ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

December 12, 2018 **Analytical Report for Service Request No:** K1810430

Janet Knox
Pacific Groundwater Group
2377 Eastlake Ave., East
Suite 200
Seattle, WA 98102

RE: Head of Swan Island Lagoon / JK1807.01

Dear Janet,

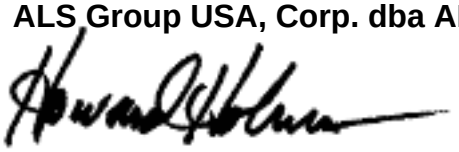
Enclosed are the results of the sample(s) submitted to our laboratory October 24, 2018
For your reference, these analyses have been assigned our service request number **K1810430.**

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3364. You may also contact me via email at howard.holmes@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental



Howard Holmes
Project Manager

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
T : +1 360 577 7222
F : +1 360 636 1068
www.alsglobal.com

Table of Contents

Acronyms
Qualifiers
State Certifications, Accreditations, And Licenses
Case Narrative
Chain of Custody
Total Solids
Polynuclear Aromatic Hydrocarbons
Polynuclear Aromatic Hydrocarbons
Raw Data
- Total Solids
- Polynuclear Aromatic Hydrocarbons
- Polynuclear Aromatic Hydrocarbons

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
E	The result is an estimate amount because the value exceeded the instrument calibration range.
J	The result is an estimated value.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.
H	The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

#	The control limit criteria is not applicable. See case narrative.
J	The result is an estimated value.
E	The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
M	The duplicate injection precision was not met.
N	The Matrix Spike sample recovery is not within control limits. See case narrative.
S	The reported value was determined by the Method of Standard Additions (MSA).
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
W	The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
i	The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
X	See case narrative.
+	The correlation coefficient for the MSA is less than 0.995.
Q	See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

*	The result is an outlier. See case narrative.
#	The control limit criteria is not applicable. See case narrative.
A	A tentatively identified compound, a suspected aldol-condensation product.
B	The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
C	The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
D	The reported result is from a dilution.
E	The result is an estimated value.
J	The result is an estimated value.
N	The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
P	The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
U	The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL. *DOD-QSM 4.2 definition* : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
i	The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
X	See case narrative.
Q	See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

F	The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
L	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
H	The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
O	The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
Y	The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
Z	The chromatographic fingerprint does not resemble a petroleum product.

ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L16-58-R4
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water-	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon
Sample Matrix: Soil, Water

Service Request: K1810430
Date Received: 10/24/2018

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt:

Eleven soil samples and one water sample were received for analysis at ALS Environmental on 10/24/2018. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Semivolatiles by GC/MS:

Method 8270D, Polynuclear Aromatic Hydrocarbons: The results reported for the following compound in sample 612-102418 may contain a slight bias: Acenaphthylene. The chromatogram indicated the presence of non-target background components. The matrix interference may have resulted in a slight high bias in the affected sample. The results were flagged with “X” to indicate the issue.

Method 8270D, Polynuclear Aromatic Hydrocarbons: The results reported for the following compound in sample G-9.15-0to18-102418 may contain a slight bias: Acenaphthylene and Dibenzofuran. The chromatogram indicated the presence of non-target background components. The matrix interference may have resulted in a slight high bias in the affected sample. The results were flagged with “X” to indicate the issue.

Method 8270D, Polynuclear Aromatic Hydrocarbons: The recoveries of a few analytes in Matrix Spikes (MS/DMS) KWG1805796-1/2 were outside the control limits listed in the results summary. The limits are default values temporarily in use until sufficient data points are generated to calculate statistical control limits. Based on the method and historic data, the recoveries observed were in the range expected for this procedure. No further corrective action was taken.

Approved by  Date 12/12/2018

Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

CHAIN OF CUSTODY

SR# K1810430

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax) PAGE 1 OF 2 COC#

PROJECT NAME	Head of Swan Island Lagoon
PROJECT NUMBER	JK1807.01
PROJECT MANAGER	Janet Lenox
COMPANY NAME	PBS
ADDRESS	2377 Eastlake Ave E
CITY/STATE/ZIP	Seattle WA 98102
E-MAIL ADDRESS	janet@pbsusa.com
PHONE #	206 329 0141 FAX #
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ SIM PAH☒	Volatile Organics 624☐ 8260☐ 8270LL☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases RSK 175☐ CO_2☐ Methane☐ Ethane☐ Ethene☐	FROZEN ARCHIVE	REMARKS
E-8.99-0to28-102418	10/24/18	1040		S	4	X															X	Archive split & extra jar(s) per each sample
C-8.94-0to27-102418	10/24/18	0955		S	4	X															X	
D-8.90-0to27-102418	10/24/18	0910		S	4	X															X	
D-8.83-0to25-102418	10/24/18	0833		S	4	X															X	
E-9.02-0to26-102418	10/24/18	1207		S	3	X															X	* MS + MSD
B-9.00-0to29-102418	10/24/18	1119		S	4	X															X	
512-0to29 ID 102418	10/24/18	1119		S	2	X															X	
D-9.09-0to29-102418	10/24/18	1405		S	4	X															X	
A-9.03-0to26-102418	10/24/18	1320		S	4	X															X	
B-9.15-0to30-102418	10/24/18	1547		S	4	X															X	

REPORT REQUIREMENTS

- ___ I. Routine Report: Method Blank, Surrogate, as required
- ___ II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- ___ IV. Data Validation Report
- ___ V. EDD

INVOICE INFORMATION

P.O. #

Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 day

___ Standard (15 working days)

___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

extra 2@40z for MS and 1@40z for MSD sample ID E-9.02-0to26-102418

Container Supply Number

94249

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY:
Signature: 10/24/18 2000	Signature: 10-24, 2015	Signature / Date/Time	Signature / Date/Time
Printed Name: Matt Lucas / Firm: Acme Env	Printed Name: Dale Iverson / Firm: ALS	Printed Name / Firm	Printed Name / Firm

Copyright 2012 by ALS Group

CHAIN OF CUSTODY

SR# K1810430

1317 South 13th Ave., Kelso, WA 98626 | +1 360 577 7222 | +1 800 695 7222 | +1 360 636 1068 (fax)

PAGE 2 OF 2 COC#

PROJECT NAME	Head & Snow Island Lagoon
PROJECT NUMBER	JK1807-01
PROJECT MANAGER	Janet Knox
COMPANY NAME	POO
ADDRESS	2377 East Lake Ave E
CITY/STATE/ZIP	Seattle WA 98102
E-MAIL ADDRESS	janet@pgrg.com
PHONE # / FAX #	206 329 0141 /
SAMPLER'S SIGNATURE	

SAMPLE I.D.	DATE	TIME	LAB I.D.	MATRIX	NUMBER OF CONTAINERS	Semivolatile Organics by GC/MS 625☐ 8270☐ 8270LL☐ SIM PAH☐	Volatile Organics 624☐ 8260☐ 8021☐ BTEX☐	Hydrocarbons (*see below) Gas☐ Diesel☐ Oil☐	Oil & Grease/TRPH 1664 HEM☐ 1664 SGT☐	PCBs Aroclors☐ Congeners☐	Pesticides/Herbicides 608☐ 8081☐ 8141☐ 8151☐	Chlorophenolics - 8151M Tri☐ Tetra☐ PCP☐	Metals, Total or Dissolved (See List below)	Cyanide☐ Hex-Chrom☐	(circle) pH, Cond., Cl, SO_4, PO_4, F, NO_2, NO_3, BOD, TSS, TDS, Turb.	(circle) NH_3-N, COD, TKN, TOC, DOC, NO_2+NO_3, T-Phos	TOX 9020☐ AOX 1650☐ 506☐	Alkalinity☐ CO_3☐ HCO_3☐	Dioxins/Furans 1613☐ 8290☐	Dissolved Gases CO_2☐ RSK 175☐ Methane☐ Ethane☐ Ethene☐	Grain Archive		REMARKS
G-9.15-0to 18-102418	10/24/18	1446		S	4		X																X		Archive split
612-102418	10/24/18	1635		W	2		X																		

REPORT REQUIREMENTS

___ I. Routine Report: Method Blank, Surrogate, as required

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

___ IV. Data Validation Report

___ V. EDD

INVOICE INFORMATION

P.O. #

Bill To:

TURNAROUND REQUIREMENTS

___ 24 hr. ___ 48 hr.

___ 5 day

___ Standard (15 working days)

___ Provide FAX Results

Requested Report Date

Circle which metals are to be analyzed:

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg

*INDICATE STATE HYDROCARBON PROCEDURE: AK CA WI NORTHWEST OTHER: (CIRCLE ONE)

SPECIAL INSTRUCTIONS/COMMENTS:

Container Supply Number

94249

☐ Sample Shipment contains USDA regulated soil samples (check box if applicable)

RELINQUISHED BY:		RECEIVED BY:		RELINQUISHED BY:		RECEIVED BY:	
Signature	Date/Time: 10/24 2000	Signature	Date/Time: 10-24-2018	Signature	Date/Time	Signature	Date/Time
Printed Name: Matt Luxon	Firm: Anne Env.	Printed Name: Dair Iverson	Firm: ALS	Printed Name	Firm	Printed Name	Firm

Copyright 2012 by ALS Group

PC HH

Cooler Receipt and Preservation Form

Client PGG Service Request K18 / 0430

Received: 10/24/18 Opened: 10/24/18 By: D. Iverson Unloaded: 10/25/18 By: CG

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* (*Hand Delivered*)
2. Samples were received in: (circle) (*Cooler*) *Box* *Envelope* *Other* _____ *NA*
3. Were custody seals on coolers? NA Y (N) If yes, how many and where? _____
   If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected. Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID (NA)	Tracking Number (NA)	Filed
* 1.4	1.6	2.5	2.7	+0.2	308			

4. Packing material: *Inserts* (*Baggies*) *Bubble Wrap* *Gel Packs* (*Wet Ice*) *Dry Ice* *Sleeves* _____
5. Were custody papers properly filled out (ink, signed, etc.)? NA (Y) N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA (Y) N
   If applicable, tissue samples were received: ***Frozen*** ***Partially Thawed*** ***Thawed***
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA (Y) N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA (Y) N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA (Y) N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* (NA) Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* (NA) Y N
12. Was C12/Res negative? NA (Y) N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: *Cooler temperature measured on 10/25/18 at 0820 by CG. Temp not measured upon receipt, cooler stored in refrigerator overnight. Samples taken on 10/24; evidence of cooling as there is wet ice in the cooler & was delivered to ALS on the same day as sampling.

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Analytical Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/18
Sample Matrix:	Soil	**Date Received:**	10/24/18
Analysis Method:	160.3 Modified	**Units:**	Percent
Prep Method:	None	**Basis:**	As Received

Solids, Total

Sample Name	Lab Code	Result	MRL	MDL	Dil.	Date Analyzed	Q
E-8.99-0to28-102418	K1810430-001	**28.5**	-	-	1	11/30/18 11:20	
C-8.94-0to27-102418	K1810430-002	**30.2**	-	-	1	11/30/18 11:20	
D-8.90-0to27-102418	K1810430-003	**34.7**	-	-	1	11/30/18 11:20	
D-8.83-0to25-102418	K1810430-004	**34.7**	-	-	1	11/30/18 11:20	
E-9.02-0to26-102418	K1810430-005	**35.0**	-	-	1	11/30/18 11:20	
B-9.00-0to29-102418	K1810430-006	**27.7**	-	-	1	11/30/18 11:20	
512-0to29-102418	K1810430-007	**27.3**	-	-	1	11/30/18 11:20	
D-9.09-0to29-102418	K1810430-008	**32.2**	-	-	1	11/30/18 11:20	
A-9.03-0to26-102418	K1810430-009	**28.8**	-	-	1	11/30/18 11:20	
B-9.15-0to30-102418	K1810430-010	**46.5**	-	-	1	11/30/18 11:20	
G-9.15-0to18-102418	K1810430-011	**74.1**	-	-	1	11/30/18 11:20	

ALS Group USA, Corp.

dba ALS Environmental

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/18
Sample Matrix:	Soil	**Date Received:**	10/24/18
		Date Analyzed:	11/30/18

Replicate Sample Summary
Inorganic Parameters

Sample Name:	E-9.02-0to26-102418	**Units:**	Percent
Lab Code:	K1810430-005	**Basis:**	As Received

Analyte Name	Analysis Method	MRL	MDL	Sample Result	Duplicate Sample K1810430-005DUP Result	Average	RPD	RPD Limit
Solids, Total	160.3 Modified	-	-	35.0	35.1	35.1	<1	20

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Polynuclear Aromatic Hydrocarbons

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
E-8.99-0to28-102418	K1810430-001	10/24/2018	10/24/2018
C-8.94-0to27-102418	K1810430-002	10/24/2018	10/24/2018
D-8.90-0to27-102418	K1810430-003	10/24/2018	10/24/2018
D-8.83-0to25-102418	K1810430-004	10/24/2018	10/24/2018
E-9.02-0to26-102418	K1810430-005	10/24/2018	10/24/2018
B-9.00-0to29-102418	K1810430-006	10/24/2018	10/24/2018
512-0to29-102418	K1810430-007	10/24/2018	10/24/2018
D-9.09-0to29-102418	K1810430-008	10/24/2018	10/24/2018
A-9.03-0to26-102418	K1810430-009	10/24/2018	10/24/2018
B-9.15-0to30-102418	K1810430-010	10/24/2018	10/24/2018
G-9.15-0to18-102418	K1810430-011	10/24/2018	10/24/2018
E-9.02-0to26-102418MS	KWG1805796-1	10/24/2018	10/24/2018
E-9.02-0to26-102418DMS	KWG1805796-2	10/24/2018	10/24/2018

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	E-8.99-0to28-102418	**Units:**	ug/Kg
Lab Code:	K1810430-001	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**17**	D	8.8	0.78	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**8.5**	JD	8.8	0.42	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**13**	D	4.4	0.26	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**10**	D	4.4	0.29	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**14**	D	4.4	0.20	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**23**	D	4.4	0.35	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**120**	D	4.4	0.29	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**36**	D	4.4	0.23	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**360**	D	4.4	0.29	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**360**	D	4.4	0.29	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**110**	D	4.4	0.29	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**140**	D	4.4	0.24	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**210**	D	4.4	0.50	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**72**	D	4.4	0.40	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**110**	D	4.4	0.32	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**90**	D	4.4	0.57	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**20**	D	4.4	0.51	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**100**	D	4.4	0.52	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	26-102	11/14/18	Acceptable
Fluoranthene-d10	69	23-110	11/14/18	Acceptable
Terphenyl-d14	84	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	C-8.94-0to27-102418	**Units:**	ug/Kg
Lab Code:	K1810430-002	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**17**	D	8.3	0.74	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**8.2**	JD	8.3	0.39	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**13**	D	4.2	0.25	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**8.7**	D	4.2	0.27	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**9.8**	D	4.2	0.19	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**16**	D	4.2	0.33	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**87**	D	4.2	0.28	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**28**	D	4.2	0.22	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**290**	D	4.2	0.27	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**320**	D	4.2	0.27	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**110**	D	4.2	0.28	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**220**	D	4.2	0.23	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**210**	D	4.2	0.48	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**66**	D	4.2	0.38	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**120**	D	4.2	0.30	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**99**	D	4.2	0.53	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**22**	D	4.2	0.49	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**110**	D	4.2	0.49	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	78	26-102	11/14/18	Acceptable
Fluoranthene-d10	73	23-110	11/14/18	Acceptable
Terphenyl-d14	87	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	D-8.90-0to27-102418	**Units:**	ug/Kg
Lab Code:	K1810430-003	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**17**	D	7.3	0.65	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**9.8**	D	7.3	0.34	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**11**	D	3.7	0.21	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**12**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**9.1**	D	3.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**15**	D	3.7	0.29	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**120**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**25**	D	3.7	0.19	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**310**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**340**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**120**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**190**	D	3.7	0.20	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**230**	D	3.7	0.42	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**86**	D	3.7	0.33	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**150**	D	3.7	0.26	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**120**	D	3.7	0.47	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**25**	D	3.7	0.42	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**120**	D	3.7	0.43	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	75	26-102	11/14/18	Acceptable
Fluoranthene-d10	75	23-110	11/14/18	Acceptable
Terphenyl-d14	88	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	D-8.83-0to25-102418	**Units:**	ug/Kg
Lab Code:	K1810430-004	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**16**	D	7.3	0.65	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**7.4**	D	7.3	0.34	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**13**	D	3.7	0.21	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**9.1**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**7.9**	D	3.7	0.16	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**15**	D	3.7	0.29	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**98**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**29**	D	3.7	0.19	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**300**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**340**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**120**	D	3.7	0.24	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**220**	D	3.7	0.20	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**250**	D	3.7	0.42	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**87**	D	3.7	0.33	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**140**	D	3.7	0.26	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**110**	D	3.7	0.47	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**26**	D	3.7	0.42	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**120**	D	3.7	0.43	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	71	26-102	11/14/18	Acceptable
Fluoranthene-d10	72	23-110	11/14/18	Acceptable
Terphenyl-d14	84	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	E-9.02-0to26-102418	**Units:**	ug/Kg
Lab Code:	K1810430-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**41**	D	15	1.3	10	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**20**	D	15	0.68	10	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**17**	D	7.2	0.42	10	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**23**	D	7.2	0.46	10	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**12**	D	7.2	0.32	10	11/07/18	11/14/18	KWG1805796	
Fluorene	**21**	D	7.2	0.56	10	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**130**	D	7.2	0.48	10	11/07/18	11/14/18	KWG1805796	
Anthracene	**31**	D	7.2	0.38	10	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**240**	D	7.2	0.46	10	11/07/18	11/14/18	KWG1805796	
Pyrene	**310**	D	7.2	0.46	10	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**92**	D	7.2	0.48	10	11/07/18	11/14/18	KWG1805796	
Chrysene	**120**	D	7.2	0.39	10	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**170**	D	7.2	0.82	10	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**64**	D	7.2	0.65	10	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**120**	D	7.2	0.52	10	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**96**	D	7.2	0.92	10	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**20**	D	7.2	0.83	10	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**110**	D	7.2	0.85	10	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	77	26-102	11/14/18	Acceptable
Fluoranthene-d10	72	23-110	11/14/18	Acceptable
Terphenyl-d14	87	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	B-9.00-0to29-102418	**Units:**	ug/Kg
Lab Code:	K1810430-006	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**11**	D	9.1	0.81	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**5.6**	JD	9.1	0.43	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**14**	D	4.6	0.27	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**7.4**	D	4.6	0.29	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**9.7**	D	4.6	0.20	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**16**	D	4.6	0.36	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**77**	D	4.6	0.30	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**26**	D	4.6	0.24	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**290**	D	4.6	0.29	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**320**	D	4.6	0.29	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**100**	D	4.6	0.30	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**140**	D	4.6	0.25	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**210**	D	4.6	0.52	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**73**	D	4.6	0.41	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**110**	D	4.6	0.33	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**97**	D	4.6	0.58	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**21**	D	4.6	0.53	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**110**	D	4.6	0.54	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	89	26-102	11/14/18	Acceptable
Fluoranthene-d10	92	23-110	11/14/18	Acceptable
Terphenyl-d14	113	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	512-0to29-102418	**Units:**	ug/Kg
Lab Code:	K1810430-007	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**10**	D	9.2	0.82	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**5.4**	JD	9.2	0.43	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**12**	D	4.6	0.27	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**7.1**	D	4.6	0.30	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**10**	D	4.6	0.21	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**16**	D	4.6	0.36	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**70**	D	4.6	0.31	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**25**	D	4.6	0.24	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**270**	D	4.6	0.30	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**290**	D	4.6	0.30	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**94**	D	4.6	0.31	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**170**	D	4.6	0.25	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**190**	D	4.6	0.53	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**65**	D	4.6	0.42	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**100**	D	4.6	0.33	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**89**	D	4.6	0.59	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**21**	D	4.6	0.54	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**100**	D	4.6	0.54	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	82	26-102	11/14/18	Acceptable
Fluoranthene-d10	78	23-110	11/14/18	Acceptable
Terphenyl-d14	94	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	D-9.09-0to29-102418	**Units:**	ug/Kg
Lab Code:	K1810430-008	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**18**	D	7.8	0.70	5	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**10**	D	7.8	0.37	5	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**13**	D	3.9	0.23	5	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**10**	D	3.9	0.25	5	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**9.0**	D	3.9	0.18	5	11/07/18	11/14/18	KWG1805796	
Fluorene	**13**	D	3.9	0.31	5	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**92**	D	3.9	0.26	5	11/07/18	11/14/18	KWG1805796	
Anthracene	**24**	D	3.9	0.21	5	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**250**	D	3.9	0.25	5	11/07/18	11/14/18	KWG1805796	
Pyrene	**310**	D	3.9	0.25	5	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**98**	D	3.9	0.26	5	11/07/18	11/14/18	KWG1805796	
Chrysene	**130**	D	3.9	0.21	5	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**230**	D	3.9	0.45	5	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**77**	D	3.9	0.35	5	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**130**	D	3.9	0.28	5	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**120**	D	3.9	0.50	5	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**25**	D	3.9	0.46	5	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**140**	D	3.9	0.46	5	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	82	26-102	11/14/18	Acceptable
Fluoranthene-d10	80	23-110	11/14/18	Acceptable
Terphenyl-d14	95	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	A-9.03-0to26-102418	**Units:**	ug/Kg
Lab Code:	K1810430-009	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**14**	JD	18	1.6	10	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**8.1**	JD	18	0.82	10	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**33**	D	8.7	0.51	10	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**15**	D	8.7	0.56	10	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**14**	D	8.7	0.39	10	11/07/18	11/14/18	KWG1805796	
Fluorene	**35**	D	8.7	0.68	10	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**170**	D	8.7	0.58	10	11/07/18	11/14/18	KWG1805796	
Anthracene	**63**	D	8.7	0.46	10	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**1100**	D	8.7	0.56	10	11/07/18	11/14/18	KWG1805796	
Pyrene	**1000**	D	8.7	0.56	10	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**240**	D	8.7	0.58	10	11/07/18	11/14/18	KWG1805796	
Chrysene	**530**	D	8.7	0.47	10	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**530**	D	8.7	0.99	10	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**170**	D	8.7	0.79	10	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**250**	D	8.7	0.63	10	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**220**	D	8.7	1.2	10	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**47**	D	8.7	1.1	10	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**210**	D	8.7	1.1	10	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	79	26-102	11/14/18	Acceptable
Fluoranthene-d10	77	23-110	11/14/18	Acceptable
Terphenyl-d14	98	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	B-9.15-0to30-102418	**Units:**	ug/Kg
Lab Code:	K1810430-010	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**38**	D	11	0.96	10	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**19**	D	11	0.51	10	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**18**	D	5.4	0.32	10	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**27**	D	5.4	0.35	10	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**11**	D	5.4	0.24	10	11/07/18	11/14/18	KWG1805796	
Fluorene	**21**	D	5.4	0.42	10	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**210**	D	5.4	0.36	10	11/07/18	11/14/18	KWG1805796	
Anthracene	**41**	D	5.4	0.28	10	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**370**	D	5.4	0.35	10	11/07/18	11/14/18	KWG1805796	
Pyrene	**430**	D	5.4	0.35	10	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**140**	D	5.4	0.36	10	11/07/18	11/14/18	KWG1805796	
Chrysene	**210**	D	5.4	0.29	10	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**230**	D	5.4	0.62	10	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**78**	D	5.4	0.49	10	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**170**	D	5.4	0.39	10	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**120**	D	5.4	0.69	10	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**28**	D	5.4	0.63	10	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**130**	D	5.4	0.64	10	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	76	26-102	11/14/18	Acceptable
Fluoranthene-d10	73	23-110	11/14/18	Acceptable
Terphenyl-d14	89	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Soil	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	G-9.15-0to18-102418	**Units:**	ug/Kg
Lab Code:	K1810430-011	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**3.2**	JD	14	1.8	20	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	**2.4**	JD	14	0.94	20	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	**4.1**	JDX	6.8	0.58	20	11/07/18	11/14/18	KWG1805796	
Acenaphthene	**5.7**	JD	6.8	0.64	20	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	**2.6**	JDX	6.8	0.44	20	11/07/18	11/14/18	KWG1805796	
Fluorene	**6.7**	JD	6.8	0.78	20	11/07/18	11/14/18	KWG1805796	
Phenanthrene	**47**	D	6.8	0.66	20	11/07/18	11/14/18	KWG1805796	
Anthracene	**8.6**	D	6.8	0.52	20	11/07/18	11/14/18	KWG1805796	
Fluoranthene	**58**	D	6.8	0.64	20	11/07/18	11/14/18	KWG1805796	
Pyrene	**86**	D	6.8	0.64	20	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**26**	D	6.8	0.66	20	11/07/18	11/14/18	KWG1805796	
Chrysene	**34**	D	6.8	0.54	20	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	**35**	D	6.8	1.2	20	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	**11**	D	6.8	0.90	20	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	**29**	D	6.8	0.72	20	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	**19**	D	6.8	1.3	20	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	**6.6**	JD	6.8	1.2	20	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	**28**	D	6.8	1.2	20	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	80	26-102	11/14/18	Acceptable
Fluoranthene-d10	73	23-110	11/14/18	Acceptable
Terphenyl-d14	86	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	NA
Sample Matrix:	Sediment	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/Kg
Lab Code:	KWG1805796-6	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	ND	U	0.50	0.089	1	11/07/18	11/14/18	KWG1805796	
2-Methylnaphthalene	ND	U	0.50	0.047	1	11/07/18	11/14/18	KWG1805796	
Acenaphthylene	ND	U	0.25	0.029	1	11/07/18	11/14/18	KWG1805796	
Acenaphthene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Dibenzofuran	ND	U	0.25	0.022	1	11/07/18	11/14/18	KWG1805796	
Fluorene	ND	U	0.25	0.039	1	11/07/18	11/14/18	KWG1805796	
Phenanthrene	ND	U	0.25	0.033	1	11/07/18	11/14/18	KWG1805796	
Anthracene	ND	U	0.25	0.026	1	11/07/18	11/14/18	KWG1805796	
Fluoranthene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Pyrene	ND	U	0.25	0.032	1	11/07/18	11/14/18	KWG1805796	
Benz(a)anthracene	**0.035**	J	0.25	0.033	1	11/07/18	11/14/18	KWG1805796	
Chrysene	ND	U	0.25	0.027	1	11/07/18	11/14/18	KWG1805796	
Benzo(b)fluoranthene†	ND	U	0.25	0.057	1	11/07/18	11/14/18	KWG1805796	
Benzo(k)fluoranthene	ND	U	0.25	0.045	1	11/07/18	11/14/18	KWG1805796	
Benzo(a)pyrene	ND	U	0.25	0.036	1	11/07/18	11/14/18	KWG1805796	
Indeno(1,2,3-cd)pyrene	ND	U	0.25	0.064	1	11/07/18	11/14/18	KWG1805796	
Dibenz(a,h)anthracene	ND	U	0.25	0.058	1	11/07/18	11/14/18	KWG1805796	
Benzo(g,h,i)perylene	ND	U	0.25	0.059	1	11/07/18	11/14/18	KWG1805796	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	72	26-102	11/14/18	Acceptable
Fluoranthene-d10	67	23-110	11/14/18	Acceptable
Terphenyl-d14	75	27-115	11/14/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01
Sample Matrix: Soil

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Units:** Percent
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
E-8.99-0to28-102418	K1810430-001	75 D	69 D	84 D
C-8.94-0to27-102418	K1810430-002	78 D	73 D	87 D
D-8.90-0to27-102418	K1810430-003	75 D	75 D	88 D
D-8.83-0to25-102418	K1810430-004	71 D	72 D	84 D
E-9.02-0to26-102418	K1810430-005	77 D	72 D	87 D
B-9.00-0to29-102418	K1810430-006	89 D	92 D	113 D
512-0to29-102418	K1810430-007	82 D	78 D	94 D
D-9.09-0to29-102418	K1810430-008	82 D	80 D	95 D
A-9.03-0to26-102418	K1810430-009	79 D	77 D	98 D
B-9.15-0to30-102418	K1810430-010	76 D	73 D	89 D
G-9.15-0to18-102418	K1810430-011	80 D	73 D	86 D
Method Blank	KWG1805796-6	72	67	75
E-9.02-0to26-102418MS	KWG1805796-1	74 D	73 D	89 D
E-9.02-0to26-102418DMS	KWG1805796-2	80 D	77 D	91 D
Lab Control Sample	KWG1805796-5	78	79	87

Surrogate Recovery Control Limits (%)

Sur1	=	Fluorene-d10	26-102
Sur2	=	Fluoranthene-d10	23-110
Sur3	=	Terphenyl-d14	27-115

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Date Analyzed: 11/14/2018
Time Analyzed: 06:17

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\111418\1114F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806235-2
Analysis Lot: KWG1806235

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	58,386	4.75	27,245	6.31	66,920	7.55
	Upper Limit ==>	116,772	5.25	54,490	6.81	133,840	8.05
	Lower Limit ==>	29,193	4.25	13,623	5.81	33,460	7.05
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Method Blank	KWG1805796-6	59,123	4.74	31,330	6.31	73,826	7.55
Lab Control Sample	KWG1805796-5	60,453	4.75	29,887	6.31	65,739	7.55
E-8.99-0to28-102418	K1810430-001	53,237	4.74	28,627	6.31	68,745	7.55
C-8.94-0to27-102418	K1810430-002	51,976	4.74	29,108	6.31	65,813	7.55
D-8.90-0to27-102418	K1810430-003	53,010	4.74	30,185	6.31	67,316	7.55
D-8.83-0to25-102418	K1810430-004	53,975	4.75	31,796	6.31	66,432	7.55
B-9.00-0to29-102418	K1810430-006	53,727	4.75	31,129	6.31	67,994	7.55
512-0to29-102418	K1810430-007	54,002	4.74	31,799	6.31	68,800	7.55
D-9.09-0to29-102418	K1810430-008	53,005	4.75	31,761	6.31	67,603	7.55
G-9.15-0to18-102418	K1810430-011	52,974	4.75	32,289	6.31	65,075	7.55
E-9.02-0to26-102418MS	KWG1805796-1	57,068	4.75	34,110	6.31	71,191	7.56
E-9.02-0to26-102418DMS	KWG1805796-2	56,579	4.75	33,461	6.31	71,518	7.56
E-9.02-0to26-102418	K1810430-005	57,873	4.75	34,312	6.31	72,283	7.55
A-9.03-0to26-102418	K1810430-009	58,523	4.75	34,733	6.31	71,985	7.55
B-9.15-0to30-102418	K1810430-010	60,301	4.75	35,072	6.31	73,936	7.55

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Date Analyzed: 11/14/2018
Time Analyzed: 06:17

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\111418\1114F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1806235-2
Analysis Lot: KWG1806235

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	75,302	10.10	83,299	13.29
	Upper Limit ==>	150,604	10.60	166,598	13.79
	Lower Limit ==>	37,651	9.60	41,650	12.79
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Method Blank	KWG1805796-6	83,472	10.10	90,973	13.28
Lab Control Sample	KWG1805796-5	75,453	10.10	83,033	13.29
E-8.99-0to28-102418	K1810430-001	73,642	10.11	79,661	13.32
C-8.94-0to27-102418	K1810430-002	71,367	10.11	77,597	13.33
D-8.90-0to27-102418	K1810430-003	72,757	10.11	78,286	13.34
D-8.83-0to25-102418	K1810430-004	71,829	10.12	77,551	13.35
B-9.00-0to29-102418	K1810430-006	69,568	10.11	76,977	13.33
512-0to29-102418	K1810430-007	70,481	10.11	78,229	13.33
D-9.09-0to29-102418	K1810430-008	73,060	10.12	78,515	13.36
G-9.15-0to18-102418	K1810430-011	65,997	10.11	72,825	13.33
E-9.02-0to26-102418MS	KWG1805796-1	73,537	10.12	80,690	13.34
E-9.02-0to26-102418DMS	KWG1805796-2	75,741	10.12	82,288	13.34
E-9.02-0to26-102418	K1810430-005	76,051	10.12	83,438	13.34
A-9.03-0to26-102418	K1810430-009	73,648	10.11	81,339	13.33
B-9.15-0to30-102418	K1810430-010	76,456	10.11	84,208	13.34

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Extracted:**	11/07/2018
Sample Matrix:	Soil	**Date Analyzed:**	11/14/2018

Matrix Spike/Duplicate Matrix Spike Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	E-9.02-0to26-102418	**Units:**	ug/Kg
Lab Code:	K1810430-005	**Basis:**	Dry
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805796

		E-9.02-0to26-102418MS KWG1805796-1 Matrix Spike			E-9.02-0to26-102418DMS KWG1805796-2 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	41	109	143	48 *	108	143	47 *	70-130	2	40
2-Methylnaphthalene	20	106	143	60 *	110	143	63 *	70-130	4	40
Acenaphthylene	17	102	143	59 *	108	143	63 *	70-130	6	40
Acenaphthene	23	106	143	58 *	115	143	64 *	70-130	8	40
Dibenzofuran	12	99.7	143	61 *	107	143	66 *	70-130	7	40
Fluorene	21	118	143	68 *	128	143	75	70-130	9	40
Phenanthrene	130	217	143	62 *	234	143	74	70-130	8	40
Anthracene	31	132	143	70	139	143	75	70-130	5	40
Fluoranthene	240	319	143	58 *	343	143	75	70-130	7	40
Pyrene	310	402	143	65 *	423	143	79	70-130	5	40
Benz(a)anthracene	92	195	143	72	206	143	80	70-130	6	40
Chrysene	120	235	143	83	247	143	90	70-130	5	40
Benzo(b)fluoranthene	170	259	143	65 *	284	143	82	70-130	9	40
Benzo(k)fluoranthene	64	150	143	61 *	160	143	68 *	70-130	6	40
Benzo(a)pyrene	120	222	143	70	240	143	82	70-130	8	40
Indeno(1,2,3-cd)pyrene	96	210	143	80	226	143	91	70-130	7	40
Dibenz(a,h)anthracene	20	108	143	62 *	116	143	67 *	70-130	7	40
Benzo(g,h,i)perylene	110	190	143	57 *	208	143	69 *	70-130	9	40

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018

Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3541	**Units:**	ug/Kg
Analysis Method:	8270D SIM	**Basis:**	Dry
		Level:	Low
		Extraction Lot:	KWG1805796

Lab Control Sample
KWG1805796-5
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Naphthalene	63.7	100	64	48-77
2-Methylnaphthalene	67.3	100	67	52-85
Acenaphthylene	68.6	100	69	51-80
Acenaphthene	68.4	100	68	51-82
Dibenzofuran	67.8	100	68	14-125
Fluorene	72.0	100	72	52-83
Phenanthrene	68.9	100	69	48-85
Anthracene	74.2	100	74	56-87
Fluoranthene	68.9	100	69	45-96
Pyrene	73.4	100	73	59-98
Benz(a)anthracene	82.2	100	82	65-97
Chrysene	79.0	100	79	63-100
Benzo(b)fluoranthene	84.4	100	84	63-99
Benzo(k)fluoranthene	81.1	100	81	62-99
Benzo(a)pyrene	85.3	100	85	64-103
Indeno(1,2,3-cd)pyrene	85.9	100	86	61-105
Dibenz(a,h)anthracene	82.2	100	82	56-104
Benzo(g,h,i)perylene	73.4	100	73	56-101

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018
		Time Analyzed:	06:42

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Instrument ID:**	MS14
Lab Code:	KWG1805796-6	**File ID:**	J:\MS14\DATA\111418\1114F003.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805796

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1805796-5	J:\MS14\DATA\111418\1114F004.D	11/14/18	07:08
E-8.99-0to28-102418	K1810430-001	J:\MS14\DATA\111418\1114F014.D	11/14/18	11:21
C-8.94-0to27-102418	K1810430-002	J:\MS14\DATA\111418\1114F015.D	11/14/18	11:46
D-8.90-0to27-102418	K1810430-003	J:\MS14\DATA\111418\1114F016.D	11/14/18	12:12
D-8.83-0to25-102418	K1810430-004	J:\MS14\DATA\111418\1114F017.D	11/14/18	12:39
B-9.00-0to29-102418	K1810430-006	J:\MS14\DATA\111418\1114F018.D	11/14/18	13:05
512-0to29-102418	K1810430-007	J:\MS14\DATA\111418\1114F019.D	11/14/18	13:31
D-9.09-0to29-102418	K1810430-008	J:\MS14\DATA\111418\1114F020.D	11/14/18	13:57
G-9.15-0to18-102418	K1810430-011	J:\MS14\DATA\111418\1114F021.D	11/14/18	14:25
E-9.02-0to26-102418MS	KWG1805796-1	J:\MS14\DATA\111418\1114F022.D	11/14/18	14:51
E-9.02-0to26-102418DMS	KWG1805796-2	J:\MS14\DATA\111418\1114F023.D	11/14/18	15:17
E-9.02-0to26-102418	K1810430-005	J:\MS14\DATA\111418\1114F024.D	11/14/18	15:43
A-9.03-0to26-102418	K1810430-009	J:\MS14\DATA\111418\1114F025.D	11/14/18	16:09
B-9.15-0to30-102418	K1810430-010	J:\MS14\DATA\111418\1114F026.D	11/14/18	16:35

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Extracted:**	11/07/2018
Sample Matrix:	Sediment	**Date Analyzed:**	11/14/2018
		Time Analyzed:	07:08

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Instrument ID:**	MS14
Lab Code:	KWG1805796-5	**File ID:**	J:\MS14\DATA\111418\1114F004.D
Extraction Method:	EPA 3541	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805796

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1805796-6	J:\MS14\DATA\111418\1114F003.D	11/14/18	06:42
E-8.99-0to28-102418	K1810430-001	J:\MS14\DATA\111418\1114F014.D	11/14/18	11:21
C-8.94-0to27-102418	K1810430-002	J:\MS14\DATA\111418\1114F015.D	11/14/18	11:46
D-8.90-0to27-102418	K1810430-003	J:\MS14\DATA\111418\1114F016.D	11/14/18	12:12
D-8.83-0to25-102418	K1810430-004	J:\MS14\DATA\111418\1114F017.D	11/14/18	12:39
B-9.00-0to29-102418	K1810430-006	J:\MS14\DATA\111418\1114F018.D	11/14/18	13:05
512-0to29-102418	K1810430-007	J:\MS14\DATA\111418\1114F019.D	11/14/18	13:31
D-9.09-0to29-102418	K1810430-008	J:\MS14\DATA\111418\1114F020.D	11/14/18	13:57
G-9.15-0to18-102418	K1810430-011	J:\MS14\DATA\111418\1114F021.D	11/14/18	14:25
E-9.02-0to26-102418MS	KWG1805796-1	J:\MS14\DATA\111418\1114F022.D	11/14/18	14:51
E-9.02-0to26-102418DMS	KWG1805796-2	J:\MS14\DATA\111418\1114F023.D	11/14/18	15:17
E-9.02-0to26-102418	K1810430-005	J:\MS14\DATA\111418\1114F024.D	11/14/18	15:43
A-9.03-0to26-102418	K1810430-009	J:\MS14\DATA\111418\1114F025.D	11/14/18	16:09
B-9.15-0to30-102418	K1810430-010	J:\MS14\DATA\111418\1114F026.D	11/14/18	16:35

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Date Analyzed: 11/14/2018
Time Analyzed: 05:51

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\111418\1114F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1806235

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.5	157589	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	46.9	158868	PASS
70	69	0	2	0.7	1054	PASS
127	198	10	80	51.6	174890	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	48.5	339050	PASS
199	198	5	9	6.8	22890	PASS
275	198	10	60	35.0	118562	PASS
365	442	1	50	3.4	24040	PASS
441	443	0	100	75.3	101050	PASS
442	442	100	100	100.0	698368	PASS
443	442	15	24	19.2	134280	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1806235-2	J:\MS14\DATA\111418\1114F002.D	11/14/2018	06:17	
Method Blank	KWG1805796-6	J:\MS14\DATA\111418\1114F003.D	11/14/2018	06:42	
Lab Control Sample	KWG1805796-5	J:\MS14\DATA\111418\1114F004.D	11/14/2018	07:08	
E-8.99-0to28-102418	K1810430-001	J:\MS14\DATA\111418\1114F014.D	11/14/2018	11:21	
C-8.94-0to27-102418	K1810430-002	J:\MS14\DATA\111418\1114F015.D	11/14/2018	11:46	
D-8.90-0to27-102418	K1810430-003	J:\MS14\DATA\111418\1114F016.D	11/14/2018	12:12	
D-8.83-0to25-102418	K1810430-004	J:\MS14\DATA\111418\1114F017.D	11/14/2018	12:39	
B-9.00-0to29-102418	K1810430-006	J:\MS14\DATA\111418\1114F018.D	11/14/2018	13:05	
512-0to29-102418	K1810430-007	J:\MS14\DATA\111418\1114F019.D	11/14/2018	13:31	
D-9.09-0to29-102418	K1810430-008	J:\MS14\DATA\111418\1114F020.D	11/14/2018	13:57	
G-9.15-0to18-102418	K1810430-011	J:\MS14\DATA\111418\1114F021.D	11/14/2018	14:25	
E-9.02-0to26-102418MS	KWG1805796-1	J:\MS14\DATA\111418\1114F022.D	11/14/2018	14:51	
E-9.02-0to26-102418DMS	KWG1805796-2	J:\MS14\DATA\111418\1114F023.D	11/14/2018	15:17	
E-9.02-0to26-102418	K1810430-005	J:\MS14\DATA\111418\1114F024.D	11/14/2018	15:43	
A-9.03-0to26-102418	K1810430-009	J:\MS14\DATA\111418\1114F025.D	11/14/2018	16:09	
B-9.15-0to30-102418	K1810430-010	J:\MS14\DATA\111418\1114F026.D	11/14/2018	16:35	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Level ID	File ID	Level ID	File ID
A	J:\MS14\DATA\071118\0711F003.D	G	J:\MS14\DATA\071118\0711F009.D
B	J:\MS14\DATA\071118\0711F004.D	H	J:\MS14\DATA\071118\0711F010.D
C	J:\MS14\DATA\071118\0711F005.D	I	J:\MS14\DATA\071118\0711F011.D
D	J:\MS14\DATA\071118\0711F006.D	J	J:\MS14\DATA\071118\0711F012.D
E	J:\MS14\DATA\071118\0711F007.D		
F	J:\MS14\DATA\071118\0711F008.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.42	B	4.0	1.31	C	8.0	1.19	D	20	1.15	E	100	1.13
	F	200	1.11	G	400	1.09	H	1000	1.06	I	1600	1.03	J	2000	1.07
2-Methylnaphthalene	A	2.0	0.789	B	4.0	0.741	C	8.0	0.734	D	20	0.715	E	100	0.718
	F	200	0.692	G	400	0.662	H	1000	0.650	I	1600	0.627	J	2000	0.635
Acenaphthylene	A	2.0	2.52	B	4.0	2.35	C	8.0	2.29	D	20	2.33	E	100	2.37
	F	200	2.41	G	400	2.42	H	1000	2.41	I	1600	2.43	J	2000	2.34
Acenaphthene	A	2.0	1.44	B	4.0	1.38	C	8.0	1.33	D	20	1.38	E	100	1.38
	F	200	1.39	G	400	1.38	H	1000	1.35	I	1600	1.38	J	2000	1.32
Dibenzofuran	A	2.0	2.25	B	4.0	2.12	C	8.0	2.21	D	20	2.09	E	100	2.22
	F	200	2.29	G	400	2.24	H	1000	2.22	I	1600	2.24	J	2000	2.11
Fluorene	A	2.0	1.81	B	4.0	1.68	C	8.0	1.62	D	20	1.64	E	100	1.70
	F	200	1.68	G	400	1.67	H	1000	1.60	I	1600	1.63	J	2000	1.56
Phenanthrene	A	2.0	1.33	B	4.0	1.33	C	8.0	1.25	D	20	1.23	E	100	1.25
	F	200	1.25	G	400	1.22	H	1000	1.23	I	1600	1.22	J	2000	1.16
Anthracene	A	2.0	1.20	B	4.0	1.17	C	8.0	1.17	D	20	1.14	E	100	1.21
	F	200	1.22	G	400	1.22	H	1000	1.22	I	1600	1.21	J	2000	1.17
Fluoranthene	A	2.0	1.50	B	4.0	1.44	C	8.0	1.44	D	20	1.41	E	100	1.54
	F	200	1.60	G	400	1.58	H	1000	1.63	I	1600	1.65	J	2000	1.62
Pyrene	A	2.0	1.49	B	4.0	1.46	C	8.0	1.38	D	20	1.37	E	100	1.34
	F	200	1.29	G	400	1.32	H	1000	1.33	I	1600	1.39	J	2000	1.36
Benz(a)anthracene	A	2.0	1.50	B	4.0	1.32	C	8.0	1.26	D	20	1.19	E	100	1.20
	F	200	1.23	G	400	1.27	H	1000	1.32	I	1600	1.34	J	2000	1.31
Chrysene	A	2.0	1.23	B	4.0	1.21	C	8.0	1.23	D	20	1.20	E	100	1.24
	F	200	1.25	G	400	1.25	H	1000	1.26	I	1600	1.28	J	2000	1.24
Benzo(b)fluoranthene	A	2.0	1.19	B	4.0	1.16	C	8.0	1.15	D	20	1.16	E	100	1.20
	F	200	1.26	G	400	1.30	H	1000	1.34	I	1600	1.32	J	2000	1.27
Benzo(k)fluoranthene	A	2.0	1.16	B	4.0	1.17	C	8.0	1.13	D	20	1.19	E	100	1.23
	F	200	1.26	G	400	1.29	H	1000	1.29	I	1600	1.29	J	2000	1.25

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.09	B	4.0	1.01	C	8.0	1.03	D	20	1.04	E	100	1.05
	F	200	1.07	G	400	1.11	H	1000	1.15	I	1600	1.16	J	2000	1.12
Indeno(1,2,3-cd)pyrene	A	2.0	1.23	B	4.0	1.10	C	8.0	1.06	D	20	1.06	E	100	1.07
	F	200	1.08	G	400	1.05	H	1000	1.01	I	1600	0.996	J	2000	0.959
Dibenz(a,h)anthracene	A	2.0	1.12	B	4.0	1.10	C	8.0	1.09	D	20	1.17	E	100	1.12
	F	200	1.10	G	400	1.07	H	1000	1.02	I	1600	1.00	J	2000	0.971
Benzo(g,h,i)perylene	A	2.0	1.44	B	4.0	1.37	C	8.0	1.31	D	20	1.34	E	100	1.28
	F	200	1.27	G	400	1.21	H	1000	1.12	I	1600	1.07	J	2000	1.04
Fluorene-d10				B	4.0	1.49	C	8.0	1.33	D	20	1.28	E	100	1.25
	F	200	1.24	G	400	1.25	H	1000	1.21	I	1600	1.24	J	2000	1.20
Fluoranthene-d10	A	2.0	1.18	B	4.0	1.19	C	8.0	1.15	D	20	1.11	E	100	1.20
	F	200	1.26	G	400	1.31	H	1000	1.40	I	1600	1.42	J	2000	1.39
Terphenyl-d14				B	4.0	1.05	C	8.0	0.934	D	20	0.867	E	100	0.832
	F	200	0.823	G	400	0.835	H	1000	0.837	I	1600	0.830	J	2000	0.801

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	10.7		≤ 20	1.15		0.70
2-Methylnaphthalene	MS	AverageRF	% RSD	7.5		≤ 20	0.696		0.40
Acenaphthylene	MS	AverageRF	% RSD	2.7		≤ 20	2.39		0.90
Acenaphthene	MS	AverageRF	% RSD	2.3		≤ 20	1.37		0.90
Dibenzofuran	MS	AverageRF	% RSD	3.1		≤ 20	2.20		0.80
Fluorene	MS	AverageRF	% RSD	4.1		≤ 20	1.66		0.90
Phenanthrene	MS	AverageRF	% RSD	4.1		≤ 20	1.25		0.70
Anthracene	MS	AverageRF	% RSD	2.4		≤ 20	1.19		0.70
Fluoranthene	MS	AverageRF	% RSD	5.8		≤ 20	1.54		0.60
Pyrene	MS	AverageRF	% RSD	4.5		≤ 20	1.37		0.60
Benz(a)anthracene	MS	AverageRF	% RSD	6.8		≤ 20	1.29		0.80
Chrysene	MS	AverageRF	% RSD	1.9		≤ 20	1.24		0.70
Benzo(b)fluoranthene	MS	AverageRF	% RSD	5.7		≤ 20	1.24		0.70
Benzo(k)fluoranthene	MS	AverageRF	% RSD	4.7		≤ 20	1.23		0.70
Benzo(a)pyrene	MS	AverageRF	% RSD	4.7		≤ 20	1.08		0.70
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	6.9		≤ 20	1.06		0.50
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	5.7		≤ 20	1.08		0.40
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	10.7		≤ 20	1.24		0.50
Fluorene-d10	SURR	AverageRF	% RSD	6.9		≤ 20	1.28		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	9.0		≤ 20	1.26		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	8.9		≤ 20	0.867		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Calibration Date: 07/11/2018
Date Analyzed: 07/11/2018

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270D SIM

Calibration ID: CAL15779
Units: ng/ml

File ID: J:\MS14\DATA\071118\0711F013.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	370	1.15	1.06	-8	NA	± 30 %	AverageRF
2-Methylnaphthalene	400	390	0.696	0.683	-2	NA	± 30 %	AverageRF
Acenaphthylene	400	390	2.39	2.33	-2	NA	± 30 %	AverageRF
Acenaphthene	400	380	1.37	1.32	-4	NA	± 30 %	AverageRF
Dibenzofuran	400	370	2.20	2.05	-7	NA	± 30 %	AverageRF
Fluorene	400	390	1.66	1.60	-4	NA	± 30 %	AverageRF
Phenanthrene	400	380	1.25	1.19	-4	NA	± 30 %	AverageRF
Anthracene	400	400	1.19	1.18	-1	NA	± 30 %	AverageRF
Fluoranthene	400	410	1.54	1.60	4	NA	± 30 %	AverageRF
Pyrene	400	350	1.37	1.21	-12	NA	± 30 %	AverageRF
Benz(a)anthracene	400	380	1.29	1.22	-6	NA	± 30 %	AverageRF
Chrysene	400	390	1.24	1.20	-3	NA	± 30 %	AverageRF
Benzo(b)fluoranthene	400	410	1.24	1.27	2	NA	± 30 %	AverageRF
Benzo(k)fluoranthene	400	420	1.23	1.28	4	NA	± 30 %	AverageRF
Benzo(a)pyrene	400	400	1.08	1.08	0	NA	± 30 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	370	1.06	0.993	-7	NA	± 30 %	AverageRF
Dibenz(a,h)anthracene	400	380	1.08	1.03	-4	NA	± 30 %	AverageRF
Benzo(g,h,i)perylene	400	370	1.24	1.14	-9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Date Analyzed:** 11/14/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1806235
Units: ng/ml

File ID: J:\MS14\DATA\111418\1114F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	350	0.70	1.15	0.996	-14	NA	± 20	AverageRF
2-Methylnaphthalene	400	350	0.40	0.696	0.609	-13	NA	± 20	AverageRF
Acenaphthylene	400	360	0.90	2.39	2.13	-11	NA	± 20	AverageRF
Acenaphthene	400	360	0.90	1.37	1.22	-11	NA	± 20	AverageRF
Dibenzofuran	400	360	0.80	2.20	1.96	-11	NA	± 20	AverageRF
Fluorene	400	390	0.90	1.66	1.63	-2	NA	± 20	AverageRF
Phenanthrene	400	340	0.70	1.25	1.07	-14	NA	± 20	AverageRF
Anthracene	400	360	0.70	1.19	1.07	-11	NA	± 20	AverageRF
Fluoranthene	400	330	0.60	1.54	1.27	-17	NA	± 20	AverageRF
Pyrene	400	350	0.60	1.37	1.19	-13	NA	± 20	AverageRF
Benz(a)anthracene	400	360	0.80	1.29	1.17	-10	NA	± 20	AverageRF
Chrysene	400	350	0.70	1.24	1.10	-11	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	380	0.70	1.24	1.18	-5	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	370	0.70	1.23	1.12	-8	NA	± 20	AverageRF
Benzo(a)pyrene	400	380	0.70	1.08	1.04	-4	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	360	0.50	1.06	0.966	-9	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	360	0.40	1.08	0.969	-10	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	320	0.50	1.24	1.01	-19	NA	± 20	AverageRF
Fluorene-d10	400	440	0.01	1.28	1.41	10	NA	± 20	AverageRF
Fluoranthene-d10	400	390	0.01	1.26	1.21	-4	NA	± 20	AverageRF
Terphenyl-d14	400	400	0.01	0.867	0.868	0	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1806235
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1114F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1806235-1	11/14/2018	05:51		11/14/2018	06:11
1114F002.D	Continuing Calibration Verification	KWG1806235-2	11/14/2018	06:17		11/14/2018	06:36
1114F003.D	Method Blank	KWG1805796-6	11/14/2018	06:42		11/14/2018	07:01
1114F004.D	Lab Control Sample	KWG1805796-5	11/14/2018	07:08		11/14/2018	07:27
1114F005.D	ZZZZZZ	ZZZZZZ	11/14/2018	07:33		11/14/2018	07:52
1114F006.D	ZZZZZZ	ZZZZZZ	11/14/2018	07:58		11/14/2018	08:17
1114F007.D	ZZZZZZ	ZZZZZZ	11/14/2018	08:23		11/14/2018	08:42
1114F008.D	ZZZZZZ	ZZZZZZ	11/14/2018	08:48		11/14/2018	09:07
1114F009.D	ZZZZZZ	ZZZZZZ	11/14/2018	09:14		11/14/2018	09:33
1114F010.D	ZZZZZZ	ZZZZZZ	11/14/2018	09:40		11/14/2018	09:59
1114F011.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:05		11/14/2018	10:24
1114F012.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:30		11/14/2018	10:49
1114F013.D	ZZZZZZ	ZZZZZZ	11/14/2018	10:56		11/14/2018	11:15
1114F014.D	E-8.99-0to28-102418	K1810430-001	11/14/2018	11:21		11/14/2018	11:40
1114F015.D	C-8.94-0to27-102418	K1810430-002	11/14/2018	11:46		11/14/2018	12:05
1114F016.D	D-8.90-0to27-102418	K1810430-003	11/14/2018	12:12		11/14/2018	12:31
1114F017.D	D-8.83-0to25-102418	K1810430-004	11/14/2018	12:39		11/14/2018	12:58
1114F018.D	B-9.00-0to29-102418	K1810430-006	11/14/2018	13:05		11/14/2018	13:24
1114F019.D	512-0to29-102418	K1810430-007	11/14/2018	13:31		11/14/2018	13:50
1114F020.D	D-9.09-0to29-102418	K1810430-008	11/14/2018	13:57		11/14/2018	14:16
1114F021.D	G-9.15-0to18-102418	K1810430-011	11/14/2018	14:25		11/14/2018	14:44
1114F022.D	E-9.02-0to26-102418MS	KWG1805796-1	11/14/2018	14:51		11/14/2018	15:10
1114F023.D	E-9.02-0to26-102418DMS	KWG1805796-2	11/14/2018	15:17		11/14/2018	15:36
1114F024.D	E-9.02-0to26-102418	K1810430-005	11/14/2018	15:43		11/14/2018	16:02
1114F025.D	A-9.03-0to26-102418	K1810430-009	11/14/2018	16:09		11/14/2018	16:28
1114F026.D	B-9.15-0to30-102418	K1810430-010	11/14/2018	16:35		11/14/2018	16:54
1114F027.D	ZZZZZZ	ZZZZZZ	11/14/2018	17:01		11/14/2018	17:20
1114F028.D	ZZZZZZ	ZZZZZZ	11/14/2018	17:27		11/14/2018	17:46

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Date Extracted:** 11/07/2018
Sample Matrix: Soil

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3541 **Extraction Lot:** KWG1805796
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
E-8.99-0to28-102418	K1810430-001	10/24/18	10/24/18	40.037g	2mL	28.5	
C-8.94-0to27-102418	K1810430-002	10/24/18	10/24/18	40.004g	2mL	30.2	
D-8.90-0to27-102418	K1810430-003	10/24/18	10/24/18	40.007g	2mL	34.7	
D-8.83-0to25-102418	K1810430-004	10/24/18	10/24/18	40.011g	2mL	34.7	
E-9.02-0to26-102418	K1810430-005	10/24/18	10/24/18	40.028g	2mL	35.0	
B-9.00-0to29-102418	K1810430-006	10/24/18	10/24/18	40.009g	2mL	27.7	
512-0to29-102418	K1810430-007	10/24/18	10/24/18	40.052g	2mL	27.3	
D-9.09-0to29-102418	K1810430-008	10/24/18	10/24/18	40.011g	2mL	32.2	
A-9.03-0to26-102418	K1810430-009	10/24/18	10/24/18	40.044g	2mL	28.8	
B-9.15-0to30-102418	K1810430-010	10/24/18	10/24/18	40.077g	2mL	46.5	
G-9.15-0to18-102418	K1810430-011	10/24/18	10/24/18	40.080g	2mL	74.1	
Method Blank	KWG1805796-6	NA	NA	40.332g	2mL	NA	
E-9.02-0to26-102418MS	KWG1805796-1	10/24/18	10/24/18	40.057g	2mL	35.0	
E-9.02-0to26-102418DMS	KWG1805796-2	10/24/18	10/24/18	40.011g	2mL	35.0	
Lab Control Sample	KWG1805796-5	NA	NA	20.000g	2mL	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Polynuclear Aromatic Hydrocarbons

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01

Cover Page - Organic Analysis Data Package
Polynuclear Aromatic Hydrocarbons

Sample Name	Lab Code	Date Collected	Date Received
612-102418	K1810430-012	10/24/2018	10/24/2018

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	10/24/2018
Sample Matrix:	Water	**Date Received:**	10/24/2018

Polynuclear Aromatic Hydrocarbons

Sample Name:	612-102418	**Units:**	ug/L
Lab Code:	K1810430-012	**Basis:**	NA
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.0077**	J	0.020	0.0014	1	10/30/18	11/01/18	KWG1805607	
2-Methylnaphthalene	**0.0059**	J	0.020	0.0013	1	10/30/18	11/01/18	KWG1805607	
Acenaphthylene	**0.0070**	JX	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Acenaphthene	**0.0024**	J	0.020	0.0012	1	10/30/18	11/01/18	KWG1805607	
Dibenzofuran	**0.0054**	J	0.020	0.00096	1	10/30/18	11/01/18	KWG1805607	
Fluorene	**0.0034**	J	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Phenanthrene	**0.011**	J	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Anthracene	ND	U	0.020	0.00082	1	10/30/18	11/01/18	KWG1805607	
Fluoranthene	**0.0029**	J	0.020	0.00082	1	10/30/18	11/01/18	KWG1805607	
Pyrene	**0.0020**	J	0.020	0.0010	1	10/30/18	11/01/18	KWG1805607	
Benz(a)anthracene	**0.0024**	J	0.020	0.00097	1	10/30/18	11/01/18	KWG1805607	
Chrysene	ND	U	0.020	0.00076	1	10/30/18	11/01/18	KWG1805607	
Benzo(b)fluoranthene†	ND	U	0.020	0.00083	1	10/30/18	11/01/18	KWG1805607	
Benzo(k)fluoranthene	ND	U	0.020	0.00094	1	10/30/18	11/01/18	KWG1805607	
Benzo(a)pyrene	ND	U	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	0.00089	1	10/30/18	11/01/18	KWG1805607	
Dibenz(a,h)anthracene	ND	U	0.020	0.0013	1	10/30/18	11/01/18	KWG1805607	
Benzo(g,h,i)perylene	ND	U	0.020	0.00086	1	10/30/18	11/01/18	KWG1805607	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	80	42-131	11/01/18	Acceptable
Fluoranthene-d10	76	42-133	11/01/18	Acceptable
Terphenyl-d14	72	32-129	11/01/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

Analytical Results

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1805607-3	**Basis:**	NA
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8270D SIM		

Analyte Name	Result	Q	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Naphthalene	**0.0070**	J	0.020	0.0014	1	10/30/18	11/01/18	KWG1805607	
2-Methylnaphthalene	**0.0053**	J	0.020	0.0013	1	10/30/18	11/01/18	KWG1805607	
Acenaphthylene	ND	U	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Acenaphthene	**0.0024**	J	0.020	0.0012	1	10/30/18	11/01/18	KWG1805607	
Dibenzofuran	**0.0056**	J	0.020	0.00096	1	10/30/18	11/01/18	KWG1805607	
Fluorene	**0.0040**	J	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Phenanthrene	**0.011**	J	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Anthracene	ND	U	0.020	0.00082	1	10/30/18	11/01/18	KWG1805607	
Fluoranthene	**0.0024**	J	0.020	0.00082	1	10/30/18	11/01/18	KWG1805607	
Pyrene	**0.0021**	J	0.020	0.0010	1	10/30/18	11/01/18	KWG1805607	
Benz(a)anthracene	**0.0022**	J	0.020	0.00097	1	10/30/18	11/01/18	KWG1805607	
Chrysene	ND	U	0.020	0.00076	1	10/30/18	11/01/18	KWG1805607	
Benzo(b)fluoranthene†	ND	U	0.020	0.00083	1	10/30/18	11/01/18	KWG1805607	
Benzo(k)fluoranthene	ND	U	0.020	0.00094	1	10/30/18	11/01/18	KWG1805607	
Benzo(a)pyrene	ND	U	0.020	0.0011	1	10/30/18	11/01/18	KWG1805607	
Indeno(1,2,3-cd)pyrene	ND	U	0.020	0.00089	1	10/30/18	11/01/18	KWG1805607	
Dibenz(a,h)anthracene	ND	U	0.020	0.0013	1	10/30/18	11/01/18	KWG1805607	
Benzo(g,h,i)perylene	ND	U	0.020	0.00086	1	10/30/18	11/01/18	KWG1805607	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Fluorene-d10	89	42-131	11/01/18	Acceptable
Fluoranthene-d10	83	42-133	11/01/18	Acceptable
Terphenyl-d14	67	32-129	11/01/18	Acceptable

† Analyte Comments

Benzo(b)fluoranthene	This analyte cannot be separated from Benzo(j)fluoranthene.

Comments:

QA/QC Report

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01
Sample Matrix: Water

Surrogate Recovery Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3511 **Units:** Percent
Analysis Method: 8270D SIM **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3
612-102418	K1810430-012	80	76	72
Method Blank	KWG1805607-3	89	83	67
Lab Control Sample	KWG1805607-1	98	96	81
Duplicate Lab Control Sample	KWG1805607-2	87	86	76

Surrogate Recovery Control Limits (%)

Sur1	=	Fluorene-d10	42-131
Sur2	=	Fluoranthene-d10	42-133
Sur3	=	Terphenyl-d14	32-129

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Date Analyzed: 11/01/2018
Time Analyzed: 10:01

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110118\1101F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1805861-2
Analysis Lot: KWG1805861

		Naphthalene-d8		Acenaphthene-d10		Phenanthrene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	61,479	4.79	27,097	6.35	55,256	7.59
	Upper Limit ==>	122,958	5.29	54,194	6.85	110,512	8.09
	Lower Limit ==>	30,740	4.29	13,549	5.85	27,628	7.09
	ICAL Result ==>	60,855	4.80	25,959	6.35	53,916	7.59
Associated Analyses							
Method Blank	KWG1805607-3	74,394	4.80	34,232	6.35	70,535	7.59
Lab Control Sample	KWG1805607-1	75,504	4.80	32,219	6.35	66,909	7.59
Duplicate Lab Control Sample	KWG1805607-2	72,899	4.80	31,102	6.35	64,163	7.59
612-102418	K1810430-012	72,186	4.80	33,109	6.35	67,185	7.59

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Date Analyzed: 11/01/2018
Time Analyzed: 10:01

Internal Standard Area and RT Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110118\1101F002.D
Instrument ID: MS14
Analysis Method: 8270D SIM

Lab Code: KWG1805861-2
Analysis Lot: KWG1805861

		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**
	Results ==>	65,042	10.16	74,641	13.37
	Upper Limit ==>	130,084	10.66	149,282	13.87
	Lower Limit ==>	32,521	9.66	37,321	12.87
	ICAL Result ==>	68,964	10.15	73,742	13.30
Associated Analyses					
Method Blank	KWG1805607-3	70,471	10.16	76,749	13.37
Lab Control Sample	KWG1805607-1	70,688	10.16	77,747	13.37
Duplicate Lab Control Sample	KWG1805607-2	67,948	10.16	75,058	13.37
612-102418	K1810430-012	68,339	10.16	74,415	13.37

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Extracted:**	10/30/2018
Sample Matrix:	Water	**Date Analyzed:**	11/01/2018

Lab Control Spike/Duplicate Lab Control Spike Summary
Polynuclear Aromatic Hydrocarbons

Extraction Method:	EPA 3511	**Units:**	ug/L
Analysis Method:	8270D SIM	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1805607

	Lab Control Sample KWG1805607-1 Lab Control Spike			Duplicate Lab Control Sample KWG1805607-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Naphthalene	2.31	2.78	83	2.37	2.78	85	52-115	3	30
2-Methylnaphthalene	2.27	2.78	82	2.33	2.78	84	48-120	3	30
Acenaphthylene	2.63	2.78	95	2.67	2.78	96	58-124	2	30
Acenaphthene	2.53	2.78	91	2.60	2.78	94	63-121	3	30
Dibenzofuran	2.60	2.78	94	2.68	2.78	96	56-132	3	30
Fluorene	2.57	2.78	93	2.62	2.78	94	68-121	2	30
Phenanthrene	2.53	2.78	91	2.58	2.78	93	64-126	2	30
Anthracene	2.65	2.78	96	2.72	2.78	98	68-127	2	30
Fluoranthene	2.33	2.78	84	2.40	2.78	86	70-127	3	30
Pyrene	2.71	2.78	98	2.78	2.78	100	72-127	2	30
Benz(a)anthracene	2.67	2.78	96	2.75	2.78	99	74-124	3	30
Chrysene	2.57	2.78	92	2.66	2.78	96	74-132	4	30
Benzo(b)fluoranthene	2.73	2.78	98	2.81	2.78	101	73-136	3	30
Benzo(k)fluoranthene	2.57	2.78	93	2.65	2.78	96	74-134	3	30
Benzo(a)pyrene	2.68	2.78	96	2.76	2.78	99	75-131	3	30
Indeno(1,2,3-cd)pyrene	2.52	2.78	91	2.59	2.78	93	63-136	3	30
Dibenz(a,h)anthracene	2.31	2.78	83	2.38	2.78	86	59-135	3	30
Benzo(g,h,i)perylene	2.41	2.78	87	2.48	2.78	89	63-127	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Extracted:**	10/30/2018
Sample Matrix:	Water	**Date Analyzed:**	11/01/2018
		Time Analyzed:	14:24

Method Blank Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Method Blank	**Instrument ID:**	MS14
Lab Code:	KWG1805607-3	**File ID:**	J:\MS14\DATA\110118\1101F011.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805607

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1805607-1	J:\MS14\DATA\110118\1101F012.D	11/01/18	14:53
Duplicate Lab Control Sample	KWG1805607-2	J:\MS14\DATA\110118\1101F013.D	11/01/18	15:23
612-102418	K1810430-012	J:\MS14\DATA\110118\1101F014.D	11/01/18	15:52

QA/QC Report

Client:	Pacific Groundwater Group (PGG)	**Service Request:**	K1810430
Project:	Head of Swan Island Lagoon/JK1807.01	**Date Extracted:**	10/30/2018
Sample Matrix:	Water	**Date Analyzed:**	11/01/2018
		Time Analyzed:	14:53

Lab Control Sample Summary
Polynuclear Aromatic Hydrocarbons

Sample Name:	Lab Control Sample	**Instrument ID:**	MS14
Lab Code:	KWG1805607-1	**File ID:**	J:\MS14\DATA\110118\1101F012.D
Extraction Method:	EPA 3511	**Level:**	Low
Analysis Method:	8270D SIM	**Extraction Lot:**	KWG1805607

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1805607-3	J:\MS14\DATA\110118\1101F011.D	11/01/18	14:24
612-102418	K1810430-012	J:\MS14\DATA\110118\1101F014.D	11/01/18	15:52

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Date Analyzed: 11/01/2018
Time Analyzed: 09:32

Tune Summary
Polynuclear Aromatic Hydrocarbons

File ID: J:\MS14\DATA\110118\1101F001.D
Instrument ID: MS14
Column:

Analysis Method: 8270D SIM
Analysis Lot: KWG1805861

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	39.4	88173	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	41.4	92794	PASS
70	69	0	2	0.7	646	PASS
127	198	10	80	47.2	105666	PASS
197	198	0	2	0.0	0	PASS
198	442	30	100	47.1	223978	PASS
199	198	5	9	6.9	15387	PASS
275	198	10	60	35.5	79600	PASS
365	442	1	50	2.6	12134	PASS
441	443	0	100	74.8	68840	PASS
442	442	100	100	100.0	475328	PASS
443	442	15	24	19.4	92066	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1805861-2	J:\MS14\DATA\110118\1101F002.D	11/01/2018	10:01	
Method Blank	KWG1805607-3	J:\MS14\DATA\110118\1101F011.D	11/01/2018	14:24	
Lab Control Sample	KWG1805607-1	J:\MS14\DATA\110118\1101F012.D	11/01/2018	14:53	
Duplicate Lab Control Sample	KWG1805607-2	J:\MS14\DATA\110118\1101F013.D	11/01/2018	15:23	
612-102418	K1810430-012	J:\MS14\DATA\110118\1101F014.D	11/01/2018	15:52	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Level ID	File ID	Level ID	File ID
A	J:\MS14\DATA\071118\0711F003.D	G	J:\MS14\DATA\071118\0711F009.D
B	J:\MS14\DATA\071118\0711F004.D	H	J:\MS14\DATA\071118\0711F010.D
C	J:\MS14\DATA\071118\0711F005.D	I	J:\MS14\DATA\071118\0711F011.D
D	J:\MS14\DATA\071118\0711F006.D	J	J:\MS14\DATA\071118\0711F012.D
E	J:\MS14\DATA\071118\0711F007.D		
F	J:\MS14\DATA\071118\0711F008.D		

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Naphthalene	A	2.0	1.42	B	4.0	1.31	C	8.0	1.19	D	20	1.15	E	100	1.13
	F	200	1.11	G	400	1.09	H	1000	1.06	I	1600	1.03	J	2000	1.07
2-Methylnaphthalene	A	2.0	0.789	B	4.0	0.741	C	8.0	0.734	D	20	0.715	E	100	0.718
	F	200	0.692	G	400	0.662	H	1000	0.650	I	1600	0.627	J	2000	0.635
Acenaphthylene	A	2.0	2.52	B	4.0	2.35	C	8.0	2.29	D	20	2.33	E	100	2.37
	F	200	2.41	G	400	2.42	H	1000	2.41	I	1600	2.43	J	2000	2.34
Acenaphthene	A	2.0	1.44	B	4.0	1.38	C	8.0	1.33	D	20	1.38	E	100	1.38
	F	200	1.39	G	400	1.38	H	1000	1.35	I	1600	1.38	J	2000	1.32
Dibenzofuran	A	2.0	2.25	B	4.0	2.12	C	8.0	2.21	D	20	2.09	E	100	2.22
	F	200	2.29	G	400	2.24	H	1000	2.22	I	1600	2.24	J	2000	2.11
Fluorene	A	2.0	1.81	B	4.0	1.68	C	8.0	1.62	D	20	1.64	E	100	1.70
	F	200	1.68	G	400	1.67	H	1000	1.60	I	1600	1.63	J	2000	1.56
Phenanthrene	A	2.0	1.33	B	4.0	1.33	C	8.0	1.25	D	20	1.23	E	100	1.25
	F	200	1.25	G	400	1.22	H	1000	1.23	I	1600	1.22	J	2000	1.16
Anthracene	A	2.0	1.20	B	4.0	1.17	C	8.0	1.17	D	20	1.14	E	100	1.21
	F	200	1.22	G	400	1.22	H	1000	1.22	I	1600	1.21	J	2000	1.17
Fluoranthene	A	2.0	1.50	B	4.0	1.44	C	8.0	1.44	D	20	1.41	E	100	1.54
	F	200	1.60	G	400	1.58	H	1000	1.63	I	1600	1.65	J	2000	1.62
Pyrene	A	2.0	1.49	B	4.0	1.46	C	8.0	1.38	D	20	1.37	E	100	1.34
	F	200	1.29	G	400	1.32	H	1000	1.33	I	1600	1.39	J	2000	1.36
Benz(a)anthracene	A	2.0	1.50	B	4.0	1.32	C	8.0	1.26	D	20	1.19	E	100	1.20
	F	200	1.23	G	400	1.27	H	1000	1.32	I	1600	1.34	J	2000	1.31
Chrysene	A	2.0	1.23	B	4.0	1.21	C	8.0	1.23	D	20	1.20	E	100	1.24
	F	200	1.25	G	400	1.25	H	1000	1.26	I	1600	1.28	J	2000	1.24
Benzo(b)fluoranthene	A	2.0	1.19	B	4.0	1.16	C	8.0	1.15	D	20	1.16	E	100	1.20
	F	200	1.26	G	400	1.30	H	1000	1.34	I	1600	1.32	J	2000	1.27
Benzo(k)fluoranthene	A	2.0	1.16	B	4.0	1.17	C	8.0	1.13	D	20	1.19	E	100	1.23
	F	200	1.26	G	400	1.29	H	1000	1.29	I	1600	1.29	J	2000	1.25

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Benzo(a)pyrene	A	2.0	1.09	B	4.0	1.01	C	8.0	1.03	D	20	1.04	E	100	1.05
	F	200	1.07	G	400	1.11	H	1000	1.15	I	1600	1.16	J	2000	1.12
Indeno(1,2,3-cd)pyrene	A	2.0	1.23	B	4.0	1.10	C	8.0	1.06	D	20	1.06	E	100	1.07
	F	200	1.08	G	400	1.05	H	1000	1.01	I	1600	0.996	J	2000	0.959
Dibenz(a,h)anthracene	A	2.0	1.12	B	4.0	1.10	C	8.0	1.09	D	20	1.17	E	100	1.12
	F	200	1.10	G	400	1.07	H	1000	1.02	I	1600	1.00	J	2000	0.971
Benzo(g,h,i)perylene	A	2.0	1.44	B	4.0	1.37	C	8.0	1.31	D	20	1.34	E	100	1.28
	F	200	1.27	G	400	1.21	H	1000	1.12	I	1600	1.07	J	2000	1.04
Fluorene-d10				B	4.0	1.49	C	8.0	1.33	D	20	1.28	E	100	1.25
	F	200	1.24	G	400	1.25	H	1000	1.21	I	1600	1.24	J	2000	1.20
Fluoranthene-d10	A	2.0	1.18	B	4.0	1.19	C	8.0	1.15	D	20	1.11	E	100	1.20
	F	200	1.26	G	400	1.31	H	1000	1.40	I	1600	1.42	J	2000	1.39
Terphenyl-d14				B	4.0	1.05	C	8.0	0.934	D	20	0.867	E	100	0.832
	F	200	0.823	G	400	0.835	H	1000	0.837	I	1600	0.830	J	2000	0.801

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Calibration Date:** 07/11/2018

Initial Calibration Summary
Polynuclear Aromatic Hydrocarbons

Calibration ID: CAL15779 **Column:** MS
Instrument ID: MS14

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Naphthalene	MS	AverageRF	% RSD	10.7		≤ 20	1.15		0.70
2-Methylnaphthalene	MS	AverageRF	% RSD	7.5		≤ 20	0.696		0.40
Acenaphthylene	MS	AverageRF	% RSD	2.7		≤ 20	2.39		0.90
Acenaphthene	MS	AverageRF	% RSD	2.3		≤ 20	1.37		0.90
Dibenzofuran	MS	AverageRF	% RSD	3.1		≤ 20	2.20		0.80
Fluorene	MS	AverageRF	% RSD	4.1		≤ 20	1.66		0.90
Phenanthrene	MS	AverageRF	% RSD	4.1		≤ 20	1.25		0.70
Anthracene	MS	AverageRF	% RSD	2.4		≤ 20	1.19		0.70
Fluoranthene	MS	AverageRF	% RSD	5.8		≤ 20	1.54		0.60
Pyrene	MS	AverageRF	% RSD	4.5		≤ 20	1.37		0.60
Benz(a)anthracene	MS	AverageRF	% RSD	6.8		≤ 20	1.29		0.80
Chrysene	MS	AverageRF	% RSD	1.9		≤ 20	1.24		0.70
Benzo(b)fluoranthene	MS	AverageRF	% RSD	5.7		≤ 20	1.24		0.70
Benzo(k)fluoranthene	MS	AverageRF	% RSD	4.7		≤ 20	1.23		0.70
Benzo(a)pyrene	MS	AverageRF	% RSD	4.7		≤ 20	1.08		0.70
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	6.9		≤ 20	1.06		0.50
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	5.7		≤ 20	1.08		0.40
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	10.7		≤ 20	1.24		0.50
Fluorene-d10	SURR	AverageRF	% RSD	6.9		≤ 20	1.28		0.01
Fluoranthene-d10	SURR	AverageRF	% RSD	9.0		≤ 20	1.26		0.01
Terphenyl-d14	SURR	AverageRF	% RSD	8.9		≤ 20	0.867		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01

Service Request: K1810430
Calibration Date: 07/11/2018
Date Analyzed: 07/11/2018

Second Source Calibration Verification
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard
Analysis Method: 8270D SIM

Calibration ID: CAL15779
Units: ng/ml

File ID: J:\MS14\DATA\071118\0711F013.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	370	1.15	1.06	-8	NA	± 30 %	AverageRF
2-Methylnaphthalene	400	390	0.696	0.683	-2	NA	± 30 %	AverageRF
Acenaphthylene	400	390	2.39	2.33	-2	NA	± 30 %	AverageRF
Acenaphthene	400	380	1.37	1.32	-4	NA	± 30 %	AverageRF
Dibenzofuran	400	370	2.20	2.05	-7	NA	± 30 %	AverageRF
Fluorene	400	390	1.66	1.60	-4	NA	± 30 %	AverageRF
Phenanthrene	400	380	1.25	1.19	-4	NA	± 30 %	AverageRF
Anthracene	400	400	1.19	1.18	-1	NA	± 30 %	AverageRF
Fluoranthene	400	410	1.54	1.60	4	NA	± 30 %	AverageRF
Pyrene	400	350	1.37	1.21	-12	NA	± 30 %	AverageRF
Benz(a)anthracene	400	380	1.29	1.22	-6	NA	± 30 %	AverageRF
Chrysene	400	390	1.24	1.20	-3	NA	± 30 %	AverageRF
Benzo(b)fluoranthene	400	410	1.24	1.27	2	NA	± 30 %	AverageRF
Benzo(k)fluoranthene	400	420	1.23	1.28	4	NA	± 30 %	AverageRF
Benzo(a)pyrene	400	400	1.08	1.08	0	NA	± 30 %	AverageRF
Indeno(1,2,3-cd)pyrene	400	370	1.06	0.993	-7	NA	± 30 %	AverageRF
Dibenz(a,h)anthracene	400	380	1.08	1.03	-4	NA	± 30 %	AverageRF
Benzo(g,h,i)perylene	400	370	1.24	1.14	-9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01 **Date Analyzed:** 11/01/2018

Continuing Calibration Verification Summary
Polynuclear Aromatic Hydrocarbons

Calibration Type: Internal Standard **Calibration Date:** 07/11/2018
Analysis Method: 8270D SIM **Calibration ID:** CAL15779
Analysis Lot: KWG1805861
Units: ng/ml

File ID: J:\MS14\DATA\110118\1101F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Naphthalene	400	410	0.70	1.15	1.17	2	NA	± 20	AverageRF
2-Methylnaphthalene	400	410	0.40	0.696	0.712	2	NA	± 20	AverageRF
Acenaphthylene	400	450	0.90	2.39	2.67	12	NA	± 20	AverageRF
Acenaphthene	400	430	0.90	1.37	1.49	9	NA	± 20	AverageRF
Dibenzofuran	400	450	0.80	2.20	2.48	13	NA	± 20	AverageRF
Fluorene	400	430	0.90	1.66	1.80	8	NA	± 20	AverageRF
Phenanthrene	400	420	0.70	1.25	1.32	6	NA	± 20	AverageRF
Anthracene	400	390	0.70	1.19	1.17	-2	NA	± 20	AverageRF
Fluoranthene	400	410	0.60	1.54	1.58	2	NA	± 20	AverageRF
Pyrene	400	410	0.60	1.37	1.42	4	NA	± 20	AverageRF
Benz(a)anthracene	400	440	0.80	1.29	1.43	10	NA	± 20	AverageRF
Chrysene	400	430	0.70	1.24	1.34	8	NA	± 20	AverageRF
Benzo(b)fluoranthene	400	440	0.70	1.24	1.36	10	NA	± 20	AverageRF
Benzo(k)fluoranthene	400	430	0.70	1.23	1.31	6	NA	± 20	AverageRF
Benzo(a)pyrene	400	460	0.70	1.08	1.24	14	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	400	450	0.50	1.06	1.21	14	NA	± 20	AverageRF
Dibenz(a,h)anthracene	400	420	0.40	1.08	1.12	4	NA	± 20	AverageRF
Benzo(g,h,i)perylene	400	430	0.50	1.24	1.35	9	NA	± 20	AverageRF
Fluorene-d10	400	390	0.01	1.28	1.25	-2	NA	± 20	AverageRF
Fluoranthene-d10	400	380	0.01	1.26	1.21	-4	NA	± 20	AverageRF
Terphenyl-d14	400	400	0.01	0.867	0.858	-1	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound **‡ CCC Compound**

Client: Pacific Groundwater Group (PGG) **Service Request:** K1810430
Project: Head of Swan Island Lagoon/JK1807.01

Analysis Run Log
Polynuclear Aromatic Hydrocarbons

Analysis Method: 8270D SIM **Analysis Lot:** KWG1805861
Instrument ID: MS14

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1101F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1805861-1	11/1/2018	09:32		11/1/2018	09:52
1101F002.D	Continuing Calibration Verification	KWG1805861-2	11/1/2018	10:01		11/1/2018	10:20
1101F003.D	ZZZZZZ	ZZZZZZ	11/1/2018	10:30		11/1/2018	10:49
1101F004.D	ZZZZZZ	ZZZZZZ	11/1/2018	10:59		11/1/2018	11:18
1101F005.D	ZZZZZZ	ZZZZZZ	11/1/2018	11:28		11/1/2018	11:47
1101F006.D	ZZZZZZ	ZZZZZZ	11/1/2018	11:58		11/1/2018	12:17
1101F007.D	ZZZZZZ	ZZZZZZ	11/1/2018	12:27		11/1/2018	12:46
1101F008.D	ZZZZZZ	ZZZZZZ	11/1/2018	12:56		11/1/2018	13:15
1101F009.D	ZZZZZZ	ZZZZZZ	11/1/2018	13:25		11/1/2018	13:44
1101F010.D	ZZZZZZ	ZZZZZZ	11/1/2018	13:55		11/1/2018	14:14
1101F011.D	Method Blank	KWG1805607-3	11/1/2018	14:24		11/1/2018	14:43
1101F012.D	Lab Control Sample	KWG1805607-1	11/1/2018	14:53		11/1/2018	15:12
1101F013.D	Duplicate Lab Control Sample	KWG1805607-2	11/1/2018	15:23		11/1/2018	15:42
1101F014.D	612-102418	K1810430-012	11/1/2018	15:52		11/1/2018	16:11
1101F015.D	ZZZZZZ	ZZZZZZ	11/1/2018	16:22		11/1/2018	16:41
1101F016.D	ZZZZZZ	ZZZZZZ	11/1/2018	16:51		11/1/2018	17:10
1101F017.D	ZZZZZZ	ZZZZZZ	11/1/2018	17:20		11/1/2018	17:39
1101F018.D	ZZZZZZ	ZZZZZZ	11/1/2018	17:50		11/1/2018	18:09
1101F019.D	ZZZZZZ	ZZZZZZ	11/1/2018	18:19		11/1/2018	18:38
1101F020.D	ZZZZZZ	ZZZZZZ	11/1/2018	18:49		11/1/2018	19:08
1101F021.D	Continuing Calibration Verification	KWG1805861-3	11/1/2018	19:18		11/1/2018	19:37

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Pacific Groundwater Group (PGG)
Project: Head of Swan Island Lagoon/JK1807.01
Sample Matrix: Water

Service Request: K1810430
Date Extracted: 10/30/2018

Extraction Prep Log
Polynuclear Aromatic Hydrocarbons

Extraction Method: EPA 3511
Analysis Method: 8270D SIM

Extraction Lot: KWG1805607
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
612-102418	K1810430-012	10/24/18	10/24/18	450mL	2ml	NA	
Method Blank	KWG1805607-3	NA	NA	450mL	2ml	NA	
Lab Control Sample	KWG1805607-1	NA	NA	450mL	2ml	NA	
Duplicate Lab Control Sample	KWG1805607-2	NA	NA	450mL	2ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Raw Data

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Total Solids

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Benchsheet

Service Request #: K1810430, KQ1815750 **Run #:** 613038
Test: TS **Balance ID:** K-BALANCE-49
Method: 160.3 Modified

Matrix	Lab Code	Tare (g)	Wet Wt. (g)	Tare + Dry Wt. (g)	Dry Weight (g)	% Total Solids	RPD
Soil	K1810430-001	1.279	10.155	4.177	2.90	28.5	
Soil	K1810430-002	1.268	10.460	4.430	3.16	30.2	
Soil	K1810430-003	1.269	10.020	4.742	3.47	34.7	
Soil	K1810430-004	1.285	10.037	4.770	3.49	34.7	
Soil	K1810430-005	1.271	10.300	4.881	3.61	35.0	
Soil	K1810430-005DUP	1.292	10.397	4.938	3.65	35.1	<1
Soil	K1810430-006	1.283	10.389	4.165	2.88	27.7	
Soil	K1810430-007	1.280	10.154	4.050	2.77	27.3	
Soil	K1810430-008	1.276	10.193	4.558	3.28	32.2	
Soil	K1810430-009	1.280	10.522	4.309	3.03	28.8	
Soil	K1810430-010	1.269	10.058	5.949	4.68	46.5	
Soil	K1810430-011	1.286	11.746	9.985	8.70	74.1	

	Oven ID	Temp In	Temp Out	Date In	Time In	Date Out	Time Out	Thermometer ID
Oven1	k-oven-07	105	105	11/30/2018	11:20	10/31/2018	07:40	

	Cal EQID	Cal Start Value	Cal End Value	Start Date	Start Time	End Date	End Time
Calibration1	K-BALANCE-49	1.000/100.000	1.000/99.999	10/30/2018	09:55	10/31/2018	11:20
Calibration2	K-BALANCE-49	1.000/99.999	1.000/99.999	10/31/2018	09:05	10/31/2018	09:14

Comments: gb 42868

Polynuclear Aromatic Hydrocarbons

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F014.D
Lab ID: K1810430-001
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 11:21
Date Quantitated: 11/30/2018 12:38
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F014.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 11:21	**Quant Date:**	11/30/2018 12:38	**Vial:**	14
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-001			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702213	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.74	-0.01	136	53237	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	28627	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	68745	200.00	OK
4	Chrysene-d12	10.11	0.01	240	73642	200.00	OK
5	Perylene-d12	13.32	0.03	264	79661	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.74	-0.01	0.00	176	27480	150.13	75	26-102	OK	
3	Fluoranthene-d10	8.54	0.01	0.00	212	60129	138.78	69	23-110	OK	
4	Terphenyl-d14	8.88	0.00	0.00	244	53408	167.20	84	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.76	-0.01	0.00	128	5980	19.46	17	D	
1	2-Methylnaphthalene	5.41		0.00	142	1795	9.69	8.5	JD	
2	Acenaphthylene	6.19		0.00	152	5195	15.21	13	D	
2	Acenaphthene	6.33	-0.01	0.00	154	2343	11.94	10	D	
2	Dibenzofuran	6.48	-0.01	0.00	168	4972	15.79	14	D	
2	Fluorene	6.77		0.00	166	6204**m**	26.14	23	D	
3	Phenanthrene	7.57		0.00	178	60537	141.16	120	D	
3	Anthracene	7.61		0.00	178	16792	41.02	36	D	
3	Fluoranthene	8.56	0.01	0.00	202	219728	414.94	360	D	
4	Pyrene	8.75		0.00	202	207131	409.95	360	D	
4	Benz(a)anthracene	10.09		0.00	228	60949	128.01	110	D	
4	Chrysene	10.15	0.01	0.00	228	73027**m**	160.13	140	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F014.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 11:21	**Quant Date:**	11/30/2018 12:38	**Vial:**	14
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-001			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.24	0.03	0.00	252	116986	237.70	210	D	
5	Benzo(k)fluoranthene	12.30	0.02	0.00	252	40066**m**	82.06	72	D	
5	Benzo(a)pyrene	13.15	0.03	0.00	252	55951	129.63	110	D	
5	Indeno(1,2,3-cd)pyrene	15.52	0.03	0.00	276	43542	102.88	90	D	
5	Dibenz(a,h)anthracene	15.54	0.02	0.00	278	9990**m**	23.29	20	D	
5	Benzo(g,h,i)perylene	15.92	0.04	0.00	276	58580	118.19	100	D	

Prep Amount:	40.037 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	28.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

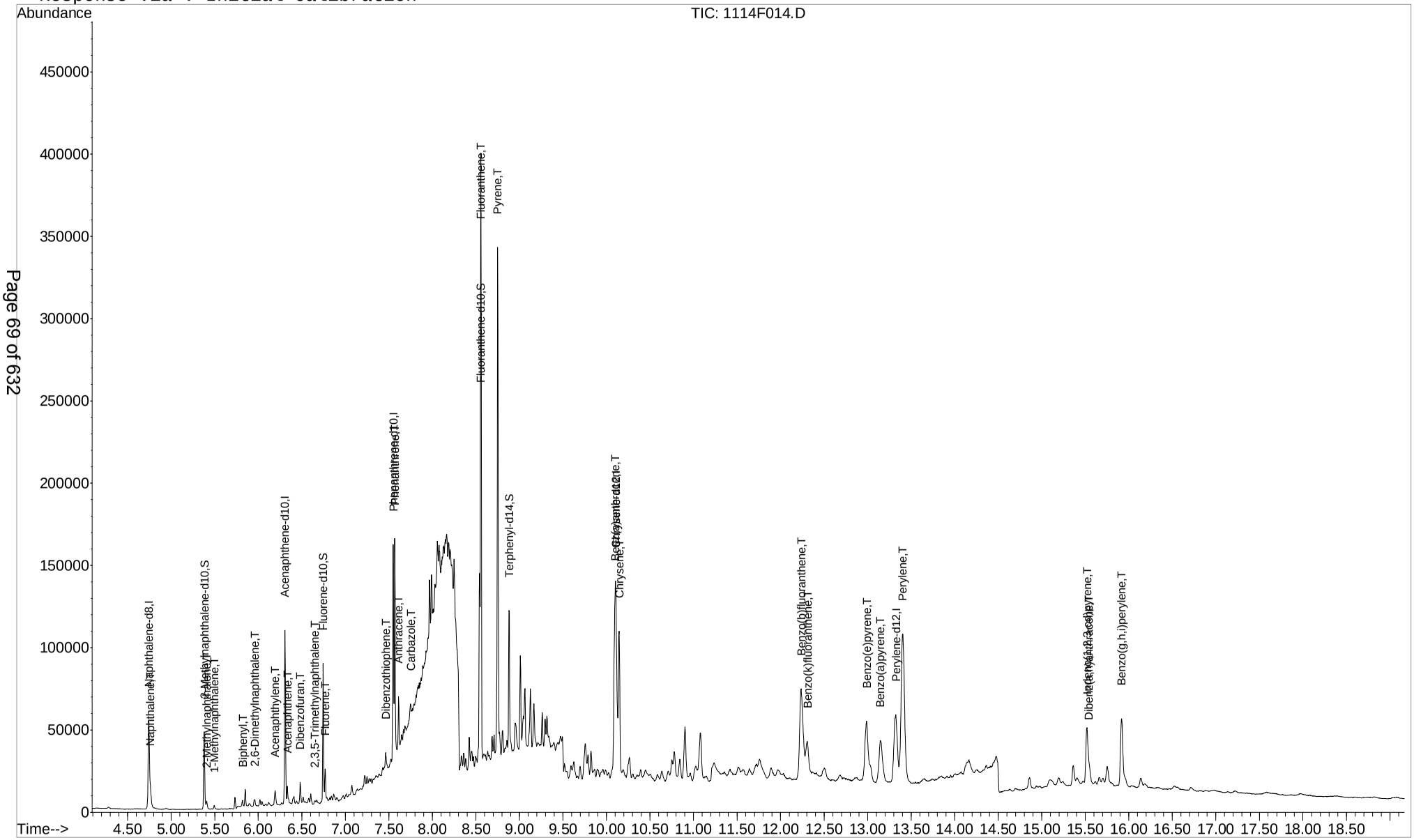
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

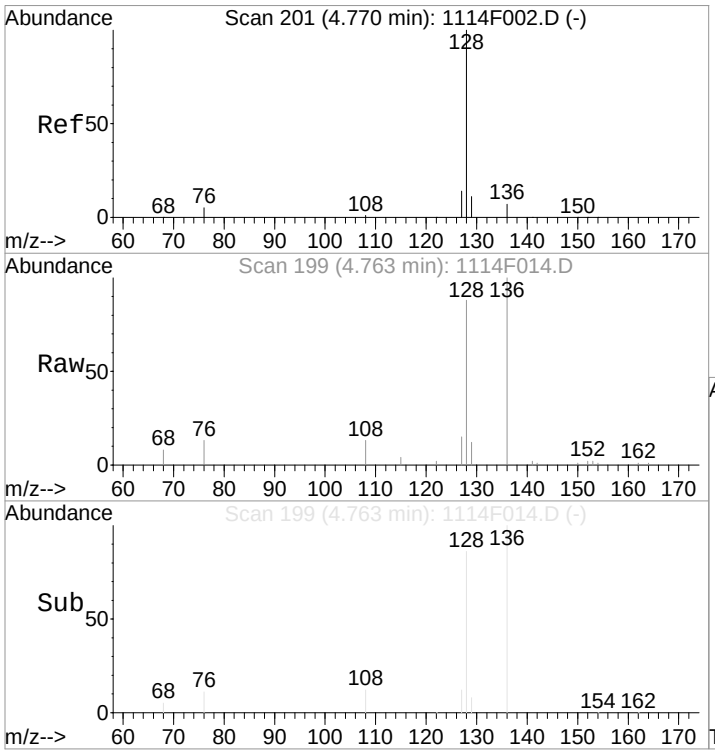
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:38 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



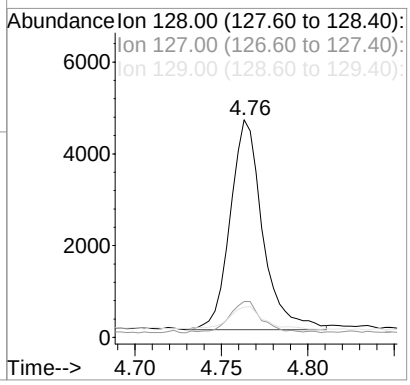
1st 12/03/18
2nd 12/06/18

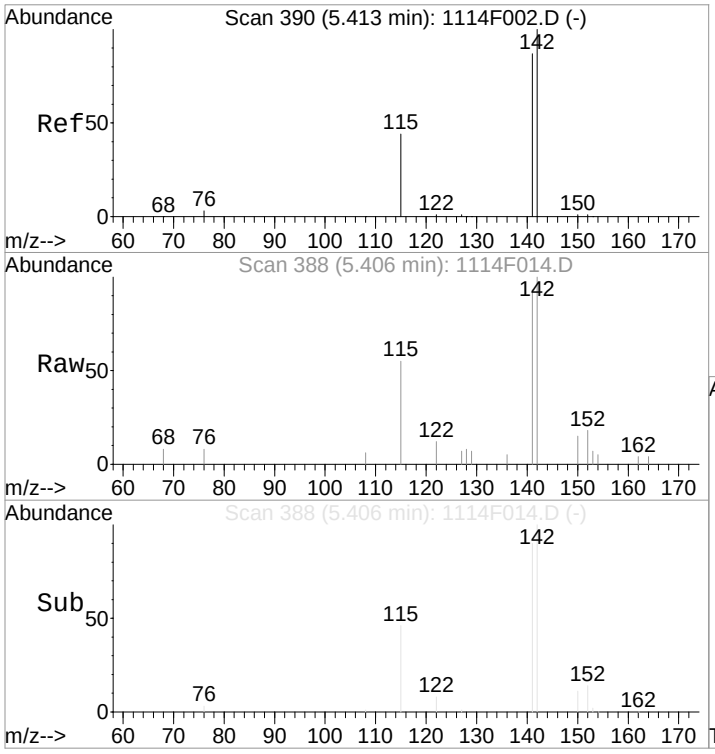


#2
Naphthalene
Concen: 19.46 ng/ml
RT: 4.76 min Scan# 199
Delta R.T. -0.02 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:128 Resp: 5980

Ion	Ratio	Lower	Upper
128	100		
127	14.8	0.0	43.7
129	10.2	0.0	30.8

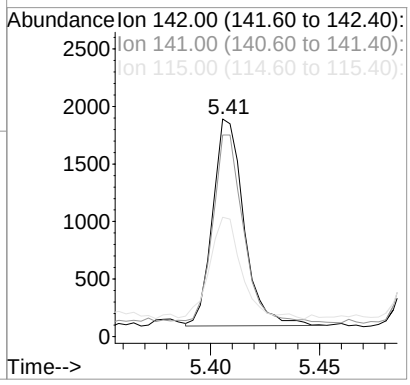


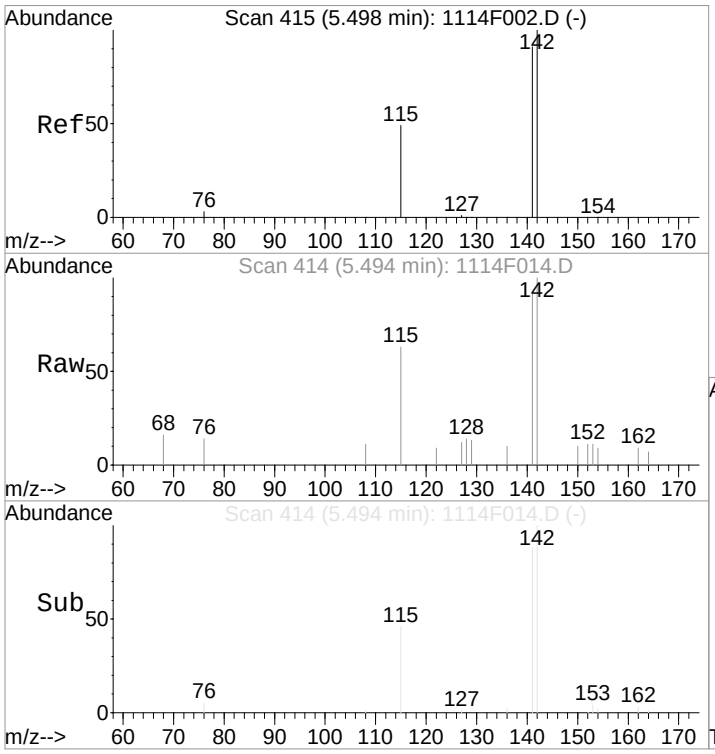


#4
2-Methylnaphthalene
Concen: 9.69 ng/ml
RT: 5.41 min Scan# 388
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:142 Resp: 1795

Ion	Ratio	Lower	Upper
142	100		
141	90.8	56.8	116.8
115	48.3	13.3	53.3

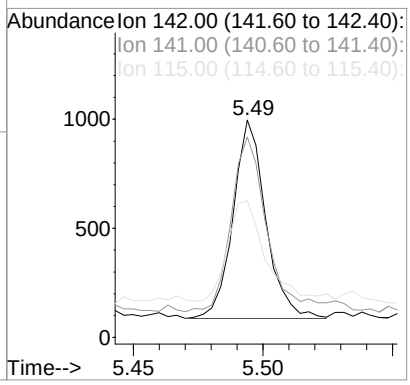


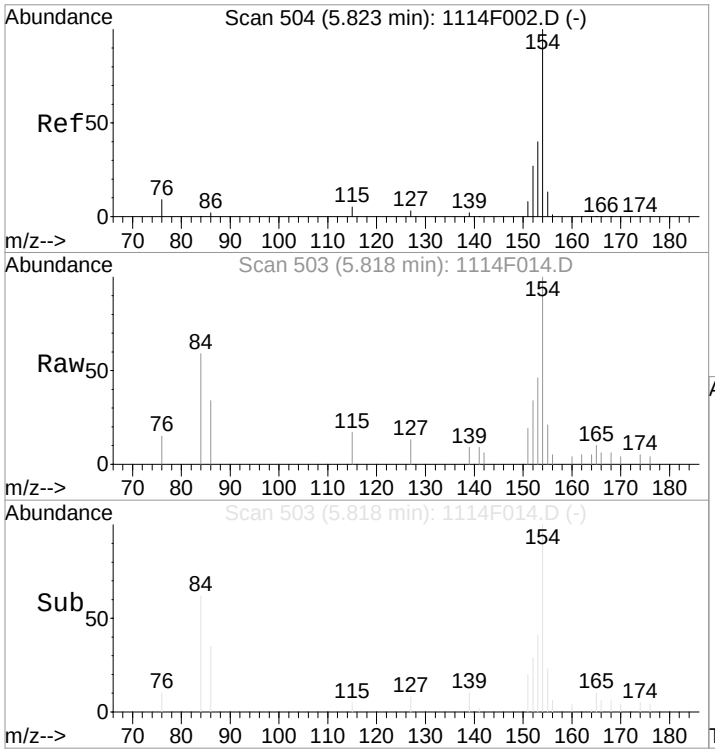


#5
1-Methylnaphthalene
Concen: 4.49 ng/ml
RT: 5.49 min Scan# 414
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:142 Resp: 801

Ion	Ratio	Lower	Upper
142	100		
141	88.0	59.7	119.7
115	49.8	13.7	53.7

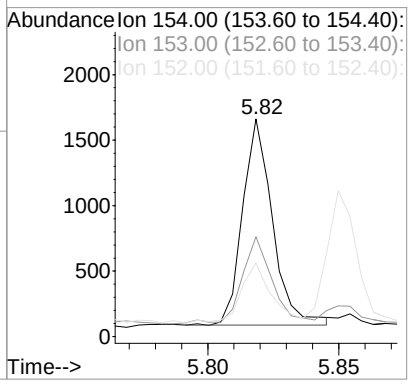




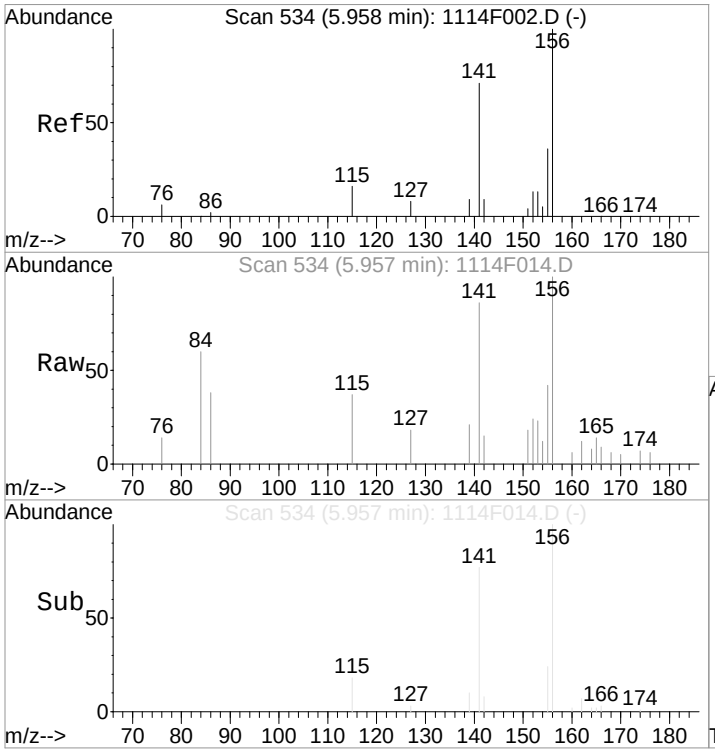
#6
Biphenyl
Concen: 5.42 ng/ml
RT: 5.82 min Scan# 503
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:154 Resp: 1254

Ion	Ratio	Lower	Upper
154	100		
153	41.8	11.4	71.4
152	29.1	7.1	47.1



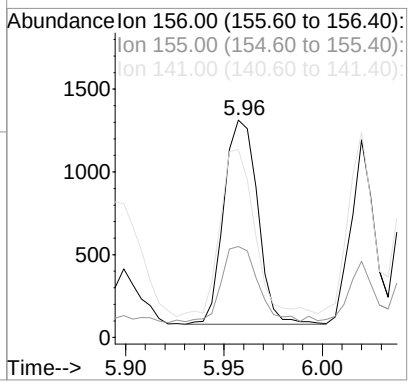
1st 12/03/18
2nd 12/06/18

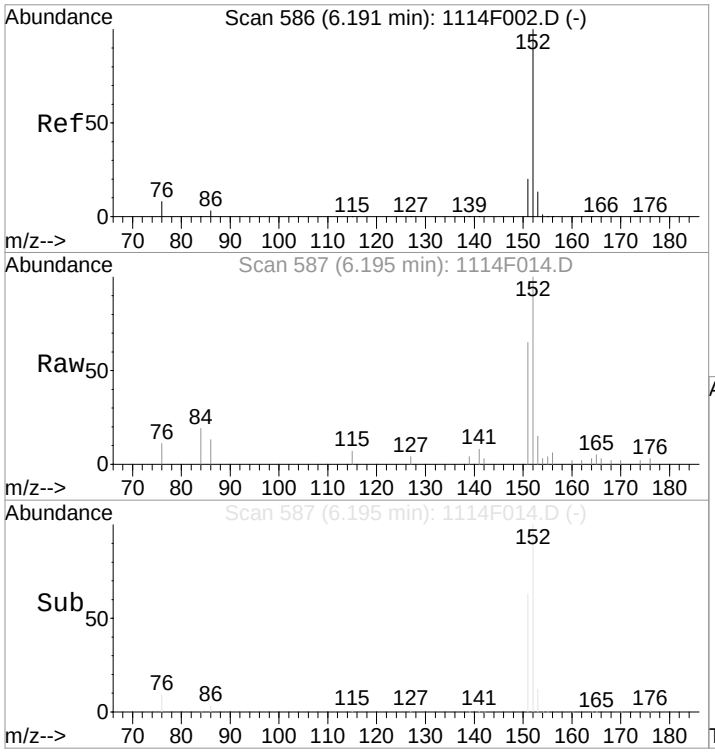


#7
2,6-Dimethylnaphthalene
Concen: 9.28 ng/ml
RT: 5.96 min Scan# 534
Delta R.T. -0.00 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:156 Resp: 1476

Ion	Ratio	Lower	Upper
156	100		
155	36.9	7.0	67.0
141	80.0	47.9	87.9

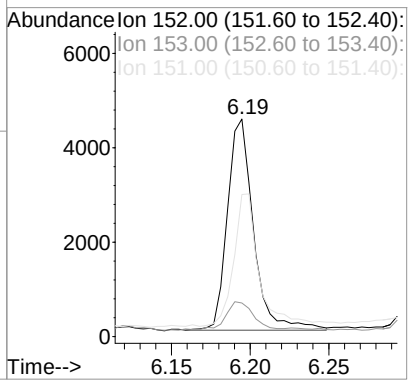


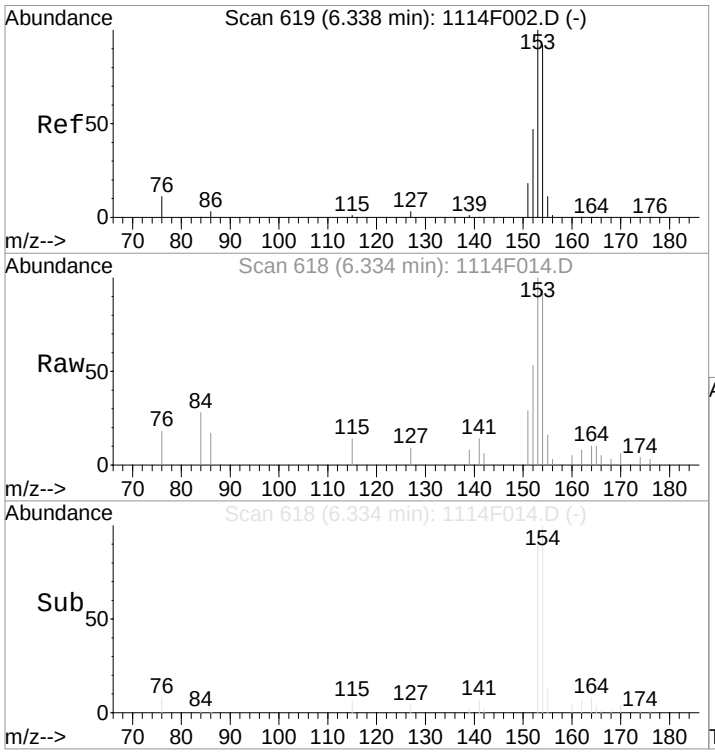


#9
Acenaphthylene
Concen: 15.21 ng/ml
RT: 6.19 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:152 Resp: 5195

Ion	Ratio	Lower	Upper
152	100		
153	12.6	0.0	42.9
151	62.4	0.2	40.2#

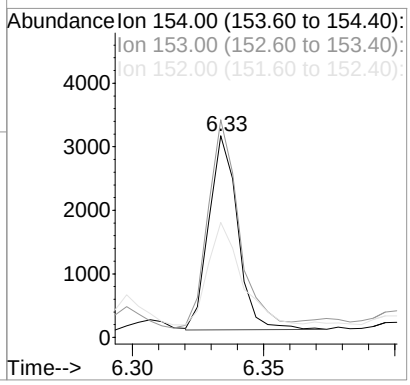


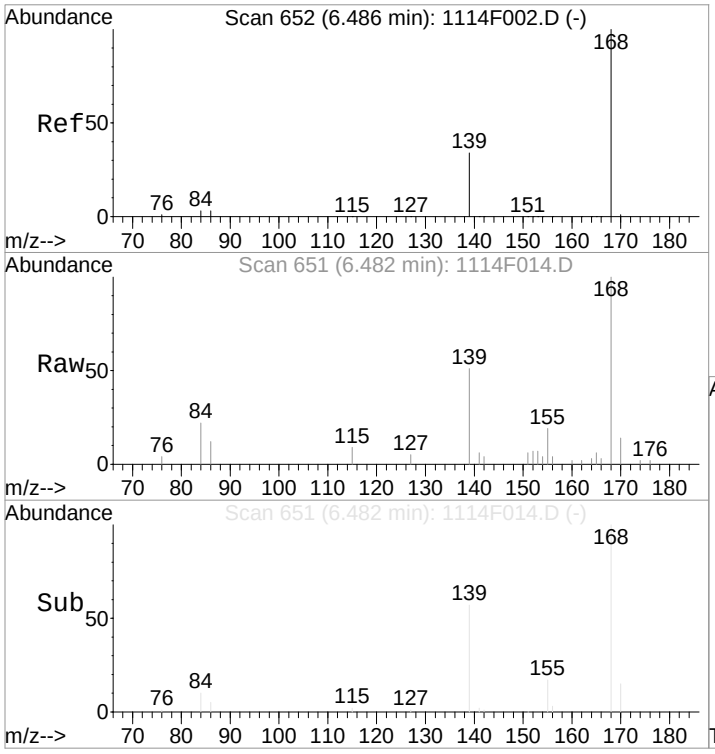


#10
Acenaphthene
Concen: 11.94 ng/ml
RT: 6.33 min Scan# 618
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:154 Resp: 2343

Ion	Ratio	Lower	Upper
154	100		
153	106.0	77.1	137.1
152	52.9	19.7	79.7

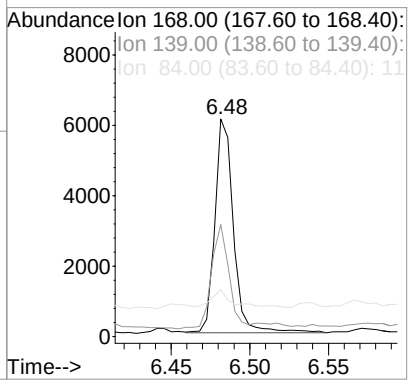




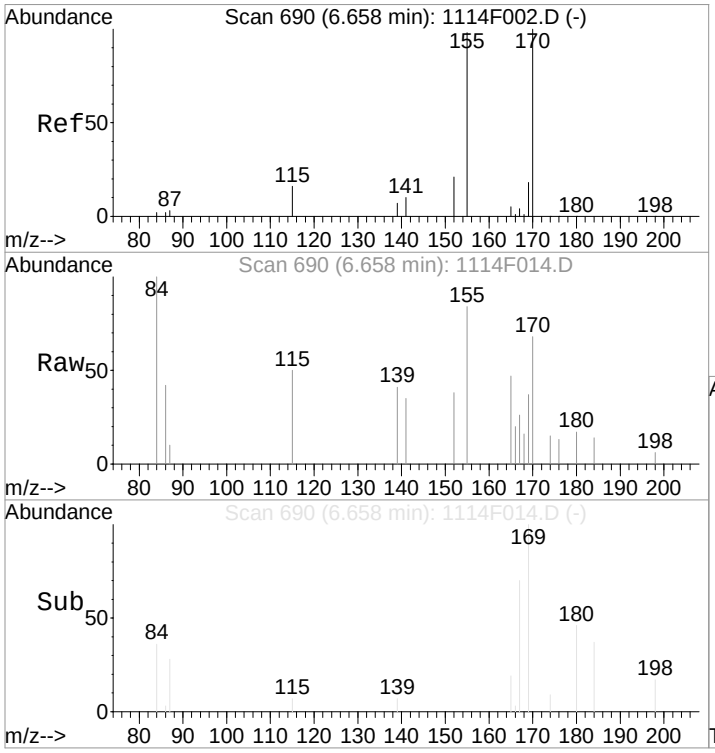
#11
Dibenzofuran
Concen: 15.79 ng/ml
RT: 6.48 min Scan# 651
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:168 Resp: 4972

Ion	Ratio	Lower	Upper
168	100		
139	48.2	0.0	55.8
84	8.1	0.0	23.5



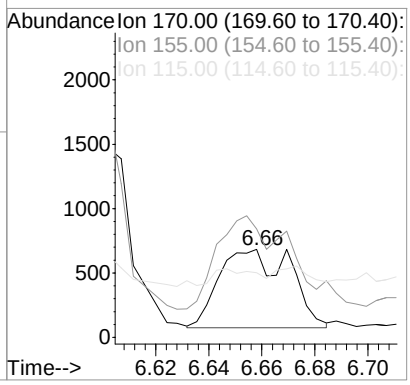
1st 12/03/18
2nd 12/06/18

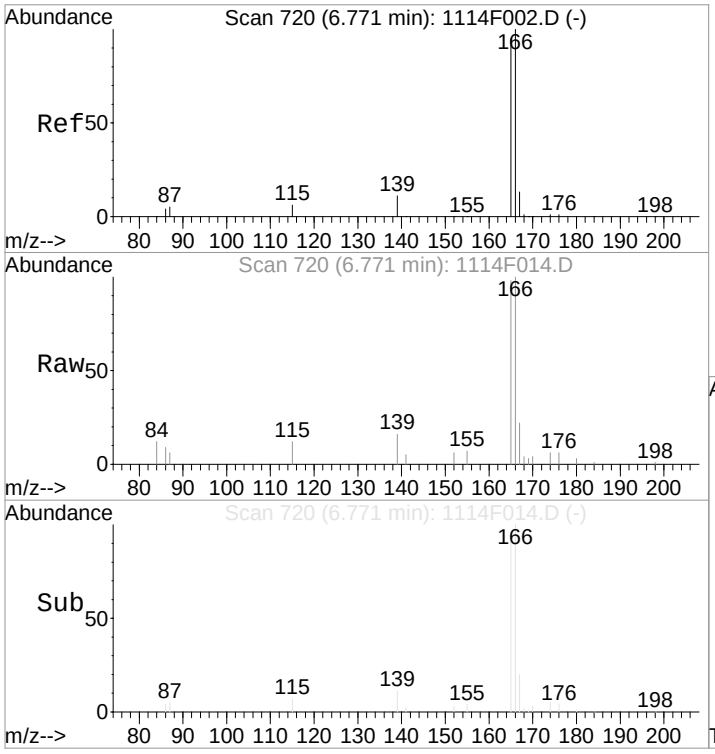


#12
2,3,5-Trimethylnaphthalene
Concen: 6.22 ng/ml m
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:170 Resp: 1128

Ion	Ratio	Lower	Upper
170	100		
155	123.2	59.2	119.2#
115	73.2	0.0	30.1#

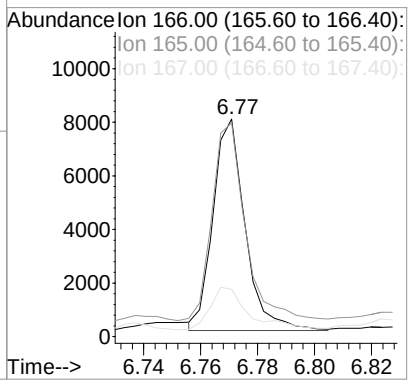


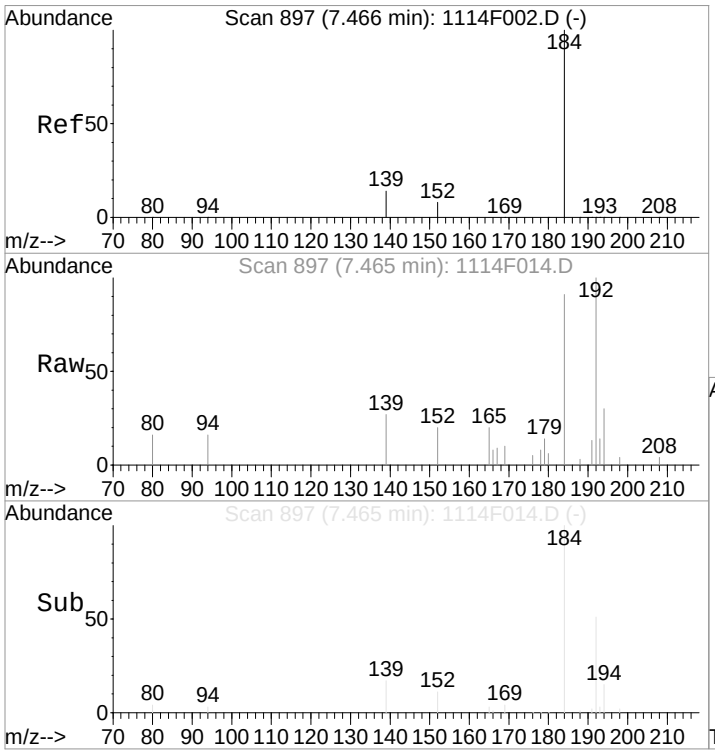


#14
Fluorene
Concen: 26.14 ng/ml m
RT: 6.77 min Scan# 720
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:166 Resp: 6204

Ion	Ratio	Lower	Upper
166	100		
165	98.3	63.4	123.4
167	21.8	0.0	33.1

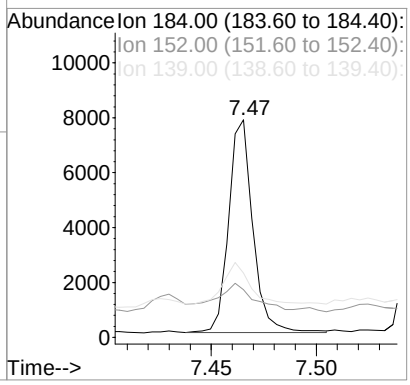


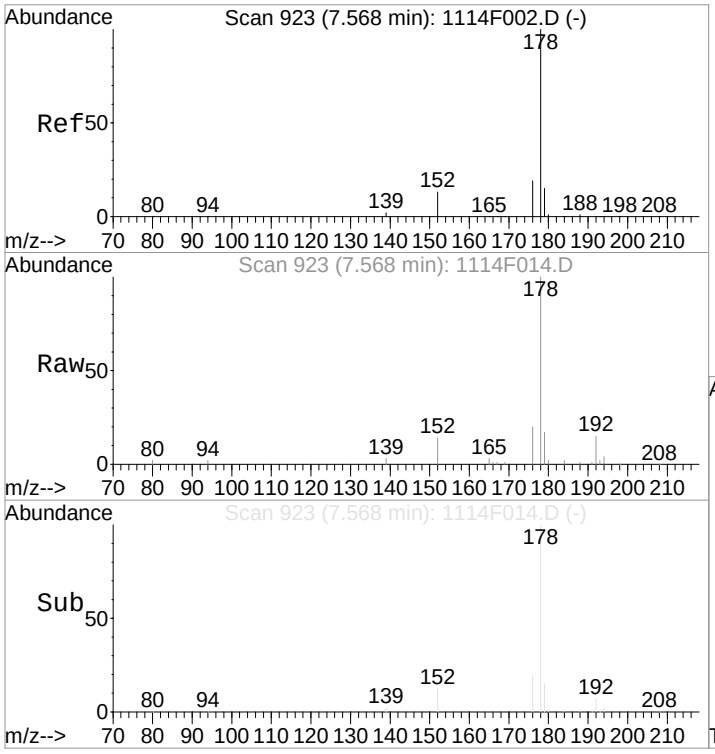


#16
Dibenzothiophene
Concen: 14.39 ng/ml
RT: 7.47 min Scan# 897
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:184 Resp: 6168

Ion	Ratio	Lower	Upper
184	100		
152	10.5	0.0	37.8
139	14.6	0.0	32.6

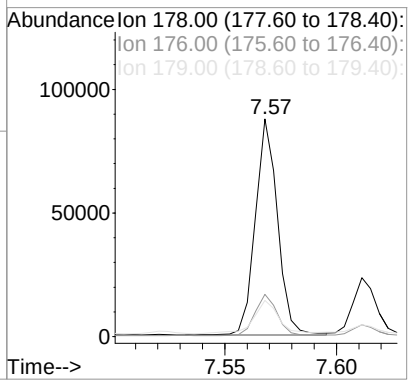


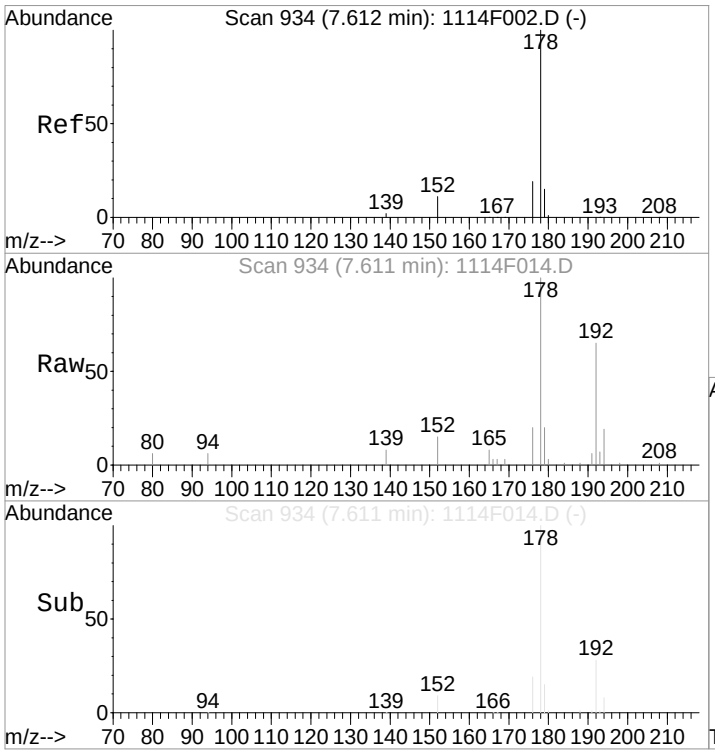


#17
Phenanthrene
Concen: 141.16 ng/ml
RT: 7.57 min Scan# 923
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:178 Resp: 60537

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.7
179	15.3	0.0	35.1

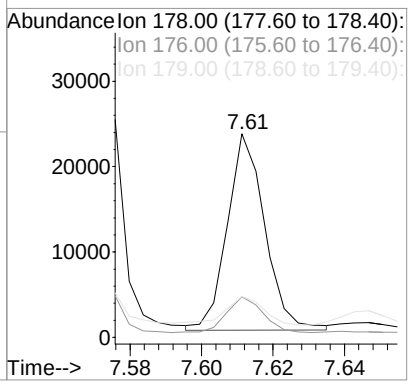


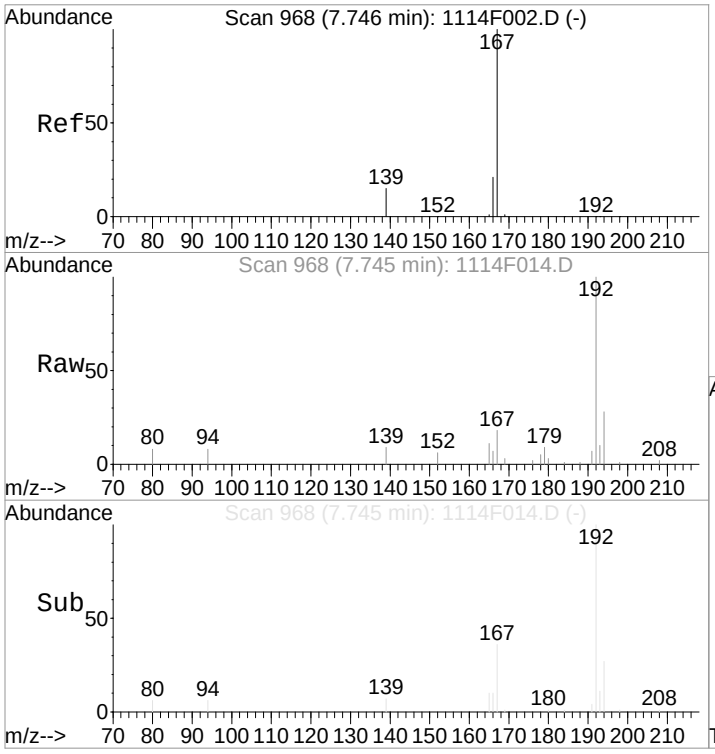


#18
Anthracene
Concen: 41.02 ng/ml
RT: 7.61 min Scan# 934
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:178 Resp: 16792

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	48.0
179	13.5	0.0	35.1

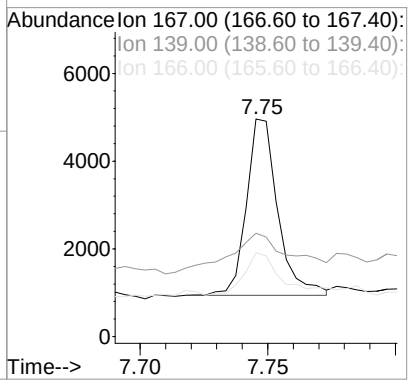




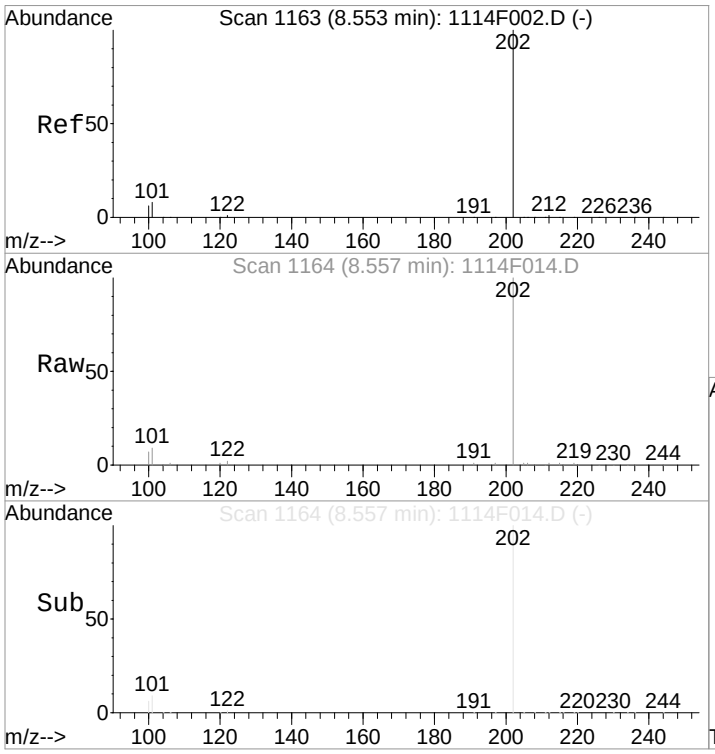
#19
Carbazole
Concen: 8.60 ng/ml
RT: 7.75 min Scan# 968
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:167 Resp: 3435

Ion	Ratio	Lower	Upper
167	100		
139	19.7	0.0	41.5
166	21.5	0.7	40.7



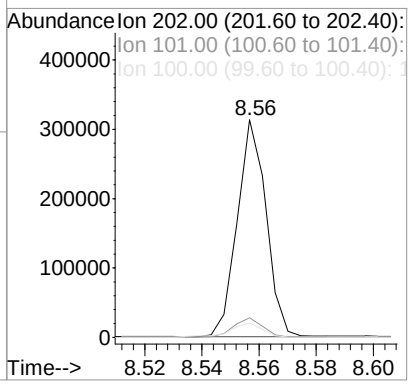
1st 12/03/18
2nd 12/06/18

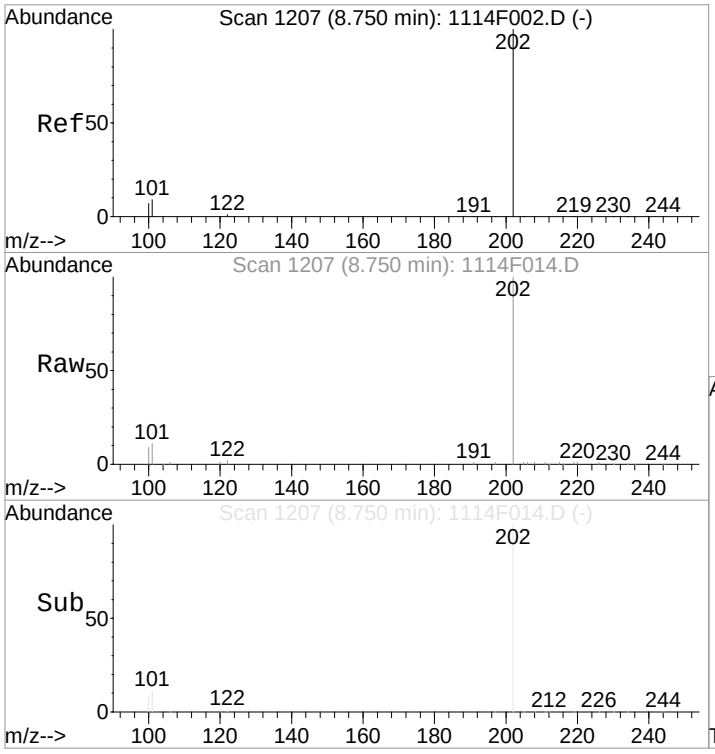


#21
Fluoranthene
Concen: 414.94 ng/ml
RT: 8.56 min Scan# 1164
Delta R.T. -0.00 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:202 Resp: 219728

Ion	Ratio	Lower	Upper
202	100		
101	8.8	0.0	41.3
100	6.5	0.0	28.6

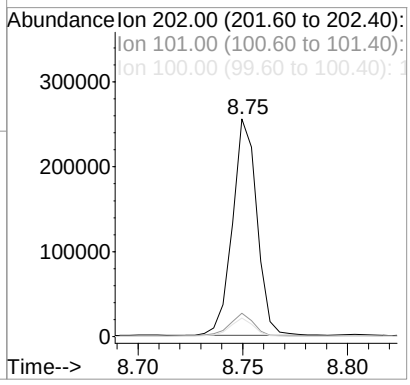




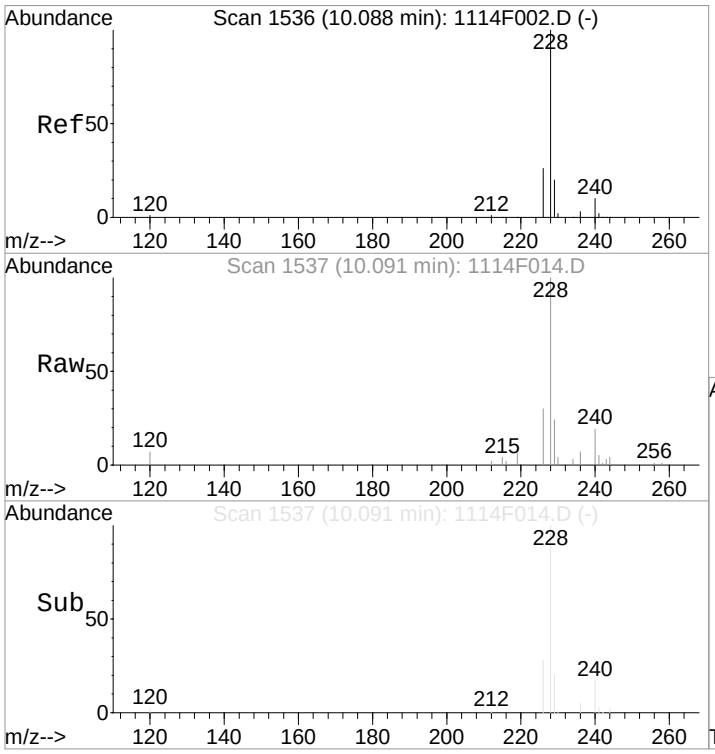
#24
Pyrene
Concen: 409.95 ng/ml
RT: 8.75 min Scan# 1207
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:202 Resp: 207131

Ion	Ratio	Lower	Upper
202	100		
101	10.6	0.0	40.8
100	8.4	0.0	28.5



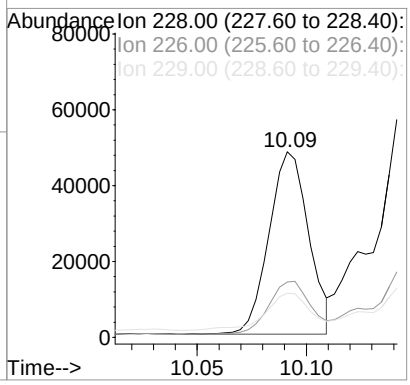
1st 12/03/18
2nd 12/06/18

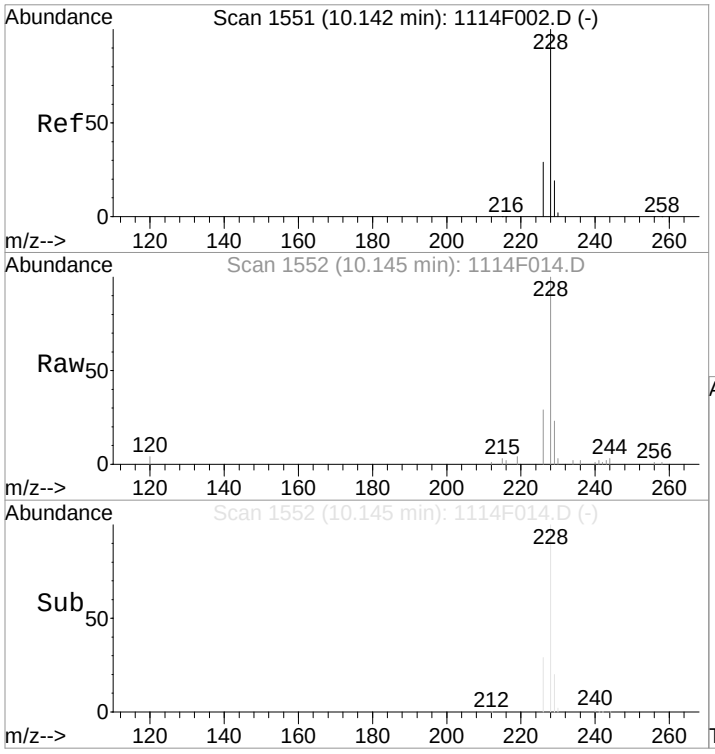


#26
Benz(a)anthracene
Concen: 128.01 ng/ml
RT: 10.09 min Scan# 1537
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:228 Resp: 60949

Ion	Ratio	Lower	Upper
228	100		
226	28.7	0.0	56.3
229	20.4	0.0	39.1

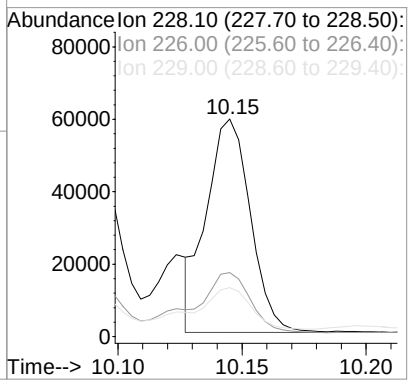




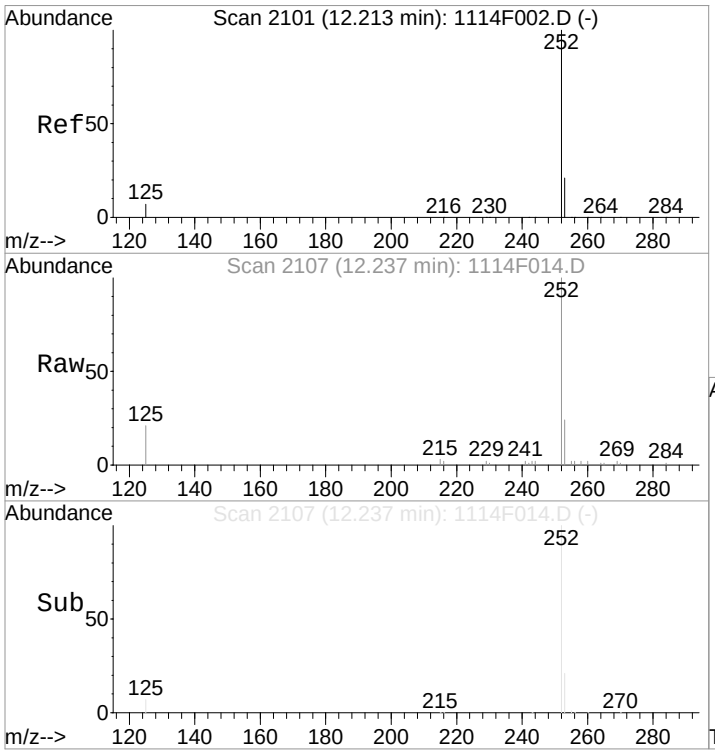
#27
Chrysene
Concen: 160.13 ng/ml m
RT: 10.15 min Scan# 1552
Delta R.T. -0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:228 Resp: 73027

Ion	Ratio	Lower	Upper
228	100		
226	29.5	0.0	58.7
229	22.6	0.0	39.2



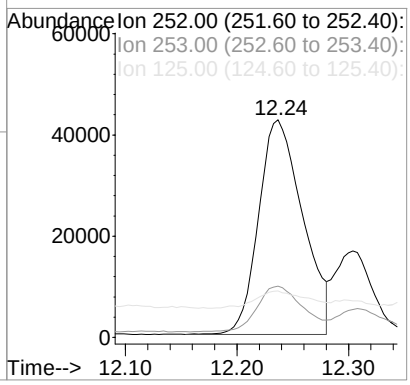
1st 12/03/18
2nd 12/06/18

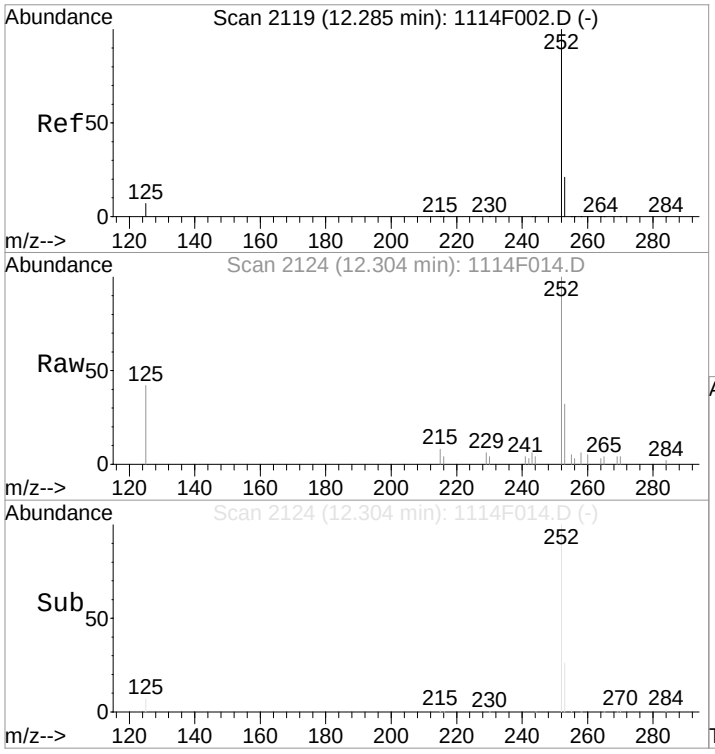


#29
Benzo(b)fluoranthene
Concen: 237.70 ng/ml
RT: 12.24 min Scan# 2107
Delta R.T. 0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:252 Resp: 116986

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	7.4	0.0	29.5

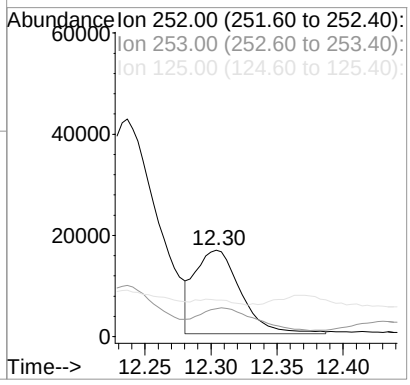




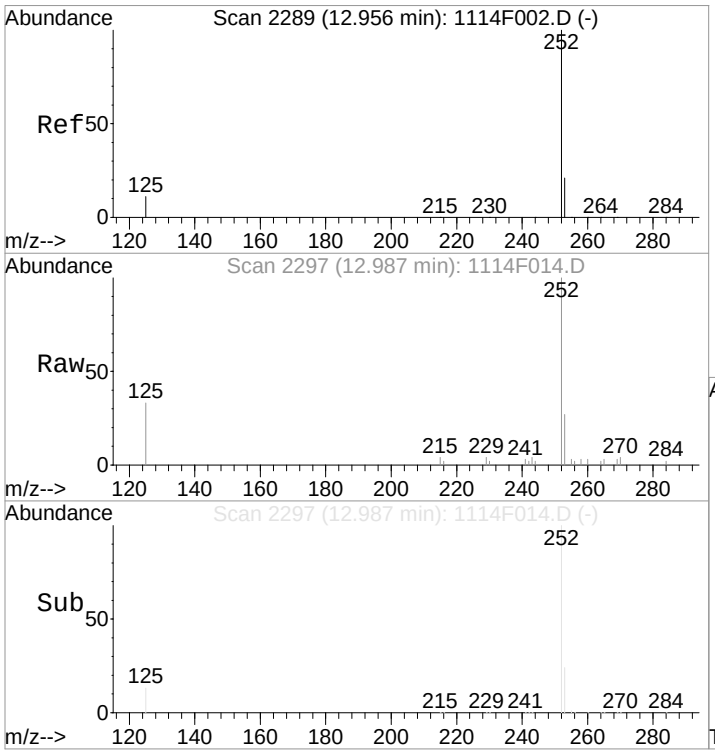
#30
Benzo(k)fluoranthene
Concen: 82.06 ng/ml m
RT: 12.30 min Scan# 2124
Delta R.T. 0.01 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:252 Resp: 40066

Ion	Ratio	Lower	Upper
252	100		
253	32.2	0.0	51.2
125	42.4	0.0	29.7#



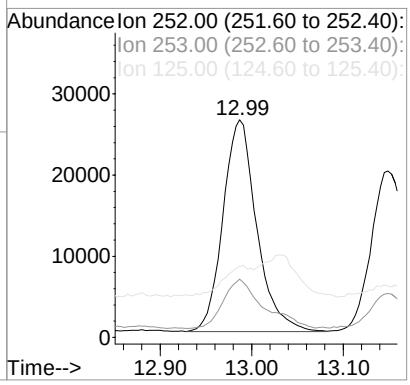
1st 12/03/18
2nd 12/06/18

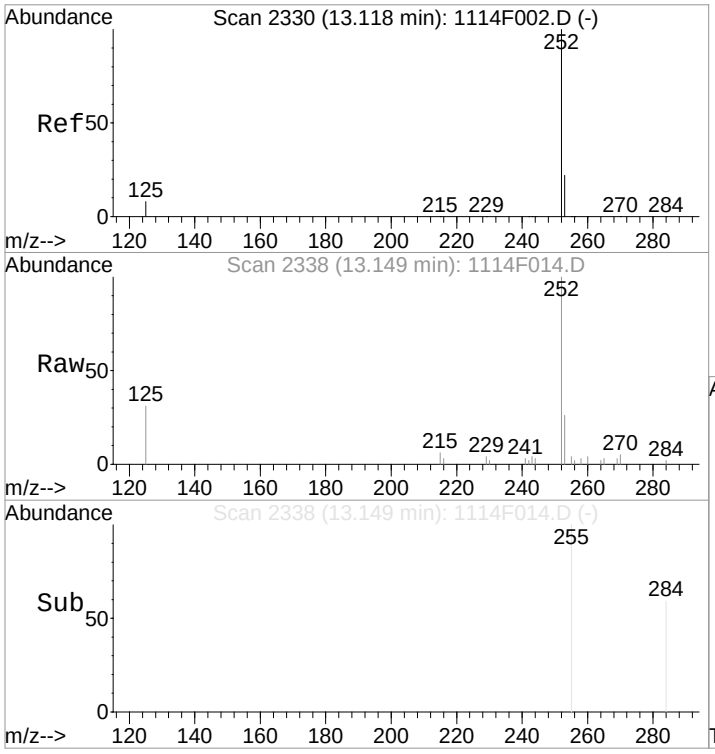


#31
Benzo(e)pyrene
Concen: 142.51 ng/ml
RT: 12.99 min Scan# 2297
Delta R.T. 0.02 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:252 Resp: 66855

Ion	Ratio	Lower	Upper
252	100		
253	23.3	0.0	51.3
125	13.5	0.0	33.5

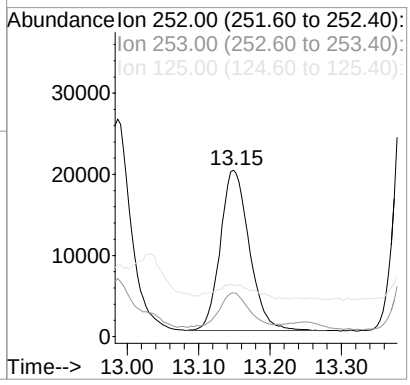




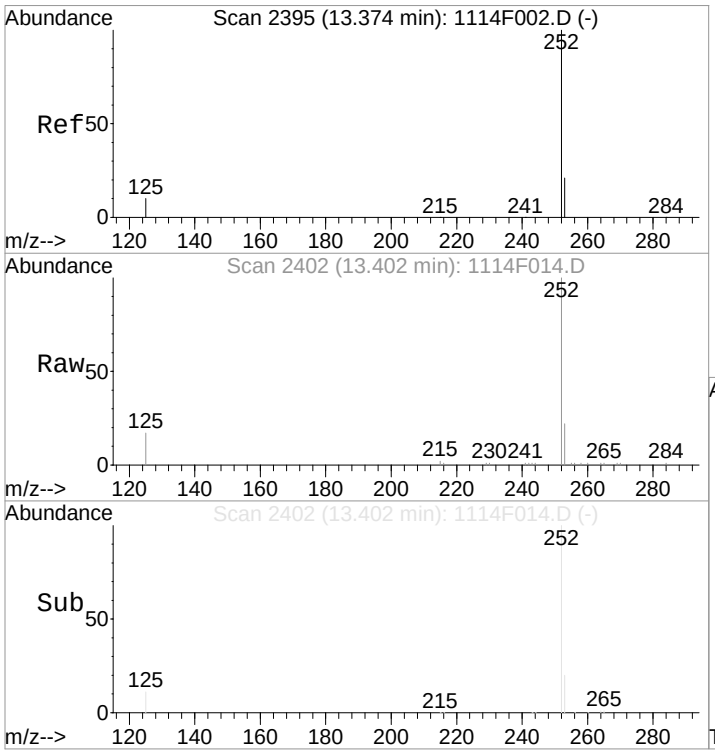
#32
Benzo(a)pyrene
Concen: 129.63 ng/ml
RT: 13.15 min Scan# 2338
Delta R.T. 0.02 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:252 Resp: 55951

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	50.9
125	8.6	0.0	30.3



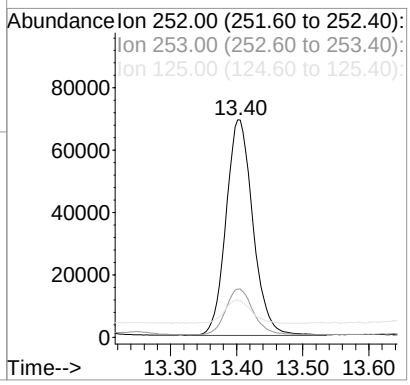
1st 12/03/18
2nd 12/06/18

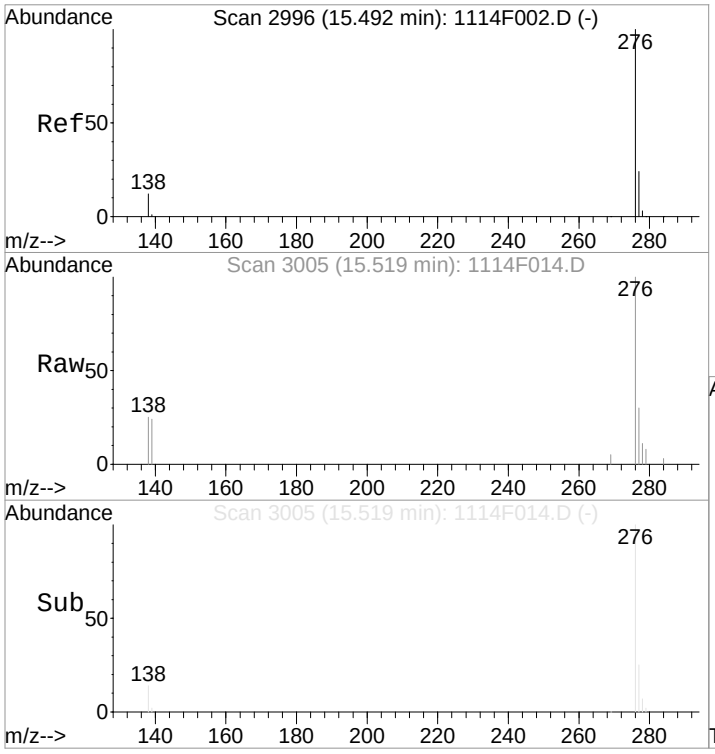


#33
Perylene
Concen: 431.47 ng/ml
RT: 13.40 min Scan# 2402
Delta R.T. 0.02 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:252 Resp: 195355

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.2
125	10.7	0.0	33.8

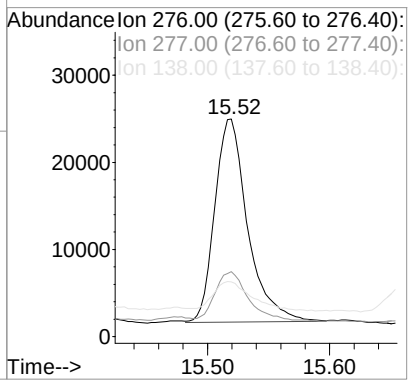




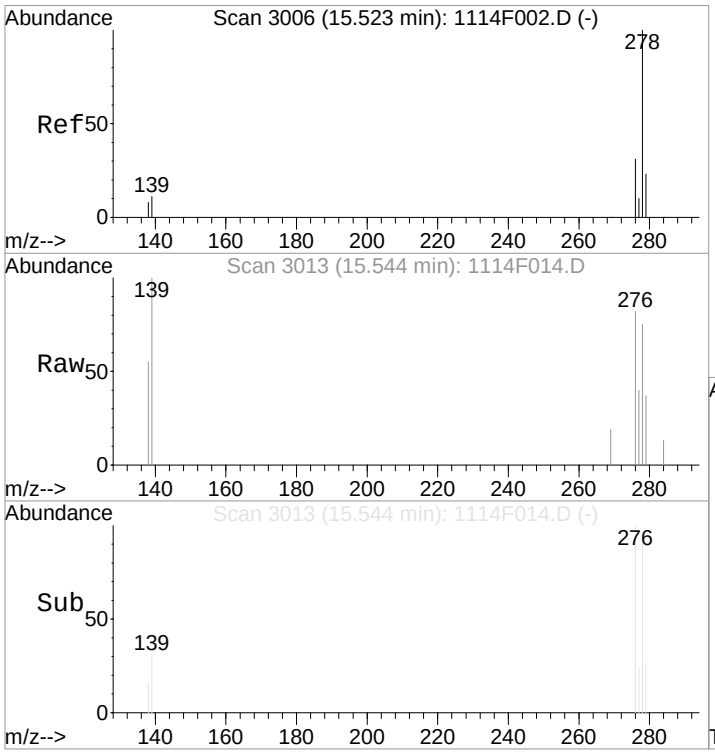
#34
Indeno(1,2,3-cd)pyrene
Concen: 102.88 ng/ml
RT: 15.52 min Scan# 3005
Delta R.T. 0.03 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:276 Resp: 43542

Ion	Ratio	Lower	Upper
276	100		
277	24.3	0.0	53.4
138	14.1	0.0	37.7



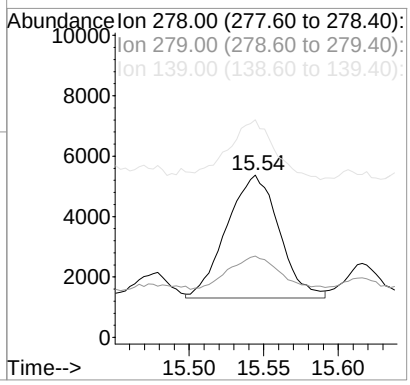
1st 12/03/18
2nd 12/06/18

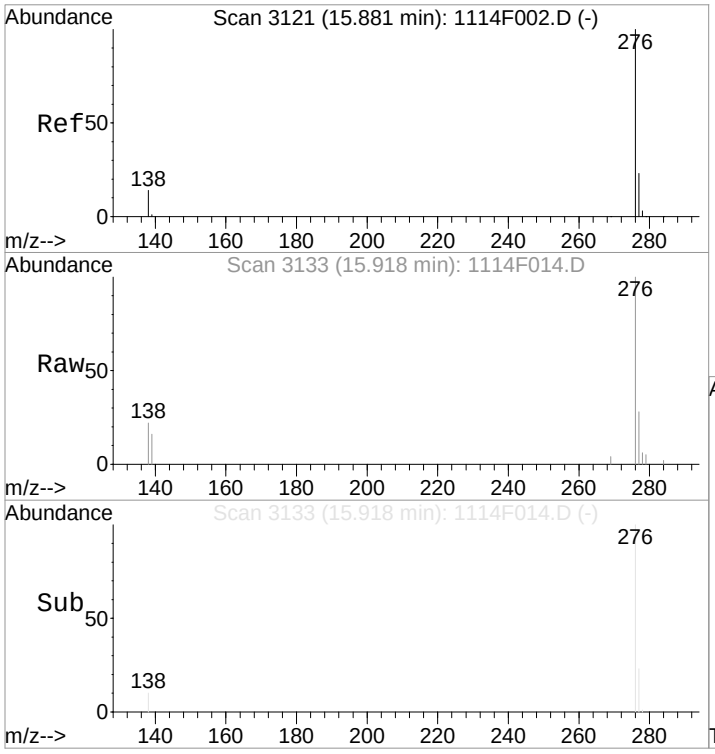


#35
Dibenz(a,h)anthracene
Concen: 23.29 ng/ml m
RT: 15.54 min Scan# 3013
Delta R.T. 0.02 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:278 Resp: 9990

Ion	Ratio	Lower	Upper
278	100		
279	50.1	0.0	53.5
139	134.1	0.0	35.0#

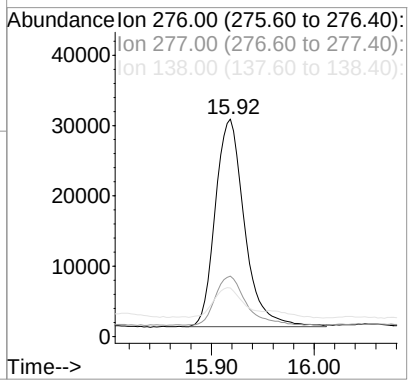




#36
Benzo(g,h,i)perylene
Concen: 118.19 ng/ml
RT: 15.92 min Scan# 3133
Delta R.T. 0.04 min
Lab File: 1114F014.D
Acq: 14 Nov 2018 11:21 am

Tgt Ion:276 Resp: 58580

Ion	Ratio	Lower	Upper
276	100		
277	23.6	0.0	53.1
138	14.3	0.0	39.2



1st 12/03/18
2nd 12/06/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:05:59 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.74	136	53237	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.31	164	28627	200.00	ng/ml	-0.01
15) Phenanthrene-d10	7.55	188	68745	200.00	ng/ml	-0.01
23) Chrysene-d12	10.11	240	73642	200.00	ng/ml	0.00
28) Perylene-d12	13.32	264	79661	200.00	ng/ml	0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	15527	104.49	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	10.45%		
13) Fluorene-d10	6.74	176	27480	150.13	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	15.01%		
22) Fluoranthene-d10	8.54	212	60129	138.78	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	13.88%		
25) Terphenyl-d14	8.88	244	53408	167.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.72%		
Target Compounds						Qvalue
2) Naphthalene	4.76	128	5980	19.46	ng/ml	98
4) 2-Methylnaphthalene	5.41	142	1795	9.69	ng/ml	90
5) 1-Methylnaphthalene	5.49	142	801	4.49	ng/ml	91
6) Biphenyl	5.82	154	1254	5.42	ng/ml	98
7) 2,6-Dimethylnaphthalene	5.96	156	1476	9.28	ng/ml	90
9) Acenaphthylene	6.19	152	5195	15.21	ng/ml#	44
10) Acenaphthene	6.33	154	2343	11.94	ng/ml	98
11) Dibenzofuran	6.48	168	4972	15.79	ng/ml	60
12) 2,3,5-Trimethylnaphthalene	6.66	170	1128m	6.22	ng/ml	
14) Fluorene	6.77	166	6204m	26.14	ng/ml	
16) Dibenzothiophene	7.47	184	6168	14.39	ng/ml	94
17) Phenanthrene	7.57	178	60537	141.16	ng/ml	99
18) Anthracene	7.61	178	16792	41.02	ng/ml	98
19) Carbazole	7.75	167	3435	8.60	ng/ml	91
21) Fluoranthene	8.56	202	219728	414.94	ng/ml	94
24) Pyrene	8.75	202	207131	409.95	ng/ml	100
26) Benz(a)anthracene	10.09	228	60949	128.01	ng/ml	96
27) Chrysene	10.15	228	73027m	160.13	ng/ml	
29) Benzo(b)fluoranthene	12.24	252	116986	237.70	ng/ml	98
30) Benzo(k)fluoranthene	12.30	252	40066m	82.06	ng/ml	
31) Benzo(e)pyrene	12.99	252	66855	142.51	ng/ml	97
32) Benzo(a)pyrene	13.15	252	55951	129.63	ng/ml	98
33) Perylene	13.40	252	195355	431.47	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.52	276	43542	102.88	ng/ml	95
35) Dibenz(a,h)anthracene	15.54	278	9990m	23.29	ng/ml	
36) Benzo(g,h,i)perylene	15.92	276	58580	118.19	ng/ml	95

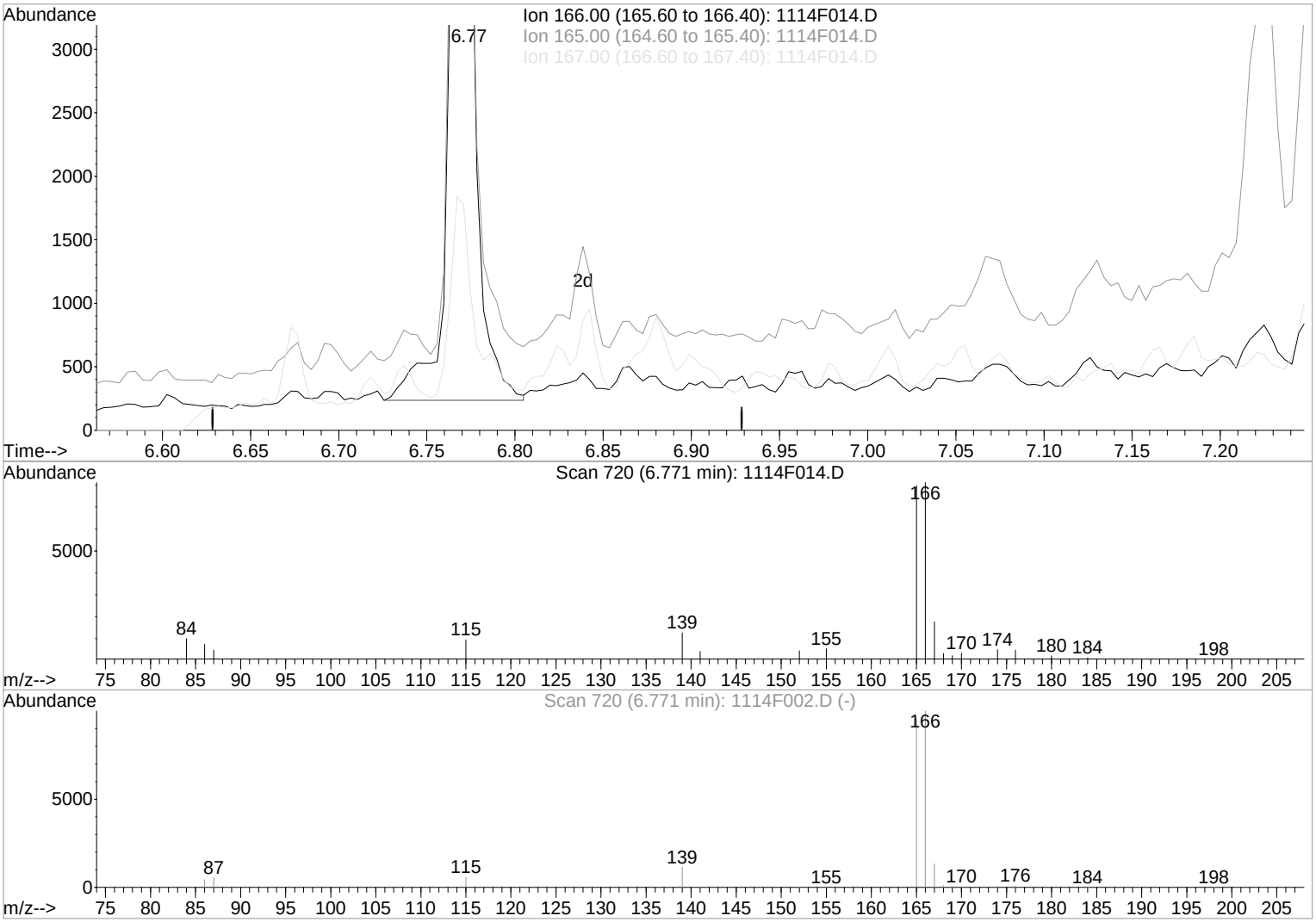
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(14) Fluorene (T)

6.77min 27.64ng/ml

response 6560

Ion	Exp%	Act%
166.00	100	100
165.00	93.40	94.30
167.00	13.10	18.82
0.00	0.00	0.00

Manual Integration:

Before

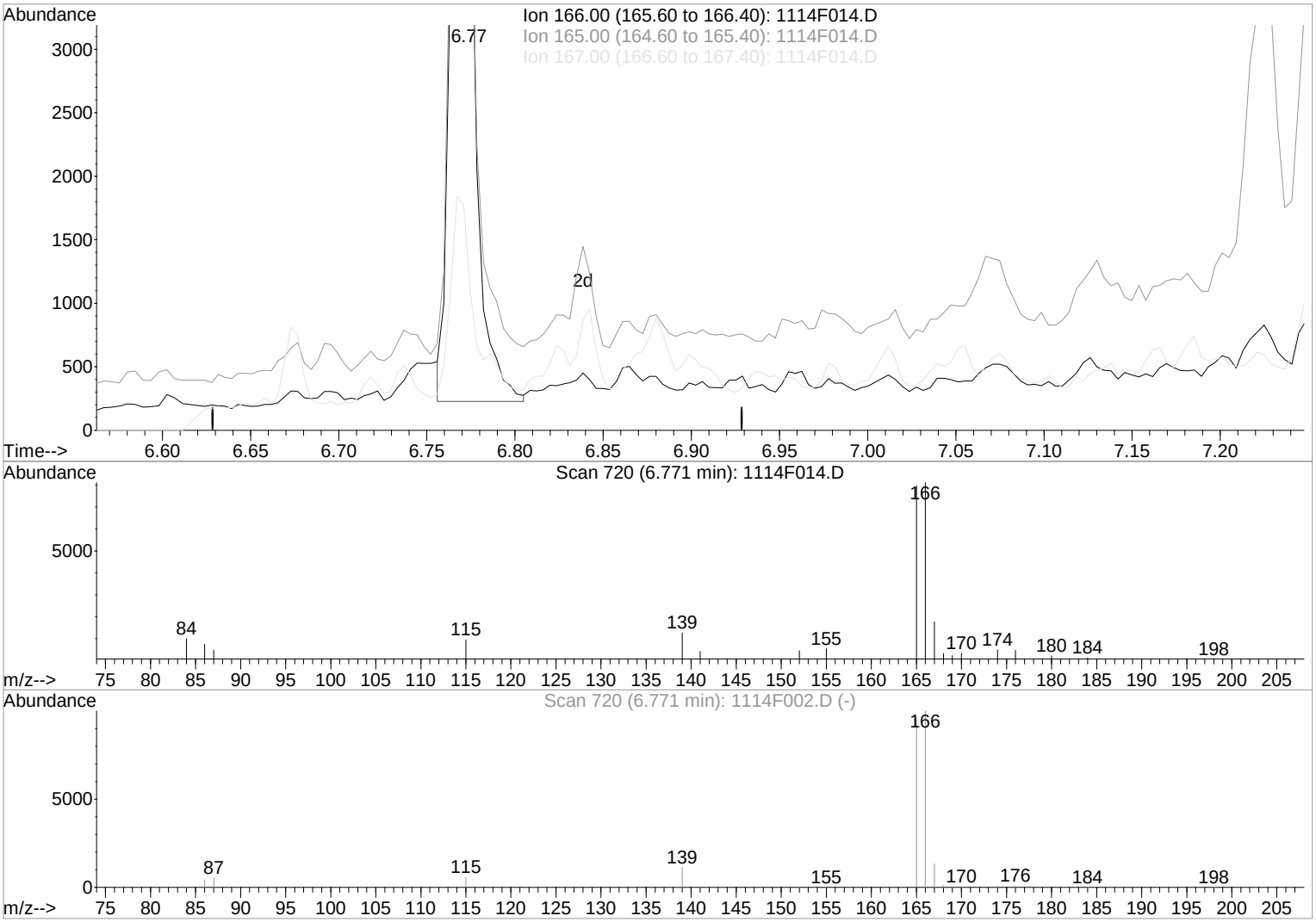
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(14) Fluorene (T)

6.77min 26.14ng/ml m

response 6204

Ion	Exp%	Act%
166.00	100	100
165.00	93.40	98.30
167.00	13.10	21.84
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

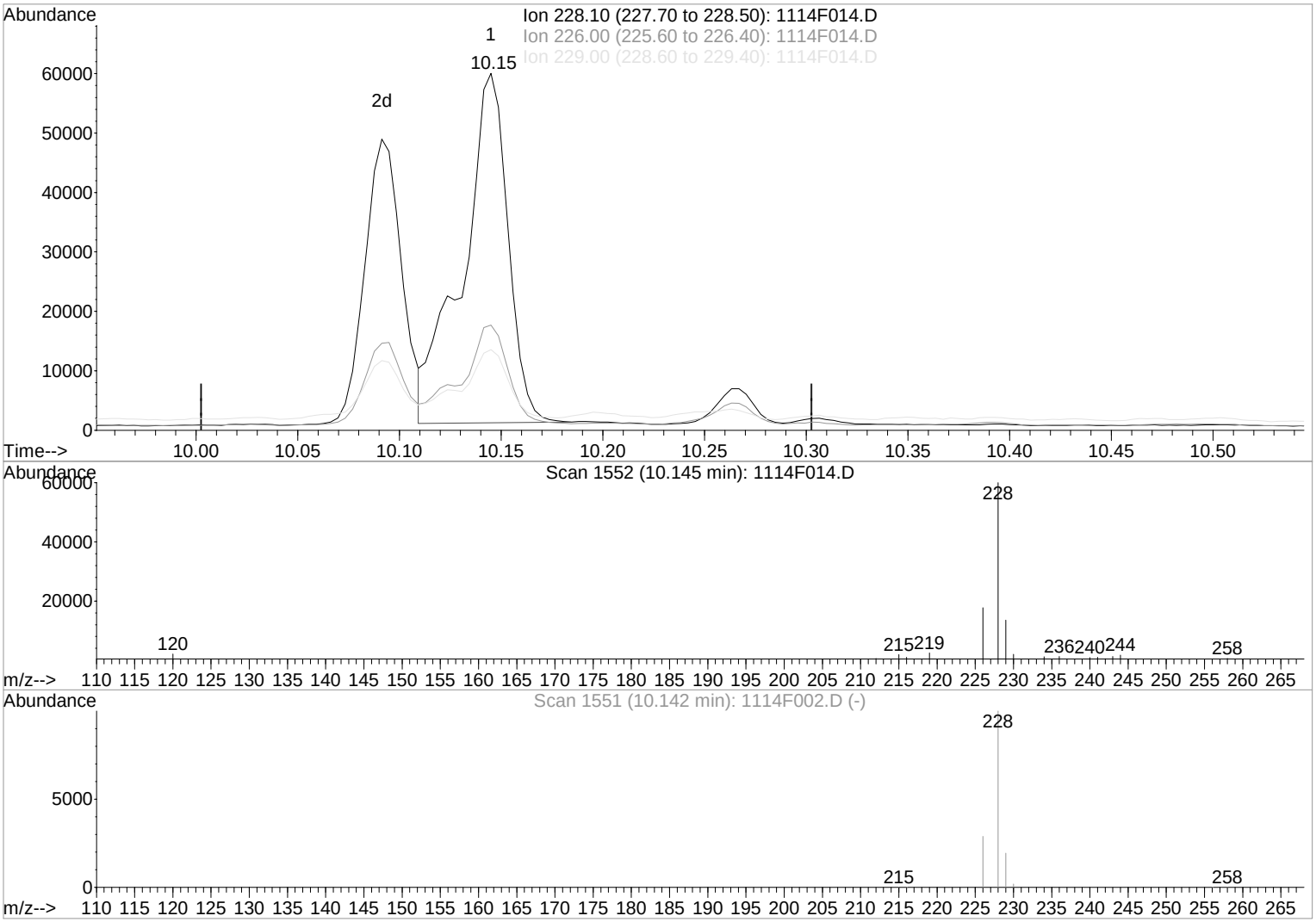
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(27) Chrysene (T)

10.15min 199.37ng/ml

response 90923

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	28.26
229.00	19.20	19.04
0.00	0.00	0.00

Manual Integration:

Before

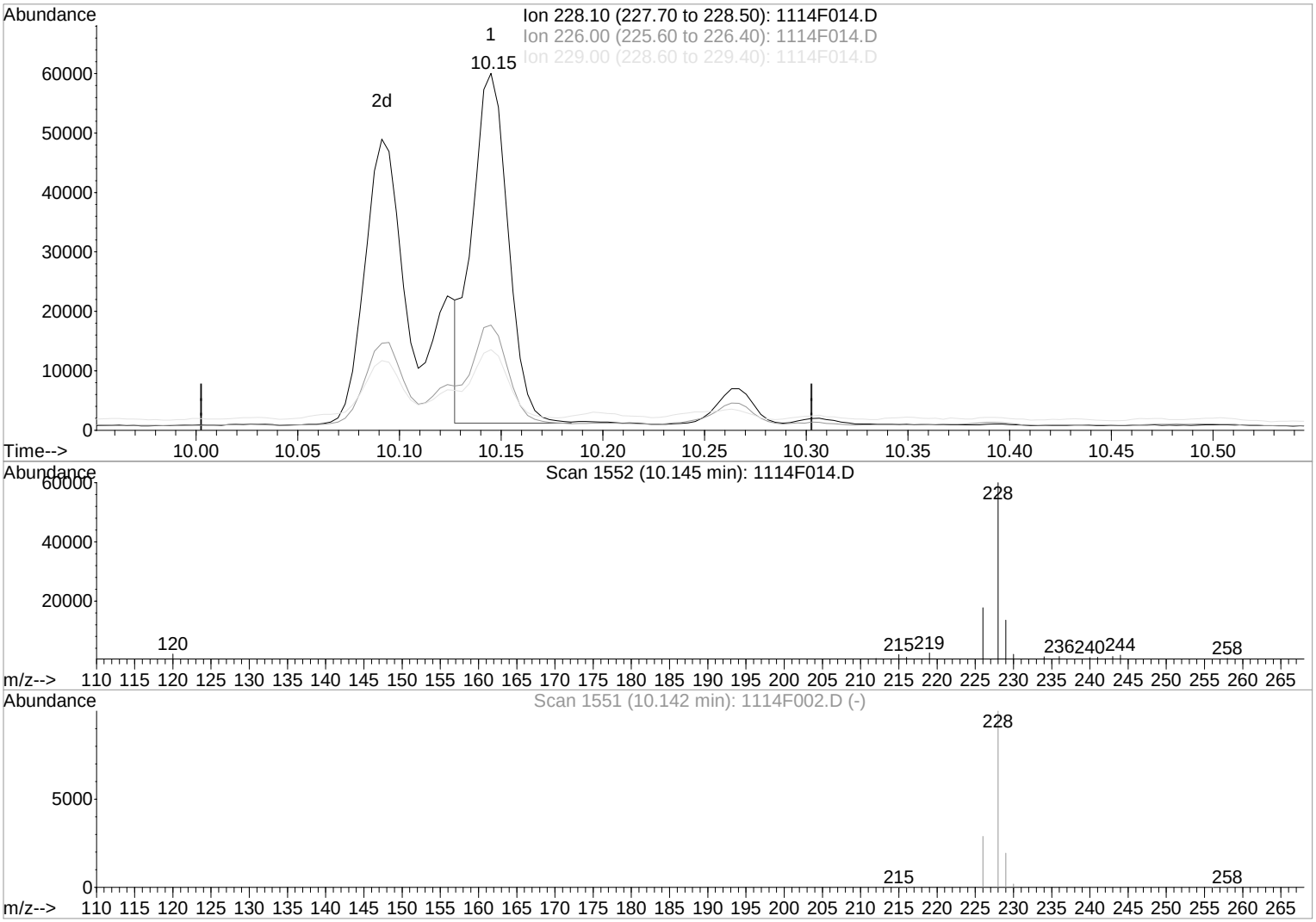
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(27) Chrysene (T)

10.15min 160.13ng/ml m

response 73027

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	29.47
229.00	19.20	22.59
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

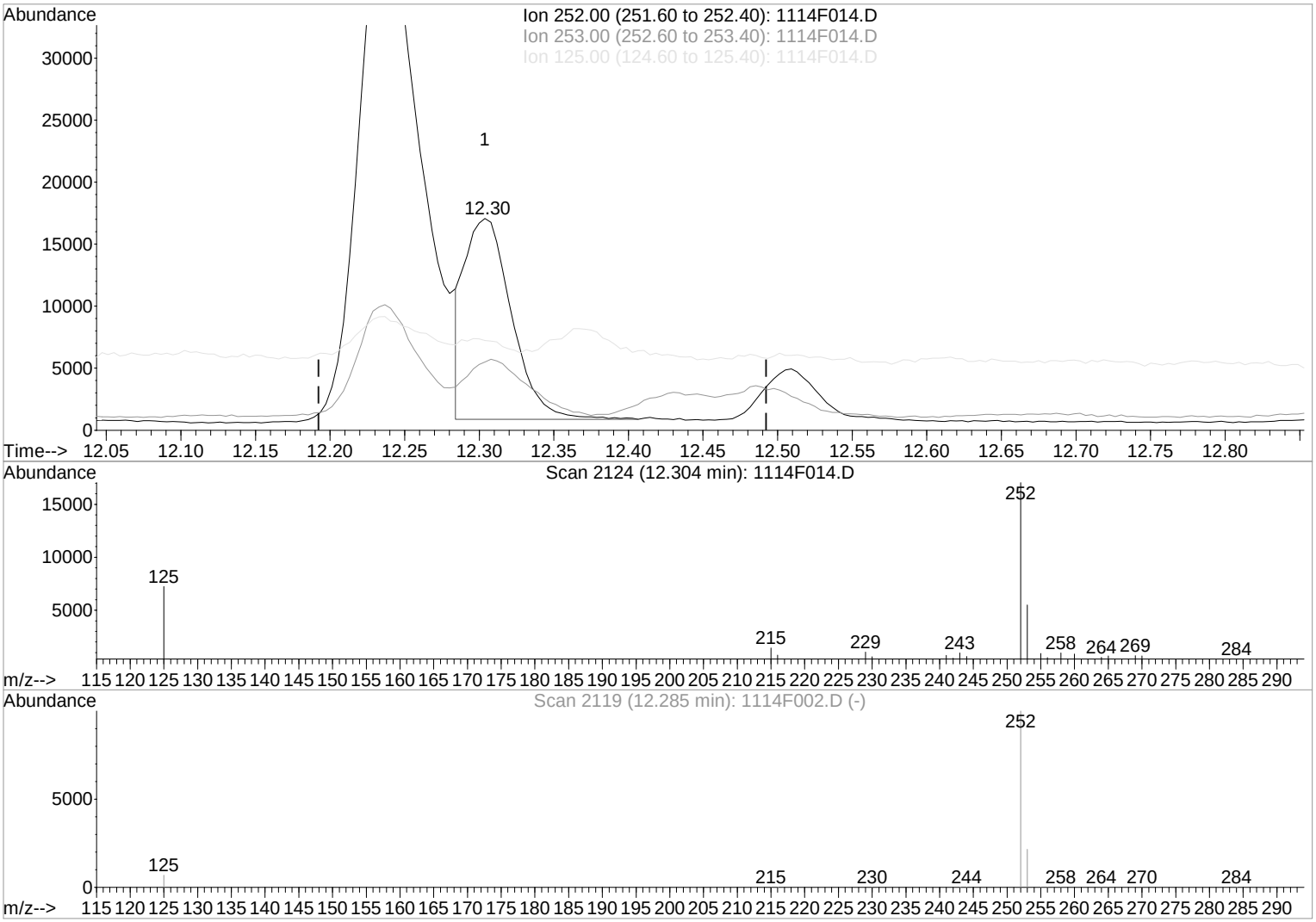
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(30) Benzo(k)fluoranthene (T)

12.30min 72.93ng/ml

response 35607

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	21.16
125.00	9.70	5.07
0.00	0.00	0.00

Manual Integration:

Before

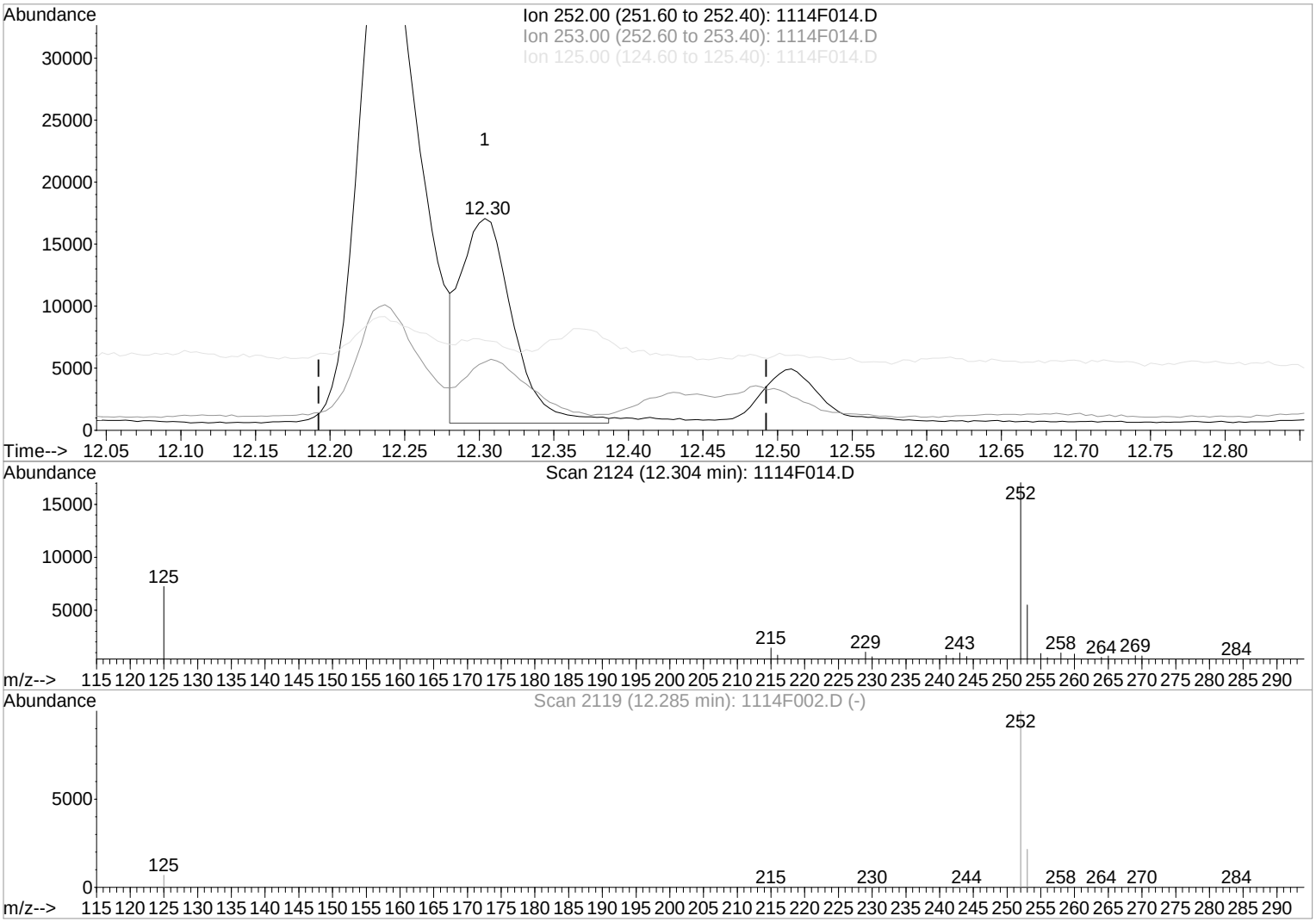
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:38 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(30) Benzo(k)fluoranthene (T)

12.30min 82.06ng/ml m

response 40066

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	32.19
125.00	9.70	42.39#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

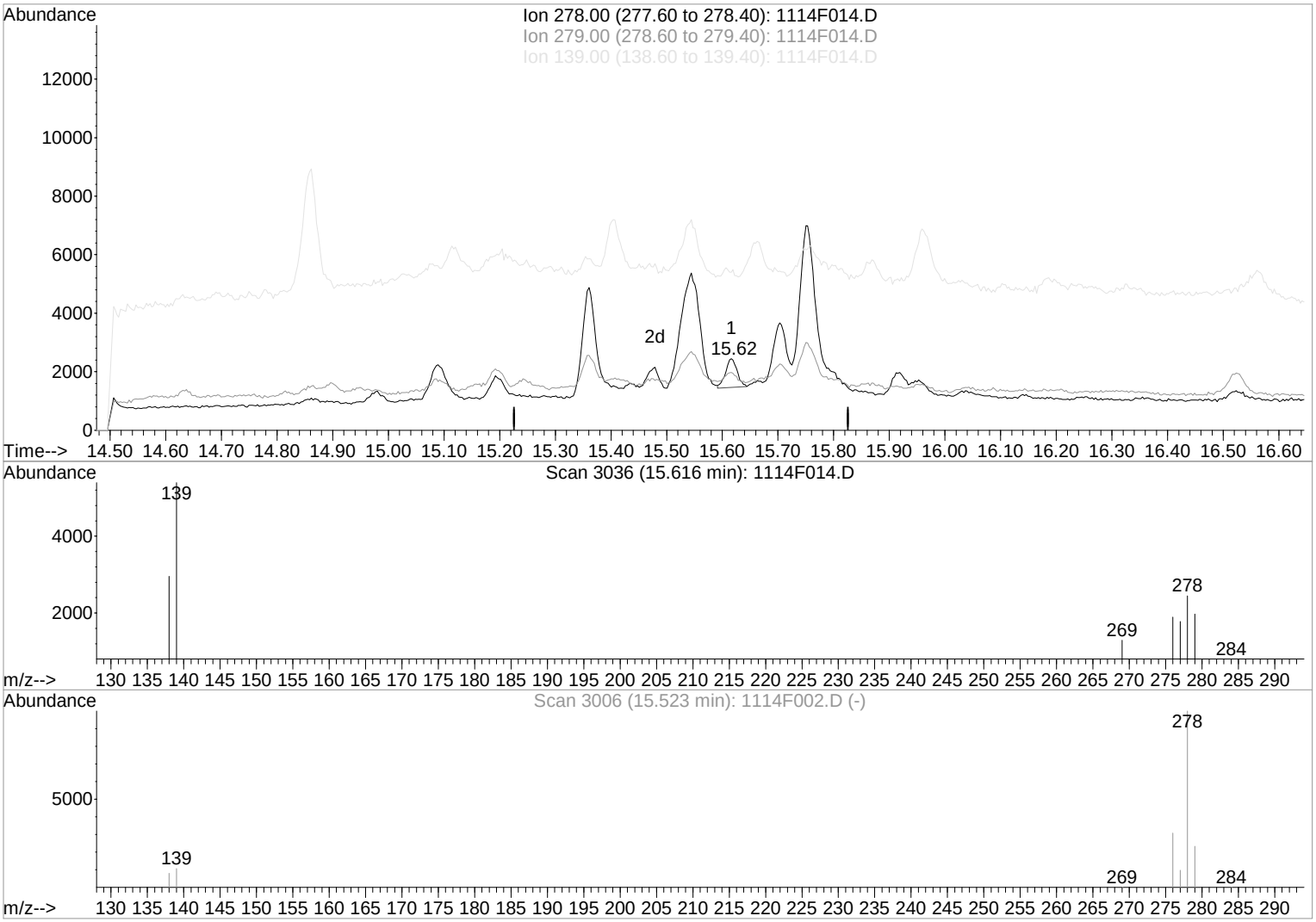
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:38 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(35) Dibenz(a,h)anthracene (T)

15.62min 3.30ng/ml

response 1416

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	35.57
139.00	15.00	12.17
0.00	0.00	0.00

Manual Integration:

Before

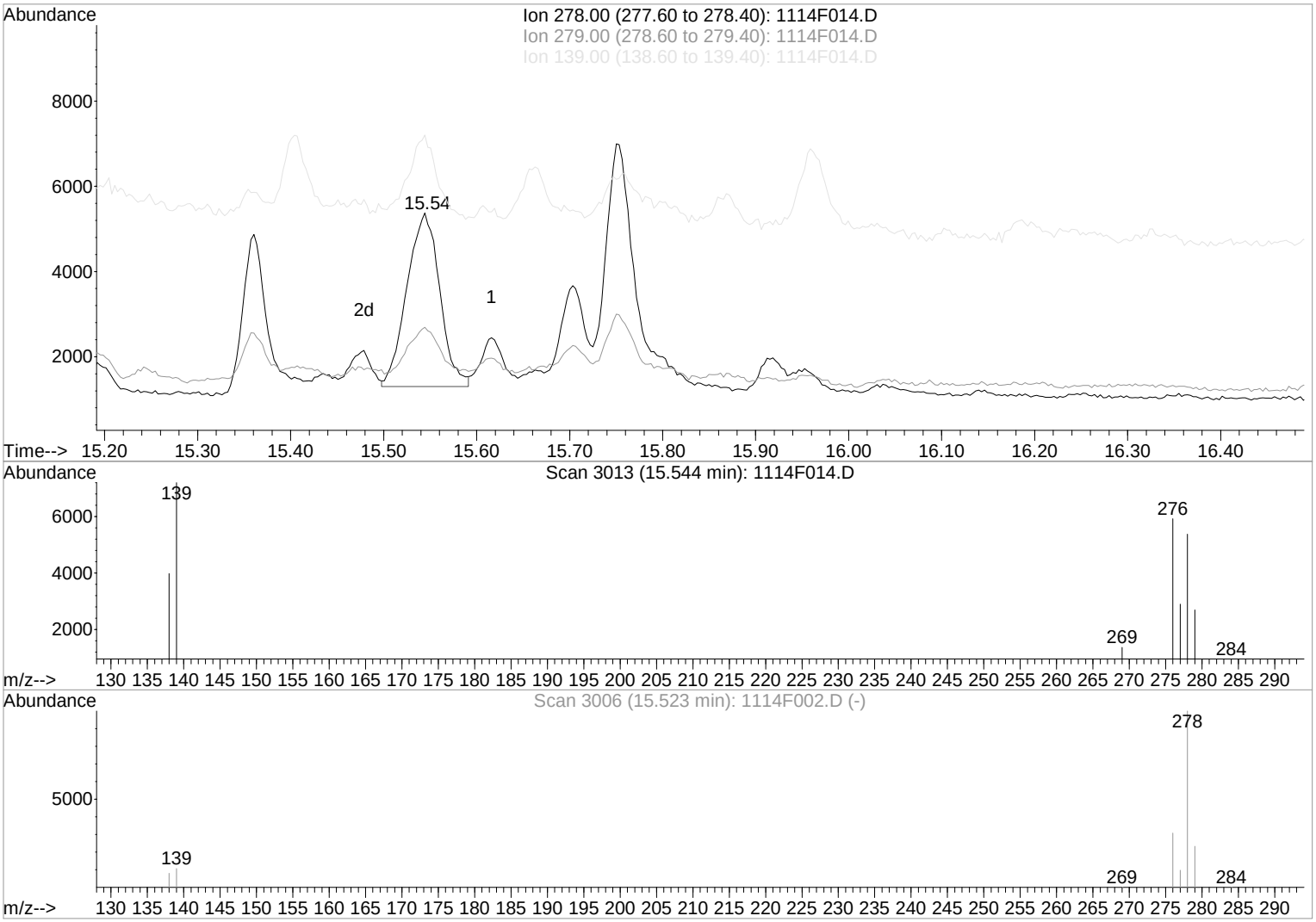
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F014.D Vial: 14
Acq On : 14 Nov 2018 11:21 am Operator: LWeiskopf
Sample : K1810430-001DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:38 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F014.D

(35) Dibenz(a,h)anthracene (T)

15.54min 23.29ng/ml m

response 9990

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	50.12
139.00	15.00	134.09#
0.00	0.00	0.00

Manual Integration:

After

WP

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F015.D
Lab ID: K1810430-002
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 11:46
Date Quantitated: 11/30/2018 12:38
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F015.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 11:46	**Quant Date:**	11/30/2018 12:38	**Vial:**	15
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-002			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702214	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.74	-0.01	136	51976	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	29108	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	65813	200.00	OK
4	Chrysene-d12	10.11	0.01	240	71367	200.00	OK
5	Perylene-d12	13.33	0.04	264	77597	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	29126	156.49	78	26-102	OK	
3	Fluoranthene-d10	8.54	0.01	0.00	212	60802	146.59	73	23-110	OK	
4	Terphenyl-d14	8.88	0.00	0.00	244	53612	173.19	87	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	6074	20.25	17	D	
1	2-Methylnaphthalene	5.41		0.00	142	1790	9.89	8.2	JD	
2	Acenaphthylene	6.19		0.00	152	5486	15.80	13	D	
2	Acenaphthene	6.33	-0.01	0.00	154	2089	10.47	8.7	D	
2	Dibenzofuran	6.49		0.00	168	3780	11.81	9.8	D	
2	Fluorene	6.77		0.00	166	4721**m**	19.57	16	D	
3	Phenanthrene	7.57		0.00	178	42944	104.60	87	D	
3	Anthracene	7.62	0.01	0.00	178	13359	34.08	28	D	
3	Fluoranthene	8.56	0.01	0.00	202	178345	351.80	290	D	
4	Pyrene	8.75		0.00	202	190890	389.85	320	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	59443	128.83	110	D	
4	Chrysene	10.15	0.01	0.00	228	115919	262.28	220	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F015.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 11:46	**Quant Date:**	11/30/2018 12:38	**Vial:**	15
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-002			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.24	0.03	0.00	252	121557	253.55	210	D	
5	Benzo(k)fluoranthene	12.30	0.02	0.00	252	37767	79.41	66	D	
5	Benzo(a)pyrene	13.16	0.04	0.00	252	59403	141.29	120	D	
5	Indeno(1,2,3-cd)pyrene	15.52	0.03	0.00	276	49080	119.05	99	D	
5	Dibenz(a,h)anthracene	15.55	0.03	0.00	278	10961	26.23	22	D	
5	Benzo(g,h,i)perylene	15.92	0.04	0.00	276	64895	134.42	110	D	

Prep Amount:	40.004 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	30.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

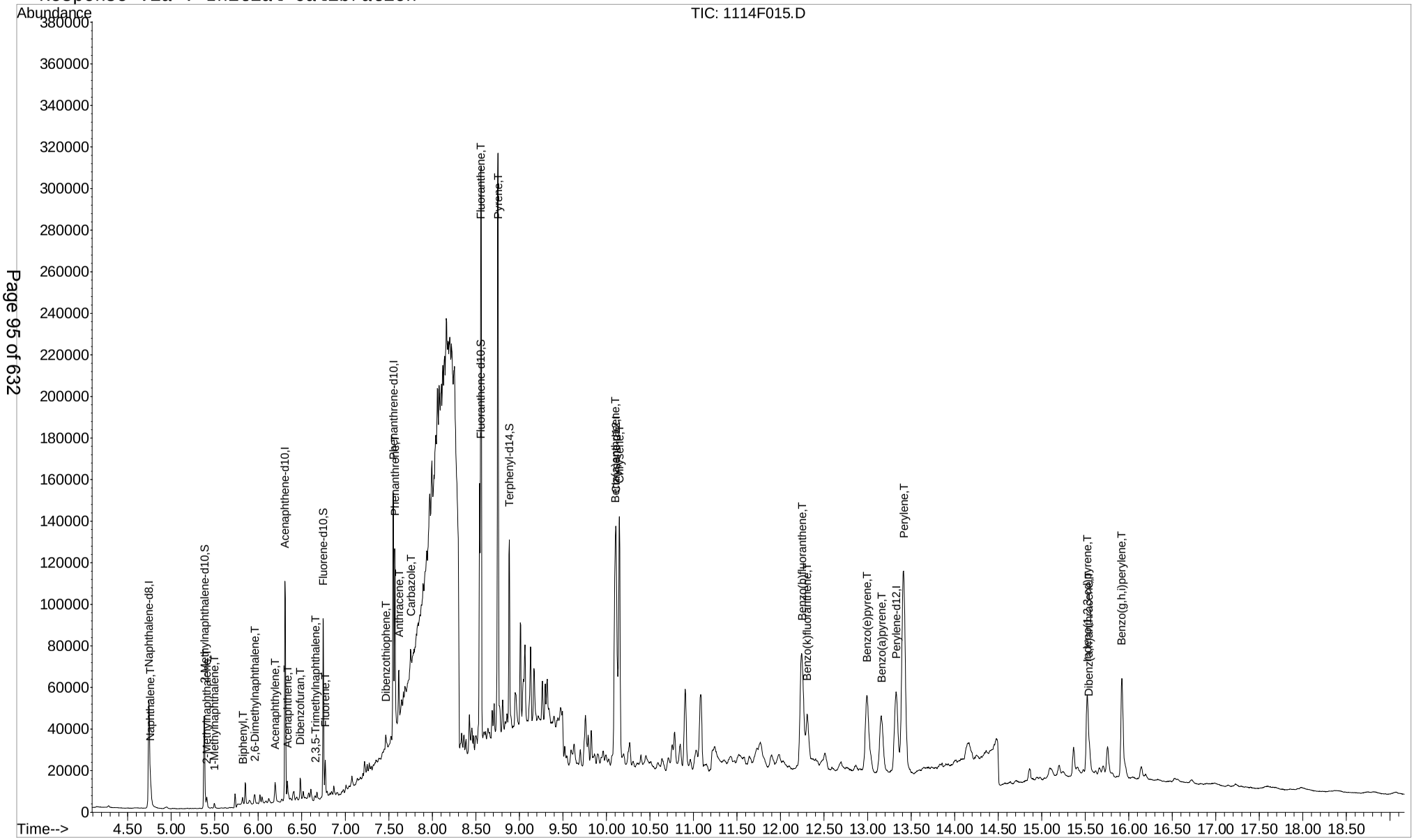
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

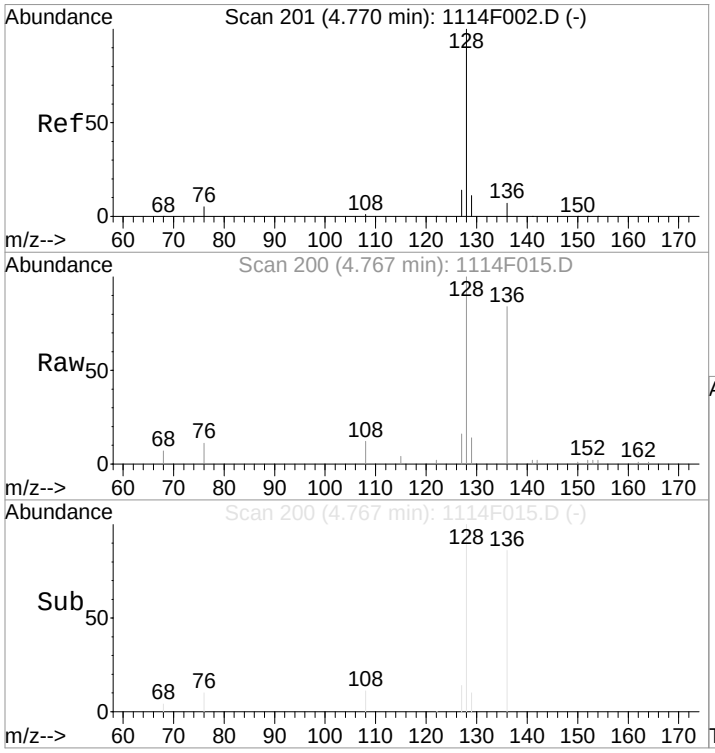
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F015.D Vial: 15
Acq On : 14 Nov 2018 11:46 am Operator: LWeiskopf
Sample : K1810430-002DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:38 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



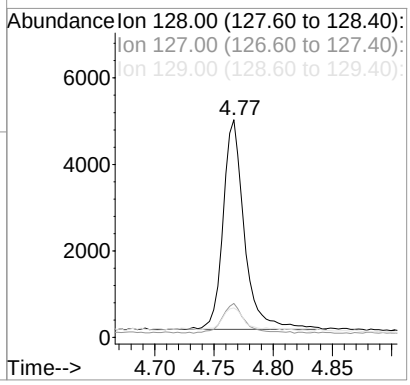
1st 12/03/18
2nd 12/06/18

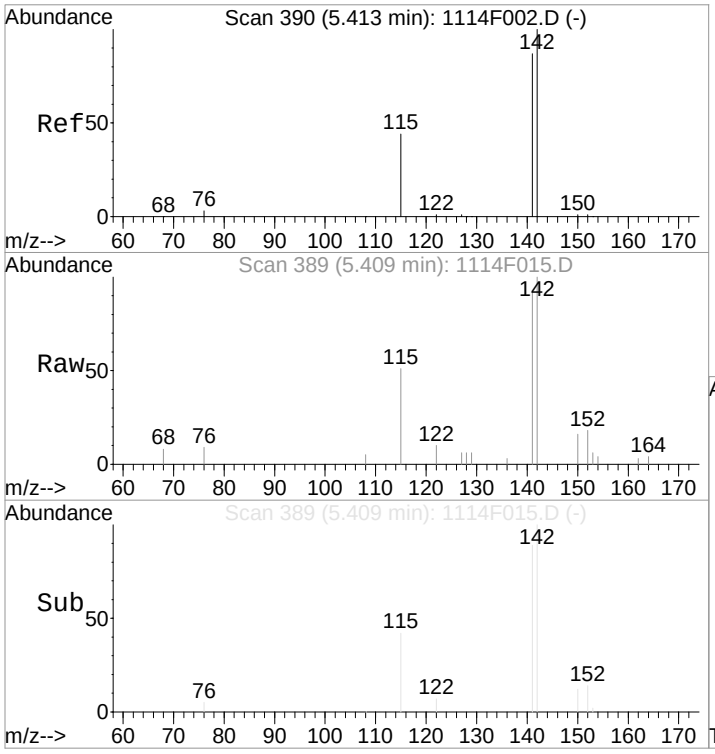


#2
Naphthalene
Concen: 20.25 ng/ml
RT: 4.77 min Scan# 200
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:128 Resp: 6074

Ion	Ratio	Lower	Upper
128	100		
127	14.1	0.0	43.7
129	10.8	0.0	30.8

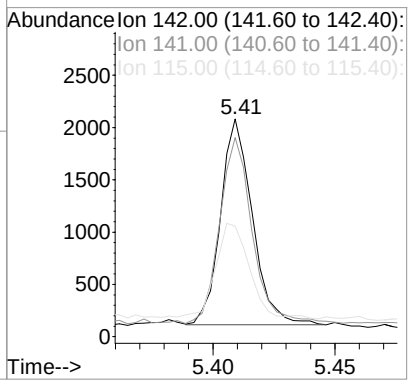


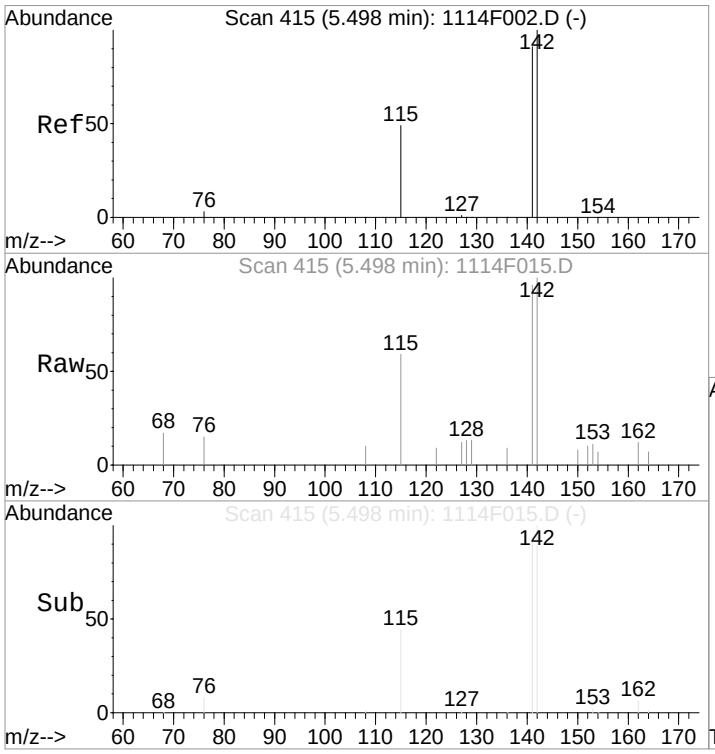


#4
2-Methylnaphthalene
Concen: 9.89 ng/ml
RT: 5.41 min Scan# 389
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:142 Resp: 1790

Ion	Ratio	Lower	Upper
142	100		
141	90.5	56.8	116.8
115	44.0	13.3	53.3

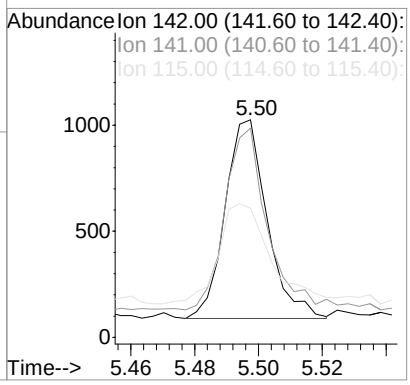


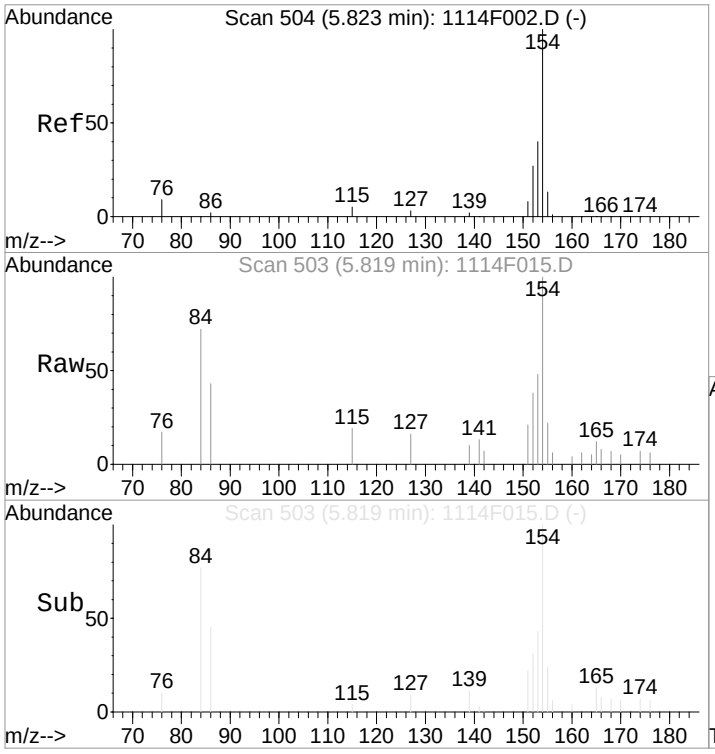


#5
1-Methylnaphthalene
Concen: 4.93 ng/ml
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:142 Resp: 859

Ion	Ratio	Lower	Upper
142	100		
141	91.7	59.7	119.7
115	46.6	13.7	53.7

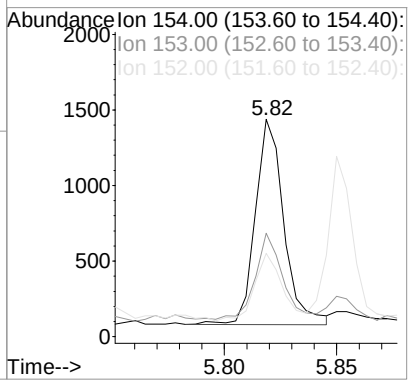


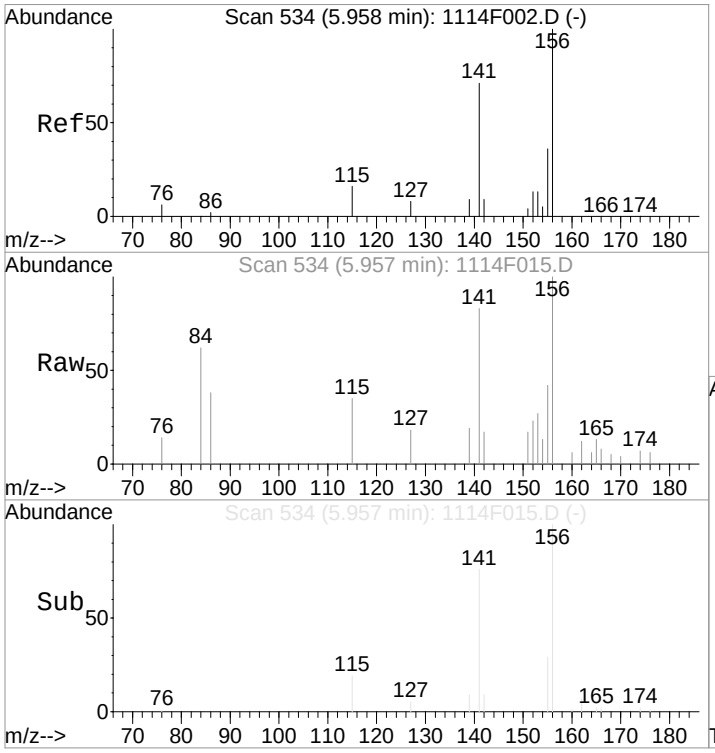


#6
Biphenyl
Concen: 5.35 ng/ml
RT: 5.82 min Scan# 503
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:154 Resp: 1208

Ion	Ratio	Lower	Upper
154	100		
153	41.3	11.4	71.4
152	30.1	7.1	47.1

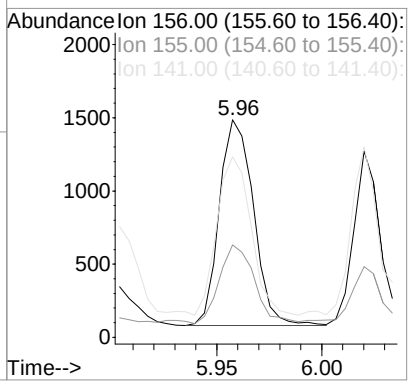


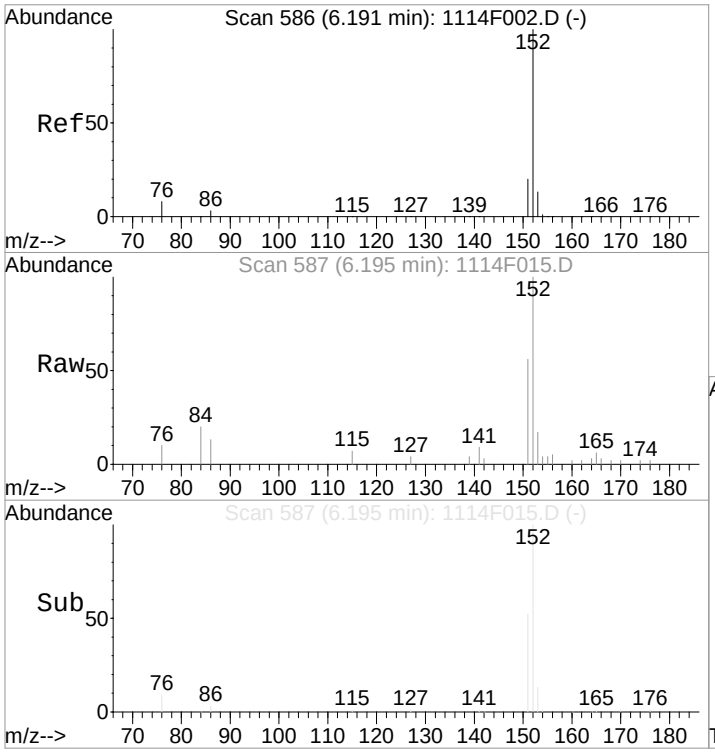


#7
2,6-Dimethylnaphthalene
Concen: 10.26 ng/ml
RT: 5.96 min Scan# 534
Delta R.T. -0.00 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:156 Resp: 1593

Ion	Ratio	Lower	Upper
156	100		
155	37.1	7.0	67.0
141	76.8	47.9	87.9

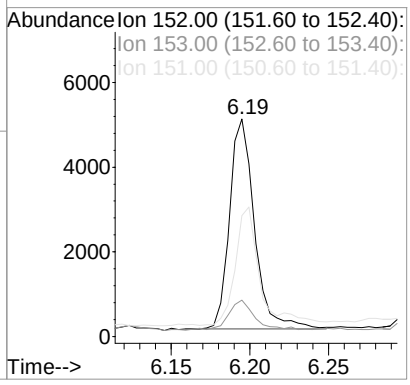


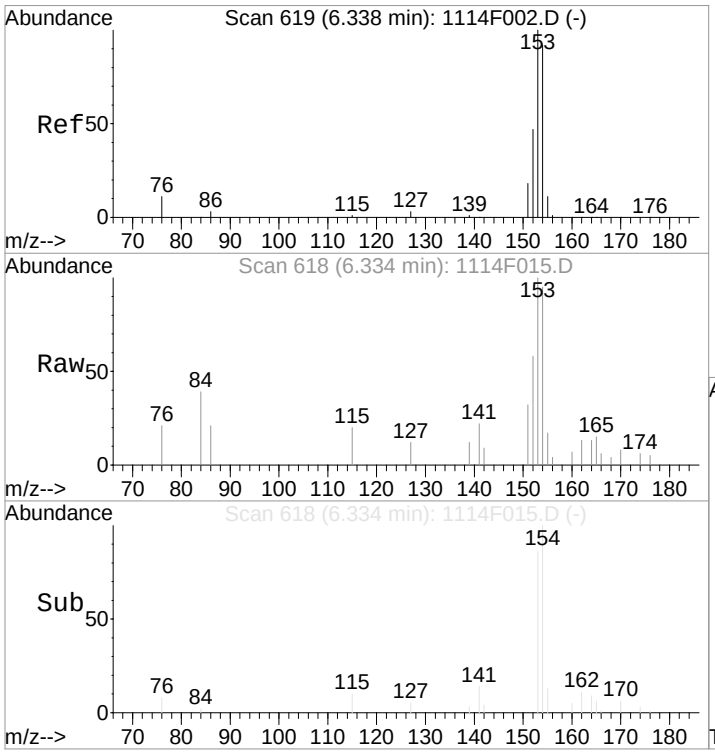


#9
Acenaphthylene
Concen: 15.80 ng/ml
RT: 6.19 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:152 Resp: 5486

Ion	Ratio	Lower	Upper
152	100		
153	14.3	0.0	42.9
151	52.1	0.2	40.2#

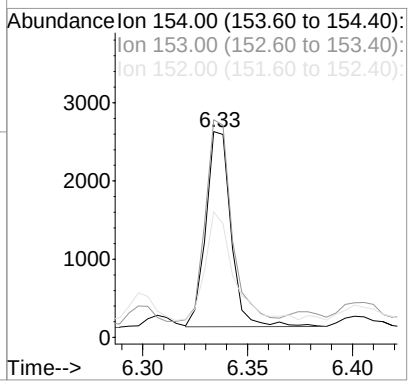


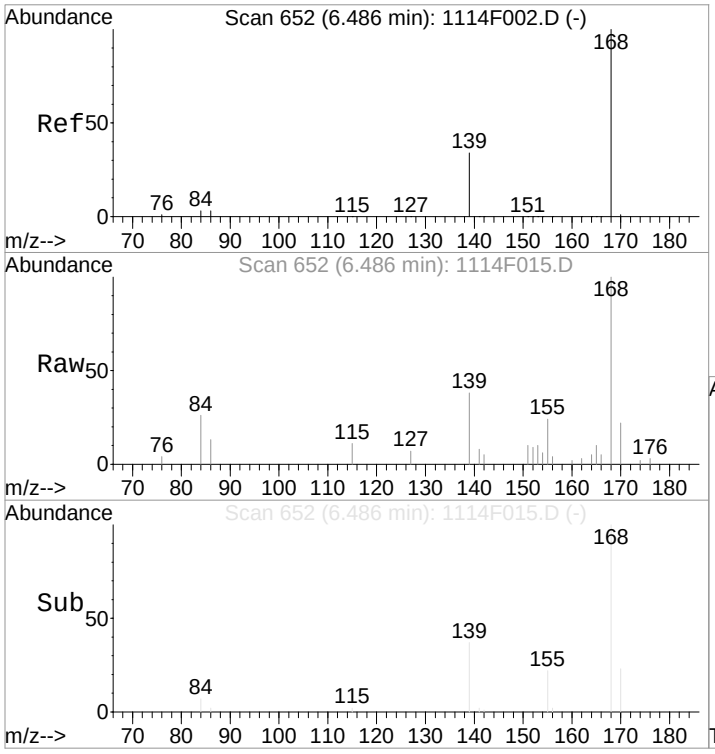


#10
Acenaphthene
Concen: 10.47 ng/ml
RT: 6.33 min Scan# 618
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:154 Resp: 2089

Ion	Ratio	Lower	Upper
154	100		
153	102.5	77.1	137.1
152	55.5	19.7	79.7

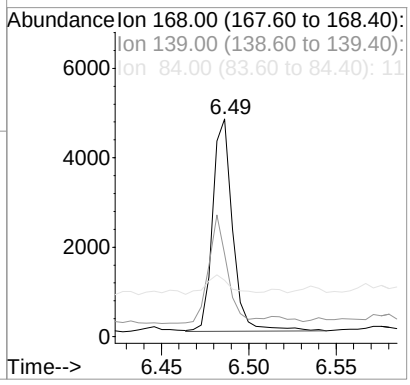


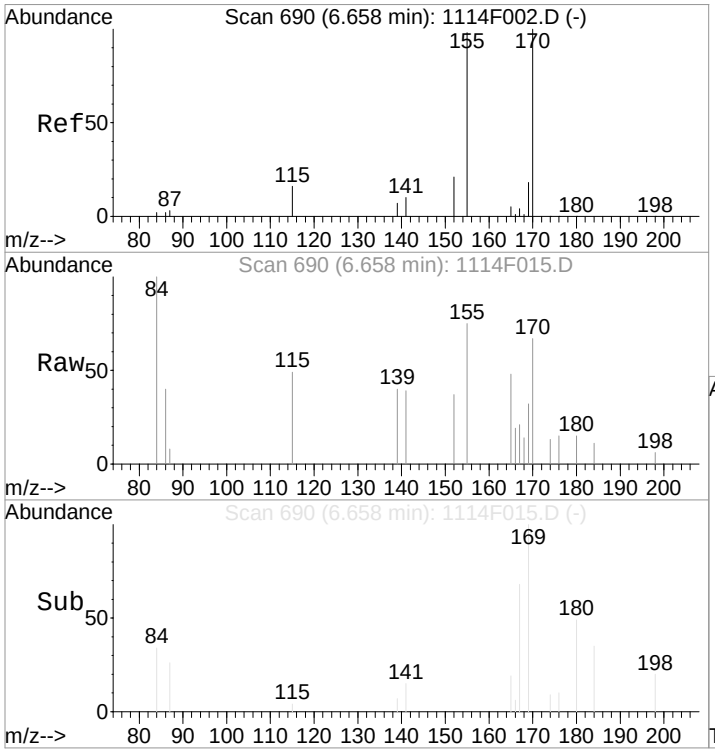


#11
Dibenzofuran
Concen: 11.81 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:168 Resp: 3780

Ion	Ratio	Lower	Upper
168	100		
139	32.4	0.0	55.8
84	6.7	0.0	23.5

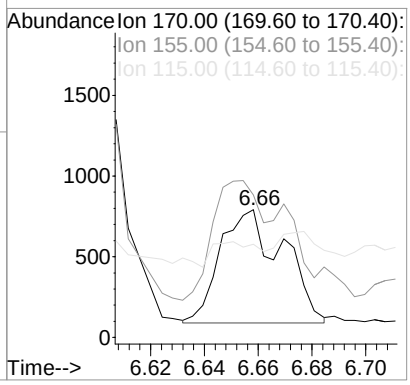


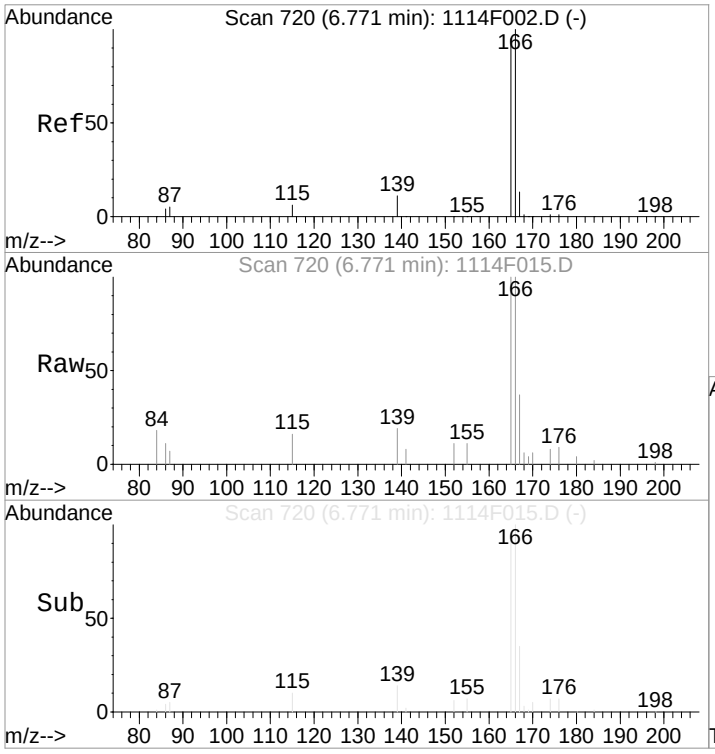


#12
2,3,5-Trimethylnaphthalene
Concen: 6.21 ng/ml m
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:170 Resp: 1146

Ion	Ratio	Lower	Upper
170	100		
155	111.5	59.2	119.2
115	73.1	0.0	30.1#

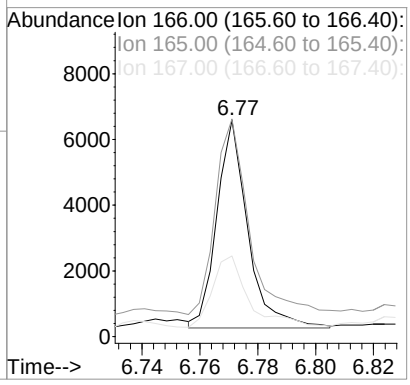




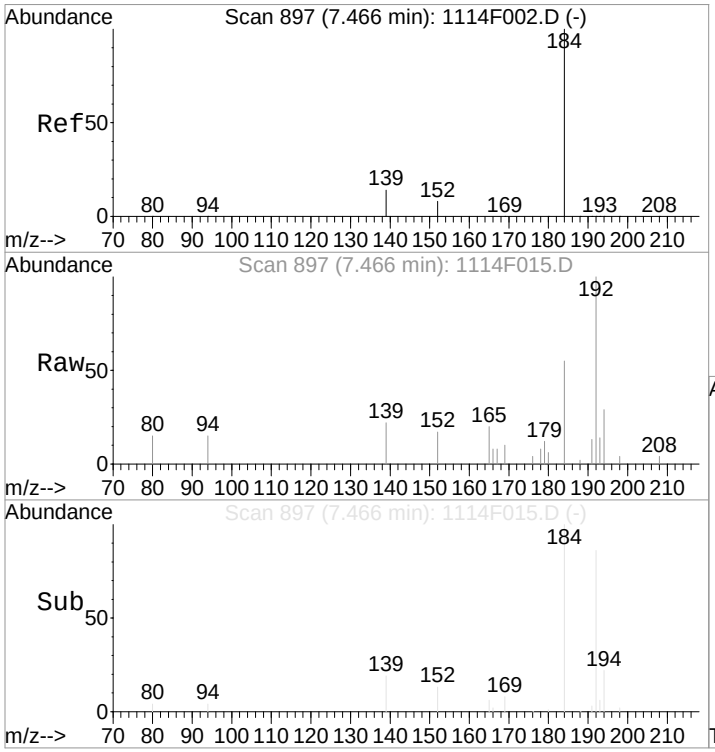
#14
Fluorene
Concen: 19.57 ng/ml m
RT: 6.77 min Scan# 720
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:166 Resp: 4721

Ion	Ratio	Lower	Upper
166	100		
165	100.5	63.4	123.4
167	37.2	0.0	33.1#



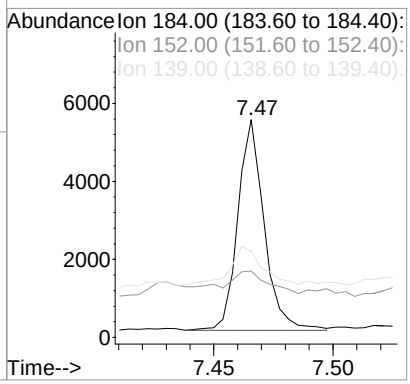
1st 12/03/18
2nd 12/06/18

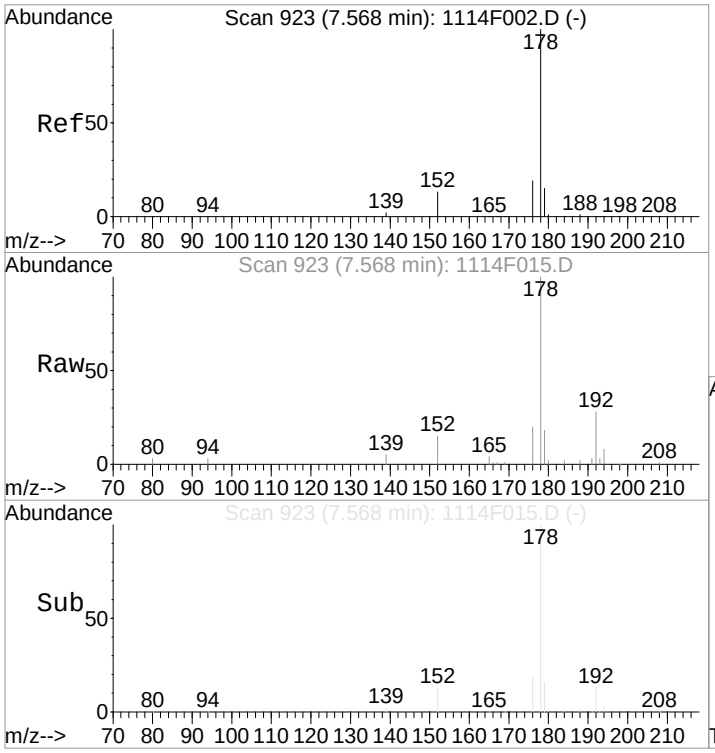


#16
Dibenzothiophene
Concen: 10.14 ng/ml
RT: 7.47 min Scan# 897
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:184 Resp: 4164

Ion	Ratio	Lower	Upper
184	100		
152	8.4	0.0	37.8
139	15.6	0.0	32.6

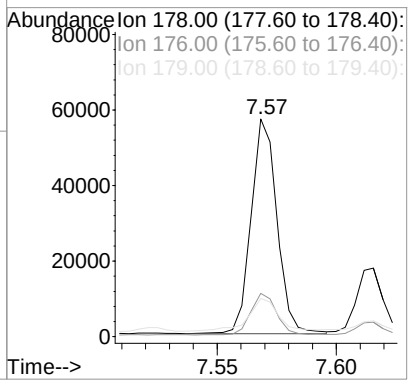




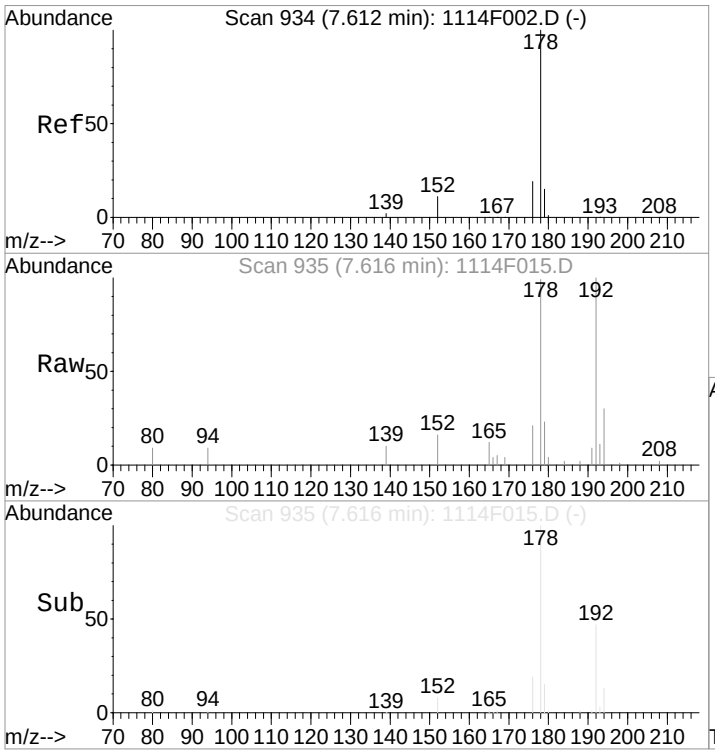
#17
Phenanthrene
Concen: 104.60 ng/ml
RT: 7.57 min Scan# 923
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:178 Resp: 42944

Ion	Ratio	Lower	Upper
178	100		
176	19.2	0.0	48.7
179	15.2	0.0	35.1



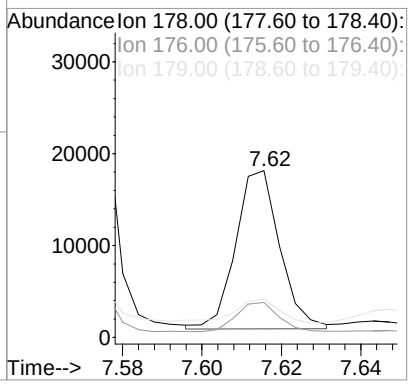
1st 12/03/18
2nd 12/06/18

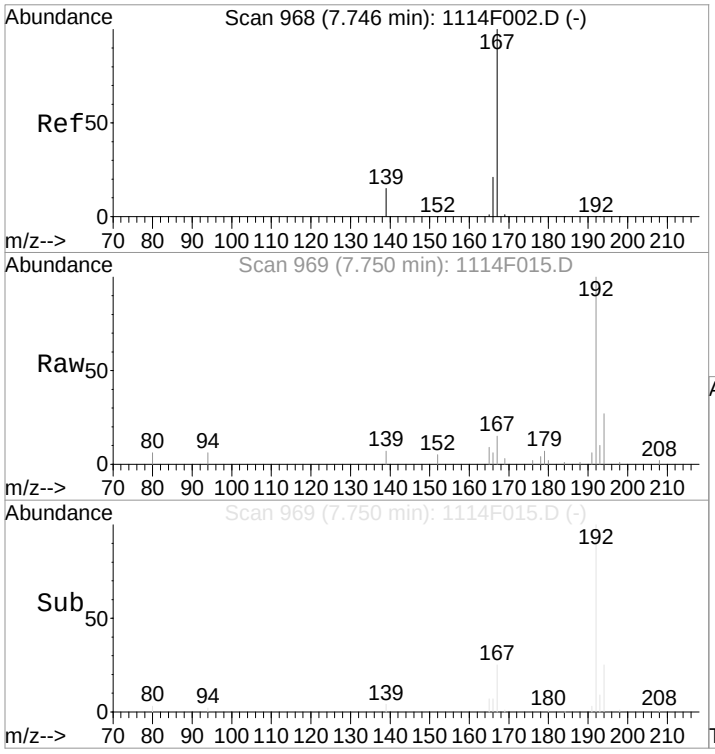


#18
Anthracene
Concen: 34.08 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:178 Resp: 13359

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.0
179	15.1	0.0	35.1

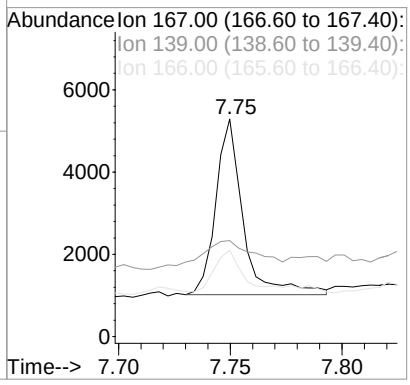




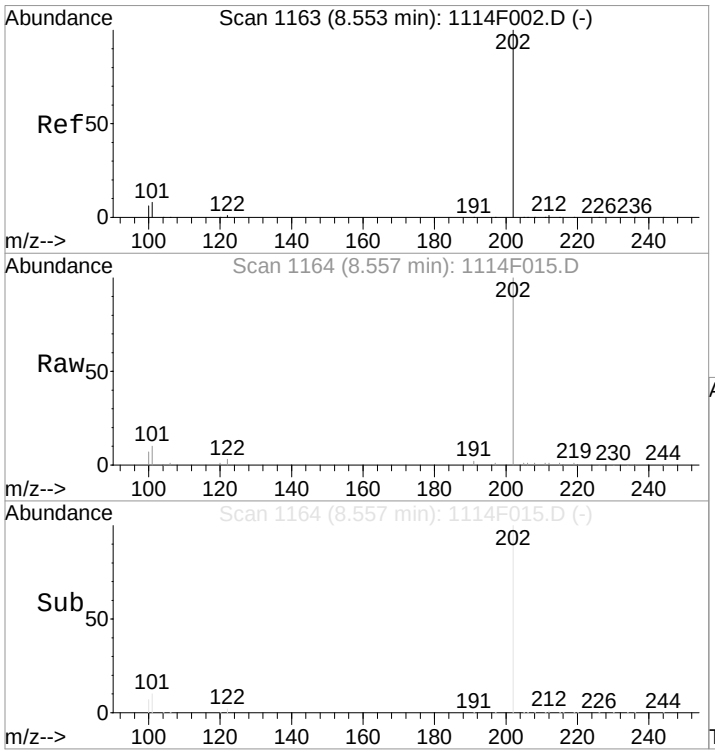
#19
Carbazole
Concen: 9.57 ng/ml
RT: 7.75 min Scan# 969
Delta R.T. -0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:167 Resp: 3662

Ion	Ratio	Lower	Upper
167	100		
139	12.3	0.0	41.5
166	23.6	0.7	40.7



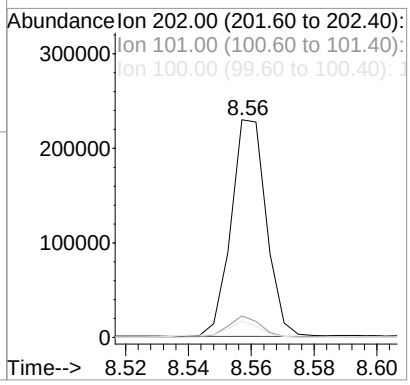
1st 12/03/18
2nd 12/06/18

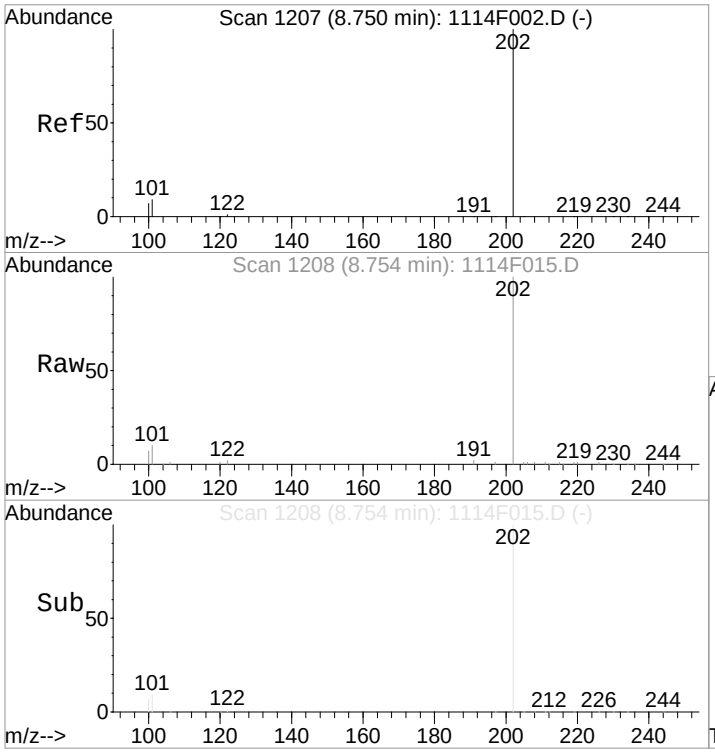


#21
Fluoranthene
Concen: 351.80 ng/ml
RT: 8.56 min Scan# 1164
Delta R.T. -0.00 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:202 Resp: 178345

Ion	Ratio	Lower	Upper
202	100		
101	9.6	0.0	41.3
100	7.2	0.0	28.6

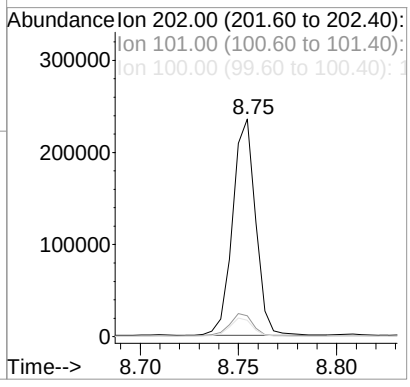




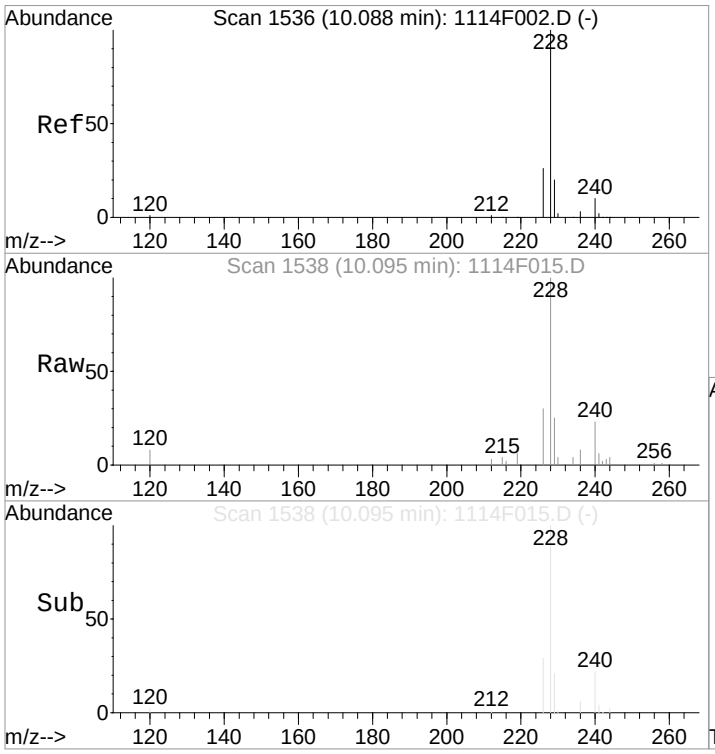
#24
Pyrene
Concen: 389.85 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. -0.00 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:202 Resp: 190890

Ion	Ratio	Lower	Upper
202	100		
101	9.4	0.0	40.8
100	7.3	0.0	28.5



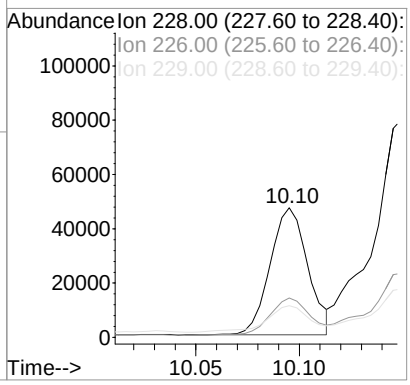
1st 12/03/18
2nd 12/06/18

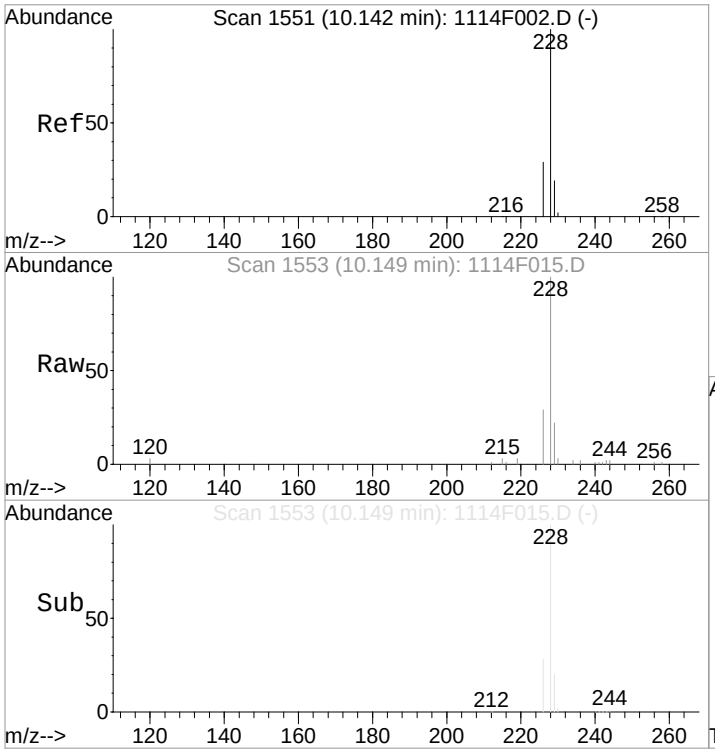


#26
Benz(a)anthracene
Concen: 128.83 ng/ml
RT: 10.10 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:228 Resp: 59443

Ion	Ratio	Lower	Upper
228	100		
226	29.1	0.0	56.3
229	20.8	0.0	39.1

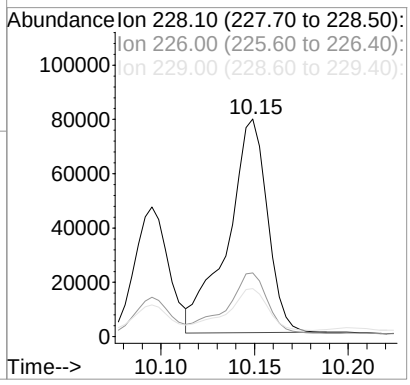


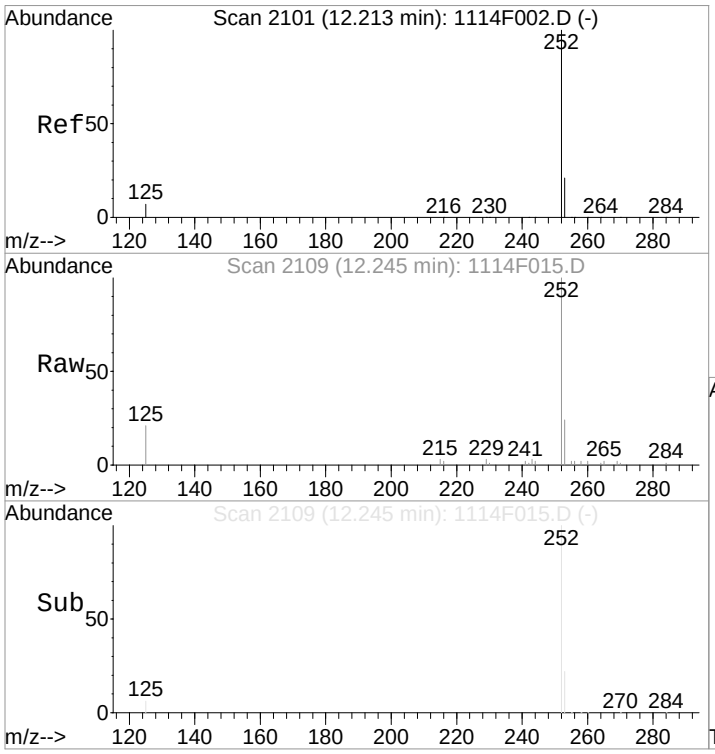


#27
Chrysene
Concen: 262.28 ng/ml
RT: 10.15 min Scan# 1553
Delta R.T. -0.00 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:228 Resp: 115919

Ion	Ratio	Lower	Upper
228	100		
226	28.4	0.0	58.7
229	19.2	0.0	39.2

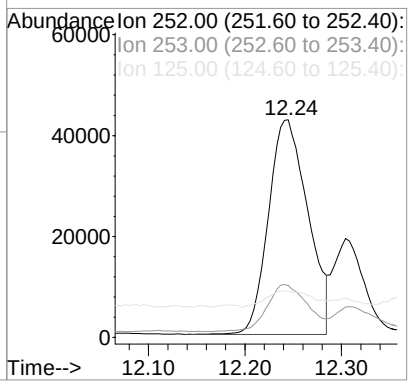


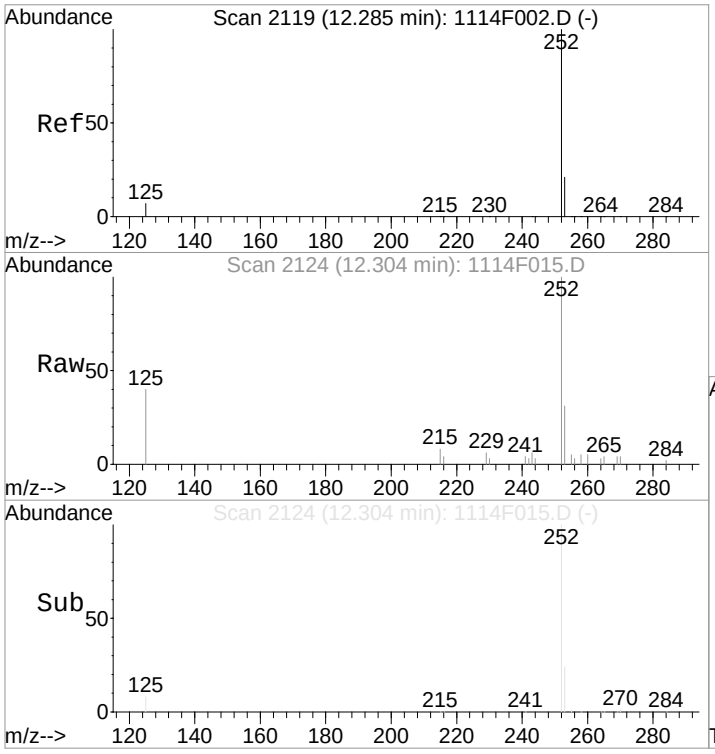


#29
Benzo(b)fluoranthene
Concen: 253.55 ng/ml
RT: 12.24 min Scan# 2109
Delta R.T. 0.02 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:252 Resp: 121557

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.2
125	7.2	0.0	29.5

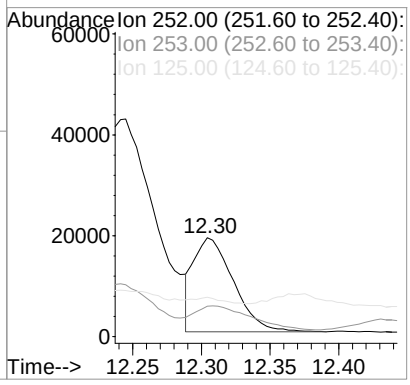




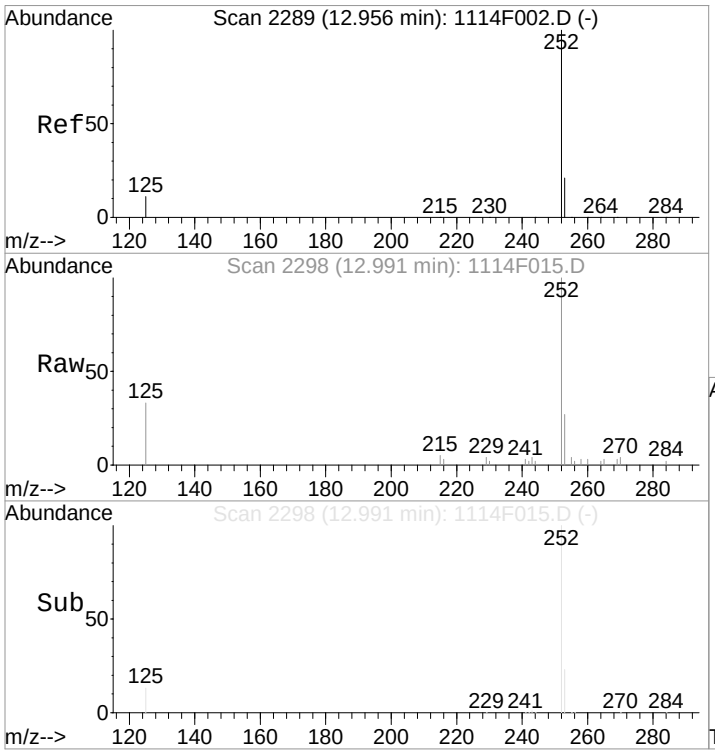
#30
Benzo(k)fluoranthene
Concen: 79.41 ng/ml
RT: 12.30 min Scan# 2124
Delta R.T. 0.01 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:252 Resp: 37767

Ion	Ratio	Lower	Upper
252	100		
253	24.4	0.0	51.2
125	3.7	0.0	29.7



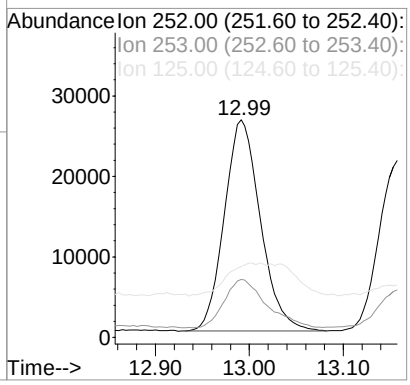
1st 12/03/18
2nd 12/06/18

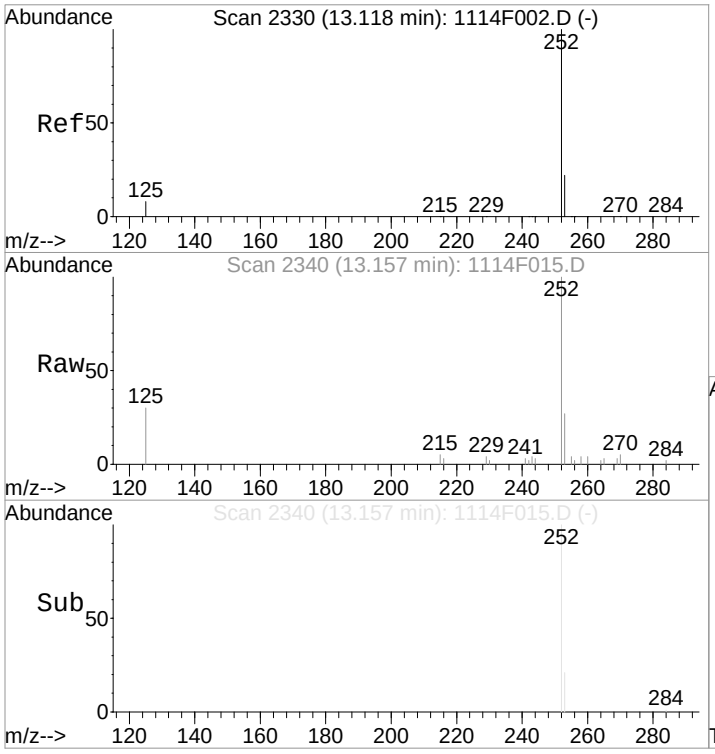


#31
Benzo(e)pyrene
Concen: 153.61 ng/ml
RT: 12.99 min Scan# 2298
Delta R.T. 0.02 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:252 Resp: 70195

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	51.3
125	13.5	0.0	33.5

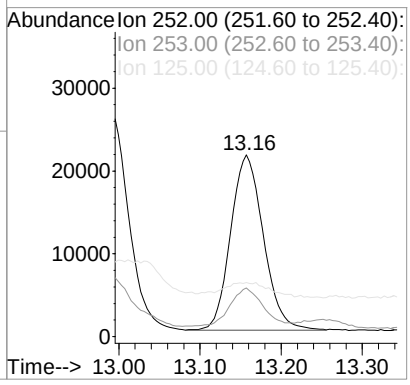




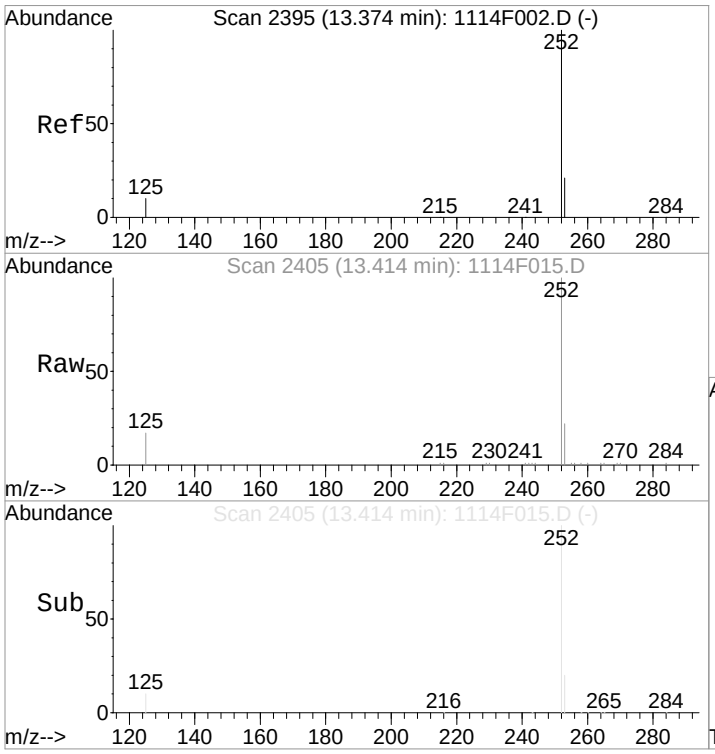
#32
Benzo(a)pyrene
Concen: 141.29 ng/ml
RT: 13.16 min Scan# 2340
Delta R.T. 0.03 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:252 Resp: 59403

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	50.9
125	8.5	0.0	30.3



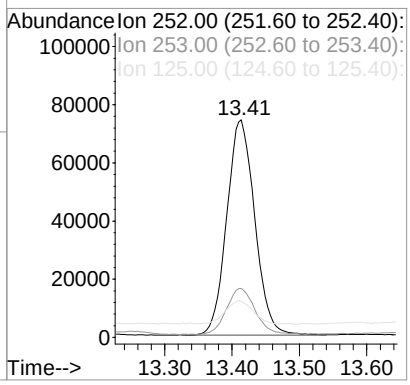
1st 12/03/18
2nd 12/06/18

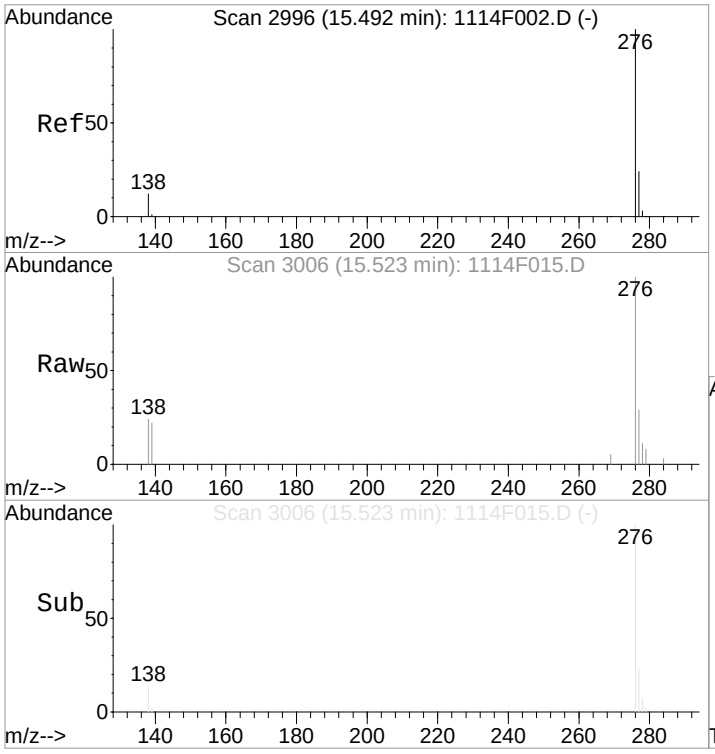


#33
Perylene
Concen: 486.71 ng/ml
RT: 13.41 min Scan# 2405
Delta R.T. 0.04 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:252 Resp: 214658

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	10.4	0.0	33.8

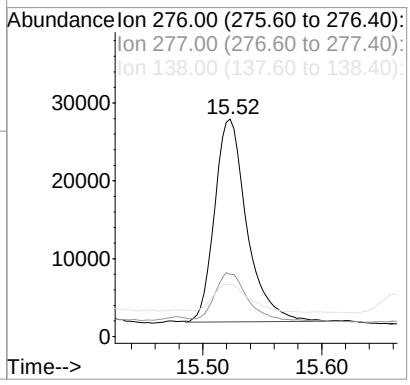


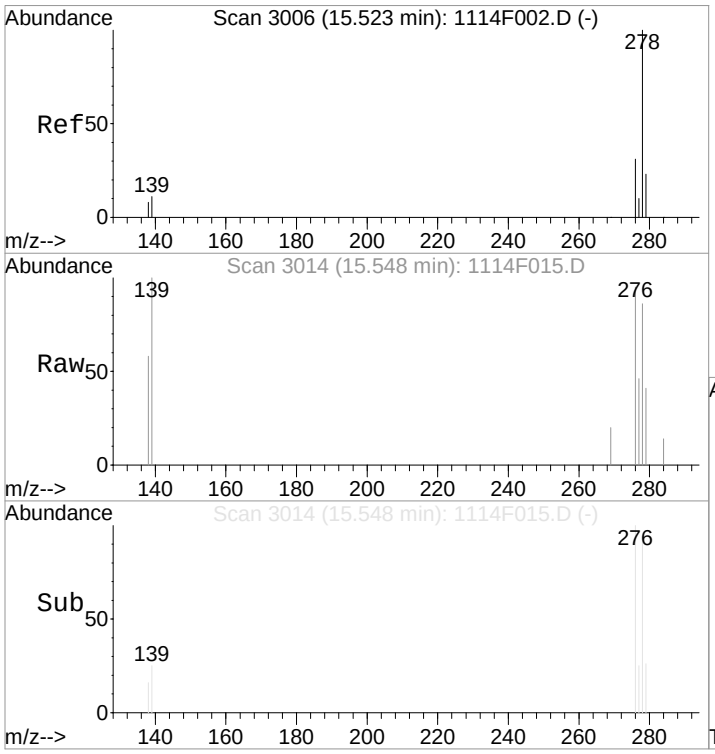


#34
Indeno(1,2,3-cd)pyrene
Concen: 119.05 ng/ml
RT: 15.52 min Scan# 3006
Delta R.T. 0.04 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:276 Resp: 49080

Ion	Ratio	Lower	Upper
276	100		
277	23.3	0.0	53.4
138	13.9	0.0	37.7

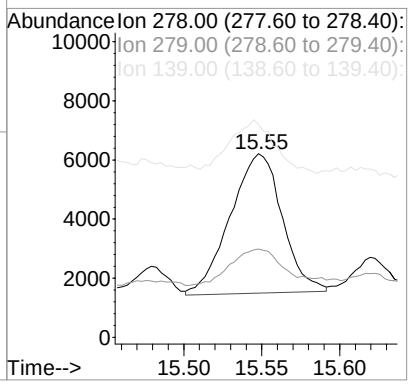


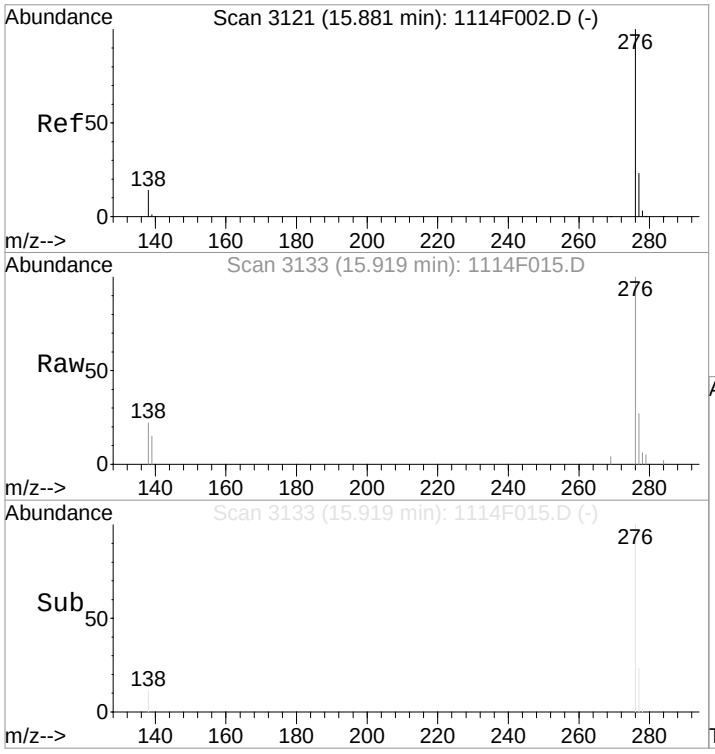


#35
Dibenz(a,h)anthracene
Concen: 26.23 ng/ml
RT: 15.55 min Scan# 3014
Delta R.T. 0.02 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:278 Resp: 10961

Ion	Ratio	Lower	Upper
278	100		
279	26.5	0.0	53.5
139	34.0	0.0	35.0

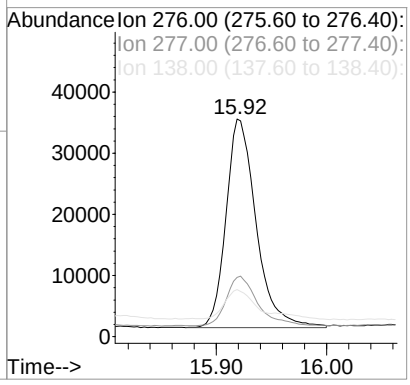




#36
Benzo(g,h,i)perylene
Concen: 134.42 ng/ml
RT: 15.92 min Scan# 3133
Delta R.T. 0.04 min
Lab File: 1114F015.D
Acq: 14 Nov 2018 11:46 am

Tgt Ion:276 Resp: 64895

Ion	Ratio	Lower	Upper
276	100		
277	23.2	0.0	53.1
138	14.2	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F015.D Vial: 15
Acq On : 14 Nov 2018 11:46 am Operator: LWeiskopf
Sample : K1810430-002DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:02 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.74	136	51976	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.31	164	29108	200.00	ng/ml	-0.01
15) Phenanthrene-d10	7.55	188	65813	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	71367	200.00	ng/ml	0.00
28) Perylene-d12	13.33	264	77597	200.00	ng/ml	0.03
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	15895	109.56	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	10.96%		
13) Fluorene-d10	6.75	176	29126	156.49	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	15.65%		
22) Fluoranthene-d10	8.54	212	60802	146.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.66%		
25) Terphenyl-d14	8.88	244	53612	173.19	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	17.32%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	6074	20.25	ng/ml	99
4) 2-Methylnaphthalene	5.41	142	1790	9.89	ng/ml	92
5) 1-Methylnaphthalene	5.50	142	859	4.93	ng/ml	92
6) Biphenyl	5.82	154	1208	5.35	ng/ml	98
7) 2,6-Dimethylnaphthalene	5.96	156	1593	10.26	ng/ml	93
9) Acenaphthylene	6.19	152	5486	15.80	ng/ml#	56
10) Acenaphthene	6.33	154	2089	10.47	ng/ml	94
11) Dibenzofuran	6.49	168	3780	11.81	ng/ml	87
12) 2,3,5-Trimethylnaphthalene	6.66	170	1146m	6.21	ng/ml	
14) Fluorene	6.77	166	4721m	19.57	ng/ml	
16) Dibenzothiophene	7.47	184	4164	10.14	ng/ml	95
17) Phenanthrene	7.57	178	42944	104.60	ng/ml	99
18) Anthracene	7.62	178	13359	34.08	ng/ml	99
19) Carbazole	7.75	167	3662	9.57	ng/ml	95
21) Fluoranthene	8.56	202	178345	351.80	ng/ml	96
24) Pyrene	8.75	202	190890	389.85	ng/ml	97
26) Benz(a)anthracene	10.10	228	59443	128.83	ng/ml	95
27) Chrysene	10.15	228	115919	262.28	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	121557	253.55	ng/ml	98
30) Benzo(k)fluoranthene	12.30	252	37767	79.41	ng/ml	90
31) Benzo(e)pyrene	12.99	252	70195	153.61	ng/ml	98
32) Benzo(a)pyrene	13.16	252	59403	141.29	ng/ml	97
33) Perylene	13.41	252	214658	486.71	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.52	276	49080	119.05	ng/ml	96
35) Dibenz(a,h)anthracene	15.55	278	10961	26.23	ng/ml	78
36) Benzo(g,h,i)perylene	15.92	276	64895	134.42	ng/ml	95

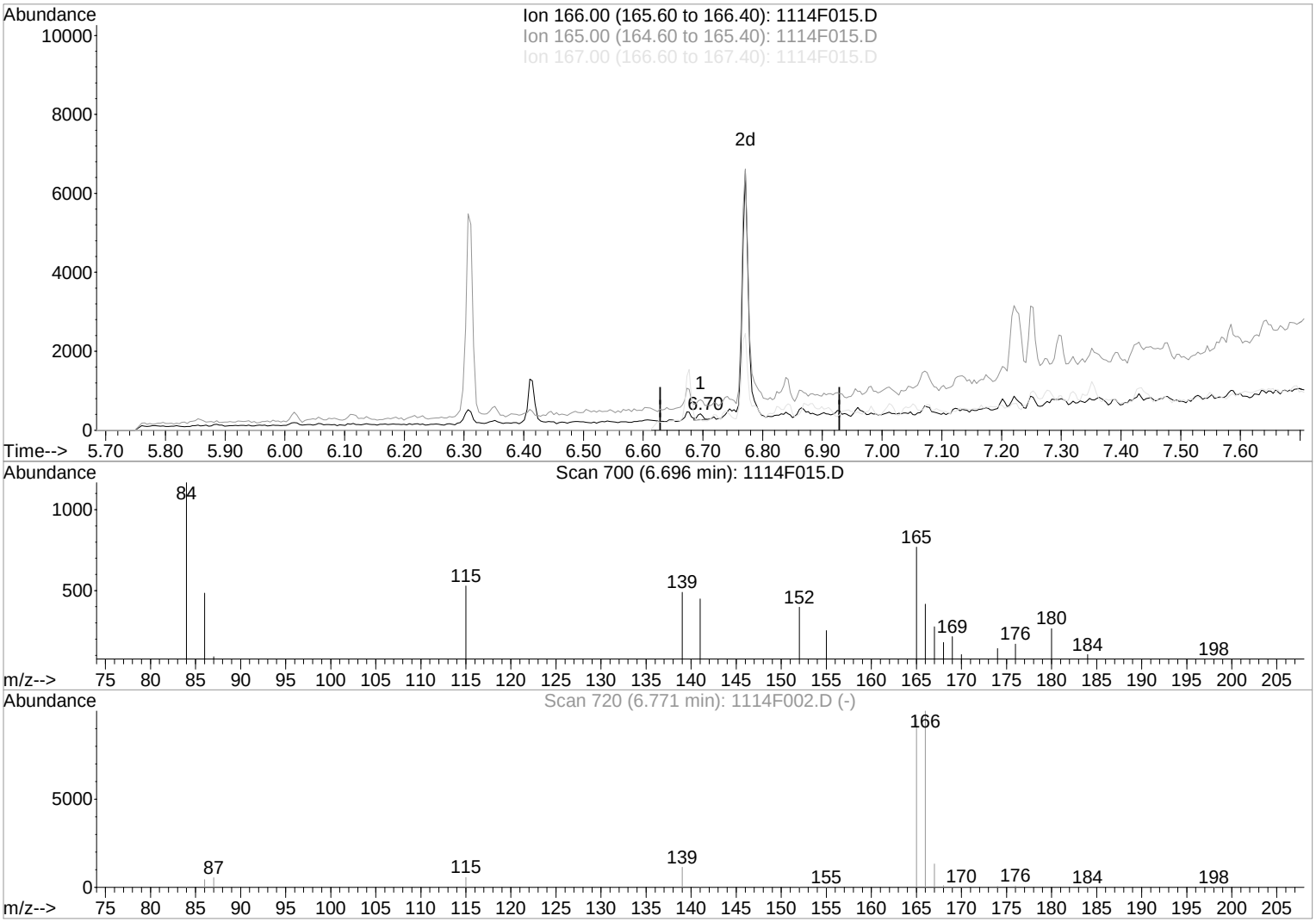
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F015.D Vial: 15
Acq On : 14 Nov 2018 11:46 am Operator: LWeiskopf
Sample : K1810430-002DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:38 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F015.D

(14) Fluorene (T)

6.70min 0.41ng/ml

response 98

Ion	Exp%	Act%
166.00	100	100
165.00	93.40	97.81
167.00	13.10	31.39
0.00	0.00	0.00

Manual Integration:

Before

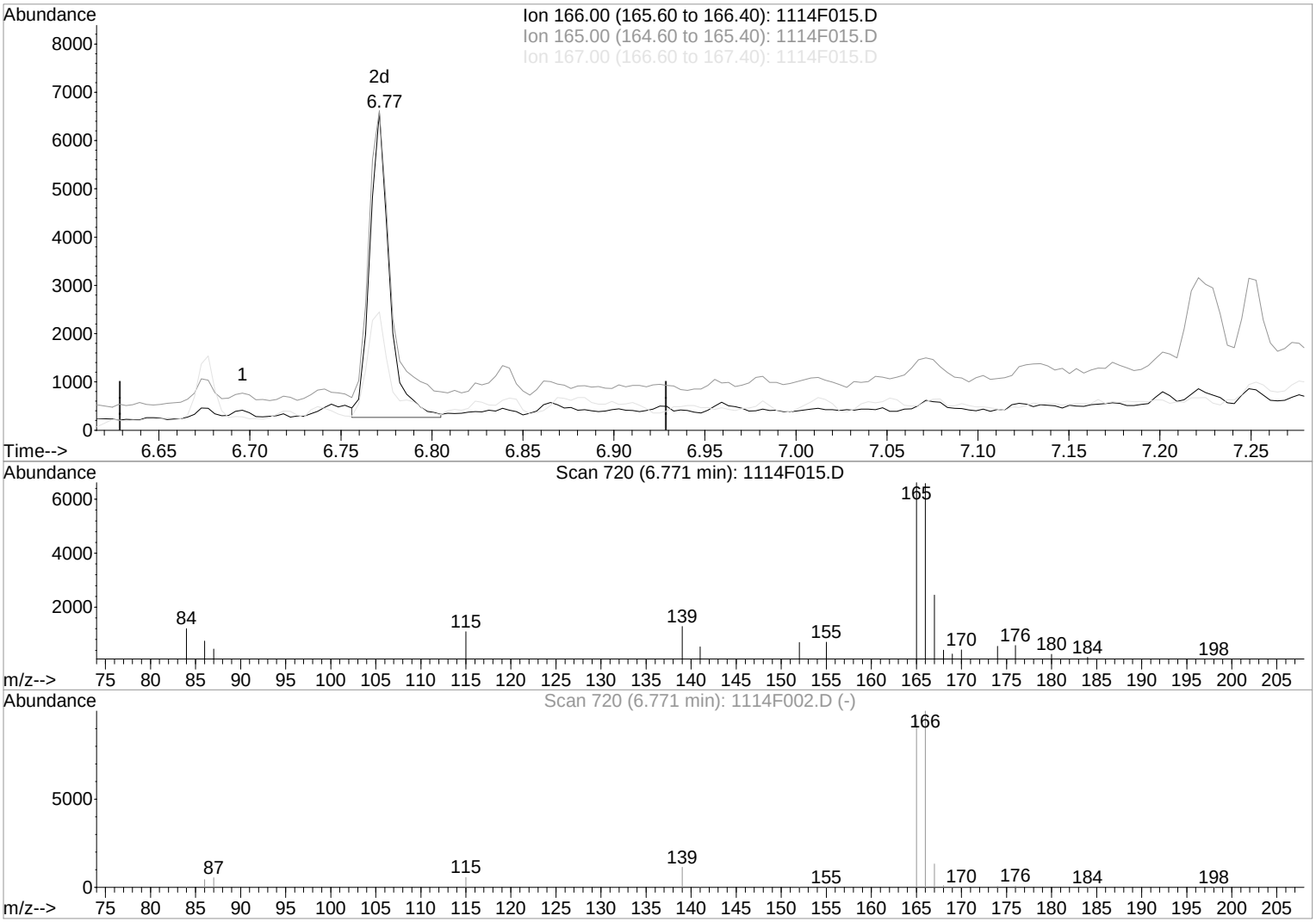
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F015.D Vial: 15
Acq On : 14 Nov 2018 11:46 am Operator: LWeiskopf
Sample : K1810430-002DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:38 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F015.D

(14) Fluorene (T)

6.77min 19.57ng/ml m

response 4721

Ion	Exp%	Act%
166.00	100	100
165.00	93.40	100.50
167.00	13.10	37.23#
0.00	0.00	0.00

Manual Integration:

After

WP

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F016.D
Lab ID: K1810430-003
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 12:12
Date Quantitated: 11/30/2018 12:39
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F016.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 12:12	**Quant Date:**	11/30/2018 12:39	**Vial:**	16
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-003			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702215	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.74	-0.01	136	53010	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	30185	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	67316	200.00	OK
4	Chrysene-d12	10.11	0.01	240	72757	200.00	OK
5	Perylene-d12	13.34	0.05	264	78286	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	28951	150.00	75	26-102	OK	
3	Fluoranthene-d10	8.54	0.01	0.00	212	63594	149.90	75	23-110	OK	
4	Terphenyl-d14	8.88	0.00	0.00	244	55390	175.52	88	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.76	-0.01	0.00	128	7394	24.16	17	D	
1	2-Methylnaphthalene	5.41		0.00	142	2500	13.55	9.8	D	
2	Acenaphthylene	6.19		0.00	152	5618	15.60	11	D	
2	Acenaphthene	6.34		0.00	154	3537	17.10	12	D	
2	Dibenzofuran	6.49		0.00	168	4180	12.59	9.1	D	
2	Fluorene	6.77		0.00	166	5259**m**	21.02	15	D	
3	Phenanthrene	7.57		0.00	178	71669	170.67	120	D	
3	Anthracene	7.62	0.01	0.00	178	14037	35.02	25	D	
3	Fluoranthene	8.56	0.01	0.00	202	219908	424.10	310	D	
4	Pyrene	8.75		0.00	202	235056	470.88	340	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	77076	163.85	120	D	
4	Chrysene	10.15	0.01	0.00	228	120548	267.54	190	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F016.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 12:12	**Quant Date:**	11/30/2018 12:39	**Vial:**	16
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-003			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	153168	316.68	230	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	57286**m**	119.39	86	D	
5	Benzo(a)pyrene	13.17	0.05	0.00	252	85745	202.15	150	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	68097	163.72	120	D	
5	Dibenz(a,h)anthracene	15.56	0.04	0.00	278	14492	34.37	25	D	
5	Benzo(g,h,i)perylene	15.93	0.05	0.00	276	83452	171.33	120	D	

Prep Amount:	40.007 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	34.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

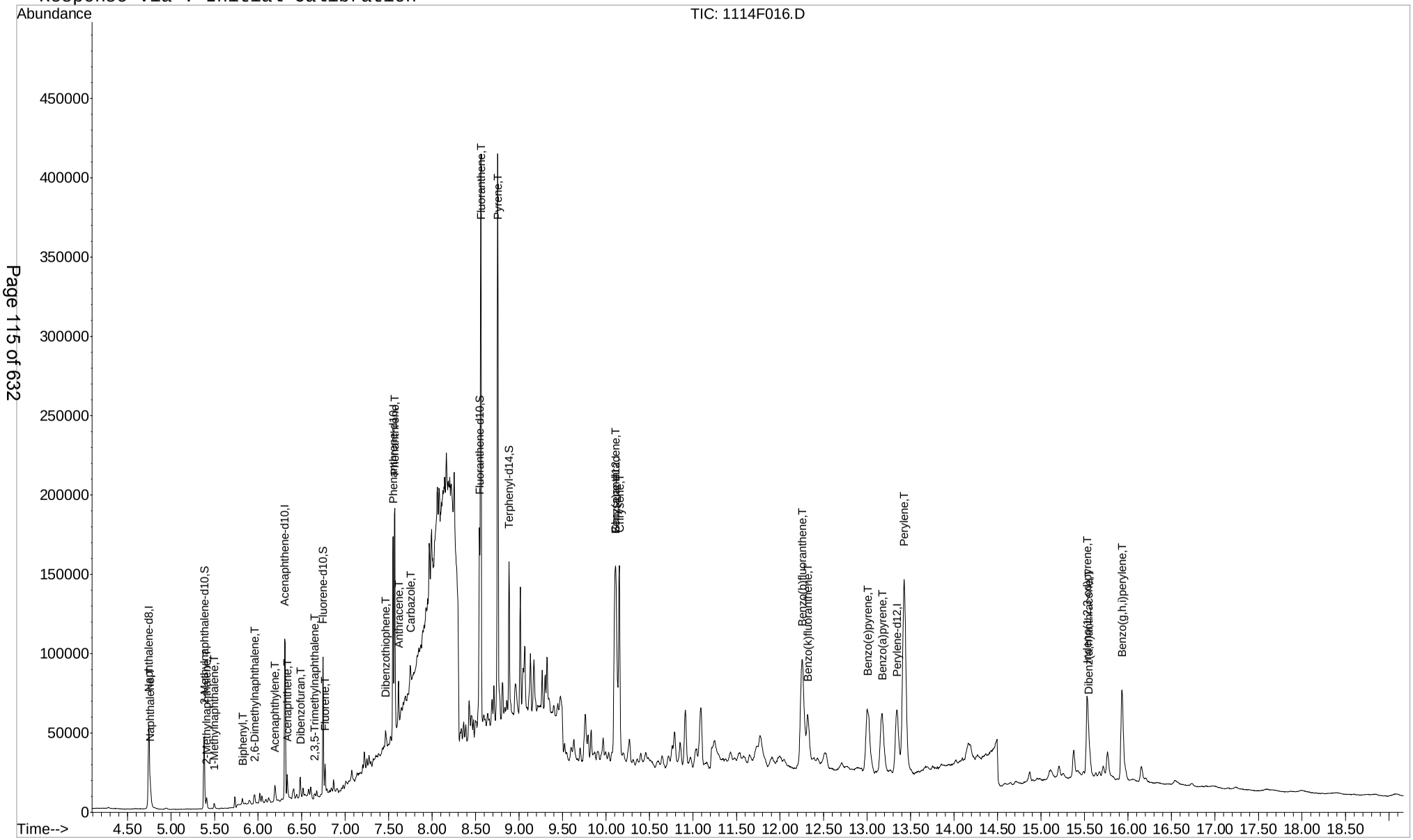
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

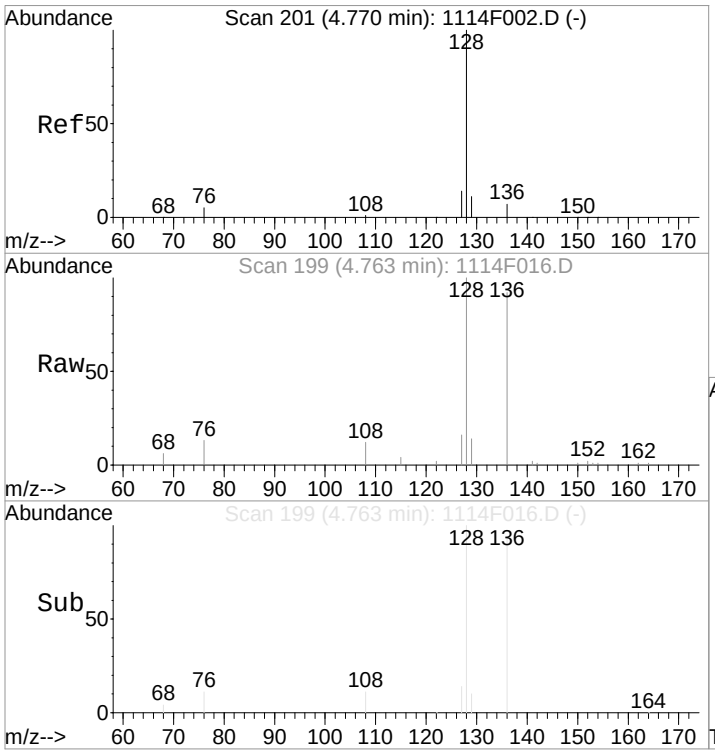
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F016.D Vial: 16
Acq On : 14 Nov 2018 12:12 pm Operator: LWeiskopf
Sample : K1810430-003DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:39 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



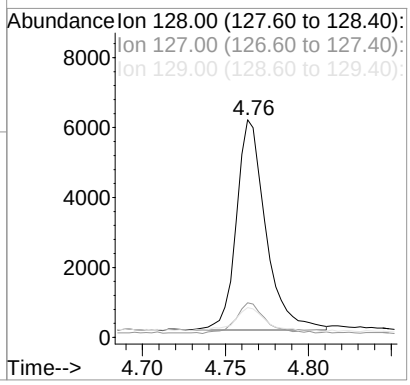
1st 12/03/18
2nd 12/06/18

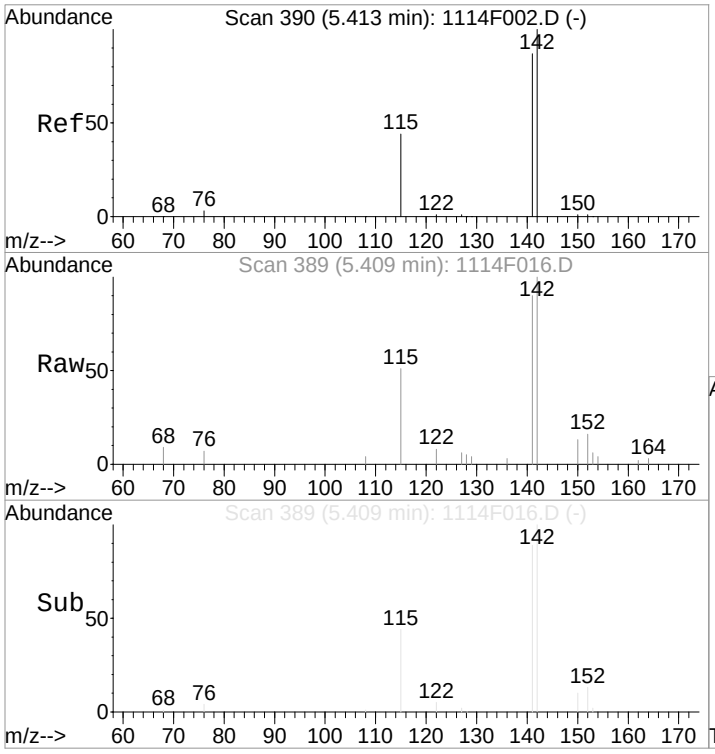


#2
Naphthalene
Concen: 24.16 ng/ml
RT: 4.76 min Scan# 199
Delta R.T. -0.02 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:128 Resp: 7394

Ion	Ratio	Lower	Upper
128	100		
127	14.3	0.0	43.7
129	11.3	0.0	30.8

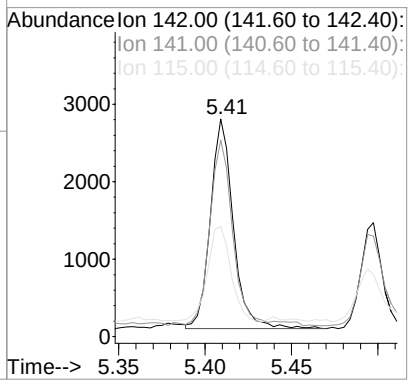




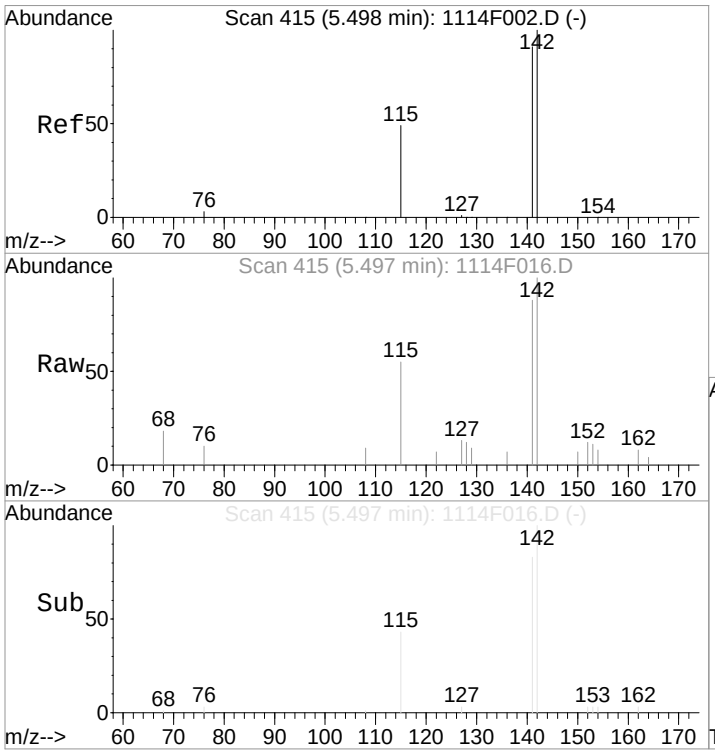
#4
2-Methylnaphthalene
Concen: 13.55 ng/ml
RT: 5.41 min Scan# 389
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:142 Resp: 2500

Ion	Ratio	Lower	Upper
142	100		
141	88.5	56.8	116.8
115	44.5	13.3	53.3



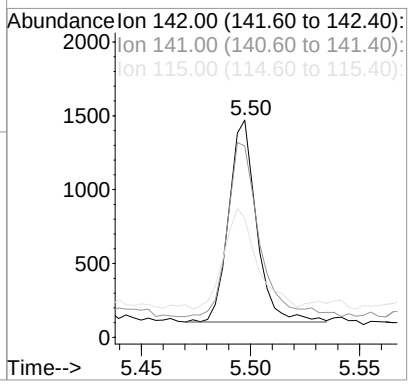
1st 12/03/18
2nd 12/06/18

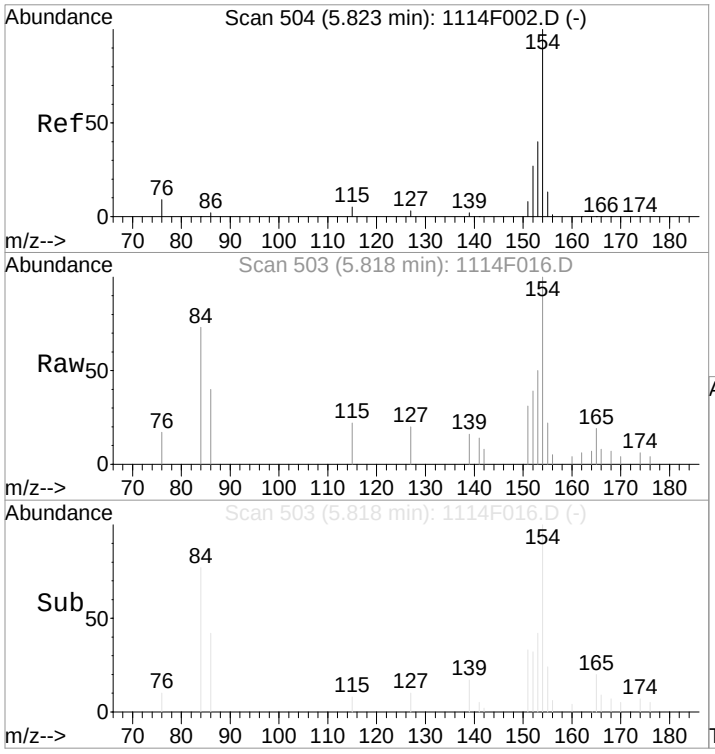


#5
1-Methylnaphthalene
Concen: 6.83 ng/ml
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:142 Resp: 1213

Ion	Ratio	Lower	Upper
142	100		
141	84.4	59.7	119.7
115	42.8	13.7	53.7

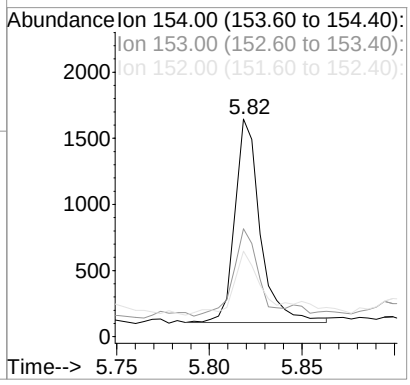




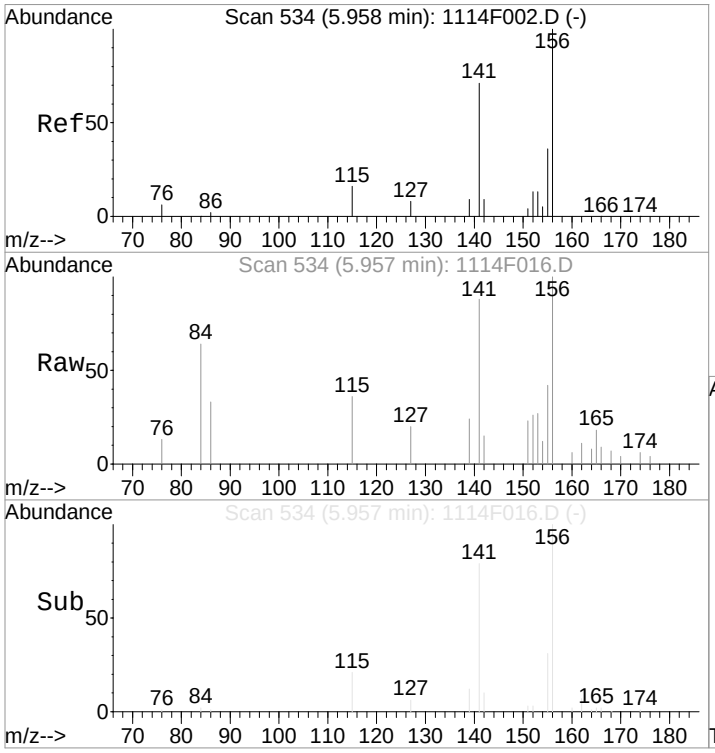
#6
Biphenyl
Concen: 6.38 ng/ml
RT: 5.82 min Scan# 503
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:154 Resp: 1469

Ion	Ratio	Lower	Upper
154	100		
153	41.2	11.4	71.4
152	31.4	7.1	47.1



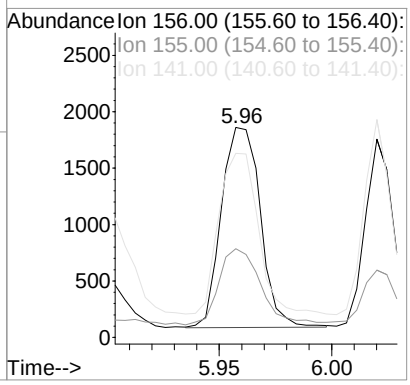
1st 12/03/18
2nd 12/06/18

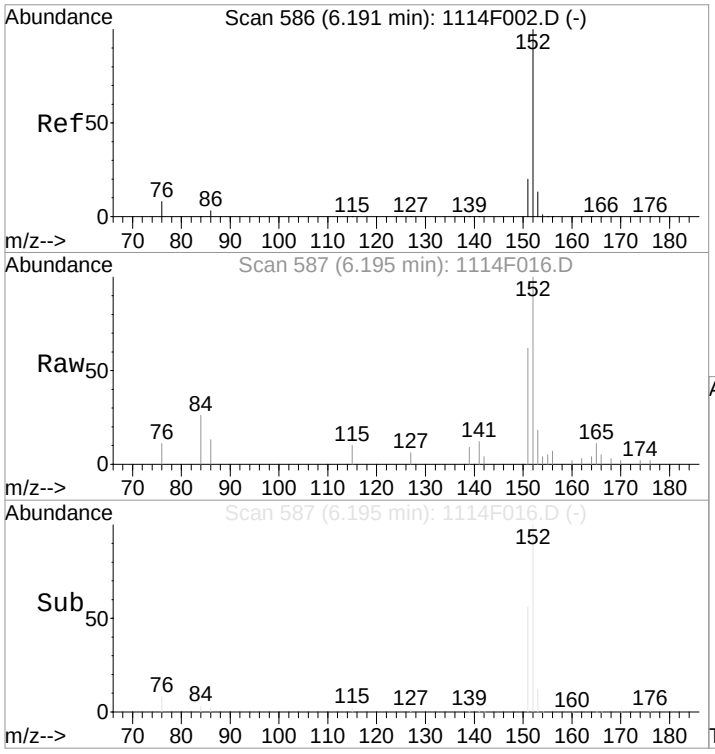


#7
2,6-Dimethylnaphthalene
Concen: 13.50 ng/ml
RT: 5.96 min Scan# 534
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:156 Resp: 2139

Ion	Ratio	Lower	Upper
156	100		
155	38.1	7.0	67.0
141	80.5	47.9	87.9

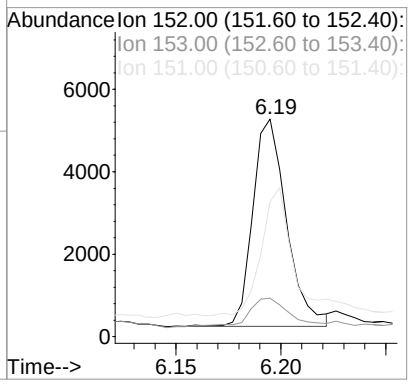




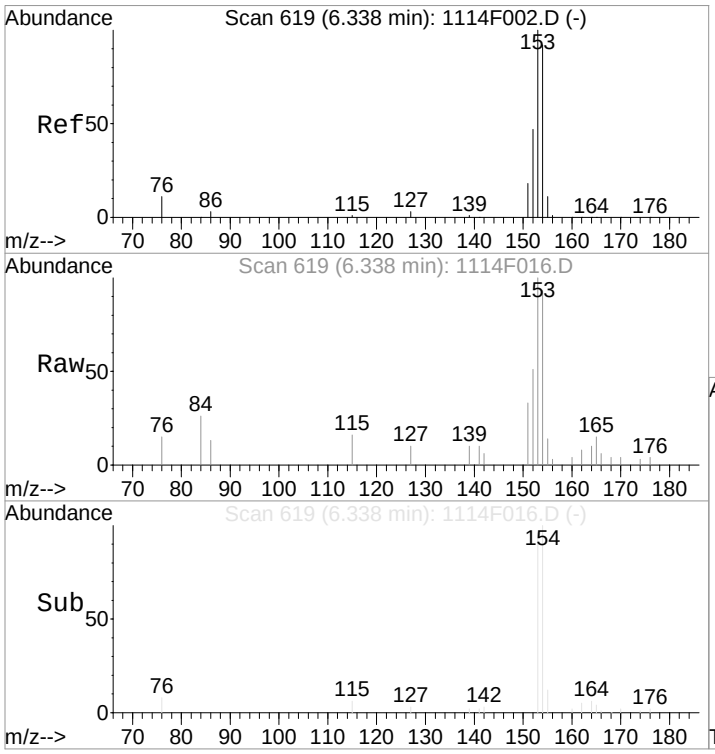
#9
Acenaphthylene
Concen: 15.60 ng/ml
RT: 6.19 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:152 Resp: 5618

Ion	Ratio	Lower	Upper
152	100		
153	13.7	0.0	42.9
151	54.8	0.2	40.2#



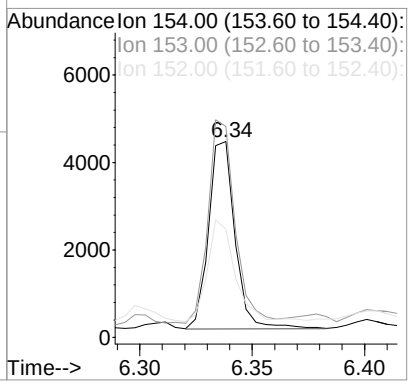
1st 12/03/18
2nd 12/06/18

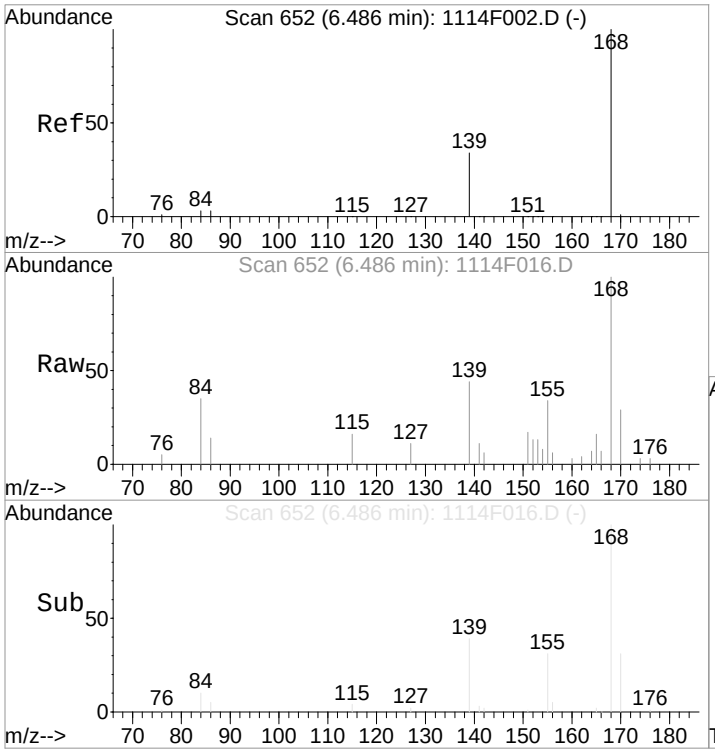


#10
Acenaphthene
Concen: 17.10 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:154 Resp: 3537

Ion	Ratio	Lower	Upper
154	100		
153	105.2	77.1	137.1
152	49.4	19.7	79.7

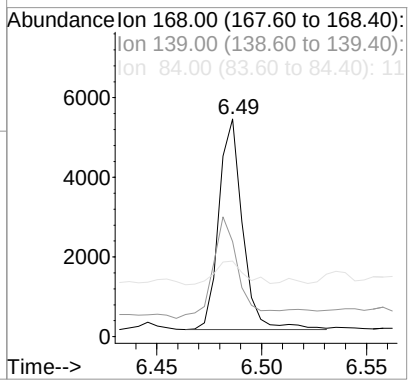


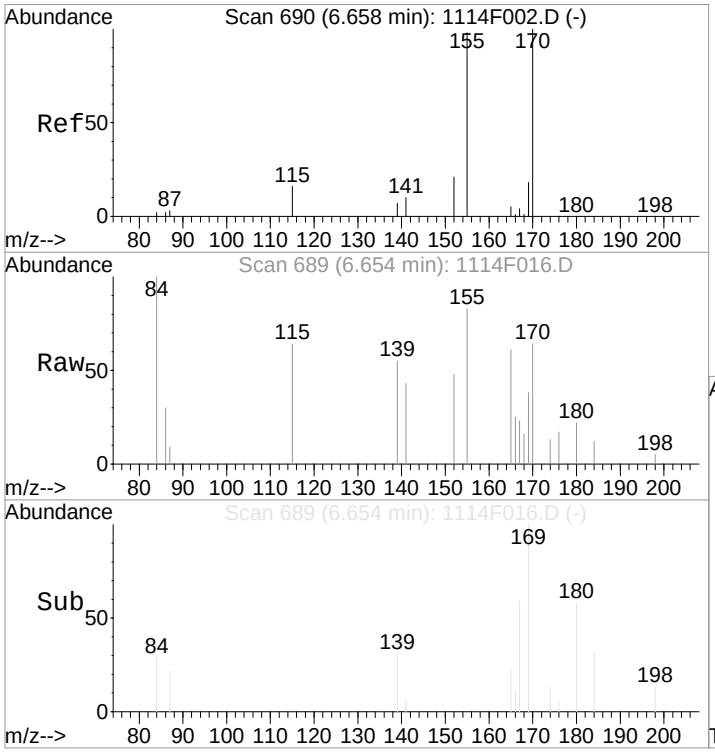


#11
Dibenzofuran
Concen: 12.59 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:168 Resp: 4180

Ion	Ratio	Lower	Upper
168	100		
139	34.6	0.0	55.8
84	11.3	0.0	23.5

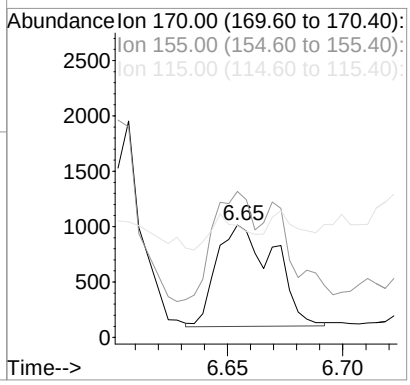


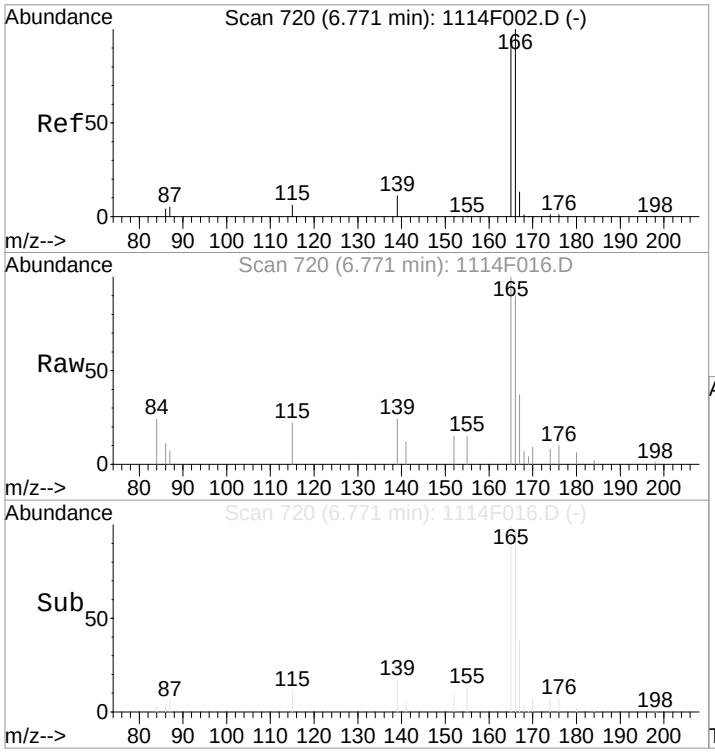


#12
2,3,5-Trimethylnaphthalene
Concen: 8.35 ng/ml m
RT: 6.65 min Scan# 689
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:170 Resp: 1598

Ion	Ratio	Lower	Upper
170	100		
155	129.9	59.2	119.2#
115	99.8	0.0	30.1#

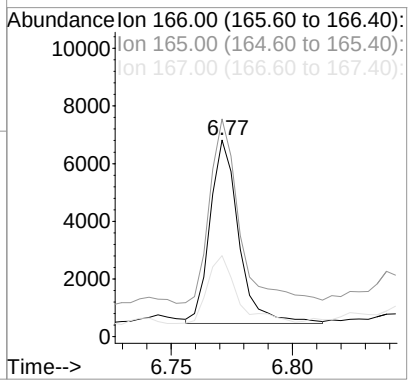




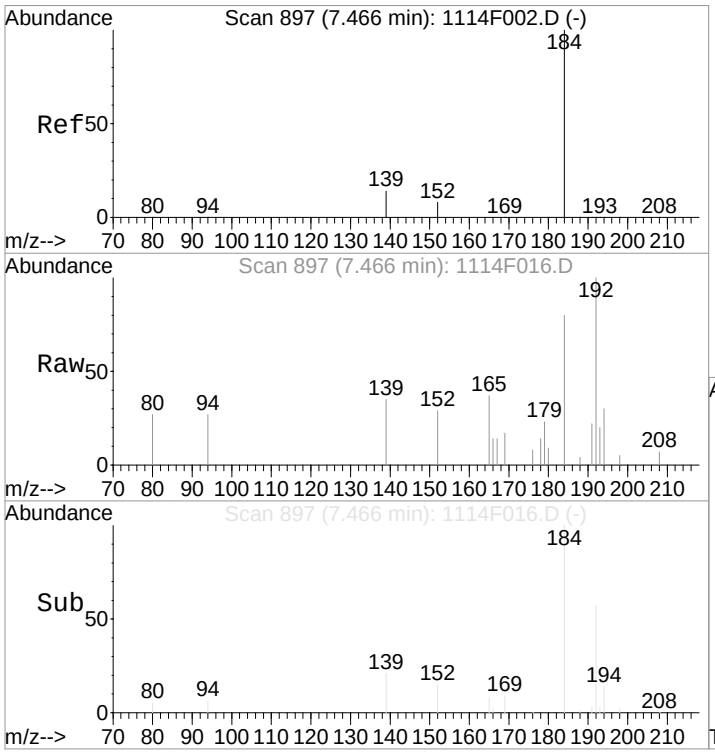
#14
Fluorene
Concen: 21.02 ng/ml m
RT: 6.77 min Scan# 720
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:166 Resp: 5259

Ion	Ratio	Lower	Upper
166	100		
165	110.6	63.4	123.4
167	41.2	0.0	33.1#



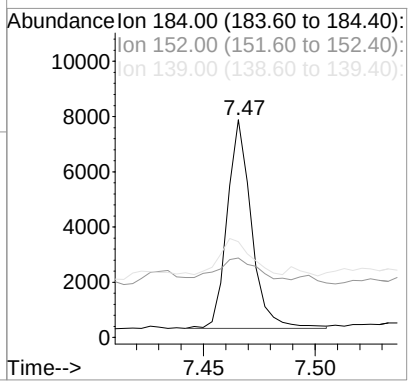
1st 12/03/18
2nd 12/06/18

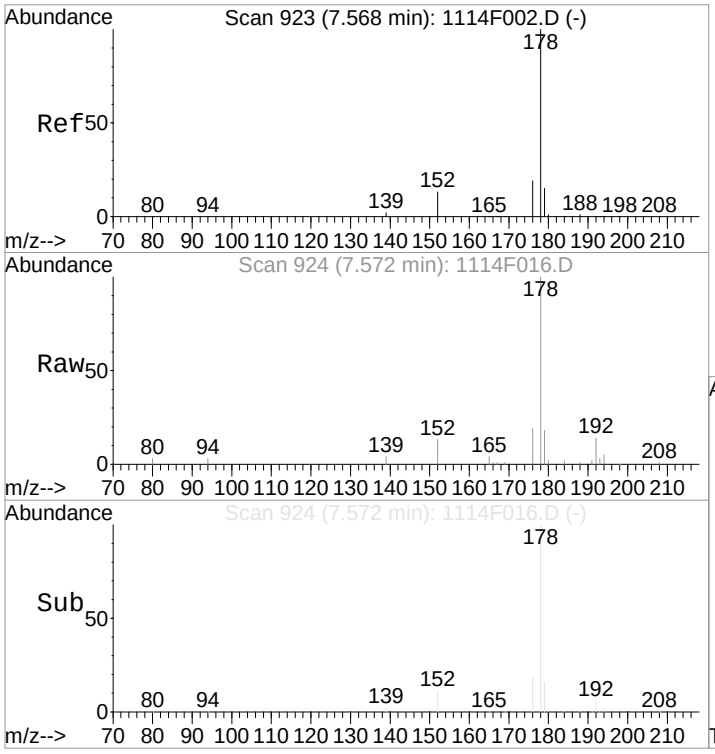


#16
Dibenzothiophene
Concen: 13.66 ng/ml
RT: 7.47 min Scan# 897
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:184 Resp: 5736

Ion	Ratio	Lower	Upper
184	100		
152	12.0	0.0	37.8
139	14.9	0.0	32.6

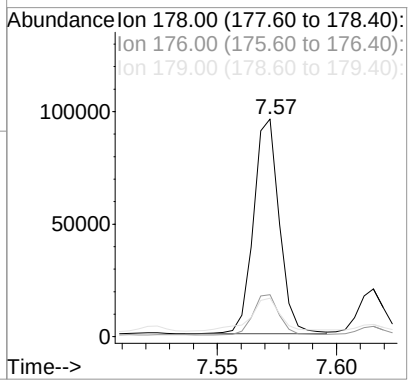




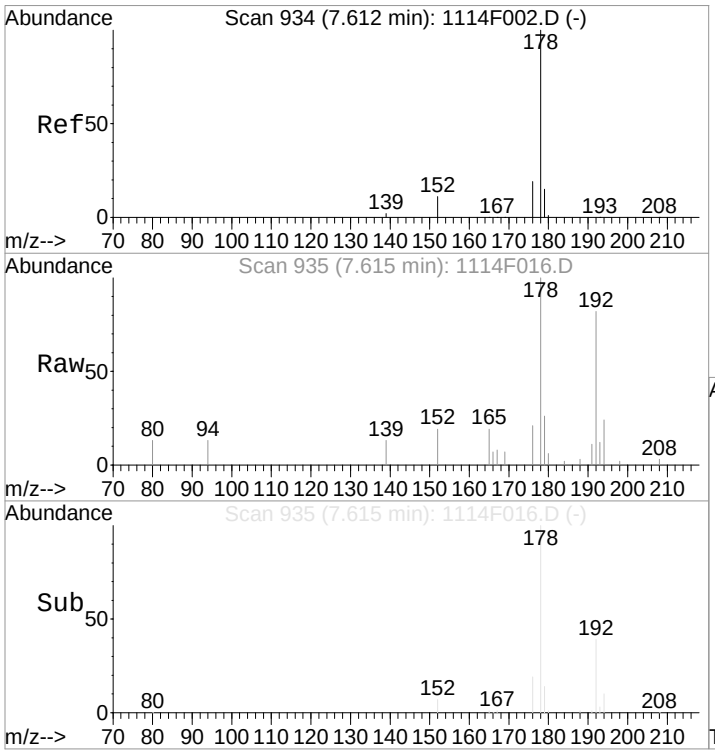
#17
Phenanthrene
Concen: 170.67 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:178 Resp: 71669

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.7
179	15.4	0.0	35.1



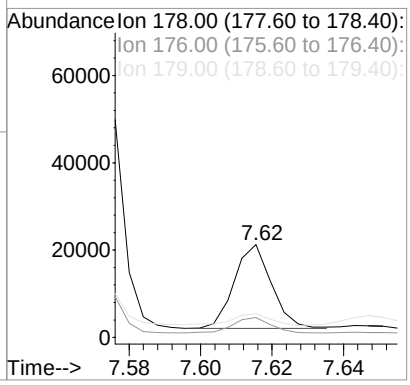
1st 12/03/18
2nd 12/06/18

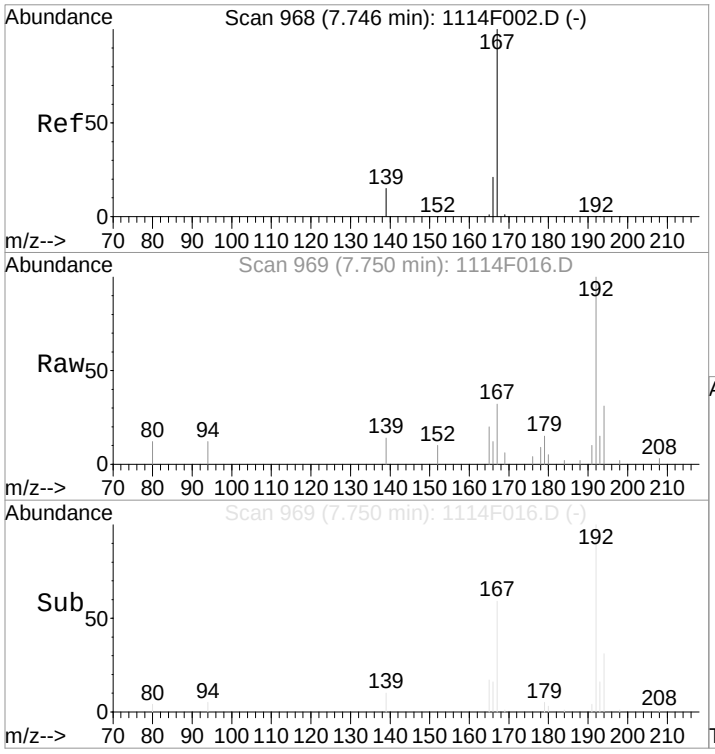


#18
Anthracene
Concen: 35.02 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:178 Resp: 14037

Ion	Ratio	Lower	Upper
178	100		
176	18.2	0.0	48.0
179	12.8	0.0	35.1

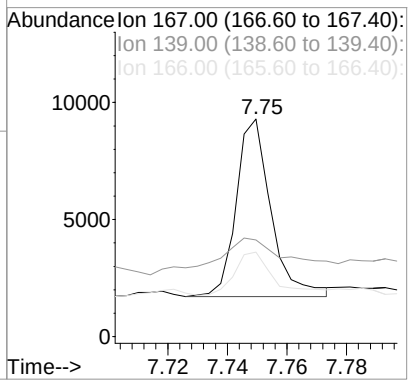




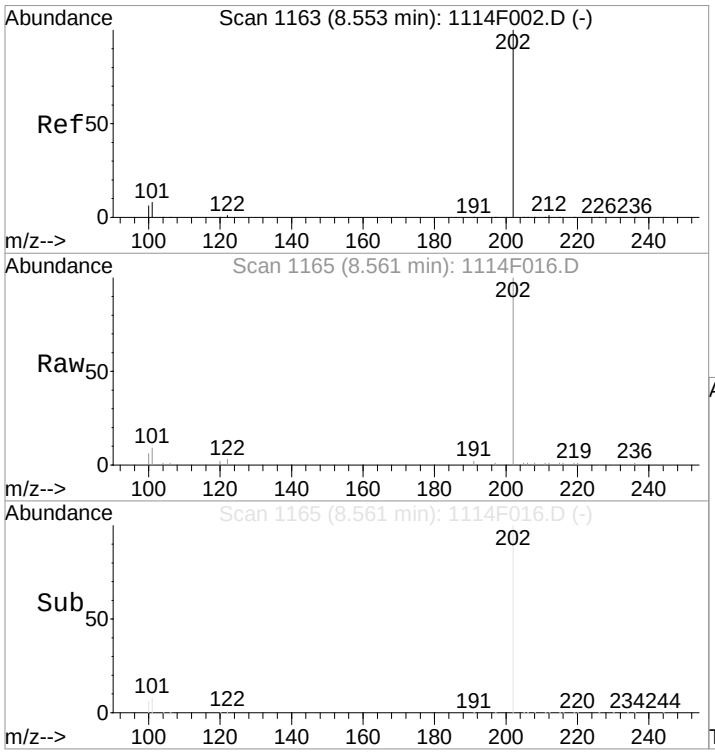
#19
Carbazole
Concen: 15.81 ng/ml
RT: 7.75 min Scan# 969
Delta R.T. -0.01 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:167 Resp: 6187

Ion	Ratio	Lower	Upper
167	100		
139	15.6	0.0	41.5
166	23.1	0.7	40.7



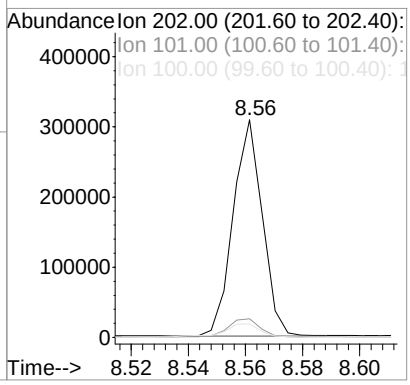
1st 12/03/18
2nd 12/06/18

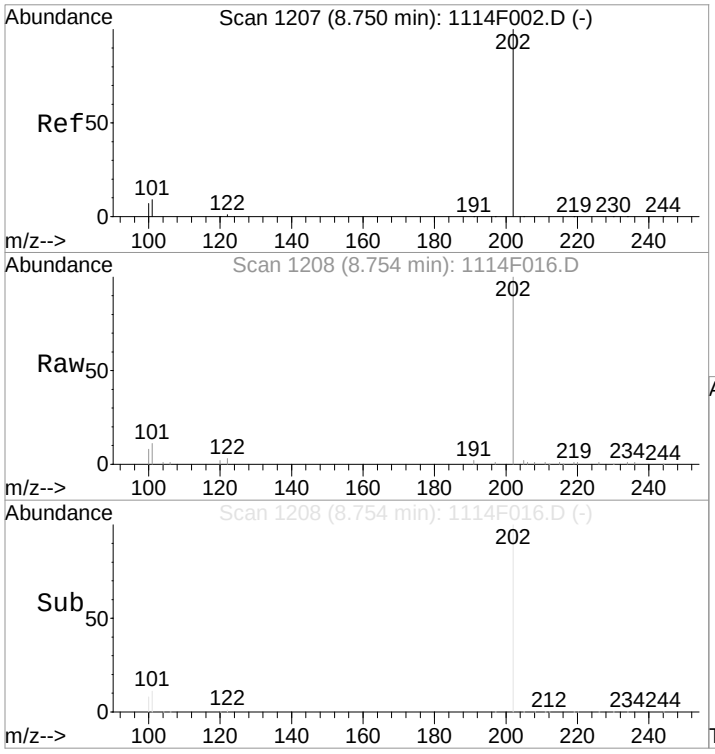


#21
Fluoranthene
Concen: 424.10 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:202 Resp: 219908

Ion	Ratio	Lower	Upper
202	100		
101	8.4	0.0	41.3
100	6.0	0.0	28.6

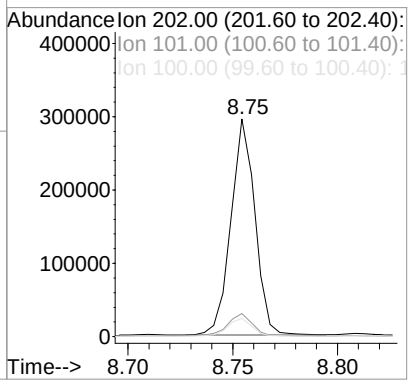




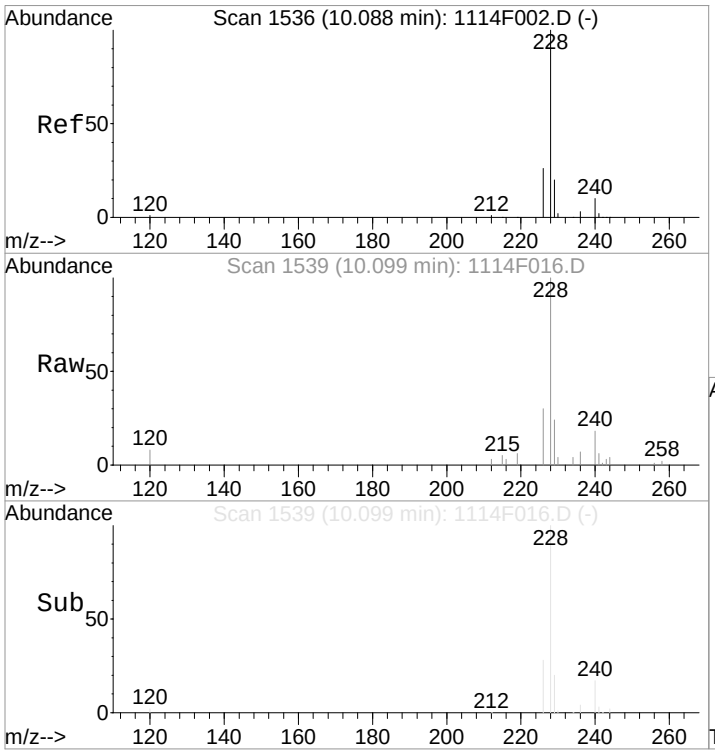
#24
Pyrene
Concen: 470.88 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:202 Resp: 235056

Ion	Ratio	Lower	Upper
202	100		
101	10.5	0.0	40.8
100	8.2	0.0	28.5



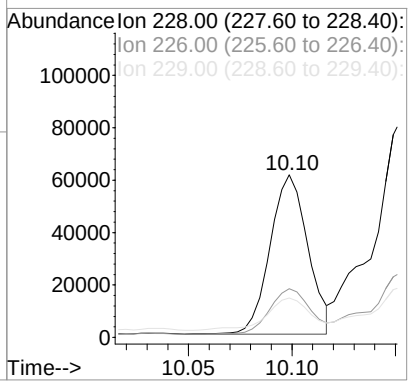
1st 12/03/18
2nd 12/06/18

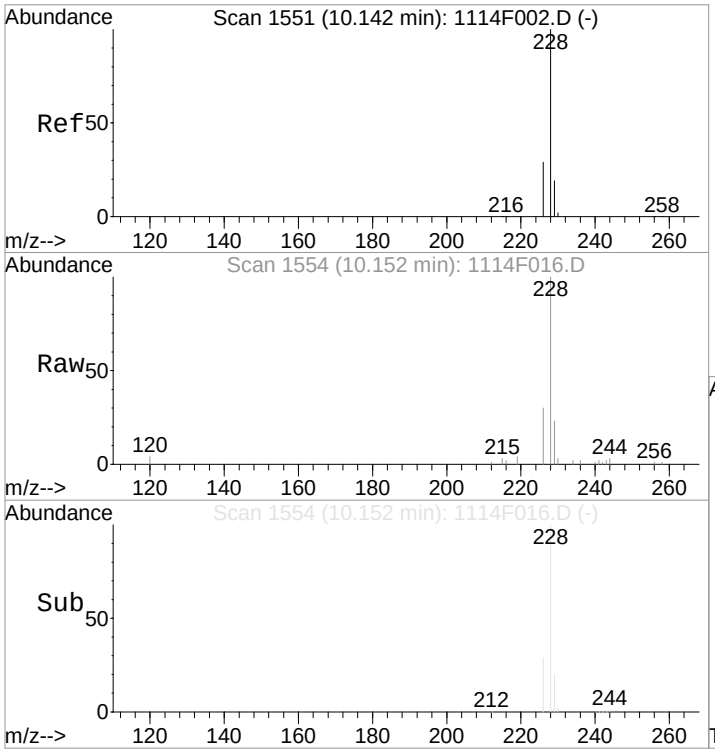


#26
Benz(a)anthracene
Concen: 163.85 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:228 Resp: 77076

Ion	Ratio	Lower	Upper
228	100		
226	28.5	0.0	56.3
229	20.2	0.0	39.1

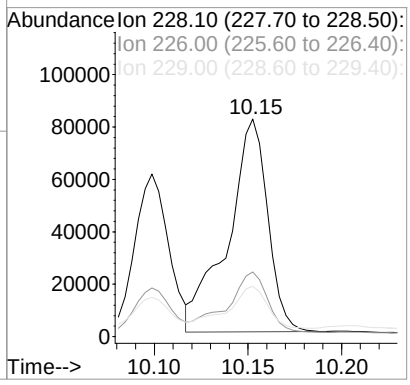




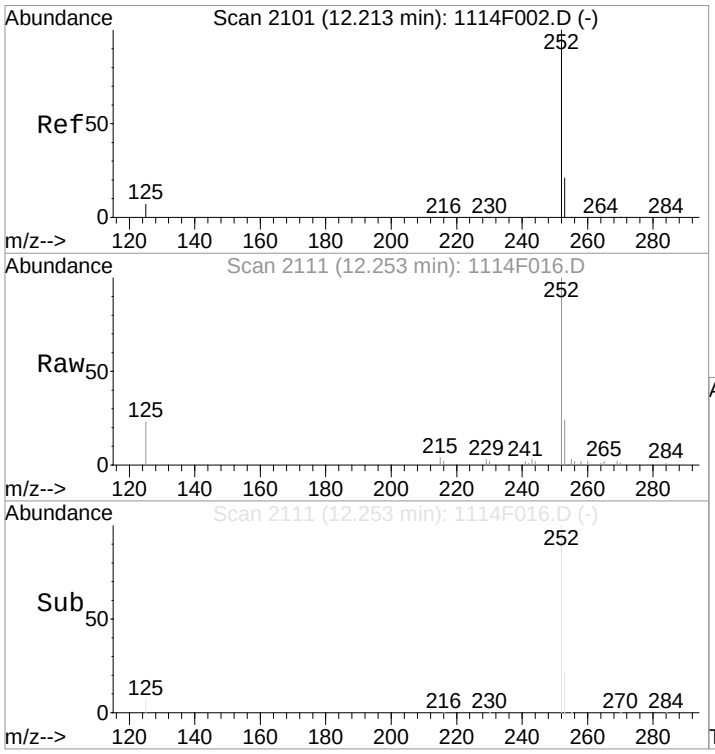
#27
Chrysene
Concen: 267.54 ng/ml
RT: 10.15 min Scan# 1554
Delta R.T. -0.00 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:228 Resp: 120548

Ion	Ratio	Lower	Upper
228	100		
226	28.6	0.0	58.7
229	19.0	0.0	39.2



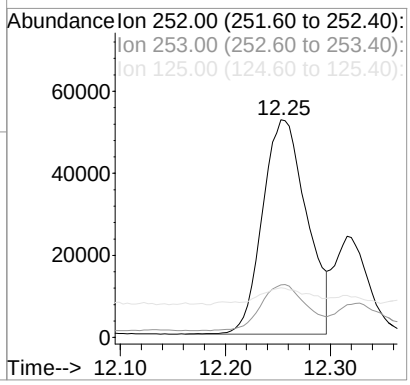
1st 12/03/18
2nd 12/06/18

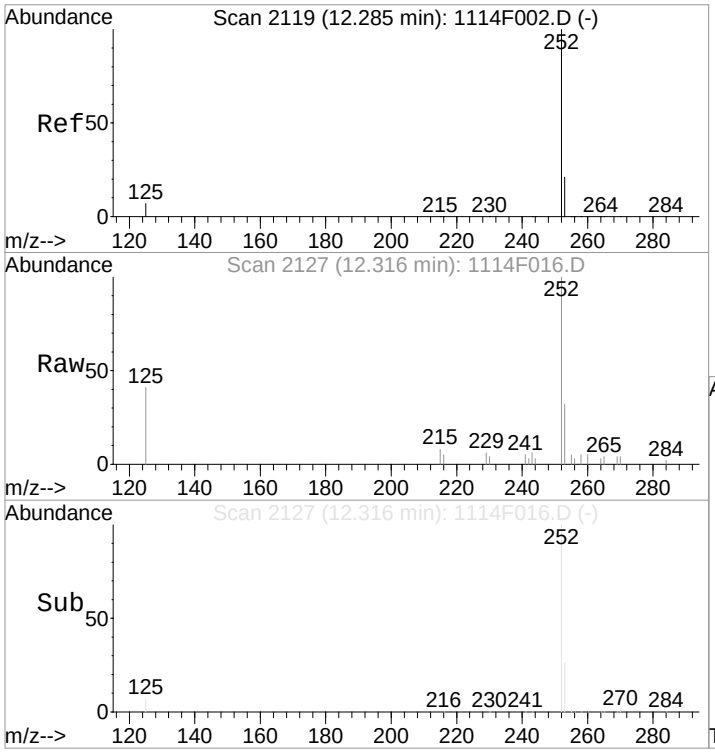


#29
Benzo(b)fluoranthene
Concen: 316.68 ng/ml
RT: 12.25 min Scan# 2111
Delta R.T. 0.03 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:252 Resp: 153168

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	7.0	0.0	29.5

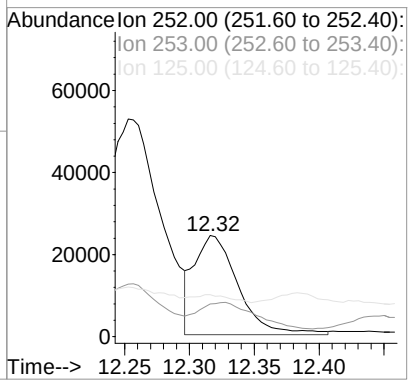




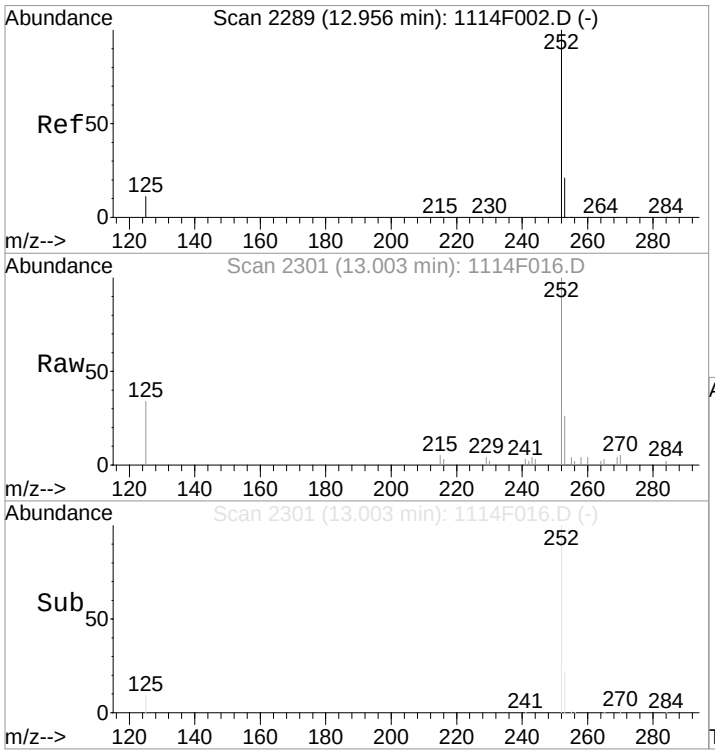
#30
Benzo(k)fluoranthene
Concen: 119.39 ng/ml m
RT: 12.32 min Scan# 2127
Delta R.T. 0.02 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:252 Resp: 57286

Ion	Ratio	Lower	Upper
252	100		
253	32.4	0.0	51.2
125	41.4	0.0	29.7#



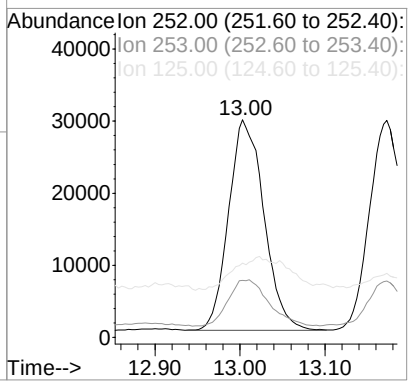
1st 12/03/18
2nd 12/06/18

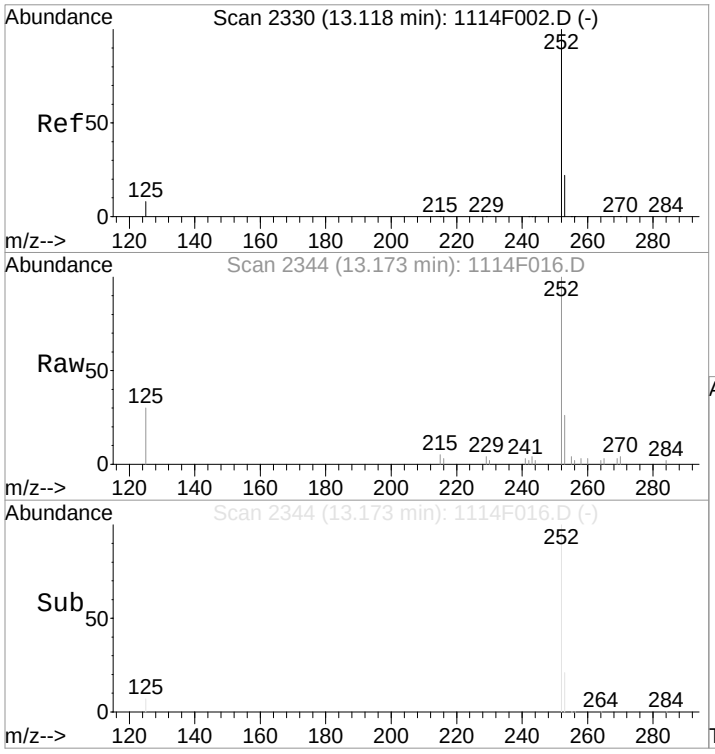


#31
Benzo(e)pyrene
Concen: 182.79 ng/ml
RT: 13.00 min Scan# 2301
Delta R.T. 0.04 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:252 Resp: 84272

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.3
125	10.8	0.0	33.5

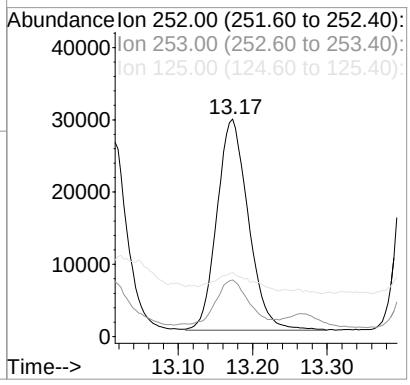




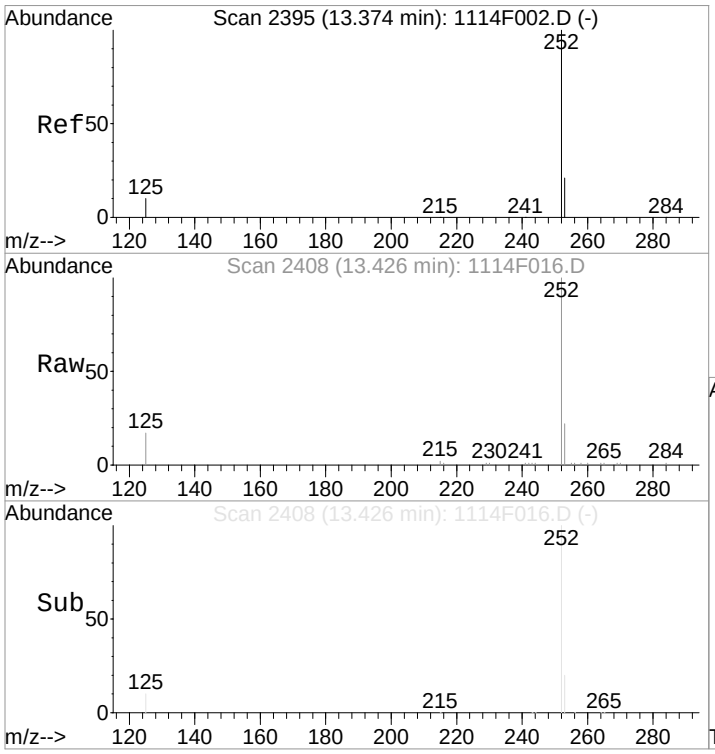
#32
Benzo(a)pyrene
Concen: 202.15 ng/ml
RT: 13.17 min Scan# 2344
Delta R.T. 0.05 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:252 Resp: 85745

Ion	Ratio	Lower	Upper
252	100		
253	20.7	0.0	50.9
125	9.5	0.0	30.3



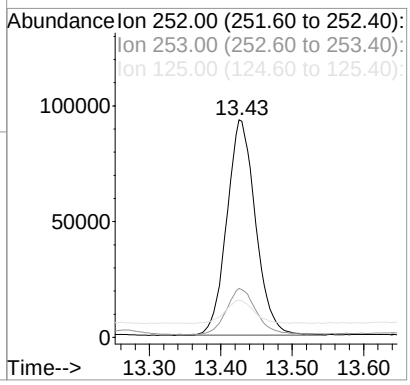
1st 12/03/18
2nd 12/06/18

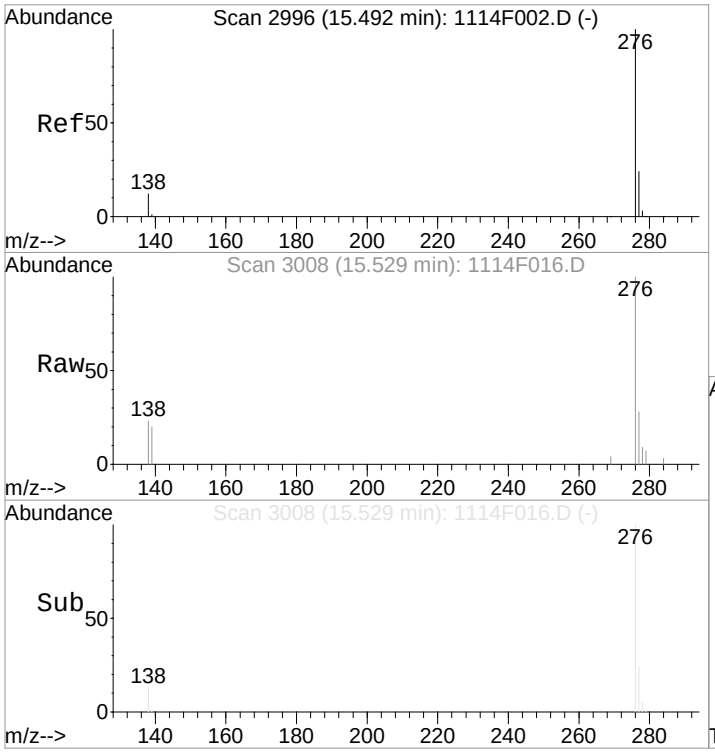


#33
Perylene
Concen: 585.31 ng/ml
RT: 13.43 min Scan# 2408
Delta R.T. 0.05 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:252 Resp: 260435

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	51.2
125	10.7	0.0	33.8

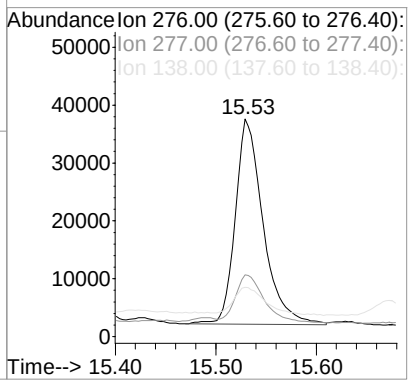


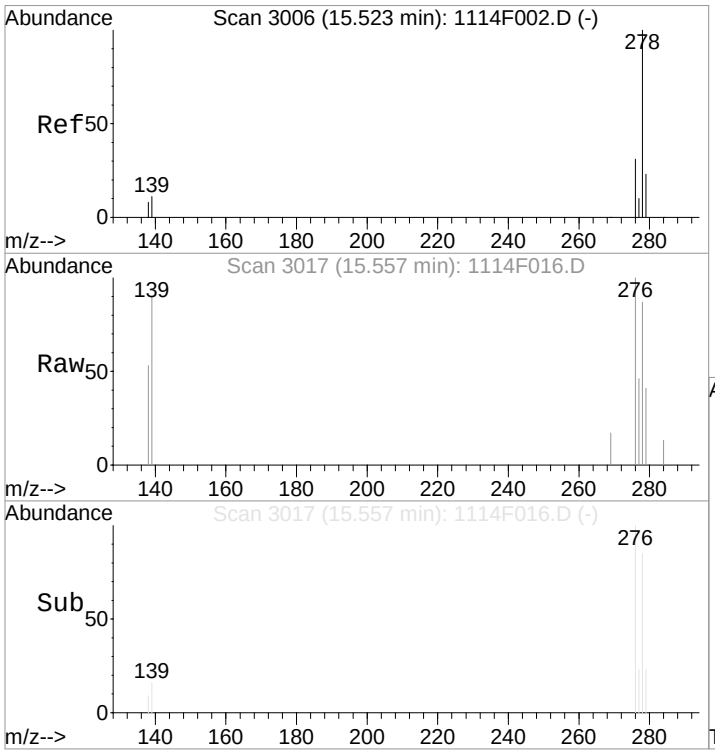


#34
Indeno(1,2,3-cd)pyrene
Concen: 163.72 ng/ml
RT: 15.53 min Scan# 3008
Delta R.T. 0.04 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:276 Resp: 68097

Ion	Ratio	Lower	Upper
276	100		
277	23.4	0.0	53.4
138	13.4	0.0	37.7

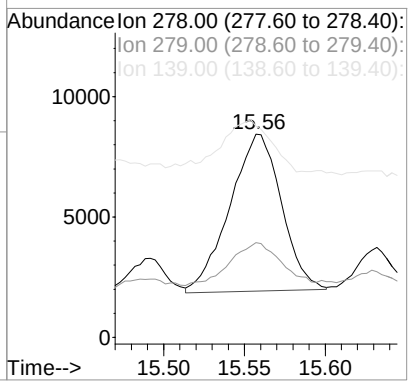


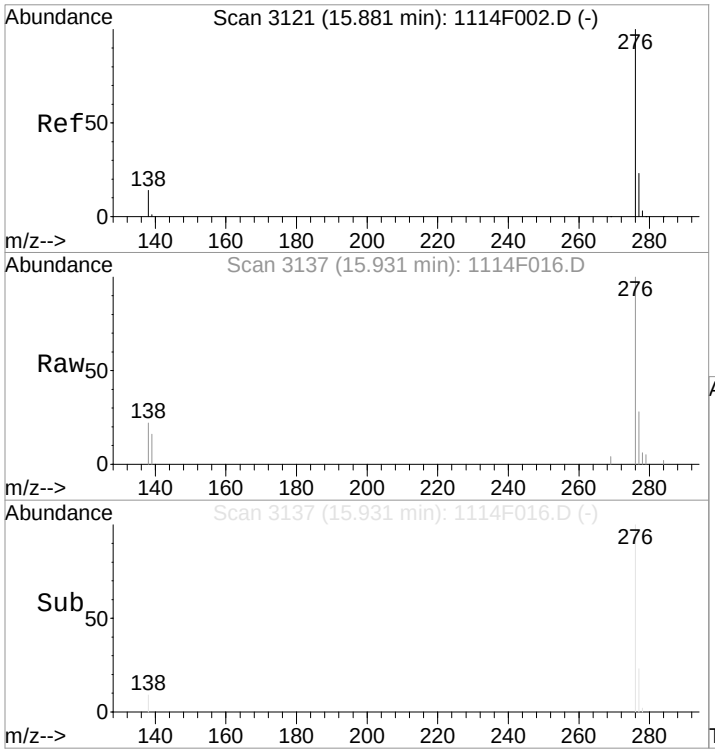


#35
Dibenz(a,h)anthracene
Concen: 34.37 ng/ml
RT: 15.56 min Scan# 3017
Delta R.T. 0.03 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:278 Resp: 14492

Ion	Ratio	Lower	Upper
278	100		
279	27.8	0.0	53.5
139	30.4	0.0	35.0

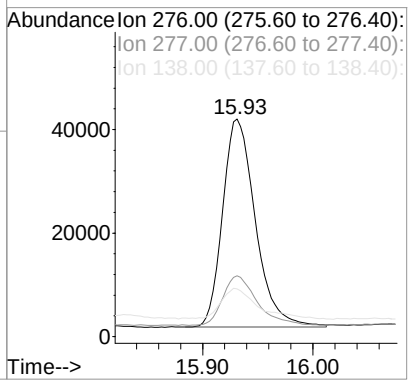




#36
Benzo(g,h,i)perylene
Concen: 171.33 ng/ml
RT: 15.93 min Scan# 3137
Delta R.T. 0.05 min
Lab File: 1114F016.D
Acq: 14 Nov 2018 12:12 pm

Tgt Ion:276 Resp: 83452

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.1
138	14.4	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F016.D Vial: 16
Acq On : 14 Nov 2018 12:12 pm Operator: LWeiskopf
Sample : K1810430-003DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:05 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.74	136	53010	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.31	164	30185	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	67316	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	72757	200.00	ng/ml	0.00
28) Perylene-d12	13.34	264	78286	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	16343	110.45	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	11.05%		
13) Fluorene-d10	6.75	176	28951	150.00	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	15.00%		
22) Fluoranthene-d10	8.54	212	63594	149.90	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.99%		
25) Terphenyl-d14	8.88	244	55390	175.52	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	17.55%		
Target Compounds						Qvalue
2) Naphthalene	4.76	128	7394	24.16	ng/ml	99
4) 2-Methylnaphthalene	5.41	142	2500	13.55	ng/ml	93
5) 1-Methylnaphthalene	5.50	142	1213	6.83	ng/ml	92
6) Biphenyl	5.82	154	1469	6.38	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.96	156	2139	13.50	ng/ml	89
9) Acenaphthylene	6.19	152	5618	15.60	ng/ml#	53
10) Acenaphthene	6.34	154	3537	17.10	ng/ml	99
11) Dibenzofuran	6.49	168	4180	12.59	ng/ml	82
12) 2,3,5-Trimethylnaphthalene	6.65	170	1598m	8.35	ng/ml	
14) Fluorene	6.77	166	5259m	21.02	ng/ml	
16) Dibenzothiophene	7.47	184	5736	13.66	ng/ml	92
17) Phenanthrene	7.57	178	71669	170.67	ng/ml	100
18) Anthracene	7.62	178	14037	35.02	ng/ml	97
19) Carbazole	7.75	167	6187	15.81	ng/ml	93
21) Fluoranthene	8.56	202	219908	424.10	ng/ml	93
24) Pyrene	8.75	202	235056	470.88	ng/ml	99
26) Benz(a)anthracene	10.10	228	77076	163.85	ng/ml	97
27) Chrysene	10.15	228	120548	267.54	ng/ml	100
29) Benzo(b)fluoranthene	12.25	252	153168	316.68	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	57286m	119.39	ng/ml	
31) Benzo(e)pyrene	13.00	252	84272	182.79	ng/ml	97
32) Benzo(a)pyrene	13.17	252	85745	202.15	ng/ml	99
33) Perylene	13.43	252	260435	585.31	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.53	276	68097	163.72	ng/ml	96
35) Dibenz(a,h)anthracene	15.56	278	14492	34.37	ng/ml	80
36) Benzo(g,h,i)perylene	15.93	276	83452	171.33	ng/ml	95

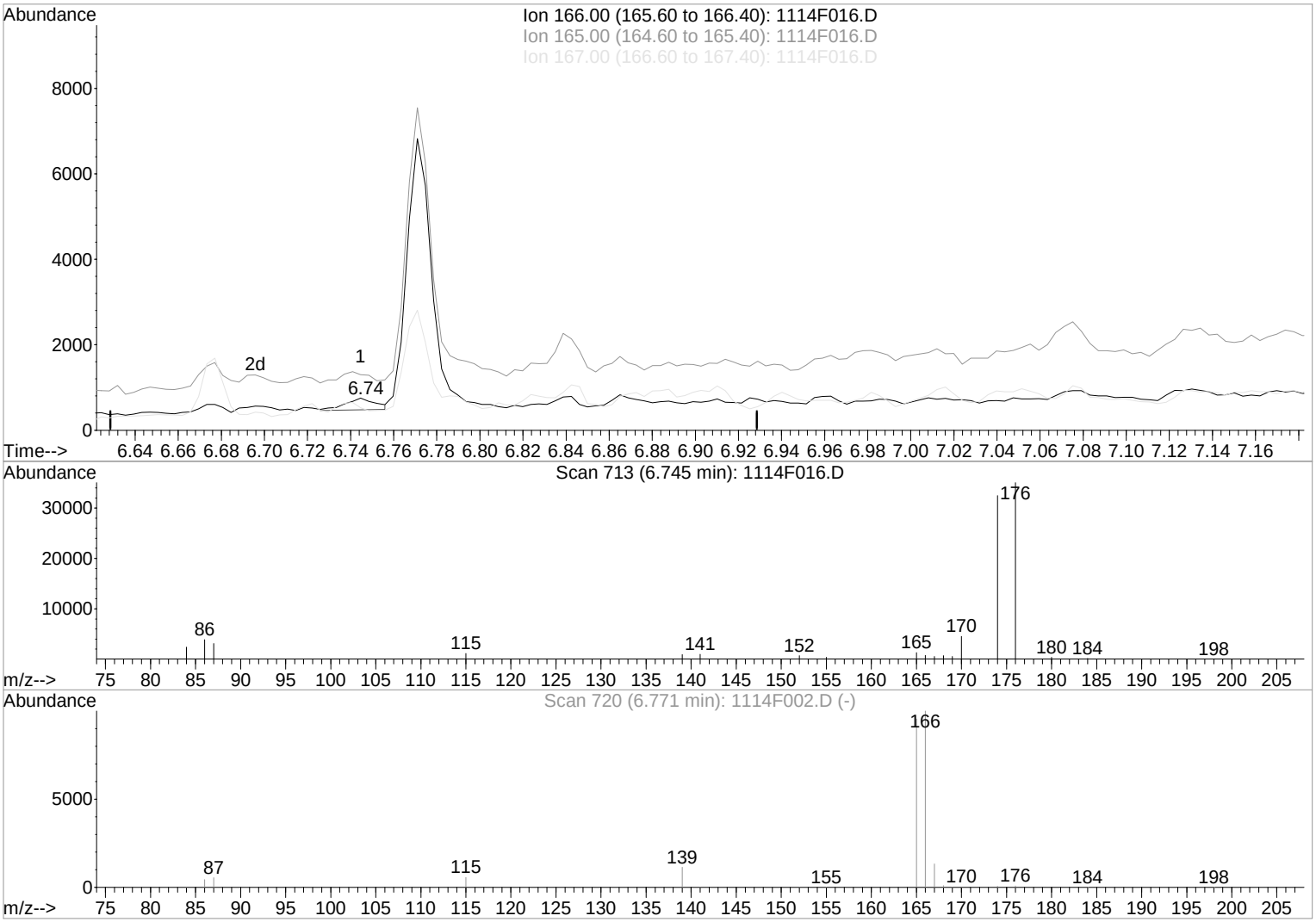
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F016.D Vial: 16
Acq On : 14 Nov 2018 12:12 pm Operator: LWeiskopf
Sample : K1810430-003DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:39 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F016.D

(14) Fluorene (T)

6.74min 1.08ng/ml

response 271

Ion	Exp%	Act%
166.00	100	100
165.00	93.40	70.94
167.00	13.10	20.75
0.00	0.00	0.00

Manual Integration:

Before

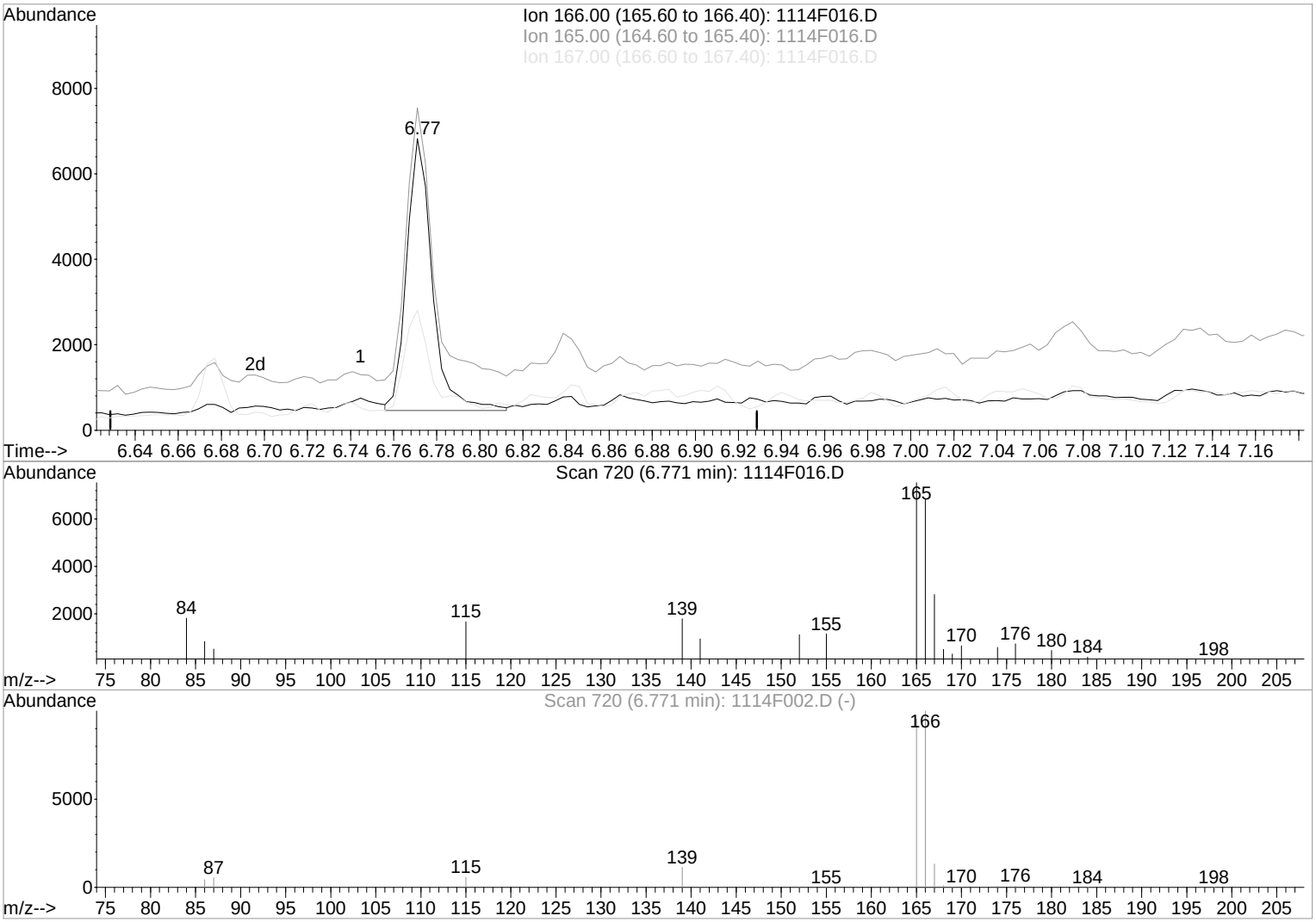
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F016.D Vial: 16
Acq On : 14 Nov 2018 12:12 pm Operator: LWeiskopf
Sample : K1810430-003DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:39 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F016.D

(14) Fluorene (T)

6.77min 21.02ng/ml m

response 5259

Ion	Exp%	Act%
166.00	100	100
165.00	93.40	110.58
167.00	13.10	41.19#
0.00	0.00	0.00

Manual Integration:

After

WP

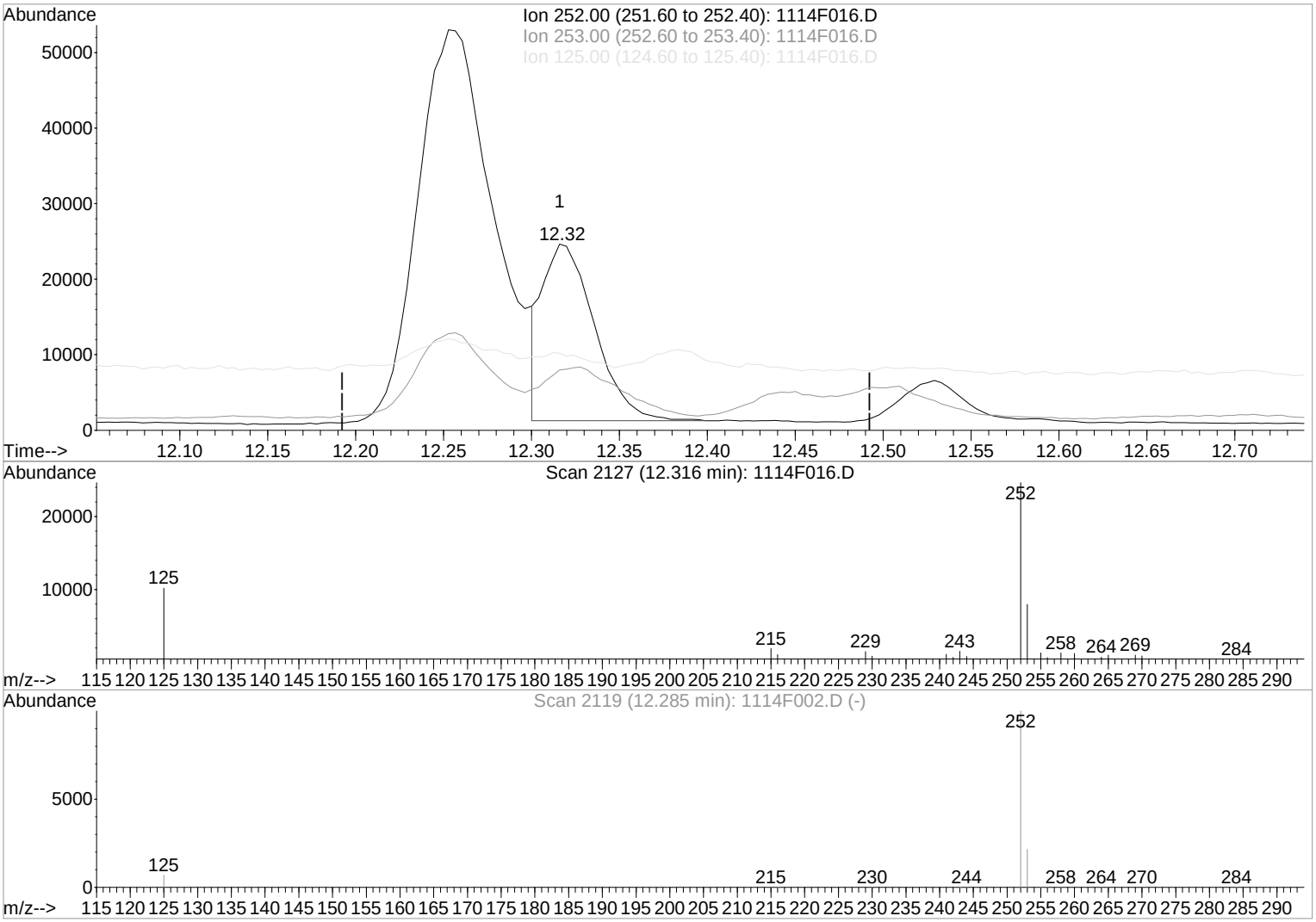
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F016.D Vial: 16
Acq On : 14 Nov 2018 12:12 pm Operator: LWeiskopf
Sample : K1810430-003DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:39 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F016.D

(30) Benzo(k)fluoranthene (T)

12.32min 100.91ng/ml

response 48420

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	24.60
125.00	9.70	5.33
0.00	0.00	0.00

Manual Integration:

Before

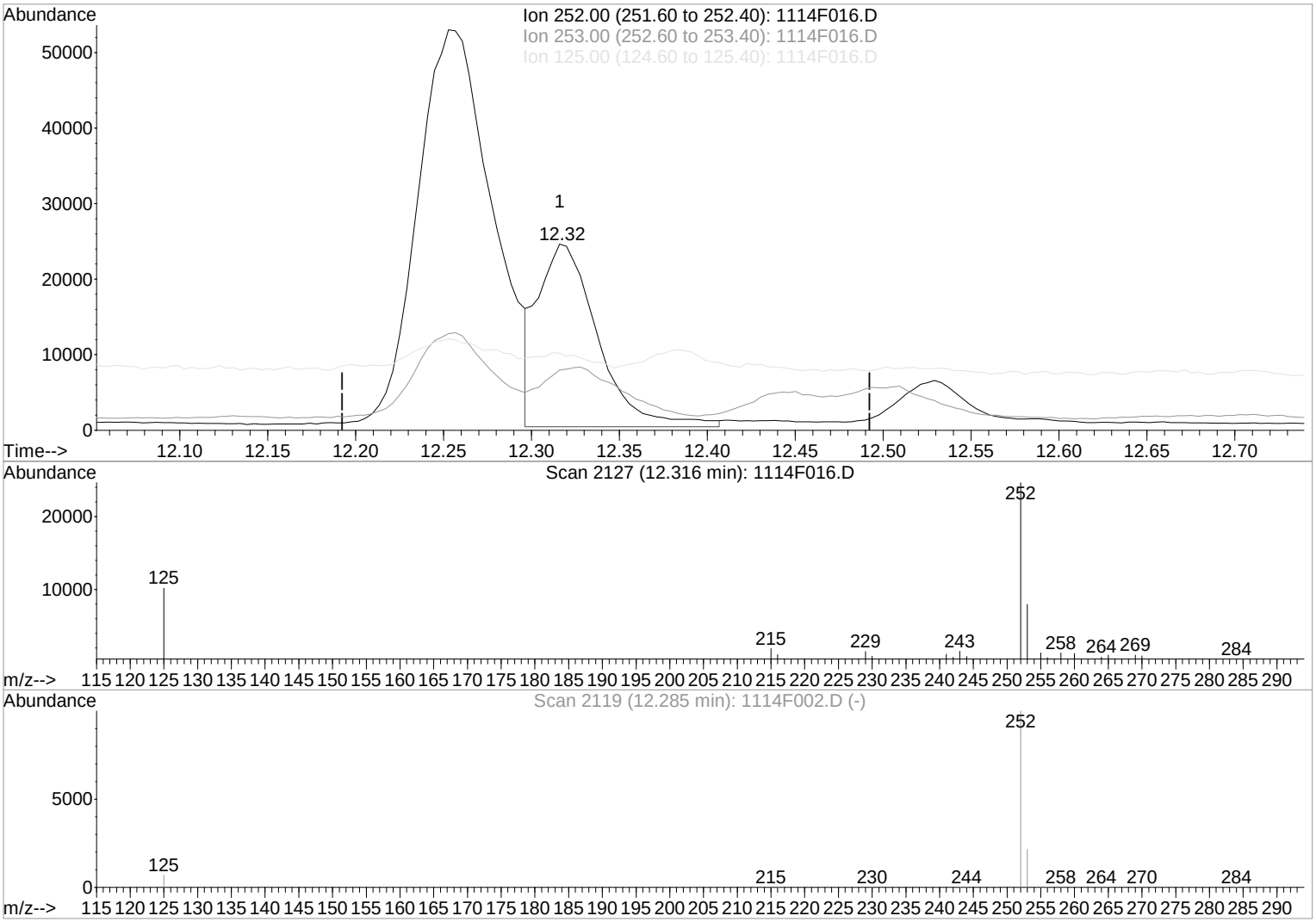
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F016.D Vial: 16
Acq On : 14 Nov 2018 12:12 pm Operator: LWeiskopf
Sample : K1810430-003DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 12:39 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F016.D

(30) Benzo(k)fluoranthene (T)

12.32min 119.39ng/ml m

response 57286

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	32.38
125.00	9.70	41.36#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F017.D
Lab ID: K1810430-004
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 12:39
Date Quantitated: 11/30/2018 13:16
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F017.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 12:39	**Quant Date:**	11/30/2018 13:16	**Vial:**	17
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-004			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702216	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	53975	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	31796	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	66432	200.00	OK
4	Chrysene-d12	10.12	0.02	240	71829	200.00	OK
5	Perylene-d12	13.35	0.06	264	77551	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	29005	142.67	71	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	60643	144.84	72	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	52143	167.36	84	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	6742	21.64	16	D	
1	2-Methylnaphthalene	5.41		0.00	142	1928	10.26	7.4	D	
2	Acenaphthylene	6.20	0.01	0.00	152	6588	17.36	13	D	
2	Acenaphthene	6.34		0.00	154	2762	12.67	9.1	D	
2	Dibenzofuran	6.49		0.00	168	3839	10.98	7.9	D	
2	Fluorene	6.77		0.00	166	5353	20.31	15	D	
3	Phenanthrene	7.57		0.00	178	56214	135.65	98	D	
3	Anthracene	7.62	0.01	0.00	178	15985	40.41	29	D	
3	Fluoranthene	8.56	0.01	0.00	202	213676	417.56	300	D	
4	Pyrene	8.76	0.01	0.00	202	234515	475.87	340	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	76720	165.20	120	D	
4	Chrysene	10.16	0.02	0.00	228	134979	303.44	220	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F017.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 12:39	**Quant Date:**	11/30/2018 13:16	**Vial:**	17
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-004			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.26	0.05	0.00	252	165069	344.52	250	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	57420**m**	120.81	87	D	
5	Benzo(a)pyrene	13.18	0.06	0.00	252	82349	195.99	140	D	
5	Indeno(1,2,3-cd)pyrene	15.54	0.05	0.00	276	65491	158.95	110	D	
5	Dibenz(a,h)anthracene	15.57	0.05	0.00	278	15248	36.51	26	D	
5	Benzo(g,h,i)perylene	15.94	0.06	0.00	276	83335	172.71	120	D	

Prep Amount:	40.011 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	34.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

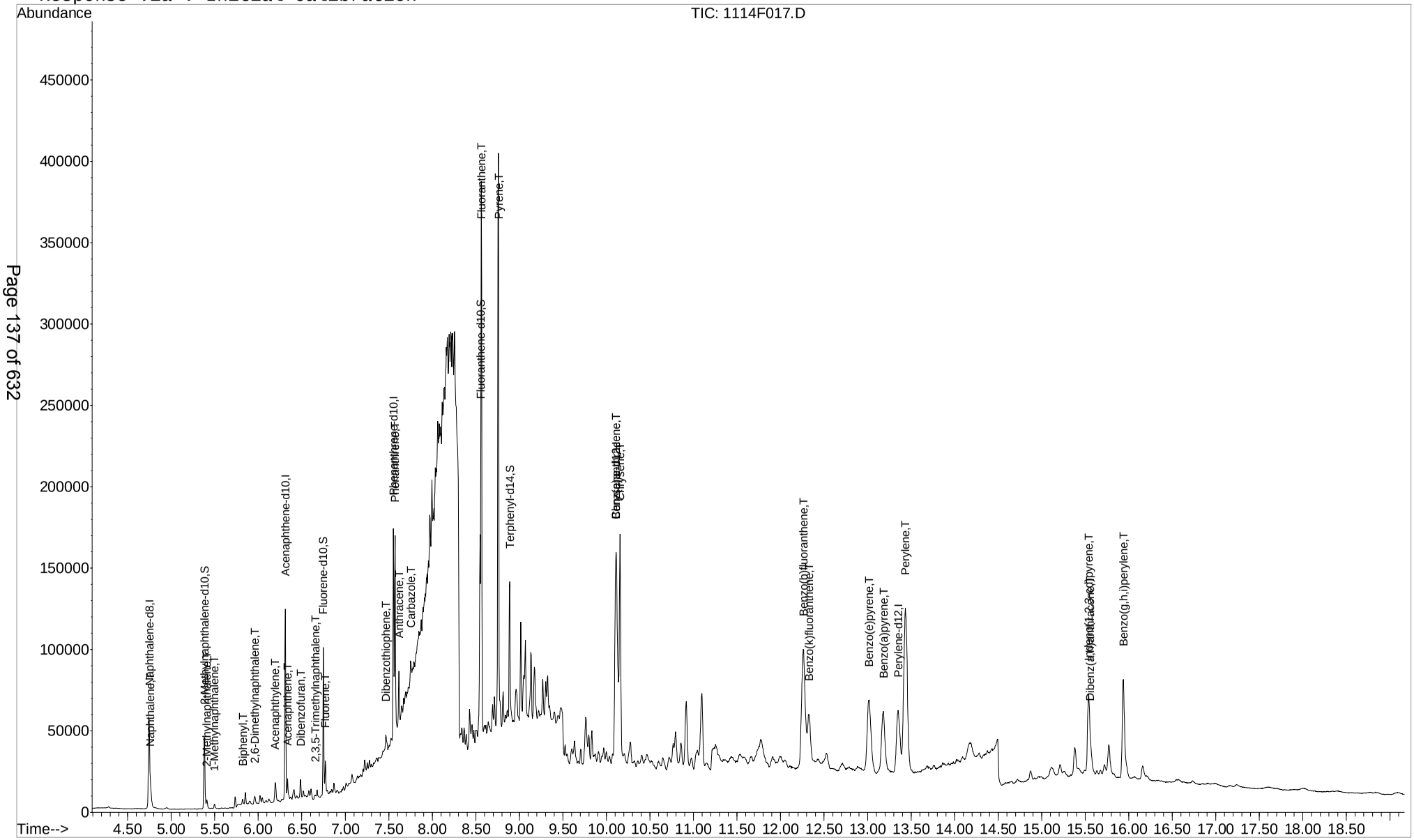
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

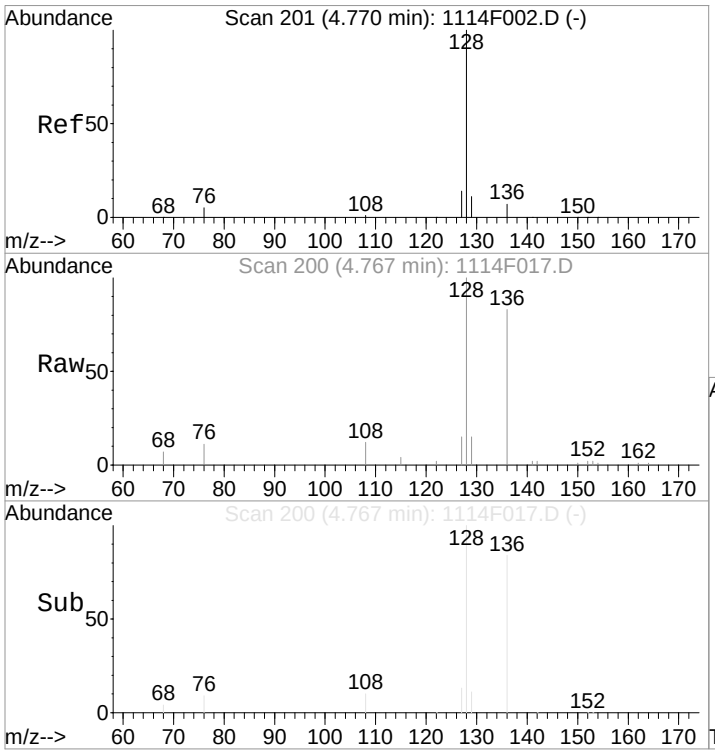
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F017.D Vial: 17
Acq On : 14 Nov 2018 12:39 pm Operator: LWeiskopf
Sample : K1810430-004DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



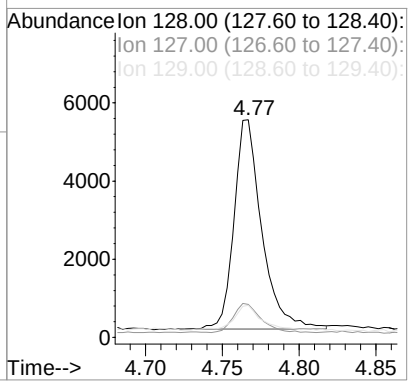
1st 12/03/18
2nd 12/06/18

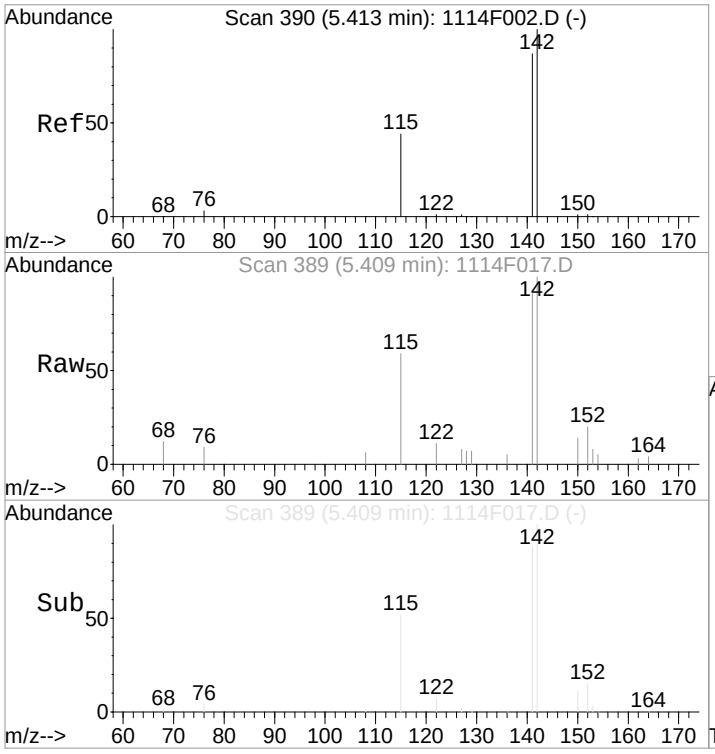


#2
Naphthalene
Concen: 21.64 ng/ml
RT: 4.77 min Scan# 200
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:128 Resp: 6742

Ion	Ratio	Lower	Upper
128	100		
127	13.4	0.0	43.7
129	11.9	0.0	30.8

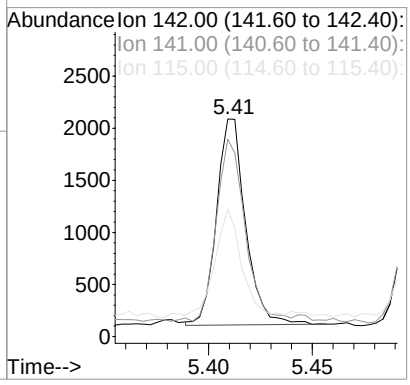




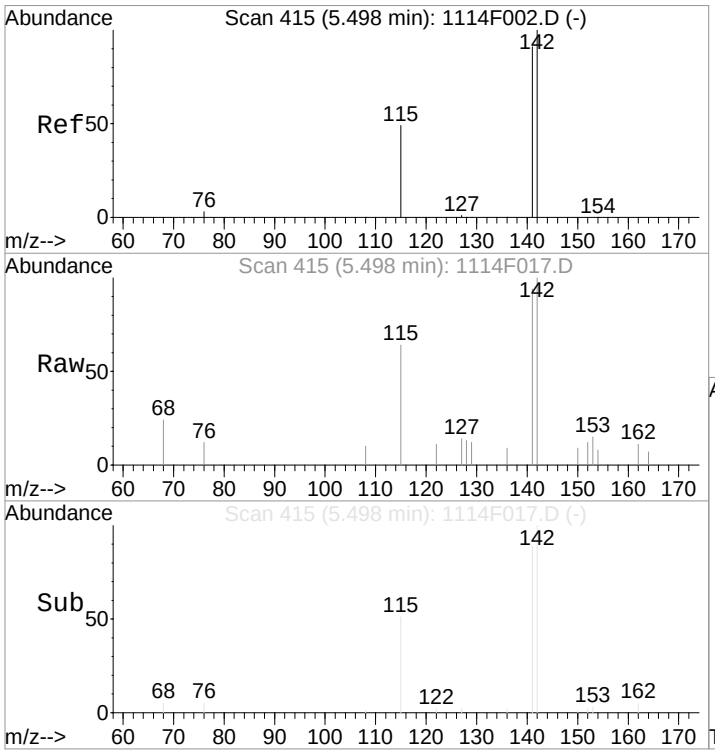
#4
2-Methylnaphthalene
Concen: 10.26 ng/ml
RT: 5.41 min Scan# 389
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:142 Resp: 1928

Ion	Ratio	Lower	Upper
142	100		
141	88.5	56.8	116.8
115	51.8	13.3	53.3



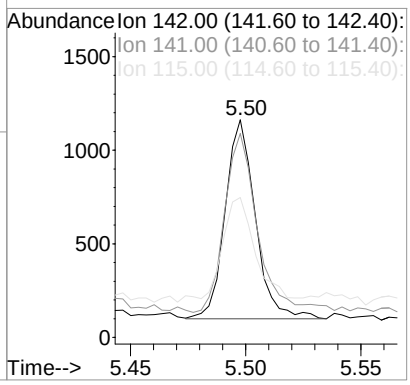
1st 12/03/18
2nd 12/06/18

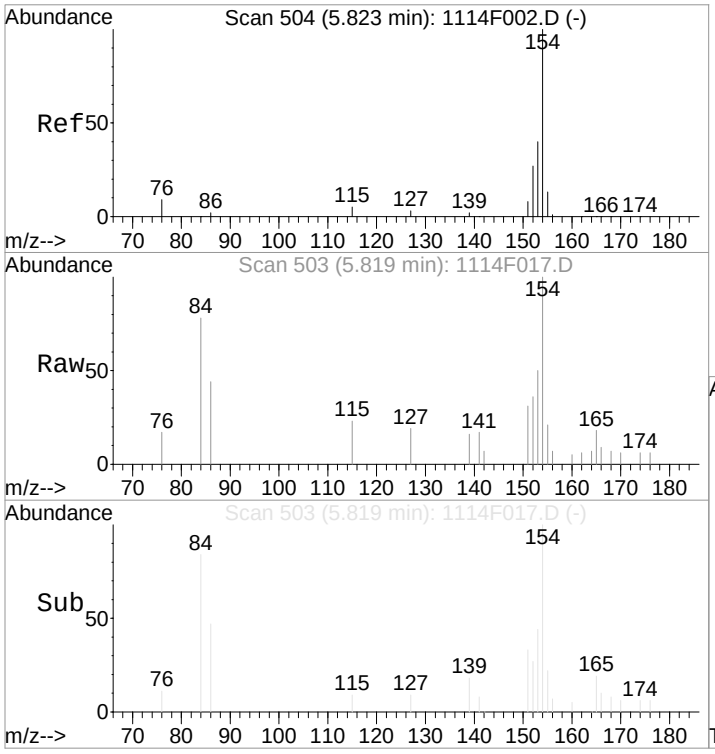


#5
1-Methylnaphthalene
Concen: 5.34 ng/ml
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:142 Resp: 966

Ion	Ratio	Lower	Upper
142	100		
141	88.8	59.7	119.7
115	49.5	13.7	53.7

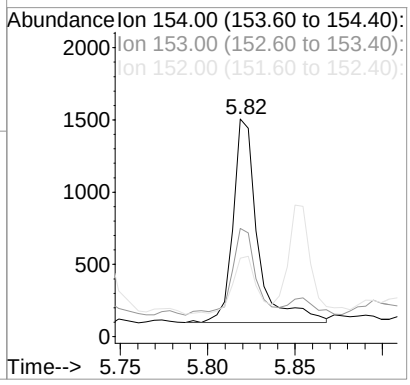




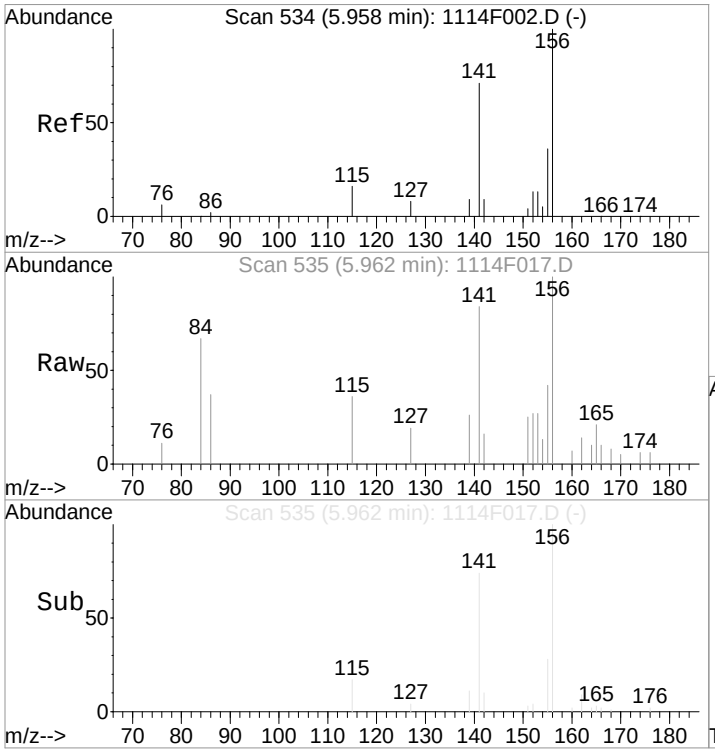
#6
Biphenyl
Concen: 5.93 ng/ml
RT: 5.82 min Scan# 503
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:154 Resp: 1391

Ion	Ratio	Lower	Upper
154	100		
153	42.8	11.4	71.4
152	27.5	7.1	47.1



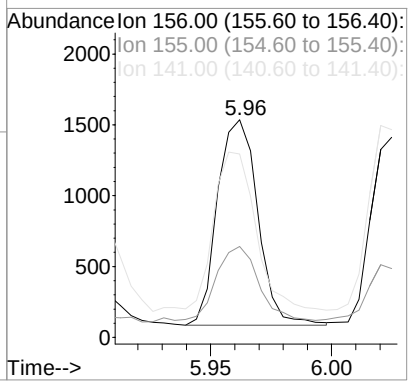
1st 12/03/18
2nd 12/06/18

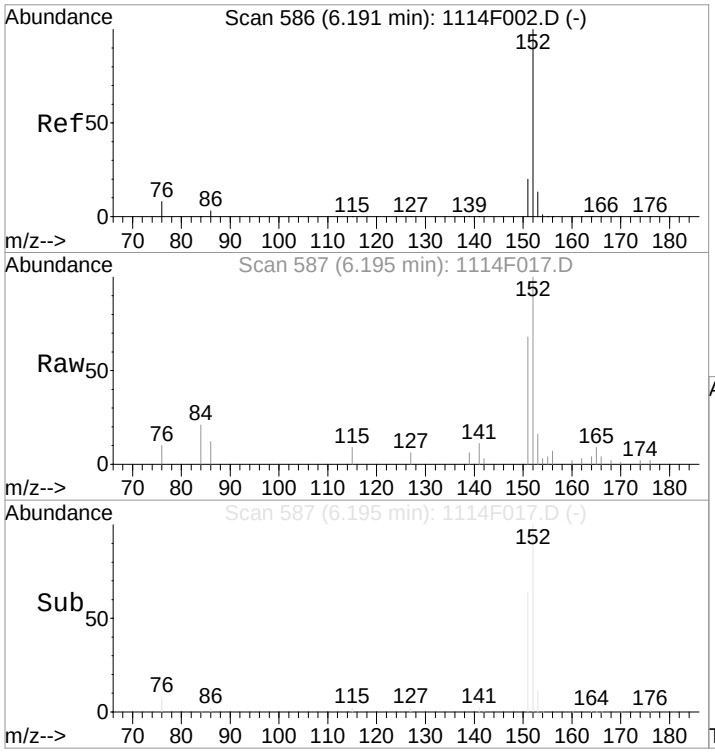


#7
2,6-Dimethylnaphthalene
Concen: 10.45 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. 0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:156 Resp: 1685

Ion	Ratio	Lower	Upper
156	100		
155	35.6	7.0	67.0
141	76.1	47.9	87.9

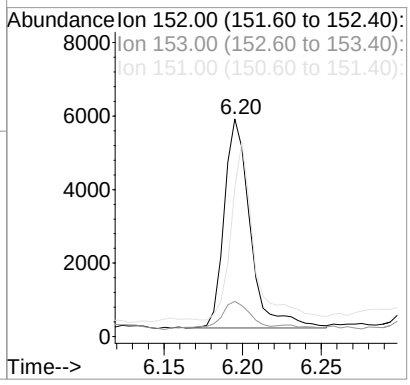


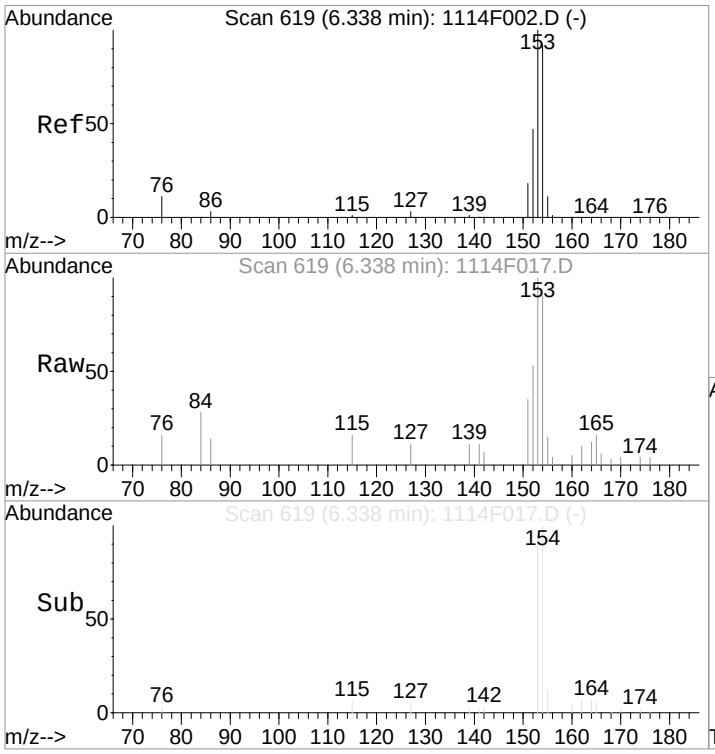


#9
Acenaphthylene
Concen: 17.36 ng/ml
RT: 6.20 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:152 Resp: 6588

Ion	Ratio	Lower	Upper
152	100		
153	12.4	0.0	42.9
151	62.8	0.2	40.2#

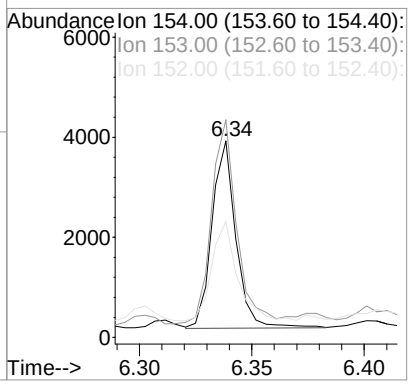


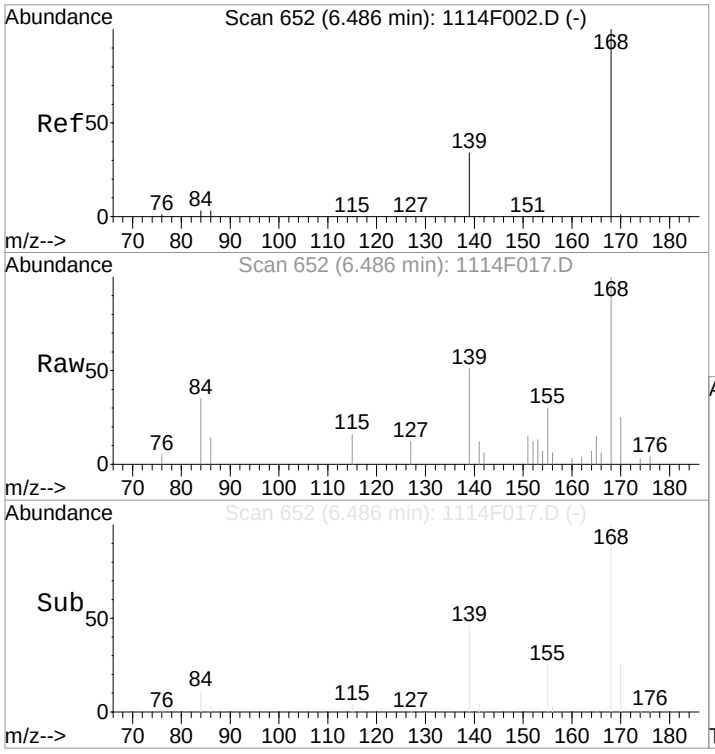


#10
Acenaphthene
Concen: 12.67 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:154 Resp: 2762

Ion	Ratio	Lower	Upper
154	100		
153	108.6	77.1	137.1
152	53.2	19.7	79.7

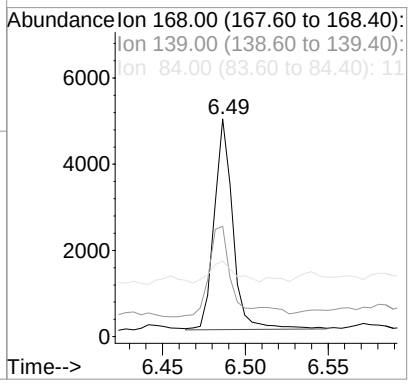




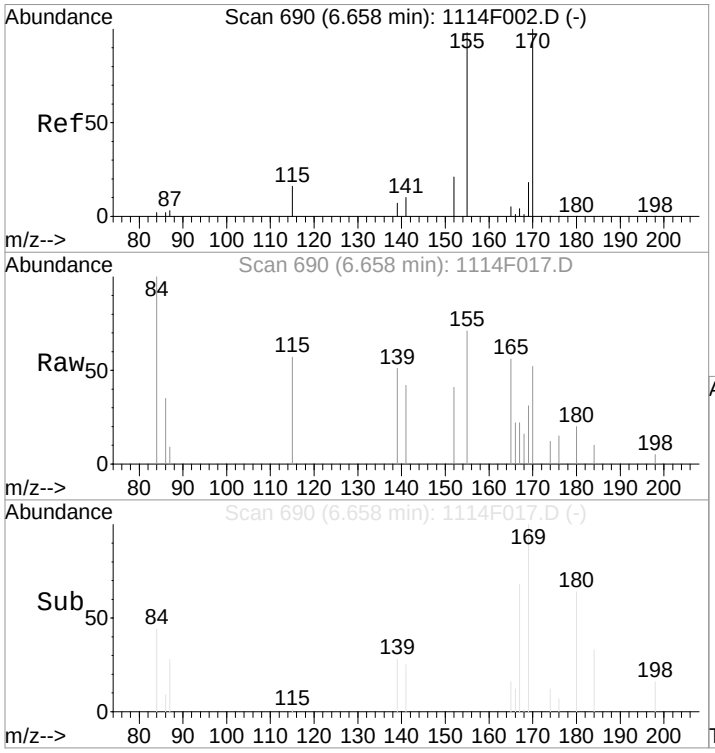
#11
Dibenzofuran
Concen: 10.98 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:168 Resp: 3839

Ion	Ratio	Lower	Upper
168	100		
139	42.7	0.0	55.8
84	9.1	0.0	23.5



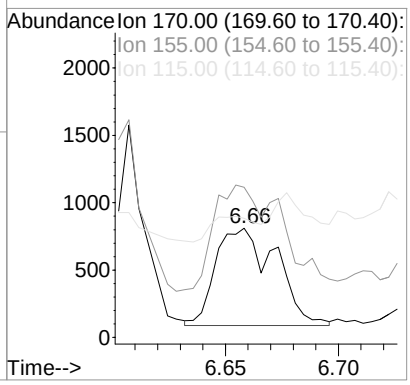
1st 12/03/18
2nd 12/06/18

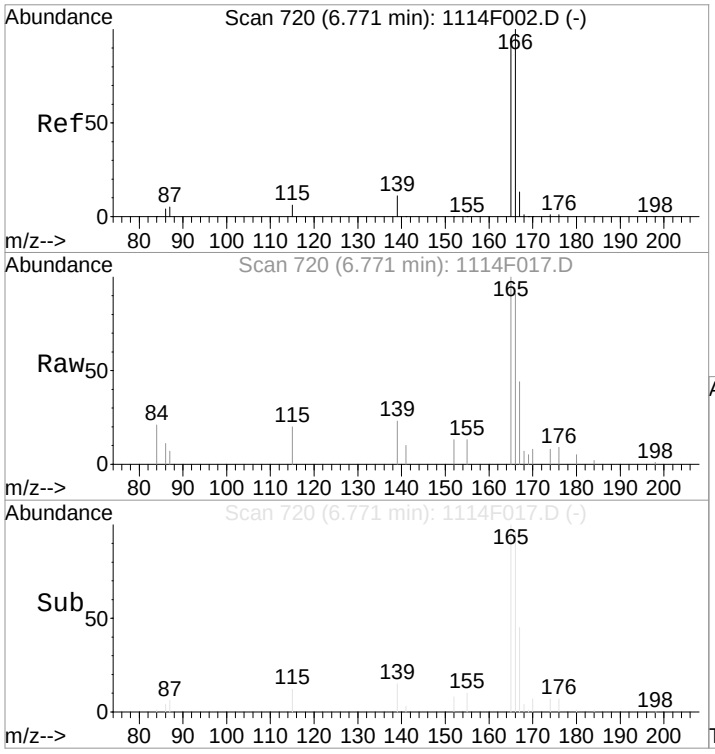


#12
2,3,5-Trimethylnaphthalene
Concen: 6.68 ng/ml m
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:170 Resp: 1346

Ion	Ratio	Lower	Upper
170	100		
155	137.4	59.2	119.2#
115	109.0	0.0	30.1#

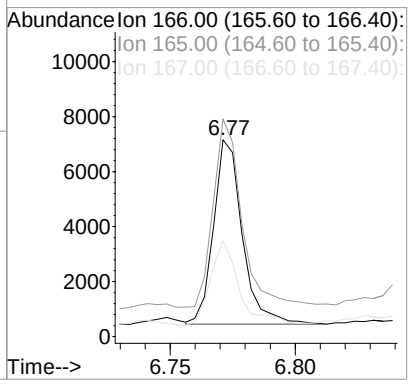


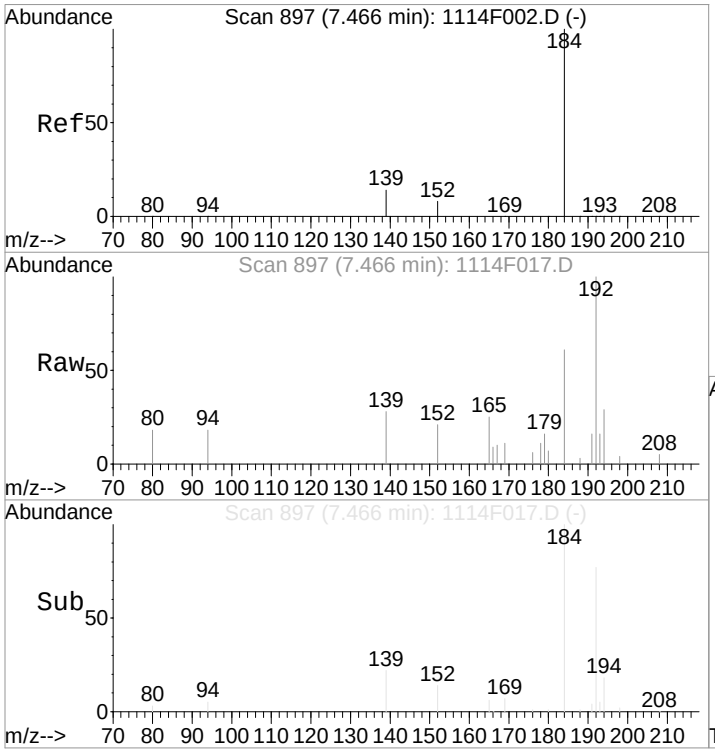


#14
Fluorene
Concen: 20.31 ng/ml
RT: 6.77 min Scan# 720
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:166 Resp: 5353

Ion	Ratio	Lower	Upper
166	100		
165	102.1	63.4	123.4
167	46.0	0.0	33.1#

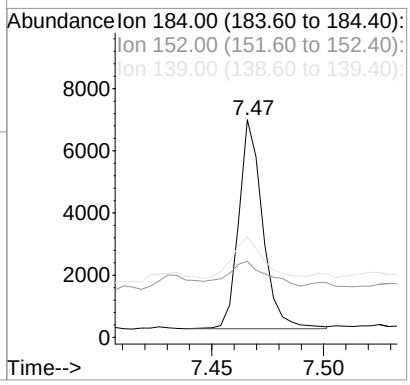


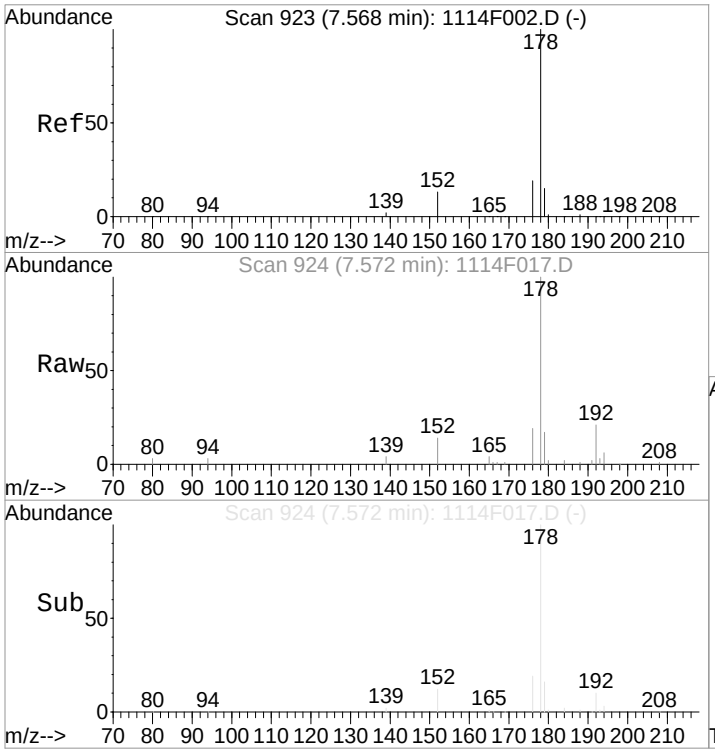


#16
Dibenzothiophene
Concen: 12.07 ng/ml
RT: 7.47 min Scan# 897
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:184 Resp: 5003

Ion	Ratio	Lower	Upper
184	100		
152	10.2	0.0	37.8
139	18.9	0.0	32.6

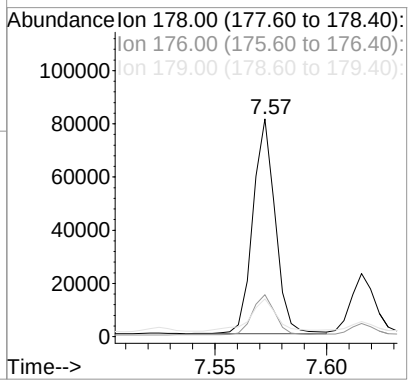




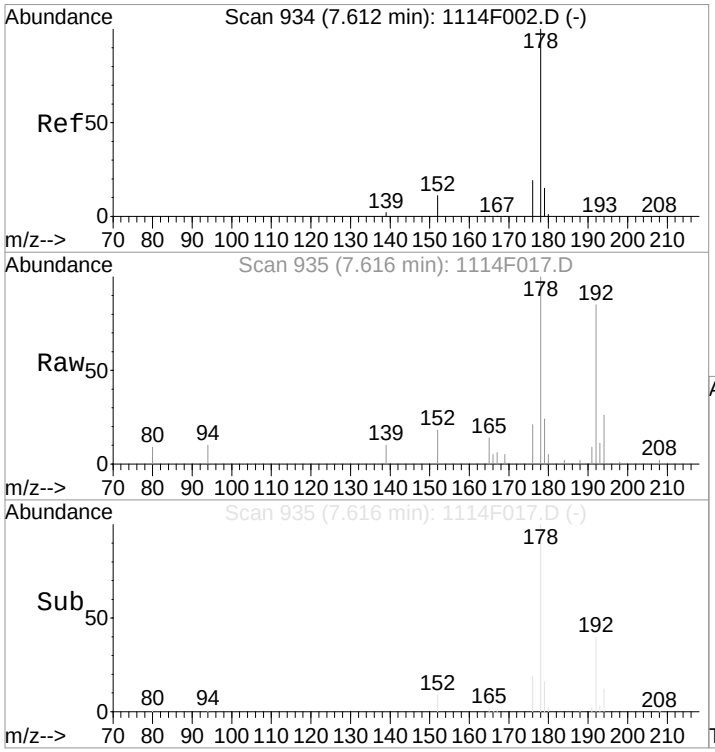
#17
Phenanthrene
Concen: 135.65 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:178 Resp: 56214

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.7
179	15.1	0.0	35.1



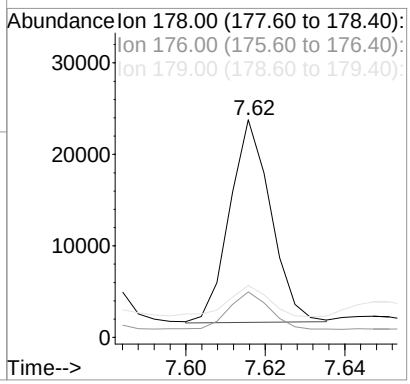
1st 12/03/18
2nd 12/06/18

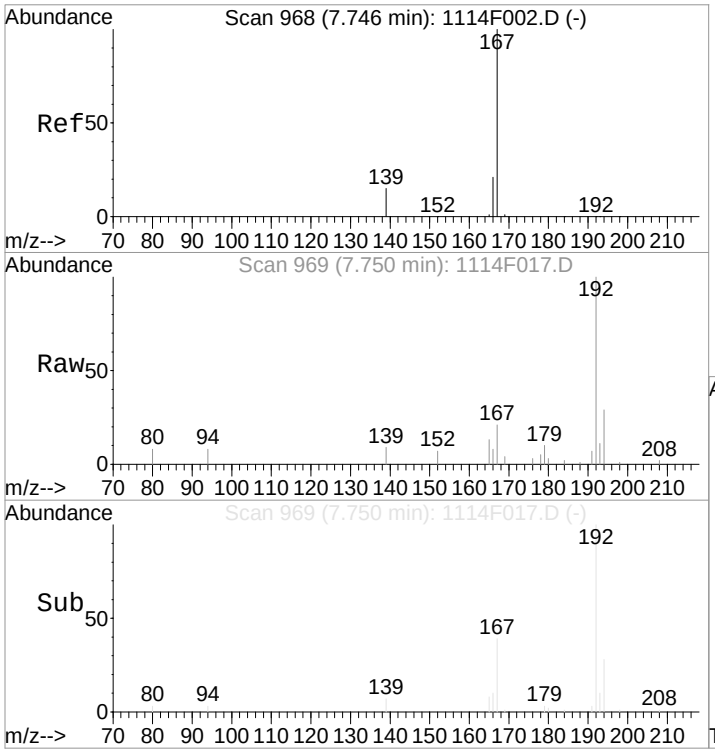


#18
Anthracene
Concen: 40.41 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:178 Resp: 15985

Ion	Ratio	Lower	Upper
178	100		
176	18.4	0.0	48.0
179	15.1	0.0	35.1

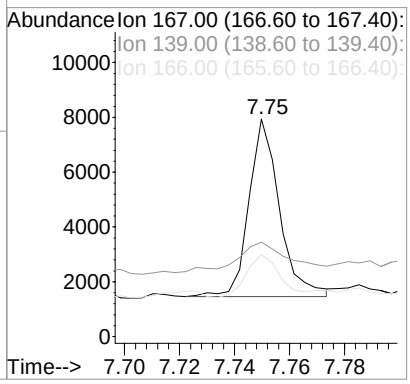




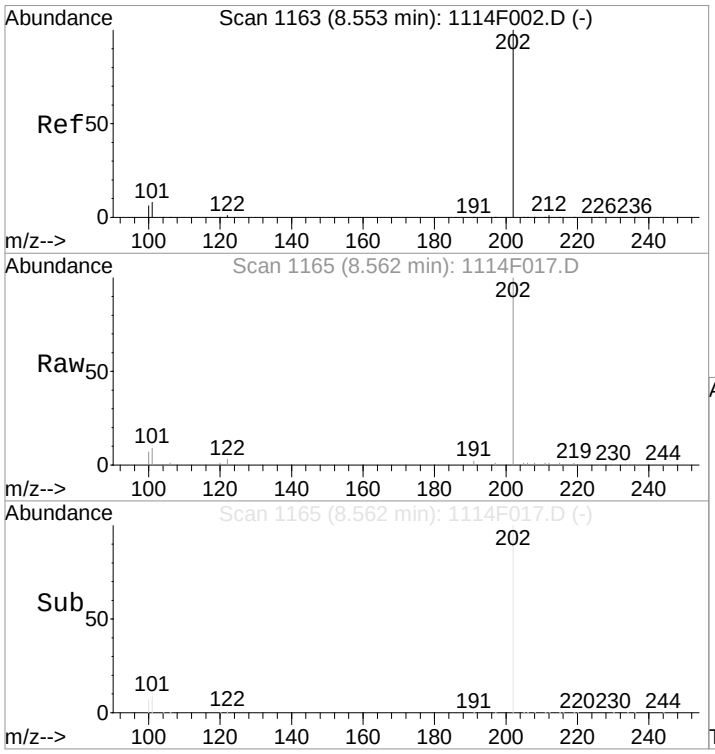
#19
Carbazole
Concen: 12.93 ng/ml
RT: 7.75 min Scan# 969
Delta R.T. -0.01 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:167 Resp: 4993

Ion	Ratio	Lower	Upper
167	100		
139	16.5	0.0	41.5
166	20.6	0.7	40.7



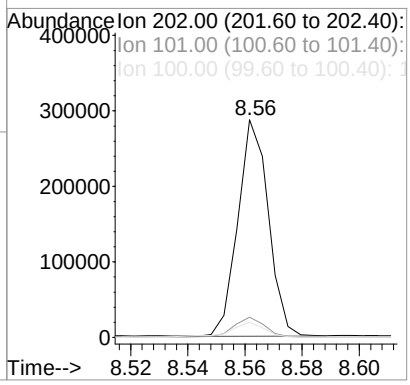
1st 12/03/18
2nd 12/06/18

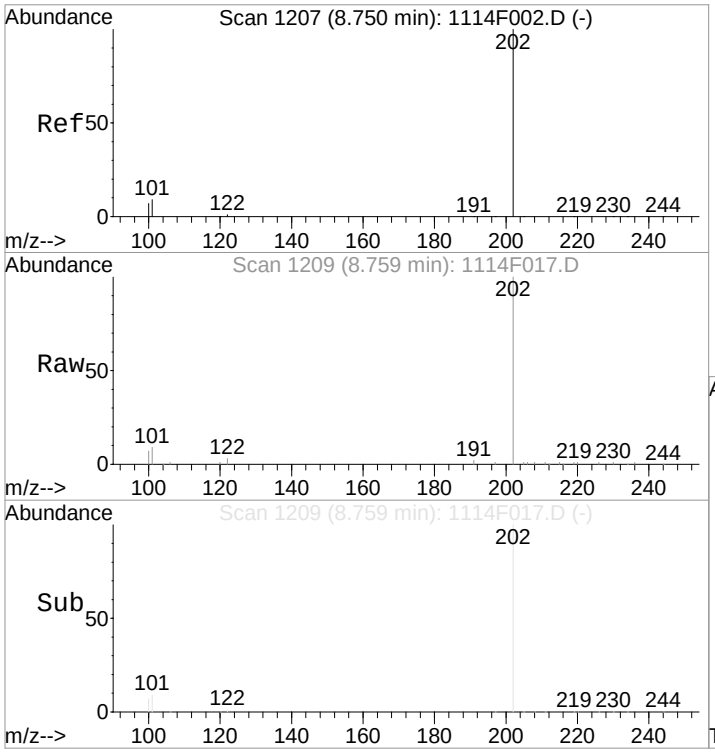


#21
Fluoranthene
Concen: 417.56 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. 0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:202 Resp: 213676

Ion	Ratio	Lower	Upper
202	100		
101	9.1	0.0	41.3
100	6.8	0.0	28.6

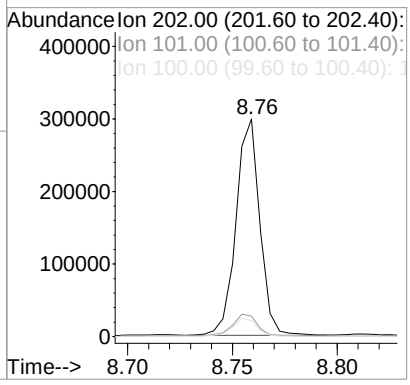




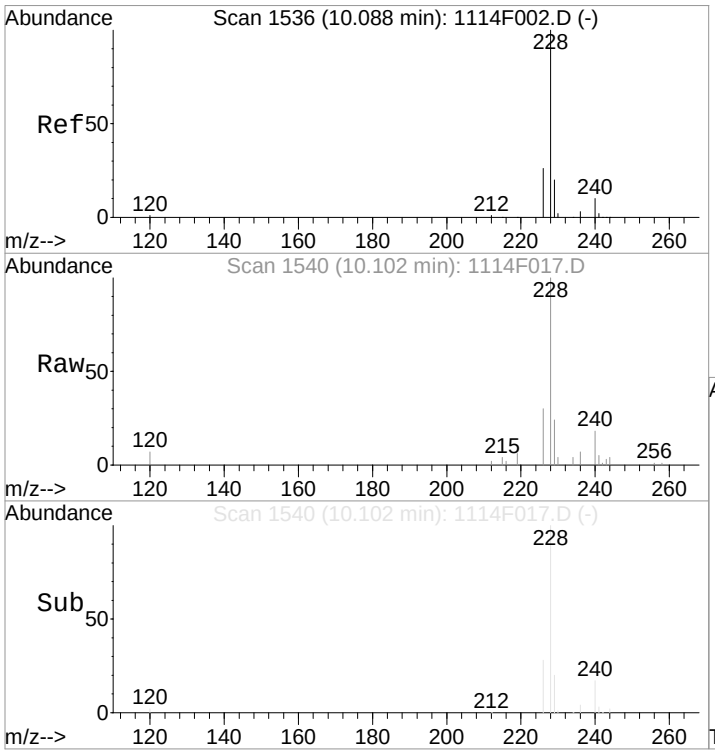
#24
Pyrene
Concen: 475.87 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. 0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:202 Resp: 234515

Ion	Ratio	Lower	Upper
202	100		
101	9.2	0.0	40.8
100	7.2	0.0	28.5



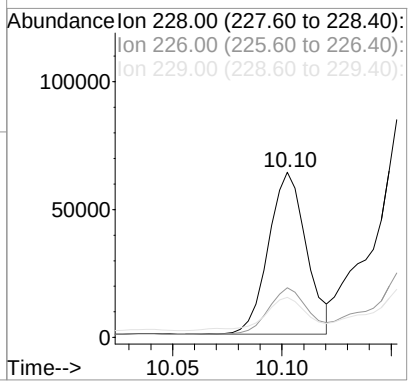
1st 12/03/18
2nd 12/06/18

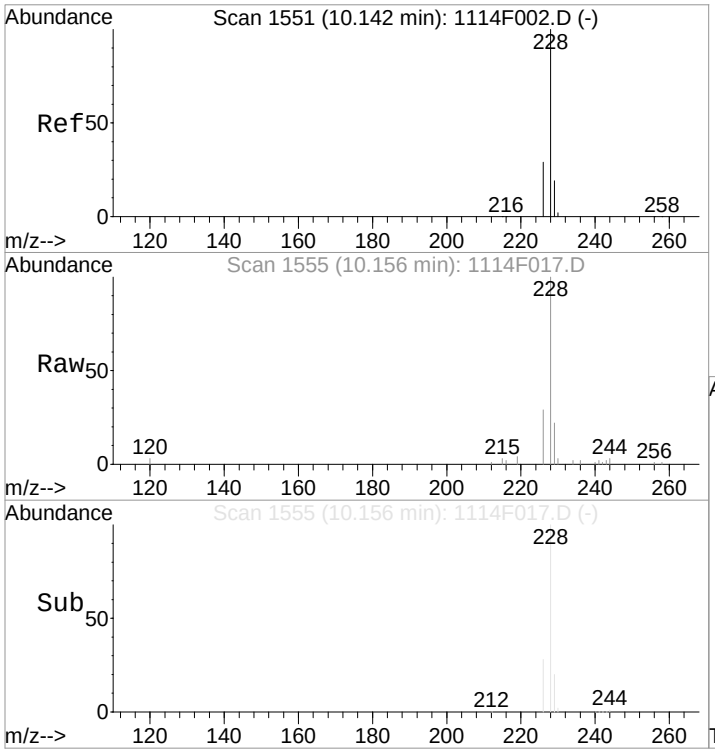


#26
Benz(a)anthracene
Concen: 165.20 ng/ml
RT: 10.10 min Scan# 1540
Delta R.T. 0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:228 Resp: 76720

Ion	Ratio	Lower	Upper
228	100		
226	28.9	0.0	56.3
229	20.6	0.0	39.1

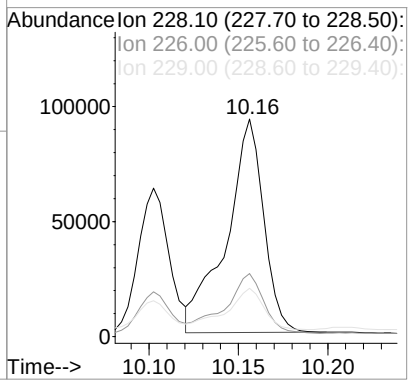


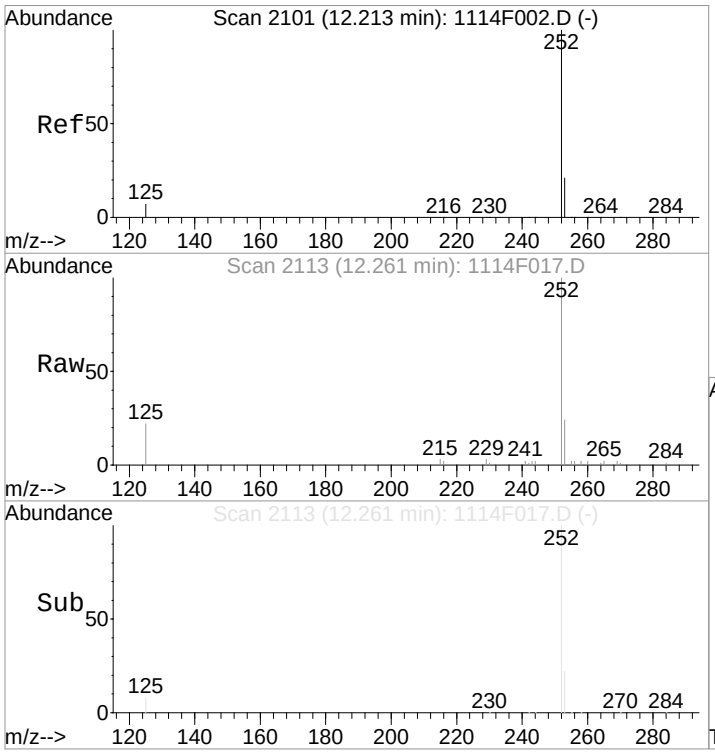


#27
Chrysene
Concen: 303.44 ng/ml
RT: 10.16 min Scan# 1555
Delta R.T. 0.00 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:228 Resp: 134979

Ion	Ratio	Lower	Upper
228	100		
226	28.0	0.0	58.7
229	18.9	0.0	39.2

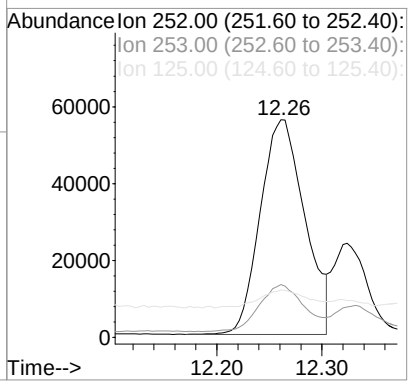


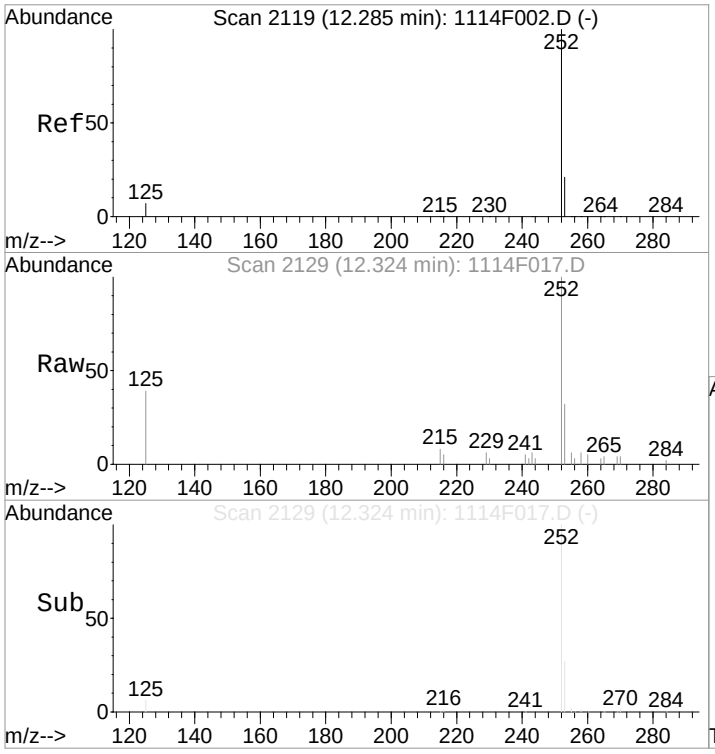


#29
Benzo(b)fluoranthene
Concen: 344.52 ng/ml
RT: 12.26 min Scan# 2113
Delta R.T. 0.04 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:252 Resp: 165069

Ion	Ratio	Lower	Upper
252	100		
253	22.0	0.0	51.2
125	8.4	0.0	29.5

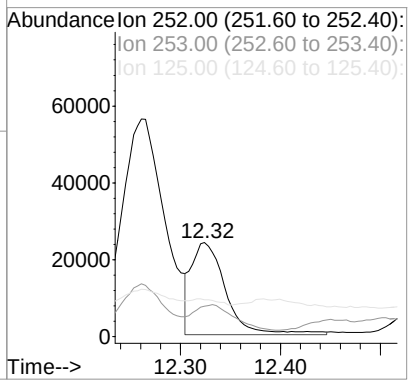


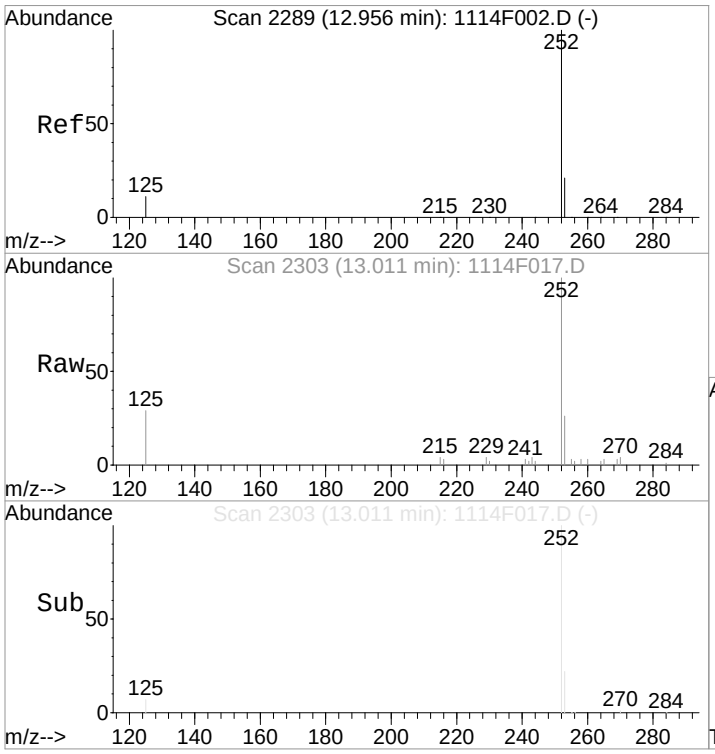


#30
Benzo(k)fluoranthene
Concen: 120.81 ng/ml m
RT: 12.32 min Scan# 2129
Delta R.T. 0.03 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:252 Resp: 57420

Ion	Ratio	Lower	Upper
252	100		
253	32.5	0.0	51.2
125	39.0	0.0	29.7#

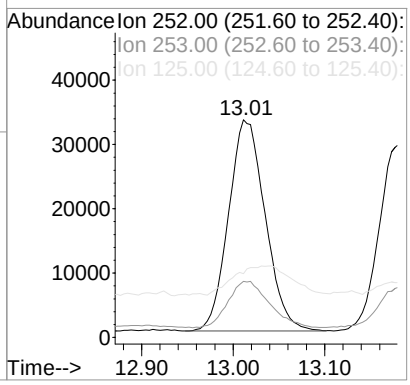


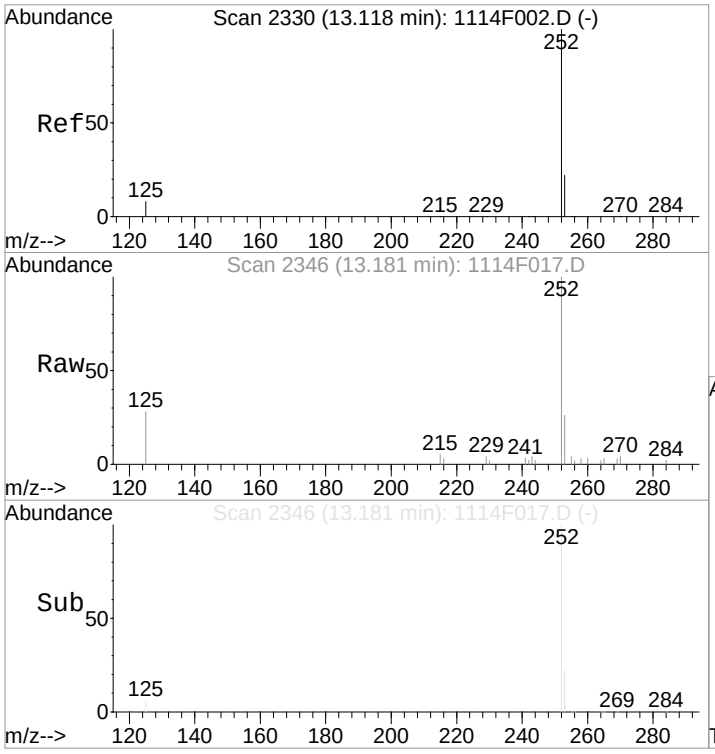


#31
Benzo(e)pyrene
Concen: 200.61 ng/ml
RT: 13.01 min Scan# 2303
Delta R.T. 0.04 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:252 Resp: 91619

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.3
125	9.6	0.0	33.5

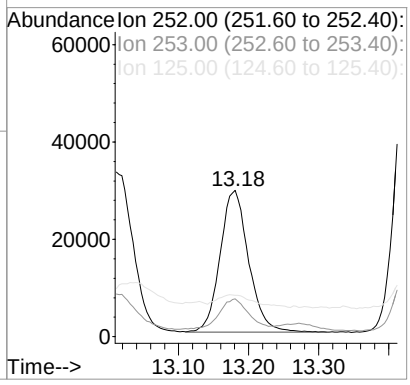




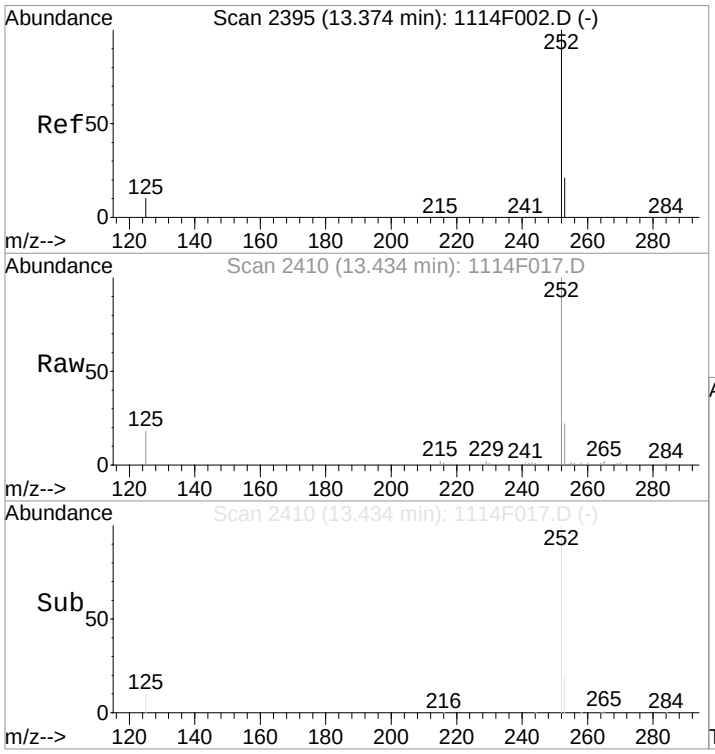
#32
Benzo(a)pyrene
Concen: 195.99 ng/ml
RT: 13.18 min Scan# 2346
Delta R.T. 0.06 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:252 Resp: 82349

Ion	Ratio	Lower	Upper
252	100		
253	21.3	0.0	50.9
125	8.2	0.0	30.3



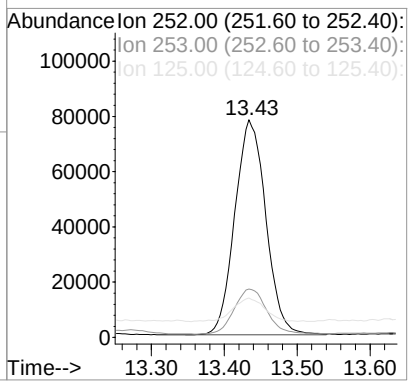
1st 12/03/18
2nd 12/06/18

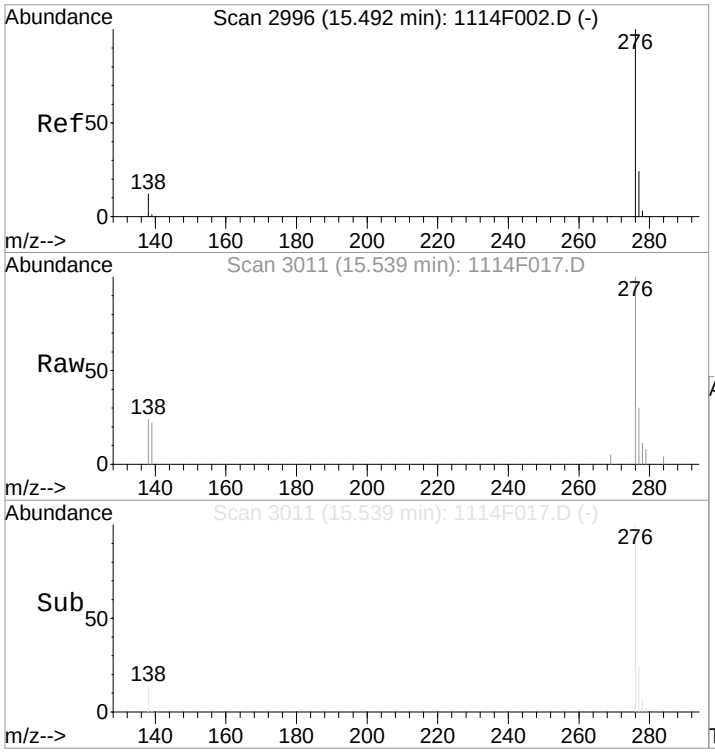


#33
Perylene
Concen: 523.94 ng/ml
RT: 13.43 min Scan# 2410
Delta R.T. 0.06 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:252 Resp: 230940

Ion	Ratio	Lower	Upper
252	100		
253	20.8	0.0	51.2
125	10.8	0.0	33.8

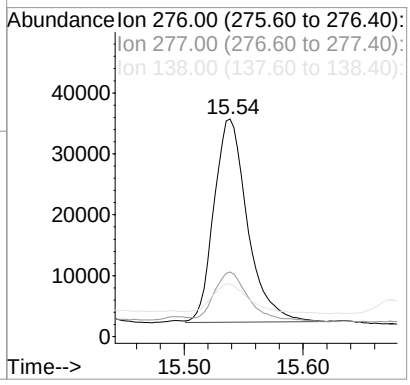




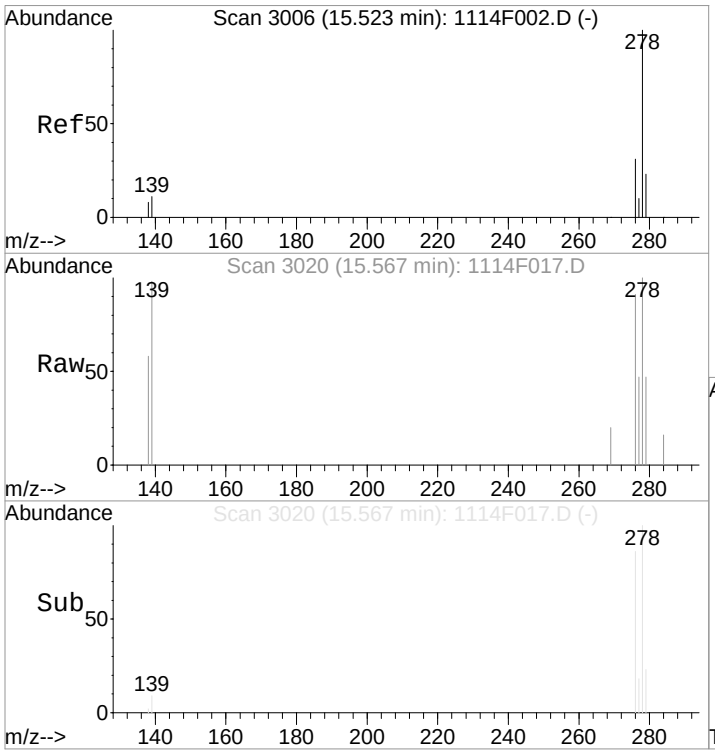
#34
Indeno(1,2,3-cd)pyrene
Concen: 158.95 ng/ml
RT: 15.54 min Scan# 3011
Delta R.T. 0.05 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:276 Resp: 65491

Ion	Ratio	Lower	Upper
276	100		
277	24.6	0.0	53.4
138	14.6	0.0	37.7



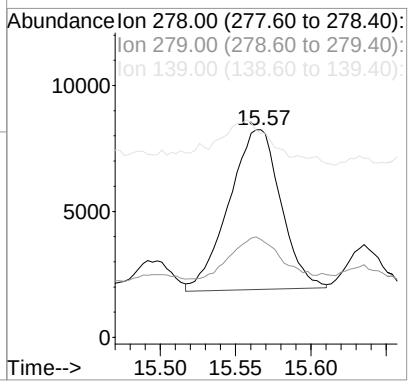
1st 12/03/18
2nd 12/06/18

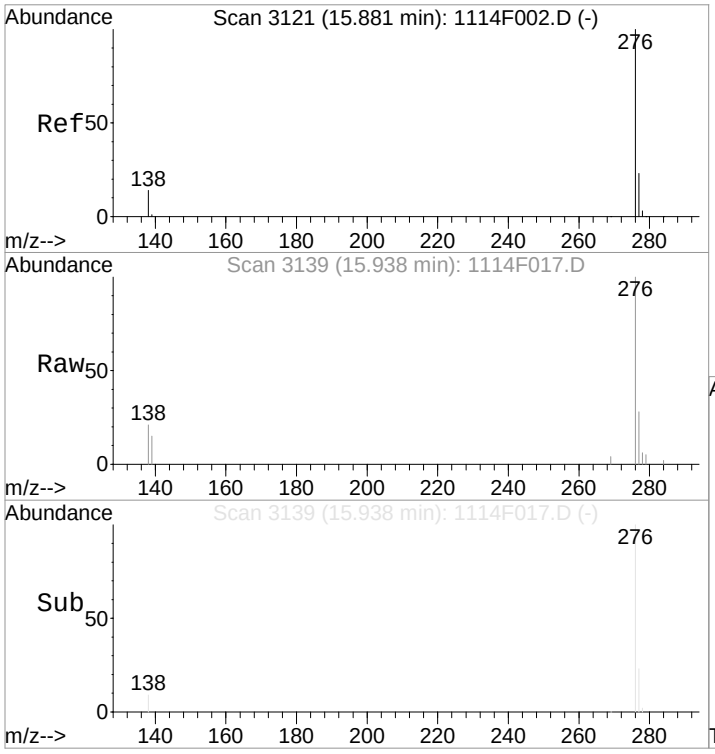


#35
Dibenz(a,h)anthracene
Concen: 36.51 ng/ml
RT: 15.57 min Scan# 3020
Delta R.T. 0.04 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:278 Resp: 15248

Ion	Ratio	Lower	Upper
278	100		
279	25.7	0.0	53.5
139	19.2	0.0	35.0

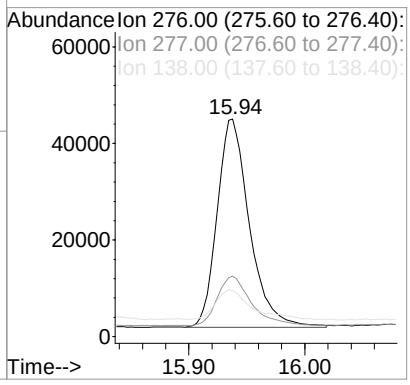




#36
Benzo(g,h,i)perylene
Concen: 172.71 ng/ml
RT: 15.94 min Scan# 3139
Delta R.T. 0.06 min
Lab File: 1114F017.D
Acq: 14 Nov 2018 12:39 pm

Tgt Ion:276 Resp: 83335

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.1
138	13.9	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F017.D Vial: 17
Acq On : 14 Nov 2018 12:39 pm Operator: LWeiskopf
Sample : K1810430-004DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:09 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	53975	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	31796	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	66432	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	71829	200.00	ng/ml	0.00
28) Perylene-d12	13.35	264	77551	200.00	ng/ml	0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	16062	106.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	10.66%		
13) Fluorene-d10	6.75	176	29005	142.67	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.27%		
22) Fluoranthene-d10	8.55	212	60643	144.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	14.48%		
25) Terphenyl-d14	8.89	244	52143	167.36	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.74%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	6742	21.64	ng/ml	98
4) 2-Methylnaphthalene	5.41	142	1928	10.26	ng/ml	90
5) 1-Methylnaphthalene	5.50	142	966	5.34	ng/ml	92
6) Biphenyl	5.82	154	1391	5.93	ng/ml	98
7) 2,6-Dimethylnaphthalene	5.96	156	1685	10.45	ng/ml	93
9) Acenaphthylene	6.20	152	6588	17.36	ng/ml#	43
10) Acenaphthene	6.34	154	2762	12.67	ng/ml	97
11) Dibenzofuran	6.49	168	3839	10.98	ng/ml	69
12) 2,3,5-Trimethylnaphthalene	6.66	170	1346m	6.68	ng/ml	
14) Fluorene	6.77	166	5353	20.31	ng/ml#	82
16) Dibenzothiophene	7.47	184	5003	12.07	ng/ml	88
17) Phenanthrene	7.57	178	56214	135.65	ng/ml	100
18) Anthracene	7.62	178	15985	40.41	ng/ml	99
19) Carbazole	7.75	167	4993	12.93	ng/ml	95
21) Fluoranthene	8.56	202	213676	417.56	ng/ml	95
24) Pyrene	8.76	202	234515	475.87	ng/ml	96
26) Benz(a)anthracene	10.10	228	76720	165.20	ng/ml	96
27) Chrysene	10.16	228	134979	303.44	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	165069	344.52	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	57420m	120.81	ng/ml	
31) Benzo(e)pyrene	13.01	252	91619	200.61	ng/ml	95
32) Benzo(a)pyrene	13.18	252	82349	195.99	ng/ml	98
33) Perylene	13.43	252	230940	523.94	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.54	276	65491	158.95	ng/ml	96
35) Dibenz(a,h)anthracene	15.57	278	15248	36.51	ng/ml	93
36) Benzo(g,h,i)perylene	15.94	276	83335	172.71	ng/ml	94

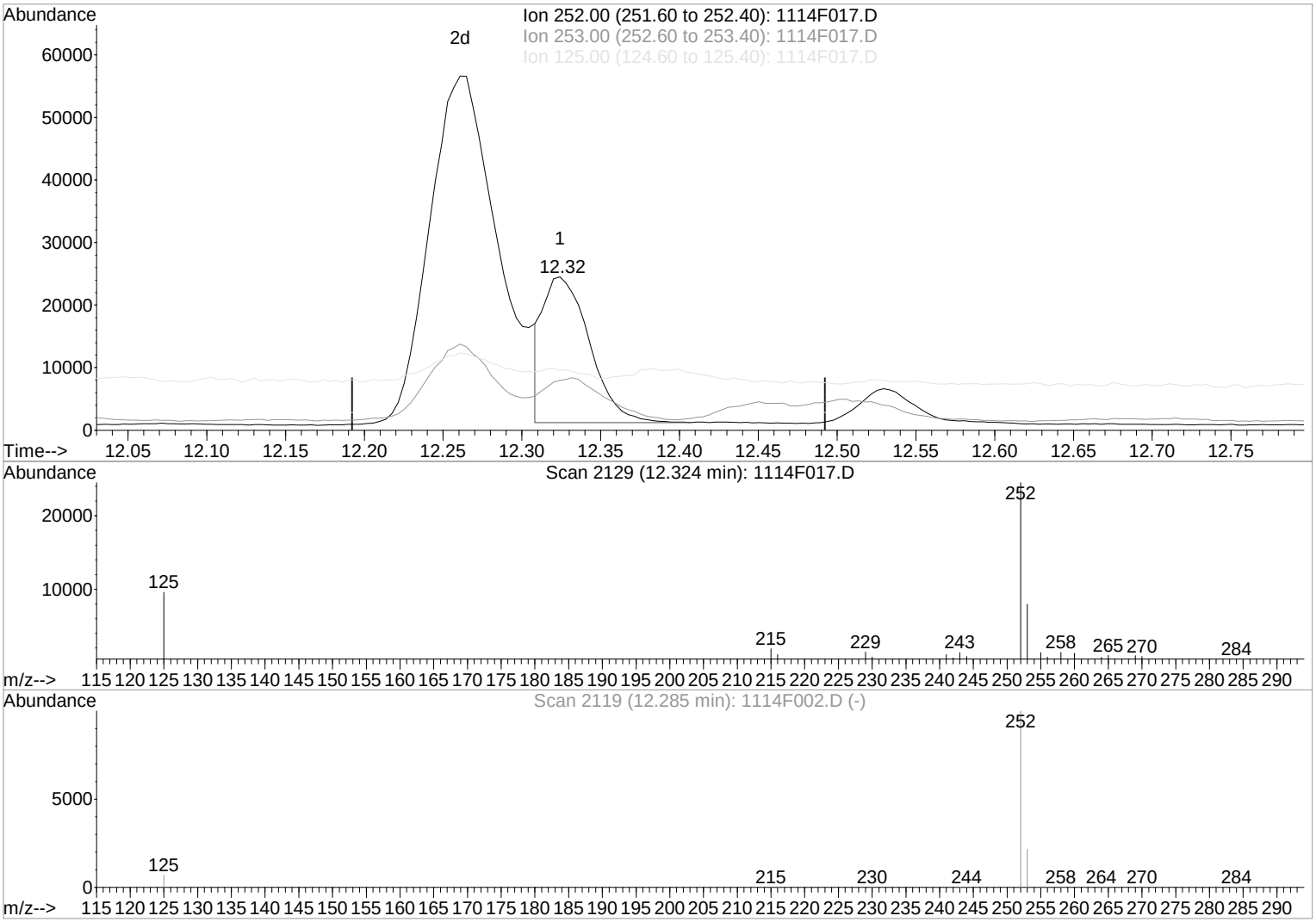
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F017.D Vial: 17
Acq On : 14 Nov 2018 12:39 pm Operator: LWeiskopf
Sample : K1810430-004DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:16 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F017.D

(30) Benzo(k)fluoranthene (T)

12.32min 100.75ng/ml

response 47889

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	26.11
125.00	9.70	1.61
0.00	0.00	0.00

Manual Integration:

Before

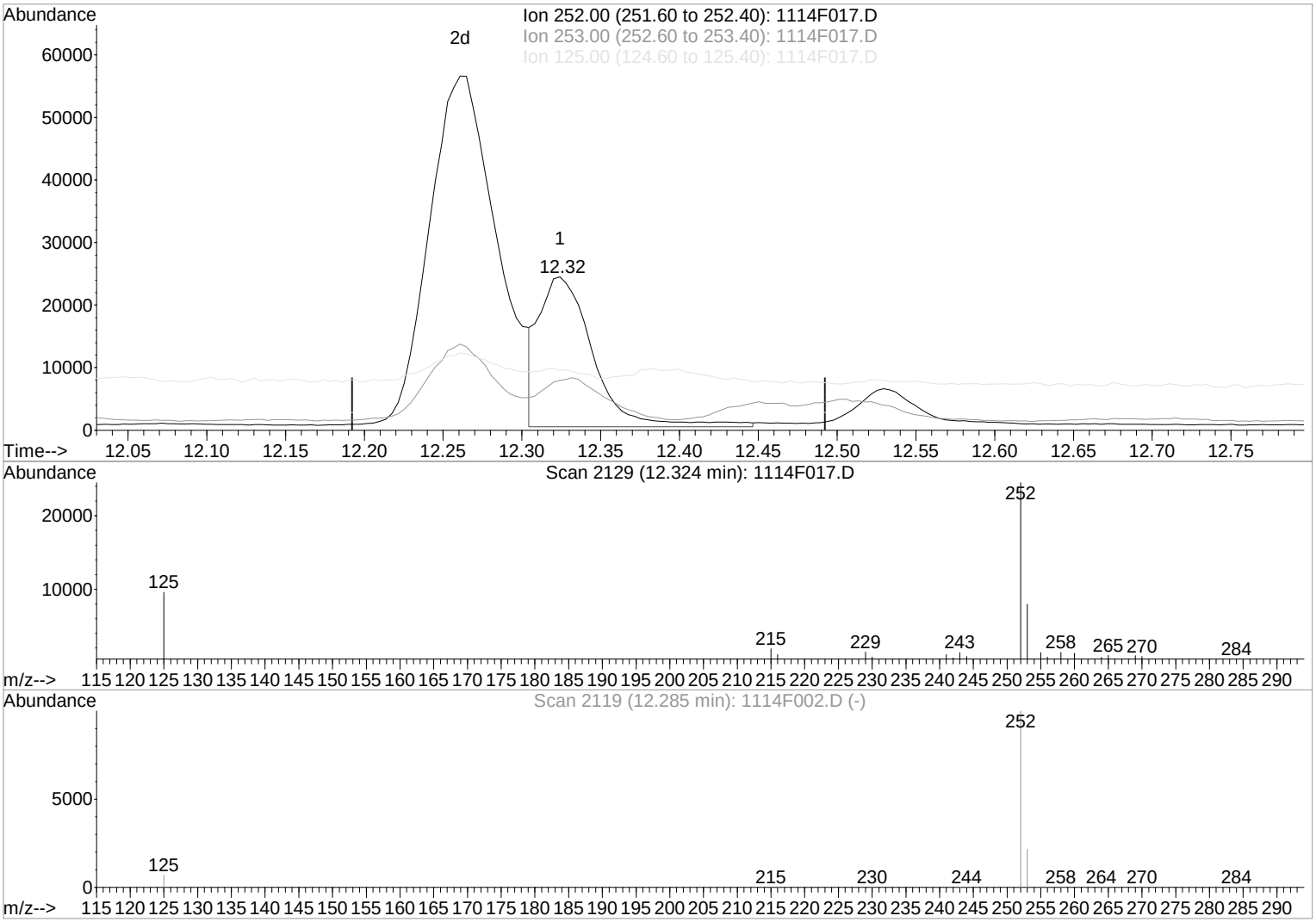
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F017.D Vial: 17
Acq On : 14 Nov 2018 12:39 pm Operator: LWeiskopf
Sample : K1810430-004DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:16 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F017.D

(30) Benzo(k)fluoranthene (T)

12.32min 120.81ng/ml m

response 57420

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	32.48
125.00	9.70	39.03#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F024.D
Lab ID: K1810430-005
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 15:43
Date Quantitated: 11/30/2018 13:23
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F024.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 15:43	**Quant Date:**	11/30/2018 13:23	**Vial:**	24
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	10.0
Lab ID:	K1810430-005			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702217	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	57873	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	34312	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	72283	200.00	OK
4	Chrysene-d12	10.12	0.02	240	76051	200.00	OK
5	Perylene-d12	13.34	0.05	264	83438	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	16857	76.84	77	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	32730	71.85	72	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	28547	86.54	87	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	9490	28.41	41	D	
1	2-Methylnaphthalene	5.41		0.00	142	2860	14.20	20	D	
2	Acenaphthylene	6.19		0.00	152	5013	12.24	17	D	
2	Acenaphthene	6.34		0.00	154	3761	15.99	23	D	
2	Dibenzofuran	6.49		0.00	168	3208	8.50	12	D	
2	Fluorene	6.77		0.00	166	4097	14.40	21	D	
3	Phenanthrene	7.57		0.00	178	40373	89.54	130	D	
3	Anthracene	7.62	0.01	0.00	178	9485	22.03	31	D	
3	Fluoranthene	8.56	0.01	0.00	202	92020	165.27	240	D	
4	Pyrene	8.76	0.01	0.00	202	113311	217.16	310	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	31831	64.74	92	D	
4	Chrysene	10.15	0.01	0.00	228	38751**m**	82.28	120	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F024.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 15:43	**Quant Date:**	11/30/2018 13:23	**Vial:**	24
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	10.0
Lab ID:	K1810430-005			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.26	0.05	0.00	252	60191	116.76	170	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	22790**m**	44.56	64	D	
5	Benzo(a)pyrene	13.17	0.05	0.00	252	38822	85.87	120	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	29687	66.97	96	D	
5	Dibenz(a,h)anthracene	15.55	0.03	0.00	278	6237**m**	13.88	20	D	
5	Benzo(g,h,i)perylene	15.92	0.04	0.00	276	39645	76.37	110	D	

Prep Amount:	40.028 g	**Dilution:**	10.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	35.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

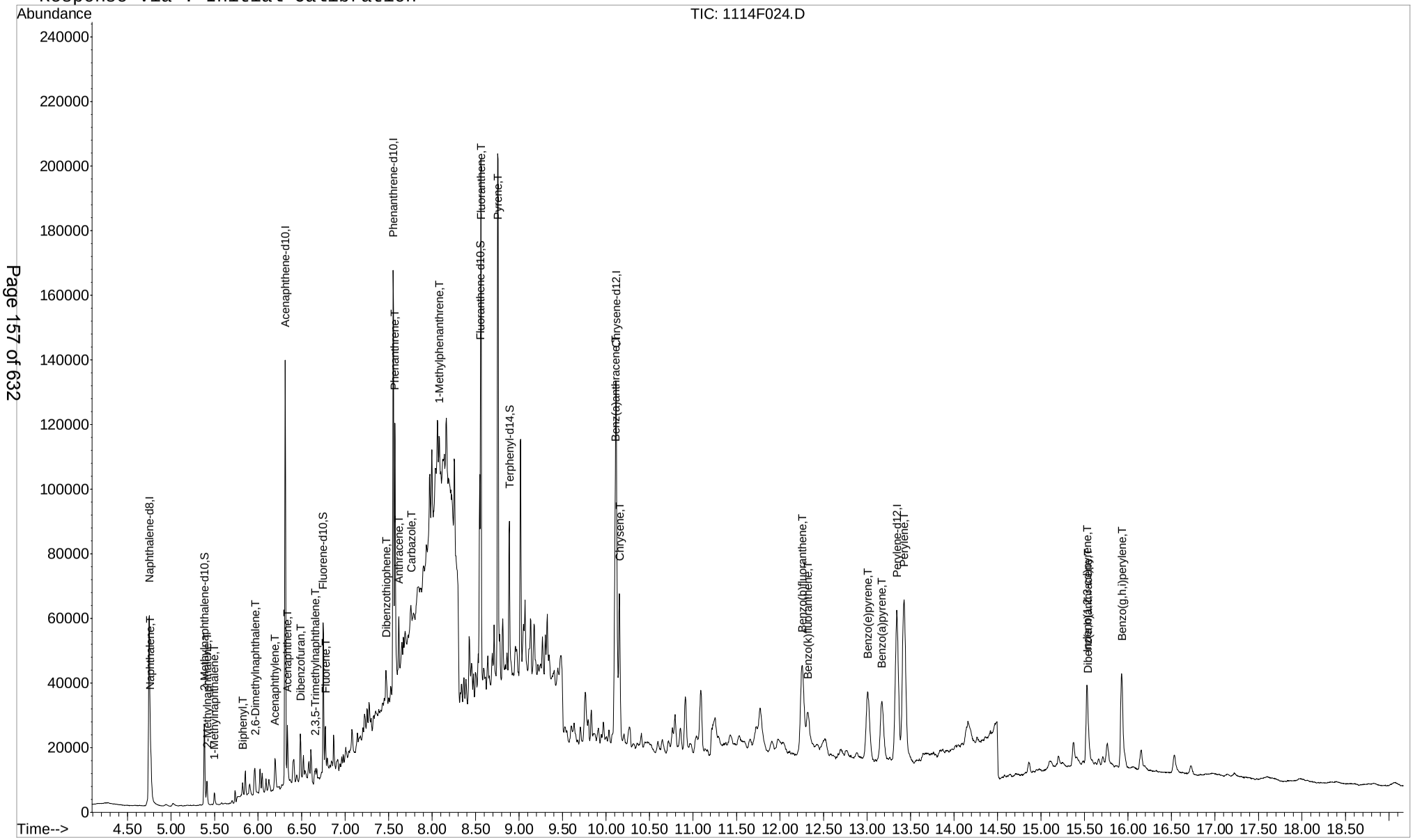
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

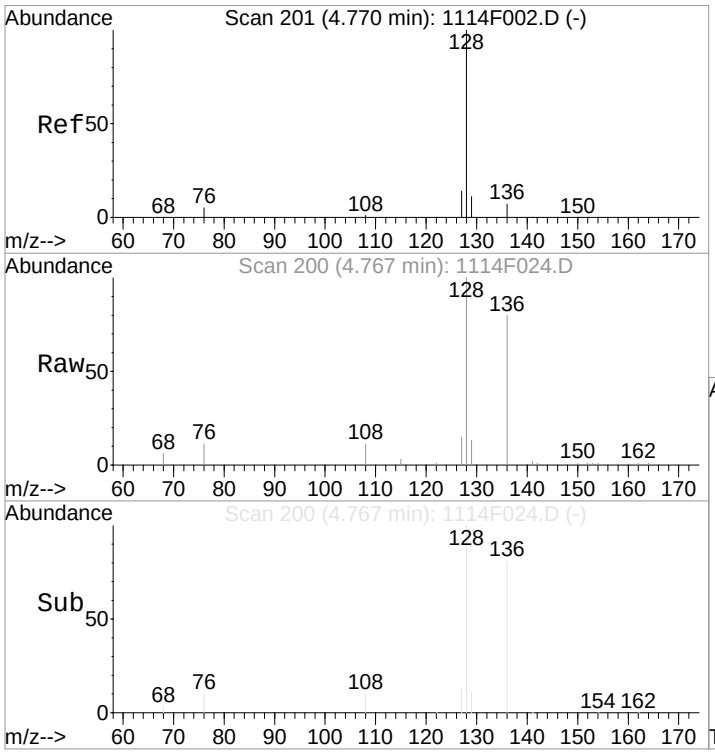
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:23 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



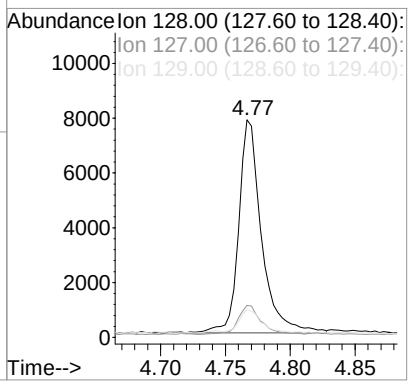
1st 12/03/18
2nd 12/06/18

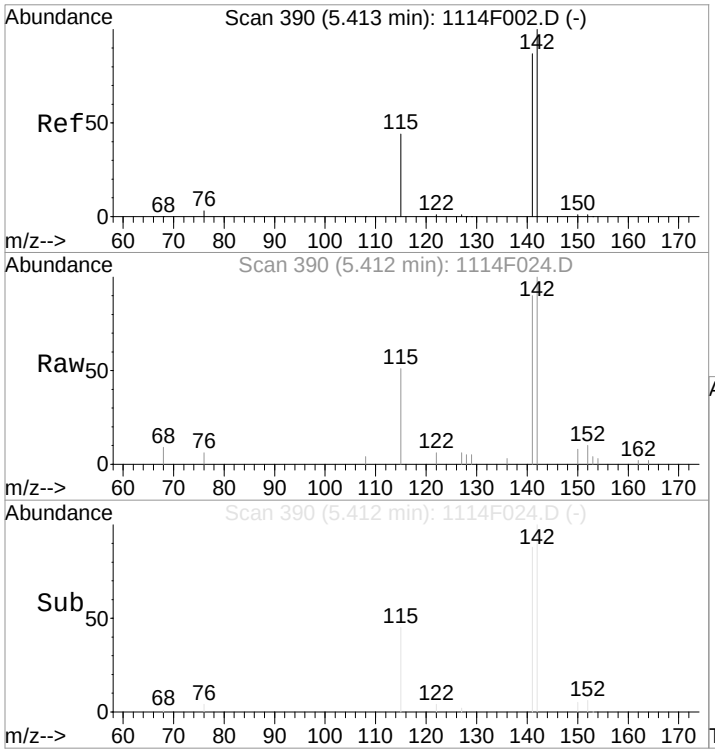


#2
Naphthalene
Concen: 28.41 ng/ml
RT: 4.77 min Scan# 200
Delta R.T. -0.01 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:128 Resp: 9490

Ion	Ratio	Lower	Upper
128	100		
127	13.5	0.0	43.7
129	10.9	0.0	30.8

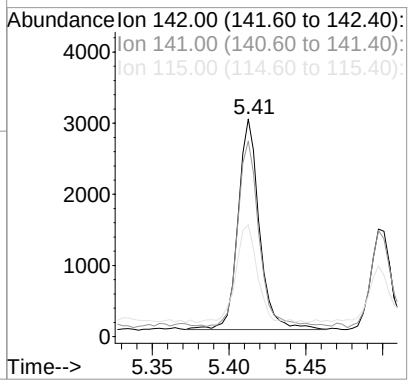


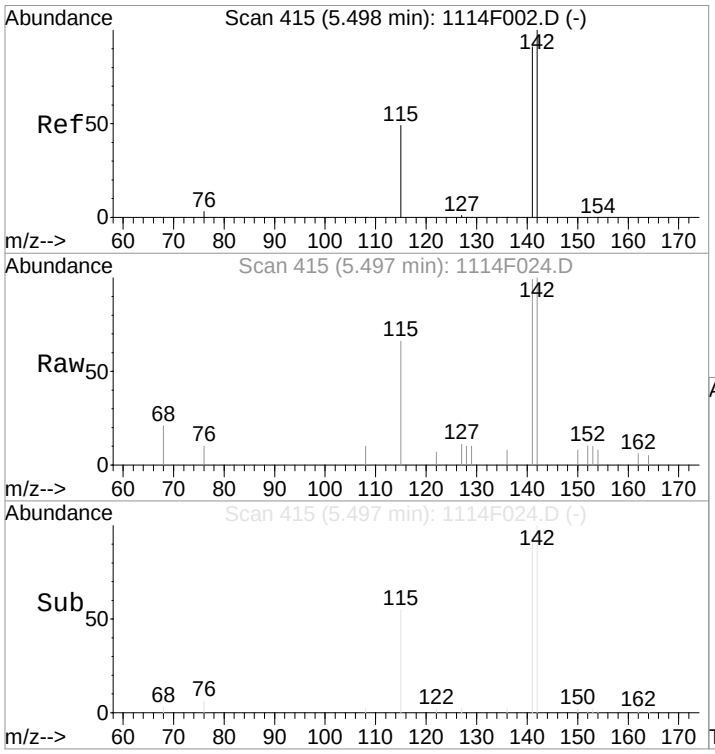


#4
2-Methylnaphthalene
Concen: 14.20 ng/ml
RT: 5.41 min Scan# 390
Delta R.T. -0.01 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:142 Resp: 2860

Ion	Ratio	Lower	Upper
142	100		
141	87.8	56.8	116.8
115	46.4	13.3	53.3

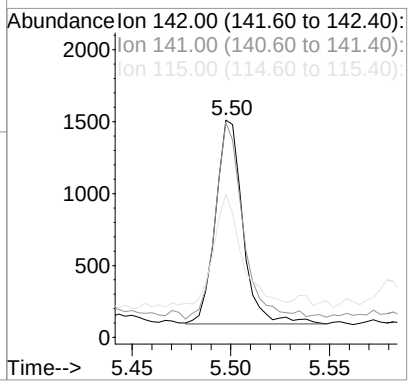


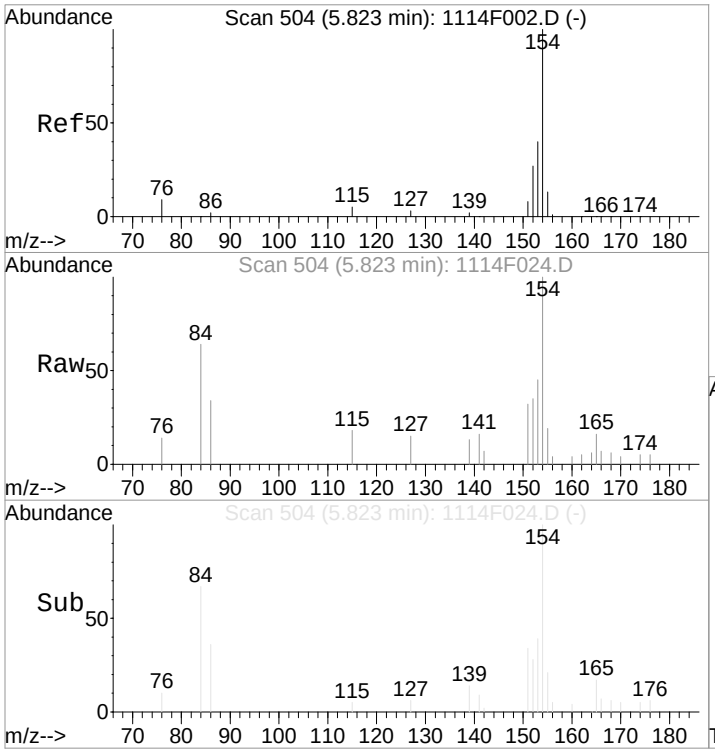


#5
1-Methylnaphthalene
Concen: 7.01 ng/ml
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:142 Resp: 1359

Ion	Ratio	Lower	Upper
142	100		
141	96.5	59.7	119.7
115	53.4	13.7	53.7

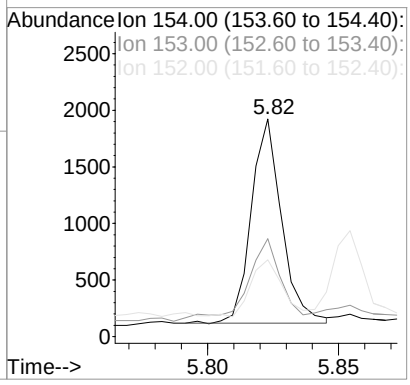




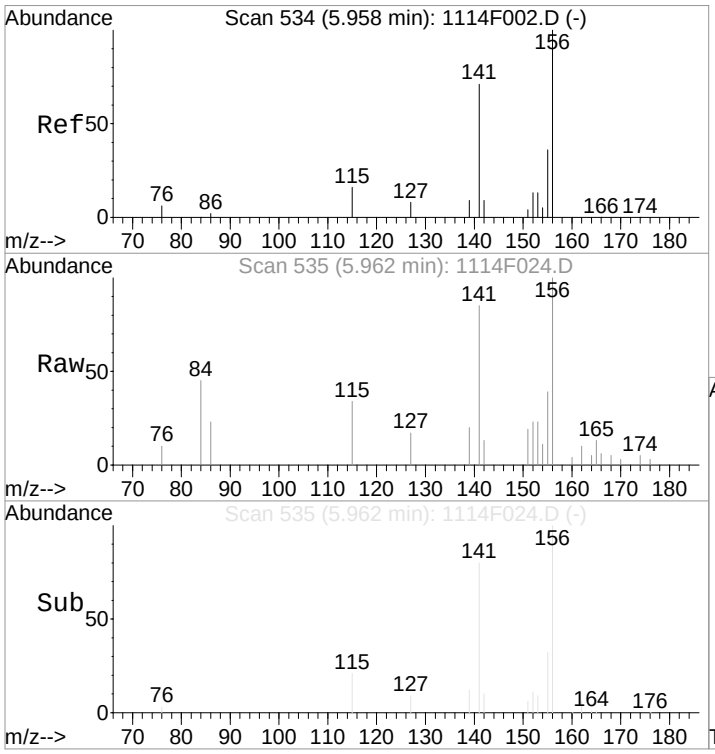
#6
Biphenyl
Concen: 5.79 ng/ml
RT: 5.82 min Scan# 504
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:154 Resp: 1457

Ion	Ratio	Lower	Upper
154	100		
153	38.7	11.4	71.4
152	25.8	7.1	47.1



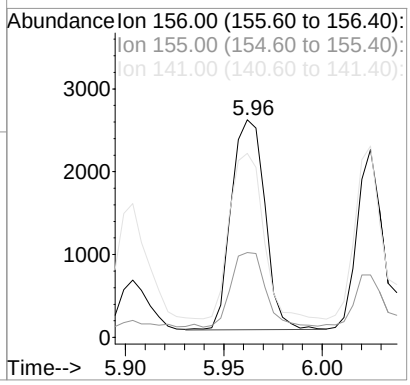
1st 12/03/18
2nd 12/06/18

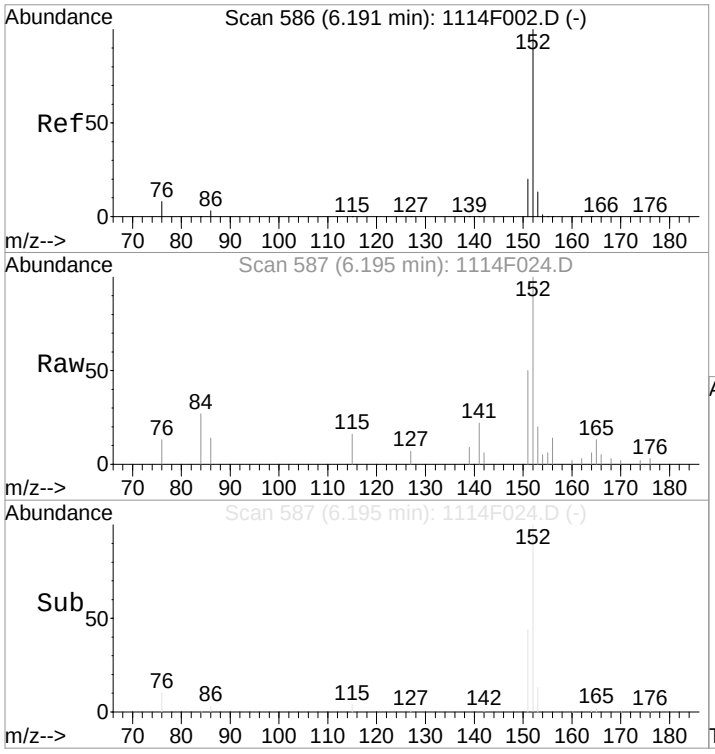


#7
2,6-Dimethylnaphthalene
Concen: 17.41 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:156 Resp: 3011

Ion	Ratio	Lower	Upper
156	100		
155	35.3	7.0	67.0
141	79.2	47.9	87.9

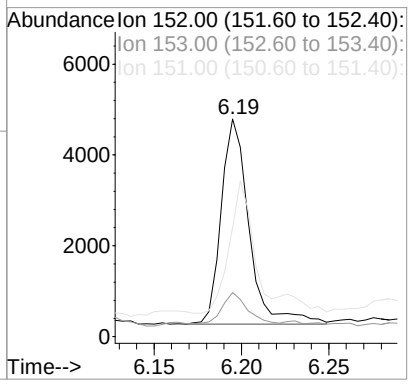


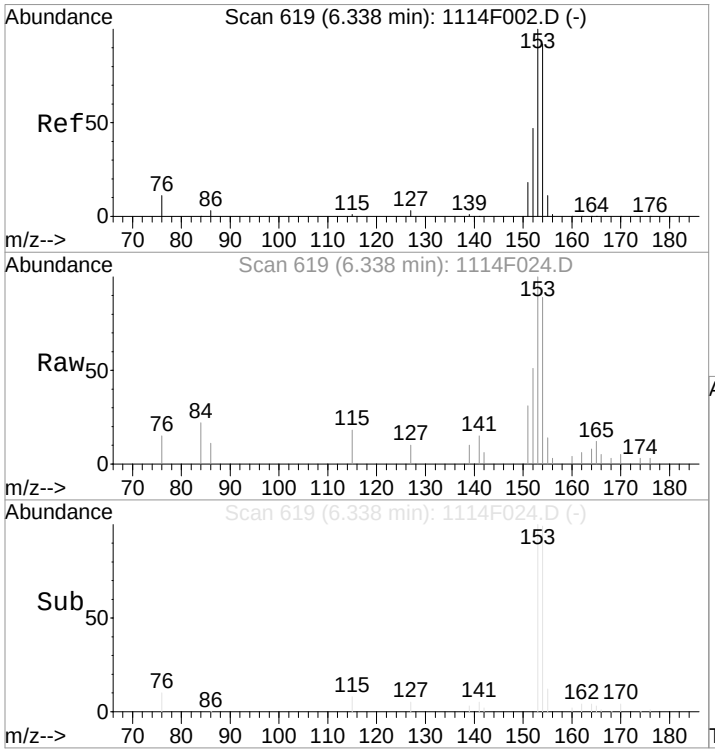


#9
Acenaphthylene
Concen: 12.24 ng/ml
RT: 6.19 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:152 Resp: 5013

Ion	Ratio	Lower	Upper
152	100		
153	15.4	0.0	42.9
151	41.1	0.2	40.2#

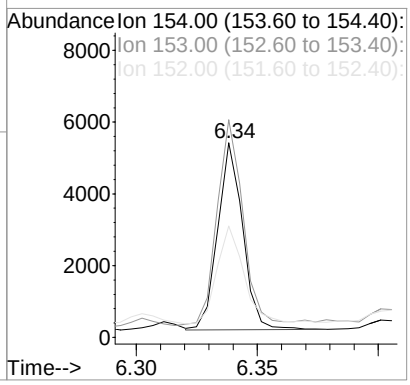


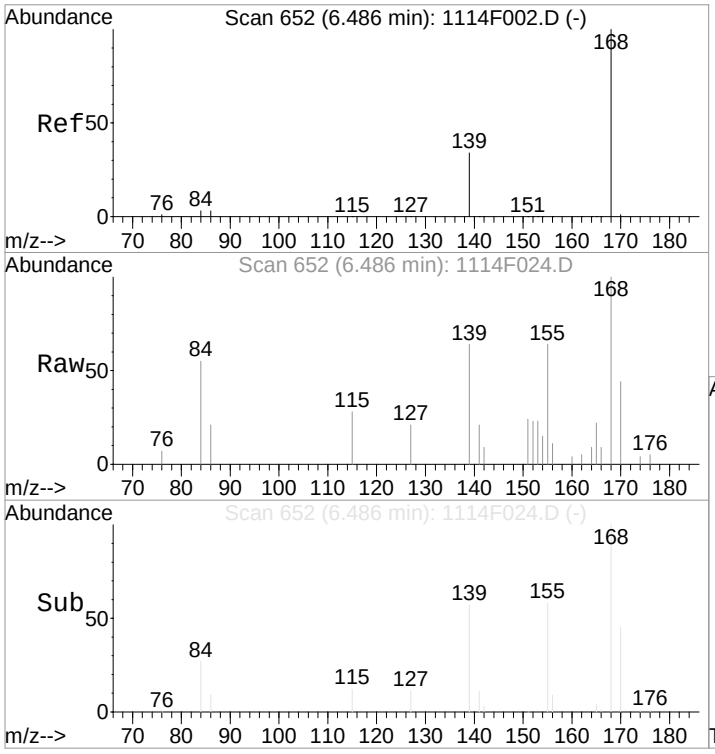


#10
Acenaphthene
Concen: 15.99 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:154 Resp: 3761

Ion	Ratio	Lower	Upper
154	100		
153	109.4	77.1	137.1
152	52.5	19.7	79.7

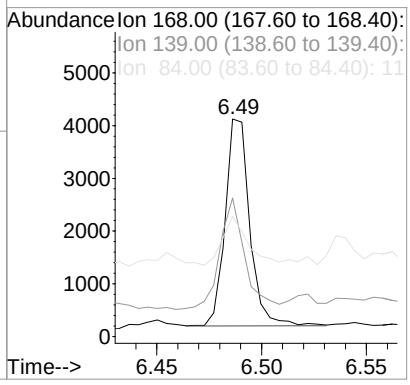




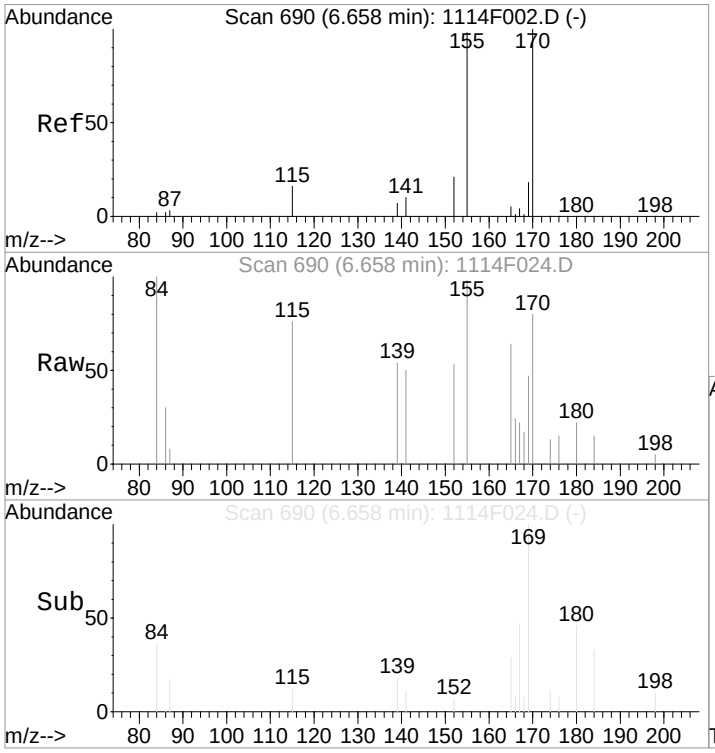
#11
Dibenzofuran
Concen: 8.50 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:168 Resp: 3208

Ion	Ratio	Lower	Upper
168	100		
139	53.4	0.0	55.8
84	22.3	0.0	23.5



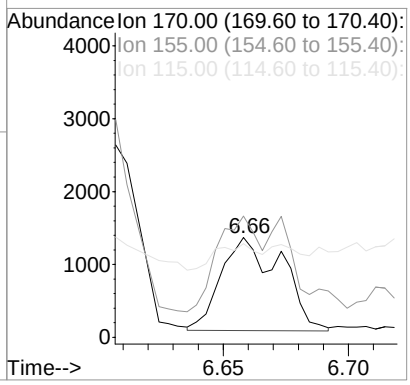
1st 12/03/18
2nd 12/06/18

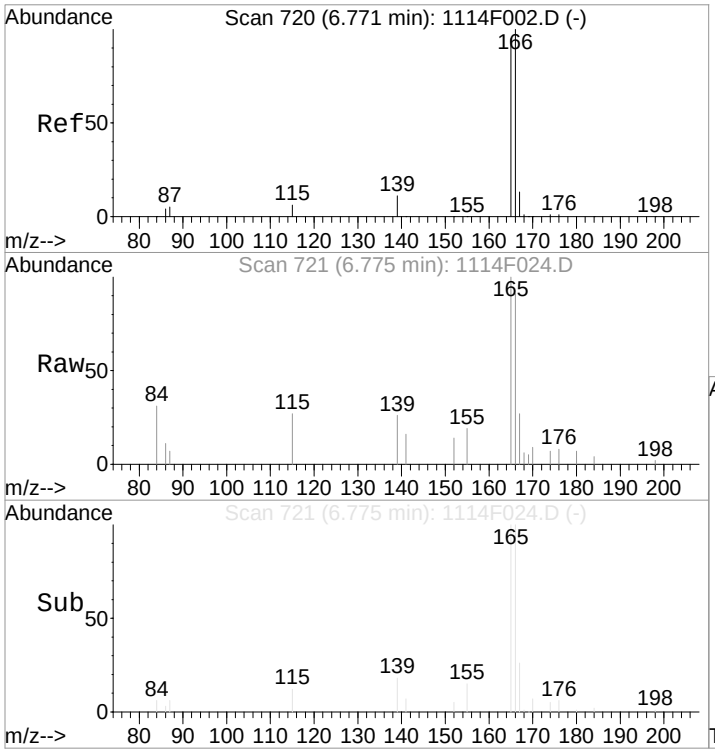


#12
2,3,5-Trimethylnaphthalene
Concen: 9.84 ng/ml m
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:170 Resp: 2141

Ion	Ratio	Lower	Upper
170	100		
155	121.5	59.2	119.2#
115	93.9	0.0	30.1#

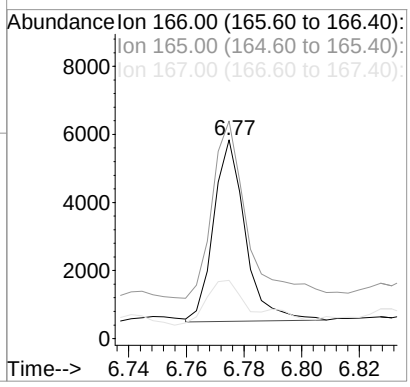


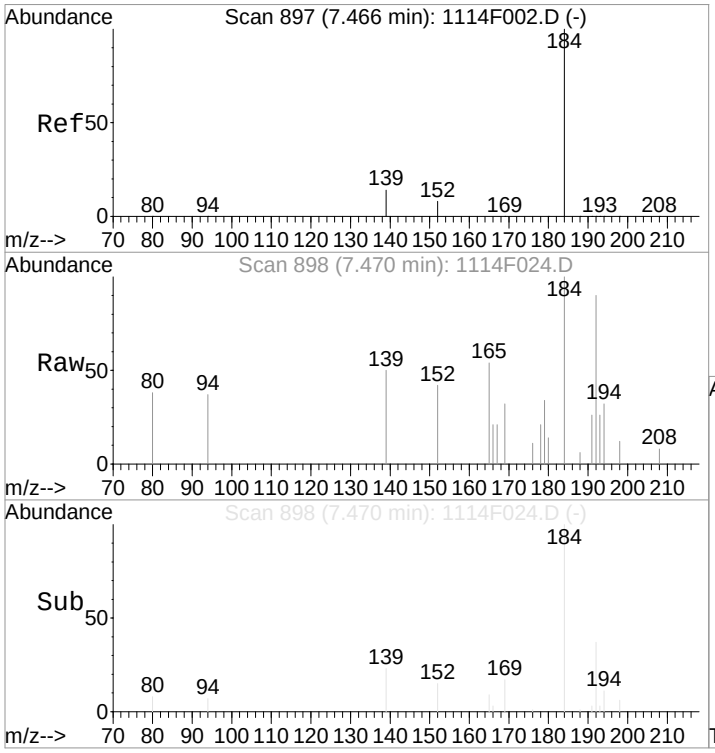


#14
Fluorene
Concen: 14.40 ng/ml
RT: 6.77 min Scan# 721
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:166 Resp: 4097

Ion	Ratio	Lower	Upper
166	100		
165	98.3	63.4	123.4
167	23.6	0.0	33.1

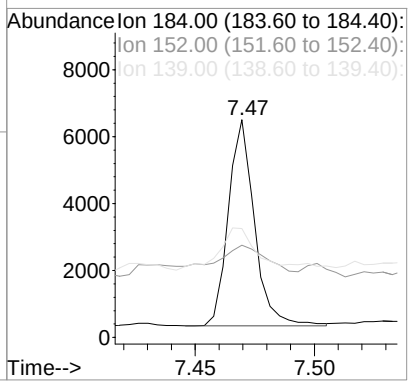


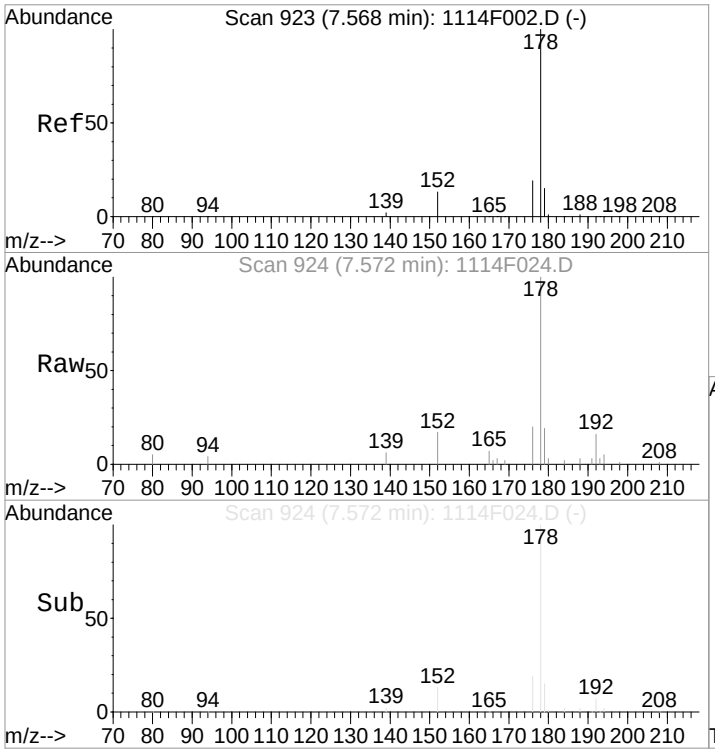


#16
Dibenzothiophene
Concen: 10.42 ng/ml
RT: 7.47 min Scan# 898
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:184 Resp: 4697

Ion	Ratio	Lower	Upper
184	100		
152	11.6	0.0	37.8
139	18.3	0.0	32.6

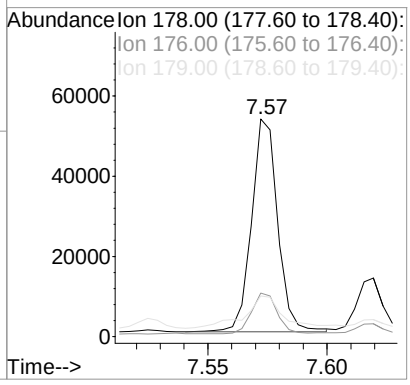




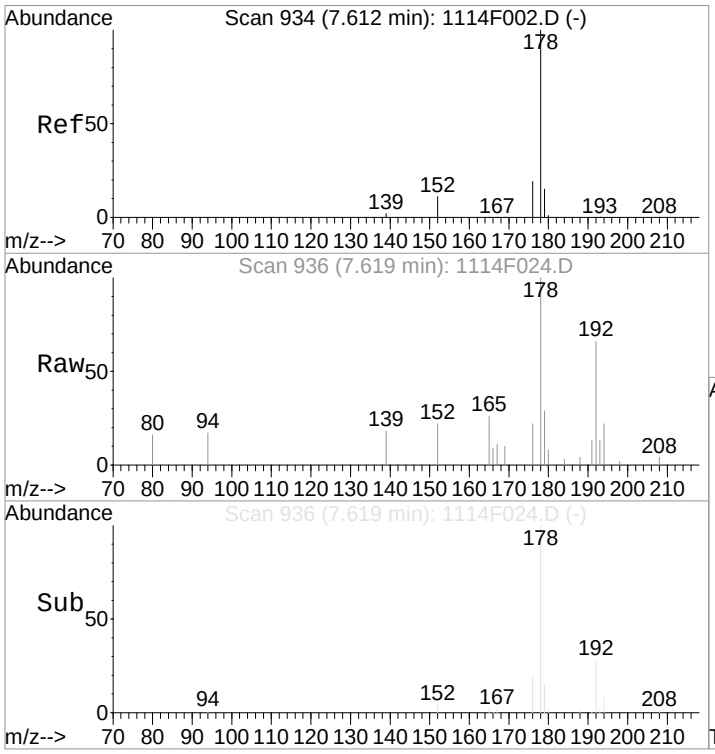
#17
Phenanthrene
Concen: 89.54 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:178 Resp: 40373

Ion	Ratio	Lower	Upper
178	100		
176	19.0	0.0	48.7
179	15.2	0.0	35.1



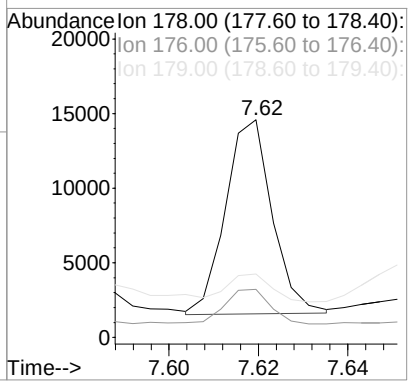
1st 12/03/18
2nd 12/06/18

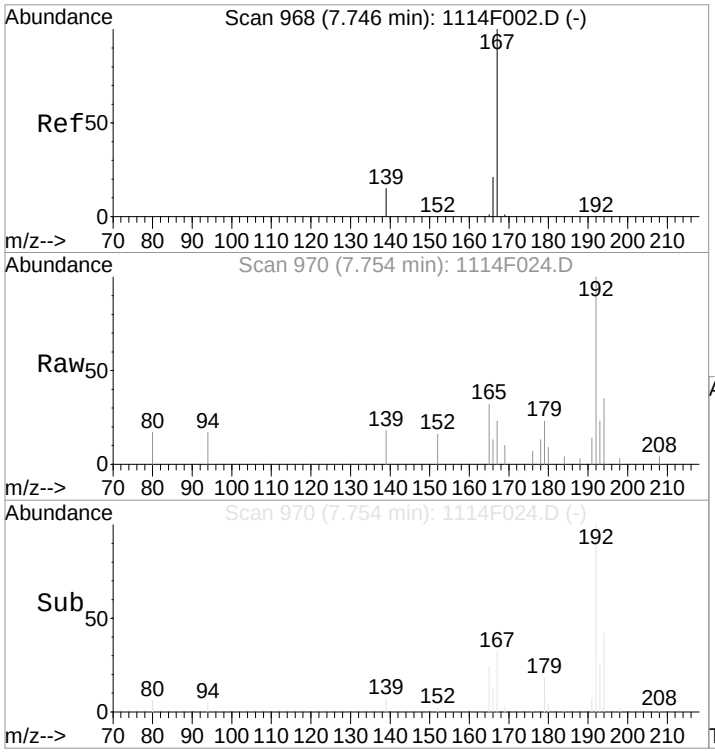


#18
Anthracene
Concen: 22.03 ng/ml
RT: 7.62 min Scan# 936
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:178 Resp: 9485

Ion	Ratio	Lower	Upper
178	100		
176	18.1	0.0	48.0
179	14.5	0.0	35.1

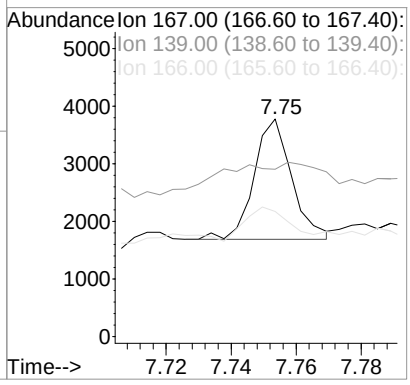




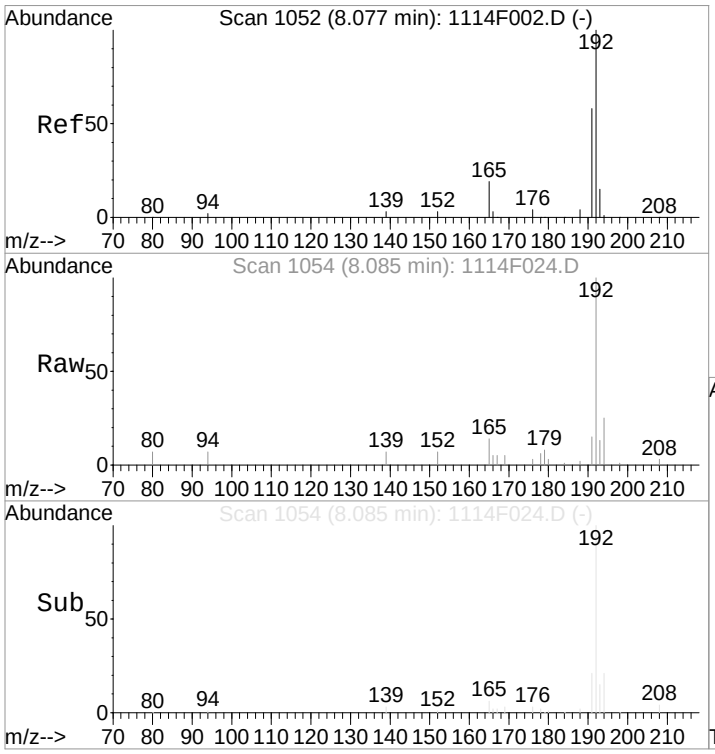
#19
Carbazole
Concen: 4.01 ng/ml
RT: 7.75 min Scan# 970
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:167 Resp: 1684

Ion	Ratio	Lower	Upper
167	100		
139	16.3	0.0	41.5
166	20.2	0.7	40.7



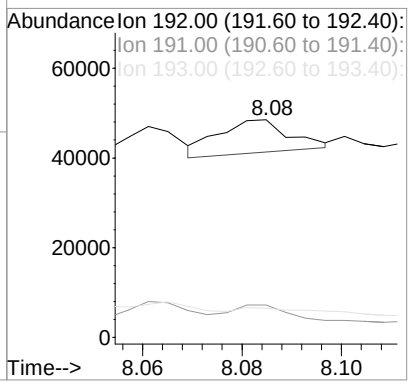
1st 12/03/18
2nd 12/06/18

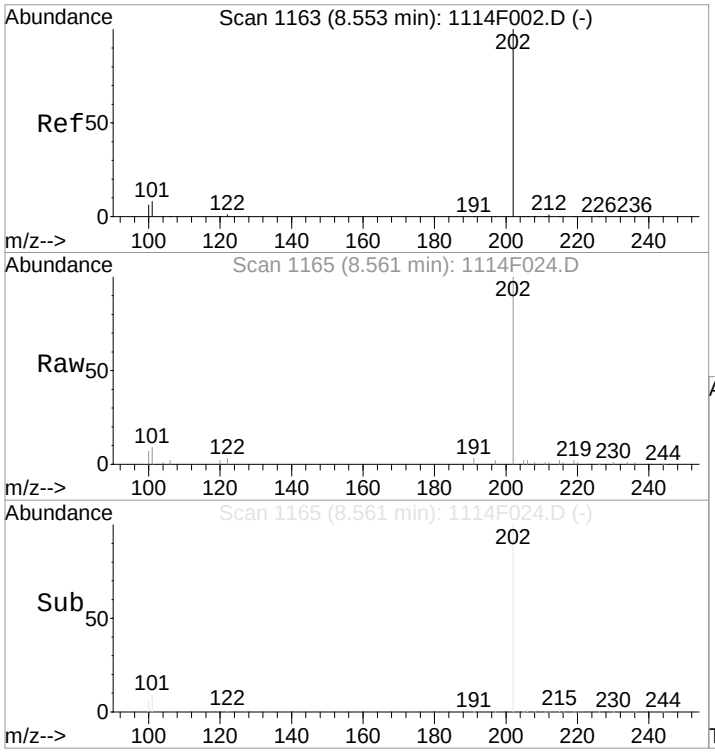


#20
1-Methylphenanthrene
Concen: 22.02 ng/ml m
RT: 8.08 min Scan# 1054
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:192 Resp: 7522

Ion	Ratio	Lower	Upper
192	100		
191	14.9	27.7	87.7#
193	13.5	0.0	45.4

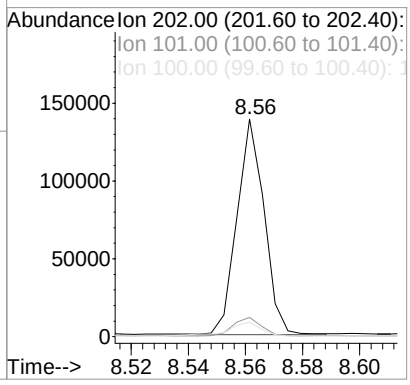




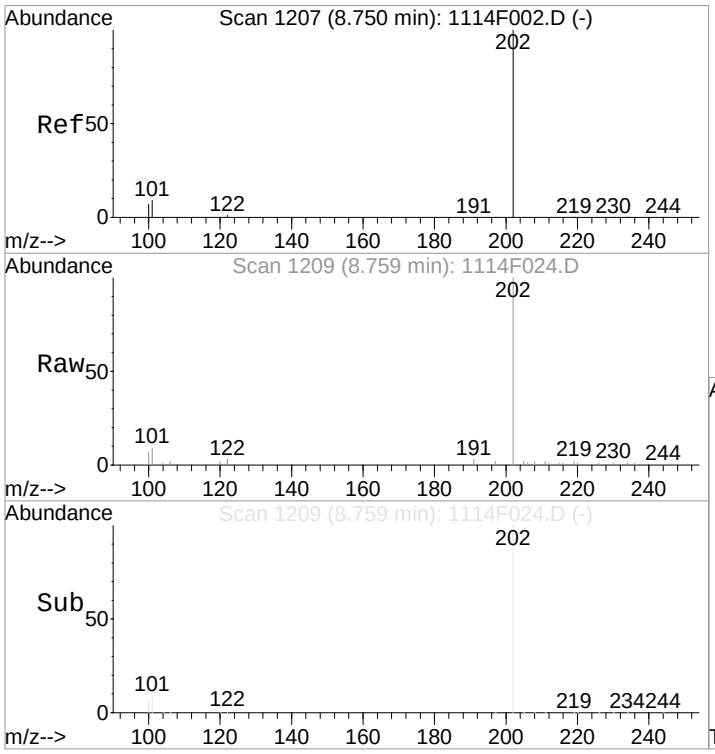
#21
Fluoranthene
Concen: 165.27 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:202 Resp: 92020

Ion	Ratio	Lower	Upper
202	100		
101	8.6	0.0	41.3
100	6.3	0.0	28.6



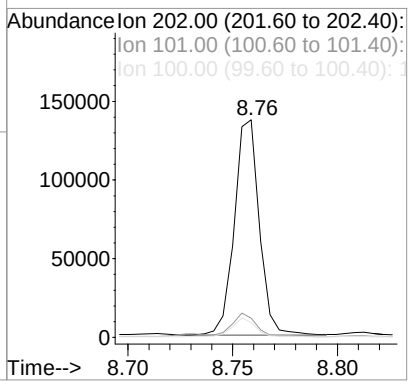
1st 12/03/18
2nd 12/06/18

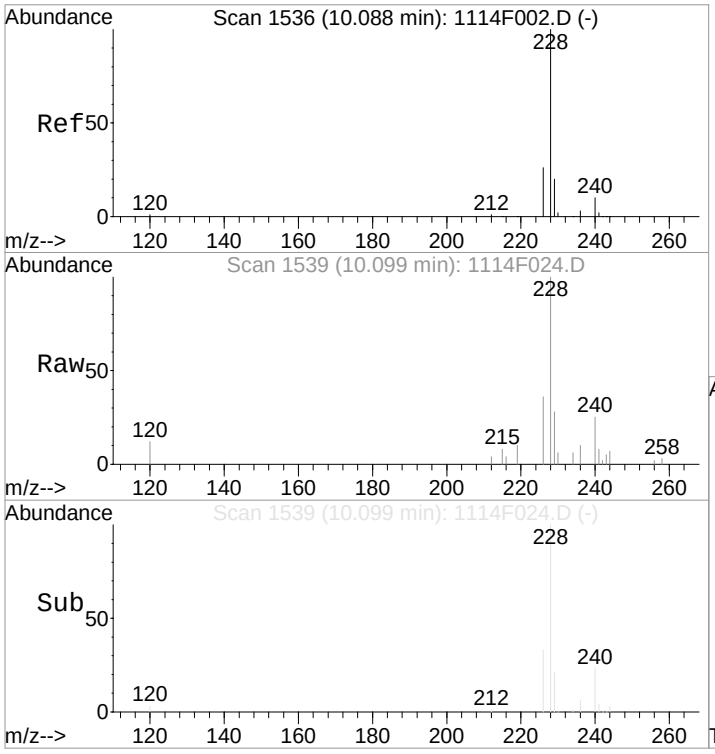


#24
Pyrene
Concen: 217.16 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:202 Resp: 113311

Ion	Ratio	Lower	Upper
202	100		
101	8.6	0.0	40.8
100	6.7	0.0	28.5

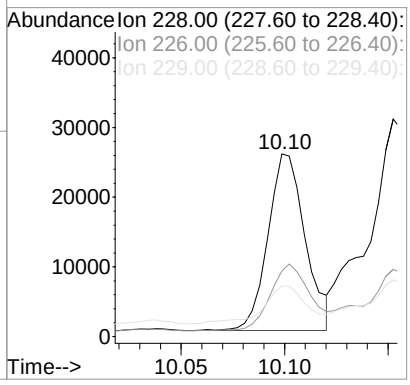


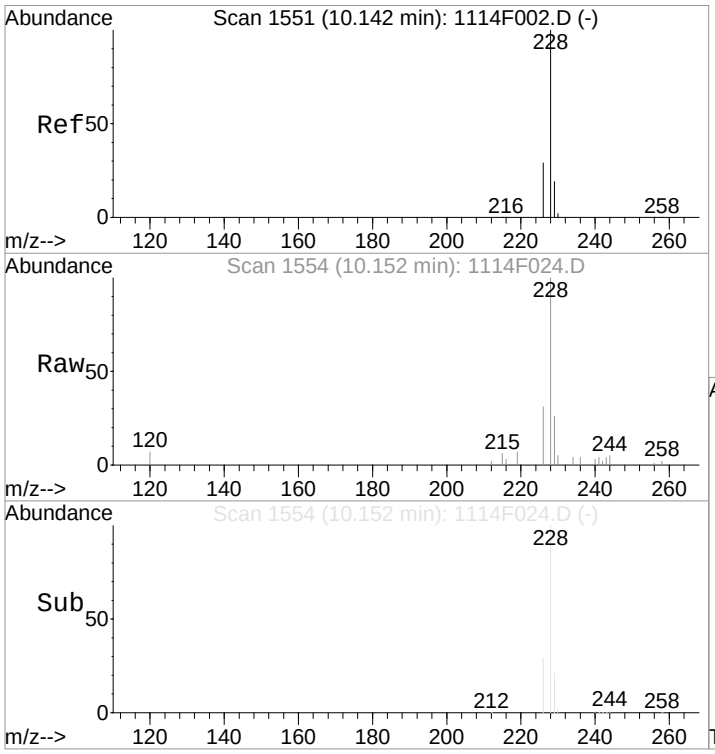


#26
Benz(a)anthracene
Concen: 64.74 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:228 Resp: 31831

Ion	Ratio	Lower	Upper
228	100		
226	33.9	0.0	56.3
229	21.3	0.0	39.1

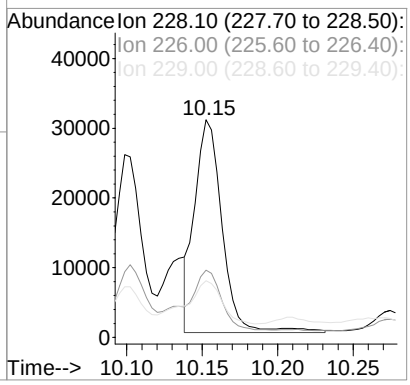


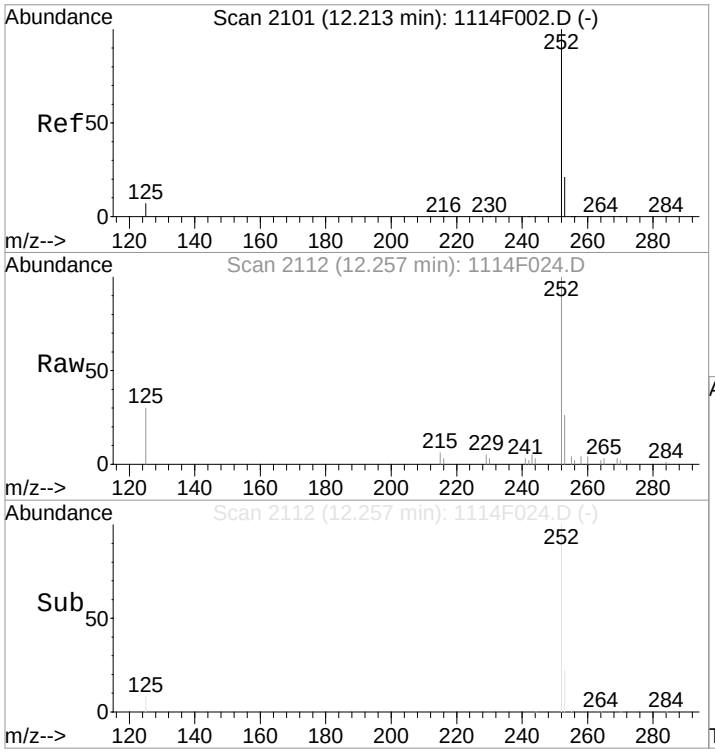


#27
Chrysene
Concen: 82.28 ng/ml m
RT: 10.15 min Scan# 1554
Delta R.T. -0.00 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:228 Resp: 38751

Ion	Ratio	Lower	Upper
228	100		
226	30.9	0.0	58.7
229	26.1	0.0	39.2

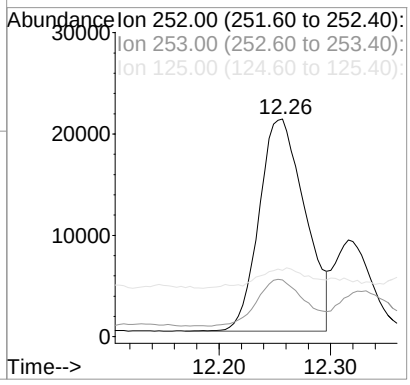




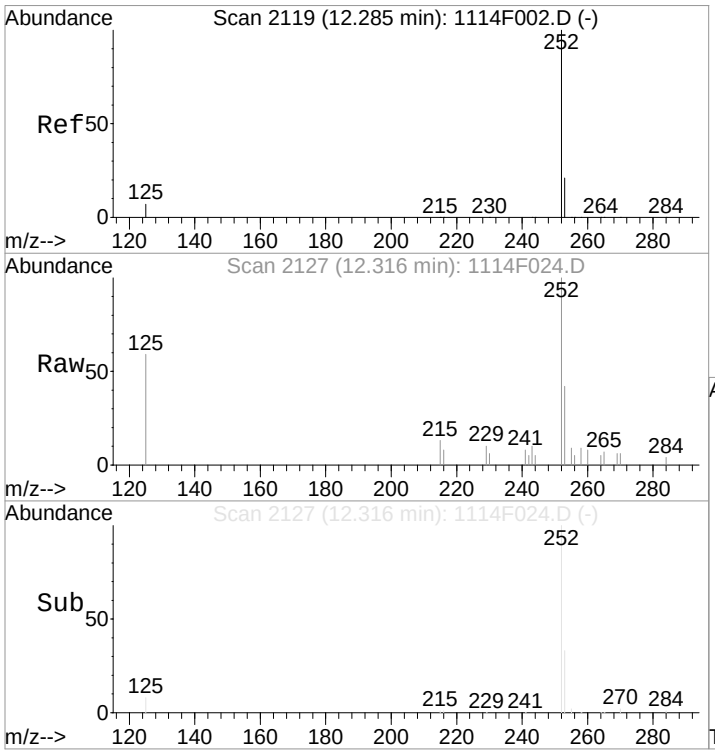
#29
Benzo(b)fluoranthene
Concen: 116.76 ng/ml
RT: 12.26 min Scan# 2112
Delta R.T. 0.03 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:252 Resp: 60191

Ion	Ratio	Lower	Upper
252	100		
253	21.6	0.0	51.2
125	8.2	0.0	29.5



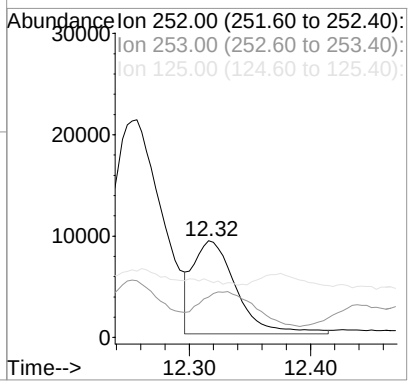
1st 12/03/18
2nd 12/06/18

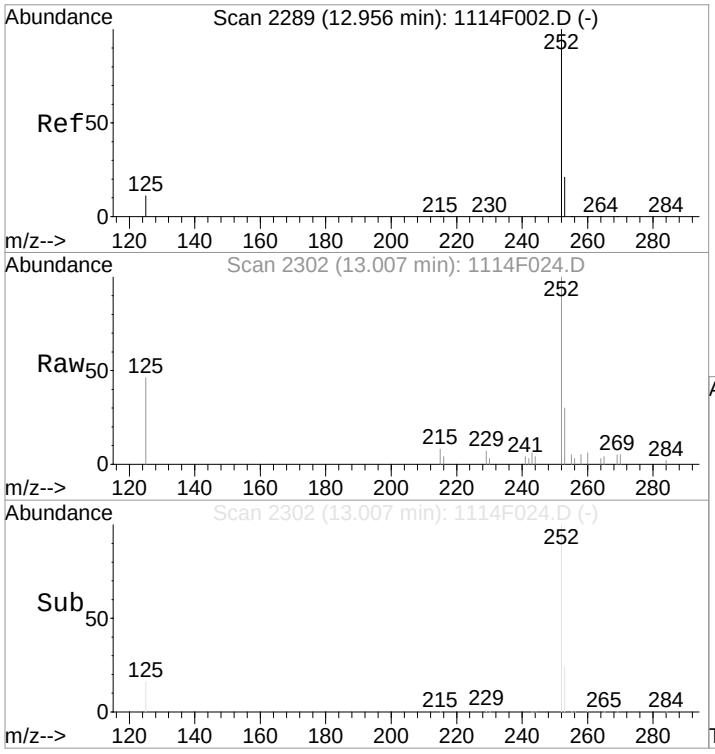


#30
Benzo(k)fluoranthene
Concen: 44.56 ng/ml m
RT: 12.32 min Scan# 2127
Delta R.T. 0.02 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:252 Resp: 22790

Ion	Ratio	Lower	Upper
252	100		
253	41.8	0.0	51.2
125	58.7	0.0	29.7#

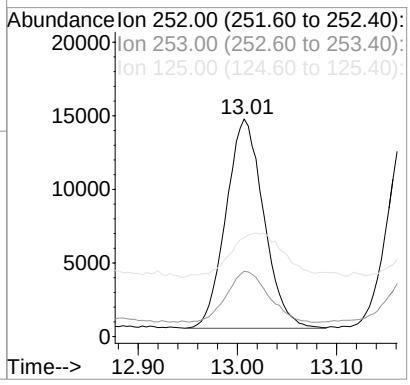




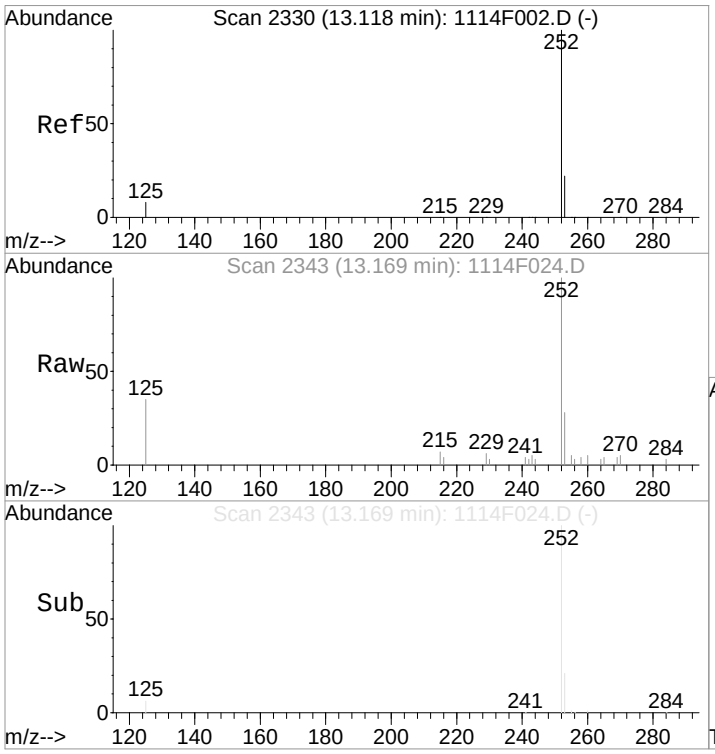
#31
Benzo(e)pyrene
Concen: 76.68 ng/ml
RT: 13.01 min Scan# 2302
Delta R.T. 0.04 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:252 Resp: 37680

Ion	Ratio	Lower	Upper
252	100		
253	24.1	0.0	51.3
125	18.7	0.0	33.5



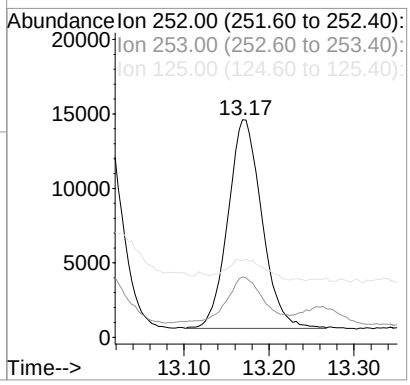
1st 12/03/18
2nd 12/06/18

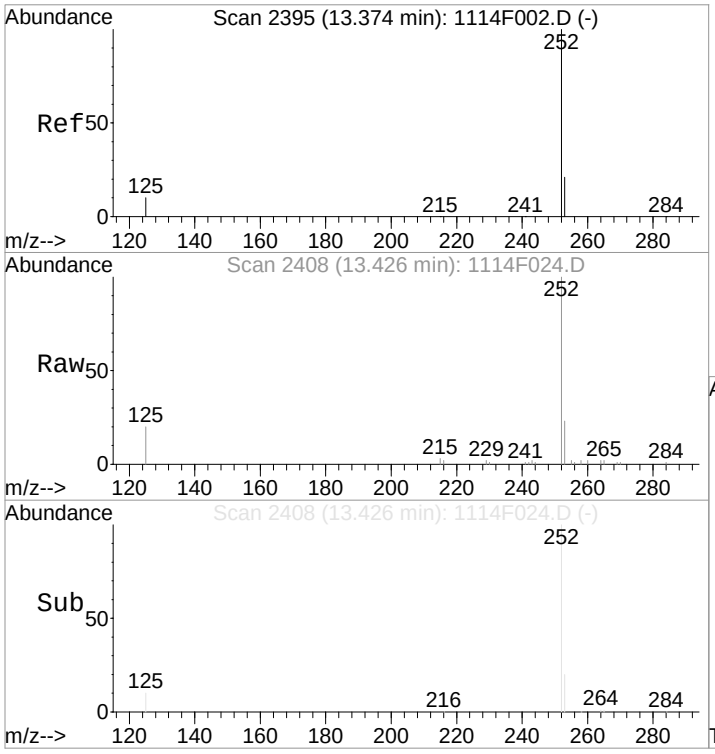


#32
Benzo(a)pyrene
Concen: 85.87 ng/ml
RT: 13.17 min Scan# 2343
Delta R.T. 0.04 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:252 Resp: 38822

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	50.9
125	8.4	0.0	30.3

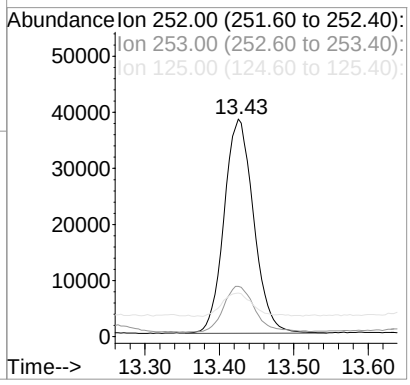


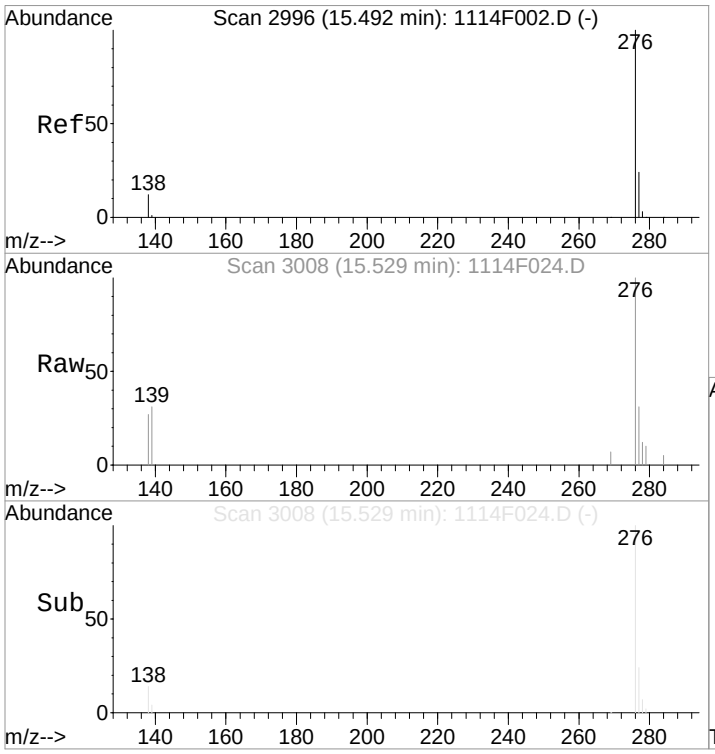


#33
Perylene
Concen: 222.73 ng/ml
RT: 13.43 min Scan# 2408
Delta R.T. 0.05 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:252 Resp: 105626

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.2
125	10.5	0.0	33.8

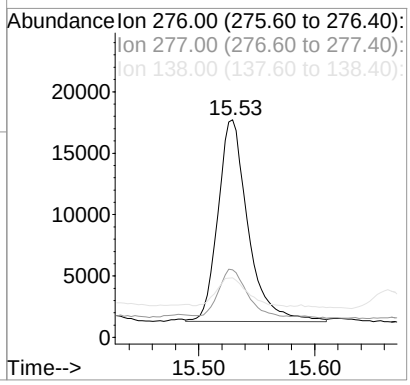


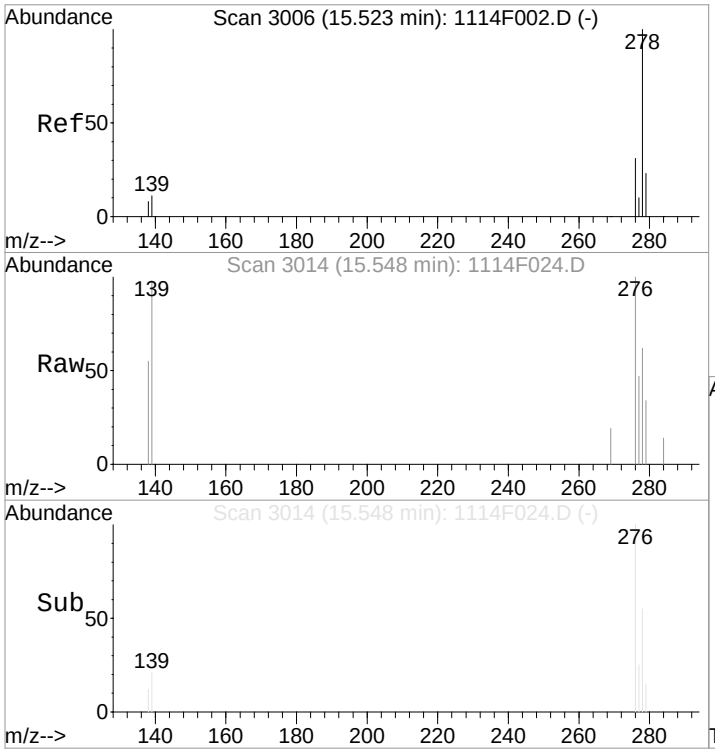


#34
Indeno(1,2,3-cd)pyrene
Concen: 66.97 ng/ml
RT: 15.53 min Scan# 3008
Delta R.T. 0.04 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:276 Resp: 29687

Ion	Ratio	Lower	Upper
276	100		
277	24.1	0.0	53.4
138	14.9	0.0	37.7

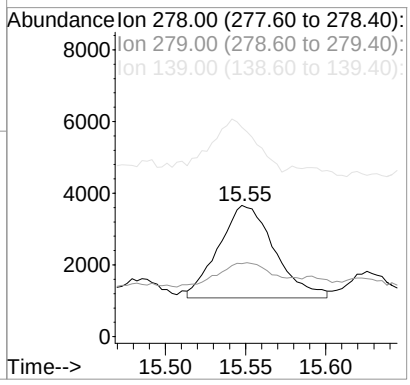




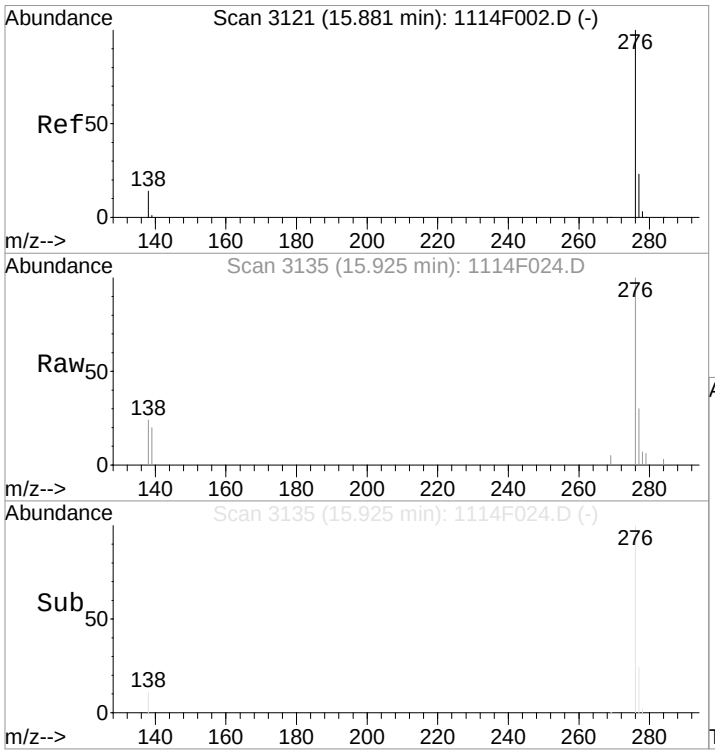
#35
Dibenz(a,h)anthracene
Concen: 13.88 ng/ml m
RT: 15.55 min Scan# 3014
Delta R.T. 0.02 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:278 Resp: 6237

Ion	Ratio	Lower	Upper
278	100		
279	55.6	0.0	53.5#
139	159.2	0.0	35.0#



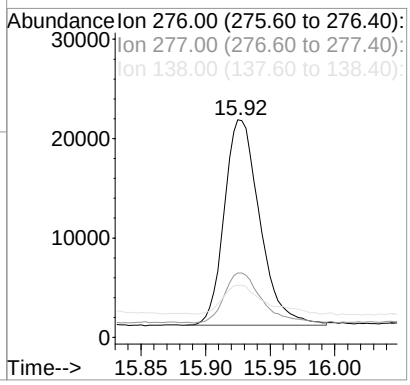
1st 12/03/18
2nd 12/06/18



#36
Benzo(g,h,i)perylene
Concen: 76.37 ng/ml
RT: 15.92 min Scan# 3135
Delta R.T. 0.04 min
Lab File: 1114F024.D
Acq: 14 Nov 2018 3:43 pm

Tgt Ion:276 Resp: 39645

Ion	Ratio	Lower	Upper
276	100		
277	24.0	0.0	53.1
138	13.6	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:30 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	57873	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	34312	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	72283	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	76051	200.00	ng/ml	0.00
28) Perylene-d12	13.34	264	83438	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	8929	55.28	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	5.53%		
13) Fluorene-d10	6.75	176	16857	76.84	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.68%		
22) Fluoranthene-d10	8.55	212	32730	71.85	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.18%		
25) Terphenyl-d14	8.89	244	28547	86.54	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.65%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	9490	28.41	ng/ml	100
4) 2-Methylnaphthalene	5.41	142	2860	14.20	ng/ml	93
5) 1-Methylnaphthalene	5.50	142	1359	7.01	ng/ml	85
6) Biphenyl	5.82	154	1457	5.79	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.96	156	3011	17.41	ng/ml	90
9) Acenaphthylene	6.19	152	5013	12.24	ng/ml#	70
10) Acenaphthene	6.34	154	3761	15.99	ng/ml	97
11) Dibenzofuran	6.49	168	3208	8.50	ng/ml	45
12) 2,3,5-Trimethylnaphthalene	6.66	170	2141m	9.84	ng/ml	
14) Fluorene	6.77	166	4097	14.40	ng/ml	92
16) Dibenzothiophene	7.47	184	4697	10.42	ng/ml	87
17) Phenanthrene	7.57	178	40373	89.54	ng/ml	100
18) Anthracene	7.62	178	9485	22.03	ng/ml	99
19) Carbazole	7.75	167	1684	4.01	ng/ml	95
20) 1-Methylphenanthrene	8.08	192	7522m	22.02	ng/ml	
21) Fluoranthene	8.56	202	92020	165.27	ng/ml	93
24) Pyrene	8.76	202	113311	217.16	ng/ml	95
26) Benz(a)anthracene	10.10	228	31831	64.74	ng/ml	89
27) Chrysene	10.15	228	38751m	82.28	ng/ml	
29) Benzo(b)fluoranthene	12.26	252	60191	116.76	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	22790m	44.56	ng/ml	
31) Benzo(e)pyrene	13.01	252	37680	76.68	ng/ml	91
32) Benzo(a)pyrene	13.17	252	38822	85.87	ng/ml	97
33) Perylene	13.43	252	105626	222.73	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.53	276	29687	66.97	ng/ml	96
35) Dibenz(a,h)anthracene	15.55	278	6237m	13.88	ng/ml	
36) Benzo(g,h,i)perylene	15.92	276	39645	76.37	ng/ml	93

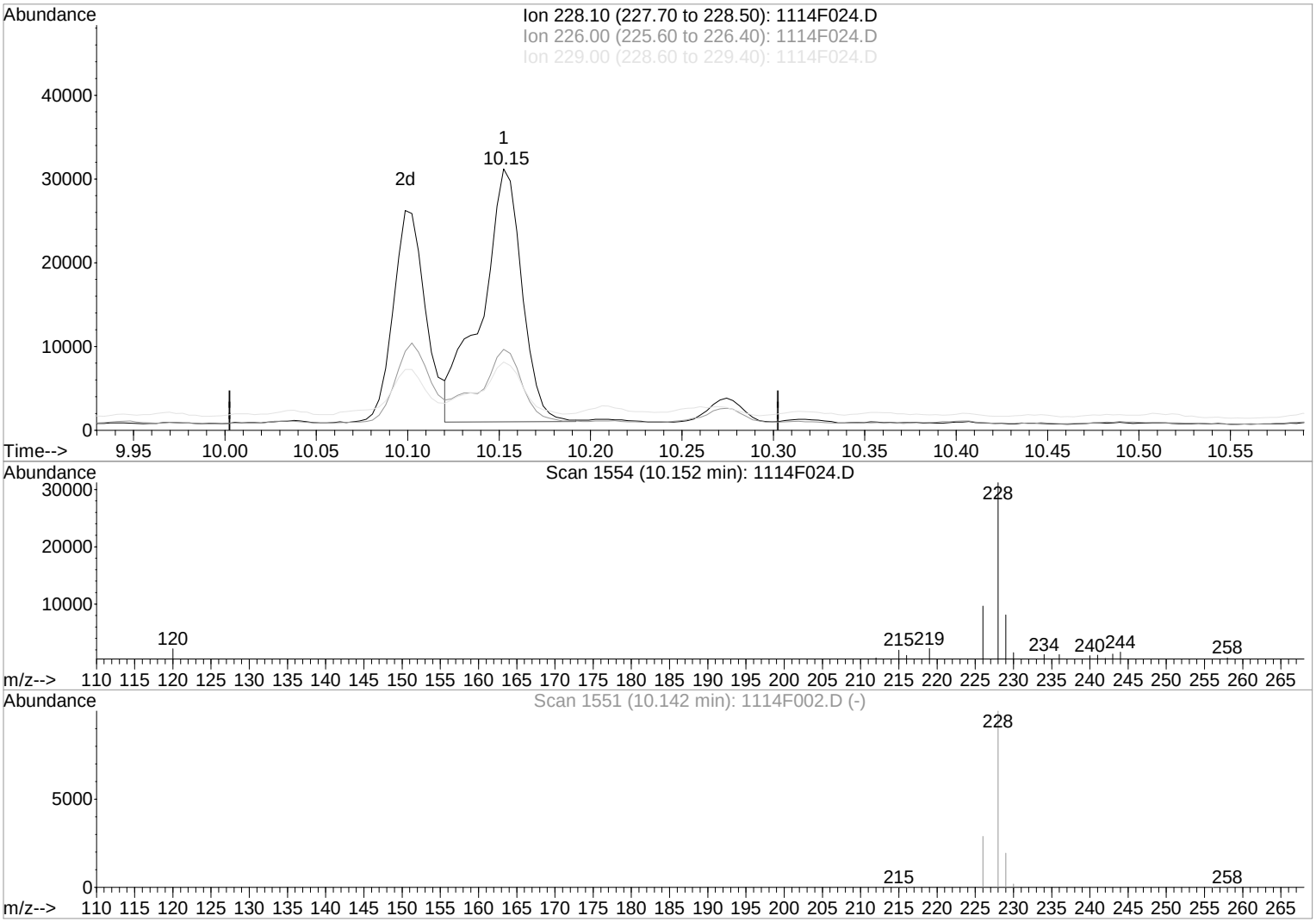
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:23 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F024.D

(27) Chrysene (T)

10.15min 98.61ng/ml

response 46441

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	28.49
229.00	19.20	20.31
0.00	0.00	0.00

Manual Integration:

Before

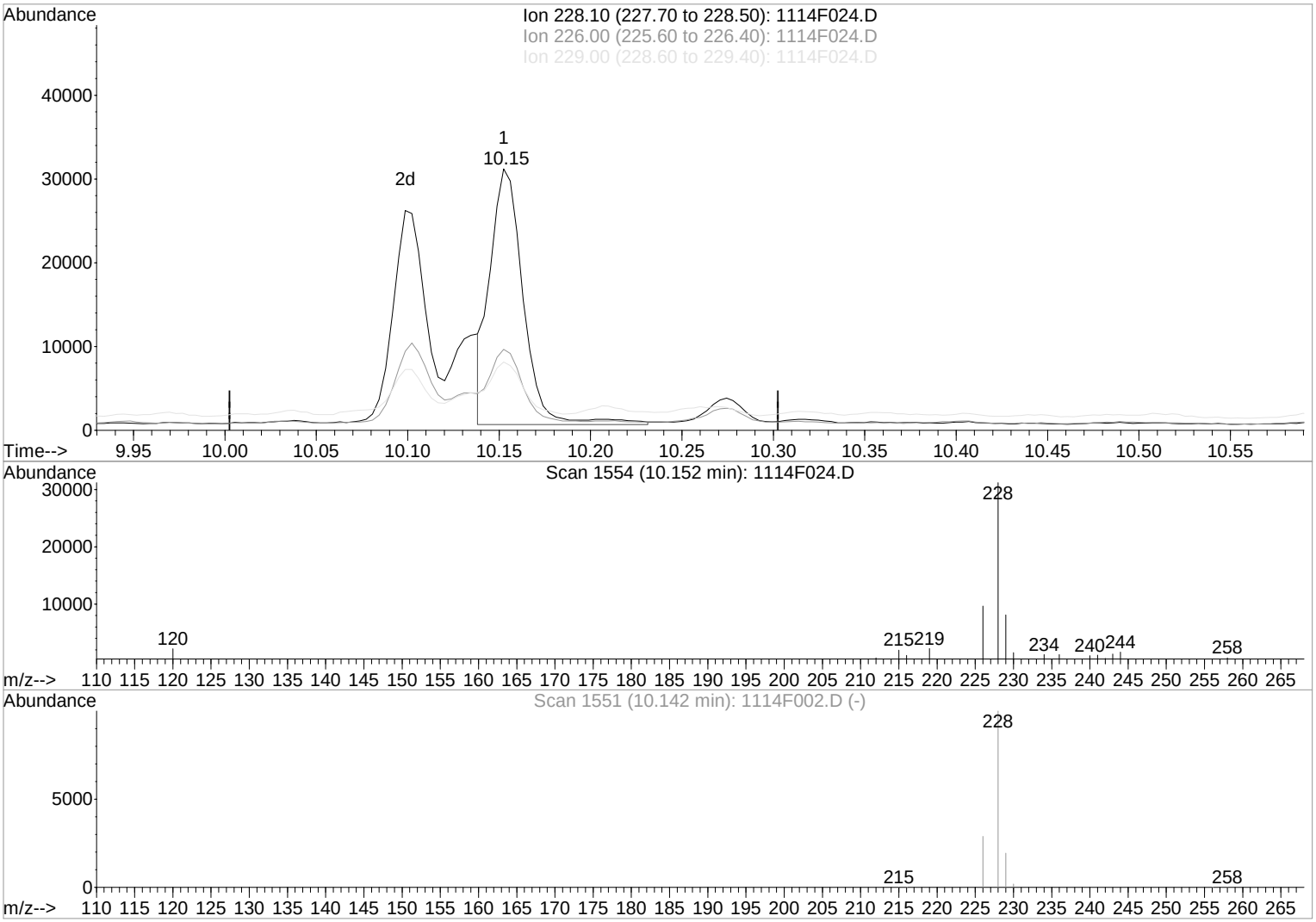
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:23 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F024.D

(27) Chrysene (T)

10.15min 82.28ng/ml m

response 38751

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	30.90
229.00	19.20	26.05
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

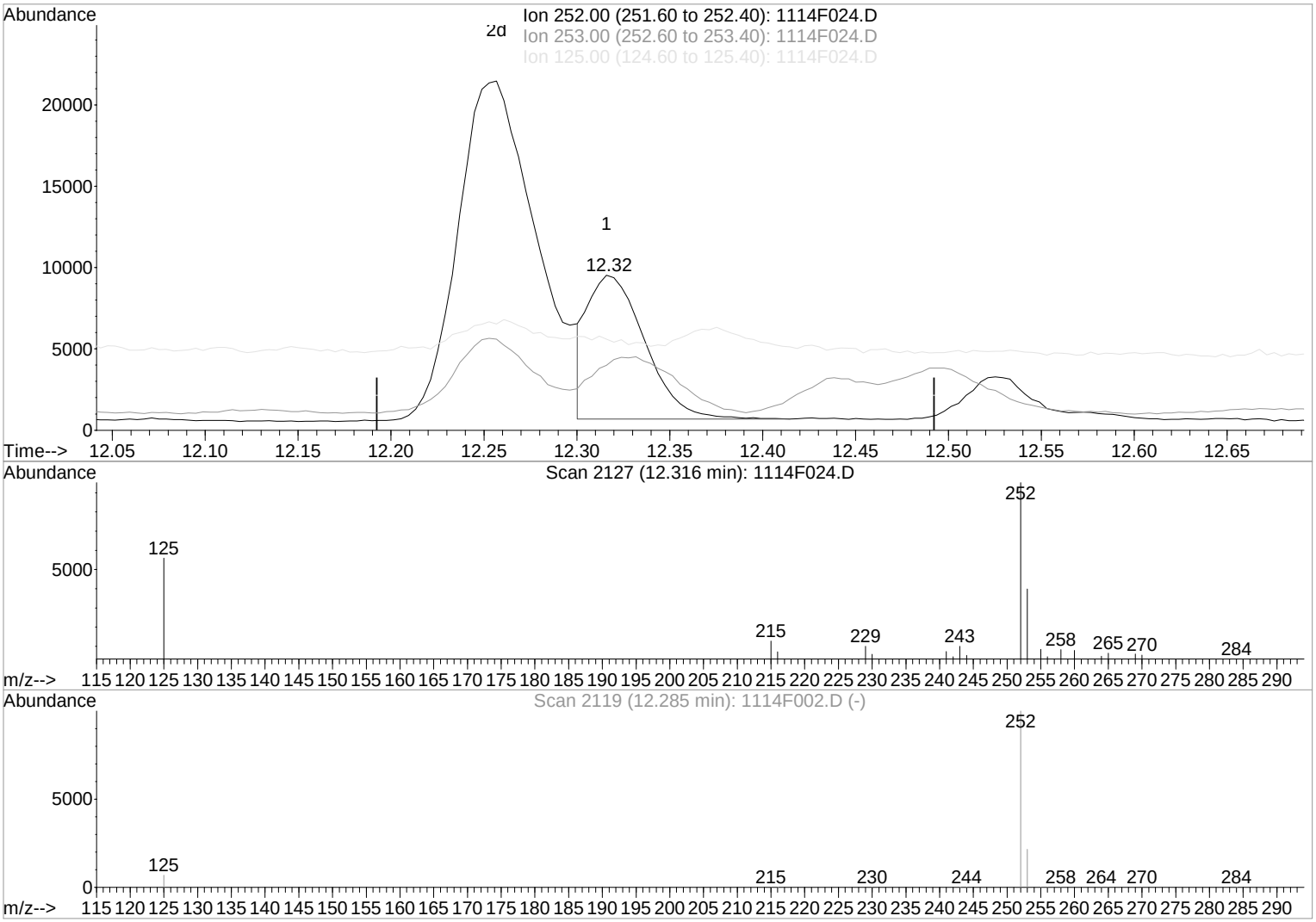
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:23 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F024.D

(30) Benzo(k)fluoranthene (T)

12.32min 37.18ng/ml

response 19011

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	23.24
125.00	9.70	5.22
0.00	0.00	0.00

Manual Integration:

Before

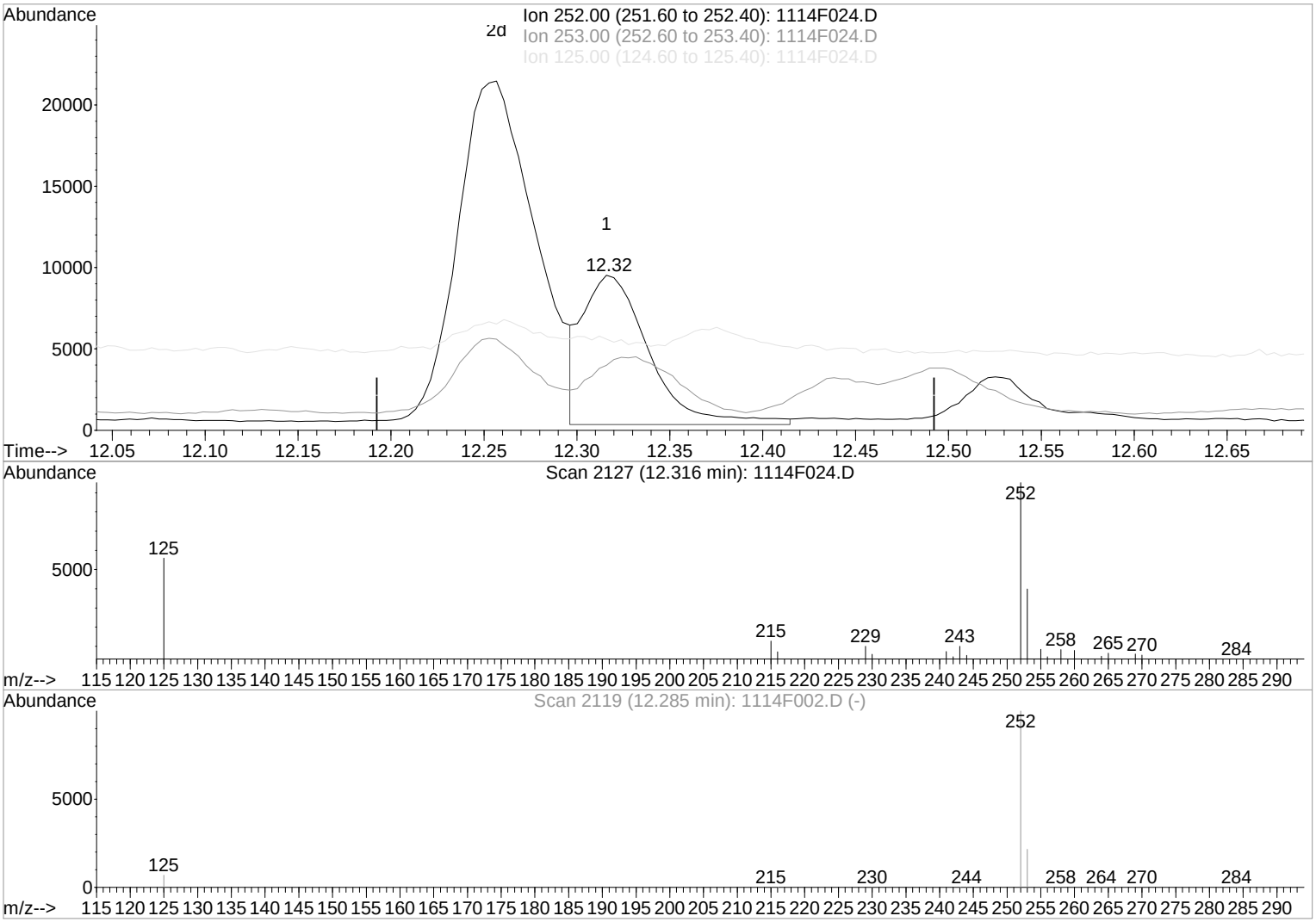
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:23 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F024.D

(30) Benzo(k)fluoranthene (T)

12.32min 44.56ng/ml m

response 22790

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	41.83
125.00	9.70	58.65#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

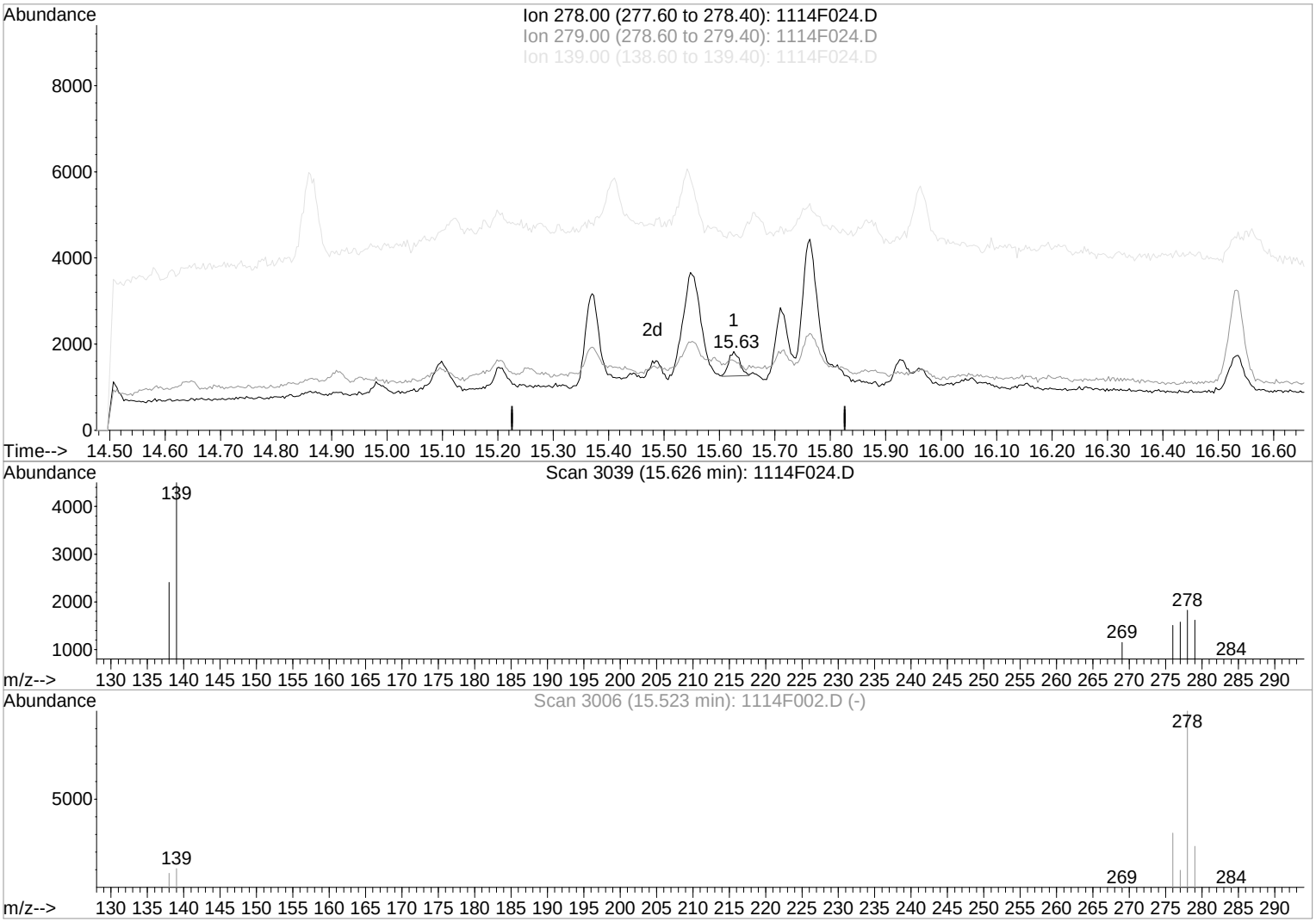
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:23 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F024.D

(35) Dibenz(a,h)anthracene (T)

15.63min 1.75ng/ml

response 786

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	19.46
139.00	15.00	0.00
0.00	0.00	0.00

Manual Integration:

Before

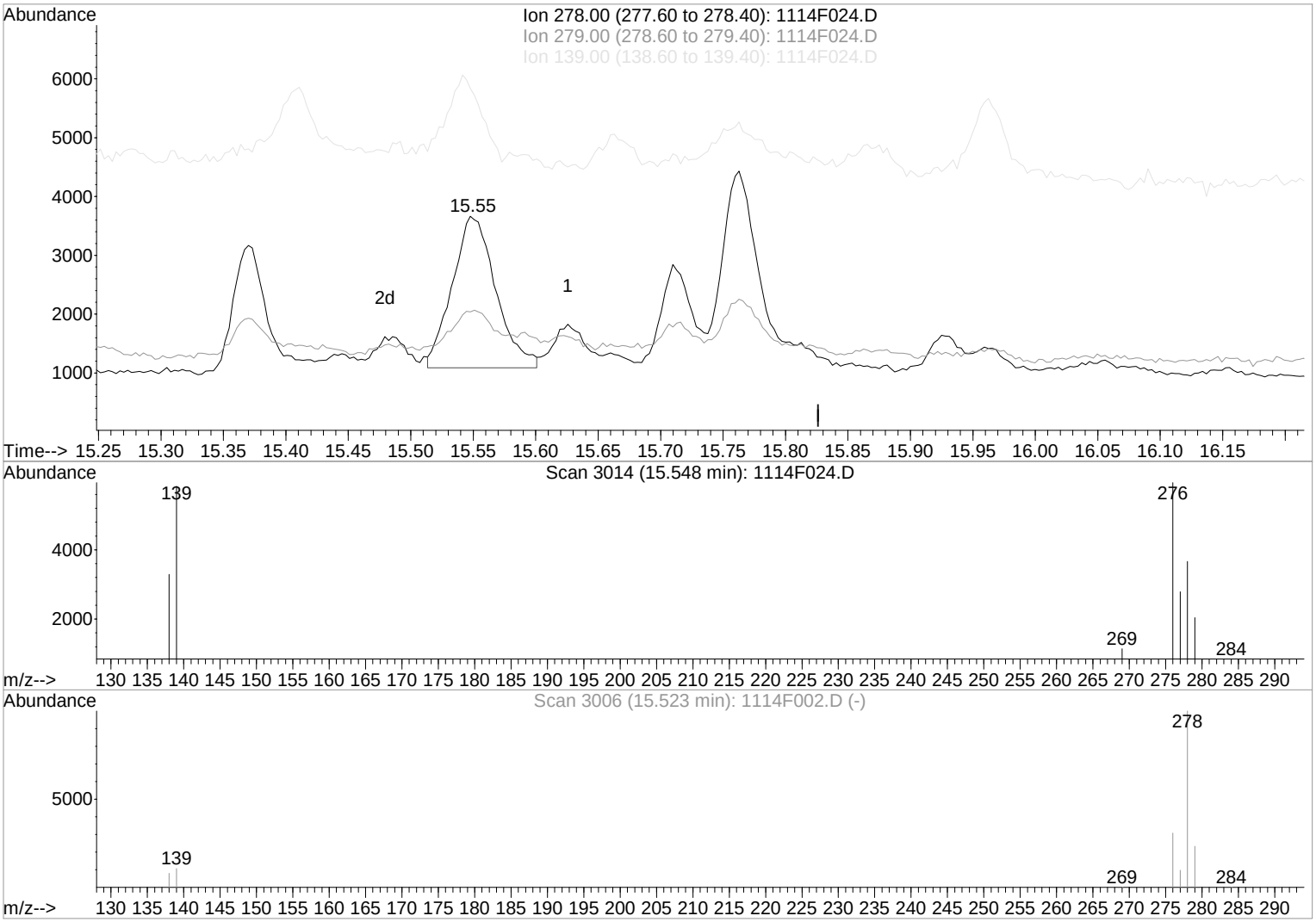
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F024.D Vial: 24
Acq On : 14 Nov 2018 3:43 pm Operator: LWeiskopf
Sample : K1810430-005DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:23 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F024.D

(35) Dibenz(a,h)anthracene (T)

15.55min 13.88ng/ml m

response 6237

Ion	Exp%	Act%
278.00	100	100
279.00	23.50	55.61#
139.00	15.00	159.21#
0.00	0.00	0.00

Manual Integration:

After

WP

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F018.D
Lab ID: K1810430-006
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 13:05
Date Quantitated: 11/30/2018 13:17
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F018.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 13:05	**Quant Date:**	11/30/2018 13:17	**Vial:**	18
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-006			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702218	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	53727	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	31129	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	67994	200.00	OK
4	Chrysene-d12	10.11	0.01	240	69568	200.00	OK
5	Perylene-d12	13.33	0.04	264	76977	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	35481	178.26	89	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	78815	183.92	92	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	67963	225.23	113	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	3787	12.21	11	D	
1	2-Methylnaphthalene	5.41		0.00	142	1162	6.21	5.6	JD	
2	Acenaphthylene	6.20	0.01	0.00	152	5721	15.40	14	D	
2	Acenaphthene	6.34		0.00	154	1758	8.24	7.4	D	
2	Dibenzofuran	6.49		0.00	168	3687	10.77	9.7	D	
2	Fluorene	6.77		0.00	166	4633	17.95	16	D	
3	Phenanthrene	7.57		0.00	178	36344	85.68	77	D	
3	Anthracene	7.62	0.01	0.00	178	11808	29.16	26	D	
3	Fluoranthene	8.56	0.01	0.00	202	169525	323.67	290	D	
4	Pyrene	8.75		0.00	202	166863	349.60	320	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	50896	113.16	100	D	
4	Chrysene	10.15	0.01	0.00	228	68195**m**	158.29	140	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F018.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 13:05	**Quant Date:**	11/30/2018 13:17	**Vial:**	18
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-006			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	108431	228.00	210	D	
5	Benzo(k)fluoranthene	12.31	0.03	0.00	252	38218**m**	81.01	73	D	
5	Benzo(a)pyrene	13.17	0.05	0.00	252	50478	121.03	110	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	43739	106.95	97	D	
5	Dibenz(a,h)anthracene	15.55	0.03	0.00	278	9774	23.58	21	D	
5	Benzo(g,h,i)perylene	15.92	0.04	0.00	276	56993	119.00	110	D	

Prep Amount:	40.009 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	27.7 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

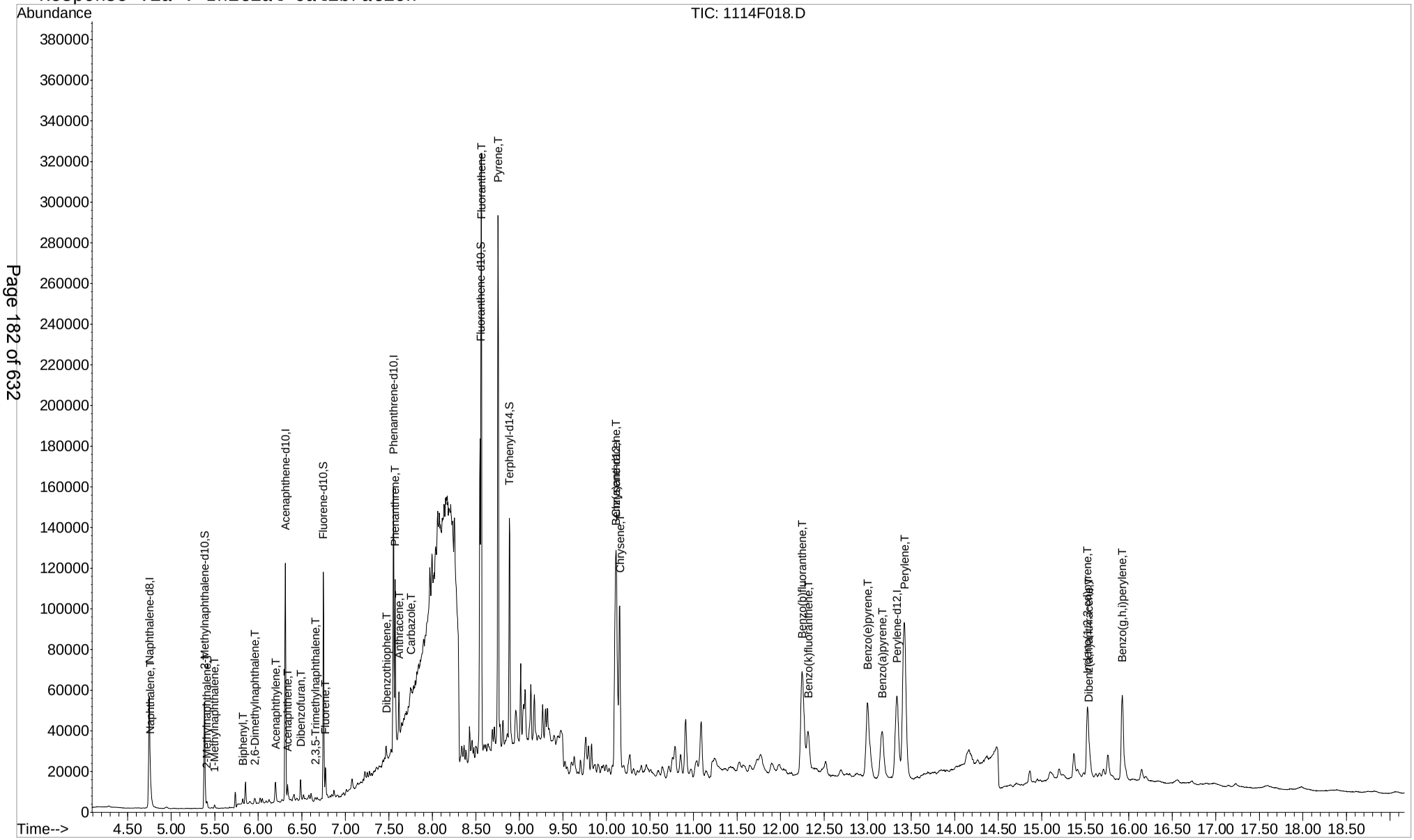
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

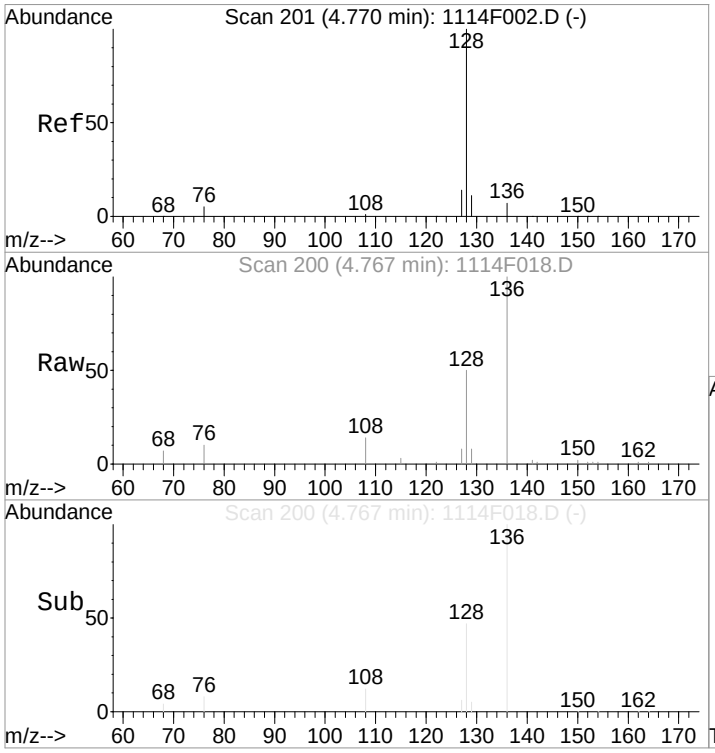
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F018.D Vial: 18
Acq On : 14 Nov 2018 1:05 pm Operator: LWeiskopf
Sample : K1810430-006DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:17 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



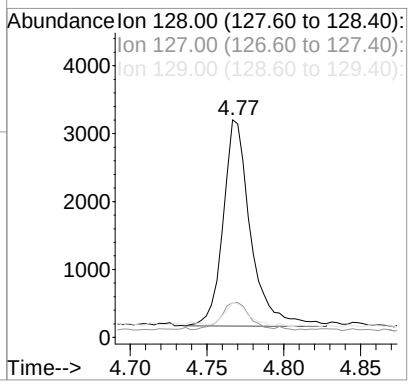
1st 12/03/18
2nd 12/06/18

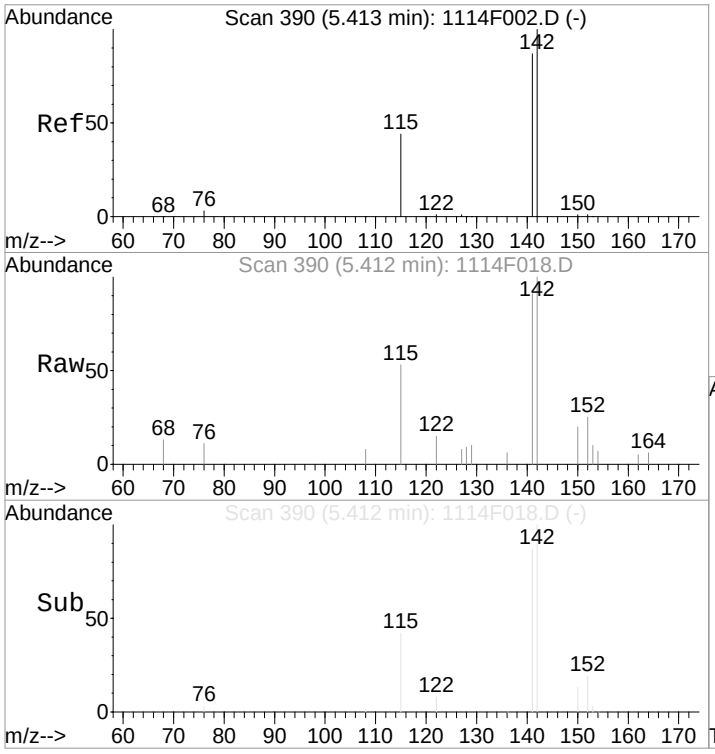


#2
Naphthalene
Concen: 12.21 ng/ml
RT: 4.77 min Scan# 200
Delta R.T. -0.01 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:128 Resp: 3787

Ion	Ratio	Lower	Upper
128	100		
127	12.6	0.0	43.7
129	10.8	0.0	30.8

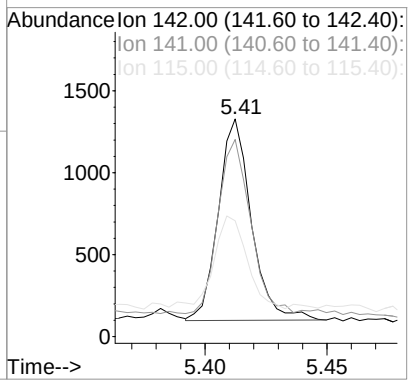




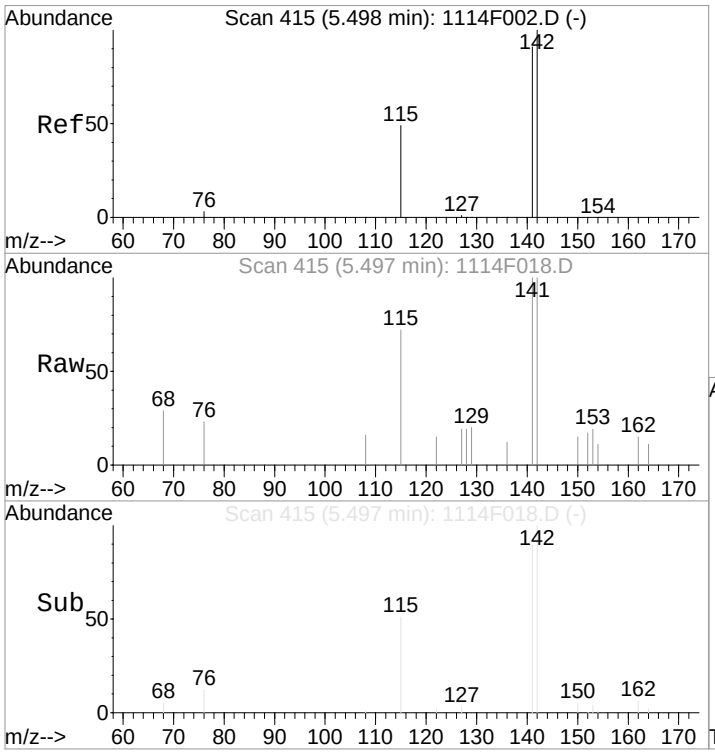
#4
2-Methylnaphthalene
Concen: 6.21 ng/ml
RT: 5.41 min Scan# 390
Delta R.T. -0.01 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:142 Resp: 1162

Ion	Ratio	Lower	Upper
142	100		
141	86.5	56.8	116.8
115	42.0	13.3	53.3



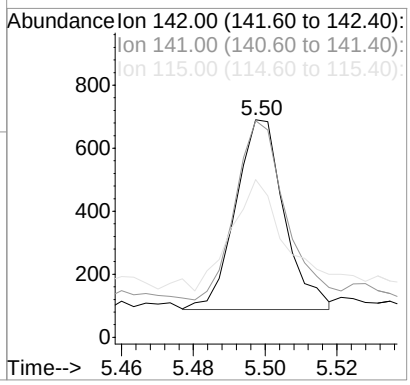
1st 12/03/18
2nd 12/06/18

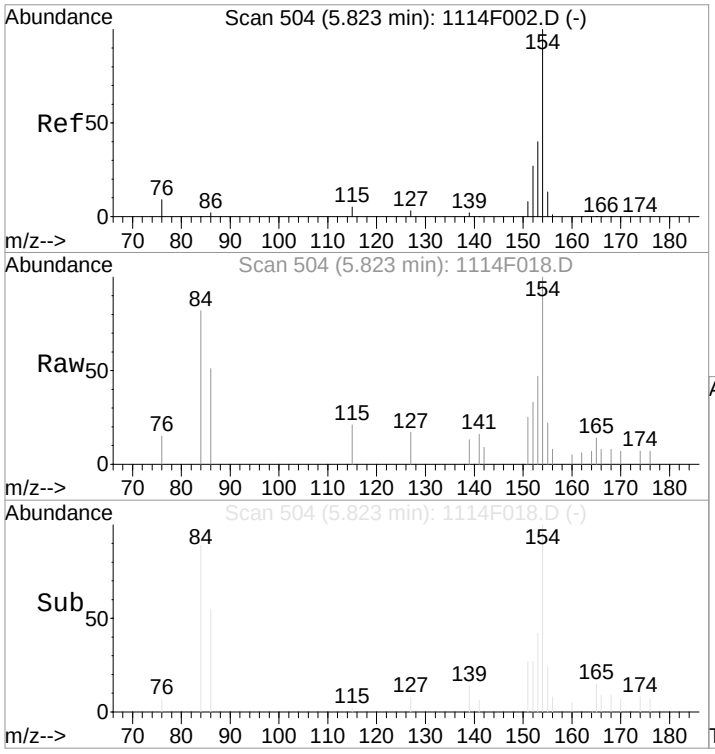


#5
1-Methylnaphthalene
Concen: 3.16 ng/ml m
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:142 Resp: 569

Ion	Ratio	Lower	Upper
142	100		
141	99.6	59.7	119.7
115	72.5	13.7	53.7#

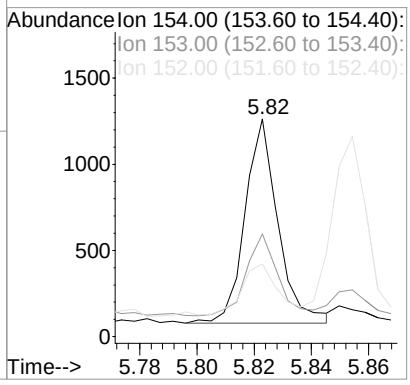


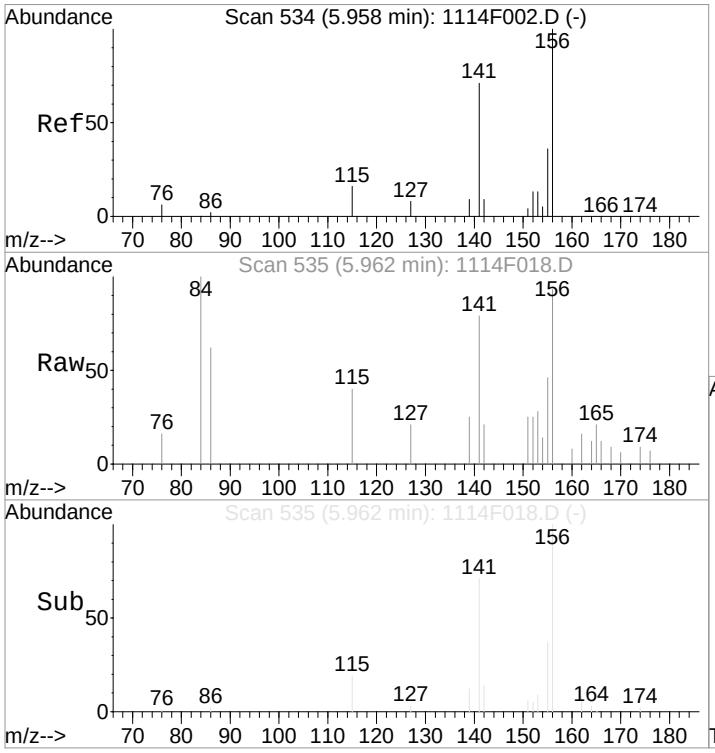


#6
Biphenyl
Concen: 4.07 ng/ml
RT: 5.82 min Scan# 504
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:154 Resp: 951

Ion	Ratio	Lower	Upper
154	100		
153	40.1	11.4	71.4
152	23.6	7.1	47.1

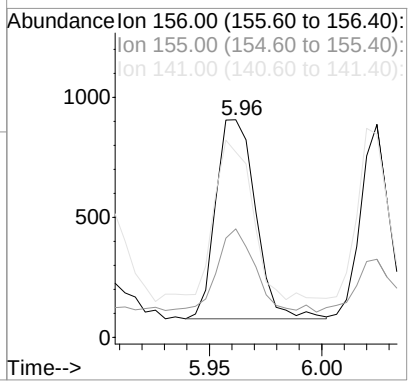


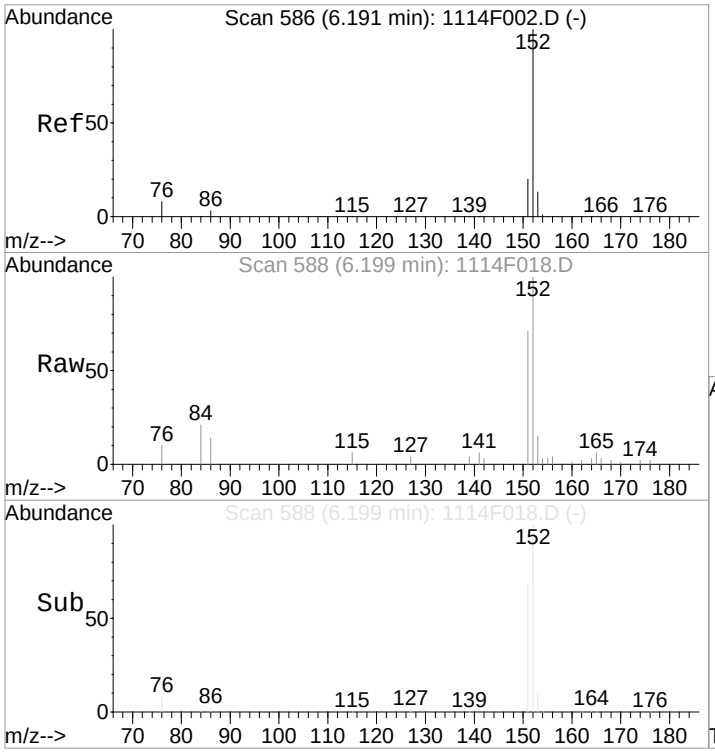


#7
2,6-Dimethylnaphthalene
Concen: 6.35 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:156 Resp: 1019

Ion	Ratio	Lower	Upper
156	100		
155	39.9	7.0	67.0
141	73.6	47.9	87.9

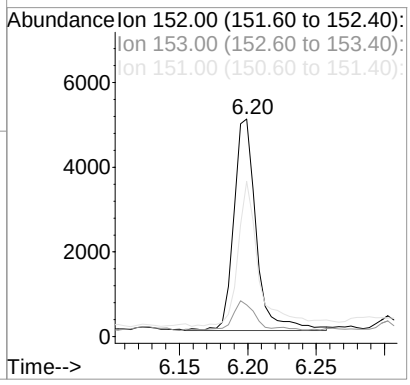


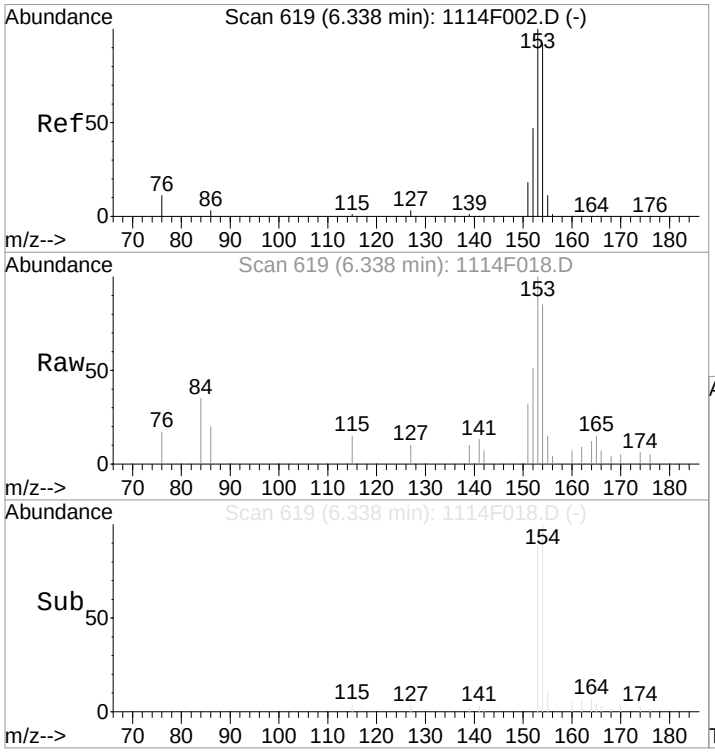


#9
Acenaphthylene
Concen: 15.40 ng/ml
RT: 6.20 min Scan# 588
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:152 Resp: 5721

Ion	Ratio	Lower	Upper
152	100		
153	11.4	0.0	42.9
151	67.3	0.2	40.2#

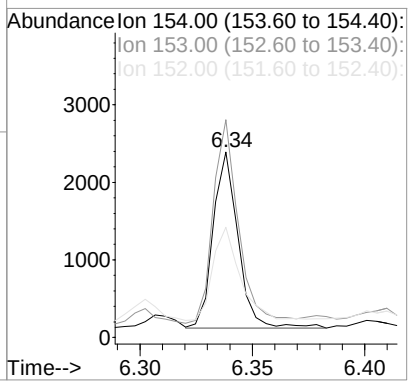


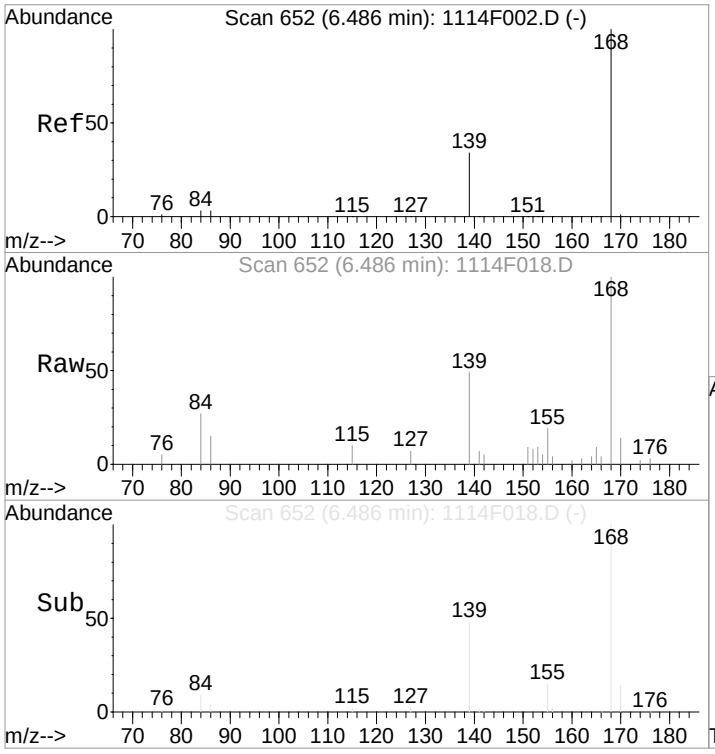


#10
Acenaphthene
Concen: 8.24 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:154 Resp: 1758

Ion	Ratio	Lower	Upper
154	100		
153	115.6	77.1	137.1
152	53.0	19.7	79.7

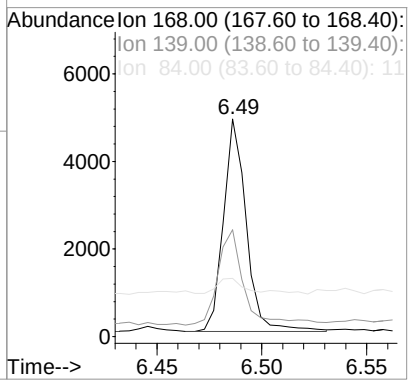




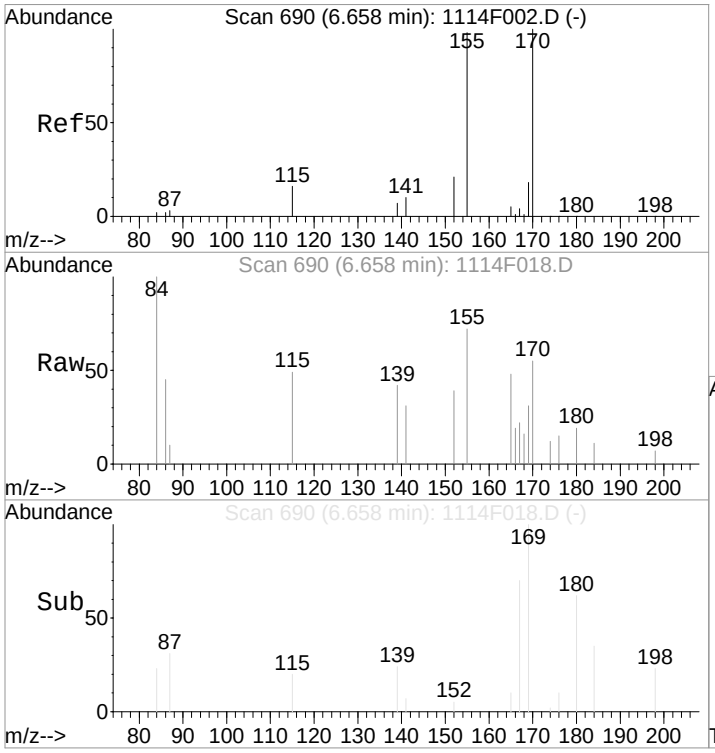
#11
Dibenzofuran
Concen: 10.77 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:168 Resp: 3687

Ion	Ratio	Lower	Upper
168	100		
139	45.0	0.0	55.8
84	6.0	0.0	23.5



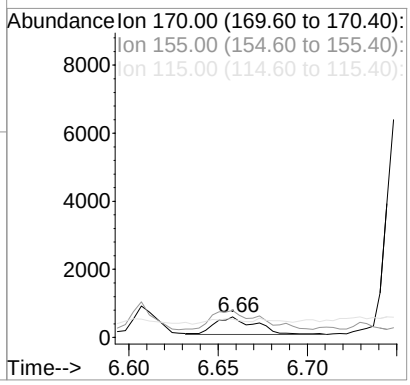
1st 12/03/18
2nd 12/06/18

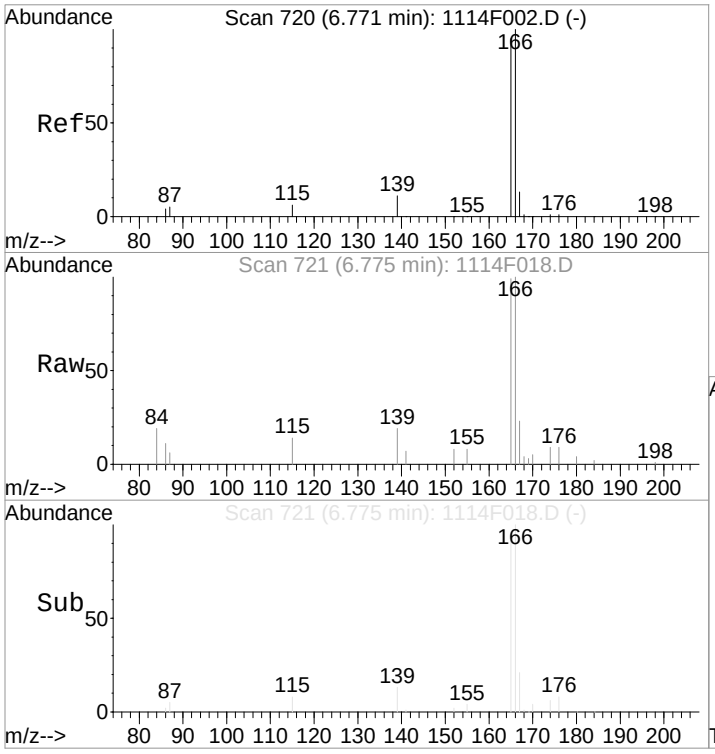


#12
2,3,5-Trimethylnaphthalene
Concen: 4.13 ng/ml
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:170 Resp: 816

Ion	Ratio	Lower	Upper
170	100		
155	104.2	59.2	119.2
115	17.6	0.0	30.1

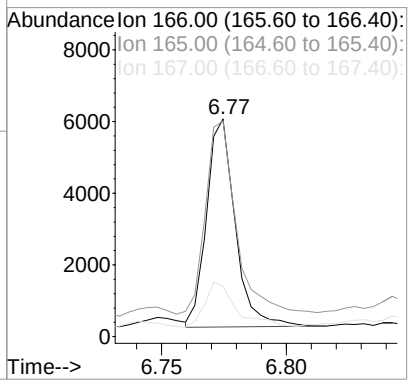




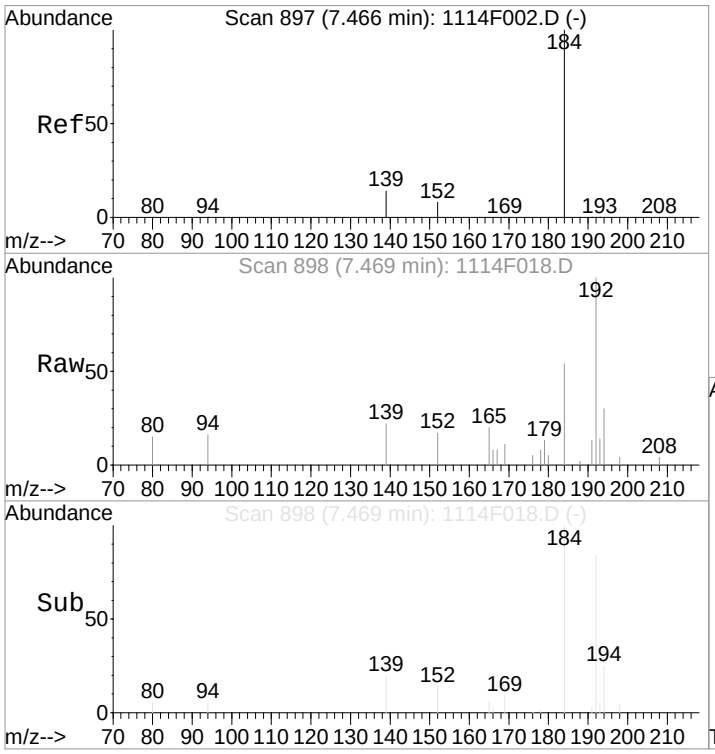
#14
Fluorene
Concen: 17.95 ng/ml
RT: 6.77 min Scan# 721
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:166 Resp: 4633

Ion	Ratio	Lower	Upper
166	100		
165	92.2	63.4	123.4
167	19.9	0.0	33.1



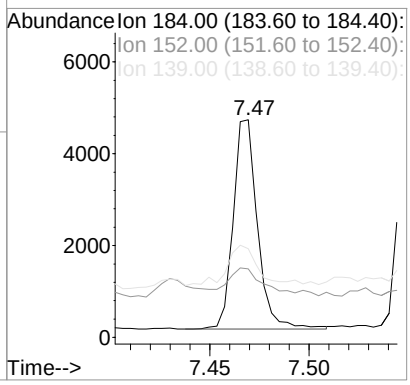
1st 12/03/18
2nd 12/06/18

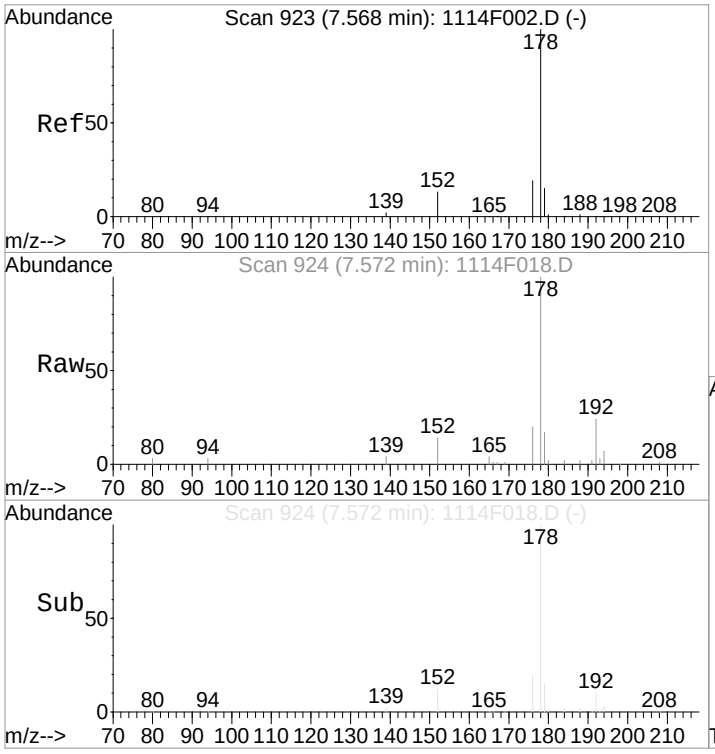


#16
Dibenzothiophene
Concen: 9.15 ng/ml
RT: 7.47 min Scan# 898
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:184 Resp: 3880

Ion	Ratio	Lower	Upper
184	100		
152	11.2	0.0	37.8
139	17.7	0.0	32.6

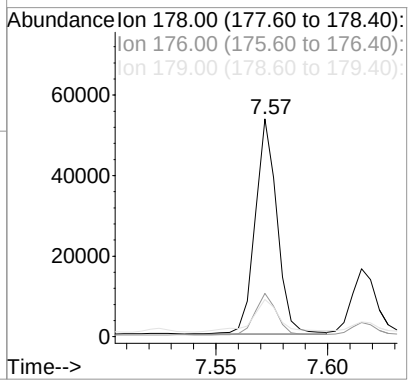


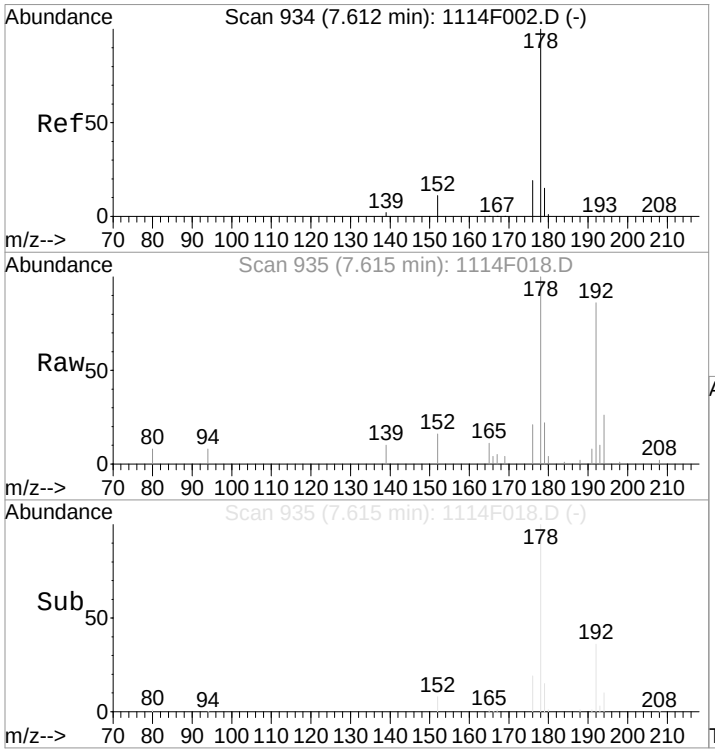


#17
Phenanthrene
Concen: 85.68 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:178 Resp: 36344

Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	48.7
179	15.0	0.0	35.1

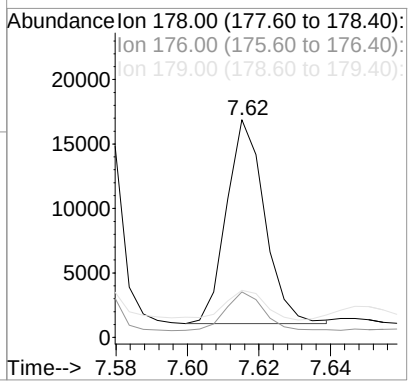


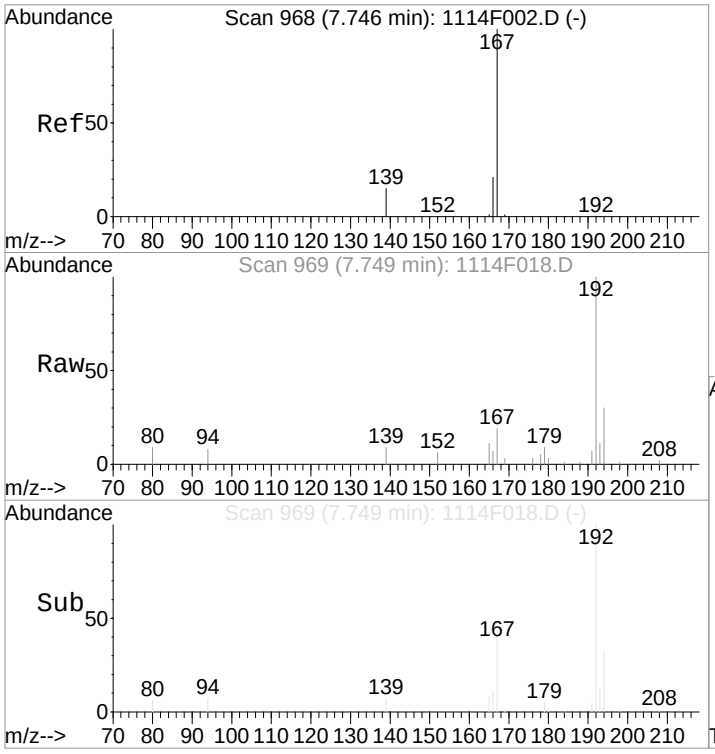


#18
Anthracene
Concen: 29.16 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:178 Resp: 11808

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.0
179	13.2	0.0	35.1

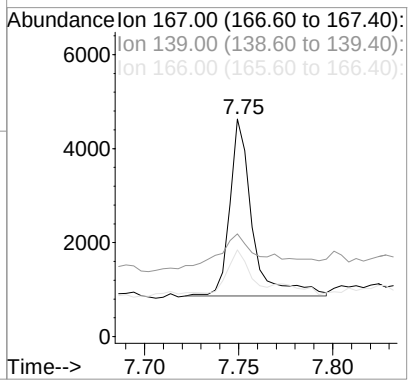


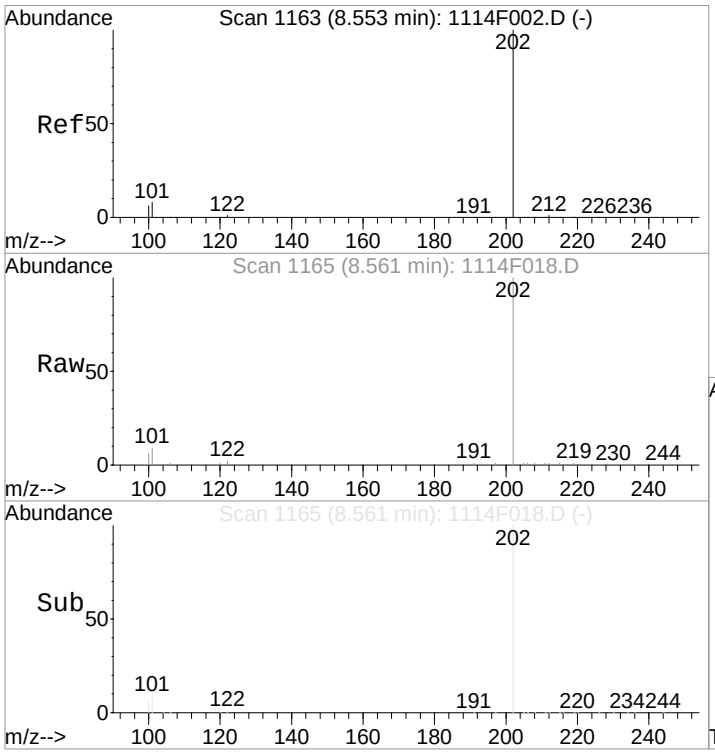


#19
Carbazole
Concen: 8.01 ng/ml
RT: 7.75 min Scan# 969
Delta R.T. -0.01 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:167 Resp: 3166

Ion	Ratio	Lower	Upper
167	100		
139	18.0	0.0	41.5
166	24.2	0.7	40.7

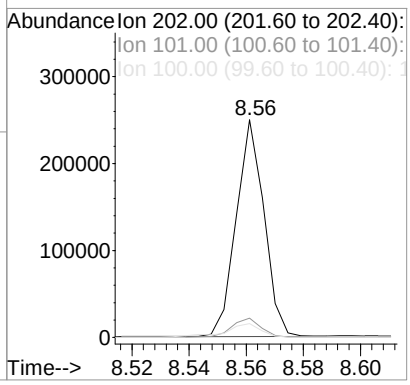


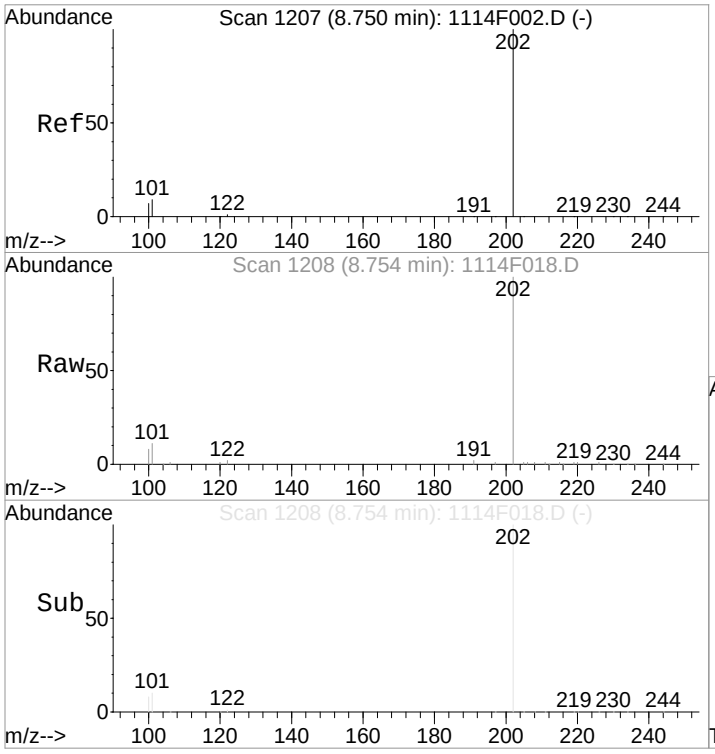


#21
Fluoranthene
Concen: 323.67 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:202 Resp: 169525

Ion	Ratio	Lower	Upper
202	100		
101	8.7	0.0	41.3
100	6.2	0.0	28.6

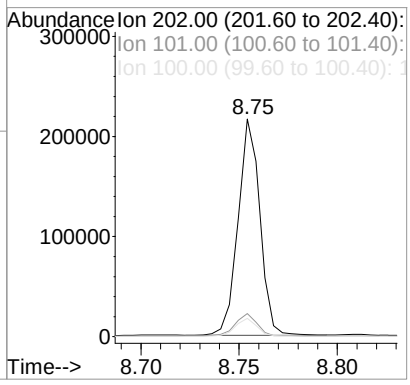




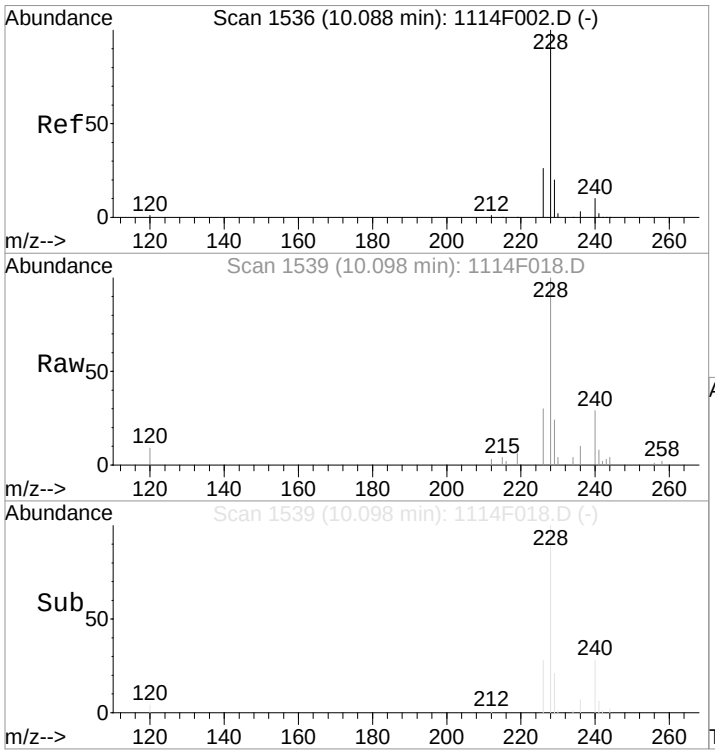
#24
Pyrene
Concen: 349.60 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:202 Resp: 166863

Ion	Ratio	Lower	Upper
202	100		
101	10.5	0.0	40.8
100	8.3	0.0	28.5



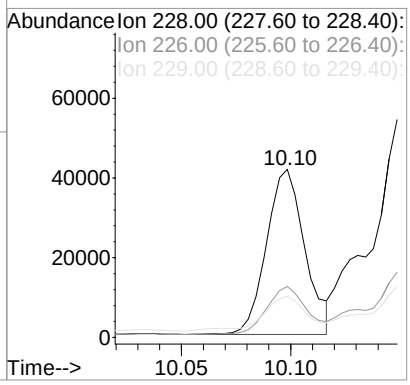
1st 12/03/18
2nd 12/06/18

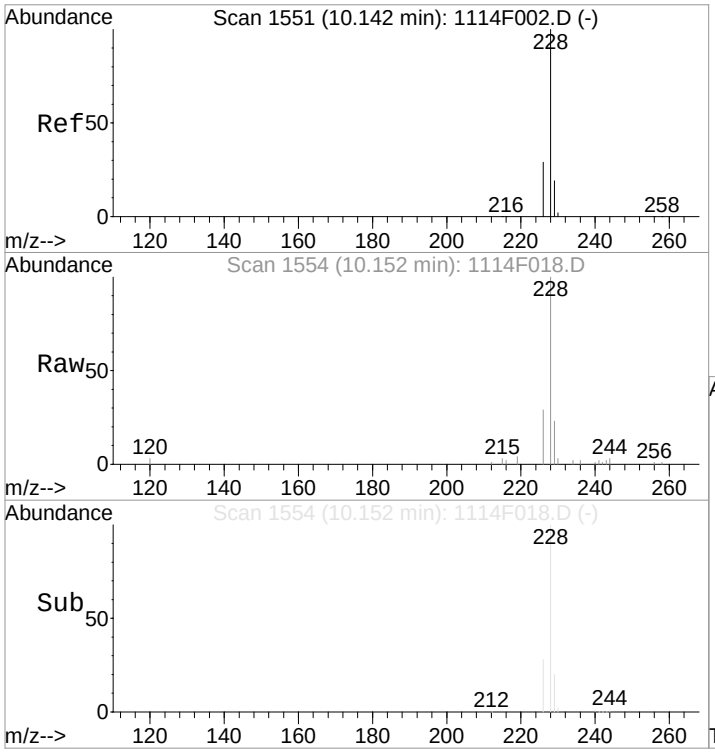


#26
Benz(a)anthracene
Concen: 113.16 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:228 Resp: 50896

Ion	Ratio	Lower	Upper
228	100		
226	29.0	0.0	56.3
229	21.1	0.0	39.1

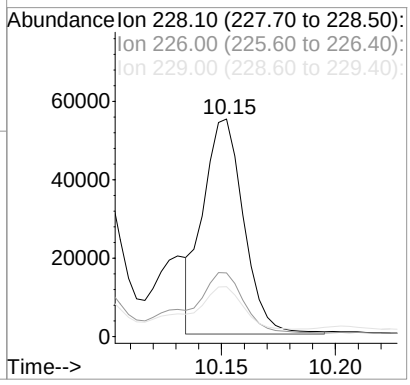




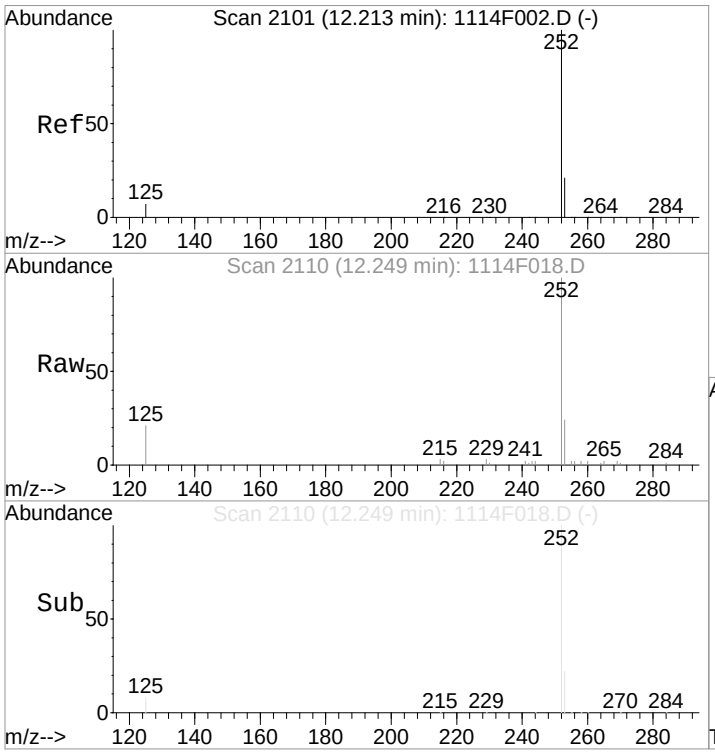
#27
Chrysene
Concen: 158.29 ng/ml m
RT: 10.15 min Scan# 1554
Delta R.T. -0.00 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:228 Resp: 68195

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.7
229	22.9	0.0	39.2



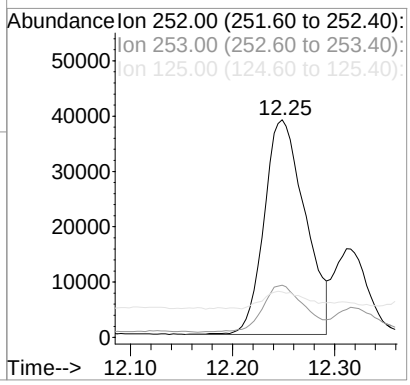
1st 12/03/18
2nd 12/06/18

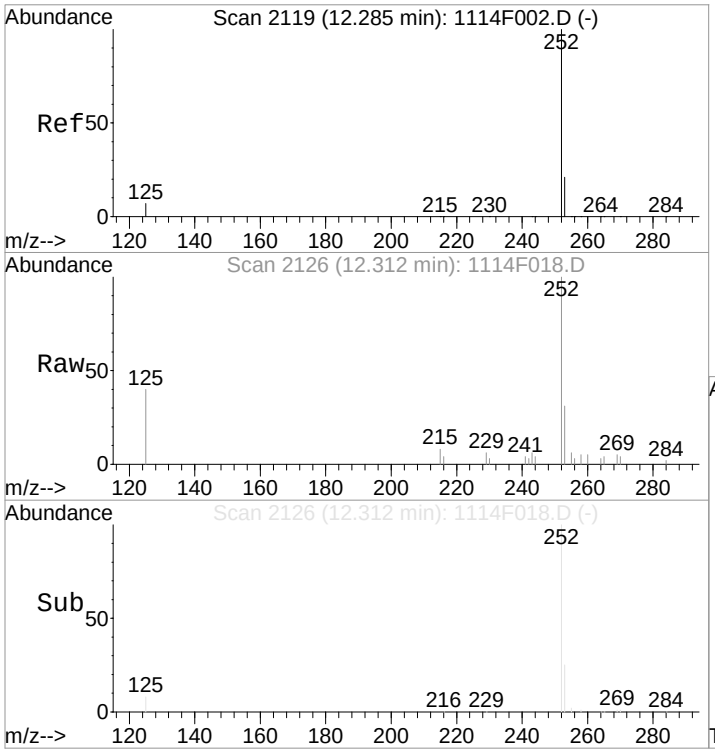


#29
Benzo(b)fluoranthene
Concen: 228.00 ng/ml
RT: 12.25 min Scan# 2110
Delta R.T. 0.02 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:252 Resp: 108431

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.2
125	7.5	0.0	29.5

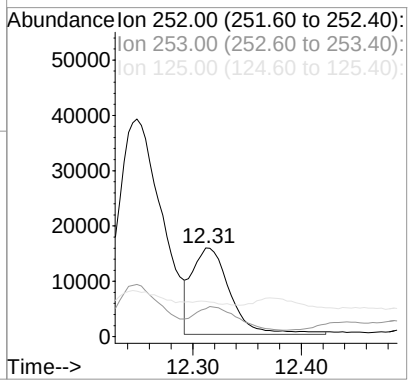




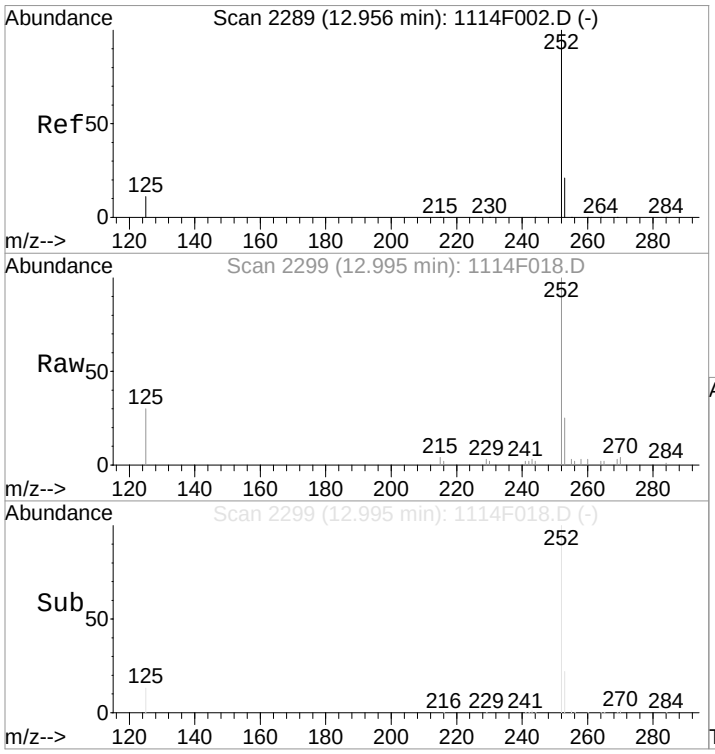
#30
Benzo(k)fluoranthene
Concen: 81.01 ng/ml m
RT: 12.31 min Scan# 2126
Delta R.T. 0.02 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:252 Resp: 38218

Ion	Ratio	Lower	Upper
252	100		
253	31.4	0.0	51.2
125	39.7	0.0	29.7#



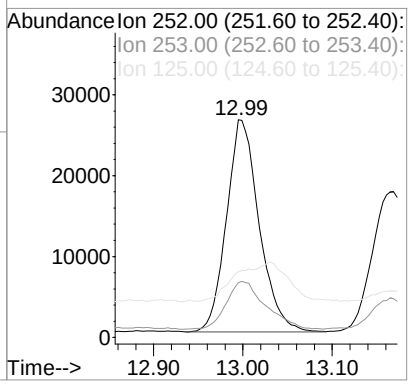
1st 12/03/18
2nd 12/06/18

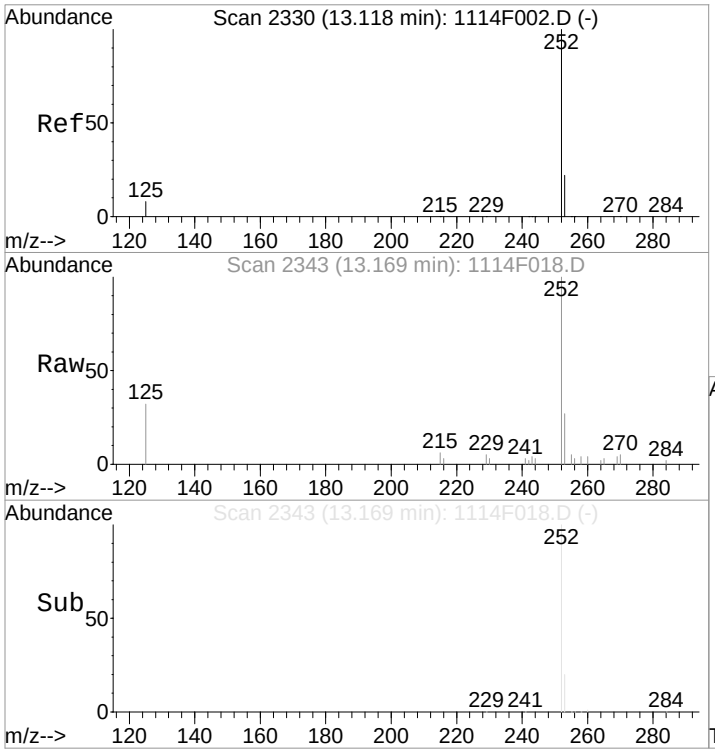


#31
Benzo(e)pyrene
Concen: 147.77 ng/ml
RT: 12.99 min Scan# 2299
Delta R.T. 0.03 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:252 Resp: 66986

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.3
125	13.8	0.0	33.5

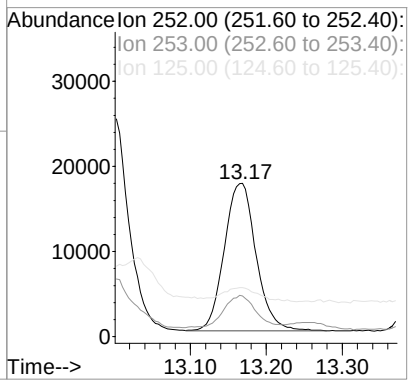




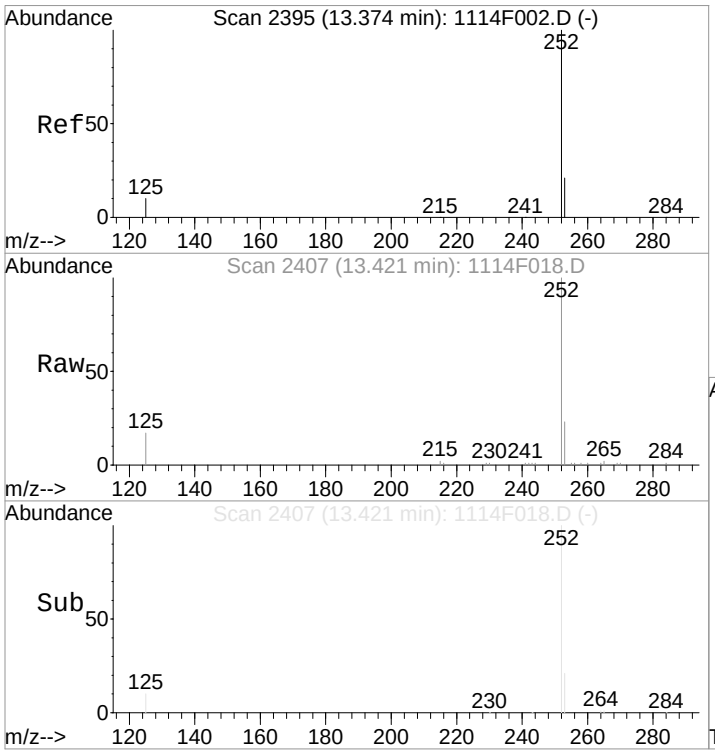
#32
Benzo(a)pyrene
Concen: 121.03 ng/ml
RT: 13.17 min Scan# 2343
Delta R.T. 0.04 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:252 Resp: 50478

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	50.9
125	9.2	0.0	30.3



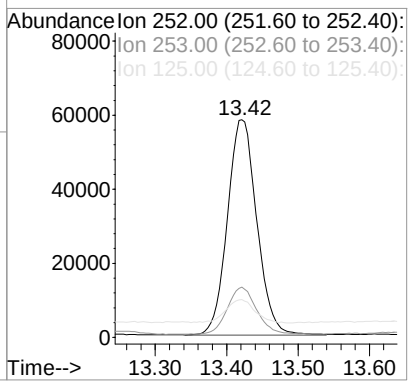
1st 12/03/18
2nd 12/06/18

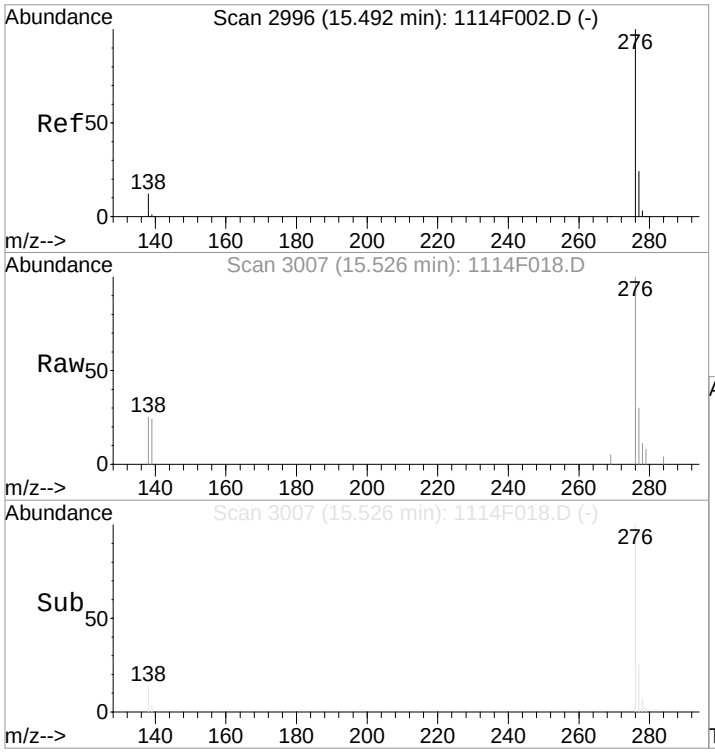


#33
Perylene
Concen: 380.69 ng/ml
RT: 13.42 min Scan# 2407
Delta R.T. 0.04 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:252 Resp: 166555

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.2
125	10.5	0.0	33.8

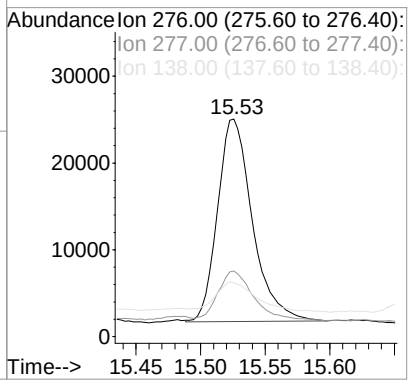




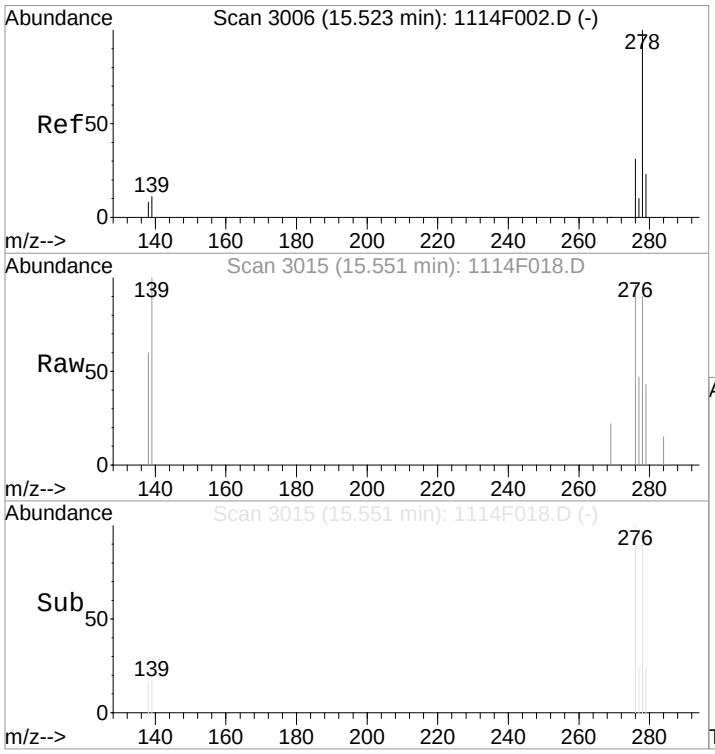
#34
Indeno(1,2,3-cd)pyrene
Concen: 106.95 ng/ml
RT: 15.53 min Scan# 3007
Delta R.T. 0.04 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:276 Resp: 43739

Ion	Ratio	Lower	Upper
276	100		
277	24.7	0.0	53.4
138	14.4	0.0	37.7



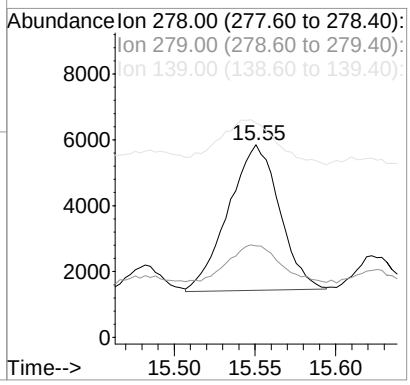
1st 12/03/18
2nd 12/06/18

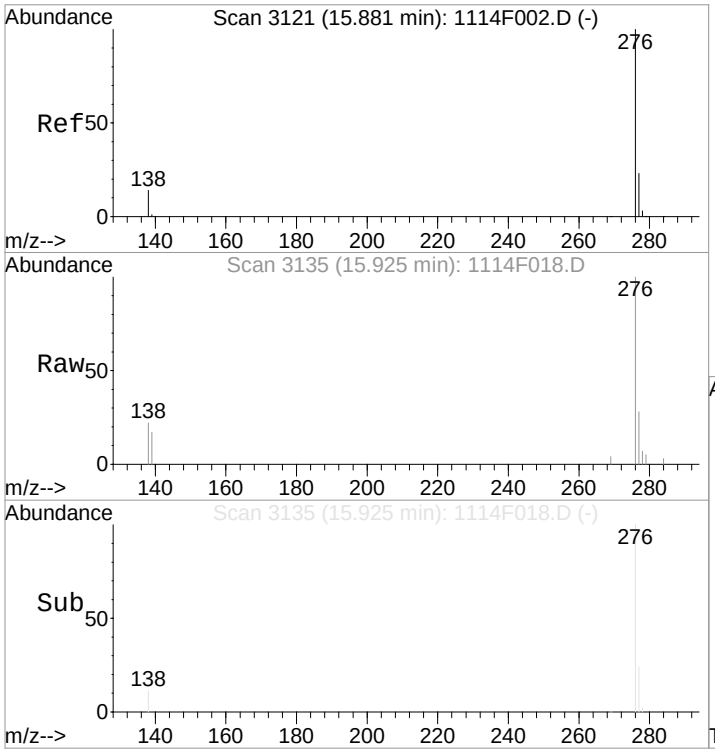


#35
Dibenz(a,h)anthracene
Concen: 23.58 ng/ml
RT: 15.55 min Scan# 3015
Delta R.T. 0.02 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:278 Resp: 9774

Ion	Ratio	Lower	Upper
278	100		
279	25.3	0.0	53.5
139	29.0	0.0	35.0

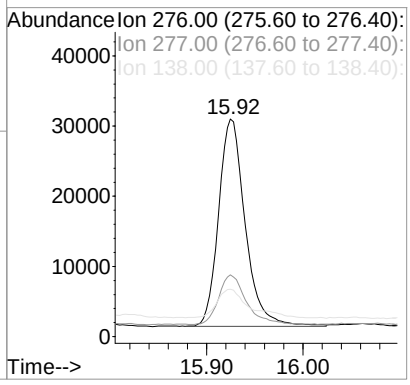




#36
Benzo(g,h,i)perylene
Concen: 119.00 ng/ml
RT: 15.92 min Scan# 3135
Delta R.T. 0.04 min
Lab File: 1114F018.D
Acq: 14 Nov 2018 1:05 pm

Tgt Ion:276 Resp: 56993

Ion	Ratio	Lower	Upper
276	100		
277	23.8	0.0	53.1
138	14.0	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F018.D Vial: 18
Acq On : 14 Nov 2018 1:05 pm Operator: LWeiskopf
Sample : K1810430-006DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:12 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	53727	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	31129	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	67994	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	69568	200.00	ng/ml	0.00
28) Perylene-d12	13.33	264	76977	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	17184	114.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	11.46%		
13) Fluorene-d10	6.75	176	35481	178.26	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	17.83%		
22) Fluoranthene-d10	8.55	212	78815	183.92	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	18.39%		
25) Terphenyl-d14	8.89	244	67963	225.23	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	22.52%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	3787	12.21	ng/ml	98
4) 2-Methylnaphthalene	5.41	142	1162	6.21	ng/ml	96
5) 1-Methylnaphthalene	5.50	142	569m	3.16	ng/ml	
6) Biphenyl	5.82	154	951	4.07	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.96	156	1019	6.35	ng/ml	94
9) Acenaphthylene	6.20	152	5721	15.40	ng/ml#	36
10) Acenaphthene	6.34	154	1758	8.24	ng/ml	93
11) Dibenzofuran	6.49	168	3687	10.77	ng/ml	66
12) 2,3,5-Trimethylnaphthalene	6.66	170	816	4.13	ng/ml	84
14) Fluorene	6.77	166	4633	17.95	ng/ml	97
16) Dibenzothiophene	7.47	184	3880	9.15	ng/ml	88
17) Phenanthrene	7.57	178	36344	85.68	ng/ml	99
18) Anthracene	7.62	178	11808	29.16	ng/ml	97
19) Carbazole	7.75	167	3166	8.01	ng/ml	89
21) Fluoranthene	8.56	202	169525	323.67	ng/ml	93
24) Pyrene	8.75	202	166863	349.60	ng/ml	99
26) Benz(a)anthracene	10.10	228	50896	113.16	ng/ml	95
27) Chrysene	10.15	228	68195m	158.29	ng/ml	
29) Benzo(b)fluoranthene	12.25	252	108431	228.00	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	38218m	81.01	ng/ml	
31) Benzo(e)pyrene	12.99	252	66986	147.77	ng/ml	99
32) Benzo(a)pyrene	13.17	252	50478	121.03	ng/ml	98
33) Perylene	13.42	252	166555	380.69	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.53	276	43739	106.95	ng/ml	95
35) Dibenz(a,h)anthracene	15.55	278	9774	23.58	ng/ml	85
36) Benzo(g,h,i)perylene	15.92	276	56993	119.00	ng/ml	94

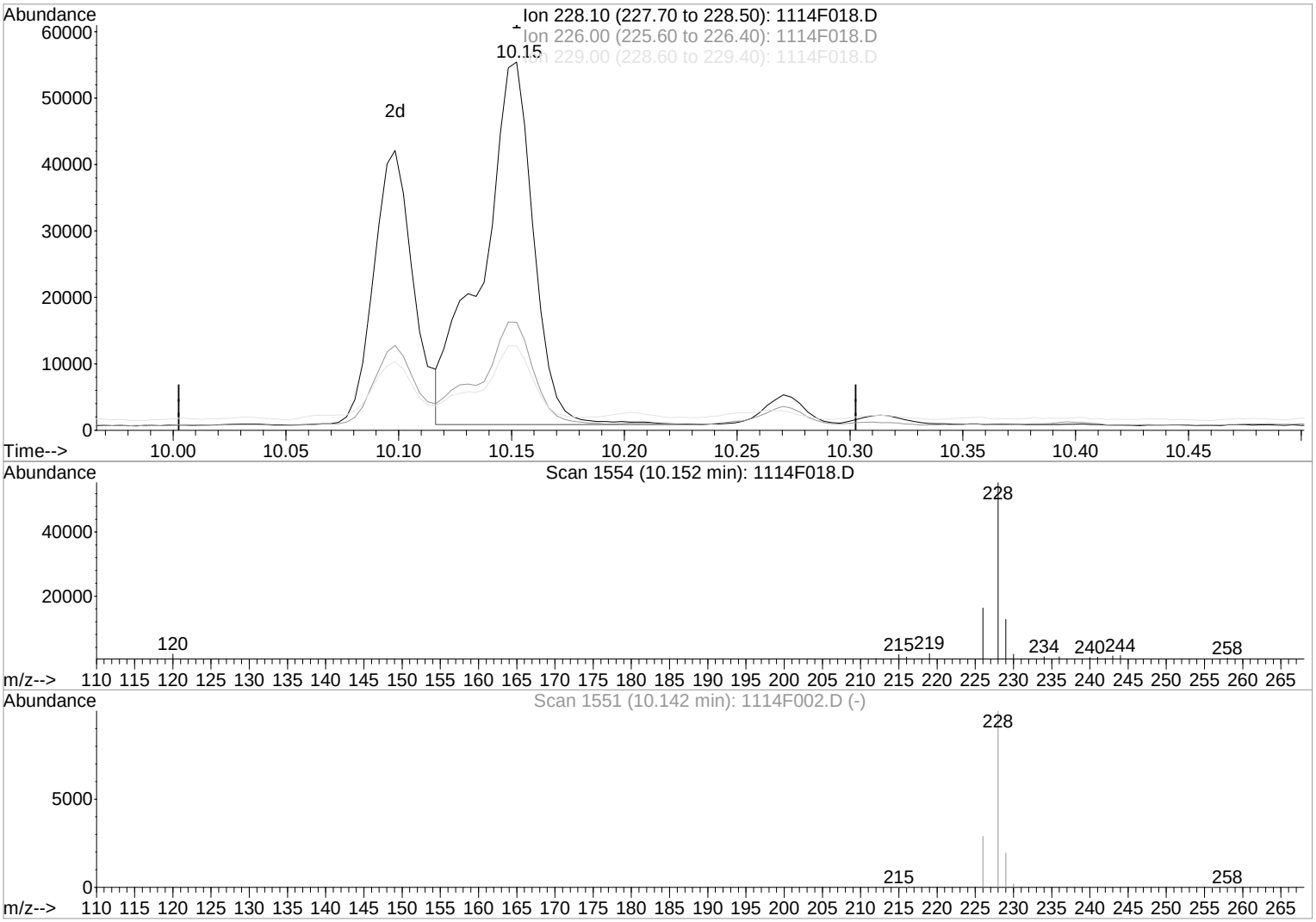
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F018.D Vial: 18
Acq On : 14 Nov 2018 1:05 pm Operator: LWeiskopf
Sample : K1810430-006DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:17 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F018.D

(27) Chrysene (T)

10.15min 200.37ng/ml

response 86324

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	28.08
229.00	19.20	19.76
0.00	0.00	0.00

Manual Integration:

Before

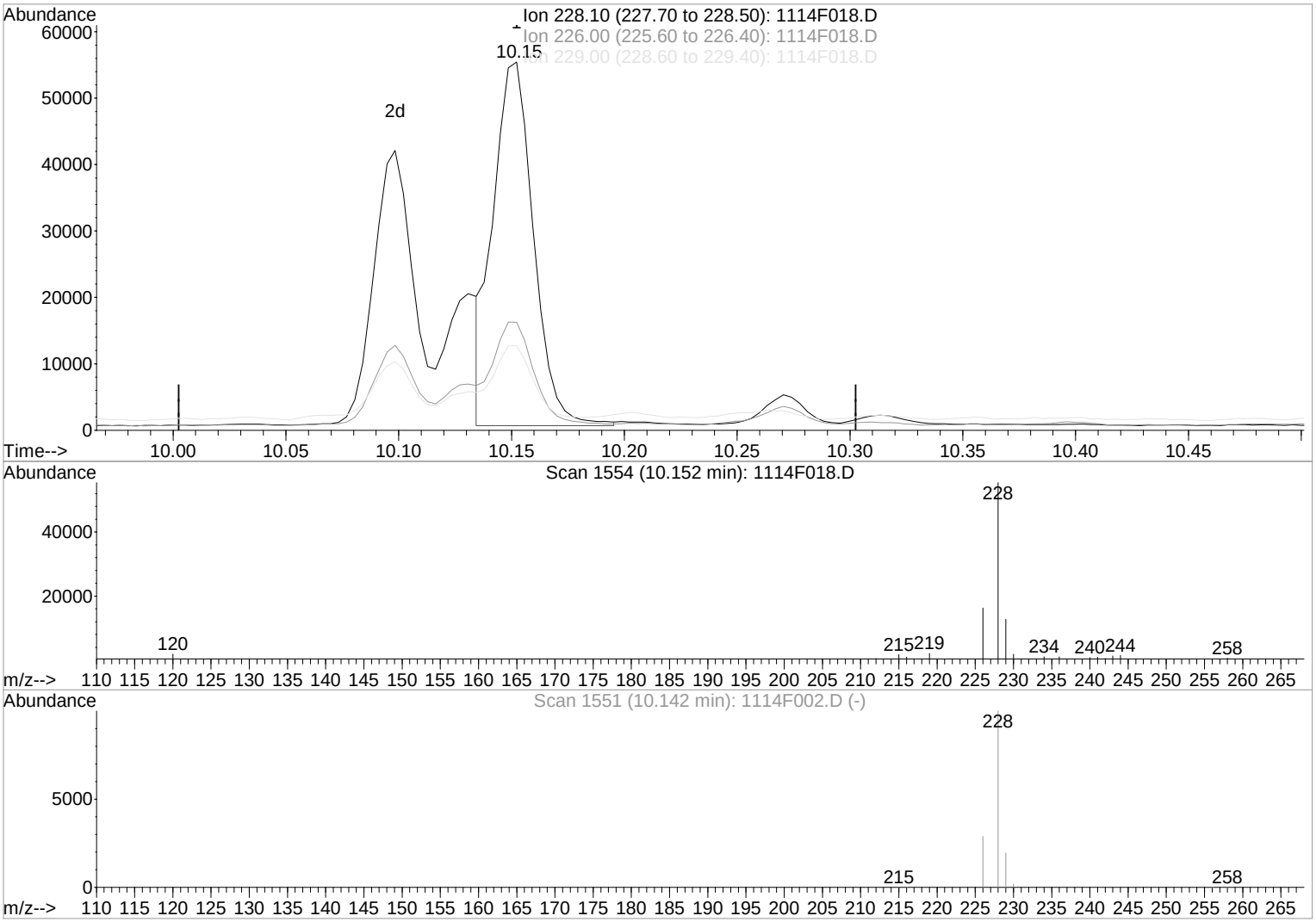
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F018.D Vial: 18
Acq On : 14 Nov 2018 1:05 pm Operator: LWeiskopf
Sample : K1810430-006DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:17 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F018.D

(27) Chrysene (T)

10.15min 158.29ng/ml m

response 68195

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	29.29
229.00	19.20	22.91
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

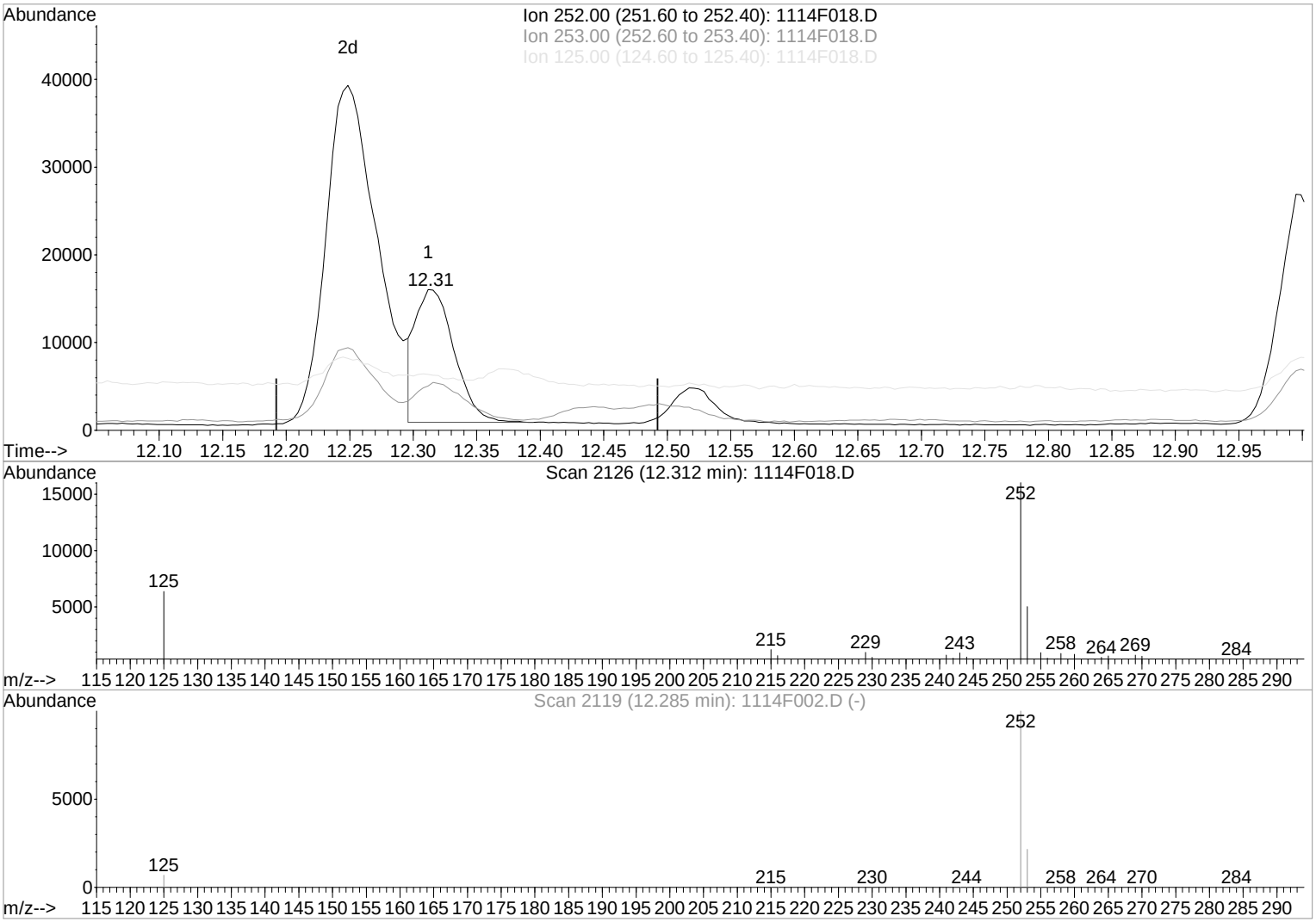
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F018.D Vial: 18
Acq On : 14 Nov 2018 1:05 pm Operator: LWeiskopf
Sample : K1810430-006DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:17 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F018.D

(30) Benzo(k)fluoranthene (T)

12.31min 67.81ng/ml

response 31991

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	24.87
125.00	9.70	1.67
0.00	0.00	0.00

Manual Integration:

Before

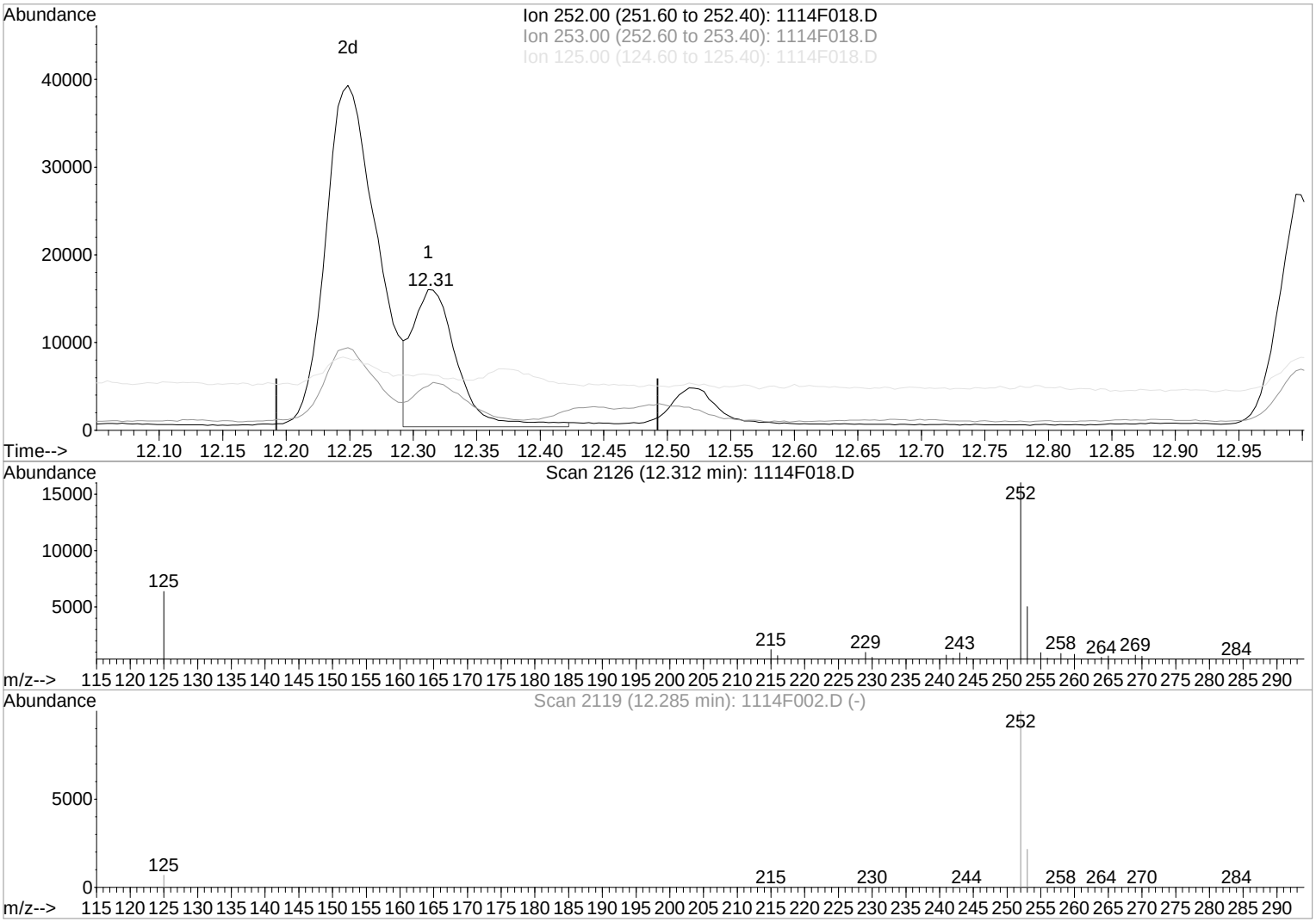
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F018.D Vial: 18
Acq On : 14 Nov 2018 1:05 pm Operator: LWeiskopf
Sample : K1810430-006DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:17 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F018.D

(30) Benzo(k)fluoranthene (T)

12.31min 81.01ng/ml m

response 38218

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	31.38
125.00	9.70	39.73#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F019.D
Lab ID: K1810430-007
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 13:31
Date Quantitated: 11/30/2018 13:18
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F019.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 13:31	**Quant Date:**	11/30/2018 13:18	**Vial:**	19
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-007			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702219	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.74	-0.01	136	54002	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	31799	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	68800	200.00	OK
4	Chrysene-d12	10.11	0.01	240	70481	200.00	OK
5	Perylene-d12	13.33	0.04	264	78229	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	33417	164.35	82	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	67371	155.37	78	23-110	OK	
4	Terphenyl-d14	8.88	0.00	0.00	244	57722	188.82	94	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.76	-0.01	0.00	128	3462	11.11	10	D	
1	2-Methylnaphthalene	5.41		0.00	142	1107	5.89	5.4	JD	
2	Acenaphthylene	6.20	0.01	0.00	152	4880	12.86	12	D	
2	Acenaphthene	6.34		0.00	154	1696	7.78	7.1	D	
2	Dibenzofuran	6.49		0.00	168	3865	11.05	10	D	
2	Fluorene	6.77		0.00	166	4659	17.67	16	D	
3	Phenanthrene	7.57		0.00	178	32640	76.05	70	D	
3	Anthracene	7.62	0.01	0.00	178	11331	27.66	25	D	
3	Fluoranthene	8.56	0.01	0.00	202	154466	291.47	270	D	
4	Pyrene	8.75		0.00	202	155924	322.45	290	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	46652	102.38	94	D	
4	Chrysene	10.15	0.01	0.00	228	79075	181.16	170	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F019.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 13:31	**Quant Date:**	11/30/2018 13:18	**Vial:**	19
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-007			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	100057	207.02	190	D	
5	Benzo(k)fluoranthene	12.31	0.03	0.00	252	33964**m**	70.84	65	D	
5	Benzo(a)pyrene	13.17	0.05	0.00	252	46316	109.27	100	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	40662	97.83	89	D	
5	Dibenz(a,h)anthracene	15.55	0.03	0.00	278	9784	23.22	21	D	
5	Benzo(g,h,i)perylene	15.93	0.05	0.00	276	53855	110.65	100	D	

Prep Amount:	40.052 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	27.3 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

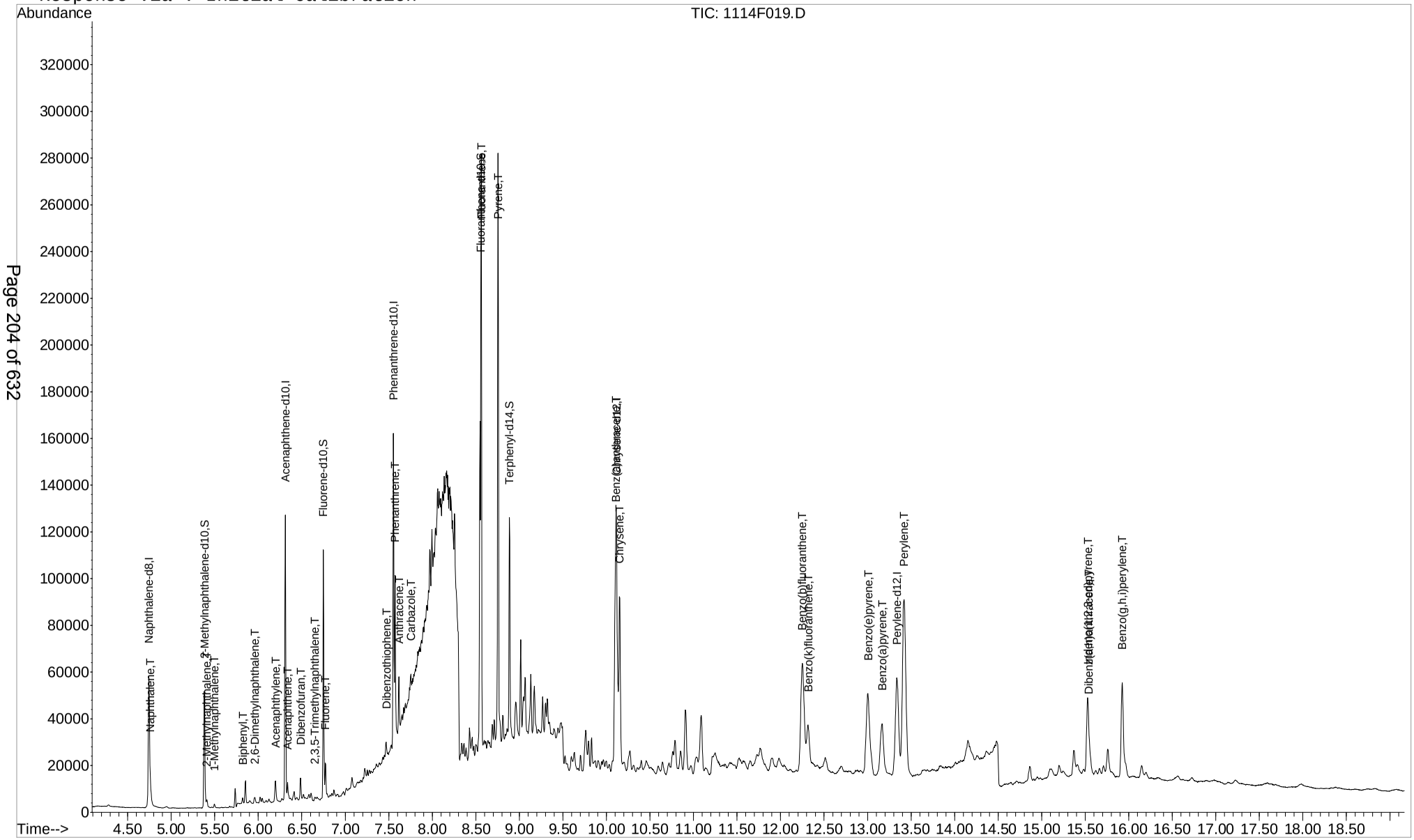
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

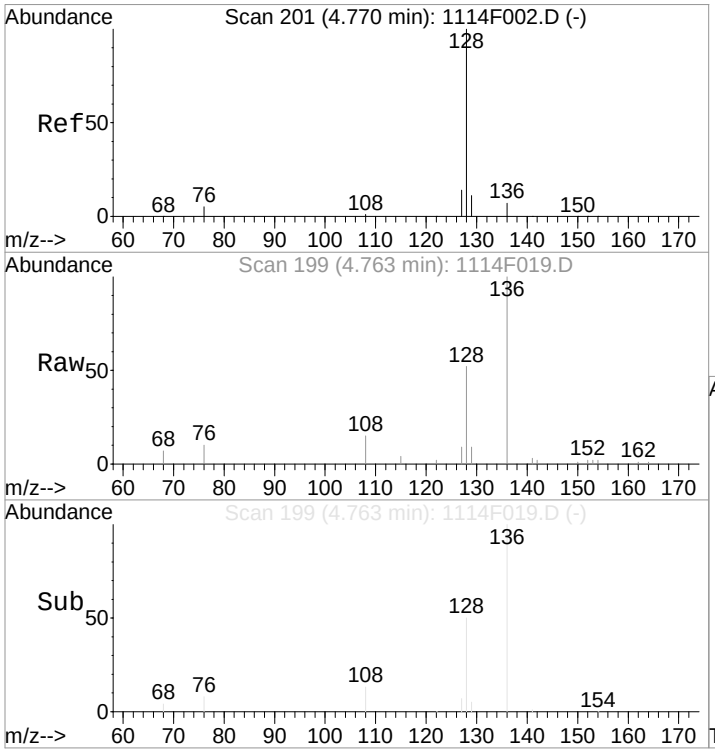
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F019.D Vial: 19
Acq On : 14 Nov 2018 1:31 pm Operator: LWeiskopf
Sample : K1810430-007DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:18 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



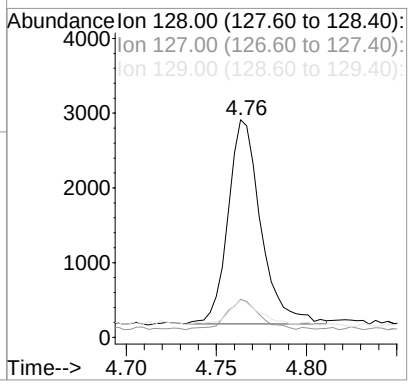
1st 12/03/18
2nd 12/06/18

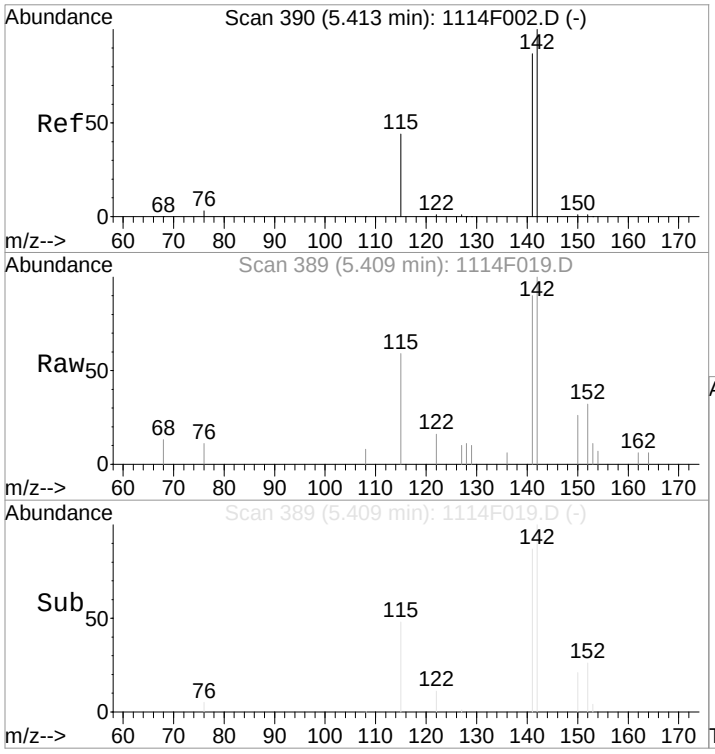


#2
Naphthalene
Concen: 11.11 ng/ml
RT: 4.76 min Scan# 199
Delta R.T. -0.02 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:128 Resp: 3462

Ion	Ratio	Lower	Upper
128	100		
127	15.0	0.0	43.7
129	11.9	0.0	30.8

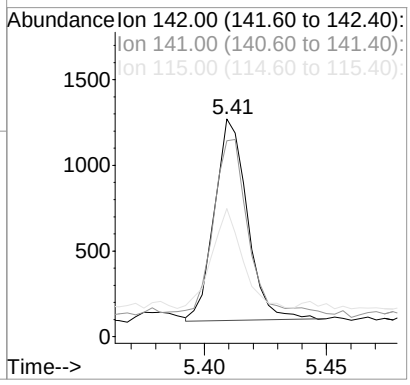




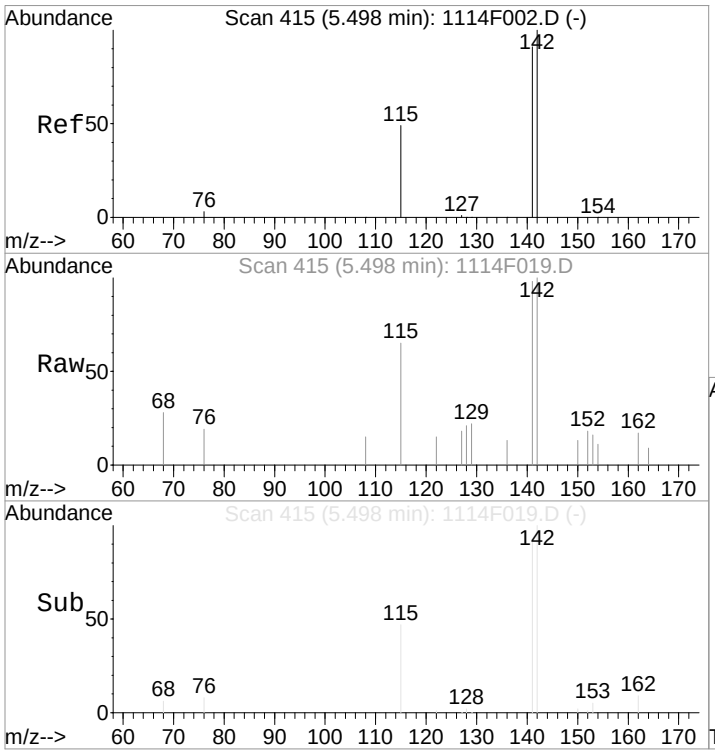
#4
2-Methylnaphthalene
Concen: 5.89 ng/ml
RT: 5.41 min Scan# 389
Delta R.T. -0.01 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:142 Resp: 1107

Ion	Ratio	Lower	Upper
142	100		
141	86.7	56.8	116.8
115	48.6	13.3	53.3



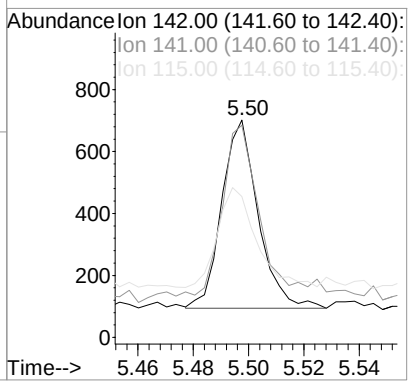
1st 12/03/18
2nd 12/06/18

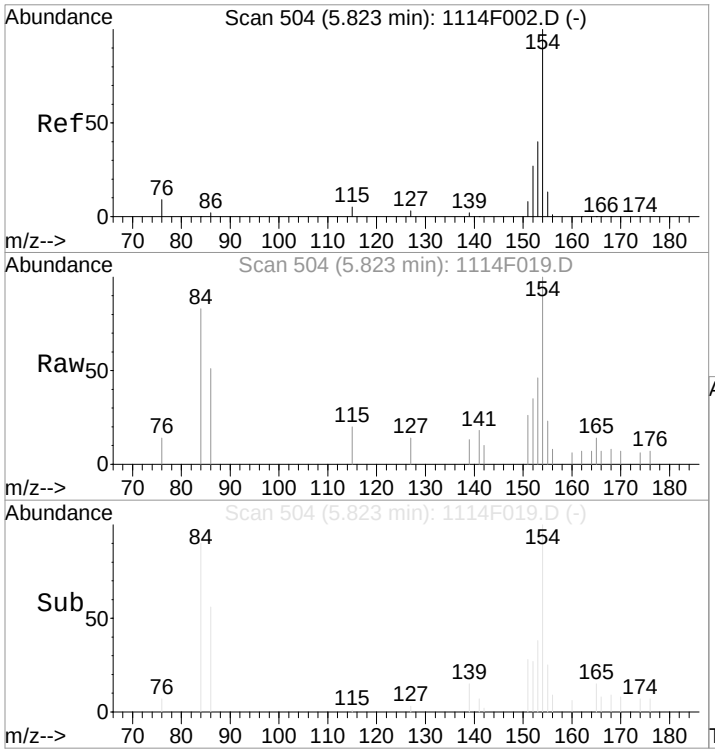


#5
1-Methylnaphthalene
Concen: 3.08 ng/ml
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:142 Resp: 557

Ion	Ratio	Lower	Upper
142	100		
141	88.5	59.7	119.7
115	48.4	13.7	53.7

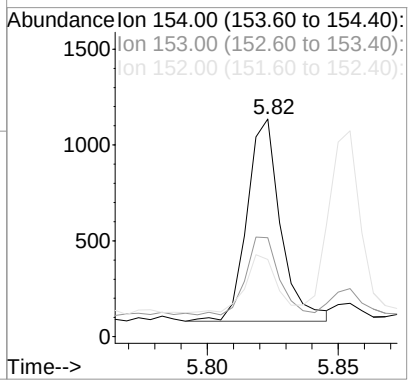




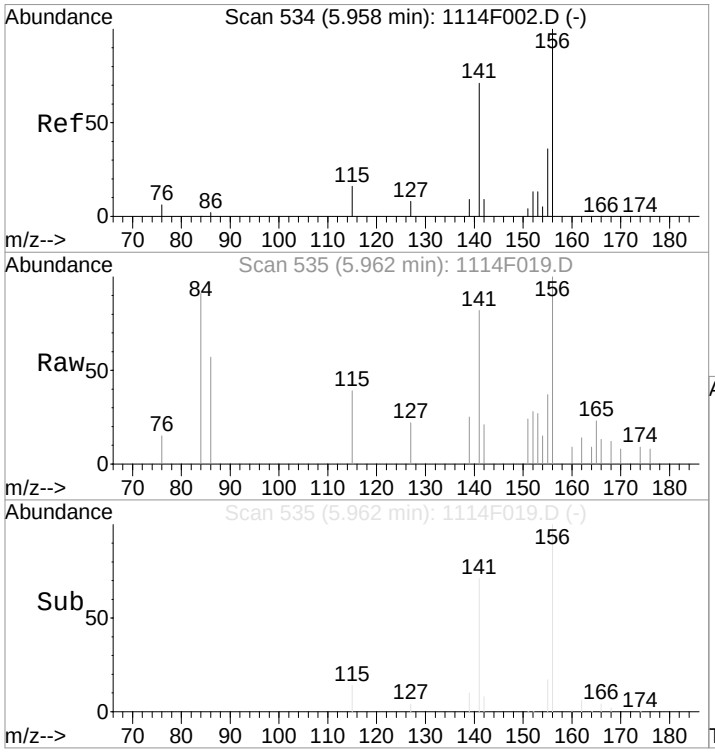
#6
Biphenyl
Concen: 4.01 ng/ml
RT: 5.82 min Scan# 504
Delta R.T. -0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:154 Resp: 941

Ion	Ratio	Lower	Upper
154	100		
153	37.5	11.4	71.4
152	26.3	7.1	47.1



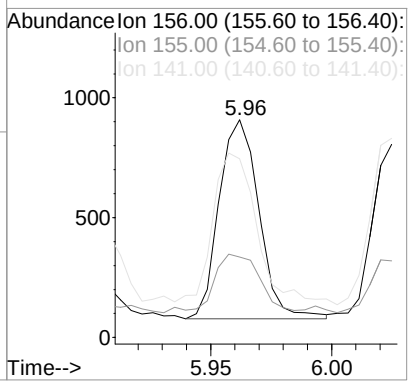
1st 12/03/18
2nd 12/06/18

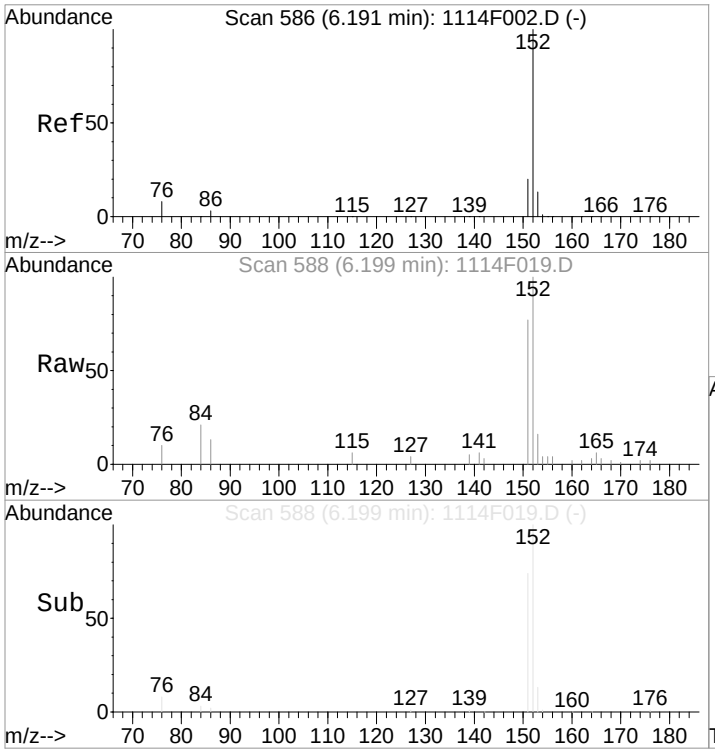


#7
2,6-Dimethylnaphthalene
Concen: 5.91 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. 0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:156 Resp: 954

Ion	Ratio	Lower	Upper
156	100		
155	26.6	7.0	67.0
141	70.6	47.9	87.9

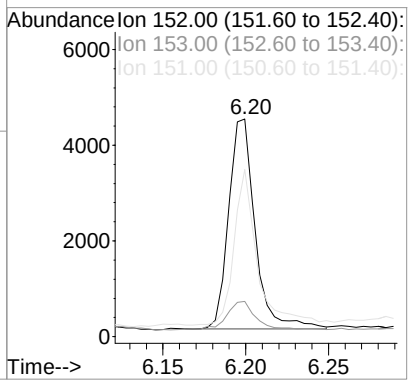




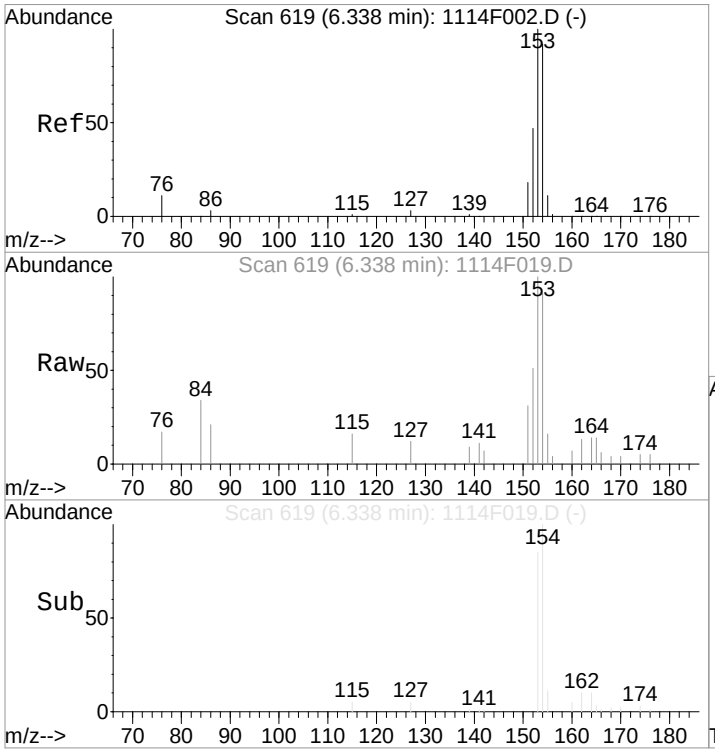
#9
Acenaphthylene
Concen: 12.86 ng/ml
RT: 6.20 min Scan# 588
Delta R.T. 0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:152 Resp: 4880

Ion	Ratio	Lower	Upper
152	100		
153	13.4	0.0	42.9
151	74.1	0.2	40.2#



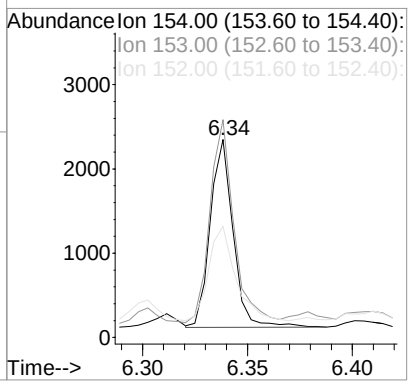
1st 12/03/18
2nd 12/06/18

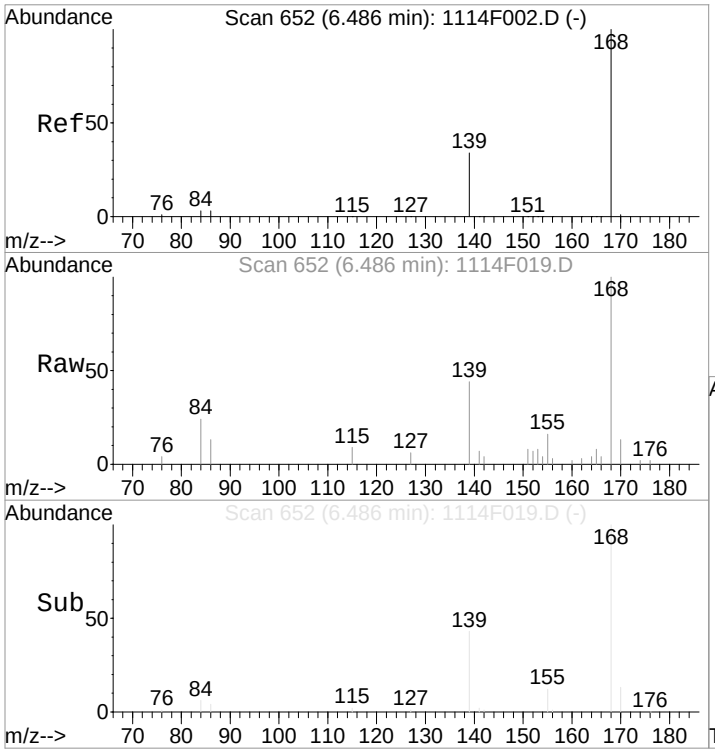


#10
Acenaphthene
Concen: 7.78 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:154 Resp: 1696

Ion	Ratio	Lower	Upper
154	100		
153	108.1	77.1	137.1
152	50.4	19.7	79.7

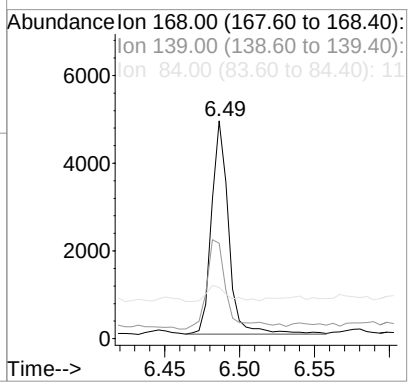




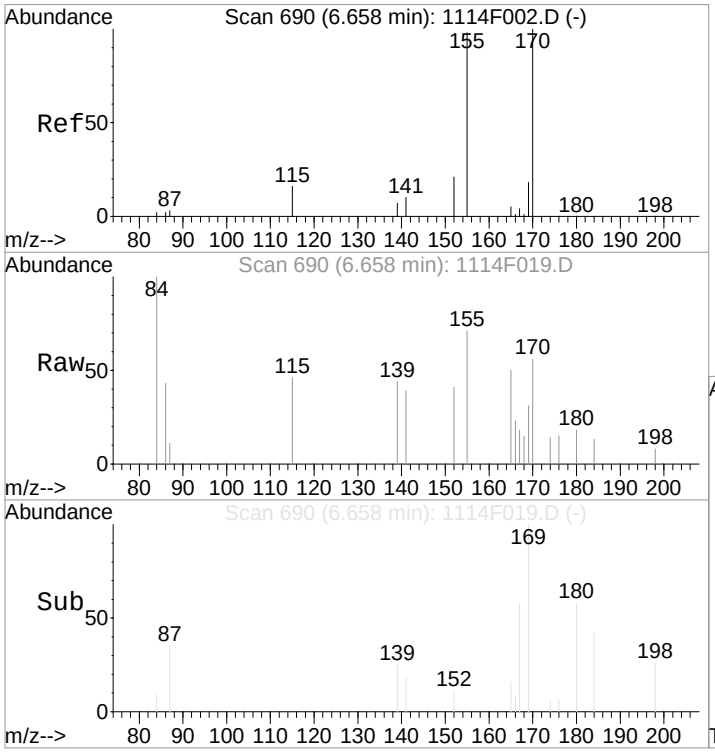
#11
Dibenzofuran
Concen: 11.05 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:168 Resp: 3865

Ion	Ratio	Lower	Upper
168	100		
139	40.3	0.0	55.8
84	6.6	0.0	23.5



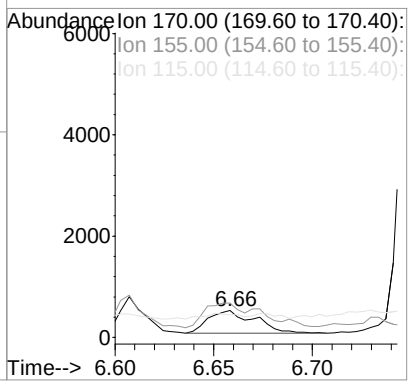
1st 12/03/18
2nd 12/06/18

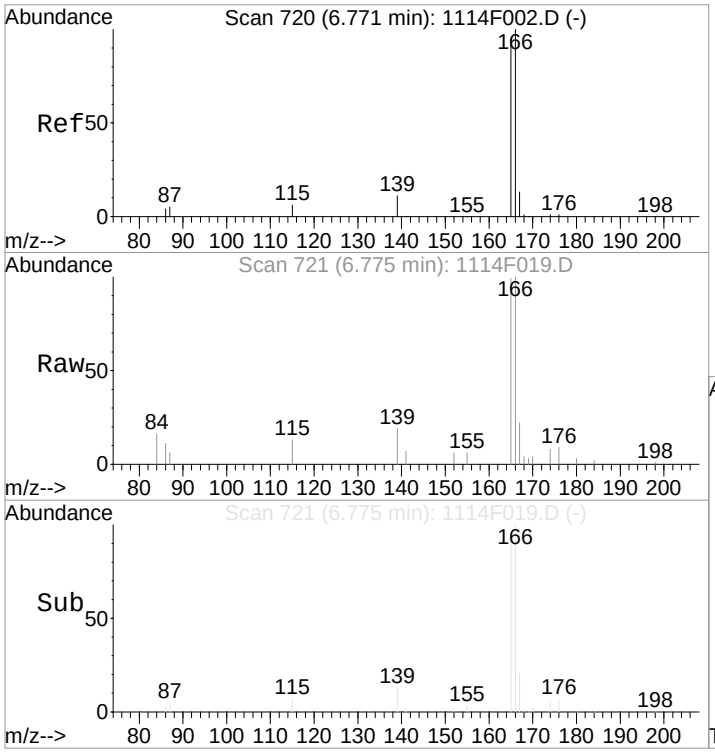


#12
2,3,5-Trimethylnaphthalene
Concen: 3.69 ng/ml
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:170 Resp: 743

Ion	Ratio	Lower	Upper
170	100		
155	108.3	59.2	119.2
115	18.4	0.0	30.1

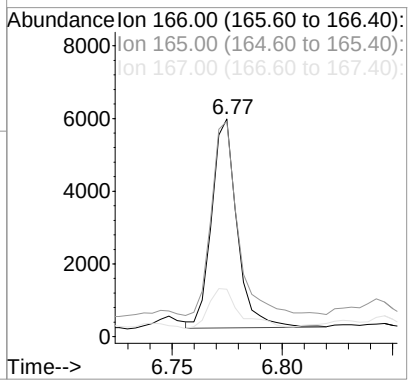


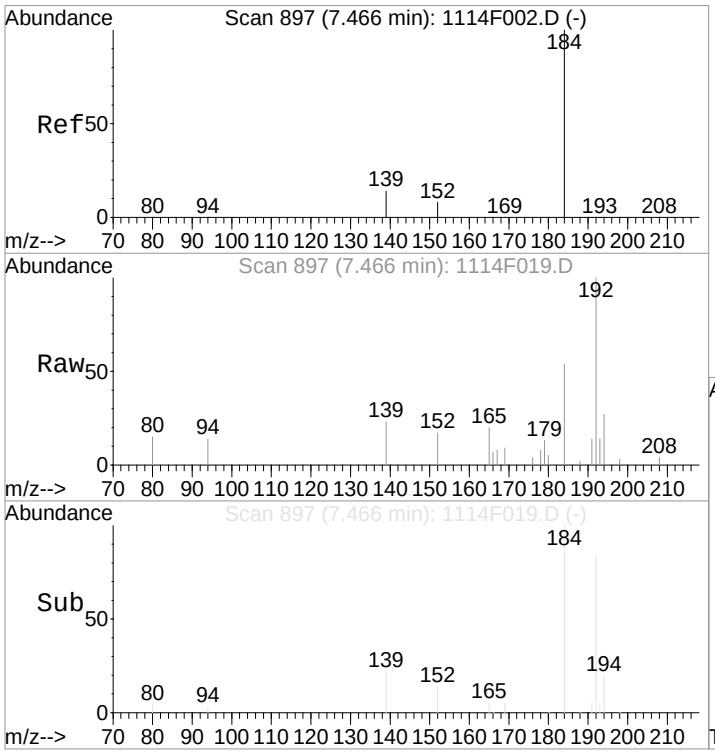


#14
Fluorene
Concen: 17.67 ng/ml
RT: 6.77 min Scan# 721
Delta R.T. -0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:166 Resp: 4659

Ion	Ratio	Lower	Upper
166	100		
165	93.5	63.4	123.4
167	18.9	0.0	33.1

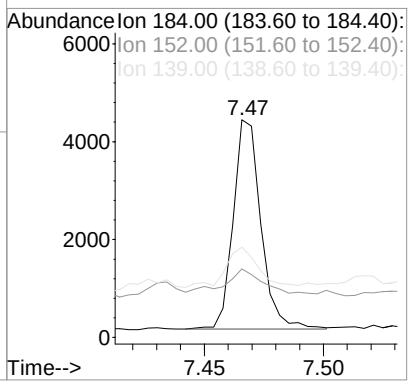


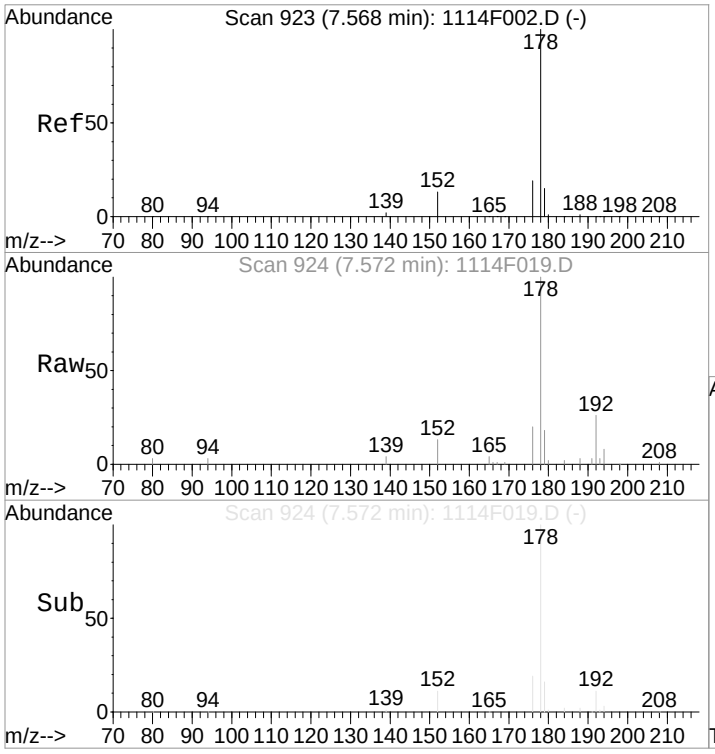


#16
Dibenzothiophene
Concen: 8.05 ng/ml
RT: 7.47 min Scan# 897
Delta R.T. -0.01 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:184 Resp: 3455

Ion	Ratio	Lower	Upper
184	100		
152	11.2	0.0	37.8
139	19.3	0.0	32.6

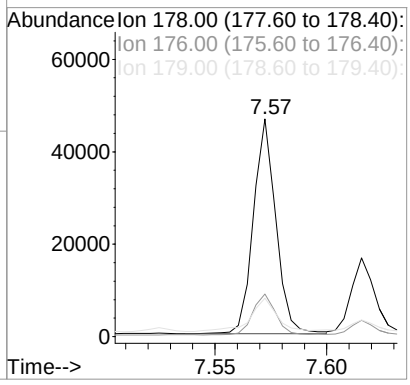




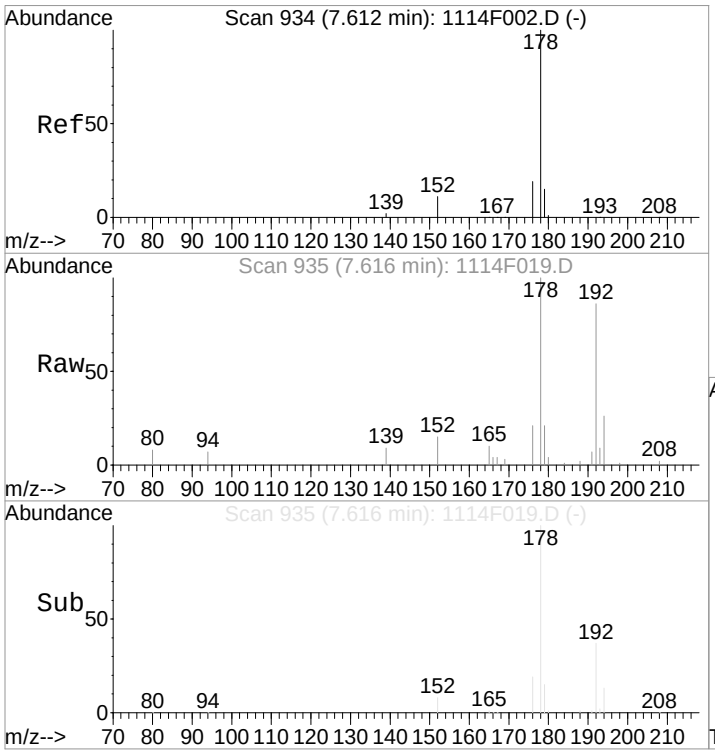
#17
Phenanthrene
Concen: 76.05 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:178 Resp: 32640

Ion	Ratio	Lower	Upper
178	100		
176	18.9	0.0	48.7
179	15.5	0.0	35.1



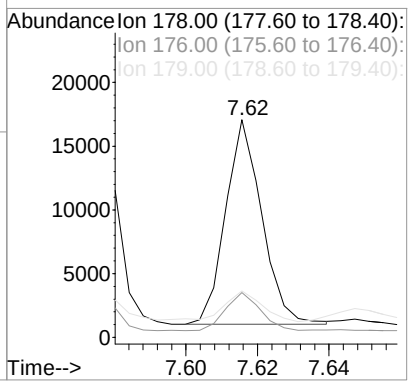
1st 12/03/18
2nd 12/06/18

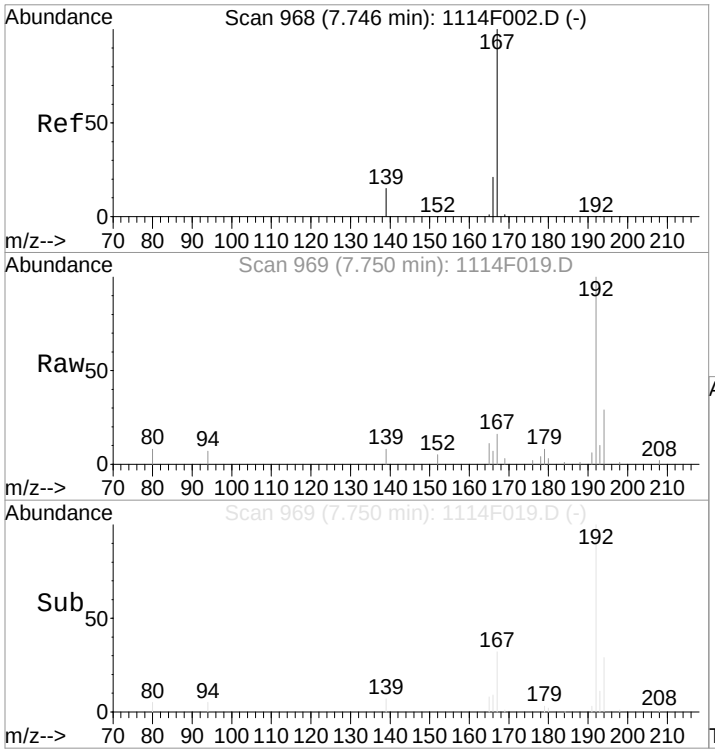


#18
Anthracene
Concen: 27.66 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:178 Resp: 11331

Ion	Ratio	Lower	Upper
178	100		
176	18.7	0.0	48.0
179	13.6	0.0	35.1

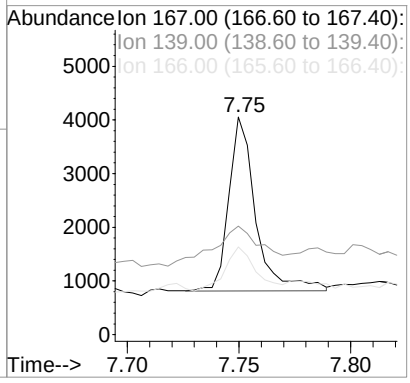




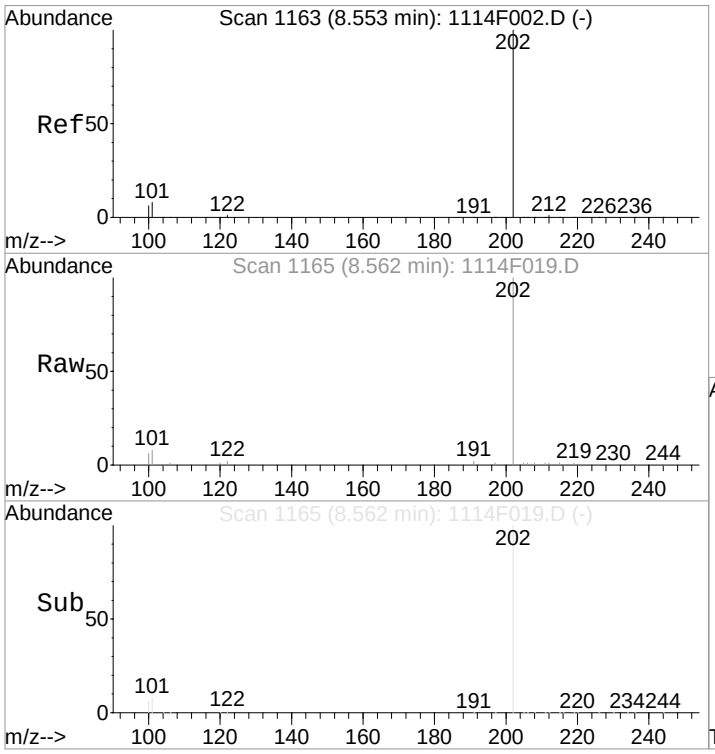
#19
Carbazole
Concen: 6.82 ng/ml
RT: 7.75 min Scan# 969
Delta R.T. -0.01 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:167 Resp: 2728

Ion	Ratio	Lower	Upper
167	100		
139	18.2	0.0	41.5
166	24.0	0.7	40.7



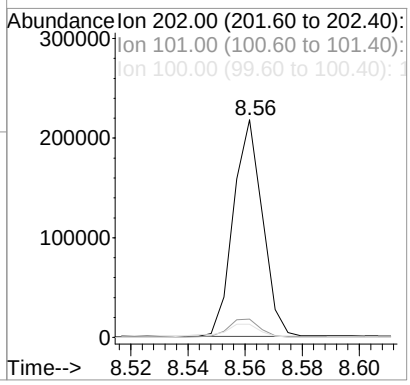
1st 12/03/18
2nd 12/06/18

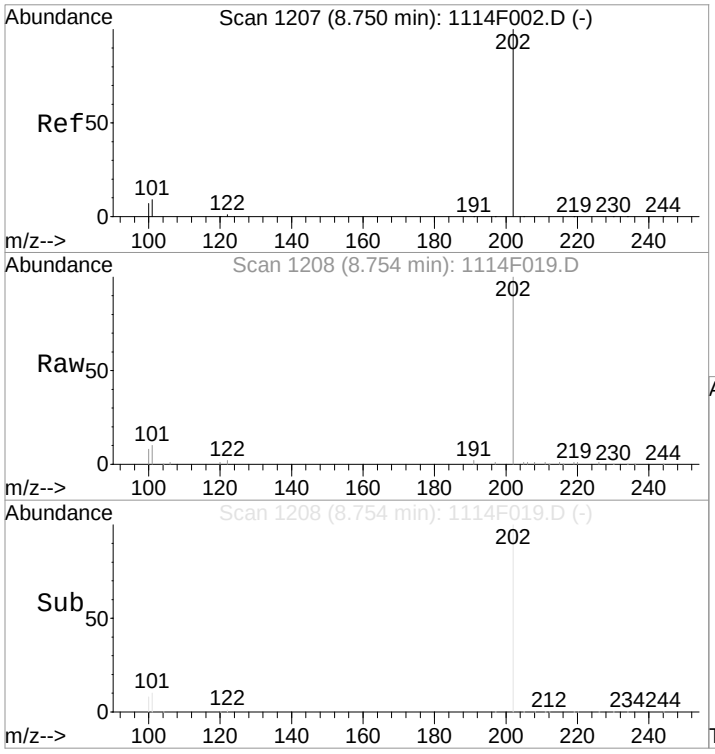


#21
Fluoranthene
Concen: 291.47 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. 0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:202 Resp: 154466

Ion	Ratio	Lower	Upper
202	100		
101	8.2	0.0	41.3
100	5.9	0.0	28.6

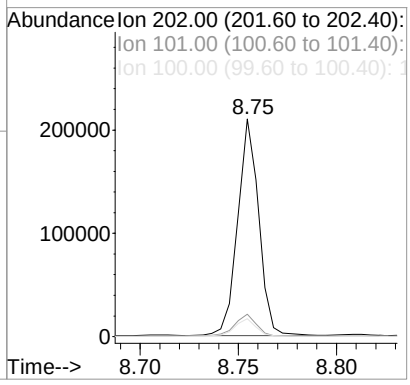


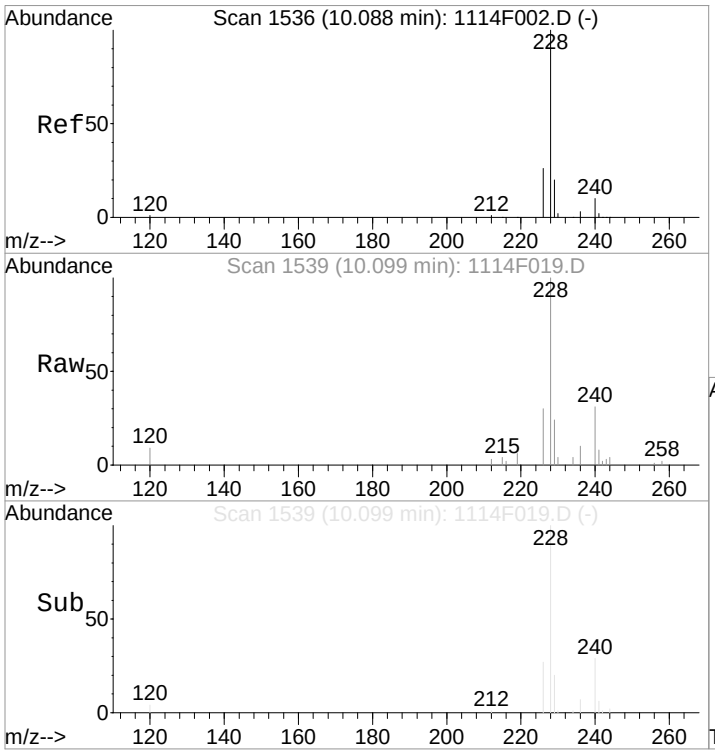


#24
Pyrene
Concen: 322.45 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. -0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:202 Resp: 155924

Ion	Ratio	Lower	Upper
202	100		
101	10.2	0.0	40.8
100	8.1	0.0	28.5

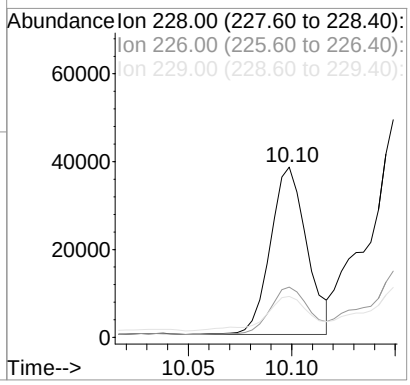


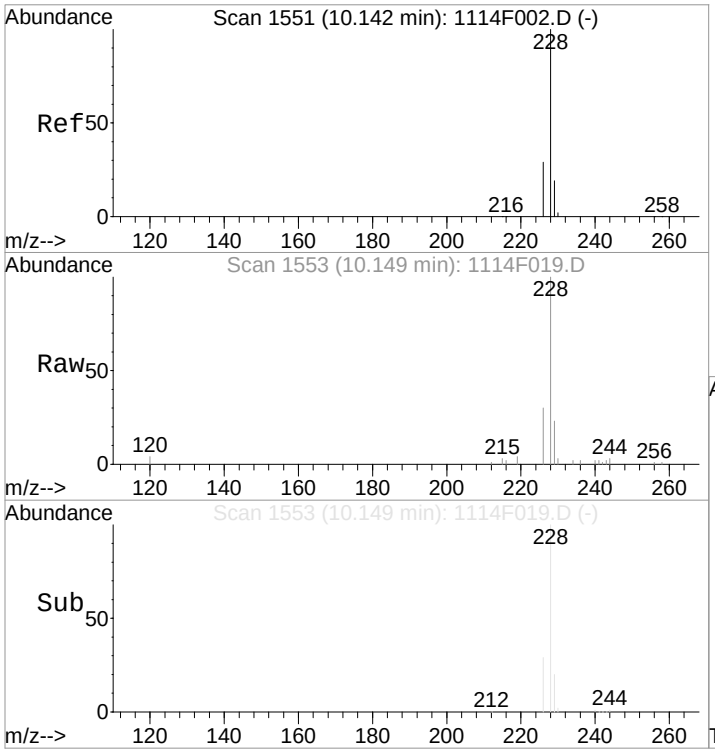


#26
Benz(a)anthracene
Concen: 102.38 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. 0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:228 Resp: 46652

Ion	Ratio	Lower	Upper
228	100		
226	28.3	0.0	56.3
229	20.6	0.0	39.1

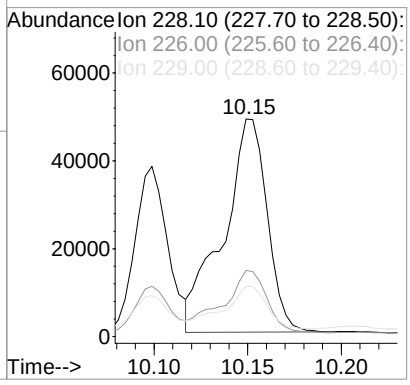




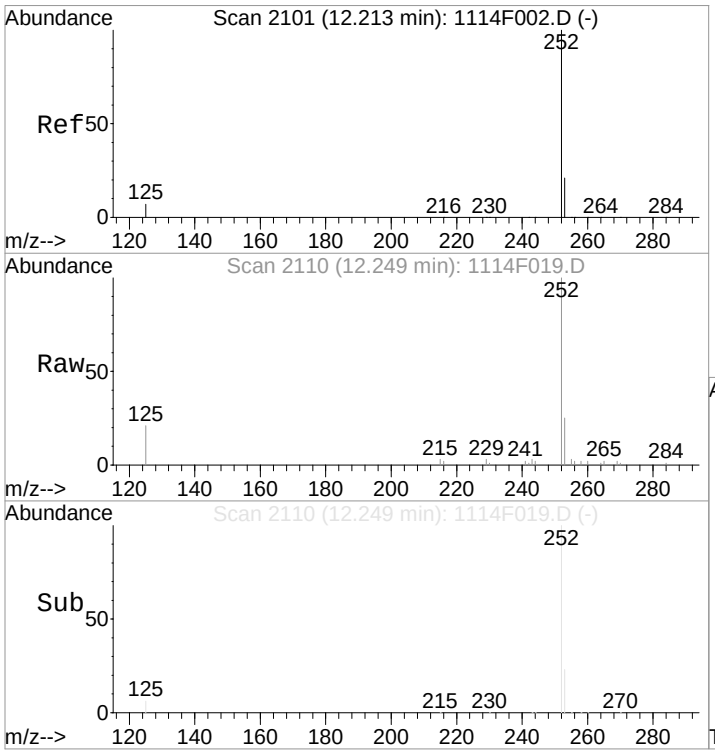
#27
Chrysene
Concen: 181.16 ng/ml
RT: 10.15 min Scan# 1553
Delta R.T. -0.00 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:228 Resp: 79075

Ion	Ratio	Lower	Upper
228	100		
226	29.4	0.0	58.7
229	19.4	0.0	39.2



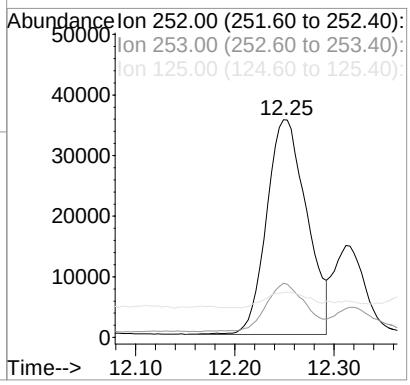
1st 12/03/18
2nd 12/06/18

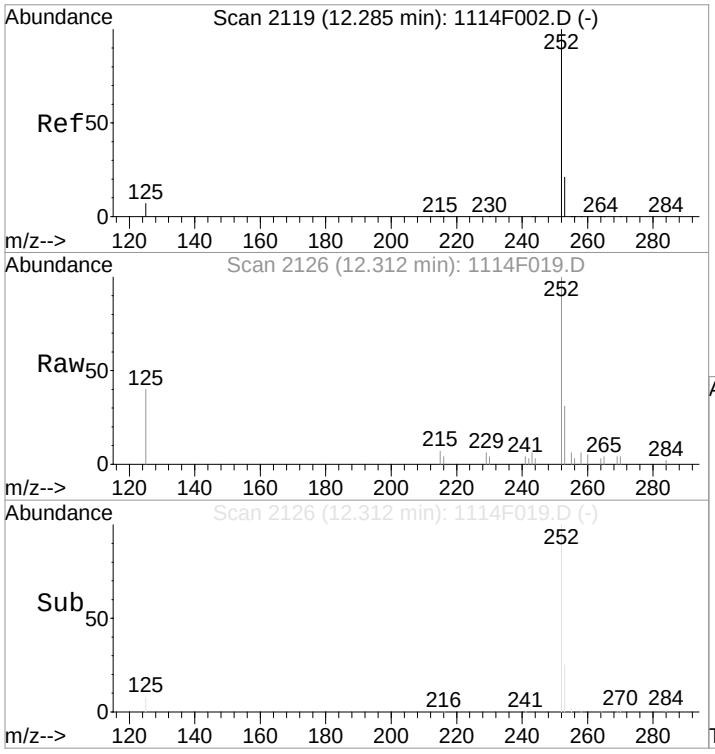


#29
Benzo(b)fluoranthene
Concen: 207.02 ng/ml
RT: 12.25 min Scan# 2110
Delta R.T. 0.02 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:252 Resp: 100057

Ion	Ratio	Lower	Upper
252	100		
253	22.3	0.0	51.2
125	6.7	0.0	29.5

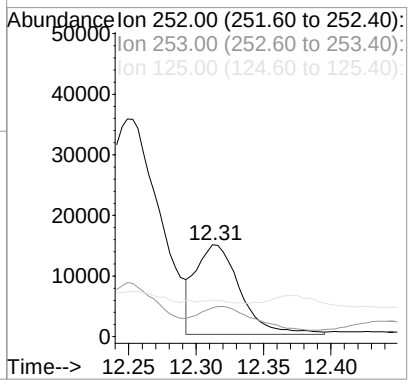




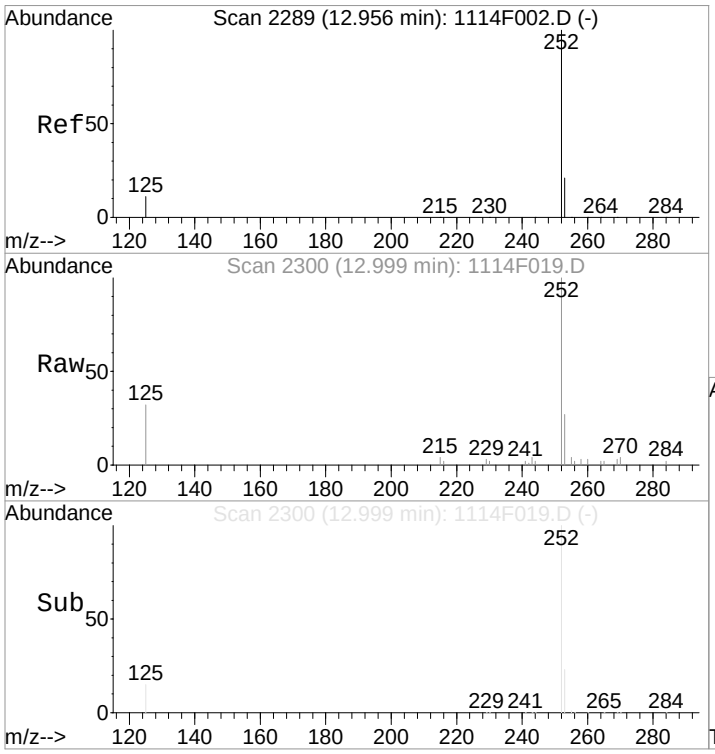
#30
Benzo(k)fluoranthene
Concen: 70.84 ng/ml m
RT: 12.31 min Scan# 2126
Delta R.T. 0.02 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:252 Resp: 33964

Ion	Ratio	Lower	Upper
252	100		
253	31.3	0.0	51.2
125	39.9	0.0	29.7#



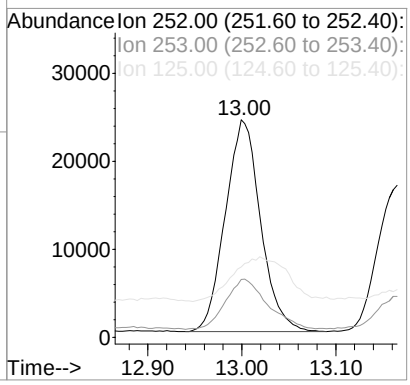
1st 12/03/18
2nd 12/06/18

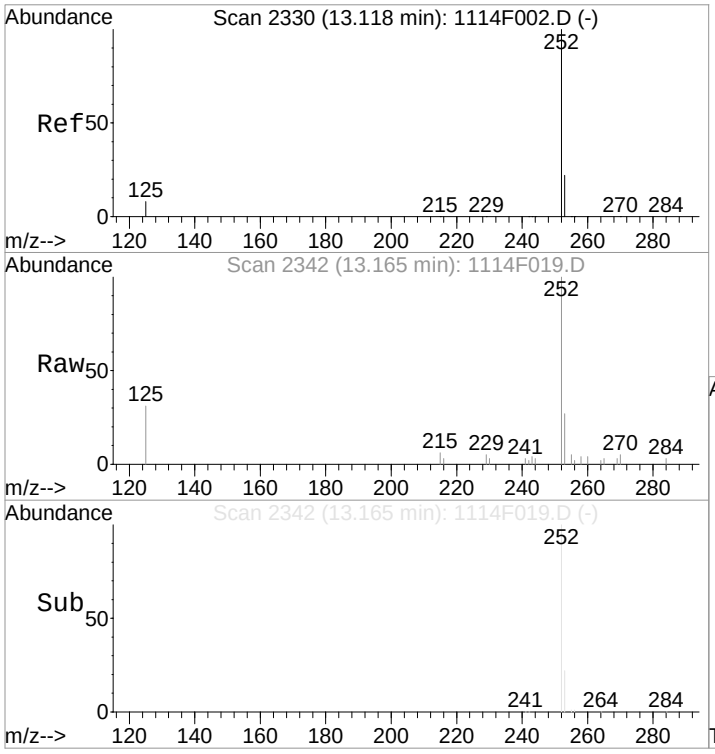


#31
Benzo(e)pyrene
Concen: 136.42 ng/ml
RT: 13.00 min Scan# 2300
Delta R.T. 0.03 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:252 Resp: 62849

Ion	Ratio	Lower	Upper
252	100		
253	23.6	0.0	51.3
125	16.1	0.0	33.5

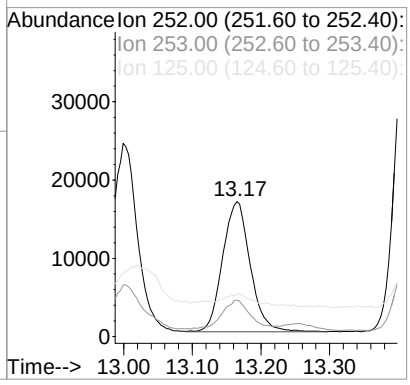


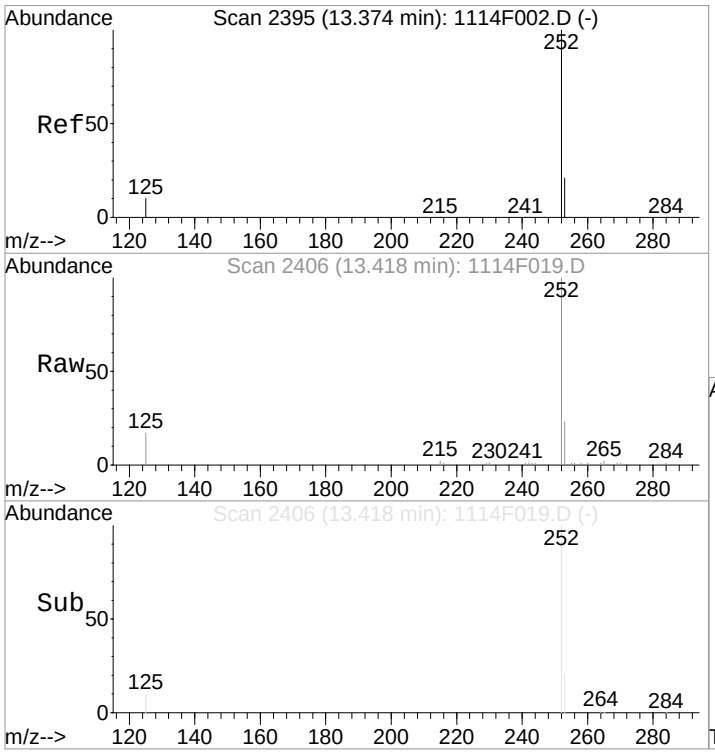


#32
Benzo(a)pyrene
Concen: 109.27 ng/ml
RT: 13.17 min Scan# 2342
Delta R.T. 0.04 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:252 Resp: 46316

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	50.9
125	9.2	0.0	30.3

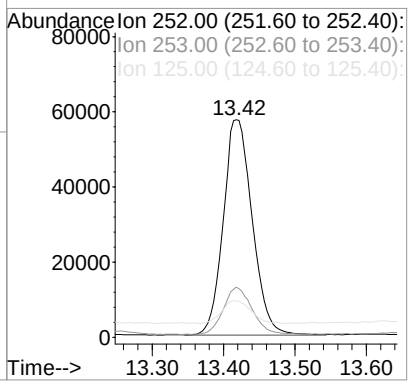


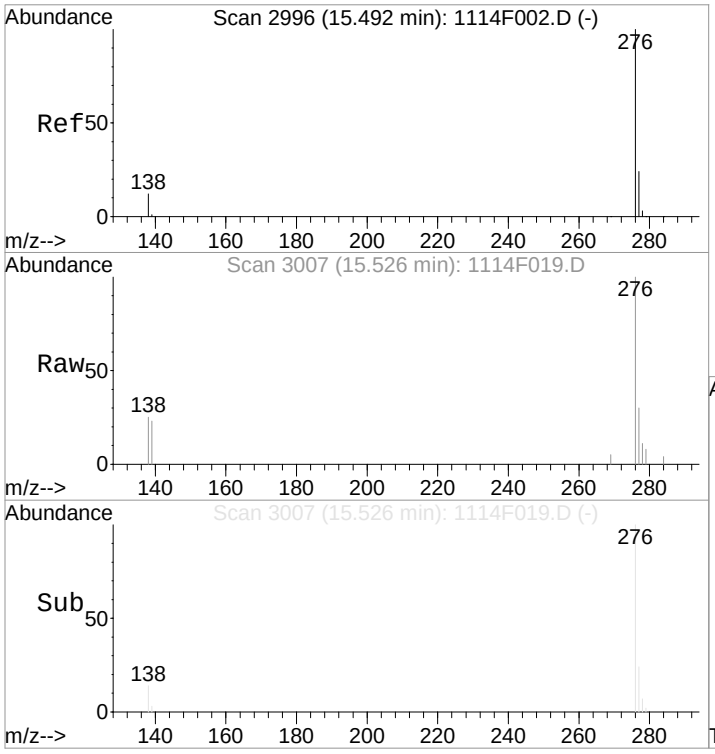


#33
Perylene
Concen: 363.35 ng/ml
RT: 13.42 min Scan# 2406
Delta R.T. 0.04 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:252 Resp: 161558

Ion	Ratio	Lower	Upper
252	100		
253	21.9	0.0	51.2
125	10.4	0.0	33.8

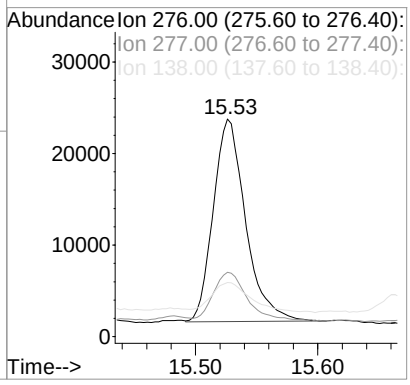




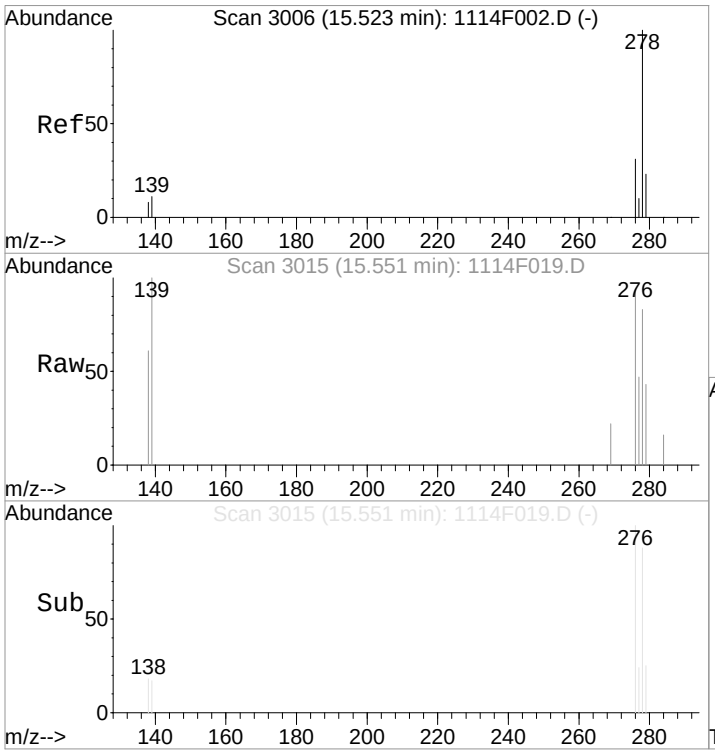
#34
Indeno(1,2,3-cd)pyrene
Concen: 97.83 ng/ml
RT: 15.53 min Scan# 3007
Delta R.T. 0.04 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:276 Resp: 40662

Ion	Ratio	Lower	Upper
276	100		
277	23.9	0.0	53.4
138	14.3	0.0	37.7



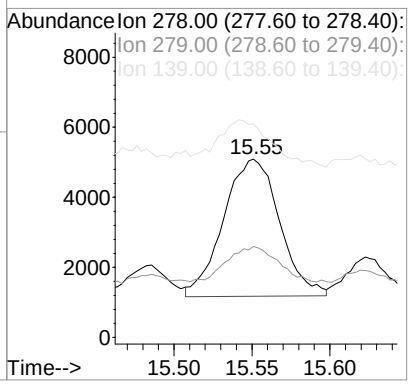
1st 12/03/18
2nd 12/06/18

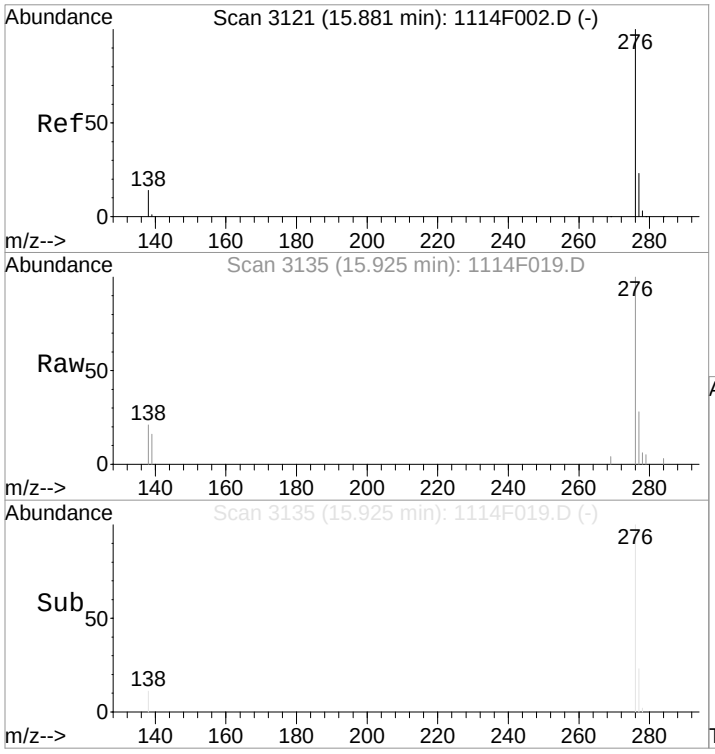


#35
Dibenz(a,h)anthracene
Concen: 23.22 ng/ml
RT: 15.55 min Scan# 3015
Delta R.T. 0.02 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:278 Resp: 9784

Ion	Ratio	Lower	Upper
278	100		
279	27.1	0.0	53.5
139	33.4	0.0	35.0

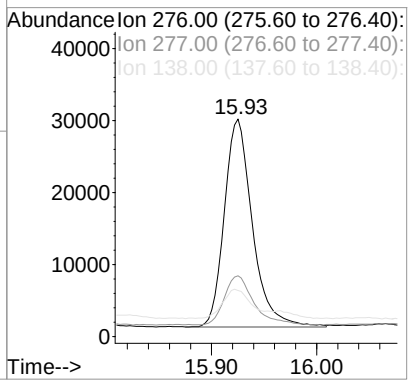




#36
Benzo(g,h,i)perylene
Concen: 110.65 ng/ml
RT: 15.93 min Scan# 3135
Delta R.T. 0.04 min
Lab File: 1114F019.D
Acq: 14 Nov 2018 1:31 pm

Tgt Ion:276 Resp: 53855

Ion	Ratio	Lower	Upper
276	100		
277	23.5	0.0	53.1
138	13.6	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F019.D Vial: 19
Acq On : 14 Nov 2018 1:31 pm Operator: LWeiskopf
Sample : K1810430-007DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.74	136	54002	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.31	164	31799	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	68800	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	70481	200.00	ng/ml	0.00
28) Perylene-d12	13.33	264	78229	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	17298	114.76	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	11.48%		
13) Fluorene-d10	6.75	176	33417	164.35	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.43%		
22) Fluoranthene-d10	8.55	212	67371	155.37	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	15.54%		
25) Terphenyl-d14	8.88	244	57722	188.82	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	18.88%		
Target Compounds						Qvalue
2) Naphthalene	4.76	128	3462	11.11	ng/ml	97
4) 2-Methylnaphthalene	5.41	142	1107	5.89	ng/ml	92
5) 1-Methylnaphthalene	5.50	142	557	3.08	ng/ml	92
6) Biphenyl	5.82	154	941	4.01	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.96	156	954	5.91	ng/ml	92
9) Acenaphthylene	6.20	152	4880	12.86	ng/ml#	28
10) Acenaphthene	6.34	154	1696	7.78	ng/ml	99
11) Dibenzofuran	6.49	168	3865	11.05	ng/ml	74
12) 2,3,5-Trimethylnaphthalene	6.66	170	743	3.69	ng/ml	79
14) Fluorene	6.77	166	4659	17.67	ng/ml	98
16) Dibenzothiophene	7.47	184	3455	8.05	ng/ml	86
17) Phenanthrene	7.57	178	32640	76.05	ng/ml	99
18) Anthracene	7.62	178	11331	27.66	ng/ml	98
19) Carbazole	7.75	167	2728	6.82	ng/ml	89
21) Fluoranthene	8.56	202	154466	291.47	ng/ml	92
24) Pyrene	8.75	202	155924	322.45	ng/ml	99
26) Benz(a)anthracene	10.10	228	46652	102.38	ng/ml	96
27) Chrysene	10.15	228	79075	181.16	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	100057	207.02	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	33964m	70.84	ng/ml	
31) Benzo(e)pyrene	13.00	252	62849	136.42	ng/ml	94
32) Benzo(a)pyrene	13.17	252	46316	109.27	ng/ml	97
33) Perylene	13.42	252	161558	363.35	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.53	276	40662	97.83	ng/ml	96
35) Dibenz(a,h)anthracene	15.55	278	9784	23.22	ng/ml	78
36) Benzo(g,h,i)perylene	15.93	276	53855	110.65	ng/ml	94

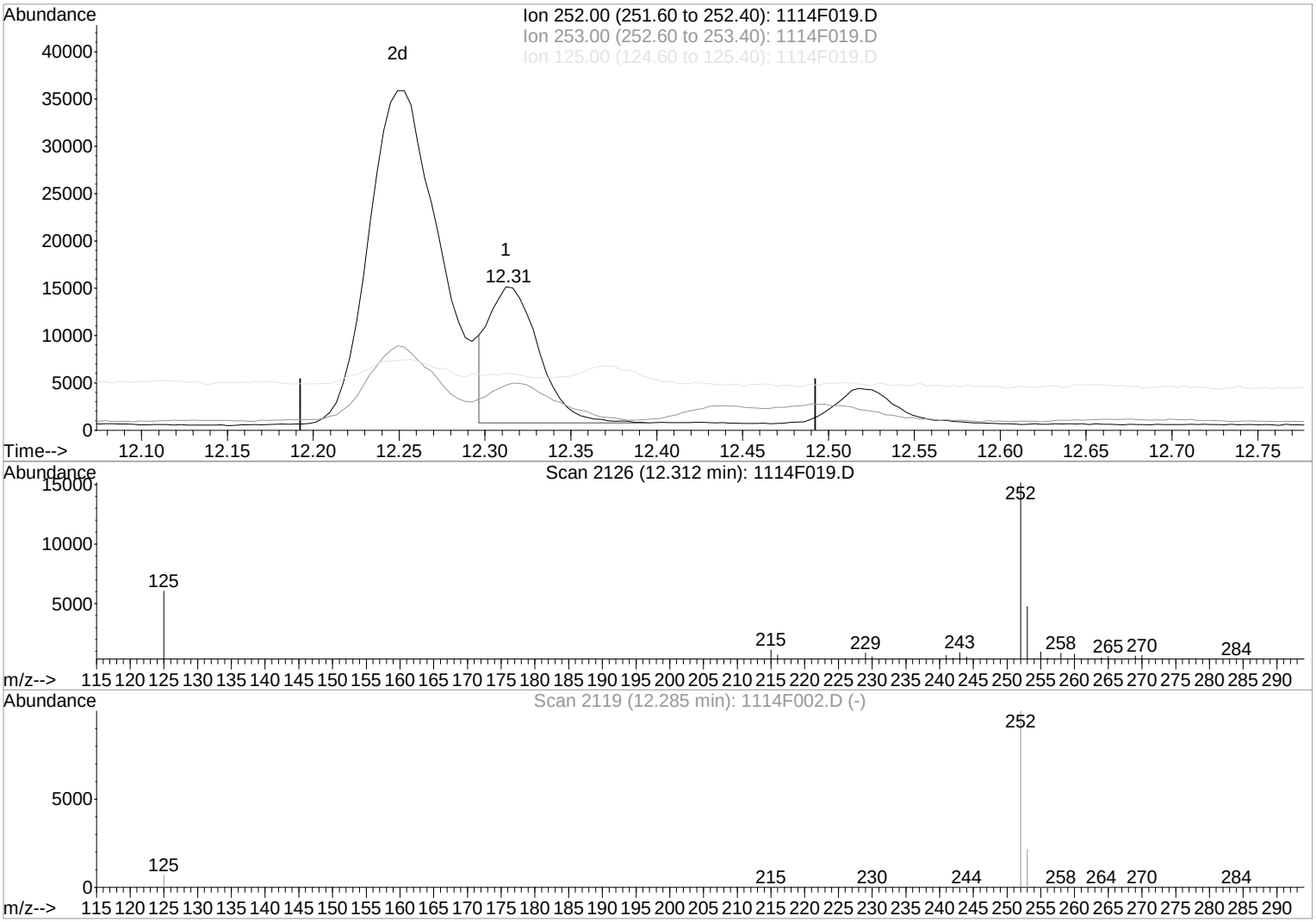
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F019.D Vial: 19
Acq On : 14 Nov 2018 1:31 pm Operator: LWeiskopf
Sample : K1810430-007DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:18 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F019.D

(30) Benzo(k)fluoranthene (T)

12.31min 61.13ng/ml

response 29310

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	25.04
125.00	9.70	3.77
0.00	0.00	0.00

Manual Integration:

Before

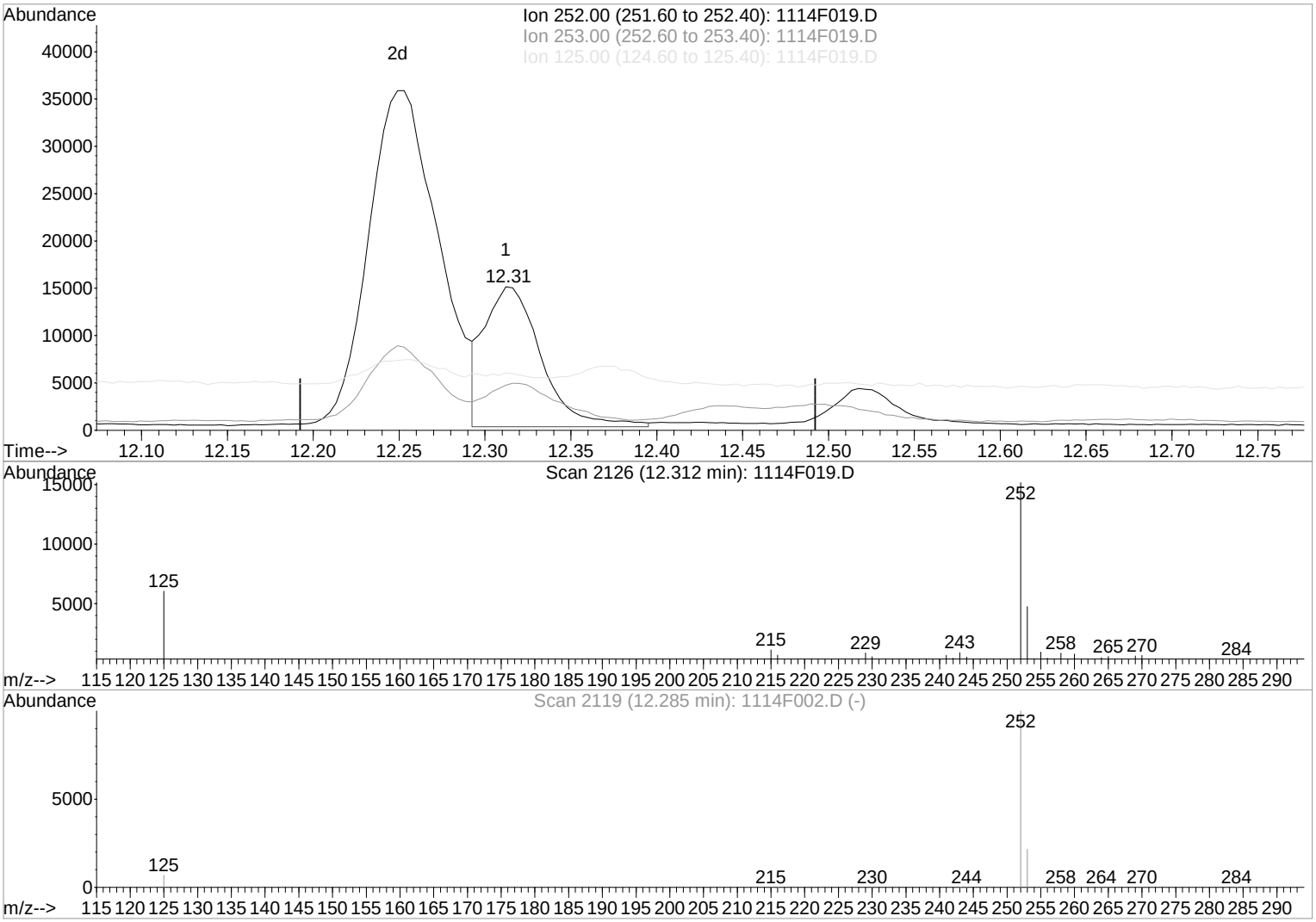
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F019.D Vial: 19
Acq On : 14 Nov 2018 1:31 pm Operator: LWeiskopf
Sample : K1810430-007DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:18 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F019.D

(30) Benzo(k)fluoranthene (T)

12.31min 70.84ng/ml m

response 33964

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	31.34
125.00	9.70	39.93#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F020.D
Lab ID: K1810430-008
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 13:57
Date Quantitated: 11/30/2018 13:19
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F020.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 13:57	**Quant Date:**	11/30/2018 13:19	**Vial:**	20
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-008			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702220	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	53005	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	31761	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	67603	200.00	OK
4	Chrysene-d12	10.12	0.02	240	73060	200.00	OK
5	Perylene-d12	13.36	0.07	264	78515	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	33358	164.26	82	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	68265	160.22	80	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	60254	190.14	95	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	7197	23.52	18	D	
1	2-Methylnaphthalene	5.41		0.00	142	2420	13.12	10	D	
2	Acenaphthylene	6.19		0.00	152	6431	16.97	13	D	
2	Acenaphthene	6.34		0.00	154	2898	13.31	10	D	
2	Dibenzofuran	6.49		0.00	168	4043	11.57	9.0	D	
2	Fluorene	6.77		0.00	166	4441	16.87	13	D	
3	Phenanthrene	7.57		0.00	178	49967	118.48	92	D	
3	Anthracene	7.62	0.01	0.00	178	12195	30.29	24	D	
3	Fluoranthene	8.57	0.02	0.00	202	165153	317.15	250	D	
4	Pyrene	8.76	0.01	0.00	202	197798	394.60	310	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	59430	125.82	98	D	
4	Chrysene	10.16	0.02	0.00	228	77163**m**	170.54	130	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F020.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 13:57	**Quant Date:**	11/30/2018 13:19	**Vial:**	20
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	5.0
Lab ID:	K1810430-008			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.26	0.05	0.00	252	141912	292.55	230	D	
5	Benzo(k)fluoranthene	12.33	0.05	0.00	252	47802**m**	99.34	77	D	
5	Benzo(a)pyrene	13.18	0.06	0.00	252	73641	173.11	130	D	
5	Indeno(1,2,3-cd)pyrene	15.54	0.05	0.00	276	64288	154.12	120	D	
5	Dibenz(a,h)anthracene	15.57	0.05	0.00	278	13554	32.05	25	D	
5	Benzo(g,h,i)perylene	15.94	0.06	0.00	276	86145	176.35	140	D	

Prep Amount:	40.011 g	**Dilution:**	5.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	32.2 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

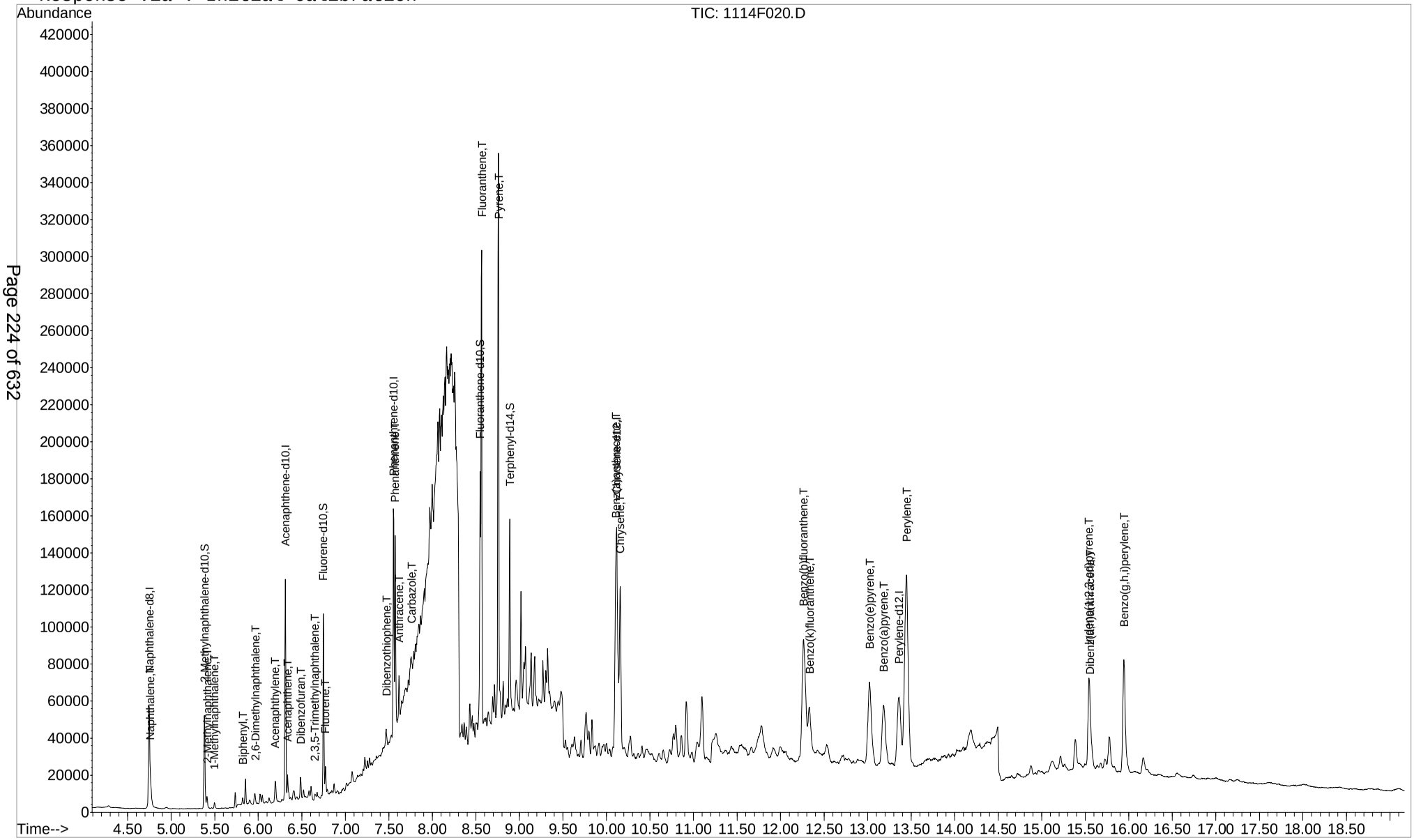
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

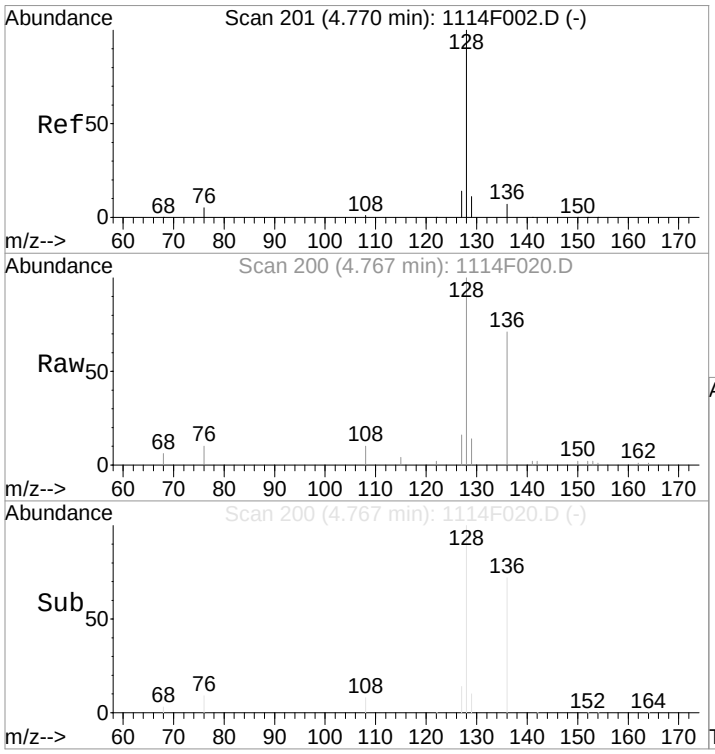
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F020.D Vial: 20
Acq On : 14 Nov 2018 1:57 pm Operator: LWeiskopf
Sample : K1810430-008DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:19 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



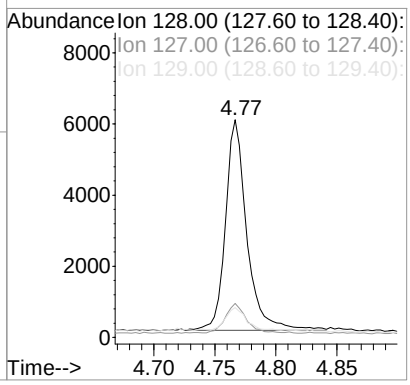
1st 12/03/18
2nd 12/06/18

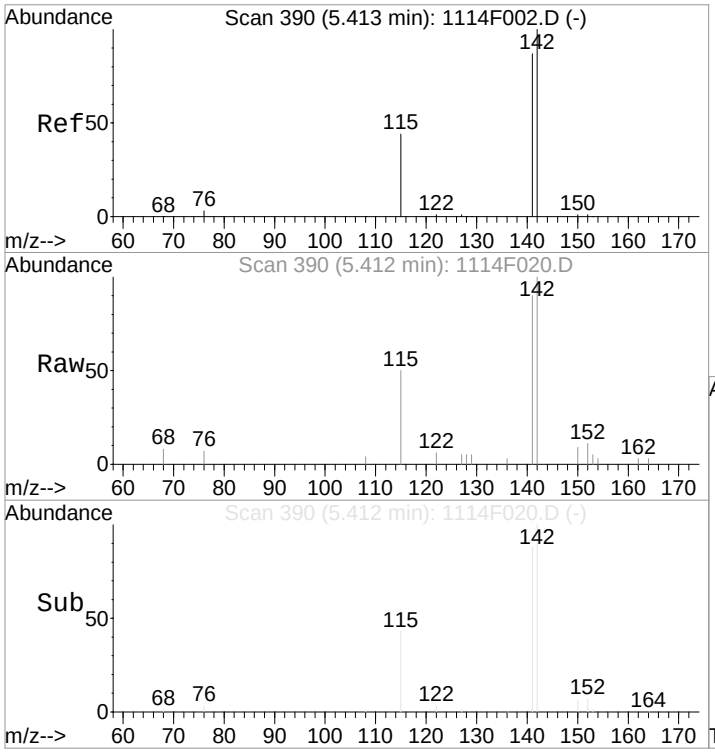


#2
Naphthalene
Concen: 23.52 ng/ml
RT: 4.77 min Scan# 200
Delta R.T. -0.01 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:128 Resp: 7197

Ion	Ratio	Lower	Upper
128	100		
127	14.0	0.0	43.7
129	11.0	0.0	30.8

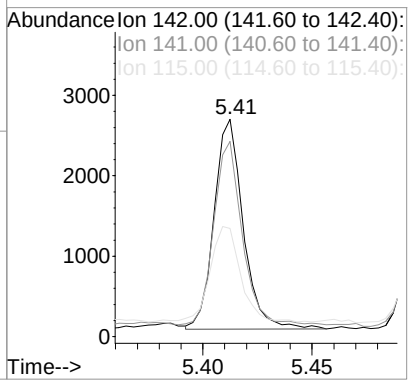




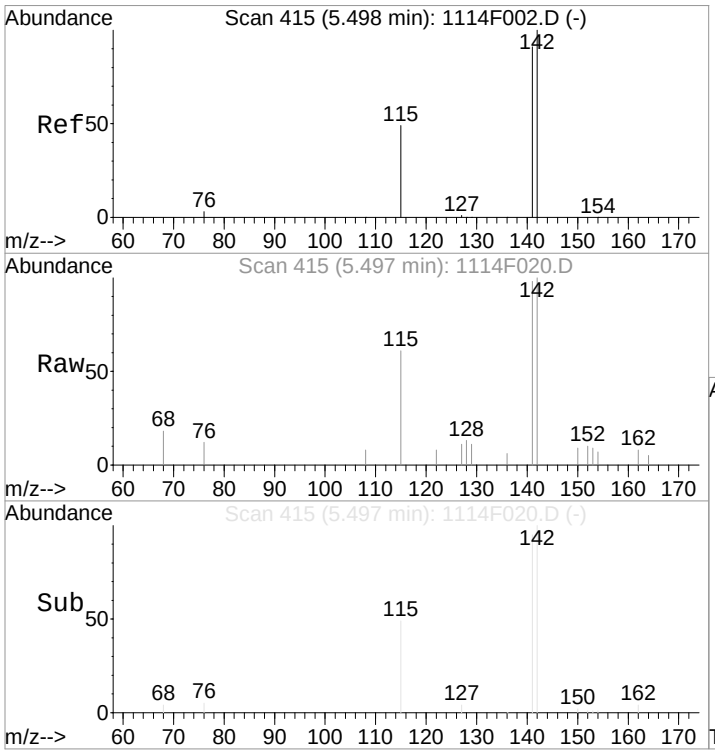
#4
2-Methylnaphthalene
Concen: 13.12 ng/ml
RT: 5.41 min Scan# 390
Delta R.T. -0.01 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:142 Resp: 2420

Ion	Ratio	Lower	Upper
142	100		
141	87.6	56.8	116.8
115	43.7	13.3	53.3



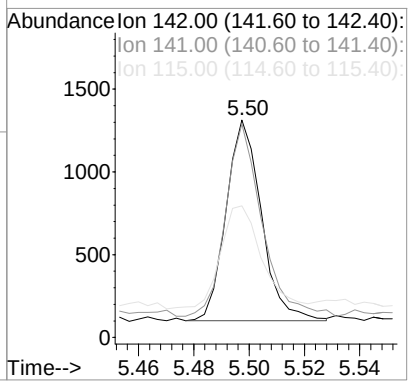
1st 12/03/18
2nd 12/06/18

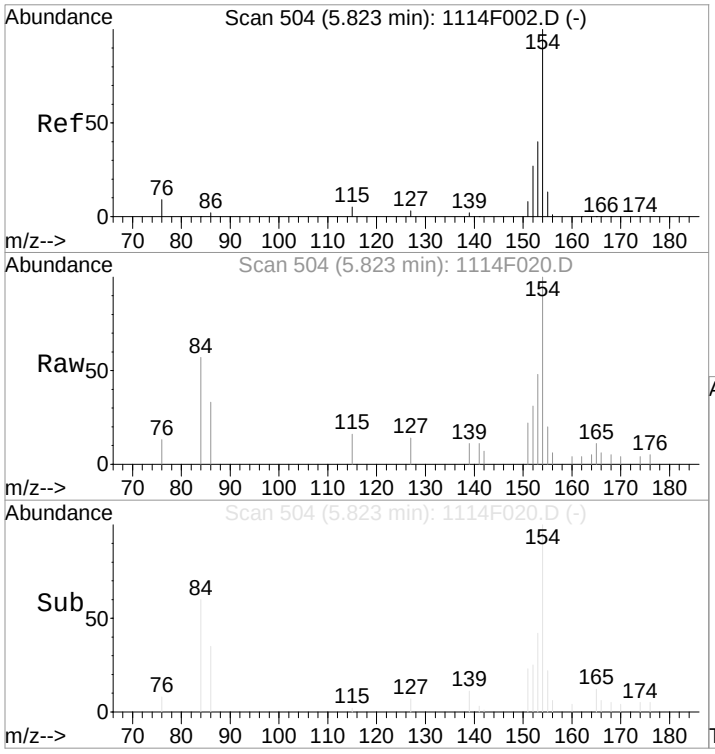


#5
1-Methylnaphthalene
Concen: 6.07 ng/ml
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:142 Resp: 1078

Ion	Ratio	Lower	Upper
142	100		
141	95.8	59.7	119.7
115	50.3	13.7	53.7

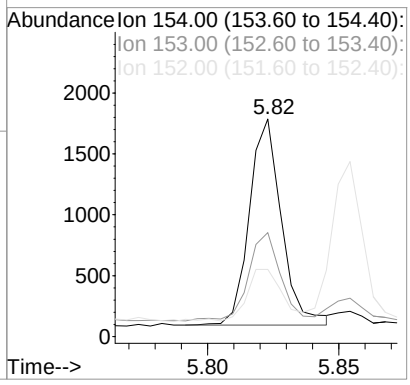




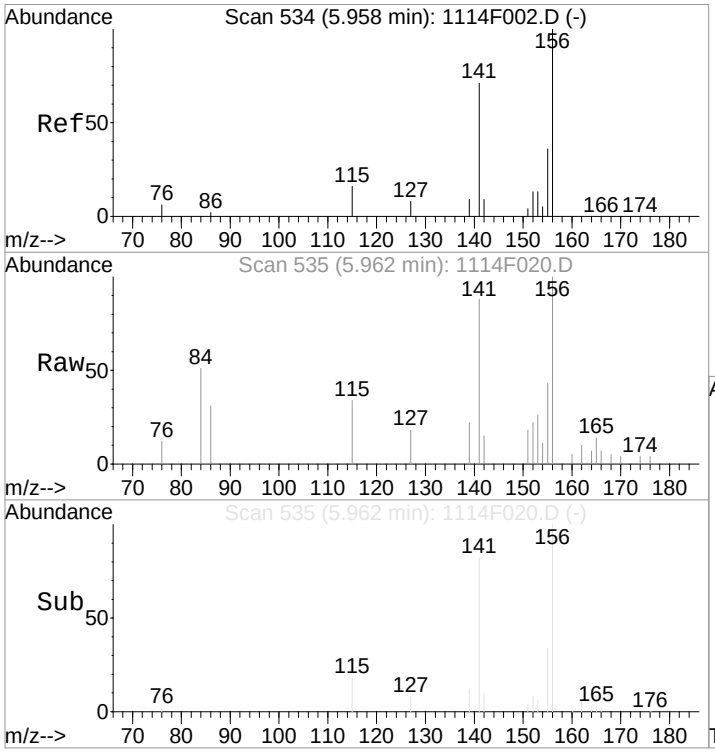
#6
Biphenyl
Concen: 6.25 ng/ml
RT: 5.82 min Scan# 504
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:154 Resp: 1439

Ion	Ratio	Lower	Upper
154	100		
153	43.0	11.4	71.4
152	24.2	7.1	47.1



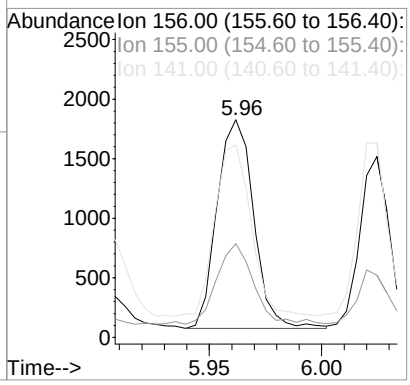
1st 12/03/18
2nd 12/06/18

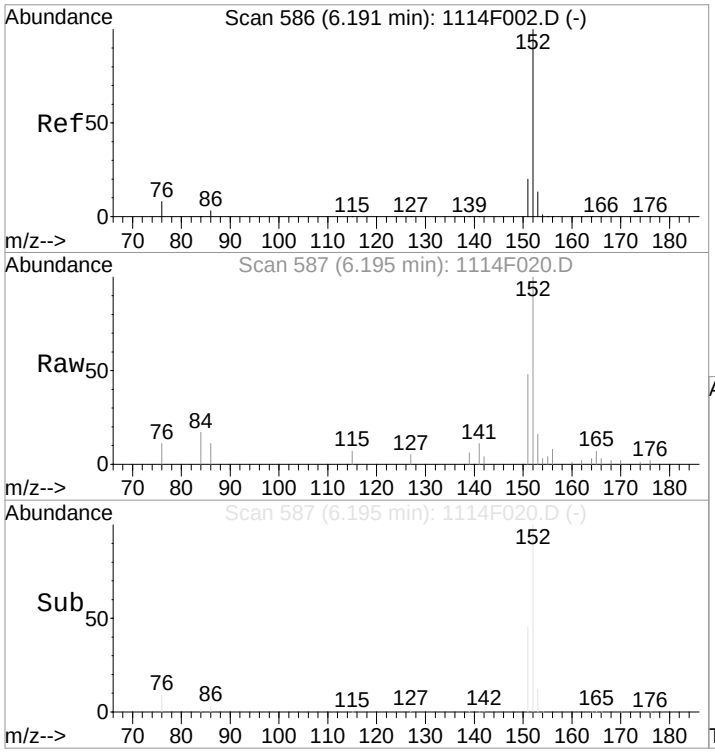


#7
2,6-Dimethylnaphthalene
Concen: 12.56 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:156 Resp: 1989

Ion	Ratio	Lower	Upper
156	100		
155	38.7	7.0	67.0
141	81.1	47.9	87.9

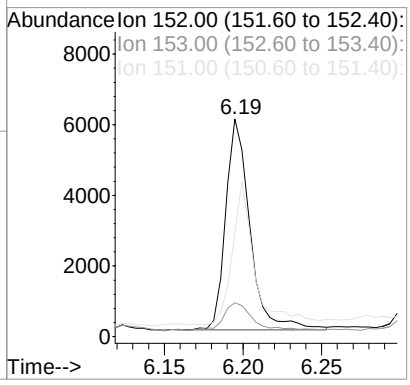


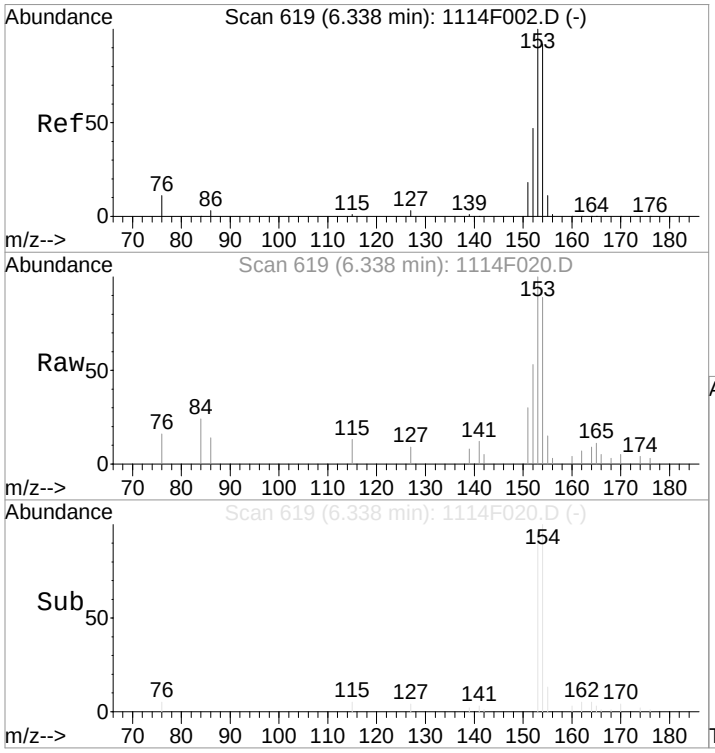


#9
Acenaphthylene
Concen: 16.97 ng/ml
RT: 6.19 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:152 Resp: 6431

Ion	Ratio	Lower	Upper
152	100		
153	13.0	0.0	42.9
151	43.5	0.2	40.2#

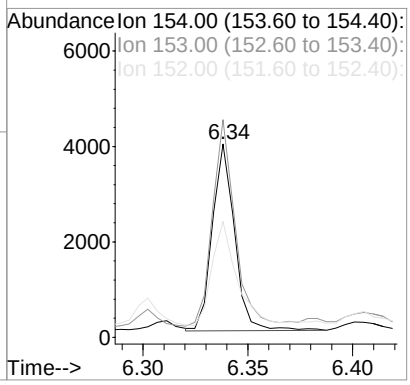


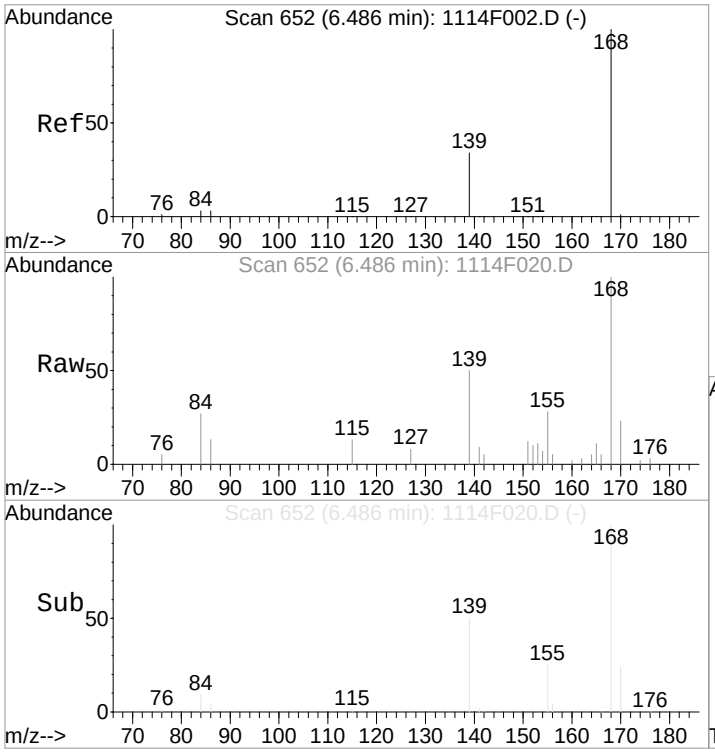


#10
Acenaphthene
Concen: 13.31 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:154 Resp: 2898

Ion	Ratio	Lower	Upper
154	100		
153	110.9	77.1	137.1
152	55.6	19.7	79.7

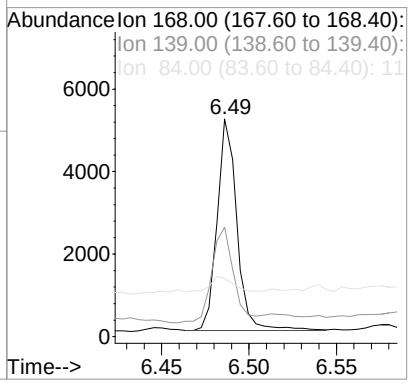




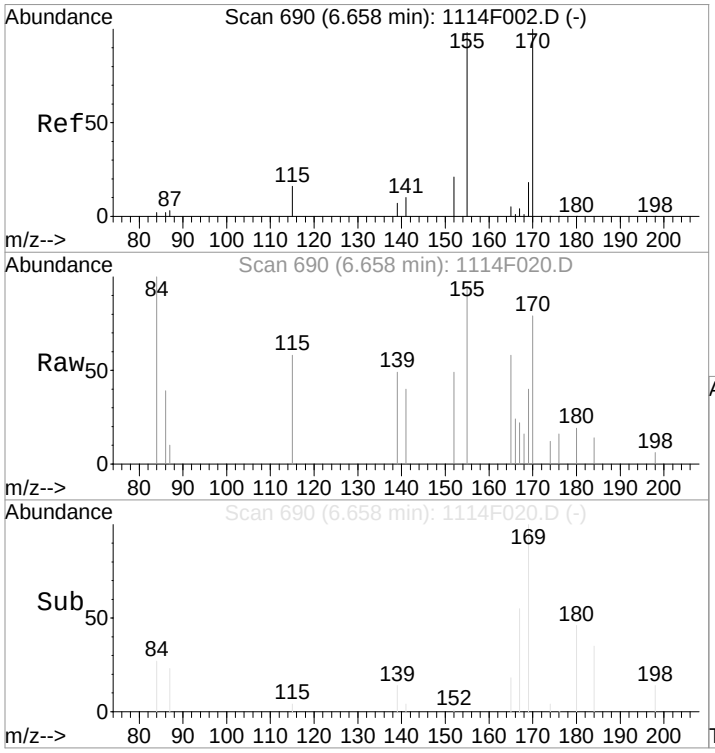
#11
Dibenzofuran
Concen: 11.57 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:168 Resp: 4043

Ion	Ratio	Lower	Upper
168	100		
139	44.6	0.0	55.8
84	6.4	0.0	23.5



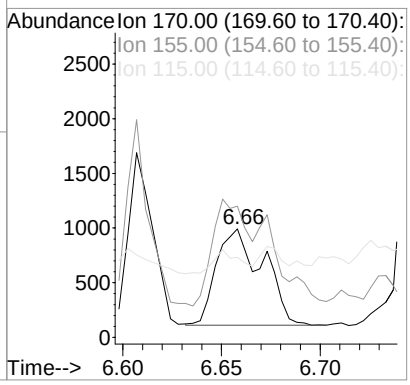
1st 12/03/18
2nd 12/06/18

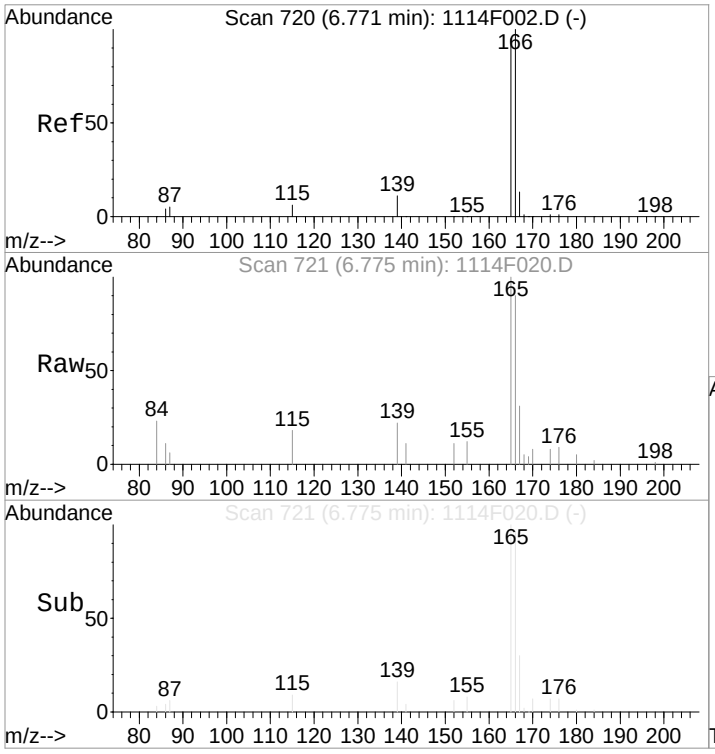


#12
2,3,5-Trimethylnaphthalene
Concen: 7.25 ng/ml
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:170 Resp: 1459

Ion	Ratio	Lower	Upper
170	100		
155	100.9	59.2	119.2
115	16.8	0.0	30.1

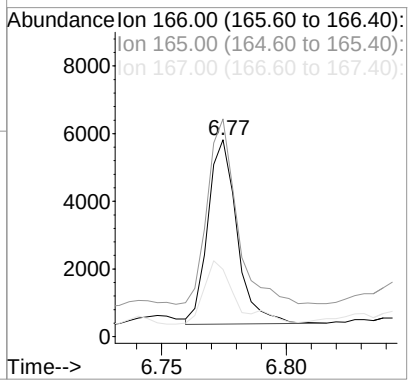




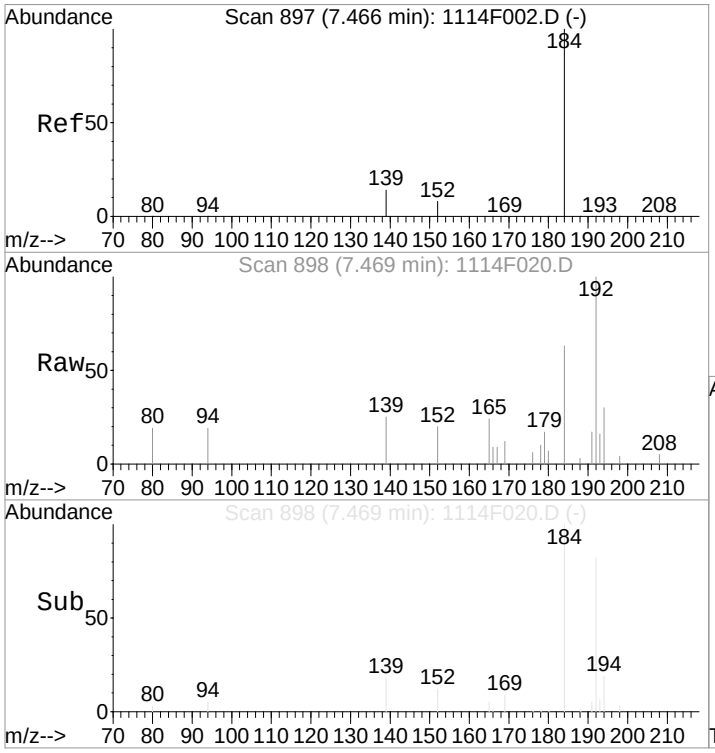
#14
Fluorene
Concen: 16.87 ng/ml
RT: 6.77 min Scan# 721
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:166 Resp: 4441

Ion	Ratio	Lower	Upper
166	100		
165	100.6	63.4	123.4
167	29.3	0.0	33.1



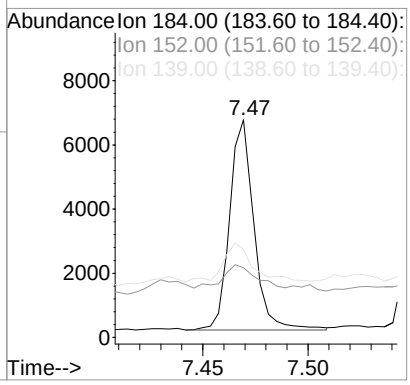
1st 12/03/18
2nd 12/06/18

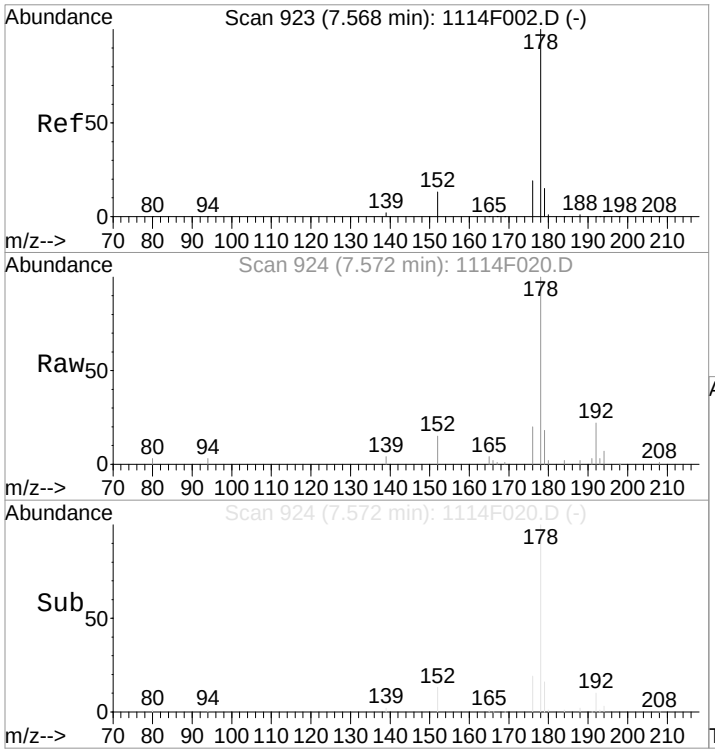


#16
Dibenzothiophene
Concen: 12.45 ng/ml
RT: 7.47 min Scan# 898
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:184 Resp: 5249

Ion	Ratio	Lower	Upper
184	100		
152	11.1	0.0	37.8
139	15.5	0.0	32.6

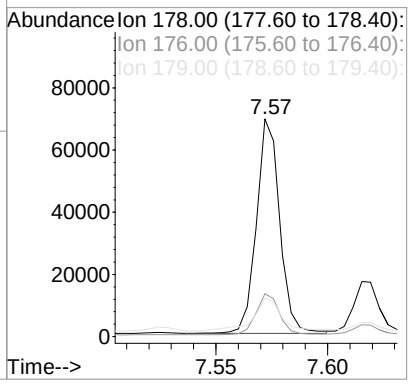




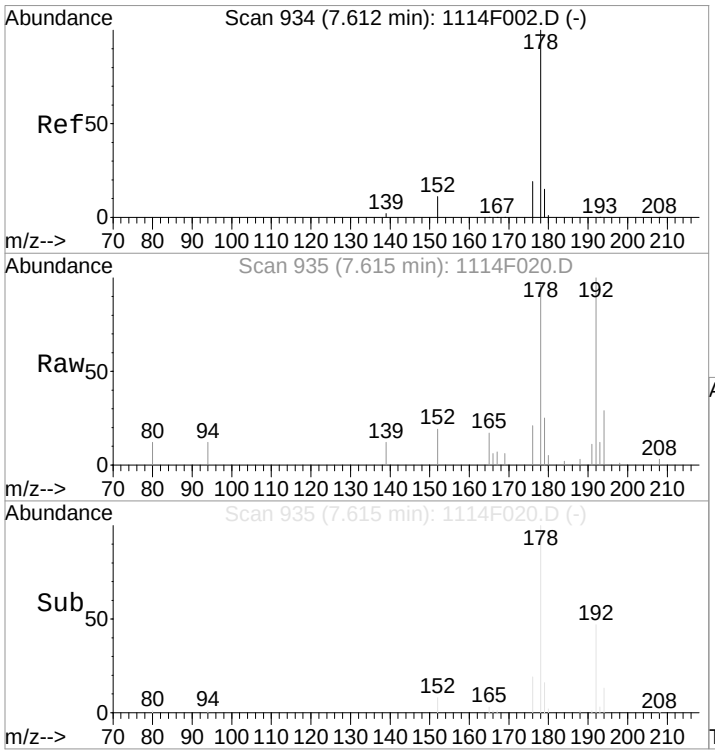
#17
Phenanthrene
Concen: 118.48 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:178 Resp: 49967

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.7
179	15.3	0.0	35.1



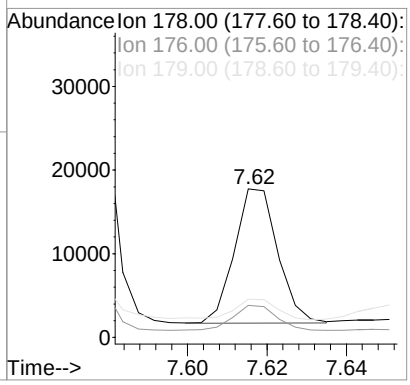
1st 12/03/18
2nd 12/06/18

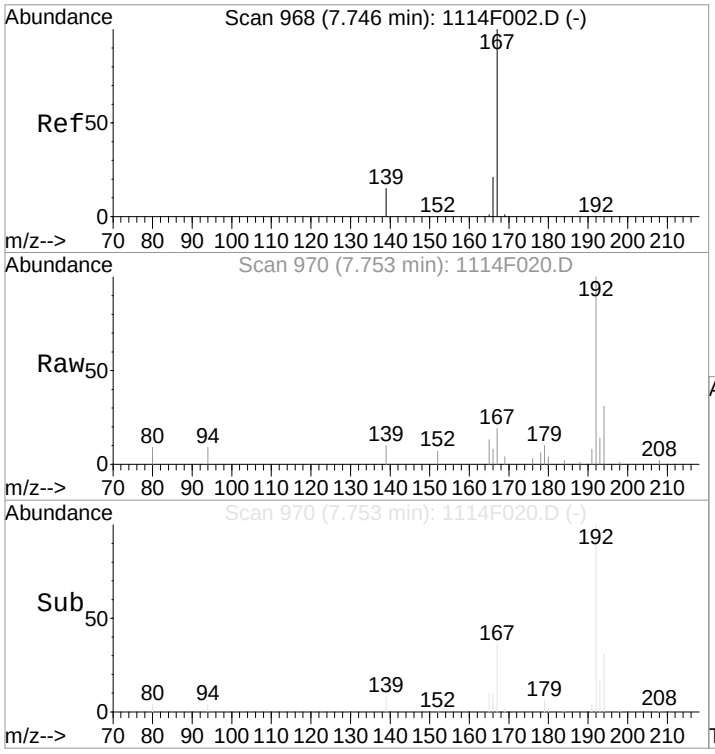


#18
Anthracene
Concen: 30.29 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:178 Resp: 12195

Ion	Ratio	Lower	Upper
178	100		
176	18.6	0.0	48.0
179	14.7	0.0	35.1

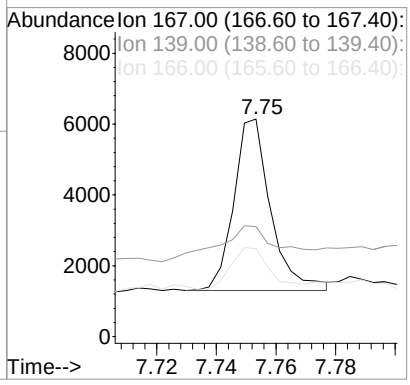




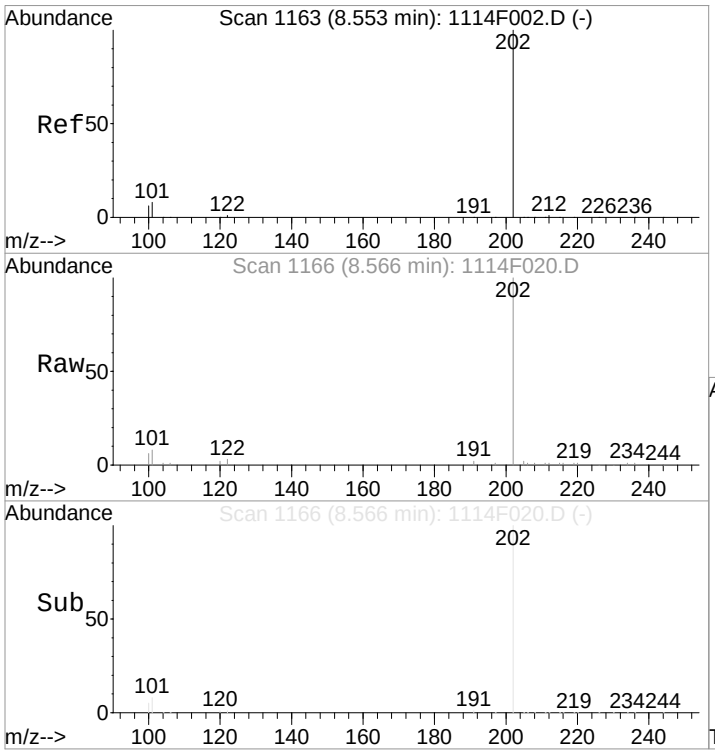
#19
Carbazole
Concen: 10.67 ng/ml
RT: 7.75 min Scan# 970
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:167 Resp: 4194

Ion	Ratio	Lower	Upper
167	100		
139	15.5	0.0	41.5
166	22.1	0.7	40.7



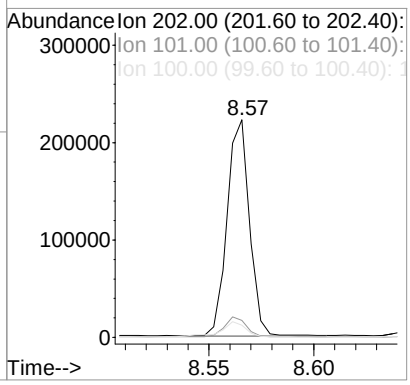
1st 12/03/18
2nd 12/06/18

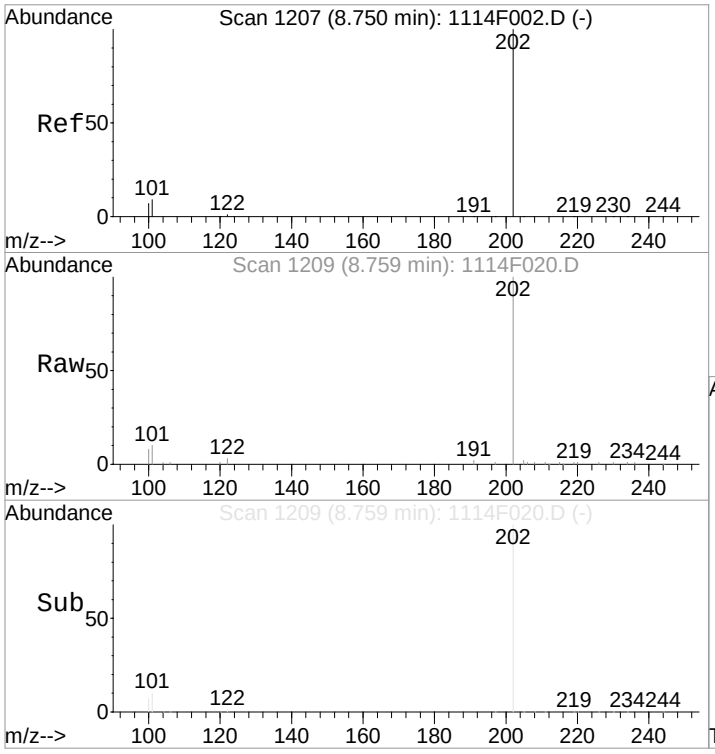


#21
Fluoranthene
Concen: 317.15 ng/ml
RT: 8.57 min Scan# 1166
Delta R.T. 0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:202 Resp: 165153

Ion	Ratio	Lower	Upper
202	100		
101	7.7	0.0	41.3
100	5.5	0.0	28.6

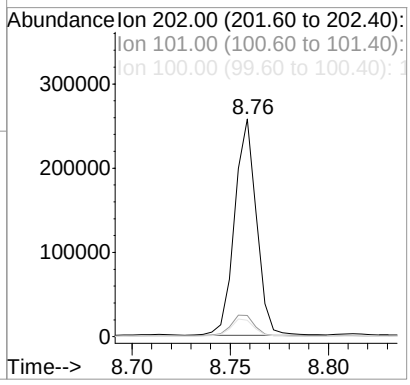




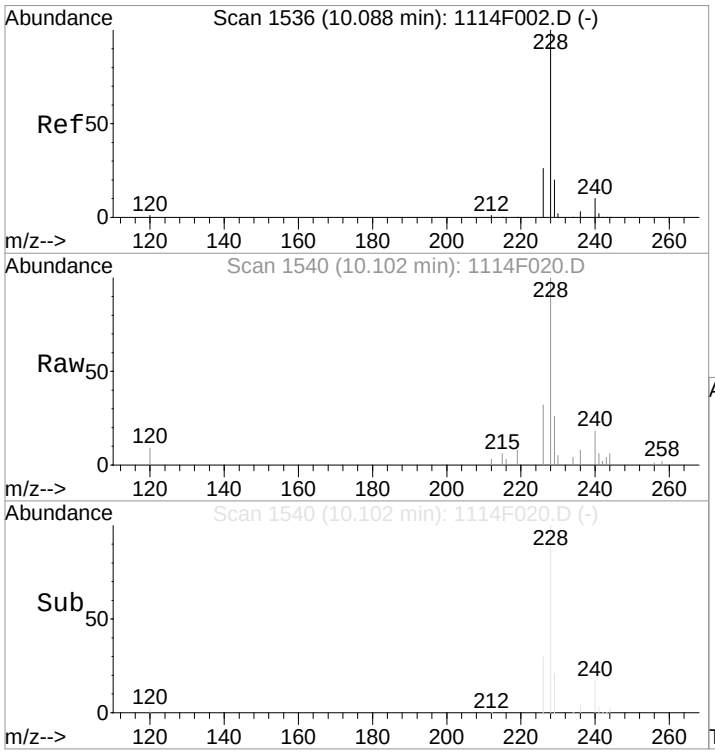
#24
Pyrene
Concen: 394.60 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. -0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:202 Resp: 197798

Ion	Ratio	Lower	Upper
202	100		
101	9.6	0.0	40.8
100	7.4	0.0	28.5



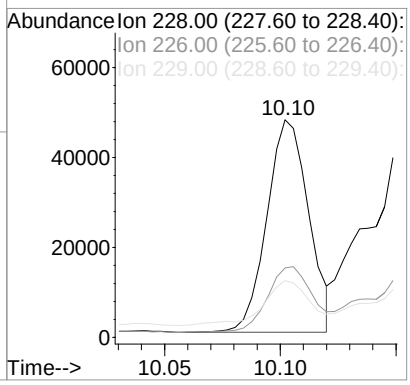
1st 12/03/18
2nd 12/06/18

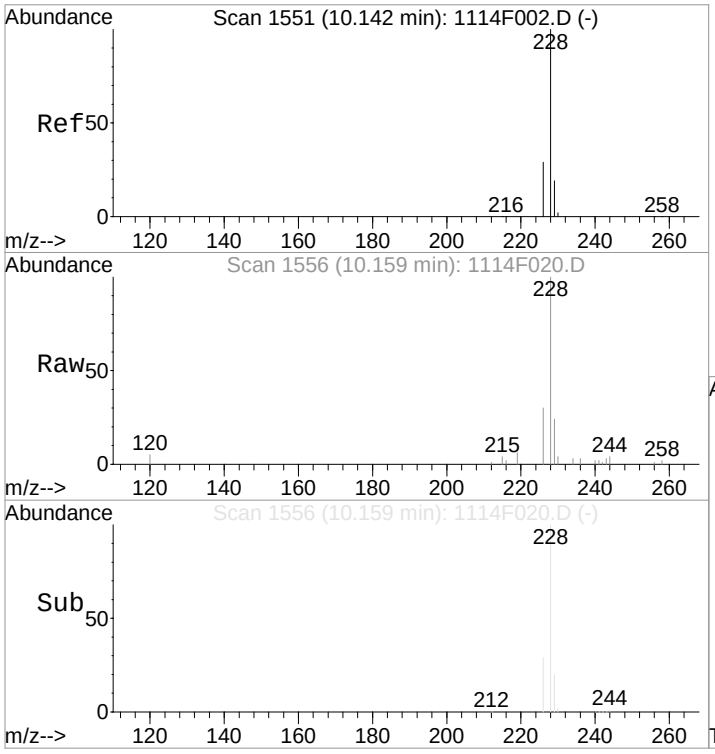


#26
Benz(a)anthracene
Concen: 125.82 ng/ml
RT: 10.10 min Scan# 1540
Delta R.T. 0.00 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:228 Resp: 59430

Ion	Ratio	Lower	Upper
228	100		
226	30.3	0.0	56.3
229	21.0	0.0	39.1

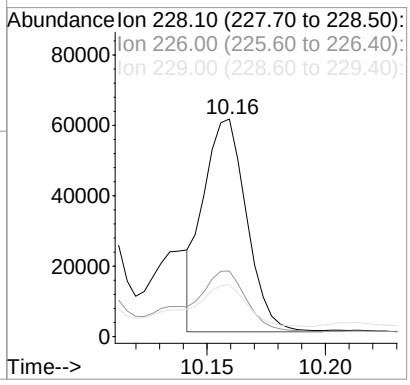




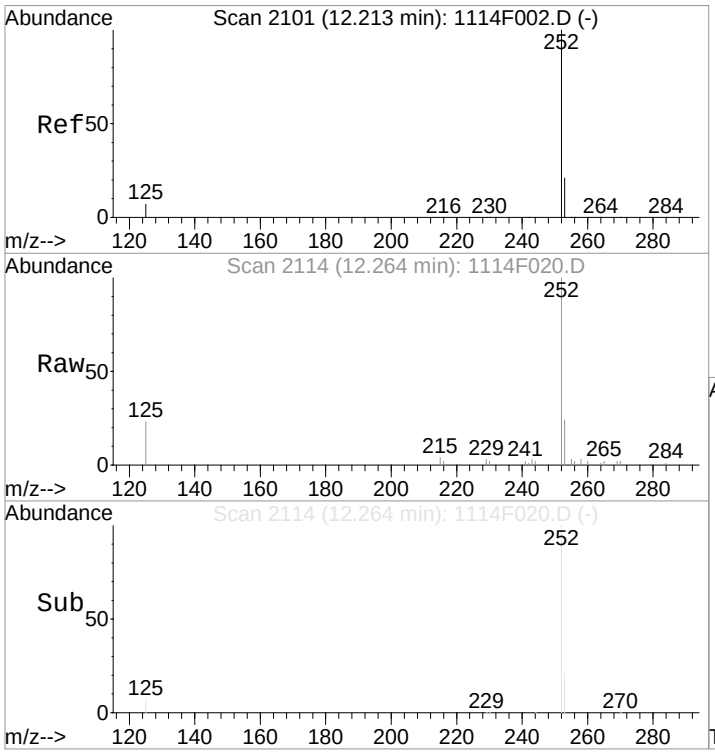
#27
Chrysene
Concen: 170.54 ng/ml m
RT: 10.16 min Scan# 1556
Delta R.T. 0.01 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:228 Resp: 77163

Ion	Ratio	Lower	Upper
228	100		
226	30.2	0.0	58.7
229	23.8	0.0	39.2



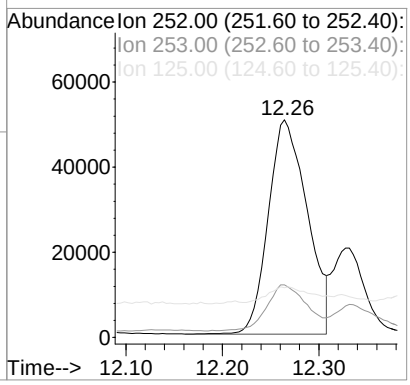
1st 12/03/18
2nd 12/06/18

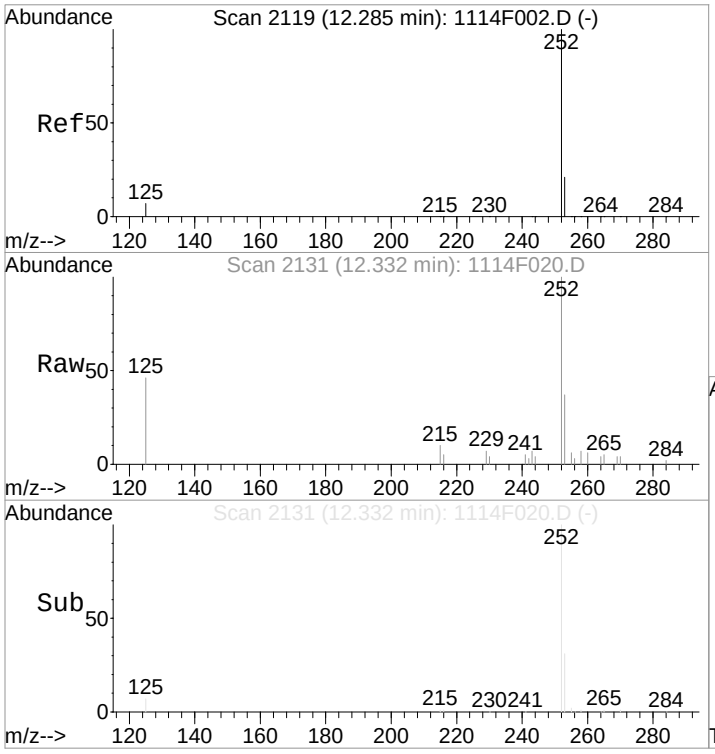


#29
Benzo(b)fluoranthene
Concen: 292.55 ng/ml
RT: 12.26 min Scan# 2114
Delta R.T. 0.04 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:252 Resp: 141912

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	7.3	0.0	29.5

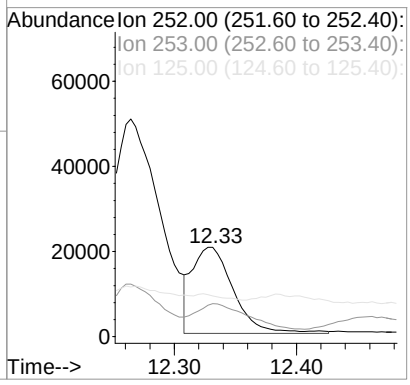




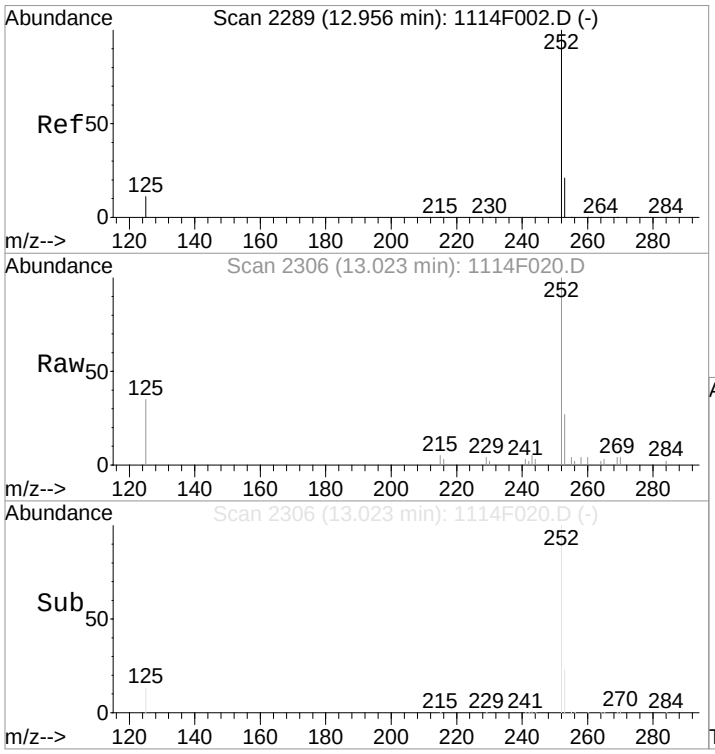
#30
Benzo(k)fluoranthene
Concen: 99.34 ng/ml m
RT: 12.33 min Scan# 2131
Delta R.T. 0.04 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:252 Resp: 47802

Ion	Ratio	Lower	Upper
252	100		
253	36.9	0.0	51.2
125	45.6	0.0	29.7#



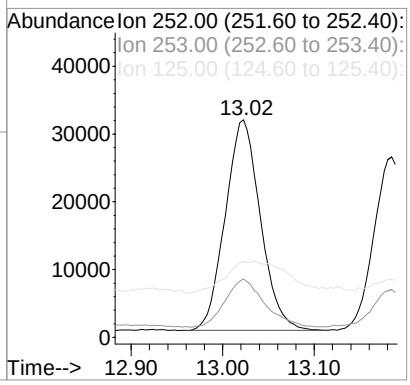
1st 12/03/18
2nd 12/06/18

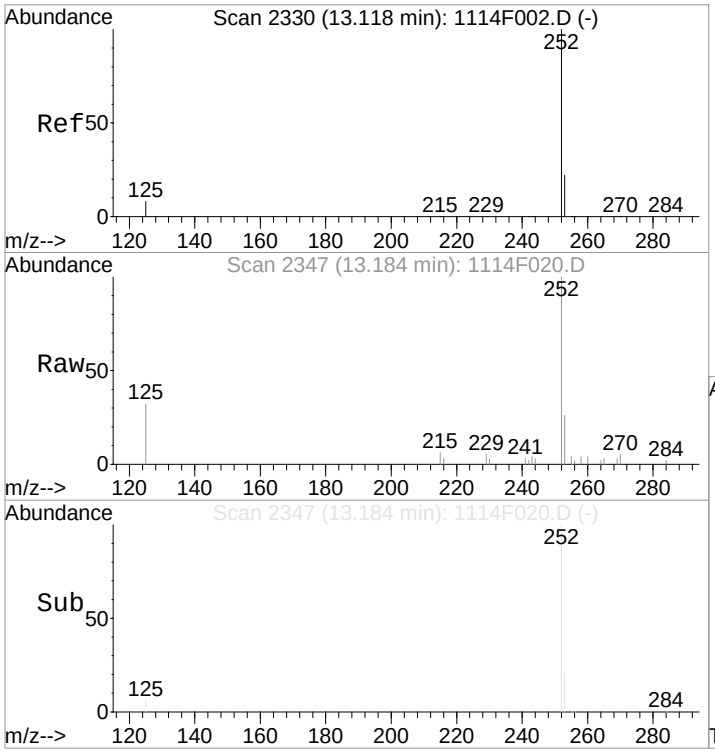


#31
Benzo(e)pyrene
Concen: 179.21 ng/ml
RT: 13.02 min Scan# 2306
Delta R.T. 0.05 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:252 Resp: 82864

Ion	Ratio	Lower	Upper
252	100		
253	22.8	0.0	51.3
125	15.0	0.0	33.5

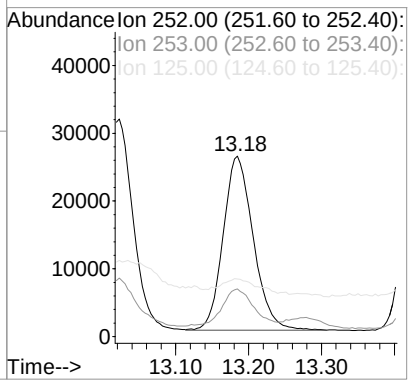




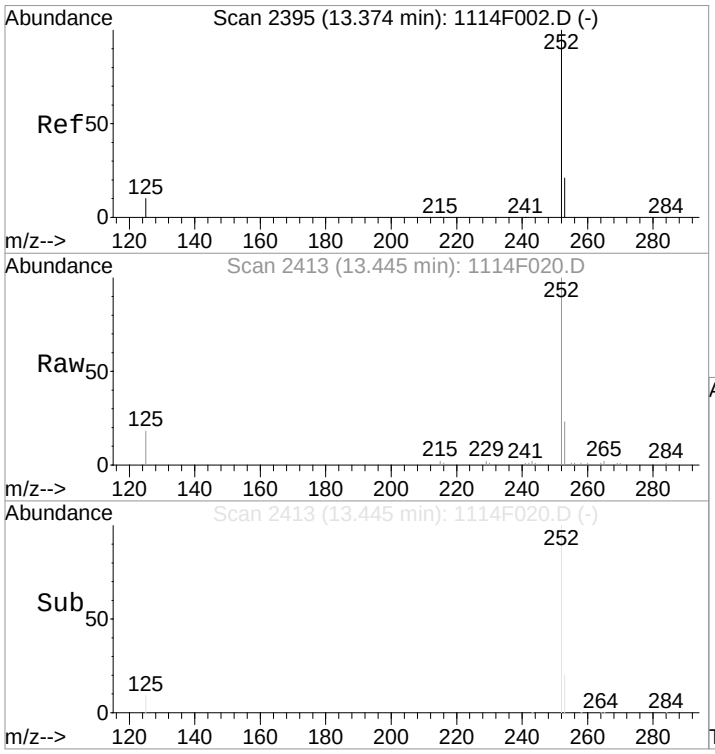
#32
Benzo(a)pyrene
Concen: 173.11 ng/ml
RT: 13.18 min Scan# 2347
Delta R.T. 0.06 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:252 Resp: 73641

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	50.9
125	10.1	0.0	30.3



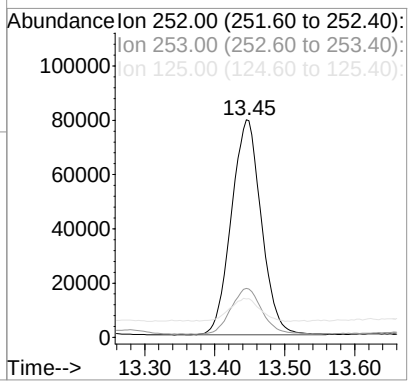
1st 12/03/18
2nd 12/06/18

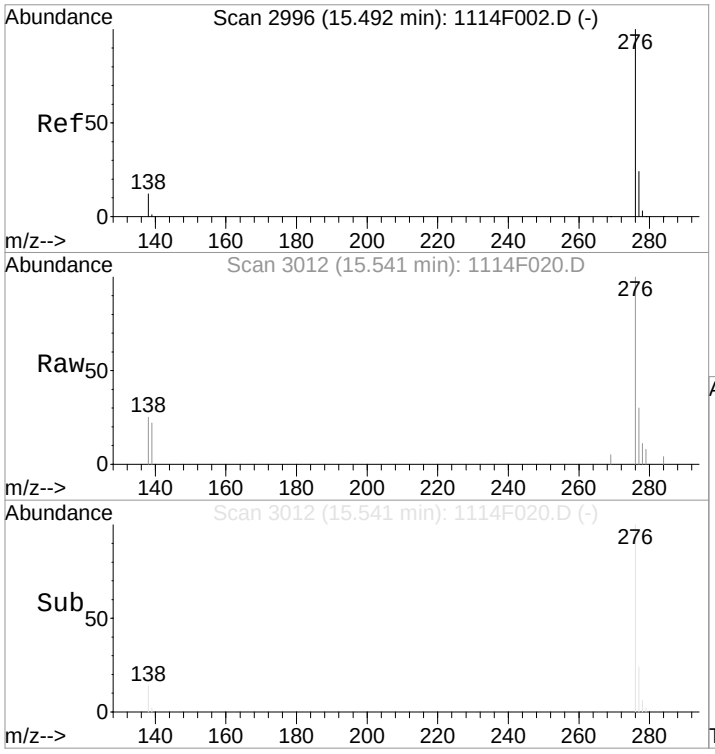


#33
Perylene
Concen: 529.82 ng/ml
RT: 13.45 min Scan# 2413
Delta R.T. 0.07 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:252 Resp: 236436

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	51.2
125	10.2	0.0	33.8

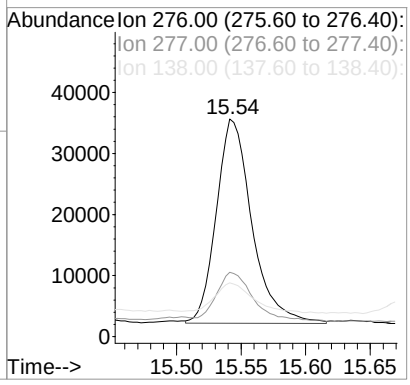




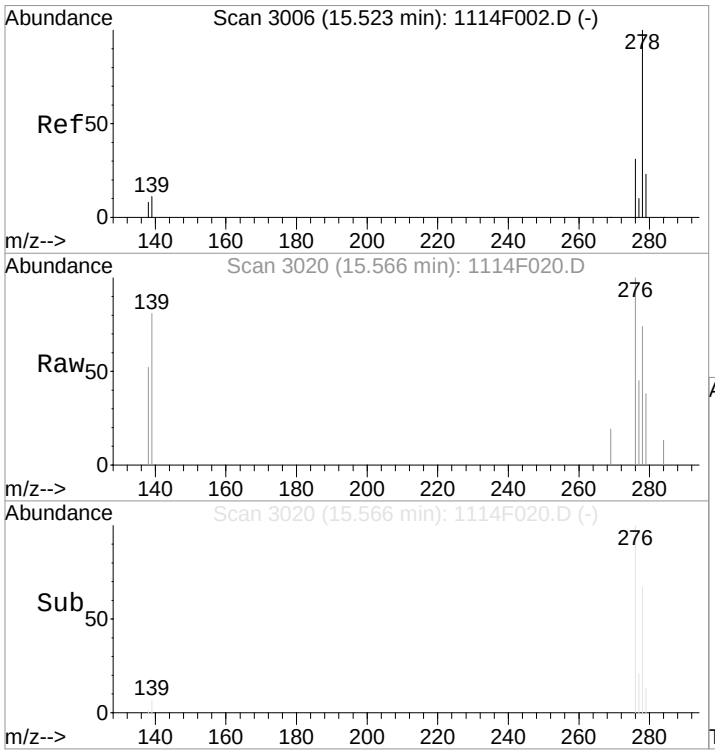
#34
Indeno(1,2,3-cd)pyrene
Concen: 154.12 ng/ml
RT: 15.54 min Scan# 3012
Delta R.T. 0.06 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:276 Resp: 64288

Ion	Ratio	Lower	Upper
276	100		
277	24.2	0.0	53.4
138	15.0	0.0	37.7



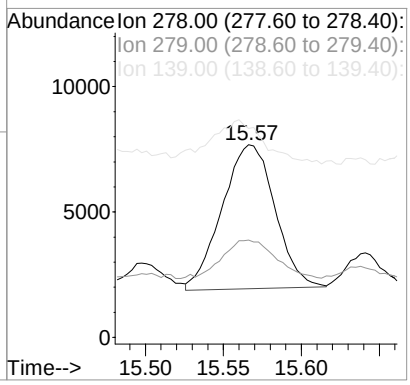
1st 12/03/18
2nd 12/06/18

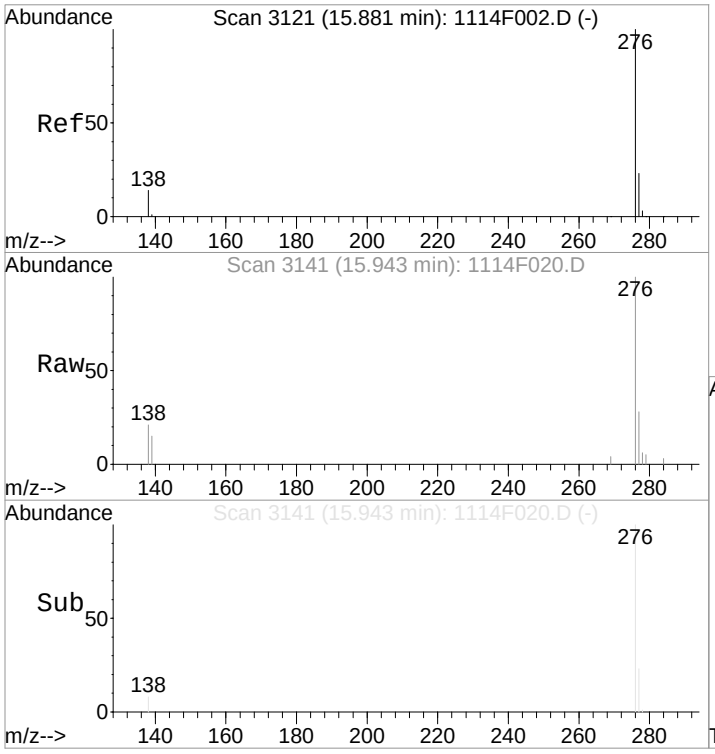


#35
Dibenz(a,h)anthracene
Concen: 32.05 ng/ml
RT: 15.57 min Scan# 3020
Delta R.T. 0.04 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:278 Resp: 13554

Ion	Ratio	Lower	Upper
278	100		
279	26.5	0.0	53.5
139	23.1	0.0	35.0

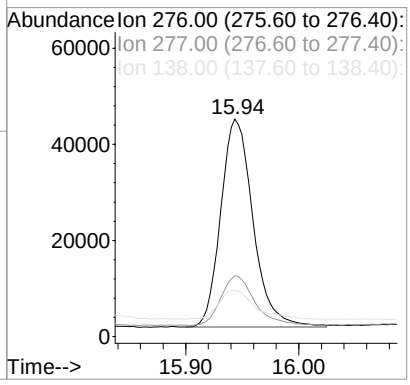




#36
Benzo(g,h,i)perylene
Concen: 176.35 ng/ml
RT: 15.94 min Scan# 3141
Delta R.T. 0.06 min
Lab File: 1114F020.D
Acq: 14 Nov 2018 1:57 pm

Tgt Ion:276 Resp: 86145

Ion	Ratio	Lower	Upper
276	100		
277	23.7	0.0	53.1
138	13.9	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F020.D Vial: 20
Acq On : 14 Nov 2018 1:57 pm Operator: LWeiskopf
Sample : K1810430-008DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:18 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	53005	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	31761	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	67603	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	73060	200.00	ng/ml	0.00
28) Perylene-d12	13.36	264	78515	200.00	ng/ml	0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	17529	118.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	11.85%		
13) Fluorene-d10	6.75	176	33358	164.26	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.43%		
22) Fluoranthene-d10	8.55	212	68265	160.22	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	16.02%		
25) Terphenyl-d14	8.89	244	60254	190.14	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	19.01%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	7197	23.52	ng/ml	99
4) 2-Methylnaphthalene	5.41	142	2420	13.12	ng/ml	94
5) 1-Methylnaphthalene	5.50	142	1078	6.07	ng/ml	87
6) Biphenyl	5.82	154	1439	6.25	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.96	156	1989	12.56	ng/ml	88
9) Acenaphthylene	6.19	152	6431	16.97	ng/ml#	69
10) Acenaphthene	6.34	154	2898	13.31	ng/ml	95
11) Dibenzofuran	6.49	168	4043	11.57	ng/ml	66
12) 2,3,5-Trimethylnaphthalene	6.66	170	1459	7.25	ng/ml	87
14) Fluorene	6.77	166	4441	16.87	ng/ml	88
16) Dibenzothiophene	7.47	184	5249	12.45	ng/ml	92
17) Phenanthrene	7.57	178	49967	118.48	ng/ml	99
18) Anthracene	7.62	178	12195	30.29	ng/ml	99
19) Carbazole	7.75	167	4194	10.67	ng/ml	94
21) Fluoranthene	8.57	202	165153	317.15	ng/ml	91
24) Pyrene	8.76	202	197798	394.60	ng/ml	97
26) Benz(a)anthracene	10.10	228	59430	125.82	ng/ml	94
27) Chrysene	10.16	228	77163m	170.54	ng/ml	
29) Benzo(b)fluoranthene	12.26	252	141912	292.55	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	47802m	99.34	ng/ml	
31) Benzo(e)pyrene	13.02	252	82864	179.21	ng/ml	97
32) Benzo(a)pyrene	13.18	252	73641	173.11	ng/ml	99
33) Perylene	13.45	252	236436	529.82	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.54	276	64288	154.12	ng/ml	96
35) Dibenz(a,h)anthracene	15.57	278	13554	32.05	ng/ml	89
36) Benzo(g,h,i)perylene	15.94	276	86145	176.35	ng/ml	94

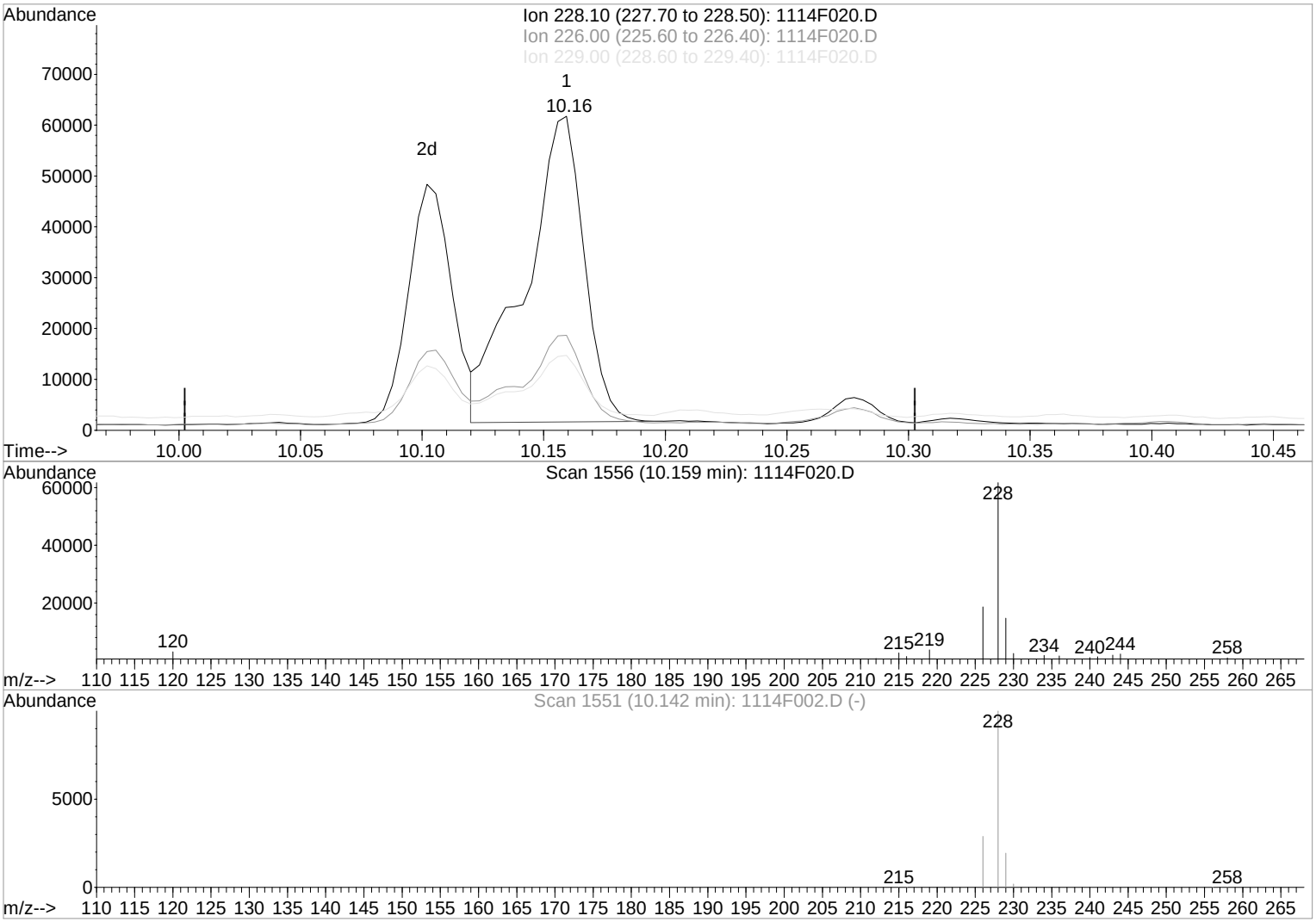
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F020.D Vial: 20
Acq On : 14 Nov 2018 1:57 pm Operator: LWeiskopf
Sample : K1810430-008DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:18 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F020.D

(27) Chrysene (T)

10.16min 222.94ng/ml

response 100870

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	28.57
229.00	19.20	18.94
0.00	0.00	0.00

Manual Integration:

Before

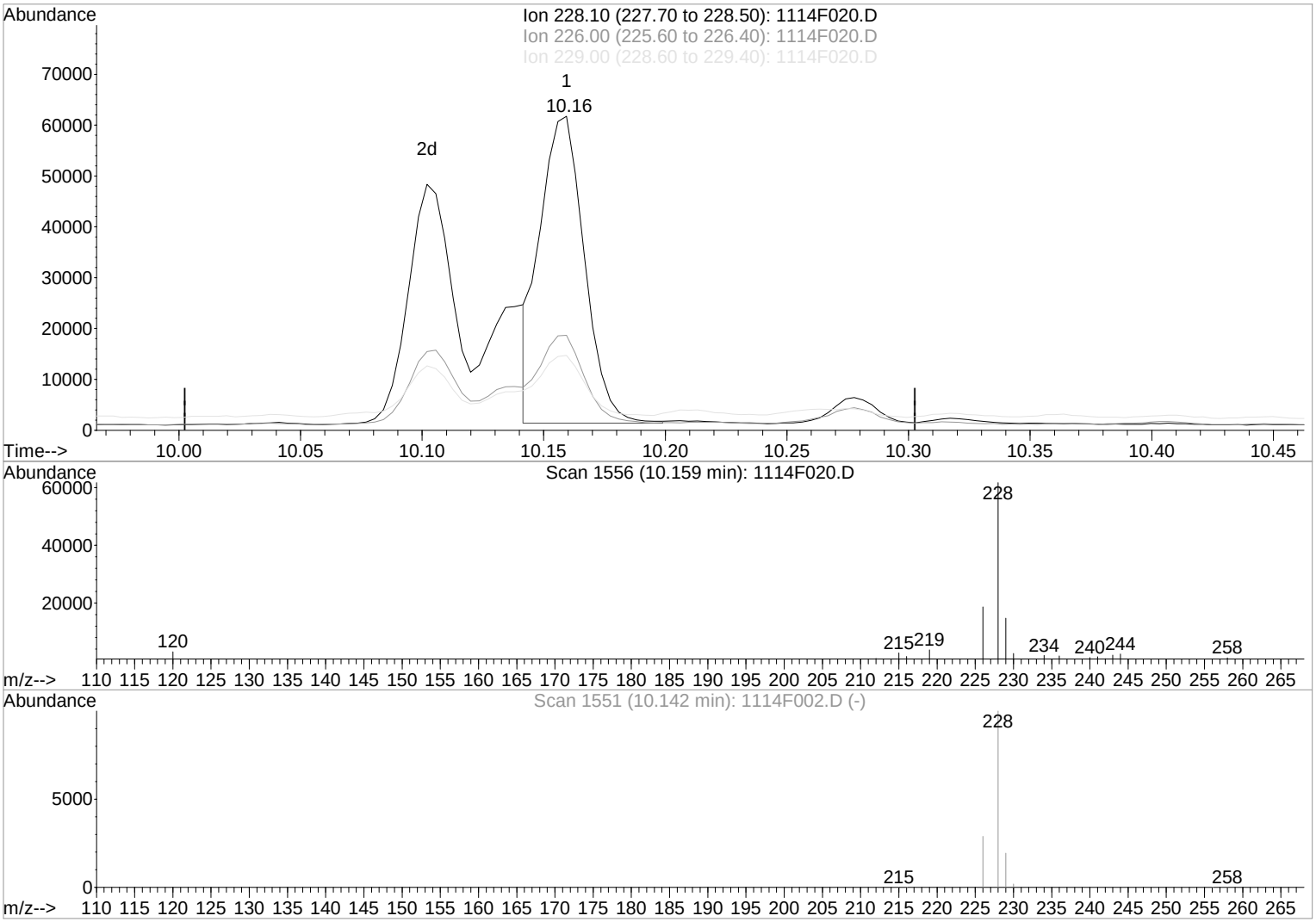
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F020.D Vial: 20
Acq On : 14 Nov 2018 1:57 pm Operator: LWeiskopf
Sample : K1810430-008DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:18 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F020.D

(27) Chrysene (T)

10.16min 170.54ng/ml m

response 77163

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	30.19
229.00	19.20	23.81
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

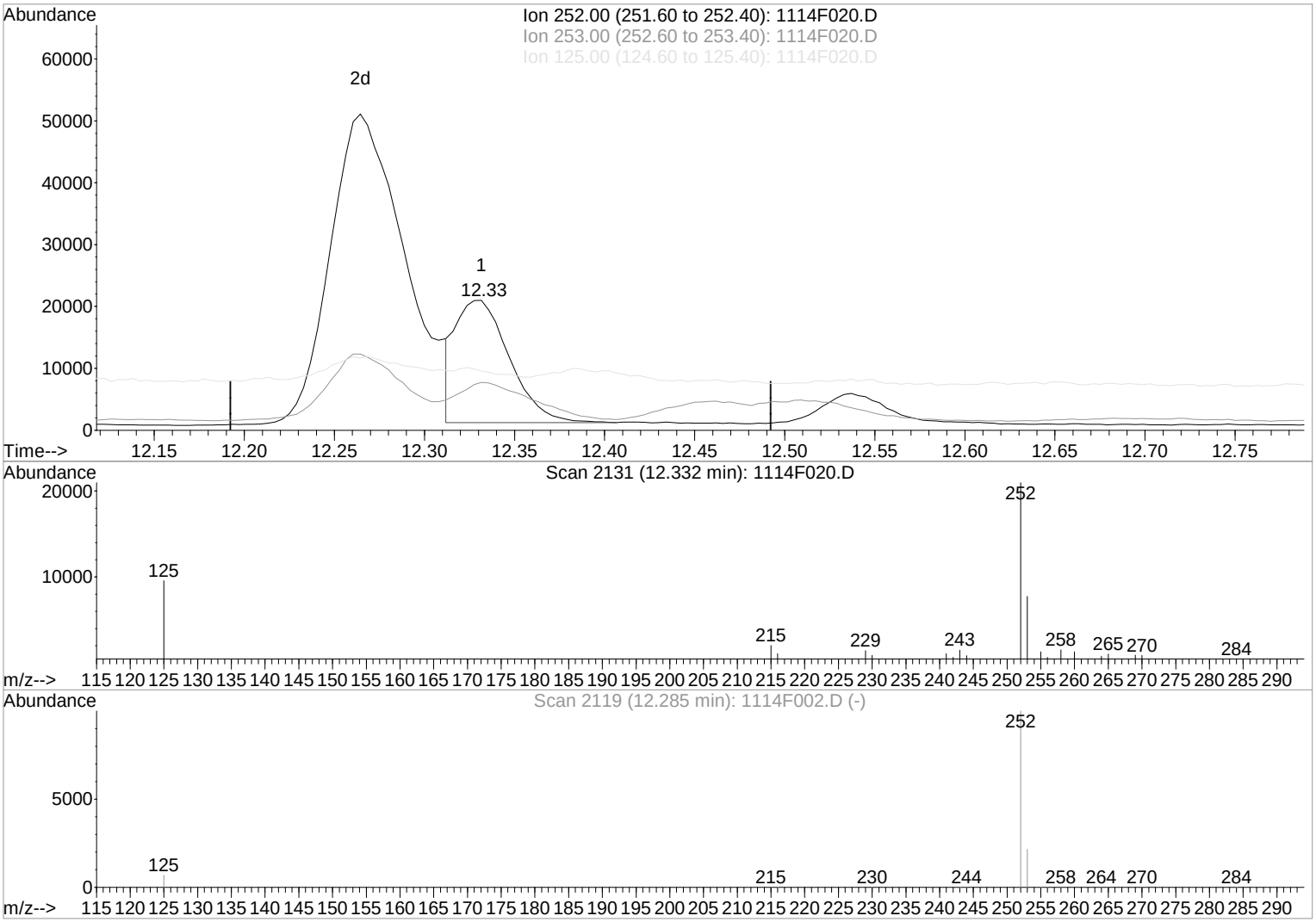
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F020.D Vial: 20
Acq On : 14 Nov 2018 1:57 pm Operator: LWeiskopf
Sample : K1810430-008DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:18 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F020.D

(30) Benzo(k)fluoranthene (T)

12.33min 85.51ng/ml

response 41149

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	30.53
125.00	9.70	1.59
0.00	0.00	0.00

Manual Integration:

Before

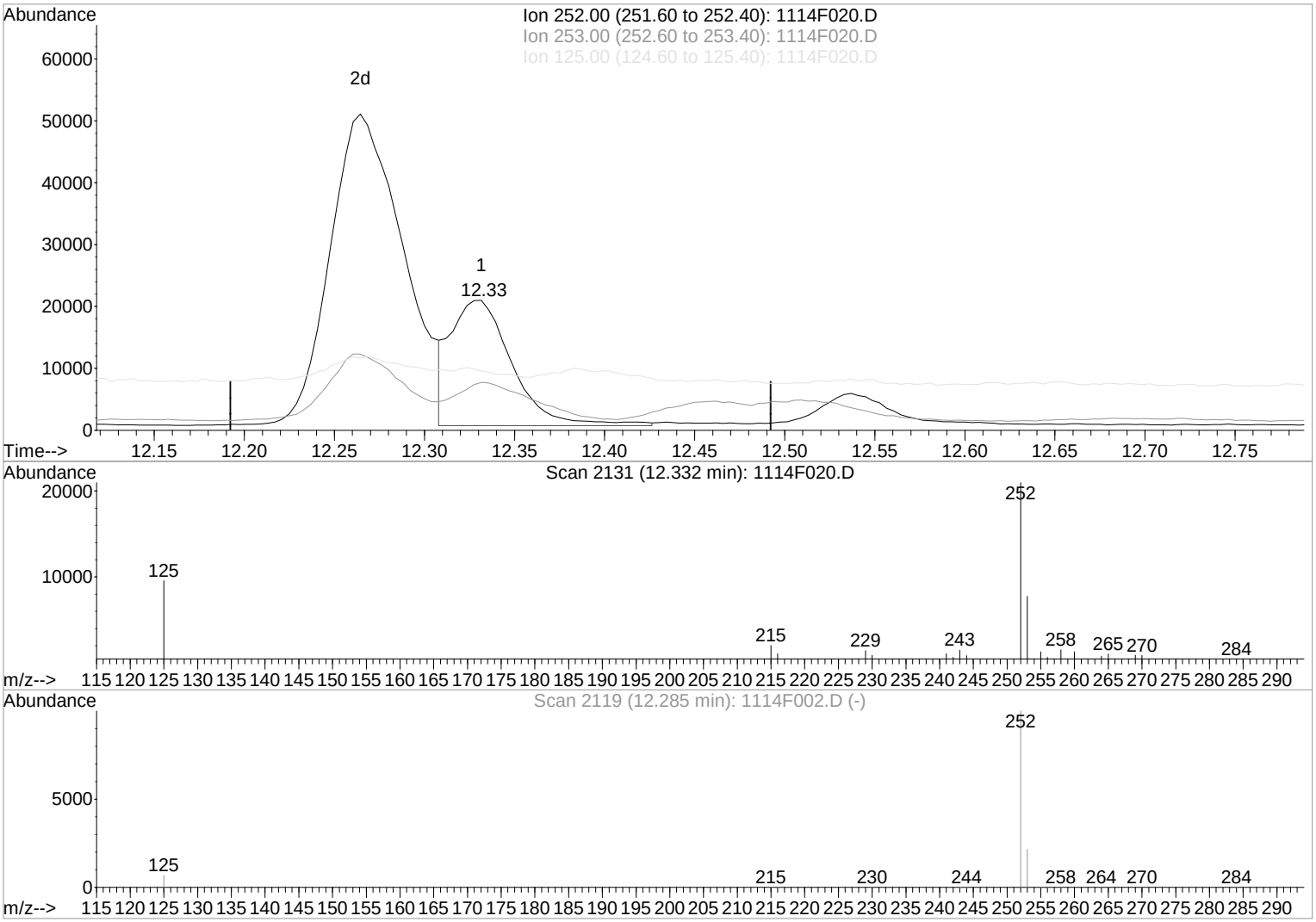
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F020.D Vial: 20
Acq On : 14 Nov 2018 1:57 pm Operator: LWeiskopf
Sample : K1810430-008DIL 5X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:19 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F020.D

(30) Benzo(k)fluoranthene (T)

12.33min 99.34ng/ml m

response 47802

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	36.91
125.00	9.70	45.64#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F025.D
Lab ID: K1810430-009
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 16:09
Date Quantitated: 11/30/2018 13:24
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F025.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 16:09	**Quant Date:**	11/30/2018 13:24	**Vial:**	25
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	10.0
Lab ID:	K1810430-009			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702221	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	58523	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	34733	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	71985	200.00	OK
4	Chrysene-d12	10.11	0.01	240	73648	200.00	OK
5	Perylene-d12	13.33	0.04	264	81339	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	17459	78.61	79	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	35121	77.41	77	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	31203	97.68	98	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	2747**m**	8.13	14	JD	
1	2-Methylnaphthalene	5.41		0.00	142	953	4.68	8.1	JD	
2	Acenaphthylene	6.20	0.01	0.00	152	7847	18.93	33	D	
2	Acenaphthene	6.34		0.00	154	2028	8.52	15	D	
2	Dibenzofuran	6.49		0.00	168	3084	8.07	14	D	
2	Fluorene	6.77		0.00	166	5857	20.34	35	D	
3	Phenanthrene	7.57		0.00	178	43437	96.73	170	D	
3	Anthracene	7.62	0.01	0.00	178	15625	36.45	63	D	
3	Fluoranthene	8.56	0.01	0.00	202	338968	611.31	1100	D	
4	Pyrene	8.76	0.01	0.00	202	294558	582.94	1000	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	67069	140.85	240	D	
4	Chrysene	10.15	0.01	0.00	228	139746	306.39	530	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F025.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 16:09	**Quant Date:**	11/30/2018 13:24	**Vial:**	25
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	10.0
Lab ID:	K1810430-009			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	152903	304.27	530	D	
5	Benzo(k)fluoranthene	12.31	0.03	0.00	252	48343	96.97	170	D	
5	Benzo(a)pyrene	13.16	0.04	0.00	252	63559	144.22	250	D	
5	Indeno(1,2,3-cd)pyrene	15.52	0.03	0.00	276	53641	124.13	220	D	
5	Dibenz(a,h)anthracene	15.55	0.03	0.00	278	11920	27.21	47	D	
5	Benzo(g,h,i)perylene	15.92	0.04	0.00	276	62630	123.76	210	D	

Prep Amount:	40.044 g	**Dilution:**	10.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	28.8 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

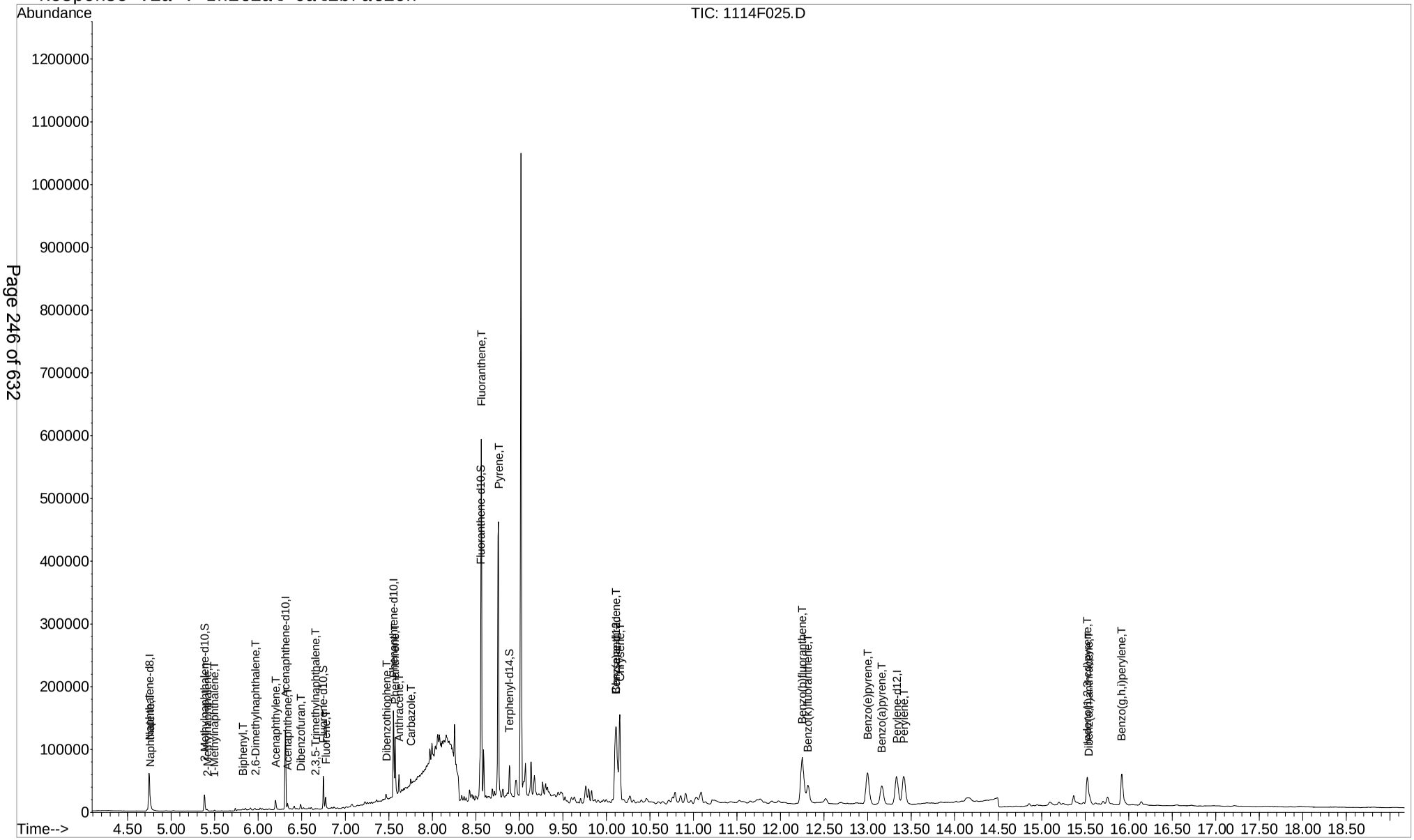
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

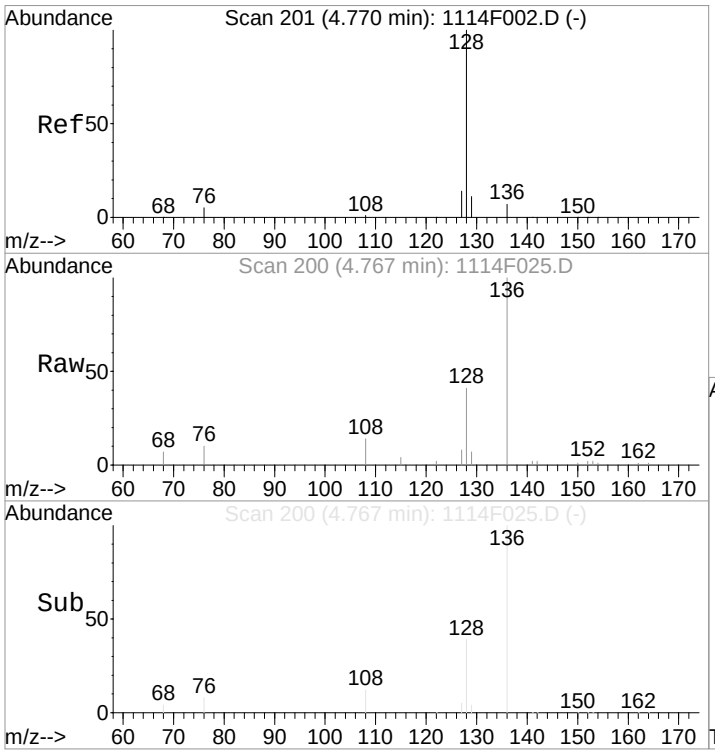
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F025.D Vial: 25
Acq On : 14 Nov 2018 4:09 pm Operator: LWeiskopf
Sample : K1810430-009DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:24 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



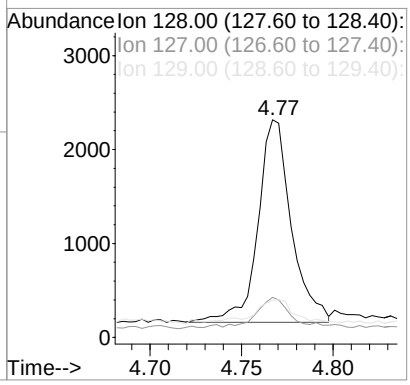
1st 12/03/18
2nd 12/06/18

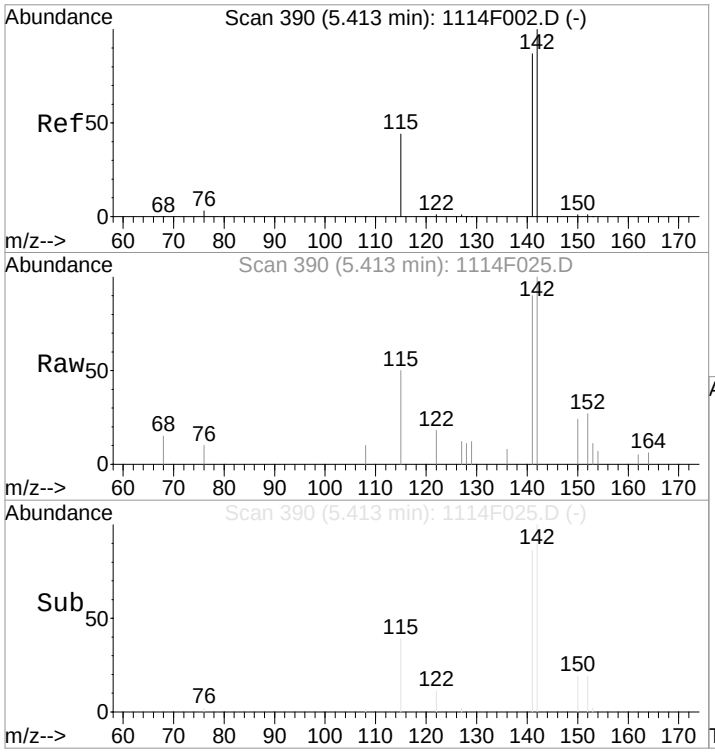


#2
Naphthalene
Concen: 8.13 ng/ml m
RT: 4.77 min Scan# 200
Delta R.T. -0.01 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:128 Resp: 2747

Ion	Ratio	Lower	Upper
128	100		
127	18.5	0.0	43.7
129	17.1	0.0	30.8

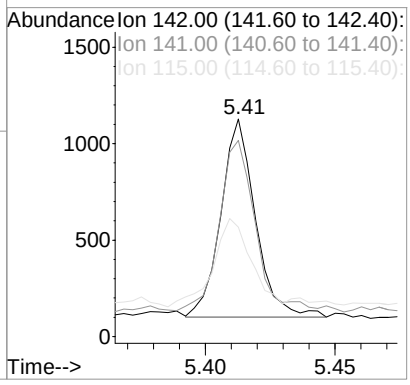




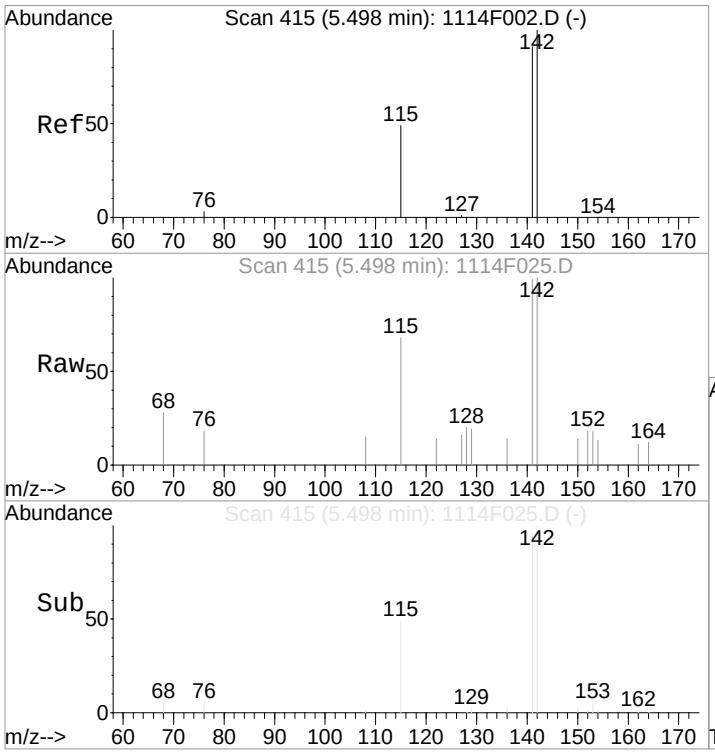
#4
2-Methylnaphthalene
Concen: 4.68 ng/ml
RT: 5.41 min Scan# 390
Delta R.T. -0.01 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:142 Resp: 953

Ion	Ratio	Lower	Upper
142	100		
141	83.7	56.8	116.8
115	37.3	13.3	53.3



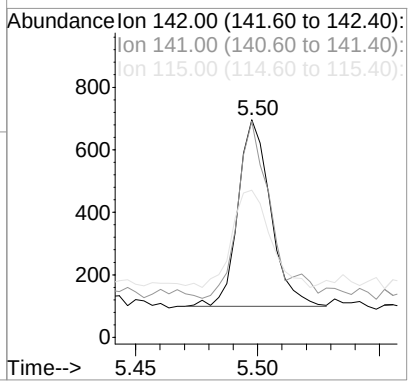
1st 12/03/18
2nd 12/06/18

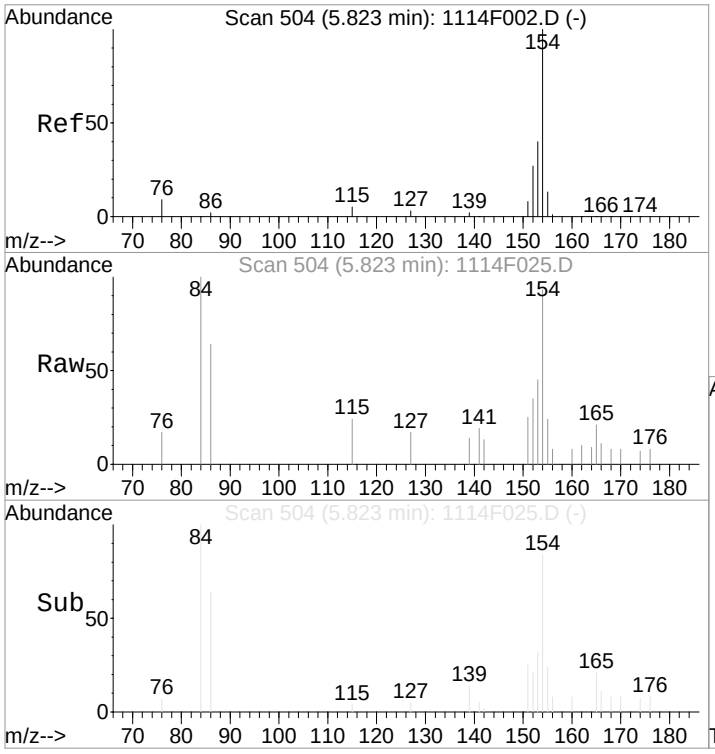


#5
1-Methylnaphthalene
Concen: 2.82 ng/ml
RT: 5.50 min Scan# 415
Delta R.T. -0.01 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:142 Resp: 553

Ion	Ratio	Lower	Upper
142	100		
141	92.5	59.7	119.7
115	51.1	13.7	53.7

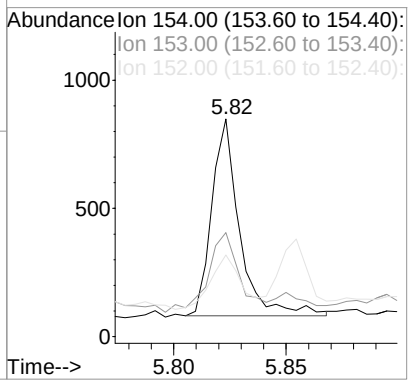




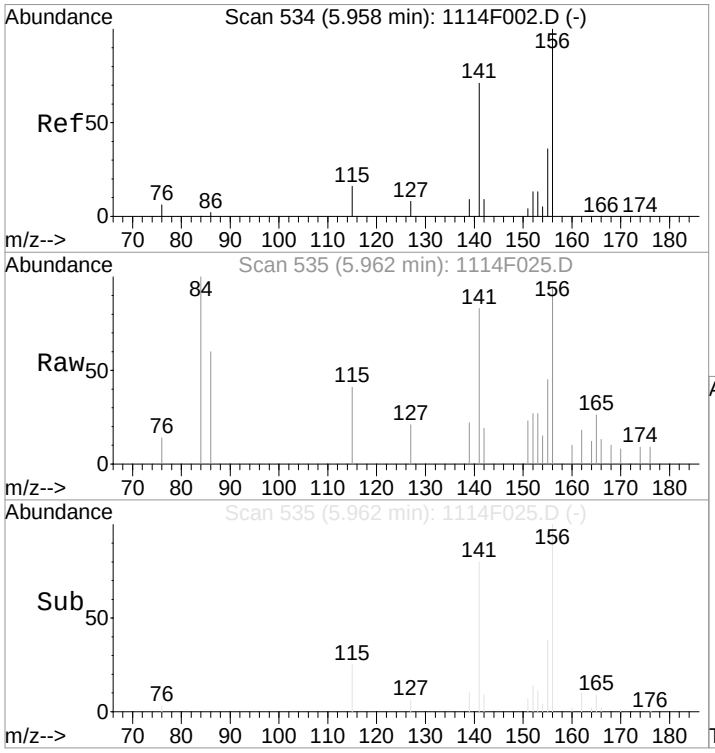
#6
Biphenyl
Concen: 2.59 ng/ml
RT: 5.82 min Scan# 504
Delta R.T. -0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:154 Resp: 658

Ion	Ratio	Lower	Upper
154	100		
153	38.3	11.4	71.4
152	26.6	7.1	47.1



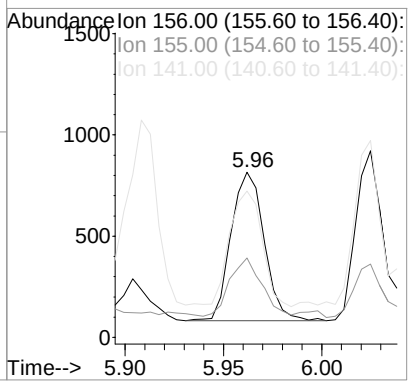
1st 12/03/18
2nd 12/06/18

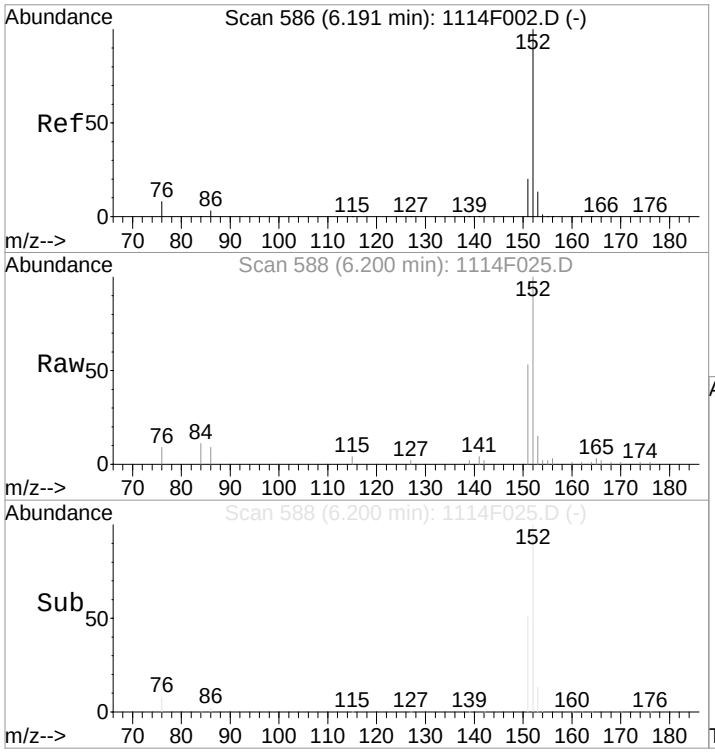


#7
2,6-Dimethylnaphthalene
Concen: 4.92 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. 0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:156 Resp: 860

Ion	Ratio	Lower	Upper
156	100		
155	40.1	7.0	67.0
141	76.6	47.9	87.9

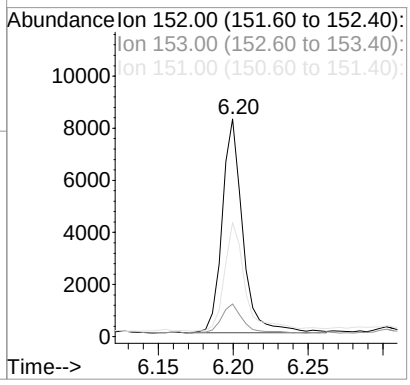




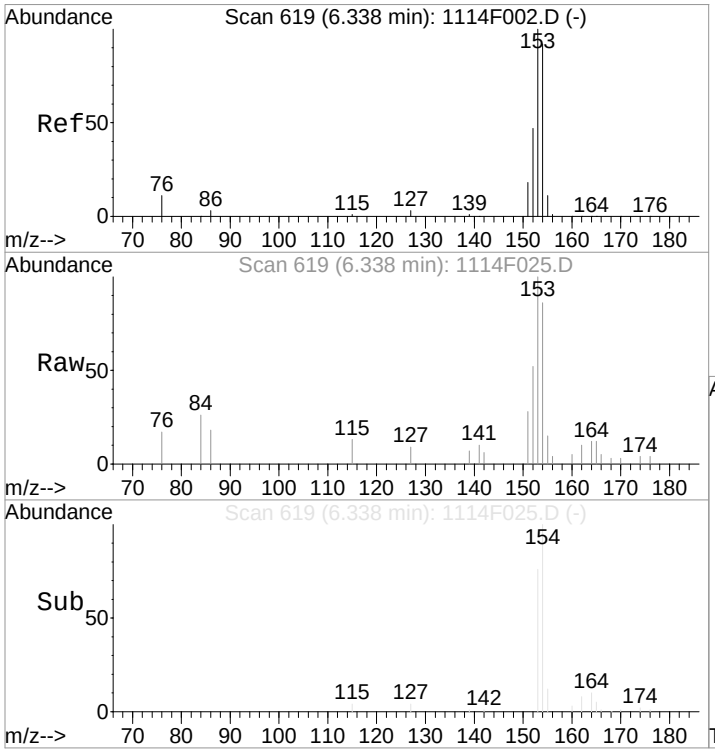
#9
Acenaphthylene
Concen: 18.93 ng/ml
RT: 6.20 min Scan# 588
Delta R.T. 0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:152 Resp: 7847

Ion	Ratio	Lower	Upper
152	100		
153	13.6	0.0	42.9
151	50.6	0.2	40.2#



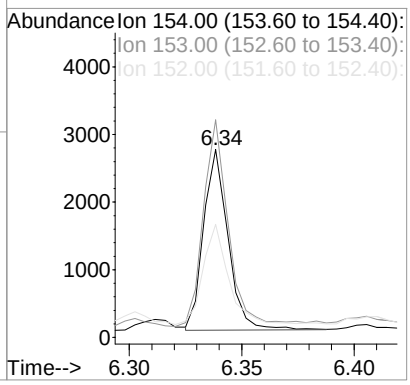
1st 12/03/18
2nd 12/06/18

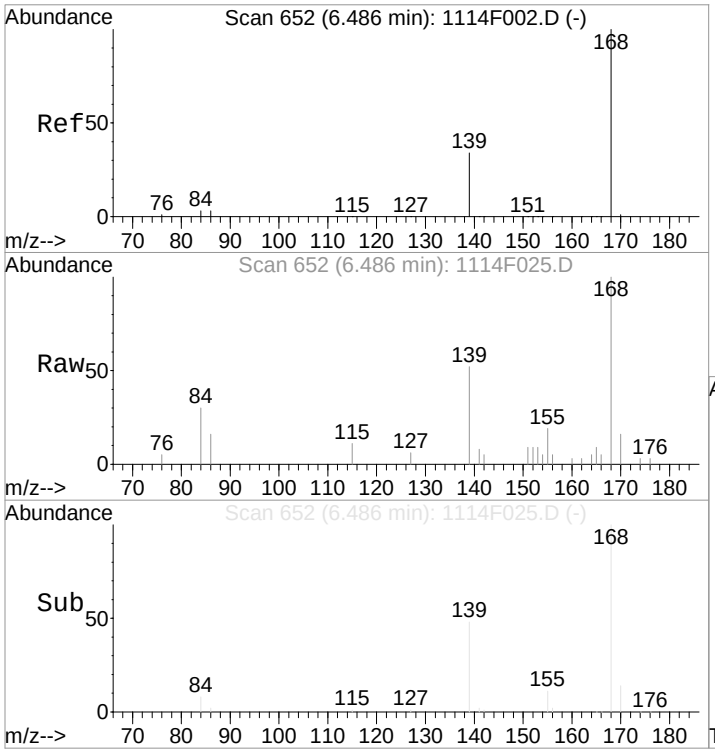


#10
Acenaphthene
Concen: 8.52 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:154 Resp: 2028

Ion	Ratio	Lower	Upper
154	100		
153	112.9	77.1	137.1
152	55.3	19.7	79.7

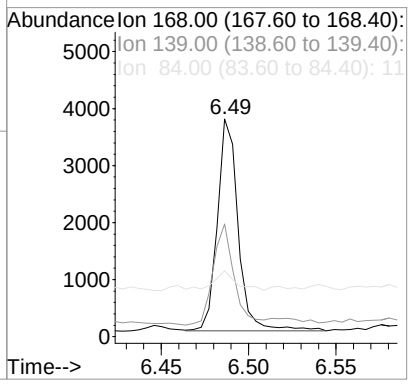




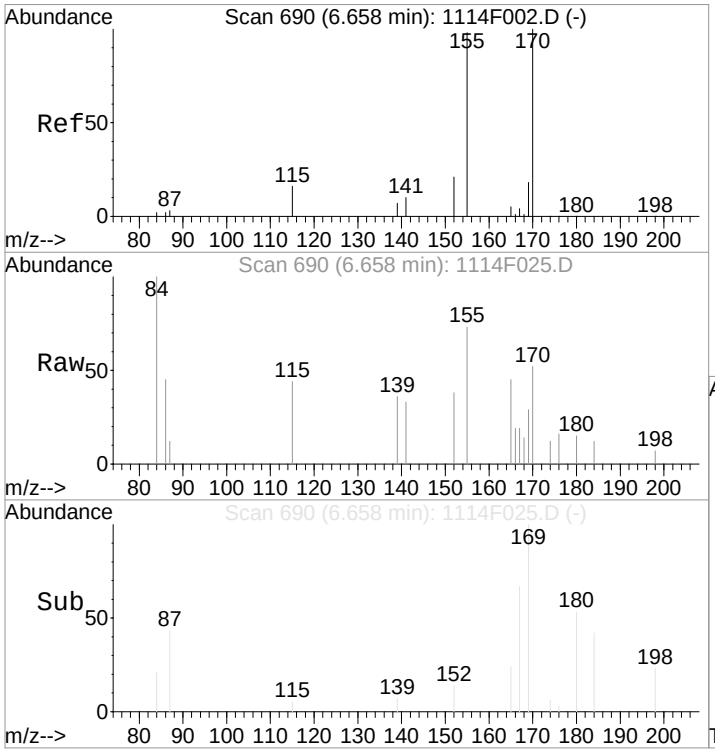
#11
Dibenzofuran
Concen: 8.07 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:168 Resp: 3084

Ion	Ratio	Lower	Upper
168	100		
139	47.7	0.0	55.8
84	8.7	0.0	23.5



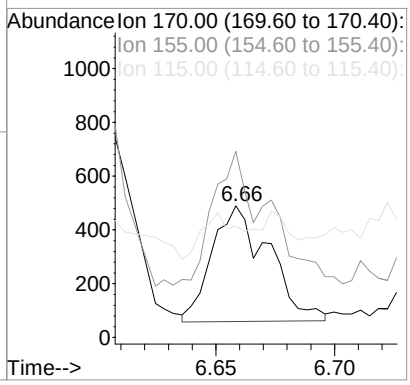
1st 12/03/18
2nd 12/06/18

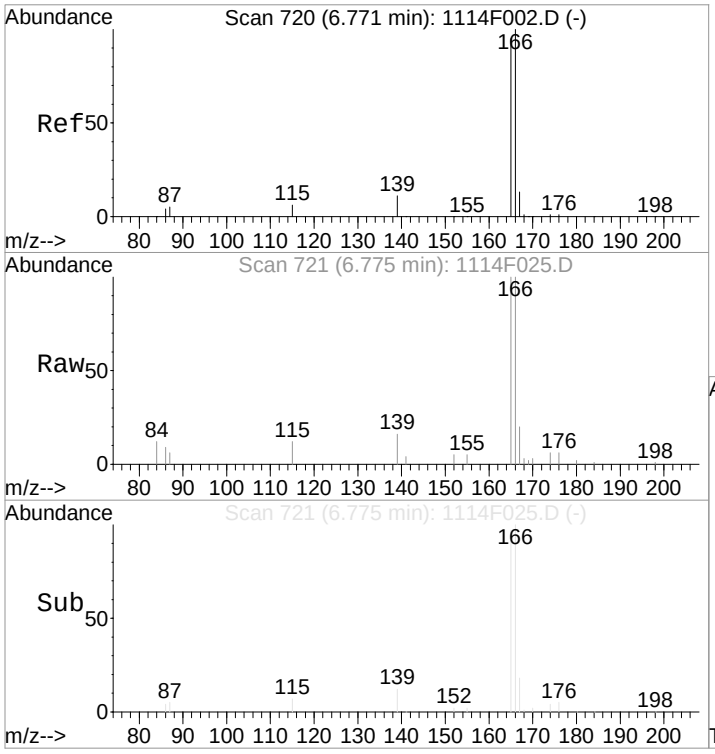


#12
2,3,5-Trimethylnaphthalene
Concen: 3.26 ng/ml m
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:170 Resp: 717

Ion	Ratio	Lower	Upper
170	100		
155	141.2	59.2	119.2#
115	84.7	0.0	30.1#

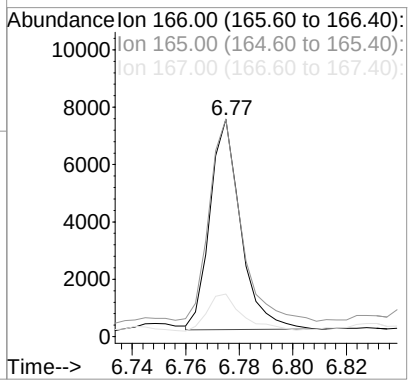


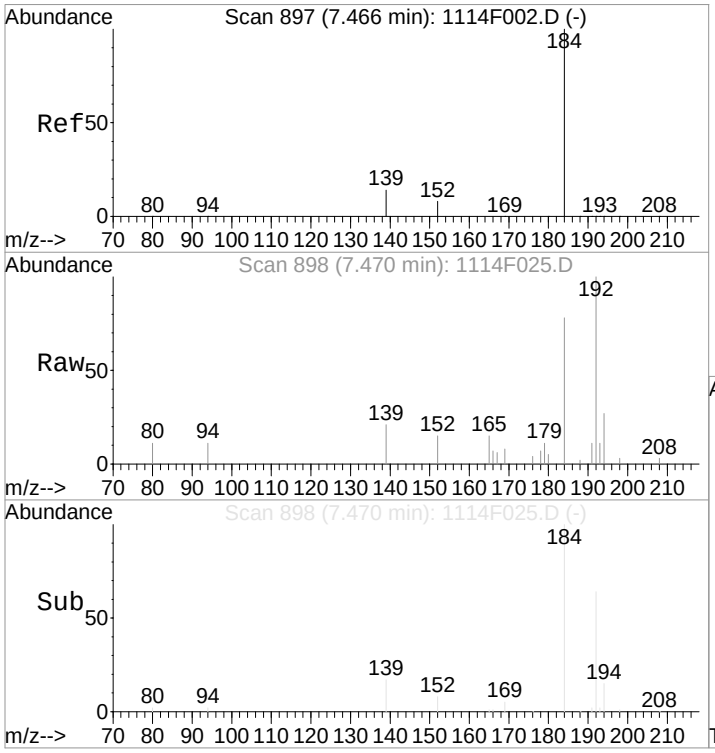


#14
Fluorene
Concen: 20.34 ng/ml
RT: 6.77 min Scan# 721
Delta R.T. -0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:166 Resp: 5857

Ion	Ratio	Lower	Upper
166	100		
165	95.7	63.4	123.4
167	17.7	0.0	33.1

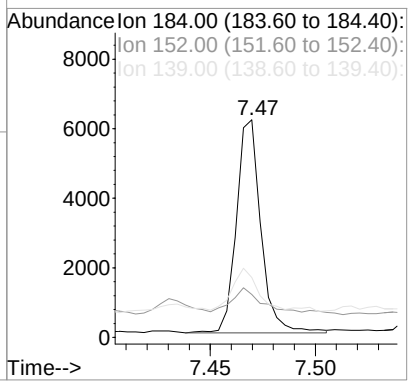


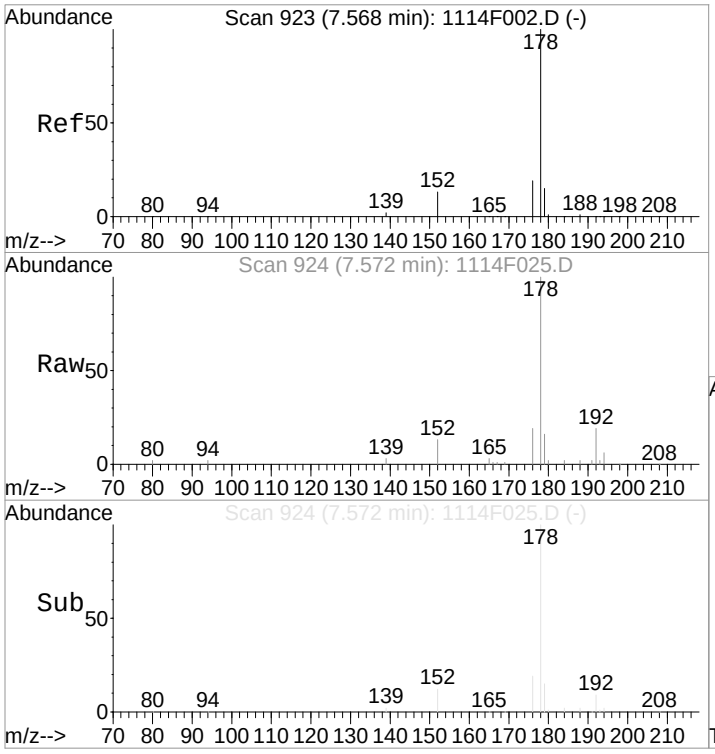


#16
Dibenzothiophene
Concen: 10.99 ng/ml
RT: 7.47 min Scan# 898
Delta R.T. -0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:184 Resp: 4936

Ion	Ratio	Lower	Upper
184	100		
152	8.4	0.0	37.8
139	15.6	0.0	32.6

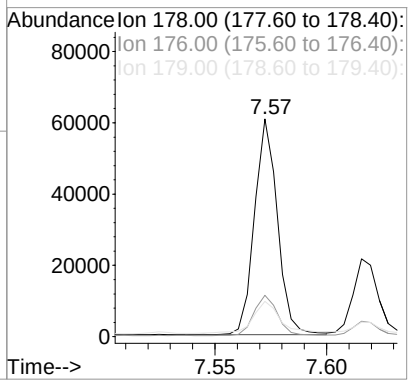


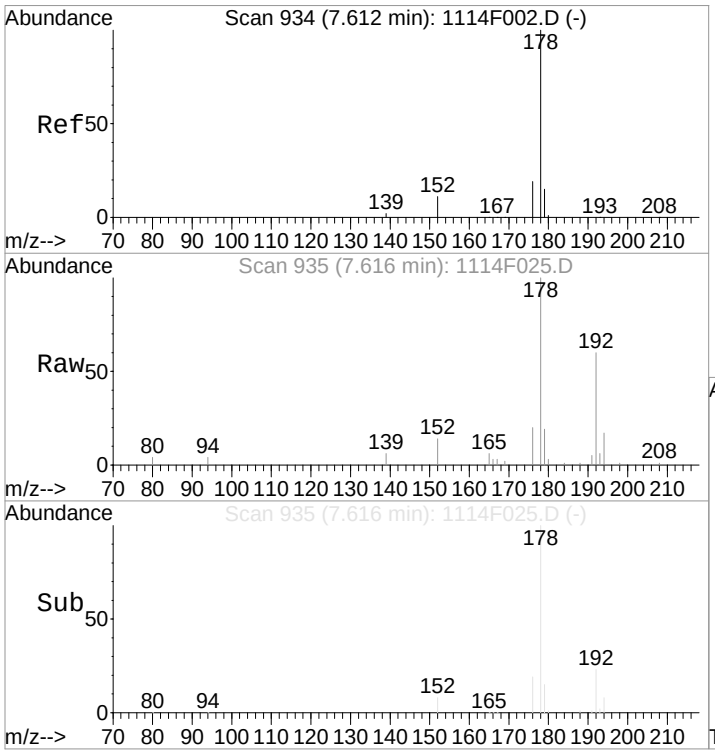


#17
Phenanthrene
Concen: 96.73 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:178 Resp: 43437

Ion	Ratio	Lower	Upper
178	100		
176	18.5	0.0	48.7
179	14.9	0.0	35.1

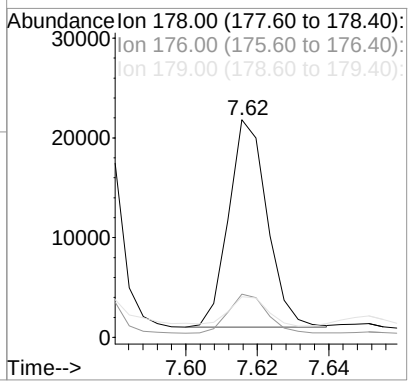


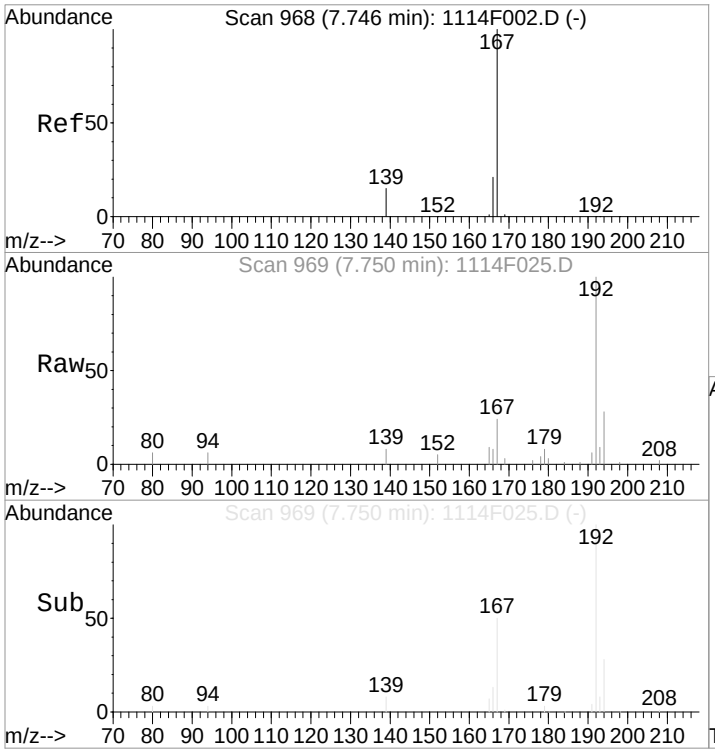


#18
Anthracene
Concen: 36.45 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:178 Resp: 15625

Ion	Ratio	Lower	Upper
178	100		
176	18.8	0.0	48.0
179	13.0	0.0	35.1

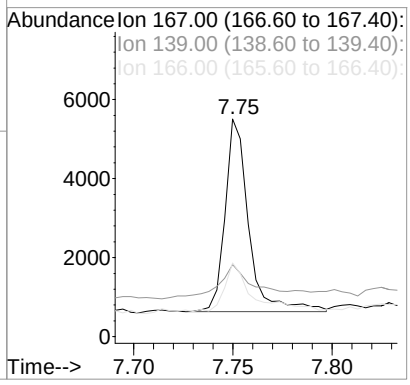




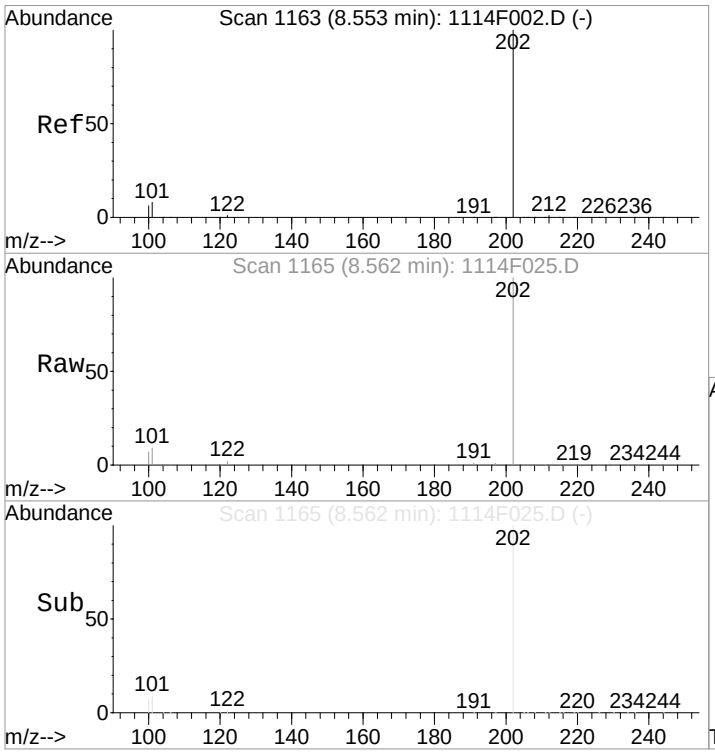
#19
Carbazole
Concen: 9.64 ng/ml
RT: 7.75 min Scan# 969
Delta R.T. -0.01 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:167 Resp: 4033

Ion	Ratio	Lower	Upper
167	100		
139	16.3	0.0	41.5
166	24.4	0.7	40.7



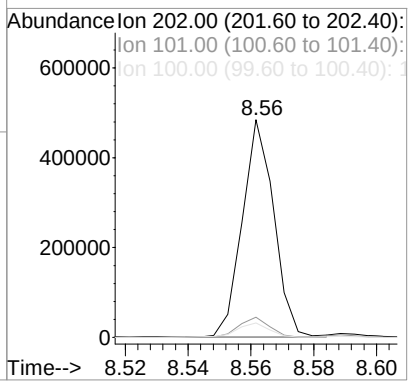
1st 12/03/18
2nd 12/06/18

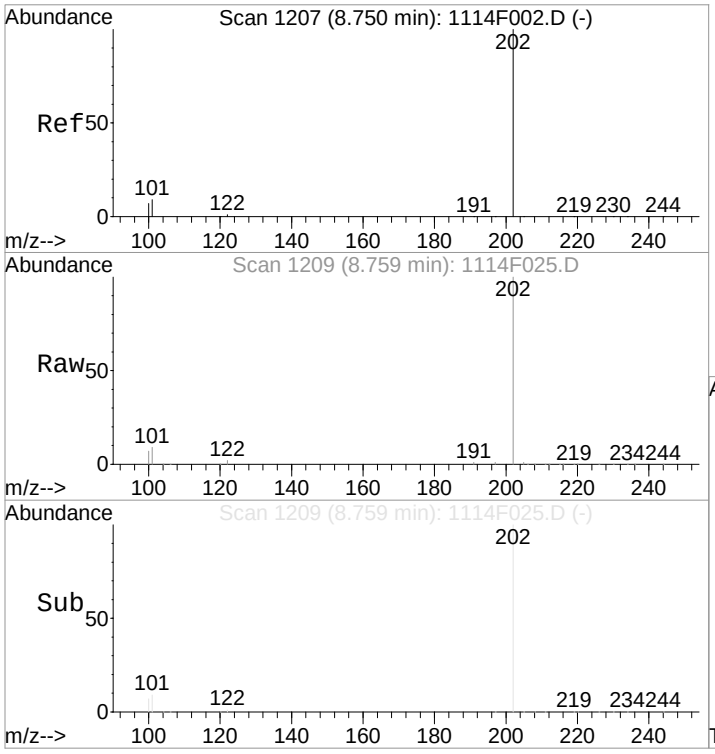


#21
Fluoranthene
Concen: 611.31 ng/ml
RT: 8.56 min Scan# 1165
Delta R.T. 0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:202 Resp: 338968

Ion	Ratio	Lower	Upper
202	100		
101	9.2	0.0	41.3
100	6.5	0.0	28.6

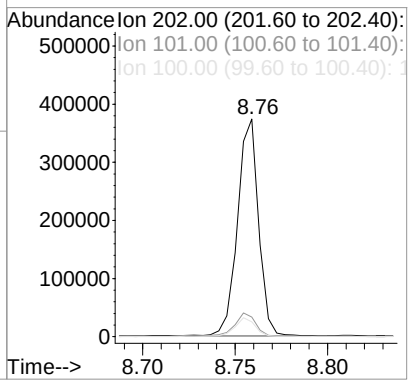


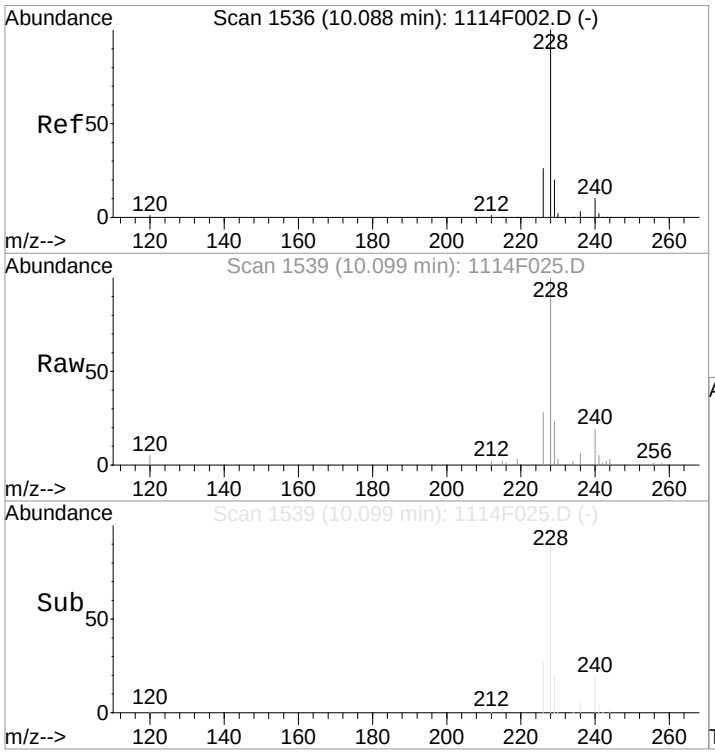


#24
Pyrene
Concen: 582.94 ng/ml
RT: 8.76 min Scan# 1209
Delta R.T. 0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:202 Resp: 294558

Ion	Ratio	Lower	Upper
202	100		
101	8.9	0.0	40.8
100	6.7	0.0	28.5

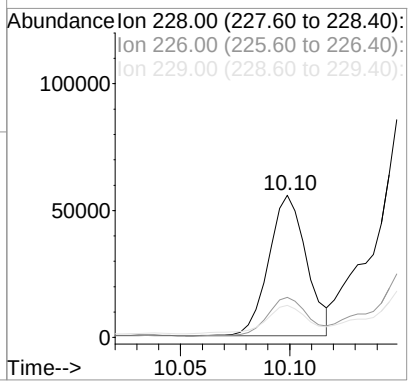


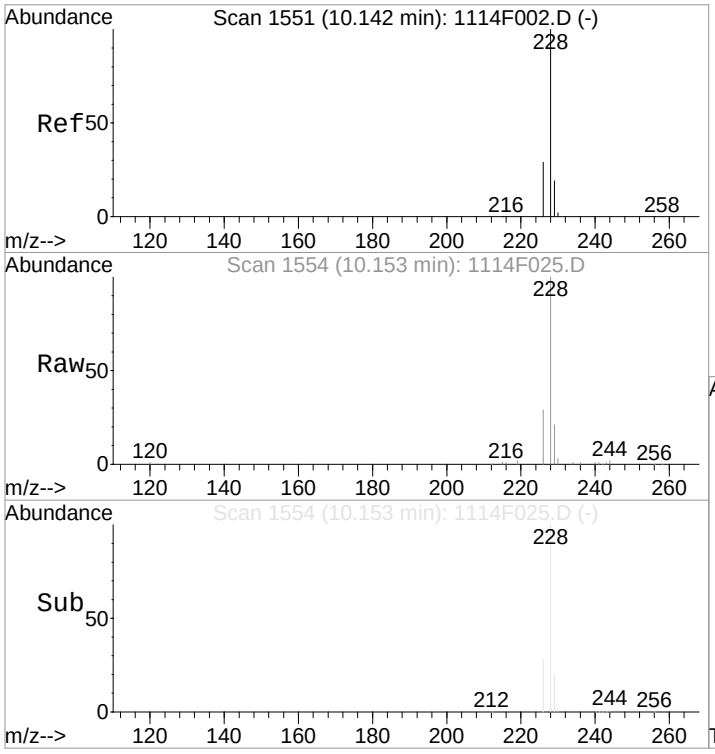


#26
Benz(a)anthracene
Concen: 140.85 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. 0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:228 Resp: 67069

Ion	Ratio	Lower	Upper
228	100		
226	27.6	0.0	56.3
229	20.3	0.0	39.1

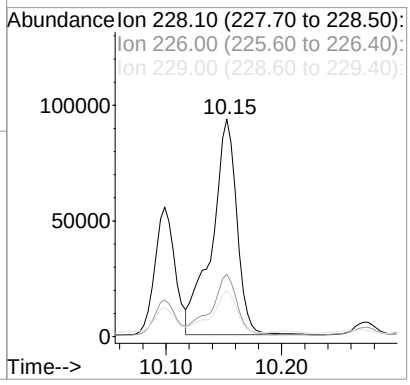


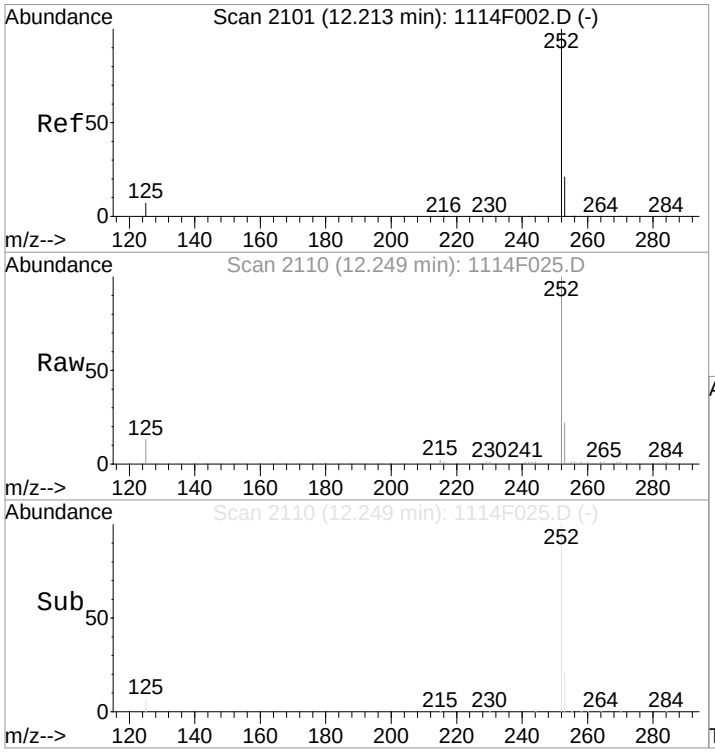


#27
Chrysene
Concen: 306.39 ng/ml
RT: 10.15 min Scan# 1554
Delta R.T. 0.00 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:228 Resp: 139746

Ion	Ratio	Lower	Upper
228	100		
226	28.0	0.0	58.7
229	19.3	0.0	39.2

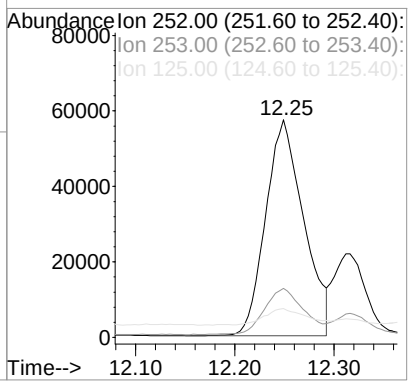


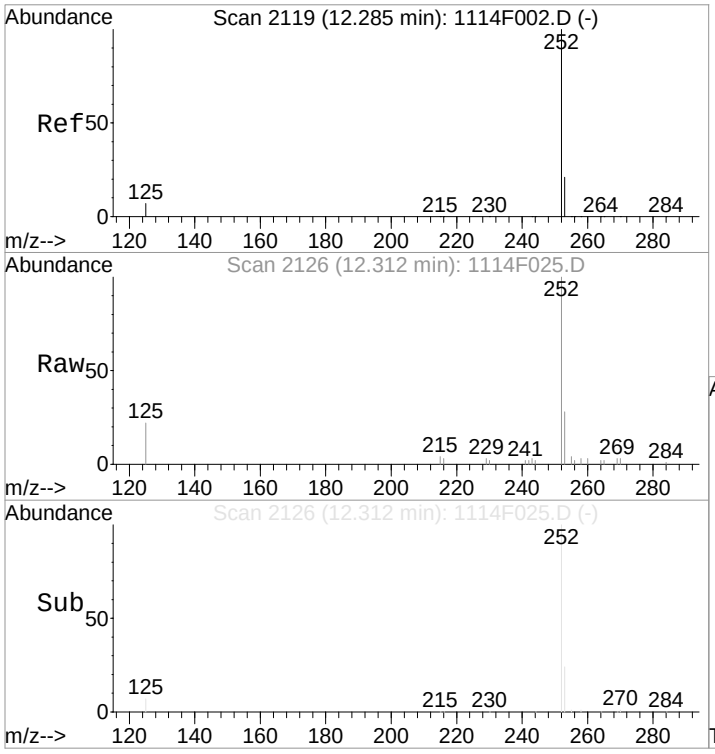


#29
Benzo(b)fluoranthene
Concen: 304.27 ng/ml
RT: 12.25 min Scan# 2110
Delta R.T. 0.02 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:252 Resp: 152903

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.2
125	7.4	0.0	29.5

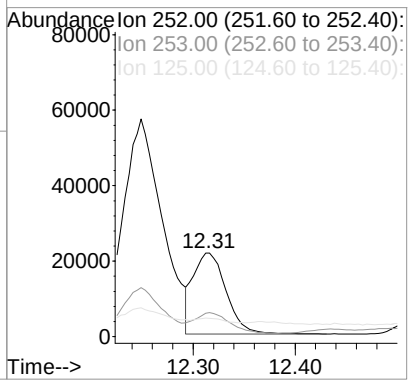




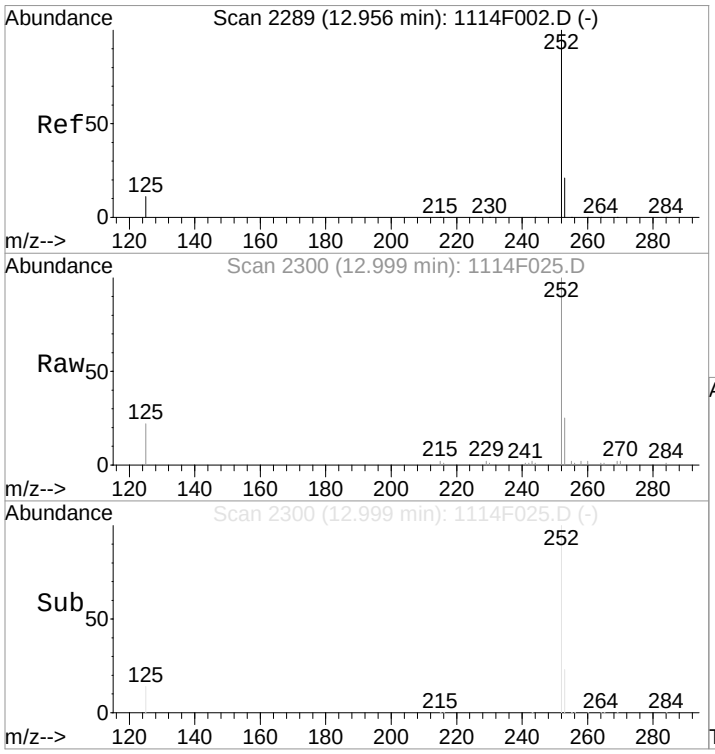
#30
Benzo(k)fluoranthene
Concen: 96.97 ng/ml
RT: 12.31 min Scan# 2126
Delta R.T. 0.02 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:252 Resp: 48343

Ion	Ratio	Lower	Upper
252	100		
253	19.8	0.0	51.2
125	7.2	0.0	29.7



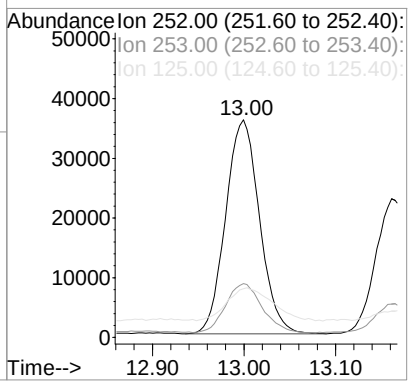
1st 12/03/18
2nd 12/06/18

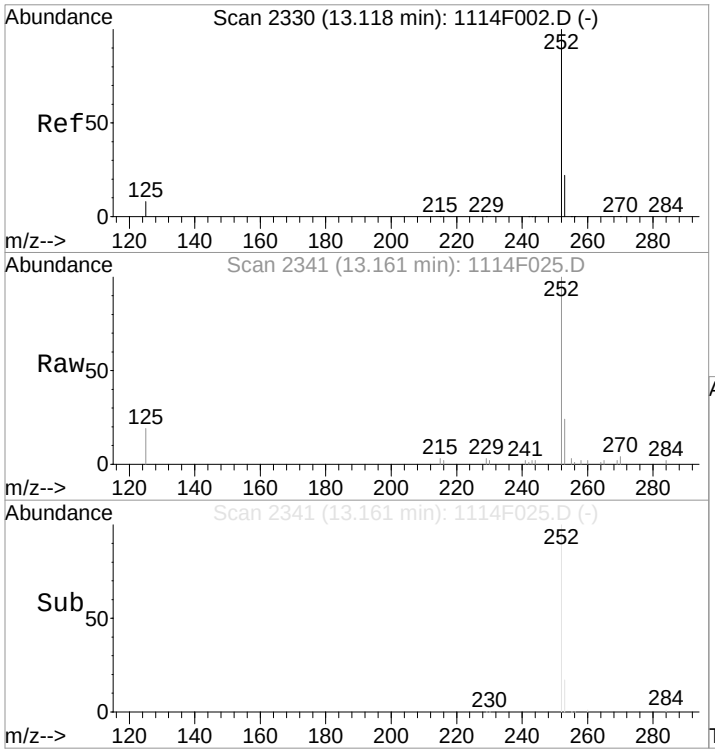


#31
Benzo(e)pyrene
Concen: 192.63 ng/ml
RT: 13.00 min Scan# 2300
Delta R.T. 0.03 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:252 Resp: 92270

Ion	Ratio	Lower	Upper
252	100		
253	22.7	0.0	51.3
125	14.7	0.0	33.5

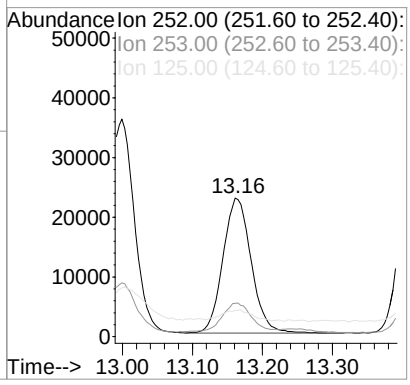


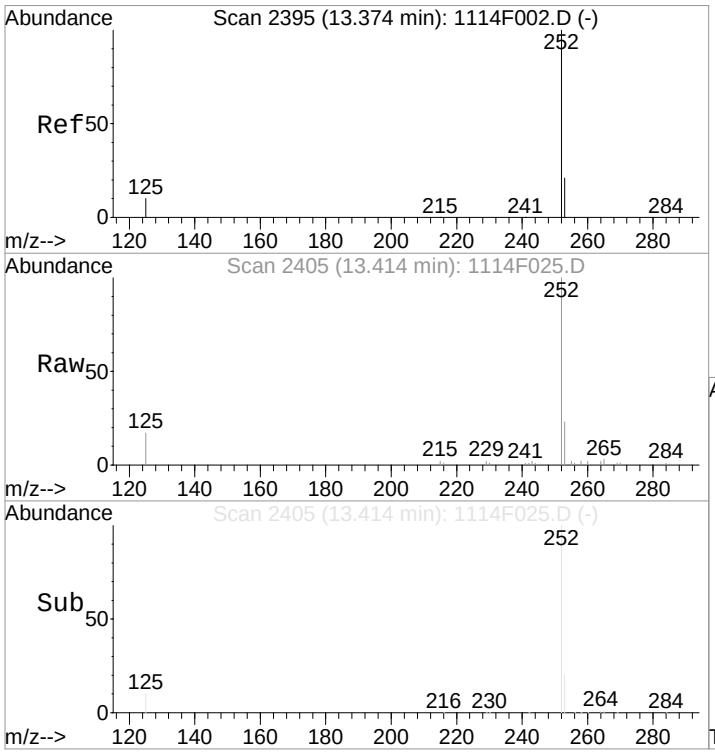


#32
Benzo(a)pyrene
Concen: 144.22 ng/ml
RT: 13.16 min Scan# 2341
Delta R.T. 0.04 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:252 Resp: 63559

Ion	Ratio	Lower	Upper
252	100		
253	21.2	0.0	50.9
125	7.4	0.0	30.3

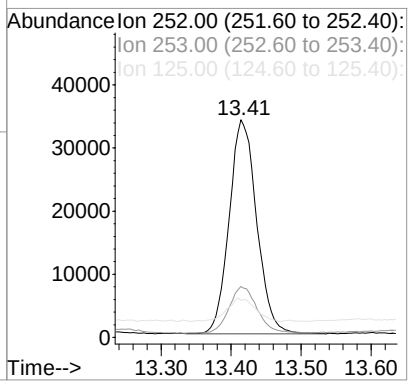


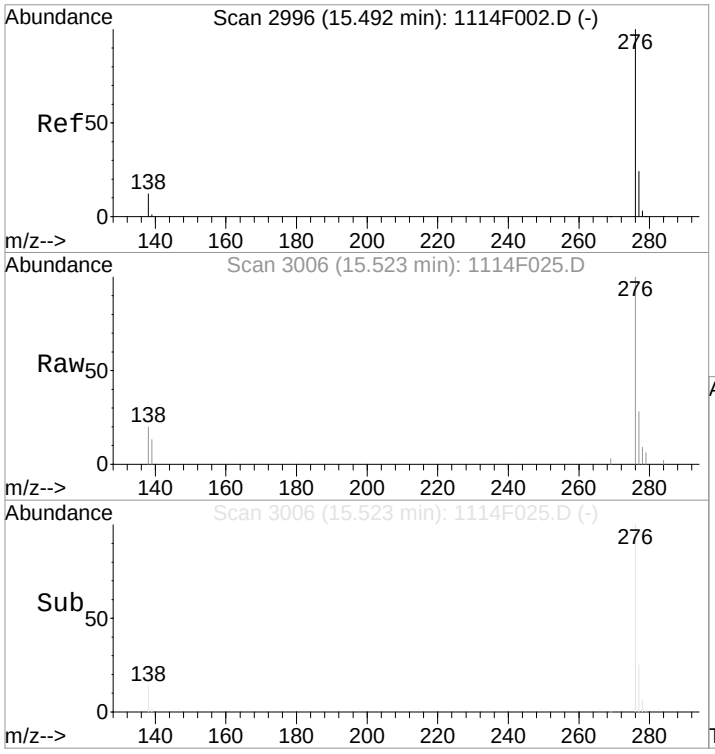


#33
Perylene
Concen: 200.45 ng/ml
RT: 13.41 min Scan# 2405
Delta R.T. 0.04 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:252 Resp: 92667

Ion	Ratio	Lower	Upper
252	100		
253	21.8	0.0	51.2
125	9.6	0.0	33.8

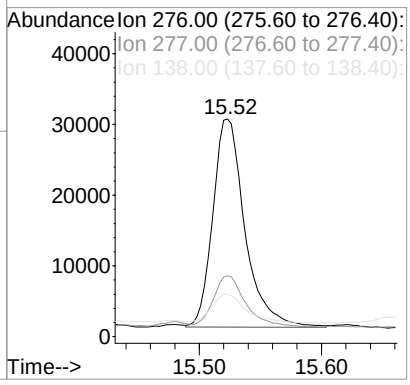


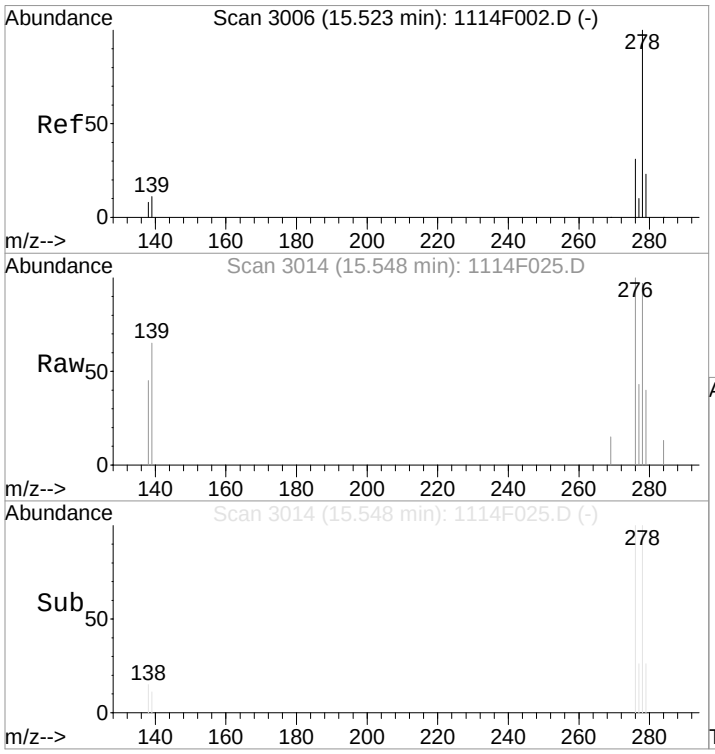


#34
Indeno(1,2,3-cd)pyrene
Concen: 124.13 ng/ml
RT: 15.52 min Scan# 3006
Delta R.T. 0.04 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:276 Resp: 53641

Ion	Ratio	Lower	Upper
276	100		
277	24.6	0.0	53.4
138	13.9	0.0	37.7

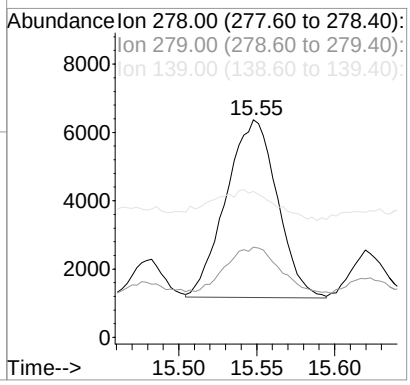


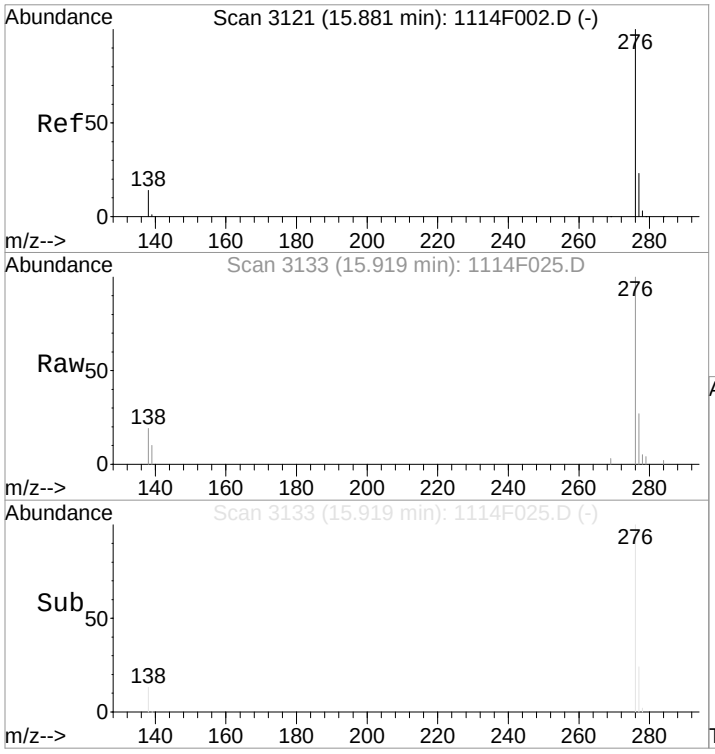


#35
Dibenz(a,h)anthracene
Concen: 27.21 ng/ml
RT: 15.55 min Scan# 3014
Delta R.T. 0.02 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:278 Resp: 11920

Ion	Ratio	Lower	Upper
278	100		
279	25.5	0.0	53.5
139	16.0	0.0	35.0

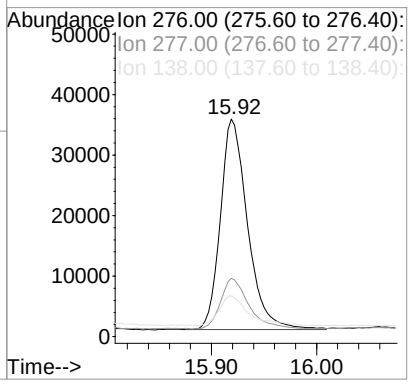




#36
Benzo(g,h,i)perylene
Concen: 123.76 ng/ml
RT: 15.92 min Scan# 3133
Delta R.T. 0.04 min
Lab File: 1114F025.D
Acq: 14 Nov 2018 4:09 pm

Tgt Ion:276 Resp: 62630

Ion	Ratio	Lower	Upper
276	100		
277	23.9	0.0	53.1
138	14.1	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F025.D Vial: 25
Acq On : 14 Nov 2018 4:09 pm Operator: LWeiskopf
Sample : K1810430-009DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:32 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	58523	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	34733	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	71985	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	73648	200.00	ng/ml	0.00
28) Perylene-d12	13.33	264	81339	200.00	ng/ml	0.03
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	9241	56.57	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	5.66%		
13) Fluorene-d10	6.75	176	17459	78.61	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.86%		
22) Fluoranthene-d10	8.55	212	35121	77.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.74%		
25) Terphenyl-d14	8.89	244	31203	97.68	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.77%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	2747m	8.13	ng/ml	
4) 2-Methylnaphthalene	5.41	142	953	4.68	ng/ml	96
5) 1-Methylnaphthalene	5.50	142	553	2.82	ng/ml	90
6) Biphenyl	5.82	154	658	2.59	ng/ml	97
7) 2,6-Dimethylnaphthalene	5.96	156	860	4.92	ng/ml	91
9) Acenaphthylene	6.20	152	7847	18.93	ng/ml#	59
10) Acenaphthene	6.34	154	2028	8.52	ng/ml	94
11) Dibenzofuran	6.49	168	3084	8.07	ng/ml	60
12) 2,3,5-Trimethylnaphthalene	6.66	170	717m	3.26	ng/ml	
14) Fluorene	6.77	166	5857	20.34	ng/ml	96
16) Dibenzothiophene	7.47	184	4936	10.99	ng/ml	95
17) Phenanthrene	7.57	178	43437	96.73	ng/ml	100
18) Anthracene	7.62	178	15625	36.45	ng/ml	97
19) Carbazole	7.75	167	4033	9.64	ng/ml	90
21) Fluoranthene	8.56	202	338968	611.31	ng/ml	94
24) Pyrene	8.76	202	294558	582.94	ng/ml	95
26) Benz(a)anthracene	10.10	228	67069	140.85	ng/ml	97
27) Chrysene	10.15	228	139746	306.39	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	152903	304.27	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	48343	96.97	ng/ml	96
31) Benzo(e)pyrene	13.00	252	92270	192.63	ng/ml	97
32) Benzo(a)pyrene	13.16	252	63559	144.22	ng/ml	97
33) Perylene	13.41	252	92667	200.45	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.52	276	53641	124.13	ng/ml	95
35) Dibenz(a,h)anthracene	15.55	278	11920	27.21	ng/ml	97
36) Benzo(g,h,i)perylene	15.92	276	62630	123.76	ng/ml	94

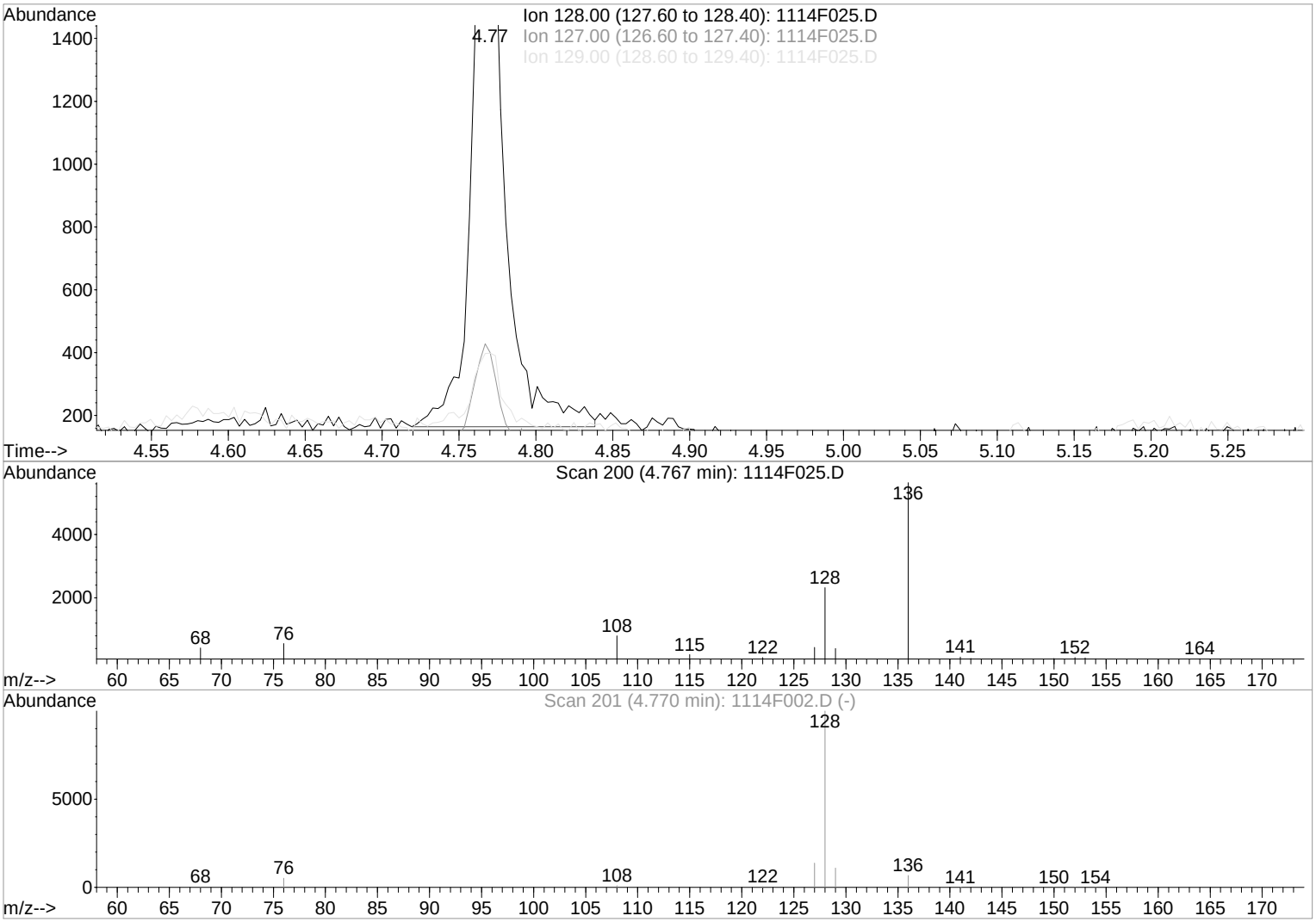
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F025.D Vial: 25
Acq On : 14 Nov 2018 4:09 pm Operator: LWeiskopf
Sample : K1810430-009DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 5:06 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F025.D

(2) Naphthalene (T)

4.77min 8.55ng/ml

response 2889

Ion	Exp%	Act%
128.00	100	100
127.00	13.70	14.92
129.00	10.80	11.71
0.00	0.00	0.00

Manual Integration:

Before

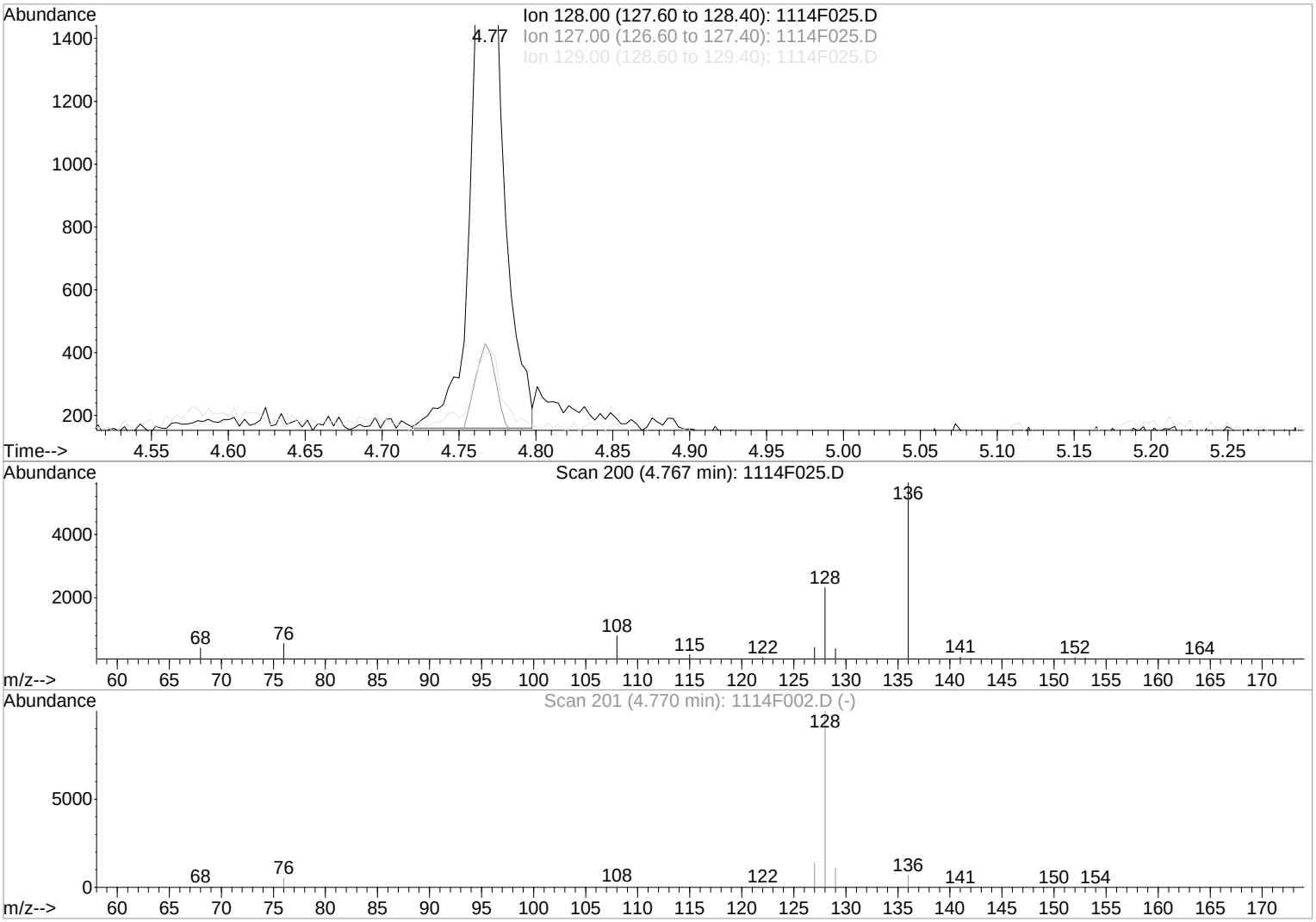
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F025.D Vial: 25
Acq On : 14 Nov 2018 4:09 pm Operator: LWeiskopf
Sample : K1810430-009DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:24 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F025.D

(2) Naphthalene (T)

4.77min 8.13ng/ml m

response 2747

Ion	Exp%	Act%
128.00	100	100
127.00	13.70	18.48
129.00	10.80	17.14
0.00	0.00	0.00

Manual Integration:

After

BLC

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F026.D
Lab ID: K1810430-010
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 16:35
Date Quantitated: 11/30/2018 13:25
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F026.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 16:35	**Quant Date:**	11/30/2018 13:25	**Vial:**	26
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	10.0
Lab ID:	K1810430-010			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702222	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	60301	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	35072	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	73936	200.00	OK
4	Chrysene-d12	10.11	0.01	240	76456	200.00	OK
5	Perylene-d12	13.34	0.05	264	84208	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	16951	75.59	76	26-102	OK	
3	Fluoranthene-d10	8.54	0.01	0.00	212	34140	73.27	73	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	29467	88.86	89	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	12390	35.60	38	D	
1	2-Methylnaphthalene	5.41		0.00	142	3737	17.80	19	D	
2	Acenaphthylene	6.19		0.00	152	6980**m**	16.68	18	D	
2	Acenaphthene	6.34		0.00	154	6153	25.60	27	D	
2	Dibenzofuran	6.49		0.00	168	4132	10.71	11	D	
2	Fluorene	6.77		0.00	166	5764	19.83	21	D	
3	Phenanthrene	7.57		0.00	178	89099	193.18	210	D	
3	Anthracene	7.62	0.01	0.00	178	17022	38.66	41	D	
3	Fluoranthene	8.56	0.01	0.00	202	198515	348.56	370	D	
4	Pyrene	8.75		0.00	202	211111	402.45	430	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	64927	131.35	140	D	
4	Chrysene	10.15	0.01	0.00	228	93269	196.98	210	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F026.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 16:35	**Quant Date:**	11/30/2018 13:25	**Vial:**	26
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	10.0
Lab ID:	K1810430-010			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	112142	215.55	230	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	37434	72.53	78	D	
5	Benzo(a)pyrene	13.16	0.04	0.00	252	72576	159.07	170	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	49148	109.86	120	D	
5	Dibenz(a,h)anthracene	15.55	0.03	0.00	278	12016	26.50	28	D	
5	Benzo(g,h,i)perylene	15.93	0.05	0.00	276	61597	117.57	130	D	

Prep Amount:	40.077 g	**Dilution:**	10.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	46.5 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

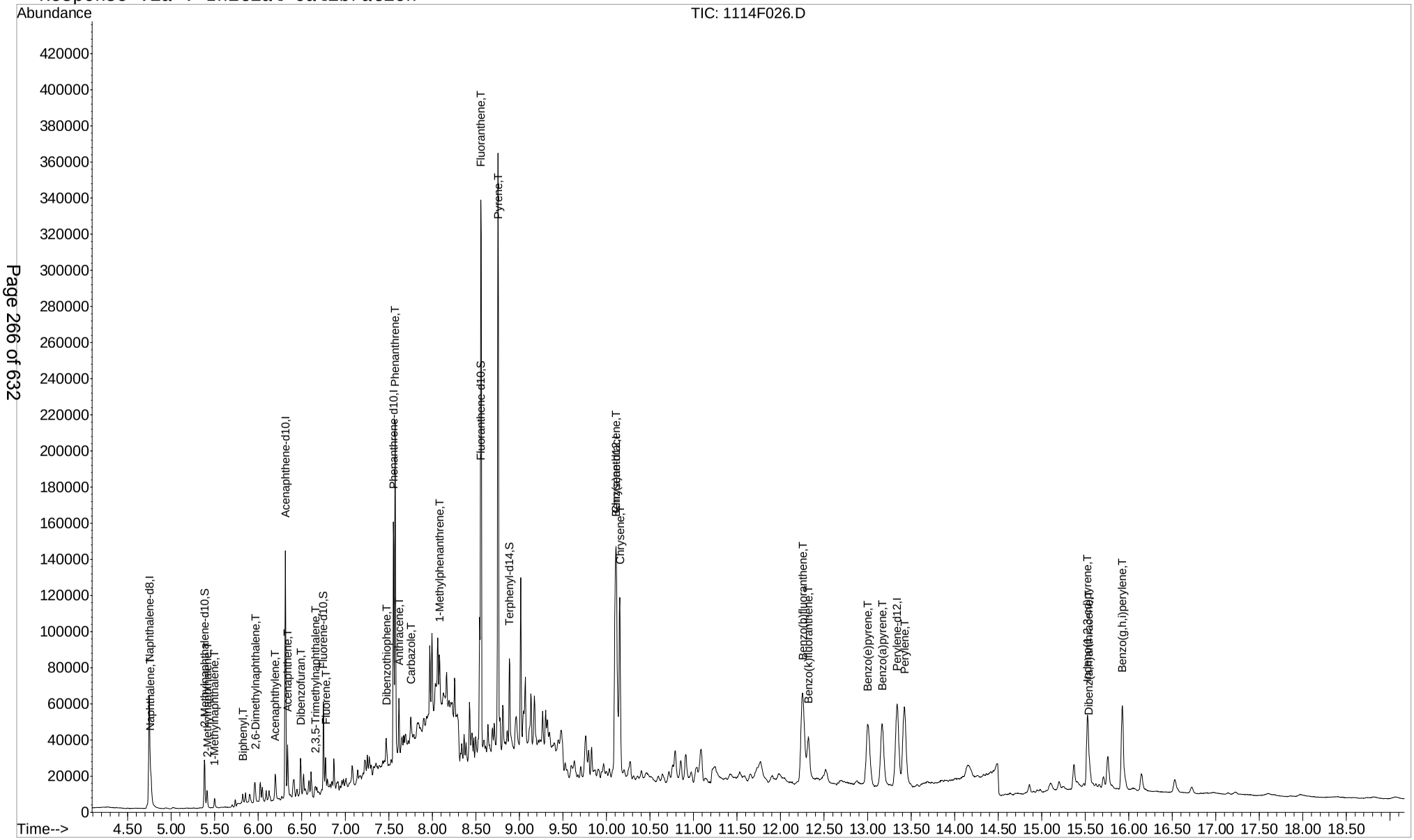
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

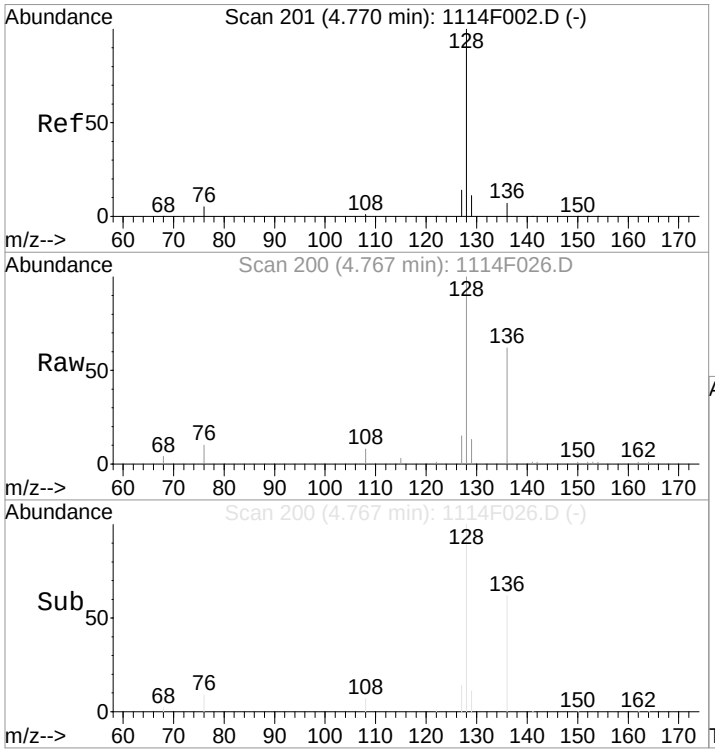
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F026.D Vial: 26
Acq On : 14 Nov 2018 4:35 pm Operator: LWeiskopf
Sample : K1810430-010DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:25 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



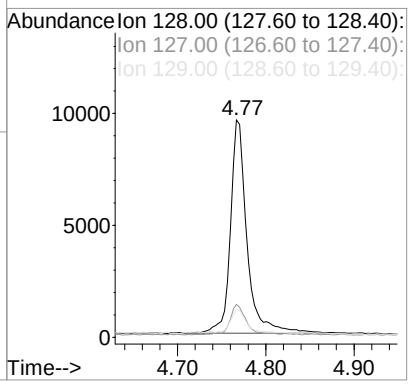
1st 12/03/18
2nd 12/06/18

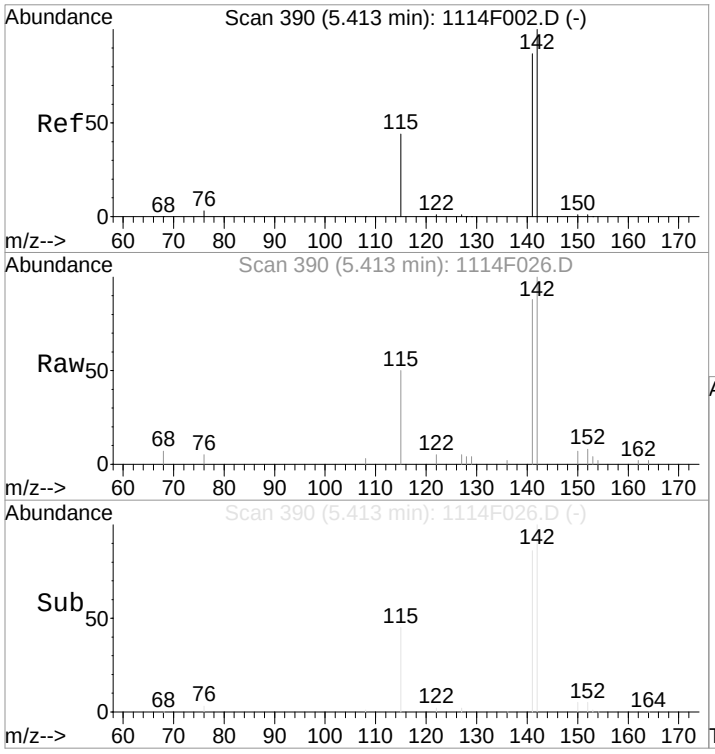


#2
Naphthalene
Concen: 35.60 ng/ml
RT: 4.77 min Scan# 200
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:128 Resp: 12390

Ion	Ratio	Lower	Upper
128	100		
127	14.3	0.0	43.7
129	11.1	0.0	30.8

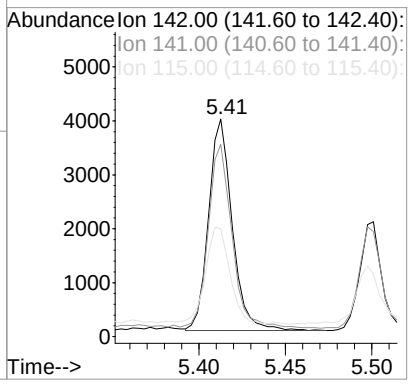


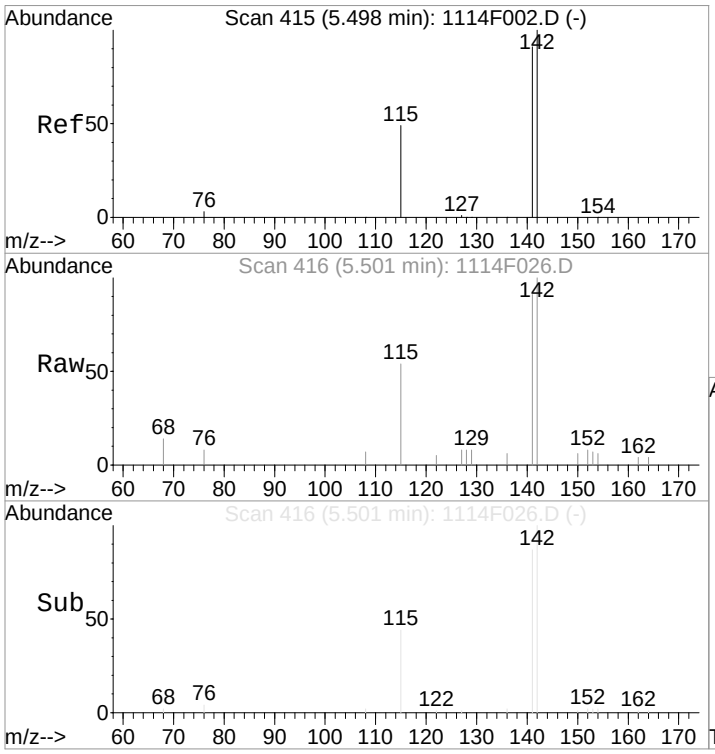


#4
2-Methylnaphthalene
Concen: 17.80 ng/ml
RT: 5.41 min Scan# 390
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:142 Resp: 3737

Ion	Ratio	Lower	Upper
142	100		
141	86.7	56.8	116.8
115	43.9	13.3	53.3

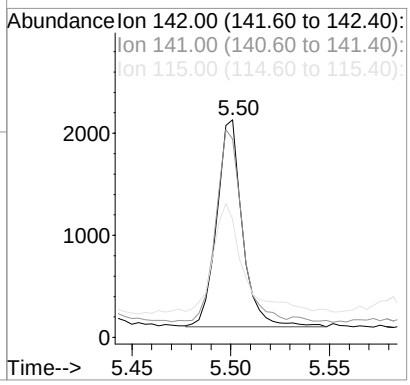


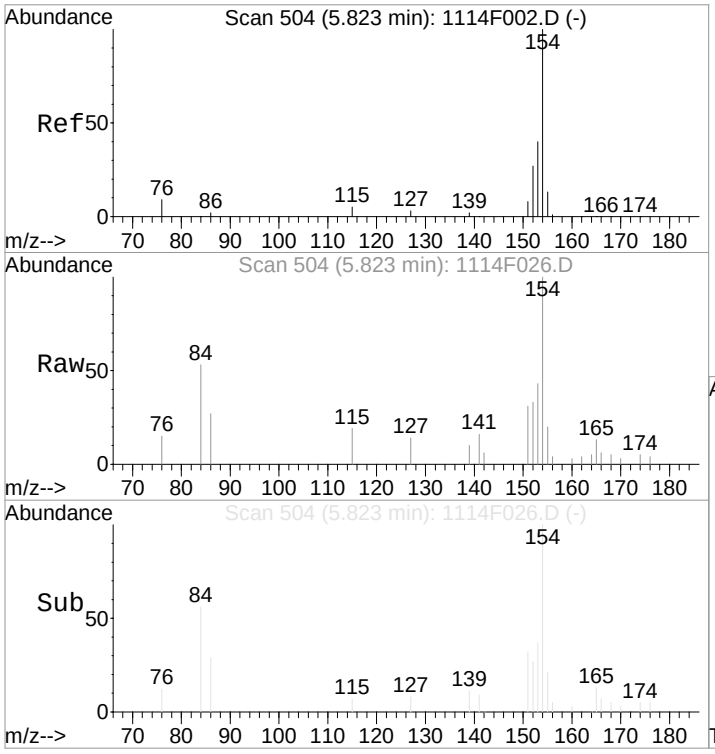


#5
1-Methylnaphthalene
Concen: 9.05 ng/ml
RT: 5.50 min Scan# 416
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:142 Resp: 1828

Ion	Ratio	Lower	Upper
142	100		
141	87.9	59.7	119.7
115	44.7	13.7	53.7

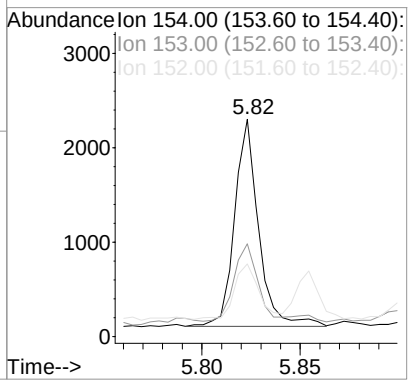




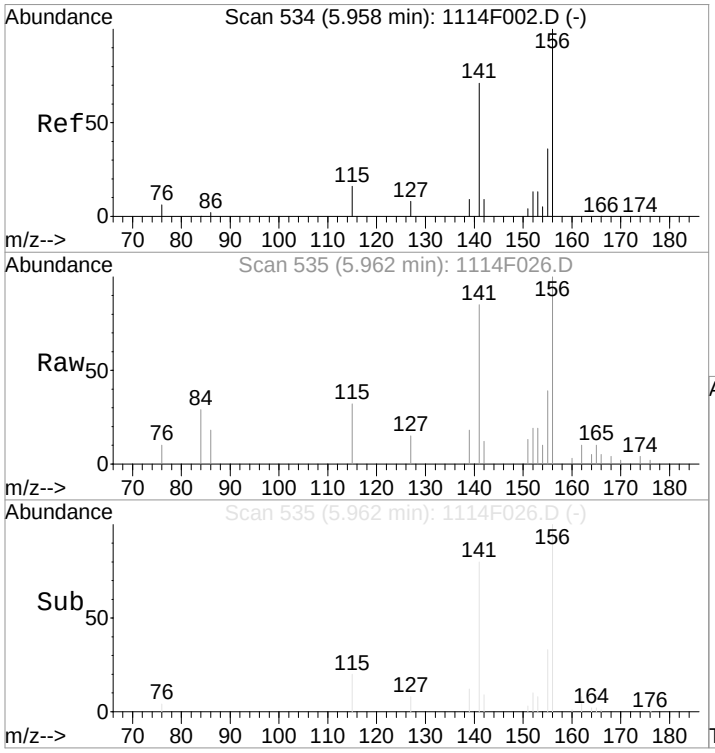
#6
Biphenyl
Concen: 7.13 ng/ml
RT: 5.82 min Scan# 504
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:154 Resp: 1867

Ion	Ratio	Lower	Upper
154	100		
153	37.5	11.4	71.4
152	26.3	7.1	47.1



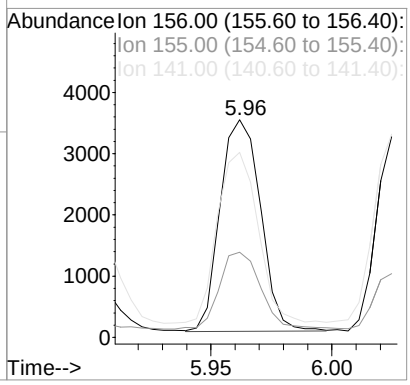
1st 12/03/18
2nd 12/06/18

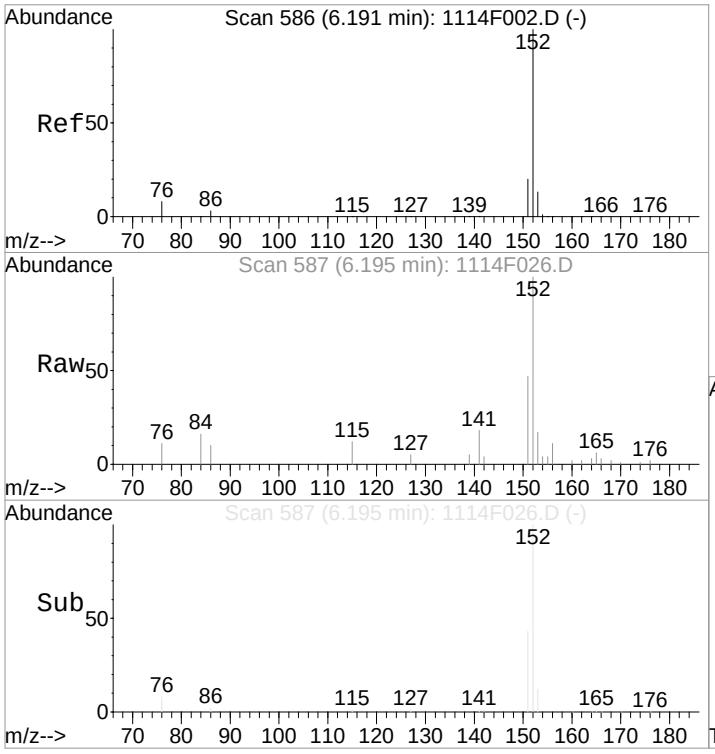


#7
2,6-Dimethylnaphthalene
Concen: 22.27 ng/ml
RT: 5.96 min Scan# 535
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:156 Resp: 4014

Ion	Ratio	Lower	Upper
156	100		
155	35.9	7.0	67.0
141	80.7	47.9	87.9

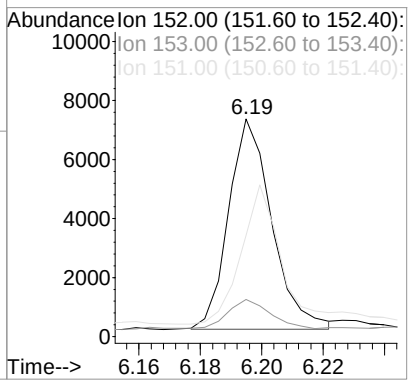




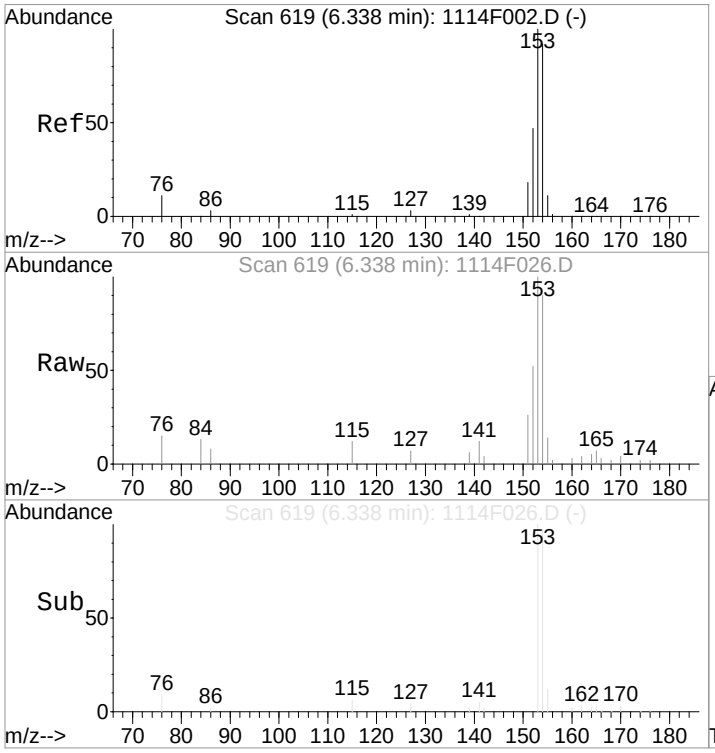
#9
Acenaphthylene
Concen: 16.68 ng/ml m
RT: 6.19 min Scan# 587
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:152 Resp: 6980

Ion	Ratio	Lower	Upper
152	100		
153	17.1	0.0	42.9
151	46.6	0.2	40.2#



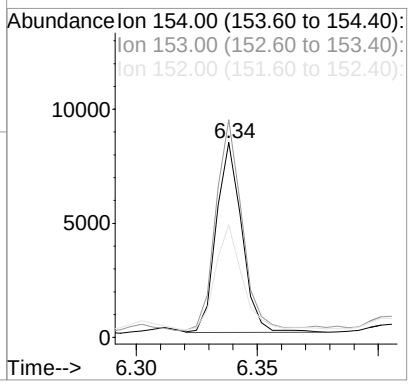
1st 12/03/18
2nd 12/06/18

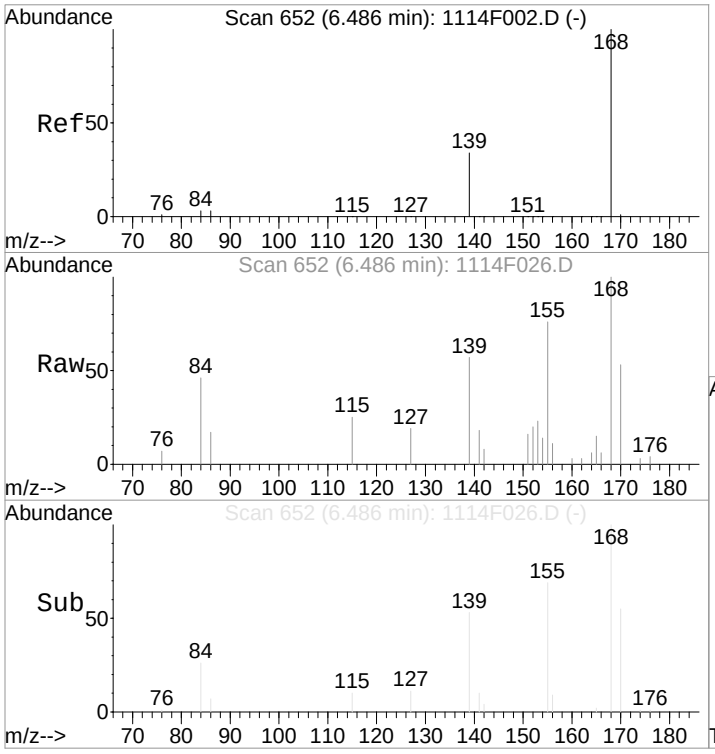


#10
Acenaphthene
Concen: 25.60 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:154 Resp: 6153

Ion	Ratio	Lower	Upper
154	100		
153	110.8	77.1	137.1
152	55.5	19.7	79.7

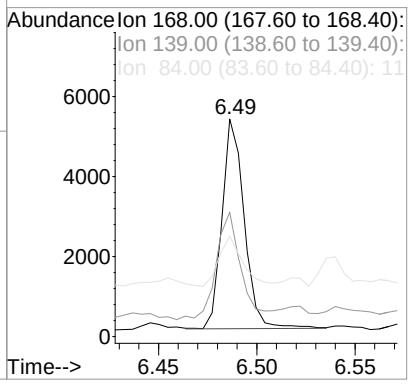




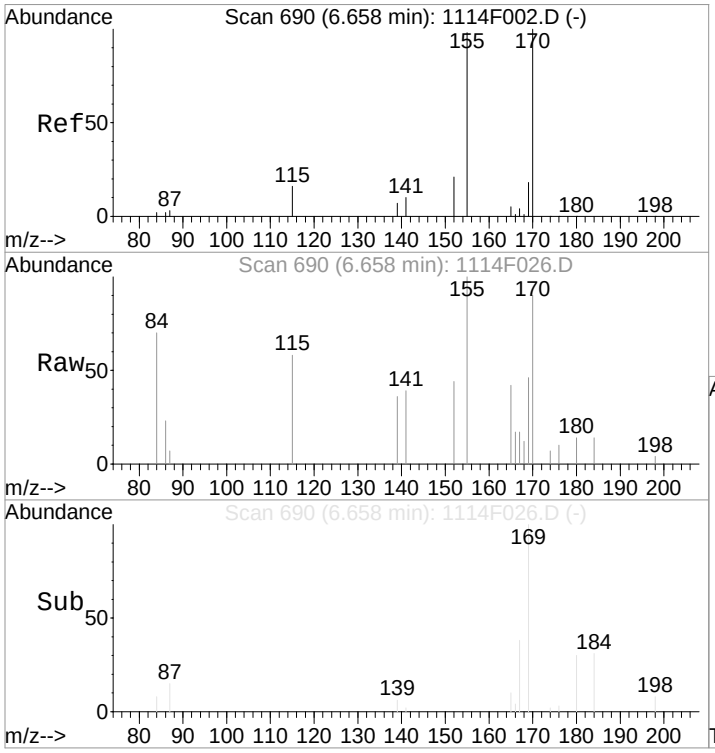
#11
Dibenzofuran
Concen: 10.71 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:168 Resp: 4132

Ion	Ratio	Lower	Upper
168	100		
139	49.8	0.0	55.8
84	22.8	0.0	23.5



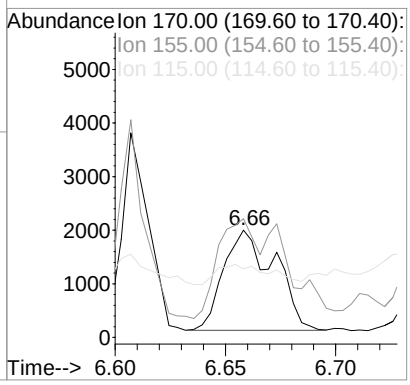
1st 12/03/18
2nd 12/06/18

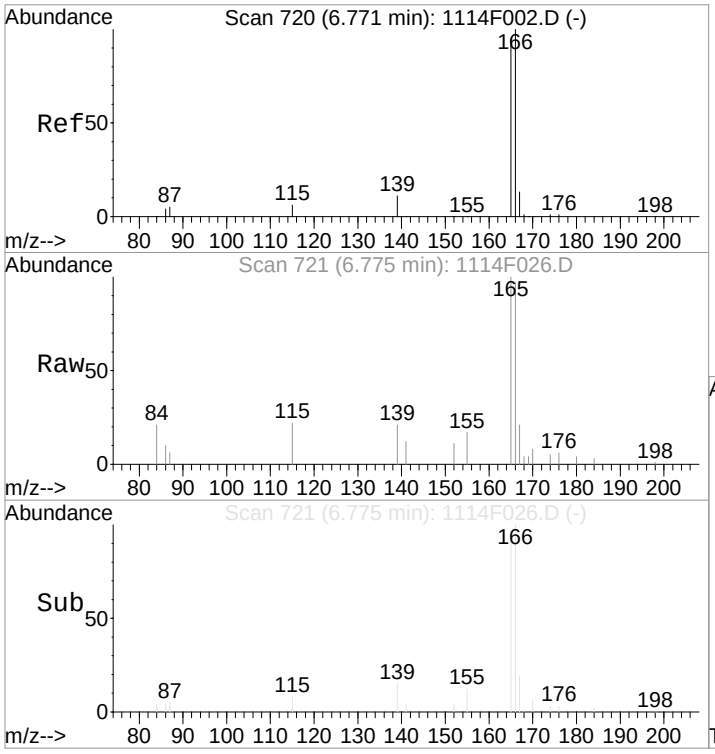


#12
2,3,5-Trimethylnaphthalene
Concen: 13.60 ng/ml
RT: 6.66 min Scan# 690
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:170 Resp: 3025

Ion	Ratio	Lower	Upper
170	100		
155	97.4	59.2	119.2
115	13.0	0.0	30.1

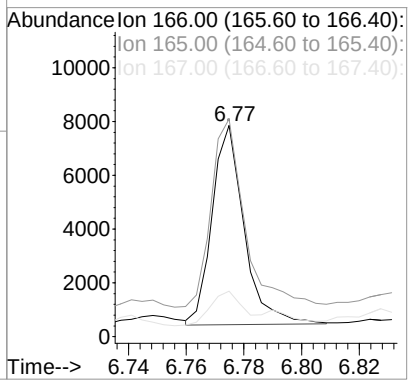


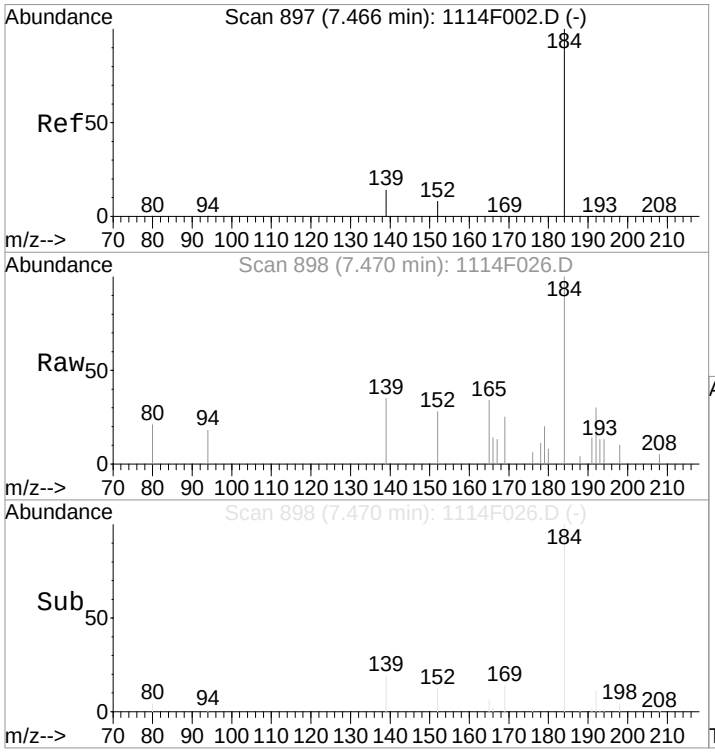


#14
Fluorene
Concen: 19.83 ng/ml
RT: 6.77 min Scan# 721
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:166 Resp: 5764

Ion	Ratio	Lower	Upper
166	100		
165	94.8	63.4	123.4
167	17.1	0.0	33.1

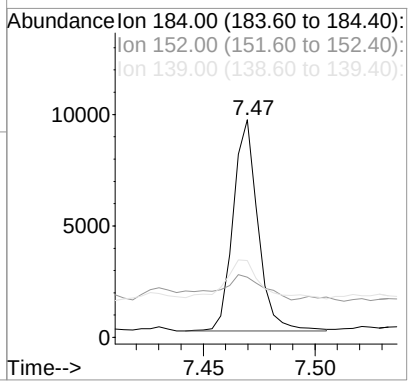


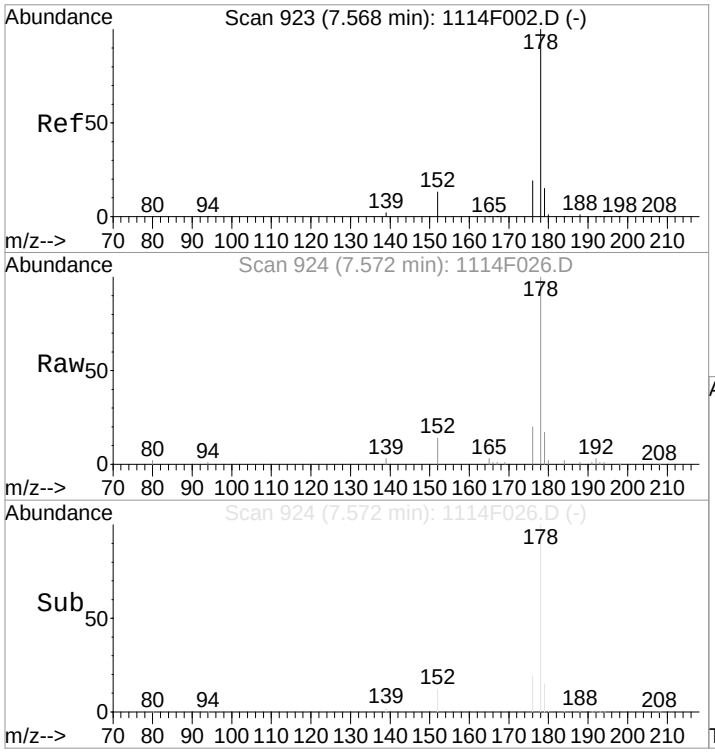


#16
Dibenzothiophene
Concen: 16.00 ng/ml
RT: 7.47 min Scan# 898
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:184 Resp: 7380

Ion	Ratio	Lower	Upper
184	100		
152	9.5	0.0	37.8
139	18.1	0.0	32.6

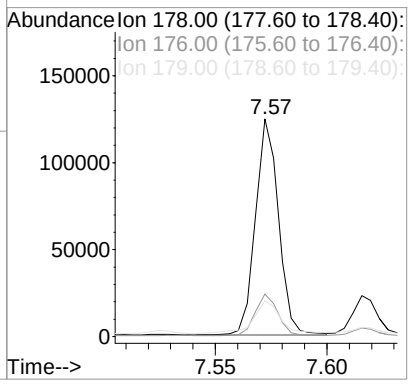


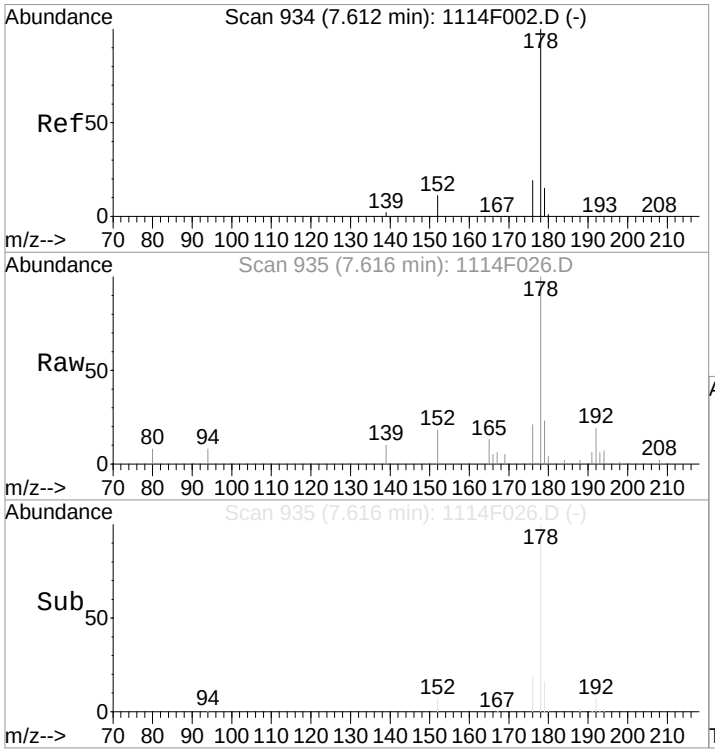


#17
Phenanthrene
Concen: 193.18 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:178 Resp: 89099

Ion	Ratio	Lower	Upper
178	100		
176	19.3	0.0	48.7
179	15.2	0.0	35.1

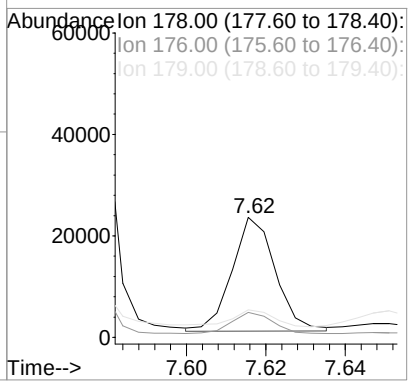


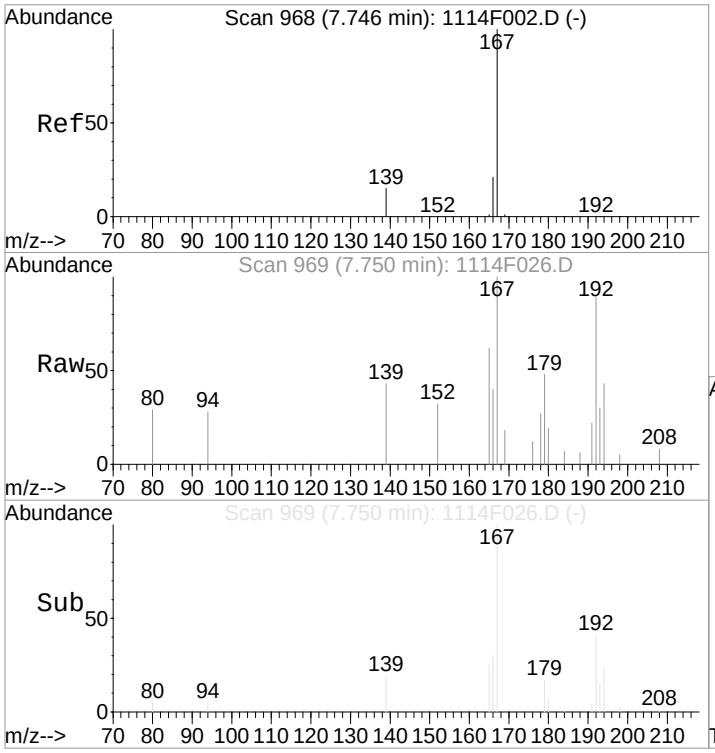


#18
Anthracene
Concen: 38.66 ng/ml
RT: 7.62 min Scan# 935
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:178 Resp: 17022

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.0
179	14.4	0.0	35.1

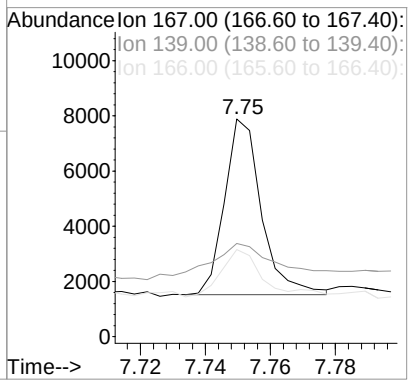


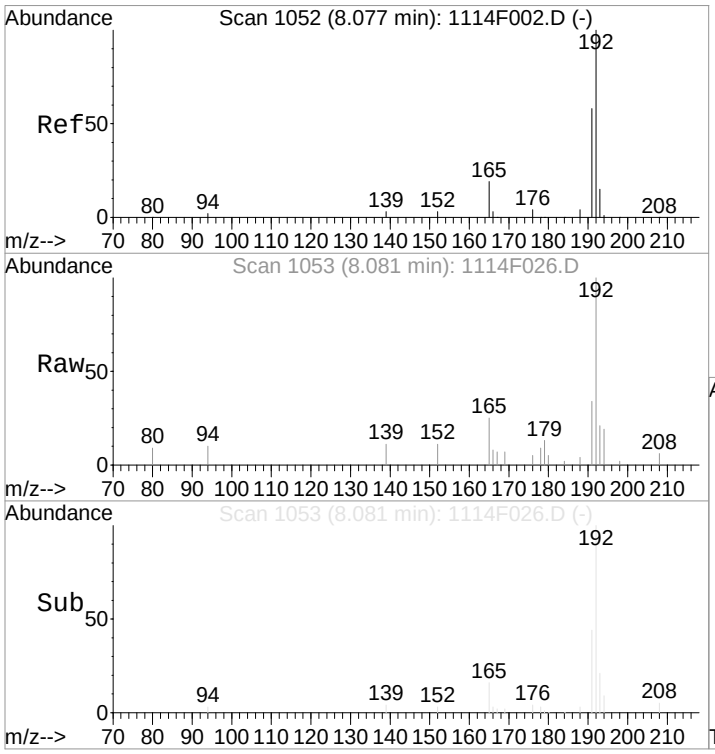


#19
Carbazole
Concen: 11.72 ng/ml
RT: 7.75 min Scan# 969
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:167 Resp: 5035

Ion	Ratio	Lower	Upper
167	100		
139	16.2	0.0	41.5
166	26.9	0.7	40.7

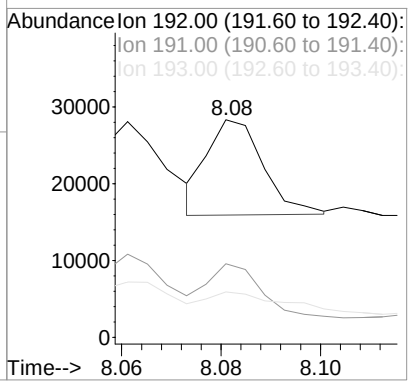


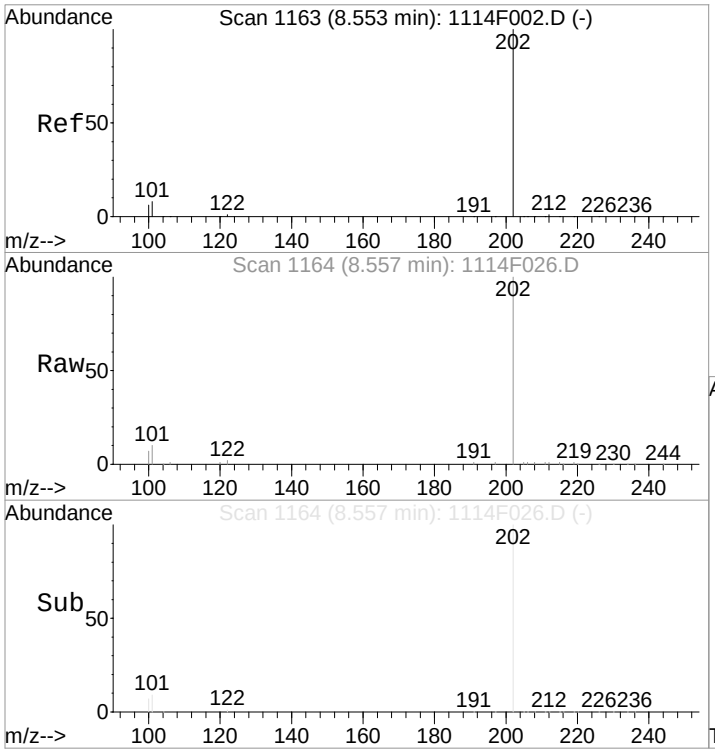


#20
1-Methylphenanthrene
Concen: 27.79 ng/ml m
RT: 8.08 min Scan# 1053
Delta R.T. -0.01 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:192 Resp: 9707

Ion	Ratio	Lower	Upper
192	100		
191	33.8	27.7	87.7
193	20.9	0.0	45.4

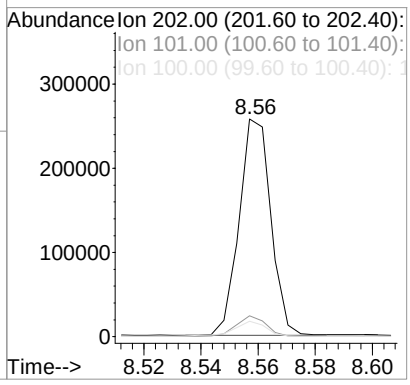




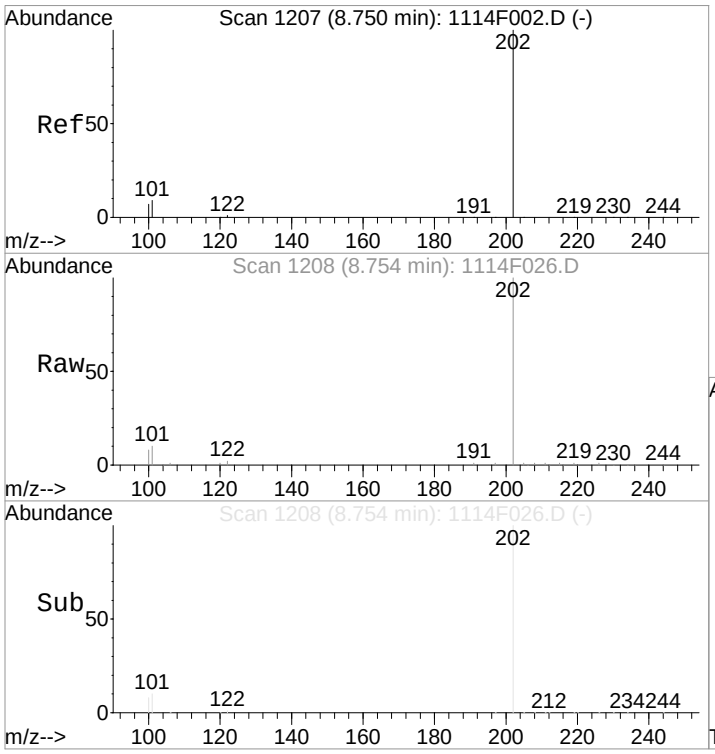
#21
Fluoranthene
Concen: 348.56 ng/ml
RT: 8.56 min Scan# 1164
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:202 Resp: 198515

Ion	Ratio	Lower	Upper
202	100		
101	9.5	0.0	41.3
100	7.0	0.0	28.6



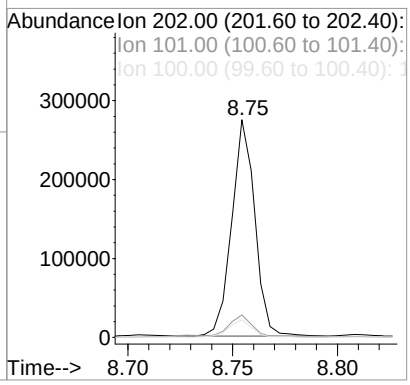
1st 12/03/18
2nd 12/06/18

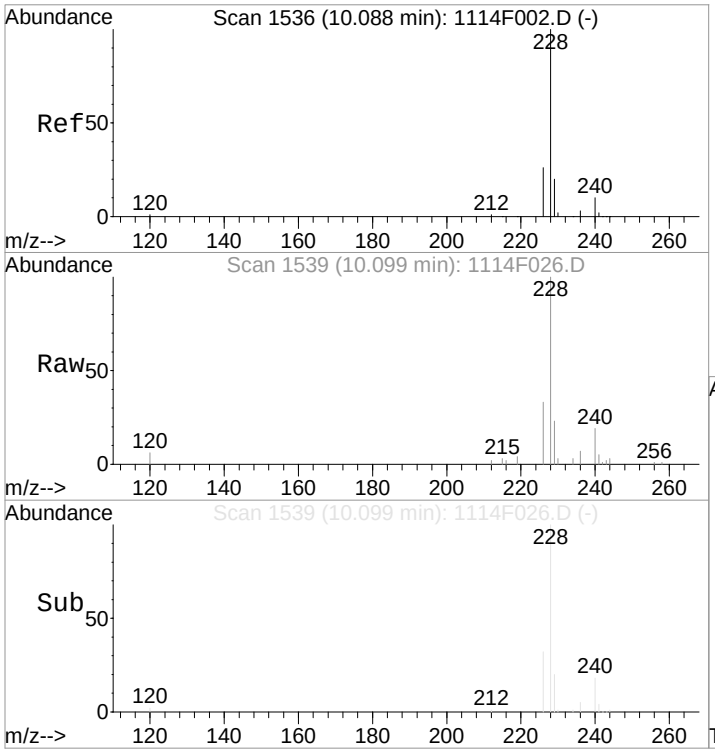


#24
Pyrene
Concen: 402.45 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:202 Resp: 211111

Ion	Ratio	Lower	Upper
202	100		
101	10.2	0.0	40.8
100	8.0	0.0	28.5

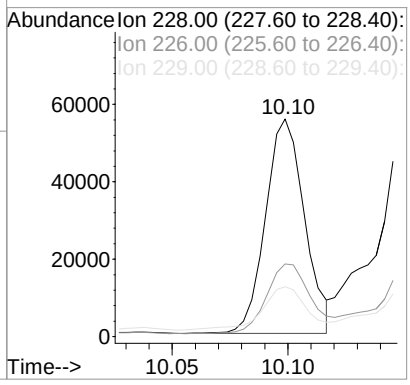


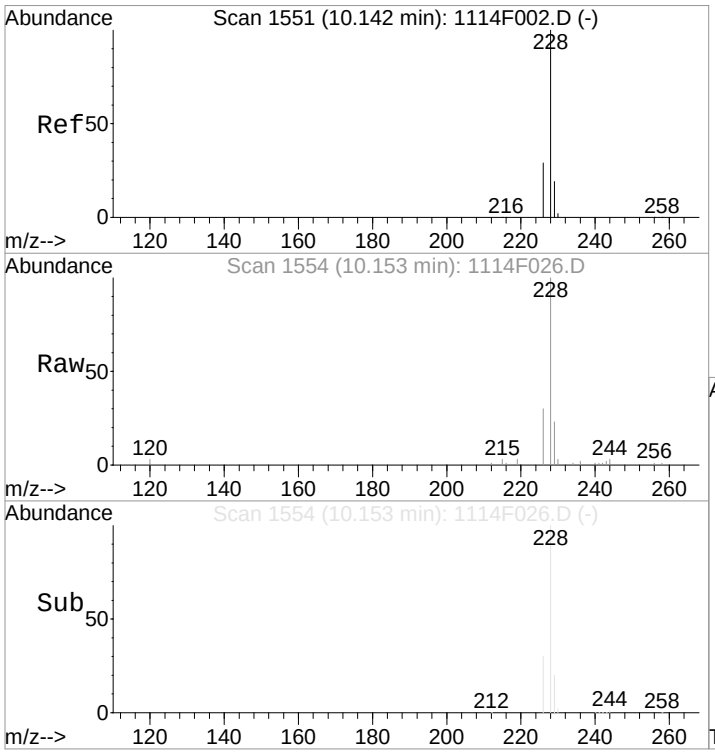


#26
Benz(a)anthracene
Concen: 131.35 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:228 Resp: 64927

Ion	Ratio	Lower	Upper
228	100		
226	32.5	0.0	56.3
229	20.2	0.0	39.1

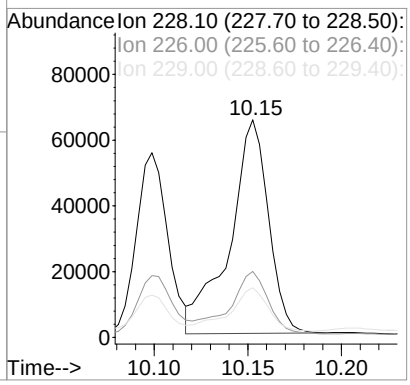


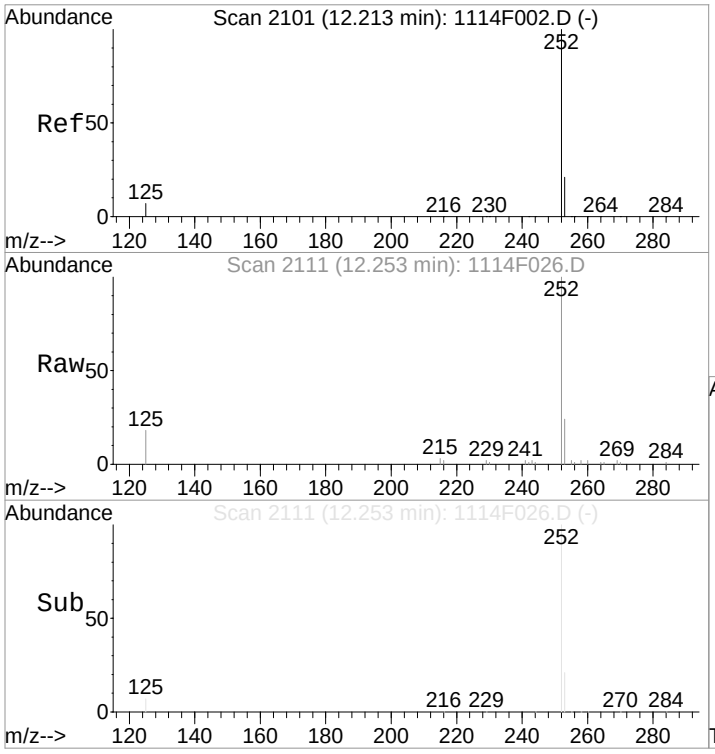


#27
Chrysene
Concen: 196.98 ng/ml
RT: 10.15 min Scan# 1554
Delta R.T. -0.00 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:228 Resp: 93269

Ion	Ratio	Lower	Upper
228	100		
226	29.3	0.0	58.7
229	20.1	0.0	39.2

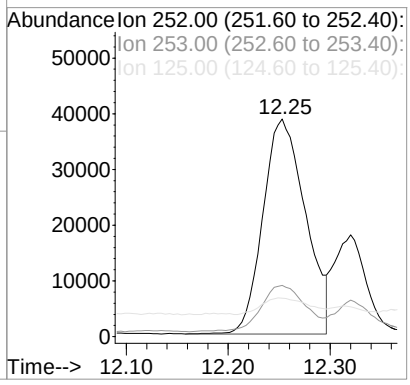




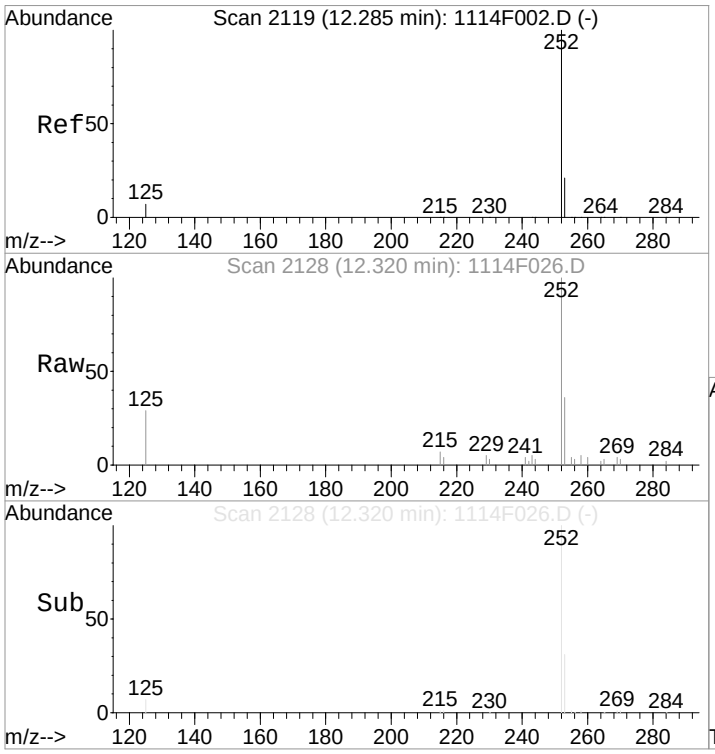
#29
Benzo(b)fluoranthene
Concen: 215.55 ng/ml
RT: 12.25 min Scan# 2111
Delta R.T. 0.03 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:252 Resp: 112142

Ion	Ratio	Lower	Upper
252	100		
253	21.4	0.0	51.2
125	7.6	0.0	29.5



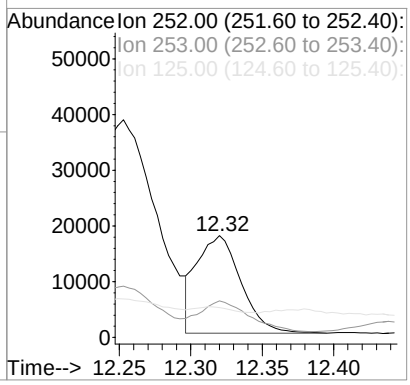
1st 12/03/18
2nd 12/06/18

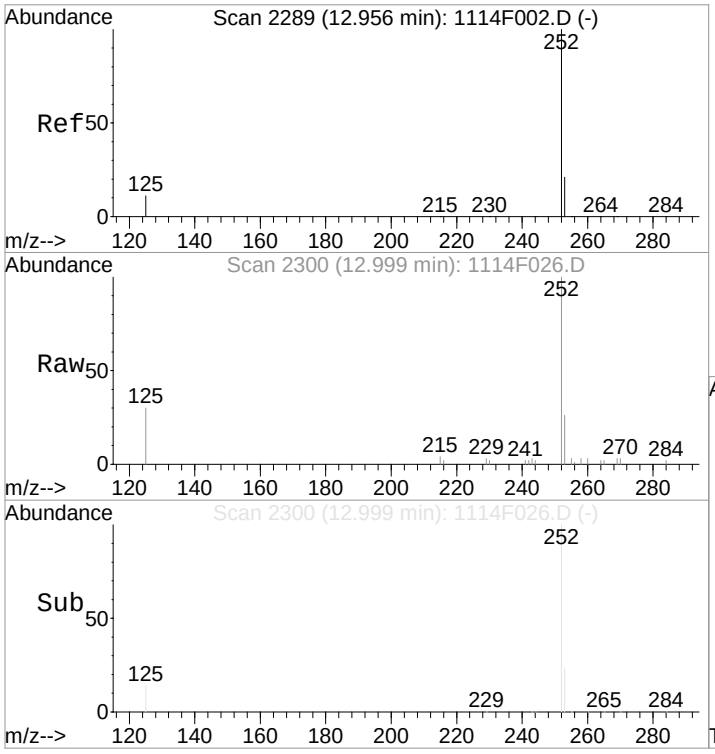


#30
Benzo(k)fluoranthene
Concen: 72.53 ng/ml
RT: 12.32 min Scan# 2128
Delta R.T. 0.03 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:252 Resp: 37434

Ion	Ratio	Lower	Upper
252	100		
253	30.8	0.0	51.2
125	5.7	0.0	29.7

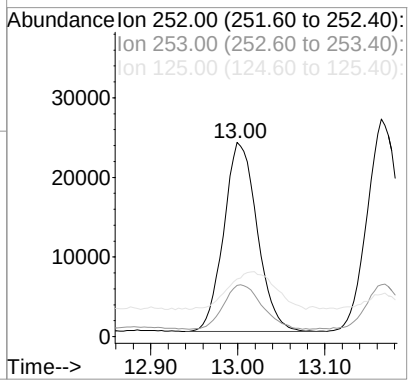




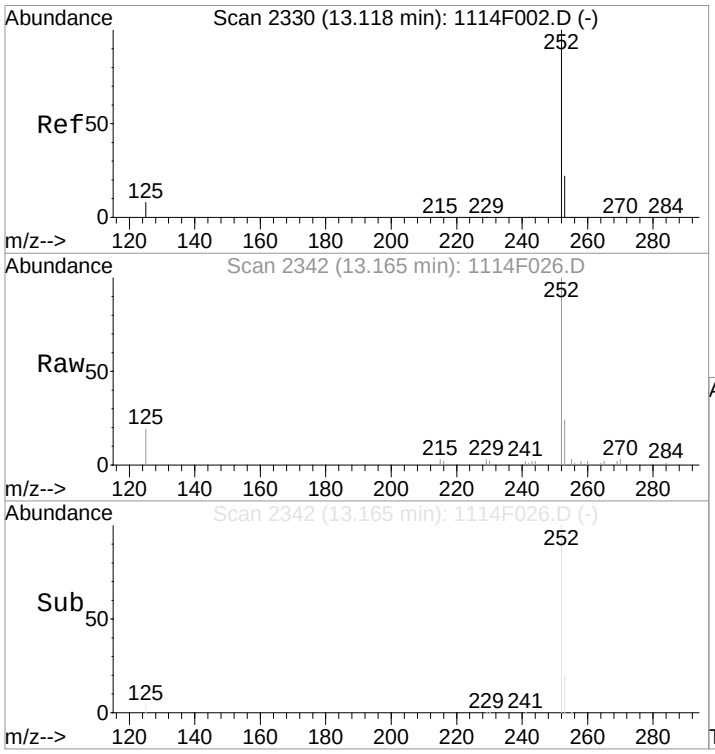
#31
Benzo(e)pyrene
Concen: 127.90 ng/ml
RT: 13.00 min Scan# 2300
Delta R.T. 0.03 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:252 Resp: 63426

Ion	Ratio	Lower	Upper
252	100		
253	23.0	0.0	51.3
125	15.7	0.0	33.5



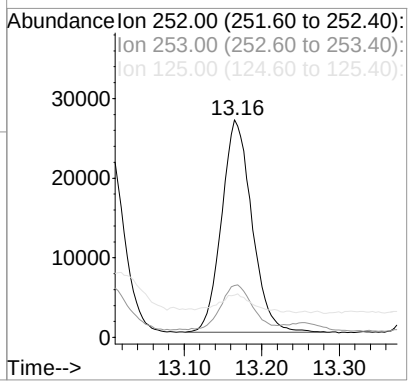
1st 12/03/18
2nd 12/06/18

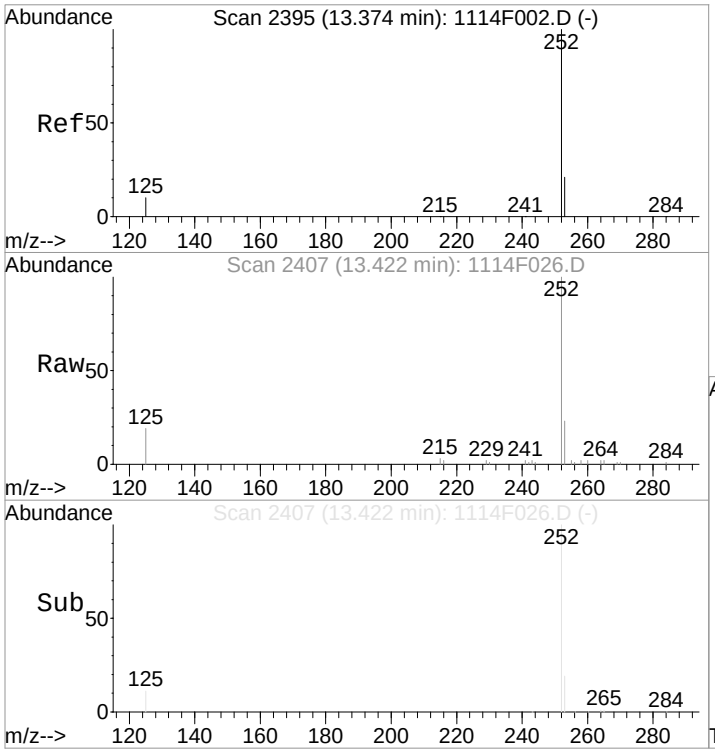


#32
Benzo(a)pyrene
Concen: 159.07 ng/ml
RT: 13.16 min Scan# 2342
Delta R.T. 0.04 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:252 Resp: 72576

Ion	Ratio	Lower	Upper
252	100		
253	20.7	0.0	50.9
125	8.6	0.0	30.3

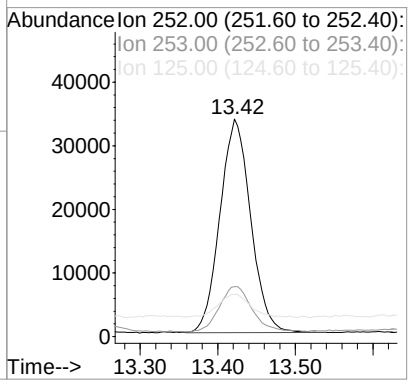


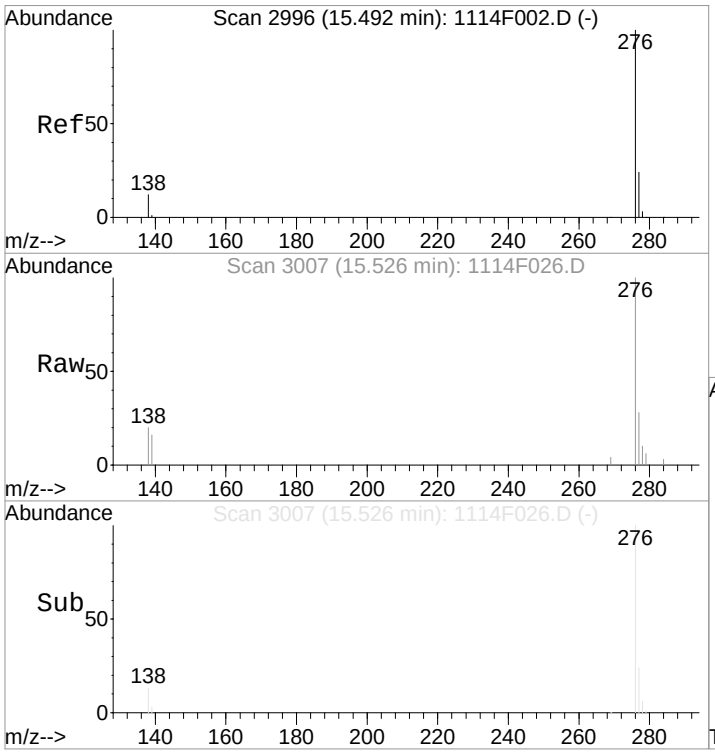


#33
Perylene
Concen: 193.45 ng/ml
RT: 13.42 min Scan# 2407
Delta R.T. 0.04 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:252 Resp: 92585

Ion	Ratio	Lower	Upper
252	100		
253	21.1	0.0	51.2
125	10.7	0.0	33.8

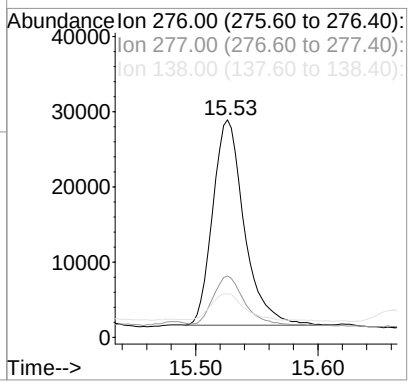


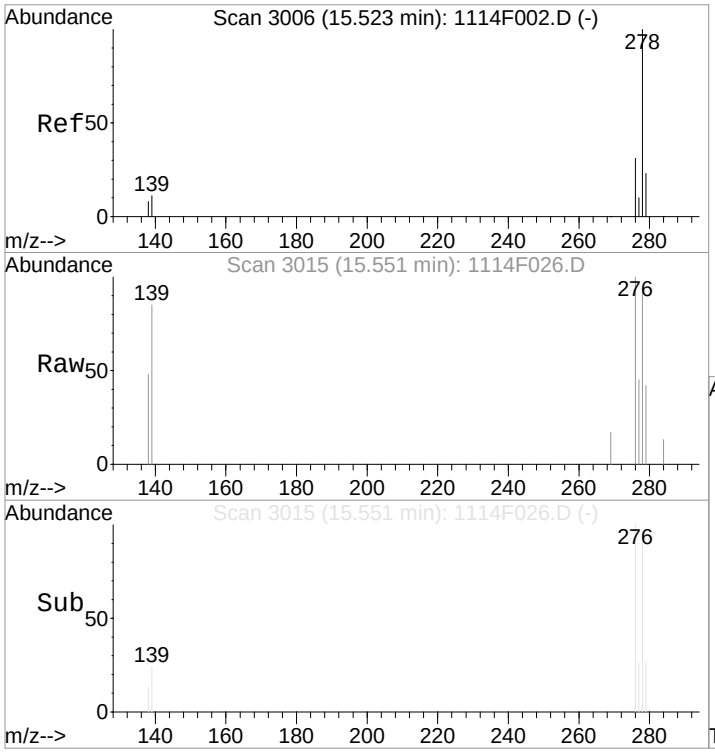


#34
Indeno(1,2,3-cd)pyrene
Concen: 109.86 ng/ml
RT: 15.53 min Scan# 3007
Delta R.T. 0.04 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:276 Resp: 49148

Ion	Ratio	Lower	Upper
276	100		
277	24.1	0.0	53.4
138	13.1	0.0	37.7

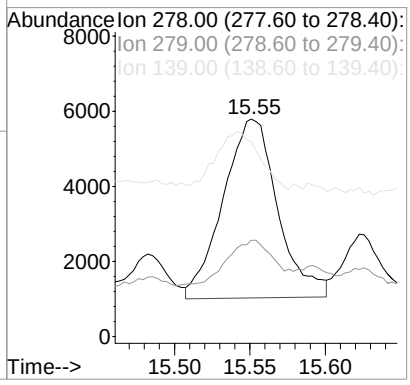




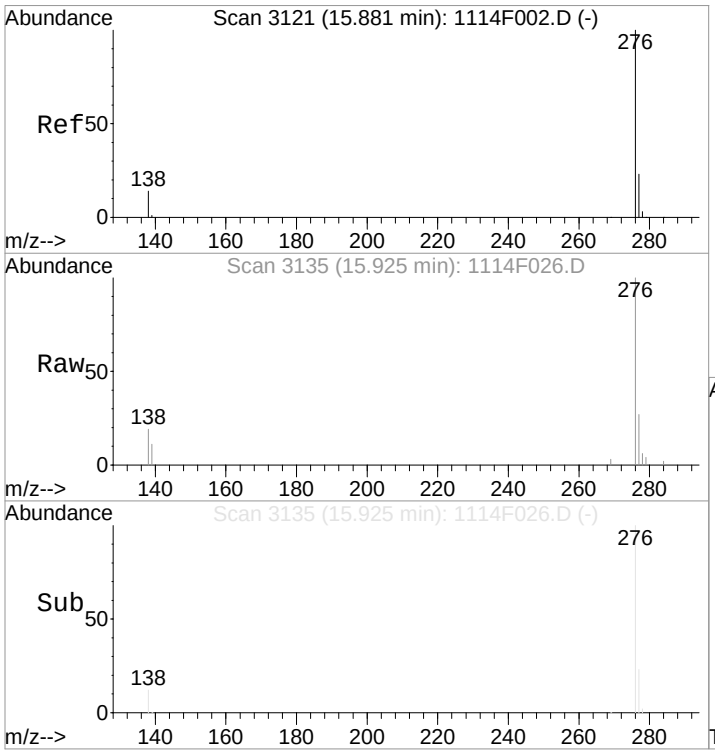
#35
Dibenz(a,h)anthracene
Concen: 26.50 ng/ml
RT: 15.55 min Scan# 3015
Delta R.T. 0.02 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:278 Resp: 12016

Ion	Ratio	Lower	Upper
278	100		
279	26.0	0.0	53.5
139	29.3	0.0	35.0



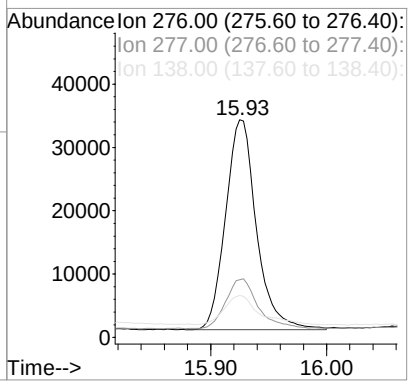
1st 12/03/18
2nd 12/06/18



#36
Benzo(g,h,i)perylene
Concen: 117.57 ng/ml
RT: 15.93 min Scan# 3135
Delta R.T. 0.04 min
Lab File: 1114F026.D
Acq: 14 Nov 2018 4:35 pm

Tgt Ion:276 Resp: 61597

Ion	Ratio	Lower	Upper
276	100		
277	23.4	0.0	53.1
138	13.9	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F026.D Vial: 26
Acq On : 14 Nov 2018 4:35 pm Operator: LWeiskopf
Sample : K1810430-010DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:35 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	60301	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	35072	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	73936	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	76456	200.00	ng/ml	0.00
28) Perylene-d12	13.34	264	84208	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	9380	55.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	5.57%		
13) Fluorene-d10	6.75	176	16951	75.59	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.56%		
22) Fluoranthene-d10	8.54	212	34140	73.27	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.33%		
25) Terphenyl-d14	8.89	244	29467	88.86	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.89%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	12390	35.60	ng/ml	99
4) 2-Methylnaphthalene	5.41	142	3737	17.80	ng/ml	95
5) 1-Methylnaphthalene	5.50	142	1828	9.05	ng/ml	93
6) Biphenyl	5.82	154	1867	7.13	ng/ml	96
7) 2,6-Dimethylnaphthalene	5.96	156	4014	22.27	ng/ml	89
9) Acenaphthylene	6.19	152	6980m	16.68	ng/ml	
10) Acenaphthene	6.34	154	6153	25.60	ng/ml	95
11) Dibenzofuran	6.49	168	4132	10.71	ng/ml	51
12) 2,3,5-Trimethylnaphthalene	6.66	170	3025	13.60	ng/ml	91
14) Fluorene	6.77	166	5764	19.83	ng/ml	98
16) Dibenzothiophene	7.47	184	7380	16.00	ng/ml	90
17) Phenanthrene	7.57	178	89099	193.18	ng/ml	99
18) Anthracene	7.62	178	17022	38.66	ng/ml	98
19) Carbazole	7.75	167	5035	11.72	ng/ml	87
20) 1-Methylphenanthrene	8.08	192	9707m	27.79	ng/ml	
21) Fluoranthene	8.56	202	198515	348.56	ng/ml	95
24) Pyrene	8.75	202	211111	402.45	ng/ml	98
26) Benz(a)anthracene	10.10	228	64927	131.35	ng/ml	92
27) Chrysene	10.15	228	93269	196.98	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	112142	215.55	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	37434	72.53	ng/ml	83
31) Benzo(e)pyrene	13.00	252	63426	127.90	ng/ml	96
32) Benzo(a)pyrene	13.16	252	72576	159.07	ng/ml	98
33) Perylene	13.42	252	92585	193.45	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.53	276	49148	109.86	ng/ml	95
35) Dibenz(a,h)anthracene	15.55	278	12016	26.50	ng/ml	84
36) Benzo(g,h,i)perylene	15.93	276	61597	117.57	ng/ml	94

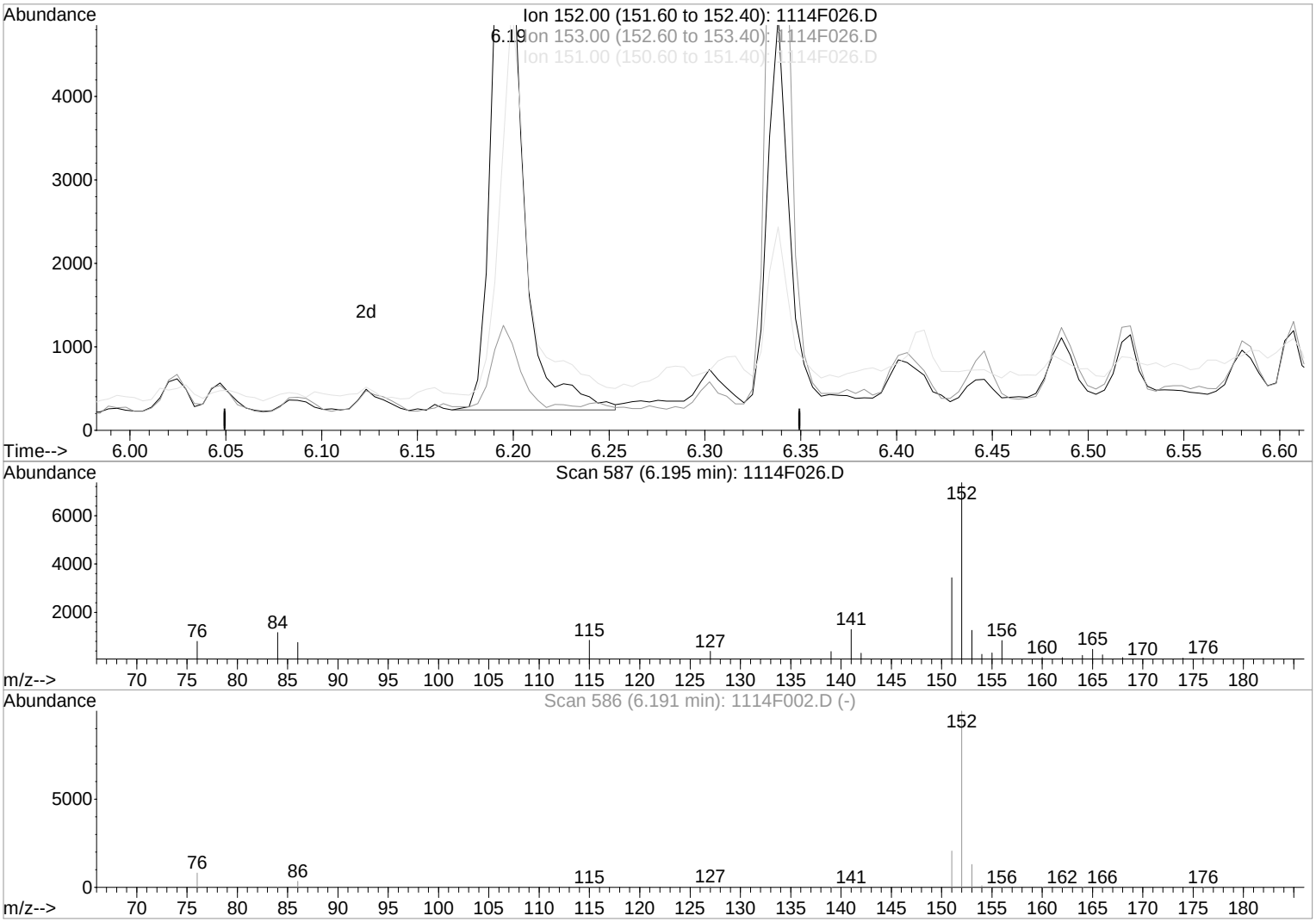
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F026.D Vial: 26
Acq On : 14 Nov 2018 4:35 pm Operator: LWeiskopf
Sample : K1810430-010DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 5:06 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F026.D

(9) Acenaphthylene (T)

6.19min 17.51ng/ml

response 7328

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	13.84
151.00	20.20	42.02#
0.00	0.00	0.00

Manual Integration:

Before

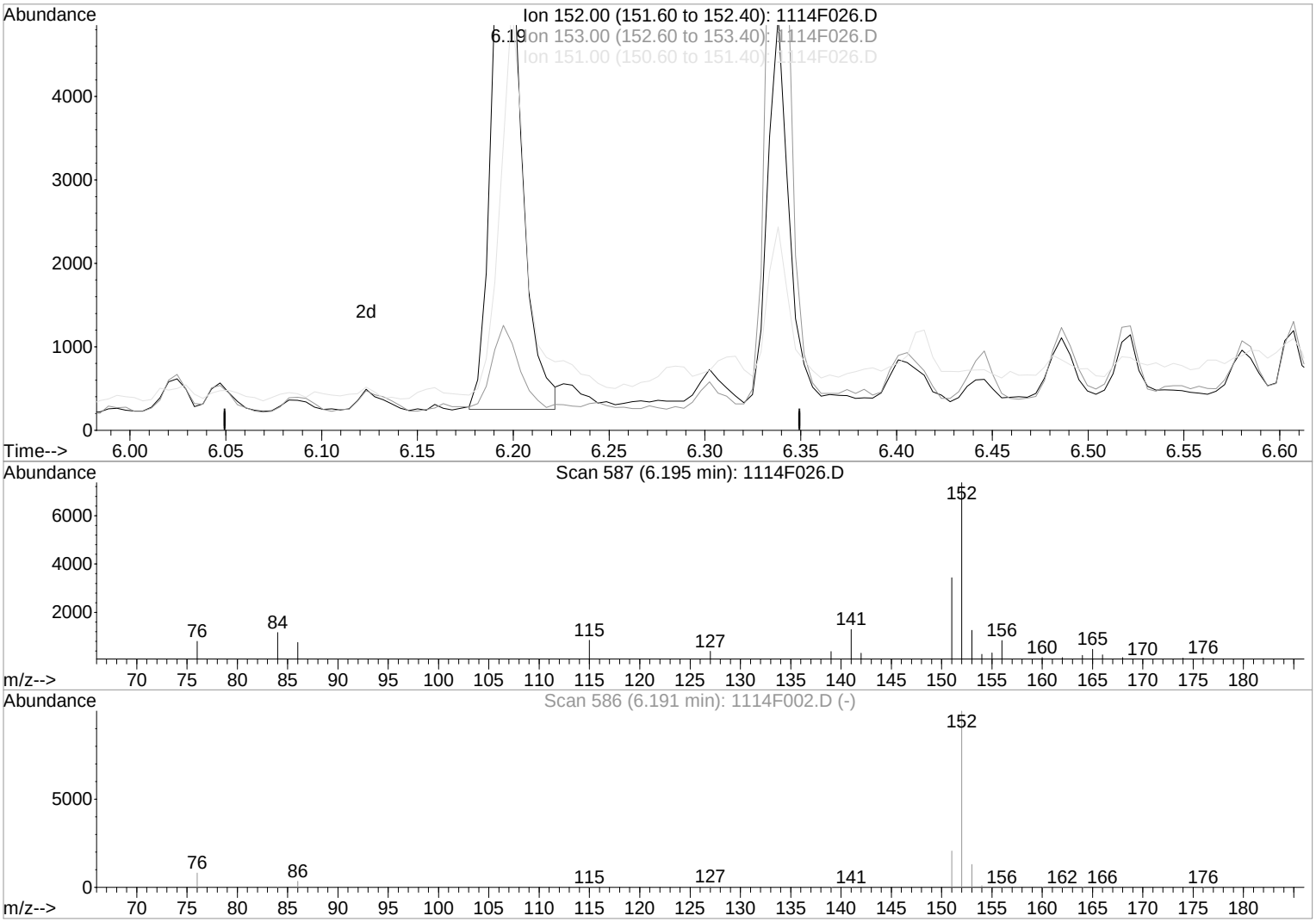
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F026.D Vial: 26
Acq On : 14 Nov 2018 4:35 pm Operator: LWeiskopf
Sample : K1810430-010DIL 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:24 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F026.D

(9) Acenaphthylene (T)

6.19min 16.68ng/ml m

response 6980

Ion	Exp%	Act%
152.00	100	100
153.00	12.90	17.06
151.00	20.20	46.58#
0.00	0.00	0.00

Manual Integration:

After

BLC

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F021.D
Lab ID: K1810430-011
RunType: DL
Matrix: SOIL

Date Acquired: 11/14/2018 14:25
Date Quantitated: 11/30/2018 13:20
Batch ID: KWG1806235
Analysis Method: 8270D SIM
ListJoinID: LJ12908

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
Preparation Holding Time	NA	NA	NA	x		
Pre-Preparation Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Method Blank	NA	NA	NA	x		
MB Surrogate Recovery	NA	NA	NA	x		
Lab Control Spike	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA	x		
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F021.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 14:25	**Quant Date:**	11/30/2018 13:20	**Vial:**	21
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	20.0
Lab ID:	K1810430-011			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702223	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ12908
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	52974	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	32289	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	65075	200.00	OK
4	Chrysene-d12	10.11	0.01	240	65997	200.00	OK
5	Perylene-d12	13.33	0.04	264	72825	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.75	0.00	0.00	176	8299	40.20	80	26-102	OK	
3	Fluoranthene-d10	8.54	0.01	0.00	212	14929	36.40	73	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	12302	42.98	86	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	728	2.38	3.2	JD	
1	2-Methylnaphthalene	5.41		0.00	142	325	1.76	2.4	JD	
2	Acenaphthylene	6.20	0.01	0.00	152	1187	3.08	4.1	JDX	
2	Acenaphthene	6.34		0.00	154	933	4.22	5.7	JD	
2	Dibenzofuran	6.49		0.00	168	682**m**	1.92	2.6	JDX	
2	Fluorene	6.77		0.00	166	1339	5.00	6.7	JD	
3	Phenanthrene	7.57		0.00	178	14058	34.63	47	D	
3	Anthracene	7.62	0.01	0.00	178	2465	6.36	8.6	D	
3	Fluoranthene	8.56	0.01	0.00	202	21581	43.05	58	D	
4	Pyrene	8.75		0.00	202	28947	63.93	86	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	8361	19.59	26	D	
4	Chrysene	10.15	0.01	0.00	228	10273**m**	25.13	34	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F021.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 14:25	**Quant Date:**	11/30/2018 13:20	**Vial:**	21
Run Type:	DL	**ListJoinID:**	LJ12908	**Dilution:**	20.0
Lab ID:	K1810430-011			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene	12.24	0.03	0.00	252	11550	25.67	35	D	
5	Benzo(k)fluoranthene	12.31	0.03	0.00	252	3782**m**	8.47	11	D	
5	Benzo(a)pyrene	13.16	0.04	0.00	252	8463	21.45	29	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	5458	14.11	19	D	
5	Dibenz(a,h)anthracene	15.55	0.03	0.00	278	1911	4.87	6.6	JD	
5	Benzo(g,h,i)perylene	15.92	0.04	0.00	276	9283	20.49	28	D	

Prep Amount:	40.080 g	**Dilution:**	20.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	74.1 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

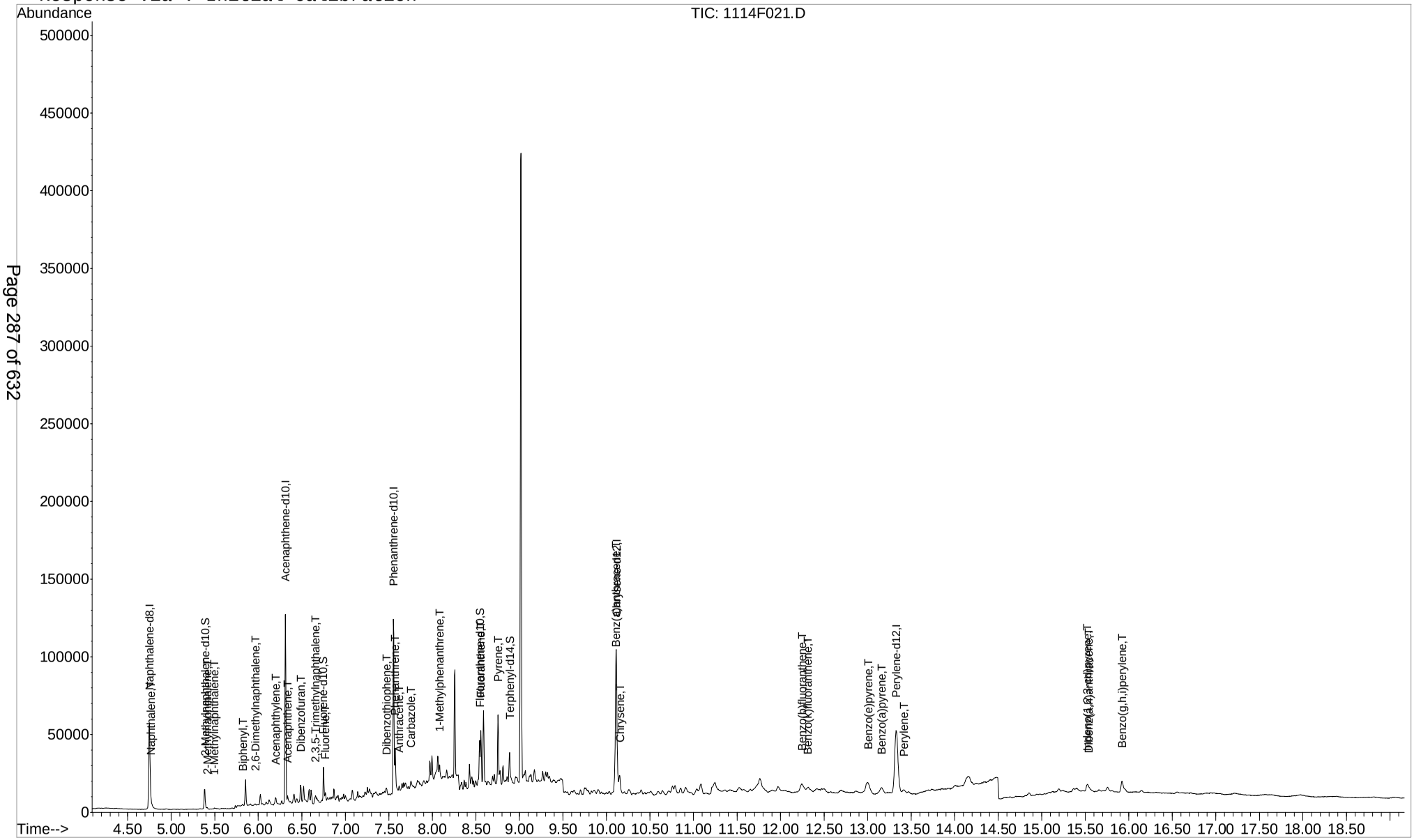
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

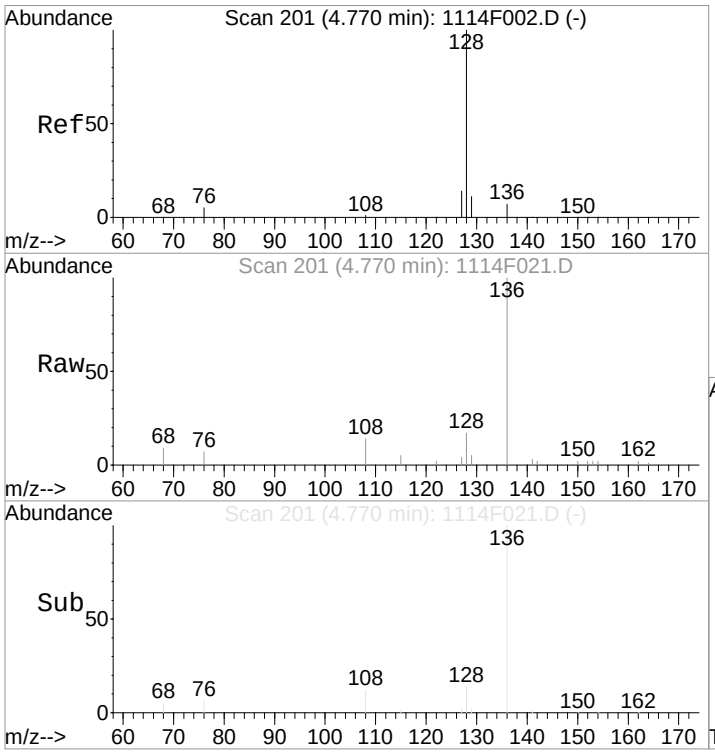
1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:20 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



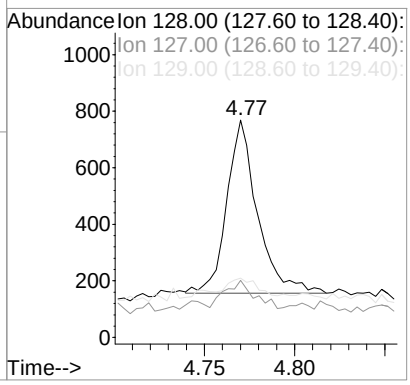
1st 12/03/18
2nd 12/06/18

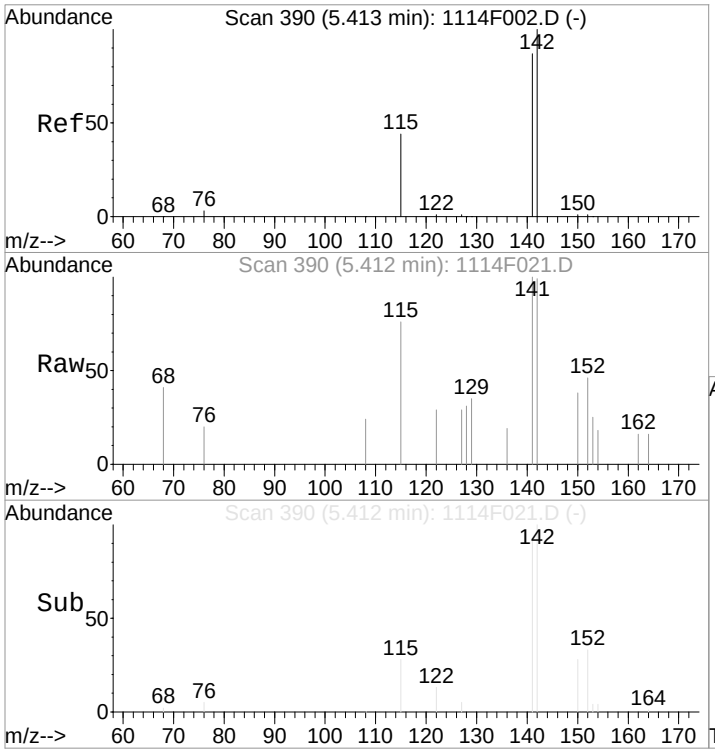


#2
Naphthalene
Concen: 2.38 ng/ml
RT: 4.77 min Scan# 201
Delta R.T. -0.01 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:128 Resp: 728

Ion	Ratio	Lower	Upper
128	100		
127	14.2	0.0	43.7
129	12.1	0.0	30.8

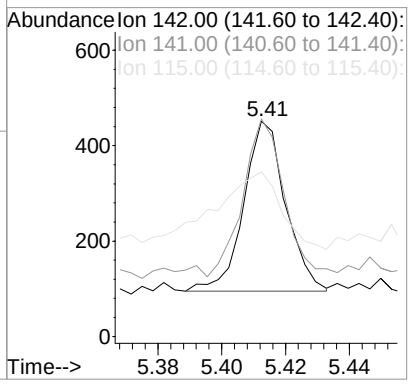


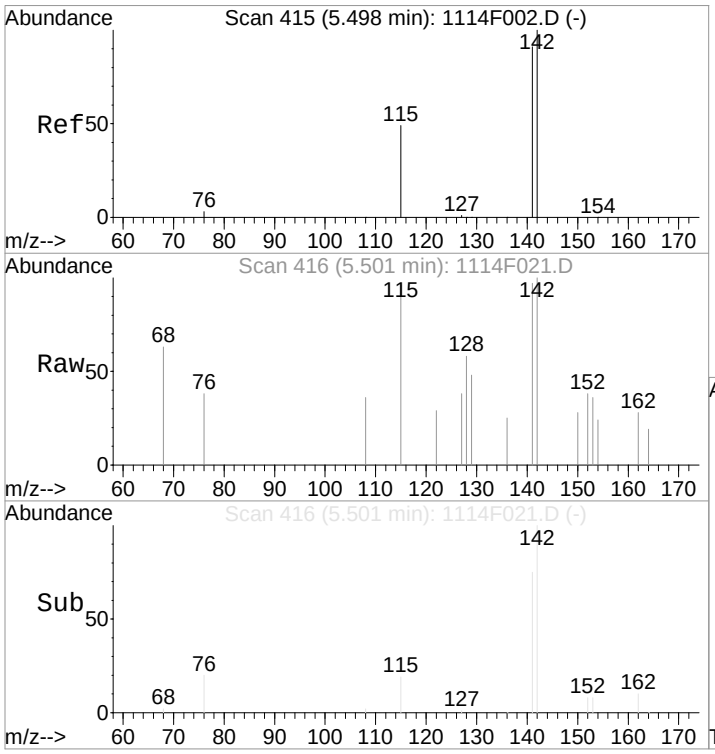


#4
2-Methylnaphthalene
Concen: 1.76 ng/ml
RT: 5.41 min Scan# 390
Delta R.T. -0.01 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:142 Resp: 325

Ion	Ratio	Lower	Upper
142	100		
141	89.0	56.8	116.8
115	45.5	13.3	53.3

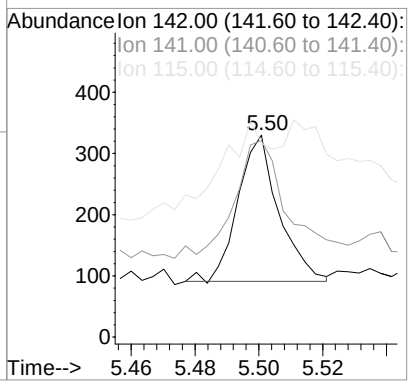


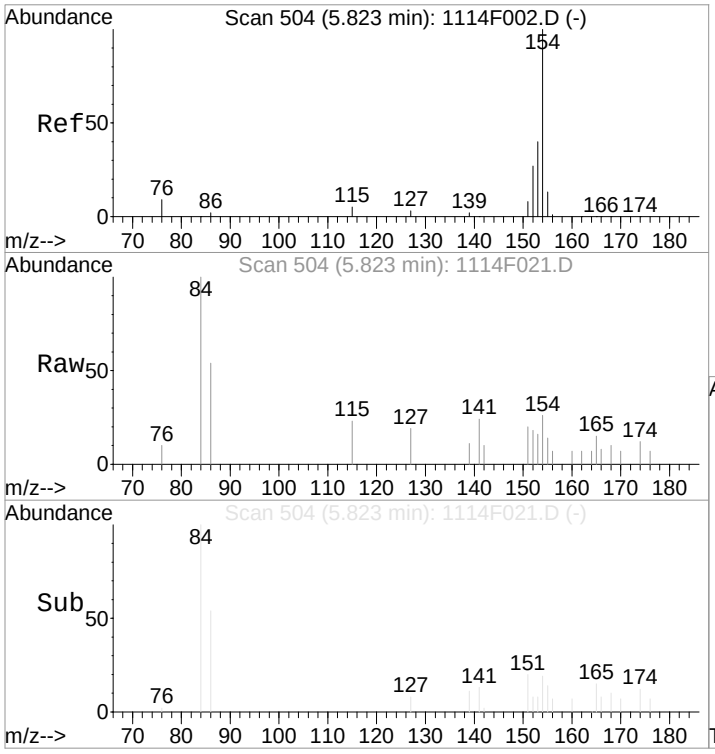


#5
1-Methylnaphthalene
Concen: 1.20 ng/ml
RT: 5.50 min Scan# 416
Delta R.T. -0.01 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:142 Resp: 213

Ion	Ratio	Lower	Upper
142	100		
141	72.0	59.7	119.7
115	35.1	13.7	53.7

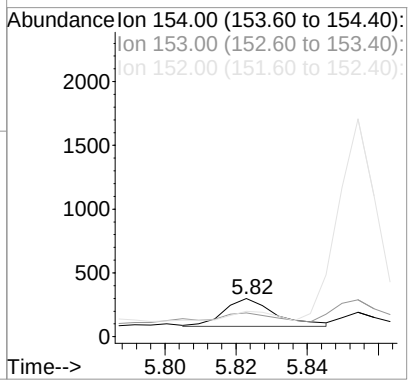




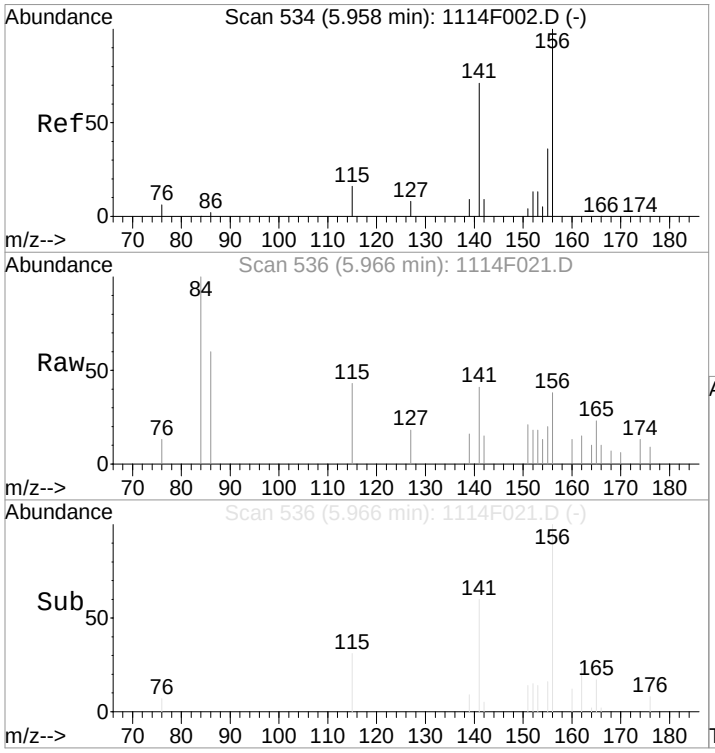
#6
Biphenyl
Concen: 0.96 ng/ml m
RT: 5.82 min Scan# 504
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:154 Resp: 220

Ion	Ratio	Lower	Upper
154	100		
153	62.0	11.4	71.4
152	66.3	7.1	47.1#



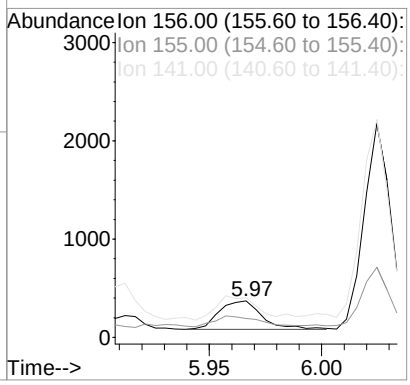
1st 12/03/18
2nd 12/06/18

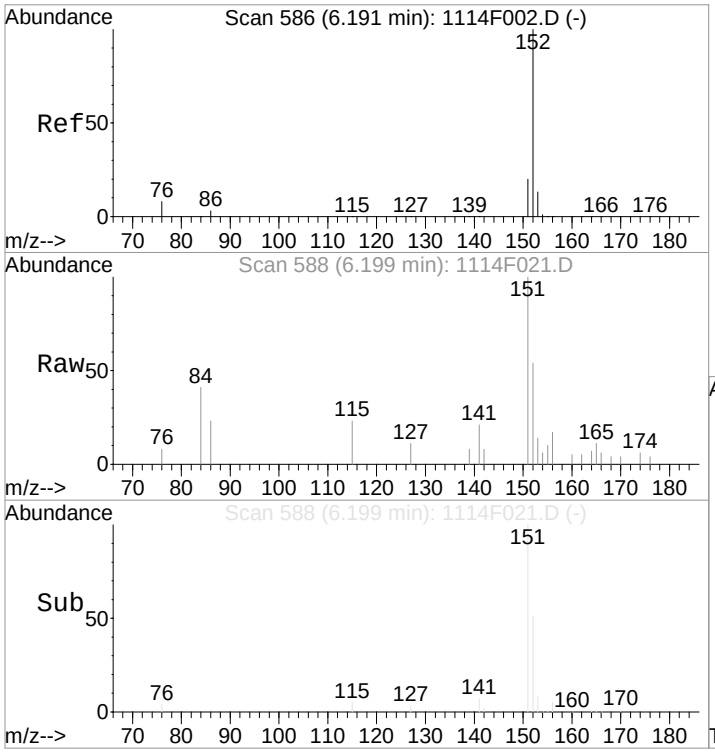


#7
2,6-Dimethylnaphthalene
Concen: 2.45 ng/ml
RT: 5.97 min Scan# 536
Delta R.T. 0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:156 Resp: 388

Ion	Ratio	Lower	Upper
156	100		
155	27.4	7.0	67.0
141	68.8	47.9	87.9

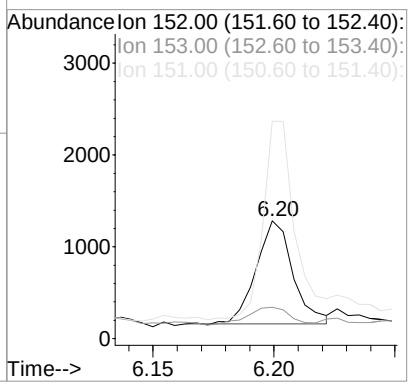




#9
Acenaphthylene
Concen: 3.08 ng/ml
RT: 6.20 min Scan# 588
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

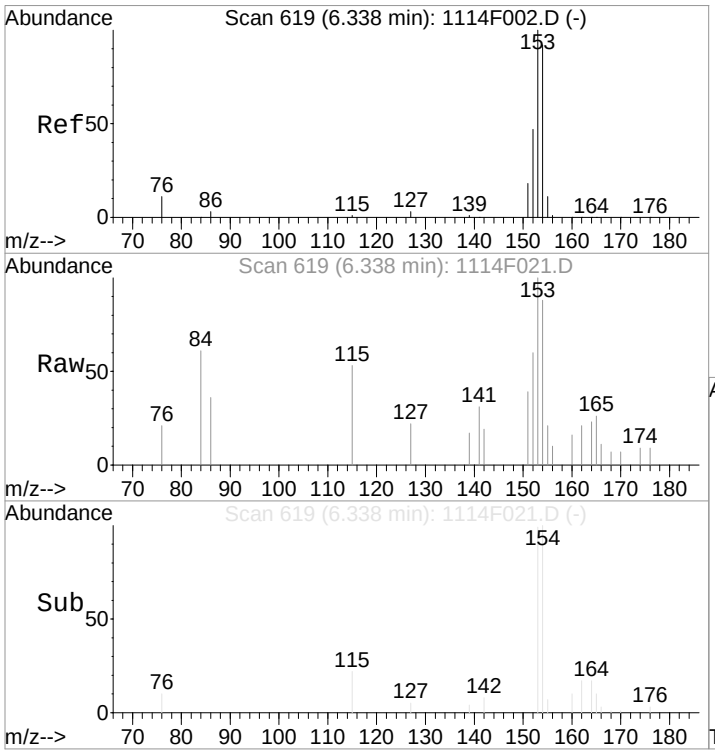
Tgt Ion:152 Resp: 1187

Ion	Ratio	Lower	Upper
152	100		
153	14.8	0.0	42.9
151	191.3	0.2	40.2#



X

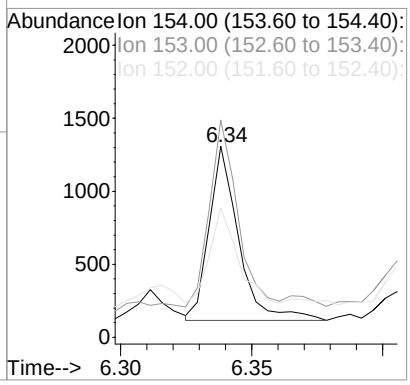
1st 12/03/18
2nd 12/06/18

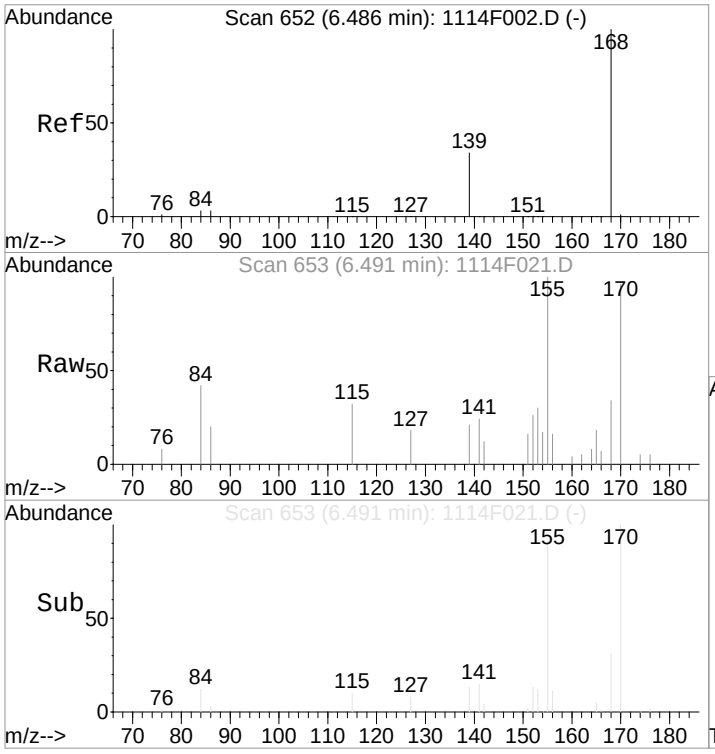


#10
Acenaphthene
Concen: 4.22 ng/ml
RT: 6.34 min Scan# 619
Delta R.T. -0.01 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:154 Resp: 933

Ion	Ratio	Lower	Upper
154	100		
153	107.5	77.1	137.1
152	54.5	19.7	79.7

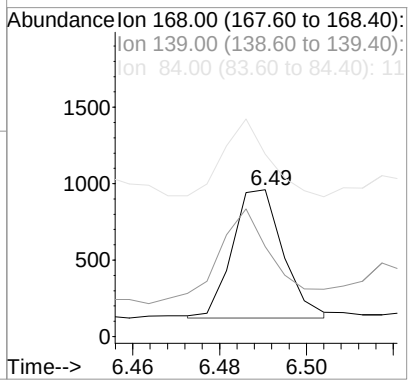




#11
Dibenzofuran
Concen: 1.92 ng/ml m
RT: 6.49 min Scan# 653
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

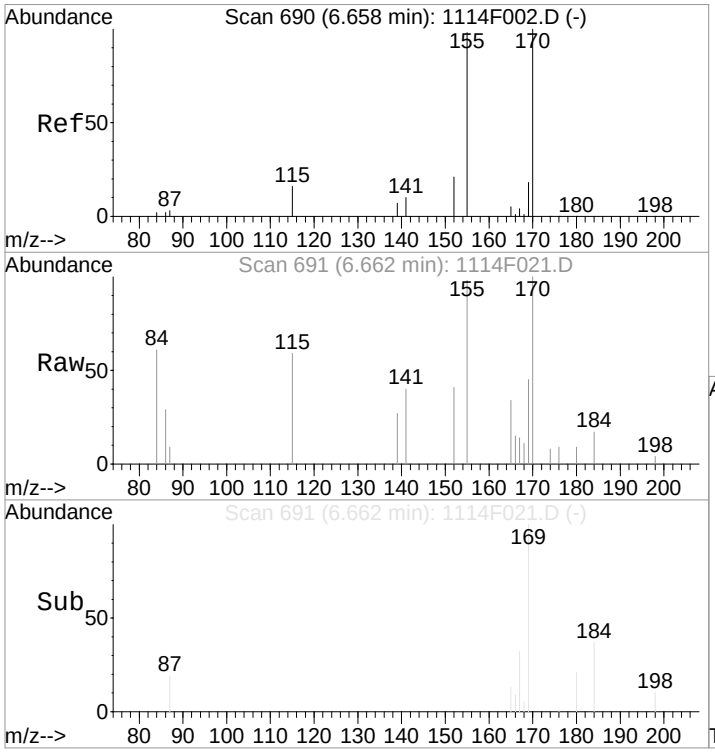
Tgt Ion:168 Resp: 682

Ion	Ratio	Lower	Upper
168	100		
139	61.3	0.0	55.8#
84	124.0	0.0	23.5#



x

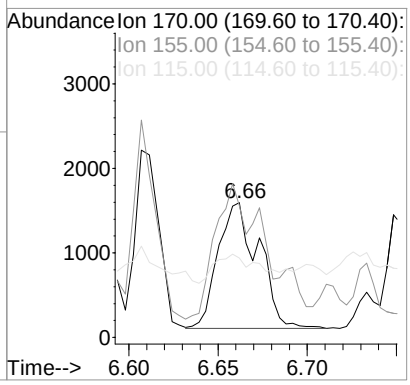
1st 12/03/18
2nd 12/06/18

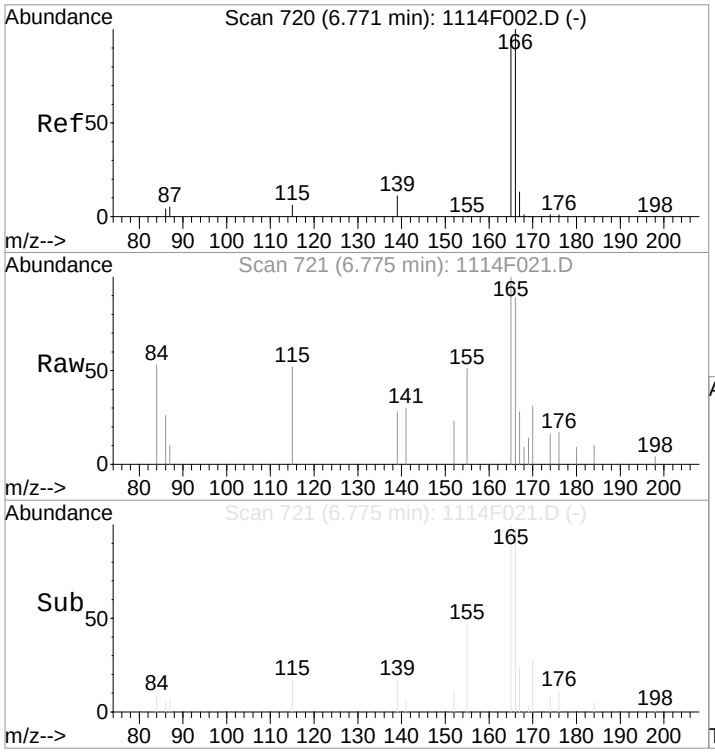


#12
2,3,5-Trimethylnaphthalene
Concen: 11.53 ng/ml
RT: 6.66 min Scan# 691
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:170 Resp: 2361

Ion	Ratio	Lower	Upper
170	100		
155	90.5	59.2	119.2
115	13.1	0.0	30.1

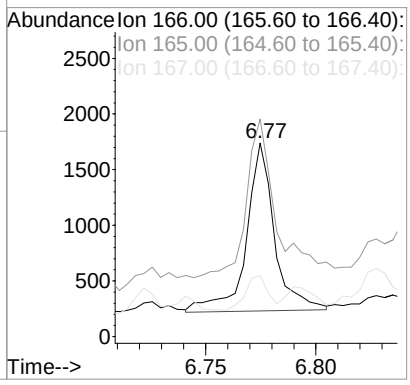


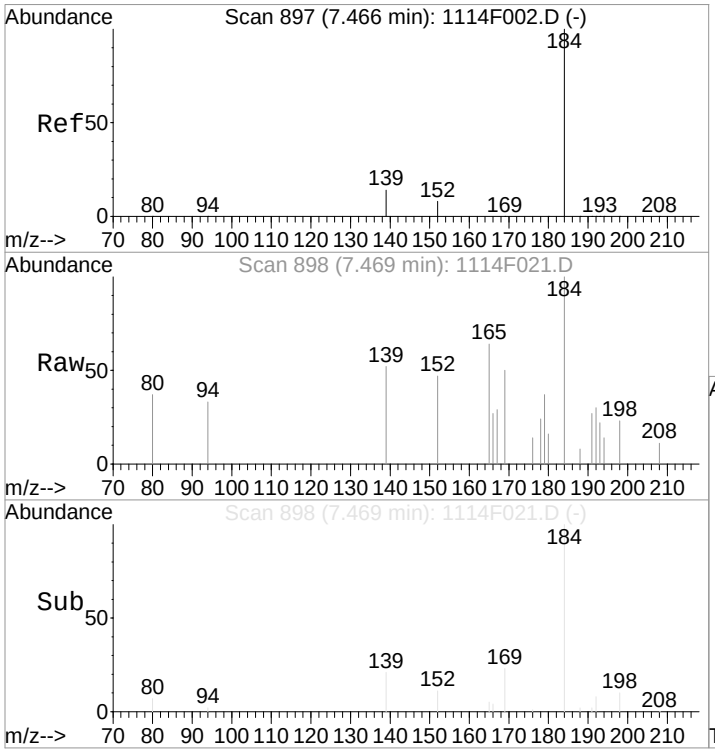


#14
Fluorene
Concen: 5.00 ng/ml
RT: 6.77 min Scan# 721
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:166 Resp: 1339

Ion	Ratio	Lower	Upper
166	100		
165	93.9	63.4	123.4
167	17.6	0.0	33.1

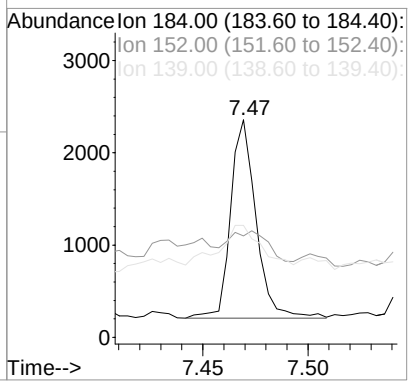


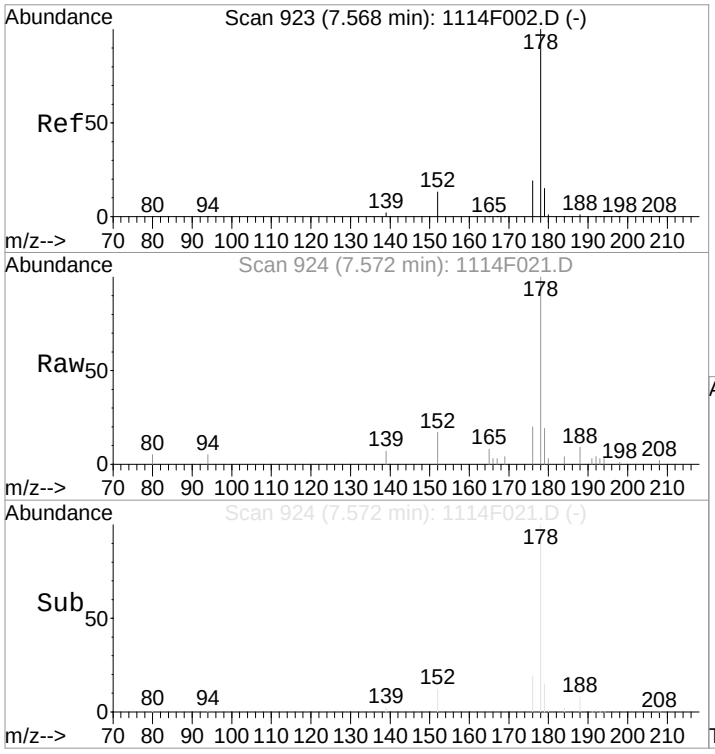


#16
Dibenzothiophene
Concen: 4.46 ng/ml
RT: 7.47 min Scan# 898
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:184 Resp: 1809

Ion	Ratio	Lower	Upper
184	100		
152	11.0	0.0	37.8
139	20.0	0.0	32.6

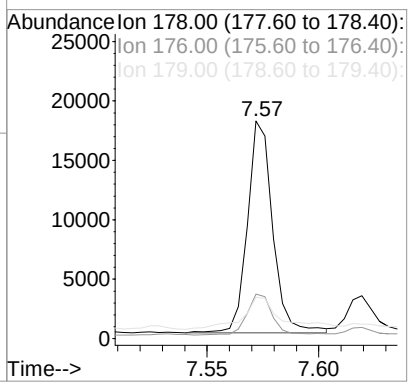




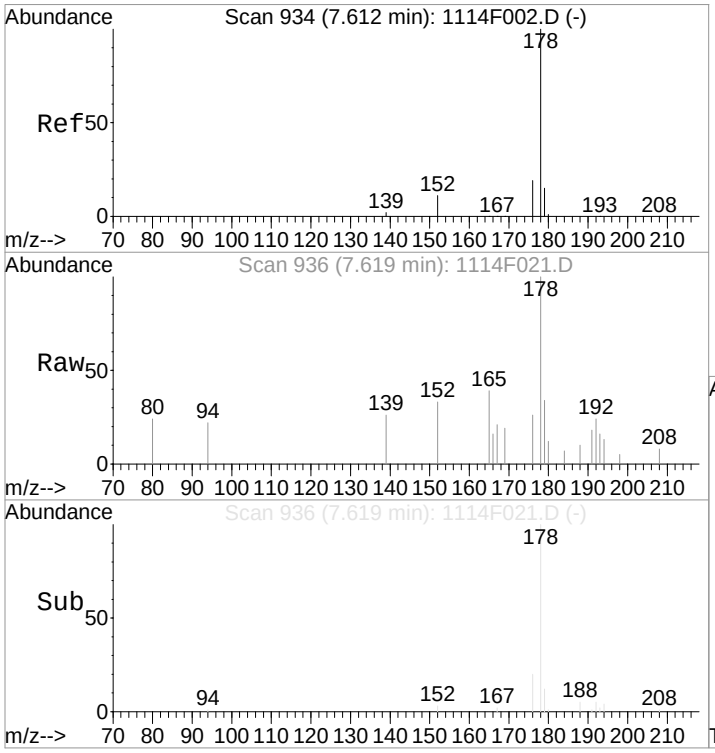
#17
Phenanthrene
Concen: 34.63 ng/ml
RT: 7.57 min Scan# 924
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:178 Resp: 14058

Ion	Ratio	Lower	Upper
178	100		
176	19.1	0.0	48.7
179	15.1	0.0	35.1



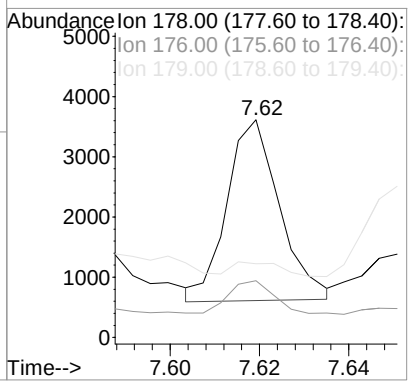
1st 12/03/18
2nd 12/06/18

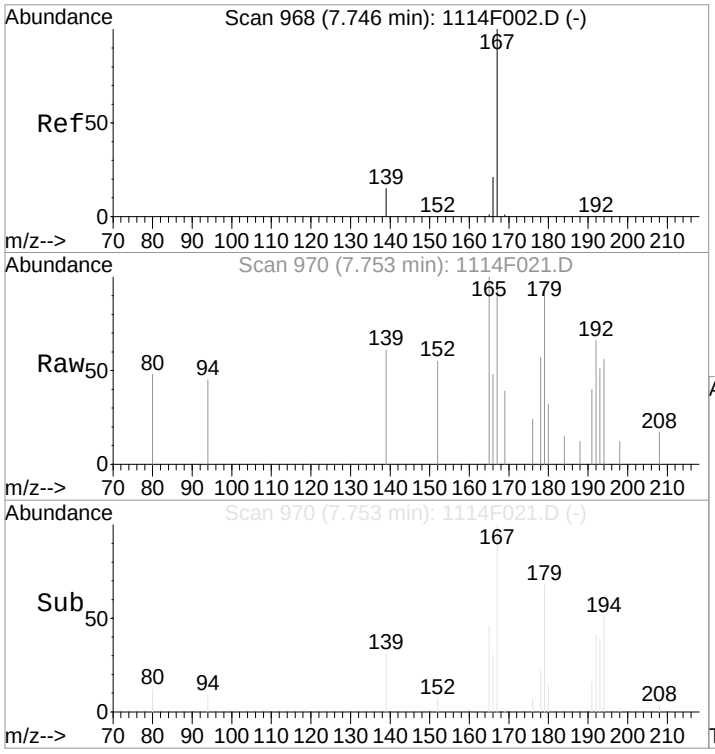


#18
Anthracene
Concen: 6.36 ng/ml
RT: 7.62 min Scan# 936
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:178 Resp: 2465

Ion	Ratio	Lower	Upper
178	100		
176	19.2	0.0	48.0
179	7.6	0.0	35.1

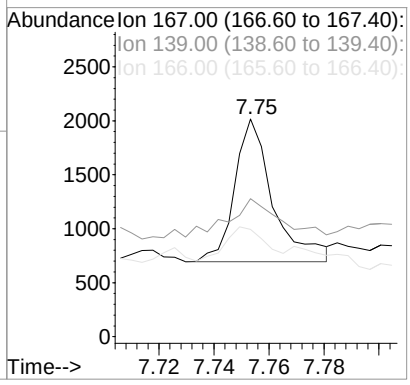


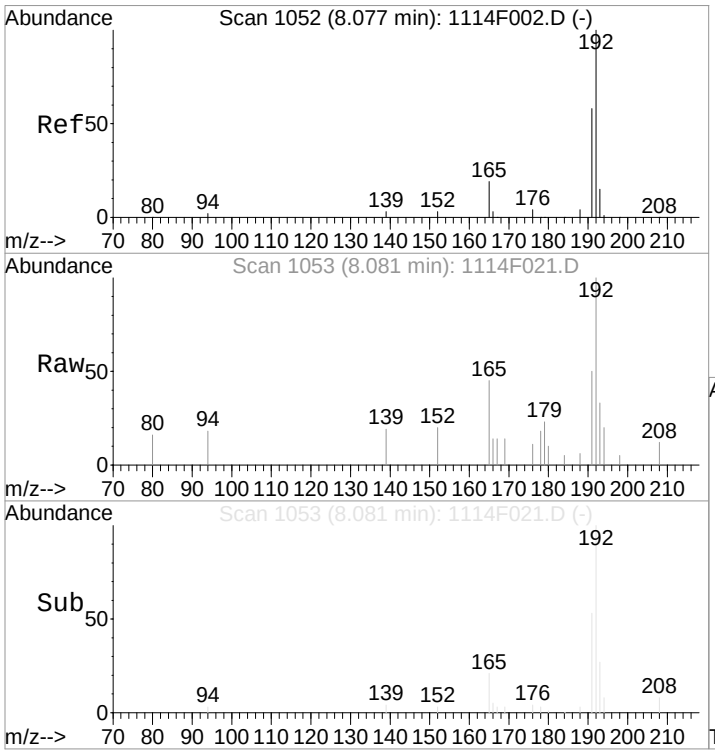


#19
Carbazole
Concen: 3.38 ng/ml
RT: 7.75 min Scan# 970
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:167 Resp: 1279

Ion	Ratio	Lower	Upper
167	100		
139	27.0	0.0	41.5
166	19.5	0.7	40.7

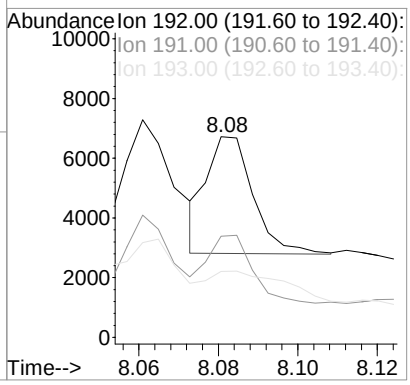


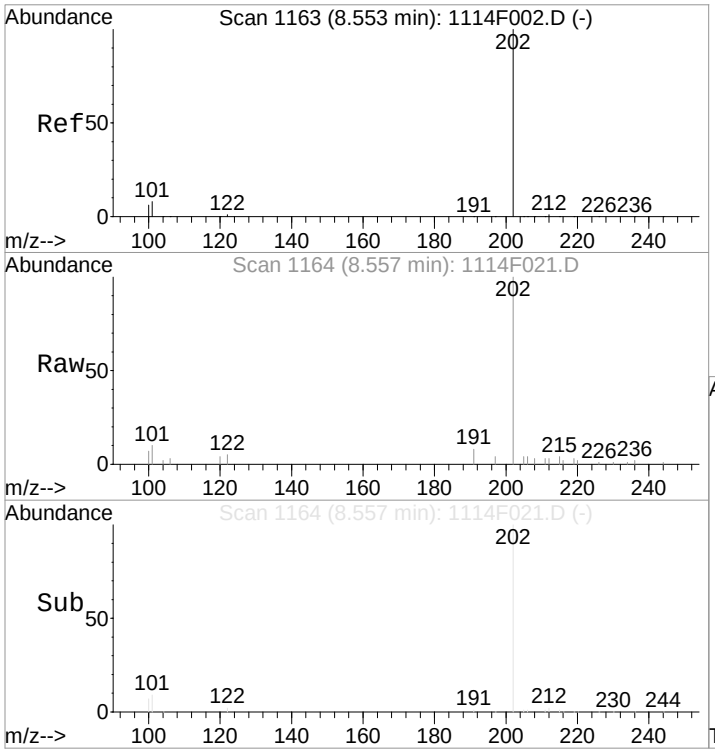


#20
1-Methylphenanthrene
Concen: 10.32 ng/ml m
RT: 8.08 min Scan# 1053
Delta R.T. -0.01 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:192 Resp: 3174

Ion	Ratio	Lower	Upper
192	100		
191	50.4	27.7	87.7
193	32.9	0.0	45.4

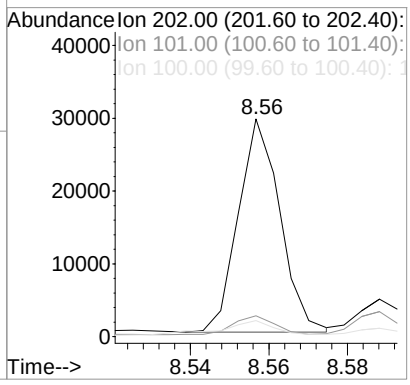




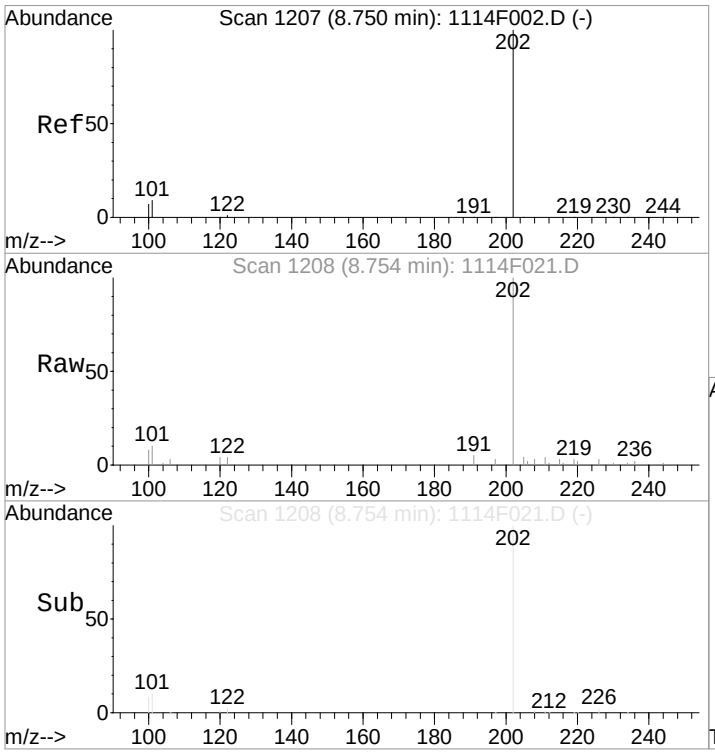
#21
Fluoranthene
Concen: 43.05 ng/ml
RT: 8.56 min Scan# 1164
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:202 Resp: 21581

Ion	Ratio	Lower	Upper
202	100		
101	8.7	0.0	41.3
100	6.4	0.0	28.6



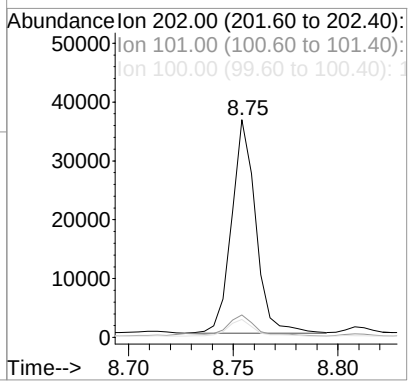
1st 12/03/18
2nd 12/06/18

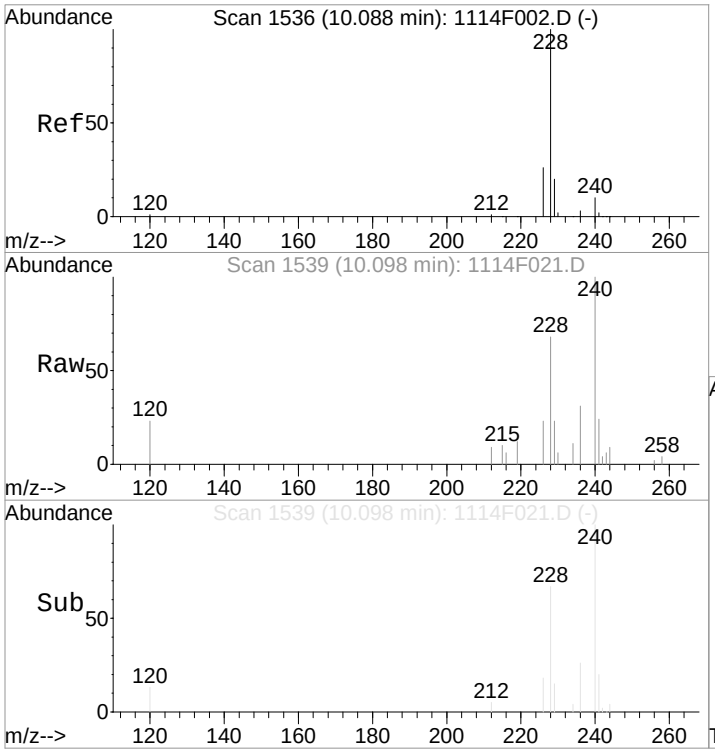


#24
Pyrene
Concen: 63.93 ng/ml
RT: 8.75 min Scan# 1208
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:202 Resp: 28947

Ion	Ratio	Lower	Upper
202	100		
101	9.9	0.0	40.8
100	7.9	0.0	28.5

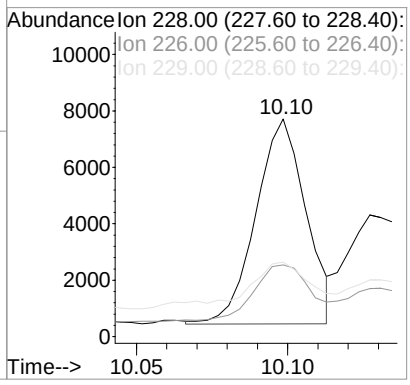


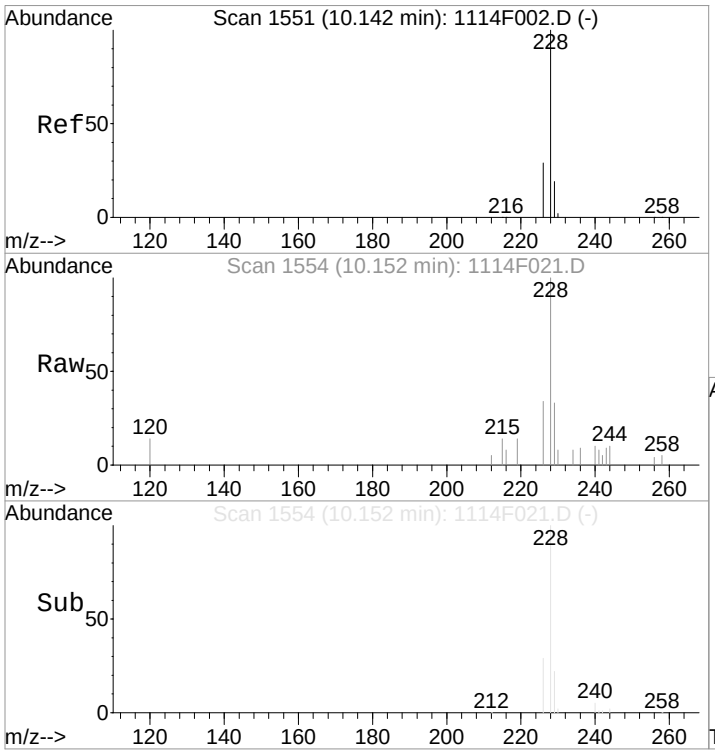


#26
Benz(a)anthracene
Concen: 19.59 ng/ml
RT: 10.10 min Scan# 1539
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:228 Resp: 8361

Ion	Ratio	Lower	Upper
228	100		
226	27.1	0.0	56.3
229	20.1	0.0	39.1

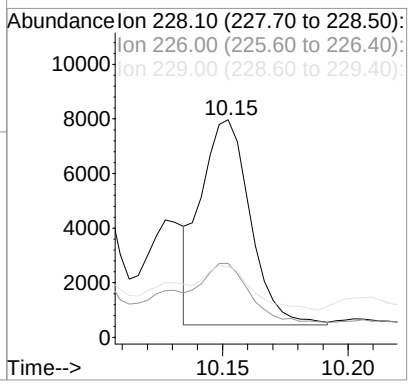


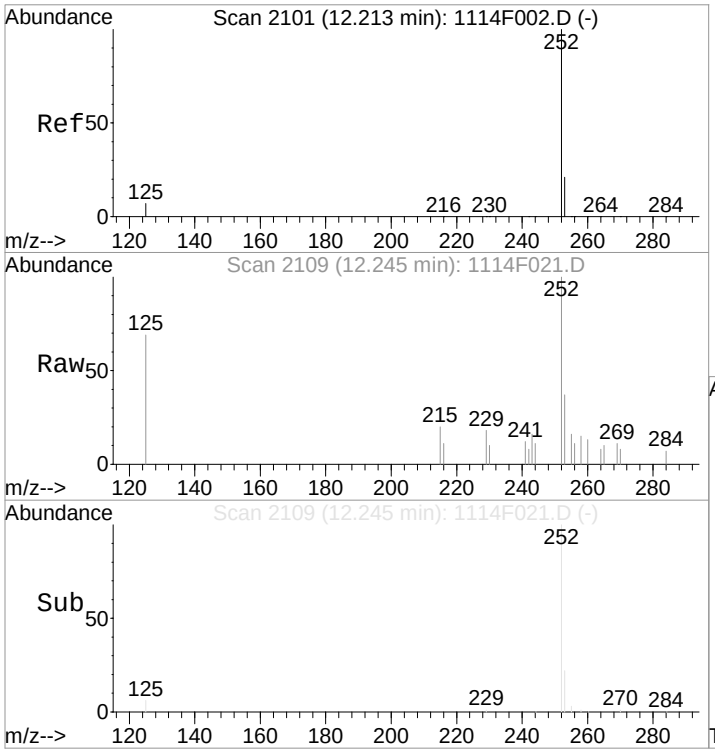


#27
Chrysene
Concen: 25.13 ng/ml m
RT: 10.15 min Scan# 1554
Delta R.T. -0.00 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:228 Resp: 10273

Ion	Ratio	Lower	Upper
228	100		
226	34.0	0.0	58.7
229	32.5	0.0	39.2

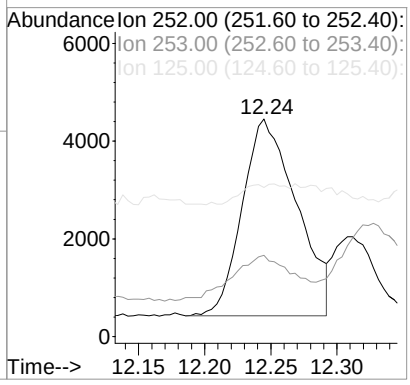




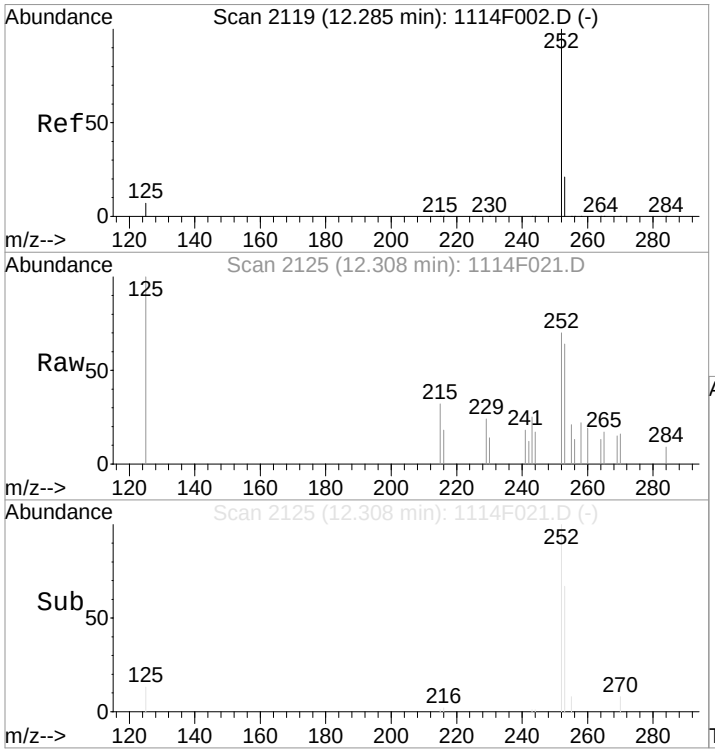
#29
Benzo(b)fluoranthene
Concen: 25.67 ng/ml
RT: 12.24 min Scan# 2109
Delta R.T. 0.02 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:252 Resp: 11550

Ion	Ratio	Lower	Upper
252	100		
253	21.5	0.0	51.2
125	8.5	0.0	29.5



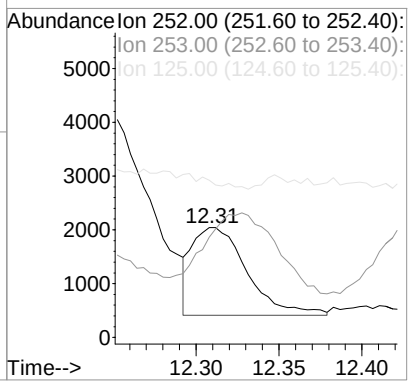
1st 12/03/18
2nd 12/06/18

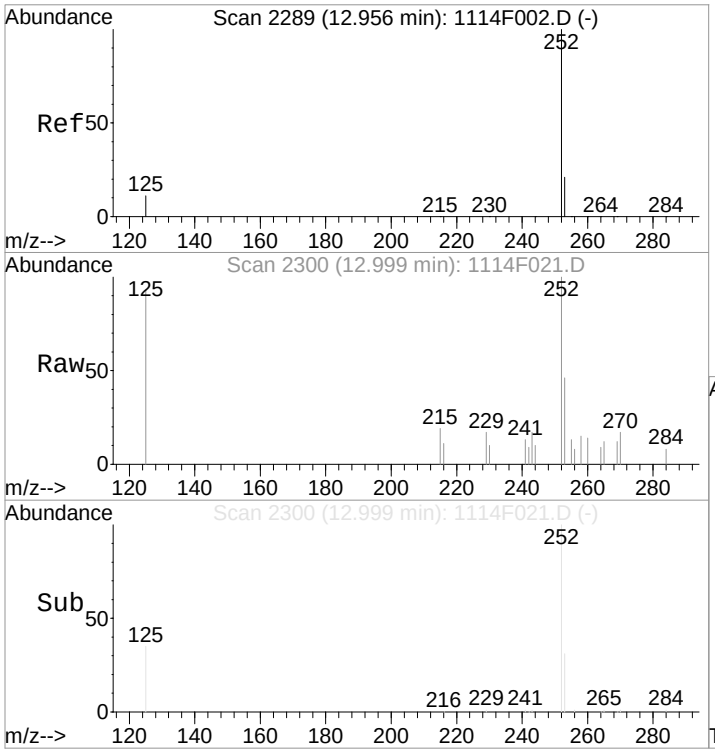


#30
Benzo(k)fluoranthene
Concen: 8.47 ng/ml m
RT: 12.31 min Scan# 2125
Delta R.T. 0.02 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:252 Resp: 3782

Ion	Ratio	Lower	Upper
252	100		
253	91.0	0.0	51.2#
125	142.8	0.0	29.7#

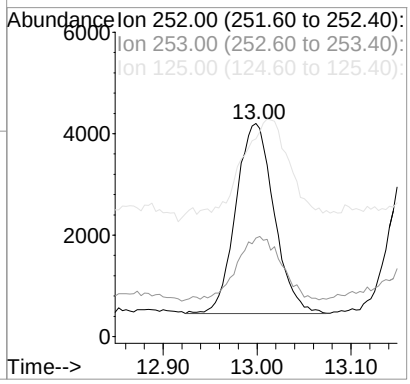




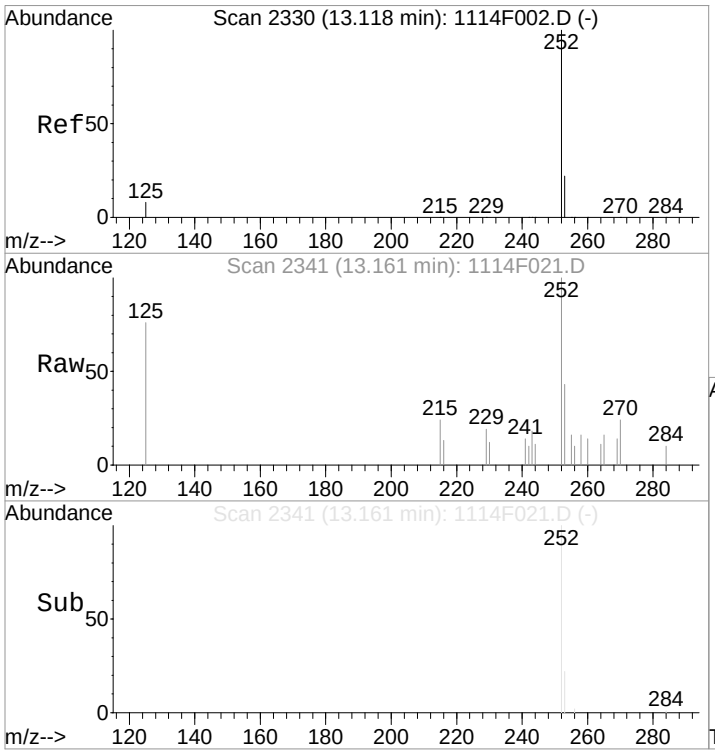
#31
Benzo(e)pyrene
Concen: 24.77 ng/ml
RT: 13.00 min Scan# 2300
Delta R.T. 0.03 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:252 Resp: 10624

Ion	Ratio	Lower	Upper
252	100		
253	32.5	0.0	51.3
125	39.5	0.0	33.5#



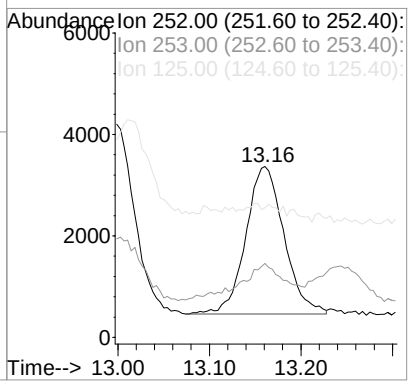
1st 12/03/18
2nd 12/06/18

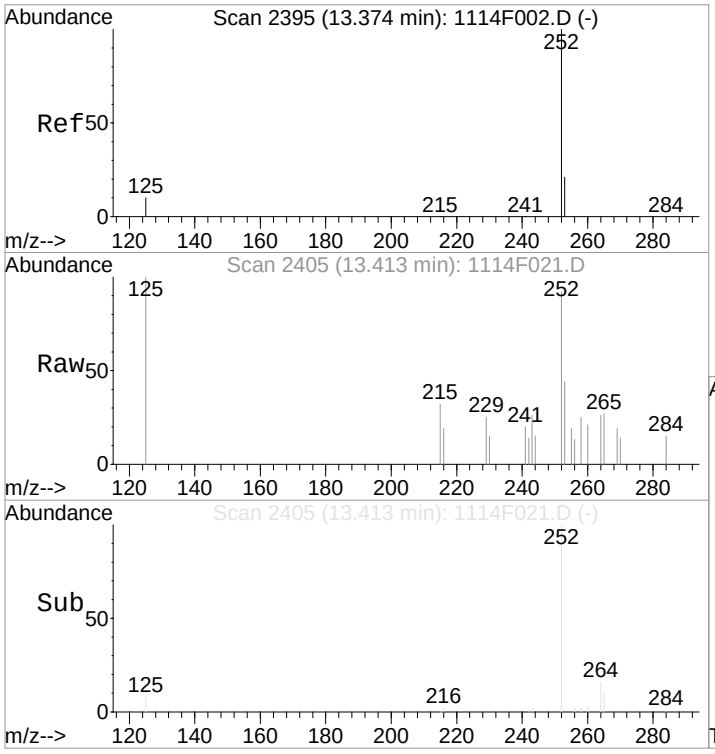


#32
Benzo(a)pyrene
Concen: 21.45 ng/ml
RT: 13.16 min Scan# 2341
Delta R.T. 0.04 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:252 Resp: 8463

Ion	Ratio	Lower	Upper
252	100		
253	24.8	0.0	50.9
125	7.2	0.0	30.3

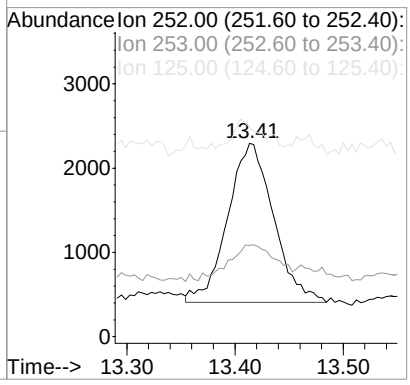




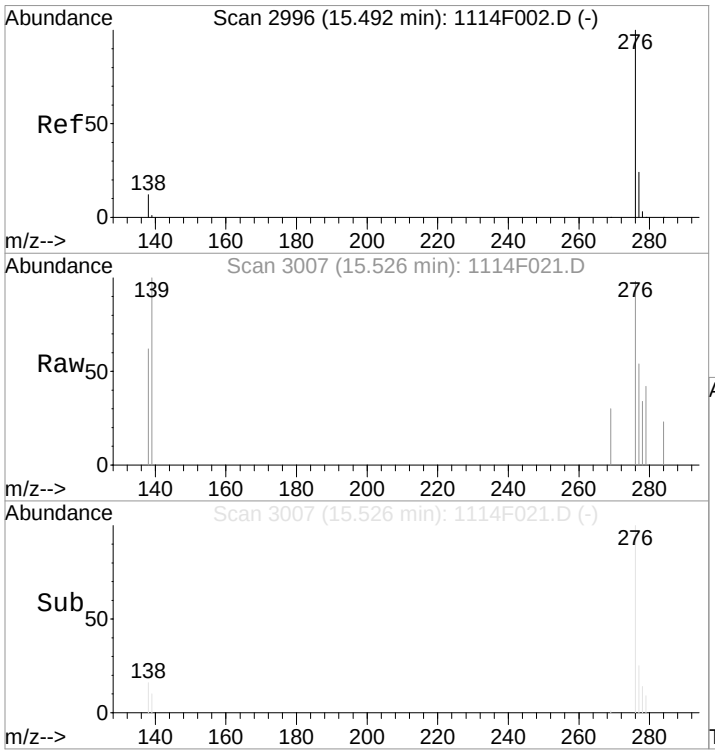
#33
Perylene
Concen: 13.49 ng/ml
RT: 13.41 min Scan# 2405
Delta R.T. 0.04 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:252 Resp: 5584

Ion	Ratio	Lower	Upper
252	100		
253	22.6	0.0	51.2
125	17.0	0.0	33.8



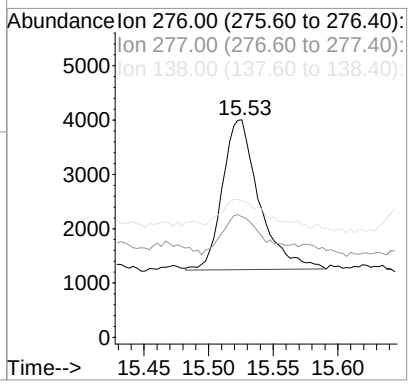
1st 12/03/18
2nd 12/06/18

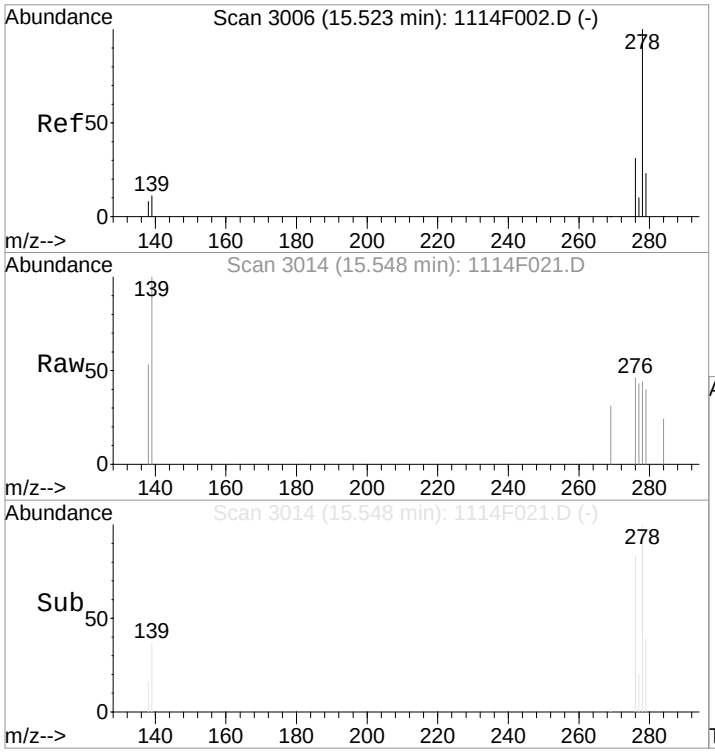


#34
Indeno(1,2,3-cd)pyrene
Concen: 14.11 ng/ml
RT: 15.53 min Scan# 3007
Delta R.T. 0.04 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:276 Resp: 5458

Ion	Ratio	Lower	Upper
276	100		
277	22.7	0.0	53.4
138	18.1	0.0	37.7

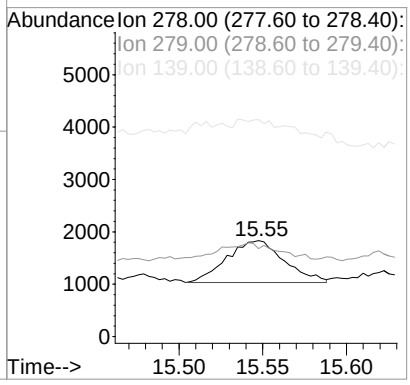




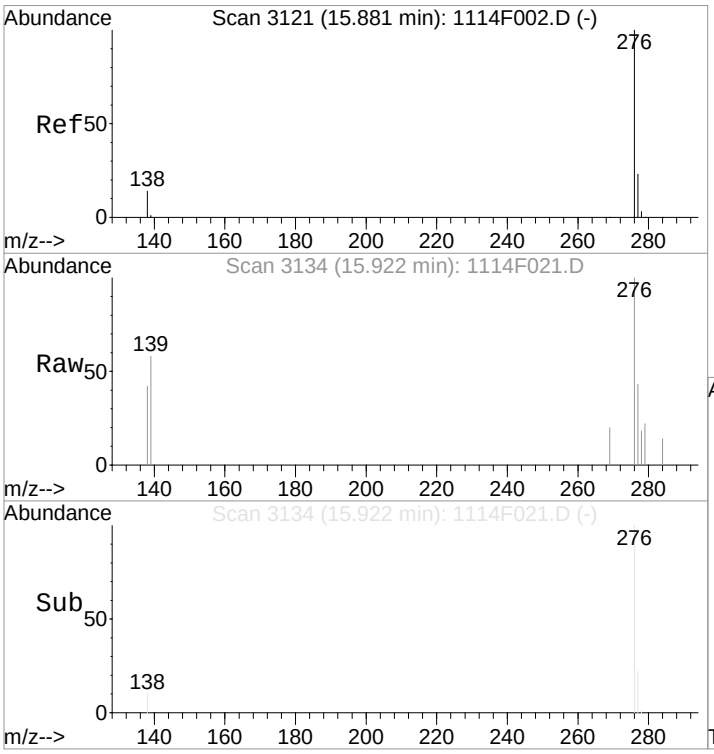
#35
Dibenz(a,h)anthracene
Concen: 4.87 ng/ml
RT: 15.55 min Scan# 3014
Delta R.T. 0.02 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:278 Resp: 1911

Ion	Ratio	Lower	Upper
278	100		
279	20.9	0.0	53.5
139	33.4	0.0	35.0



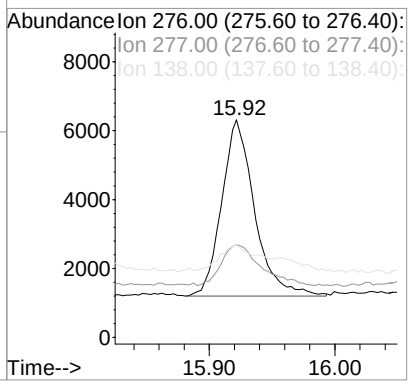
1st 12/03/18
2nd 12/06/18



#36
Benzo(g,h,i)perylene
Concen: 20.49 ng/ml
RT: 15.92 min Scan# 3134
Delta R.T. 0.04 min
Lab File: 1114F021.D
Acq: 14 Nov 2018 2:25 pm

Tgt Ion:276 Resp: 9283

Ion	Ratio	Lower	Upper
276	100		
277	22.9	0.0	53.1
138	14.6	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:21 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	52974	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	32289	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	65075	200.00	ng/ml	0.00
23) Chrysene-d12	10.11	240	65997	200.00	ng/ml	0.00
28) Perylene-d12	13.33	264	72825	200.00	ng/ml	0.03
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.39	152	4646	31.42	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.14%		
13) Fluorene-d10	6.75	176	8299	40.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	4.02%		
22) Fluoranthene-d10	8.54	212	14929	36.40	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	3.64%		
25) Terphenyl-d14	8.89	244	12302	42.98	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	4.30%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	728	2.38	ng/ml	98
4) 2-Methylnaphthalene	5.41	142	325	1.76	ng/ml	92
5) 1-Methylnaphthalene	5.50	142	213	1.20	ng/ml	86
6) Biphenyl	5.82	154	220m	0.96	ng/ml	
7) 2,6-Dimethylnaphthalene	5.97	156	388	2.45	ng/ml	94
9) Acenaphthylene	6.20	152	1187	3.08	ng/ml#	1
10) Acenaphthene	6.34	154	933	4.22	ng/ml	98
11) Dibenzofuran	6.49	168	682m	1.92	ng/ml	
12) 2,3,5-Trimethylnaphthalene	6.66	170	2361	11.53	ng/ml	98
14) Fluorene	6.77	166	1339	5.00	ng/ml	98
16) Dibenzothiophene	7.47	184	1809	4.46	ng/ml	85
17) Phenanthrene	7.57	178	14058	34.63	ng/ml	100
18) Anthracene	7.62	178	2465	6.36	ng/ml	90
19) Carbazole	7.75	167	1279	3.38	ng/ml	84
20) 1-Methylphenanthrene	8.08	192	3174m	10.32	ng/ml	
21) Fluoranthene	8.56	202	21581	43.05	ng/ml	94
24) Pyrene	8.75	202	28947	63.93	ng/ml	98
26) Benz(a)anthracene	10.10	228	8361	19.59	ng/ml	98
27) Chrysene	10.15	228	10273m	25.13	ng/ml	
29) Benzo(b)fluoranthene	12.24	252	11550	25.67	ng/ml	99
30) Benzo(k)fluoranthene	12.31	252	3782m	8.47	ng/ml	
31) Benzo(e)pyrene	13.00	252	10624	24.77	ng/ml#	60
32) Benzo(a)pyrene	13.16	252	8463	21.45	ng/ml	92
33) Perylene	13.41	252	5584	13.49	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.53	276	5458	14.11	ng/ml	99
35) Dibenz(a,h)anthracene	15.55	278	1911	4.87	ng/ml	80
36) Benzo(g,h,i)perylene	15.92	276	9283	20.49	ng/ml	95

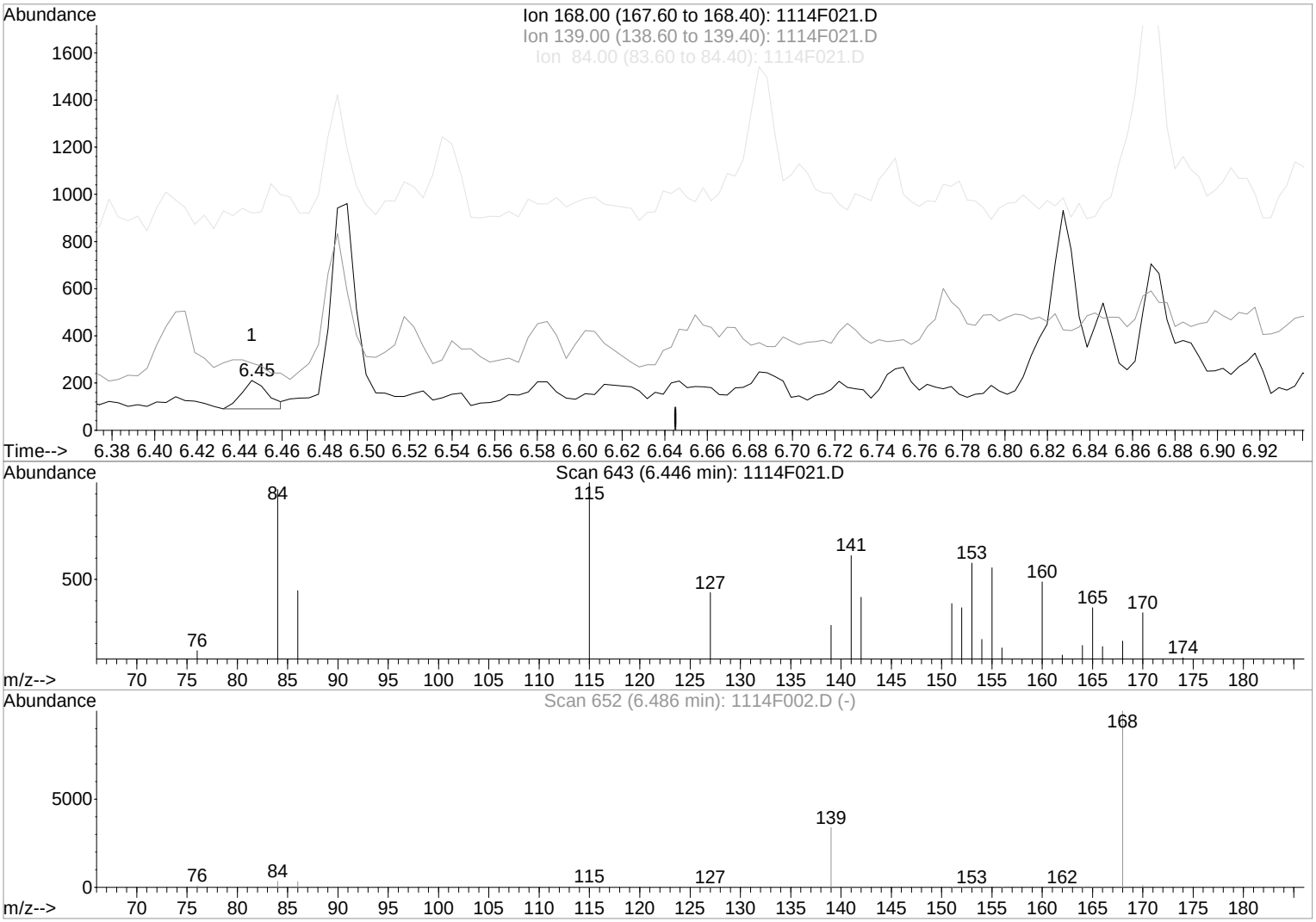
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:19 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F021.D

(11) Dibenzofuran (T)

6.45min 0.29ng/ml

response 103

Ion	Exp%	Act%
168.00	100	100
139.00	25.80	35.83
84.00	3.50	0.00
0.00	0.00	0.00

Manual Integration:

Before

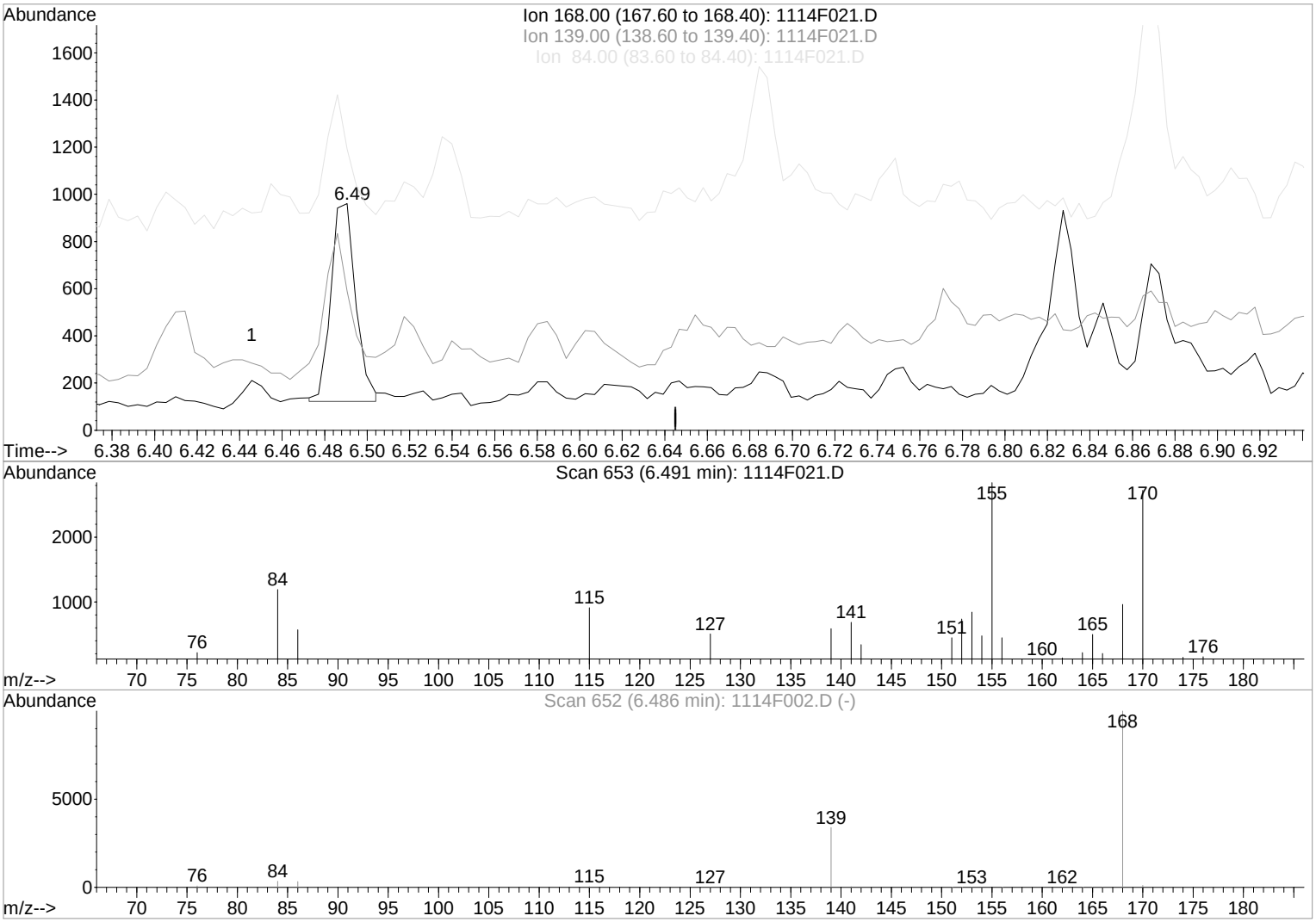
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:19 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F021.D

(11) Dibenzofuran (T)

6.49min 1.92ng/ml m

response 682

Ion	Exp%	Act%
168.00	100	100
139.00	25.80	61.29#
84.00	3.50	124.04#
0.00	0.00	0.00

Manual Integration:

After

WP

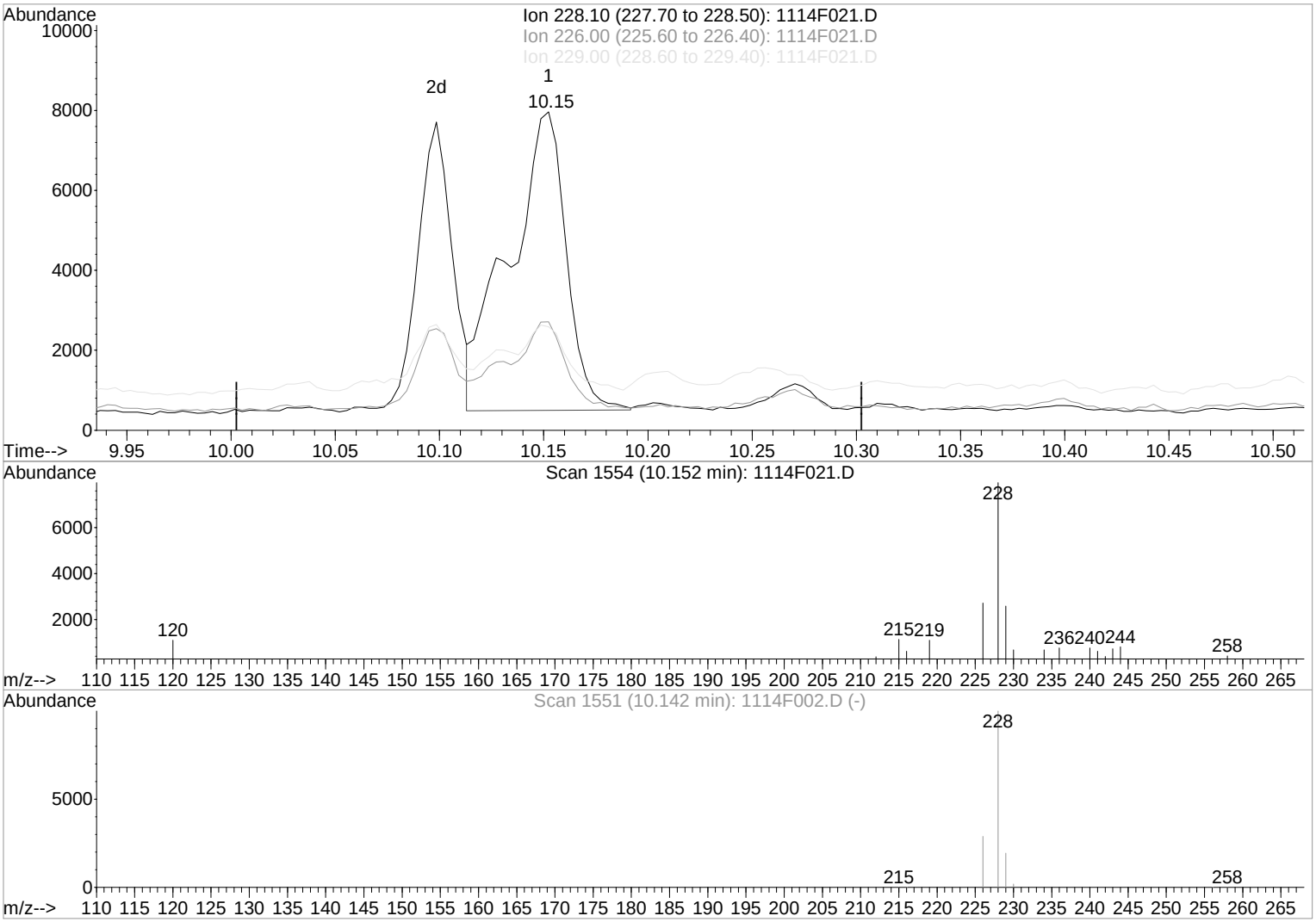
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F021.D

(27) Chrysene (T)

10.15min 34.59ng/ml

response 14137

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	29.13
229.00	19.20	19.63
0.00	0.00	0.00

Manual Integration:

Before

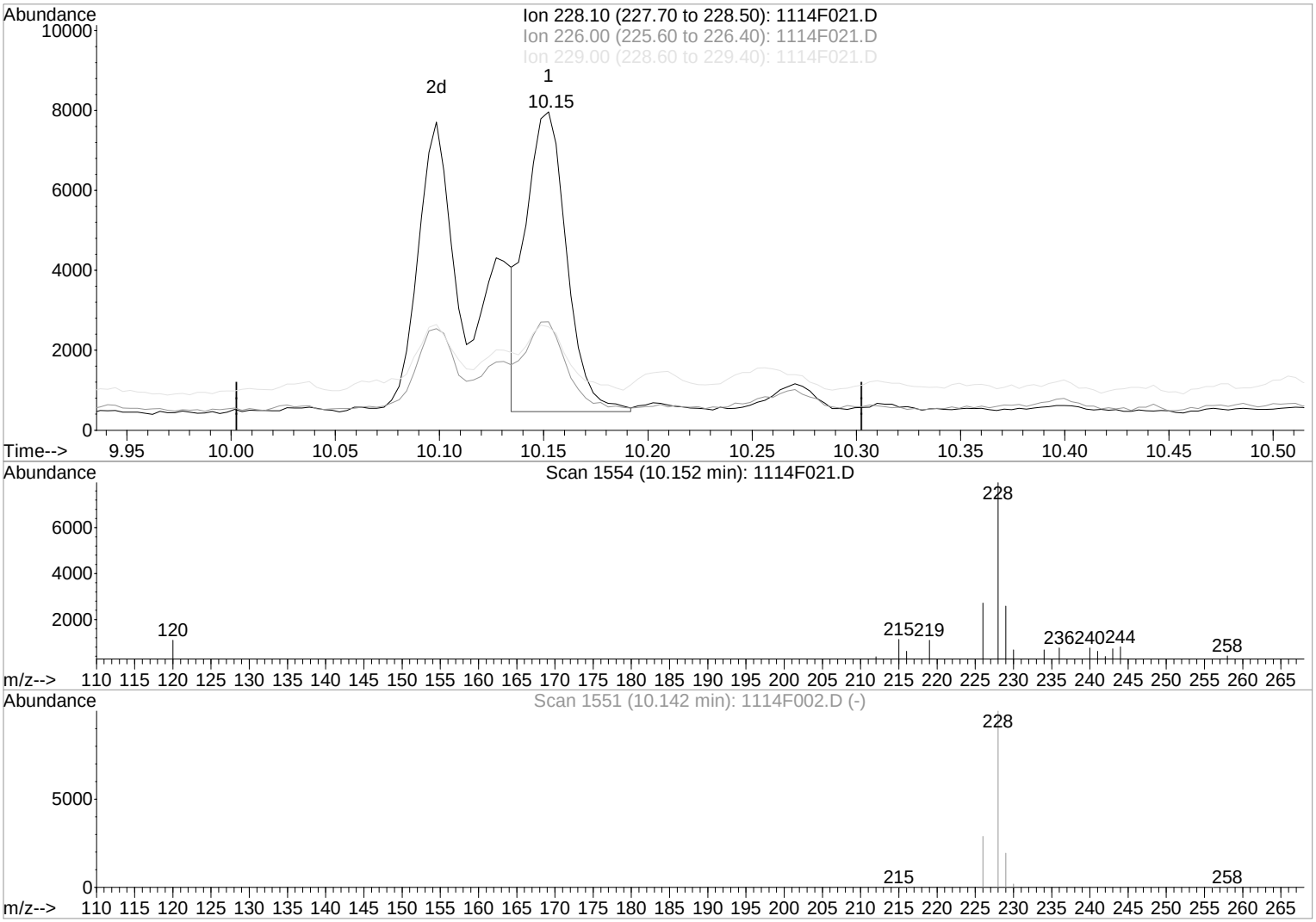
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F021.D

(27) Chrysene (T)

10.15min 25.13ng/ml m

response 10273

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	34.03
229.00	19.20	32.50
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

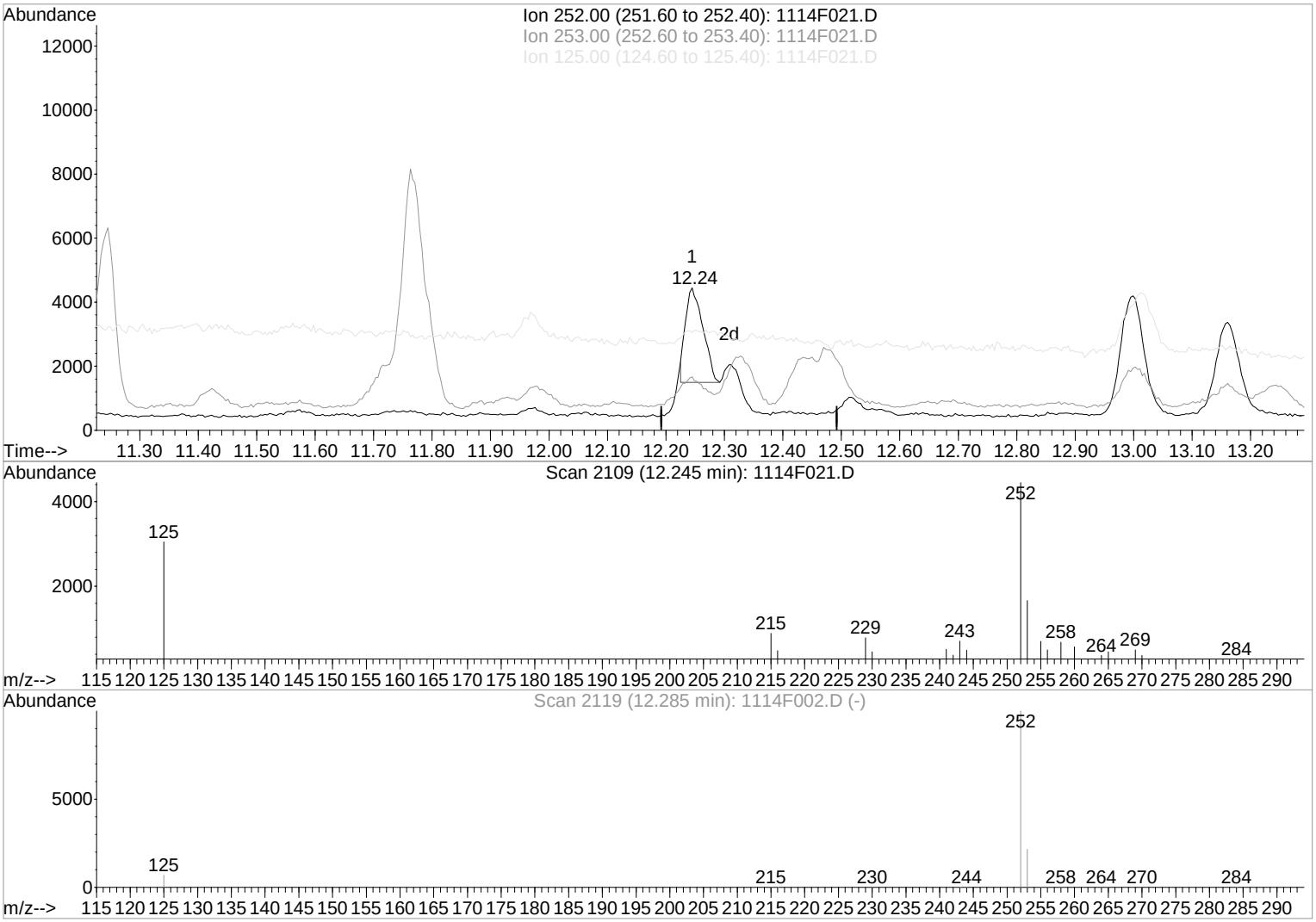
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F021.D

(30) Benzo(k)fluoranthene (T)

12.24min 13.78ng/ml

response 6150

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	16.19
125.00	9.70	5.71
0.00	0.00	0.00

Manual Integration:

Before

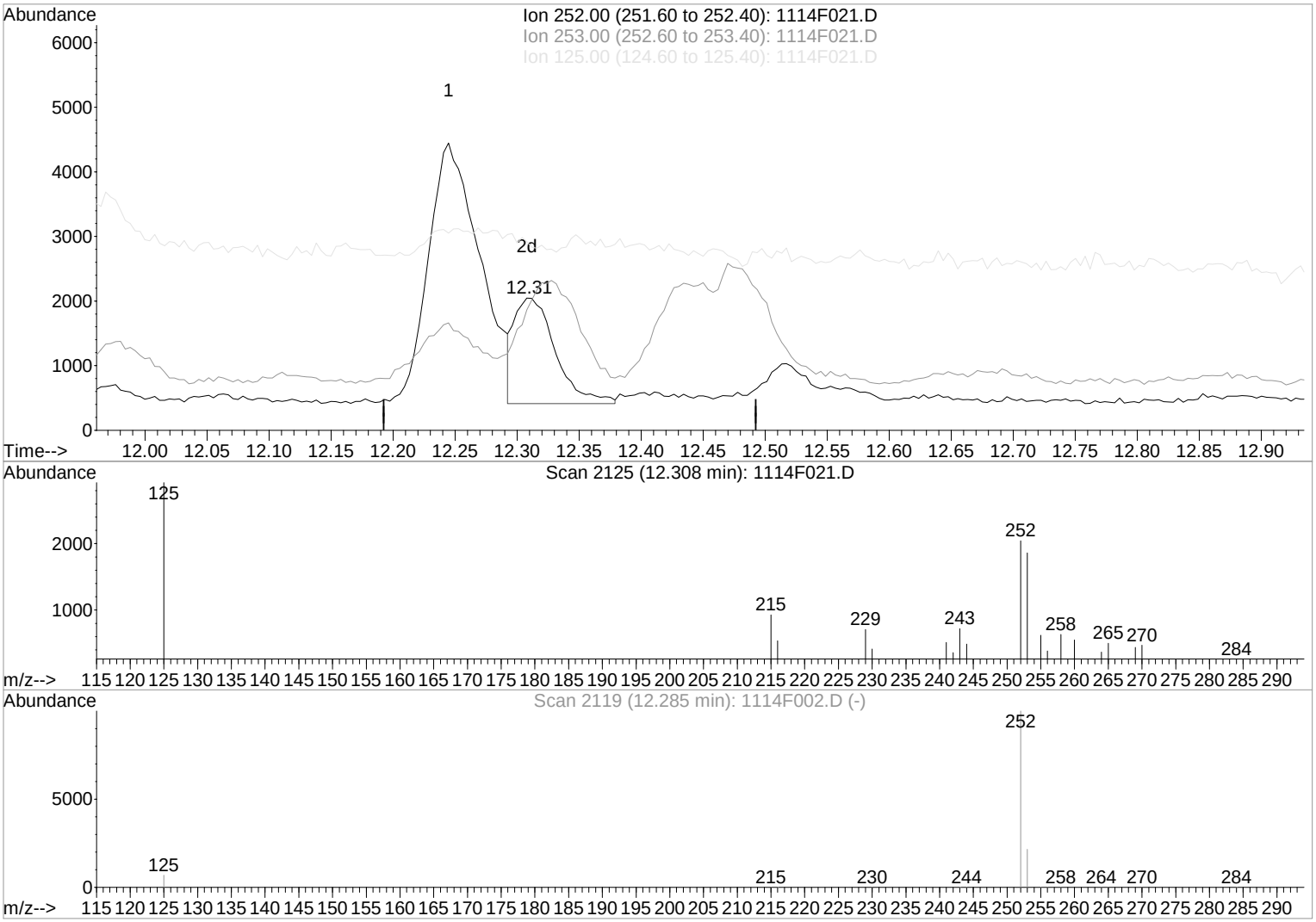
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F021.D Vial: 21
Acq On : 14 Nov 2018 2:25 pm Operator: LWeiskopf
Sample : K1810430-011DIL 20X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:20 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F021.D

(30) Benzo(k)fluoranthene (T)

12.31min 8.47ng/ml m

response 3782

Ion	Exp%	Act%
252.00	100	100
253.00	21.20	91.00#
125.00	9.70	142.84#
0.00	0.00	0.00

Manual Integration:

After

WP

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F003.D
Lab ID: KWG1805796-6
RunType: MB
Matrix: SEDIMENT

Date Acquired: 11/14/2018 06:42
Date Quantitated: 11/30/2018 10:48
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2-Methylnaphthalene-d10	61	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F003.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:42	**Quant Date:**	11/30/2018 10:48	**Vial:**	3
Run Type:	MB	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-6			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/12/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702233	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.74	-0.01	136	59123	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	31330	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	73826	200.00	OK
4	Chrysene-d12	10.10	0.00	240	83472	200.00	OK
5	Perylene-d12	13.28	-0.01	264	90973	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.38	0.00	0.00	152	101190	613.17	61	70-130	*
2	Fluorene-d10	6.75	0.00	0.00	176	143673	717.20	72	26-102	OK
3	Fluoranthene-d10	8.53	0.00	0.00	212	309898	666.04	67	23-110	OK
4	Terphenyl-d14	8.88	0.00	0.00	244	272250	751.96	75	27-115	OK

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.76	-0.01	0.00	128	521	1.53	0.089	U	
1	2-Methylnaphthalene	5.41		0.00	142	123	0.6000	0.047	U	
1	1-Methylnaphthalene	5.49	-0.01	0.00	142	104**m**	0.5200	0.055	U	
1	Biphenyl	5.82		0.00	154	427**m**	1.66	0.15	U	
1	2,6-Dimethylnaphthalene				156	0**d**		0.055	U	
2	Acenaphthylene				152	0**d**		0.029	U	
2	Acenaphthene				154	0**d**		0.032	U	
2	Dibenzofuran	6.49		0.00	168	118	0.3400	0.022	U	
2	2,3,5-Trimethylnaphthalene				170	0**d**		0.034	U	
2	Fluorene				166	0**d**		0.039	U	
3	Dibenzothiophene				184	0**d**		0.049	U	
3	Phenanthrene	7.57		0.00	178	185	0.4000	0.033	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F003.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:42	**Quant Date:**	11/30/2018 10:48	**Vial:**	3
Run Type:	MB	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-6			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene				178	0**d**		0.026	U	
3	Carbazole				167	0**d**		0.080	U	
3	1-Methylphenanthrene				192	0**d**		0.041	U	
3	Fluoranthene	8.55		0.00	202	210**m**	0.3700	0.032	U	
4	Pyrene	8.75		0.00	202	218	0.3800	0.032	U	
4	Benz(a)anthracene	10.10	0.01	0.00	228	377	0.7000	0.0347	J	
4	Chrysene	10.14		0.00	228	180**m**	0.3500	0.027	U	
5	Benzo(b)fluoranthene	12.22	0.01	0.00	252	222	0.3900	0.057	U	
5	Benzo(k)fluoranthene				252	0**d**		0.045	U	
5	Benzo(e)pyrene	12.96		0.00	252	405	0.7600	0.051	U	
5	Benzo(a)pyrene	13.11	-0.01	0.00	252	242**m**	0.4900	0.036	U	
5	Perylene	13.36	-0.01	0.00	252	340	0.6600	0.19	U	
5	Indeno(1,2,3-cd)pyrene				276	0**d**		0.064	U	
5	Dibenz(a,h)anthracene				278	0**d**		0.058	U	
5	Benzo(g,h,i)perylene	15.89	0.01	0.00	276	249	0.4400	0.059	U	

Prep Amount:	40.332 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

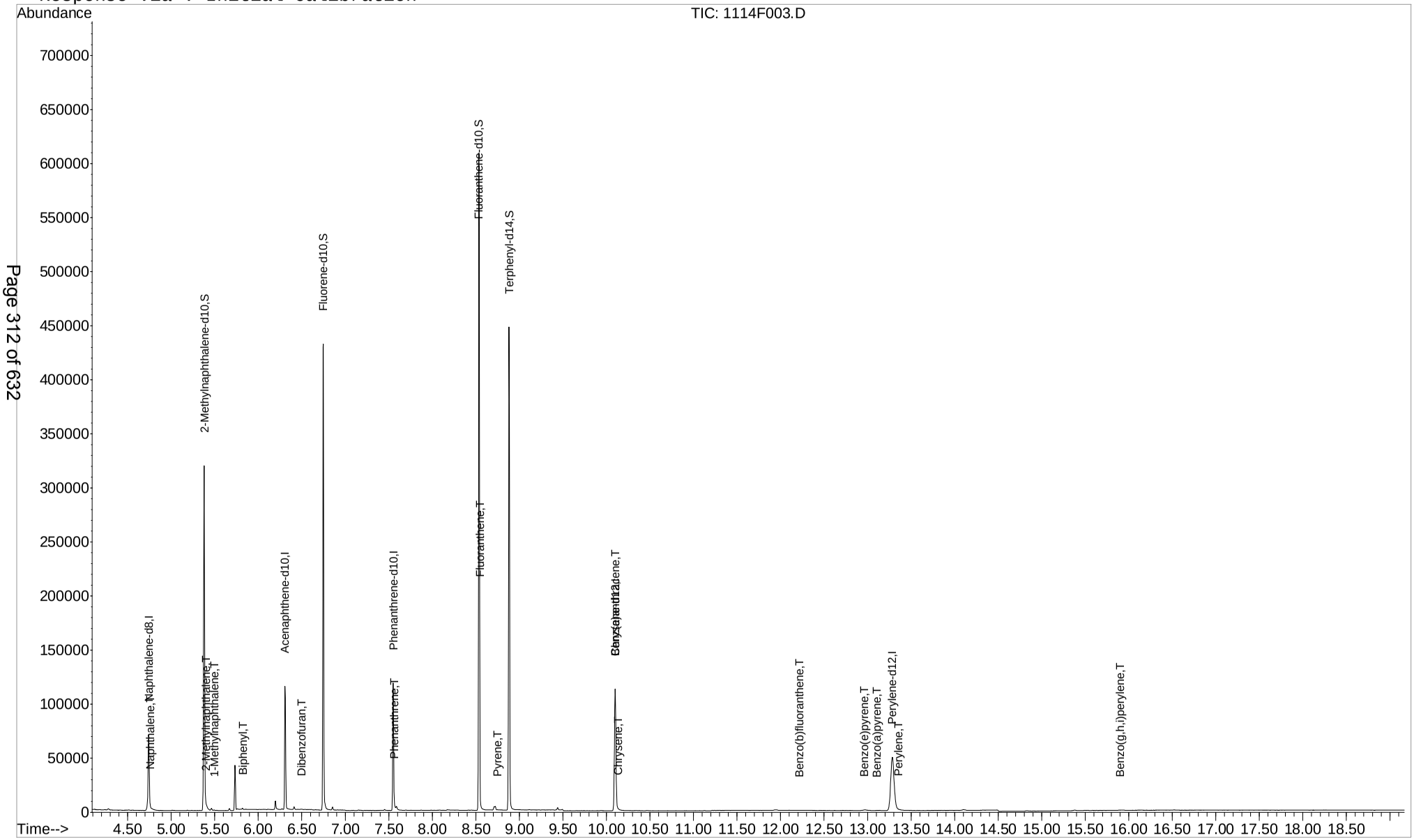
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

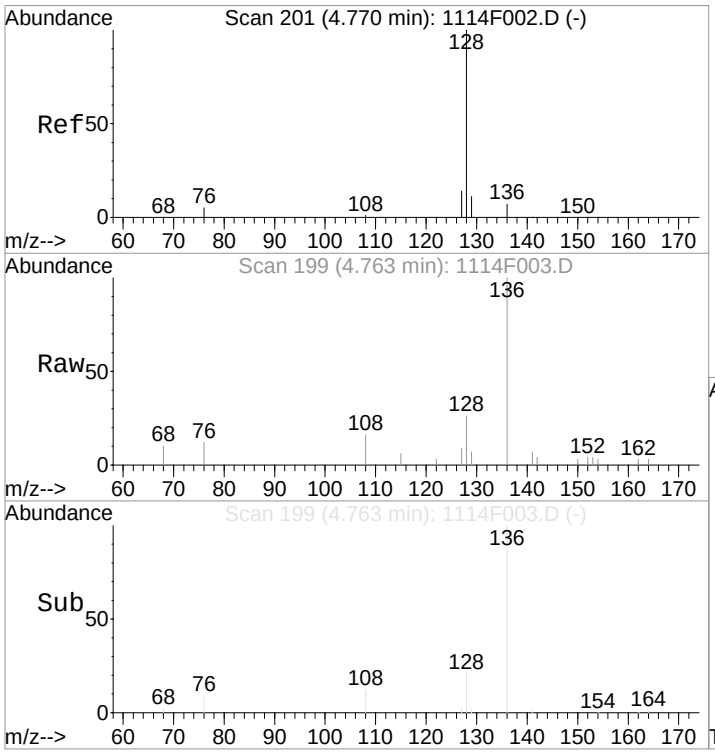
Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



Page 312 of 632

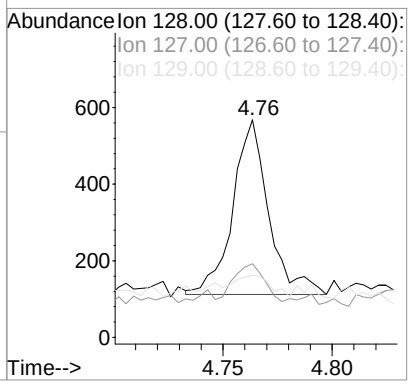
1st 12/03/18
2nd 12/06/18

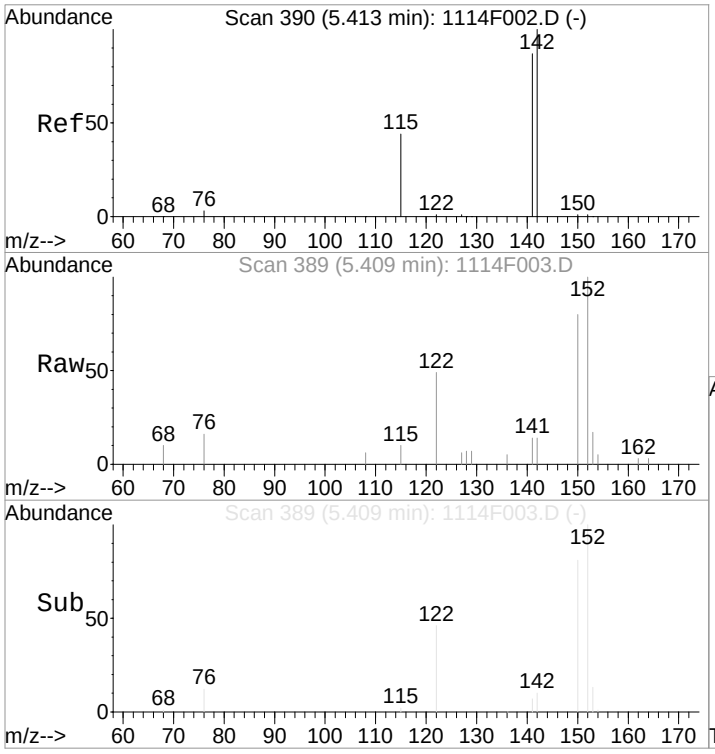


#2
Naphthalene
Concen: 1.53 ng/ml
RT: 4.76 min Scan# 199
Delta R.T. -0.02 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:128 Resp: 521

Ion	Ratio	Lower	Upper
128	100		
127	22.1	0.0	43.7
129	12.7	0.0	30.8

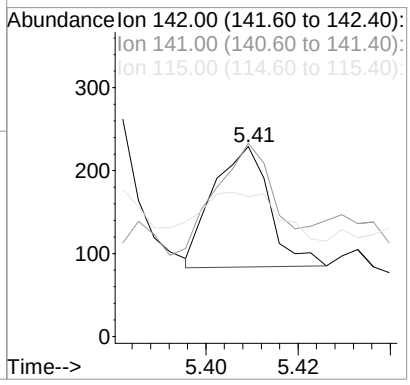




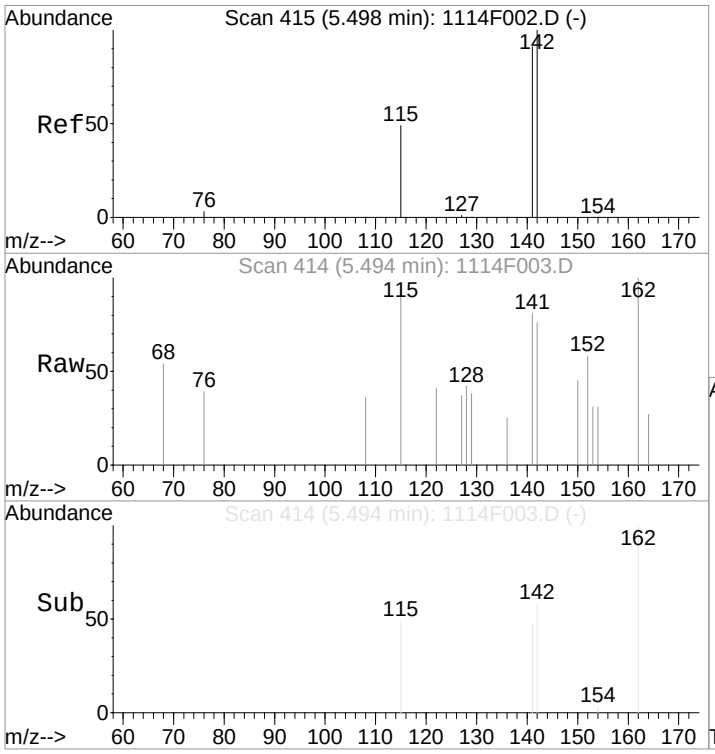
#4
2-Methylnaphthalene
Concen: 0.60 ng/ml
RT: 5.41 min Scan# 389
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:142 Resp: 123

Ion	Ratio	Lower	Upper
142	100		
141	88.2	56.8	116.8
115	37.5	13.3	53.3



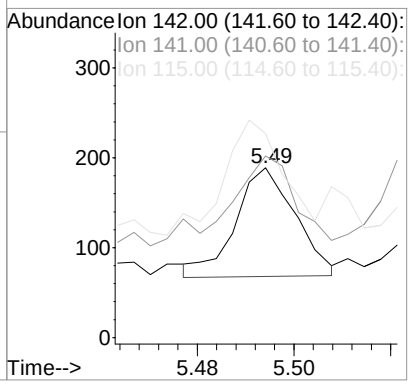
1st 12/03/18
2nd 12/06/18

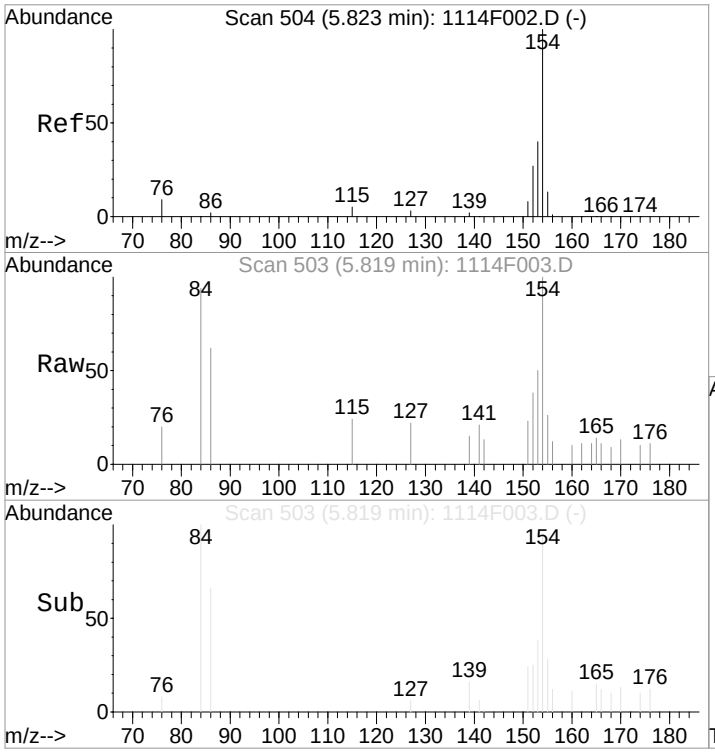


#5
1-Methylnaphthalene
Concen: 0.52 ng/ml m
RT: 5.49 min Scan# 414
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:142 Resp: 104

Ion	Ratio	Lower	Upper
142	100		
141	106.9	59.7	119.7
115	120.1	13.7	53.7#

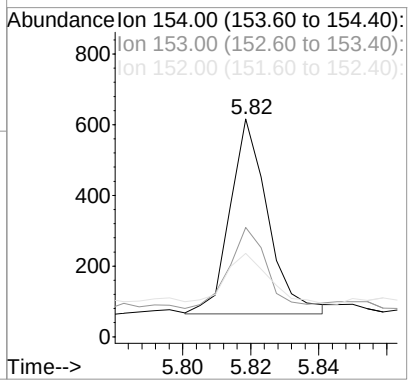




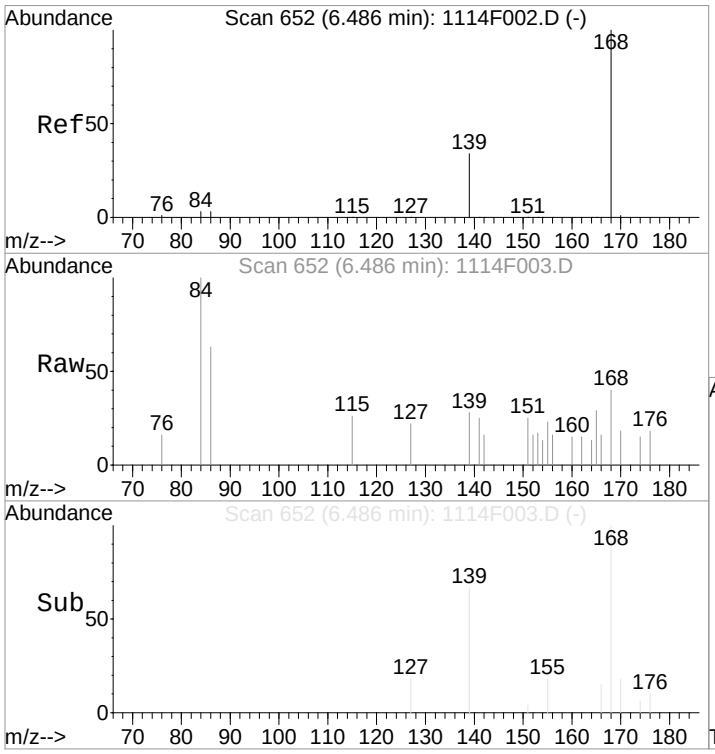
#6
Biphenyl
Concen: 1.66 ng/ml m
RT: 5.82 min Scan# 503
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:154 Resp: 427

Ion	Ratio	Lower	Upper
154	100		
153	50.2	11.4	71.4
152	38.3	7.1	47.1



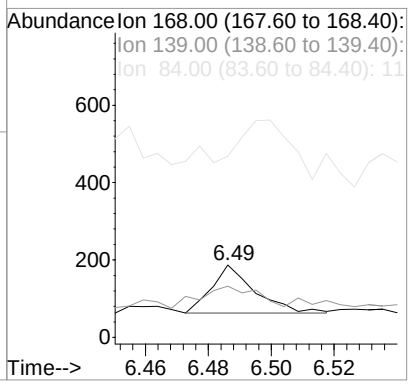
1st 12/03/18
2nd 12/06/18

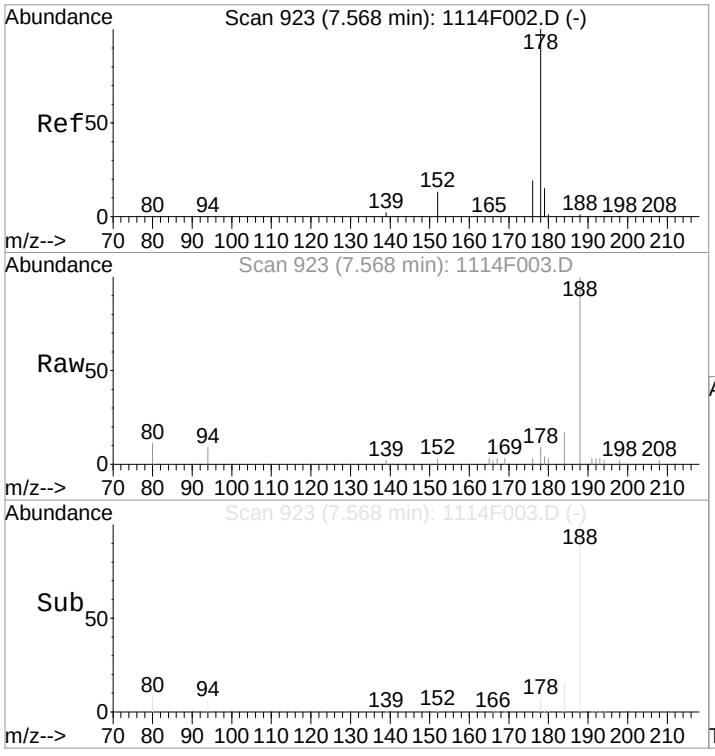


#11
Dibenzofuran
Concen: 0.34 ng/ml
RT: 6.49 min Scan# 652
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:168 Resp: 118

Ion	Ratio	Lower	Upper
168	100		
139	29.8	0.0	55.8
84	10.5	0.0	23.5

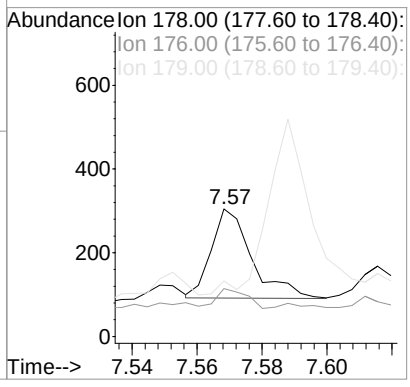




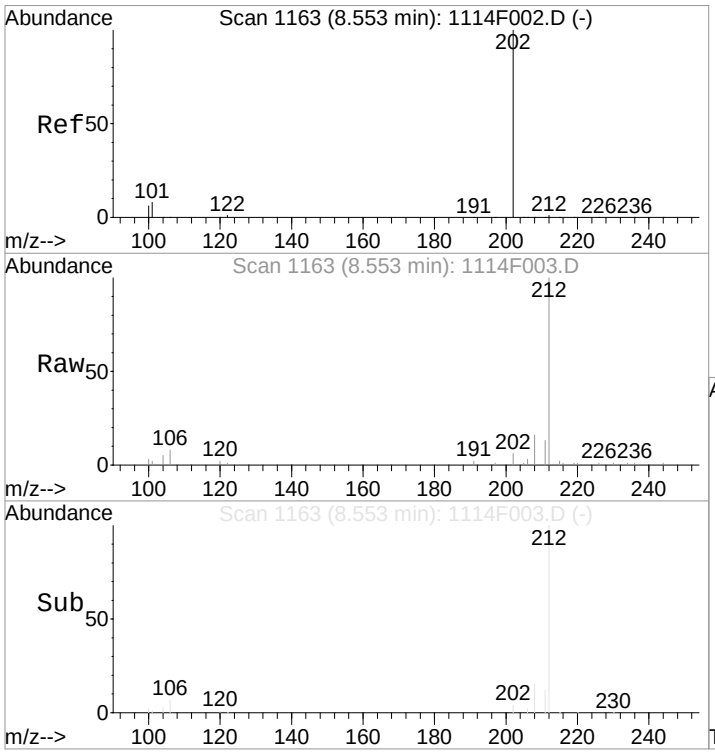
#17
Phenanthrene
Concen: 0.40 ng/ml
RT: 7.57 min Scan# 923
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:178 Resp: 185

Ion	Ratio	Lower	Upper
178	100		
176	21.1	0.0	48.7
179	2.8	0.0	35.1



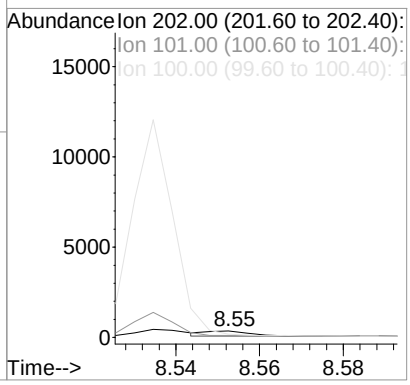
1st 12/03/18
2nd 12/06/18

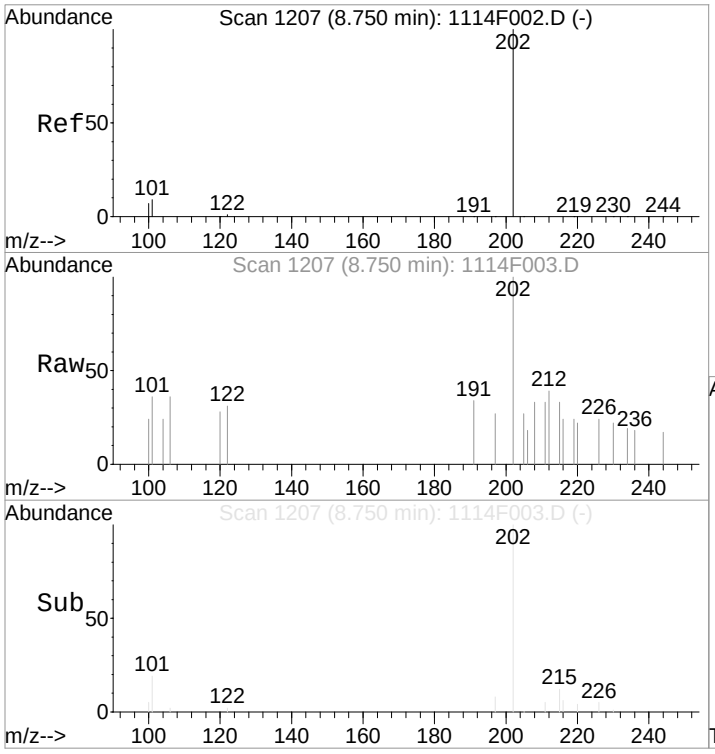


#21
Fluoranthene
Concen: 0.37 ng/ml m
RT: 8.55 min Scan# 1163
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:202 Resp: 210

Ion	Ratio	Lower	Upper
202	100		
101	27.7	0.0	41.3
100	50.7	0.0	28.6#

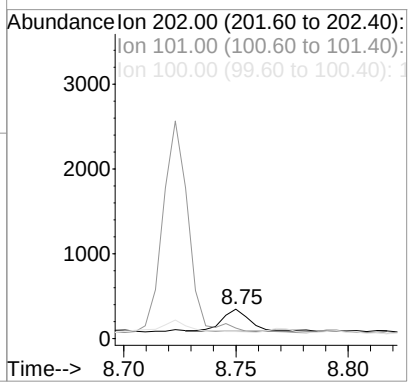


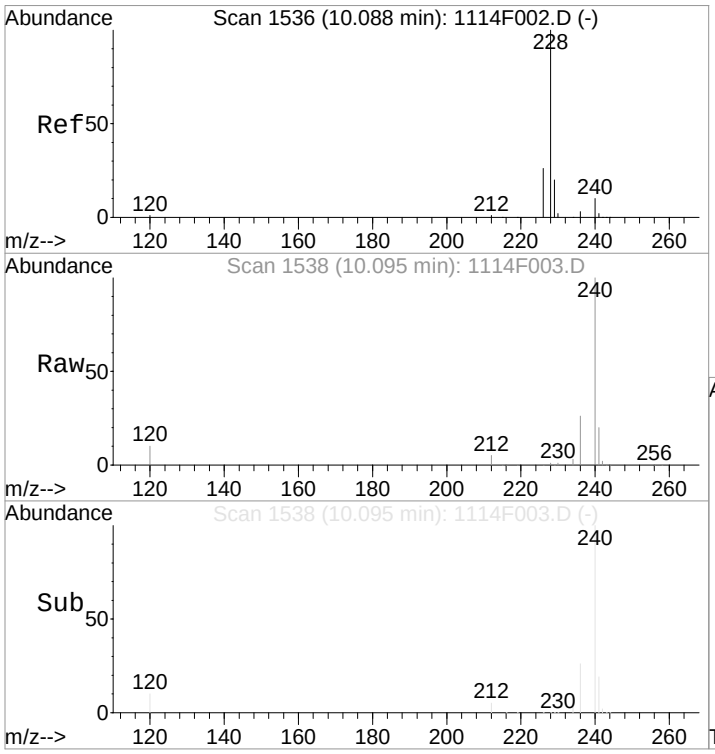


#24
Pyrene
Concen: 0.38 ng/ml
RT: 8.75 min Scan# 1207
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:202 Resp: 218

Ion	Ratio	Lower	Upper
202	100		
101	8.6	0.0	40.8
100	0.0	0.0	28.5

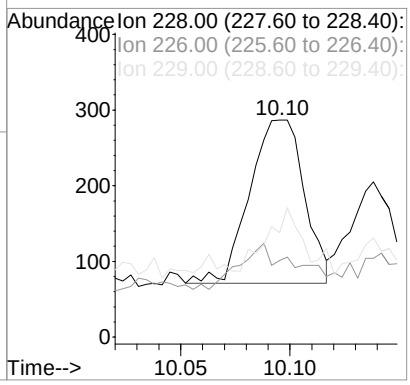


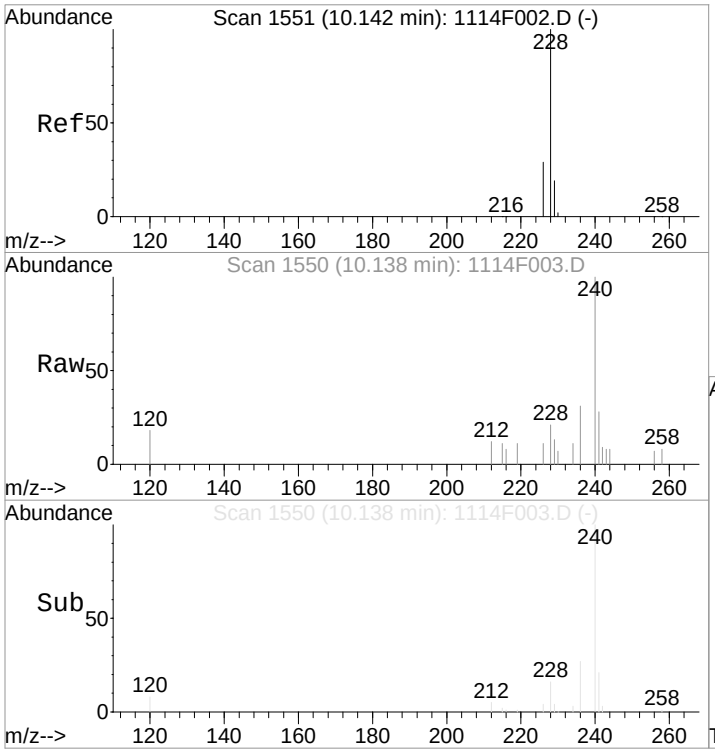


#26
Benz(a)anthracene
Concen: 0.70 ng/ml
RT: 10.10 min Scan# 1538
Delta R.T. -0.00 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:228 Resp: 377

Ion	Ratio	Lower	Upper
228	100		
226	14.8	0.0	56.3
229	23.1	0.0	39.1

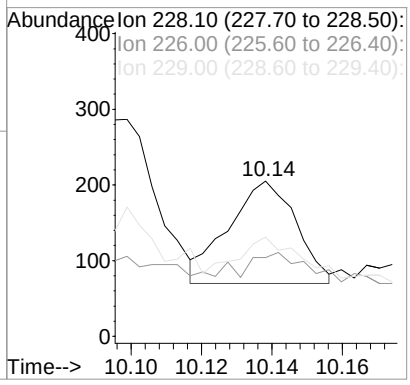




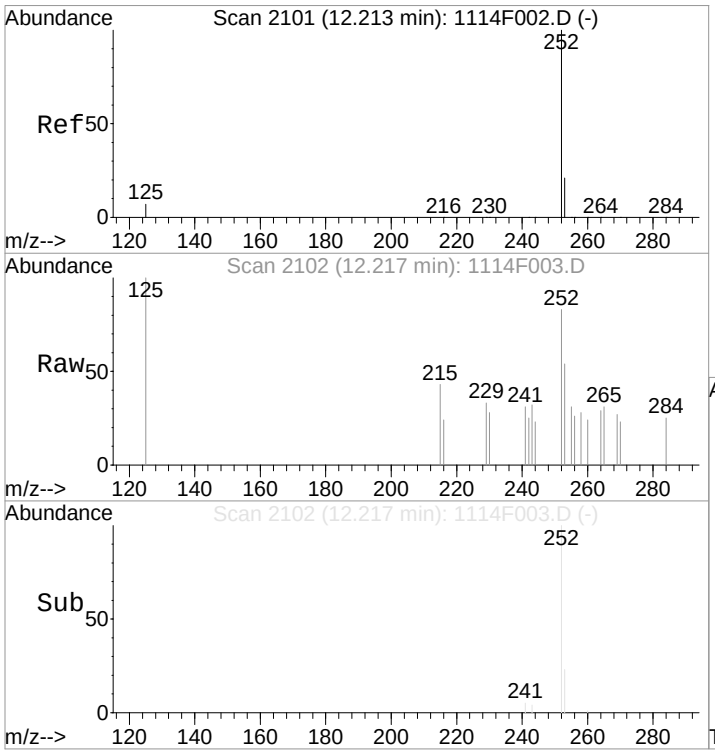
#27
Chrysene
Concen: 0.35 ng/ml m
RT: 10.14 min Scan# 1550
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:228 Resp: 180

Ion	Ratio	Lower	Upper
228	100		
226	50.7	0.0	58.7
229	63.9	0.0	39.2#



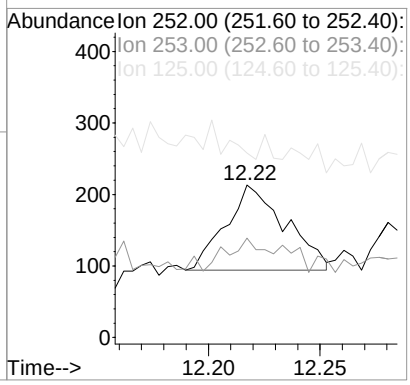
1st 12/03/18
2nd 12/06/18

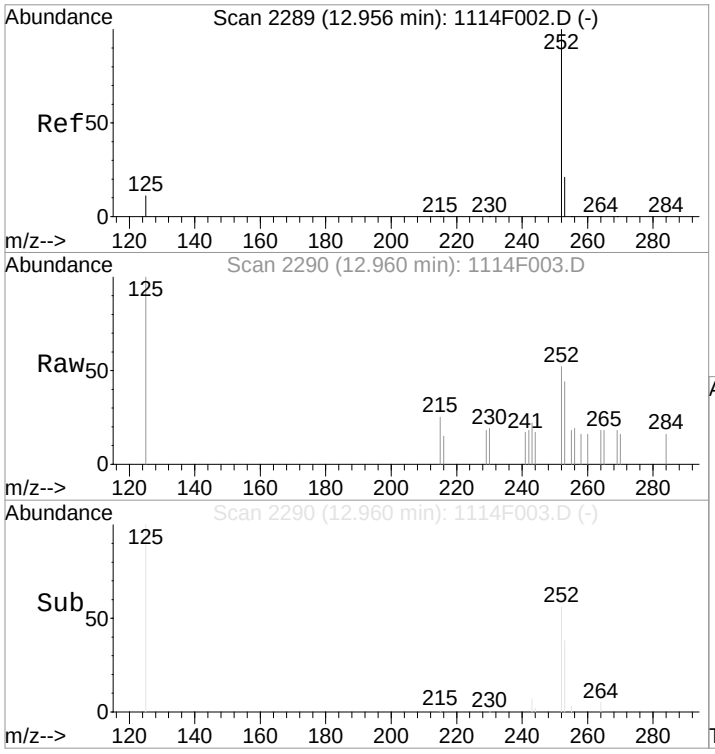


#29
Benzo(b)fluoranthene
Concen: 0.39 ng/ml
RT: 12.22 min Scan# 2102
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 222

Ion	Ratio	Lower	Upper
252	100		
253	36.1	0.0	51.2
125	23.5	0.0	29.5

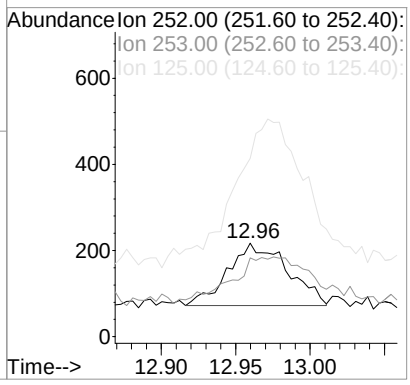




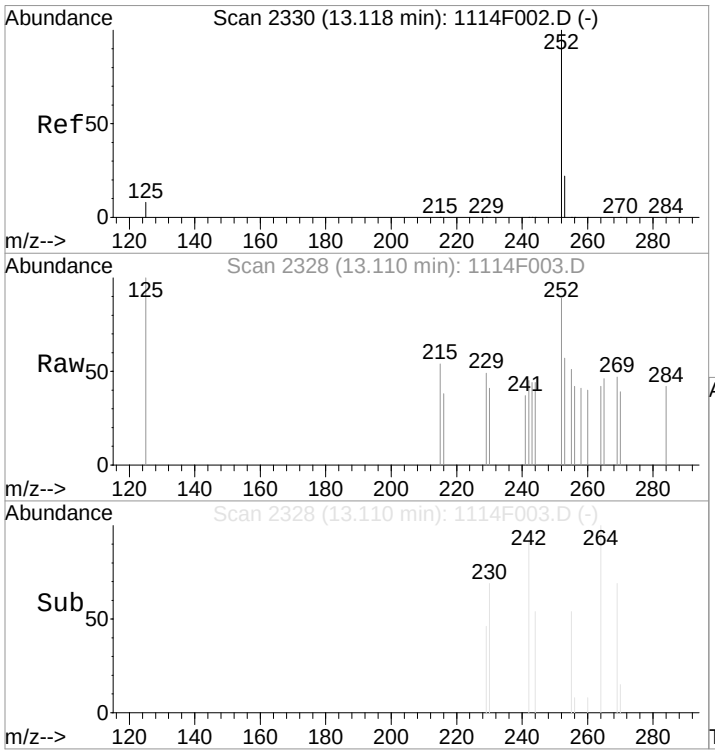
#31
Benzo(e)pyrene
Concen: 0.76 ng/ml
RT: 12.96 min Scan# 2290
Delta R.T. -0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 405

Ion	Ratio	Lower	Upper
252	100		
253	66.9	0.0	51.3#
125	145.5	0.0	33.5#



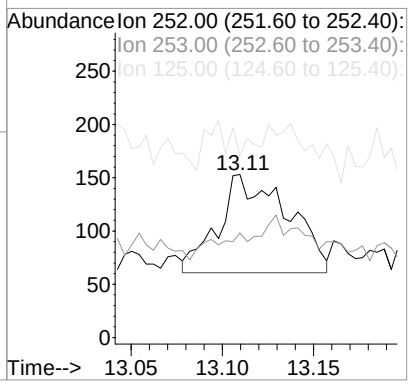
1st 12/03/18
2nd 12/06/18

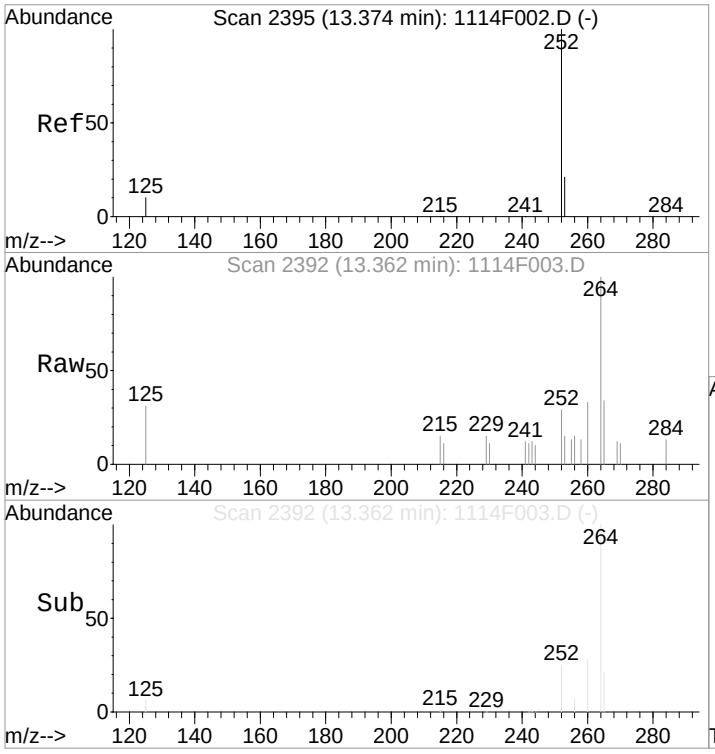


#32
Benzo(a)pyrene
Concen: 0.49 ng/ml m
RT: 13.11 min Scan# 2328
Delta R.T. -0.02 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 242

Ion	Ratio	Lower	Upper
252	100		
253	64.1	0.0	50.9#
125	111.8	0.0	30.3#

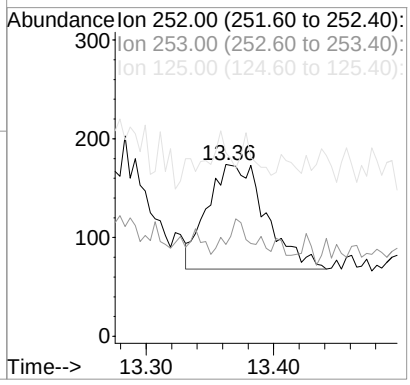




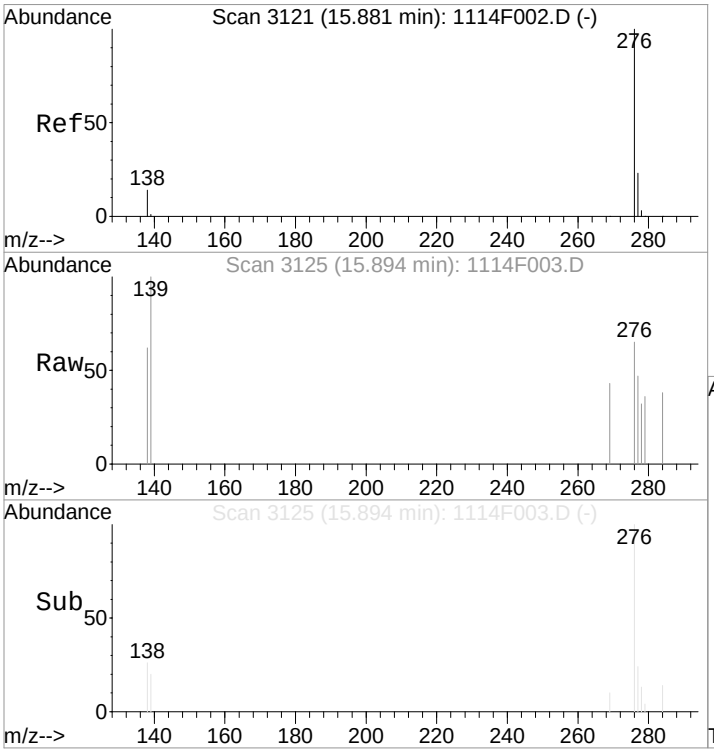
#33
Perylene
Concen: 0.66 ng/ml
RT: 13.36 min Scan# 2392
Delta R.T. -0.02 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:252 Resp: 340

Ion	Ratio	Lower	Upper
252	100		
253	2.8	0.0	51.2
125	5.7	0.0	33.8



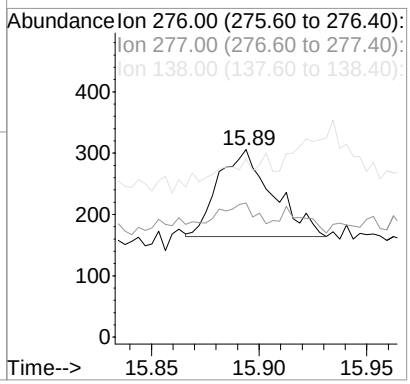
1st 12/03/18
2nd 12/06/18



#36
Benzo(g,h,i)perylene
Concen: 0.44 ng/ml
RT: 15.89 min Scan# 3125
Delta R.T. 0.01 min
Lab File: 1114F003.D
Acq: 14 Nov 2018 6:42 am

Tgt Ion:276 Resp: 249

Ion	Ratio	Lower	Upper
276	100		
277	34.5	0.0	53.1
138	32.4	0.0	39.2



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:05:28 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.74	136	59123	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.31	164	31330	200.00	ng/ml	-0.01
15) Phenanthrene-d10	7.55	188	73826	200.00	ng/ml	-0.01
23) Chrysene-d12	10.10	240	83472	200.00	ng/ml	-0.01
28) Perylene-d12	13.28	264	90973	200.00	ng/ml	-0.02
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	101190	613.17	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	61.32%		
13) Fluorene-d10	6.75	176	143673	717.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	71.72%		
22) Fluoranthene-d10	8.53	212	309898	666.04	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	66.60%		
25) Terphenyl-d14	8.88	244	272250	751.96	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	75.20%		
Target Compounds						Qvalue
2) Naphthalene	4.76	128	521	1.53	ng/ml	86
4) 2-Methylnaphthalene	5.41	142	123	0.60	ng/ml	97
5) 1-Methylnaphthalene	5.49	142	104m	0.52	ng/ml	
6) Biphenyl	5.82	154	427m	1.66	ng/ml	
11) Dibenzofuran	6.49	168	118	0.34	ng/ml	90
17) Phenanthrene	7.57	178	185	0.40	ng/ml	84
21) Fluoranthene	8.55	202	210m	0.37	ng/ml	
24) Pyrene	8.75	202	218	0.38	ng/ml	86
26) Benz(a)anthracene	10.10	228	377	0.70	ng/ml	83
27) Chrysene	10.14	228	180m	0.35	ng/ml	
29) Benzo(b)fluoranthene	12.22	252	222	0.39	ng/ml	66
31) Benzo(e)pyrene	12.96	252	405	0.76	ng/ml#	1
32) Benzo(a)pyrene	13.11	252	242m	0.49	ng/ml	
33) Perylene	13.36	252	340	0.66	ng/ml	68
36) Benzo(g,h,i)perylene	15.89	276	249	0.44	ng/ml	74

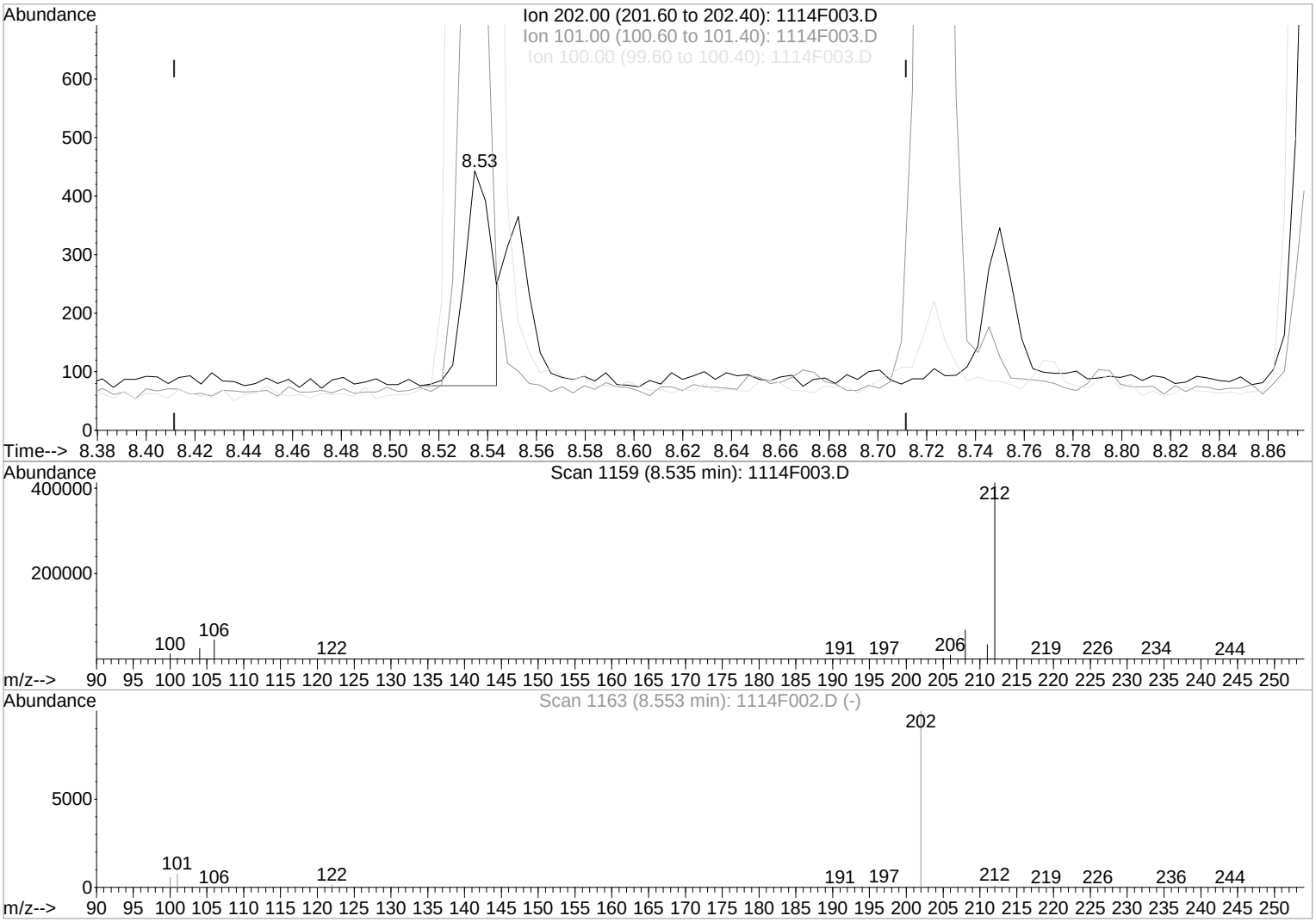
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:47 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(21) Fluoranthene (T)

8.53min 0.51ng/ml

response 291

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	358.31#
100.00	8.60	3265.12#
0.00	0.00	0.00

Manual Integration:

Before

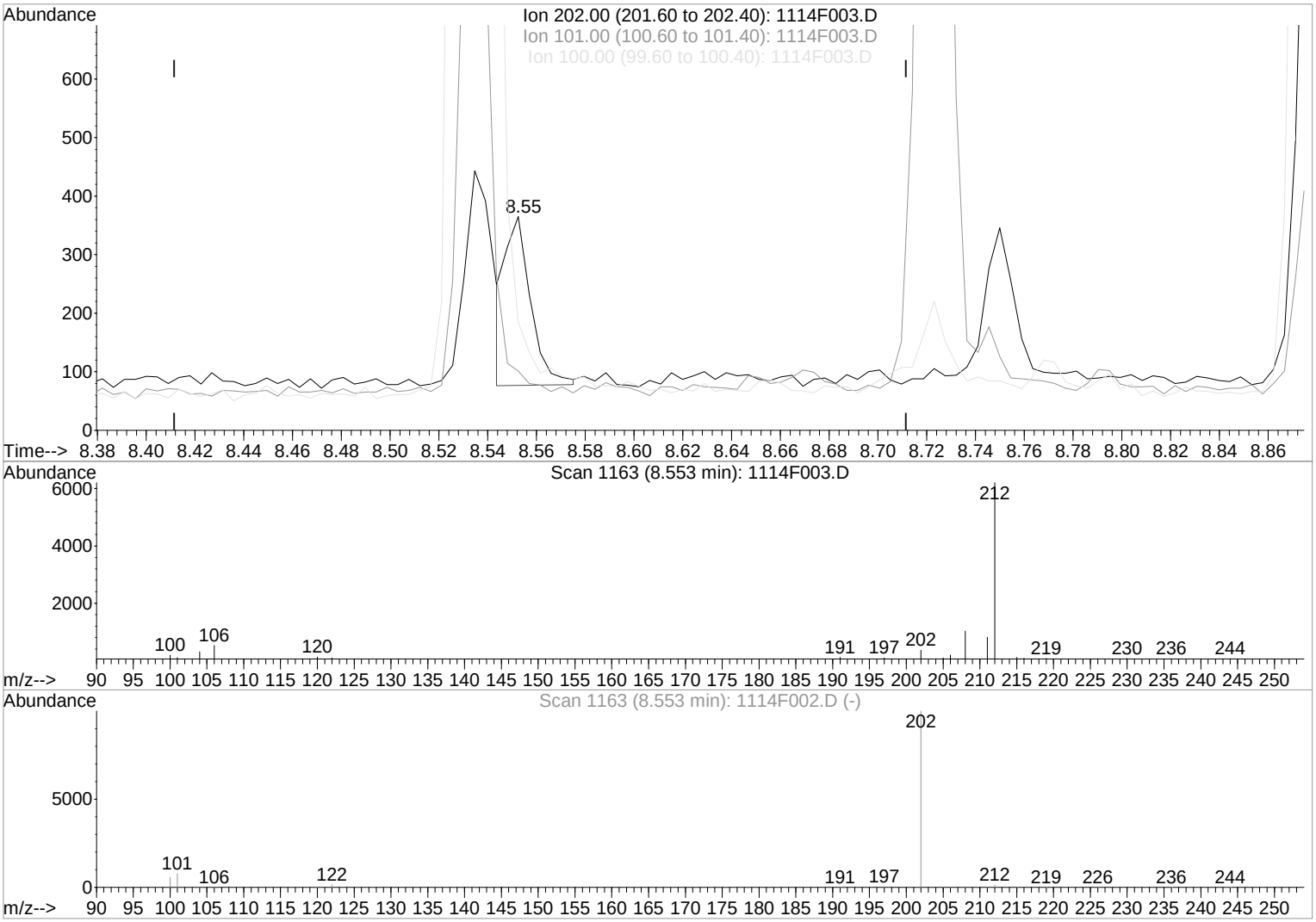
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:47 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(21) Fluoranthene (T)

8.55min 0.37ng/ml m

response 210

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	27.67
100.00	8.60	50.68#
0.00	0.00	0.00

Manual Integration:

After

WP

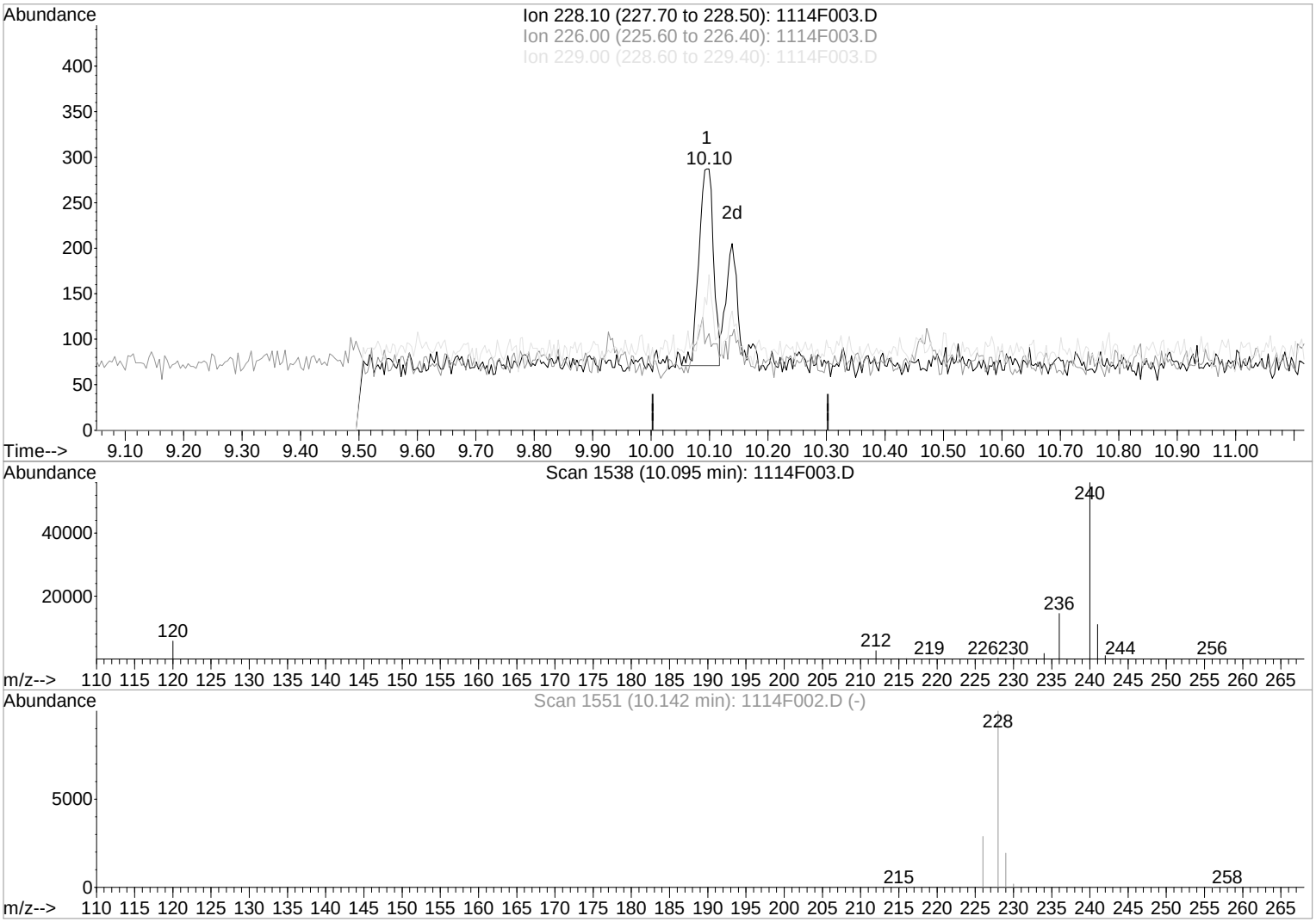
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:47 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(27) Chrysene (T)

10.10min 0.73ng/ml

response 377

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	14.81
229.00	19.20	23.15
0.00	0.00	0.00

Manual Integration:

Before

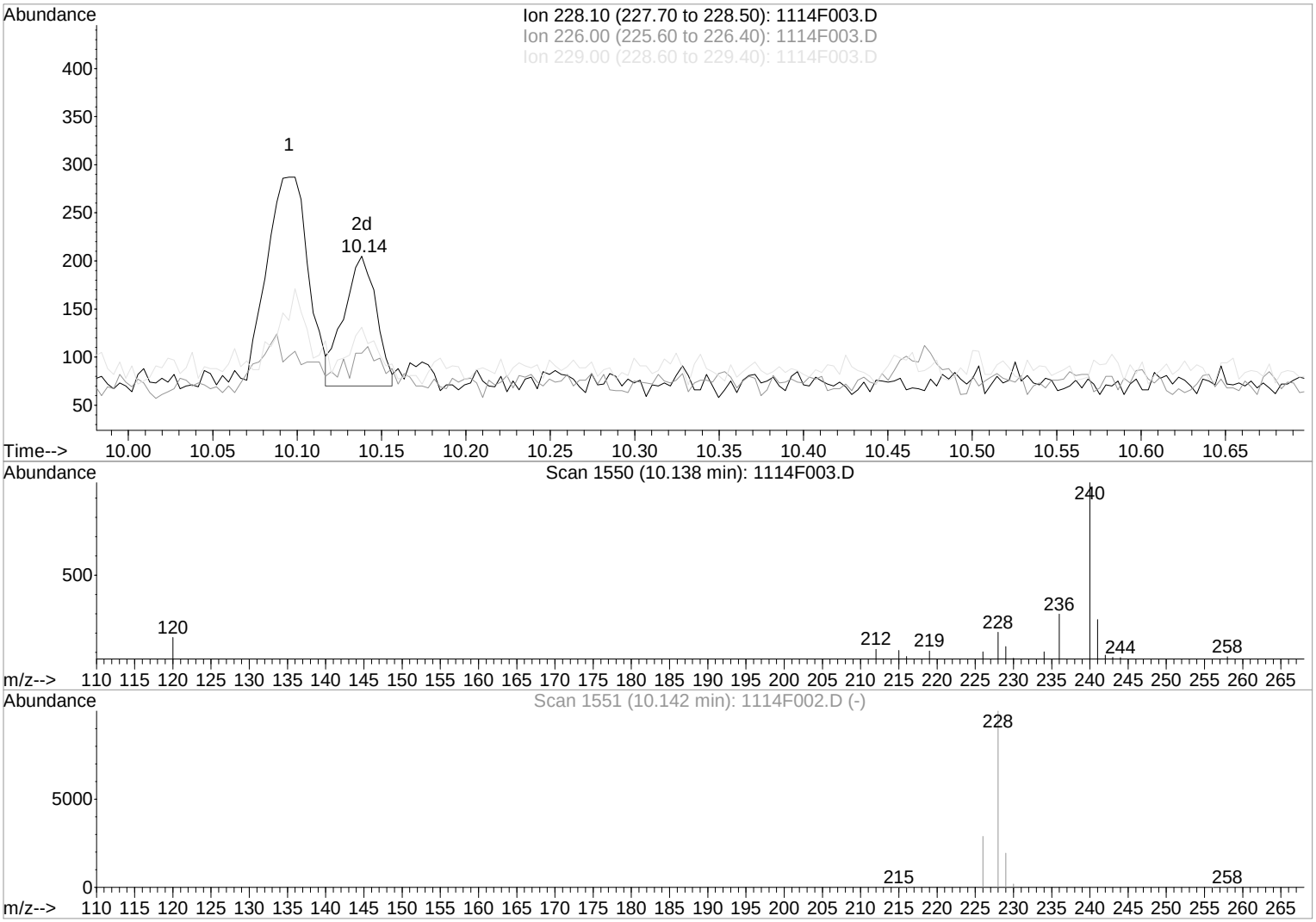
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(27) Chrysene (T)

10.14min 0.35ng/ml m

response 180

Ion	Exp%	Act%
228.10	100	100
226.00	28.70	50.73
229.00	19.20	63.90#
0.00	0.00	0.00

Manual Integration:

After

WP

11/30/18

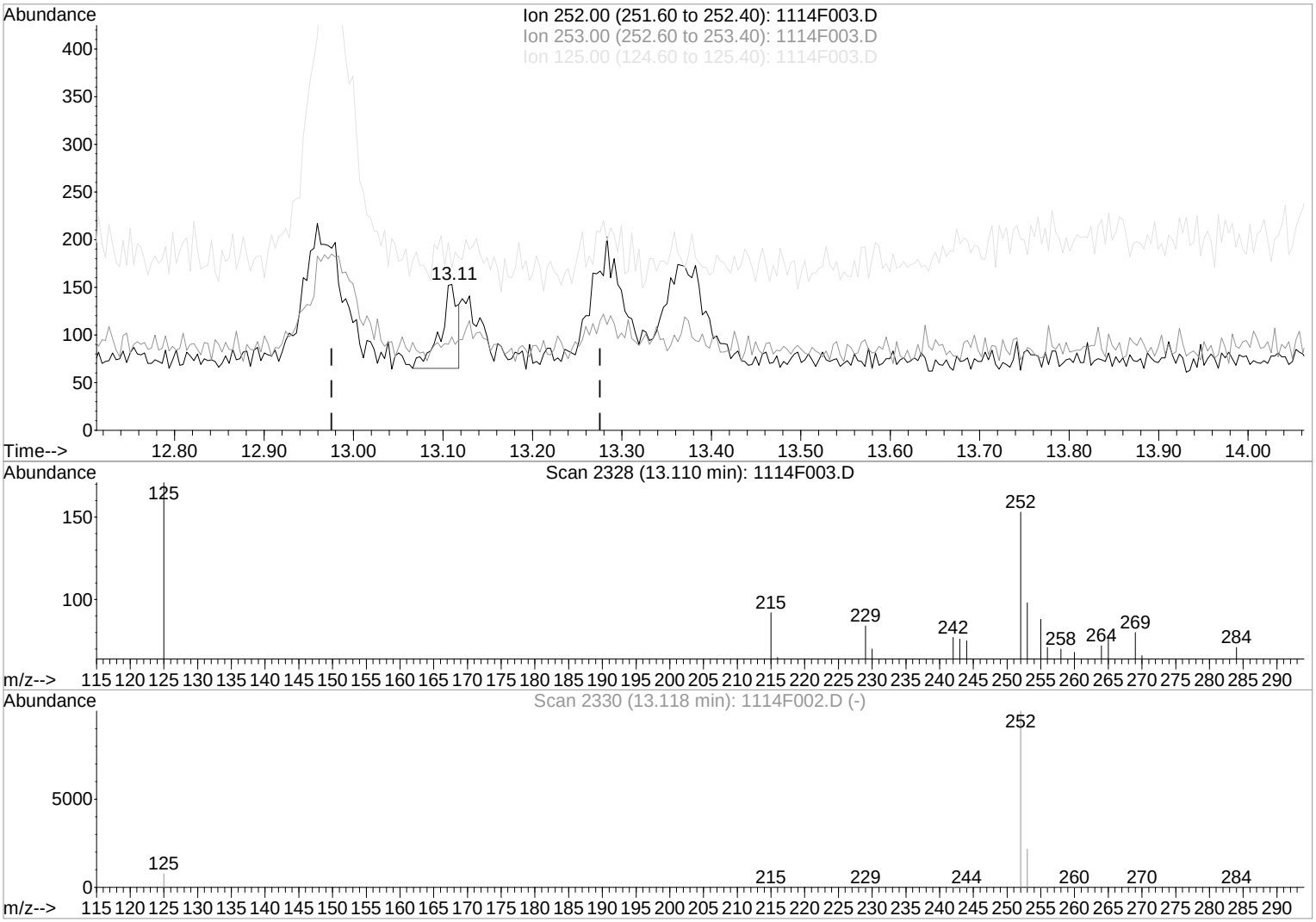
1114F003.D 071118PAH.M Fri Nov 30 10:48:03 2018

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(32) Benzo(a)pyrene (T)

13.11min 0.24ng/ml

response 120

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	6.82
125.00	10.30	0.00
0.00	0.00	0.00

Manual Integration:

Before

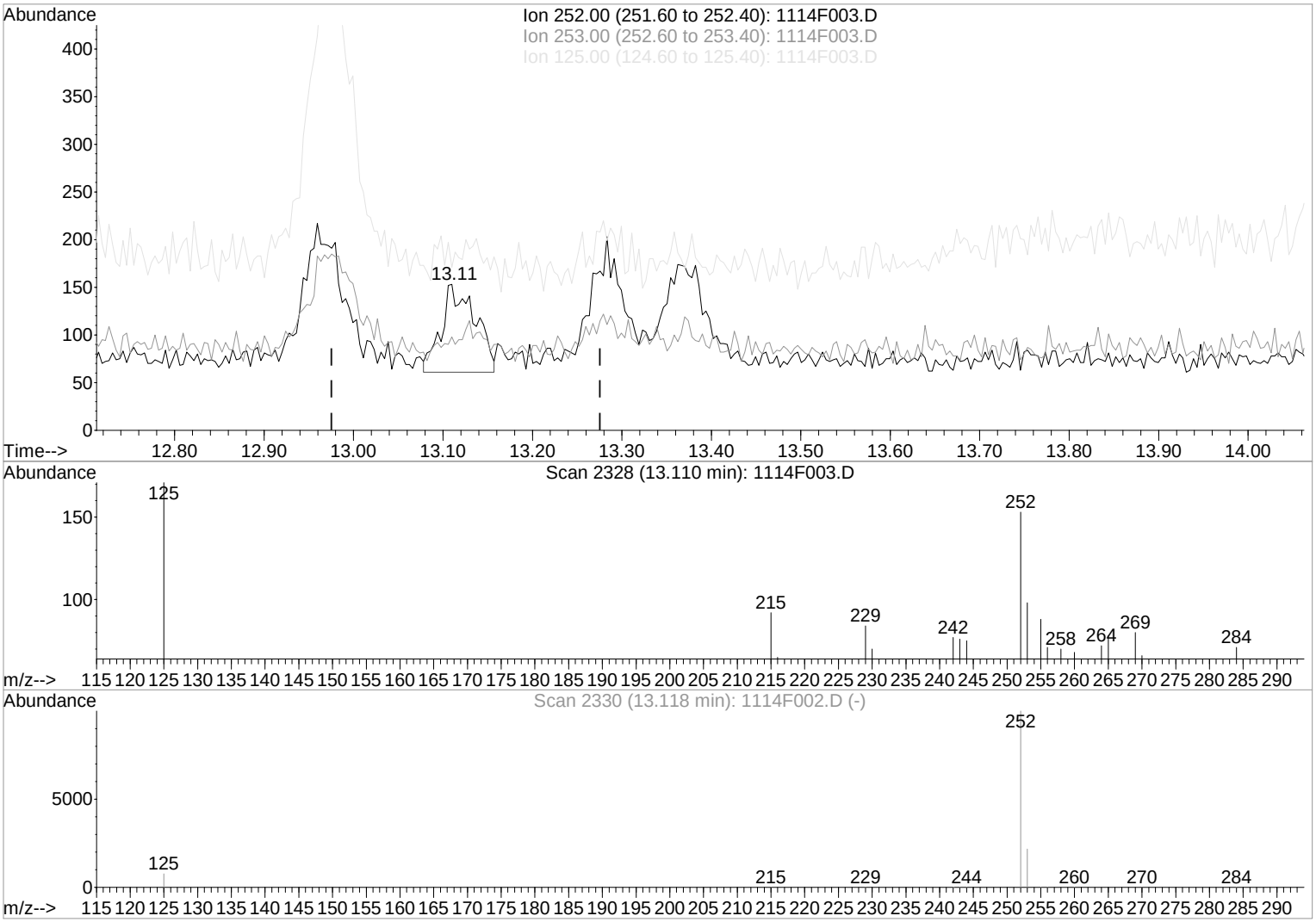
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F003.D Vial: 3
Acq On : 14 Nov 2018 6:42 am Operator: LWeiskopf
Sample : KWG1805796-6 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F003.D

(32) Benzo(a)pyrene (T)

13.11min 0.49ng/ml m

response 242

Ion	Exp%	Act%
252.00	100	100
253.00	20.90	64.05#
125.00	10.30	111.76#
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F022.D
Lab ID: KWG1805796-1 -- K1810430-005MS
RunType: MS
Matrix: SOIL

Date Acquired: 11/14/2018 14:51
Date Quantitated: 11/15/2018 05:06
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail	
Tune Window	NA	NA	NA	x		
Analytical Holding Time	NA	NA	NA	x		
ICAL Pass/Fail	NA	NA	NA	x		
ICAL Analyte Recovery	NA	NA	NA	x		
Initial Calibration Minimum RF	NA	NA	NA	x		
Initial Calibration SPCC/CCC	NA	NA	NA	x		
Second Source ICAL Verification	NA	NA	NA	x		
Calibration Verification Pass/Fail	NA	NA	NA	x		
Continuing Calibration Recovery	NA	NA	NA	x		
Continuing Calibration Minimum RF	NA	NA	NA	x		
Continuing Calibration SPCC/CCC	NA	NA	NA	x		
Internal Standards	NA	NA	NA	x		
Surrogates	NA	NA	NA		x	
Analyte Co-elution	NA	NA	NA	x		
Retention Time	NA	NA	NA	x		
Relative Retention Time	NA	NA	NA	x		
Below Lowest ICAL Level	NA	NA	NA	x		
Std MRL Unsupported by ICAL	NA	NA	NA	x		
Above Highest ICAL Level	NA	NA	NA	x		
Enviroquant/Stealth Calibration Check	NA	NA	NA	x		
Overdiluted Analysis	*	NA	NA		x	matrix

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2-Methylnaphthalene-d10	56	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F022.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 14:51	**Quant Date:**	11/15/2018 05:06	**Vial:**	22
Run Type:	MS	**MethodJoinID:**	MJ1233	**Dilution:**	10.0
Lab ID:	KWG1805796-1 -- K1810430-005MS			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/12/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702228	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	57068	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	34110	200.00	OK
3	Phenanthrene-d10	7.56	0.01	188	71191	200.00	OK
4	Chrysene-d12	10.12	0.02	240	73537	200.00	OK
5	Perylene-d12	13.34	0.05	264	80690	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.38	0.00	0.00	152	8849	55.55	56	70-130	*	
2	Fluorene-d10	6.75	0.00	0.00	176	16114	73.88	74	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	32648	72.76	73	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	28469	89.26	89	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	25225	76.58	109	D	
1	2-Methylnaphthalene	5.41		0.00	142	14729	74.14	106	D	
1	1-Methylnaphthalene	5.50		0.00	142	12977	67.87	96.8	D	
1	Biphenyl	5.82		0.00	154	18620	75.10	107	D	
1	2,6-Dimethylnaphthalene	5.96		0.00	156	15839	92.87	132	D	
2	Acenaphthylene	6.20	0.01	0.00	152	29035	71.34	102	D	
2	Acenaphthene	6.34		0.00	154	17320	74.08	106	D	
2	Dibenzofuran	6.49		0.00	168	26208	69.86	99.7	D	
2	2,3,5-Trimethylnaphthalene	6.66		0.00	170	17103	79.09	113	D	
2	Fluorene	6.77		0.00	166	23346	82.56	118	D	
3	Dibenzothiophene	7.47		0.00	184	33341	75.09	107	D	
3	Phenanthrene	7.58	0.01	0.00	178	67440	151.86	217	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/03/18
2nd 12/06/18

Data File:	J:\MS14\DATA\111418\1114F022.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 14:51	**Quant Date:**	11/15/2018 05:06	**Vial:**	22
Run Type:	MS	**MethodJoinID:**	MJ1233	**Dilution:**	10.0
Lab ID:	KWG1805796-1 -- K1810430-005MS			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62	0.01	0.00	178	39157	92.36	132	D	
3	Carbazole	7.75		0.00	167	27140	65.60	93.6	D	
3	1-Methylphenanthrene	8.09	0.01	0.00	192	28682	85.27	122	D	
3	Fluoranthene	8.56	0.01	0.00	202	122455	223.30	319	D	
4	Pyrene	8.76	0.01	0.00	202	142324	282.09	402	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	65054	136.83	195	D	
4	Chrysene	10.16	0.02	0.00	228	75148	165.01	235	D	
5	Benzo(b)fluoranthene	12.26	0.05	0.00	252	90473	181.48	259	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	52161	105.47	150	D	
5	Benzo(e)pyrene	13.01	0.05	0.00	252	68410	143.97	205	D	
5	Benzo(a)pyrene	13.17	0.05	0.00	252	67975	155.48	222	D	
5	Perylene	13.43	0.06	0.00	252	134132	292.47	417	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	63206	147.44	210	D	
5	Dibenz(a,h)anthracene	15.56	0.04	0.00	278	32784	75.44	108	D	
5	Benzo(g,h,i)perylene	15.93	0.05	0.00	276	66884	133.23	190	D	

Prep Amount:	40.057 g	**Dilution:**	10.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	35.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

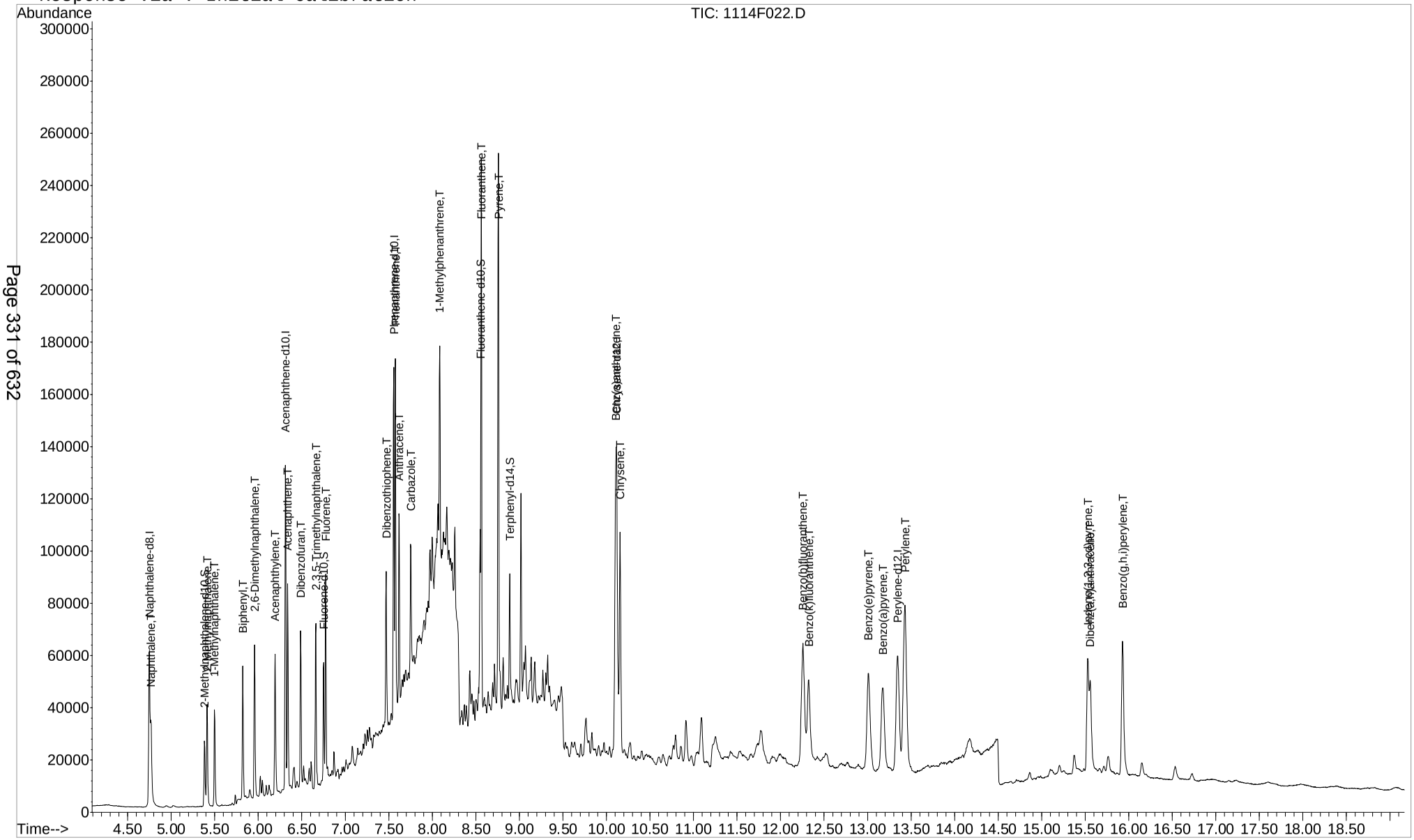
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F022.D Vial: 22
Acq On : 14 Nov 2018 2:51 pm Operator: LWeiskopf
Sample : K1810430-005MS 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 5:06 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F022.D Vial: 22
Acq On : 14 Nov 2018 2:51 pm Operator: LWeiskopf
Sample : K1810430-005MS 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:24 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	57068	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	34110	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	71191	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	73537	200.00	ng/ml	0.00
28) Perylene-d12	13.34	264	80690	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	8849	55.55	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	5.55%		
13) Fluorene-d10	6.75	176	16114	73.88	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.39%		
22) Fluoranthene-d10	8.55	212	32648	72.76	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.28%		
25) Terphenyl-d14	8.89	244	28469	89.26	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	8.93%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	25225	76.58	ng/ml	100
4) 2-Methylnaphthalene	5.41	142	14729	74.14	ng/ml	93
5) 1-Methylnaphthalene	5.50	142	12977	67.87	ng/ml	92
6) Biphenyl	5.82	154	18620	75.10	ng/ml	100
7) 2,6-Dimethylnaphthalene	5.96	156	15839	92.87	ng/ml	92
9) Acenaphthylene	6.20	152	29035	71.34	ng/ml	94
10) Acenaphthene	6.34	154	17320	74.08	ng/ml	98
11) Dibenzofuran	6.49	168	26208	69.86	ng/ml	59
12) 2,3,5-Trimethylnaphthalene	6.66	170	17103	79.09	ng/ml	95
14) Fluorene	6.77	166	23346	82.56	ng/ml	99
16) Dibenzothiophene	7.47	184	33341	75.09	ng/ml	93
17) Phenanthrene	7.58	178	67440	151.86	ng/ml	100
18) Anthracene	7.62	178	39157	92.36	ng/ml	99
19) Carbazole	7.75	167	27140	65.60	ng/ml	94
20) 1-Methylphenanthrene	8.09	192	28682	85.27	ng/ml	94
21) Fluoranthene	8.56	202	122455	223.30	ng/ml	93
24) Pyrene	8.76	202	142324	282.09	ng/ml	96
26) Benz(a)anthracene	10.10	228	65054	136.83	ng/ml	95
27) Chrysene	10.16	228	75148	165.01	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	90473	181.48	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	52161	105.47	ng/ml	93
31) Benzo(e)pyrene	13.01	252	68410	143.97	ng/ml	98
32) Benzo(a)pyrene	13.17	252	67975	155.48	ng/ml	98
33) Perylene	13.43	252	134132	292.47	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.53	276	63206	147.44	ng/ml	95
35) Dibenz(a,h)anthracene	15.56	278	32784	75.44	ng/ml	97
36) Benzo(g,h,i)perylene	15.93	276	66884	133.23	ng/ml	94

(#) = qualifier out of range (m) = manual integration

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F023.D
Lab ID: KWG1805796-2 -- K1810430-005DMS
RunType: DMS
Matrix: SOIL

Date Acquired: 11/14/2018 15:17
Date Quantitated: 11/30/2018 13:22
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	*	NA	NA		x

matrix

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2-Methylnaphthalene-d10	57	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F023.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 15:17	**Quant Date:**	11/30/2018 13:22	**Vial:**	23
Run Type:	DMS	**MethodJoinID:**	MJ1233	**Dilution:**	10.0
Lab ID:	KWG1805796-2 -- K1810430-005DMS			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SOIL
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/12/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702229	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	56579	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	33461	200.00	OK
3	Phenanthrene-d10	7.56	0.01	188	71518	200.00	OK
4	Chrysene-d12	10.12	0.02	240	75741	200.00	OK
5	Perylene-d12	13.34	0.05	264	82288	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.38	0.00	0.00	152	9067	57.41	57	70-130	*	
2	Fluorene-d10	6.75	0.00	0.00	176	17068	79.78	80	26-102	OK	
3	Fluoranthene-d10	8.55	0.02	0.00	212	34871	77.36	77	23-110	OK	
4	Terphenyl-d14	8.89	0.01	0.00	244	29809	90.74	91	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	24591	75.30	108	D	
1	2-Methylnaphthalene	5.41		0.00	142	15134	76.84	110	D	
1	1-Methylnaphthalene	5.50		0.00	142	13387	70.62	101	D	
1	Biphenyl	5.82		0.00	154	18976	77.20	110	D	
1	2,6-Dimethylnaphthalene	5.96		0.00	156	16368	96.81	138	D	
2	Acenaphthylene	6.19		0.00	152	30061	75.29	108	D	
2	Acenaphthene	6.34		0.00	154	18420	80.32	115	D	
2	Dibenzofuran	6.49		0.00	168	27523	74.79	107	D	
2	2,3,5-Trimethylnaphthalene	6.66		0.00	170	18390	86.69	124	D	
2	Fluorene	6.77		0.00	166	24924	89.86	128	D	
3	Dibenzothiophene	7.47		0.00	184	36576	82.00	117	D	
3	Phenanthrene	7.57		0.00	178	73109	163.87	234	D	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/03/18
2nd 12/06/18

Data File:	J:\MS14\DATA\111418\1114F023.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 15:17	**Quant Date:**	11/30/2018 13:22	**Vial:**	23
Run Type:	DMS	**MethodJoinID:**	MJ1233	**Dilution:**	10.0
Lab ID:	KWG1805796-2 -- K1810430-005DMS			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Dry Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.62	0.01	0.00	178	41373	97.14	139	D	
3	Carbazole	7.75		0.00	167	30183	72.62	104	D	
3	1-Methylphenanthrene	8.08		0.00	192	31949**m**	94.54	135	D	
3	Fluoranthene	8.56	0.01	0.00	202	132326	240.20	343	D	
4	Pyrene	8.76	0.01	0.00	202	153967	296.29	423	D	
4	Benz(a)anthracene	10.10	0.01	0.00	228	70777	144.53	206	D	
4	Chrysene	10.16	0.02	0.00	228	81000	172.69	247	D	
5	Benzo(b)fluoranthene	12.25	0.04	0.00	252	101170	199.00	284	D	
5	Benzo(k)fluoranthene	12.32	0.04	0.00	252	56673	112.37	160	D	
5	Benzo(e)pyrene	13.01	0.05	0.00	252	74697	154.14	220	D	
5	Benzo(a)pyrene	13.17	0.05	0.00	252	74792	167.75	240	D	
5	Perylene	13.43	0.06	0.00	252	149105	318.81	455	D	
5	Indeno(1,2,3-cd)pyrene	15.53	0.04	0.00	276	69181	158.24	226	D	
5	Dibenz(a,h)anthracene	15.56	0.04	0.00	278	35955	81.13	116	D	
5	Benzo(g,h,i)perylene	15.93	0.05	0.00	276	74654	145.82	208	D	

Prep Amount:	40.011 g	**Dilution:**	10.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	35.0 %		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

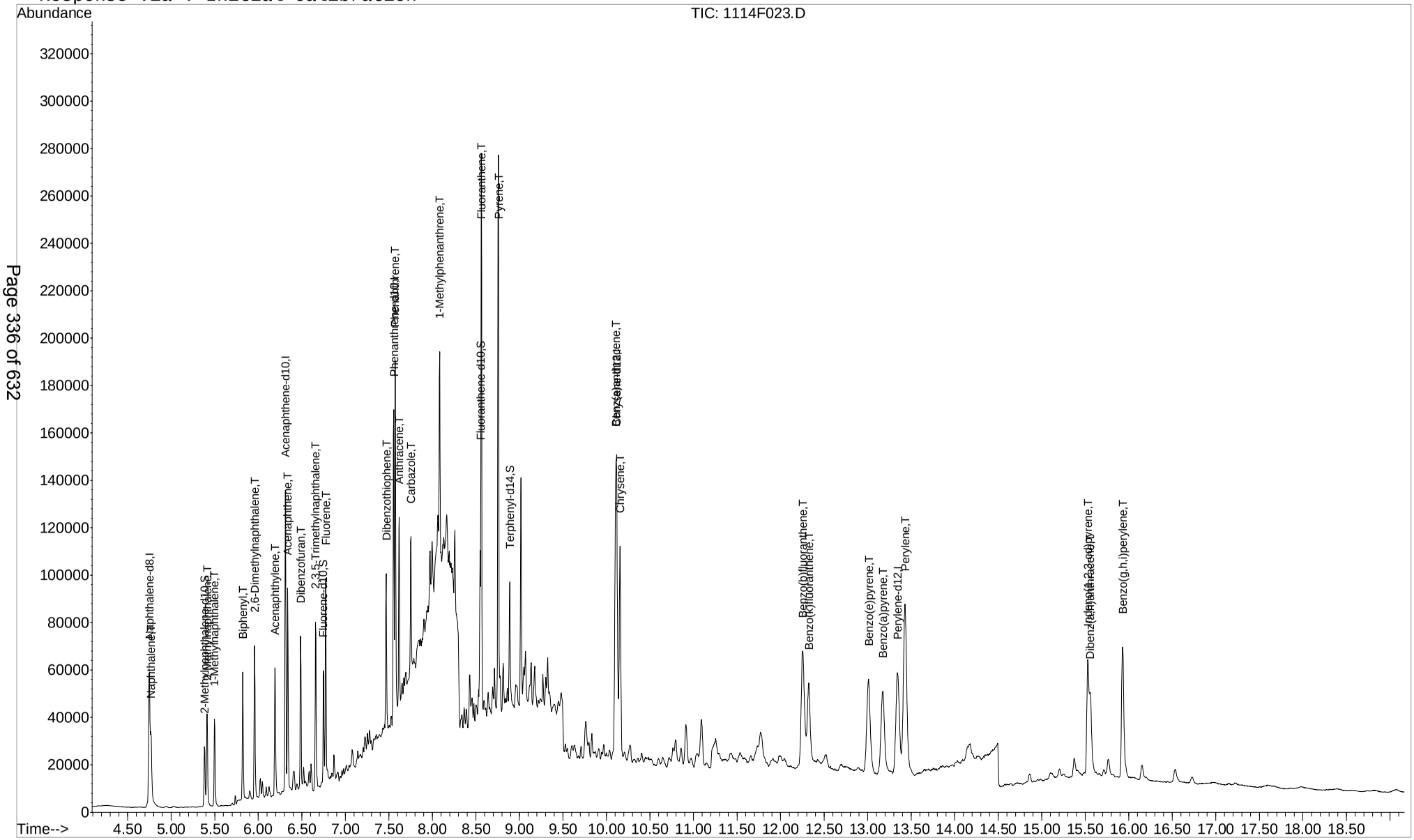
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F023.D Vial: 23
Acq On : 14 Nov 2018 3:17 pm Operator: LWeiskopf
Sample : K1810430-005DMS 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 13:22 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F023.D Vial: 23
Acq On : 14 Nov 2018 3:17 pm Operator: LWeiskopf
Sample : K1810430-005DMS 10X Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:06:27 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	56579	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	33461	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.56	188	71518	200.00	ng/ml	0.00
23) Chrysene-d12	10.12	240	75741	200.00	ng/ml	0.00
28) Perylene-d12	13.34	264	82288	200.00	ng/ml	0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	9067	57.41	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	5.74%		
13) Fluorene-d10	6.75	176	17068	79.78	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.98%		
22) Fluoranthene-d10	8.55	212	34871	77.36	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	7.74%		
25) Terphenyl-d14	8.89	244	29809	90.74	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	9.07%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	24591	75.30	ng/ml	99
4) 2-Methylnaphthalene	5.41	142	15134	76.84	ng/ml	93
5) 1-Methylnaphthalene	5.50	142	13387	70.62	ng/ml	90
6) Biphenyl	5.82	154	18976	77.20	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.96	156	16368	96.81	ng/ml	88
9) Acenaphthylene	6.19	152	30061	75.29	ng/ml	97
10) Acenaphthene	6.34	154	18420	80.32	ng/ml	97
11) Dibenzofuran	6.49	168	27523	74.79	ng/ml	59
12) 2,3,5-Trimethylnaphthalene	6.66	170	18390	86.69	ng/ml	98
14) Fluorene	6.77	166	24924	89.86	ng/ml	96
16) Dibenzothiophene	7.47	184	36576	82.00	ng/ml	93
17) Phenanthrene	7.57	178	73109	163.87	ng/ml	100
18) Anthracene	7.62	178	41373	97.14	ng/ml	99
19) Carbazole	7.75	167	30183	72.62	ng/ml	97
20) 1-Methylphenanthrene	8.08	192	31949m	94.54	ng/ml	
21) Fluoranthene	8.56	202	132326	240.20	ng/ml	95
24) Pyrene	8.76	202	153967	296.29	ng/ml	96
26) Benz(a)anthracene	10.10	228	70777	144.53	ng/ml	95
27) Chrysene	10.16	228	81000	172.69	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	101170	199.00	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	56673	112.37	ng/ml	88
31) Benzo(e)pyrene	13.01	252	74697	154.14	ng/ml	97
32) Benzo(a)pyrene	13.17	252	74792	167.75	ng/ml	98
33) Perylene	13.43	252	149105	318.81	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.53	276	69181	158.24	ng/ml	95
35) Dibenz(a,h)anthracene	15.56	278	35955	81.13	ng/ml	96
36) Benzo(g,h,i)perylene	15.93	276	74654	145.82	ng/ml	94

(#) = qualifier out of range (m) = manual integration

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F004.D
Lab ID: KWG1805796-5
RunType: LCS
Matrix: SEDIMENT

Date Acquired: 11/14/2018 07:08
Date Quantitated: 11/30/2018 10:48
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA		x
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Analyte Exceptions

Exception Categories	Analyte Name	Result	Low Limit	High Limit	Corrective Action
Surrogates	2-Methylnaphthalene-d10	66	70	130	NT

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F004.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 07:08	**Quant Date:**	11/30/2018 10:48	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-5			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	SEDIMENT
Prod Code:	8270D PAH SIM U	**Collect Date:**		**Receive Date:**	11/12/2018

Analysis Lot:	KWG1806235	**Prep Lot:**	KWG1805796	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3541		
Prep Ref:	1702232	**Prep Date:**	11/07/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:	J:\MS14\DATA\111418\1114F003.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	0.00	136	60453	200.00	OK
2	Acenaphthene-d10	6.31	0.00	164	29887	200.00	OK
3	Phenanthrene-d10	7.55	0.00	188	65739	200.00	OK
4	Chrysene-d12	10.10	0.00	240	75453	200.00	OK
5	Perylene-d12	13.29	0.00	264	83033	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
1	2-Methylnaphthalene-d10	5.38	0.00	0.00	152	110830	656.81	66	70-130	*	
2	Fluorene-d10	6.75	0.00	0.00	176	149121	780.34	78	26-102	OK	
3	Fluoranthene-d10	8.53	0.00	0.00	212	329050	794.20	79	23-110	OK	
4	Terphenyl-d14	8.88	0.00	0.00	244	286181	874.45	87	27-115	OK	

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77		0.00	128	222429	637.42	63.7		
1	2-Methylnaphthalene	5.41		0.00	142	141523	672.52	67.3		
1	1-Methylnaphthalene	5.49	-0.01	0.00	142	135420	668.56	66.9		
1	Biphenyl	5.82		0.00	154	184459	702.32	70.2		
1	2,6-Dimethylnaphthalene	5.95	-0.01	0.00	156	134472	744.34	74.4		
2	Acenaphthylene	6.19		0.00	152	244630	685.99	68.6		
2	Acenaphthene	6.33	-0.01	0.00	154	140110	683.97	68.4		
2	Dibenzofuran	6.48	-0.01	0.00	168	222985	678.36	67.8		
2	2,3,5-Trimethylnaphthalene	6.66		0.00	170	144184	760.95	76.1		
2	Fluorene	6.77		0.00	166	178420	720.15	72.0		
3	Dibenzothiophene	7.46	-0.01	0.00	184	284989	695.04	69.5		
3	Phenanthrene	7.57		0.00	178	282616	689.15	68.9		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F004.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 07:08	**Quant Date:**	11/30/2018 10:48	**Vial:**	4
Run Type:	LCS	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1805796-5			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/Kg Wet Weight

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.61		0.00	178	290483	741.99	74.2		
3	Carbazole	7.75		0.00	167	274075	717.37	71.7		
3	1-Methylphenanthrene	8.08		0.00	192	233036	750.22	75.0		
3	Fluoranthene	8.55		0.00	202	348909	689.02	68.9		
4	Pyrene	8.75		0.00	202	379726	733.52	73.4		
4	Benz(a)anthracene	10.09		0.00	228	400794	821.58	82.2		
4	Chrysene	10.14		0.00	228	369157	790.02	79.0		
5	Benzo(b)fluoranthene	12.21		0.00	252	432975	844.01	84.4		
5	Benzo(k)fluoranthene	12.28		0.00	252	412789	811.13	81.1		
5	Benzo(e)pyrene	12.96		0.00	252	404722	827.68	82.8		
5	Benzo(a)pyrene	13.12		0.00	252	383906	853.35	85.3		
5	Perylene	13.37		0.00	252	373075	790.53	79.1		
5	Indeno(1,2,3-cd)pyrene	15.49		0.00	276	378929**m**	858.96	85.9		
5	Dibenz(a,h)anthracene	15.52		0.00	278	367439	821.66	82.2		
5	Benzo(g,h,i)perylene	15.88		0.00	276	379088	733.80	73.4		

Prep Amount:	20.000 g	**Dilution:**	1.0
Prep Final Vol:	2 mL	**Unit Factor:**	1
Solids:	%		

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / (Prep Amount x Solids)) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

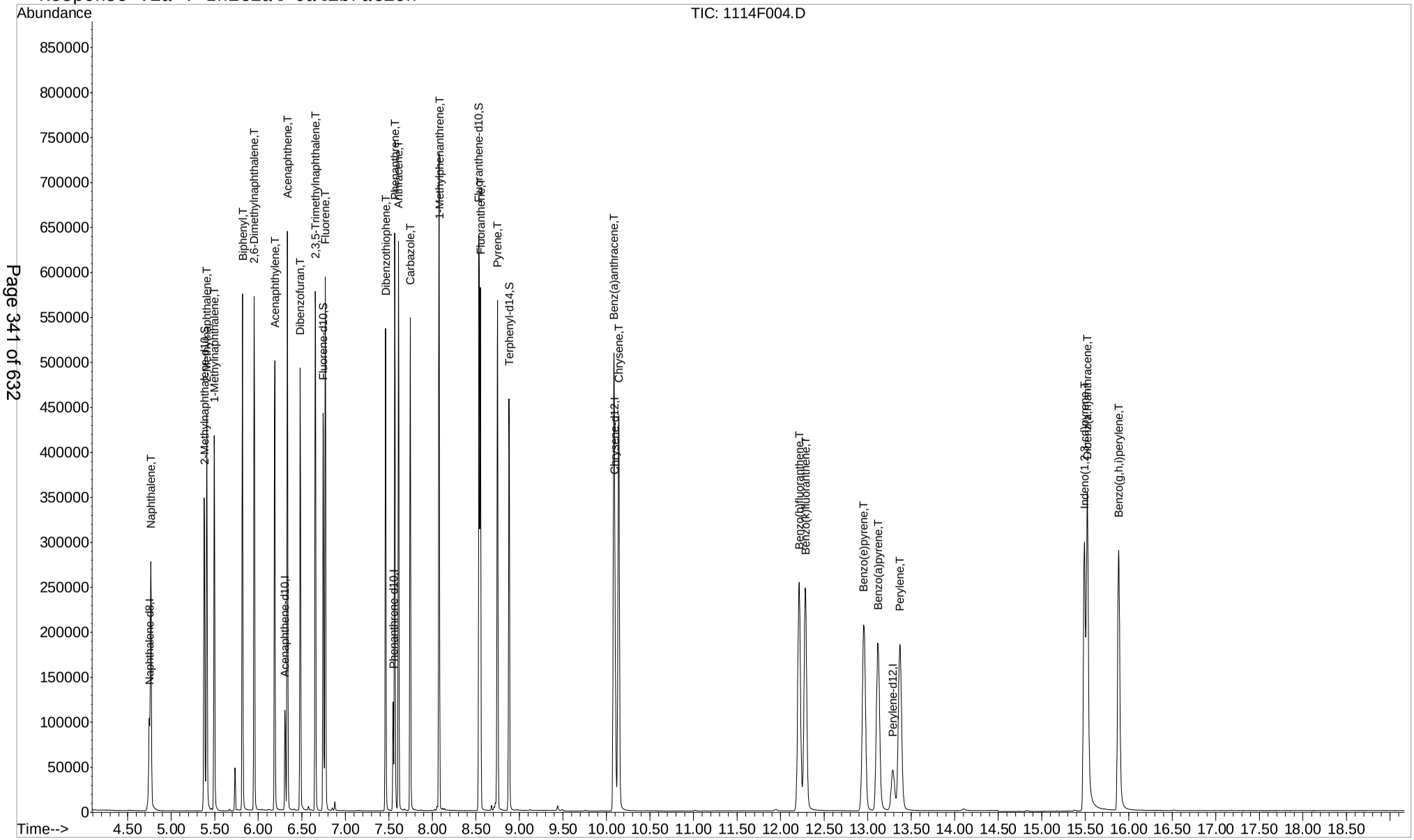
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 05:05:31 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	60453	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	29887	200.00	ng/ml	-0.01
15) Phenanthrene-d10	7.55	188	65739	200.00	ng/ml	-0.01
23) Chrysene-d12	10.10	240	75453	200.00	ng/ml	-0.01
28) Perylene-d12	13.29	264	83033	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	110830	656.81	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	65.68%		
13) Fluorene-d10	6.75	176	149121	780.34	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	78.03%		
22) Fluoranthene-d10	8.53	212	329050	794.20	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	79.42%		
25) Terphenyl-d14	8.88	244	286181	874.45	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	87.45%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	222429	637.42	ng/ml	100
4) 2-Methylnaphthalene	5.41	142	141523	672.52	ng/ml	93
5) 1-Methylnaphthalene	5.49	142	135420	668.56	ng/ml	89
6) Biphenyl	5.82	154	184459	702.32	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.95	156	134472	744.34	ng/ml	87
9) Acenaphthylene	6.19	152	244630	685.99	ng/ml	99
10) Acenaphthene	6.33	154	140110	683.97	ng/ml	97
11) Dibenzofuran	6.48	168	222985	678.36	ng/ml	61
12) 2,3,5-Trimethylnaphthalene	6.66	170	144184	760.95	ng/ml	97
14) Fluorene	6.77	166	178420	720.15	ng/ml	100
16) Dibenzothiophene	7.46	184	284989	695.04	ng/ml	87
17) Phenanthrene	7.57	178	282616	689.15	ng/ml	98
18) Anthracene	7.61	178	290483	741.99	ng/ml	99
19) Carbazole	7.75	167	274075	717.37	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	233036	750.22	ng/ml	100
21) Fluoranthene	8.55	202	348909	689.02	ng/ml	92
24) Pyrene	8.75	202	379726	733.52	ng/ml	96
26) Benz(a)anthracene	10.09	228	400794	821.58	ng/ml	99
27) Chrysene	10.14	228	369157	790.02	ng/ml	99
29) Benzo(b)fluoranthene	12.21	252	432975	844.01	ng/ml	97
30) Benzo(k)fluoranthene	12.28	252	412789	811.13	ng/ml	97
31) Benzo(e)pyrene	12.96	252	404722	827.68	ng/ml	96
32) Benzo(a)pyrene	13.12	252	383906	853.35	ng/ml	97
33) Perylene	13.37	252	373075	790.53	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.49	276	378929m	858.96	ng/ml	
35) Dibenz(a,h)anthracene	15.52	278	367439	821.66	ng/ml	96
36) Benzo(g,h,i)perylene	15.88	276	379088	733.80	ng/ml	94

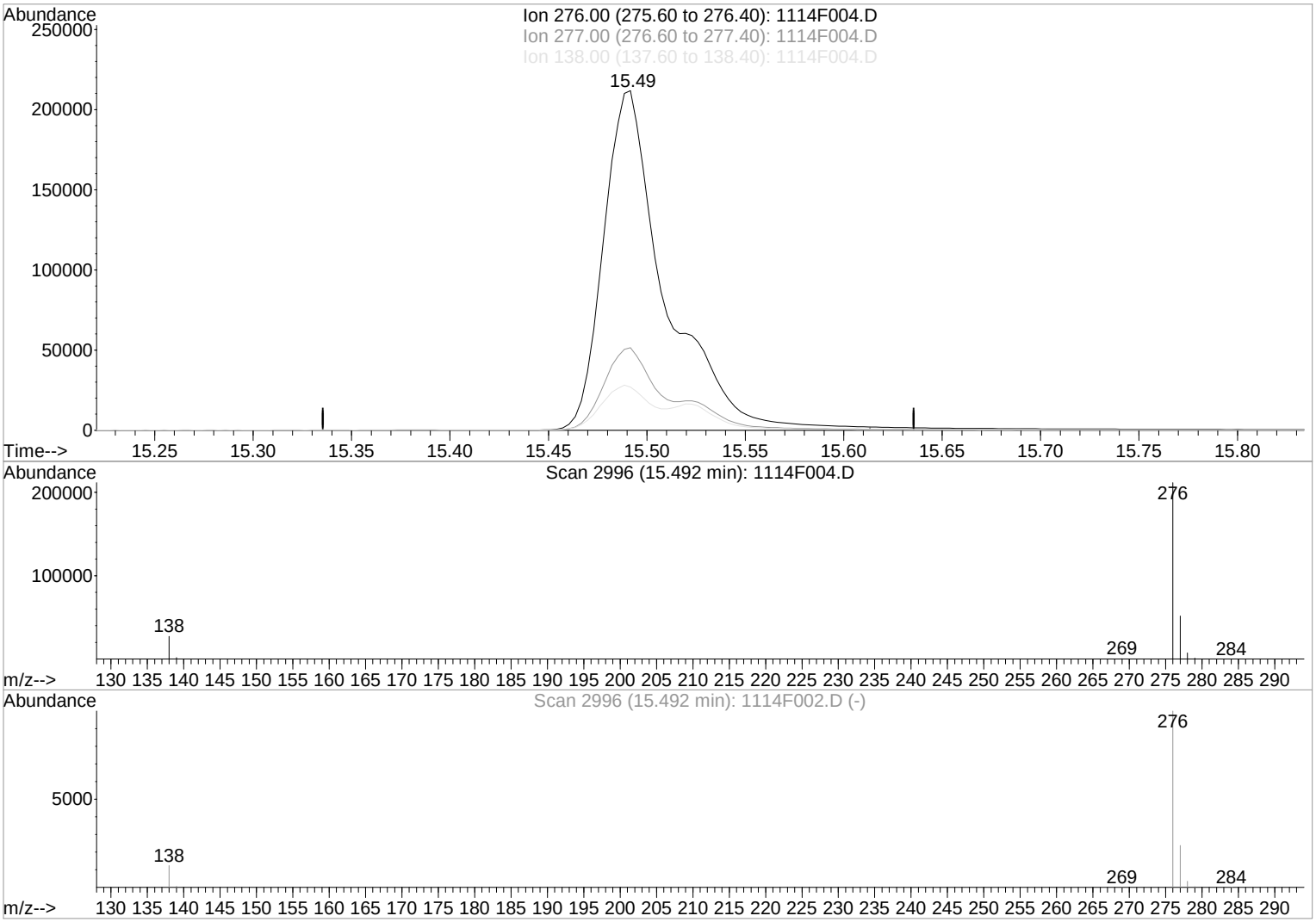
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 15 5:05 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F004.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 1047.47ng/ml

response 462088

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	24.24
138.00	17.70	12.63
0.00	0.00	0.00

Manual Integration:

Before

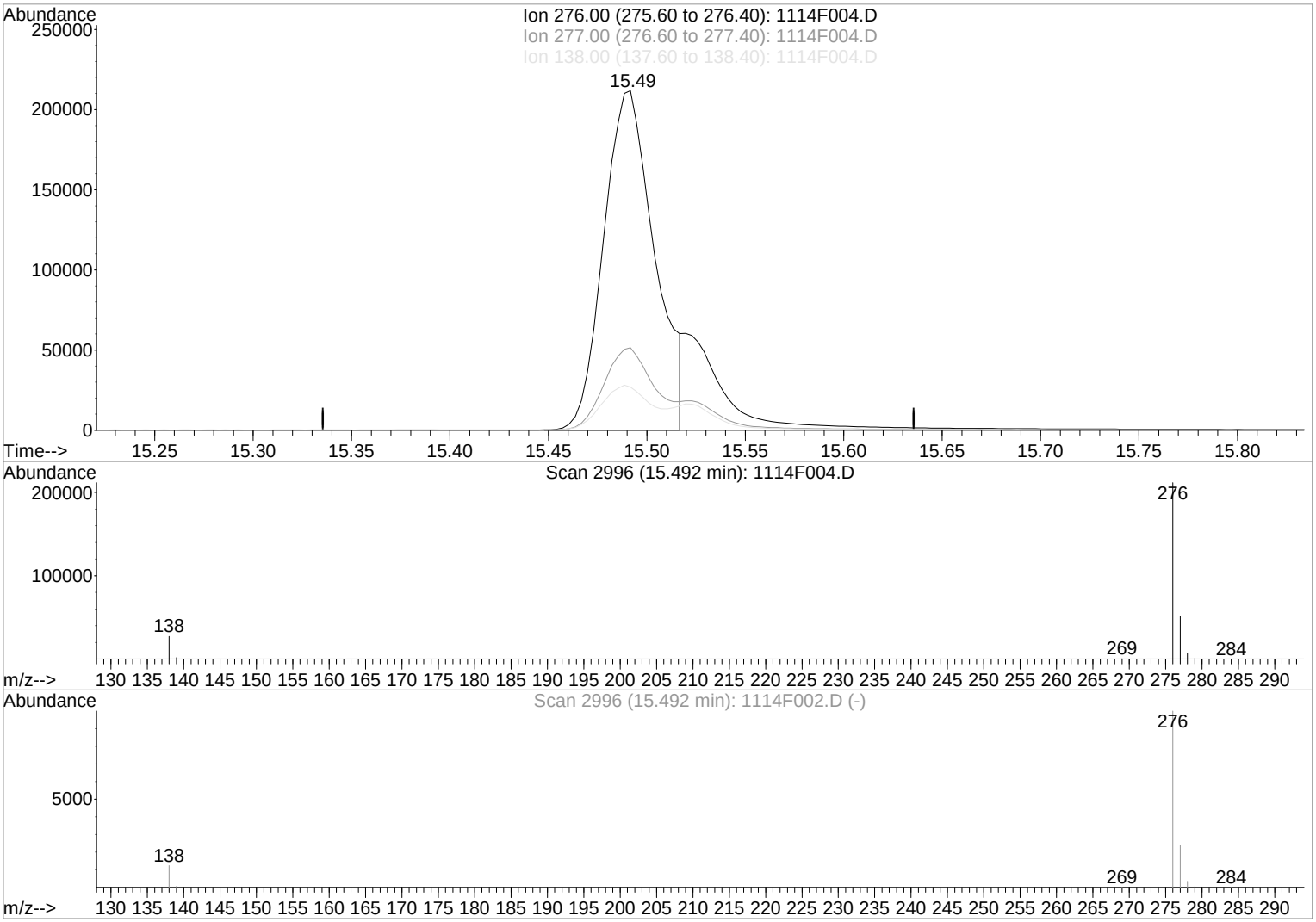
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F004.D Vial: 4
Acq On : 14 Nov 2018 7:08 am Operator: LWeiskopf
Sample : KWG1805796-5 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:48 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Multiple Level Calibration



TIC: 1114F004.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 858.96ng/ml m

response 378929

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	24.29
138.00	17.70	12.73
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

11/30/18

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F001.D
Lab ID: KWG1806235-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/14/2018 05:51
Date Quantitated:
Batch ID: KWG1806235
Analysis Method: DFTPP
ListJoinID: LJ1965

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F001.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 05:51	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP	**ListJoinID:**	LJ1965	**Dilution:**	1.0
Lab ID:	KWG1806235-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH ALK S	**Collect Date:**		**Receive Date:**	11/30/2018

Analysis Lot:	KWG1806235	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\A_DFTPP.M			**Calibration ID:**	CAL15779
Title:				**Report List ID:**	LJ1965
Tune Ref:				**Method ID:**	MJ190
MB Ref:				**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	46.5	157589	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	46.9	158868	Pass
70	69	0	2	0.7	1054	Pass
127	198	10	80	51.6	174890	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	48.5	339050	Pass
199	198	5	9	6.8	22890	Pass
275	198	10	60	35.0	118562	Pass
365	442	1	50	3.4	24040	Pass
441	443	0.01	100	75.3	101050	Pass
442	442	100	100	100.0	698368	Pass
443	442	15	24	19.2	134280	Pass

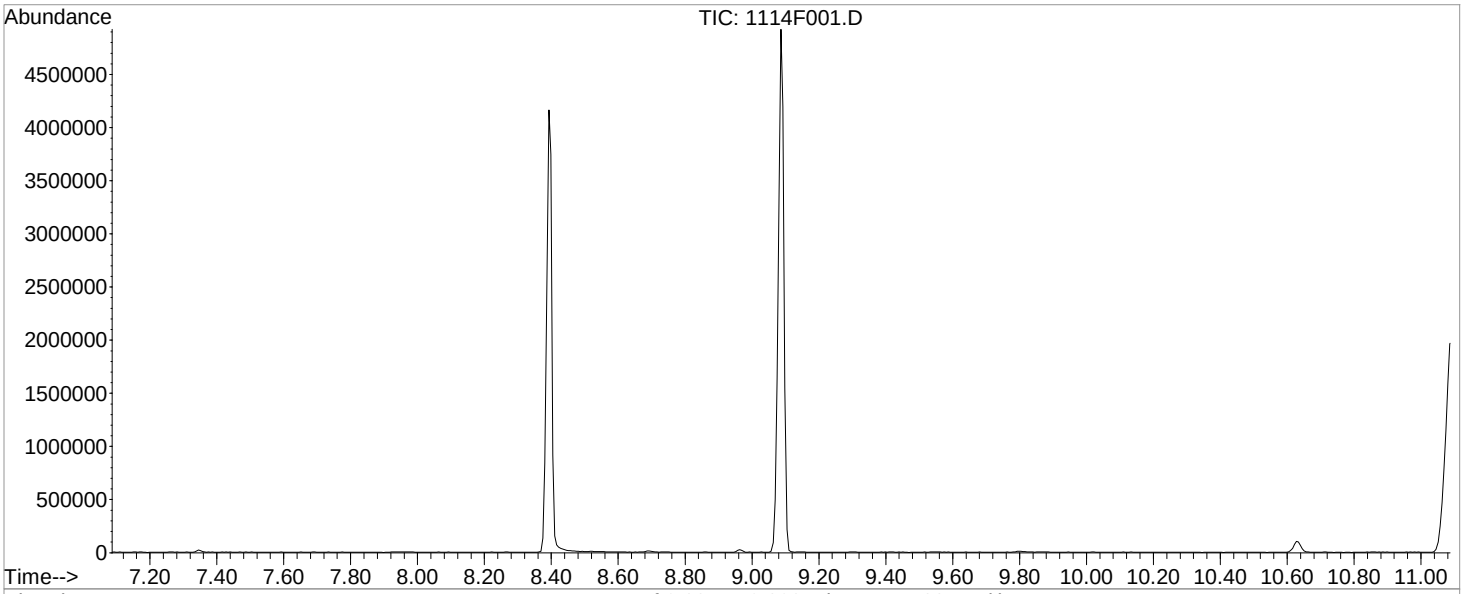
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F001.D Vial: 1
Acq On : 14 Nov 2018 5:51 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 509, 510, 511; Background Corrected with Scan 501

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	46.5	157589	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	46.9	158868	PASS
70	69	0.00	2	0.7	1054	PASS
127	198	10	80	51.6	174890	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	48.5	339050	PASS
199	198	5	9	6.8	22890	PASS
275	198	10	60	35.0	118562	PASS
365	442	1	50	3.4	24040	PASS
441	443	0.01	100	75.3	101050	PASS
442	442	30	100	100.0	698368	PASS
443	442	15	24	19.2	134280	PASS

1st 12/03/18
2nd 12/06/18

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.10	54	51.10	157589	63.00	6729	74.05	18702
37.05	1127	52.10	7821	64.00	244	75.00	25458
38.10	2961	53.05	424	64.25	513	76.10	10756
39.10	11503	55.05	1362	65.00	2207	77.10	160853
40.00	644	56.05	4752	65.90	330	78.10	11158
41.05	91	57.05	9931	68.95	158868	79.00	16037
44.90	304	57.95	338	69.95	1054	80.00	10218
47.80	187	59.00	71	71.00	347	81.00	13400
48.30	169	60.10	172	72.10	118	82.00	3294
49.05	1918	61.05	2128	72.30	70	83.00	2896
50.10	49018	62.05	2412	73.05	2032	84.10	283

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
85.05	2564	95.00	494	105.00	4957	117.00	62536
86.05	4657	95.95	671	106.00	836	117.95	4094
87.00	1795	96.15	625	107.00	56888	119.10	579
87.90	550	97.15	264	108.00	7629	119.95	799
88.85	245	98.00	22288	110.00	93861	120.85	261
89.15	131	99.00	12569	110.95	14505	121.20	78
90.10	81	100.00	1149	111.95	2086	121.95	4734
91.00	3371	101.00	6696	112.90	470	123.00	6482
92.05	3666	101.95	382	114.50	91	124.00	2659
93.00	25130	103.00	3040	114.90	163	124.95	2440
94.00	1565	104.00	5160	116.15	2621	127.00	174890

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
128.00	14618	137.80	172	147.00	5815	157.00	1683
129.00	79189	138.00	579	147.95	13293	157.95	2238
130.00	7078	139.05	663	148.95	2281	158.95	1861
130.95	1234	140.00	1255	150.00	957	160.00	3424
132.00	669	141.00	10813	150.95	1104	160.95	4290
132.90	172	142.00	3452	151.70	420	161.95	1584
133.10	310	143.00	2082	152.00	61	162.95	337
133.95	2378	144.00	480	152.95	3742	163.30	120
135.00	6291	144.80	141	153.95	2097	164.00	754
136.00	2730	145.00	335	155.00	6195	164.95	4344
137.00	3312	146.00	2206	156.05	8400	166.00	3492

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
167.00	20890	177.00	3879	188.00	1503	200.00	1875
168.00	9298	177.95	1463	189.00	4510	201.30	374
168.95	1811	178.95	15646	189.95	730	201.50	1246
169.80	149	180.00	9295	190.90	1612	203.00	3403
170.00	563	181.00	4781	191.95	4470	204.00	14520
170.95	747	181.95	747	193.00	5427	205.00	24413
171.90	1960	183.10	545	194.05	1158	206.00	101250
172.95	2360	183.95	1565	194.95	562	207.00	12791
174.00	4263	185.05	7816	196.00	11029	208.00	3841
175.00	7346	186.00	58829	197.90	339050	208.95	1254
176.00	2018	187.00	16665	198.95	22890	210.00	1559

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
210.30	501	221.90	859	233.00	573	244.00	47106
210.95	3492	223.00	6561	233.95	1554	245.00	5624
211.95	746	224.00	58229	234.95	1867	246.00	11411
212.90	497	225.00	15068	235.95	1702	246.90	2025
214.90	1313	226.05	1687	236.95	1897	247.90	523
216.00	2489	227.00	27306	238.00	312	248.95	1666
216.95	28066	228.00	4098	238.95	1261	249.95	269
217.95	3794	228.90	5597	239.85	937	250.80	165
218.95	409	229.85	735	240.95	1633	251.00	430
219.80	200	231.00	2060	242.00	3525	251.95	430
221.00	17179	231.85	183	243.05	3609	252.95	957

Average of 9.081 to 9.092 min.: 1114F001.D

1st 12/03/18
2nd 12/06/18

DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
253.30	272	264.95	7543	276.00	15515	288.95	574
255.00	248768	265.95	1076	276.95	11685	289.95	482
256.00	37472	268.00	84	278.00	1913	290.90	175
257.00	2759	269.80	204	278.85	333	291.10	97
258.00	17138	270.05	158	281.95	428	291.95	695
258.95	2534	270.90	265	282.90	840	292.95	2804
260.00	383	271.10	198	283.10	496	293.90	607
260.95	553	272.05	906	283.95	1302	294.90	380
262.00	92	272.95	7955	285.00	1972	295.95	42088
263.10	55	273.95	21347	286.00	486	296.95	5681
263.95	839	275.00	118562	287.80	81	297.90	469

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
298.95	131	312.90	446	325.90	149	335.90	388
300.90	549	313.95	1953	326.20	87	338.90	205
302.00	598	314.95	4860	326.90	2631	339.85	228
302.20	200	316.00	3070	327.95	1325	341.00	1912
302.95	4801	317.00	441	328.70	96	342.00	403
303.95	1097	319.85	164	329.00	95	345.95	3474
304.90	196	321.00	1048	329.15	226	346.90	663
307.90	634	322.05	861	332.00	1079	348.10	77
309.00	454	323.00	13435	332.95	1270	349.95	137
310.00	569	323.95	2670	334.00	9310	351.05	324
311.80	61	324.95	261	334.95	2725	352.00	5015

Average of 9.081 to 9.092 min.: 1114F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
352.95	3183	372.95	2340	400.95	724	424.95	757
354.00	5035	373.90	248	401.95	3376	438.85	149
355.05	1006	376.95	210	402.95	5239	439.40	131
358.95	243	381.70	51	403.95	1787	441.00	101050
363.60	119	382.90	2478	404.95	167	442.00	698368
364.95	24040	383.95	770	410.00	126	443.00	134280
365.95	3212	384.90	304	415.00	298	444.00	11847
366.95	170	390.00	1501	421.00	4522	444.90	361
369.90	543	390.95	1067	421.95	4628	445.10	327
371.00	1464	392.05	756	423.00	38762	473.85	110
372.00	8654	396.90	54	424.00	7704		

1st 12/03/18
2nd 12/06/18

Exception Report

Data File: J:\MS14\DATA\111418\1114F002.D
Lab ID: KWG1806235-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/14/2018 06:17
Date Quantitated: 11/30/2018 10:35
Batch ID: KWG1806235
Analysis Method: 8270D SIM
MethodJoinID: MJ1233

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH ALK S	**Collect Date:**		**Receive Date:**	11/30/2018

Analysis Lot:	KWG1806235	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1233
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.05	136	58386	200.00	OK
2	Acenaphthene-d10	6.31	-0.04	164	27245	200.00	OK
3	Phenanthrene-d10	7.55	-0.04	188	66920	200.00	OK
4	Chrysene-d12	10.10	-0.05	240	75302	200.00	OK
5	Perylene-d12	13.29	-0.01	264	83299	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.38			152	66335	407.04		70-130 NA	
2	Fluorene-d10	6.75			176	76649	439.99		26-102 NA	
3	Fluoranthene-d10	8.53			212	162469	385.22		23-110 NA	
4	Terphenyl-d14	8.88			244	130789	400.44		27-115 NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77			128	116359	345.26			
1	2-Methylnaphthalene	5.41			142	71082	349.74			
1	1-Methylnaphthalene	5.50			142	67138	343.19			
1	Biphenyl	5.82			154	89673	353.51			
1	2,6-Dimethylnaphthalene	5.96			156	64326	368.67			
2	Acenaphthylene	6.19			152	115986	356.78			
2	Acenaphthene	6.34			154	66455	355.87			
2	Dibenzofuran	6.49			168	106893	356.72			
2	2,3,5-Trimethylnaphthalene	6.66			170	69748	403.80			
2	Fluorene	6.77			166	88590	392.25			
3	Dibenzothiophene	7.47			184	148749	356.37			
3	Phenanthrene	7.57			178	143132	342.86			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1233	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.61			178	142658	357.96			
3	Carbazole	7.75			167	126017	324.02			
3	1-Methylphenanthrene	8.08			192	113785	359.85			
3	Fluoranthene	8.55			202	170329	330.43			
4	Pyrene	8.75			202	179644	347.71			
4	Benz(a)anthracene	10.09			228	176058	361.62			
4	Chrysene	10.14			228	165336	354.54			
5	Benzo(b)fluoranthene	12.21			252	195878	380.61			
5	Benzo(k)fluoranthene	12.28			252	186893	366.07			
5	Benzo(e)pyrene	12.96			252	184653	376.42			
5	Benzo(a)pyrene	13.12			252	173681	384.83			
5	Perylene	13.37			252	171111	361.42			
5	Indeno(1,2,3-cd)pyrene	15.49			276	161015**m**	363.83			
5	Dibenz(a,h)anthracene	15.52			278	161474	359.93			
5	Benzo(g,h,i)perylene	15.88			276	167493	323.18			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 12/03/18
2nd 12/06/18

Quantitation Report

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1651	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH ALK S	**Collect Date:**		**Receive Date:**	11/30/2018

Analysis Lot:	KWG1806235	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\111418\1114F001.D	**Method ID:**	MJ1651
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.75	-0.05	136	58386	200.00	OK
2	Acenaphthene-d10	6.31	-0.04	164	27245	200.00	OK
3	Phenanthrene-d10	7.55	-0.04	188	66920	200.00	OK
4	Chrysene-d12	10.10	-0.05	240	75302	200.00	OK
5	Perylene-d12	13.29	-0.01	264	83299	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.38			152	66335	407.04		70-130 NA	
2	Fluorene-d10	6.75			176	76649	439.99		38-104 NA	
3	Fluoranthene-d10	8.53			212	162469	385.22		39-109 NA	
4	Terphenyl-d14	8.88			244	130789	400.44		38-113 NA	

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.77			128	116359	345.26			
1	2-Methylnaphthalene	5.41			142	71082	349.74			
1	1-Methylnaphthalene	5.50			142	67138	343.19			
1	Biphenyl	5.82			154	89673	353.51			
1	2,6-Dimethylnaphthalene	5.96			156	64326	368.67			
2	Acenaphthylene	6.19			152	115986	356.78			
2	Acenaphthene	6.34			154	66455	355.87			
2	Dibenzofuran	6.49			168	106893	356.72			
2	2,3,5-Trimethylnaphthalene	6.66			170	69748	403.80			
2	Fluorene	6.77			166	88590	392.25			
3	Dibenzothiophene	7.47			184	148749	356.37			
3	Phenanthrene	7.57			178	143132	342.86			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\111418\1114F002.D			**Instrument:**	MS14
Acqu Date:	11/14/2018 06:17	**Quant Date:**	11/30/2018 10:35	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1651	**Dilution:**	1.0
Lab ID:	KWG1806235-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units:

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.61			178	142658	357.96			
3	Carbazole	7.75			167	126017	324.02			
3	1-Methylphenanthrene	8.08			192	113785	359.85			
3	Fluoranthene	8.55			202	170329	330.43			
4	Pyrene	8.75			202	179644	347.71			
4	Benz(a)anthracene	10.09			228	176058	361.62			
4	Chrysene	10.14			228	165336	354.54			
5	Benzo(b)fluoranthene	12.21			252	195878	380.61			
5	Benzo(k)fluoranthene	12.28			252	186893	366.07			
5	Benzo(e)pyrene	12.96			252	184653	376.42			
5	Benzo(a)pyrene	13.12			252	173681	384.83			
5	Perylene	13.37			252	171111	361.42			
5	Indeno(1,2,3-cd)pyrene	15.49			276	161015**m**	363.83			
5	Dibenz(a,h)anthracene	15.52			278	161474	359.93			
5	Benzo(g,h,i)perylene	15.88			276	167493	323.18			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

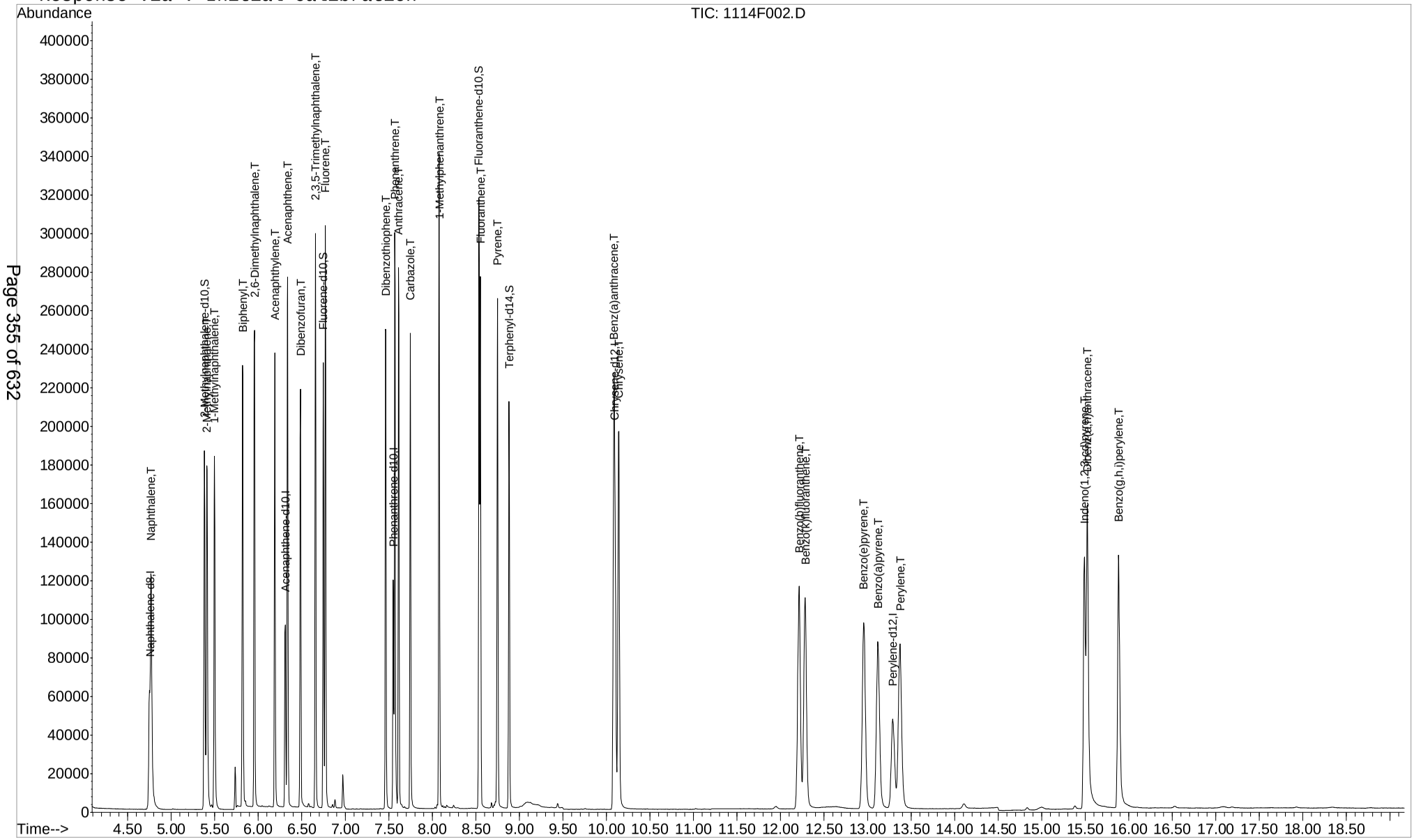
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 30 10:35:26 2018
Response via : Initial Calibration



Page 355 of 632

Quantitation Report (QT Reviewed)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 14 06:55:51 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Tue Nov 13 06:57:35 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.75	136	58386	200.00	ng/ml	-0.01
8) Acenaphthene-d10	6.31	164	27245	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.55	188	66920	200.00	ng/ml	-0.01
23) Chrysene-d12	10.10	240	75302	200.00	ng/ml	-0.01
28) Perylene-d12	13.29	264	83299	200.00	ng/ml	-0.01
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.38	152	66335	407.04	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	40.70%		
13) Fluorene-d10	6.75	176	76649	439.99	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	44.00%		
22) Fluoranthene-d10	8.53	212	162469	385.22	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	38.52%		
25) Terphenyl-d14	8.88	244	130789	400.44	ng/ml	-0.01
Spiked Amount 1000.000			Recovery =	40.04%		
Target Compounds						Qvalue
2) Naphthalene	4.77	128	116359	345.26	ng/ml	100
4) 2-Methylnaphthalene	5.41	142	71082	349.74	ng/ml	95
5) 1-Methylnaphthalene	5.50	142	67138	343.19	ng/ml	91
6) Biphenyl	5.82	154	89673	353.51	ng/ml	99
7) 2,6-Dimethylnaphthalene	5.96	156	64326	368.67	ng/ml	97
9) Acenaphthylene	6.19	152	115986	356.78	ng/ml	100
10) Acenaphthene	6.34	154	66455	355.87	ng/ml	98
11) Dibenzofuran	6.49	168	106893	356.72	ng/ml	86
12) 2,3,5-Trimethylnaphthalene	6.66	170	69748	403.80	ng/ml	90
14) Fluorene	6.77	166	88590	392.25	ng/ml	98
16) Dibenzothiophene	7.47	184	148749	356.37	ng/ml	98
17) Phenanthrene	7.57	178	143132	342.86	ng/ml	99
18) Anthracene	7.61	178	142658	357.96	ng/ml	99
19) Carbazole	7.75	167	126017	324.02	ng/ml	96
20) 1-Methylphenanthrene	8.08	192	113785	359.85	ng/ml	100
21) Fluoranthene	8.55	202	170329	330.43	ng/ml	91
24) Pyrene	8.75	202	179644	347.71	ng/ml	95
26) Benz(a)anthracene	10.09	228	176058	361.62	ng/ml	99
27) Chrysene	10.14	228	165336	354.54	ng/ml	100
29) Benzo(b)fluoranthene	12.21	252	195878	380.61	ng/ml	98
30) Benzo(k)fluoranthene	12.28	252	186893	366.07	ng/ml	97
31) Benzo(e)pyrene	12.96	252	184653	376.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	173681	384.83	ng/ml	97
33) Perylene	13.37	252	171111	361.42	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.49	276	161015m	363.83	ng/ml	
35) Dibenz(a,h)anthracene	15.52	278	161474	359.93	ng/ml	95
36) Benzo(g,h,i)perylene	15.88	276	167493	323.18	ng/ml	94

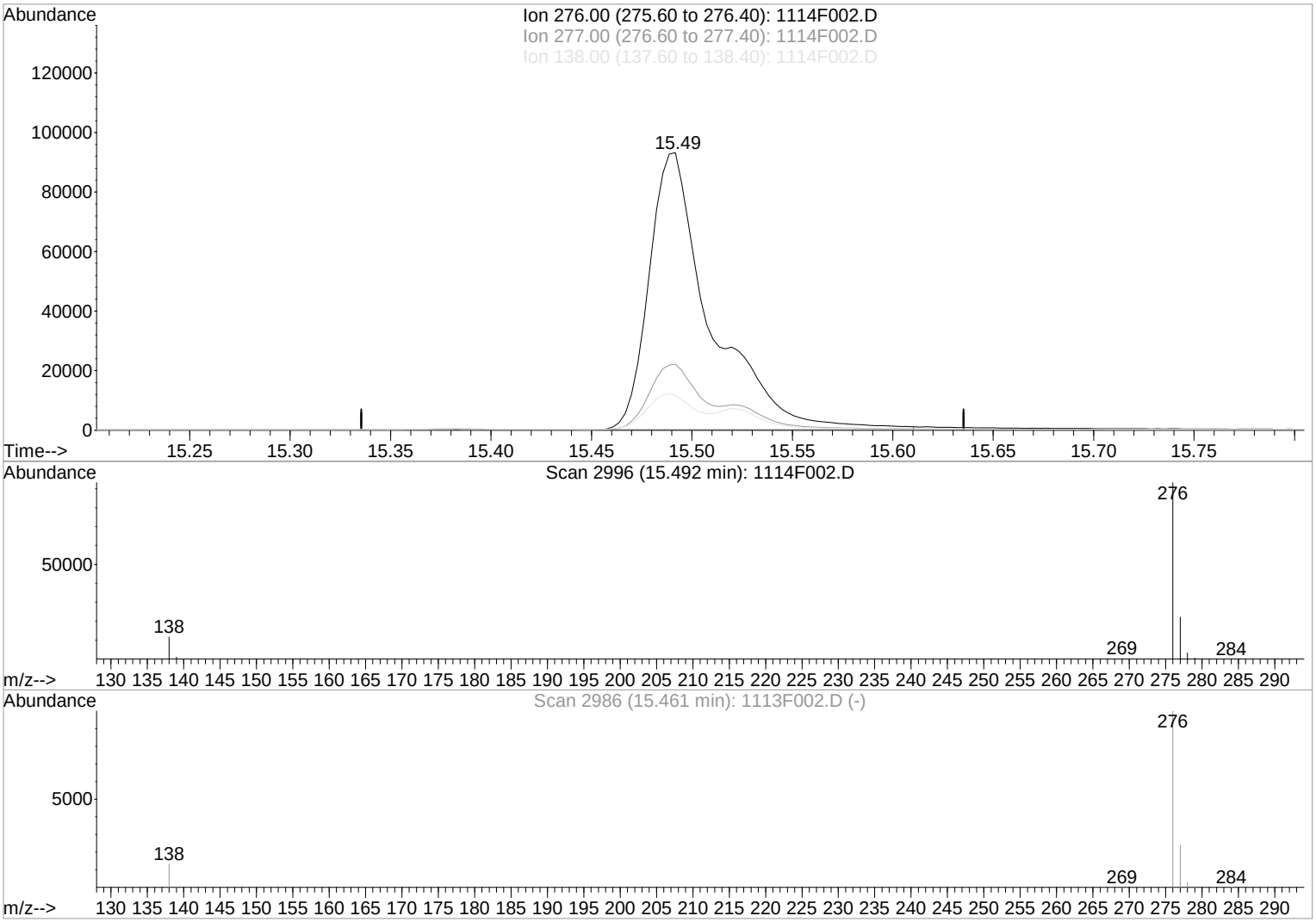
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 14 6:55 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F002.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 449.59ng/ml

response 198972

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	23.62
138.00	17.70	12.27
0.00	0.00	0.00

Manual Integration:

Before

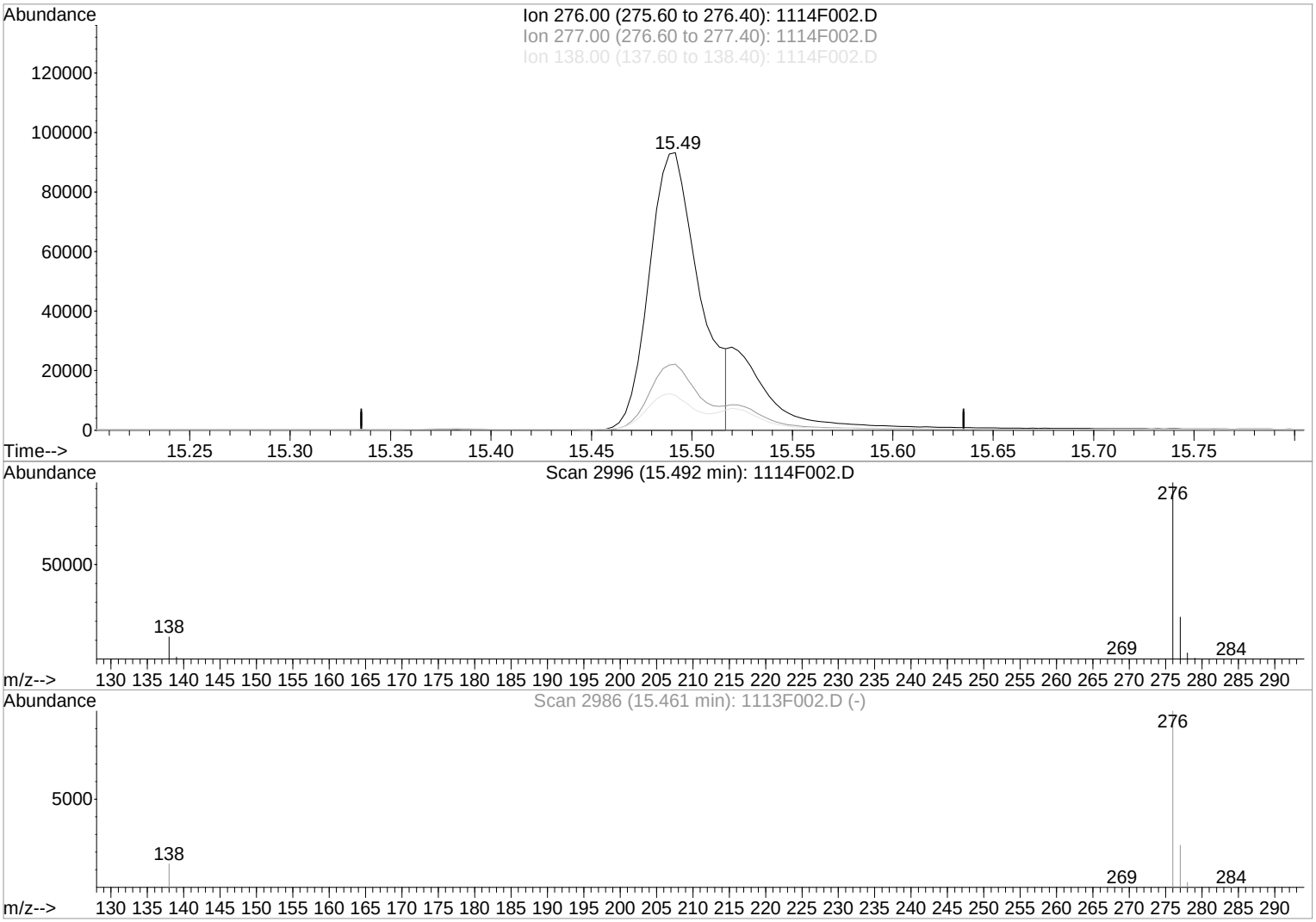
11/30/18

Quantitation Report (Qedit)

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 30 10:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration



TIC: 1114F002.D

(34) Indeno(1,2,3-cd)pyrene (T)

15.49min 363.83ng/ml m

response 161015

Ion	Exp%	Act%
276.00	100	100
277.00	23.40	23.77
138.00	17.70	12.59
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

11/30/18

Evaluate Continuing Calibration Report

1st 12/03/18
2nd 12/06/18

Data File : J:\MS14\DATA\111418\1114F002.D Vial: 2
Acq On : 14 Nov 2018 6:17 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-89N Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Nov 29 12:52:23 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	1.000	1.000	0.0	96	0.00
2	T	Naphthalene	1.154	0.996	13.7	88	-0.01
3	S	2-Methylnaphthalene-d10	0.558	0.568	-1.8	102	-0.01
4	T	2-Methylnaphthalene	0.696	0.609	12.5	88	0.00
5	T	1-Methylnaphthalene	0.670	0.575	14.2	88	0.00
6	T	Biphenyl	0.869	0.768	11.6	91	0.00
7	T	2,6-Dimethylnaphthalene	0.598	0.551	7.9	94	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	105	0.00
9	T	Acenaphthylene	2.386	2.129	10.8	92	0.00
10	T	Acenaphthene	1.371	1.220	11.0	93	0.00
11	T	Dibenzofuran	2.200	1.962	10.8	92	0.00
12	T	2,3,5-Trimethylnaphthalene	1.268	1.280	-0.9	105	0.00
13	S	Fluorene-d10	1.279	1.407	-10.0	118	0.00
14	T	Fluorene	1.658	1.626	1.9	102	0.00
15	I	Phenanthrene-d10	1.000	1.000	0.0	124	0.00
16	T	Dibenzothiophene	1.247	1.111	10.9	109	0.00
17	T	Phenanthrene	1.248	1.069	14.3	108	0.00
18	T	Anthracene	1.191	1.066	10.5	108	0.00
19	T	Carbazole	1.162	0.942	18.9	98	0.00
20	T	1-Methylphenanthrene	0.945	0.850	10.1	110	0.00
21	T	Fluoranthene	1.541	1.273	17.4	100	0.00
22	S	Fluoranthene-d10	1.260	1.214	3.7	115	0.00
23	I	Chrysene-d12	1.000	1.000	0.0	109	0.00
24	T	Pyrene	1.372	1.193	13.0	99	0.00
25	S	Terphenyl-d14	0.867	0.868	-0.1	114	-0.01
26	T	Benz(a)anthracene	1.293	1.169	9.6	100	0.00
27	T	Chrysene	1.239	1.098	11.4	96	0.00
28	I	Perylene-d12	1.000	1.000	0.0	113	0.02
29	T	Benzo(b)fluoranthene	1.236	1.176	4.9	102	0.00
30	T	Benzo(k)fluoranthene	1.226	1.122	8.5	99	0.00
31	T	Benzo(e)pyrene	1.178	1.108	5.9	104	0.02
32	T	Benzo(a)pyrene	1.084	1.043	3.8	106	0.02
33	T	Perylene	1.137	1.027	9.7	100	0.02
34	T	Indeno(1,2,3-cd)pyrene	1.063	0.966	9.1	104	0.03
35	T	Dibenz(a,h)anthracene	1.077	0.969	10.0	103	0.01
36	T	Benzo(g,h,i)perylene	1.244	1.005	19.2	94	0.02

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Injection Log

Directory: J:\MS14\DATA\071118

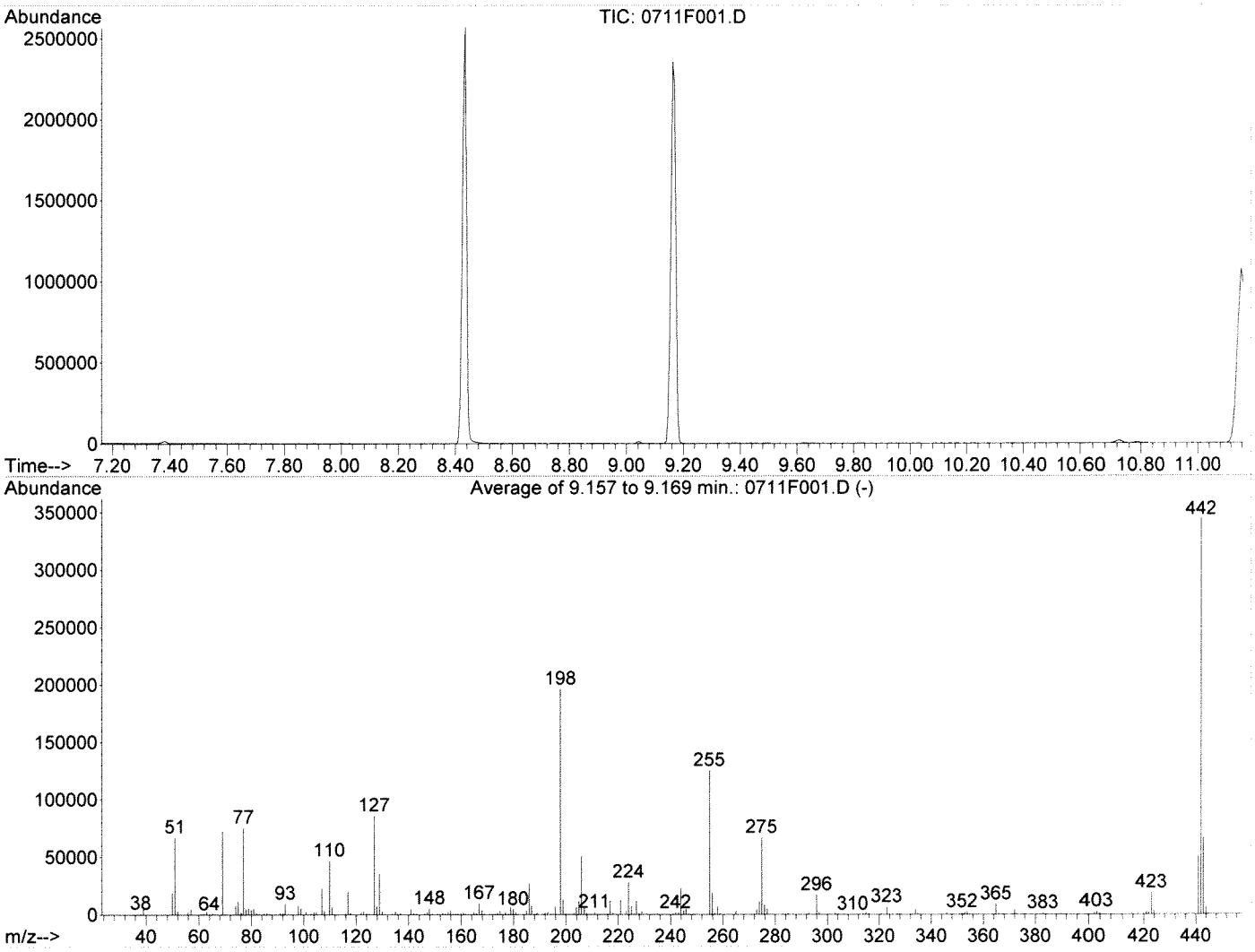
Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0711F001.D	1.	DFTPP @ 10ug/mL | SVM59-5B		11 Jul 2018 07:24
2	2	0711F002.D	1.	IB		11 Jul 2018 07:50
3	3	0711F003.D	1.	SIM-PAH ICAL @.002ug/mL | SVM59-4A		11 Jul 2018 08:16
4	4	0711F004.D	1.	SIM-PAH ICAL @.004ug/mL | SVM59-4B		11 Jul 2018 08:42
5	5	0711F005.D	1.	SIM-PAH ICAL @.008ug/mL | SVM59-4C		11 Jul 2018 09:08
6	6	0711F006.D	1.	SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D		11 Jul 2018 09:34
7	7	0711F007.D	1.	SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E		11 Jul 2018 10:00
8	8	0711F008.D	1.	SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F		11 Jul 2018 10:26
9	9	0711F009.D	1.	SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G		11 Jul 2018 10:52
10	10	0711F010.D	1.	SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H		11 Jul 2018 11:18
11	11	0711F011.D	1.	SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I		11 Jul 2018 11:44
12	12	0711F012.D	1.	SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J		11 Jul 2018 12:10
13	13	0711F013.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM59-4K		11 Jul 2018 12:36
~~14~~	~~14~~	~~0711F014.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 13:02~~
~~15~~	~~15~~	~~0711F015.D~~	~~1.~~	~~KQ1808822-3 MB~~		~~11 Jul 2018 13:28~~
~~16~~	~~16~~	~~0711F016.D~~	~~1.~~	~~KQ1808822-1 LCS~~		~~11 Jul 2018 13:55~~
~~17~~	~~17~~	~~0711F017.D~~	~~1.~~	~~KQ1808822-2 DLCS~~		~~11 Jul 2018 14:21~~
~~18~~	~~18~~	~~0711F018.D~~	~~1.~~	~~K1806167-007~~		~~11 Jul 2018 14:47~~
~~19~~	~~19~~	~~0711F019.D~~	~~1.~~	~~K1806167-008~~		~~11 Jul 2018 15:14~~
20	20	0711F020.D	1.	K1805517-004		11 Jul 2018 15:40
~~21~~	~~21~~	~~0711F021.D~~	~~1.~~	~~K1805519-006~~		~~11 Jul 2018 16:07~~
~~22~~	~~14~~	~~0711F022.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 16:34~~

SIM-PAH ICAL
CAL15779

JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 522, 523, 524; Background Corrected with Scan 516

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.2	67178	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.1	72816	PASS
70	69	0.00	2	0.8	565	PASS
127	198	10	80	43.8	86077	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.9	196352	PASS
199	198	5	9	6.5	12793	PASS
275	198	10	60	34.1	67032	PASS
365	442	1	50	2.6	8831	PASS
441	443	0.01	100	76.0	51069	PASS
442	442	30	100	100.0	344981	PASS
443	442	15	24	19.5	67152	PASS

JUL 16 2018

JUL 27 2018

J:\MS14\DATA\071118\0711F001.D A_DFTPP.M Mon Jul 16 09:16:46 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	422	52.00	3270	66.10	60	77.00	75757
38.00	1061	52.95	252	66.90	133	78.00	5265
39.00	5050	54.95	367	67.20	111	78.95	6051
39.90	450	55.95	2219	68.95	72816	79.95	4460
41.00	145	57.00	4515	69.85	565	81.00	5387
42.95	189	57.90	205	70.90	56	81.95	1583
44.00	59	60.95	997	73.05	769	82.95	1369
44.90	126	61.95	1079	74.00	8076	83.90	282
48.10	73	63.00	2719	75.00	11602	84.95	1177
50.00	19013	63.95	413	76.00	1399	85.95	1822
51.00	67178	65.00	1325	76.20	1668	86.95	803

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	285	99.95	506	112.85	198	124.90	1126
88.90	130	100.90	2768	114.80	159	126.95	86077
90.95	1445	101.90	87	116.05	1356	127.95	7121
92.00	1657	102.90	1279	116.90	20493	128.90	35413
92.95	9598	103.95	2203	117.85	1421	129.95	2909
93.90	764	104.90	2137	118.85	202	130.90	596
94.90	260	106.95	23325	120.00	347	131.85	286
95.95	399	107.95	3588	121.05	223	132.90	113
97.00	184	109.90	46866	121.90	1845	133.85	1020
97.95	7812	110.95	6574	122.90	2792	134.90	2878
98.90	5707	111.90	845	123.95	974	135.85	1123

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.95	1387	146.95	2258	157.90	1033	168.90	418
137.90	180	147.90	5200	158.85	675	169.10	172
138.10	80	148.95	1069	159.90	1384	169.85	345
138.95	357	149.90	242	160.90	2084	170.40	79
139.95	518	150.95	648	161.85	666	170.90	499
140.90	4757	151.75	466	162.95	226	171.80	868
141.90	1547	152.90	1588	163.95	352	172.95	967
142.90	919	153.90	1093	164.85	2040	173.90	1870
143.90	287	154.95	2265	165.85	1502	174.90	3597
144.85	308	155.95	3794	166.90	9686	176.00	1075
145.95	1008	156.95	752	167.90	4018	176.90	1875

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	723	186.90	8039	198.90	12793	210.30	330
178.90	6732	187.95	833	199.90	953	210.90	2074
179.90	4619	188.90	1815	201.35	1105	211.80	146
180.90	2110	189.85	379	202.90	1391	212.90	61
181.95	406	190.95	863	203.95	6760	214.10	53
182.70	66	191.90	2255	204.95	11699	214.95	698
182.95	174	192.95	2443	205.95	51016	215.85	1357
183.80	140	193.90	500	206.95	6909	216.90	12207
183.95	404	194.90	286	207.90	1813	217.85	1663
184.95	3360	195.90	6967	208.90	543	218.90	142
185.90	27480	197.90	196352	209.90	294	220.90	12633

JUL 16 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.90	3179	233.85	760	244.95	3370	255.90	18613
223.90	28144	234.90	857	245.90	4758	256.95	1466
224.95	7360	235.90	530	246.90	1019	257.90	7031
225.95	994	236.90	879	247.80	162	258.95	1297
226.90	12054	237.80	67	248.10	77	259.80	131
227.85	1634	238.85	481	248.85	832	260.95	199

JUL 27 2018

229.95	377	240.85	634	250.90	178	264.90	3018
230.90	992	241.90	1624	251.85	276	265.85	450
231.90	200	243.00	1778	252.95	599	269.95	129
232.90	244	243.90	23113	254.90	125421	270.90	256

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.95	496	284.85	977	301.85	234	316.95	160
272.90	4336	285.95	143	302.95	2145	320.95	658
273.90	11367	288.75	165	303.95	691	321.95	381
274.90	67032	289.80	209	307.85	308	322.95	6548
275.90	8655	291.85	178	308.80	217	323.95	1035
276.90	5306	292.90	1246	309.85	251	324.80	52
277.90	771	293.95	326	310.90	52	325.85	184
278.85	205	295.90	17068	312.95	171	326.90	968
281.95	112	296.90	2301	313.90	944	327.80	661
282.90	631	297.80	68	314.90	2064	331.85	496
283.90	432	300.90	235	315.90	1065	332.85	680

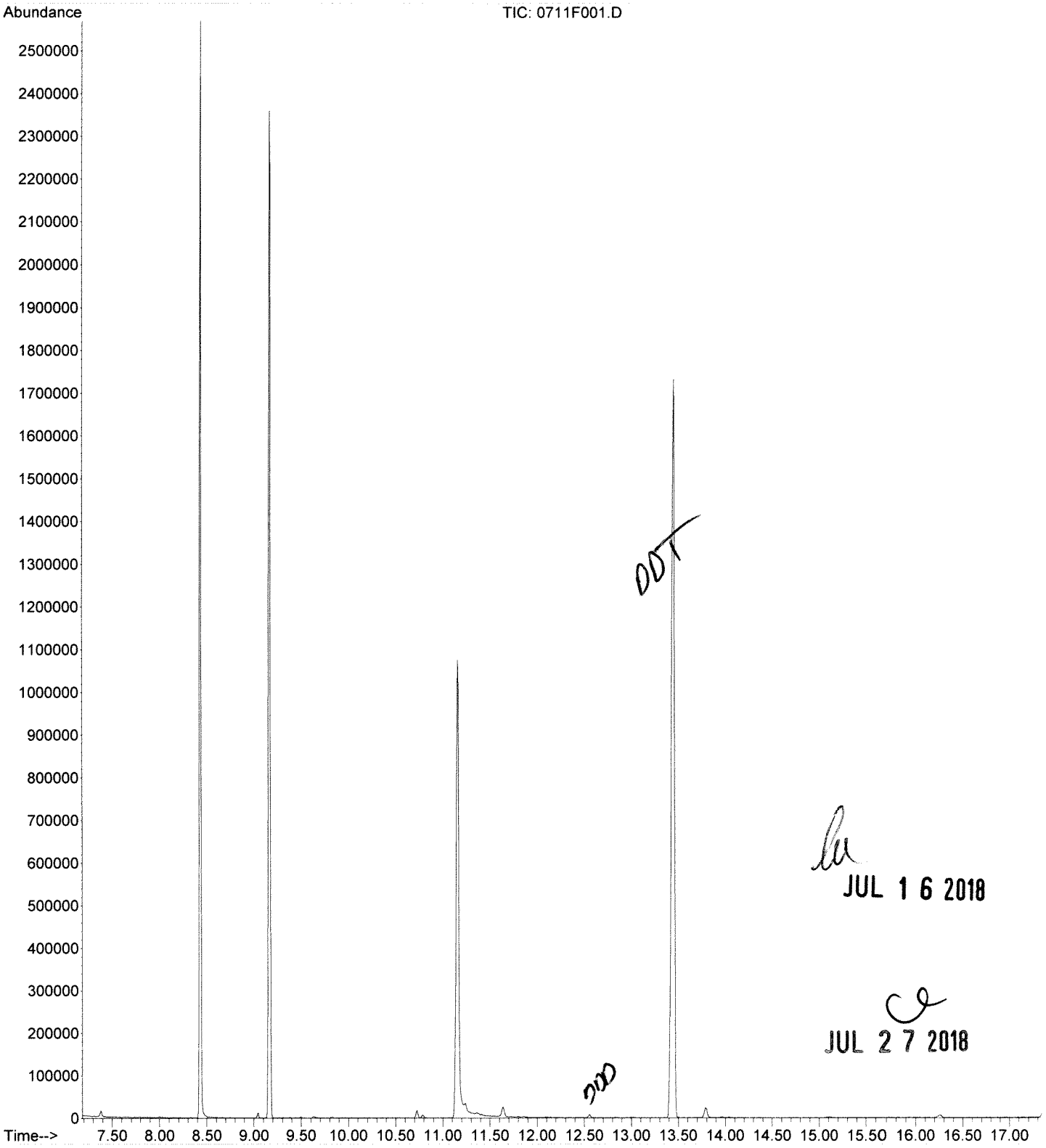
Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	4464	353.90	2529	382.95	1153	420.95	2473
334.90	1166	354.90	486	383.85	376	421.95	2435
339.80	51	358.85	126	389.95	690	422.95	18744
340.85	729	364.90	8831	390.95	465	423.90	3777
341.80	50	365.90	1261	391.90	350	424.95	479
342.00	143	369.95	218	400.90	274	439.40	77
345.90	1535	370.85	633	401.90	1735	441.00	51069
346.75	180	371.95	3936	402.90	2497	442.00	344981
350.75	114	372.90	1005	403.90	1060	443.00	67152
351.90	2058	373.85	127	404.80	57	443.95	6376
352.90	1618	376.90	51	415.00	64	444.90	445

JUL 16 2018

JUL 27 2018

File : J:\MS14\DATA\071118\0711F001.D
Operator : LWeiskopf
Acquired : 11 Jul 2018 7:24 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-5B
Misc Info :
Vial Number: 1



1	6.551	rBV	0.059		4433	6.534	6.593
2	6.628	rVB	0.059		4930	6.610	6.669
3	7.069	rBV	0.153		93262	7.022	7.175
4	7.381	rVB	0.094		22489	7.357	7.451
5	7.781	rVB	0.053		2074	7.769	7.822
6	7.904	rVB	0.047		3184	7.887	7.934
7	7.998	rVV	0.035		2540	7.981	8.016
8	8.434	rBV	0.124		2626380	8.398	8.522
9	8.751	rBV	0.041		2434	8.728	8.769
10	9.045	rVB	0.094		15370	8.992	9.086
11	9.163	rBV	0.118		2833533	9.104	9.222
12	9.310	rBV	0.053		2540	9.286	9.339
13	9.381	rVB	0.047		2669	9.363	9.410
14	9.498	rVB	0.047		3470	9.475	9.522
15	9.628	rBV	0.082		7018	9.598	9.681
16	9.822	rBV	0.076		4234	9.781	9.857
17	10.728	rBV	0.071		25758	10.686	10.757
18	10.786	rBV	0.059		9354	10.757	10.816
19	11.157	rBV	0.141		2070977	11.080	11.222
20	11.639	rVB	0.094		47781	11.592	11.686
21	11.851	rVB	0.071		6566	11.833	11.904
22	12.092	rBV	0.076		4460	12.051	12.127
23	12.551	rVB	0.082	ODD	12363	12.510	12.592
24	12.827	rVB	0.082		3949	12.804	12.886
25	12.998	rBV	0.047		2358	12.969	13.016
26	13.445	rBV	0.118	OOT	3799669	13.374	13.492
27	13.786	rBV	0.129		55536	13.727	13.857
28	13.963	rBV	0.071		3973	13.916	13.986
29	14.033	rBV	0.041		2081	14.021	14.063
30	15.086	rBV	0.065		3243	15.033	15.098
31	15.110	rVB	0.047		3085	15.098	15.145
32	16.257	rBV	0.106		18961	16.192	16.298
33	17.351	rBV	0.124		41324	17.298	17.421
34	17.821	rBV	0.035		2171	17.798	17.833
35	17.868	rBV	0.047		3073	17.833	17.880
36	18.098	rBV	0.159		129861	18.039	18.198
37	18.645	rVB	0.141		212579	18.615	18.756
38	19.092	rBV	0.165		383897	19.056	19.221
39	19.545	rBV	0.153		391093	19.509	19.662
40	20.103	rBV	0.153		441132	20.062	20.215
41	20.692	rBV	0.118		334151	20.650	20.768

OOT Breakdown

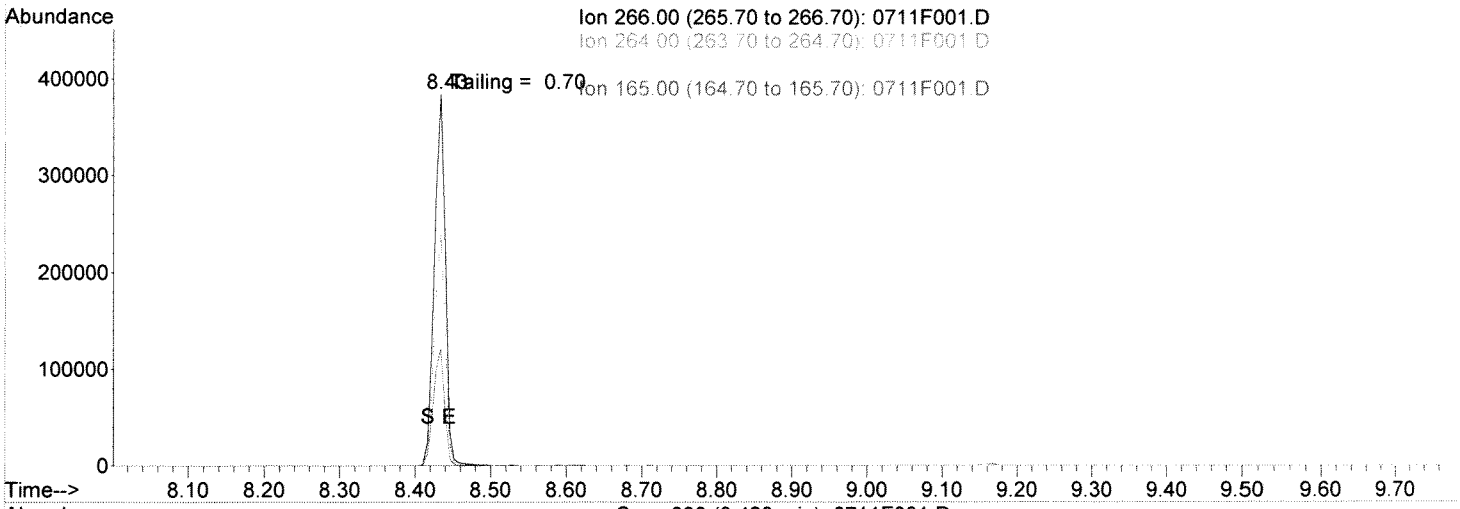
= 0.3%

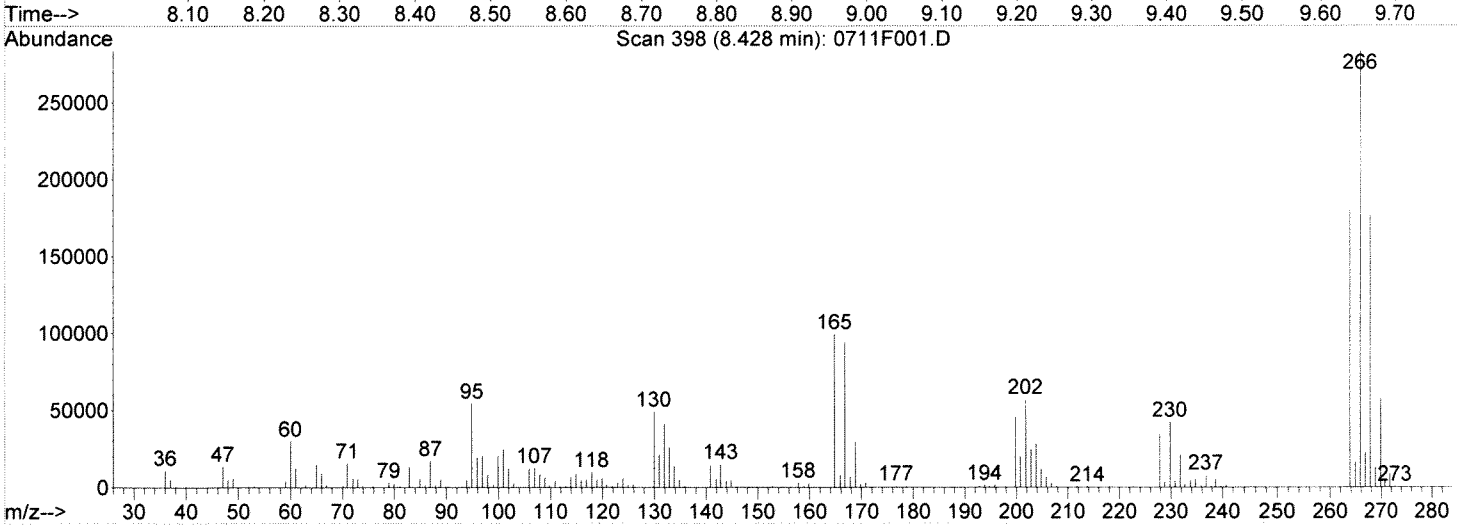
JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(1) Pentachlorophenol

7.37min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	62.30	0.00#
268.00	72.30	0.00#
165.00	42.00	0.00#

OK -2%

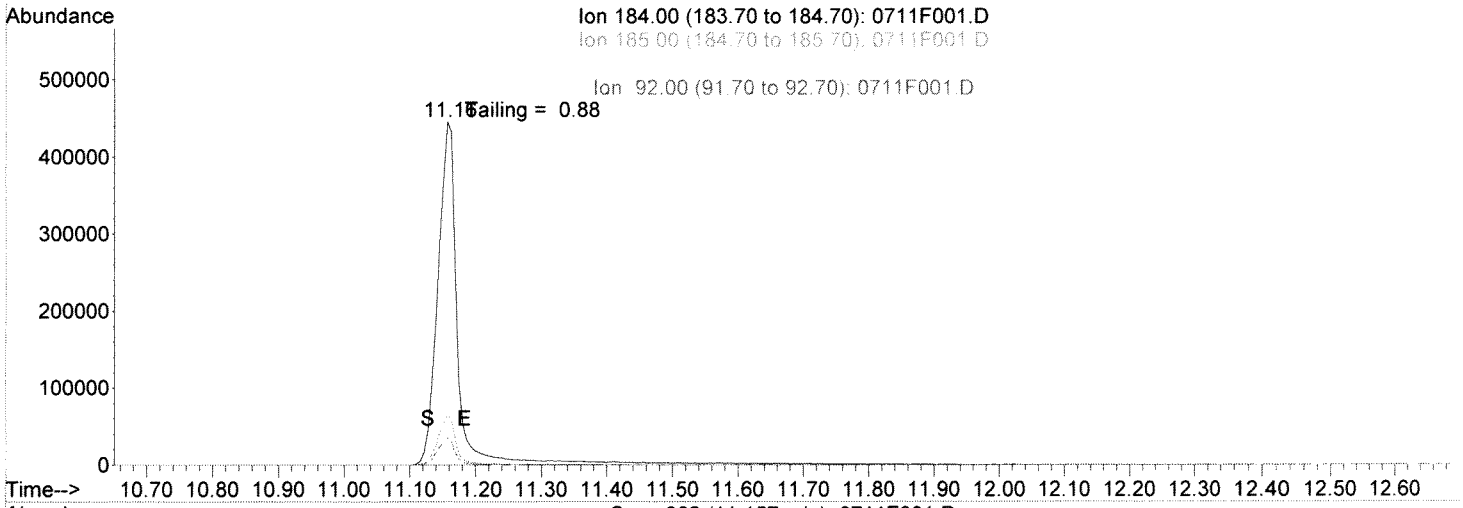
JUL 16 2018

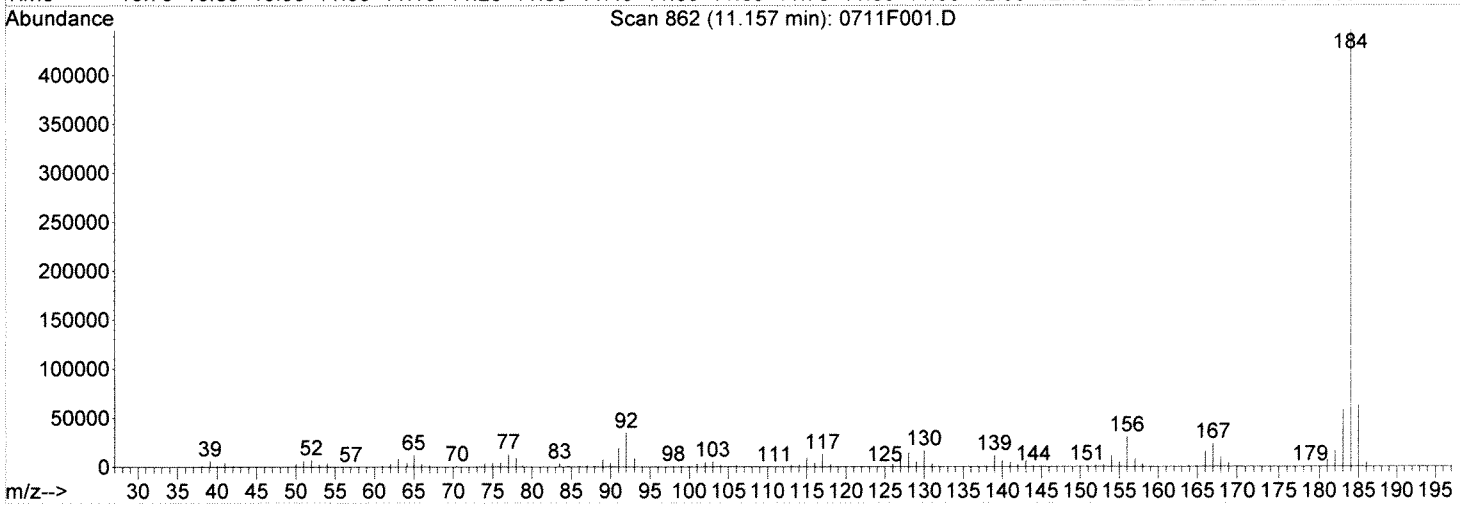
JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:15 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(3) Benzidine (T)

8.69min 0.00ug/ml

response 0

Ion	Exp%	Act%
184.00	100	0.00
185.00	14.70	0.00
156.00	9.50	0.00
92.00	7.60	0.00

JUL 16 2018

JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:28 2018

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	71486	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	36864	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	76395	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	90682	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	102113	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	0.00	152	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
13) Fluorene-d10	6.79	176	201	0.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.08%		
22) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
25) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Naphthalene	4.83	128	323	0.82	ng/ml	94
21) Fluoranthene	8.59	202	116	0.20	ng/ml	70
26) Benz(a)anthracene	10.15	228	342	0.60	ng/ml	73
27) Chrysene	10.19	228	118	0.21	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	156	0.24	ng/ml	81
31) Benzo(e)pyrene	12.97	252	134	0.22	ng/ml	85
32) Benzo(a)pyrene	13.11	252	126	0.24	ng/ml	75
33) Perylene	13.30	252	287	0.51	ng/ml	85
34) Indeno(1,2,3-cd)pyrene	15.46	276	117	0.25	ng/ml	89
35) Dibenz(a,h)anthracene	15.51	278	95	0.19	ng/ml#	1
36) Benzo(g,h,i)perylene	15.84	276	178	0.30	ng/ml	89

< 1/2 MRL

7/16/18

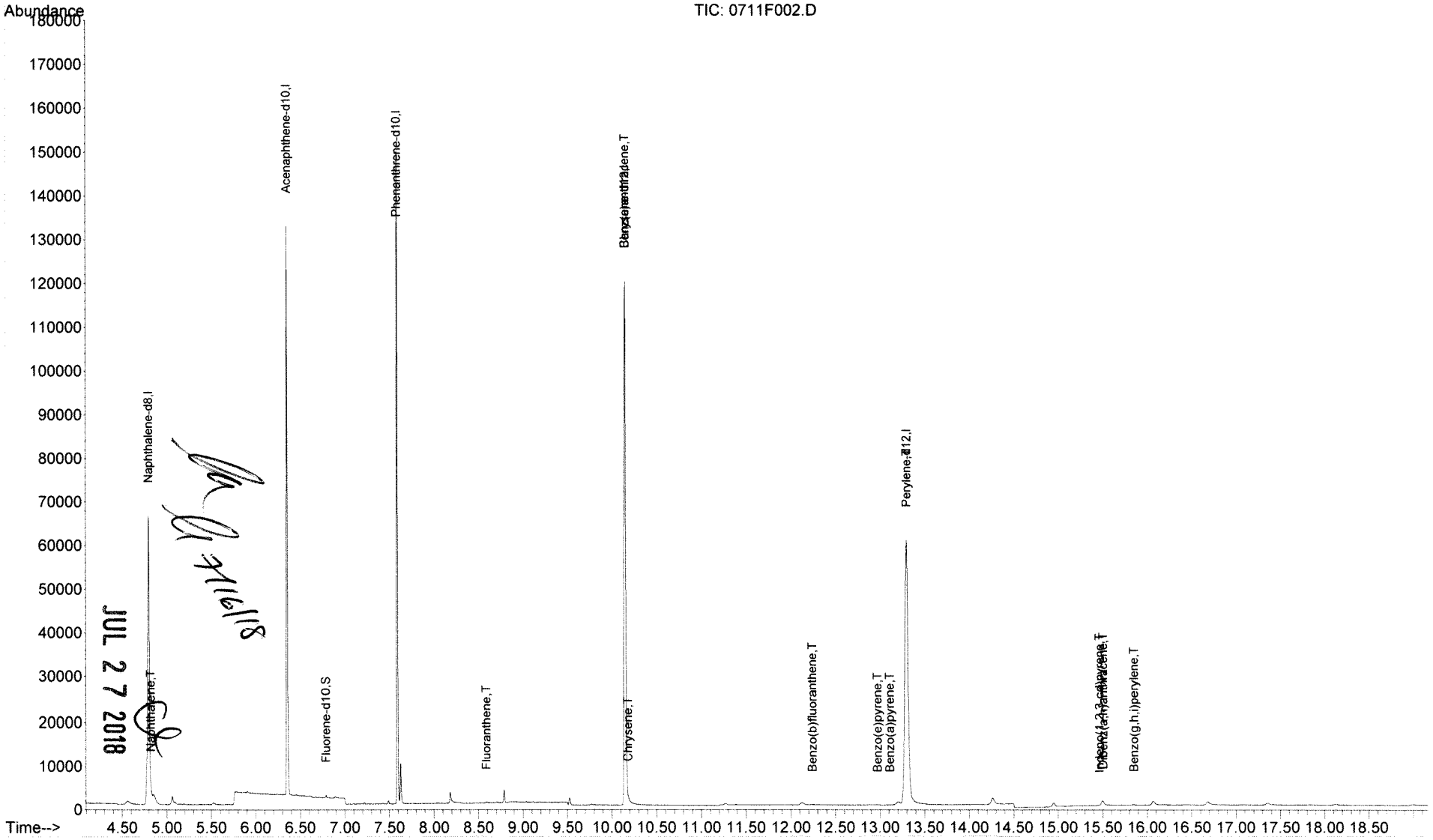
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F002.D 071118PAH.M Mon Jul 16 09:16:23 2018 Page 1

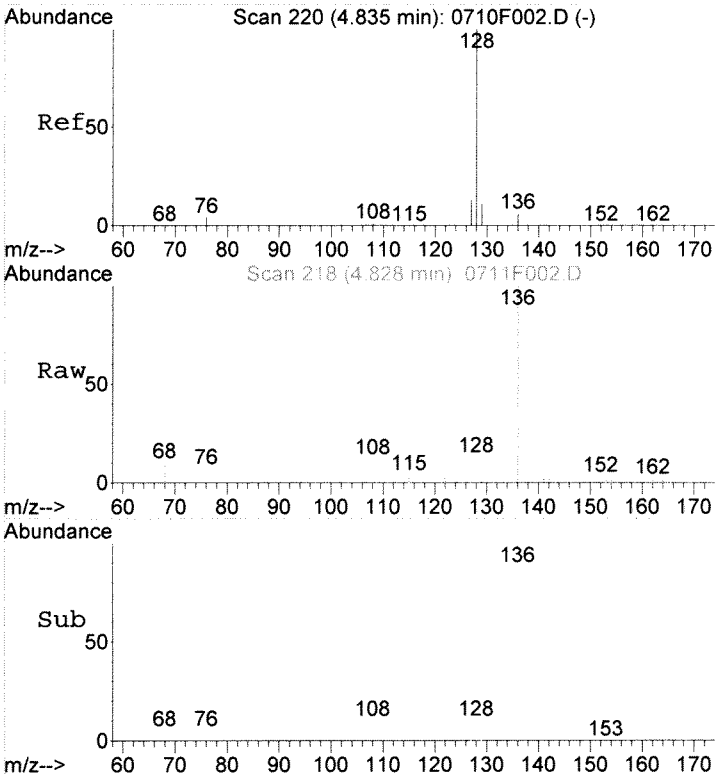
Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



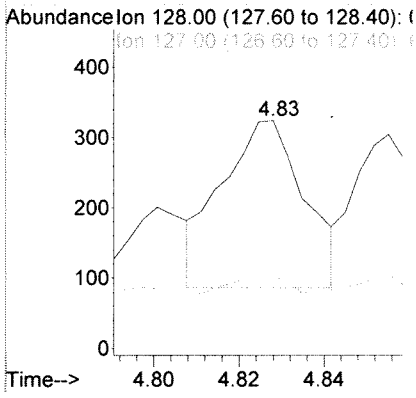
JUL 27 2018

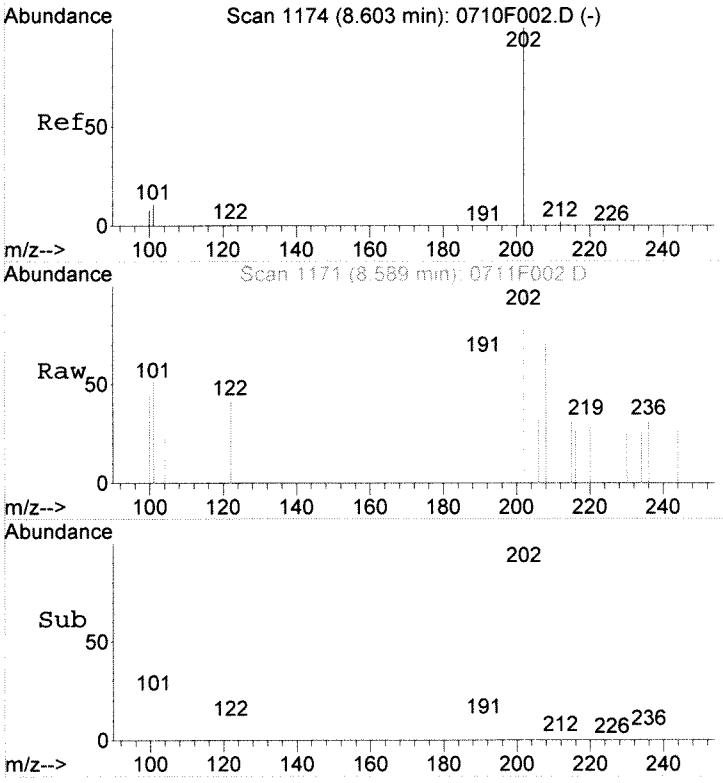


#2
Naphthalene
Concen: 0.82 ng/ml
RT: 4.83 min Scan# 218
Delta R.T. -0.01 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:128 Resp: 323

Ion	Ratio	Lower	Upper
128	100		
127	11.9	0.0	42.4
129	15.2	0.0	30.8

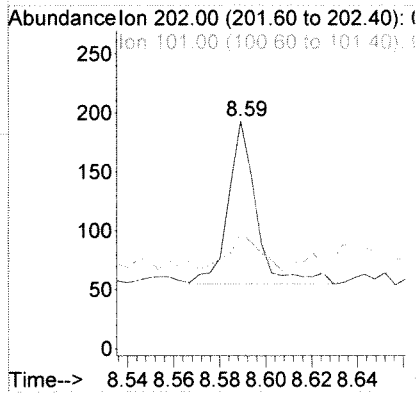




#21
Fluoranthene
Concen: 0.20 ng/ml
RT: 8.59 min Scan# 1171
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

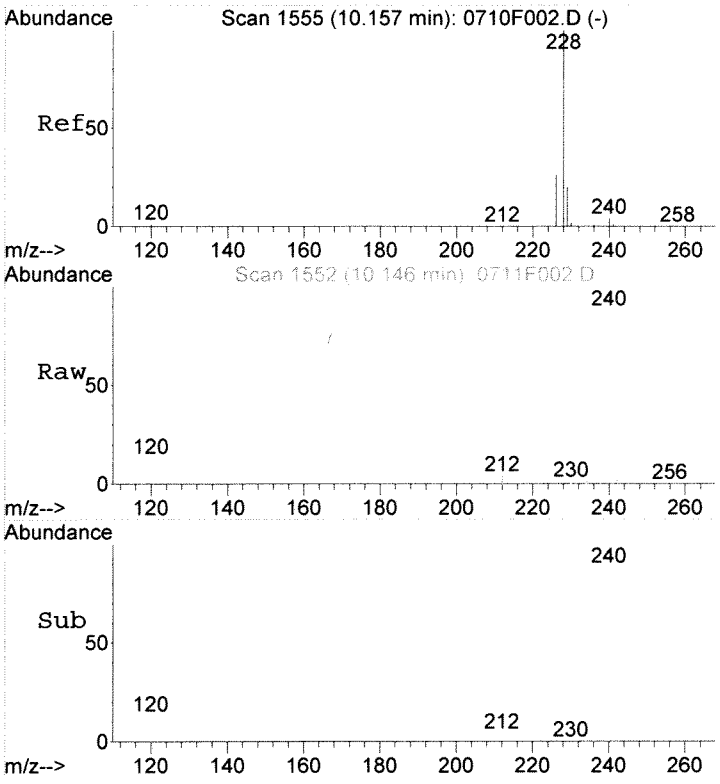
Tgt Ion:202 Resp: 116

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	40.7
100	23.9	0.0	27.5



7/16/18

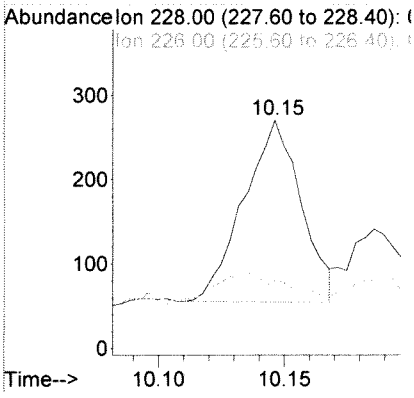
JUL 27 2018

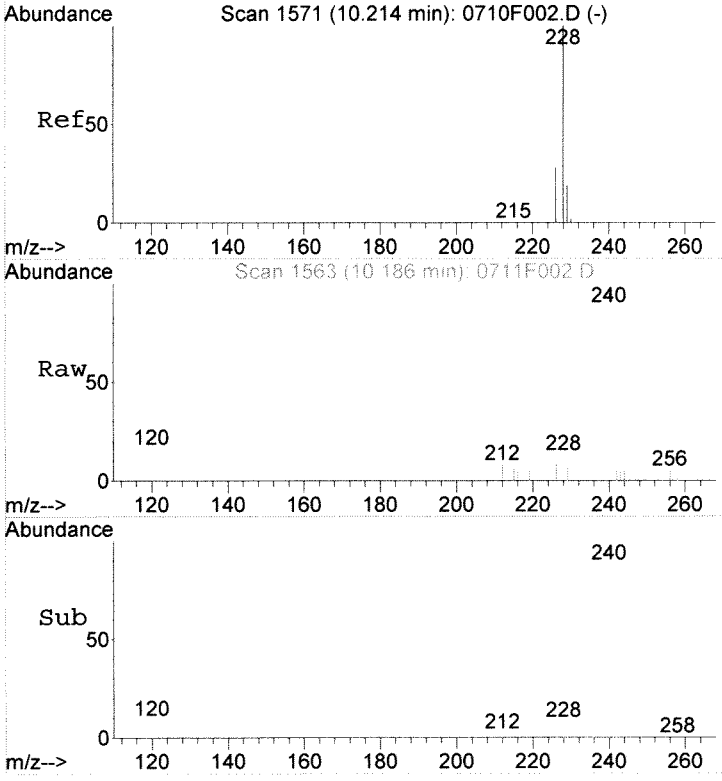


#26
Benz(a)anthracene
Concen: 0.60 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:228 Resp: 342

Ion	Ratio	Lower	Upper
228	100		
226	9.8	0.0	56.0
229	28.8	0.0	39.5

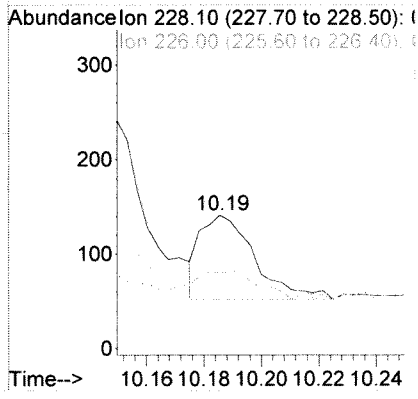




#27
Chrysene
Concen: 0.21 ng/ml
RT: 10.19 min Scan# 1563
Delta R.T. -0.03 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

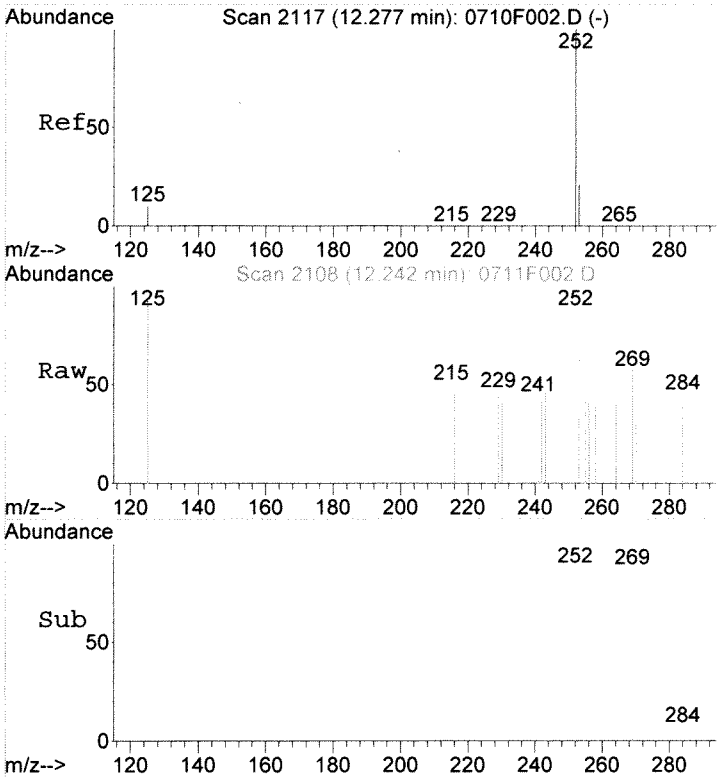
Tgt Ion:228 Resp: 118

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.6
229	18.0	0.0	39.4



7/16/18

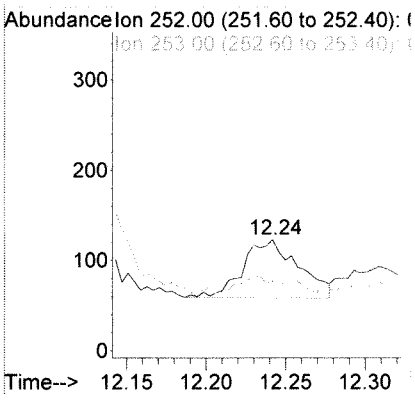
JUL 27 2018

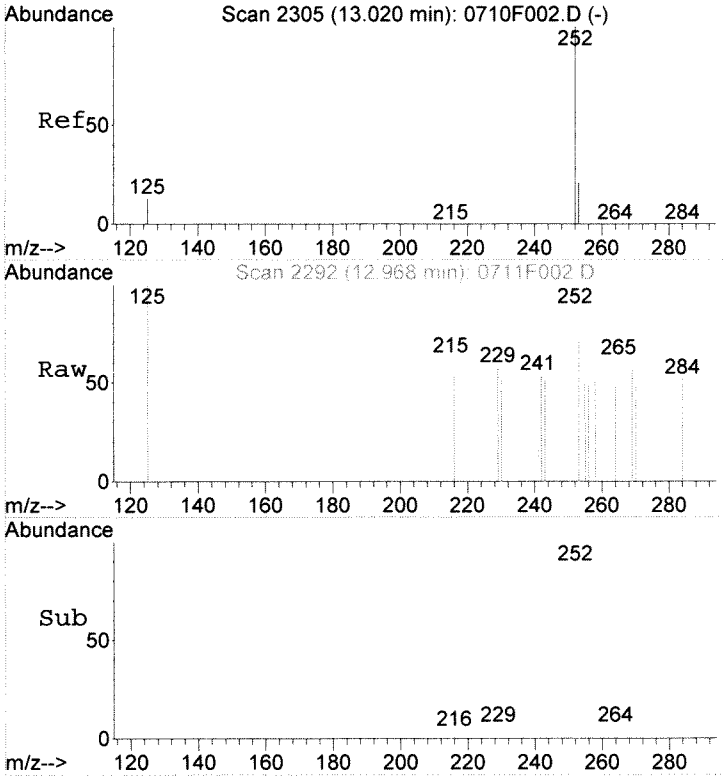


#29
Benzo(b)fluoranthene
Concen: 0.24 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 156

Ion	Ratio	Lower	Upper
252	100		
253	10.9	0.0	51.4
125	10.9	0.0	27.3

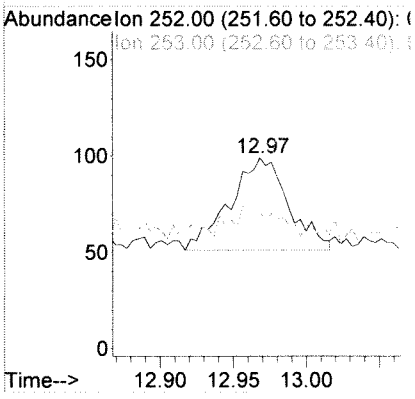




#31
Benzo(e)pyrene
Concen: 0.22 ng/ml
RT: 12.97 min Scan# 2292
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

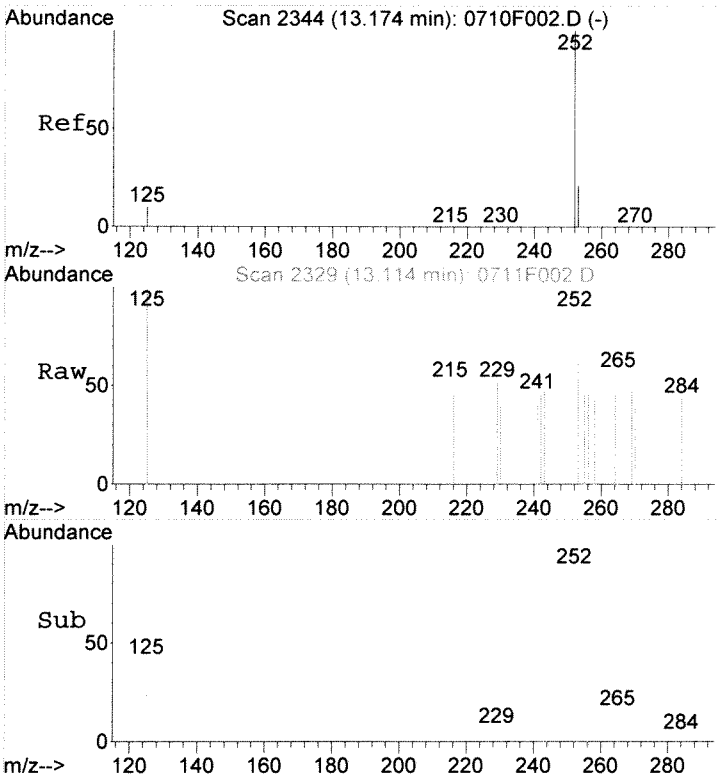
Tgt Ion:252 Resp: 134

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	51.3
125	0.0	0.0	30.8



7/16/18

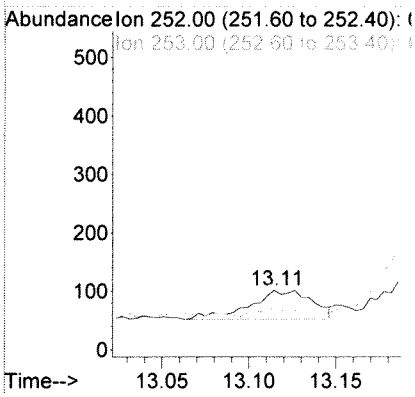
JUL 27 2018

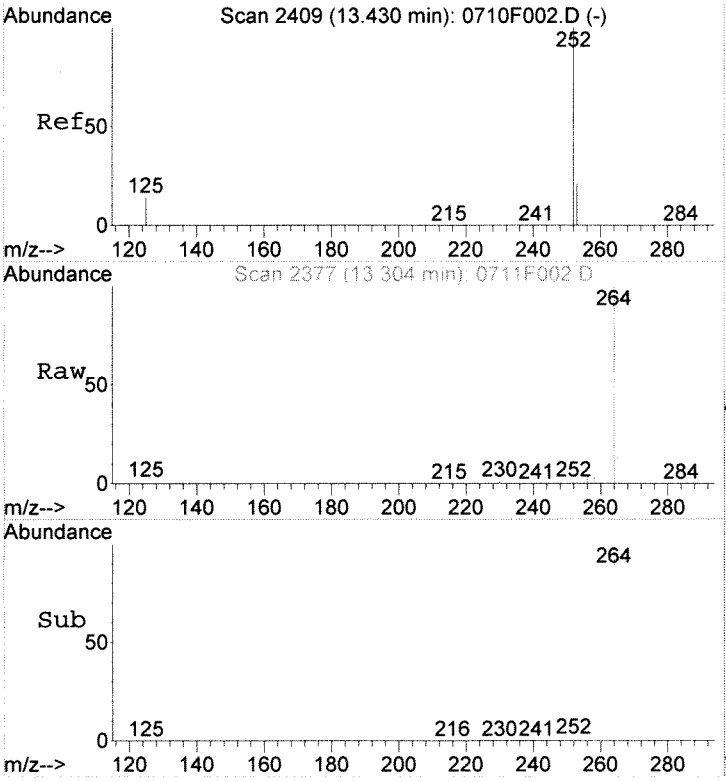


#32
Benzo(a)pyrene
Concen: 0.24 ng/ml
RT: 13.11 min Scan# 2329
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 126

Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	51.3
125	26.0	0.0	28.1

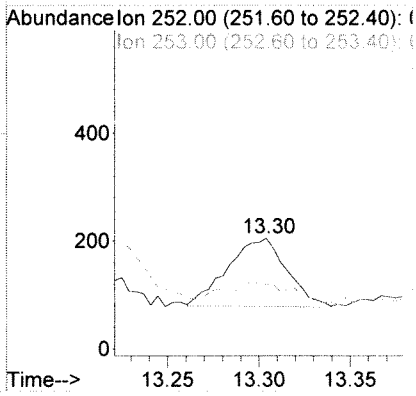




#33
Perylene
Concen: 0.51 ng/ml
RT: 13.30 min Scan# 2377
Delta R.T. -0.13 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

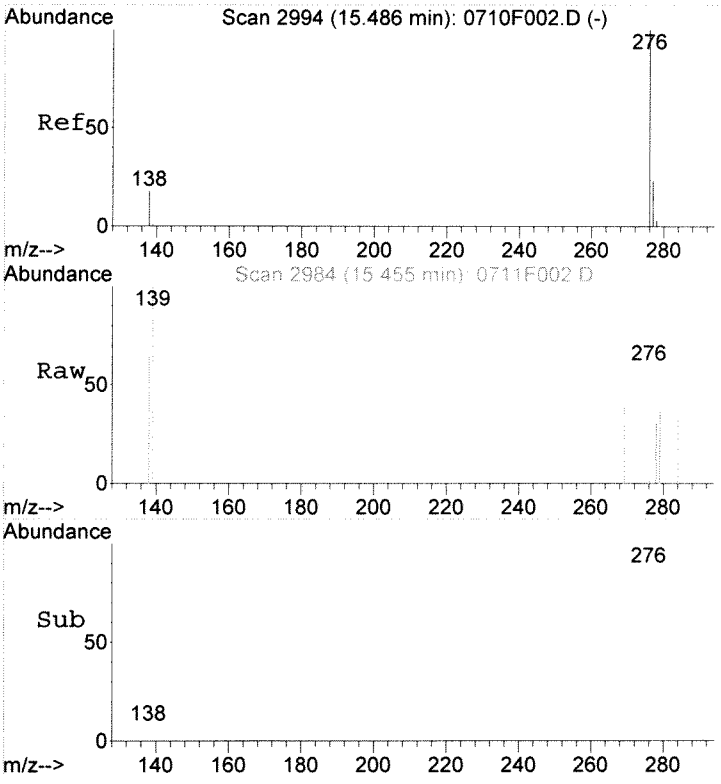
Tgt Ion:252 Resp: 287

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.4
125	22.2	0.0	31.3



7/16/18

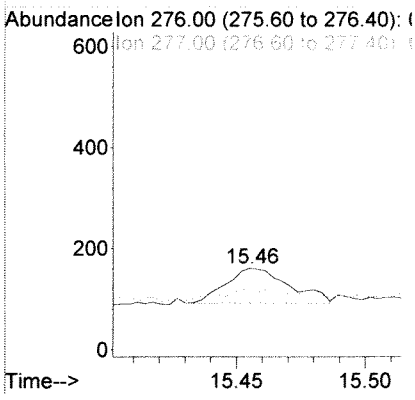
JUL 27 2018

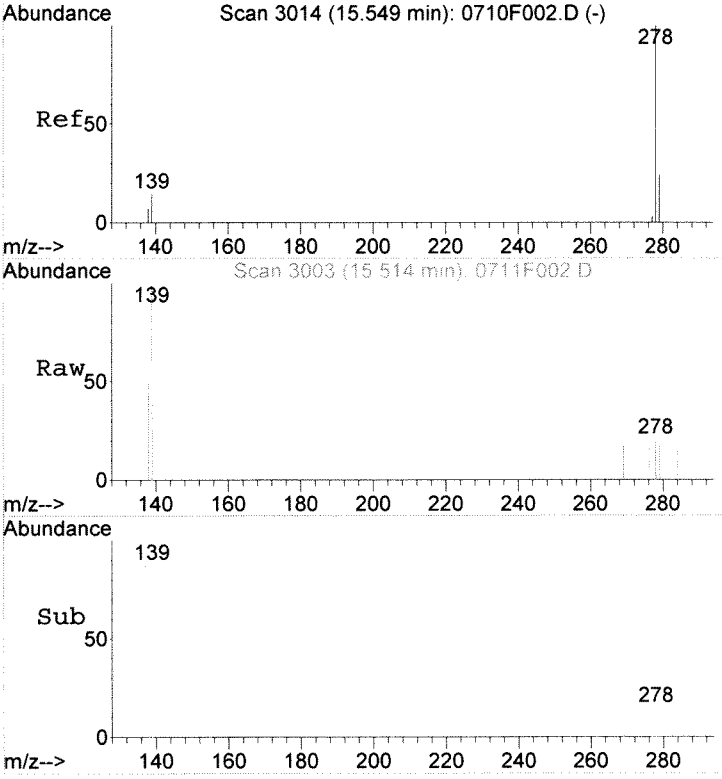


#34
Indeno(1,2,3-cd)pyrene
Concen: 0.25 ng/ml
RT: 15.46 min Scan# 2984
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 117

Ion	Ratio	Lower	Upper
276	100		
277	31.9	0.0	53.6
138	17.4	0.0	36.2

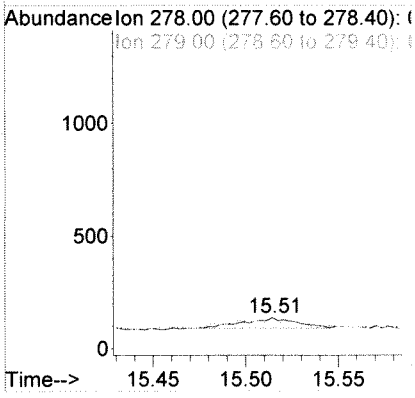




#35
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

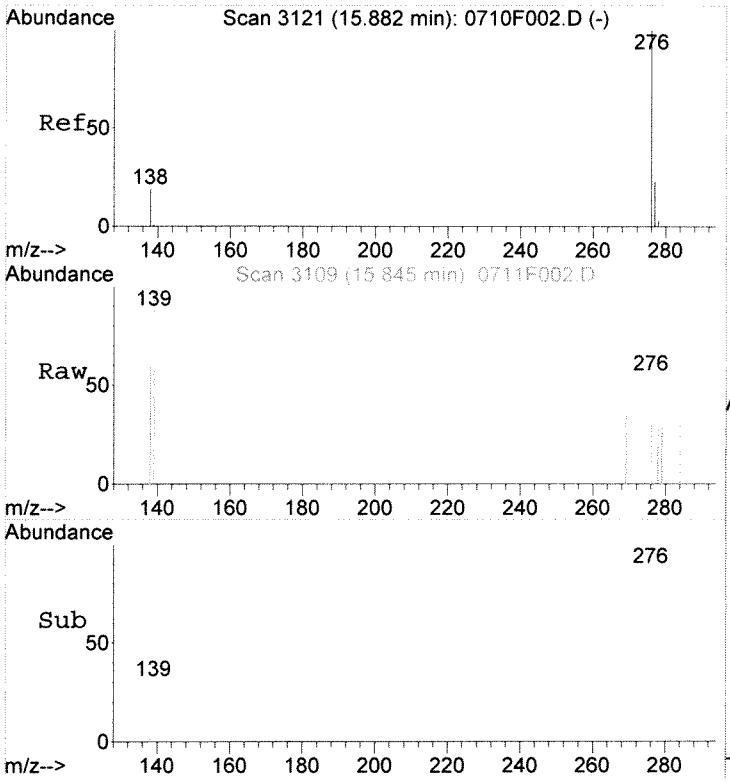
Tgt Ion:278 Resp: 95

Ion	Ratio	Lower	Upper
278	100		
279	31.3	0.0	53.6
139	702.1	0.0	33.4#



7/16/18

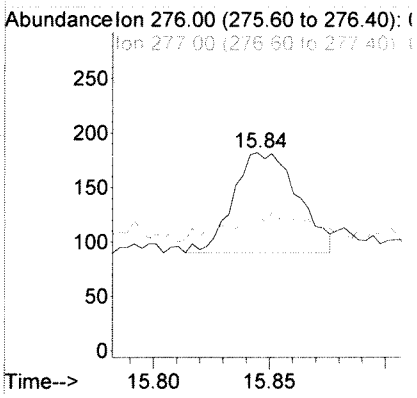
JUL 27 2018



#36
Benzo(g,h,i)perylene
Concen: 0.30 ng/ml
RT: 15.84 min Scan# 3109
Delta R.T. -0.05 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 178

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.5
138	23.9	0.0	37.2



7/16/18

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	66665	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	32181	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	67500	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72337	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	80376	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	416	2.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.22%		
13) Fluorene-d10	6.79	176	593	2.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.28%		
22) Fluoranthene-d10	8.58	212	796	1.90	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.19%		
25) Terphenyl-d14	8.93	244	986	3.00	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.30%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	947	2.59	ng/ml	96
4) 2-Methylnaphthalene	5.45	142	526	2.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	527	2.33	ng/ml	96
6) Biphenyl	5.86	154	672	2.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	469	2.33	ng/ml	96
9) Acenaphthylene	6.23	152	810	2.15	ng/ml	97
10) Acenaphthene	6.38	154	463	2.14	ng/ml	99
11) Dibenzofuran	6.53	168	724	2.09	ng/ml	90
12) 2,3,5-Trimethylnaphthalene	6.70	170	450	2.21	ng/ml	94
14) Fluorene	6.81	166	582	2.17	ng/ml	100
16) Dibenzothiophene	7.51	184	890	2.13	ng/ml	93
17) Phenanthrene	7.61	178	900m	2.18	ng/ml	
18) Anthracene	7.65	178	807	2.00	ng/ml	98
19) Carbazole	7.79	167	753	2.07	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	652	2.01	ng/ml	97
21) Fluoranthene	8.59	202	1013	2.02	ng/ml	97
24) Pyrene	8.79	202	1081	2.13	ng/ml#	48
26) Benz(a)anthracene	10.14	228	1082	2.36	ng/ml	98
27) Chrysene	10.19	228	887	1.96	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	956	1.91	ng/ml	95
30) Benzo(k)fluoranthene	12.31	252	934	1.86	ng/ml	94
31) Benzo(e)pyrene	12.97	252	971	1.99	ng/ml	96
32) Benzo(a)pyrene	13.12	252	876	2.08	ng/ml	90
33) Perylene	13.37	252	950	2.15	ng/ml	92
34) Indeno(1,2,3-cd)pyrene	15.45	276	990	2.67	ng/ml	94
35) Dibenz(a,h)anthracene	15.52	278	897	2.23	ng/ml	87
36) Benzo(g,h,i)perylene	15.85	276	1156	2.44	ng/ml	95

JUL 16 2018

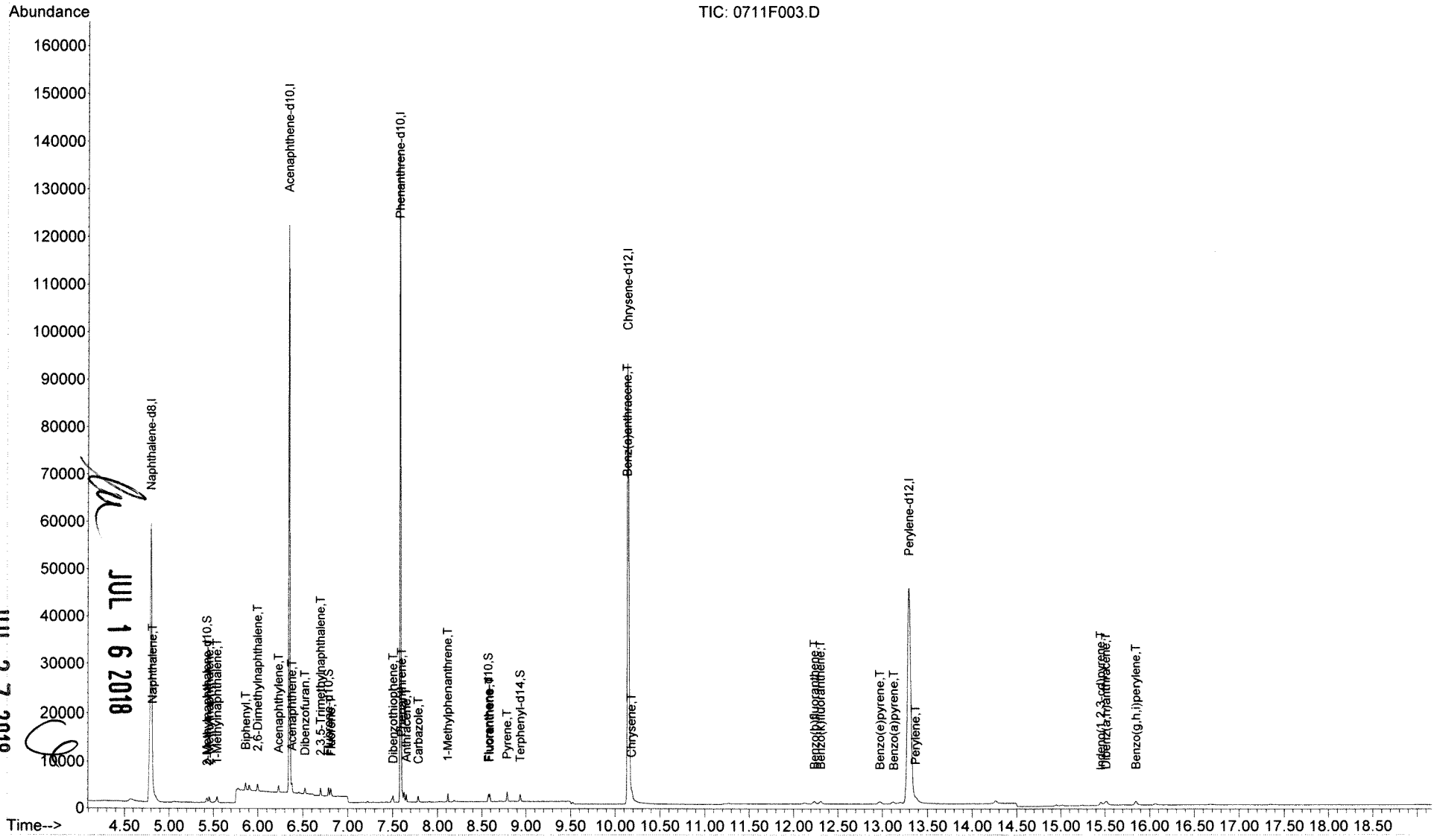
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F003.D 071118PAH.M Wed Jul 11 12:39:37 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

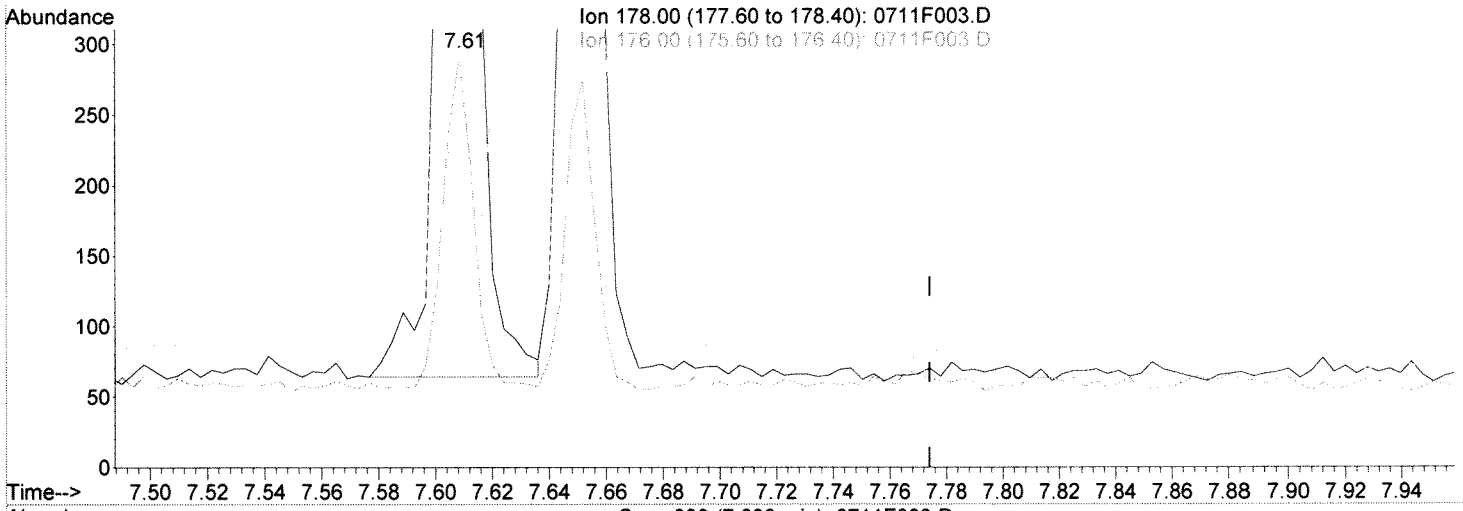


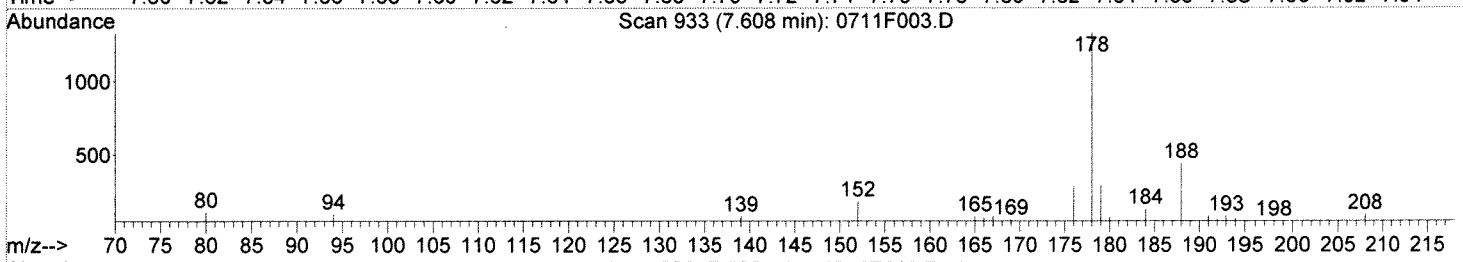
JUL 16 2018
JUL 27 2018

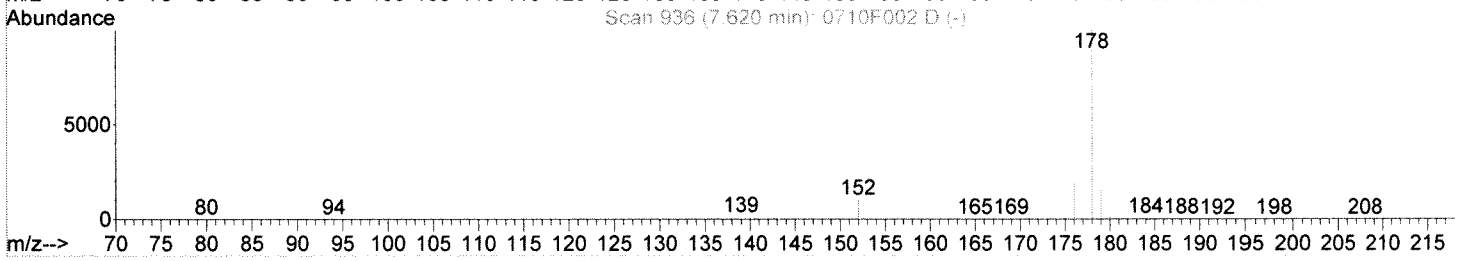
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.25ng/ml

response 927

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.38
179.00	15.20	15.85
0.00	0.00	0.00

Manual Integration:

Before

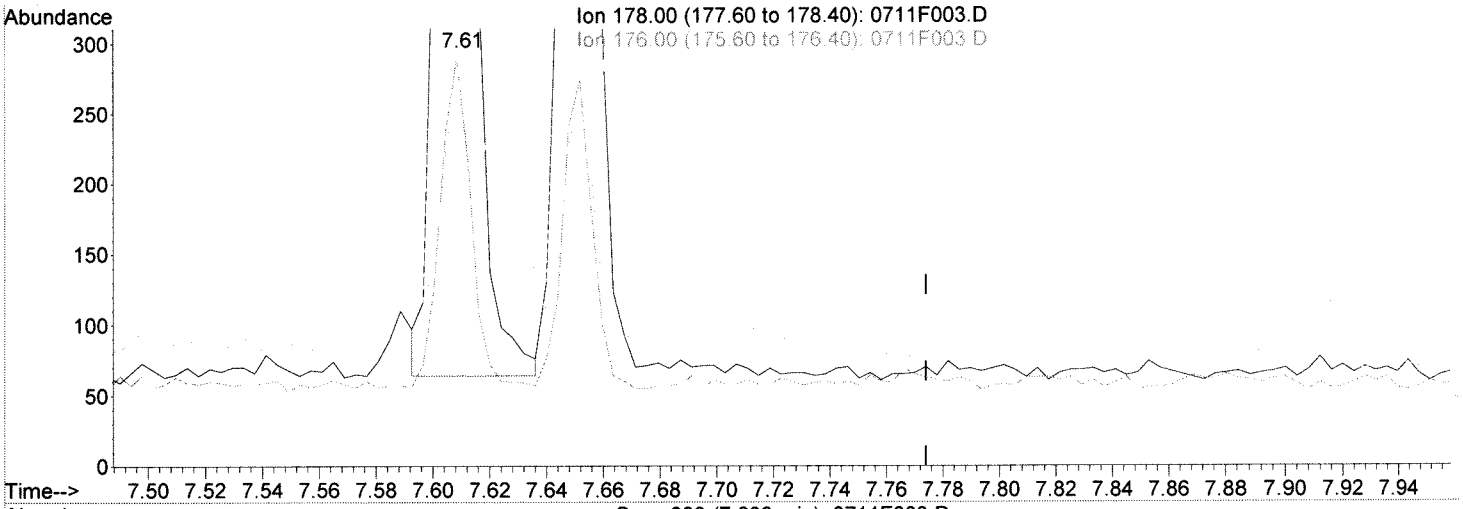
07/11/18

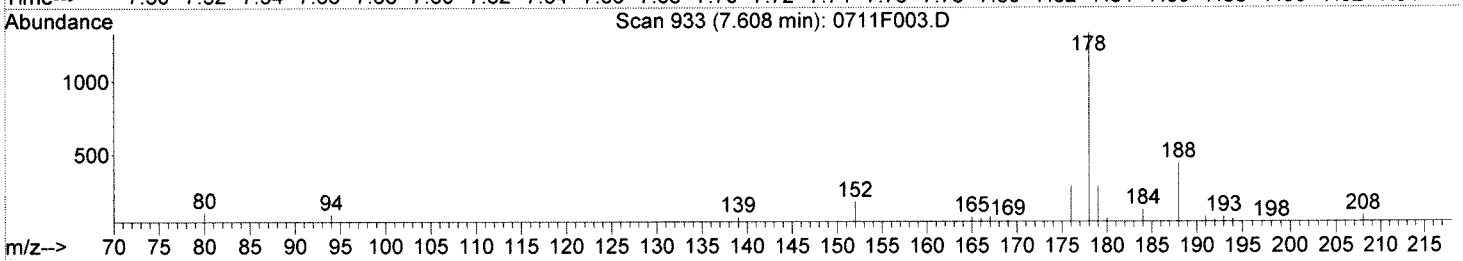
JUL 2 7 2018

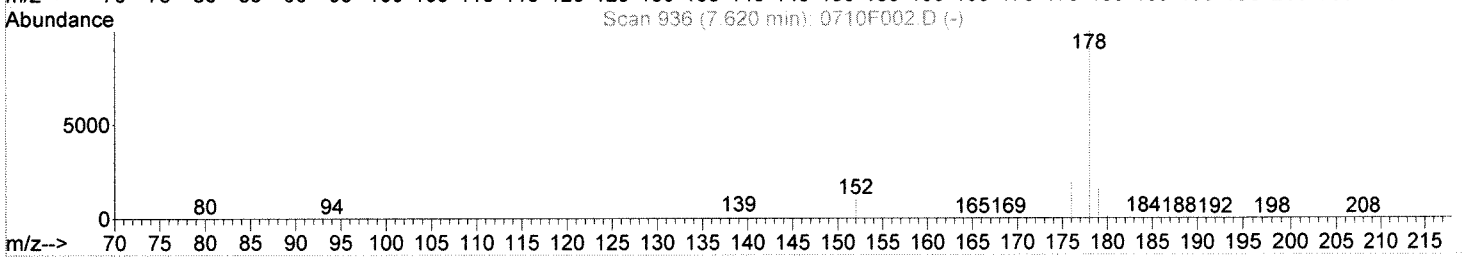
0711F003.D 071118PAH.M Wed Jul 11 12:35:11 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.18ng/ml m

response 900

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	21.77
179.00	15.20	21.70
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F003.D 071118PAH.M Wed Jul 11 12:35:17 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	63956	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30708	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63250	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72026	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	79651	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	763	4.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.42%			
13) Fluorene-d10	6.79	176	917	4.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
22) Fluoranthene-d10	8.58	212	1504	3.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.38%			
25) Terphenyl-d14	8.93	244	1510	4.62	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	1674	4.78	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	948	4.23	ng/ml	91
5) 1-Methylnaphthalene	5.54	142	937	4.32	ng/ml	90
6) Biphenyl	5.86	154	1229	4.45	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	808	4.19	ng/ml	95
9) Acenaphthylene	6.23	152	1442	4.02	ng/ml	97
10) Acenaphthene	6.38	154	846	4.11	ng/ml	95
11) Dibenzofuran	6.53	168	1300	3.94	ng/ml	91
12) 2,3,5-Trimethylnaphthalene	6.70	170	782	4.03	ng/ml	98
14) Fluorene	6.81	166	1032	4.03	ng/ml	99
16) Dibenzothiophene	7.51	184	1534	3.93	ng/ml	95
17) Phenanthrene	7.61	178	1684m	4.36	ng/ml	
18) Anthracene	7.65	178	1474	3.90	ng/ml	98
19) Carbazole	7.79	167	1414	4.15	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	1141	3.75	ng/ml	94
21) Fluoranthene	8.59	202	1825	3.88	ng/ml	96
24) Pyrene	8.79	202	2099	4.15	ng/ml#	16
26) Benz(a)anthracene	10.14	228	1900	4.17	ng/ml	100
27) Chrysene	10.19	228	1748	3.89	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	1853	3.73	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	1871	3.75	ng/ml	97
31) Benzo(e)pyrene	12.97	252	1822	3.77	ng/ml	96
32) Benzo(a)pyrene	13.12	252	1615	3.86	ng/ml	97
33) Perylene	13.38	252	1693	3.87	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.46	276	1753	4.76	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	1750	4.40	ng/ml	89
36) Benzo(g,h,i)perylene	15.85	276	2188	4.66	ng/ml	97

JUL 16 2018

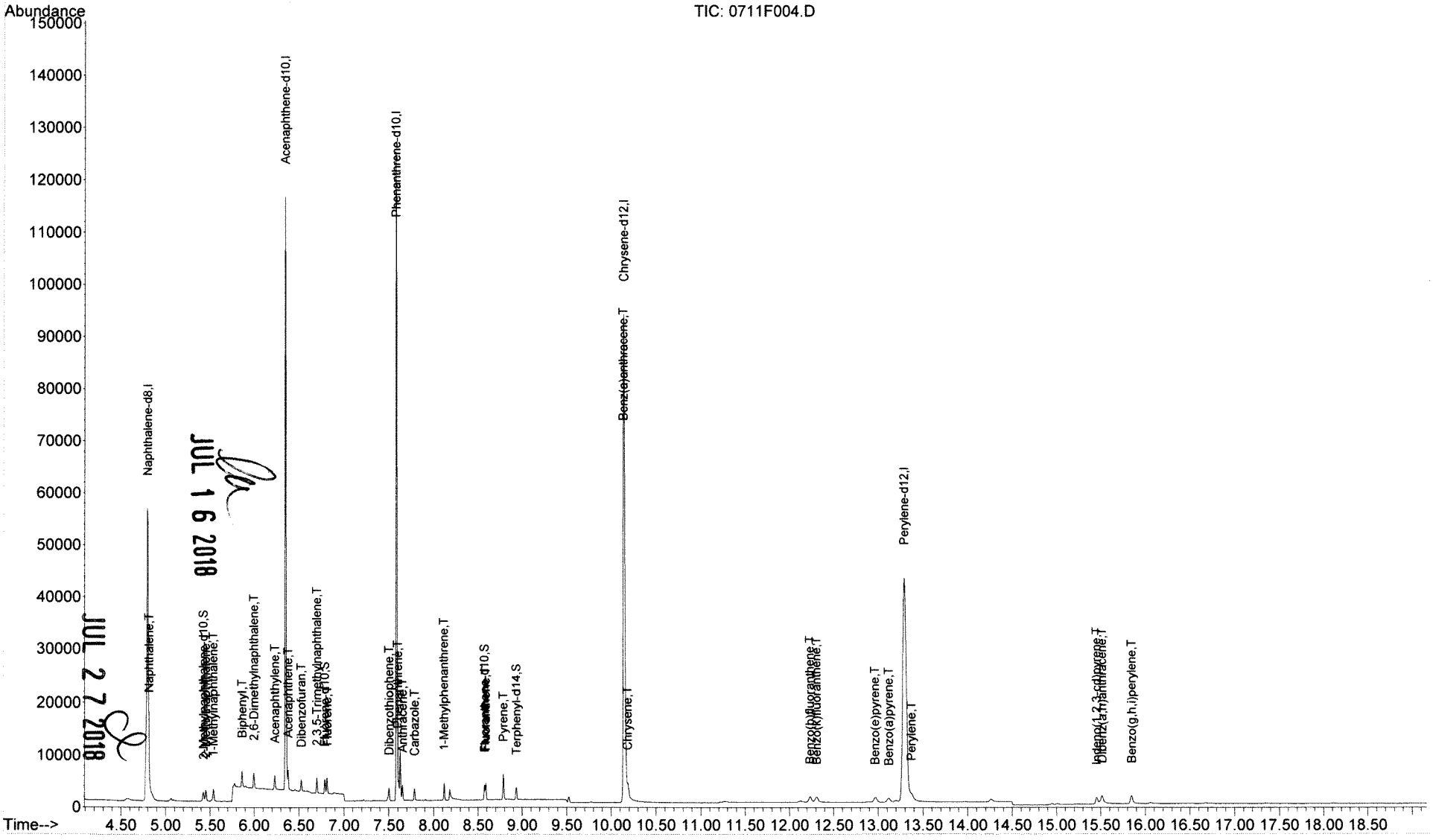
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F004.D 071118PAH.M Wed Jul 11 12:39:39 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

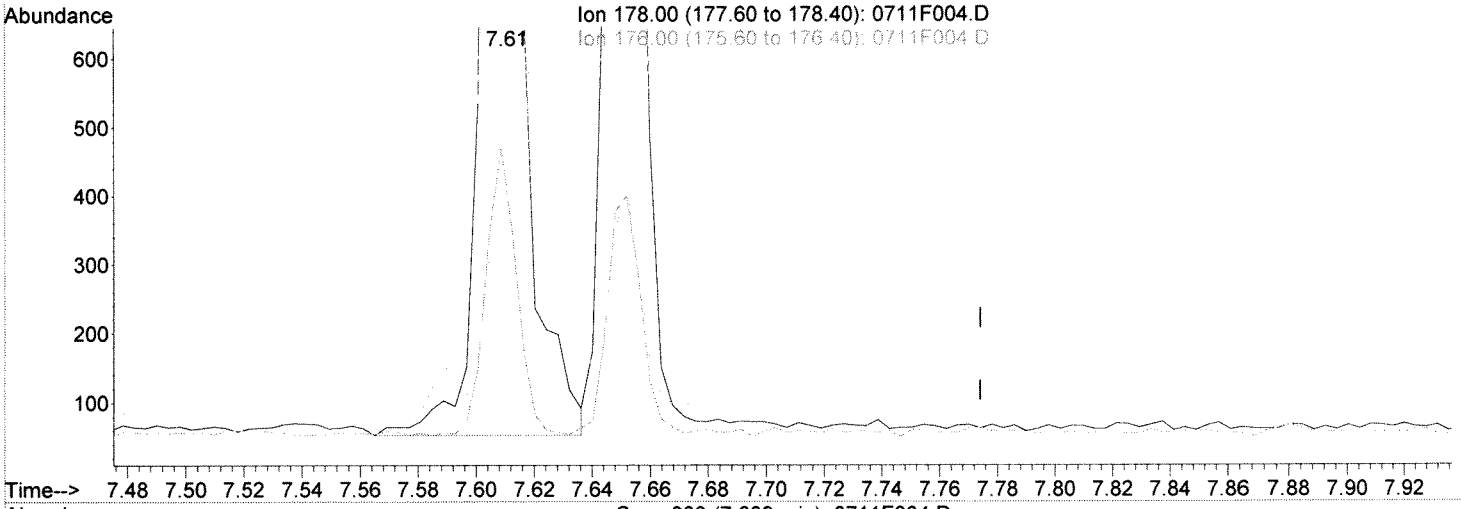
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

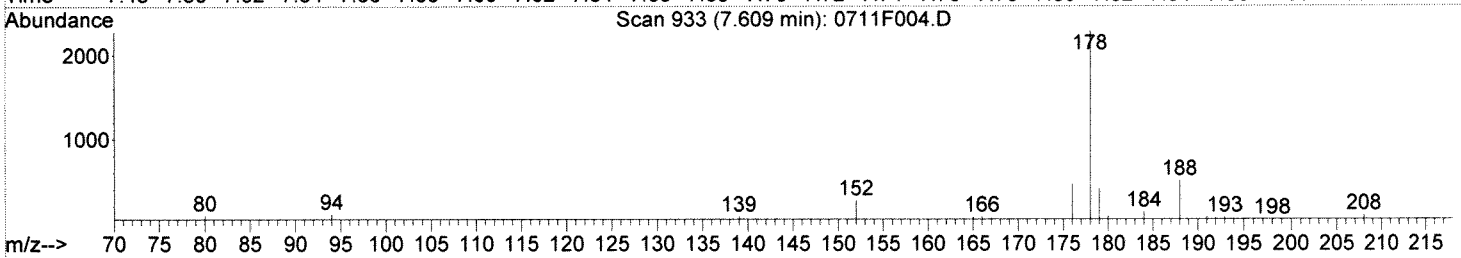


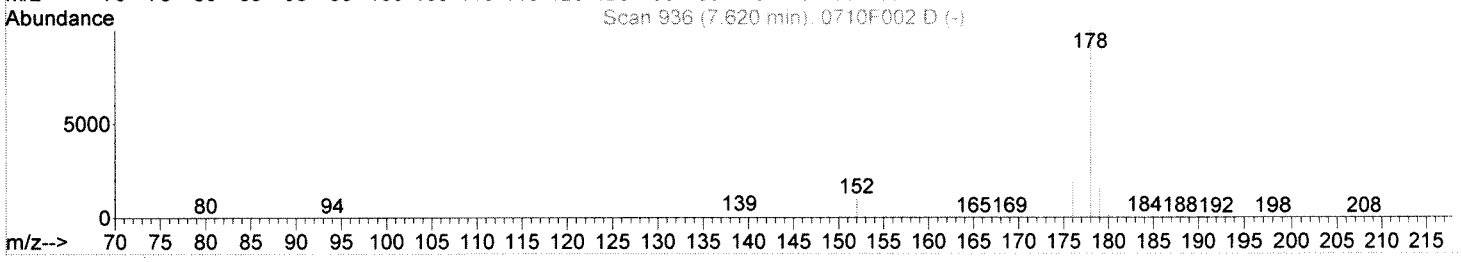
JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.47ng/ml

response 1727

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.57
179.00	15.20	14.90
0.00	0.00	0.00

Manual Integration:

Before

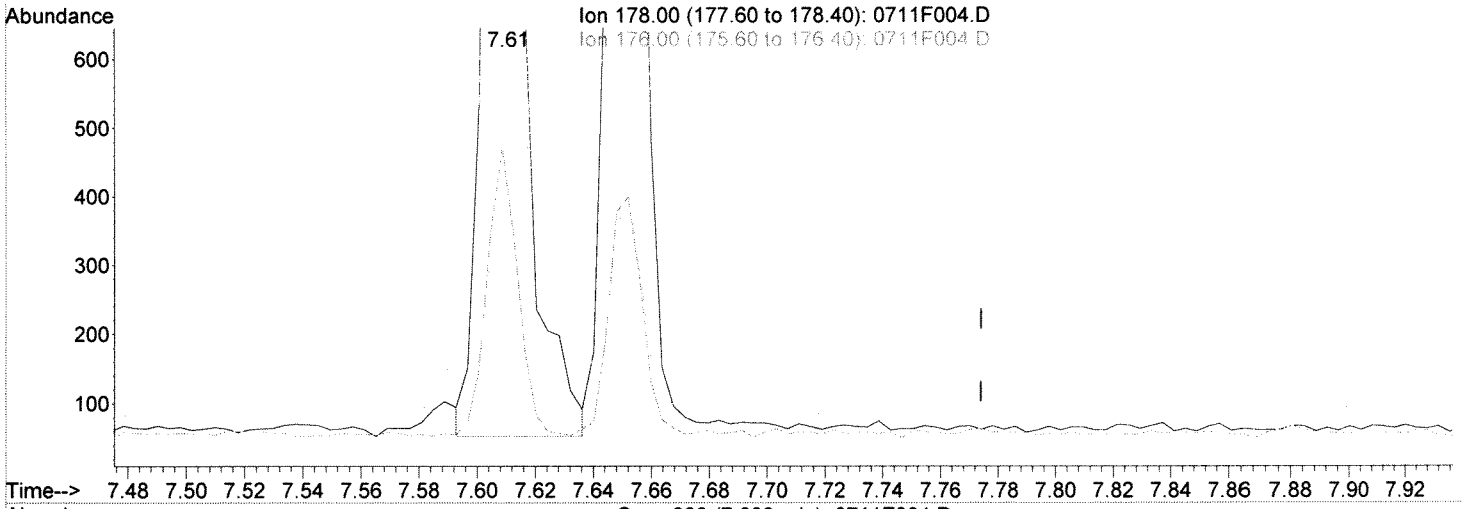
07/11/18

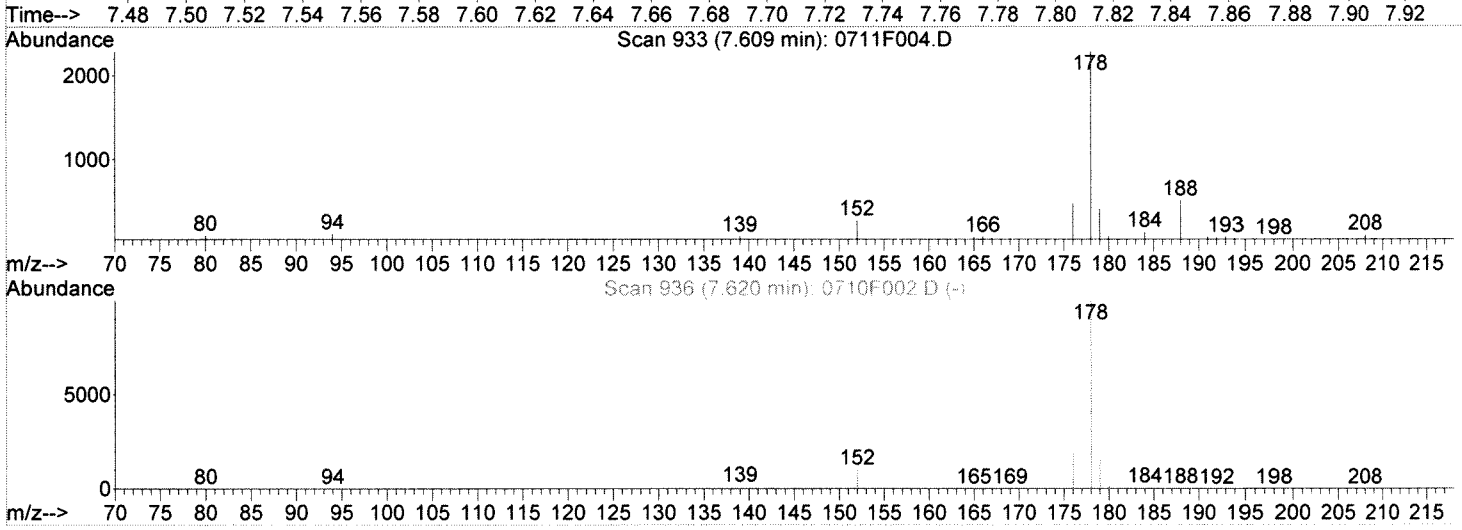
JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:50 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration





TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.36ng/ml m

response 1684

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	20.54
179.00	15.20	17.83
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:56 2018

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62880	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	29911	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	62211	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	69517	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	76895	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	1448	8.09	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.81%		
13) Fluorene-d10	6.79	176	1594	8.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
22) Fluoranthene-d10	8.58	212	2857	7.40	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.74%		
25) Terphenyl-d14	8.93	244	2597	8.23	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	2996	8.69	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	1845	8.38	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	1728	8.11	ng/ml	94
6) Biphenyl	5.86	154	2298	8.46	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	1535	8.10	ng/ml	97
9) Acenaphthylene	6.23	152	2743	7.85	ng/ml	99
10) Acenaphthene	6.38	154	1596	7.95	ng/ml	95
11) Dibenzofuran	6.53	168	2645	8.22	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	1455	7.70	ng/ml	94
14) Fluorene	6.81	166	1936	7.77	ng/ml	100
16) Dibenzothiophene	7.51	184	2951	7.68	ng/ml	94
17) Phenanthrene	7.61	178	3111	8.18	ng/ml	99
18) Anthracene	7.65	178	2901	7.81	ng/ml	99
19) Carbazole	7.78	167	2691	8.03	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	2211	7.38	ng/ml	97
21) Fluoranthene	8.59	202	3571	7.72	ng/ml	99
24) Pyrene	8.79	202	3832	7.85	ng/ml	83
26) Benz(a)anthracene	10.13	228	3494	7.94	ng/ml	98
27) Chrysene	10.19	228	3411	7.86	ng/ml	98
29) Benzo(b)fluoranthene	12.24	252	3544	7.39	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	3488	7.25	ng/ml	97
31) Benzo(e)pyrene	12.97	252	3487	7.47	ng/ml	95
32) Benzo(a)pyrene	13.12	252	3161	7.84	ng/ml	97
33) Perylene	13.37	252	3327	7.88	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.46	276	3272	9.21	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	3362	8.75	ng/ml	96
36) Benzo(g,h,i)perylene	15.85	276	4042	8.91	ng/ml	98

JUL 16 2018

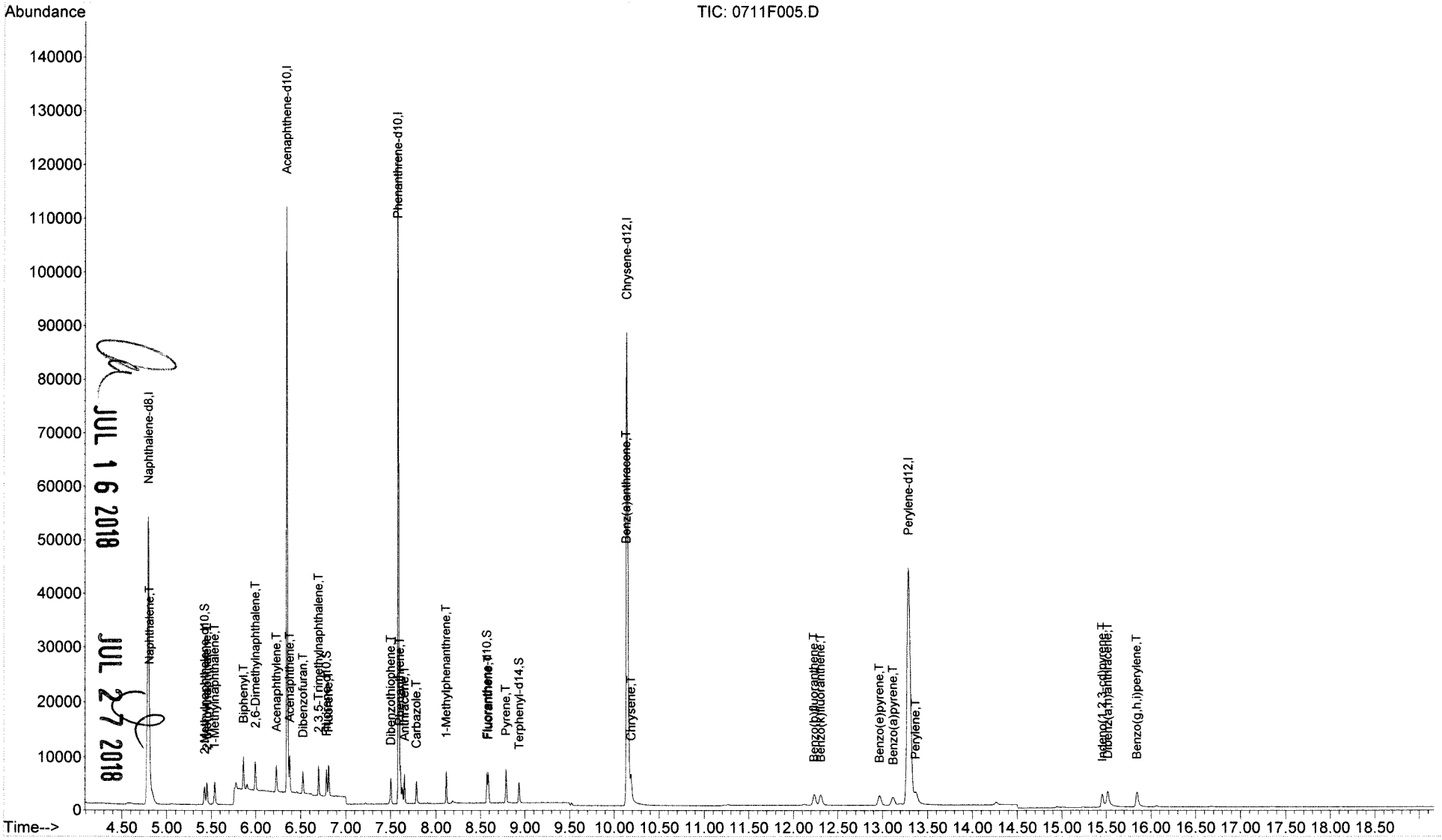
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F005.D 071118PAH.M Wed Jul 11 12:39:41 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	65840	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30682	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63668	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68947	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73587	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	3694	19.72	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.97%		
13) Fluorene-d10	6.79	176	3914	19.51	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.95%		
22) Fluoranthene-d10	8.58	212	7036	17.81	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.78%		
25) Terphenyl-d14	8.93	244	5981	19.10	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.91%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	7540	20.90	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	4709	20.41	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	4545	20.37	ng/ml	98
6) Biphenyl	5.86	154	5875	20.65	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	3939	19.85	ng/ml	98
9) Acenaphthylene	6.23	152	7137	19.90	ng/ml	97
10) Acenaphthene	6.38	154	4220	20.50	ng/ml	98
11) Dibenzofuran	6.53	168	6406	19.41	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	3696	19.07	ng/ml	95
14) Fluorene	6.81	166	5030	19.67	ng/ml	99
16) Dibenzothiophene	7.51	184	7587	19.29	ng/ml	95
17) Phenanthrene	7.61	178	7852	20.19	ng/ml	100
18) Anthracene	7.65	178	7270	19.13	ng/ml	99
19) Carbazole	7.78	167	6767	19.72	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	5509	17.97	ng/ml	96
21) Fluoranthene	8.59	202	8985	18.97	ng/ml	99
24) Pyrene	8.79	202	9434	19.48	ng/ml	92
26) Benz(a)anthracene	10.14	228	8203	18.81	ng/ml	99
27) Chrysene	10.19	228	8248	19.16	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	8538	18.60	ng/ml	97
30) Benzo(k)fluoranthene	12.31	252	8727	18.95	ng/ml	99
31) Benzo(e)pyrene	12.97	252	8307	18.60	ng/ml	96
32) Benzo(a)pyrene	13.12	252	7683	19.90	ng/ml	98
33) Perylene	13.38	252	8269m	20.48	ng/ml	
34) Indeno(1,2,3-cd)pyrene	15.46	276	7779	22.89	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	8645m	23.51	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	9837	22.66	ng/ml	98

JUL 16 2018

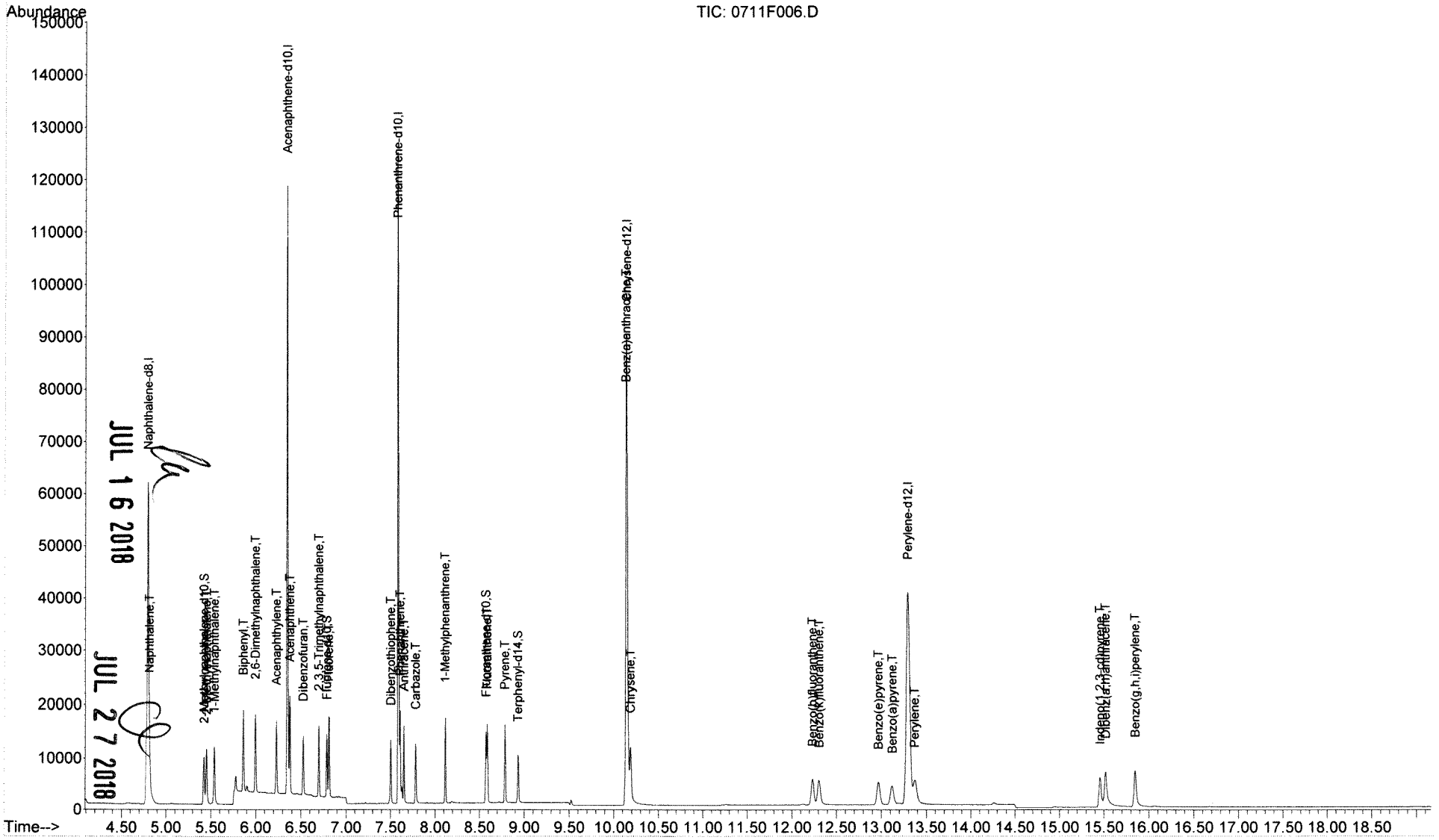
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F006.D 071118PAH.M Wed Jul 11 12:39:43 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: 071118PAH.RES

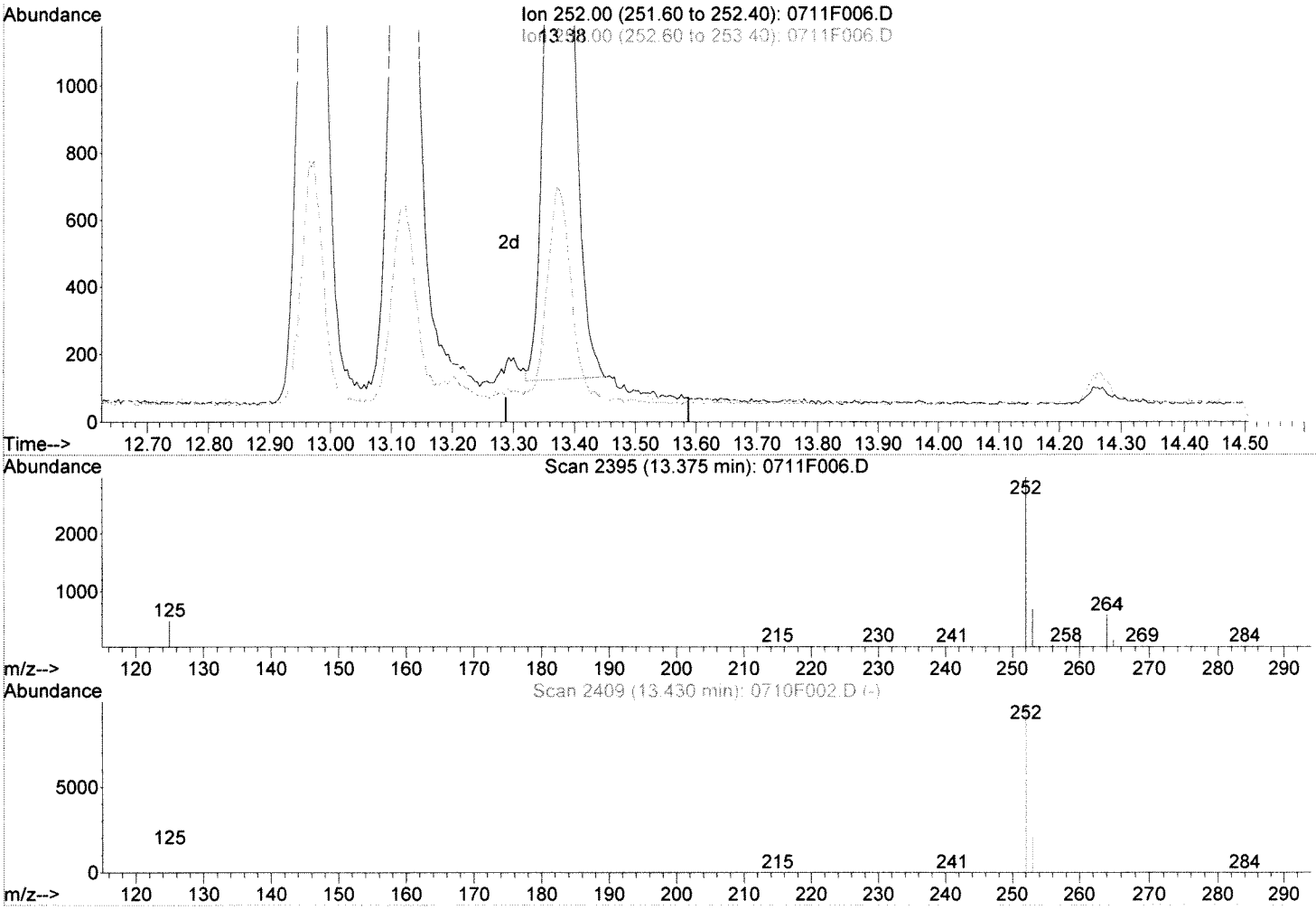
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 19.01ng/ml

response 7678

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	21.61
125.00	11.30	14.83
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

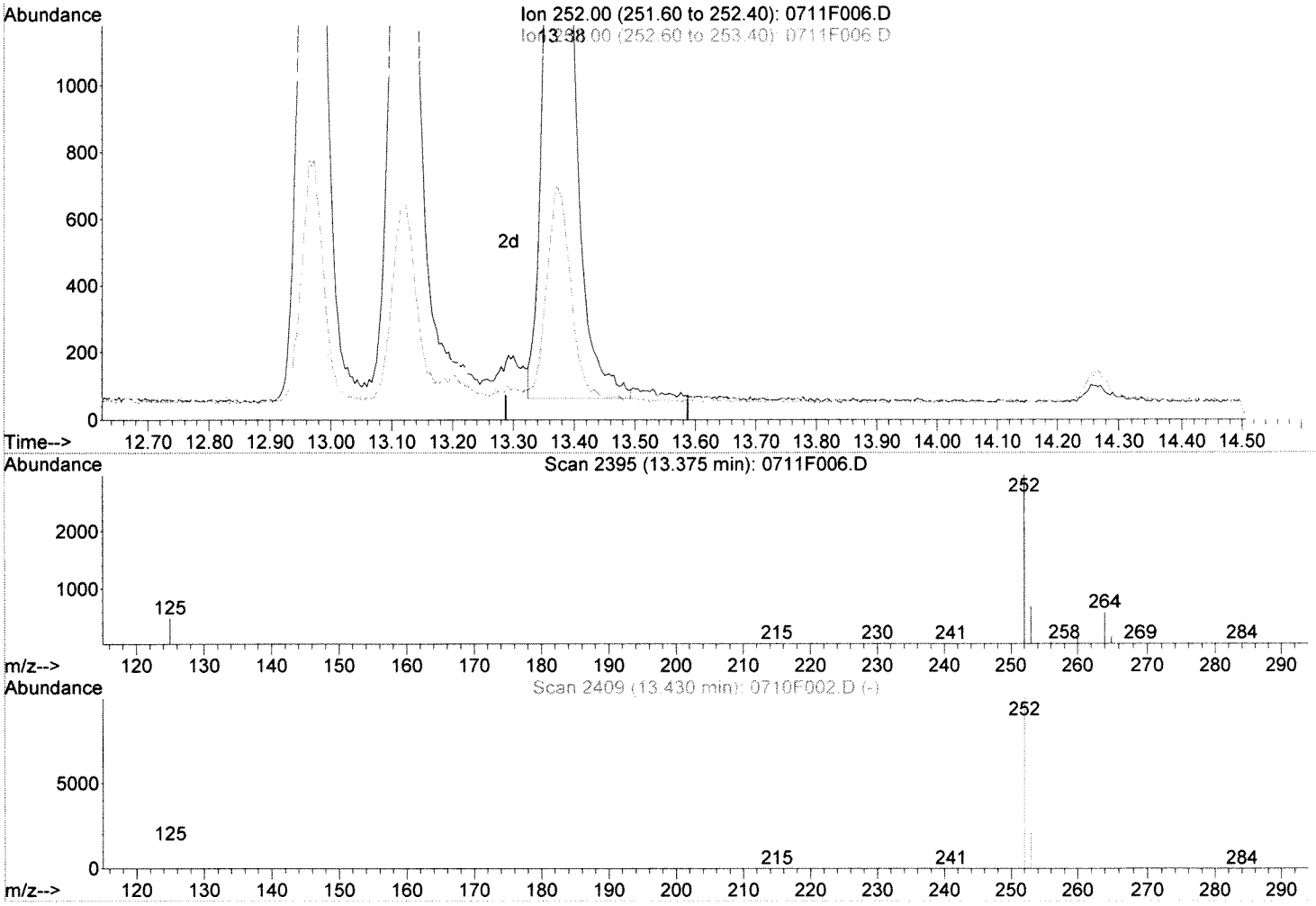
JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:36:54 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 20.48ng/ml m

response 8269

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	23.07
125.00	11.30	16.52
0.00	0.00	0.00

Manual Integration:

After

BLC

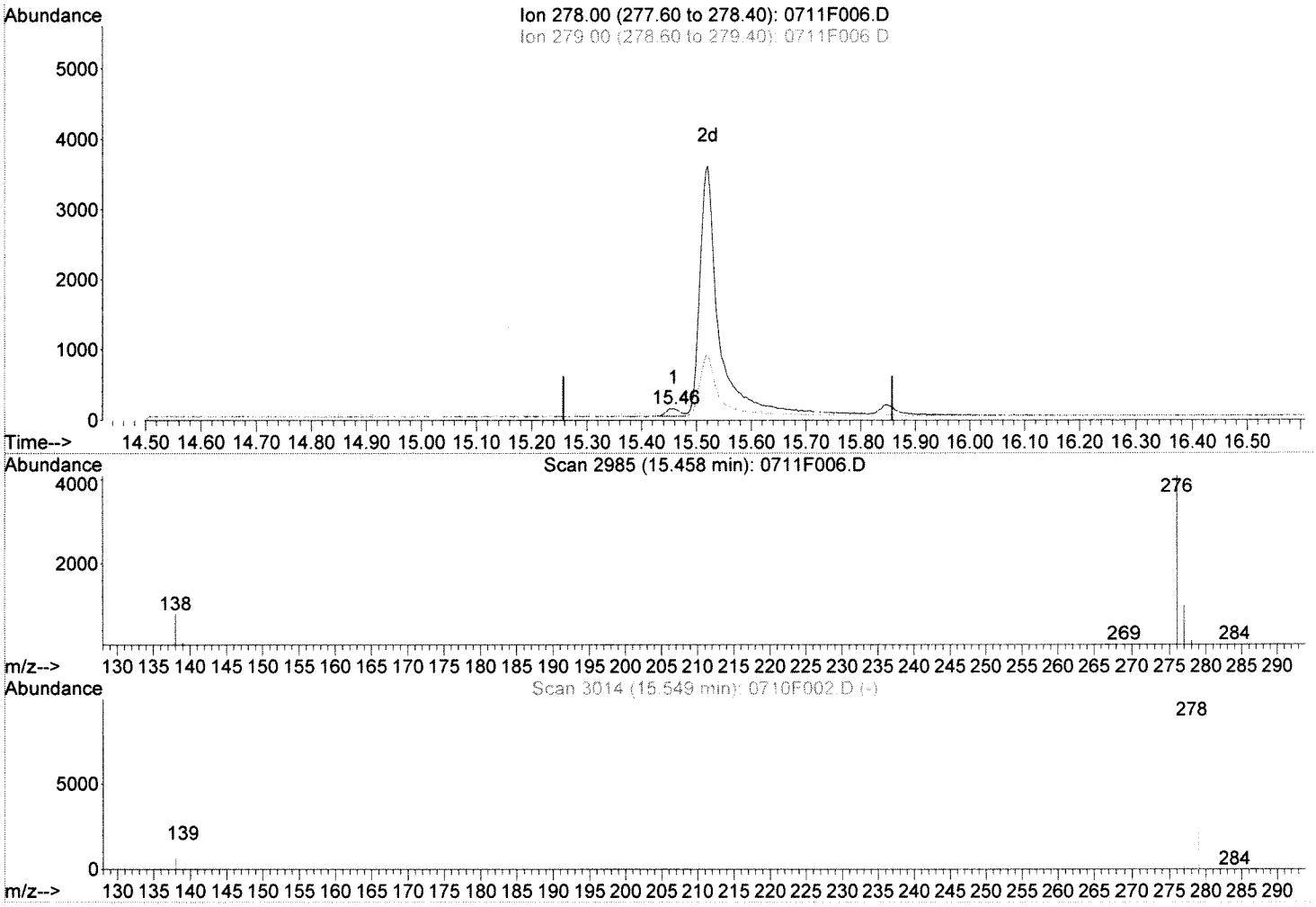
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:01 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.46min 0.54ng/ml

response 199

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	2.68
139.00	13.40	20.54
0.00	0.00	0.00

Manual Integration:

Before

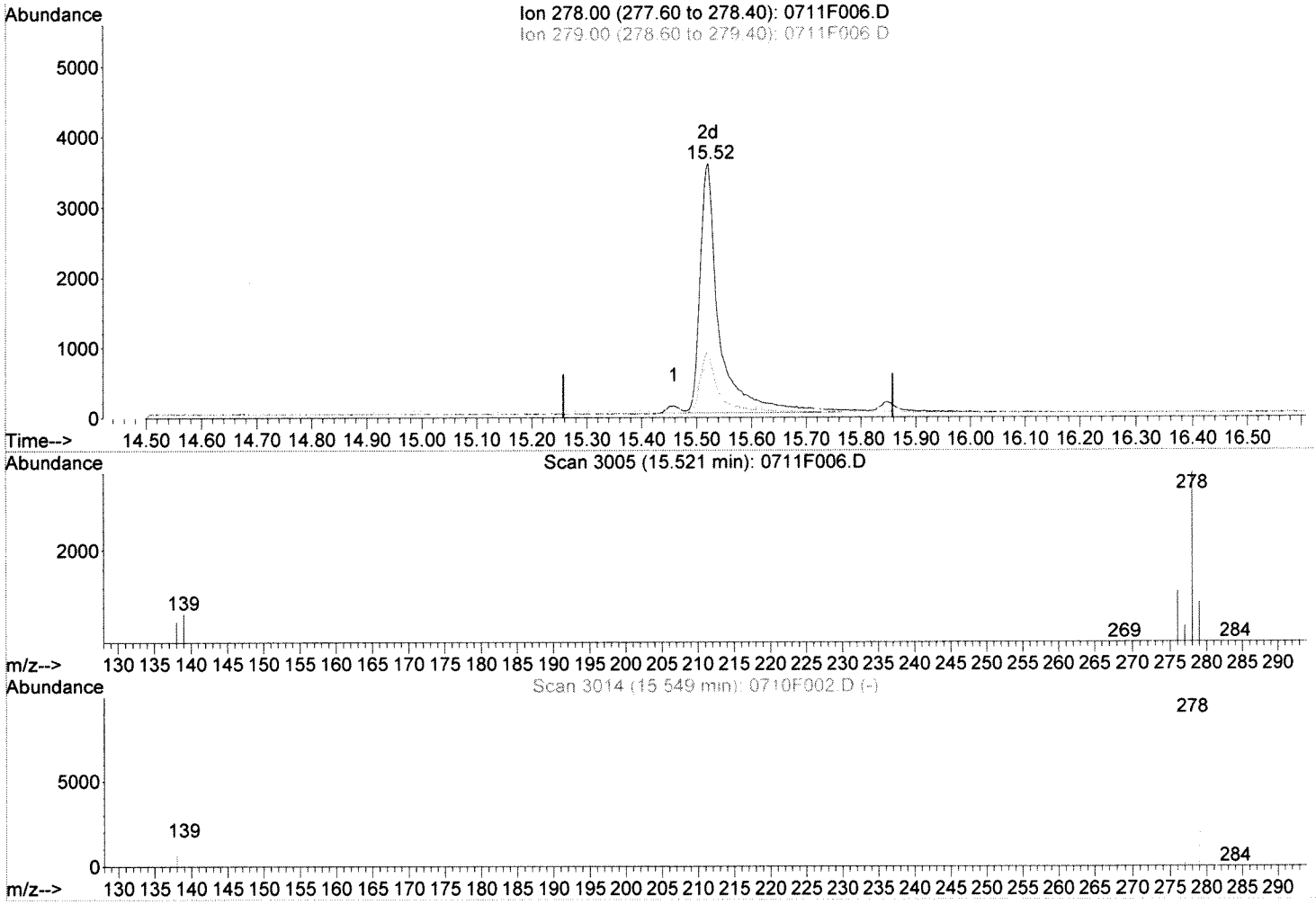
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:06 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.52min 23.51ng/ml m

response 8645

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	25.00
139.00	13.40	18.72
0.00	0.00	0.00

Manual Integration:

After

WP

07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:15 2018

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62407	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	28255	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	58489	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68483	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	75974	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	17559	98.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.89%		
13) Fluorene-d10	6.79	176	17680	95.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.57%		
22) Fluoranthene-d10	8.58	212	35144	96.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.68%		
25) Terphenyl-d14	8.93	244	28477	91.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.16%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	35255	103.08	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	22418	102.54	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	21213	100.29	ng/ml	96
6) Biphenyl	5.86	154	27265	101.12	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	18574	98.74	ng/ml	96
9) Acenaphthylene	6.23	152	33544	101.56	ng/ml	98
10) Acenaphthene	6.38	154	19460	102.65	ng/ml	97
11) Dibenzofuran	6.53	168	31402	103.33	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	17703	99.17	ng/ml	95
14) Fluorene	6.81	166	24009	101.96	ng/ml	99
16) Dibenzothiophene	7.51	184	36360	100.61	ng/ml	95
17) Phenanthrene	7.61	178	36499	102.14	ng/ml	100
18) Anthracene	7.65	178	35340	101.23	ng/ml	100
19) Carbazole	7.78	167	33613	106.65	ng/ml	99
20) 1-Methylphenanthrene	8.12	192	26919	95.59	ng/ml	97
21) Fluoranthene	8.59	202	44895	103.20	ng/ml	99
24) Pyrene	8.79	202	45944	95.52	ng/ml	96
26) Benz(a)anthracene	10.14	228	41105	94.87	ng/ml	99
27) Chrysene	10.19	228	42544	99.49	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	45690	96.41	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	46655	98.13	ng/ml	97
31) Benzo(e)pyrene	12.97	252	43163	93.59	ng/ml	96
32) Benzo(a)pyrene	13.12	252	39807	99.87	ng/ml	98
33) Perylene	13.37	252	42088	100.96	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	40462	115.30	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	42729	112.54	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	48457	108.12	ng/ml	97

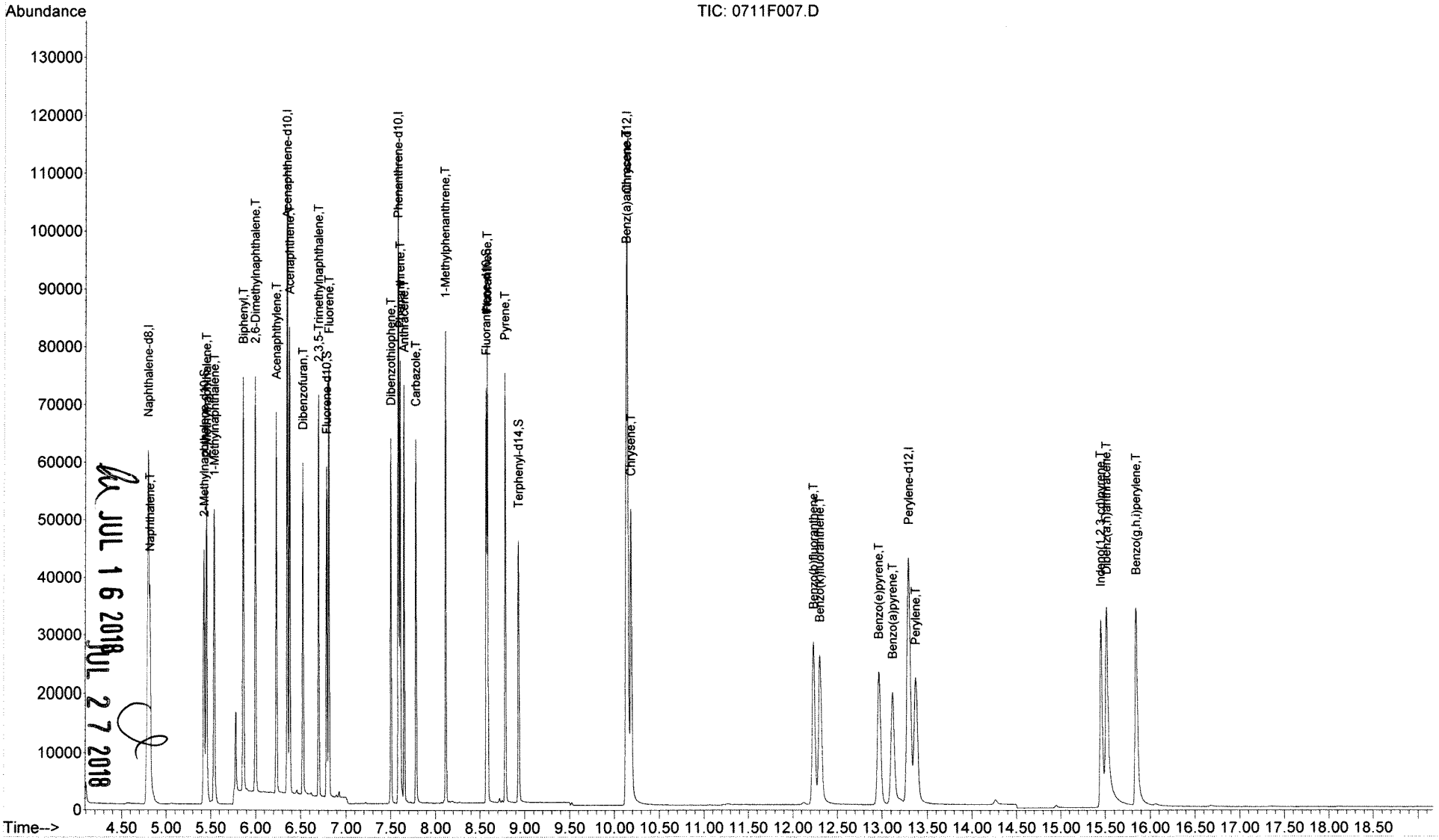
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F007.D 071118PAH.M Wed Jul 11 12:39:45 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60069	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	26067	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	52800	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	67787	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73997	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	32722	191.47	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 19.15%			
13) Fluorene-d10	6.79	176	32332	189.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.97%			
22) Fluoranthene-d10	8.58	212	66735	203.67	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 20.37%			
25) Terphenyl-d14	8.93	244	55795	181.26	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.13%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	66650	202.46	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	41546	197.42	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	39085	191.97	ng/ml	97
6) Biphenyl	5.86	154	50271	193.70	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	34463	190.34	ng/ml	96
9) Acenaphthylene	6.23	152	62756	205.96	ng/ml	98
10) Acenaphthene	6.38	154	36120	206.52	ng/ml	97
11) Dibenzofuran	6.53	168	59730	213.03	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	32934	199.97	ng/ml	94
14) Fluorene	6.81	166	43762	201.45	ng/ml	98
16) Dibenzothiophene	7.51	184	66748	204.59	ng/ml	95
17) Phenanthrene	7.61	178	65833	204.08	ng/ml	100
18) Anthracene	7.65	178	64253	203.88	ng/ml	100
19) Carbazole	7.78	167	63253	222.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	49439	194.49	ng/ml	96
21) Fluoranthene	8.59	202	84302	214.65	ng/ml	99
24) Pyrene	8.79	202	87628	184.06	ng/ml	96
26) Benz(a)anthracene	10.14	228	83249	194.11	ng/ml	99
27) Chrysene	10.19	228	84873	200.51	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	92957	201.38	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	93553	202.03	ng/ml	98
31) Benzo(e)pyrene	12.98	252	86431	192.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	79516	204.81	ng/ml	97
33) Perylene	13.38	252	84071	207.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	80179	234.58	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	81499	220.39	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	93626	214.49	ng/ml	98

JUL 16 2018

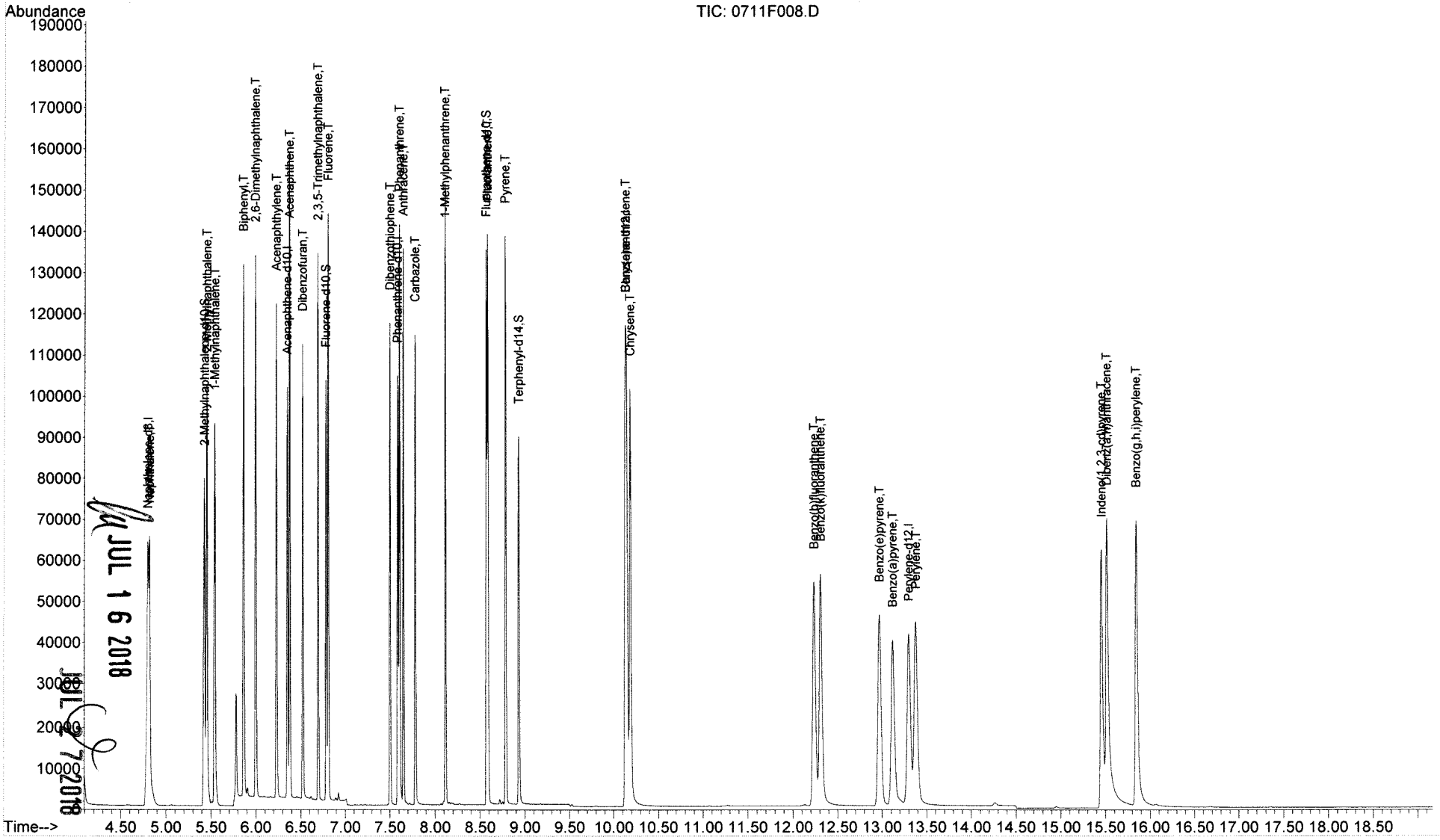
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F008.D 071118PAH.M Wed Jul 11 12:39:47 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60855	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	25959	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	53916	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68964	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73742	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	64749	373.97	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	37.40%		
13) Fluorene-d10	6.79	176	65104	383.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	38.36%		
22) Fluoranthene-d10	8.57	212	140750	420.66	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	42.07%		
25) Terphenyl-d14	8.93	244	115110	367.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	36.76%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	132311	396.73	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	80537	377.75	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	75991	368.41	ng/ml	97
6) Biphenyl	5.86	154	98008	372.75	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	68675	374.39	ng/ml	97
9) Acenaphthylene	6.23	152	125730	414.35	ng/ml	98
10) Acenaphthene	6.38	154	71389	409.87	ng/ml	98
11) Dibenzofuran	6.53	168	116544	417.39	ng/ml	89
12) 2,3,5-Trimethylnaphthalene	6.70	170	66608	406.13	ng/ml	96
14) Fluorene	6.81	166	86674	400.65	ng/ml	98
16) Dibenzothiophene	7.51	184	136509	409.76	ng/ml	95
17) Phenanthrene	7.61	178	131946	400.56	ng/ml	100
18) Anthracene	7.65	178	131533	408.72	ng/ml	100
19) Carbazole	7.79	167	129213	444.76	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	103724	399.59	ng/ml	96
21) Fluoranthene	8.59	202	170758	425.79	ng/ml	98
24) Pyrene	8.79	202	181666	375.07	ng/ml	98
26) Benz(a)anthracene	10.13	228	175185	401.51	ng/ml	99
27) Chrysene	10.19	228	172838	401.35	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	191741	416.82	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	189521	410.69	ng/ml	98
31) Benzo(e)pyrene	12.98	252	177594	396.74	ng/ml	98
32) Benzo(a)pyrene	13.13	252	163551	422.73	ng/ml	98
33) Perylene	13.39	252	170900	422.34	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	155556	456.69	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	157213	426.62	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	179053	411.61	ng/ml	98

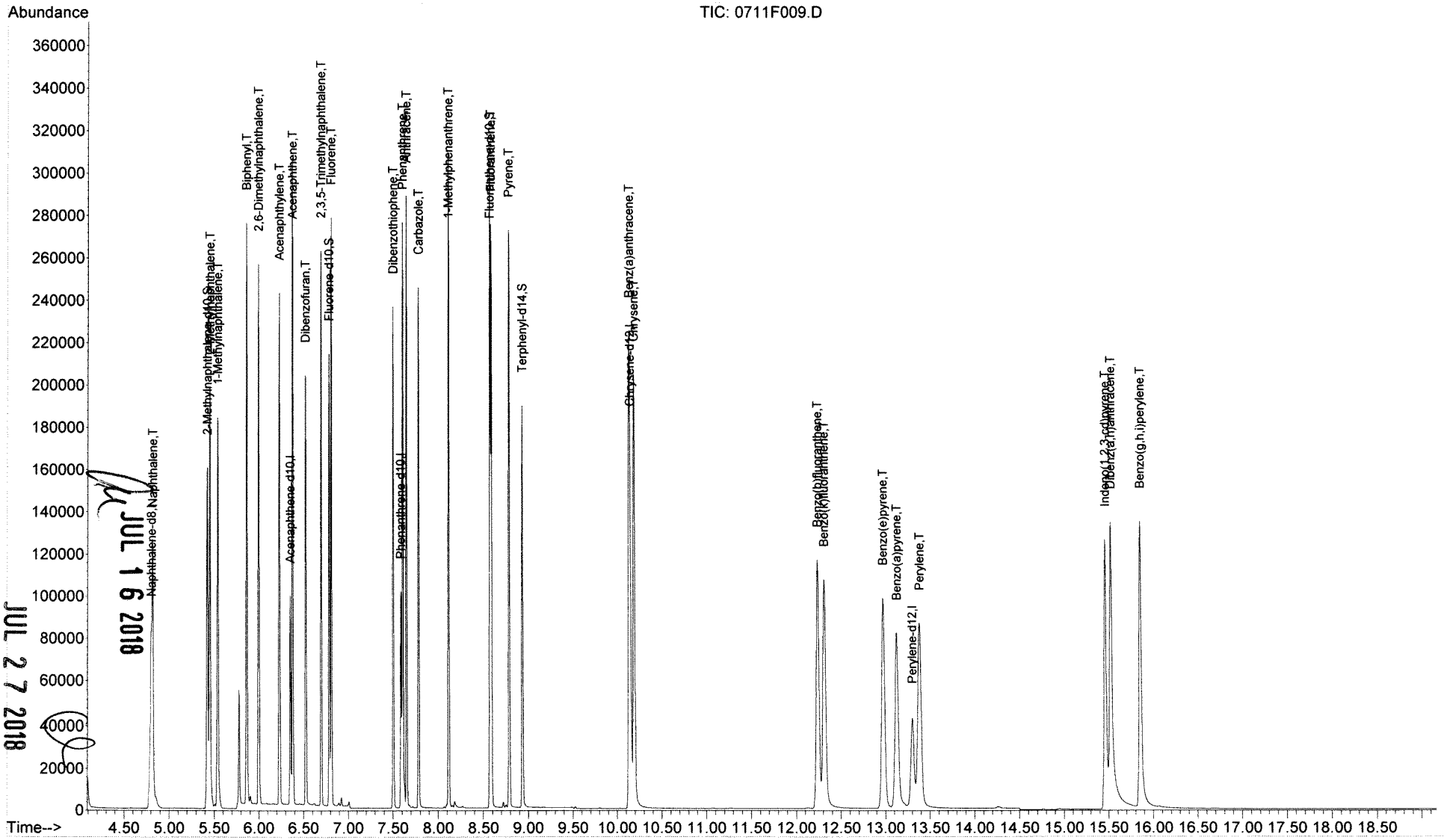
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F009.D 071118PAH.M Wed Jul 11 12:39:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:43 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	56166	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24545	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48486	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	66294	200.00	ng/ml	-0.02
28) Perylene-d12	13.31	264	71447	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	151032	945.14	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 94.51%			
13) Fluorene-d10	6.79	176	148985	928.35	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.84%			
22) Fluoranthene-d10	8.58	212	340058	1130.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 113.02%			
25) Terphenyl-d14	8.93	244	277429	921.60	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.16%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	297897	967.80	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	182505	927.49	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	175312	920.89	ng/ml	96
6) Biphenyl	5.86	154	227465	937.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	159932	944.68	ng/ml	95
9) Acenaphthylene	6.23	152	295411	1029.62	ng/ml	98
10) Acenaphthene	6.38	154	165340	1003.96	ng/ml	97
11) Dibenzofuran	6.53	168	271937	1030.03	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	155038	999.76	ng/ml	95
14) Fluorene	6.81	166	195757	957.01	ng/ml	99
16) Dibenzothiophene	7.51	184	312192	1042.05	ng/ml	95
17) Phenanthrene	7.61	178	297804	1005.31	ng/ml	99
18) Anthracene	7.65	178	294958	1019.19	ng/ml	100
19) Carbazole	7.79	167	299519	1146.42	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	241204	1033.28	ng/ml	96
21) Fluoranthene	8.59	202	395859	1097.64	ng/ml	98
24) Pyrene	8.79	202	440109	945.25	ng/ml	99
26) Benz(a)anthracene	10.14	228	438415	1045.28	ng/ml	100
27) Chrysene	10.19	228	417827	1009.33	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	477033	1070.32	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	460183	1029.25	ng/ml	98
31) Benzo(e)pyrene	12.99	252	441018	1016.88	ng/ml	97
32) Benzo(a)pyrene	13.14	252	410977	1096.36	ng/ml	98
33) Perylene	13.39	252	424046	1081.60	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.47	276	362154	1097.39	ng/ml	98
35) Dibenz(a,h)anthracene	15.53	278	365022	1022.35	ng/ml	98
36) Benzo(g,h,i)perylene	15.86	276	398340	945.13	ng/ml	97

JUL 16 2018

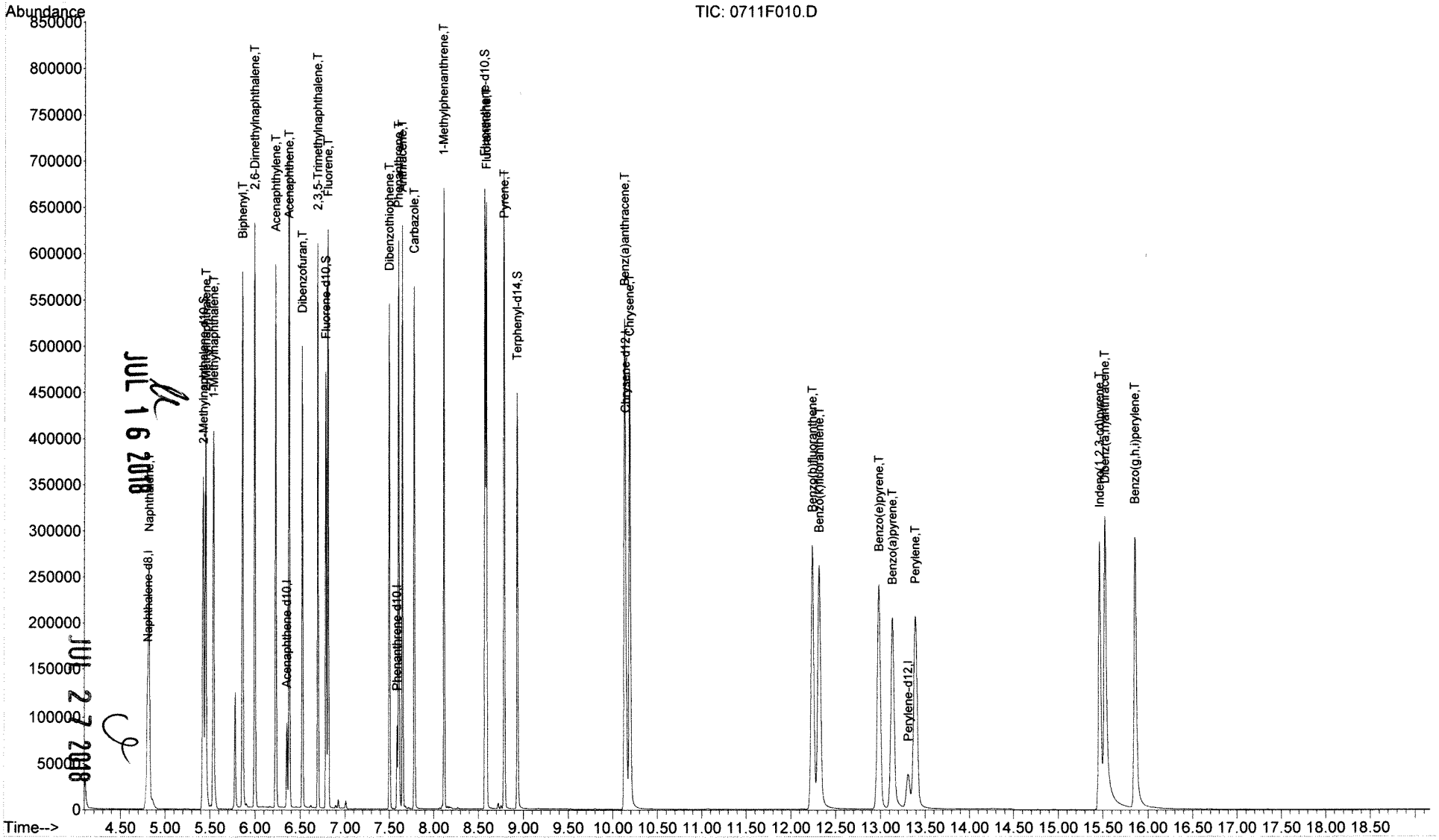
(#) = qualifier out of range (m) = manual integration
0711F010.D 071118PAH.M Wed Jul 11 12:39:51 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	55374	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	23531	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48251	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	63306	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	68587	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	230897	1465.59	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.56%			
13) Fluorene-d10	6.79	176	234277	1522.73	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 152.27%			
22) Fluoranthene-d10	8.58	212	547746	1829.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 182.93%			
25) Terphenyl-d14	8.93	244	420524	1462.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.29%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	454242	1496.83	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	277659	1431.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	268229	1429.12	ng/ml	95
6) Biphenyl	5.87	154	351048	1467.28	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	248732	1490.21	ng/ml	94
9) Acenaphthylene	6.23	152	457982	1665.02	ng/ml	98
10) Acenaphthene	6.38	154	258921	1639.94	ng/ml	98
11) Dibenzofuran	6.53	168	422115	1667.76	ng/ml	98
12) 2,3,5-Trimethylnaphthalene	6.70	170	241367	1623.53	ng/ml	87
14) Fluorene	6.81	166	306456	1562.75	ng/ml	99
16) Dibenzothiophene	7.51	184	493134	1654.02	ng/ml	98
17) Phenanthrene	7.61	178	470025	1594.41	ng/ml	99
18) Anthracene	7.65	178	468569	1626.97	ng/ml	99
19) Carbazole	7.79	167	483938	1861.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	392769	1690.76	ng/ml	98
21) Fluoranthene	8.59	202	637771	1777.03	ng/ml	97
24) Pyrene	8.79	202	701707	1578.23	ng/ml	96
26) Benz(a)anthracene	10.14	228	679766	1697.22	ng/ml	100
27) Chrysene	10.20	228	647039	1636.80	ng/ml	100
29) Benzo(b)fluoranthene	12.26	252	726698	1698.48	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	707952	1649.45	ng/ml	98
31) Benzo(e)pyrene	13.00	252	677816	1628.04	ng/ml	97
32) Benzo(a)pyrene	13.15	252	636746	1769.47	ng/ml	98
33) Perylene	13.41	252	650819	1729.25	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	546709	1725.70	ng/ml	98
35) Dibenz(a,h)anthracene	15.54	278	550676	1606.64	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	588669	1454.97	ng/ml	97

JUL 16 2018

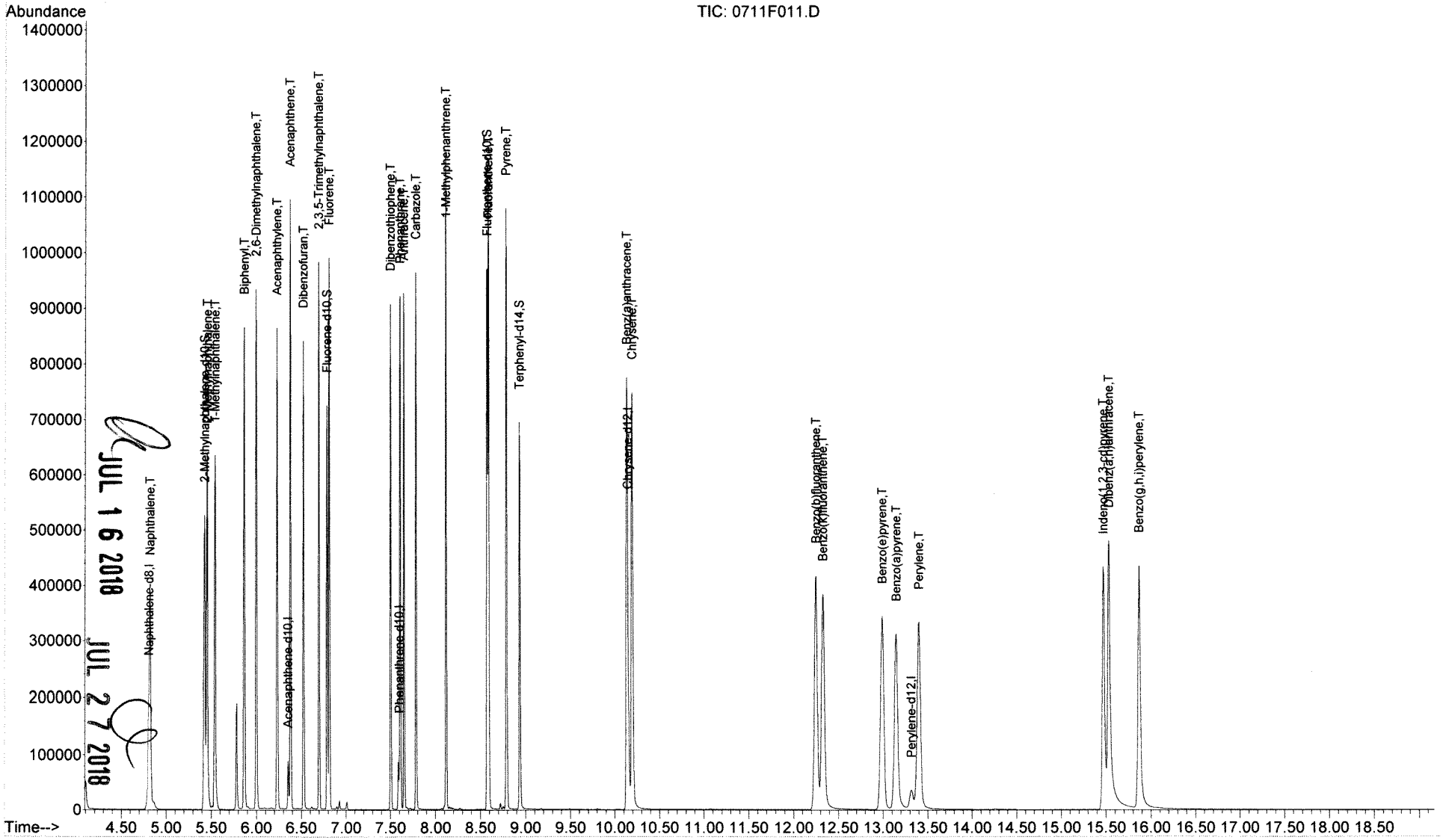
(#) = qualifier out of range (m) = manual integration
0711F011.D 071118PAH.M Wed Jul 11 12:39:53 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	54095	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24200	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	49476	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	65411	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	71109	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	284926	1851.30	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 185.13%			
13) Fluorene-d10	6.79	176	291344	1841.30	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 184.13%			
22) Fluoranthene-d10	8.58	212	688154	2241.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 224.13%			
25) Terphenyl-d14	8.94	244	524001	1764.19	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 176.42%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	576774	1945.54	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	343280	1811.34	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	333329	1817.97	ng/ml	96
6) Biphenyl	5.87	154	430613	1842.39	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	307734	1887.29	ng/ml	92
9) Acenaphthylene	6.23	152	565493	1999.05	ng/ml	97
10) Acenaphthene	6.38	154	319877	1970.02	ng/ml	97
11) Dibenzofuran	6.53	168	511819	1966.28	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	300656	1966.42	ng/ml	85
14) Fluorene	6.81	166	378044	1874.51	ng/ml	98
16) Dibenzothiophene	7.51	184	607108	1985.89	ng/ml	98
17) Phenanthrene	7.61	178	575834	1904.97	ng/ml	99
18) Anthracene	7.66	178	577074	1954.11	ng/ml	99
19) Carbazole	7.79	167	599144	2247.37	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	493413	2071.41	ng/ml	97
21) Fluoranthene	8.60	202	799381	2172.18	ng/ml	96
24) Pyrene	8.79	202	889035	1935.21	ng/ml	94
26) Benz(a)anthracene	10.14	228	854373	2064.52	ng/ml	99
27) Chrysene	10.20	228	809465	1981.79	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	904886	2039.94	ng/ml	98
30) Benzo(k)fluoranthene	12.34	252	885676	1990.34	ng/ml	98
31) Benzo(e)pyrene	13.00	252	842879	1952.70	ng/ml	97
32) Benzo(a)pyrene	13.16	252	795301	2131.70	ng/ml	98
33) Perylene	13.41	252	811546	2079.83	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	682068	2076.61	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	690770	1943.89	ng/ml	97
36) Benzo(g,h,i)perylene	15.88	276	738118	1759.65	ng/ml	96

JUL 16 2018

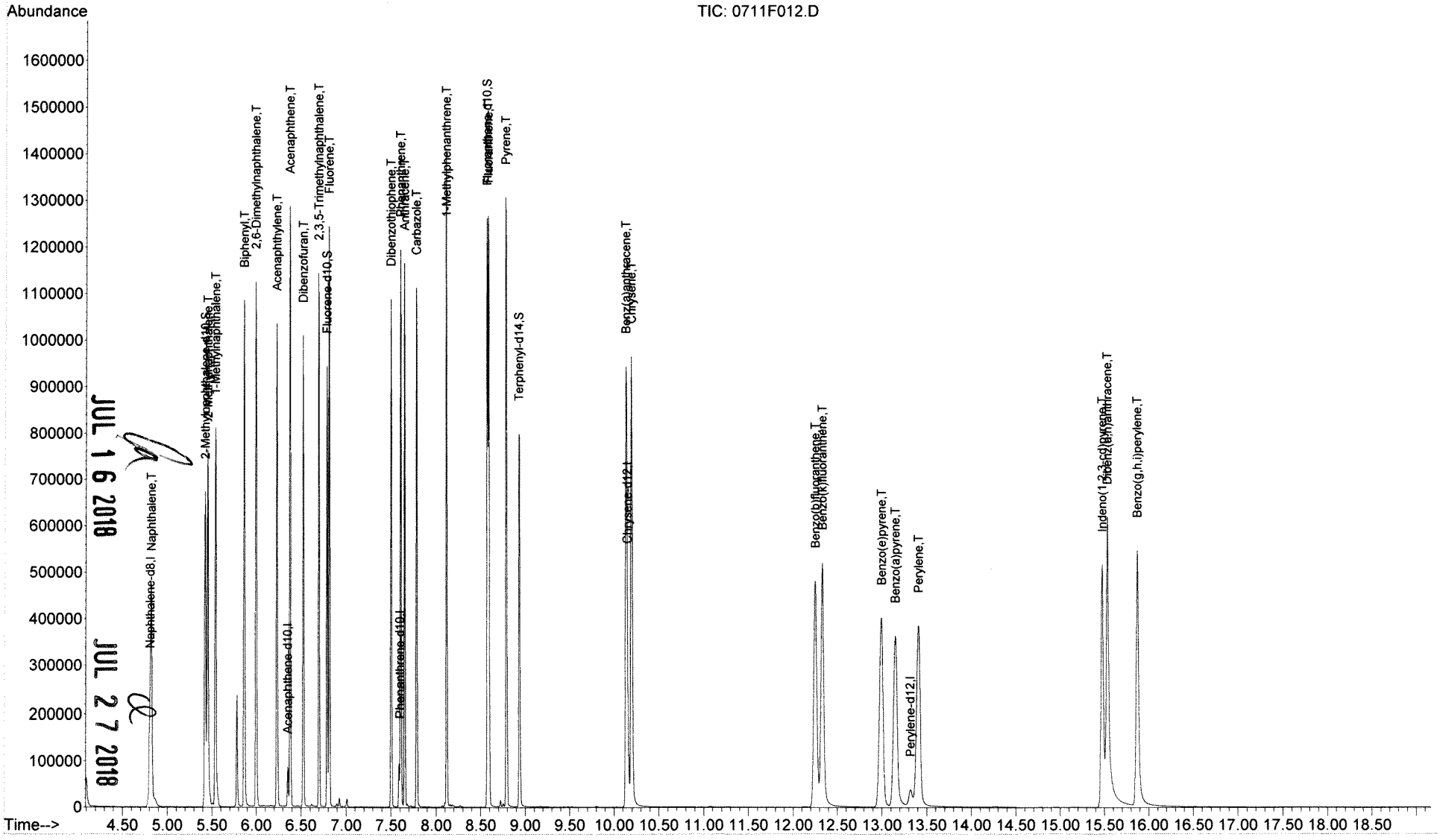
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F012.D 071118PAH.M Wed Jul 11 12:39:55 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 09:14:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	50172	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	22986	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	46192	200.00	ng/ml	0.00
23) Chrysene-d12	10.15	240	62964	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	67346	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	56170	401.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.11%			
13) Fluorene-d10	6.79	176	57243	389.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 38.95%			
22) Fluoranthene-d10	8.58	212	119281	409.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.97%			
25) Terphenyl-d14	8.93	244	103386	378.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 37.86%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	106807	368.80	ng/ml	100
4) 2-Methylnaphthalene	5.46	142	68576	392.65	ng/ml	100
5) 1-Methylnaphthalene	5.54	142	61930	368.40	ng/ml	99
6) Biphenyl	5.86	154	91235	418.55	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	63157	421.23	ng/ml	96
9) Acenaphthylene	6.23	152	107131	390.61	ng/ml	100
10) Acenaphthene	6.38	154	60647	384.94	ng/ml	98
11) Dibenzofuran	6.53	168	94217	372.67	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	59485	408.19	ng/ml	96
14) Fluorene	6.81	166	73545	385.97	ng/ml	100
16) Dibenzothiophene	7.51	184	123550	428.83	ng/ml	99
17) Phenanthrene	7.61	178	110081	382.02	ng/ml	100
18) Anthracene	7.65	178	109389	397.66	ng/ml	100
19) Carbazole	7.79	167	115133	428.87	ng/ml	100
20) 1-Methylphenanthrene	8.12	192	91182	417.77	ng/ml	100
21) Fluoranthene	8.59	202	147363	414.16	ng/ml	100
24) Pyrene	8.79	202	151769	351.32	ng/ml	92
26) Benz(a)anthracene	10.14	228	153003	375.85	ng/ml	99
27) Chrysene	10.19	228	151585	388.75	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	170488	409.75	ng/ml	100
30) Benzo(k)fluoranthene	12.32	252	172528	417.98	ng/ml	100
31) Benzo(e)pyrene	12.98	252	162645	410.10	ng/ml	100
32) Benzo(a)pyrene	13.13	252	146112	400.43	ng/ml	99
33) Perylene	13.39	252	166849	435.90	ng/ml	100
34) Indeno(1,2,3-cd)pyrene	15.46	276	133756	373.83	ng/ml	99
35) Dibenz(a,h)anthracene	15.52	278	139306	384.07	ng/ml	100
36) Benzo(g,h,i)perylene	15.85	276	152959	365.05	ng/ml	100

JUL 16 2018

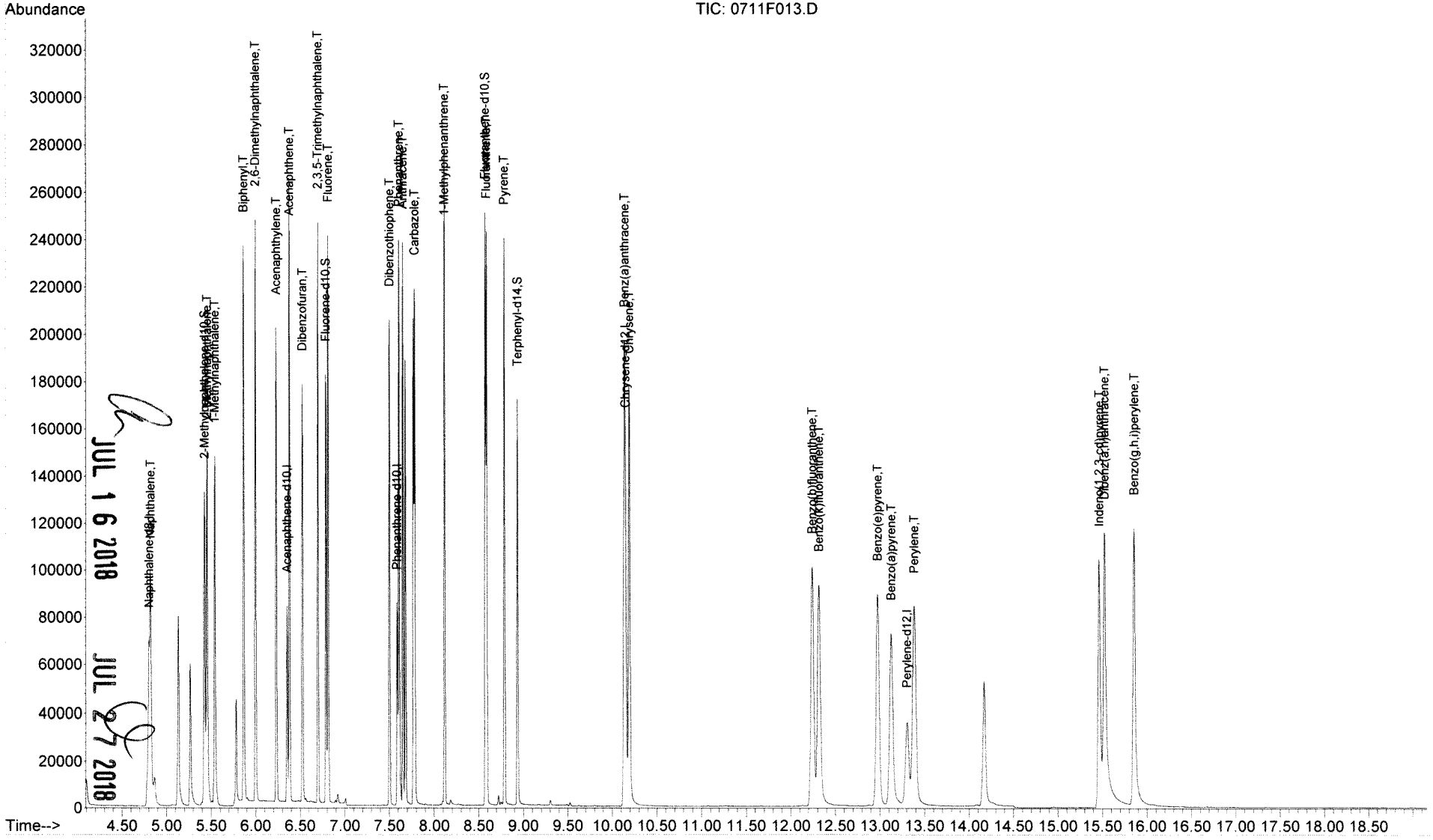
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F013.D 071118PAH.M Mon Jul 16 09:14:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:14 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



JUL 16 2018

JUL 27 2018

Preparation Information

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-001	N3-0to26-101518	8270D PAH SIM ULL	SEDIMENT	40.062g	2mL	74.3
K1810302-016	A1-0to30-102018	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	
K1810430-001	E-8.99-0to28-102418	8270D PAH SIM ULL	SOIL	40.037g	2mL	28.5
K1810430-002	C-8.94-0to27-102418	8270D PAH SIM ULL	SOIL	40.004g	2mL	30.2
K1810430-003	D-8.90-0to27-102418	8270D PAH SIM ULL	SOIL	40.007g	2mL	34.7
K1810430-004	D-8.83-0to25-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	34.7
K1810430-005	E-9.02-0to26-102418	8270D PAH SIM ULL	SOIL	40.028g	2mL	35.0
K1810430-006	B-9.00-0to29-102418	8270D PAH SIM ULL	SOIL	40.009g	2mL	27.7
K1810430-007	512-0to29-102418	8270D PAH SIM ULL	SOIL	40.052g	2mL	27.3
K1810430-008	D-9.09-0to29-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	32.2
K1810430-009	A-9.03-0to26-102418	8270D PAH SIM ULL	SOIL	40.044g	2mL	28.8
K1810430-010	B-9.15-0to30-102418	8270D PAH SIM ULL	SOIL	40.077g	2mL	46.5
K1810430-011	G-9.15-0to18-102418	8270D PAH SIM ULL	SOIL	40.080g	2mL	74.1
K1810683-001	PDI-ST-T06B-1810	8270D PAH SIM ULL	SEDIMENT	40.124g	2mL	25.3
K1810683-002	PDI-ST-T06A-1810	8270D PAH SIM ULL	SEDIMENT	40.049g	2mL	25.6
K1810683-003	PDI-ST-T07A-1810	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	22.3
K1810683-004	PDI-ST-T07B-1810	8270D PAH SIM ULL	SEDIMENT	40.085g	2mL	21.4
KWG1805796-1	Matrix Spike	8270D PAH SIM ULL	SOIL	40.057g	2mL	35.0
KWG1805796-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SOIL	40.011g	2mL	35.0
KWG1805796-3	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.064g	2mL	25.6
KWG1805796-4	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.114g	2mL	25.6
KWG1805796-5	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805796-6	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805796-1	K1810430-005	KQ1815762-01
KWG1805796-2	K1810430-005	KQ1815762-02
KWG1805796-3	K1810683-002	KQ1815762-03
KWG1805796-4	K1810683-002	KQ1815762-04
KWG1805796-5		KQ1815762-05
KWG1805796-6		KQ1815762-06

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-001	1702211					
K1810302-016	1702212					
K1810430-001	1702213					

Comments: IS = SV-557-100D

Started By: KPrescot Assisted By: —

Completed By: TPottsch Assisted By: —

Training: Yes / No (No) — Yes / No (No)

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra 11514

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18

Extracts Examined: (Yes) / No

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810430-002	1702214					
K1810430-003	1702215					
K1810430-004	1702216					
K1810430-005	1702217					
K1810430-006	1702218					
K1810430-007	1702219					
K1810430-008	1702220					
K1810430-009	1702221					
K1810430-010	1702222					
K1810430-011	1702223					
K1810683-001	1702224					
K1810683-002	1702225					
K1810683-003	1702226					
K1810683-004	1702227					
KWG1805796-1	1702228					
KWG1805796-2	1702229					
KWG1805796-3	1702230					
KWG1805796-4	1702231					
KWG1805796-5	1702232					
KWG1805796-6	1702233					

Comments:

Started By: KPrescot Assisted By: — Training

Completed By: TPottsch Assisted By: — Yes No

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra Yes No

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18 Extracts Examined: Yes No

Preparation Information

11/14

Group ID:	KWG1805796	Prep Method:	EPA 3541	Prep Date:	11/07/18 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µl	Spike Added µl
1	K1810270-001	N3-0to26-101518	.02	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	–
2	K1810302-016	A1-0to30-102018	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
3	K1810430-001	E-8.99-0to28-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
4	K1810430-002	C-8.94-0to27-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
5	K1810430-003	D-8.90-0to27-102418 1A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
6	K1810430-004	D-8.83-0to25-102418 1B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
7	K1810430-005	E-9.02-0to26-102418 1C	.02	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
8	K1810430-006	B-9.00-0to29-102418 1D	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
9	K1810430-007	512-0to29-102418 1E	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
10	K1810430-008	D-9.09-0to29-102418 1F	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
11	K1810430-009	A-9.03-0to26-102418 2A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
12	K1810430-010	B-9.15-0to30-102418 2B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
13	K1810430-011	G-9.15-0to18-102418 2C	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
14	K1810683-001	PDI-ST-T06B-1810 2D	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
15	K1810683-002	PDI-ST-T06A-1810 2E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
16	K1810683-003	PDI-ST-T07A-1810 2F	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
17	K1810683-004	PDI-ST-T07B-1810 3A	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
18	KWG1805796-1	Matrix Spike K1810430-005 3B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		80

Comments: *See Pre-Prep Information Benchsheet. KRP 11/07/18. PREPRUN: 325303

Surrogate ID: AP: SVM59-50D 100/150ppm XP: 03/04/19 20ul Syringe. S-92.

Spike ID: SIM PAH: SVM59-51F 25ppm XP: 03/07/19 ~~200ul~~ E.E. KRP 11/07/18 80ul Syringe. S-9

Witness: [signature] 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: –

Group ID:	KWG1805796	**Prep Method:**	EPA 3541						**Prep Date:**	11/07/18 00:00			
Department:	Semivoa GCMS												

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
19	KWG1805796-2	Duplicate Matrix Spike K1810430-005 3C	.01	✓	8270D PAH SIM ULL	SOIL	*	N/A	10	2	20	80
20	KWG1805796-3	Matrix Spike K1810683-002 3D	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
21	KWG1805796-4	Duplicate Matrix Spike K1810683-002 3E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
22	KWG1805796-5	Lab Control Sample 3F	-	-	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		-
23	KWG1805796-6	Method Blank	-	-	8270D PAH SIM ULL	SEDIMENT	40.332		10	2		-

Comments: * See Pre-Prep Information Benchsheet. KRP 11/07/18.

Surrogate ID: SEE PAGE 1

Spike ID: SEE PAGE 1

Witness: 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: -

Printed: 11/07/2018 08:45:56 Preparation Information Page 2 of 2

u:\Stealth\Crystal.rpt\prep2.rpt

Additional Prep Information for EPA 3541
PAH

Service Request K1810270/0302/0430/0683 Workgroup KWG1805796

Sulfate Lot #187085209 DCM (GC²) Lot #DV301 Glass Wool Lot# 213179999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-01/02/03

Soxtherm Start (Time/Date/Initial): 1345 11/07/18 KLP

Soxtherm Stop (Time/Date/Initial): 0755 11/08/18 KLP

N-Evap (Time/Date/Initial): 1328 11/8/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 10:14 11/9/18 TP
Hexane Lot # 195734 N-Evap Therm. ID: X-SVM-010
Temp as measured: 0.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 14:01 11/9/18 TP

Silica Column Lot # Ext002-350 1:1 Hexane/DCM Reagent Lot # Ext002-32X
Turbovap (Time/Date/Initial): 14:00 11/12/18 TP Turbovap Therm. ID: K-Turbovap-005
Temp as measured: 28.0 °C Correction factor: 0.0 °C Adjusted temp: 28.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20176045

Extract Storage: Hi Doggy

Completed (Time/Date/Initial): 17:04 11/12/18 TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason: Frozen)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325303 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-09-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810430-001	.01	PAH SIM ULL	40.037g		PrepComments:GBEATLEY k-balance-49
2	K1810430-002	.01	PAH SIM ULL	40.004g		PrepComments:GBEATLEY k-balance-49
3	K1810430-003	.01	PAH SIM ULL	40.007g		PrepComments:GBEATLEY k-balance-49
4	K1810430-004	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
5	K1810430-005	.02	PAH SIM ULL	40.028g		PrepComments:GBEATLEY k-balance-49
6	K1810430-005 MS KQ1815762-01	.01	PAH SIM ULL	40.057g		PrepComments:GBEATLEY k-balance-49
7	K1810430-005 DMS KQ1815762-02	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
8	K1810430-006	.01	PAH SIM ULL	40.009g		PrepComments:GBEATLEY k-balance-49
9	K1810430-007	.01	PAH SIM ULL	40.052g		PrepComments:GBEATLEY k-balance-49
10	K1810430-008	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
11	K1810430-009	.01	PAH SIM ULL	40.044g		PrepComments:GBEATLEY k-balance-49
12	K1810430-010	.01	PAH SIM ULL	40.077g		PrepComments:GBEATLEY k-balance-49
13	K1810430-011	.01	PAH SIM ULL	40.080g		PrepComments:GBEATLEY k-balance-49

Relinquished By:	Date/Time: 10/30/18 1125	Received By:	Date/Time: 11/05/18 1330

325303

Pre-Prep Information Benchsheet

Prep Run #: ~~325583~~ **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-15-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810683-001	.01	PAH SIM ULL	40.124g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
2	K1810683-002	.02	PAH SIM ULL	40.049g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
3	K1810683-002 MS KQ1816031-01	.02	PAH SIM ULL	40.064g		PrepComments:DMADDEN K-Balance-50
4	K1810683-002 DMS KQ1816031-02	.02	PAH SIM ULL	40.114g		PrepComments:DMADDEN K-Balance-50
5	K1810683-003	.01	PAH SIM ULL	40.332g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
6	K1810683-004	.01	PAH SIM ULL	40.085g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50

All samples & QC moved to prep run # 325303. KLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10:47 11.2.18	Kassidy Van	11/05/18 1348

315303

Pre-Prep Information Benchsheet

Prep Run #: ~~325832~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	PAH SIM ULL	40.062g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810302-016	.02	PAH SIM ULL	40.044g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018

Samples added to prep run # 315303. LLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.6.18 1631	LLP	11/07/18

Injection Log

Directory: J:\ms14\data\111418

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1114F001.D	1.	DFTPP @ 10ug/mL | SVM59-57A		14 Nov 2018 05:51
2	2	1114F002.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-89N		14 Nov 2018 06:17
3	3	1114F003.D	1.	KWG1805796-6 MB		14 Nov 2018 06:42
4	4	1114F004.D	1.	KWG1805796-5 LCS		14 Nov 2018 07:08
5	5	1114F005.D	1.	KWG1805775-4 MB		14 Nov 2018 07:33
6	6	1114F006.D	1.	KWG1805775-3 LCS		14 Nov 2018 07:58
7	7	1114F007.D	1.	KWG1805775-5 SRM		14 Nov 2018 08:23
8	8	1114F008.D	1.	KWG1805775-5 SRM 5X (NR)		14 Nov 2018 08:48
9	9	1114F009.D	1.	K1810669-002MS 5X		14 Nov 2018 09:14
10	10	1114F010.D	1.	K1810669-002DMS 5X		14 Nov 2018 09:40
11	11	1114F011.D	1.	K1810669-002DIL 5X		14 Nov 2018 10:05
12	12	1114F012.D	1.	K1810669-001DIL 5X		14 Nov 2018 10:30
13	13	1114F013.D	1.	K1810270-001DIL 5X		14 Nov 2018 10:56
14	14	1114F014.D	1.	K1810430-001DIL 5X		14 Nov 2018 11:21
15	15	1114F015.D	1.	K1810430-002DIL 5X		14 Nov 2018 11:46
16	16	1114F016.D	1.	K1810430-003DIL 5X		14 Nov 2018 12:12
17	17	1114F017.D	1.	K1810430-004DIL 5X		14 Nov 2018 12:39
18	18	1114F018.D	1.	K1810430-006DIL 5X		14 Nov 2018 13:05
19	19	1114F019.D	1.	K1810430-007DIL 5X		14 Nov 2018 13:31
20	20	1114F020.D	1.	K1810430-008DIL 5X		14 Nov 2018 13:57
21	21	1114F021.D	1.	K1810430-011DIL 20X		14 Nov 2018 14:25
22	22	1114F022.D	1.	K1810430-005MS 10X		14 Nov 2018 14:51
23	23	1114F023.D	1.	K1810430-005DMS 10X		14 Nov 2018 15:17
24	24	1114F024.D	1.	K1810430-005DIL 10X		14 Nov 2018 15:43
25	25	1114F025.D	1.	K1810430-009DIL 10X		14 Nov 2018 16:09
26	26	1114F026.D	1.	K1810430-010DIL 10X		14 Nov 2018 16:35
27	27	1114F027.D	1.	K1810669-002	* Lims # 615927	14 Nov 2018 17:01
28	28	1114F028.D	1.	K1810669-001		14 Nov 2018 17:27
29	100	1114F029.D	1.	DCM	CAL 5779	14 Nov 2018 17:53
30	100	1114F030.D	1.	DCM		14 Nov 2018 18:20
31	100	1114F031.D	1.	DCM	12/3/18	14 Nov 2018 18:46

NR

5

DILUTION LOG MS 14

Date: 11/14/18 Prepared by: L Weiskopf Solvent Lot #: DI 383

LAB ID.	ALIQUOT	FINAL VOLUME	DILUTION FACTOR	COMMENTS
KWG5795-SRM	100ul	0.5mL	5X	matrix
K1810669-2MS				
-2DUS				
-2				
-1				
K1810270-1				
K1810430-1				
-2				
-3				
-4				
-6				
-7				
-8				
-11	25ul		20X	
-5MS	50ul		10X	
-5DUS				
-5				
-9				
-10				

11/15/18

Injection Log

Directory: J:\MS14\DATA\071118

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0711F001.D	1.	DFTPP @ 10ug/mL | SVM59-5B		11 Jul 2018 07:24
2	2	0711F002.D	1.	IB		11 Jul 2018 07:50
3	3	0711F003.D	1.	SIM-PAH ICAL @.002ug/mL | SVM59-4A		11 Jul 2018 08:16
4	4	0711F004.D	1.	SIM-PAH ICAL @.004ug/mL | SVM59-4B		11 Jul 2018 08:42
5	5	0711F005.D	1.	SIM-PAH ICAL @.008ug/mL | SVM59-4C		11 Jul 2018 09:08
6	6	0711F006.D	1.	SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D		11 Jul 2018 09:34
7	7	0711F007.D	1.	SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E		11 Jul 2018 10:00
8	8	0711F008.D	1.	SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F		11 Jul 2018 10:26
9	9	0711F009.D	1.	SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G		11 Jul 2018 10:52
10	10	0711F010.D	1.	SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H		11 Jul 2018 11:18
11	11	0711F011.D	1.	SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I		11 Jul 2018 11:44
12	12	0711F012.D	1.	SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J		11 Jul 2018 12:10
13	13	0711F013.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM59-4K		11 Jul 2018 12:36
~~14~~	~~14~~	~~0711F014.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 13:02~~
~~15~~	~~15~~	~~0711F015.D~~	~~1.~~	~~KQ1808822-3 MB~~		~~11 Jul 2018 13:28~~
~~16~~	~~16~~	~~0711F016.D~~	~~1.~~	~~KQ1808822-1 LCS~~		~~11 Jul 2018 13:55~~
~~17~~	~~17~~	~~0711F017.D~~	~~1.~~	~~KQ1808822-2 DLCS~~		~~11 Jul 2018 14:21~~
~~18~~	~~18~~	~~0711F018.D~~	~~1.~~	~~K1806167-007~~		~~11 Jul 2018 14:47~~
~~19~~	~~19~~	~~0711F019.D~~	~~1.~~	~~K1806167-008~~		~~11 Jul 2018 15:14~~
~~20~~	~~20~~	~~0711F020.D~~	~~1.~~	~~K1805517-004~~		~~11 Jul 2018 15:40~~
~~21~~	~~21~~	~~0711F021.D~~	~~1.~~	~~K1805519-006~~		~~11 Jul 2018 16:07~~
~~22~~	~~14~~	~~0711F022.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 16:34~~

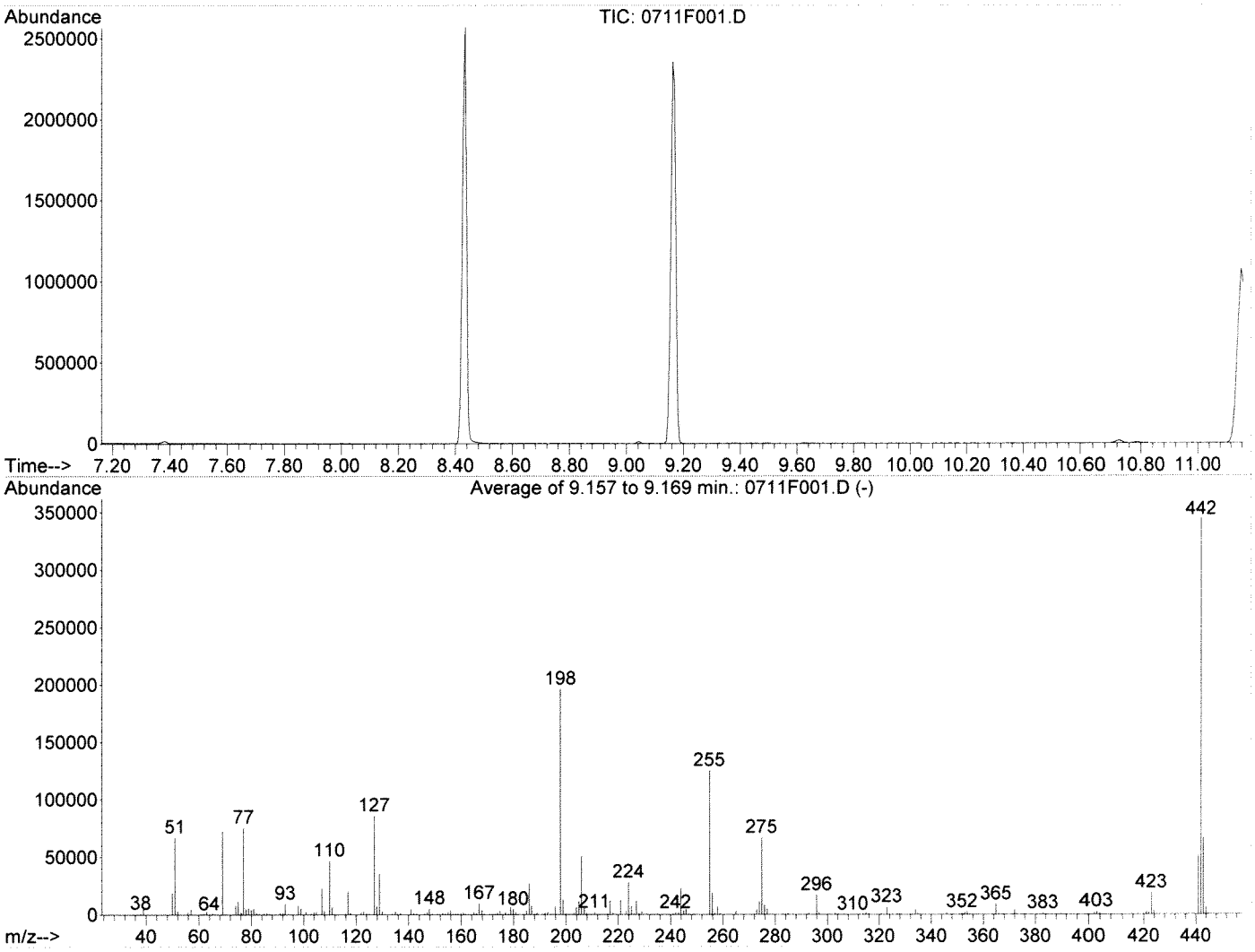
SIM-PAH ICAL
CAL15779

JUL 16 2018

JUL 27 2018

DFTPP

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 522, 523, 524; Background Corrected with Scan 516

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.2	67178	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.1	72816	PASS
70	69	0.00	2	0.8	565	PASS
127	198	10	80	43.8	86077	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.9	196352	PASS
199	198	5	9	6.5	12793	PASS
275	198	10	60	34.1	67032	PASS
365	442	1	50	2.6	8831	PASS
441	443	0.01	100	76.0	51069	PASS
442	442	30	100	100.0	344981	PASS
443	442	15	24	19.5	67152	PASS

JUL 16 2018

JUL 27 2018

J:\MS14\DATA\071118\0711F001.D A_DFTPP.M Mon Jul 16 09:16:46 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	422	52.00	3270	66.10	60	77.00	75757
38.00	1061	52.95	252	66.90	133	78.00	5265
39.00	5050	54.95	367	67.20	111	78.95	6051
39.90	450	55.95	2219	68.95	72816	79.95	4460
41.00	145	57.00	4515	69.85	565	81.00	5387
42.95	189	57.90	205	70.90	56	81.95	1583
44.00	59	60.95	997	73.05	769	82.95	1369
44.90	126	61.95	1079	74.00	8076	83.90	282
48.10	73	63.00	2719	75.00	11602	84.95	1177
50.00	19013	63.95	413	76.00	1399	85.95	1822
51.00	67178	65.00	1325	76.20	1668	86.95	803

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	285	99.95	506	112.85	198	124.90	1126
88.90	130	100.90	2768	114.80	159	126.95	86077
90.95	1445	101.90	87	116.05	1356	127.95	7121
92.00	1657	102.90	1279	116.90	20493	128.90	35413
92.95	9598	103.95	2203	117.85	1421	129.95	2909
93.90	764	104.90	2137	118.85	202	130.90	596
94.90	260	106.95	23325	120.00	347	131.85	286
95.95	399	107.95	3588	121.05	223	132.90	113
97.00	184	109.90	46866	121.90	1845	133.85	1020
97.95	7812	110.95	6574	122.90	2792	134.90	2878
98.90	5707	111.90	845	123.95	974	135.85	1123

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.95	1387	146.95	2258	157.90	1033	168.90	418
137.90	180	147.90	5200	158.85	675	169.10	172
138.10	80	148.95	1069	159.90	1384	169.85	345
138.95	357	149.90	242	160.90	2084	170.40	79
139.95	518	150.95	648	161.85	666	170.90	499
140.90	4757	151.75	466	162.95	226	171.80	868
141.90	1547	152.90	1588	163.95	352	172.95	967
142.90	919	153.90	1093	164.85	2040	173.90	1870
143.90	287	154.95	2265	165.85	1502	174.90	3597
144.85	308	155.95	3794	166.90	9686	176.00	1075
145.95	1008	156.95	752	167.90	4018	176.90	1875

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	723	186.90	8039	198.90	12793	210.30	330
178.90	6732	187.95	833	199.90	953	210.90	2074
179.90	4619	188.90	1815	201.35	1105	211.80	146
180.90	2110	189.85	379	202.90	1391	212.90	61
181.95	406	190.95	863	203.95	6760	214.10	53
182.70	66	191.90	2255	204.95	11699	214.95	698
182.95	174	192.95	2443	205.95	51016	215.85	1357
183.80	140	193.90	500	206.95	6909	216.90	12207
183.95	404	194.90	286	207.90	1813	217.85	1663
184.95	3360	195.90	6967	208.90	543	218.90	142
185.90	27480	197.90	196352	209.90	294	220.90	12633

JUL 16 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.90	3179	233.85	760	244.95	3370	255.90	18613
223.90	28144	234.90	857	245.90	4758	256.95	1466
224.95	7360	235.90	530	246.90	1019	257.90	7031
225.95	994	236.90	879	247.80	162	258.95	1297
226.90	12054	237.80	67	248.10	77	259.80	131
227.85	1634	238.85	481	248.85	832	260.95	199

JUL 27 2018

229.95	377	240.85	634	250.90	178	264.90	3018
230.90	992	241.90	1624	251.85	276	265.85	450
231.90	200	243.00	1778	252.95	599	269.95	129
232.90	244	243.90	23113	254.90	125421	270.90	256

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.95	496	284.85	977	301.85	234	316.95	160
272.90	4336	285.95	143	302.95	2145	320.95	658
273.90	11367	288.75	165	303.95	691	321.95	381
274.90	67032	289.80	209	307.85	308	322.95	6548
275.90	8655	291.85	178	308.80	217	323.95	1035
276.90	5306	292.90	1246	309.85	251	324.80	52
277.90	771	293.95	326	310.90	52	325.85	184
278.85	205	295.90	17068	312.95	171	326.90	968
281.95	112	296.90	2301	313.90	944	327.80	661
282.90	631	297.80	68	314.90	2064	331.85	496
283.90	432	300.90	235	315.90	1065	332.85	680

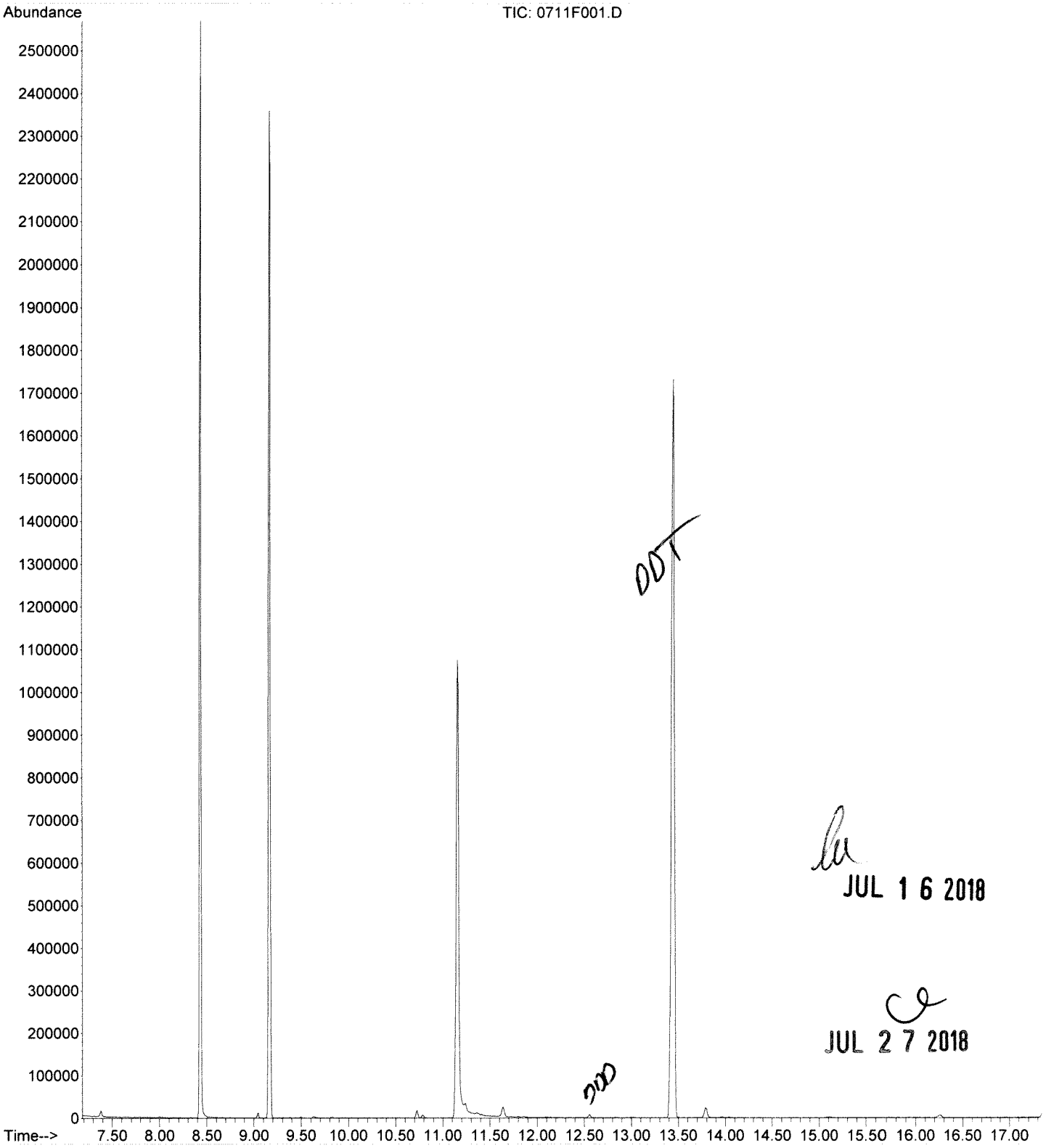
Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	4464	353.90	2529	382.95	1153	420.95	2473
334.90	1166	354.90	486	383.85	376	421.95	2435
339.80	51	358.85	126	389.95	690	422.95	18744
340.85	729	364.90	8831	390.95	465	423.90	3777
341.80	50	365.90	1261	391.90	350	424.95	479
342.00	143	369.95	218	400.90	274	439.40	77
345.90	1535	370.85	633	401.90	1735	441.00	51069
346.75	180	371.95	3936	402.90	2497	442.00	344981
350.75	114	372.90	1005	403.90	1060	443.00	67152
351.90	2058	373.85	127	404.80	57	443.95	6376
352.90	1618	376.90	51	415.00	64	444.90	445

JUL 16 2018

JUL 27 2018

File : J:\MS14\DATA\071118\0711F001.D
Operator : LWeiskopf
Acquired : 11 Jul 2018 7:24 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-5B
Misc Info :
Vial Number: 1



1	6.551	rBV	0.059		4433	6.534	6.593
2	6.628	rVB	0.059		4930	6.610	6.669
3	7.069	rBV	0.153		93262	7.022	7.175
4	7.381	rVB	0.094		22489	7.357	7.451
5	7.781	rVB	0.053		2074	7.769	7.822
6	7.904	rVB	0.047		3184	7.887	7.934
7	7.998	rVV	0.035		2540	7.981	8.016
8	8.434	rBV	0.124		2626380	8.398	8.522
9	8.751	rBV	0.041		2434	8.728	8.769
10	9.045	rVB	0.094		15370	8.992	9.086
11	9.163	rBV	0.118		2833533	9.104	9.222
12	9.310	rBV	0.053		2540	9.286	9.339
13	9.381	rVB	0.047		2669	9.363	9.410
14	9.498	rVB	0.047		3470	9.475	9.522
15	9.628	rBV	0.082		7018	9.598	9.681
16	9.822	rBV	0.076		4234	9.781	9.857
17	10.728	rBV	0.071		25758	10.686	10.757
18	10.786	rBV	0.059		9354	10.757	10.816
19	11.157	rBV	0.141		2070977	11.080	11.222
20	11.639	rVB	0.094		47781	11.592	11.686
21	11.851	rVB	0.071		6566	11.833	11.904
22	12.092	rBV	0.076		4460	12.051	12.127
23	12.551	rVB	0.082	ODD	12363	12.510	12.592
24	12.827	rVB	0.082		3949	12.804	12.886
25	12.998	rBV	0.047		2358	12.969	13.016
26	13.445	rBV	0.118	OOT	3799669	13.374	13.492
27	13.786	rBV	0.129		55536	13.727	13.857
28	13.963	rBV	0.071		3973	13.916	13.986
29	14.033	rBV	0.041		2081	14.021	14.063
30	15.086	rBV	0.065		3243	15.033	15.098
31	15.110	rVB	0.047		3085	15.098	15.145
32	16.257	rBV	0.106		18961	16.192	16.298
33	17.351	rBV	0.124		41324	17.298	17.421
34	17.821	rBV	0.035		2171	17.798	17.833
35	17.868	rBV	0.047		3073	17.833	17.880
36	18.098	rBV	0.159		129861	18.039	18.198
37	18.645	rVB	0.141		212579	18.615	18.756
38	19.092	rBV	0.165		383897	19.056	19.221
39	19.545	rBV	0.153		391093	19.509	19.662
40	20.103	rBV	0.153		441132	20.062	20.215
41	20.692	rBV	0.118		334151	20.650	20.768

OOT Breakdown

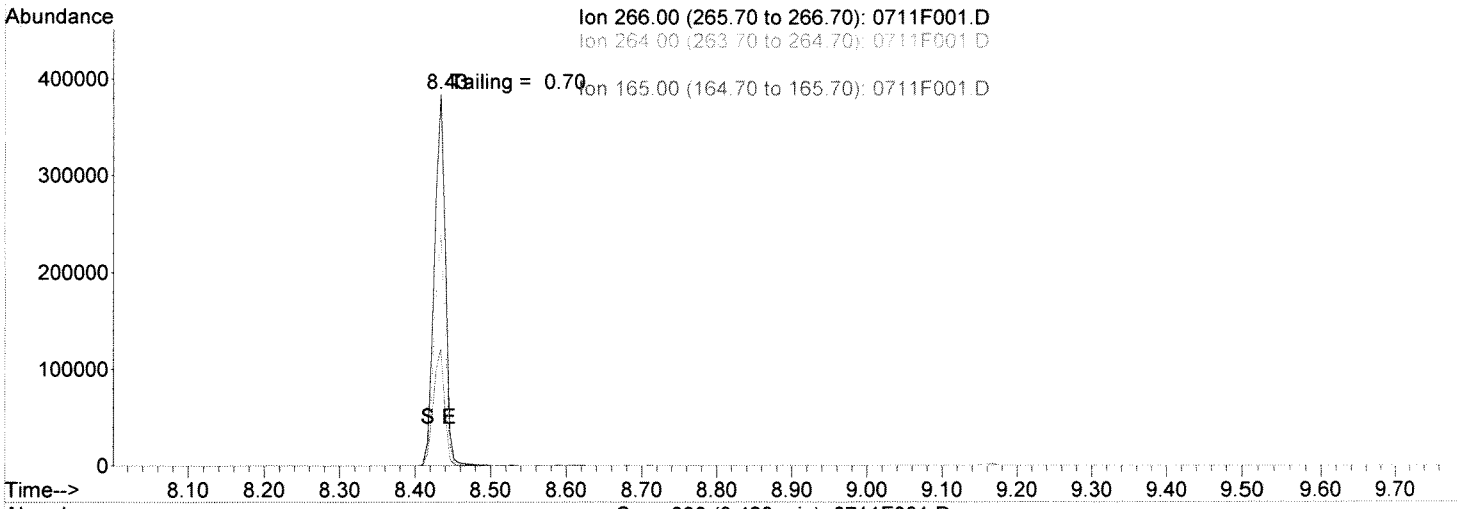
= 0.3%

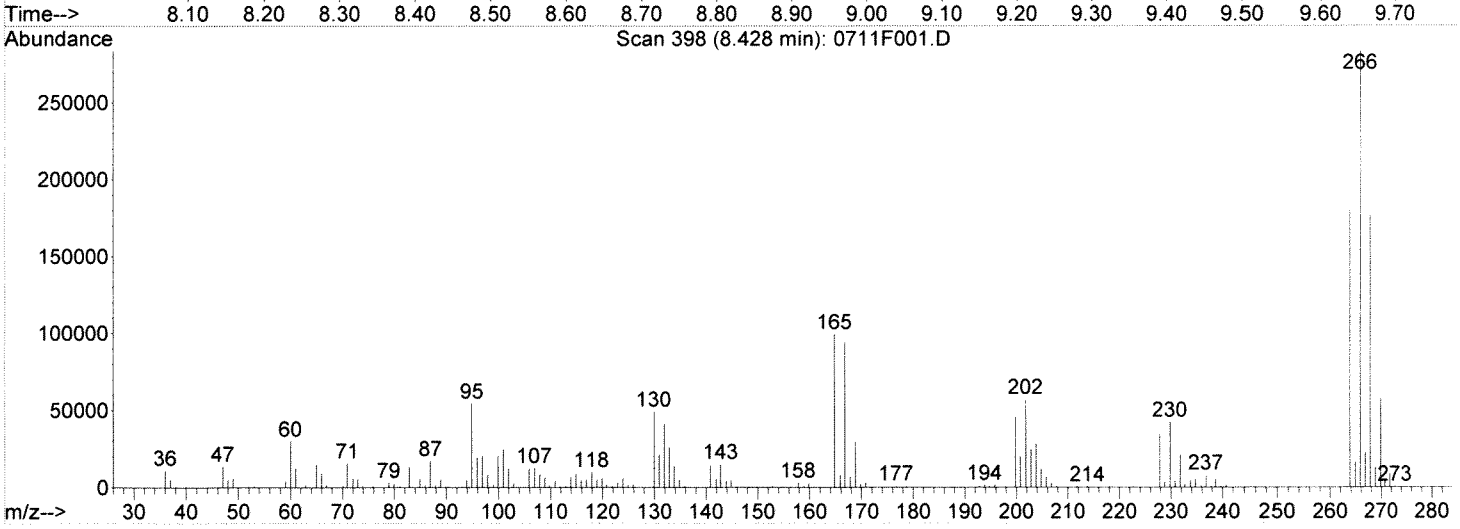
JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(1) Pentachlorophenol

7.37min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	62.30	0.00#
268.00	72.30	0.00#
165.00	42.00	0.00#

OK -27%

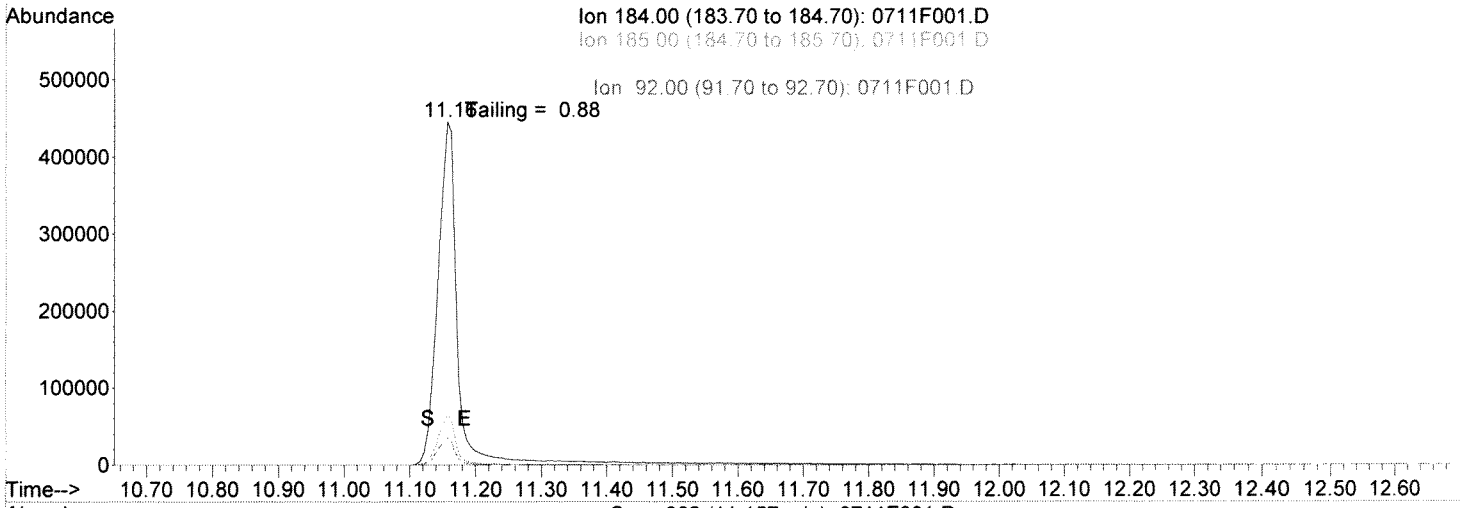
JUL 16 2018

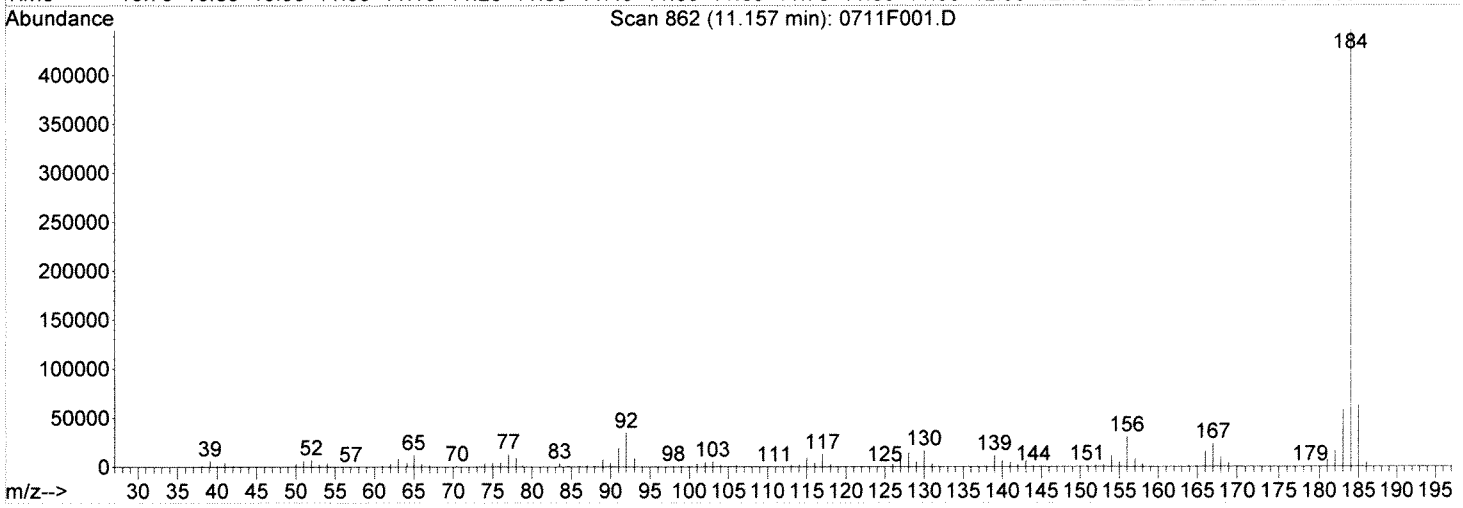
JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:15 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(3) Benzidine (T)

8.69min 0.00ug/ml

response 0

Ion	Exp%	Act%
184.00	100	0.00
185.00	14.70	0.00
156.00	9.50	0.00
92.00	7.60	0.00

JUL 16 2018

JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:28 2018

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	71486	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	36864	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	76395	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	90682	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	102113	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	0.00	152	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
13) Fluorene-d10	6.79	176	201	0.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.08%		
22) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
25) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Naphthalene	4.83	128	323	0.82	ng/ml	94
21) Fluoranthene	8.59	202	116	0.20	ng/ml	70
26) Benz(a)anthracene	10.15	228	342	0.60	ng/ml	73
27) Chrysene	10.19	228	118	0.21	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	156	0.24	ng/ml	81
31) Benzo(e)pyrene	12.97	252	134	0.22	ng/ml	85
32) Benzo(a)pyrene	13.11	252	126	0.24	ng/ml	75
33) Perylene	13.30	252	287	0.51	ng/ml	85
34) Indeno(1,2,3-cd)pyrene	15.46	276	117	0.25	ng/ml	89
35) Dibenz(a,h)anthracene	15.51	278	95	0.19	ng/ml#	1
36) Benzo(g,h,i)perylene	15.84	276	178	0.30	ng/ml	89

< 1/2 MRL

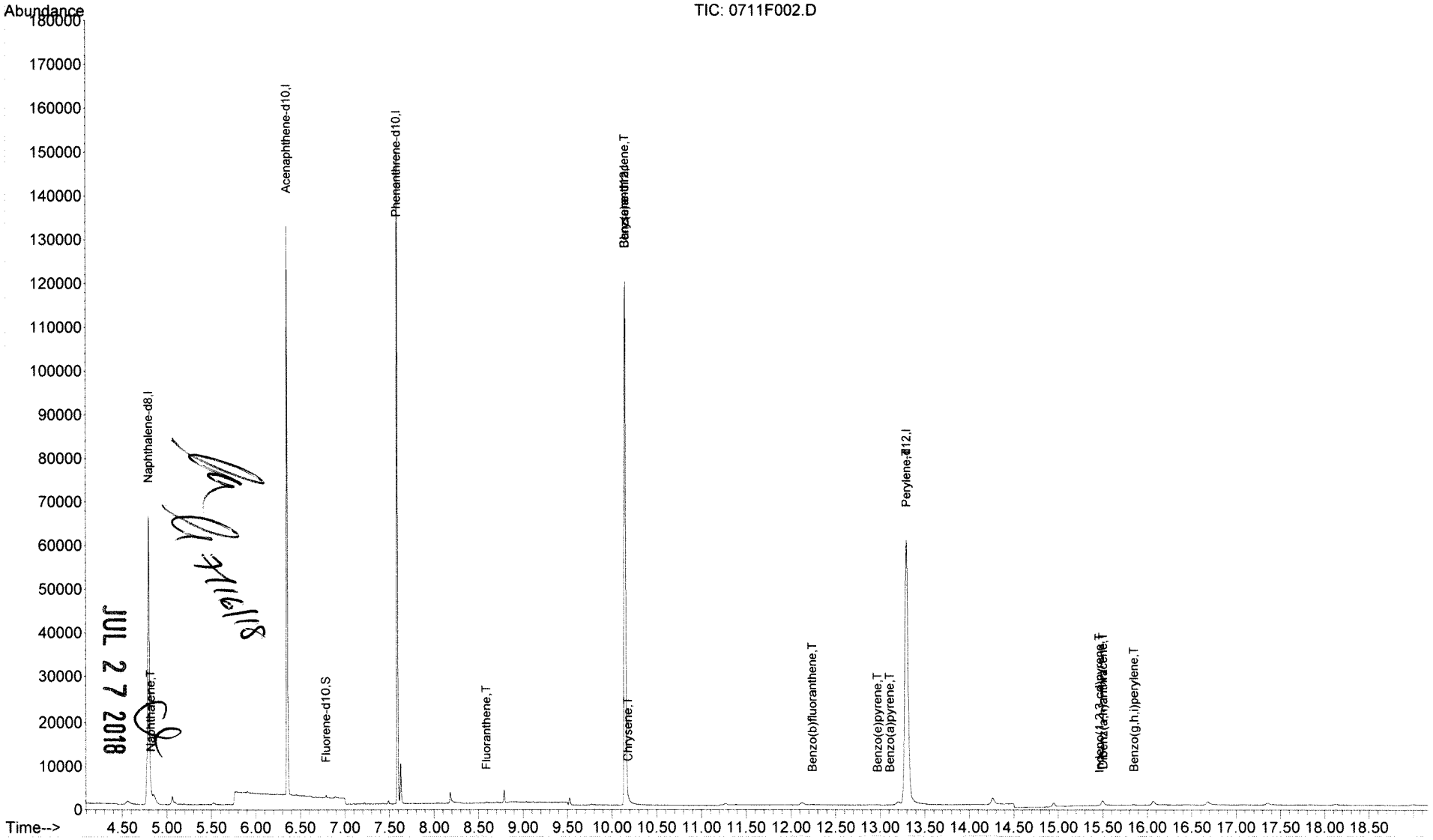
7/16/18

JUL 27 2018

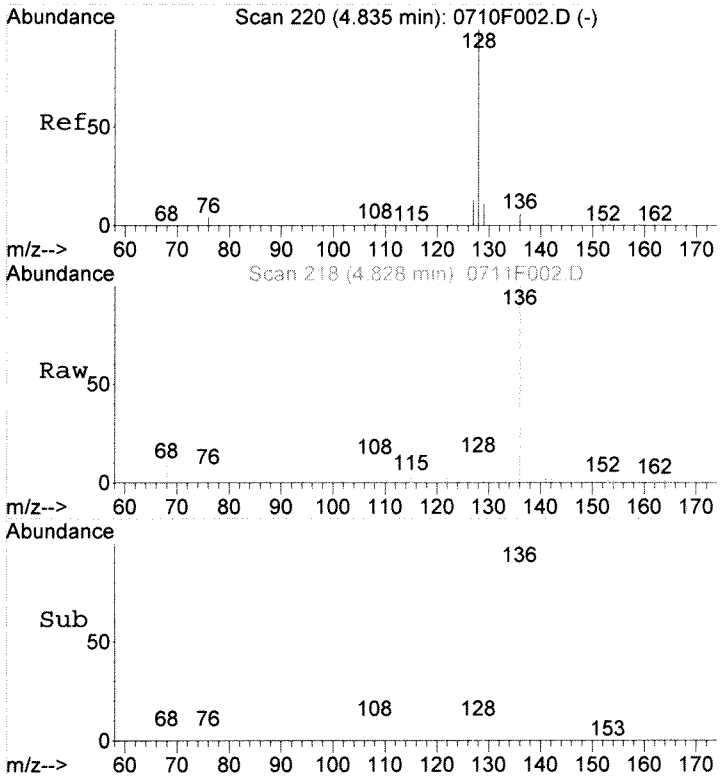
(#) = qualifier out of range (m) = manual integration
0711F002.D 071118PAH.M Mon Jul 16 09:16:23 2018 Page 1

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



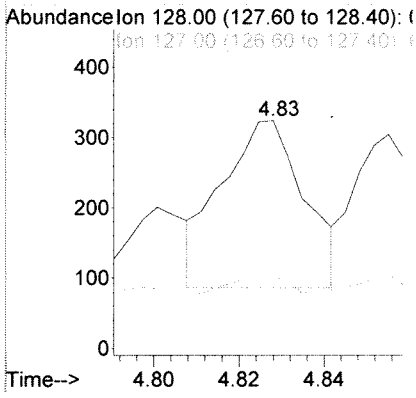
JUL 27 2018

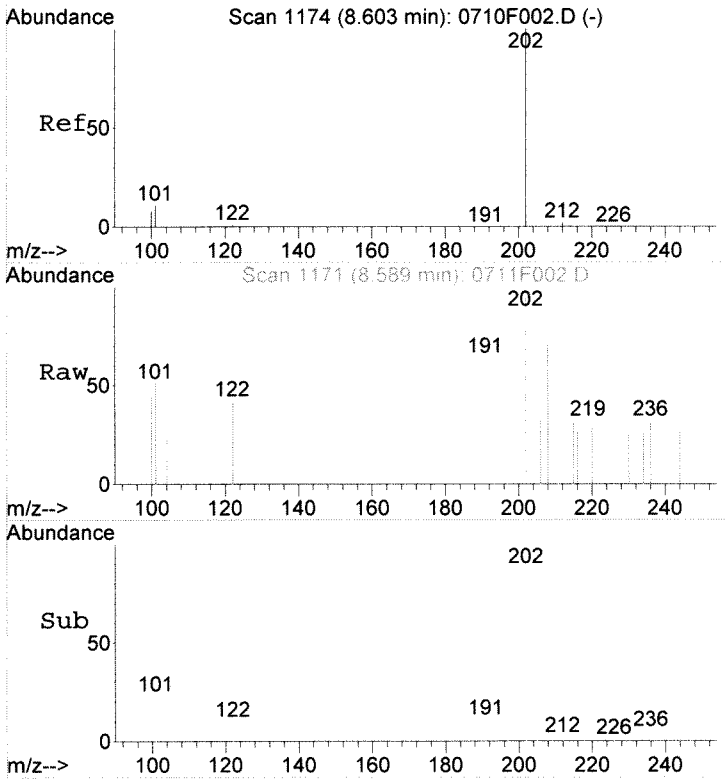


#2
Naphthalene
Concen: 0.82 ng/ml
RT: 4.83 min Scan# 218
Delta R.T. -0.01 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:128 Resp: 323

Ion	Ratio	Lower	Upper
128	100		
127	11.9	0.0	42.4
129	15.2	0.0	30.8

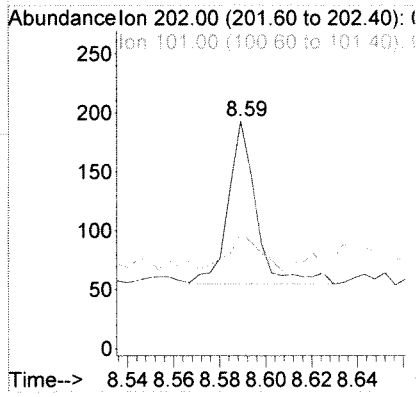




#21
Fluoranthene
Concen: 0.20 ng/ml
RT: 8.59 min Scan# 1171
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

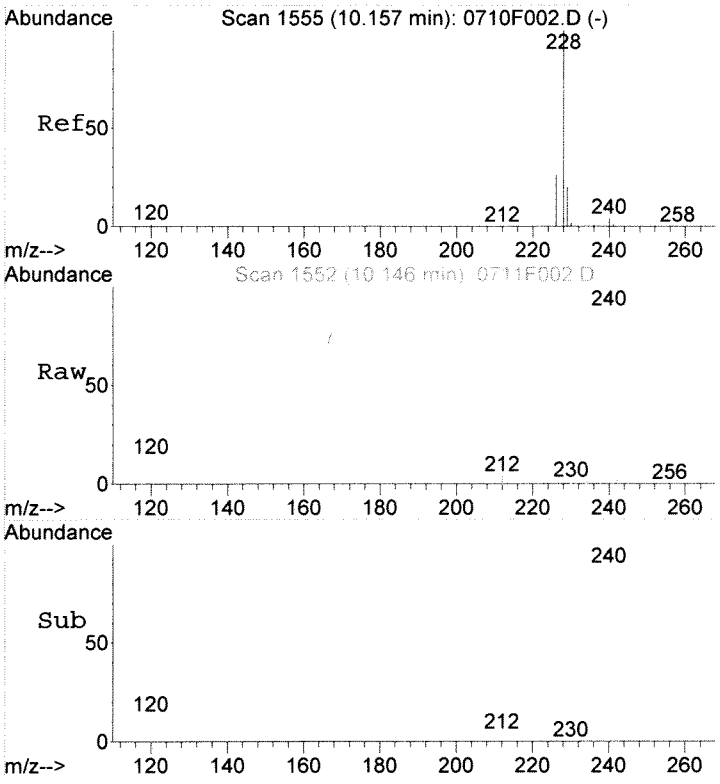
Tgt Ion:202 Resp: 116

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	40.7
100	23.9	0.0	27.5



7/16/18

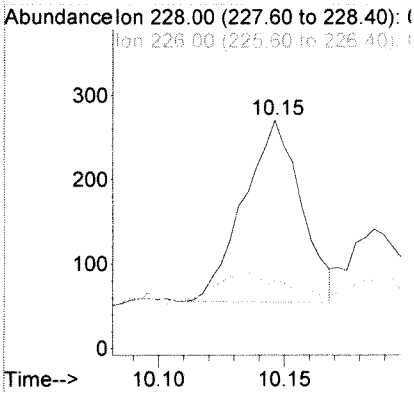
JUL 27 2018

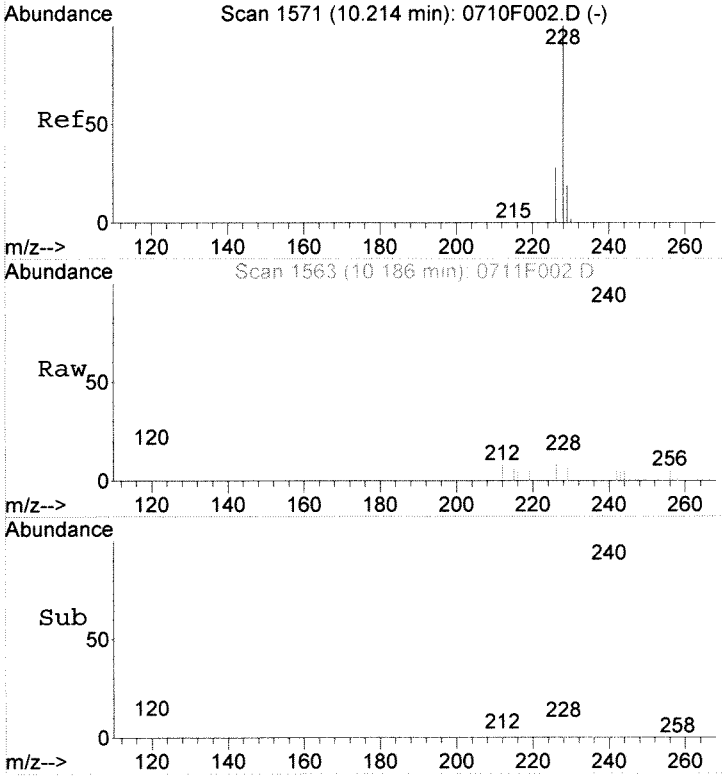


#26
Benz(a)anthracene
Concen: 0.60 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:228 Resp: 342

Ion	Ratio	Lower	Upper
228	100		
226	9.8	0.0	56.0
229	28.8	0.0	39.5

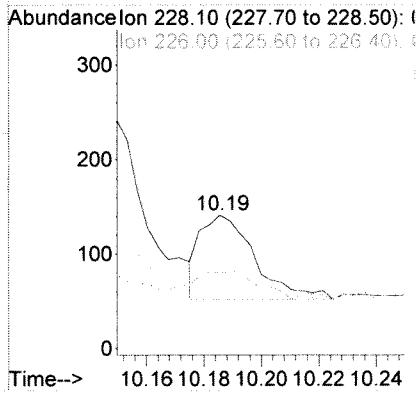




#27
Chrysene
Concen: 0.21 ng/ml
RT: 10.19 min Scan# 1563
Delta R.T. -0.03 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

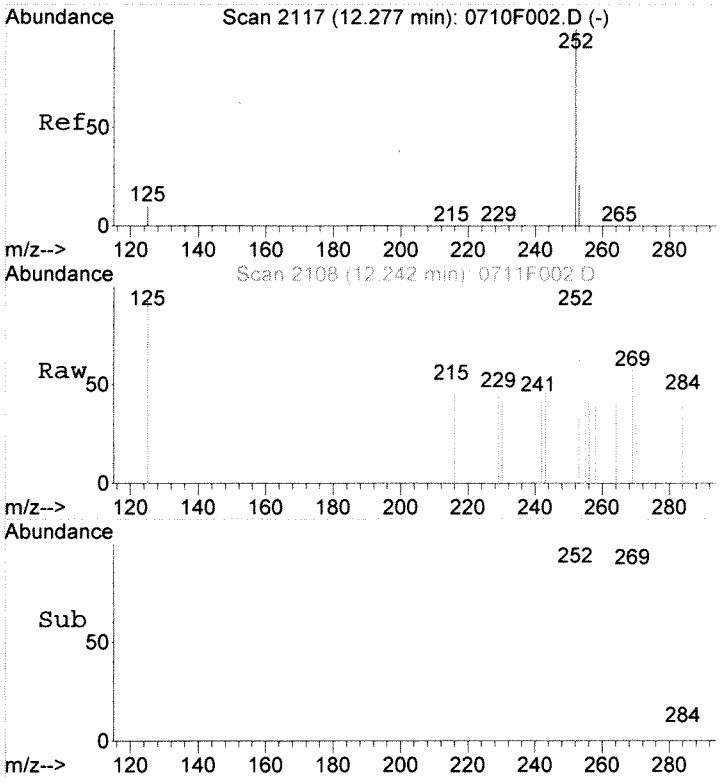
Tgt Ion:228 Resp: 118

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.6
229	18.0	0.0	39.4



7/16/18

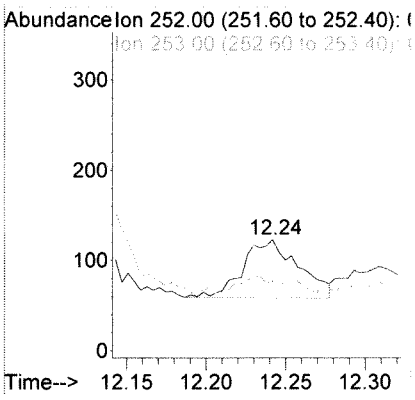
JUL 27 2018

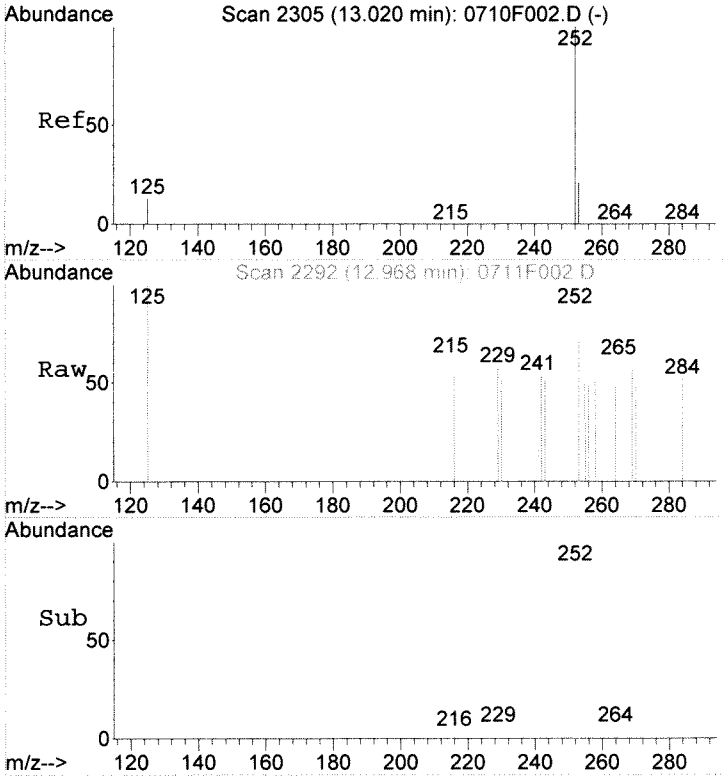


#29
Benzo(b)fluoranthene
Concen: 0.24 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 156

Ion	Ratio	Lower	Upper
252	100		
253	10.9	0.0	51.4
125	10.9	0.0	27.3

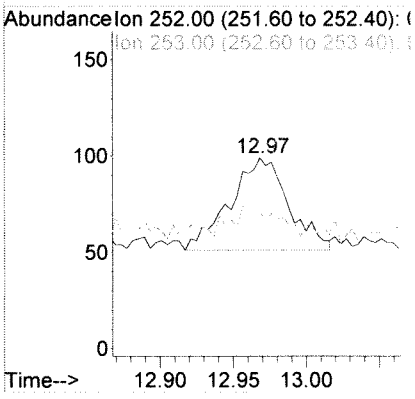




#31
Benzo(e)pyrene
Concen: 0.22 ng/ml
RT: 12.97 min Scan# 2292
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

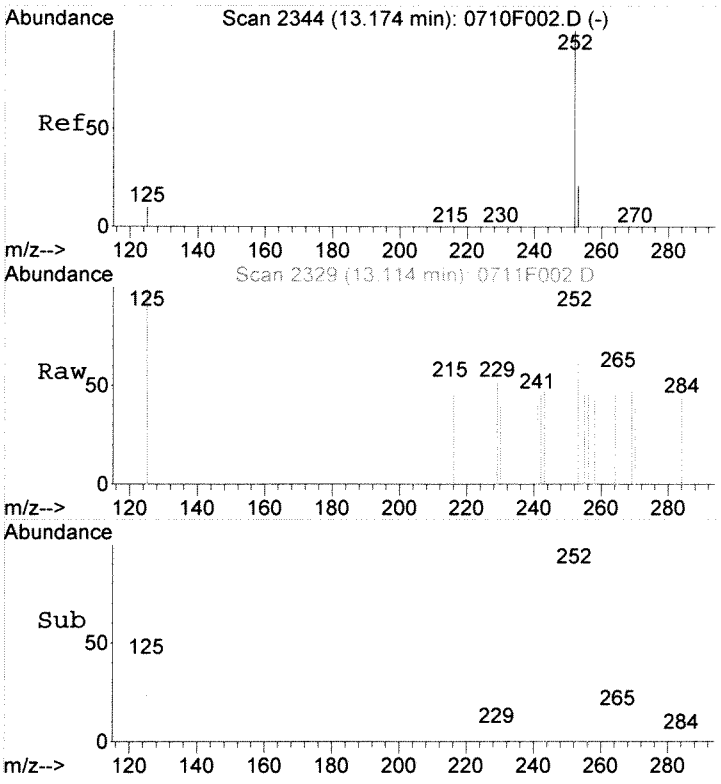
Tgt Ion:252 Resp: 134

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	51.3
125	0.0	0.0	30.8



7/16/18

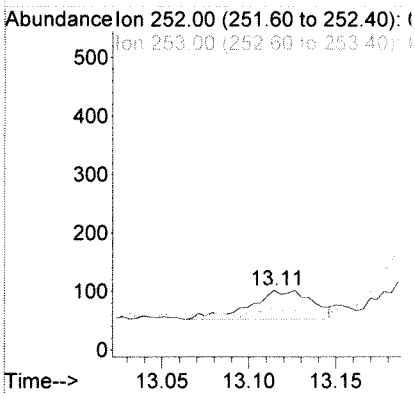
JUL 27 2018

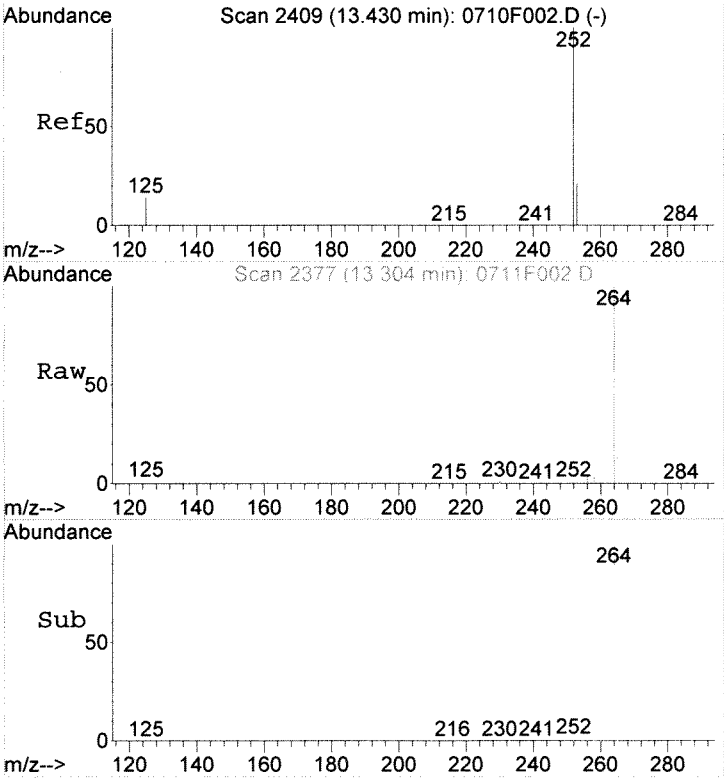


#32
Benzo(a)pyrene
Concen: 0.24 ng/ml
RT: 13.11 min Scan# 2329
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 126

Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	51.3
125	26.0	0.0	28.1

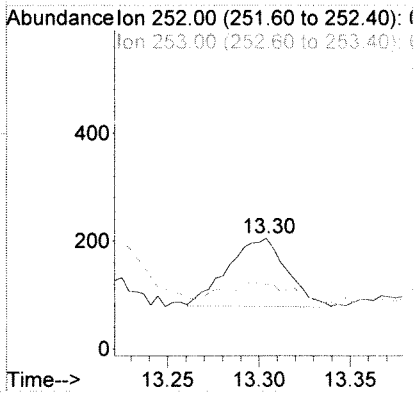




#33
Perylene
Concen: 0.51 ng/ml
RT: 13.30 min Scan# 2377
Delta R.T. -0.13 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

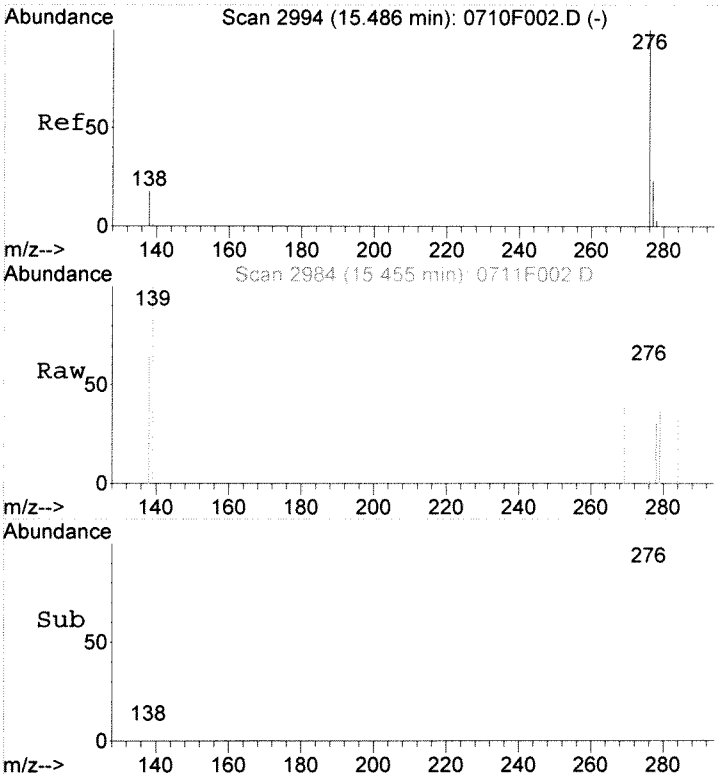
Tgt Ion:252 Resp: 287

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.4
125	22.2	0.0	31.3



7/16/18

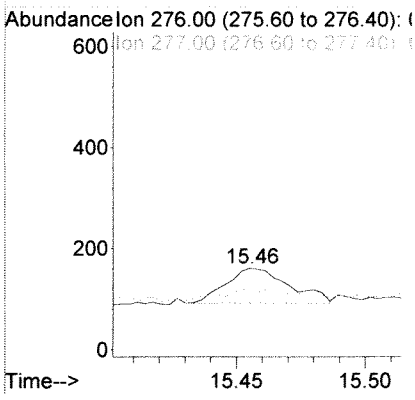
JUL 27 2018

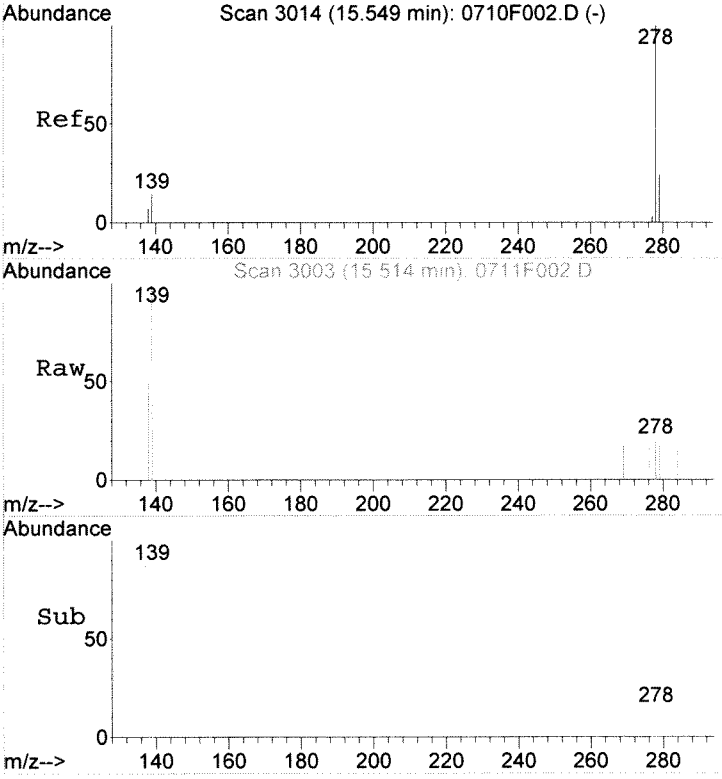


#34
Indeno(1,2,3-cd)pyrene
Concen: 0.25 ng/ml
RT: 15.46 min Scan# 2984
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 117

Ion	Ratio	Lower	Upper
276	100		
277	31.9	0.0	53.6
138	17.4	0.0	36.2

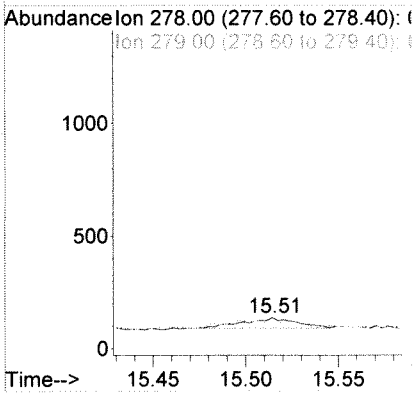




#35
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

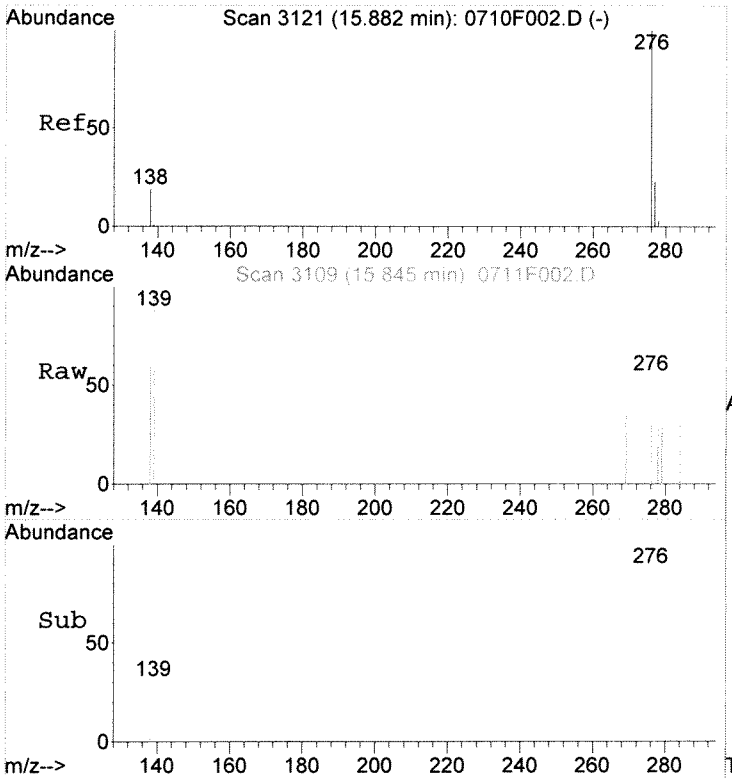
Tgt Ion:278 Resp: 95

Ion	Ratio	Lower	Upper
278	100		
279	31.3	0.0	53.6
139	702.1	0.0	33.4#



7/16/18

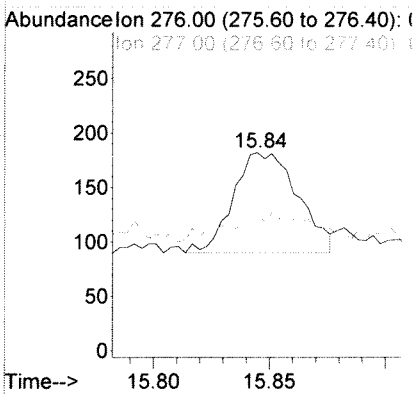
JUL 27 2018



#36
Benzo(g,h,i)perylene
Concen: 0.30 ng/ml
RT: 15.84 min Scan# 3109
Delta R.T. -0.05 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 178

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.5
138	23.9	0.0	37.2



7/16/18

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	66665	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	32181	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	67500	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72337	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	80376	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	416	2.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.22%		
13) Fluorene-d10	6.79	176	593	2.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.28%		
22) Fluoranthene-d10	8.58	212	796	1.90	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.19%		
25) Terphenyl-d14	8.93	244	986	3.00	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.30%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	947	2.59	ng/ml	96
4) 2-Methylnaphthalene	5.45	142	526	2.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	527	2.33	ng/ml	96
6) Biphenyl	5.86	154	672	2.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	469	2.33	ng/ml	96
9) Acenaphthylene	6.23	152	810	2.15	ng/ml	97
10) Acenaphthene	6.38	154	463	2.14	ng/ml	99
11) Dibenzofuran	6.53	168	724	2.09	ng/ml	90
12) 2,3,5-Trimethylnaphthalene	6.70	170	450	2.21	ng/ml	94
14) Fluorene	6.81	166	582	2.17	ng/ml	100
16) Dibenzothiophene	7.51	184	890	2.13	ng/ml	93
17) Phenanthrene	7.61	178	900m	2.18	ng/ml	
18) Anthracene	7.65	178	807	2.00	ng/ml	98
19) Carbazole	7.79	167	753	2.07	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	652	2.01	ng/ml	97
21) Fluoranthene	8.59	202	1013	2.02	ng/ml	97
24) Pyrene	8.79	202	1081	2.13	ng/ml#	48
26) Benz(a)anthracene	10.14	228	1082	2.36	ng/ml	98
27) Chrysene	10.19	228	887	1.96	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	956	1.91	ng/ml	95
30) Benzo(k)fluoranthene	12.31	252	934	1.86	ng/ml	94
31) Benzo(e)pyrene	12.97	252	971	1.99	ng/ml	96
32) Benzo(a)pyrene	13.12	252	876	2.08	ng/ml	90
33) Perylene	13.37	252	950	2.15	ng/ml	92
34) Indeno(1,2,3-cd)pyrene	15.45	276	990	2.67	ng/ml	94
35) Dibenz(a,h)anthracene	15.52	278	897	2.23	ng/ml	87
36) Benzo(g,h,i)perylene	15.85	276	1156	2.44	ng/ml	95

JUL 16 2018

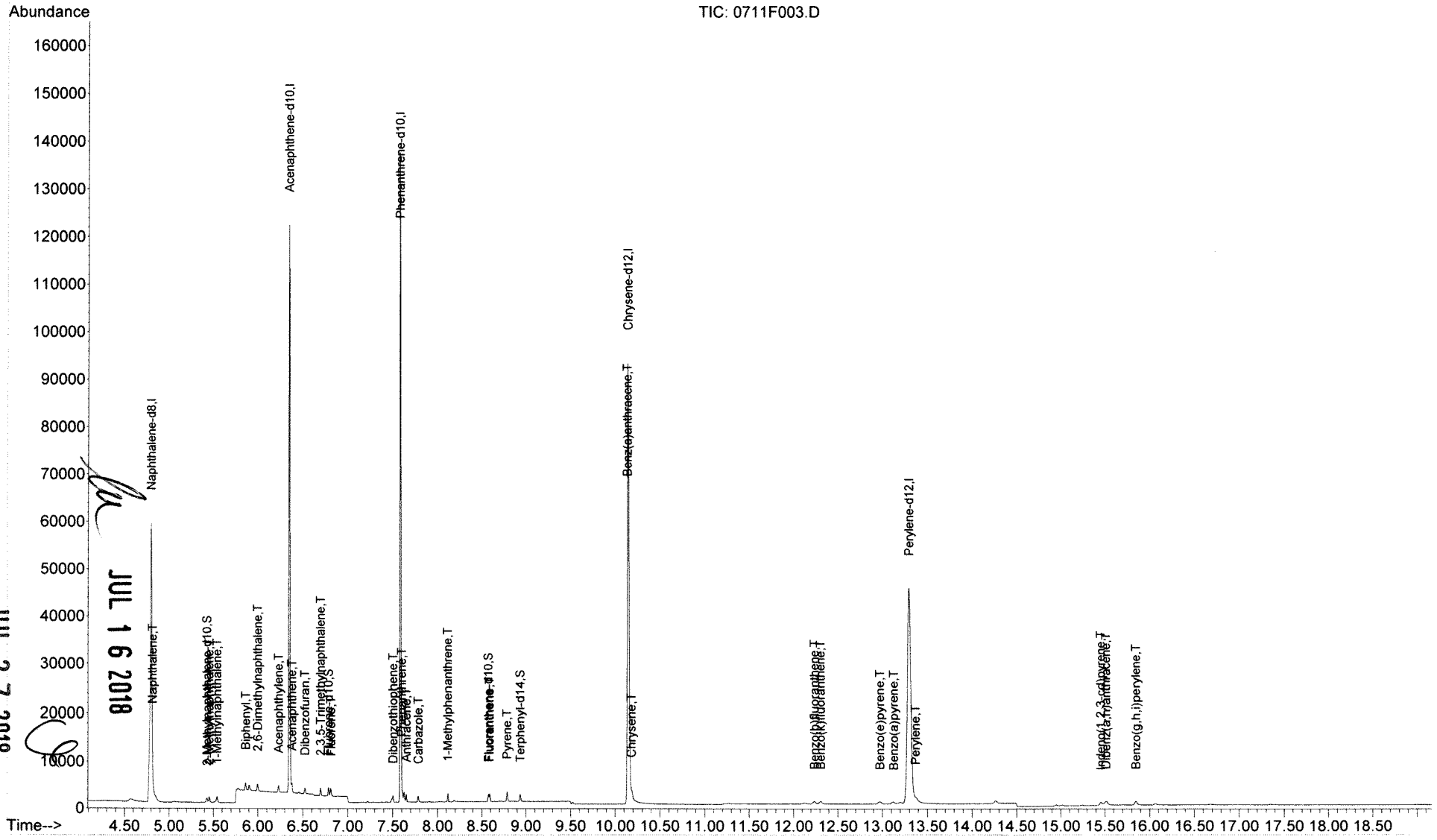
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F003.D 071118PAH.M Wed Jul 11 12:39:37 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

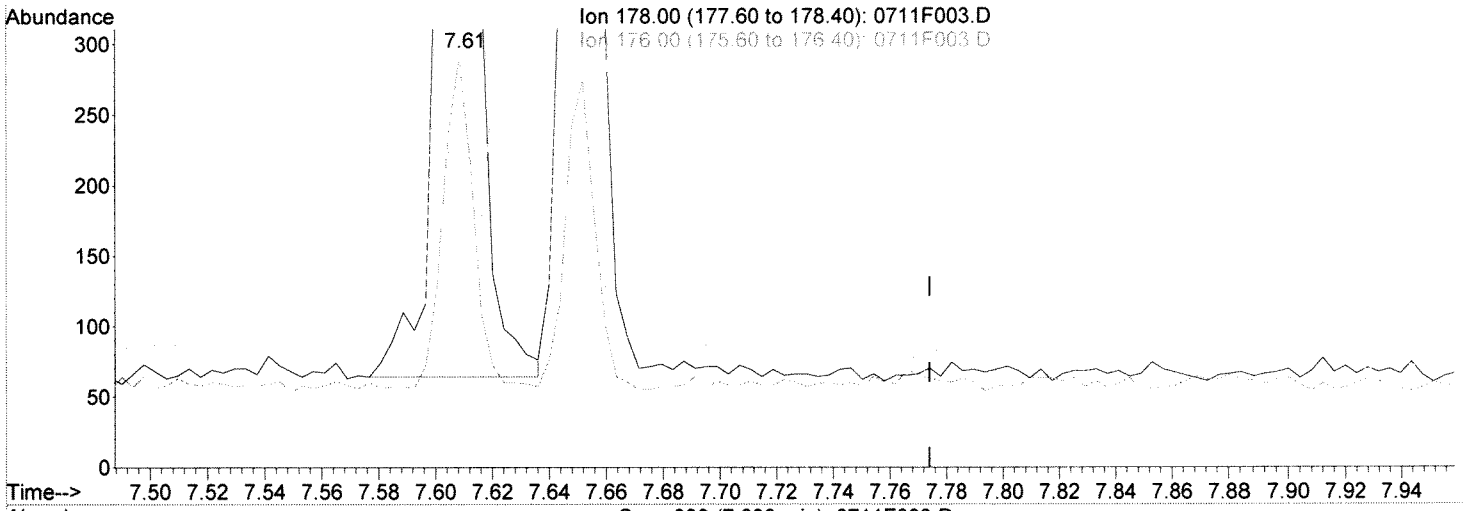


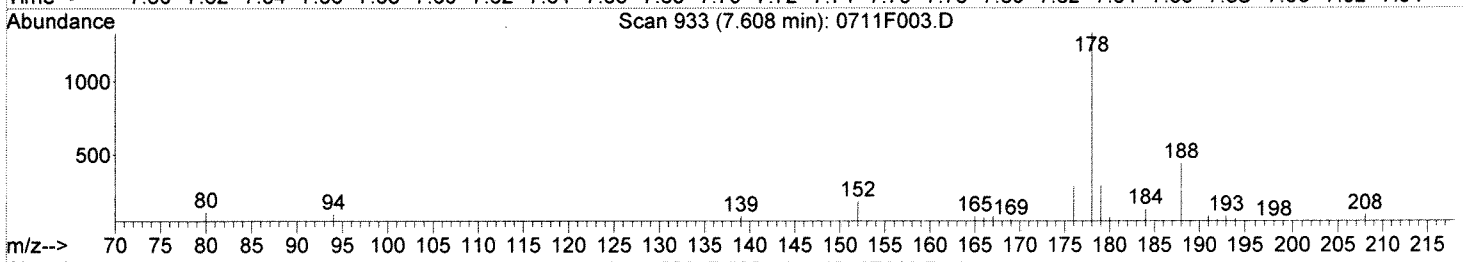
JUL 16 2018
JUL 27 2018

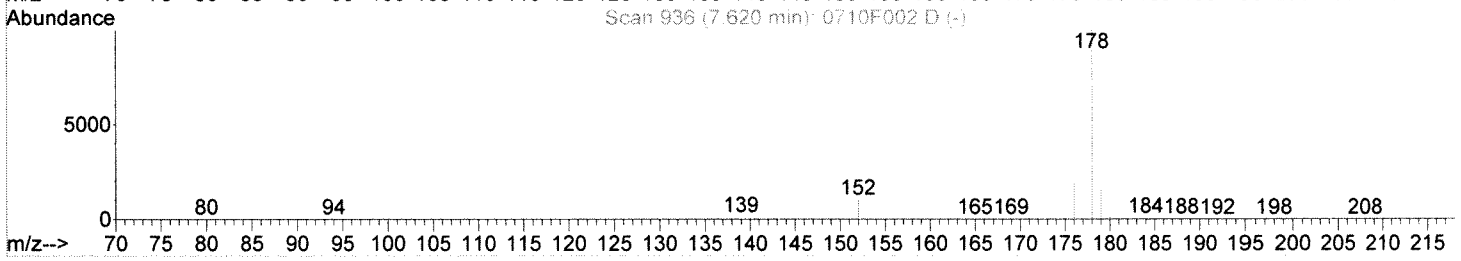
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.25ng/ml

response 927

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.38
179.00	15.20	15.85
0.00	0.00	0.00

Manual Integration:

Before

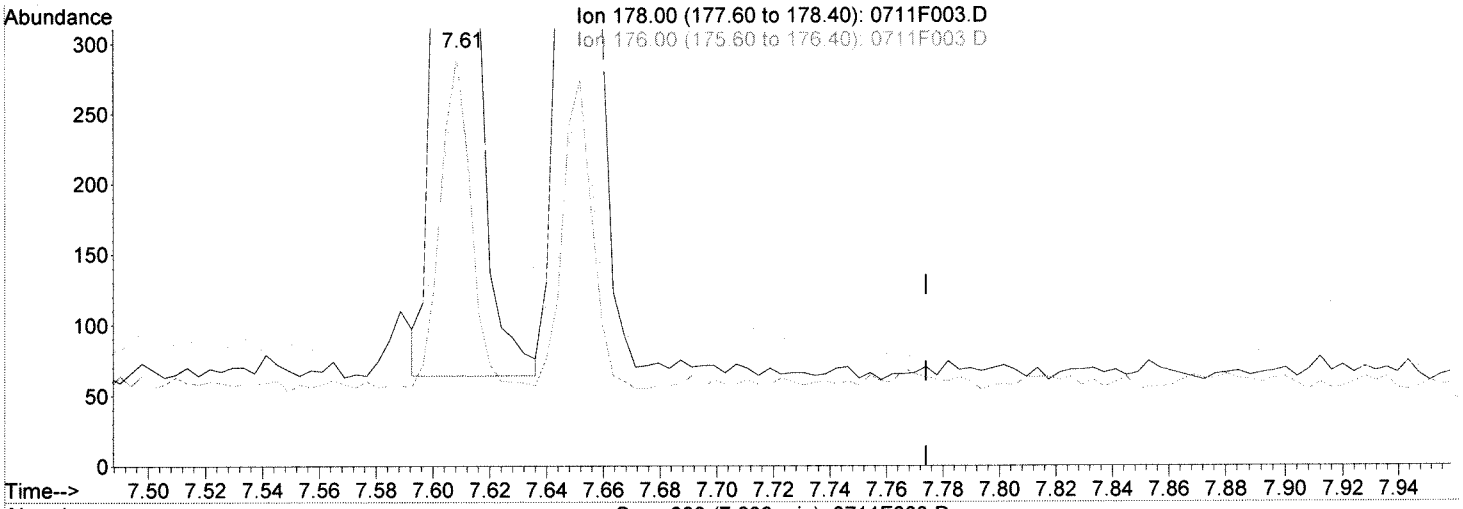
07/11/18

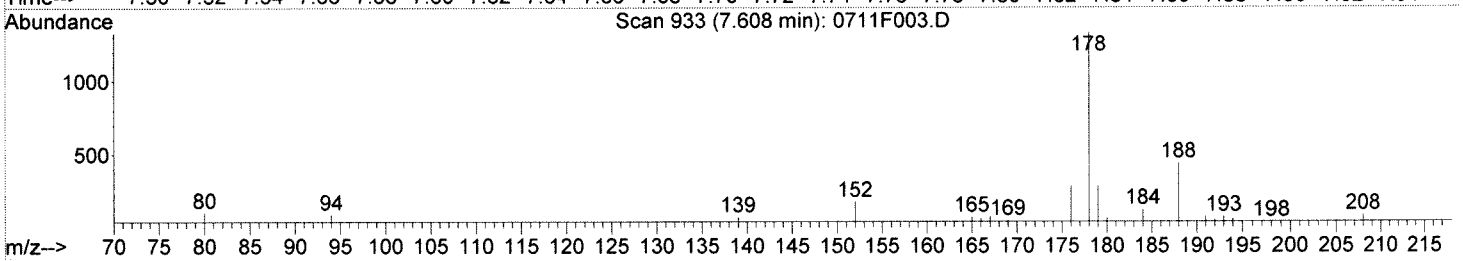
JUL 2 7 2018

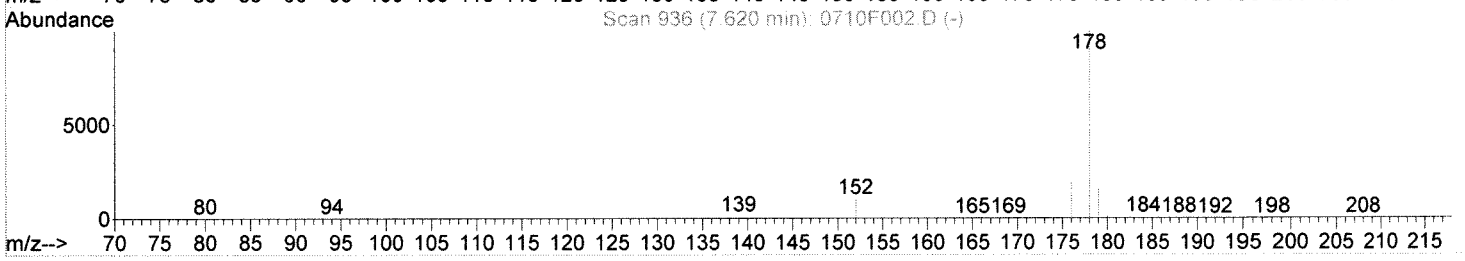
0711F003.D 071118PAH.M Wed Jul 11 12:35:11 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.18ng/ml m

response 900

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	21.77
179.00	15.20	21.70
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F003.D 071118PAH.M Wed Jul 11 12:35:17 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	63956	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30708	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63250	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72026	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	79651	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	763	4.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.42%			
13) Fluorene-d10	6.79	176	917	4.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
22) Fluoranthene-d10	8.58	212	1504	3.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.38%			
25) Terphenyl-d14	8.93	244	1510	4.62	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	1674	4.78	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	948	4.23	ng/ml	91
5) 1-Methylnaphthalene	5.54	142	937	4.32	ng/ml	90
6) Biphenyl	5.86	154	1229	4.45	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	808	4.19	ng/ml	95
9) Acenaphthylene	6.23	152	1442	4.02	ng/ml	97
10) Acenaphthene	6.38	154	846	4.11	ng/ml	95
11) Dibenzofuran	6.53	168	1300	3.94	ng/ml	91
12) 2,3,5-Trimethylnaphthalene	6.70	170	782	4.03	ng/ml	98
14) Fluorene	6.81	166	1032	4.03	ng/ml	99
16) Dibenzothiophene	7.51	184	1534	3.93	ng/ml	95
17) Phenanthrene	7.61	178	1684m	4.36	ng/ml	
18) Anthracene	7.65	178	1474	3.90	ng/ml	98
19) Carbazole	7.79	167	1414	4.15	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	1141	3.75	ng/ml	94
21) Fluoranthene	8.59	202	1825	3.88	ng/ml	96
24) Pyrene	8.79	202	2099	4.15	ng/ml#	16
26) Benz(a)anthracene	10.14	228	1900	4.17	ng/ml	100
27) Chrysene	10.19	228	1748	3.89	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	1853	3.73	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	1871	3.75	ng/ml	97
31) Benzo(e)pyrene	12.97	252	1822	3.77	ng/ml	96
32) Benzo(a)pyrene	13.12	252	1615	3.86	ng/ml	97
33) Perylene	13.38	252	1693	3.87	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.46	276	1753	4.76	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	1750	4.40	ng/ml	89
36) Benzo(g,h,i)perylene	15.85	276	2188	4.66	ng/ml	97

JUL 16 2018

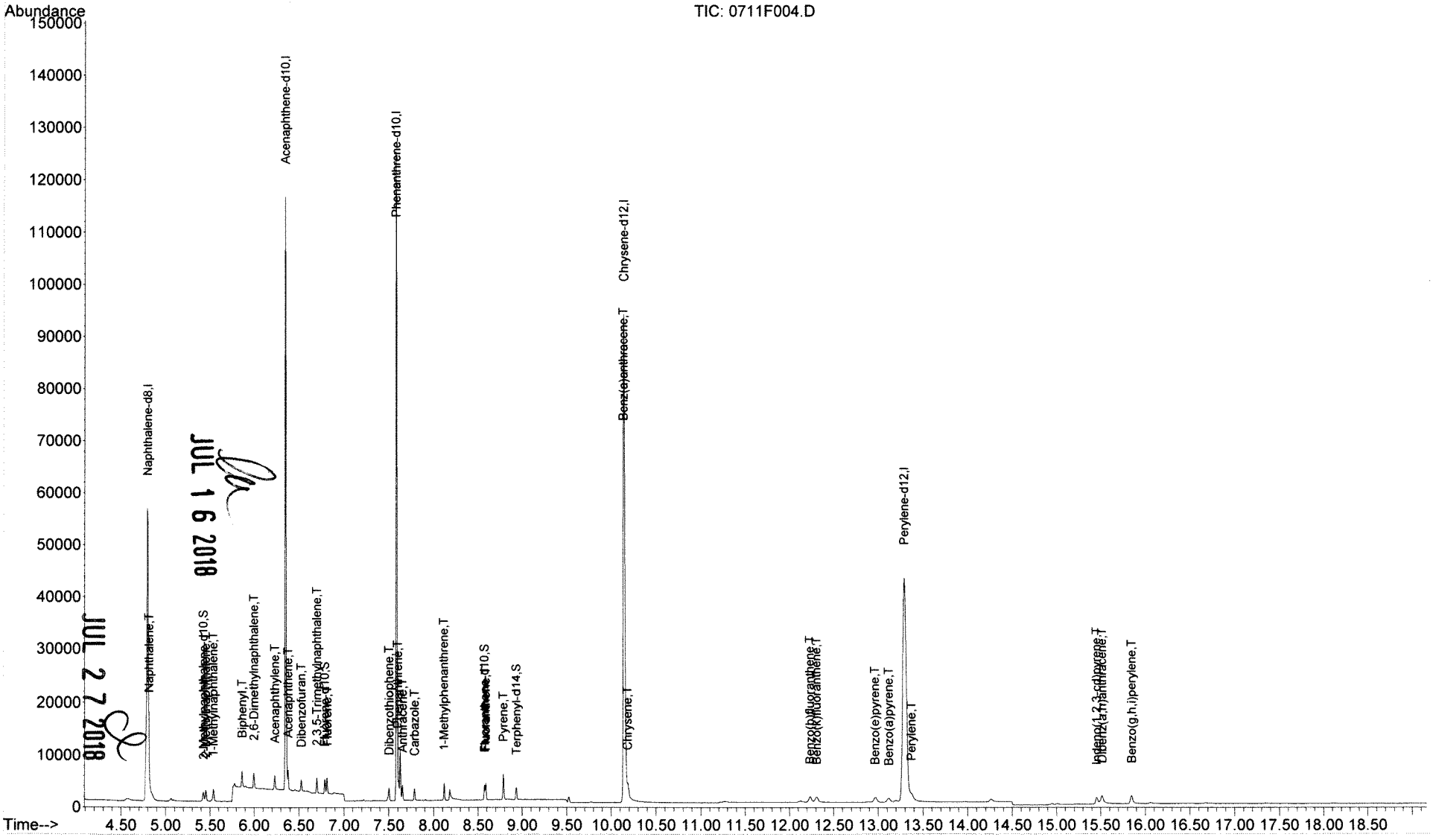
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F004.D 071118PAH.M Wed Jul 11 12:39:39 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

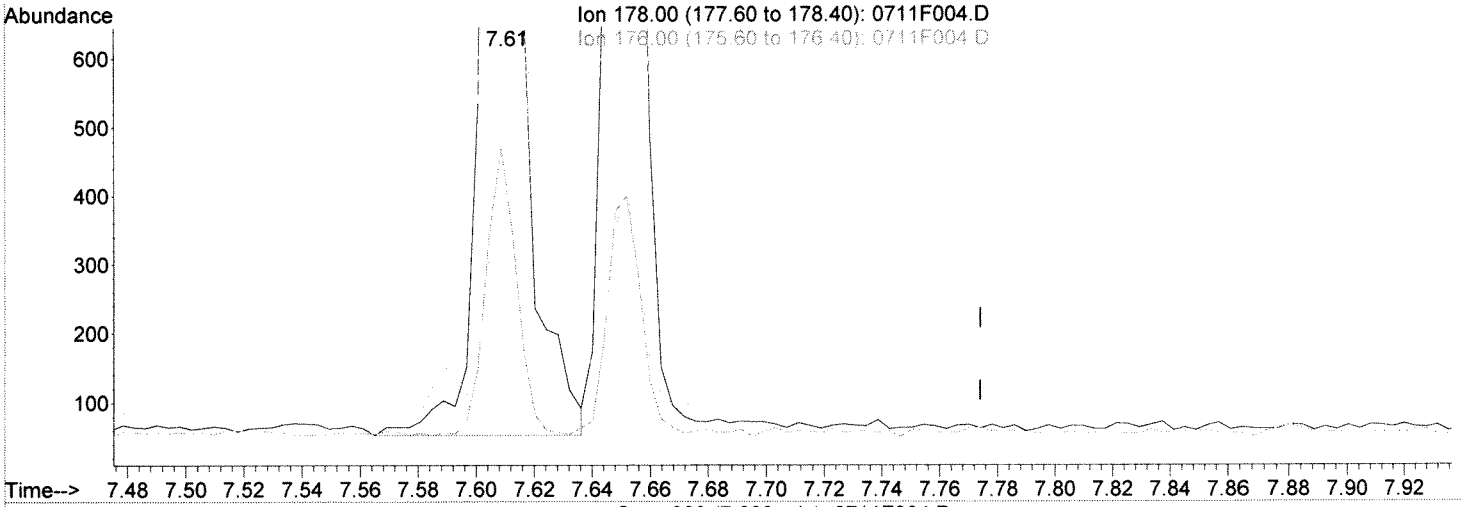
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

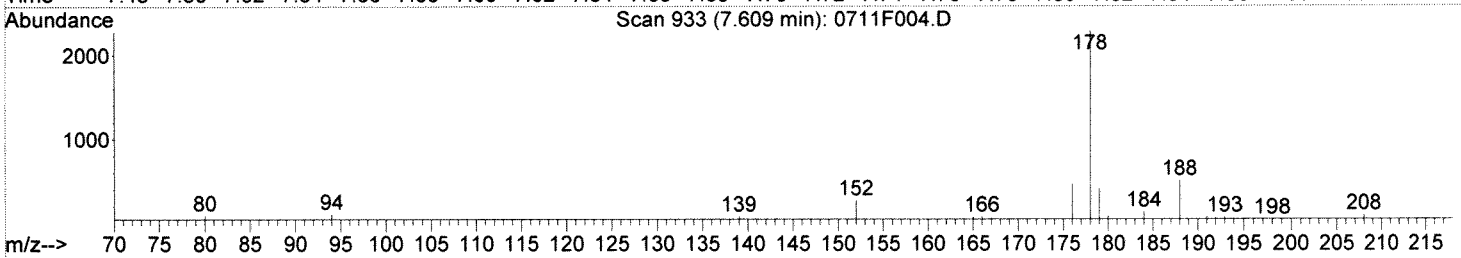


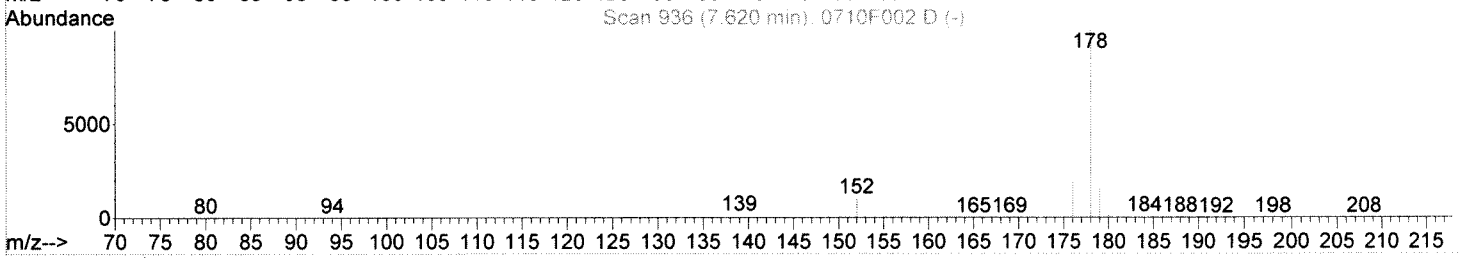
JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.47ng/ml

response 1727

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.57
179.00	15.20	14.90
0.00	0.00	0.00

Manual Integration:

Before

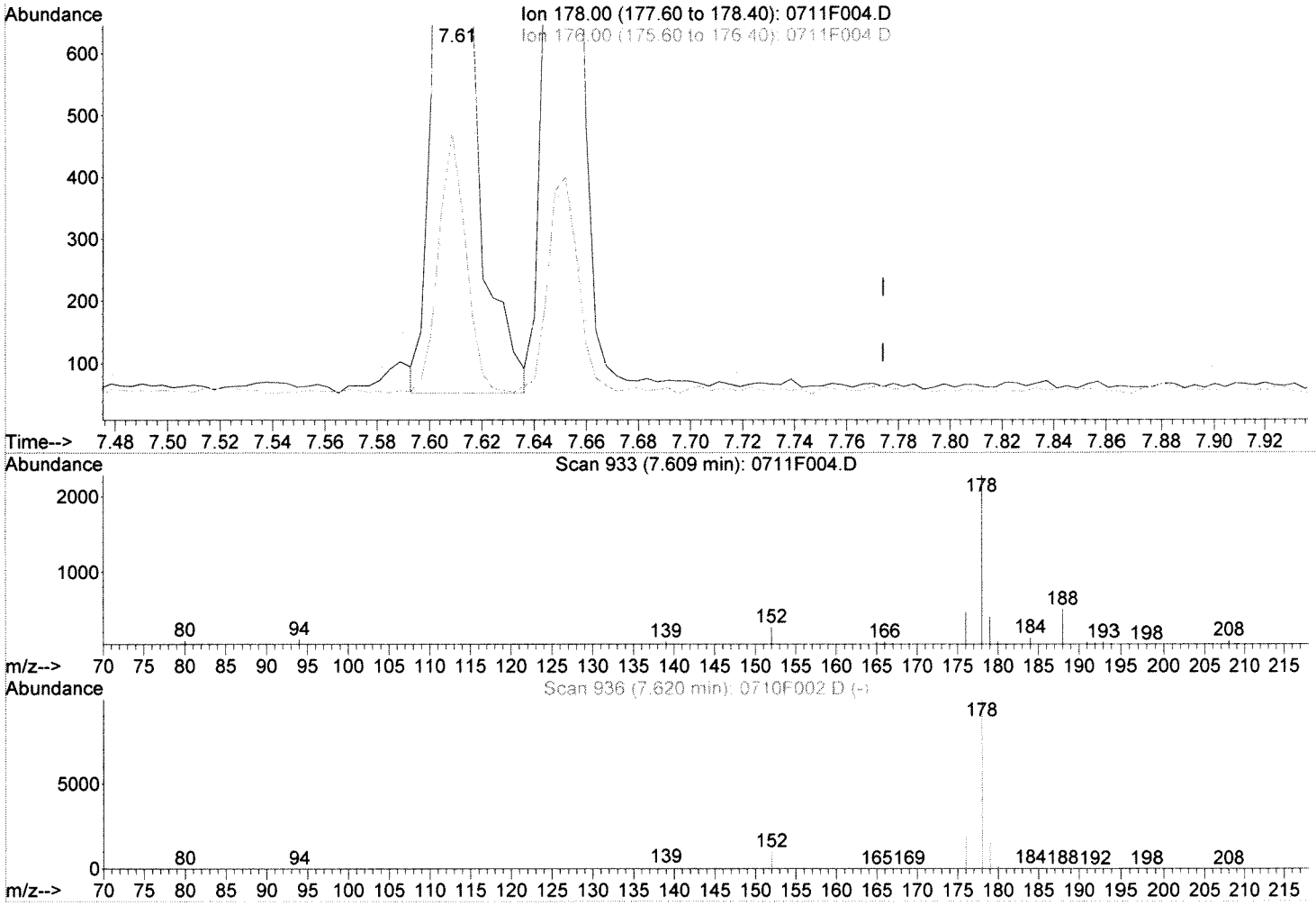
07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:50 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.36ng/ml m

response 1684

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	20.54
179.00	15.20	17.83
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:56 2018

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62880	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	29911	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	62211	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	69517	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	76895	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	1448	8.09	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.81%			
13) Fluorene-d10	6.79	176	1594	8.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.82%			
22) Fluoranthene-d10	8.58	212	2857	7.40	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.74%			
25) Terphenyl-d14	8.93	244	2597	8.23	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.82%			
Target Compounds						Qvalue
2) Naphthalene	4.81	128	2996	8.69	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	1845	8.38	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	1728	8.11	ng/ml	94
6) Biphenyl	5.86	154	2298	8.46	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	1535	8.10	ng/ml	97
9) Acenaphthylene	6.23	152	2743	7.85	ng/ml	99
10) Acenaphthene	6.38	154	1596	7.95	ng/ml	95
11) Dibenzofuran	6.53	168	2645	8.22	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	1455	7.70	ng/ml	94
14) Fluorene	6.81	166	1936	7.77	ng/ml	100
16) Dibenzothiophene	7.51	184	2951	7.68	ng/ml	94
17) Phenanthrene	7.61	178	3111	8.18	ng/ml	99
18) Anthracene	7.65	178	2901	7.81	ng/ml	99
19) Carbazole	7.78	167	2691	8.03	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	2211	7.38	ng/ml	97
21) Fluoranthene	8.59	202	3571	7.72	ng/ml	99
24) Pyrene	8.79	202	3832	7.85	ng/ml	83
26) Benz(a)anthracene	10.13	228	3494	7.94	ng/ml	98
27) Chrysene	10.19	228	3411	7.86	ng/ml	98
29) Benzo(b)fluoranthene	12.24	252	3544	7.39	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	3488	7.25	ng/ml	97
31) Benzo(e)pyrene	12.97	252	3487	7.47	ng/ml	95
32) Benzo(a)pyrene	13.12	252	3161	7.84	ng/ml	97
33) Perylene	13.37	252	3327	7.88	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.46	276	3272	9.21	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	3362	8.75	ng/ml	96
36) Benzo(g,h,i)perylene	15.85	276	4042	8.91	ng/ml	98

JUL 16 2018

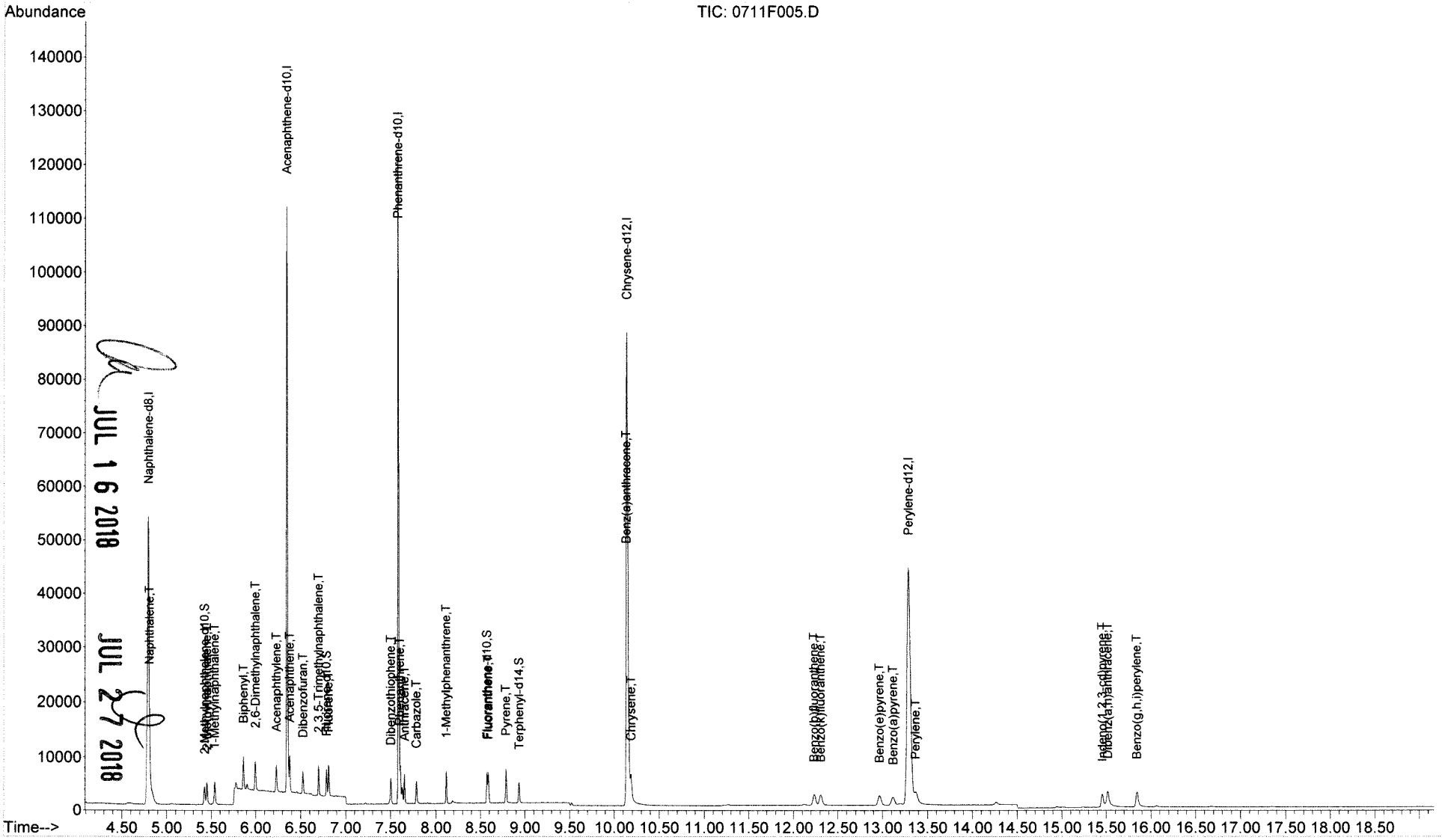
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F005.D 071118PAH.M Wed Jul 11 12:39:41 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	65840	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30682	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63668	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68947	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73587	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	3694	19.72	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.97%		
13) Fluorene-d10	6.79	176	3914	19.51	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.95%		
22) Fluoranthene-d10	8.58	212	7036	17.81	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.78%		
25) Terphenyl-d14	8.93	244	5981	19.10	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.91%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	7540	20.90	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	4709	20.41	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	4545	20.37	ng/ml	98
6) Biphenyl	5.86	154	5875	20.65	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	3939	19.85	ng/ml	98
9) Acenaphthylene	6.23	152	7137	19.90	ng/ml	97
10) Acenaphthene	6.38	154	4220	20.50	ng/ml	98
11) Dibenzofuran	6.53	168	6406	19.41	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	3696	19.07	ng/ml	95
14) Fluorene	6.81	166	5030	19.67	ng/ml	99
16) Dibenzothiophene	7.51	184	7587	19.29	ng/ml	95
17) Phenanthrene	7.61	178	7852	20.19	ng/ml	100
18) Anthracene	7.65	178	7270	19.13	ng/ml	99
19) Carbazole	7.78	167	6767	19.72	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	5509	17.97	ng/ml	96
21) Fluoranthene	8.59	202	8985	18.97	ng/ml	99
24) Pyrene	8.79	202	9434	19.48	ng/ml	92
26) Benz(a)anthracene	10.14	228	8203	18.81	ng/ml	99
27) Chrysene	10.19	228	8248	19.16	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	8538	18.60	ng/ml	97
30) Benzo(k)fluoranthene	12.31	252	8727	18.95	ng/ml	99
31) Benzo(e)pyrene	12.97	252	8307	18.60	ng/ml	96
32) Benzo(a)pyrene	13.12	252	7683	19.90	ng/ml	98
33) Perylene	13.38	252	8269m	20.48	ng/ml	
34) Indeno(1,2,3-cd)pyrene	15.46	276	7779	22.89	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	8645m	23.51	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	9837	22.66	ng/ml	98

JUL 16 2018

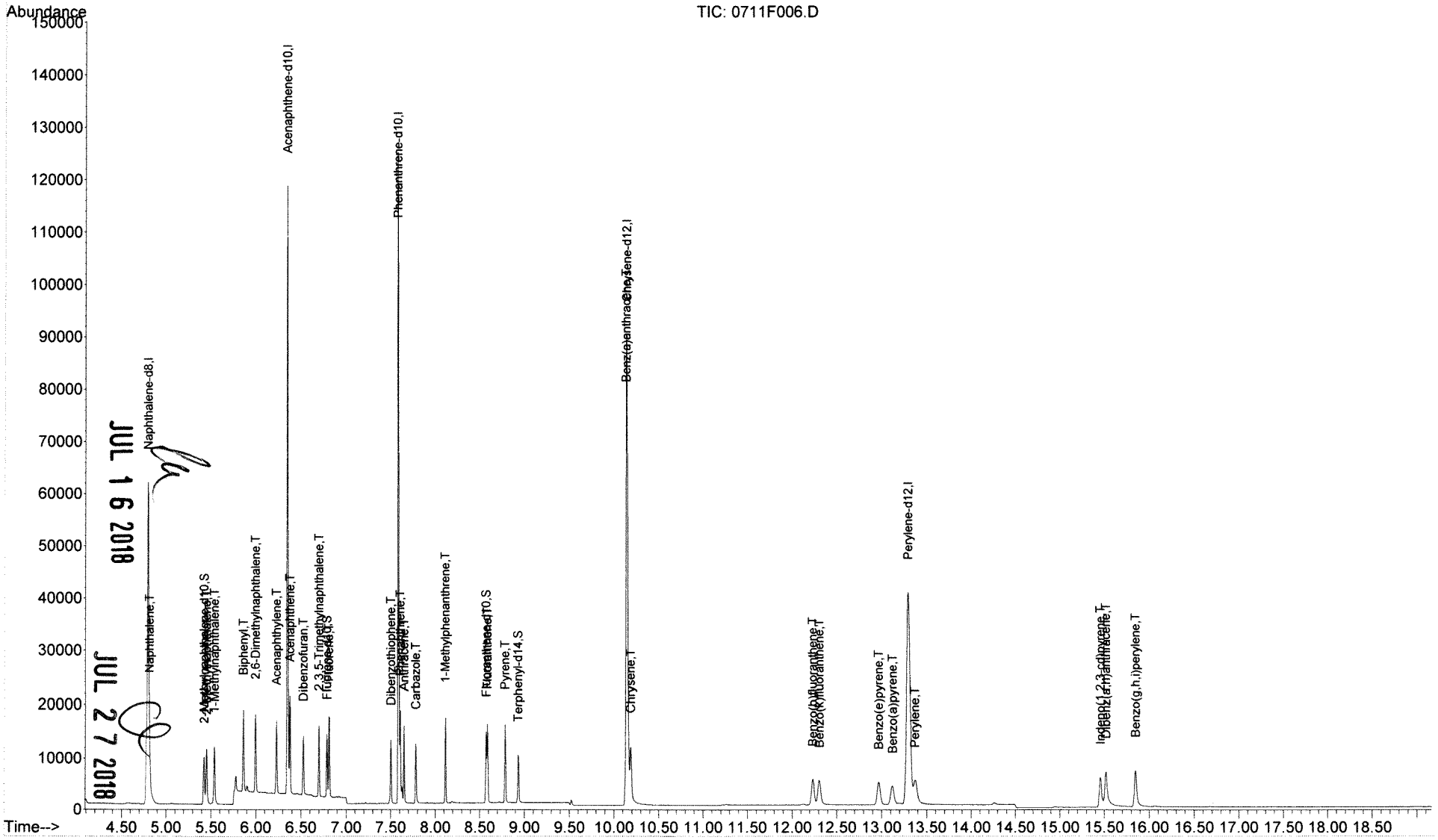
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F006.D 071118PAH.M Wed Jul 11 12:39:43 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

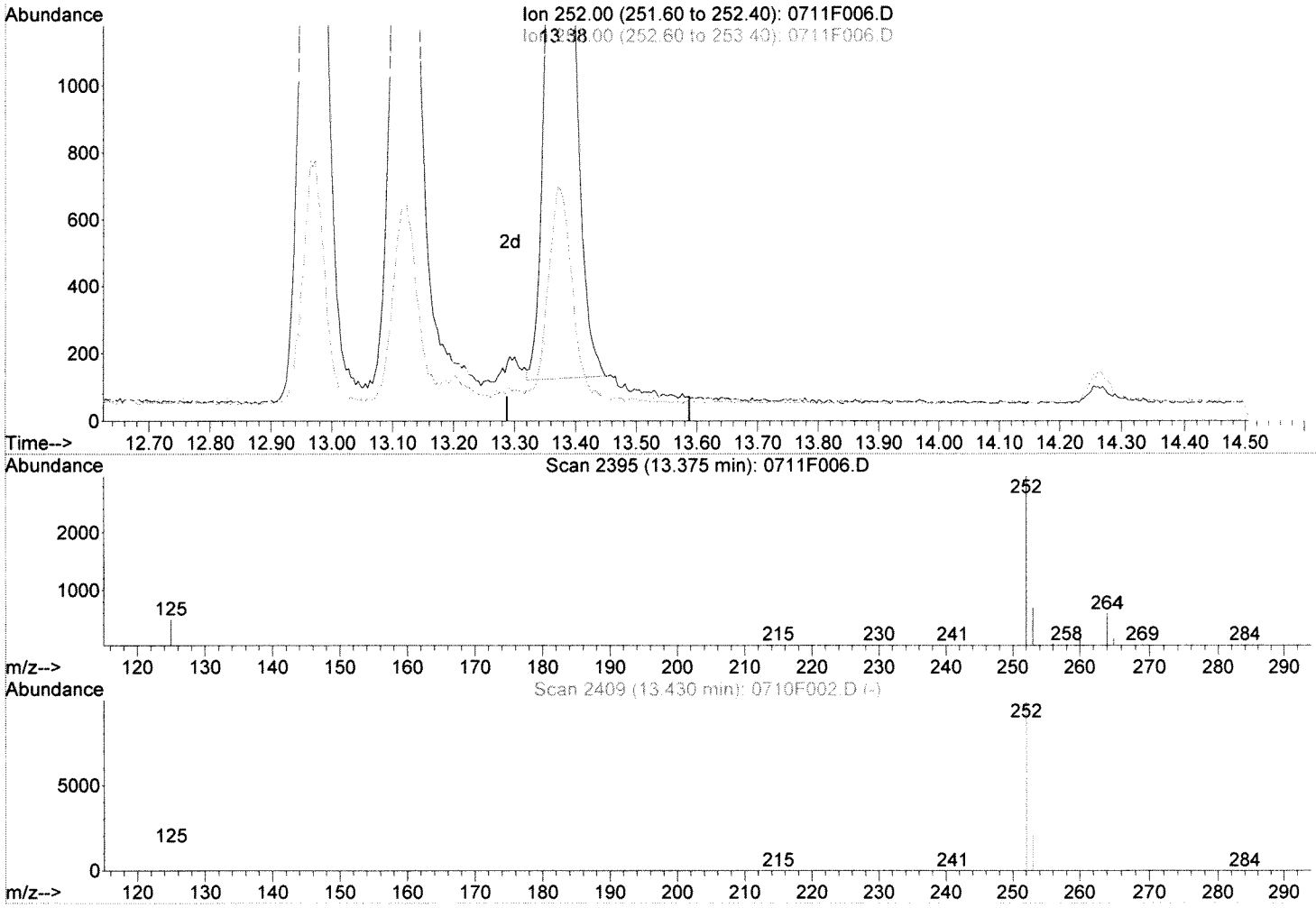


JUL 16 2018
JUL 27 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 19.01ng/ml

response 7678

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	21.61
125.00	11.30	14.83
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

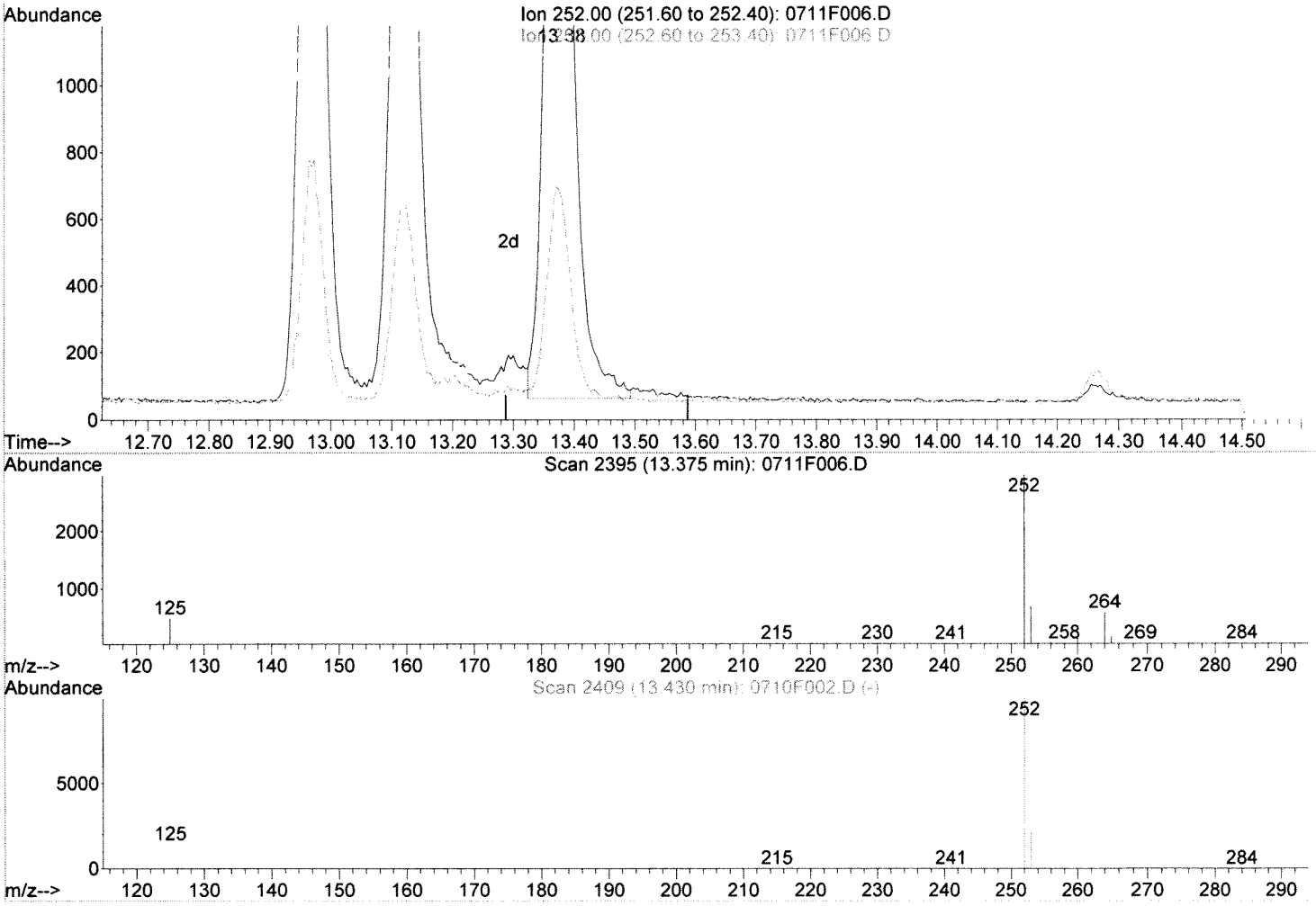
JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:36:54 2018

Quantitation Report (QedIt)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 20.48ng/ml m

response 8269

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	23.07
125.00	11.30	16.52
0.00	0.00	0.00

Manual Integration:

After

BLC

07/11/18

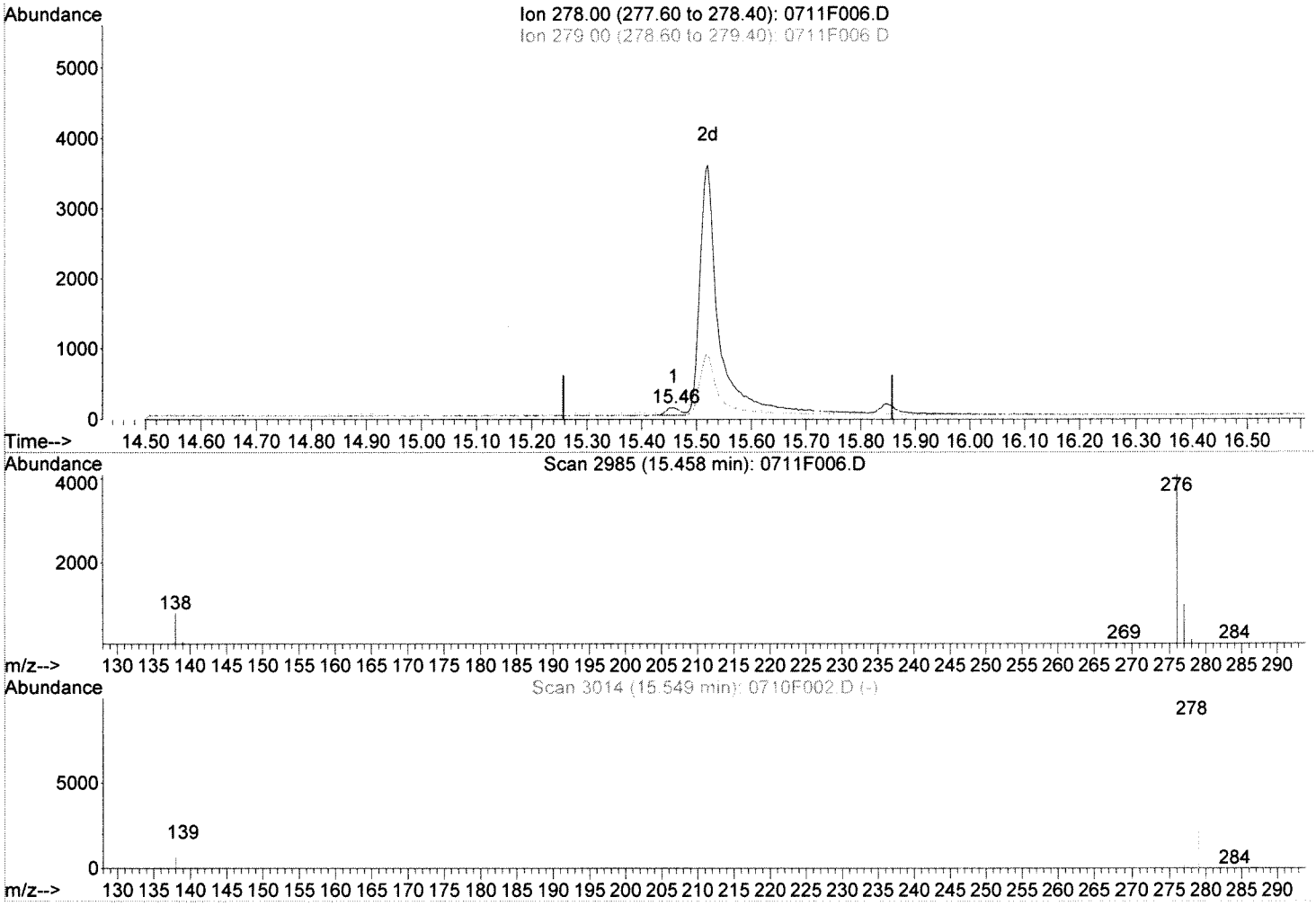
JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:01 2018

Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.46min 0.54ng/ml

response 199

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	2.68
139.00	13.40	20.54
0.00	0.00	0.00

Manual Integration:

Before

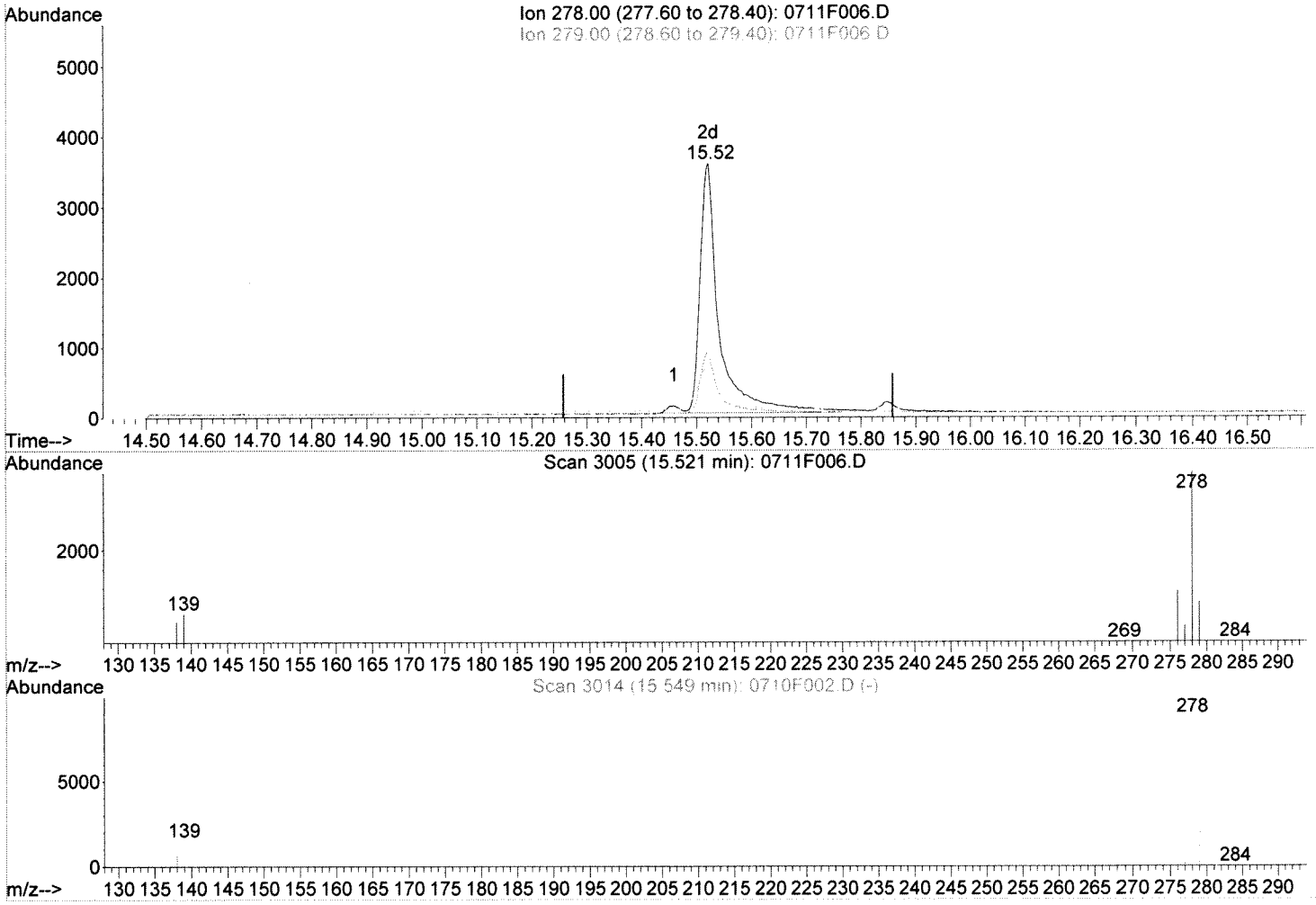
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:06 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.52min 23.51ng/ml m

response 8645

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	25.00
139.00	13.40	18.72
0.00	0.00	0.00

Manual Integration:

After

WP

07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:15 2018

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62407	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	28255	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	58489	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68483	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	75974	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	17559	98.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.89%		
13) Fluorene-d10	6.79	176	17680	95.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.57%		
22) Fluoranthene-d10	8.58	212	35144	96.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.68%		
25) Terphenyl-d14	8.93	244	28477	91.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.16%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	35255	103.08	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	22418	102.54	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	21213	100.29	ng/ml	96
6) Biphenyl	5.86	154	27265	101.12	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	18574	98.74	ng/ml	96
9) Acenaphthylene	6.23	152	33544	101.56	ng/ml	98
10) Acenaphthene	6.38	154	19460	102.65	ng/ml	97
11) Dibenzofuran	6.53	168	31402	103.33	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	17703	99.17	ng/ml	95
14) Fluorene	6.81	166	24009	101.96	ng/ml	99
16) Dibenzothiophene	7.51	184	36360	100.61	ng/ml	95
17) Phenanthrene	7.61	178	36499	102.14	ng/ml	100
18) Anthracene	7.65	178	35340	101.23	ng/ml	100
19) Carbazole	7.78	167	33613	106.65	ng/ml	99
20) 1-Methylphenanthrene	8.12	192	26919	95.59	ng/ml	97
21) Fluoranthene	8.59	202	44895	103.20	ng/ml	99
24) Pyrene	8.79	202	45944	95.52	ng/ml	96
26) Benz(a)anthracene	10.14	228	41105	94.87	ng/ml	99
27) Chrysene	10.19	228	42544	99.49	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	45690	96.41	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	46655	98.13	ng/ml	97
31) Benzo(e)pyrene	12.97	252	43163	93.59	ng/ml	96
32) Benzo(a)pyrene	13.12	252	39807	99.87	ng/ml	98
33) Perylene	13.37	252	42088	100.96	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	40462	115.30	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	42729	112.54	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	48457	108.12	ng/ml	97

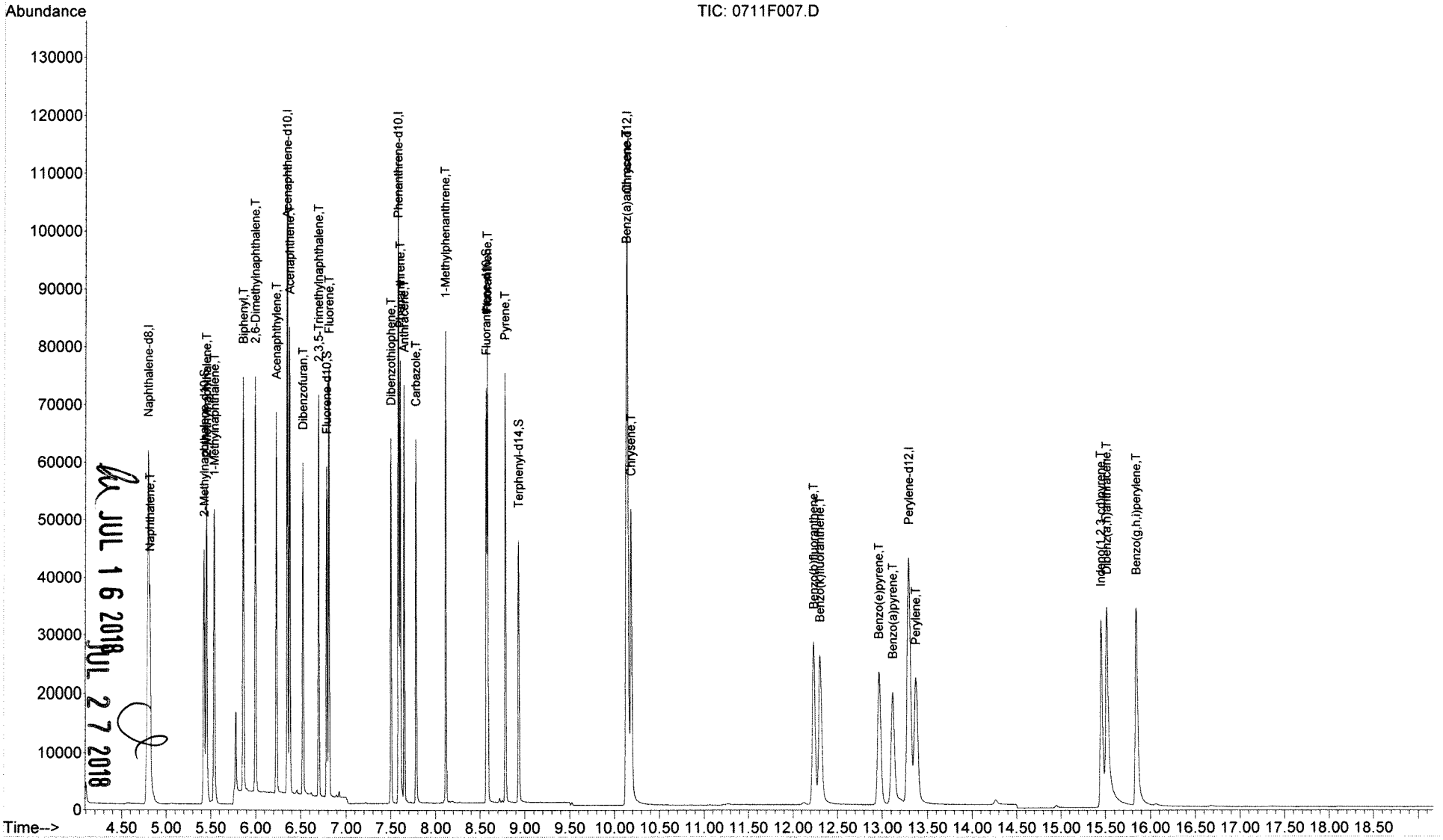
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F007.D 071118PAH.M Wed Jul 11 12:39:45 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60069	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	26067	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	52800	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	67787	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73997	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	32722	191.47	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 19.15%			
13) Fluorene-d10	6.79	176	32332	189.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.97%			
22) Fluoranthene-d10	8.58	212	66735	203.67	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 20.37%			
25) Terphenyl-d14	8.93	244	55795	181.26	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 18.13%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	66650	202.46	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	41546	197.42	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	39085	191.97	ng/ml	97
6) Biphenyl	5.86	154	50271	193.70	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	34463	190.34	ng/ml	96
9) Acenaphthylene	6.23	152	62756	205.96	ng/ml	98
10) Acenaphthene	6.38	154	36120	206.52	ng/ml	97
11) Dibenzofuran	6.53	168	59730	213.03	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	32934	199.97	ng/ml	94
14) Fluorene	6.81	166	43762	201.45	ng/ml	98
16) Dibenzothiophene	7.51	184	66748	204.59	ng/ml	95
17) Phenanthrene	7.61	178	65833	204.08	ng/ml	100
18) Anthracene	7.65	178	64253	203.88	ng/ml	100
19) Carbazole	7.78	167	63253	222.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	49439	194.49	ng/ml	96
21) Fluoranthene	8.59	202	84302	214.65	ng/ml	99
24) Pyrene	8.79	202	87628	184.06	ng/ml	96
26) Benz(a)anthracene	10.14	228	83249	194.11	ng/ml	99
27) Chrysene	10.19	228	84873	200.51	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	92957	201.38	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	93553	202.03	ng/ml	98
31) Benzo(e)pyrene	12.98	252	86431	192.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	79516	204.81	ng/ml	97
33) Perylene	13.38	252	84071	207.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	80179	234.58	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	81499	220.39	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	93626	214.49	ng/ml	98

JUL 16 2018

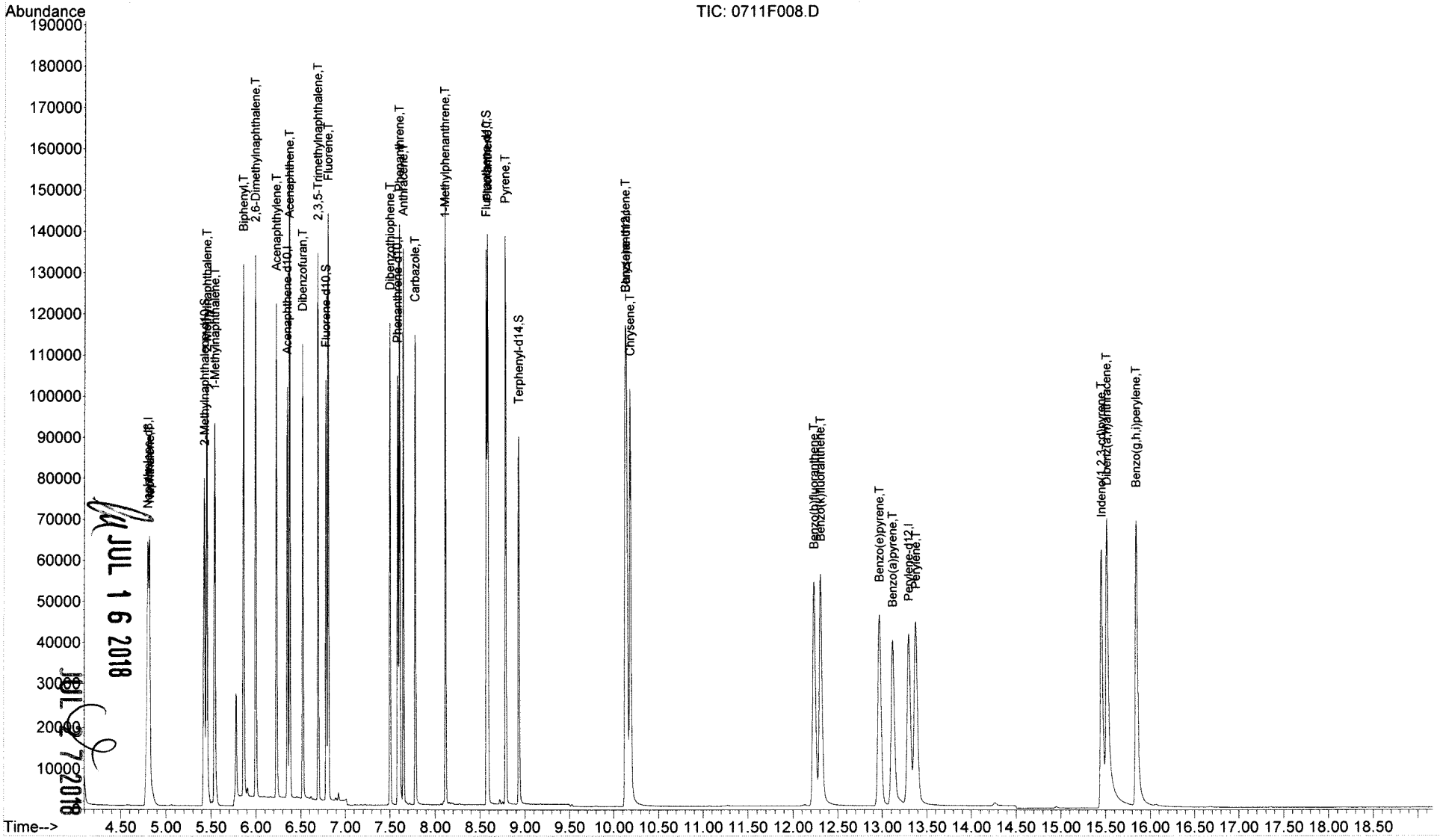
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F008.D 071118PAH.M Wed Jul 11 12:39:47 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60855	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	25959	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	53916	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68964	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73742	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	64749	373.97	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	37.40%		
13) Fluorene-d10	6.79	176	65104	383.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	38.36%		
22) Fluoranthene-d10	8.57	212	140750	420.66	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	42.07%		
25) Terphenyl-d14	8.93	244	115110	367.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	36.76%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	132311	396.73	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	80537	377.75	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	75991	368.41	ng/ml	97
6) Biphenyl	5.86	154	98008	372.75	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	68675	374.39	ng/ml	97
9) Acenaphthylene	6.23	152	125730	414.35	ng/ml	98
10) Acenaphthene	6.38	154	71389	409.87	ng/ml	98
11) Dibenzofuran	6.53	168	116544	417.39	ng/ml	89
12) 2,3,5-Trimethylnaphthalene	6.70	170	66608	406.13	ng/ml	96
14) Fluorene	6.81	166	86674	400.65	ng/ml	98
16) Dibenzothiophene	7.51	184	136509	409.76	ng/ml	95
17) Phenanthrene	7.61	178	131946	400.56	ng/ml	100
18) Anthracene	7.65	178	131533	408.72	ng/ml	100
19) Carbazole	7.79	167	129213	444.76	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	103724	399.59	ng/ml	96
21) Fluoranthene	8.59	202	170758	425.79	ng/ml	98
24) Pyrene	8.79	202	181666	375.07	ng/ml	98
26) Benz(a)anthracene	10.13	228	175185	401.51	ng/ml	99
27) Chrysene	10.19	228	172838	401.35	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	191741	416.82	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	189521	410.69	ng/ml	98
31) Benzo(e)pyrene	12.98	252	177594	396.74	ng/ml	98
32) Benzo(a)pyrene	13.13	252	163551	422.73	ng/ml	98
33) Perylene	13.39	252	170900	422.34	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	155556	456.69	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	157213	426.62	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	179053	411.61	ng/ml	98

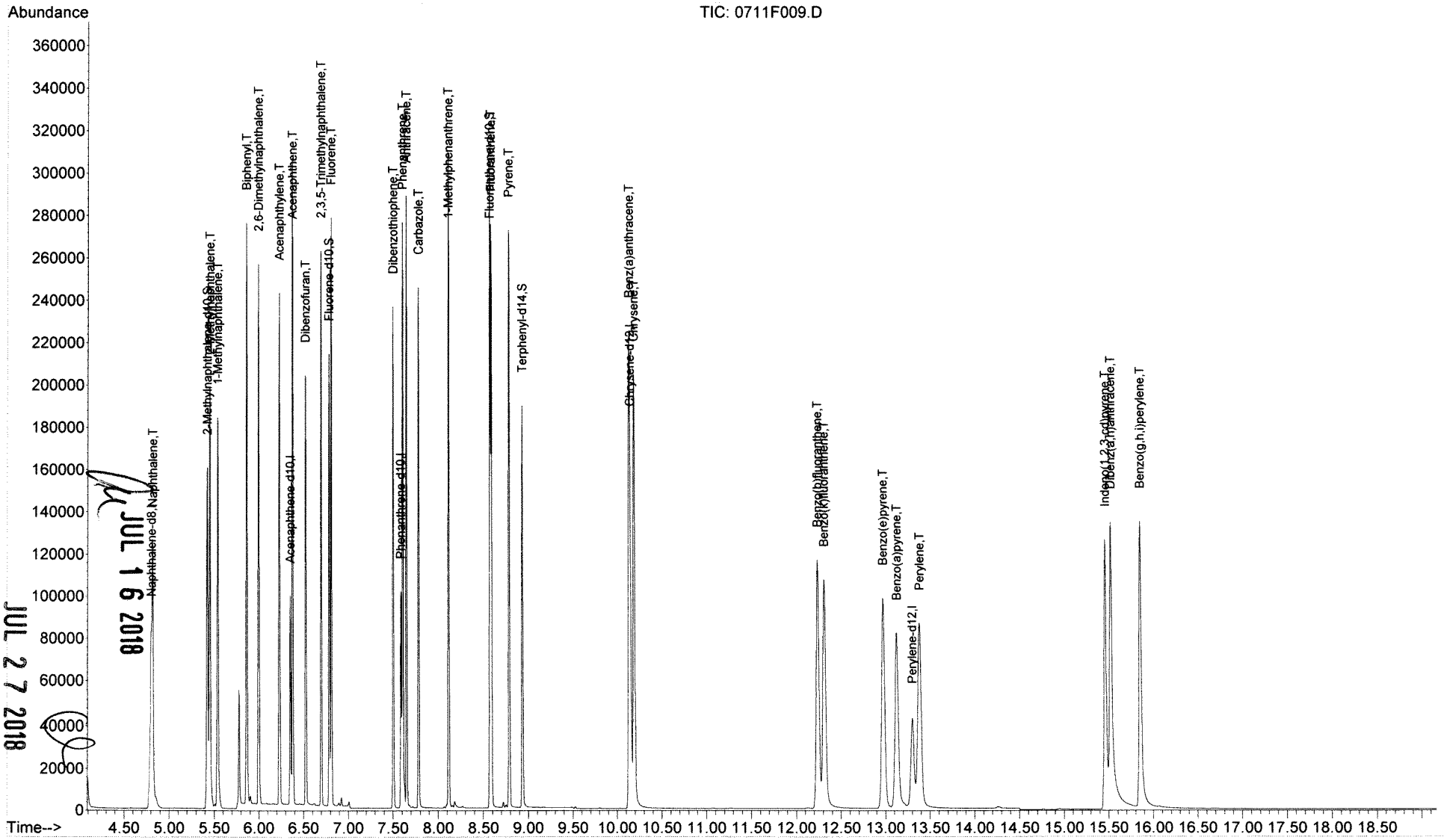
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F009.D 071118PAH.M Wed Jul 11 12:39:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:43 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	56166	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24545	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48486	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	66294	200.00	ng/ml	-0.02
28) Perylene-d12	13.31	264	71447	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	151032	945.14	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 94.51%			
13) Fluorene-d10	6.79	176	148985	928.35	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.84%			
22) Fluoranthene-d10	8.58	212	340058	1130.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 113.02%			
25) Terphenyl-d14	8.93	244	277429	921.60	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.16%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	297897	967.80	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	182505	927.49	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	175312	920.89	ng/ml	96
6) Biphenyl	5.86	154	227465	937.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	159932	944.68	ng/ml	95
9) Acenaphthylene	6.23	152	295411	1029.62	ng/ml	98
10) Acenaphthene	6.38	154	165340	1003.96	ng/ml	97
11) Dibenzofuran	6.53	168	271937	1030.03	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	155038	999.76	ng/ml	95
14) Fluorene	6.81	166	195757	957.01	ng/ml	99
16) Dibenzothiophene	7.51	184	312192	1042.05	ng/ml	95
17) Phenanthrene	7.61	178	297804	1005.31	ng/ml	99
18) Anthracene	7.65	178	294958	1019.19	ng/ml	100
19) Carbazole	7.79	167	299519	1146.42	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	241204	1033.28	ng/ml	96
21) Fluoranthene	8.59	202	395859	1097.64	ng/ml	98
24) Pyrene	8.79	202	440109	945.25	ng/ml	99
26) Benz(a)anthracene	10.14	228	438415	1045.28	ng/ml	100
27) Chrysene	10.19	228	417827	1009.33	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	477033	1070.32	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	460183	1029.25	ng/ml	98
31) Benzo(e)pyrene	12.99	252	441018	1016.88	ng/ml	97
32) Benzo(a)pyrene	13.14	252	410977	1096.36	ng/ml	98
33) Perylene	13.39	252	424046	1081.60	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.47	276	362154	1097.39	ng/ml	98
35) Dibenz(a,h)anthracene	15.53	278	365022	1022.35	ng/ml	98
36) Benzo(g,h,i)perylene	15.86	276	398340	945.13	ng/ml	97

JUL 16 2018

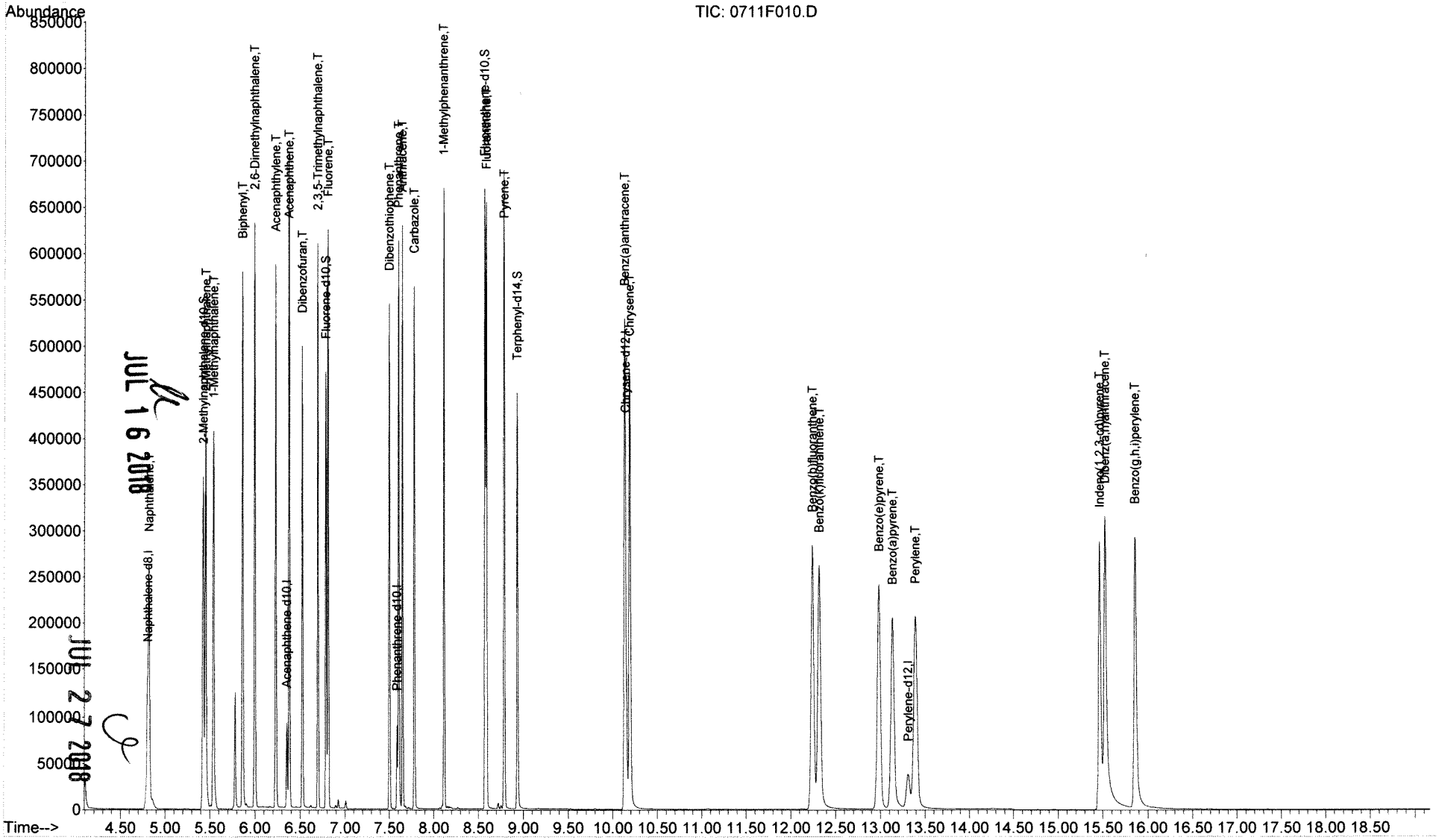
(#) = qualifier out of range (m) = manual integration
0711F010.D 071118PAH.M Wed Jul 11 12:39:51 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	55374	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	23531	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48251	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	63306	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	68587	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	230897	1465.59	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.56%			
13) Fluorene-d10	6.79	176	234277	1522.73	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 152.27%			
22) Fluoranthene-d10	8.58	212	547746	1829.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 182.93%			
25) Terphenyl-d14	8.93	244	420524	1462.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.29%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	454242	1496.83	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	277659	1431.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	268229	1429.12	ng/ml	95
6) Biphenyl	5.87	154	351048	1467.28	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	248732	1490.21	ng/ml	94
9) Acenaphthylene	6.23	152	457982	1665.02	ng/ml	98
10) Acenaphthene	6.38	154	258921	1639.94	ng/ml	98
11) Dibenzofuran	6.53	168	422115	1667.76	ng/ml	98
12) 2,3,5-Trimethylnaphthalene	6.70	170	241367	1623.53	ng/ml	87
14) Fluorene	6.81	166	306456	1562.75	ng/ml	99
16) Dibenzothiophene	7.51	184	493134	1654.02	ng/ml	98
17) Phenanthrene	7.61	178	470025	1594.41	ng/ml	99
18) Anthracene	7.65	178	468569	1626.97	ng/ml	99
19) Carbazole	7.79	167	483938	1861.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	392769	1690.76	ng/ml	98
21) Fluoranthene	8.59	202	637771	1777.03	ng/ml	97
24) Pyrene	8.79	202	701707	1578.23	ng/ml	96
26) Benz(a)anthracene	10.14	228	679766	1697.22	ng/ml	100
27) Chrysene	10.20	228	647039	1636.80	ng/ml	100
29) Benzo(b)fluoranthene	12.26	252	726698	1698.48	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	707952	1649.45	ng/ml	98
31) Benzo(e)pyrene	13.00	252	677816	1628.04	ng/ml	97
32) Benzo(a)pyrene	13.15	252	636746	1769.47	ng/ml	98
33) Perylene	13.41	252	650819	1729.25	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	546709	1725.70	ng/ml	98
35) Dibenz(a,h)anthracene	15.54	278	550676	1606.64	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	588669	1454.97	ng/ml	97

JUL 16 2018

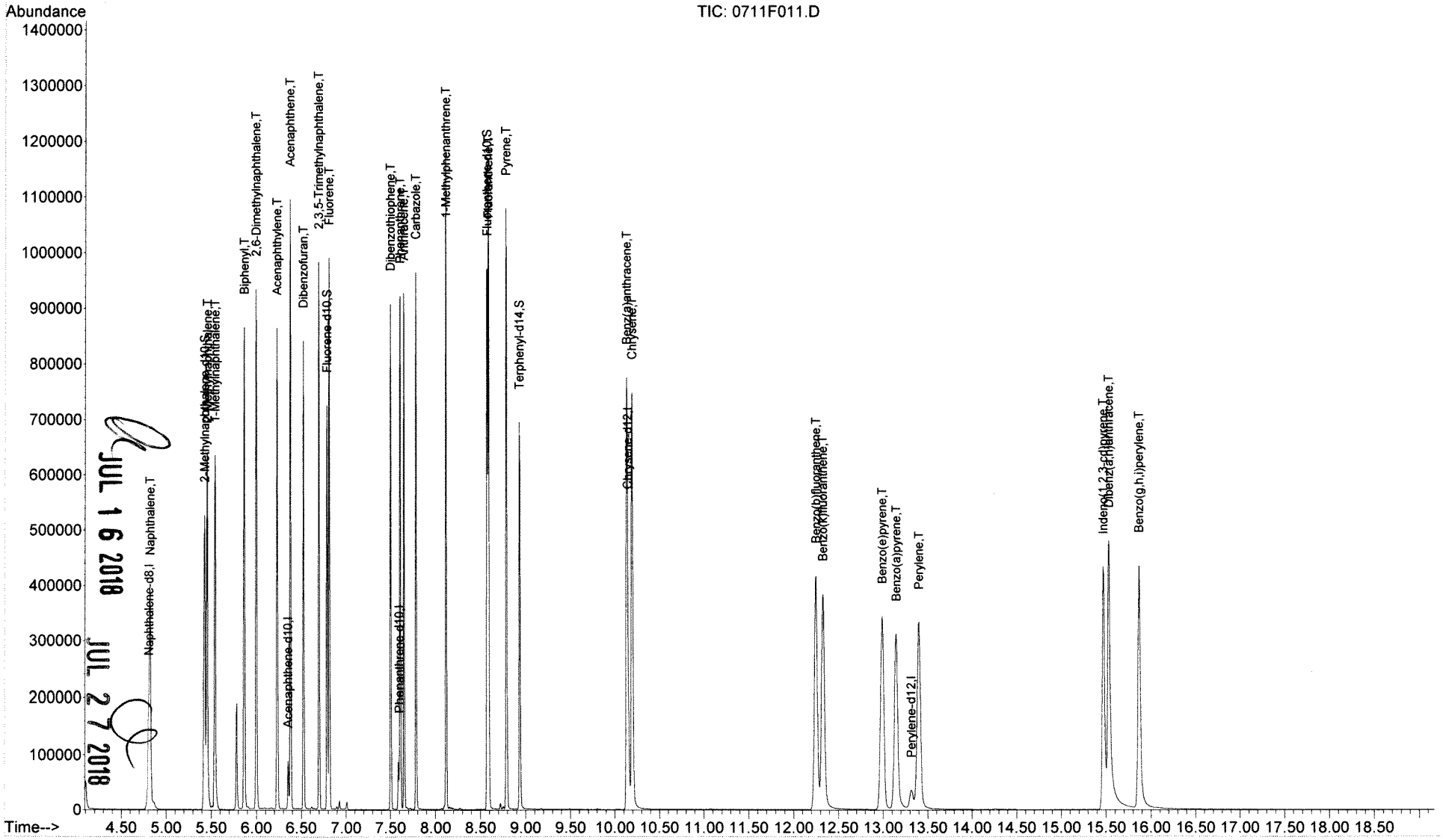
(#) = qualifier out of range (m) = manual integration
0711F011.D 071118PAH.M Wed Jul 11 12:39:53 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	54095	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24200	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	49476	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	65411	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	71109	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	284926	1851.30	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 185.13%			
13) Fluorene-d10	6.79	176	291344	1841.30	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 184.13%			
22) Fluoranthene-d10	8.58	212	688154	2241.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 224.13%			
25) Terphenyl-d14	8.94	244	524001	1764.19	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 176.42%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	576774	1945.54	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	343280	1811.34	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	333329	1817.97	ng/ml	96
6) Biphenyl	5.87	154	430613	1842.39	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	307734	1887.29	ng/ml	92
9) Acenaphthylene	6.23	152	565493	1999.05	ng/ml	97
10) Acenaphthene	6.38	154	319877	1970.02	ng/ml	97
11) Dibenzofuran	6.53	168	511819	1966.28	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	300656	1966.42	ng/ml	85
14) Fluorene	6.81	166	378044	1874.51	ng/ml	98
16) Dibenzothiophene	7.51	184	607108	1985.89	ng/ml	98
17) Phenanthrene	7.61	178	575834	1904.97	ng/ml	99
18) Anthracene	7.66	178	577074	1954.11	ng/ml	99
19) Carbazole	7.79	167	599144	2247.37	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	493413	2071.41	ng/ml	97
21) Fluoranthene	8.60	202	799381	2172.18	ng/ml	96
24) Pyrene	8.79	202	889035	1935.21	ng/ml	94
26) Benz(a)anthracene	10.14	228	854373	2064.52	ng/ml	99
27) Chrysene	10.20	228	809465	1981.79	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	904886	2039.94	ng/ml	98
30) Benzo(k)fluoranthene	12.34	252	885676	1990.34	ng/ml	98
31) Benzo(e)pyrene	13.00	252	842879	1952.70	ng/ml	97
32) Benzo(a)pyrene	13.16	252	795301	2131.70	ng/ml	98
33) Perylene	13.41	252	811546	2079.83	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	682068	2076.61	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	690770	1943.89	ng/ml	97
36) Benzo(g,h,i)perylene	15.88	276	738118	1759.65	ng/ml	96

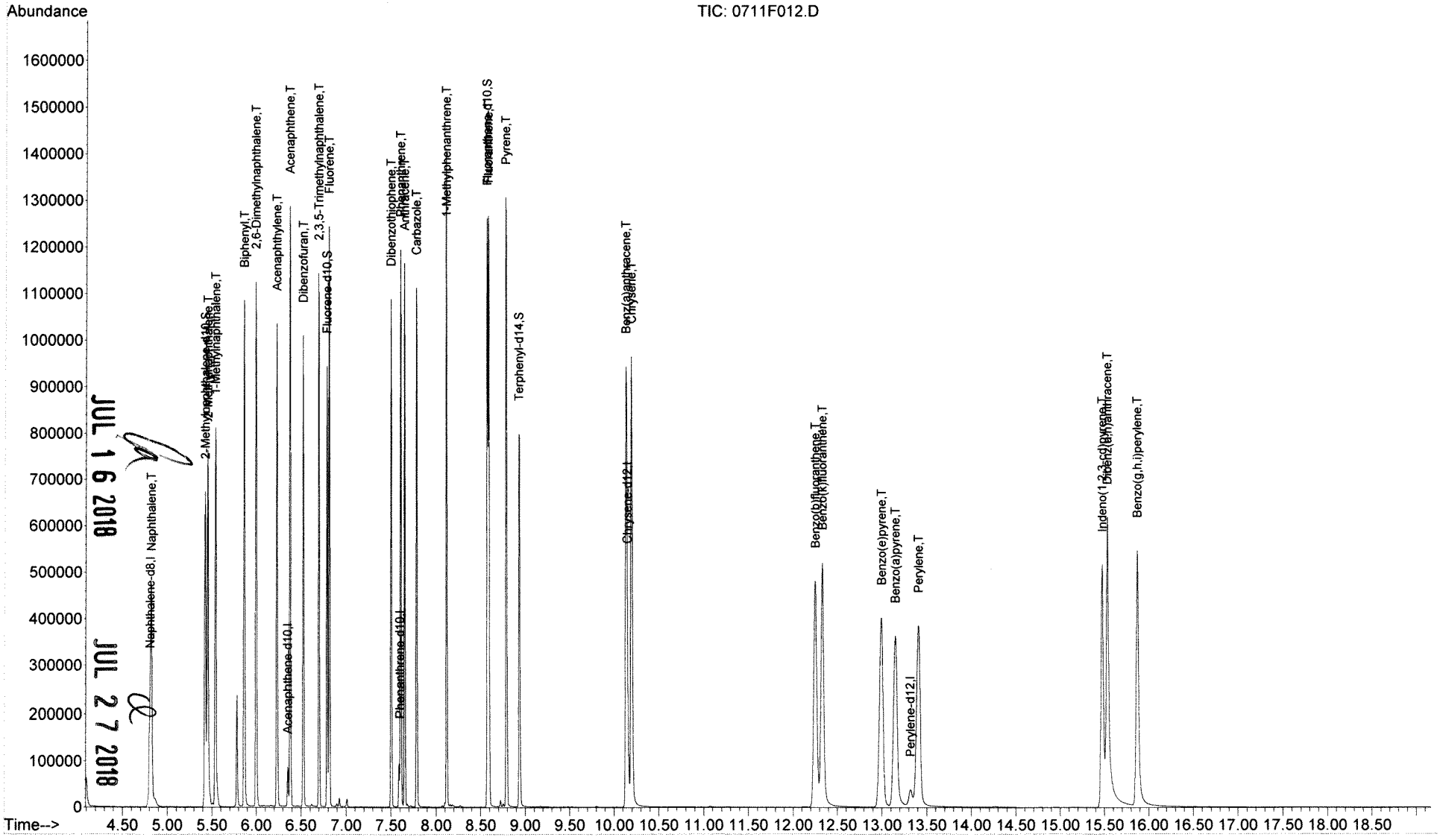
JUL 16 2018 JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F012.D 071118PAH.M Wed Jul 11 12:39:55 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 09:14:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	50172	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	22986	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	46192	200.00	ng/ml	0.00
23) Chrysene-d12	10.15	240	62964	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	67346	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	56170	401.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.11%			
13) Fluorene-d10	6.79	176	57243	389.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 38.95%			
22) Fluoranthene-d10	8.58	212	119281	409.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.97%			
25) Terphenyl-d14	8.93	244	103386	378.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 37.86%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	106807	368.80	ng/ml	100
4) 2-Methylnaphthalene	5.46	142	68576	392.65	ng/ml	100
5) 1-Methylnaphthalene	5.54	142	61930	368.40	ng/ml	99
6) Biphenyl	5.86	154	91235	418.55	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	63157	421.23	ng/ml	96
9) Acenaphthylene	6.23	152	107131	390.61	ng/ml	100
10) Acenaphthene	6.38	154	60647	384.94	ng/ml	98
11) Dibenzofuran	6.53	168	94217	372.67	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	59485	408.19	ng/ml	96
14) Fluorene	6.81	166	73545	385.97	ng/ml	100
16) Dibenzothiophene	7.51	184	123550	428.83	ng/ml	99
17) Phenanthrene	7.61	178	110081	382.02	ng/ml	100
18) Anthracene	7.65	178	109389	397.66	ng/ml	100
19) Carbazole	7.79	167	115133	428.87	ng/ml	100
20) 1-Methylphenanthrene	8.12	192	91182	417.77	ng/ml	100
21) Fluoranthene	8.59	202	147363	414.16	ng/ml	100
24) Pyrene	8.79	202	151769	351.32	ng/ml	92
26) Benz(a)anthracene	10.14	228	153003	375.85	ng/ml	99
27) Chrysene	10.19	228	151585	388.75	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	170488	409.75	ng/ml	100
30) Benzo(k)fluoranthene	12.32	252	172528	417.98	ng/ml	100
31) Benzo(e)pyrene	12.98	252	162645	410.10	ng/ml	100
32) Benzo(a)pyrene	13.13	252	146112	400.43	ng/ml	99
33) Perylene	13.39	252	166849	435.90	ng/ml	100
34) Indeno(1,2,3-cd)pyrene	15.46	276	133756	373.83	ng/ml	99
35) Dibenz(a,h)anthracene	15.52	278	139306	384.07	ng/ml	100
36) Benzo(g,h,i)perylene	15.85	276	152959	365.05	ng/ml	100

JUL 16 2018

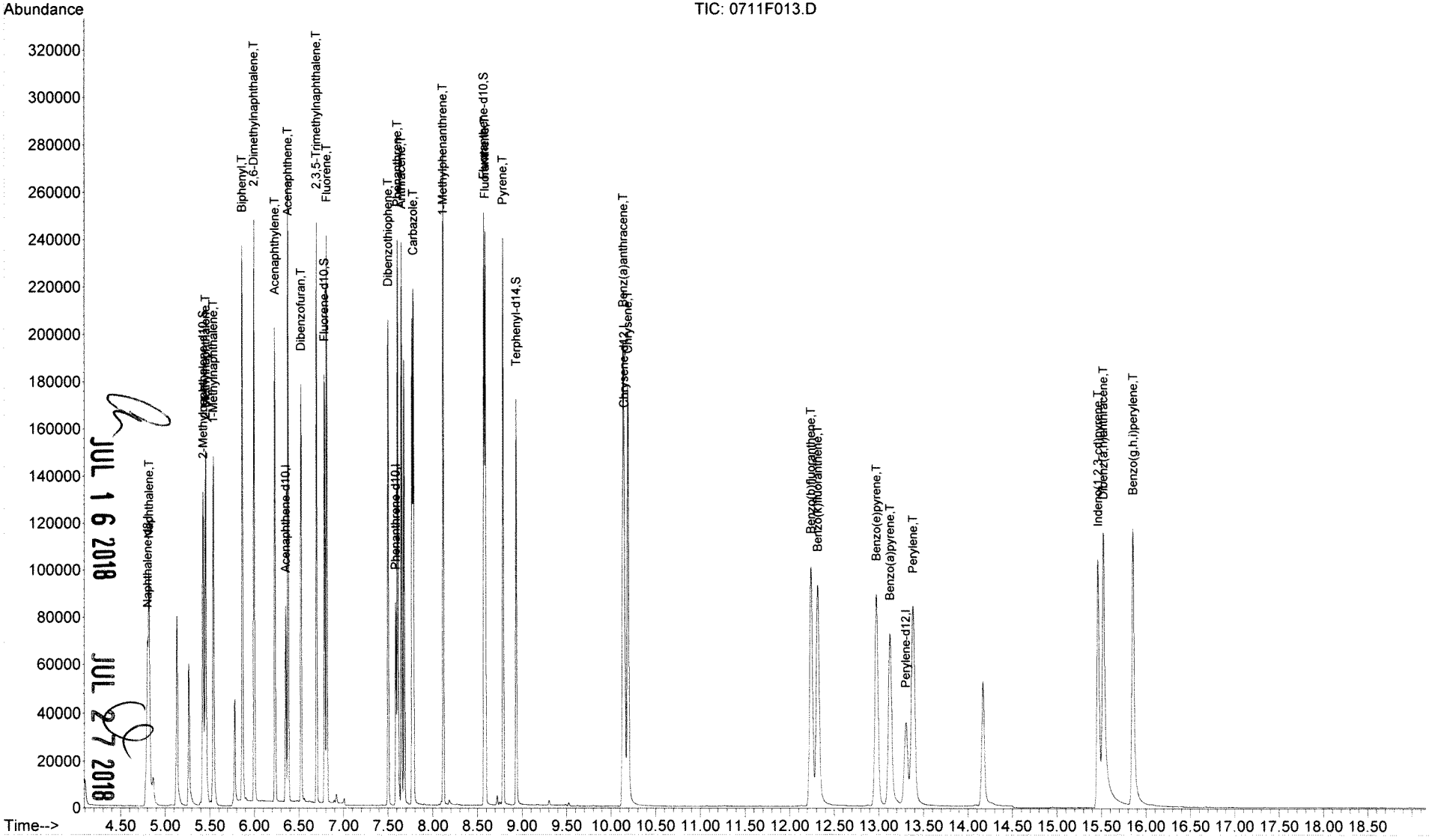
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F013.D 071118PAH.M Mon Jul 16 09:14:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:14 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



JUL 16 2018

JUL 27 2018

Preparation Information

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Client ID	Product	Matrix	Amt. Ext.	Final Vol.	Solids
K1810270-001	N3-0to26-101518	8270D PAH SIM ULL	SEDIMENT	40.062g	2mL	74.3
K1810302-016	A1-0to30-102018	8270D PAH SIM ULL	SEDIMENT	40.044g	2mL	
K1810430-001	E-8.99-0to28-102418	8270D PAH SIM ULL	SOIL	40.037g	2mL	28.5
K1810430-002	C-8.94-0to27-102418	8270D PAH SIM ULL	SOIL	40.004g	2mL	30.2
K1810430-003	D-8.90-0to27-102418	8270D PAH SIM ULL	SOIL	40.007g	2mL	34.7
K1810430-004	D-8.83-0to25-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	34.7
K1810430-005	E-9.02-0to26-102418	8270D PAH SIM ULL	SOIL	40.028g	2mL	35.0
K1810430-006	B-9.00-0to29-102418	8270D PAH SIM ULL	SOIL	40.009g	2mL	27.7
K1810430-007	512-0to29-102418	8270D PAH SIM ULL	SOIL	40.052g	2mL	27.3
K1810430-008	D-9.09-0to29-102418	8270D PAH SIM ULL	SOIL	40.011g	2mL	32.2
K1810430-009	A-9.03-0to26-102418	8270D PAH SIM ULL	SOIL	40.044g	2mL	28.8
K1810430-010	B-9.15-0to30-102418	8270D PAH SIM ULL	SOIL	40.077g	2mL	46.5
K1810430-011	G-9.15-0to18-102418	8270D PAH SIM ULL	SOIL	40.080g	2mL	74.1
K1810683-001	PDI-ST-T06B-1810	8270D PAH SIM ULL	SEDIMENT	40.124g	2mL	25.3
K1810683-002	PDI-ST-T06A-1810	8270D PAH SIM ULL	SEDIMENT	40.049g	2mL	25.6
K1810683-003	PDI-ST-T07A-1810	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	22.3
K1810683-004	PDI-ST-T07B-1810	8270D PAH SIM ULL	SEDIMENT	40.085g	2mL	21.4
KWG1805796-1	Matrix Spike	8270D PAH SIM ULL	SOIL	40.057g	2mL	35.0
KWG1805796-2	Duplicate Matrix Spike	8270D PAH SIM ULL	SOIL	40.011g	2mL	35.0
KWG1805796-3	Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.064g	2mL	25.6
KWG1805796-4	Duplicate Matrix Spike	8270D PAH SIM ULL	SEDIMENT	40.114g	2mL	25.6
KWG1805796-5	Lab Control Sample	8270D PAH SIM ULL	SEDIMENT	20.000g	2mL	
KWG1805796-6	Method Blank	8270D PAH SIM ULL	SEDIMENT	40.332g	2mL	

Lab Code	Parent Lab Code	Comments
KWG1805796-1	K1810430-005	KQ1815762-01
KWG1805796-2	K1810430-005	KQ1815762-02
KWG1805796-3	K1810683-002	KQ1815762-03
KWG1805796-4	K1810683-002	KQ1815762-04
KWG1805796-5		KQ1815762-05
KWG1805796-6		KQ1815762-06

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810270-001	1702211					
K1810302-016	1702212					
K1810430-001	1702213					

Comments: IS = SV-557-100D

Started By: KPrescot Assisted By: —

Completed By: TPottsch Assisted By: —

Training: Yes / No (No) — Yes / No (No)

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra MS14

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18

Extracts Examined: (Yes) / No

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:**	11/07/18 13:45
Department:	Semivoa GCMS				

Lab Code	Prep Event ID	Surrogate Solution ID	Amount Added	Spike Solution ID	Amount Added	Witness
K1810430-002	1702214					
K1810430-003	1702215					
K1810430-004	1702216					
K1810430-005	1702217					
K1810430-006	1702218					
K1810430-007	1702219					
K1810430-008	1702220					
K1810430-009	1702221					
K1810430-010	1702222					
K1810430-011	1702223					
K1810683-001	1702224					
K1810683-002	1702225					
K1810683-003	1702226					
K1810683-004	1702227					
KWG1805796-1	1702228					
KWG1805796-2	1702229					
KWG1805796-3	1702230					
KWG1805796-4	1702231					
KWG1805796-5	1702232					
KWG1805796-6	1702233					

Comments:

Started By: KPrescot Assisted By: — Training

Completed By: TPottsch Assisted By: — Yes No

Reviewed By: [signature] Date: 11/13/18 Storage: K-Tundra Yes No

Chain of Custody

Relinquished By: [signature] Date: 11/12/18

Received By: [signature] Date: 11/14/18 Extracts Examined Yes No

Preparation Information

11/14

Group ID:	KWG1805796	Prep Method:	EPA 3541	Prep Date:	11/07/18 00:00
Department:	Semivoa GCMS				

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µl	Spike Added µl
1	K1810270-001	N3-0to26-101518	.02	✓	8270D PAH SIM ULL	SEDIMENT	*	N/A	10	2	20	–
2	K1810302-016	A1-0to30-102018	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
3	K1810430-001	E-8.99-0to28-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
4	K1810430-002	C-8.94-0to27-102418	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
5	K1810430-003	D-8.90-0to27-102418 1A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
6	K1810430-004	D-8.83-0to25-102418 1B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
7	K1810430-005	E-9.02-0to26-102418 1C	.02	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
8	K1810430-006	B-9.00-0to29-102418 1D	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
9	K1810430-007	512-0to29-102418 1E	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
10	K1810430-008	D-9.09-0to29-102418 1F	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
11	K1810430-009	A-9.03-0to26-102418 2A	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
12	K1810430-010	B-9.15-0to30-102418 2B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
13	K1810430-011	G-9.15-0to18-102418 2C	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		–
14	K1810683-001	PDI-ST-T06B-1810 2D	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
15	K1810683-002	PDI-ST-T06A-1810 2E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
16	K1810683-003	PDI-ST-T07A-1810 2F	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
17	K1810683-004	PDI-ST-T07B-1810 3A	.01	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		–
18	KWG1805796-1	Matrix Spike K1810430-005 3B	.01	✓	8270D PAH SIM ULL	SOIL	*		10	2		80

Comments: *See Pre-Prep Information Benchsheet. KRP 11/07/18. PREPRUN: 325303

Surrogate ID: AP: SVM59-50D 100/150ppm XP: 03/04/19 20ul Syringe. S-92.

Spike ID: SIM PAH: SVM59-51F 25ppm XP: 03/07/19 ~~200ul~~ E.E. KRP 11/07/18 80ul Syringe. S-9

Witness: [signature] 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: –

Group ID:	KWG1805796	**Prep Method:**	EPA 3541	**Prep Date:** 11/07/18 00:00
Department:	Semivoa GCMS			

#	Lab Code	Client ID	B#	√	Product	Matrix	Amt. Ext. g	pH	Int. Vol. mL	Final Vol. mL	Surr. Added µL	Spike Added µL
19	KWG1805796-2	Duplicate Matrix Spike K1810430-005 3C	.01	✓	8270D PAH SIM ULL	SOIL	*	N/A	10	2	20	80
20	KWG1805796-3	Matrix Spike K1810683-002 3D	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
21	KWG1805796-4	Duplicate Matrix Spike K1810683-002 3E	.02	✓	8270D PAH SIM ULL	SEDIMENT	*		10	2		
22	KWG1805796-5	Lab Control Sample 3F	–	–	8270D PAH SIM ULL	SEDIMENT	20.000		10	2		–
23	KWG1805796-6	Method Blank	–	–	8270D PAH SIM ULL	SEDIMENT	40.332		10	2		–

Comments: * See Pre-Prep Information Benchsheet. KRP 11/07/18.

Surrogate ID: SEE PAGE 1

Spike ID: SEE PAGE 1

Witness: [signature] 11/7/18

Started By: KPrescot Assisted By: KV

Completed By: TP Assisted By: –

Additional Prep Information for EPA 3541
PAH

Service Request K1810270/0302/0430/0683 Workgroup KWG1805796

Sulfate Lot #187085209 DCM (GC²) Lot #DV301 Glass Wool Lot# 213179999
Date/Time/Initials Weighed: — Balance ID: — Calibration Verified ☐

Storage Location (if not extracted same day): —

Soxtherm/s unit I.D# K-SOX-01/02/03

Soxtherm Start (Time/Date/Initial): 1345 11/07/18 KLP

Soxtherm Stop (Time/Date/Initial): 0755 11/08/18 KLP

N-Evap (Time/Date/Initial): 1328 11/8/18 TP N-Evap Therm. ID: X-SVM-010
Temp as measured: 20.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Hexane Exchange for Silica Gel (Time/Date/Initial): 10:14 11/9/18 TP
Hexane Lot # 195734 N-Evap Therm. ID: X-SVM-010
Temp as measured: 0.0 °C Correction factor: 0.0 °C Adjusted temp: 20.0 °C

Silica Gel Clean-up (3630) (Time/Date/Initial): 14:01 11/9/18 TP

Silica Column Lot # Ext002-350 1:1 Hexane/DCM Reagent Lot # Ext002-32X
Turbovap (Time/Date/Initial): 14:00 11/12/18 TP Turbovap Therm. ID: K-Turbovap-005
Temp as measured: 28.0 °C Correction factor: 0.0 °C Adjusted temp: 28.0 °C

Pipet Lots: Intermediate Volume 14918647 Final Volume 20176045

Extract Storage: Hi Doggy

Completed (Time/Date/Initial): 17:04 11/12/18 TP

Comments/Observations: —

Bench Sheet Review Check List	
☑	Hold Times Met (If no, Reason: Frozen)
☑	Prep date, dept, method, product code correct in stealth
☑	Spike information correct
☑	Weights/Volumes and units correct on raw and final bench sheets
☑	Sample IDs have been checked—Bottle numbers appended if required
☑	Names present for: Started by, Completed by, relinquished by, and witnessed by.
☑	Training has been circled
☑	Extract Storage recorded
☑	Additional Prep Sheet completely filled out (NA or line out Blanks)
☑	All clean-ups have been noted on additional prep sheet
☑	Signed service request with Form V, if applicable, has been attached

Pre-Prep Information Benchsheet

Prep Run #: 325303 **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-09-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810430-001	.01	PAH SIM ULL	40.037g		PrepComments:GBEATLEY k-balance-49
2	K1810430-002	.01	PAH SIM ULL	40.004g		PrepComments:GBEATLEY k-balance-49
3	K1810430-003	.01	PAH SIM ULL	40.007g		PrepComments:GBEATLEY k-balance-49
4	K1810430-004	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
5	K1810430-005	.02	PAH SIM ULL	40.028g		PrepComments:GBEATLEY k-balance-49
6	K1810430-005 MS KQ1815762-01	.01	PAH SIM ULL	40.057g		PrepComments:GBEATLEY k-balance-49
7	K1810430-005 DMS KQ1815762-02	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
8	K1810430-006	.01	PAH SIM ULL	40.009g		PrepComments:GBEATLEY k-balance-49
9	K1810430-007	.01	PAH SIM ULL	40.052g		PrepComments:GBEATLEY k-balance-49
10	K1810430-008	.01	PAH SIM ULL	40.011g		PrepComments:GBEATLEY k-balance-49
11	K1810430-009	.01	PAH SIM ULL	40.044g		PrepComments:GBEATLEY k-balance-49
12	K1810430-010	.01	PAH SIM ULL	40.077g		PrepComments:GBEATLEY k-balance-49
13	K1810430-011	.01	PAH SIM ULL	40.080g		PrepComments:GBEATLEY k-balance-49

Relinquished By:	Date/Time: 10/30/18 1125	Received By:	Date/Time: 11/05/18 1330

325303

Pre-Prep Information Benchsheet

Prep Run #: ~~325583~~ **Prep Method:** **Team:** **Container Lot No:** 091718-1TW **Prep Due Date:** Nov-15-2018

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810683-001	.01	PAH SIM ULL	40.124g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
2	K1810683-002	.02	PAH SIM ULL	40.049g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
3	K1810683-002 MS KQ1816031-01	.02	PAH SIM ULL	40.064g		PrepComments:DMADDEN K-Balance-50
4	K1810683-002 DMS KQ1816031-02	.02	PAH SIM ULL	40.114g		PrepComments:DMADDEN K-Balance-50
5	K1810683-003	.01	PAH SIM ULL	40.332g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50
6	K1810683-004	.01	PAH SIM ULL	40.085g	5g Pest OC instead of 20g for AECOM.	PrepComments:DMADDEN K-Balance-50

All samples & QC moved to prep run # 325303. KLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	10:47 11.2.18	Kassidy Van	11/05/18 1348

315303

Pre-Prep Information Benchsheet

Prep Run #: ~~325832~~ **Prep Method:** **Team:** **Container Lot No:** 100118-1tw **Prep Due Date:**

#	Lab Code	Bottle	Test Name	Weight	Sample Comments	Test Comments
1	K1810270-001	.02	PAH SIM ULL	40.062g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken loss of water. Limited sample v	PrepComments:APOSEY K-BALANCE-48 11062018
2	K1810302-016	.02	PAH SIM ULL	40.044g	Samples Previously Frozen . Pulled 11/05/2018. Jar cracked/broken. Limited sample volume	PrepComments:APOSEY K-BALANCE-48 11062018

Samples added to prep run # 315303. LLP 11/07/18.

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11.6.18 1631	LLP	11/07/18

Polynuclear Aromatic Hydrocarbons

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

1st 11/09/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110118\1101F014.D
Lab ID: K1810430-012
RunType: SMPL
Matrix: WATER

Date Acquired: 11/01/2018 15:52
Date Quantitated: 11/09/2018 09:16
Batch ID: KWG1805861
Analysis Method: 8270D SIM
ListJoinID: LJ18861

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
Preparation Holding Time	NA	NA	NA	x	
Pre-Preparation Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Method Blank	NA	NA	NA	x	
MB Surrogate Recovery	NA	NA	NA	x	
Lab Control Spike	NA	NA	NA	x	
Duplicate Lab Control Spike	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/09/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110118\1101F014.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 15:52	**Quant Date:**	11/09/2018 09:16	**Vial:**	14
Run Type:	SMPL	**ListJoinID:**	LJ18861	**Dilution:**	1.0
Lab ID:	K1810430-012			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**	IV	**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**	10/24/2018	**Receive Date:**	10/24/2018

Analysis Lot:	KWG1805861	**Prep Lot:**	KWG1805607	**Report Group:**	K1810430
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3511		
Prep Ref:	1700827	**Prep Date:**	10/30/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:	Polynuclear Aromatic Hydrocarbons	**Report List ID:**	LJ18861
Tune Ref:	J:\MS14\DATA\110118\1101F001.D	**Method ID:**	MJ1638
MB Ref:	J:\MS14\DATA\110118\1101F011.D	**Quant based on Report List**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.80	0.01	136	72186**m**	200.00	OK
2	Acenaphthene-d10	6.35	0.00	164	33109	200.00	OK
3	Phenanthrene-d10	7.59	0.00	188	67185	200.00	OK
4	Chrysene-d12	10.16	0.00	240	68339	200.00	OK
5	Perylene-d12	13.37	0.00	264	74415	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.79	0.00	0.00	176	168711	796.94	80	42-131	OK	
3	Fluoranthene-d10	8.58	0.00	0.00	212	322849	762.46	76	42-133	OK	
4	Terphenyl-d14	8.93	0.00	0.00	244	214603	723.99	72	32-129	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.82	0.01	0.00	128	721	1.73	0.0077	J	
1	2-Methylnaphthalene	5.46	0.01	0.00	142	331	1.32	0.0059	J	
2	Acenaphthylene	6.24	0.01	0.00	152	626	1.58	0.0070	JX	
2	Acenaphthene	6.38		0.00	154	124	0.5500	0.0024	J	
2	Dibenzofuran	6.53		0.00	168	444	1.22	0.0054	J	
2	Fluorene	6.81		0.00	166	211	0.7700	0.0034	J	
3	Phenanthrene	7.61		0.00	178	1027	2.45	0.011	J	
3	Anthracene				178	0**d**		0.00082	U	
3	Fluoranthene	8.59		0.00	202	337**m**	0.6500	0.0029	J	
4	Pyrene	8.79		0.00	202	215**m**	0.4600	0.0020	J	
4	Benz(a)anthracene	10.16	0.01	0.00	228	232	0.5300	0.0024	J	
4	Chrysene				228	0**d**		0.00076	U	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110118\1101F014.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 15:52	**Quant Date:**	11/09/2018 09:16	**Vial:**	14
Run Type:	SMPL	**ListJoinID:**	LJ18861	**Dilution:**	1.0
Lab ID:	K1810430-012			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
5	Benzo(b)fluoranthene				252	0**d**		0.00083	U	
5	Benzo(k)fluoranthene				252	0**d**		0.00094	U	
5	Benzo(a)pyrene				252	0**d**		0.0011	U	
5	Indeno(1,2,3-cd)pyrene				276	0		0.00089	U	
5	Dibenz(a,h)anthracene				278	0		0.0013	U	
5	Benzo(g,h,i)perylene				276	0		0.00086	U	

Prep Amount:	450 mL	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

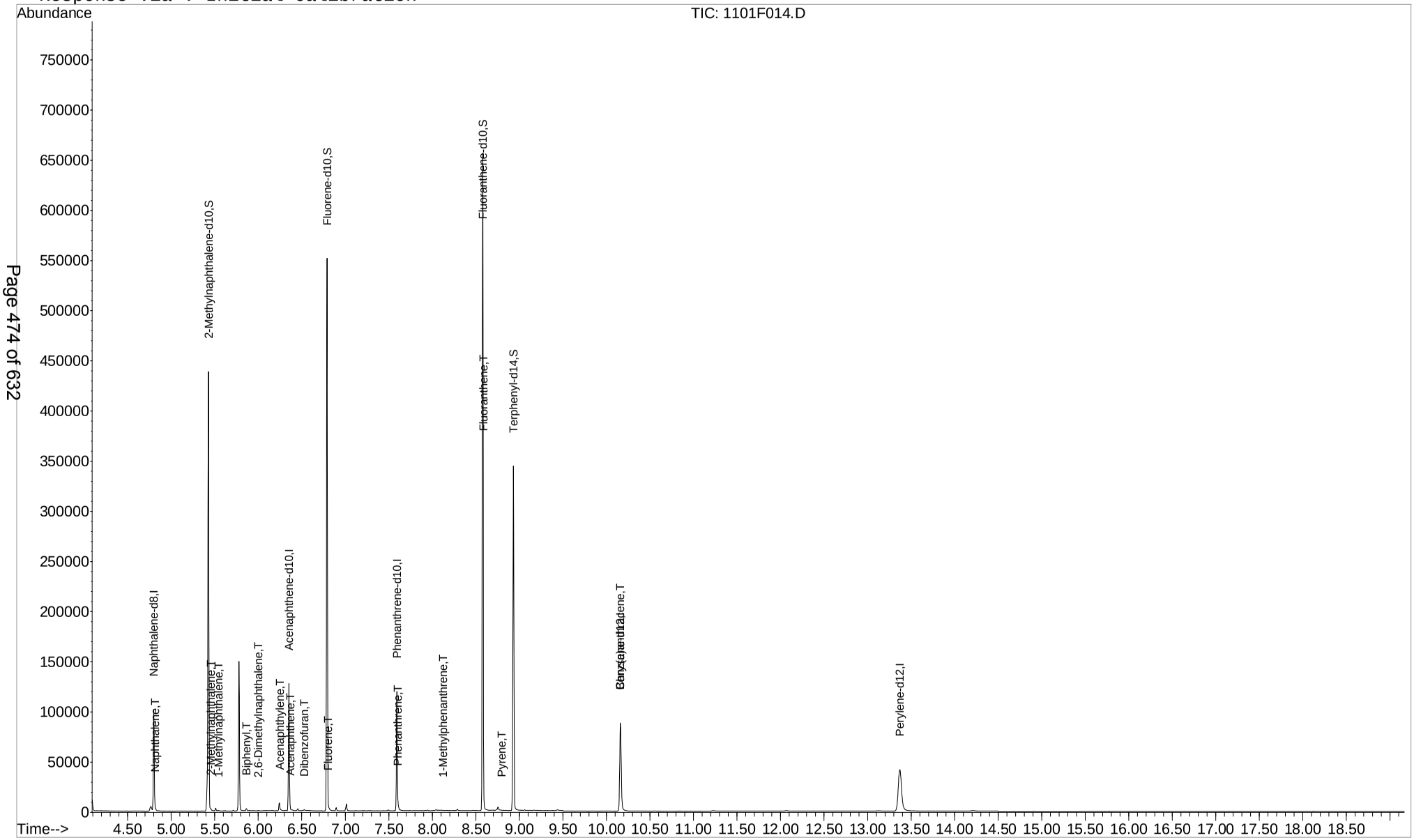
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

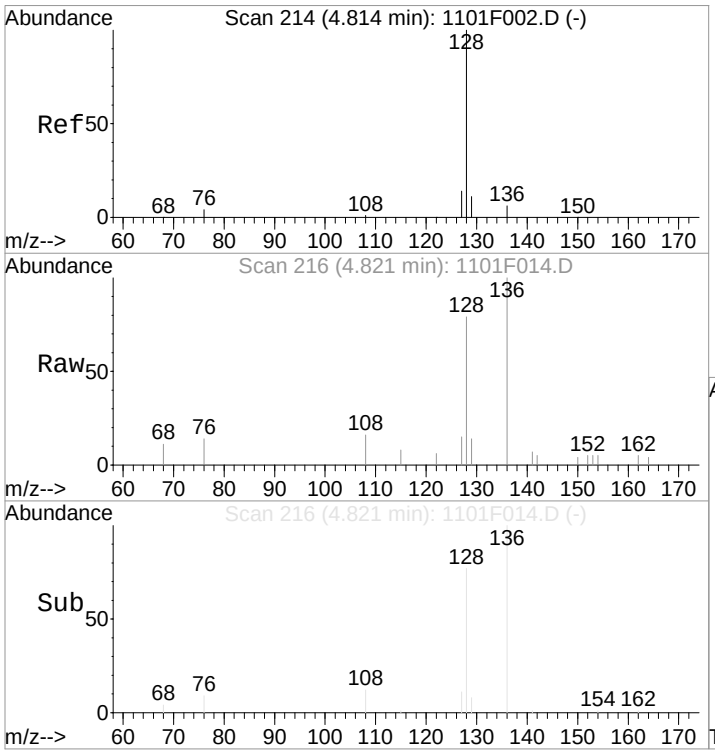
1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration



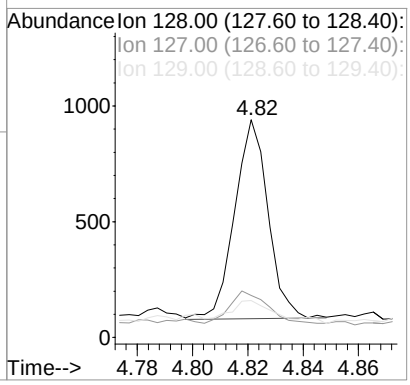
1st 11/09/18
2nd 11/27/18

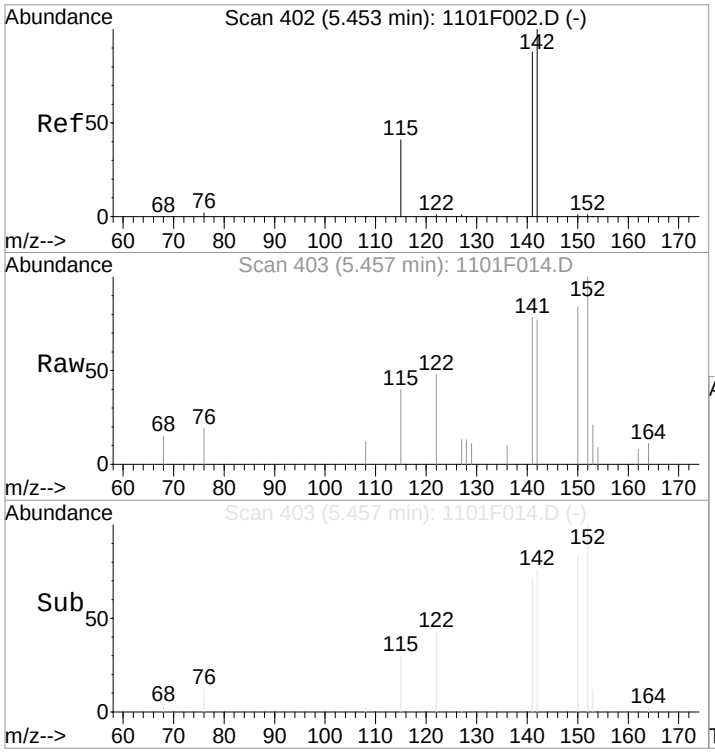


#2
Naphthalene
Concen: 1.73 ng/ml
RT: 4.82 min Scan# 216
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:128 Resp: 721

Ion	Ratio	Lower	Upper
128	100		
127	14.0	0.0	43.7
129	11.7	0.0	30.8

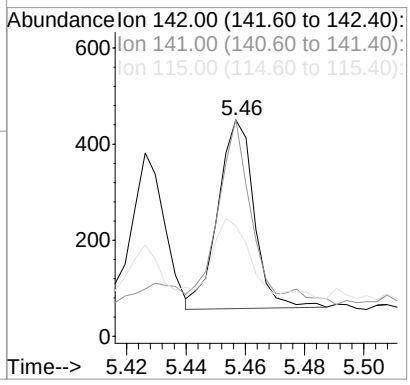


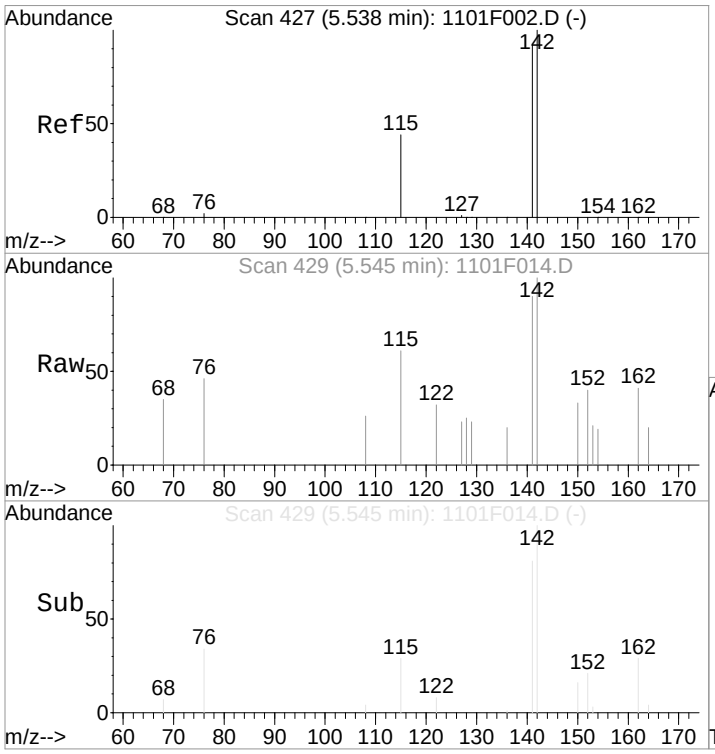


#4
2-Methylnaphthalene
Concen: 1.32 ng/ml
RT: 5.46 min Scan# 403
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:142 Resp: 331

Ion	Ratio	Lower	Upper
142	100		
141	95.9	56.8	116.8
115	39.1	13.3	53.3

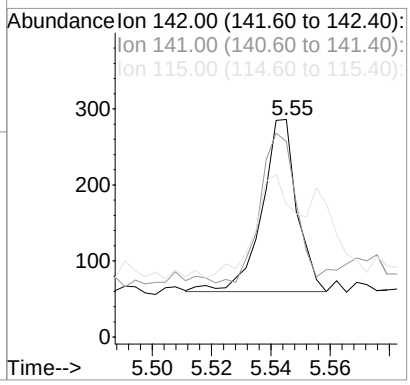


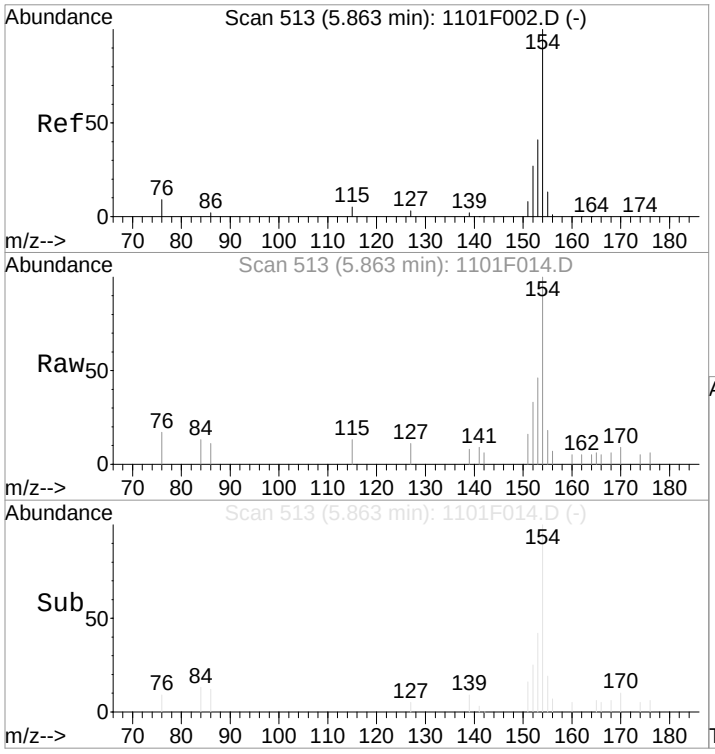


#5
1-Methylnaphthalene
Concen: 0.76 ng/ml
RT: 5.55 min Scan# 429
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:142 Resp: 185

Ion	Ratio	Lower	Upper
142	100		
141	81.0	59.7	119.7
115	42.5	13.7	53.7

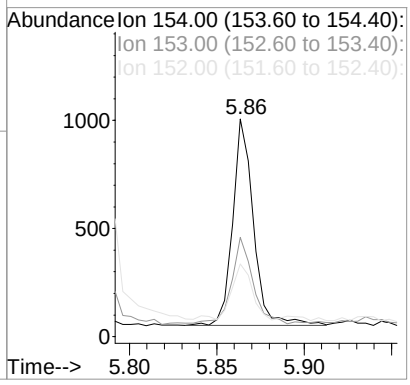




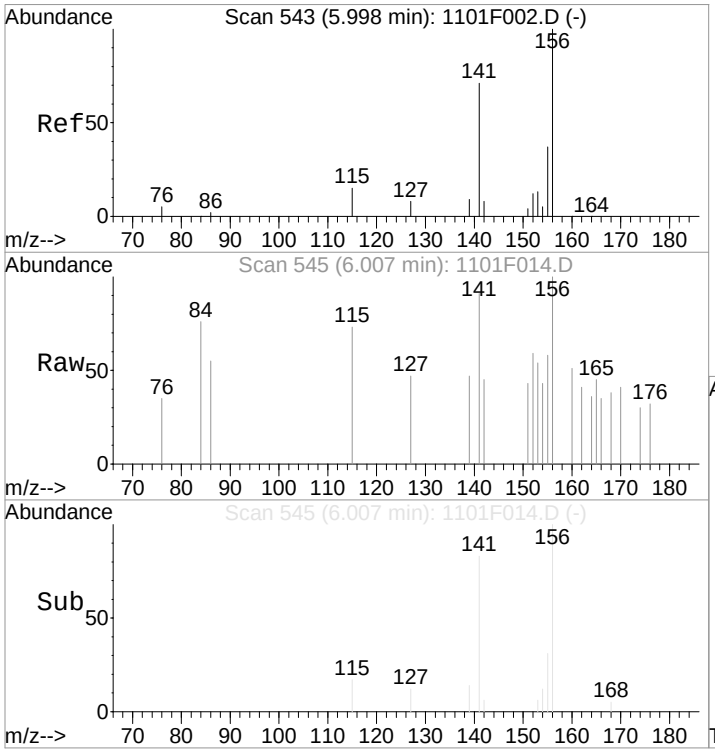
#6
Biphenyl
Concen: 2.52 ng/ml
RT: 5.86 min Scan# 513
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:154 Resp: 791

Ion	Ratio	Lower	Upper
154	100		
153	41.6	11.4	71.4
152	27.5	7.1	47.1



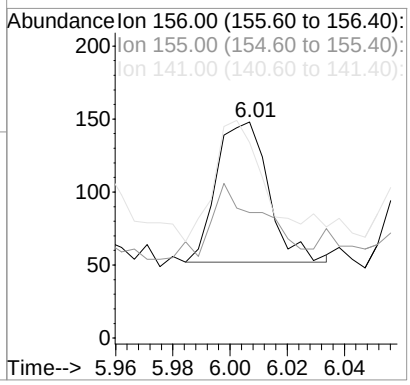
1st 11/09/18
2nd 11/27/18

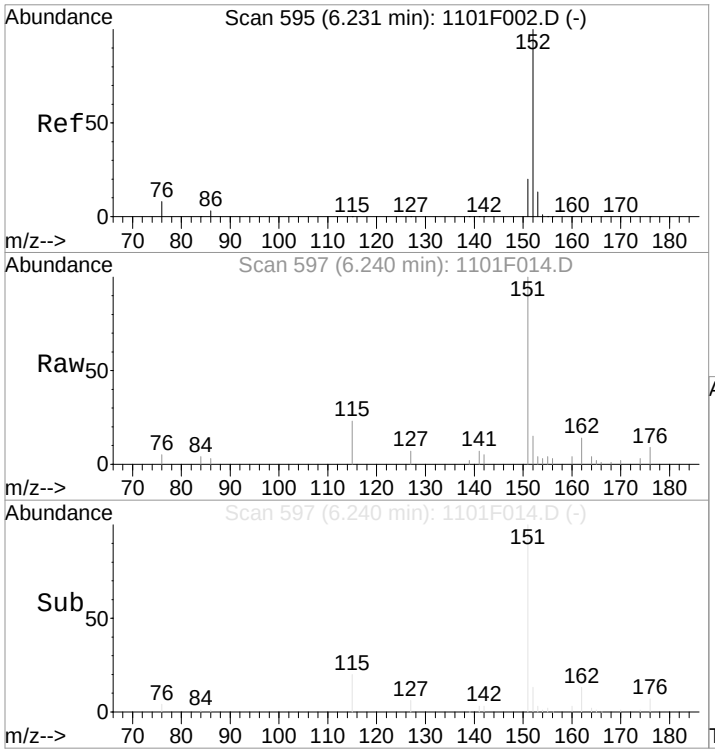


#7
2,6-Dimethylnaphthalene
Concen: 0.57 ng/ml
RT: 6.01 min Scan# 545
Delta R.T. 0.01 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:156 Resp: 122

Ion	Ratio	Lower	Upper
156	100		
155	20.8	7.0	67.0
141	70.8	47.9	87.9

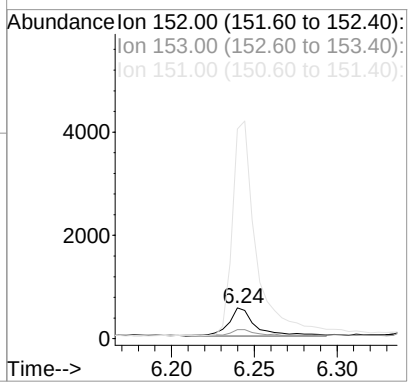




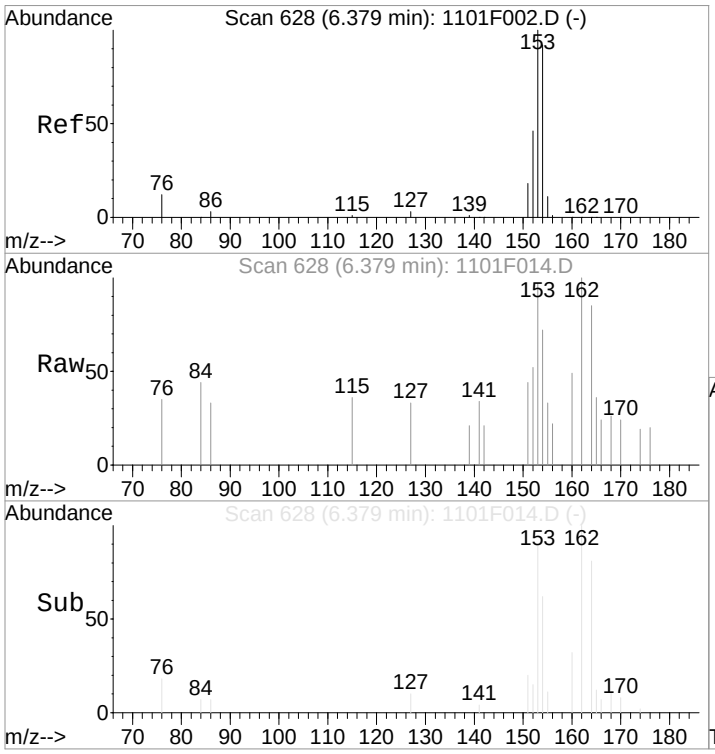
#9
Acenaphthylene
Concen: 1.58 ng/ml
RT: 6.24 min Scan# 597
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:152 Resp: 626

Ion	Ratio	Lower	Upper
152	100		
153	19.4	0.0	42.9
151	732.2	0.2	40.2#



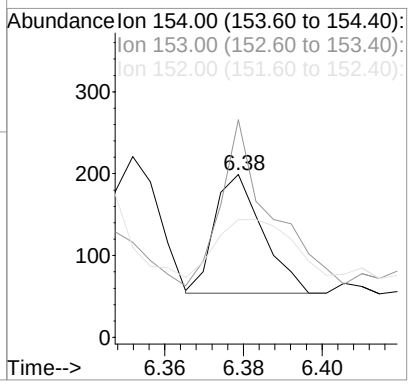
X

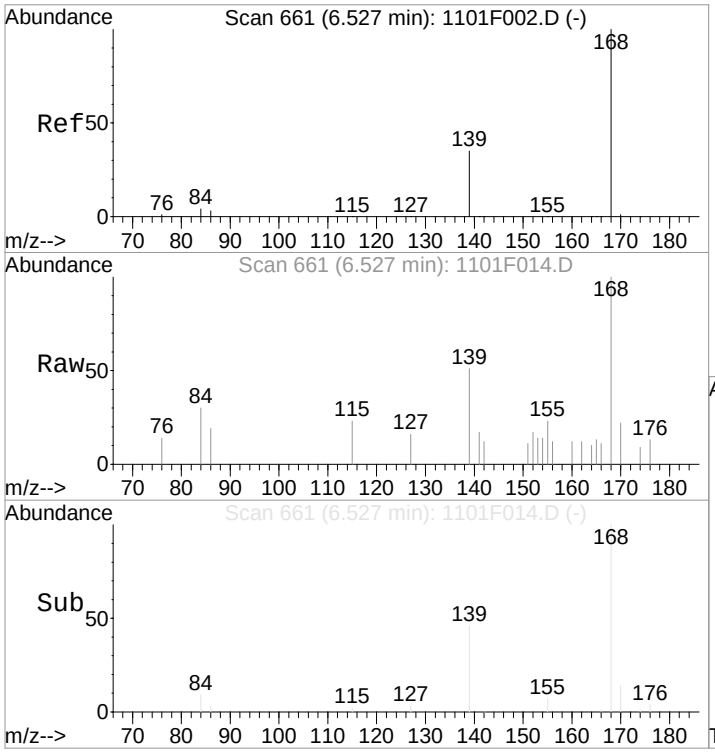


#10
Acenaphthene
Concen: 0.55 ng/ml
RT: 6.38 min Scan# 628
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:154 Resp: 124

Ion	Ratio	Lower	Upper
154	100		
153	140.0	77.1	137.1#
152	49.0	19.7	79.7

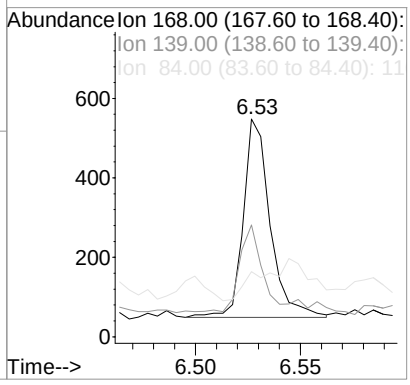


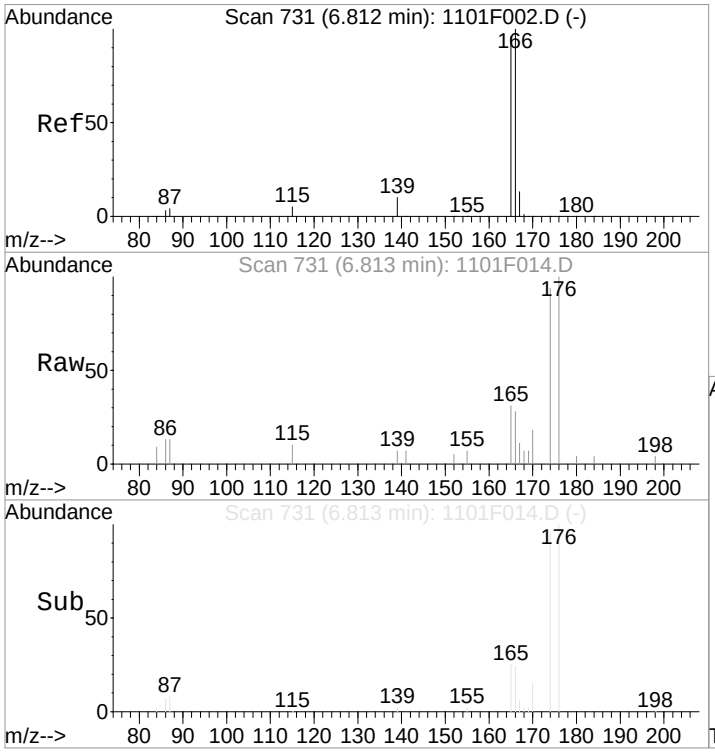


#11
Dibenzofuran
Concen: 1.22 ng/ml
RT: 6.53 min Scan# 661
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:168 Resp: 444

Ion	Ratio	Lower	Upper
168	100		
139	43.5	0.0	55.8
84	9.2	0.0	23.5

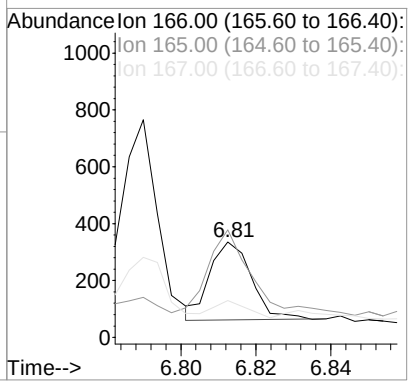


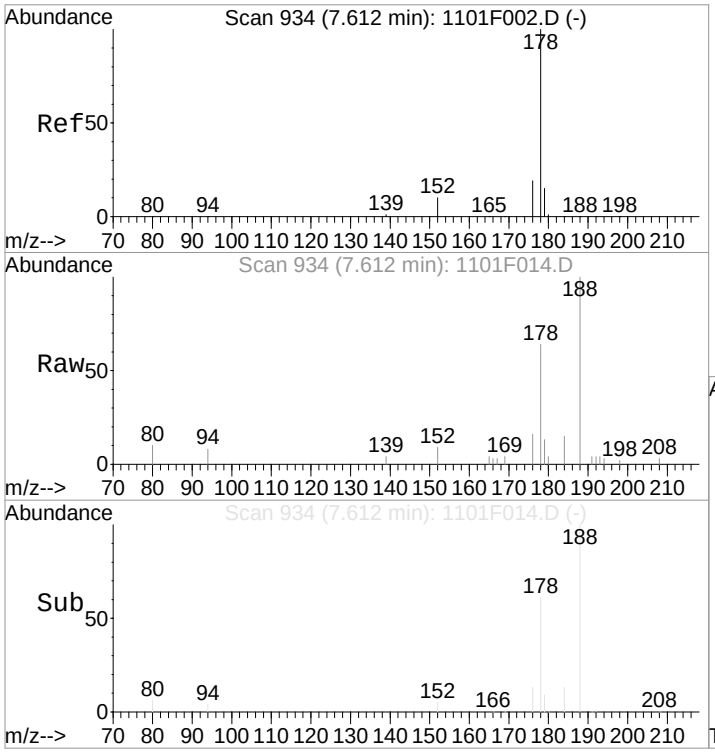


#14
Fluorene
Concen: 0.77 ng/ml
RT: 6.81 min Scan# 731
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:166 Resp: 211

Ion	Ratio	Lower	Upper
166	100		
165	104.8	63.4	123.4
167	17.8	0.0	33.1

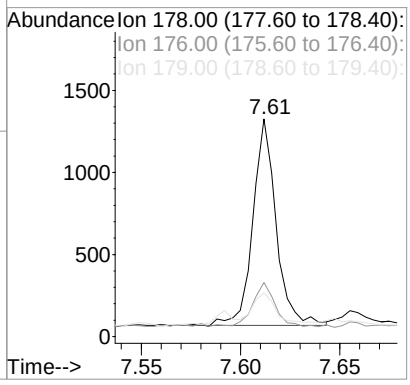




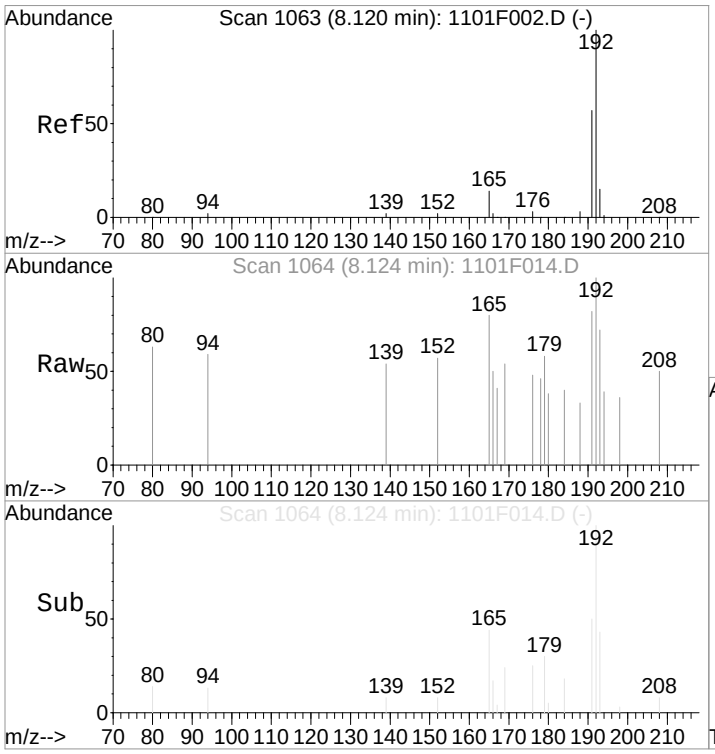
#17
Phenanthrene
Concen: 2.45 ng/ml
RT: 7.61 min Scan# 934
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:178 Resp: 1027

Ion	Ratio	Lower	Upper
178	100		
176	20.9	0.0	48.7
179	15.1	0.0	35.1



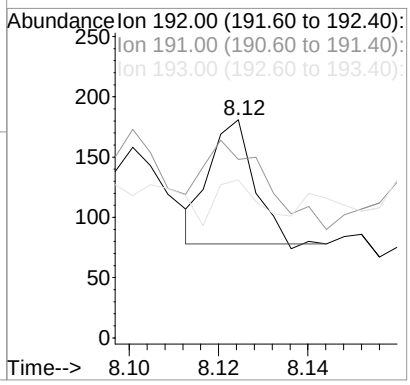
1st 11/09/18
2nd 11/27/18

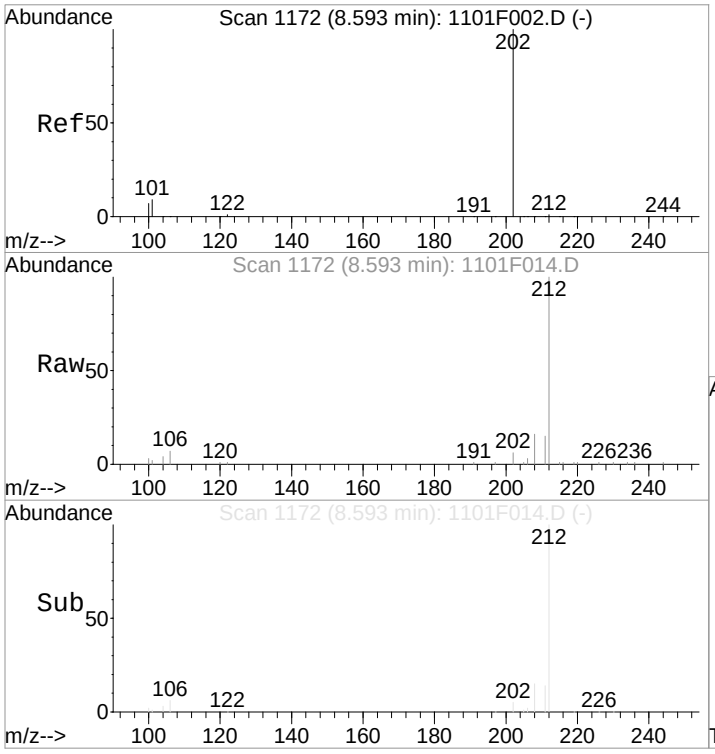


#20
1-Methylphenanthrene
Concen: 0.22 ng/ml
RT: 8.12 min Scan# 1064
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:192 Resp: 71

Ion	Ratio	Lower	Upper
192	100		
191	56.3	27.7	87.7
193	14.6	0.0	45.4

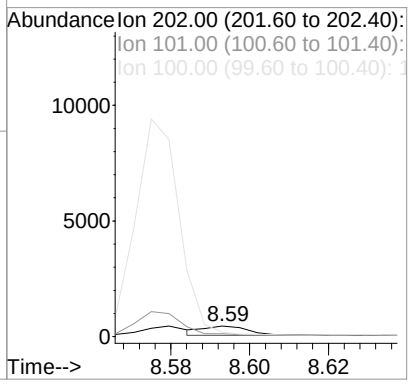




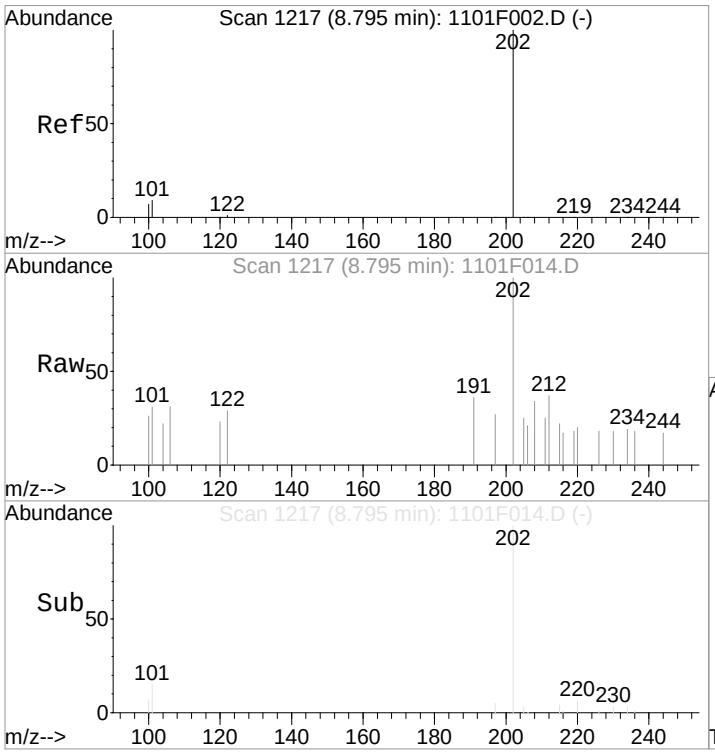
#21
Fluoranthene
Concen: 0.65 ng/ml m
RT: 8.59 min Scan# 1172
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:202 Resp: 337

Ion	Ratio	Lower	Upper
202	100		
101	28.3	0.0	41.3
100	43.6	0.0	28.6#



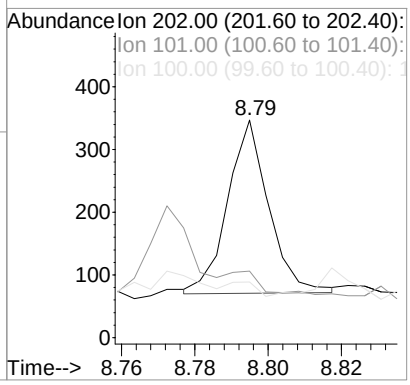
1st 11/09/18
2nd 11/27/18

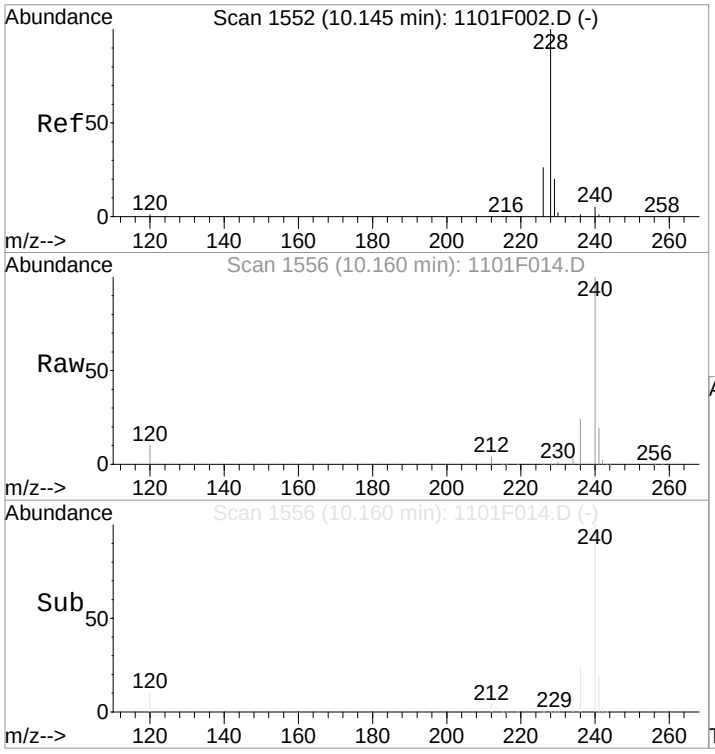


#24
Pyrene
Concen: 0.46 ng/ml m
RT: 8.79 min Scan# 1217
Delta R.T. 0.00 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:202 Resp: 215

Ion	Ratio	Lower	Upper
202	100		
101	30.5	0.0	40.8
100	25.6	0.0	28.5

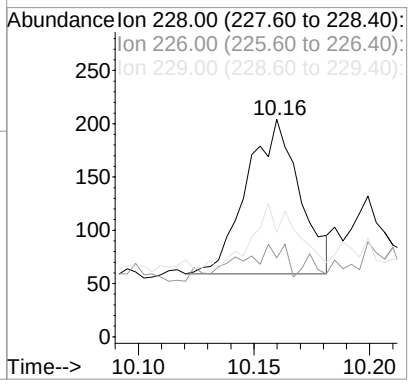




#26
Benz(a)anthracene
Concen: 0.53 ng/ml
RT: 10.16 min Scan# 1556
Delta R.T. 0.01 min
Lab File: 1101F014.D
Acq: 1 Nov 2018 3:52 pm

Tgt Ion:228 Resp: 232

Ion	Ratio	Lower	Upper
228	100		
226	15.2	0.0	56.3
229	19.3	0.0	39.1



Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 09 08:55:53 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	72186m	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	33109	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	67185	200.00	ng/ml	0.00
23) Chrysene-d12	10.16	240	68339	200.00	ng/ml	0.00
28) Perylene-d12	13.37	264	74415	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	132284	656.53	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	65.65%		
13) Fluorene-d10	6.79	176	168711	796.94	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	79.69%		
22) Fluoranthene-d10	8.58	212	322849	762.46	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	76.25%		
25) Terphenyl-d14	8.93	244	214603	723.99	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	72.40%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	721	1.73	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	331	1.32	ng/ml	90
5) 1-Methylnaphthalene	5.55	142	185	0.76	ng/ml	89
6) Biphenyl	5.86	154	791	2.52	ng/ml	100
7) 2,6-Dimethylnaphthalene	6.01	156	122	0.57	ng/ml	88
9) Acenaphthylene	6.24	152	626	1.58	ng/ml#	1
10) Acenaphthene	6.38	154	124	0.55	ng/ml#	78
11) Dibenzofuran	6.53	168	444	1.22	ng/ml	67
14) Fluorene	6.81	166	211	0.77	ng/ml	88
17) Phenanthrene	7.61	178	1027	2.45	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	71	0.22	ng/ml	98
21) Fluoranthene	8.59	202	337m	0.65	ng/ml	
24) Pyrene	8.79	202	215m	0.46	ng/ml	
26) Benz(a)anthracene	10.16	228	232	0.53	ng/ml	87

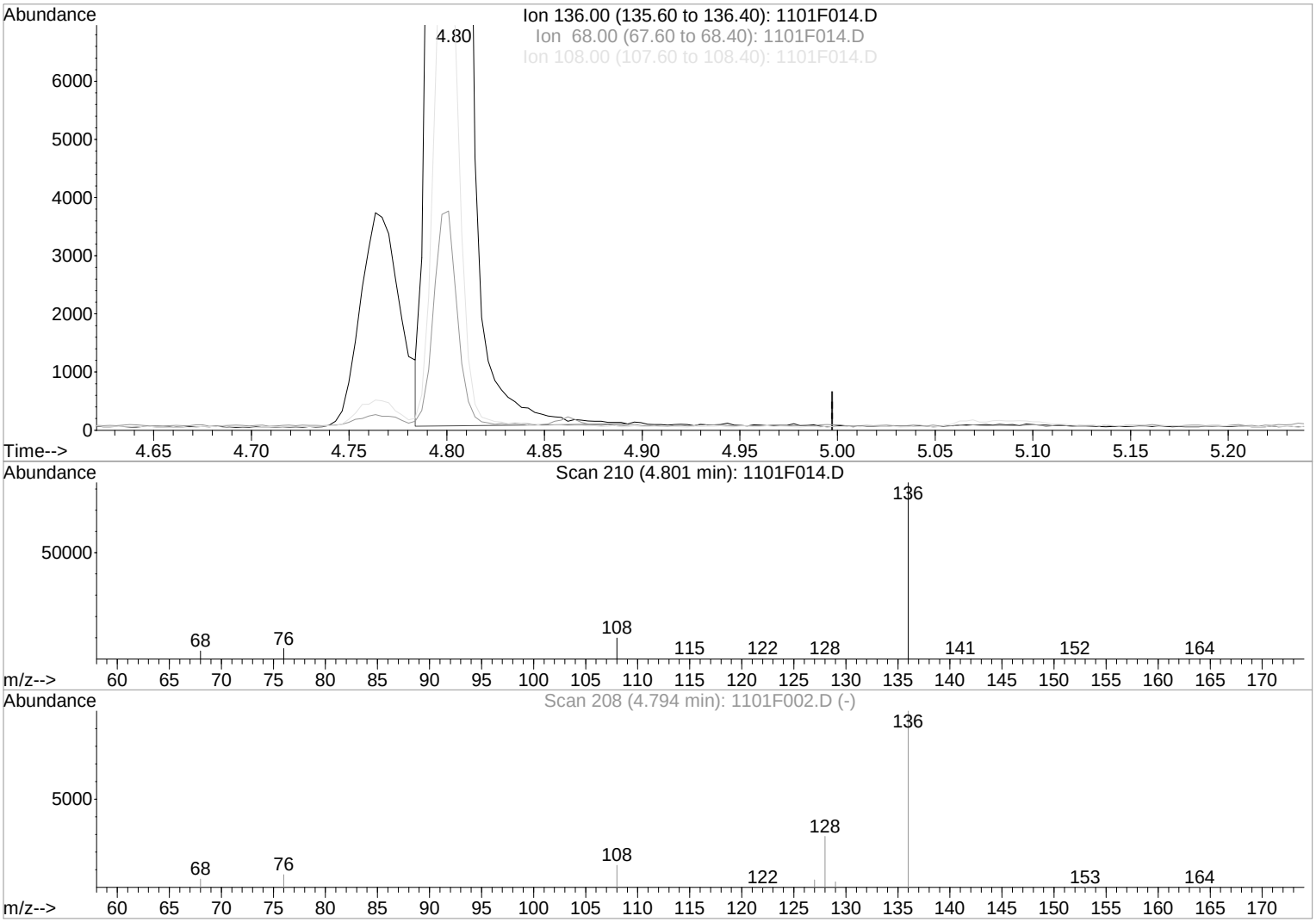
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 8:55 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F014.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml

response 66447

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.45
108.00	10.60	11.86
0.00	0.00	0.00

Manual Integration:

Before

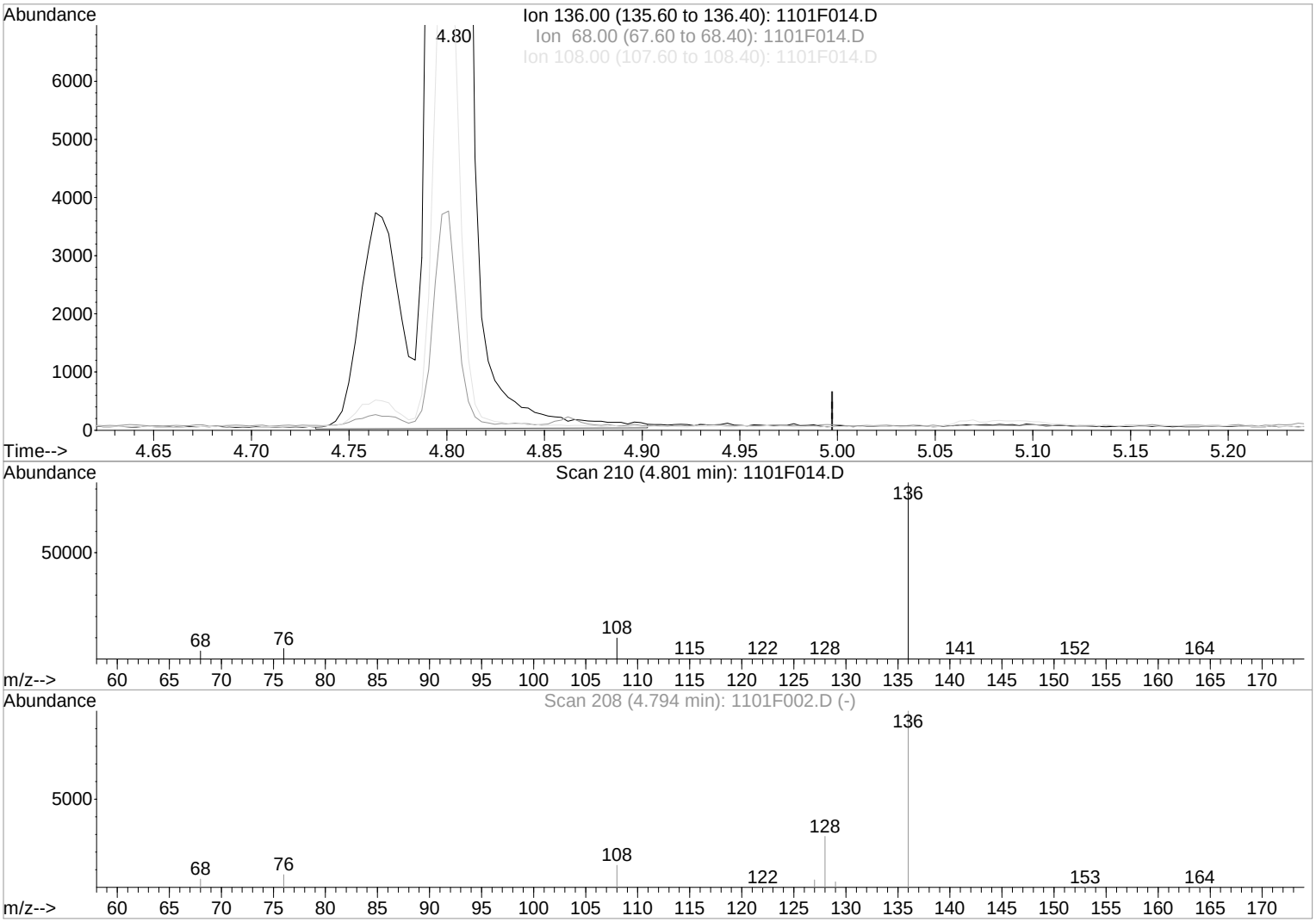
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:14 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F014.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml m

response 72186

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.54
108.00	10.60	11.91
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

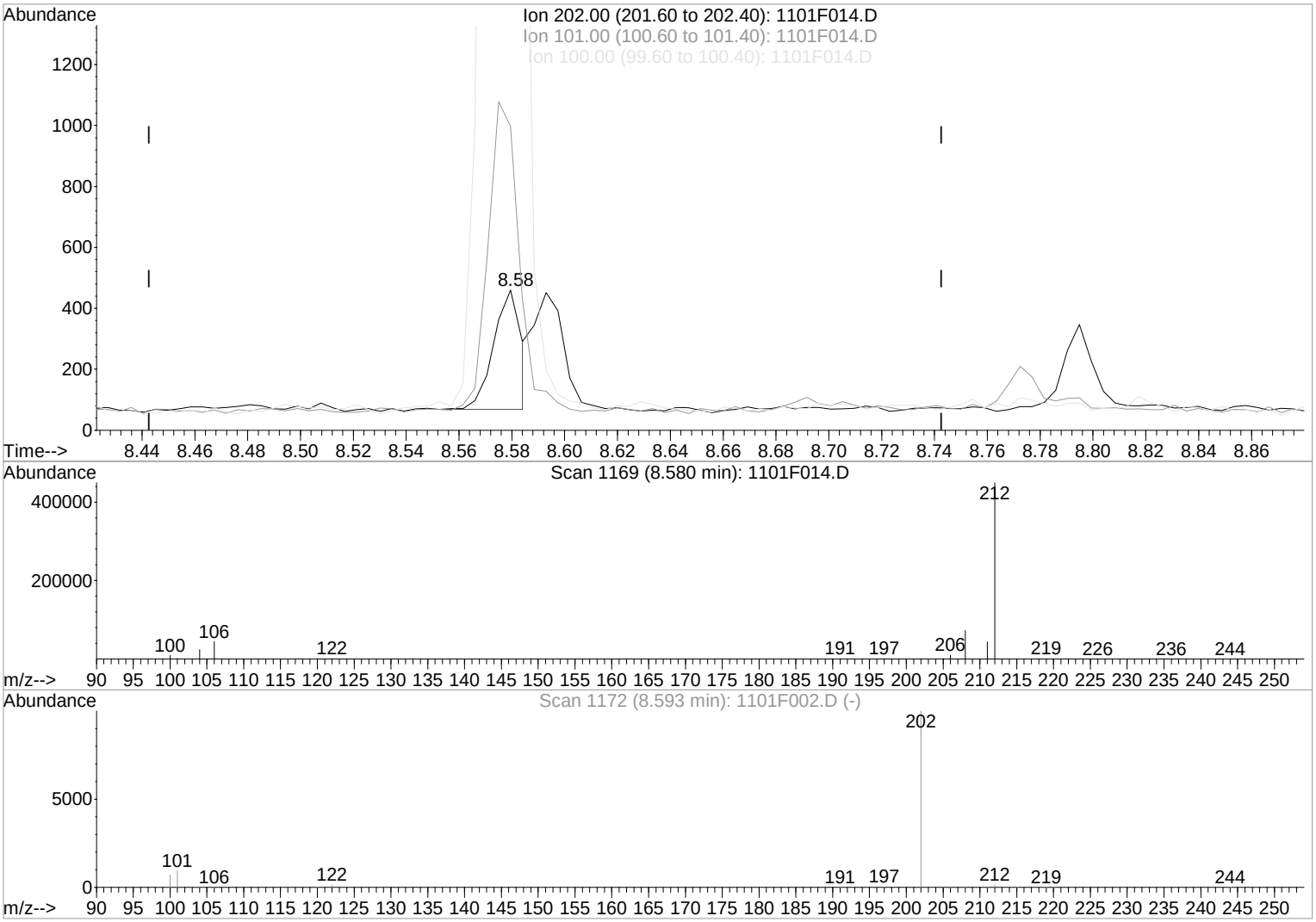
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:15 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F014.D

(21) Fluoranthene (T)

8.58min 0.55ng/ml

response 284

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	237.24#
100.00	8.60	2151.02#
0.00	0.00	0.00

Manual Integration:

Before

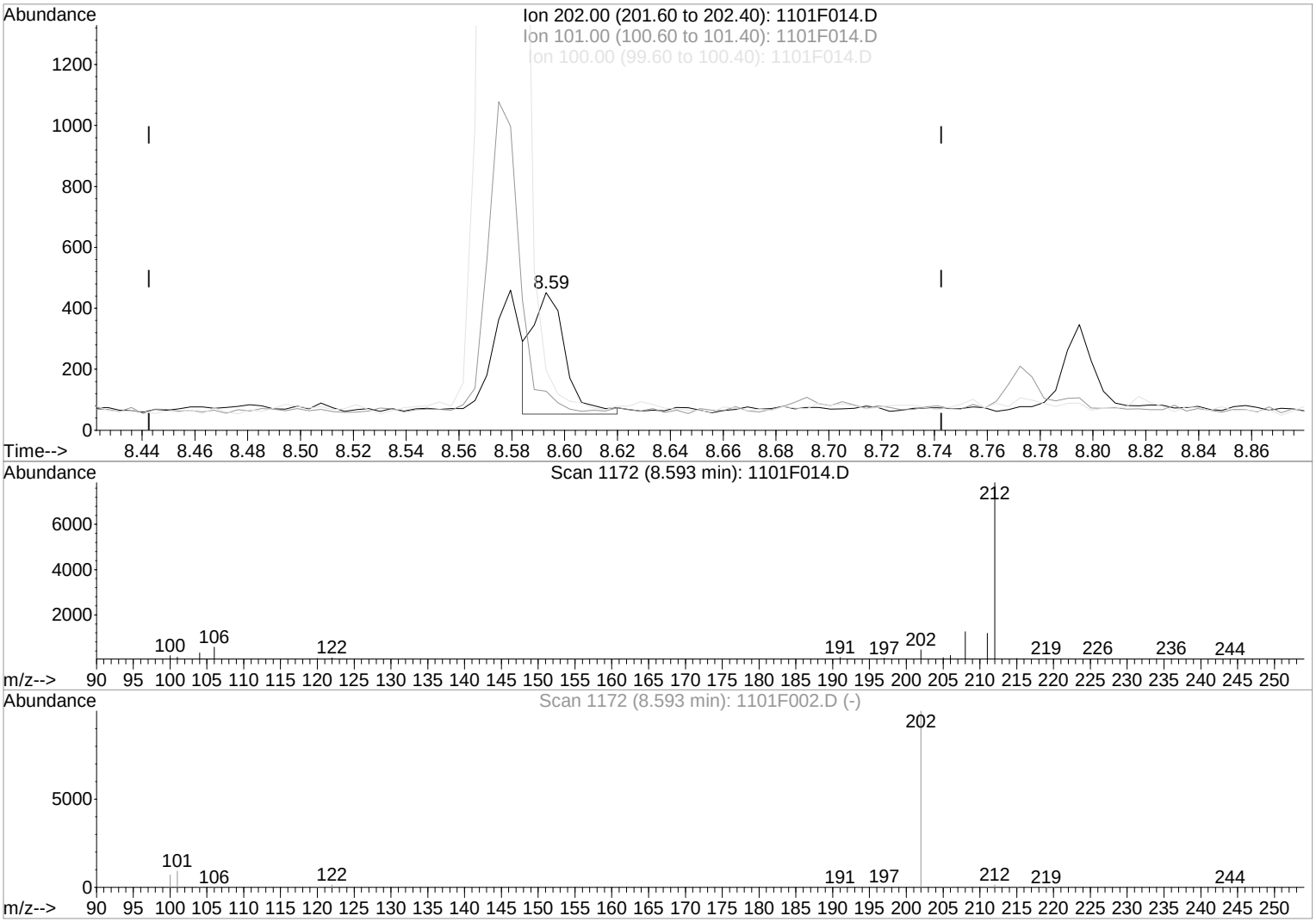
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:15 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F014.D

(21) Fluoranthene (T)

8.59min 0.65ng/ml m

response 337

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	28.32
100.00	8.60	43.58#
0.00	0.00	0.00

Manual Integration:

After

WP

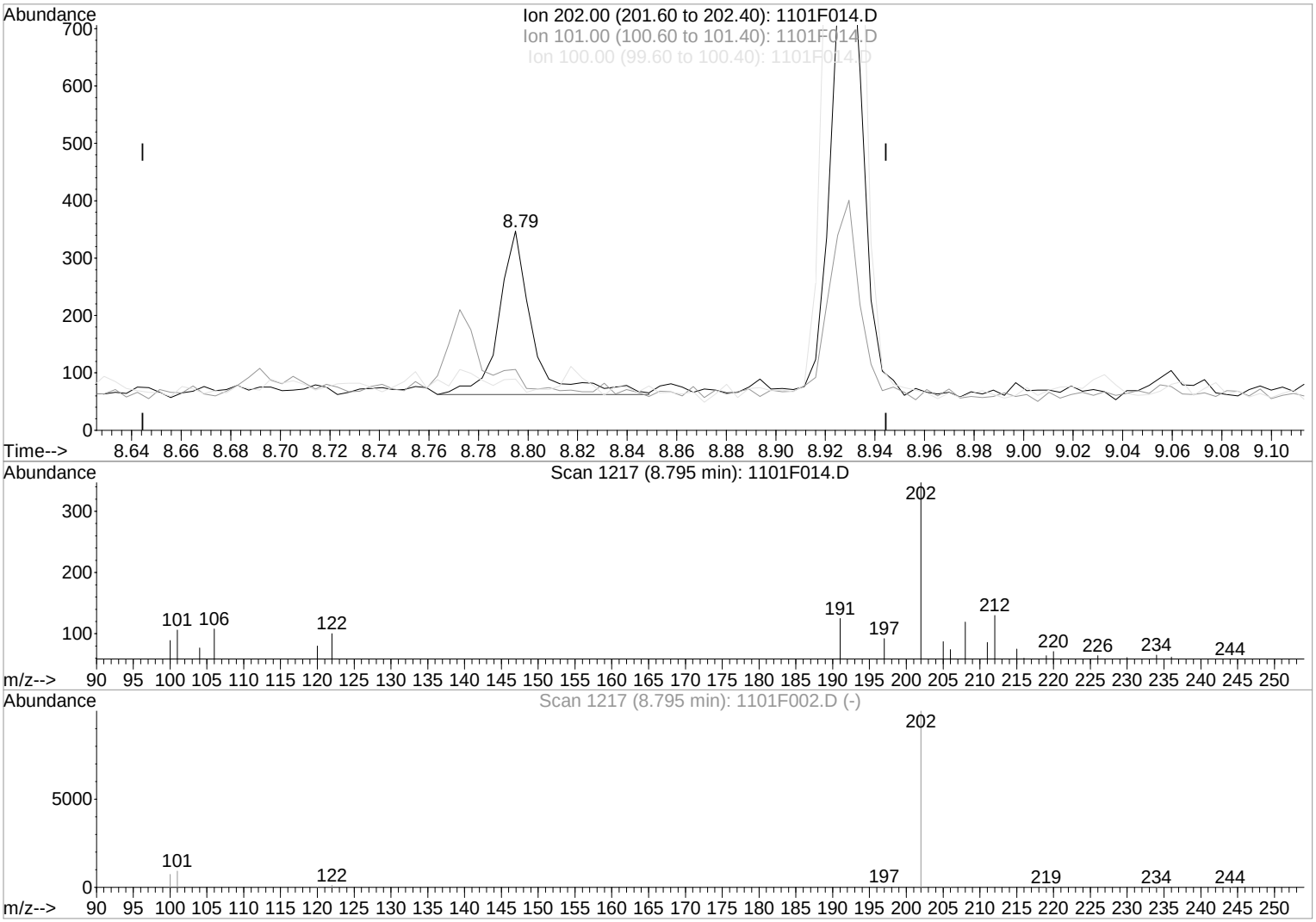
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:15 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F014.D

(24) Pyrene (T)

8.79min 0.58ng/ml

response 270

Ion	Exp%	Act%
202.00	100	100
101.00	10.80	16.49
100.00	8.50	4.21
0.00	0.00	0.00

Manual Integration:

Before

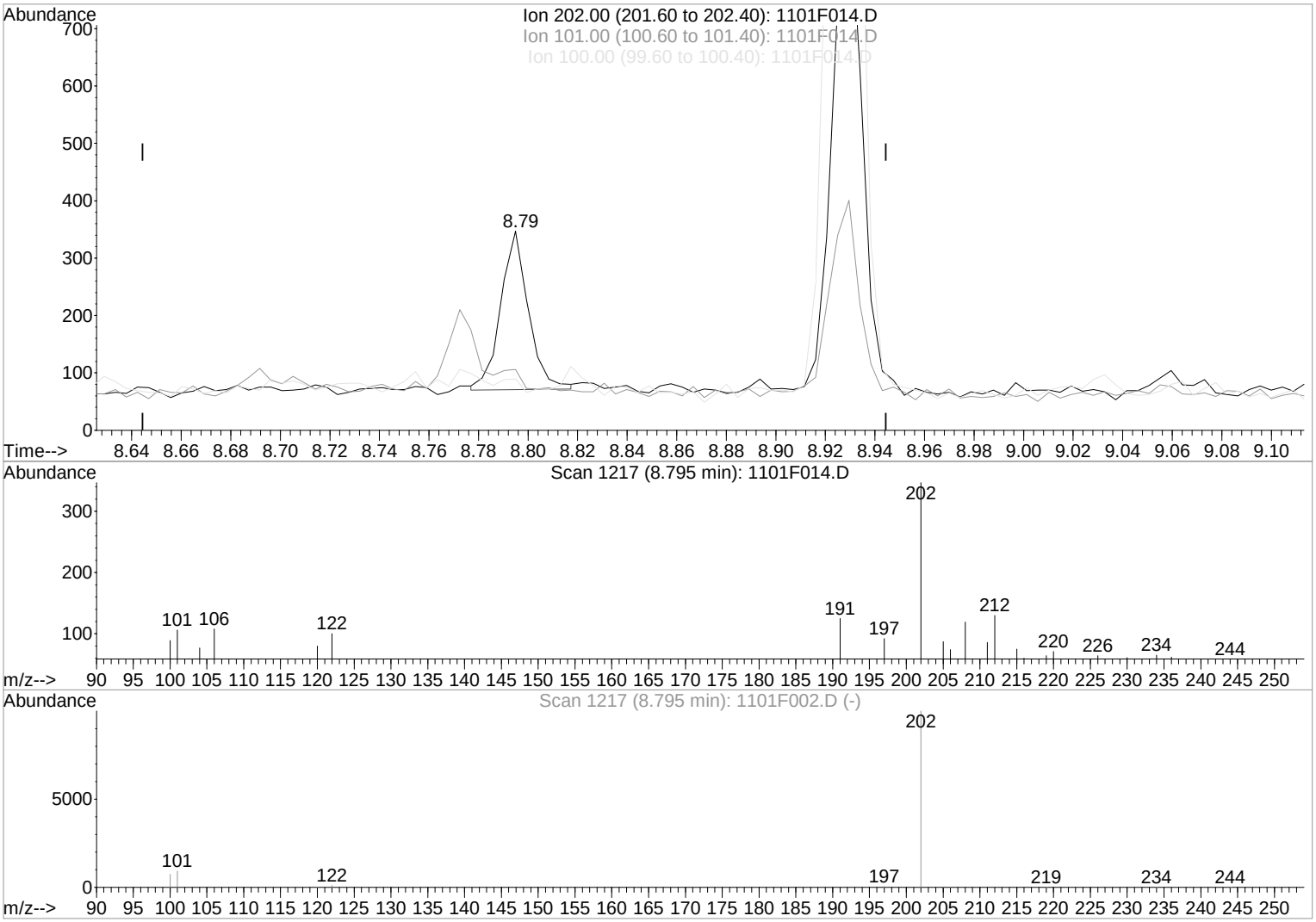
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F014.D Vial: 14
Acq On : 1 Nov 2018 3:52 pm Operator: LWeiskopf
Sample : K1810430-012 Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:15 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F014.D

(24) Pyrene (T)

8.79min 0.46ng/ml m

response 215

Ion	Exp%	Act%
202.00	100	100
101.00	10.80	30.55
100.00	8.50	25.65
0.00	0.00	0.00

Manual Integration:

After

BLC

11/09/18

1st 11/09/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110118\1101F011.D
Lab ID: KWG1805607-3
RunType: MB
Matrix: WATER

Date Acquired: 11/01/2018 14:24
Date Quantitated: 11/09/2018 09:12
Batch ID: KWG1805861
Analysis Method: 8270D SIM
MethodJoinID: MJ1638

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/09/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110118\1101F011.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 14:24	**Quant Date:**	11/09/2018 09:12	**Vial:**	11
Run Type:	MB	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805607-3			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/09/2018

Analysis Lot:	KWG1805861	**Prep Lot:**	KWG1805607	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3511		
Prep Ref:	1700831	**Prep Date:**	10/30/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110118\1101F001.D	**Method ID:**	MJ1638
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.80	0.01	136	74394**m**	200.00	OK
2	Acenaphthene-d10	6.35	0.00	164	34232	200.00	OK
3	Phenanthrene-d10	7.59	0.00	188	70535	200.00	OK
4	Chrysene-d12	10.16	0.00	240	70471	200.00	OK
5	Perylene-d12	13.37	0.00	264	76749	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.79	0.00	0.00	176	194742	889.72	89	42-131	OK	
3	Fluoranthene-d10	8.58	0.00	0.00	212	369432	831.04	83	42-133	OK	
4	Terphenyl-d14	8.93	0.00	0.00	244	205918	673.68	67	32-129	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.82	0.01	0.00	128	675	1.57	0.00698	J	
1	2-Methylnaphthalene	5.46	0.01	0.00	142	307	1.19	0.00529	J	
1	1-Methylnaphthalene	5.54		0.00	142	188**m**	0.7500	0.00333	J	
1	Biphenyl	5.86		0.00	154	873	2.70	0.0120	J	
1	2,6-Dimethylnaphthalene	6.01	0.01	0.00	156	115	0.5200	0.00231	J	
2	Acenaphthylene				152	0**d**		0.0011	U	
2	Acenaphthene	6.38		0.00	154	130	0.5500	0.00244	J	
2	Dibenzofuran	6.53		0.00	168	473	1.26	0.00560	J	
2	2,3,5-Trimethylnaphthalene				170	0**d**		0.00078	U	
2	Fluorene	6.81		0.00	166	258	0.9100	0.00404	J	
3	Dibenzothiophene				184	0**d**		0.00081	U	
3	Phenanthrene	7.61		0.00	178	1124	2.55	0.0113	J	

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110118\1101F011.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 14:24	**Quant Date:**	11/09/2018 09:12	**Vial:**	11
Run Type:	MB	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805607-3			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene				178	0**d**		0.00082	U	
3	Carbazole				167	0**d**		0.0011	U	
3	1-Methylphenanthrene				192	0**d**		0.00084	U	
3	Fluoranthene	8.59		0.00	202	286**m**	0.5300	0.00236	J	
4	Pyrene	8.79		0.00	202	232	0.4800	0.00213	J	
4	Benz(a)anthracene	10.16	0.01	0.00	228	227	0.5000	0.00222	J	
4	Chrysene				228	0**d**		0.00076	U	
5	Benzo(b)fluoranthene				252	0		0.00083	U	
5	Benzo(k)fluoranthene				252	0		0.00094	U	
5	Benzo(e)pyrene				252	0		0.0015	U	
5	Benzo(a)pyrene				252	0		0.0011	U	
5	Perylene				252	0**d**		0.00081	U	
5	Indeno(1,2,3-cd)pyrene				276	0		0.00089	U	
5	Dibenz(a,h)anthracene				278	0		0.0013	U	
5	Benzo(g,h,i)perylene				276	0		0.00086	U	

Prep Amount:	450 mL	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

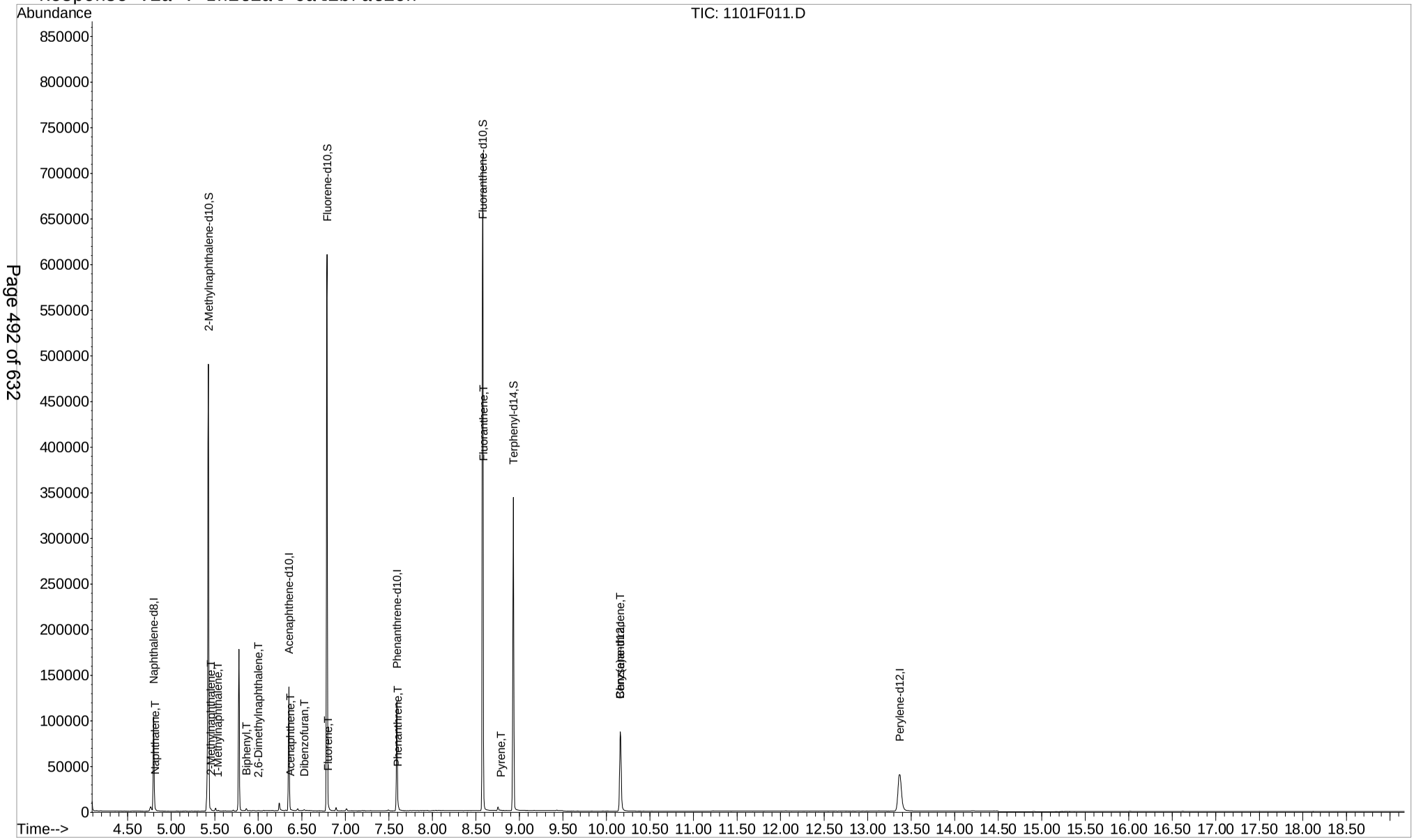
D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

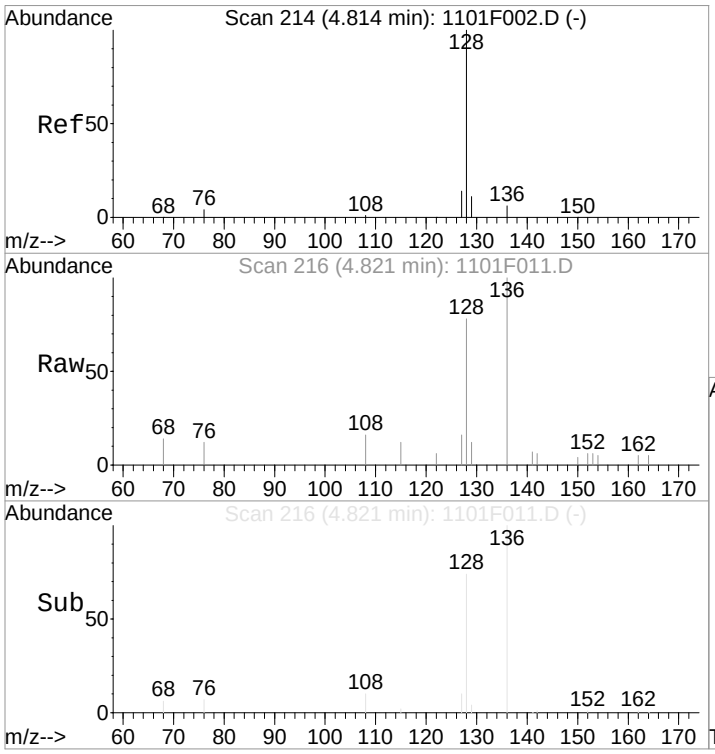
1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:12 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration



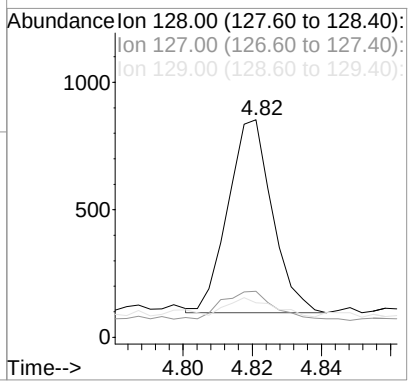
1st 11/09/18
2nd 11/27/18

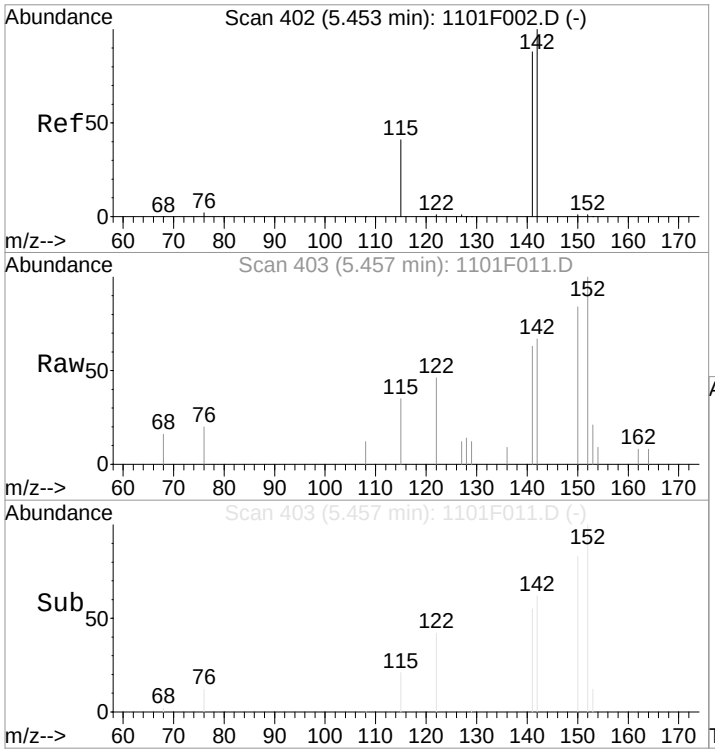


#2
Naphthalene
Concen: 1.57 ng/ml
RT: 4.82 min Scan# 216
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:128 Resp: 675

Ion	Ratio	Lower	Upper
128	100		
127	14.1	0.0	43.7
129	4.9	0.0	30.8

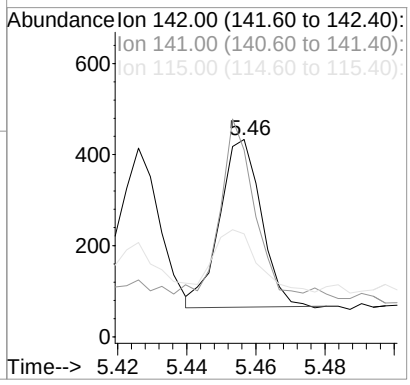




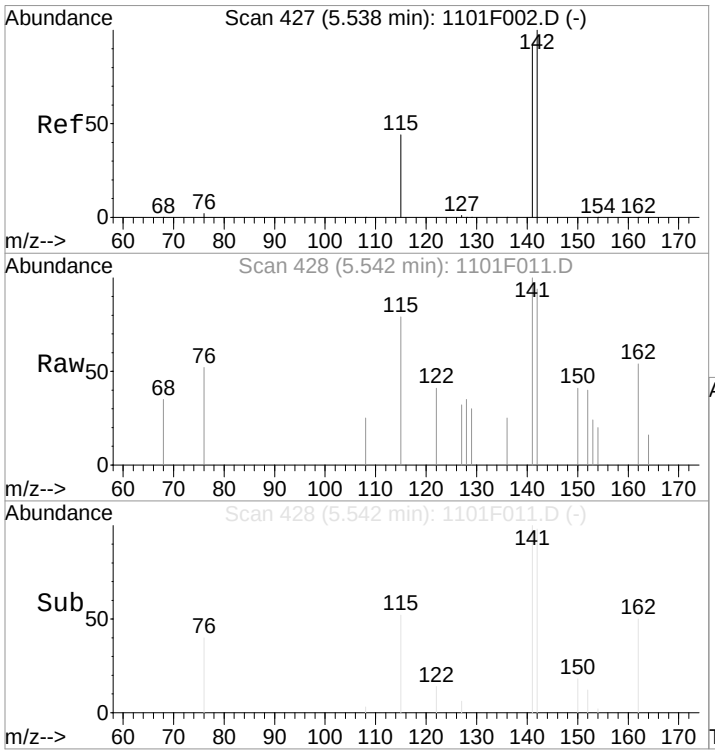
#4
2-Methylnaphthalene
Concen: 1.19 ng/ml
RT: 5.46 min Scan# 403
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:142 Resp: 307

Ion	Ratio	Lower	Upper
142	100		
141	86.3	56.8	116.8
115	31.7	13.3	53.3



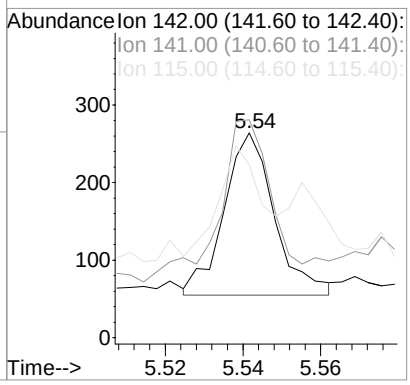
1st 11/09/18
2nd 11/27/18

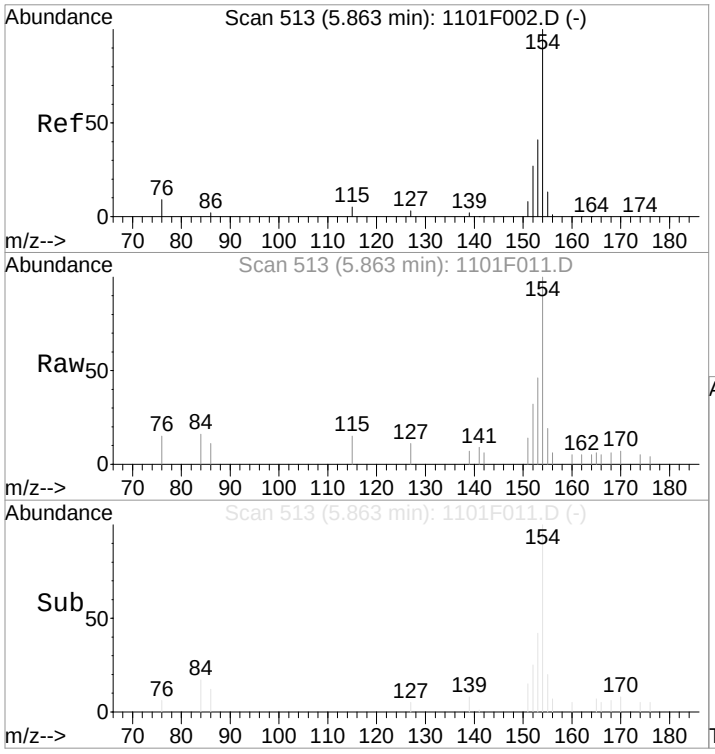


#5
1-Methylnaphthalene
Concen: 0.75 ng/ml m
RT: 5.54 min Scan# 428
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:142 Resp: 188

Ion	Ratio	Lower	Upper
142	100		
141	106.4	59.7	119.7
115	84.5	13.7	53.7#

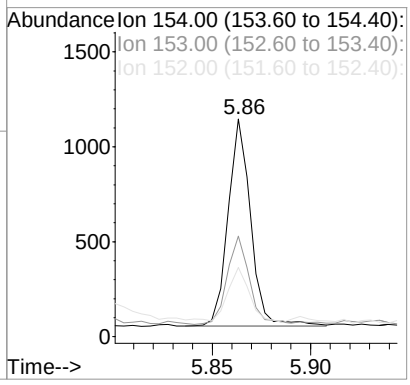




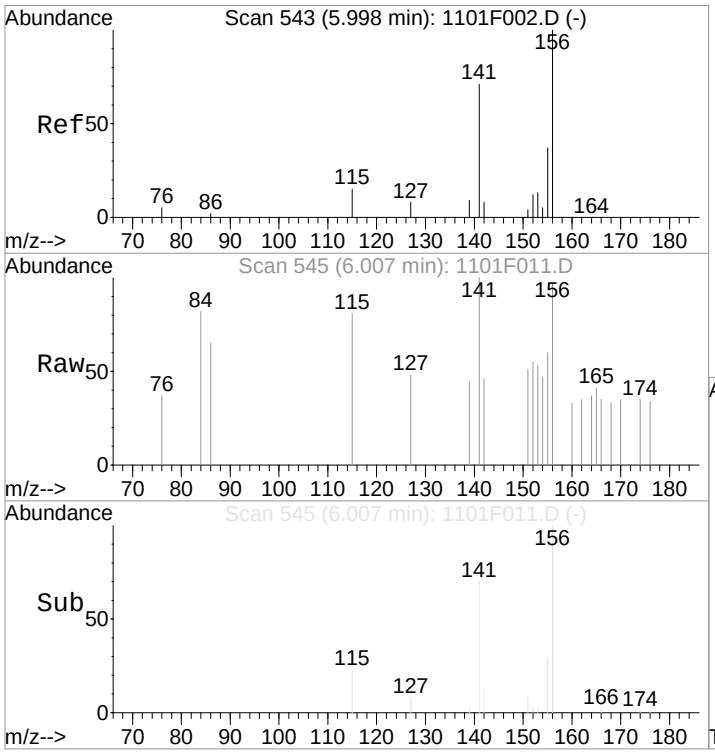
#6
Biphenyl
Concen: 2.70 ng/ml
RT: 5.86 min Scan# 513
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:154 Resp: 873

Ion	Ratio	Lower	Upper
154	100		
153	42.1	11.4	71.4
152	25.9	7.1	47.1



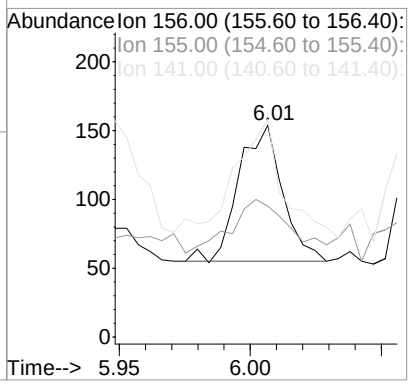
1st 11/09/18
2nd 11/27/18

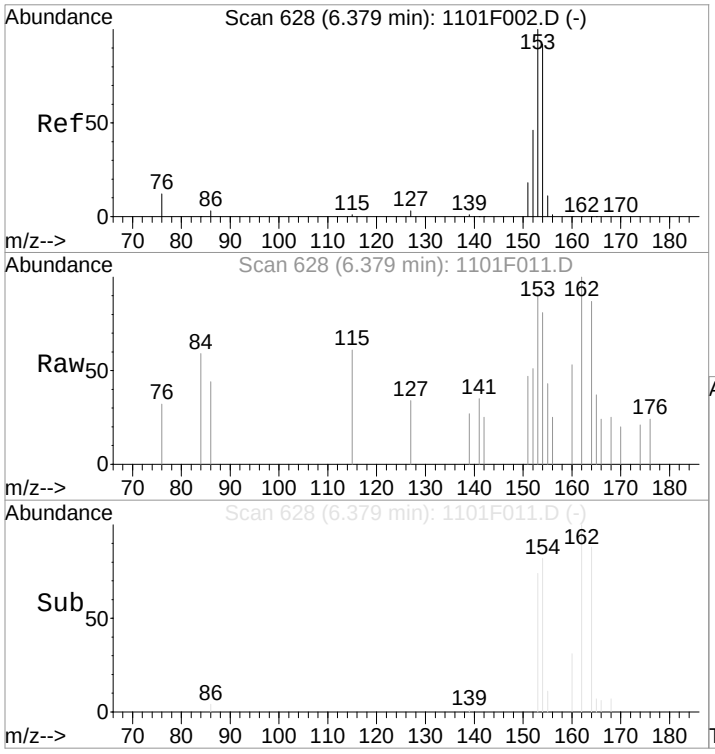


#7
2,6-Dimethylnaphthalene
Concen: 0.52 ng/ml
RT: 6.01 min Scan# 545
Delta R.T. 0.01 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:156 Resp: 115

Ion	Ratio	Lower	Upper
156	100		
155	34.3	7.0	67.0
141	78.8	47.9	87.9

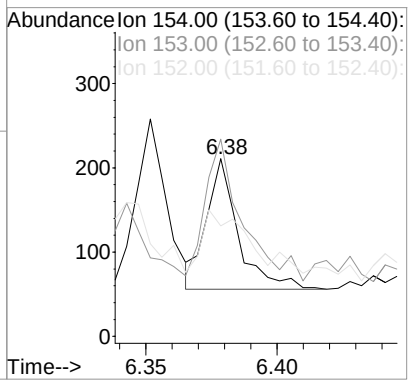




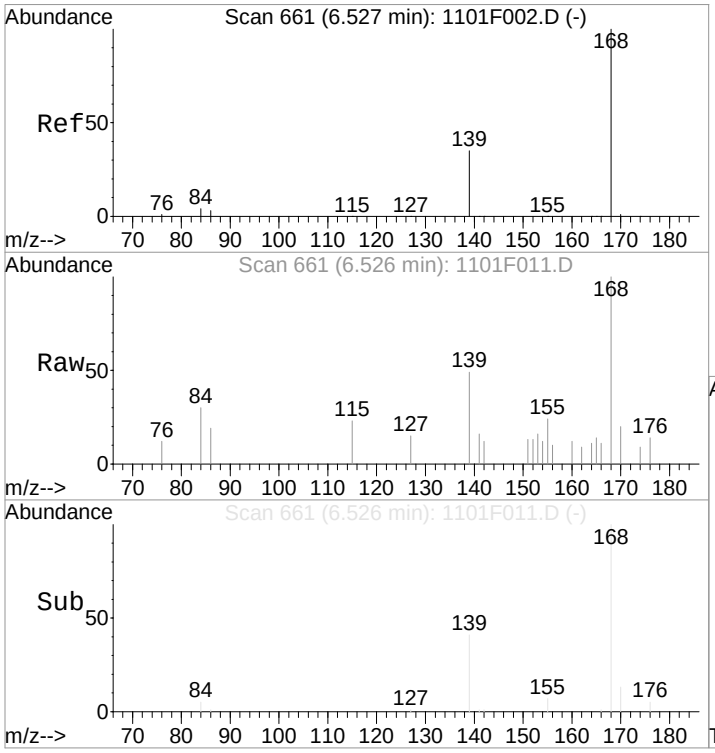
#10
Acenaphthene
Concen: 0.55 ng/ml
RT: 6.38 min Scan# 628
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:154 Resp: 130

Ion	Ratio	Lower	Upper
154	100		
153	104.5	77.1	137.1
152	35.5	19.7	79.7



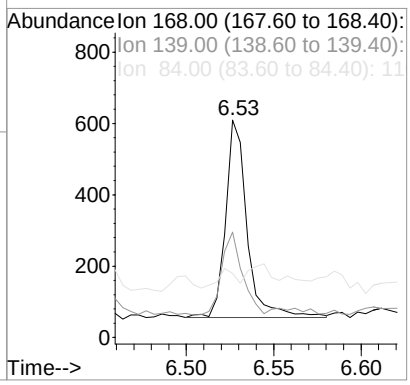
1st 11/09/18
2nd 11/27/18

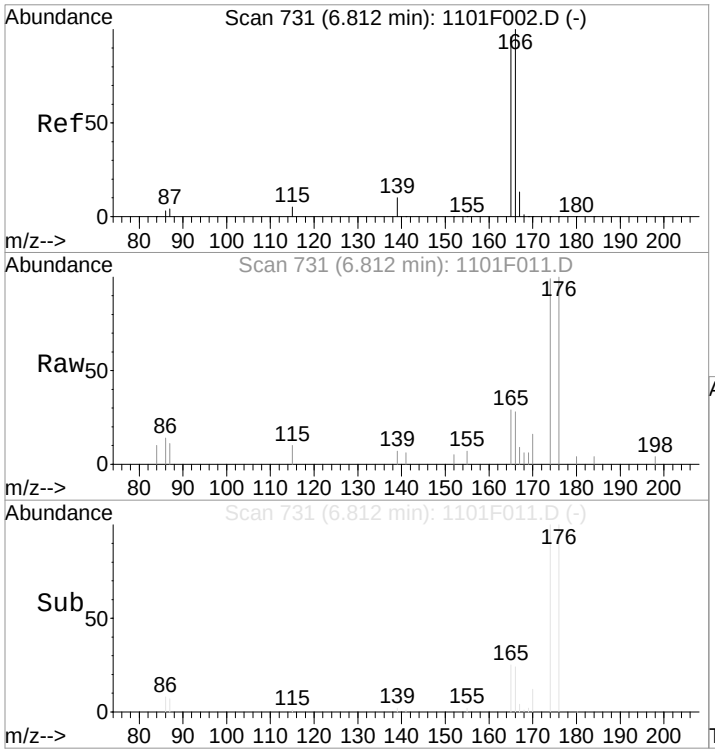


#11
Dibenzofuran
Concen: 1.26 ng/ml
RT: 6.53 min Scan# 661
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:168 Resp: 473

Ion	Ratio	Lower	Upper
168	100		
139	41.2	0.0	55.8
84	1.8	0.0	23.5

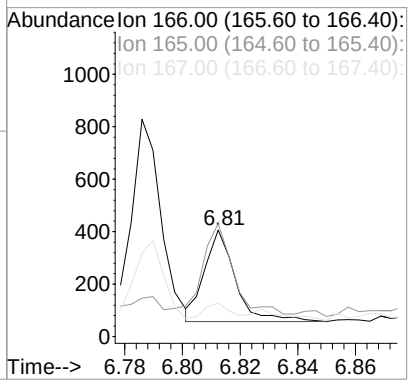




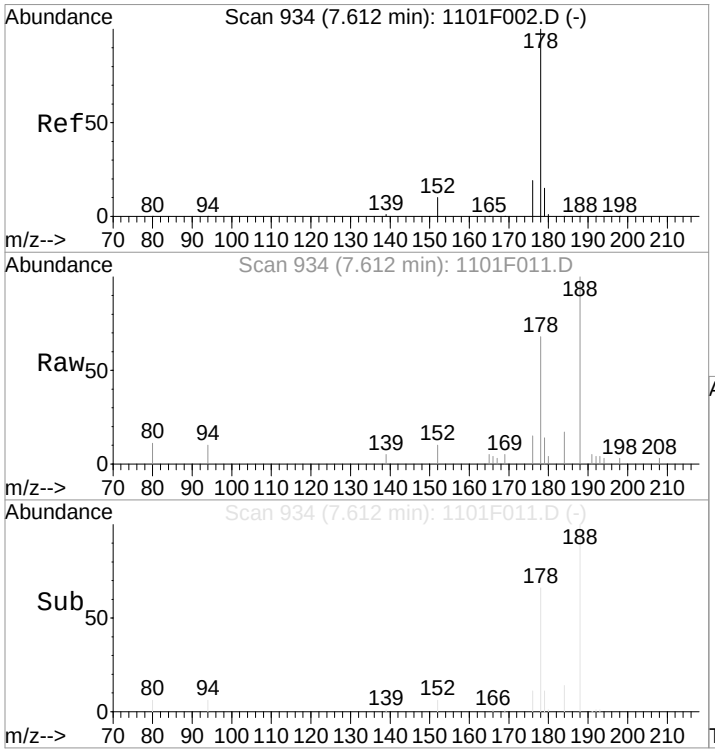
#14
Fluorene
Concen: 0.91 ng/ml
RT: 6.81 min Scan# 731
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:166 Resp: 258

Ion	Ratio	Lower	Upper
166	100		
165	101.7	63.4	123.4
167	19.3	0.0	33.1



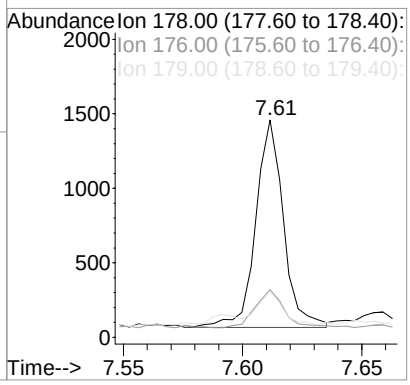
1st 11/09/18
2nd 11/27/18

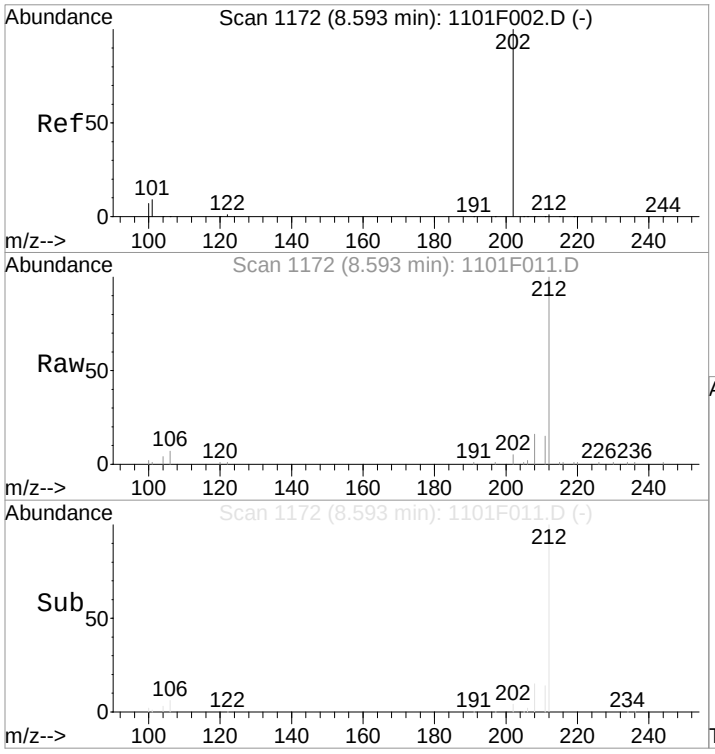


#17
Phenanthrene
Concen: 2.55 ng/ml
RT: 7.61 min Scan# 934
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:178 Resp: 1124

Ion	Ratio	Lower	Upper
178	100		
176	17.3	0.0	48.7
179	15.3	0.0	35.1

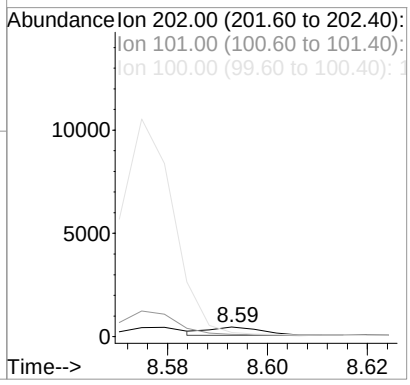




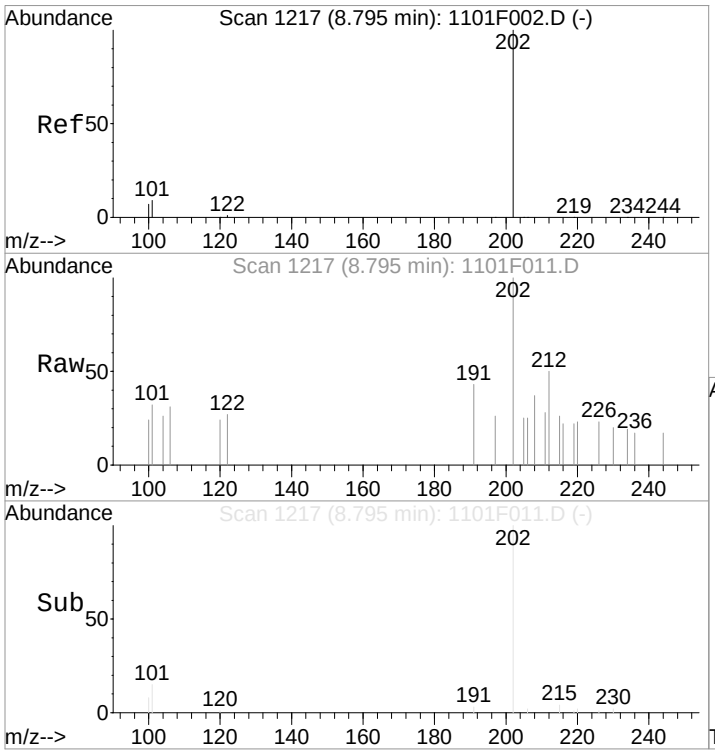
#21
Fluoranthene
Concen: 0.53 ng/ml m
RT: 8.59 min Scan# 1172
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:202 Resp: 286

Ion	Ratio	Lower	Upper
202	100		
101	24.6	0.0	41.3
100	43.9	0.0	28.6#



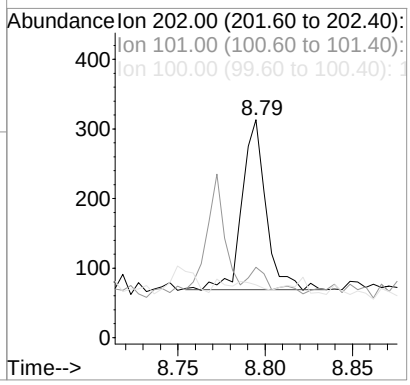
1st 11/09/18
2nd 11/27/18

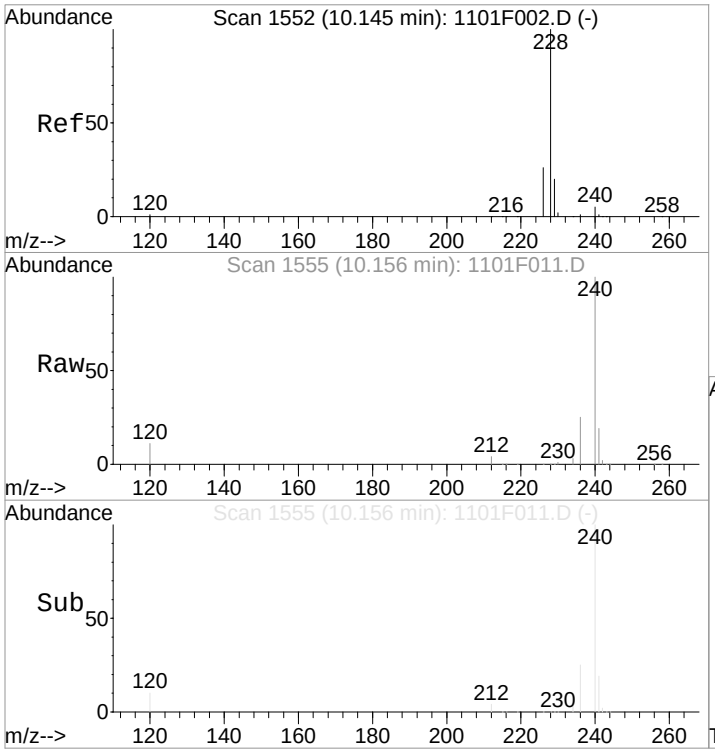


#24
Pyrene
Concen: 0.48 ng/ml
RT: 8.79 min Scan# 1217
Delta R.T. 0.00 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:202 Resp: 232

Ion	Ratio	Lower	Upper
202	100		
101	13.1	0.0	40.8
100	5.7	0.0	28.5

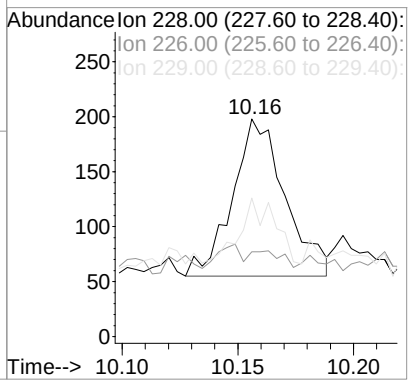




#26
Benz(a)anthracene
Concen: 0.50 ng/ml
RT: 10.16 min Scan# 1555
Delta R.T. 0.01 min
Lab File: 1101F011.D
Acq: 1 Nov 2018 2:24 pm

Tgt Ion:228 Resp: 227

Ion	Ratio	Lower	Upper
228	100		
226	7.7	0.0	56.3
229	42.0	0.0	39.1#



1st 11/09/18
2nd 11/27/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 09 08:55:51 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	74394m	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	34232	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	70535	200.00	ng/ml	0.00
23) Chrysene-d12	10.16	240	70471	200.00	ng/ml	0.00
28) Perylene-d12	13.37	264	76749	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	153195	737.75	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	73.78%		
13) Fluorene-d10	6.79	176	194742	889.72	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	88.97%		
22) Fluoranthene-d10	8.58	212	369432	831.04	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	83.10%		
25) Terphenyl-d14	8.93	244	205918	673.68	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	67.37%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	675	1.57	ng/ml	92
4) 2-Methylnaphthalene	5.46	142	307	1.19	ng/ml	99
5) 1-Methylnaphthalene	5.54	142	188m	0.75	ng/ml	
6) Biphenyl	5.86	154	873	2.70	ng/ml	98
7) 2,6-Dimethylnaphthalene	6.01	156	115	0.52	ng/ml	90
10) Acenaphthene	6.38	154	130	0.55	ng/ml	92
11) Dibenzofuran	6.53	168	473	1.26	ng/ml	73
14) Fluorene	6.81	166	258	0.91	ng/ml	91
17) Phenanthrene	7.61	178	1124	2.55	ng/ml	98
21) Fluoranthene	8.59	202	286m	0.53	ng/ml	
24) Pyrene	8.79	202	232	0.48	ng/ml	93
26) Benz(a)anthracene	10.16	228	227	0.50	ng/ml#	58

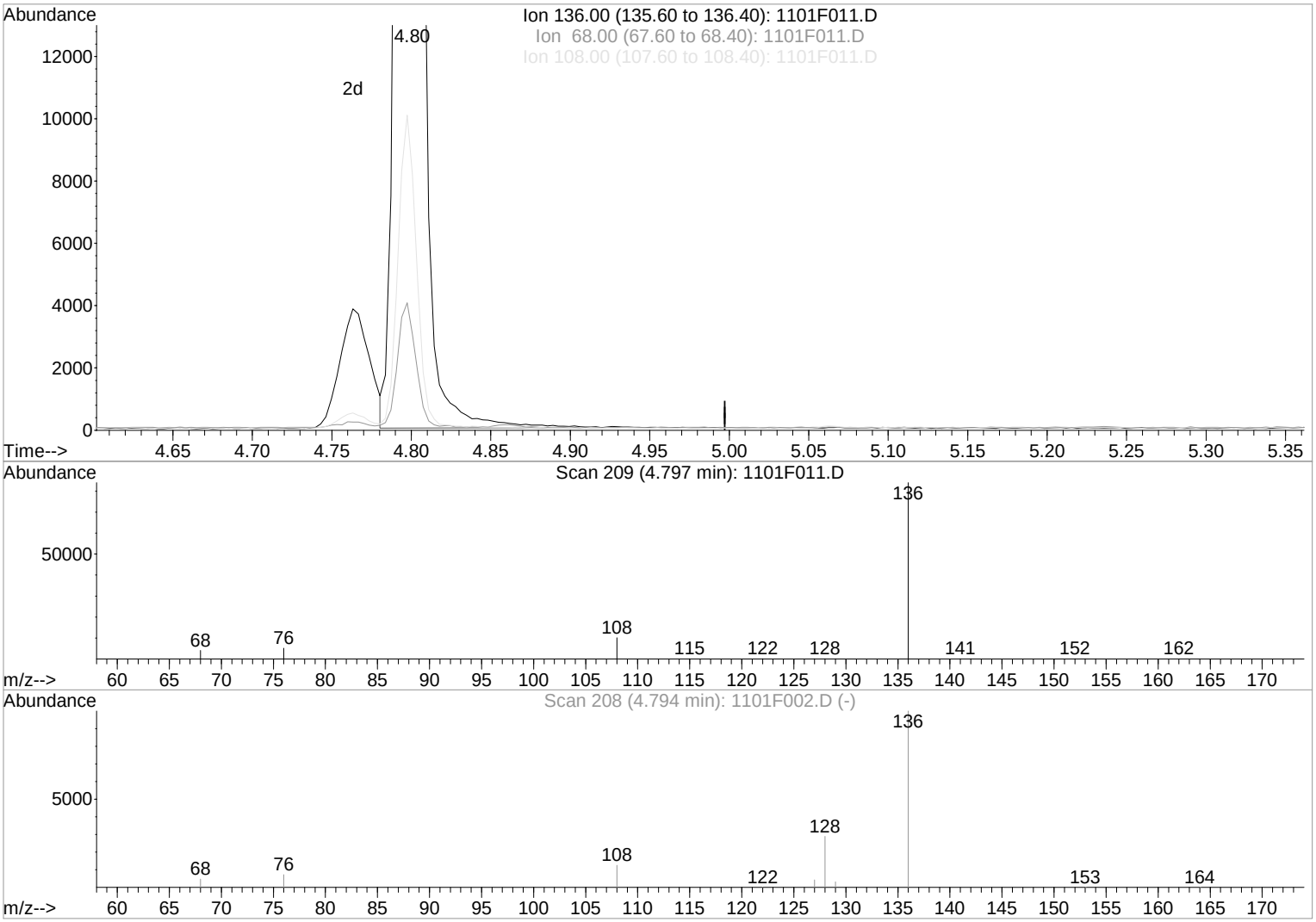
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 8:55 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F011.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml

response 69326

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.77
108.00	10.60	11.95
0.00	0.00	0.00

Manual Integration:

Before

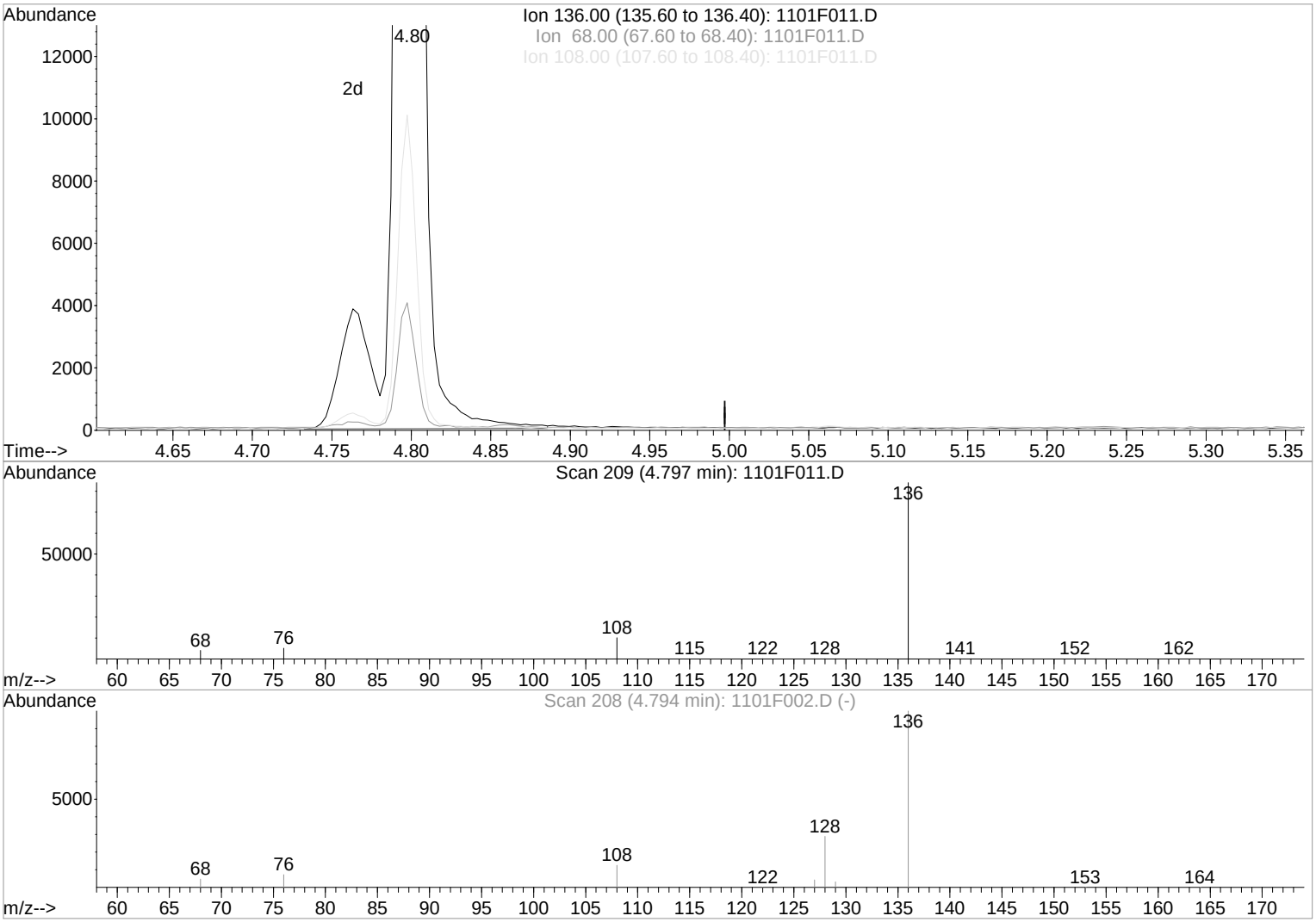
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:10 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F011.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml m

response 74394

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.86
108.00	10.60	12.02
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

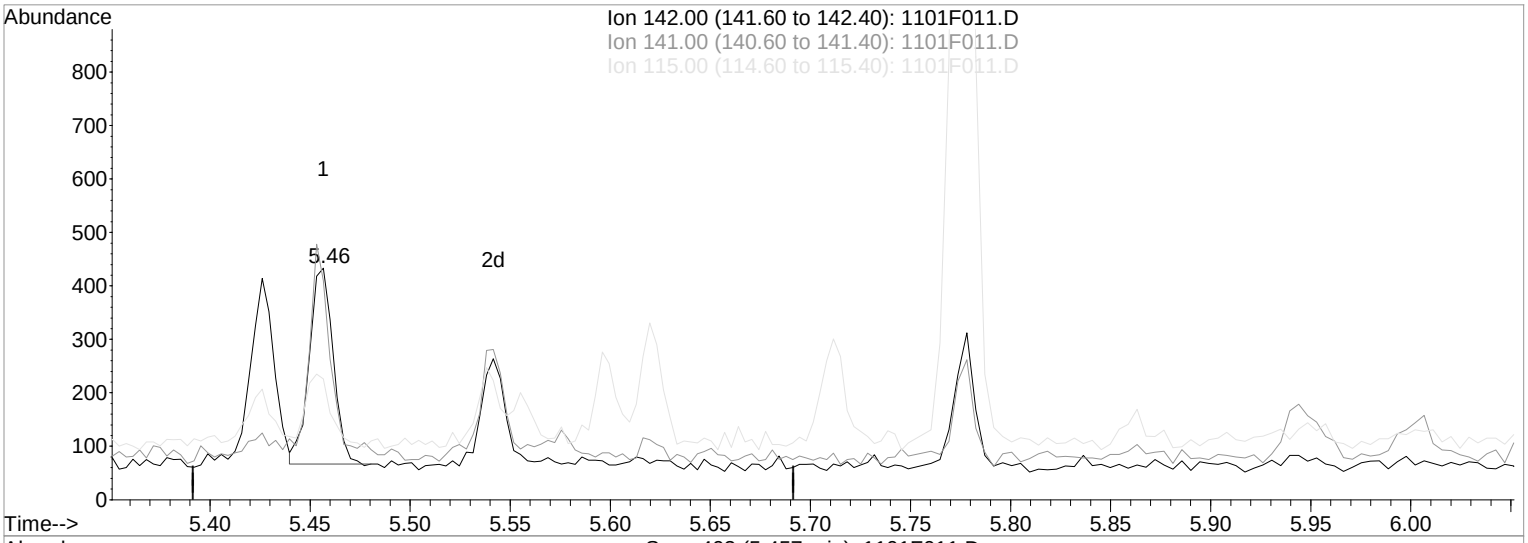
11/09/18

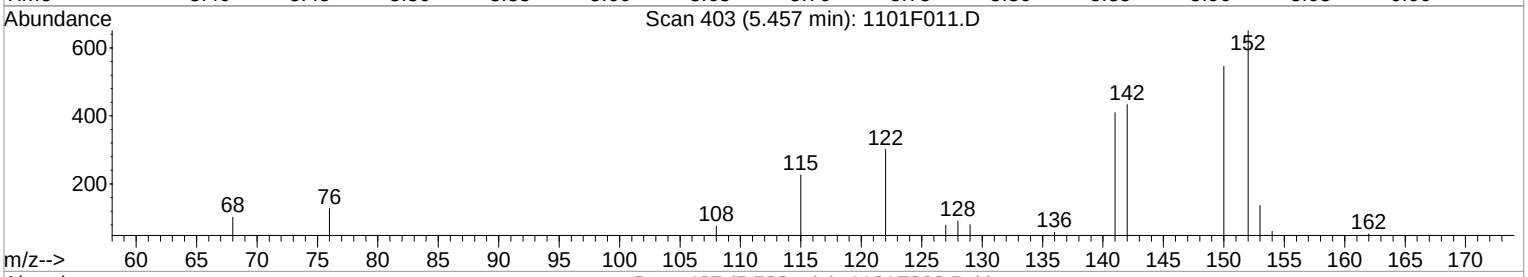
Quantitation Report (Qedit)

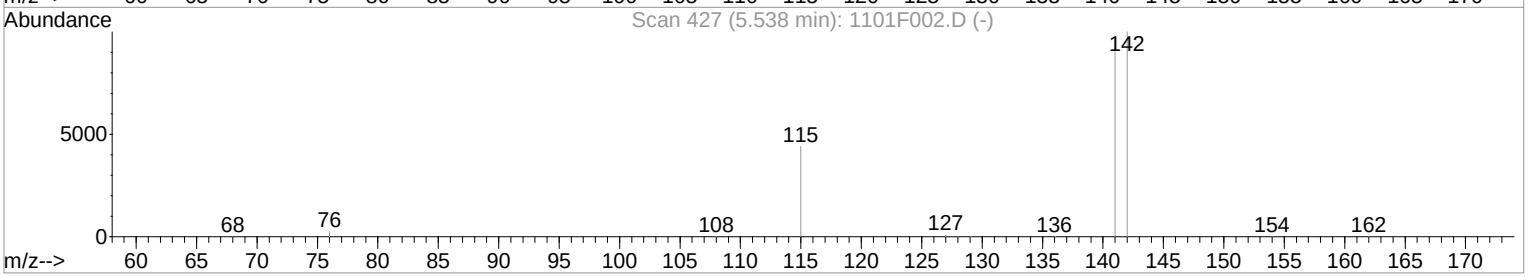
1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:10 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration







TIC: 1101F011.D

(5) 1-Methylnaphthalene (T)

5.46min 1.22ng/ml

response 303

Ion	Exp%	Act%
142.00	100	100
141.00	89.70	86.34
115.00	33.70	31.69
0.00	0.00	0.00

Manual Integration:

Before

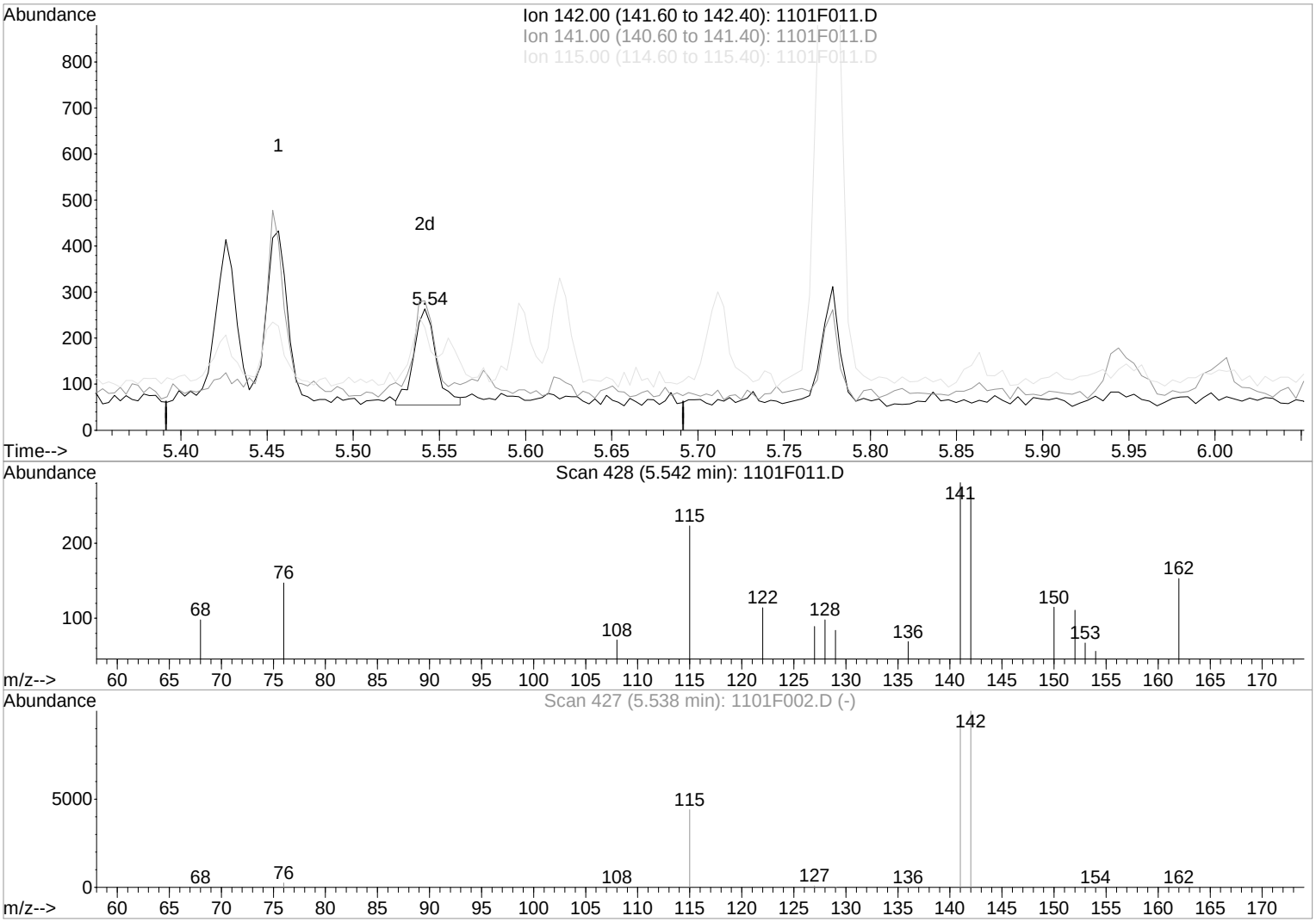
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:11 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F011.D

(5) 1-Methylnaphthalene (T)

5.54min 0.75ng/ml m

response 188

Ion	Exp%	Act%
142.00	100	100
141.00	89.70	106.44
115.00	33.70	84.47#
0.00	0.00	0.00

Manual Integration:

After

WP

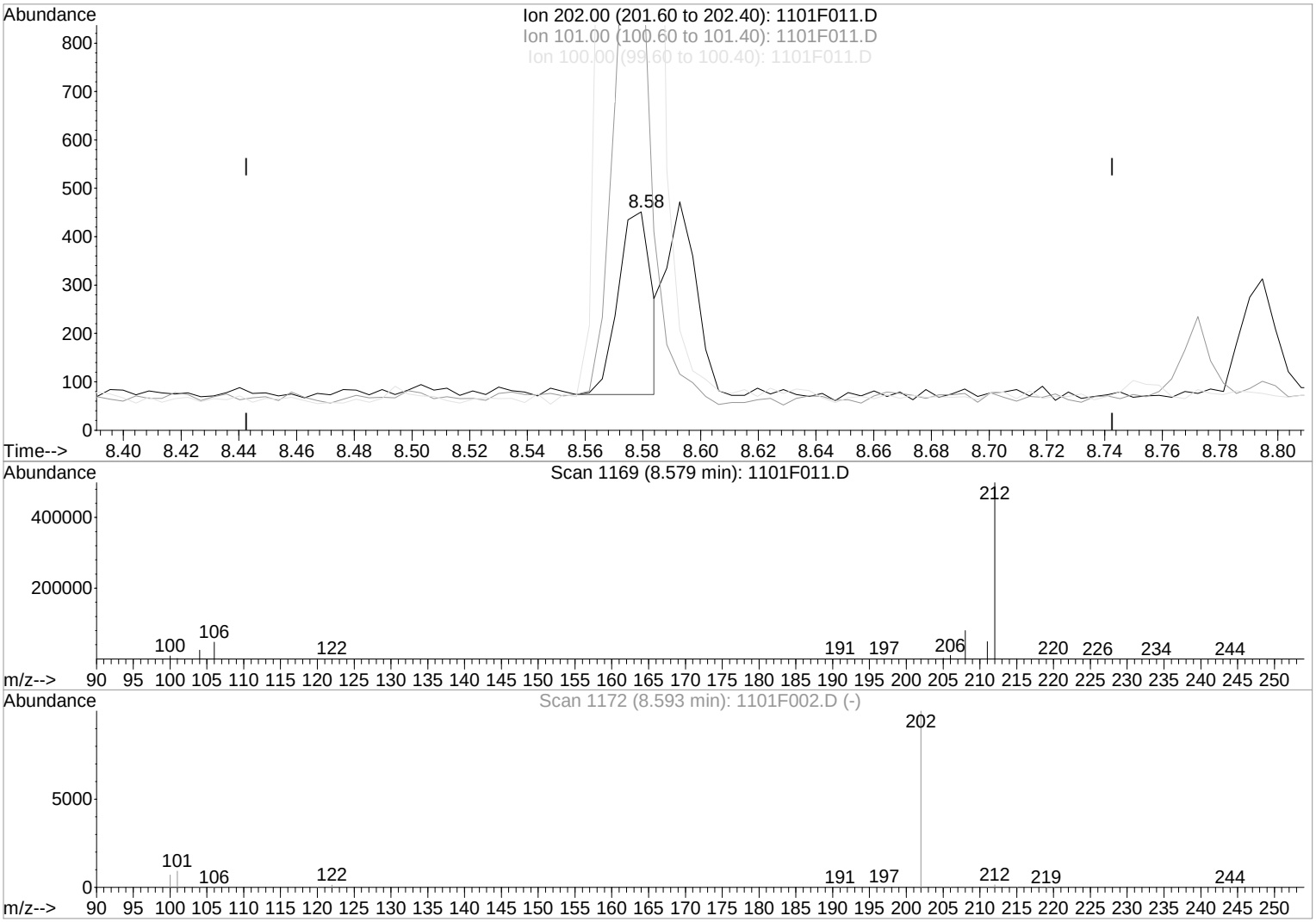
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:11 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F011.D

(21) Fluoranthene (T)

8.58min 0.56ng/ml

response 305

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	270.03#
100.00	8.60	2207.43#
0.00	0.00	0.00

Manual Integration:

Before

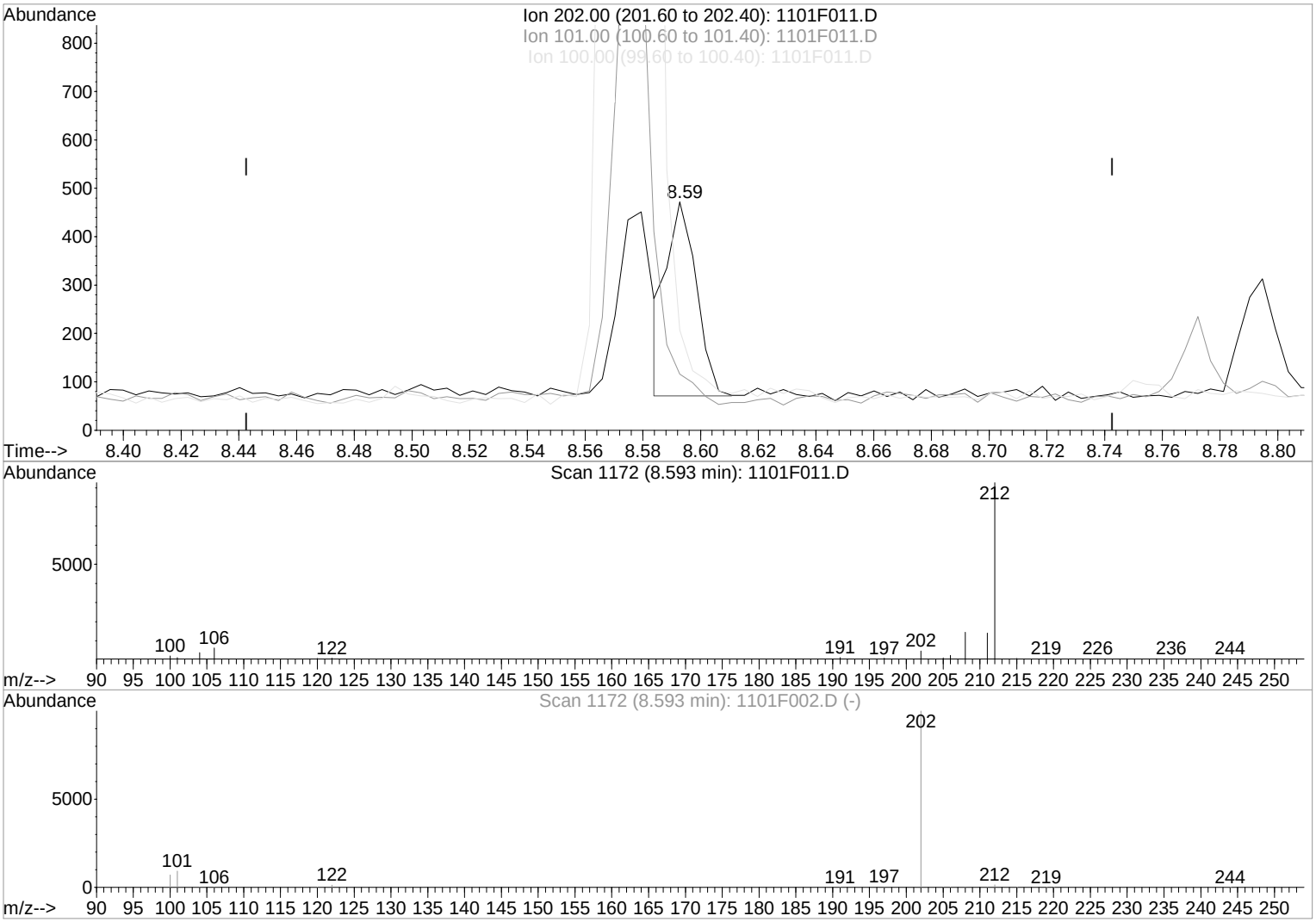
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F011.D Vial: 11
Acq On : 1 Nov 2018 2:24 pm Operator: LWeiskopf
Sample : KWG1805607-3 MB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:11 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F011.D

(21) Fluoranthene (T)

8.59min 0.53ng/ml m

response 286

Ion	Exp%	Act%
202.00	100	100
101.00	11.30	24.58
100.00	8.60	43.86#
0.00	0.00	0.00

Manual Integration:

After

WP

11/09/18

1st 11/09/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110118\1101F012.D
Lab ID: KWG1805607-1
RunType: LCS
Matrix: WATER

Date Acquired: 11/01/2018 14:53
Date Quantitated: 11/09/2018 09:12
Batch ID: KWG1805861
Analysis Method: 8270D SIM
MethodJoinID: MJ1638

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/09/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110118\1101F012.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 14:53	**Quant Date:**	11/09/2018 09:12	**Vial:**	12
Run Type:	LCS	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805607-1			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/09/2018

Analysis Lot:	KWG1805861	**Prep Lot:**	KWG1805607	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3511		
Prep Ref:	1700829	**Prep Date:**	10/30/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110118\1101F001.D	**Method ID:**	MJ1638
MB Ref:	J:\MS14\DATA\110118\1101F011.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.80	0.01	136	75504**m**	200.00	OK
2	Acenaphthene-d10	6.35	0.00	164	32219	200.00	OK
3	Phenanthrene-d10	7.59	0.00	188	66909	200.00	OK
4	Chrysene-d12	10.16	0.00	240	70688	200.00	OK
5	Perylene-d12	13.37	0.00	264	77747	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.79	0.00	0.00	176	201612	978.66	98	42-131	OK	
3	Fluoranthene-d10	8.58	0.00	0.00	212	403891	957.79	96	42-133	OK	
4	Terphenyl-d14	8.93	0.00	0.00	244	249448	813.58	81	32-129	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.82	0.01	0.00	128	226128**m**	518.85	2.31		
1	2-Methylnaphthalene	5.46	0.01	0.00	142	134294	510.96	2.27		
1	1-Methylnaphthalene	5.54		0.00	142	128262	507.00	2.25		
1	Biphenyl	5.86		0.00	154	173060	527.57	2.34		
1	2,6-Dimethylnaphthalene	6.00		0.00	156	122909	544.72	2.42		
2	Acenaphthylene	6.23		0.00	152	227269	591.17	2.63		
2	Acenaphthene	6.38		0.00	154	125902	570.12	2.53		
2	Dibenzofuran	6.53		0.00	168	207404	585.29	2.60		
2	2,3,5-Trimethylnaphthalene	6.70		0.00	170	121799	596.28	2.65		
2	Fluorene	6.81		0.00	166	154668	579.10	2.57		
3	Dibenzothiophene	7.51		0.00	184	256907	615.60	2.74		
3	Phenanthrene	7.61		0.00	178	237550	569.13	2.53		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110118\1101F012.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 14:53	**Quant Date:**	11/09/2018 09:12	**Vial:**	12
Run Type:	LCS	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805607-1			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.66		0.00	178	237887	597.02	2.65		
3	Carbazole	7.79		0.00	167	118650	305.13	1.36		
3	1-Methylphenanthrene	8.12		0.00	192	185493	586.72	2.61		
3	Fluoranthene	8.59		0.00	202	269706	523.30	2.33		
4	Pyrene	8.79		0.00	202	295812	609.94	2.71		
4	Benz(a)anthracene	10.15		0.00	228	274227	600.03	2.67		
4	Chrysene	10.20		0.00	228	252907	577.72	2.57		
5	Benzo(b)fluoranthene	12.29		0.00	252	294641	613.40	2.73		
5	Benzo(k)fluoranthene	12.36		0.00	252	275535	578.24	2.57		
5	Benzo(e)pyrene	13.04		0.00	252	273247	596.80	2.65		
5	Benzo(a)pyrene	13.20		0.00	252	253864	602.66	2.68		
5	Perylene	13.46		0.00	252	255901	579.11	2.57		
5	Indeno(1,2,3-cd)pyrene	15.52		0.00	276	234170	566.91	2.52		
5	Dibenz(a,h)anthracene	15.56		0.00	278	218034	520.71	2.31		
5	Benzo(g,h,i)perylene	15.92		0.00	276	262263	542.18	2.41		

Prep Amount:	450 mL	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

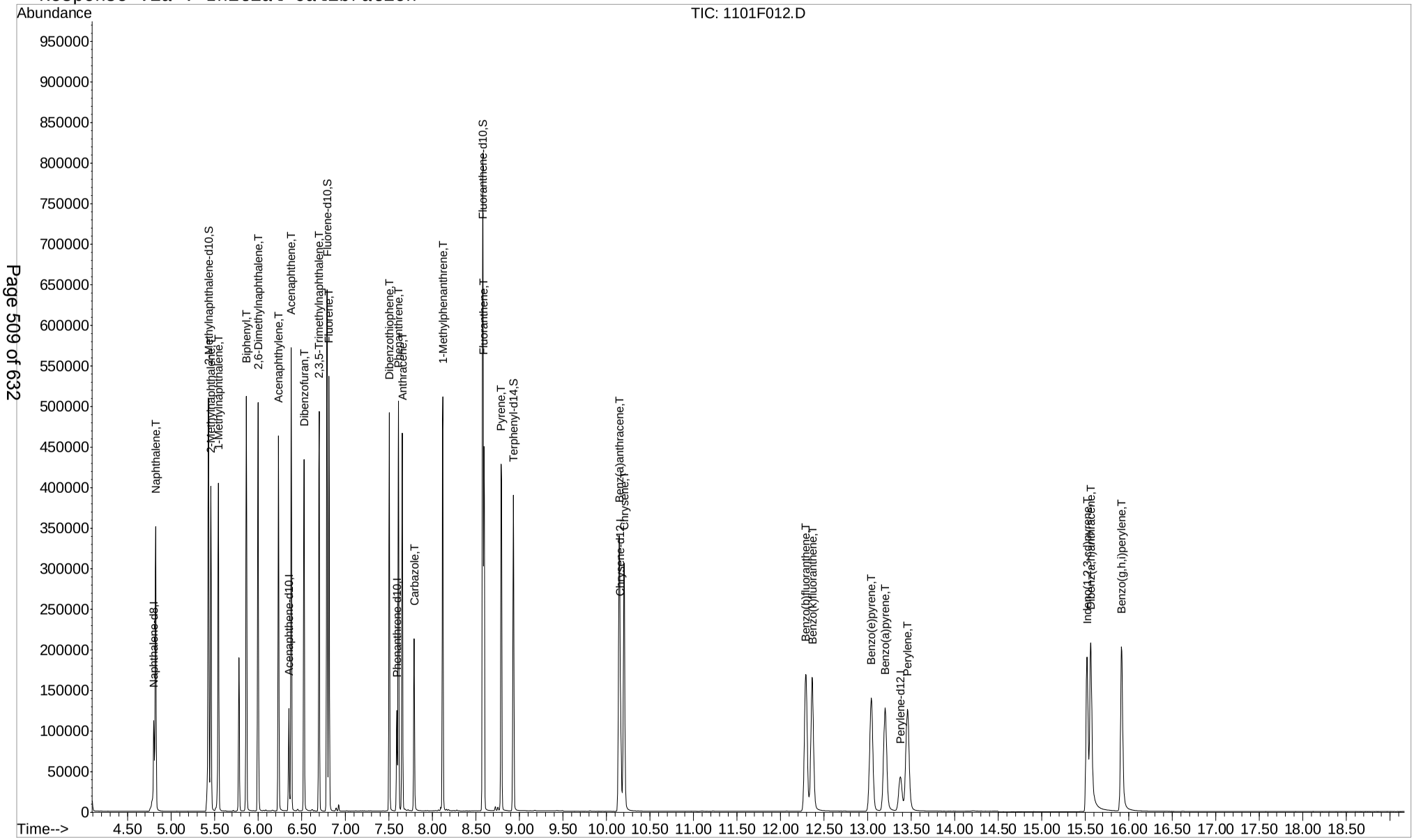
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F012.D Vial: 12
Acq On : 1 Nov 2018 2:53 pm Operator: LWeiskopf
Sample : KWG1805607-1 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:12 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration



1st 11/09/18
2nd 11/27/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\110118\1101F012.D Vial: 12
Acq On : 1 Nov 2018 2:53 pm Operator: LWeiskopf
Sample : KWG1805607-1 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 09 08:55:52 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	75504m	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	32219	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	66909	200.00	ng/ml	0.00
23) Chrysene-d12	10.16	240	70688	200.00	ng/ml	0.00
28) Perylene-d12	13.37	264	77747	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	159051	754.69	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	75.47%		
13) Fluorene-d10	6.79	176	201612	978.66	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	97.87%		
22) Fluoranthene-d10	8.58	212	403891	957.79	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	95.78%		
25) Terphenyl-d14	8.93	244	249448	813.58	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	81.36%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	226128m	518.85	ng/ml	
4) 2-Methylnaphthalene	5.46	142	134294	510.96	ng/ml	97
5) 1-Methylnaphthalene	5.54	142	128262	507.00	ng/ml	95
6) Biphenyl	5.86	154	173060	527.57	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	122909	544.72	ng/ml	95
9) Acenaphthylene	6.23	152	227269	591.17	ng/ml	99
10) Acenaphthene	6.38	154	125902	570.12	ng/ml	98
11) Dibenzofuran	6.53	168	207404	585.29	ng/ml	88
12) 2,3,5-Trimethylnaphthalene	6.70	170	121799	596.28	ng/ml	95
14) Fluorene	6.81	166	154668	579.10	ng/ml	98
16) Dibenzothiophene	7.51	184	256907	615.60	ng/ml	96
17) Phenanthrene	7.61	178	237550	569.13	ng/ml	99
18) Anthracene	7.66	178	237887	597.02	ng/ml	99
19) Carbazole	7.79	167	118650	305.13	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	185493	586.72	ng/ml	99
21) Fluoranthene	8.59	202	269706	523.30	ng/ml	97
24) Pyrene	8.79	202	295812	609.94	ng/ml	97
26) Benz(a)anthracene	10.15	228	274227	600.03	ng/ml	99
27) Chrysene	10.20	228	252907	577.72	ng/ml	100
29) Benzo(b)fluoranthene	12.29	252	294641	613.40	ng/ml	99
30) Benzo(k)fluoranthene	12.36	252	275535	578.24	ng/ml	99
31) Benzo(e)pyrene	13.04	252	273247	596.80	ng/ml	98
32) Benzo(a)pyrene	13.20	252	253864	602.66	ng/ml	98
33) Perylene	13.46	252	255901	579.11	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.52	276	234170	566.91	ng/ml	97
35) Dibenz(a,h)anthracene	15.56	278	218034	520.71	ng/ml	97
36) Benzo(g,h,i)perylene	15.92	276	262263	542.18	ng/ml	97

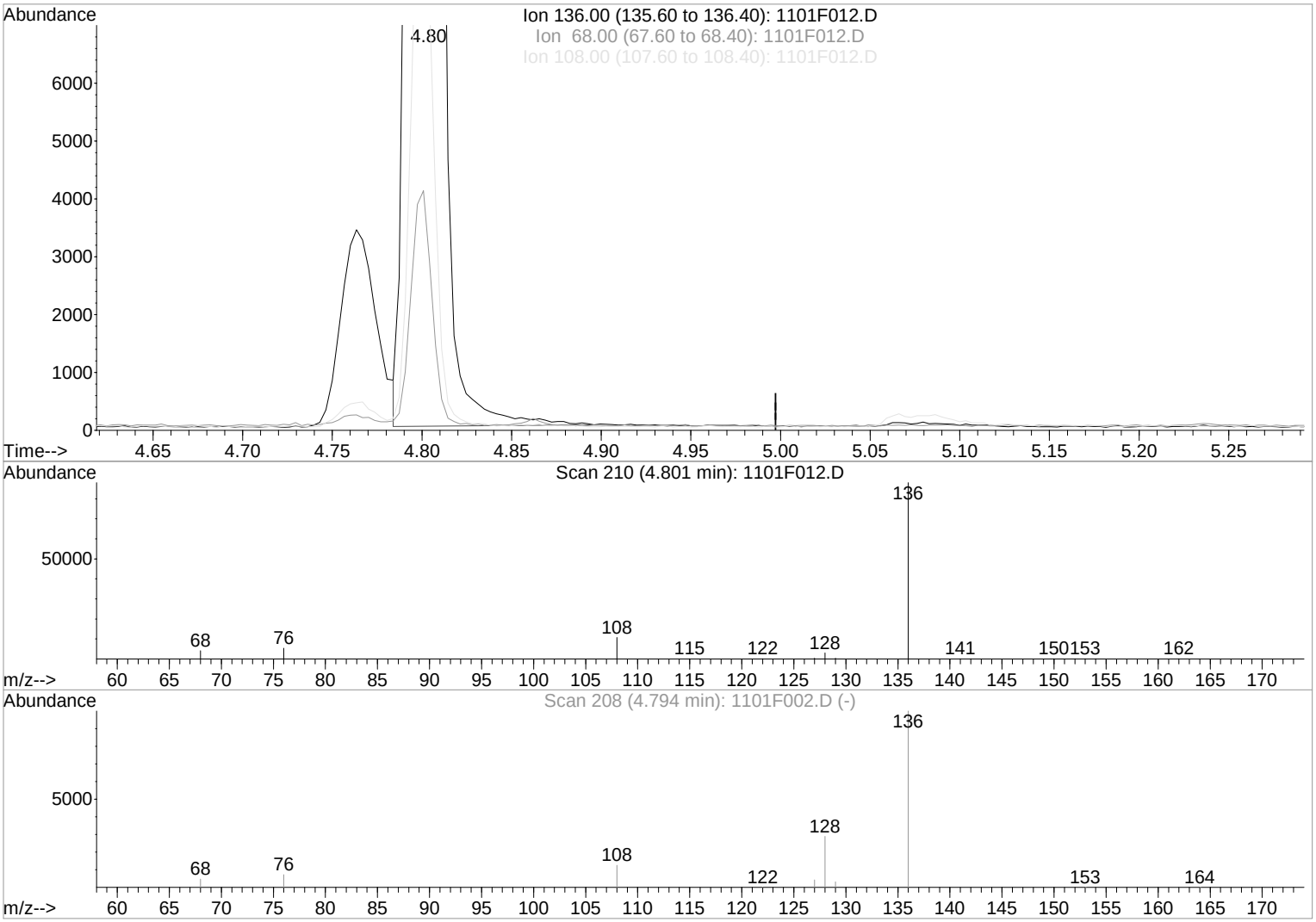
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F012.D Vial: 12
Acq On : 1 Nov 2018 2:53 pm Operator: LWeiskopf
Sample : KWG1805607-1 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 8:55 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F012.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml

response 70557

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.61
108.00	10.60	12.10
0.00	0.00	0.00

Manual Integration:

Before

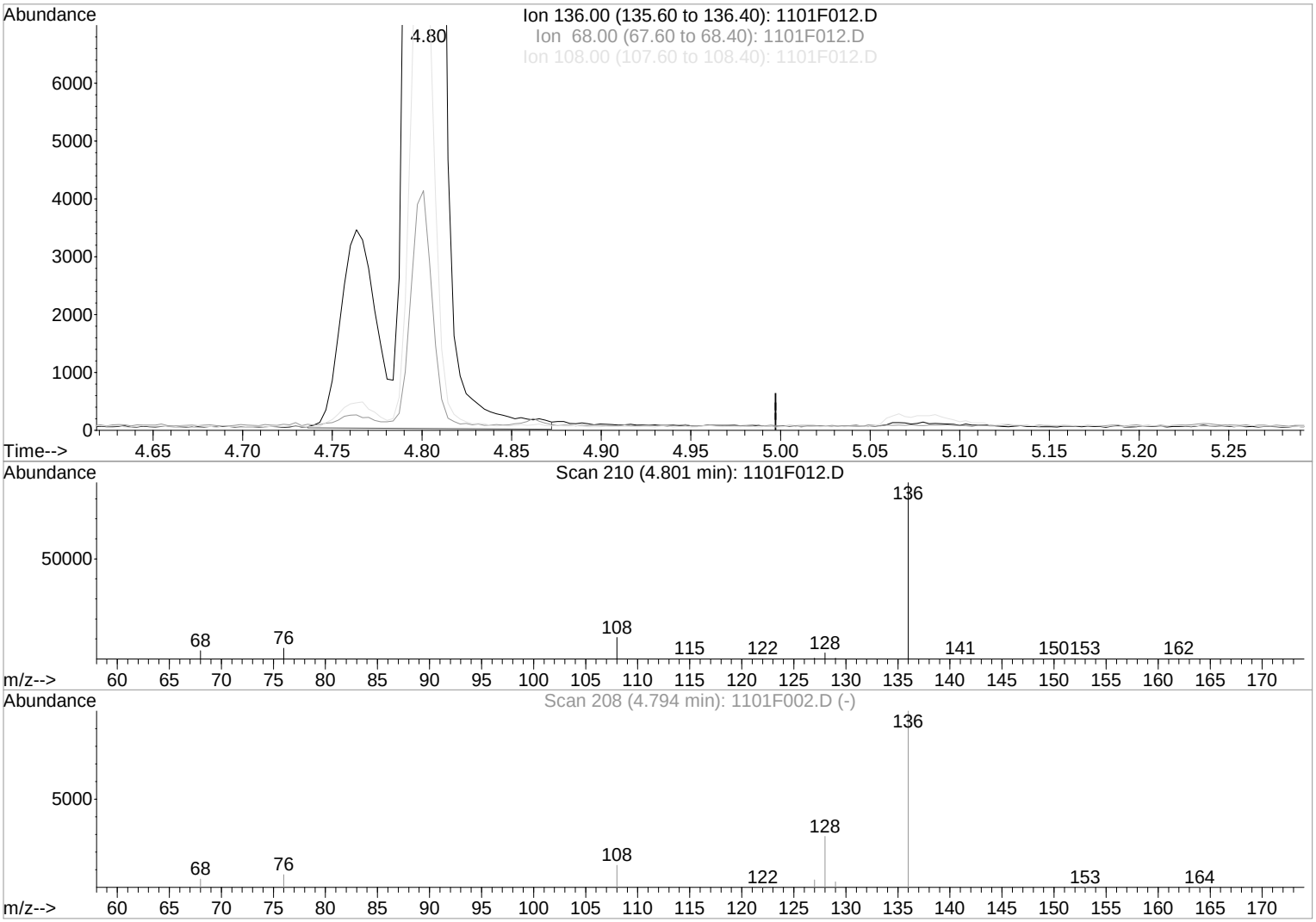
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F012.D Vial: 12
Acq On : 1 Nov 2018 2:53 pm Operator: LWeiskopf
Sample : KWG1805607-1 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:12 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F012.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml m

response 75504

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.70
108.00	10.60	12.15
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

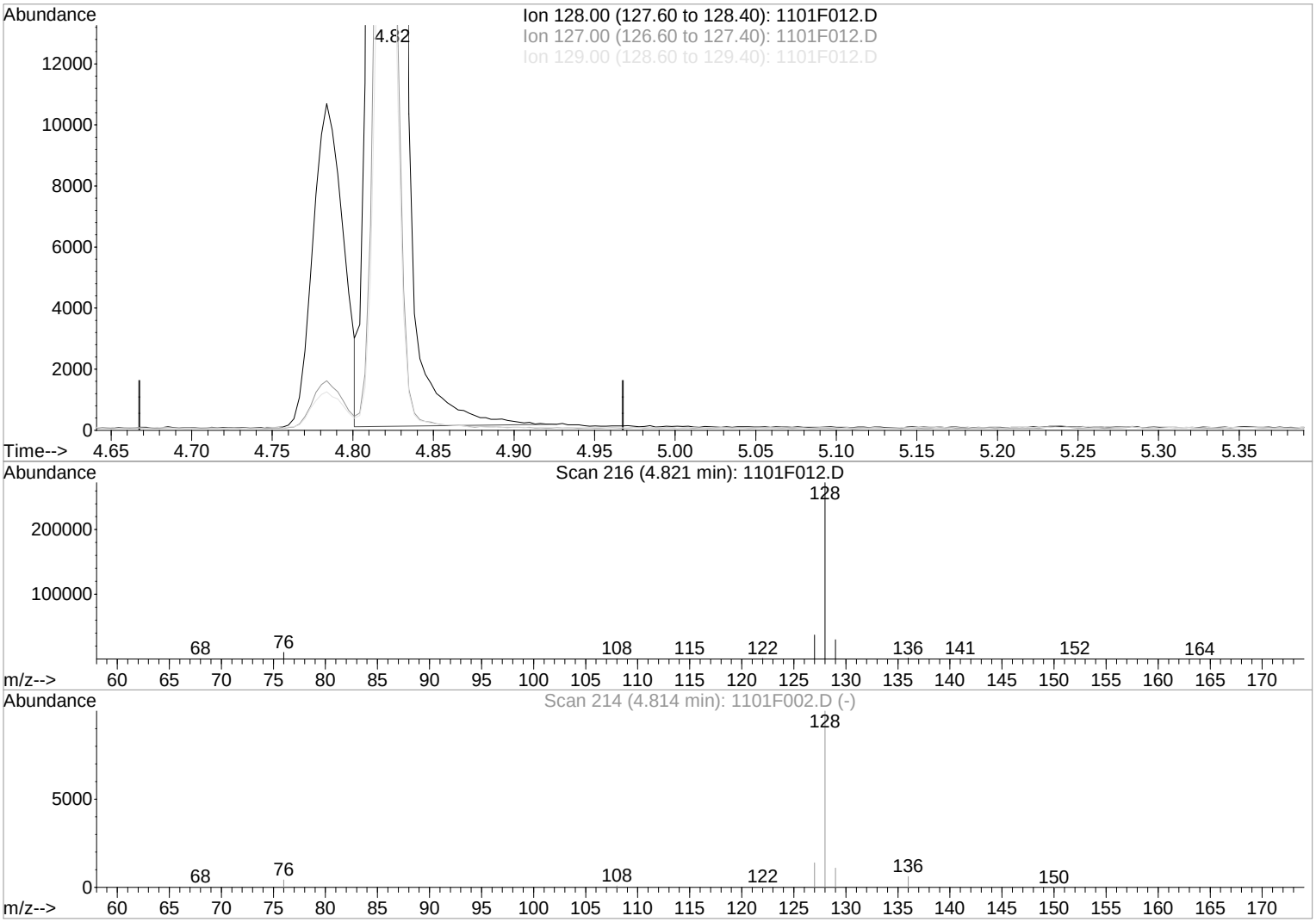
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F012.D Vial: 12
Acq On : 1 Nov 2018 2:53 pm Operator: LWeiskopf
Sample : KWG1805607-1 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:12 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F012.D

(2) Naphthalene (T)

4.82min 483.98ng/ml

response 210933

Ion	Exp%	Act%
128.00	100	100
127.00	13.70	13.51
129.00	10.80	10.79
0.00	0.00	0.00

Manual Integration:

Before

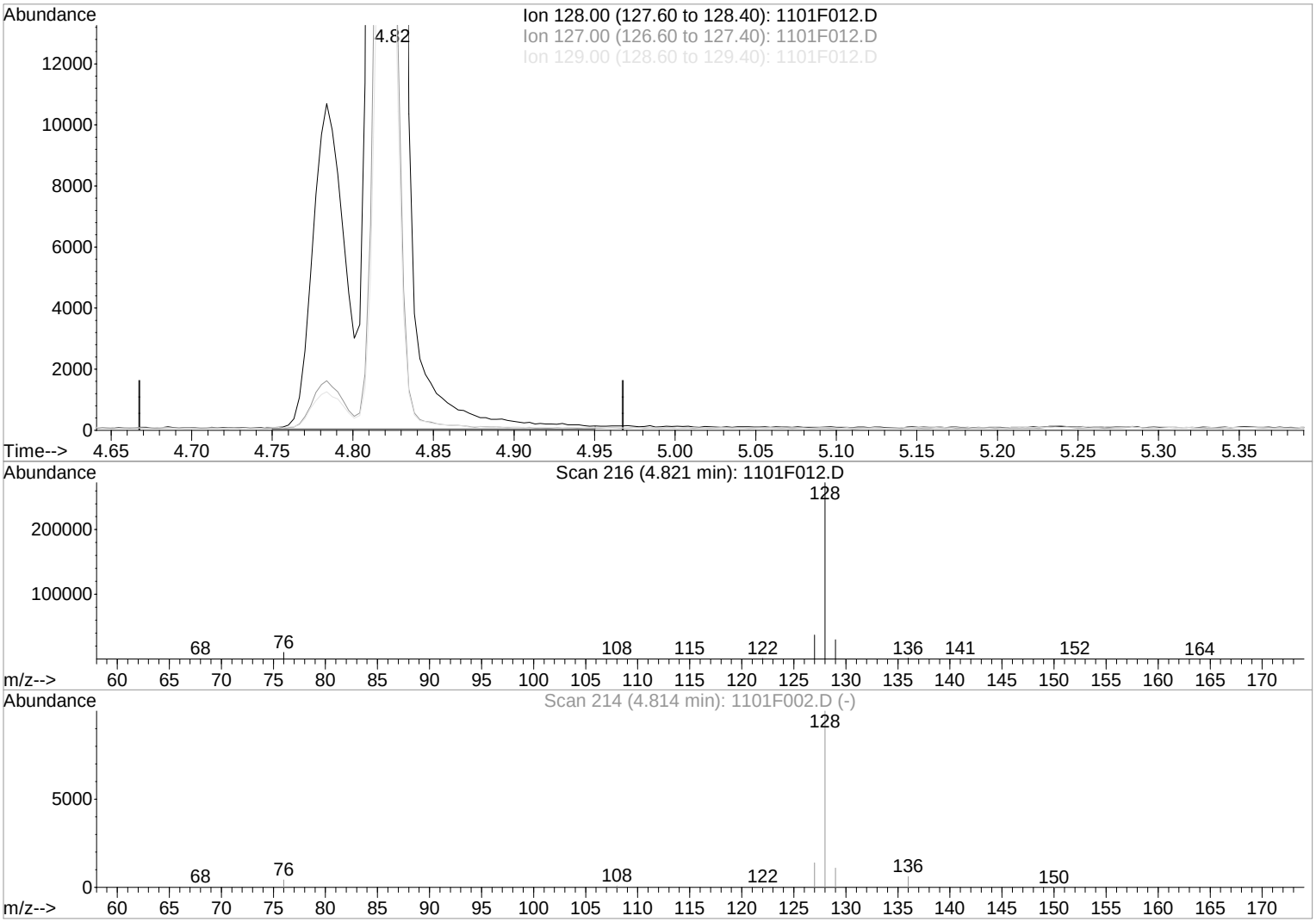
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F012.D Vial: 12
Acq On : 1 Nov 2018 2:53 pm Operator: LWeiskopf
Sample : KWG1805607-1 LCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:12 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F012.D

(2) Naphthalene (T)

4.82min 518.85ng/ml m

response 226128

Ion	Exp%	Act%
128.00	100	100
127.00	13.70	13.53
129.00	10.80	10.81
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/09/18

1st 11/09/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110118\1101F013.D
Lab ID: KWG1805607-2
RunType: DLCS
Matrix: WATER

Date Acquired: 11/01/2018 15:23
Date Quantitated: 11/09/2018 09:13
Batch ID: KWG1805861
Analysis Method: 8270D SIM
MethodJoinID: MJ1638

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Window	NA	NA	NA	x	
Analytical Holding Time	NA	NA	NA	x	
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Calibration Verification Pass/Fail	NA	NA	NA	x	
Continuing Calibration Recovery	NA	NA	NA	x	
Continuing Calibration Minimum RF	NA	NA	NA	x	
Continuing Calibration SPCC/CCC	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Surrogates	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Relative Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Std MRL Unsupported by ICAL	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	
Overdiluted Analysis	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/09/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110118\1101F013.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 15:23	**Quant Date:**	11/09/2018 09:13	**Vial:**	13
Run Type:	DLCS	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805607-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/09/2018

Analysis Lot:	KWG1805861	**Prep Lot:**	KWG1805607	**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**	EPA 3511		
Prep Ref:	1700830	**Prep Date:**	10/30/2018		

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110118\1101F001.D	**Method ID:**	MJ1638
MB Ref:	J:\MS14\DATA\110118\1101F011.D	**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.80	0.01	136	72899**m**	200.00	OK
2	Acenaphthene-d10	6.35	0.00	164	31102	200.00	OK
3	Phenanthrene-d10	7.59	0.00	188	64163	200.00	OK
4	Chrysene-d12	10.16	0.00	240	67948	200.00	OK
5	Perylene-d12	13.37	0.00	264	75058	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.79	0.00	0.00	176	173280	871.34	87	42-131	OK	
3	Fluoranthene-d10	8.58	0.00	0.00	212	347366	859.00	86	42-133	OK	
4	Terphenyl-d14	8.93	0.00	0.00	244	222723	755.71	76	32-129	OK	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.82	0.01	0.00	128	224129**m**	532.64	2.37		
1	2-Methylnaphthalene	5.46	0.01	0.00	142	133197	524.89	2.33		
1	1-Methylnaphthalene	5.54		0.00	142	127576	522.31	2.32		
1	Biphenyl	5.86		0.00	154	171221	540.61	2.40		
1	2,6-Dimethylnaphthalene	6.00		0.00	156	120765	554.34	2.46		
2	Acenaphthylene	6.23		0.00	152	222981	600.85	2.67		
2	Acenaphthene	6.38		0.00	154	124779	585.33	2.60		
2	Dibenzofuran	6.53		0.00	168	206143	602.62	2.68		
2	2,3,5-Trimethylnaphthalene	6.70		0.00	170	119332	605.19	2.69		
2	Fluorene	6.81		0.00	166	151936	589.30	2.62		
3	Dibenzothiophene	7.51		0.00	184	253380	633.13	2.81		
3	Phenanthrene	7.61		0.00	178	232588	581.09	2.58		

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110118\1101F013.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 15:23	**Quant Date:**	11/09/2018 09:13	**Vial:**	13
Run Type:	DLCS	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805607-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.66		0.00	178	233540	611.19	2.72		
3	Carbazole	7.79		0.00	167	116487	312.38	1.39		
3	1-Methylphenanthrene	8.12		0.00	192	181995	600.30	2.67		
3	Fluoranthene	8.59		0.00	202	266856	539.93	2.40		
4	Pyrene	8.79		0.00	202	291382	625.03	2.78		
4	Benz(a)anthracene	10.15		0.00	228	271714	618.50	2.75		
4	Chrysene	10.20		0.00	228	252180	599.29	2.66		
5	Benzo(b)fluoranthene	12.29		0.00	252	292999	631.84	2.81		
5	Benzo(k)fluoranthene	12.36		0.00	252	274702	597.14	2.65		
5	Benzo(e)pyrene	13.04		0.00	252	272700	616.94	2.74		
5	Benzo(a)pyrene	13.20		0.00	252	252214	620.19	2.76		
5	Perylene	13.46		0.00	252	254397	596.33	2.65		
5	Indeno(1,2,3-cd)pyrene	15.52		0.00	276	232241	582.38	2.59		
5	Dibenz(a,h)anthracene	15.56		0.00	278	216605	535.83	2.38		
5	Benzo(g,h,i)perylene	15.92		0.00	276	260815	558.50	2.48		

Prep Amount:	450 mL	**Dilution:**	1.0
Prep Final Vol:	2 ml	**Unit Factor:**	1

Final Concentration = ((Soln Conc x Prep Final Vol x Dilution) / Prep Amount) x Unit Factor

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

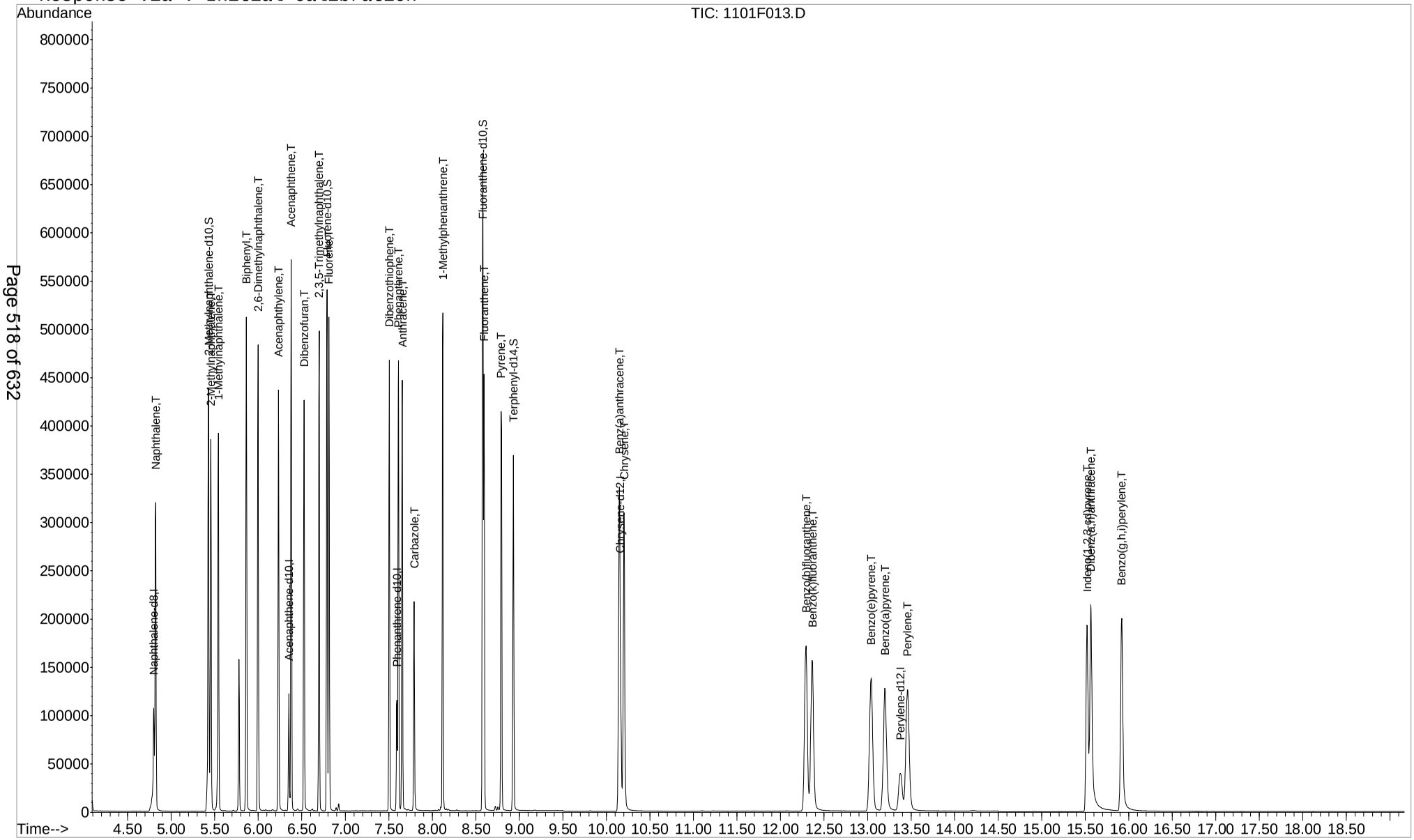
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F013.D Vial: 13
Acq On : 1 Nov 2018 3:23 pm Operator: LWeiskopf
Sample : KWG1805607-2 DLCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:13 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration



1st 11/09/18
2nd 11/27/18

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\110118\1101F013.D Vial: 13
Acq On : 1 Nov 2018 3:23 pm Operator: LWeiskopf
Sample : KWG1805607-2 DLCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 09 08:55:52 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	72899m	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	31102	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	64163	200.00	ng/ml	0.00
23) Chrysene-d12	10.16	240	67948	200.00	ng/ml	0.00
28) Perylene-d12	13.37	264	75058	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	133099	654.12	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	65.41%		
13) Fluorene-d10	6.79	176	173280	871.34	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	87.13%		
22) Fluoranthene-d10	8.58	212	347366	859.00	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	85.90%		
25) Terphenyl-d14	8.93	244	222723	755.71	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	75.57%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	224129m	532.64	ng/ml	
4) 2-Methylnaphthalene	5.46	142	133197	524.89	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	127576	522.31	ng/ml	96
6) Biphenyl	5.86	154	171221	540.61	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	120765	554.34	ng/ml	96
9) Acenaphthylene	6.23	152	222981	600.85	ng/ml	99
10) Acenaphthene	6.38	154	124779	585.33	ng/ml	98
11) Dibenzofuran	6.53	168	206143	602.62	ng/ml	85
12) 2,3,5-Trimethylnaphthalene	6.70	170	119332	605.19	ng/ml	93
14) Fluorene	6.81	166	151936	589.30	ng/ml	99
16) Dibenzothiophene	7.51	184	253380	633.13	ng/ml	96
17) Phenanthrene	7.61	178	232588	581.09	ng/ml	99
18) Anthracene	7.66	178	233540	611.19	ng/ml	99
19) Carbazole	7.79	167	116487	312.38	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	181995	600.30	ng/ml	98
21) Fluoranthene	8.59	202	266856	539.93	ng/ml	96
24) Pyrene	8.79	202	291382	625.03	ng/ml	98
26) Benz(a)anthracene	10.15	228	271714	618.50	ng/ml	99
27) Chrysene	10.20	228	252180	599.29	ng/ml	100
29) Benzo(b)fluoranthene	12.29	252	292999	631.84	ng/ml	99
30) Benzo(k)fluoranthene	12.36	252	274702	597.14	ng/ml	98
31) Benzo(e)pyrene	13.04	252	272700	616.94	ng/ml	98
32) Benzo(a)pyrene	13.20	252	252214	620.19	ng/ml	98
33) Perylene	13.46	252	254397	596.33	ng/ml	98
34) Indeno(1,2,3-cd)pyrene	15.52	276	232241	582.38	ng/ml	97
35) Dibenz(a,h)anthracene	15.56	278	216605	535.83	ng/ml	98
36) Benzo(g,h,i)perylene	15.92	276	260815	558.50	ng/ml	97

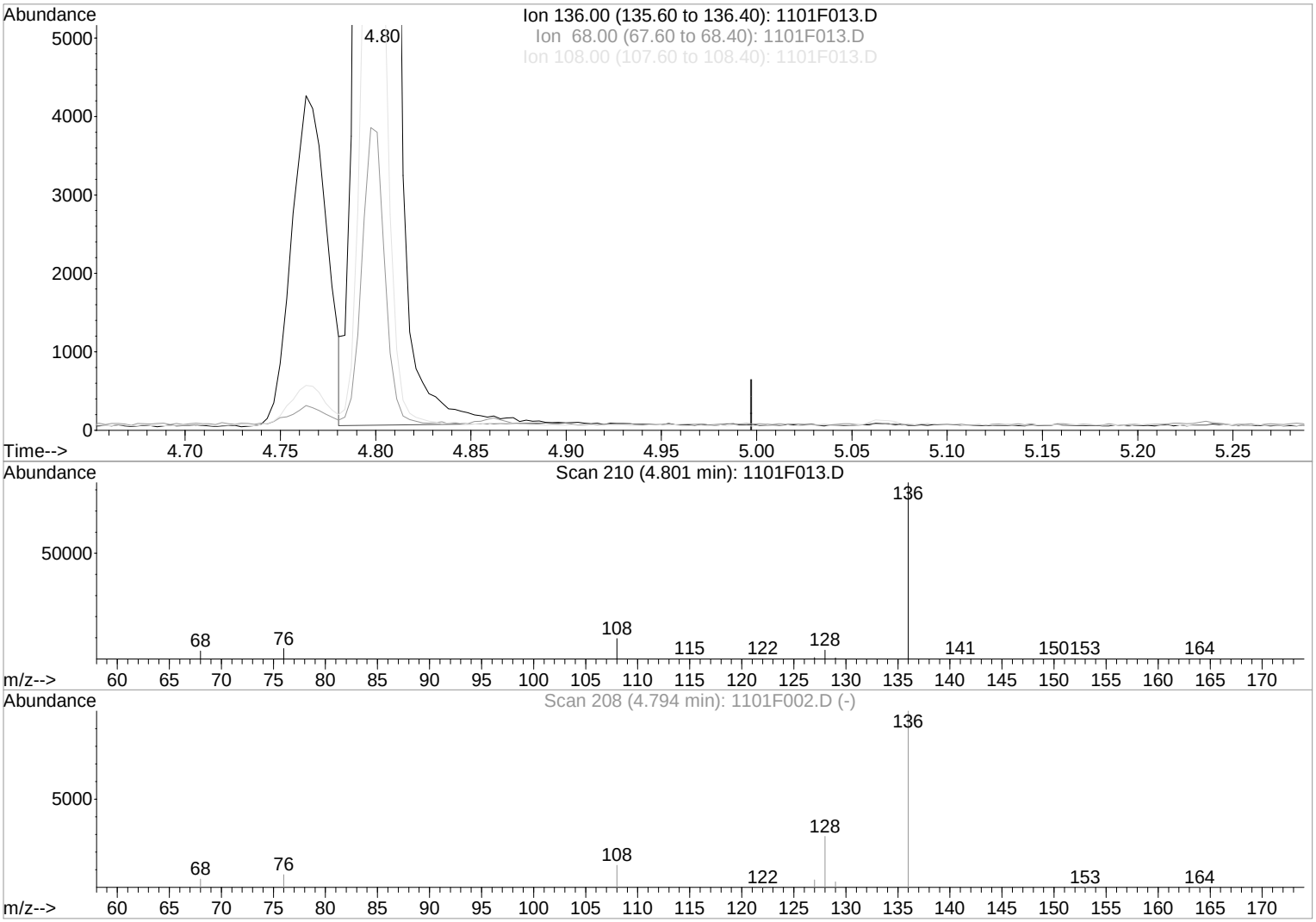
(#) = qualifier out of range (m) = manual integration

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F013.D Vial: 13
Acq On : 1 Nov 2018 3:23 pm Operator: LWeiskopf
Sample : KWG1805607-2 DLCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 8:55 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F013.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml

response 67250

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.45
108.00	10.60	11.45
0.00	0.00	0.00

Manual Integration:

Before

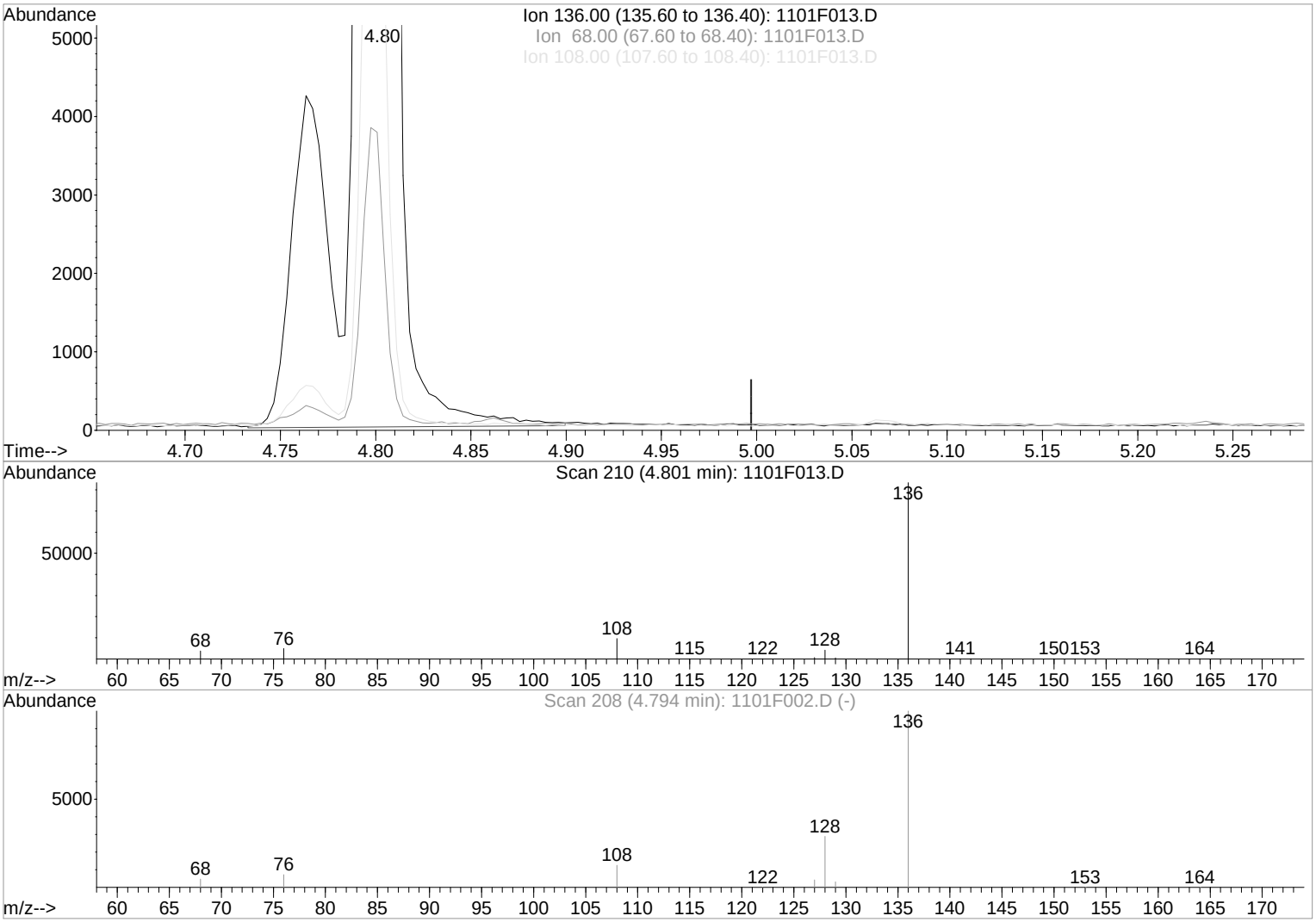
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F013.D Vial: 13
Acq On : 1 Nov 2018 3:23 pm Operator: LWeiskopf
Sample : KWG1805607-2 DLCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:12 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F013.D

(1) Naphthalene-d8 (I)

4.80min 200.00ng/ml m

response 72899

Ion	Exp%	Act%
136.00	100	100
68.00	5.10	4.55
108.00	10.60	11.52
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

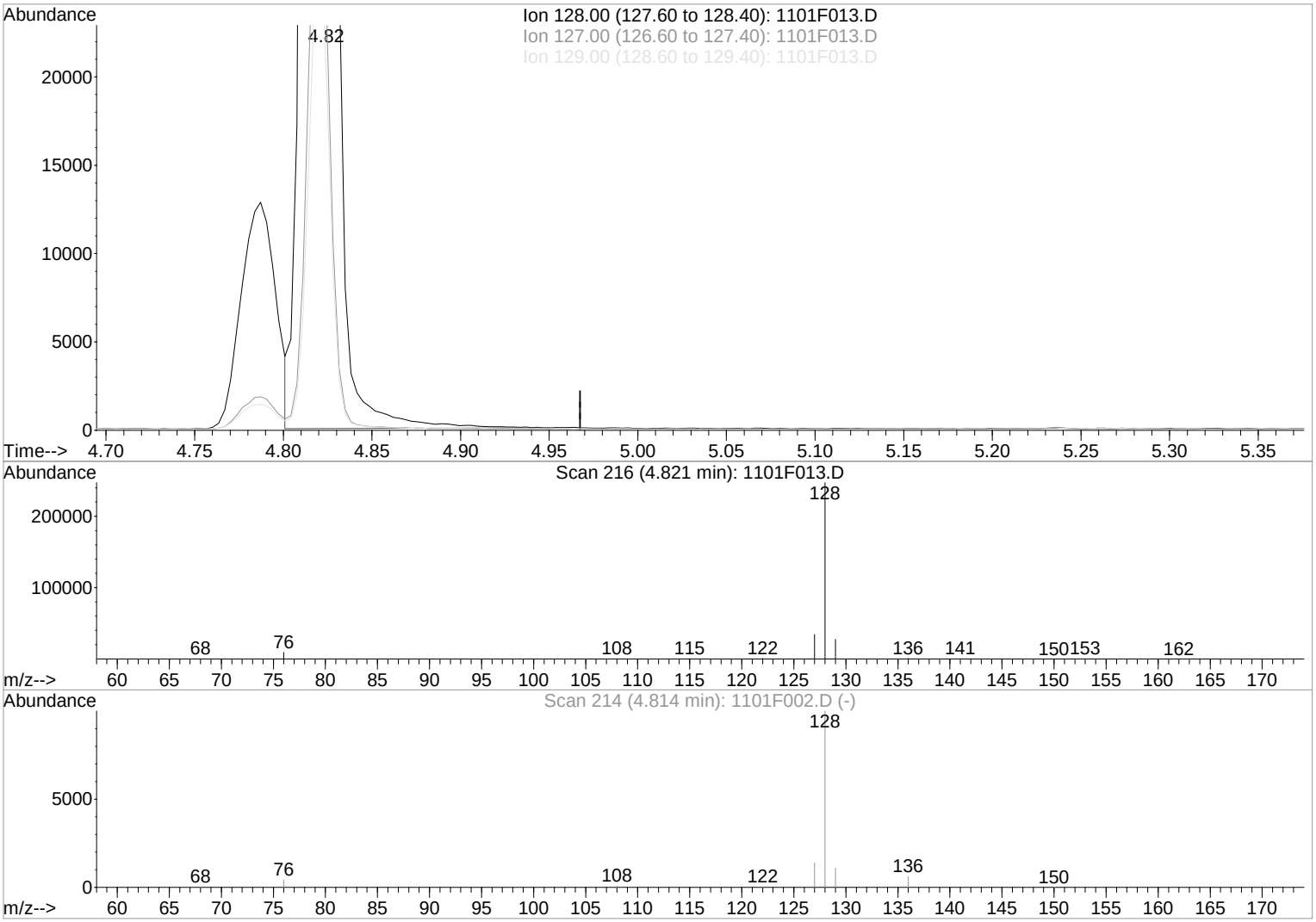
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F013.D Vial: 13
Acq On : 1 Nov 2018 3:23 pm Operator: LWeiskopf
Sample : KWG1805607-2 DLCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:12 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F013.D

(2) Naphthalene (T)

4.82min 489.64ng/ml

response 206038

Ion	Exp%	Act%
128.00	100	100
127.00	13.70	13.80
129.00	10.80	11.05
0.00	0.00	0.00

Manual Integration:

Before

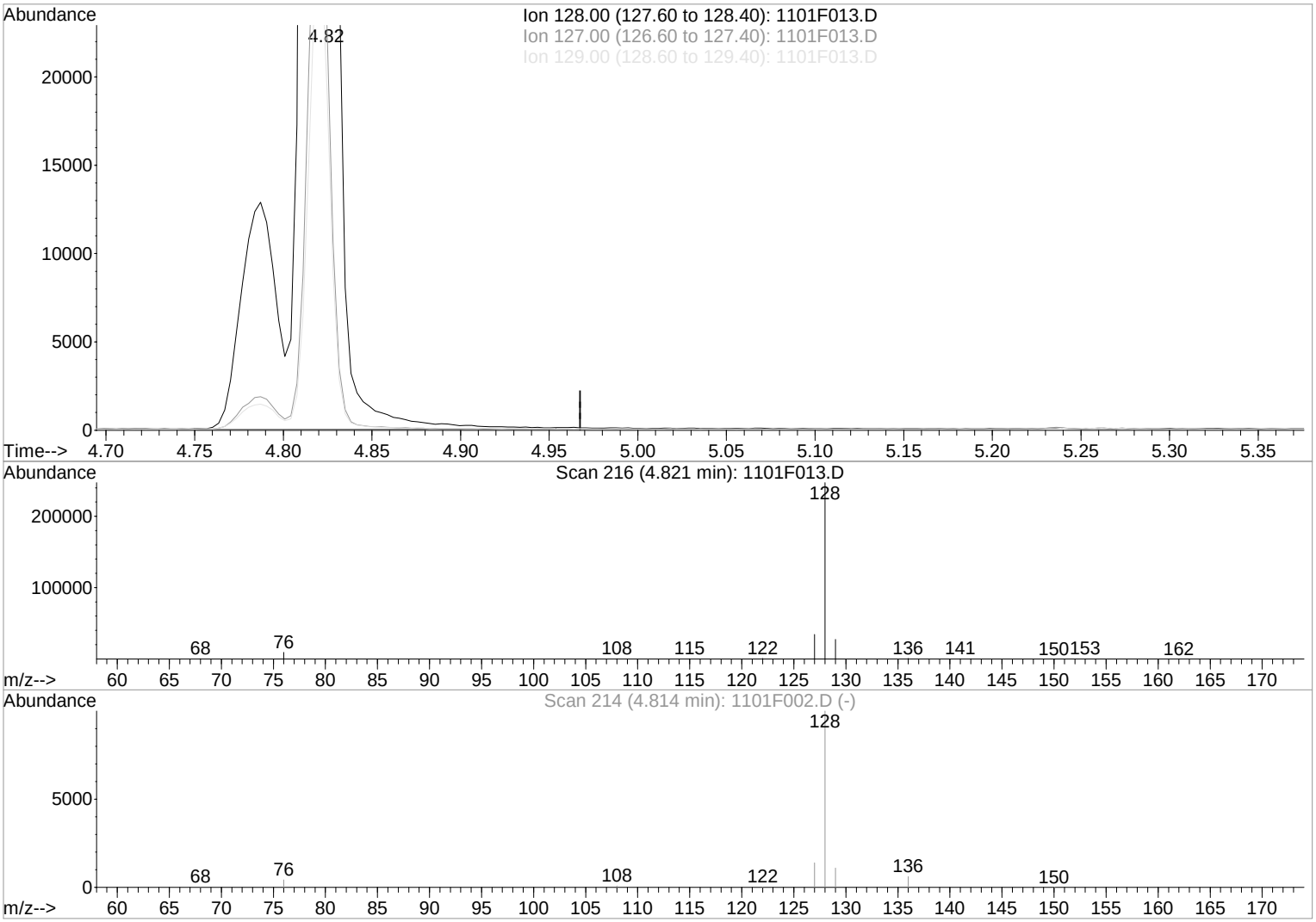
11/09/18

Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F013.D Vial: 13
Acq On : 1 Nov 2018 3:23 pm Operator: LWeiskopf
Sample : KWG1805607-2 DLCS Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 9:13 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Multiple Level Calibration



TIC: 1101F013.D

(2) Naphthalene (T)

4.82min 532.64ng/ml m

response 224129

Ion	Exp%	Act%
128.00	100	100
127.00	13.70	13.81
129.00	10.80	11.07
0.00	0.00	0.00

Manual Integration:

After

IC-Incomplete

11/09/18

1st 11/09/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110118\1101F001.D
Lab ID: KWG1805861-1
RunType: DFTPP
Matrix: WATER

Date Acquired: 11/01/2018 09:32
Date Quantitated:
Batch ID: KWG1805861
Analysis Method: DFTPP
ListJoinID: LJ1965

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
Tune Ion Ratio	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/09/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110118\1101F001.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 09:32	**Quant Date:**		**Vial:**	1
Run Type:	DFTPP	**ListJoinID:**	LJ1965	**Dilution:**	1.0
Lab ID:	KWG1805861-1			**Soln Conc. Units:**	

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/09/2018

Analysis Lot:	KWG1805861	**Prep Lot:**		**Report Group:**	
Analysis Method:	DFTPP	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\A_DFTPP.M	**Calibration ID:**	CAL15779
Title:		**Report List ID:**	LJ1965
Tune Ref:		**Method ID:**	MJ190
MB Ref:		**Quant based on Report List**	

Tune Results

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	10	80	39.4	88173	Pass
68	69	0	2	0.0	0	Pass
69	198	0	100	41.4	92794	Pass
70	69	0	2	0.7	646	Pass
127	198	10	80	47.2	105666	Pass
197	198	0	2	0.0	0	Pass
198	442	30	100	47.1	223978	Pass
199	198	5	9	6.9	15387	Pass
275	198	10	60	35.5	79600	Pass
365	442	1	50	2.6	12134	Pass
441	443	0.01	100	74.8	68840	Pass
442	442	100	100	100.0	475328	Pass
443	442	15	24	19.4	92066	Pass

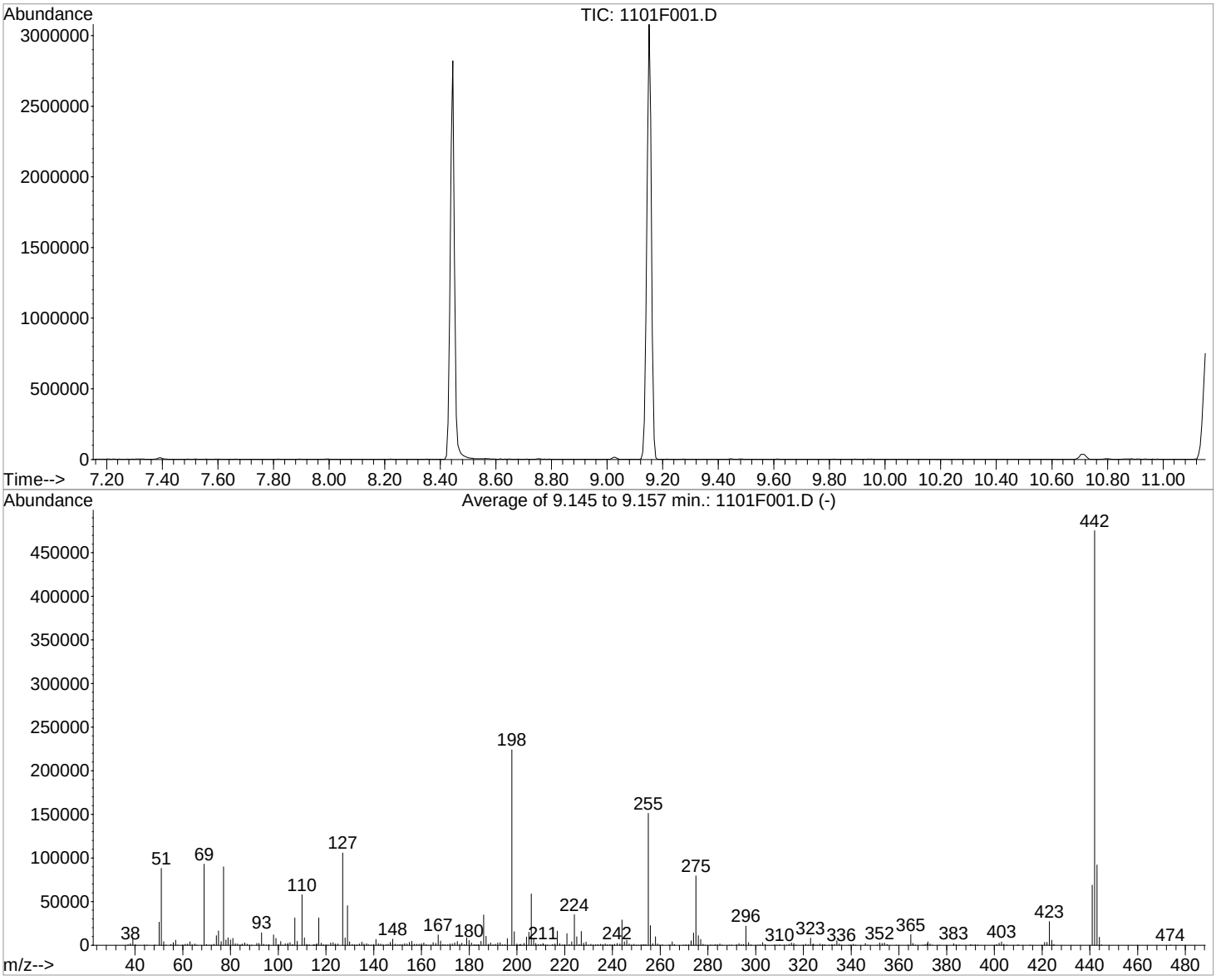
U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F001.D Vial: 1
Acq On : 1 Nov 2018 9:32 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 520, 521, 522; Background Corrected with Scan 513

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.4	88173	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	41.4	92794	PASS
70	69	0.00	2	0.7	646	PASS
127	198	10	80	47.2	105666	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	47.1	223978	PASS
199	198	5	9	6.9	15387	PASS
275	198	10	60	35.5	79600	PASS
365	442	1	50	2.6	12134	PASS
441	443	0.01	100	74.8	68840	PASS
442	442	30	100	100.0	475328	PASS
443	442	15	24	19.4	92066	PASS

1st 11/09/18
2nd 11/27/18

Average of 9.145 to 9.157 min.: 1101F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
37.05	648	53.05	121	65.90	122	79.00	8282
38.05	1696	55.00	832	69.00	92794	79.95	5931
39.10	7809	56.00	2849	69.95	646	81.00	7905
40.00	296	57.05	5691	71.20	53	81.95	1791
40.20	223	57.95	314	72.20	54	82.95	1497
43.90	50	59.90	55	73.05	1152	84.00	147
45.00	215	61.00	1213	74.05	10743	84.40	126
48.50	146	62.10	1300	75.00	16293	85.00	1507
50.10	26490	63.05	3883	76.10	4280	85.95	2528
51.05	88173	64.00	513	77.05	89997	87.00	969
52.05	4261	65.05	1505	78.05	6038	87.95	297

Average of 9.145 to 9.157 min.: 1101F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
88.90	168	101.00	4017	111.00	8350	118.80	257
91.00	2053	101.85	268	111.95	1025	119.00	52
91.95	2088	102.95	1539	112.90	106	120.00	499
93.00	14195	103.90	1068	113.10	197	120.90	84
93.95	1044	104.05	2069	114.60	83	121.95	2589
95.05	312	104.95	2990	114.90	80	122.95	3017
96.00	682	105.80	255	115.25	301	123.80	269
98.00	11672	106.10	434	115.90	659	124.05	1347
99.00	7694	107.00	31160	116.15	1718	125.00	1496
99.90	203	107.95	4459	117.00	31346	127.00	105666
100.10	425	110.00	57890	118.00	2196	128.00	8470

Average of 9.145 to 9.157 min.: 1101F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
129.00	45469	138.90	262	149.95	493	161.00	2657
129.95	3818	139.90	658	150.95	820	161.95	695
131.00	786	140.95	6457	151.95	881	163.15	277
131.95	528	141.90	1638	153.00	1737	163.95	312
132.80	187	142.95	1335	154.00	1327	164.90	2873
133.10	73	143.95	434	154.95	3268	166.00	1980
134.00	1426	145.15	398	156.00	4471	167.00	11724
135.00	3470	146.00	1171	157.00	1073	167.95	4787
135.90	1364	147.00	3182	157.95	1034	169.05	832
137.00	1789	148.00	6950	158.95	942	169.95	615
137.85	518	148.95	1195	159.95	1630	171.00	614

Average of 9.145 to 9.157 min.: 1101F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
171.85	1285	182.50	158	190.95	932	201.45	1154
172.95	1504	182.95	261	191.95	2652	202.10	136
173.95	2523	183.30	83	193.00	3068	202.95	1971
175.00	4174	183.85	557	194.00	606	204.00	9400
176.00	1077	184.10	247	195.00	502	205.00	14729
176.95	2399	184.95	4387	195.95	7471	206.00	58645
178.05	882	186.00	34602	197.90	223978	207.00	7625
178.95	8412	187.00	10162	198.90	15387	207.90	2027
179.95	5466	188.00	979	199.95	1303	208.85	624
180.95	2545	189.00	2663	200.80	222	209.90	256
181.95	457	189.90	390	201.30	404	210.05	640

Average of 9.145 to 9.157 min.: 1101F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
210.90	1862	220.95	13345	231.95	280	241.95	1976
211.10	636	221.90	690	232.90	326	243.10	1407
212.00	125	222.95	3821	233.90	914	244.00	28738
212.75	134	224.00	35021	234.95	934	245.00	3828
214.85	878	225.00	9655	235.95	726	245.95	5752
215.95	1493	226.10	896	236.95	1330	246.95	1304
216.90	15909	226.95	15750	237.80	75	248.00	294
217.90	1731	227.95	2318	238.00	115	248.95	1106
219.05	177	228.95	3392	238.95	762	250.00	159
219.80	250	229.90	174	239.90	456	250.90	244
220.00	197	231.00	1204	240.90	1007	251.90	169

Average of 9.145 to 9.157 min.: 1101F001.D

1st 11/09/18
2nd 11/27/18

DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
252.10	110	263.70	62	276.00	10873	289.90	54
252.85	705	264.20	131	276.95	6611	291.95	365
253.30	219	265.00	3842	277.95	944	292.95	1639
254.00	767	265.90	653	278.95	245	293.80	271
255.00	151104	269.75	120	281.00	174	294.10	149
255.95	22482	270.70	53	281.80	83	294.90	709
256.95	1786	270.95	216	283.00	659	295.95	21696
258.00	9544	271.95	442	283.95	493	297.00	3061
258.95	1419	273.00	4922	285.00	1353	297.85	140
259.85	175	273.95	13943	285.95	128	298.10	165
260.95	344	275.00	79600	288.85	225	300.95	237

Average of 9.145 to 9.157 min.: 1101F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

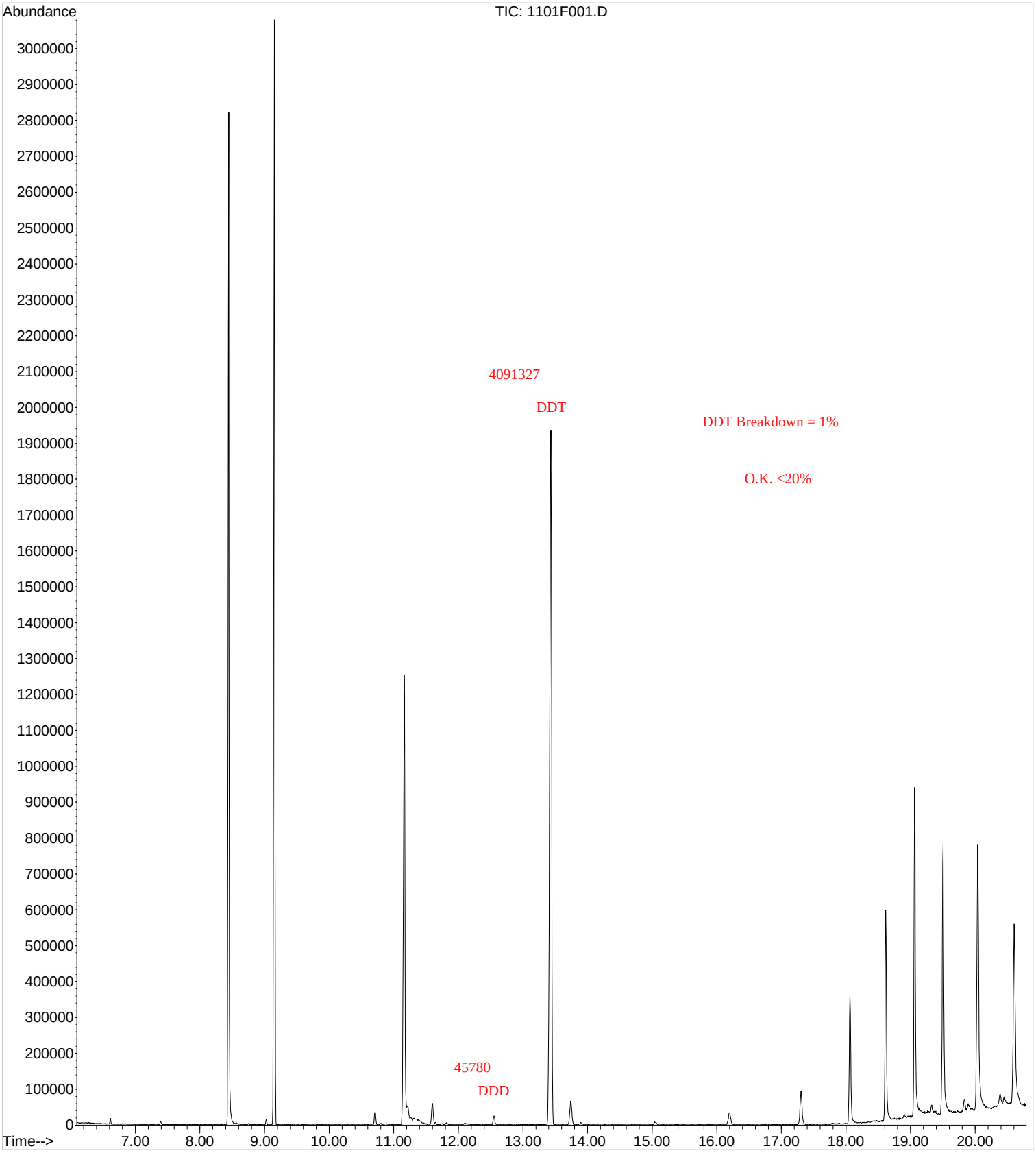
m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
301.85	462	316.90	251	328.70	68	340.95	1130
302.95	2873	319.85	119	329.05	248	341.95	228
303.95	803	320.95	993	330.80	53	345.95	2101
307.90	362	322.00	559	331.80	79	346.95	287
308.95	239	323.00	8110	331.95	572	350.95	218
310.00	434	323.90	378	333.00	769	351.95	2537
311.90	115	324.05	1297	333.95	5069	352.90	1977
312.95	253	324.80	73	334.95	1512	353.95	2743
313.95	1102	325.75	144	335.95	231	355.05	740
314.90	2619	326.90	1445	339.00	67	358.90	153
315.95	1846	327.95	645	339.95	165	363.80	71

Average of 9.145 to 9.157 min.: 1101F001.D
DFTPP @ 10ug/mL | SVM59-57A
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
364.95	12134	383.95	393	403.95	1131	441.00	68840
365.90	1896	385.20	122	405.20	74	442.00	475328
366.90	131	389.80	174	409.70	65	443.00	92066
370.00	235	390.00	535	409.95	157	444.00	8934
371.00	820	390.85	306	414.85	131	444.90	371
371.90	1560	391.90	350	421.05	3248	473.70	53
372.05	3927	393.00	118	422.05	3267		
372.95	1363	400.80	54	423.00	27066		
374.00	62	400.95	369	424.00	5567		
376.90	55	401.95	2184	424.80	54		
382.90	1784	402.95	3730	424.95	324		

1st 11/09/18
2nd 11/27/18

File : J:\MS14\DATA\110118\1101F001.D
Operator : LWeiskopf
Acquired : 1 Nov 2018 9:32 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-57A
Misc Info :
Vial Number: 1

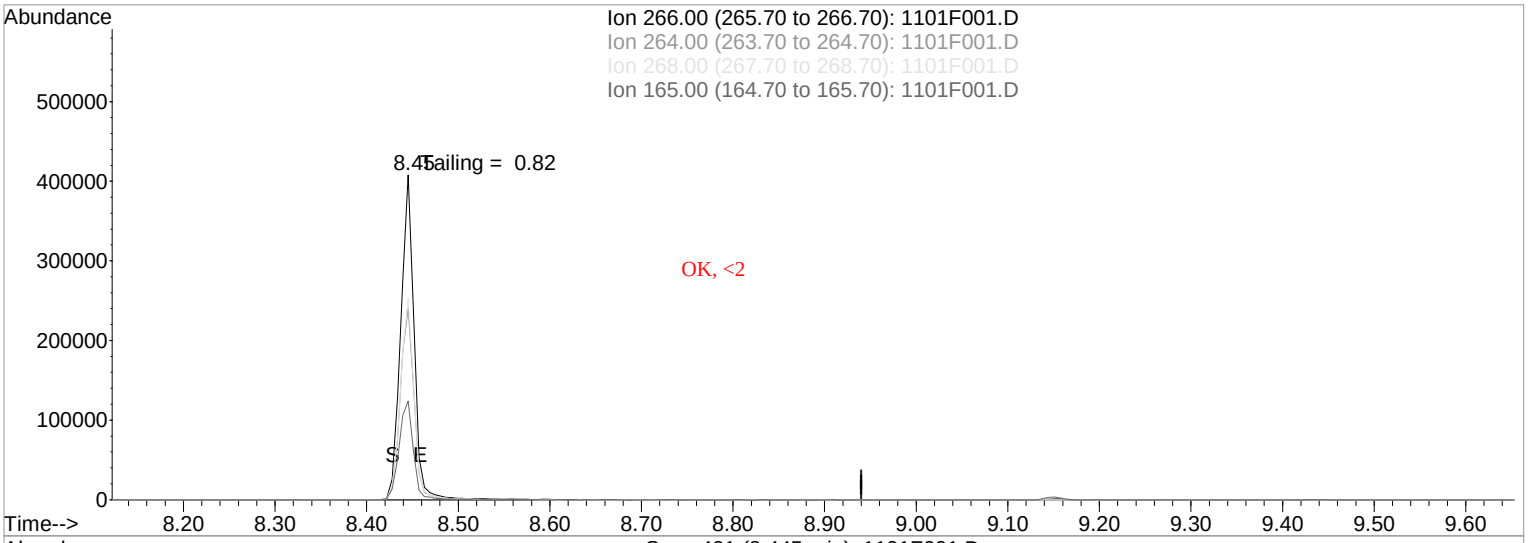


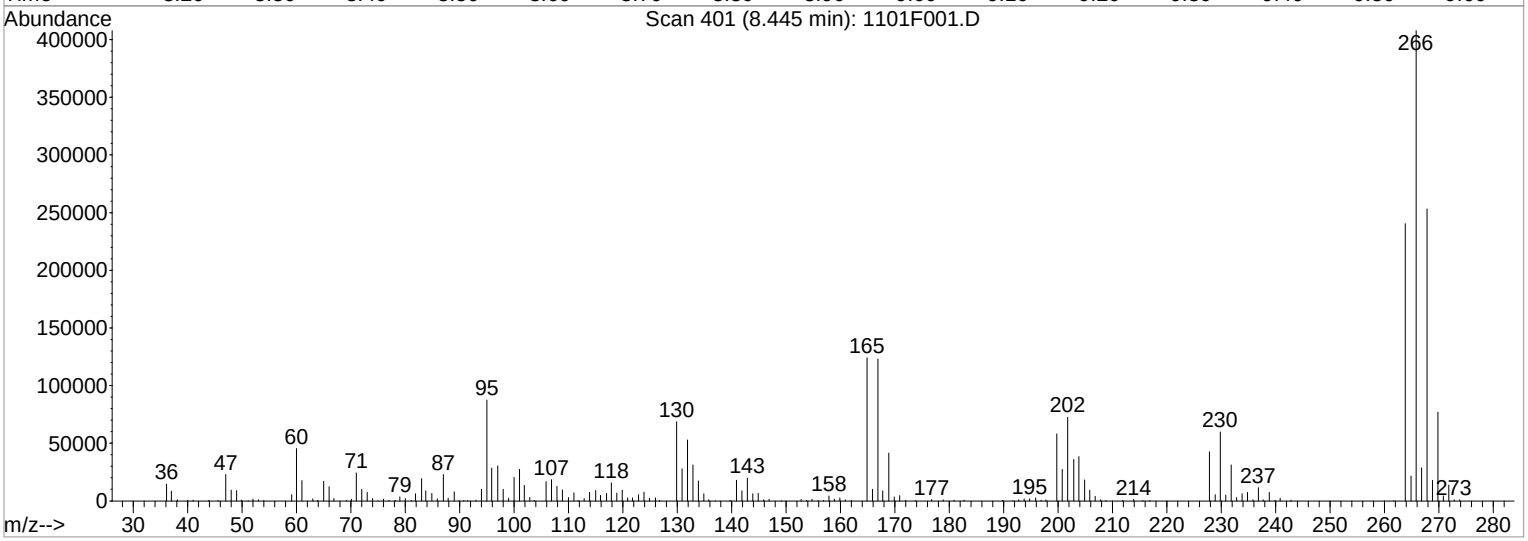
Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F001.D Vial: 1
Acq On : 1 Nov 2018 9:32 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 1 9:11 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Thu Sep 20 12:42:13 2018
Response via : Single Level Calibration





TIC: 1101F001.D

(1) Pentachlorophenol

8.45min 17.93ng/ml

response 412724

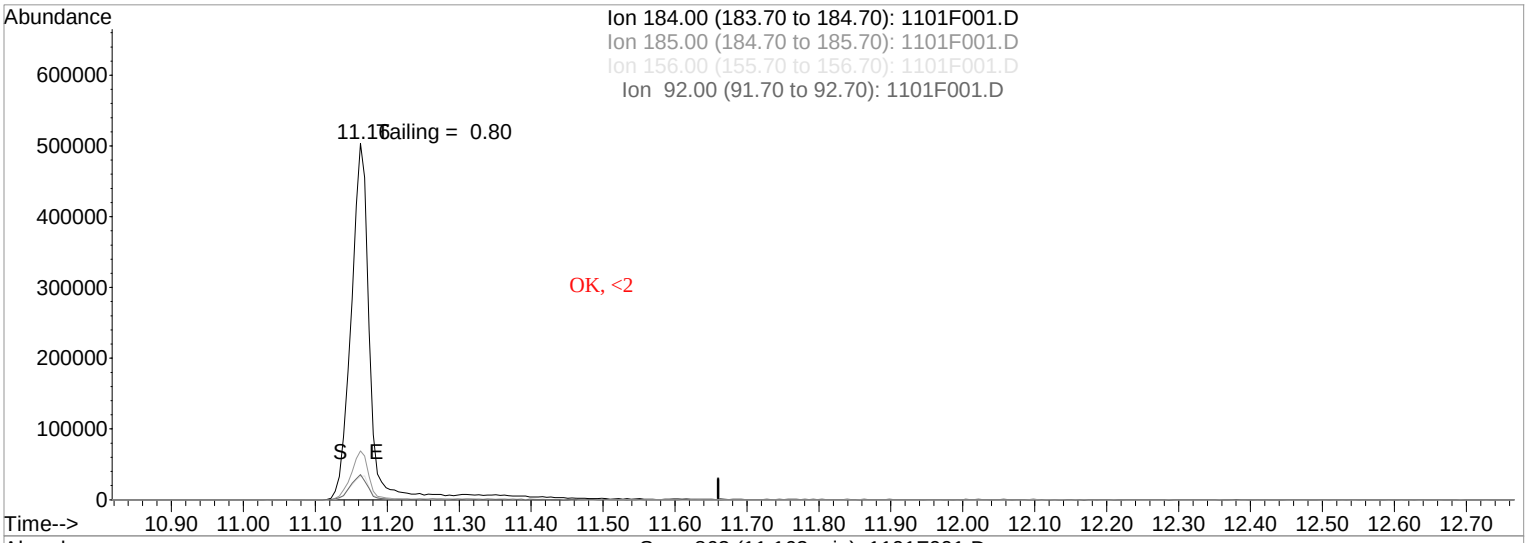
Ion	Exp%	Act%
266.00	100	100
264.00	62.30	58.93
268.00	72.30	62.05
165.00	42.00	30.42

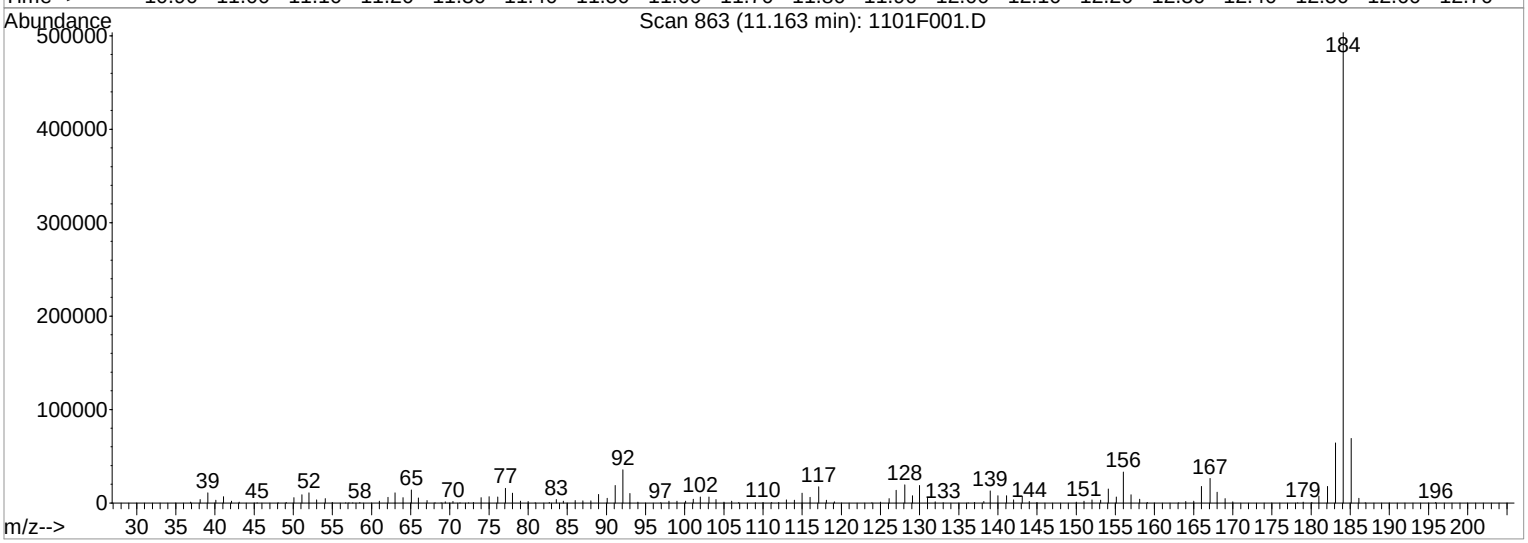
Quantitation Report (Qedit)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F001.D Vial: 1
Acq On : 1 Nov 2018 9:32 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-57A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Nov 1 9:11 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Thu Sep 20 12:42:13 2018
Response via : Single Level Calibration





TIC: 1101F001.D

(3) Benzidine (T)

11.16min 15.15ug/ml

response 873252

Ion	Exp%	Act%
184.00	100	100
185.00	14.70	13.72
156.00	9.50	6.55
92.00	7.60	7.05

1st 11/09/18
2nd 11/27/18

Exception Report

Data File: J:\MS14\DATA\110118\1101F002.D
Lab ID: KWG1805861-2
RunType: CCV
Matrix: WATER

Date Acquired: 11/01/2018 10:01
Date Quantitated: 11/09/2018 08:55
Batch ID: KWG1805861
Analysis Method: 8270D SIM
MethodJoinID: MJ1507

Sample Exceptions

Exception Categories	Result	Low Limit	High Limit	Pass	Fail
ICAL Pass/Fail	NA	NA	NA	x	
ICAL Analyte Recovery	NA	NA	NA	x	
Initial Calibration Minimum RF	NA	NA	NA	x	
Initial Calibration SPCC/CCC	NA	NA	NA	x	
Second Source ICAL Verification	NA	NA	NA	x	
Internal Standards	NA	NA	NA	x	
Analyte Co-elution	NA	NA	NA	x	
Retention Time	NA	NA	NA	x	
Below Lowest ICAL Level	NA	NA	NA	x	
Above Highest ICAL Level	NA	NA	NA	x	
Enviroquant/Stealth Calibration Check	NA	NA	NA	x	

Primary Review: _____

Secondary Review: _____

1st 11/09/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110118\1101F002.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 10:01	**Quant Date:**	11/09/2018 08:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1507	**Dilution:**	1.0
Lab ID:	KWG1805861-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/09/2018

Analysis Lot:	KWG1805861	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110118\1101F001.D	**Method ID:**	MJ1507
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.79	-0.01	136	61479	200.00	OK
2	Acenaphthene-d10	6.35	0.00	164	27097	200.00	OK
3	Phenanthrene-d10	7.59	0.00	188	55256	200.00	OK
4	Chrysene-d12	10.16	0.01	240	65042	200.00	OK
5	Perylene-d12	13.37	0.07	264	74641	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits	Rpt?
1	2-Methylnaphthalene-d10	5.42			152	56980	332.05		50-150 NA	
2	Fluorene-d10	6.79			176	67792	391.28		42-131 NA	
3	Fluoranthene-d10	8.58			212	133574	383.56		42-133 NA	
4	Terphenyl-d14	8.93			244	111651	395.76		58-132 NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.81			128	144398	406.90			
1	2-Methylnaphthalene	5.45			142	87488	408.81			
1	1-Methylnaphthalene	5.54			142	81921	397.69			
1	Biphenyl	5.86			154	110042	411.99			
1	2,6-Dimethylnaphthalene	6.00			156	77219	420.30			
2	Acenaphthylene	6.23			152	144654	447.40			
2	Acenaphthene	6.38			154	80709	434.56			
2	Dibenzofuran	6.53			168	134446	451.12			
2	2,3,5-Trimethylnaphthalene	6.70			170	75784	441.14			
2	Fluorene	6.81			166	97311	433.22			
3	Dibenzothiophene	7.51			184	158772	460.68			
3	Phenanthrene	7.61			178	146328	424.51			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110118\1101F002.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 10:01	**Quant Date:**	11/09/2018 08:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1507	**Dilution:**	1.0
Lab ID:	KWG1805861-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.66			178	128803	391.42			
3	Carbazole	7.79			167	130358	405.93			
3	1-Methylphenanthrene	8.12			192	113914	436.30			
3	Fluoranthene	8.59			202	174408	409.76			
4	Pyrene	8.79			202	185154	414.91			
4	Benz(a)anthracene	10.15			228	185866	441.99			
4	Chrysene	10.20			228	173681	431.18			
5	Benzo(b)fluoranthene	12.29			252	202513	439.15			
5	Benzo(k)fluoranthene	12.36			252	194817	425.86			
5	Benzo(e)pyrene	13.04			252	199042	452.82			
5	Benzo(a)pyrene	13.20			252	185060	457.60			
5	Perylene	13.46			252	183042	431.46			
5	Indeno(1,2,3-cd)pyrene	15.52			276	180286	454.62			
5	Dibenz(a,h)anthracene	15.56			278	167776	417.36			
5	Benzo(g,h,i)perylene	15.92			276	201618	434.15			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

1st 11/09/18
2nd 11/27/18

Quantitation Report

Data File:	J:\MS14\DATA\110118\1101F002.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 10:01	**Quant Date:**	11/09/2018 08:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805861-2			**Soln Conc. Units:**	ng/ml

Bottle ID:		**Tier:**		**Matrix:**	WATER
Prod Code:	8270D PAH SIM	**Collect Date:**		**Receive Date:**	11/09/2018

Analysis Lot:	KWG1805861	**Prep Lot:**		**Report Group:**	
Analysis Method:	8270D SIM	**Prep Method:**			
Prep Ref:		**Prep Date:**			

Quant Method:	J:\MS14\METHODS\SIM\071118PAH.M	**Calibration ID:**	CAL15779
Title:			
Tune Ref:	J:\MS14\DATA\110118\1101F001.D	**Method ID:**	MJ1638
MB Ref:		**Quant based on Method**	

Internal Standard Compounds

IS Ref	Parameter Name	RT	RT Dev	Quant Mass	Response	Solution Conc	Area Criteria
1	Naphthalene-d8	4.79	-0.01	136	61479	200.00	OK
2	Acenaphthene-d10	6.35	0.00	164	27097	200.00	OK
3	Phenanthrene-d10	7.59	0.00	188	55256	200.00	OK
4	Chrysene-d12	10.16	0.01	240	65042	200.00	OK
5	Perylene-d12	13.37	0.07	264	74641	200.00	OK

Surrogate Compounds

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	%Rec	%Rec Limits		Rpt?
2	Fluorene-d10	6.79			176	67792	391.28		42-131	NA	
3	Fluoranthene-d10	8.58			212	133574	383.56		42-133	NA	
4	Terphenyl-d14	8.93			244	111651	395.76		32-129	NA	

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
1	Naphthalene	4.81			128	144398	406.90			
1	2-Methylnaphthalene	5.45			142	87488	408.81			
1	1-Methylnaphthalene	5.54			142	81921	397.69			
1	Biphenyl	5.86			154	110042	411.99			
1	2,6-Dimethylnaphthalene	6.00			156	77219	420.30			
2	Acenaphthylene	6.23			152	144654	447.40			
2	Acenaphthene	6.38			154	80709	434.56			
2	Dibenzofuran	6.53			168	134446	451.12			
2	2,3,5-Trimethylnaphthalene	6.70			170	75784	441.14			
2	Fluorene	6.81			166	97311	433.22			
3	Dibenzothiophene	7.51			184	158772	460.68			
3	Phenanthrene	7.61			178	146328	424.51			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Data File:	J:\MS14\DATA\110118\1101F002.D			**Instrument:**	MS14
Acqu Date:	11/01/2018 10:01	**Quant Date:**	11/09/2018 08:55	**Vial:**	2
Run Type:	CCV	**MethodJoinID:**	MJ1638	**Dilution:**	1.0
Lab ID:	KWG1805861-2			**Soln Conc. Units:**	ng/ml

Target Compounds

Final Conc. Units: ug/L

IS Ref	Parameter Name	RT	RT Dev	RRT Dev	Quant Mass	Response	Solution Conc	Final Conc	Q	Rpt?
3	Anthracene	7.66			178	128803	391.42			
3	Carbazole	7.79			167	130358	405.93			
3	1-Methylphenanthrene	8.12			192	113914	436.30			
3	Fluoranthene	8.59			202	174408	409.76			
4	Pyrene	8.79			202	185154	414.91			
4	Benz(a)anthracene	10.15			228	185866	441.99			
4	Chrysene	10.20			228	173681	431.18			
5	Benzo(b)fluoranthene	12.29			252	202513	439.15			
5	Benzo(k)fluoranthene	12.36			252	194817	425.86			
5	Benzo(e)pyrene	13.04			252	199042	452.82			
5	Benzo(a)pyrene	13.20			252	185060	457.60			
5	Perylene	13.46			252	183042	431.46			
5	Indeno(1,2,3-cd)pyrene	15.52			276	180286	454.62			
5	Dibenz(a,h)anthracene	15.56			278	167776	417.36			
5	Benzo(g,h,i)perylene	15.92			276	201618	434.15			

U: Undetected at or above MDL
J: Analyte detected above MDL, but below MRL
B: Hit above MRL also found in Method Blank
E: Analyte concentration above high point of ICAL
N: Presumptive evidence of compound

D: Result from dilution
m: Manual integration performed
d: Compound manually deleted
NR: Analyte not reported from this analysis

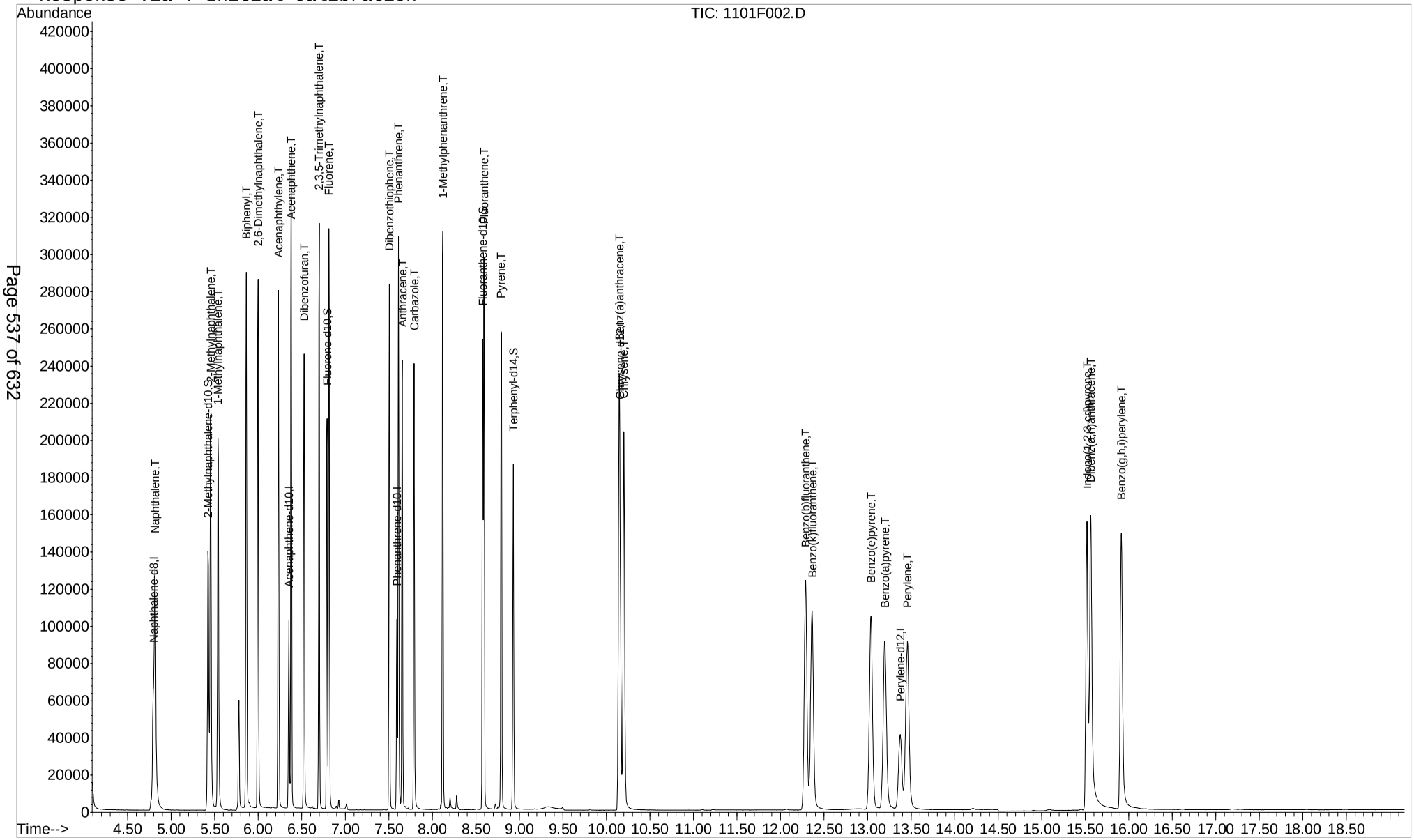
*: Result fails acceptance criteria
#: Acceptance criteria not applicable
?: Insufficient information to determine acceptance
e: Result >= MRL, but MRL less than low point of ICAL
c: check for co-elution

Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F002.D Vial: 2
Acq On : 1 Nov 2018 10:01 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 9 8:55 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 08:55:24 2018
Response via : Initial Calibration



Page 537 of 632

Quantitation Report (QT Reviewed)

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F002.D Vial: 2
Acq On : 1 Nov 2018 10:01 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Nov 09 08:55:09 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 06:22:49 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.79	136	61479	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	27097	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	55256	200.00	ng/ml	0.00
23) Chrysene-d12	10.16	240	65042	200.00	ng/ml	0.00
28) Perylene-d12	13.37	264	74641	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.42	152	56980	332.05	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	33.20%		
13) Fluorene-d10	6.79	176	67792	391.28	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	39.13%		
22) Fluoranthene-d10	8.58	212	133574	383.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	38.36%		
25) Terphenyl-d14	8.93	244	111651	395.76	ng/ml	0.00
Spiked Amount 1000.000			Recovery =	39.58%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	144398	406.90	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	87488	408.81	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	81921	397.69	ng/ml	93
6) Biphenyl	5.86	154	110042	411.99	ng/ml	100
7) 2,6-Dimethylnaphthalene	6.00	156	77219	420.30	ng/ml	97
9) Acenaphthylene	6.23	152	144654	447.40	ng/ml	100
10) Acenaphthene	6.38	154	80709	434.56	ng/ml	98
11) Dibenzofuran	6.53	168	134446	451.12	ng/ml	84
12) 2,3,5-Trimethylnaphthalene	6.70	170	75784	441.14	ng/ml	94
14) Fluorene	6.81	166	97311	433.22	ng/ml	98
16) Dibenzothiophene	7.51	184	158772	460.68	ng/ml	94
17) Phenanthrene	7.61	178	146328	424.51	ng/ml	100
18) Anthracene	7.66	178	128803	391.42	ng/ml	100
19) Carbazole	7.79	167	130358	405.93	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	113914	436.30	ng/ml	99
21) Fluoranthene	8.59	202	174408	409.76	ng/ml	95
24) Pyrene	8.79	202	185154	414.91	ng/ml	96
26) Benz(a)anthracene	10.15	228	185866	441.99	ng/ml	99
27) Chrysene	10.20	228	173681	431.18	ng/ml	100
29) Benzo(b)fluoranthene	12.29	252	202513	439.15	ng/ml	99
30) Benzo(k)fluoranthene	12.36	252	194817	425.86	ng/ml	98
31) Benzo(e)pyrene	13.04	252	199042	452.82	ng/ml	98
32) Benzo(a)pyrene	13.20	252	185060	457.60	ng/ml	98
33) Perylene	13.46	252	183042	431.46	ng/ml	99
34) Indeno(1,2,3-cd)pyrene	15.52	276	180286	454.62	ng/ml	97
35) Dibenz(a,h)anthracene	15.56	278	167776	417.36	ng/ml	98
36) Benzo(g,h,i)perylene	15.92	276	201618	434.15	ng/ml	96

(#) = qualifier out of range (m) = manual integration

Evaluate Continuing Calibration Report

1st 11/09/18
2nd 11/27/18

Data File : J:\MS14\DATA\110118\1101F002.D Vial: 2
Acq On : 1 Nov 2018 10:01 am Operator: LWeiskopf
Sample : SIM-PAH CCV @0.4ug/mL | SVM59-81A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Fri Nov 09 06:22:49 2018
Response via : Multiple Level Calibration

Min. RRF : 0.050 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	AvgRF	CCRF	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8	1.000	1.000	0.0	101	0.00
2	T	Naphthalene	1.154	1.174	-1.7	109	0.00
3	S	2-Methylnaphthalene-d10	0.558	0.463	17.0	88	0.00
4	T	2-Methylnaphthalene	0.696	0.712	-2.3	109	0.00
5	T	1-Methylnaphthalene	0.670	0.666	0.6	108	0.00
6	T	Biphenyl	0.869	0.895	-3.0	112	0.00
7	T	2,6-Dimethylnaphthalene	0.598	0.628	-5.0	112	0.00
8	I	Acenaphthene-d10	1.000	1.000	0.0	104	0.00
9	T	Acenaphthylene	2.386	2.669	-11.9	115	0.00
10	T	Acenaphthene	1.371	1.489	-8.6	113	0.00
11	T	Dibenzofuran	2.200	2.481	-12.8	115	0.00
12	T	2,3,5-Trimethylnaphthalene	1.268	1.398	-10.3	114	0.00
13	S	Fluorene-d10	1.279	1.251	2.2	104	0.00
14	T	Fluorene	1.658	1.796	-8.3	112	0.00
15	I	Phenanthrene-d10	1.000	1.000	0.0	102	0.00
16	T	Dibenzothiophene	1.247	1.437	-15.2	116	0.00
17	T	Phenanthrene	1.248	1.324	-6.1	111	0.00
18	T	Anthracene	1.191	1.166	2.1	98	0.00
19	T	Carbazole	1.162	1.180	-1.5	101	0.00
20	T	1-Methylphenanthrene	0.945	1.031	-9.1	110	0.00
21	T	Fluoranthene	1.541	1.578	-2.4	102	0.00
22	S	Fluoranthene-d10	1.260	1.209	4.0	95	0.00
23	I	Chrysene-d12	1.000	1.000	0.0	94	0.00
24	T	Pyrene	1.372	1.423	-3.7	102	0.00
25	S	Terphenyl-d14	0.867	0.858	1.0	97	0.00
26	T	Benz(a)anthracene	1.293	1.429	-10.5	106	0.00
27	T	Chrysene	1.239	1.335	-7.7	100	0.00
28	I	Perylene-d12	1.000	1.000	0.0	101	0.00
29	T	Benzo(b)fluoranthene	1.236	1.357	-9.8	106	0.00
30	T	Benzo(k)fluoranthene	1.226	1.305	-6.4	103	0.00
31	T	Benzo(e)pyrene	1.178	1.333	-13.2	112	0.00
32	T	Benzo(a)pyrene	1.084	1.240	-14.4	113	0.00
33	T	Perylene	1.137	1.226	-7.8	107	0.00
34	T	Indeno(1,2,3-cd)pyrene	1.063	1.208	-13.6	116	0.00
35	T	Dibenz(a,h)anthracene	1.077	1.124	-4.4	107	0.00
36	T	Benzo(g,h,i)perylene	1.244	1.351	-8.6	113	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Injection Log

Directory: J:\MS14\DATA\071118

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0711F001.D	1.	DFTPP @ 10ug/mL | SVM59-5B		11 Jul 2018 07:24
2	2	0711F002.D	1.	IB		11 Jul 2018 07:50
3	3	0711F003.D	1.	SIM-PAH ICAL @.002ug/mL | SVM59-4A		11 Jul 2018 08:16
4	4	0711F004.D	1.	SIM-PAH ICAL @.004ug/mL | SVM59-4B		11 Jul 2018 08:42
5	5	0711F005.D	1.	SIM-PAH ICAL @.008ug/mL | SVM59-4C		11 Jul 2018 09:08
6	6	0711F006.D	1.	SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D		11 Jul 2018 09:34
7	7	0711F007.D	1.	SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E		11 Jul 2018 10:00
8	8	0711F008.D	1.	SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F		11 Jul 2018 10:26
9	9	0711F009.D	1.	SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G		11 Jul 2018 10:52
10	10	0711F010.D	1.	SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H		11 Jul 2018 11:18
11	11	0711F011.D	1.	SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I		11 Jul 2018 11:44
12	12	0711F012.D	1.	SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J		11 Jul 2018 12:10
13	13	0711F013.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM59-4K		11 Jul 2018 12:36
~~14~~	~~14~~	~~0711F014.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 13:02~~
~~15~~	~~15~~	~~0711F015.D~~	~~1.~~	~~KQ1808822-3 MB~~		~~11 Jul 2018 13:28~~
~~16~~	~~16~~	~~0711F016.D~~	~~1.~~	~~KQ1808822-1 LCS~~		~~11 Jul 2018 13:55~~
~~17~~	~~17~~	~~0711F017.D~~	~~1.~~	~~KQ1808822-2 DLCS~~		~~11 Jul 2018 14:21~~
~~18~~	~~18~~	~~0711F018.D~~	~~1.~~	~~K1806167-007~~		~~11 Jul 2018 14:47~~
~~19~~	~~19~~	~~0711F019.D~~	~~1.~~	~~K1806167-008~~		~~11 Jul 2018 15:14~~
~~20~~	~~20~~	~~0711F020.D~~	~~1.~~	~~K1805517-004~~		~~11 Jul 2018 15:40~~
~~21~~	~~21~~	~~0711F021.D~~	~~1.~~	~~K1805519-006~~		~~11 Jul 2018 16:07~~
~~22~~	~~14~~	~~0711F022.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 16:34~~

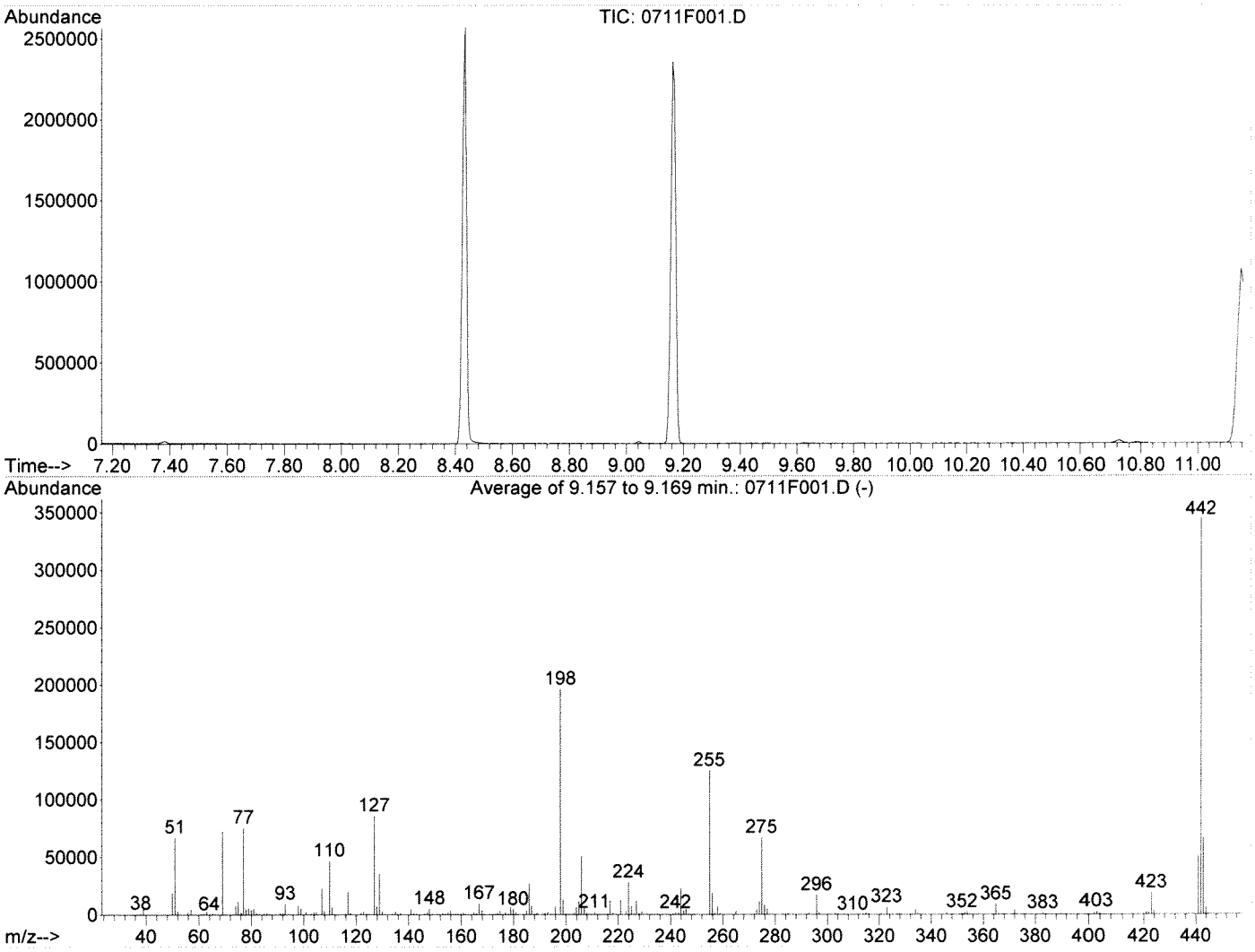
SIM-PAH ICAL
CAL15779

JUL 16 2018

JUL 27 2018

DFTPP

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 522, 523, 524; Background Corrected with Scan 516

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.2	67178	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.1	72816	PASS
70	69	0.00	2	0.8	565	PASS
127	198	10	80	43.8	86077	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.9	196352	PASS
199	198	5	9	6.5	12793	PASS
275	198	10	60	34.1	67032	PASS
365	442	1	50	2.6	8831	PASS
441	443	0.01	100	76.0	51069	PASS
442	442	30	100	100.0	344981	PASS
443	442	15	24	19.5	67152	PASS

JUL 16 2018

JUL 27 2018

J:\MS14\DATA\071118\0711F001.D A_DFTPP.M Mon Jul 16 09:16:46 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	422	52.00	3270	66.10	60	77.00	75757
38.00	1061	52.95	252	66.90	133	78.00	5265
39.00	5050	54.95	367	67.20	111	78.95	6051
39.90	450	55.95	2219	68.95	72816	79.95	4460
41.00	145	57.00	4515	69.85	565	81.00	5387
42.95	189	57.90	205	70.90	56	81.95	1583
44.00	59	60.95	997	73.05	769	82.95	1369
44.90	126	61.95	1079	74.00	8076	83.90	282
48.10	73	63.00	2719	75.00	11602	84.95	1177
50.00	19013	63.95	413	76.00	1399	85.95	1822
51.00	67178	65.00	1325	76.20	1668	86.95	803

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	285	99.95	506	112.85	198	124.90	1126
88.90	130	100.90	2768	114.80	159	126.95	86077
90.95	1445	101.90	87	116.05	1356	127.95	7121
92.00	1657	102.90	1279	116.90	20493	128.90	35413
92.95	9598	103.95	2203	117.85	1421	129.95	2909
93.90	764	104.90	2137	118.85	202	130.90	596
94.90	260	106.95	23325	120.00	347	131.85	286
95.95	399	107.95	3588	121.05	223	132.90	113
97.00	184	109.90	46866	121.90	1845	133.85	1020
97.95	7812	110.95	6574	122.90	2792	134.90	2878
98.90	5707	111.90	845	123.95	974	135.85	1123

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.95	1387	146.95	2258	157.90	1033	168.90	418
137.90	180	147.90	5200	158.85	675	169.10	172
138.10	80	148.95	1069	159.90	1384	169.85	345
138.95	357	149.90	242	160.90	2084	170.40	79
139.95	518	150.95	648	161.85	666	170.90	499
140.90	4757	151.75	466	162.95	226	171.80	868
141.90	1547	152.90	1588	163.95	352	172.95	967
142.90	919	153.90	1093	164.85	2040	173.90	1870
143.90	287	154.95	2265	165.85	1502	174.90	3597
144.85	308	155.95	3794	166.90	9686	176.00	1075
145.95	1008	156.95	752	167.90	4018	176.90	1875

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	723	186.90	8039	198.90	12793	210.30	330
178.90	6732	187.95	833	199.90	953	210.90	2074
179.90	4619	188.90	1815	201.35	1105	211.80	146
180.90	2110	189.85	379	202.90	1391	212.90	61
181.95	406	190.95	863	203.95	6760	214.10	53
182.70	66	191.90	2255	204.95	11699	214.95	698
182.95	174	192.95	2443	205.95	51016	215.85	1357
183.80	140	193.90	500	206.95	6909	216.90	12207
183.95	404	194.90	286	207.90	1813	217.85	1663
184.95	3360	195.90	6967	208.90	543	218.90	142
185.90	27480	197.90	196352	209.90	294	220.90	12633

JUL 16 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.90	3179	233.85	760	244.95	3370	255.90	18613
223.90	28144	234.90	857	245.90	4758	256.95	1466
224.95	7360	235.90	530	246.90	1019	257.90	7031
225.95	994	236.90	879	247.80	162	258.95	1297
226.90	12054	237.80	67	248.10	77	259.80	131
227.85	1634	238.85	481	248.85	832	260.95	199

JUL 27 2018

229.95	377	240.85	634	250.90	178	264.90	3018
230.90	992	241.90	1624	251.85	276	265.85	450
231.90	200	243.00	1778	252.95	599	269.95	129
232.90	244	243.90	23113	254.90	125421	270.90	256

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.95	496	284.85	977	301.85	234	316.95	160
272.90	4336	285.95	143	302.95	2145	320.95	658
273.90	11367	288.75	165	303.95	691	321.95	381
274.90	67032	289.80	209	307.85	308	322.95	6548
275.90	8655	291.85	178	308.80	217	323.95	1035
276.90	5306	292.90	1246	309.85	251	324.80	52
277.90	771	293.95	326	310.90	52	325.85	184
278.85	205	295.90	17068	312.95	171	326.90	968
281.95	112	296.90	2301	313.90	944	327.80	661
282.90	631	297.80	68	314.90	2064	331.85	496
283.90	432	300.90	235	315.90	1065	332.85	680

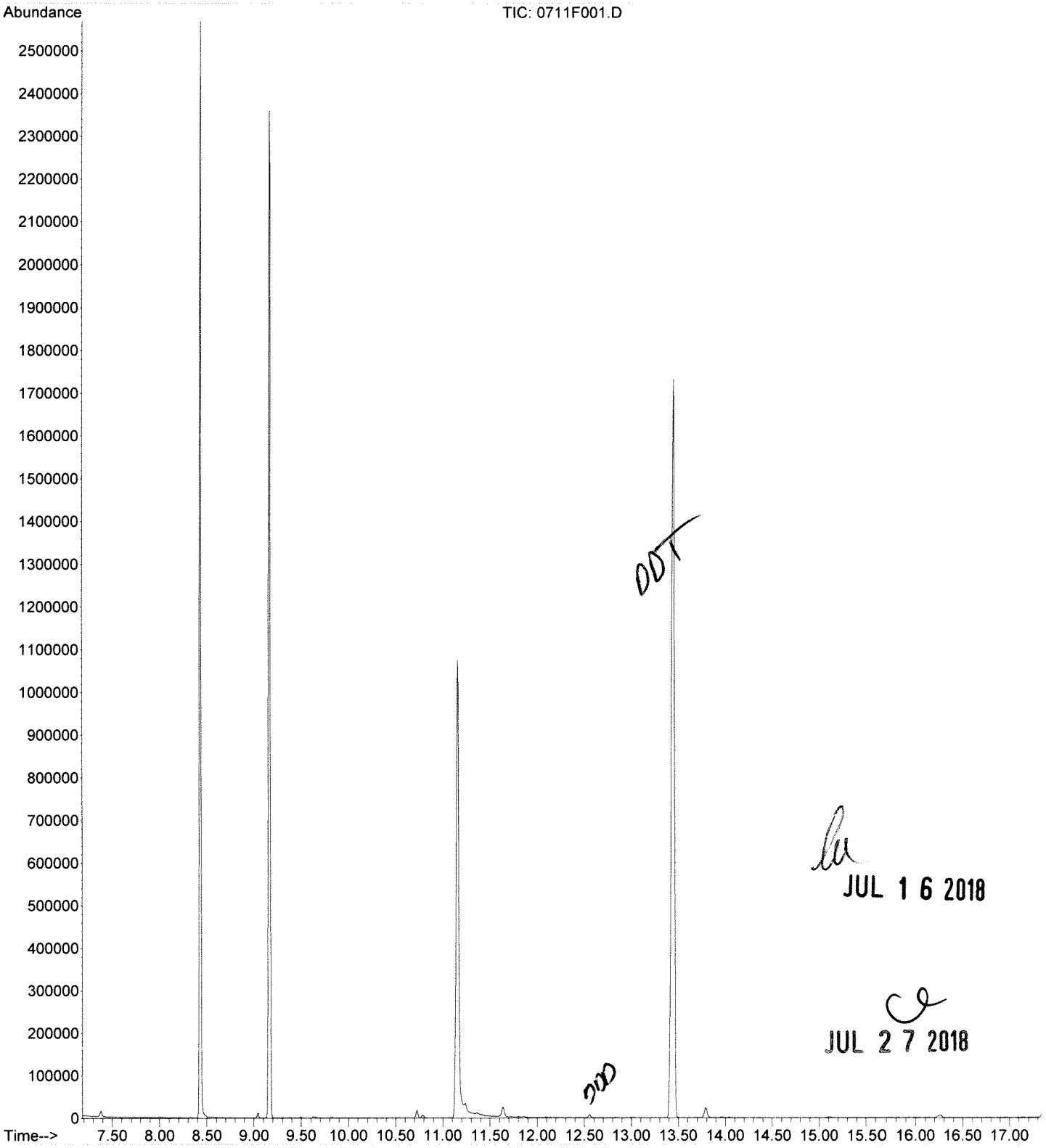
Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	4464	353.90	2529	382.95	1153	420.95	2473
334.90	1166	354.90	486	383.85	376	421.95	2435
339.80	51	358.85	126	389.95	690	422.95	18744
340.85	729	364.90	8831	390.95	465	423.90	3777
341.80	50	365.90	1261	391.90	350	424.95	479
342.00	143	369.95	218	400.90	274	439.40	77
345.90	1535	370.85	633	401.90	1735	441.00	51069
346.75	180	371.95	3936	402.90	2497	442.00	344981
350.75	114	372.90	1005	403.90	1060	443.00	67152
351.90	2058	373.85	127	404.80	57	443.95	6376
352.90	1618	376.90	51	415.00	64	444.90	445

JUL 16 2018

JUL 27 2018

File : J:\MS14\DATA\071118\0711F001.D
Operator : LWeiskopf
Acquired : 11 Jul 2018 7:24 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-5B
Misc Info :
Vial Number: 1



1	6.551	rBV	0.059		4433	6.534	6.593
2	6.628	rVB	0.059		4930	6.610	6.669
3	7.069	rBV	0.153		93262	7.022	7.175
4	7.381	rVB	0.094		22489	7.357	7.451
5	7.781	rVB	0.053		2074	7.769	7.822
6	7.904	rVB	0.047		3184	7.887	7.934
7	7.998	rVV	0.035		2540	7.981	8.016
8	8.434	rBV	0.124		2626380	8.398	8.522
9	8.751	rBV	0.041		2434	8.728	8.769
10	9.045	rVB	0.094		15370	8.992	9.086
11	9.163	rBV	0.118		2833533	9.104	9.222
12	9.310	rBV	0.053		2540	9.286	9.339
13	9.381	rVB	0.047		2669	9.363	9.410
14	9.498	rVB	0.047		3470	9.475	9.522
15	9.628	rBV	0.082		7018	9.598	9.681
16	9.822	rBV	0.076		4234	9.781	9.857
17	10.728	rBV	0.071		25758	10.686	10.757
18	10.786	rBV	0.059		9354	10.757	10.816
19	11.157	rBV	0.141		2070977	11.080	11.222
20	11.639	rVB	0.094		47781	11.592	11.686
21	11.851	rVB	0.071		6566	11.833	11.904
22	12.092	rBV	0.076		4460	12.051	12.127
23	12.551	rVB	0.082	ODD	12363	12.510	12.592
24	12.827	rVB	0.082		3949	12.804	12.886
25	12.998	rBV	0.047		2358	12.969	13.016
26	13.445	rBV	0.118	OOT	3799669	13.374	13.492
27	13.786	rBV	0.129		55536	13.727	13.857
28	13.963	rBV	0.071		3973	13.916	13.986
29	14.033	rBV	0.041		2081	14.021	14.063
30	15.086	rBV	0.065		3243	15.033	15.098
31	15.110	rVB	0.047		3085	15.098	15.145
32	16.257	rBV	0.106		18961	16.192	16.298
33	17.351	rBV	0.124		41324	17.298	17.421
34	17.821	rBV	0.035		2171	17.798	17.833
35	17.868	rBV	0.047		3073	17.833	17.880
36	18.098	rBV	0.159		129861	18.039	18.198
37	18.645	rVB	0.141		212579	18.615	18.756
38	19.092	rBV	0.165		383897	19.056	19.221
39	19.545	rBV	0.153		391093	19.509	19.662
40	20.103	rBV	0.153		441132	20.062	20.215
41	20.692	rBV	0.118		334151	20.650	20.768

OOT Breakdown

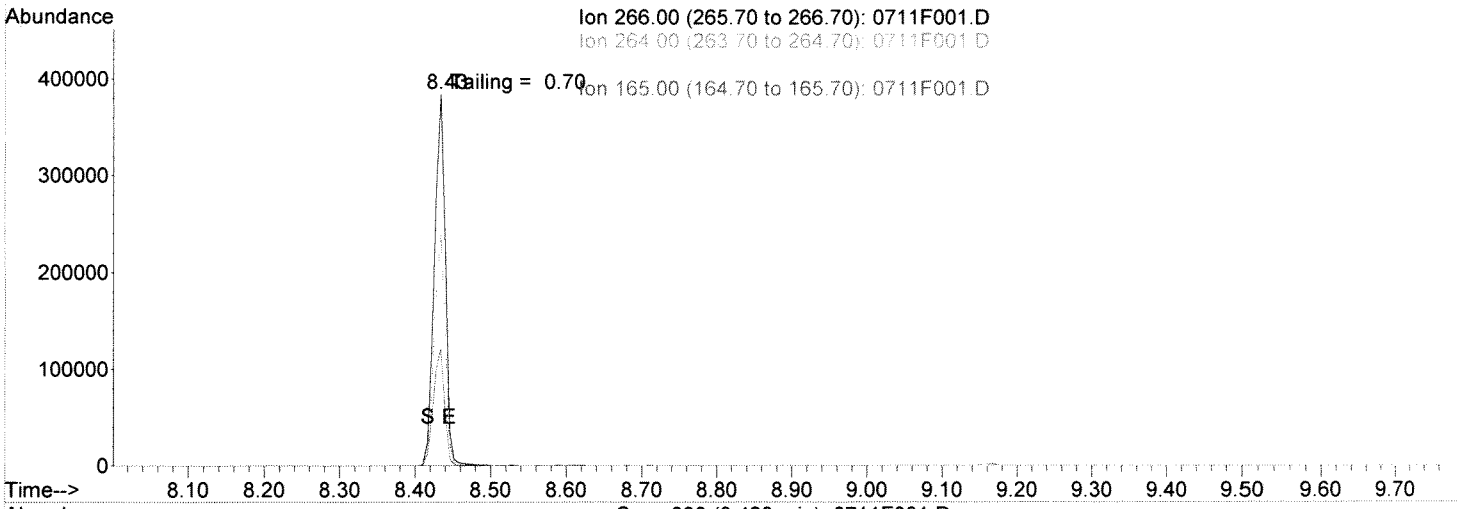
= 0.3%

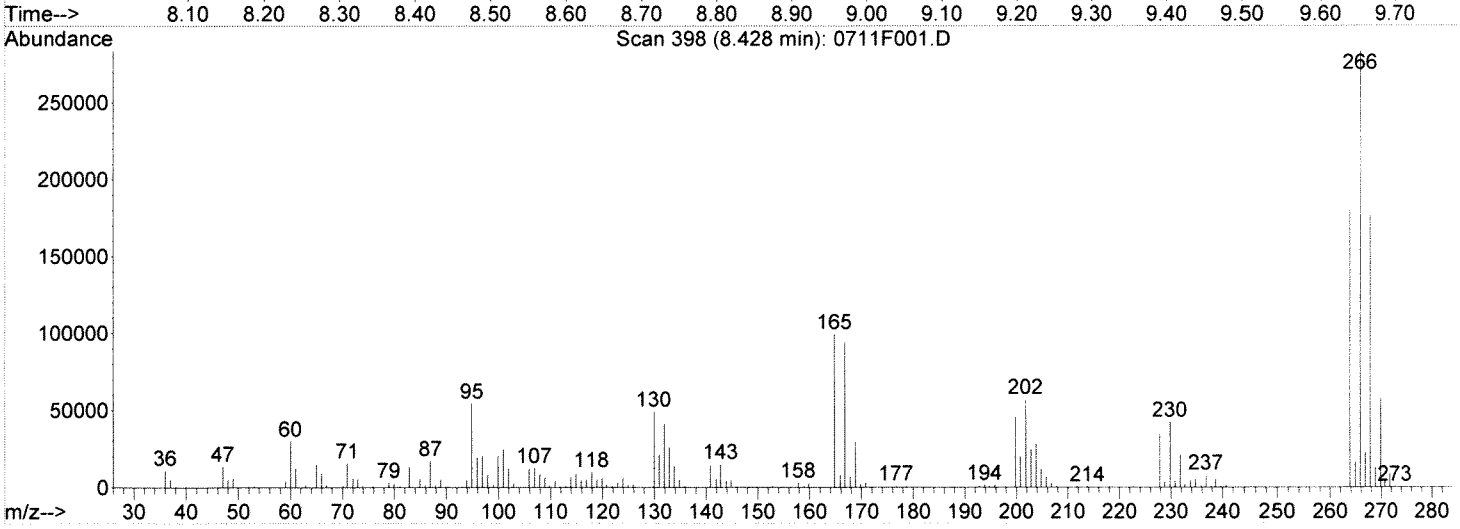
JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(1) Pentachlorophenol

7.37min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	62.30	0.00#
268.00	72.30	0.00#
165.00	42.00	0.00#

OK -2%

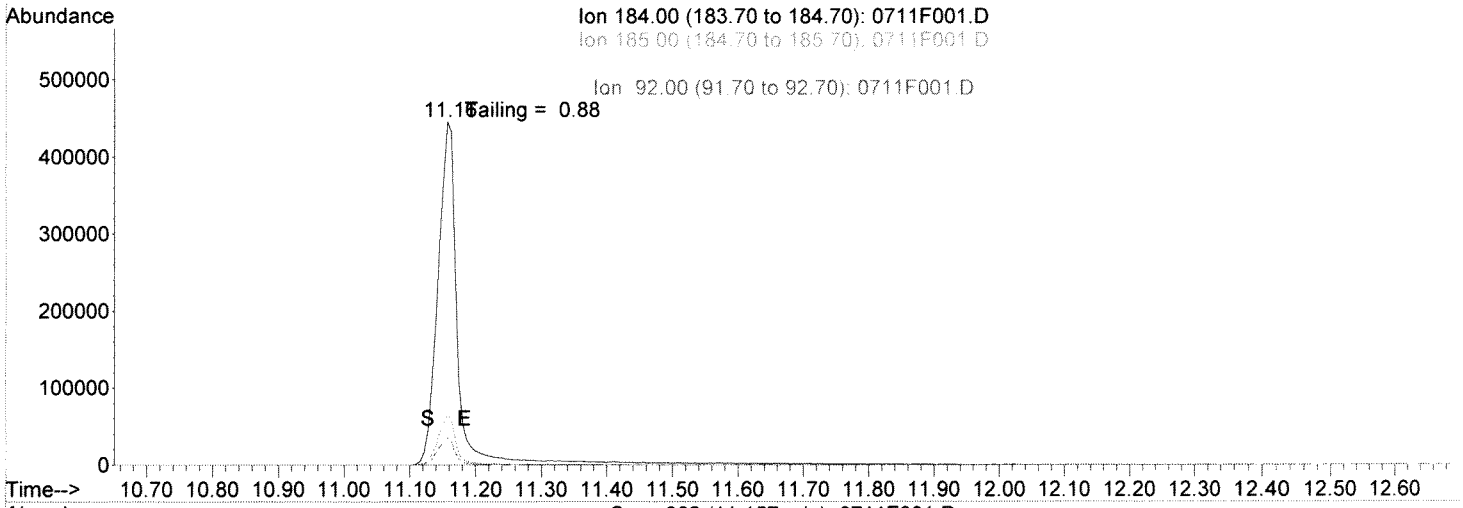
JUL 16 2018

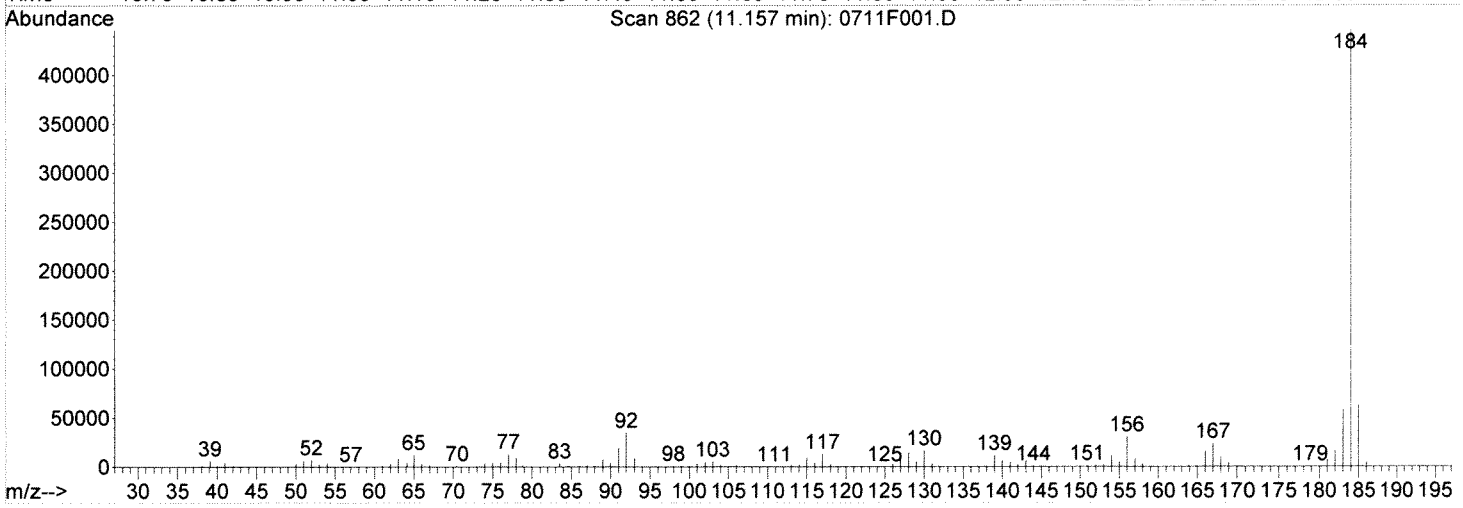
JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:15 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(3) Benzidine (T)

8.69min 0.00ug/ml

response 0

Ion	Exp%	Act%
184.00	100	0.00
185.00	14.70	0.00
156.00	9.50	0.00
92.00	7.60	0.00

JUL 16 2018

JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:28 2018

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	71486	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	36864	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	76395	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	90682	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	102113	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	0.00	152	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
13) Fluorene-d10	6.79	176	201	0.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.08%		
22) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
25) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Naphthalene	4.83	128	323	0.82	ng/ml	94
21) Fluoranthene	8.59	202	116	0.20	ng/ml	70
26) Benz(a)anthracene	10.15	228	342	0.60	ng/ml	73
27) Chrysene	10.19	228	118	0.21	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	156	0.24	ng/ml	81
31) Benzo(e)pyrene	12.97	252	134	0.22	ng/ml	85
32) Benzo(a)pyrene	13.11	252	126	0.24	ng/ml	75
33) Perylene	13.30	252	287	0.51	ng/ml	85
34) Indeno(1,2,3-cd)pyrene	15.46	276	117	0.25	ng/ml	89
35) Dibenz(a,h)anthracene	15.51	278	95	0.19	ng/ml#	1
36) Benzo(g,h,i)perylene	15.84	276	178	0.30	ng/ml	89

< 1/2 MRL

7/16/18

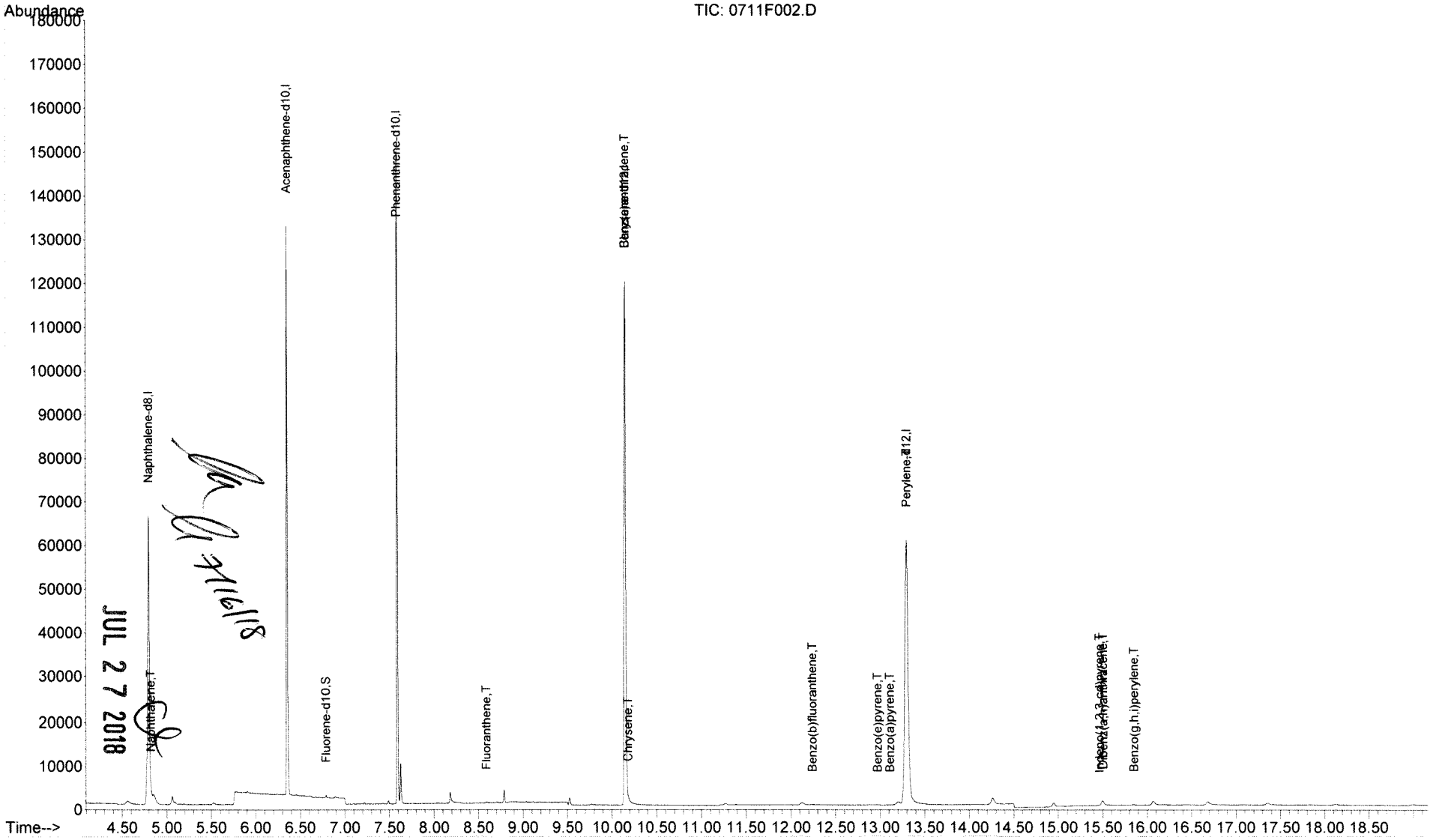
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F002.D 071118PAH.M Mon Jul 16 09:16:23 2018 Page 1

Quantitation Report (QT Reviewed)

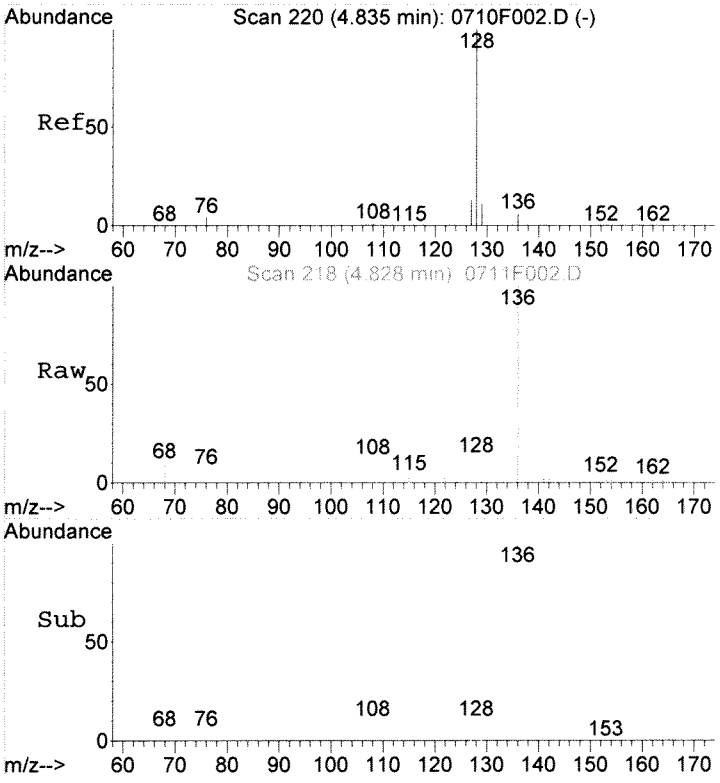
Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



JUL 27 2018

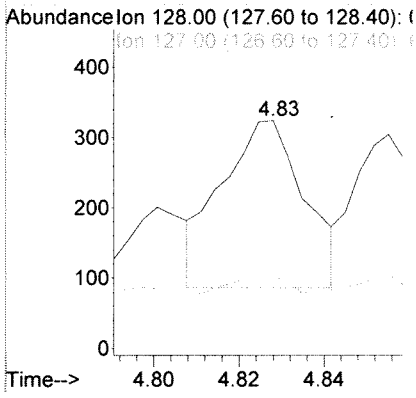
8/16/18

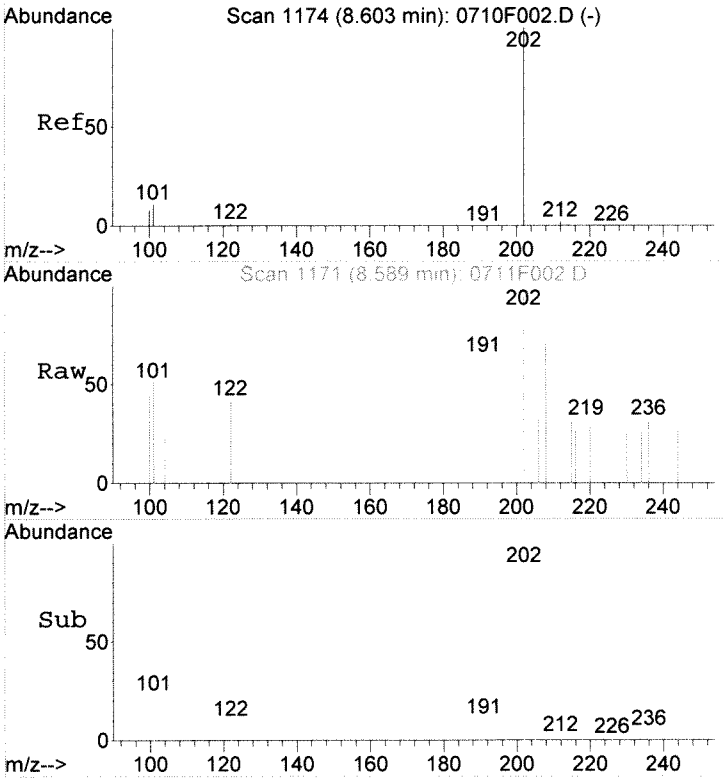


#2
Naphthalene
Concen: 0.82 ng/ml
RT: 4.83 min Scan# 218
Delta R.T. -0.01 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:128 Resp: 323

Ion	Ratio	Lower	Upper
128	100		
127	11.9	0.0	42.4
129	15.2	0.0	30.8

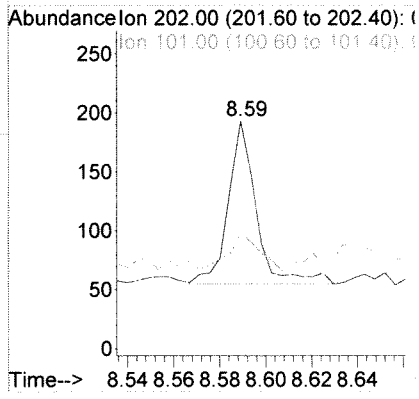




#21
Fluoranthene
Concen: 0.20 ng/ml
RT: 8.59 min Scan# 1171
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

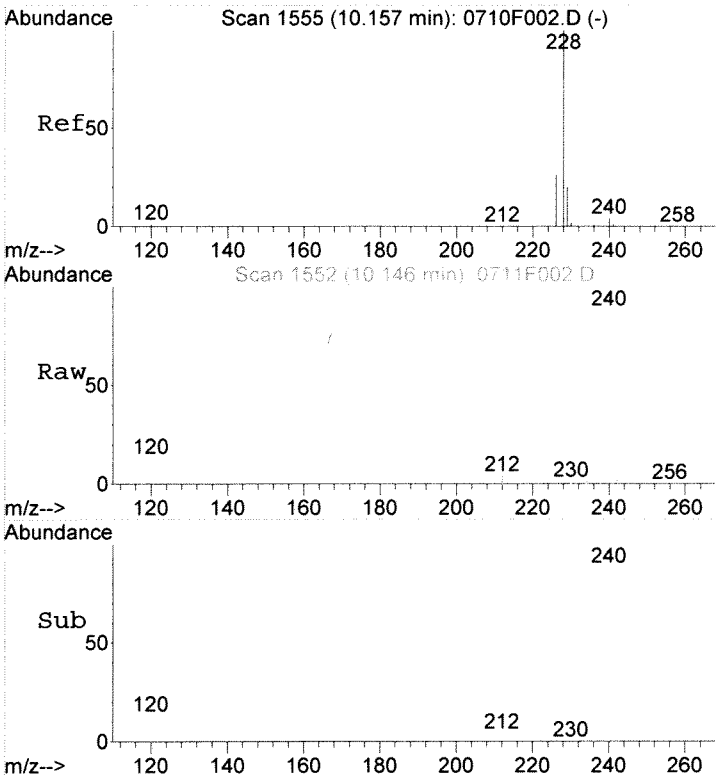
Tgt Ion:202 Resp: 116

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	40.7
100	23.9	0.0	27.5



7/16/18

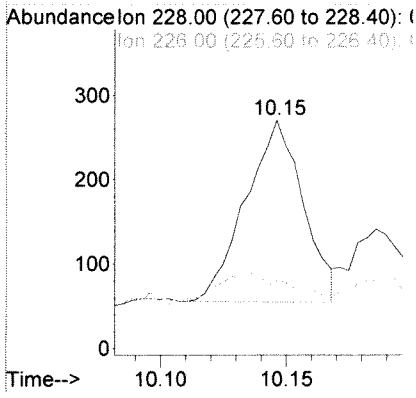
JUL 27 2018

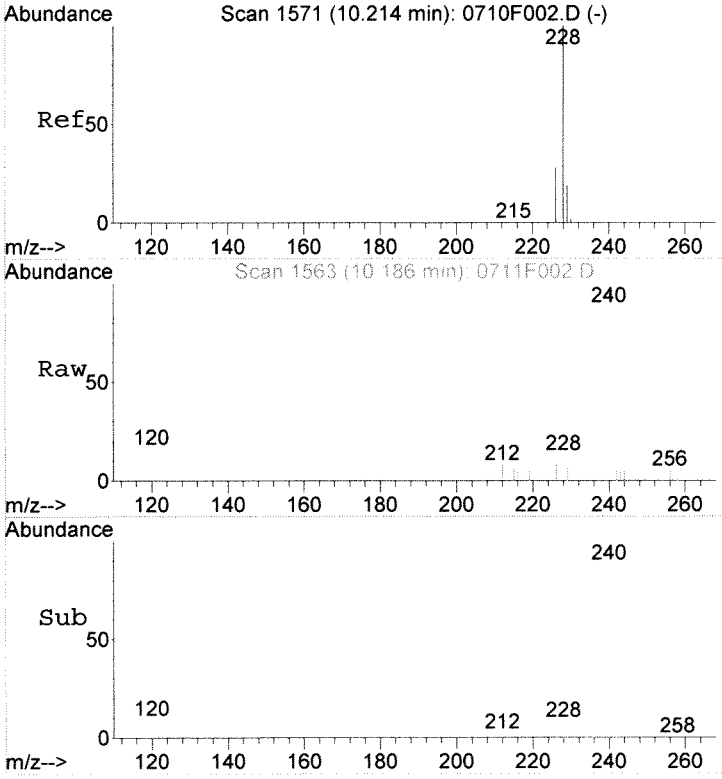


#26
Benz(a)anthracene
Concen: 0.60 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:228 Resp: 342

Ion	Ratio	Lower	Upper
228	100		
226	9.8	0.0	56.0
229	28.8	0.0	39.5

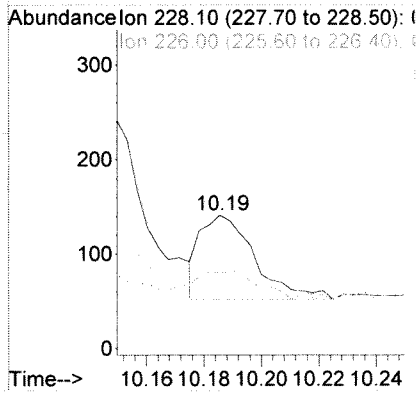




#27
Chrysene
Concen: 0.21 ng/ml
RT: 10.19 min Scan# 1563
Delta R.T. -0.03 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

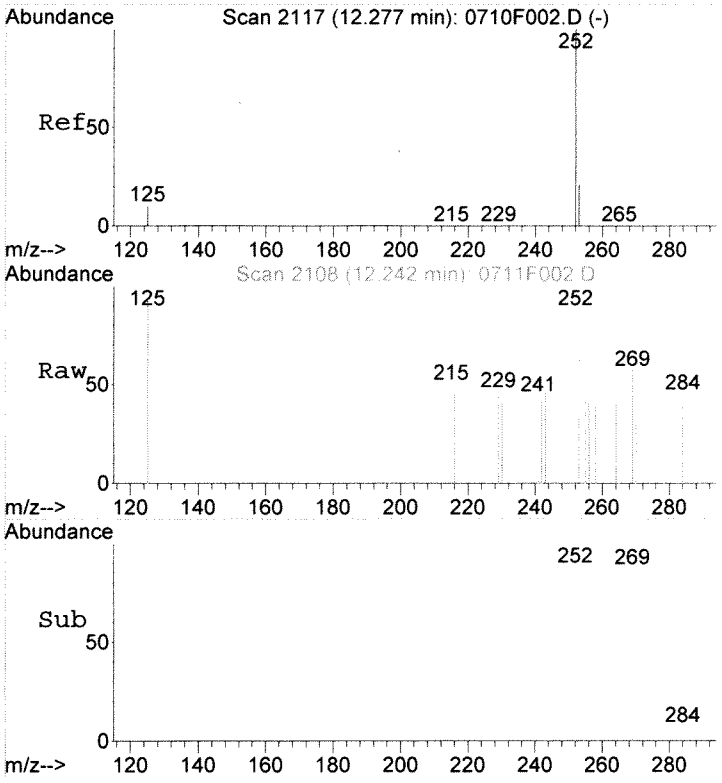
Tgt Ion:228 Resp: 118

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.6
229	18.0	0.0	39.4



7/16/18

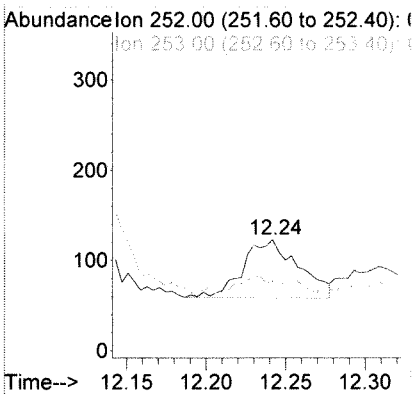
JUL 27 2018

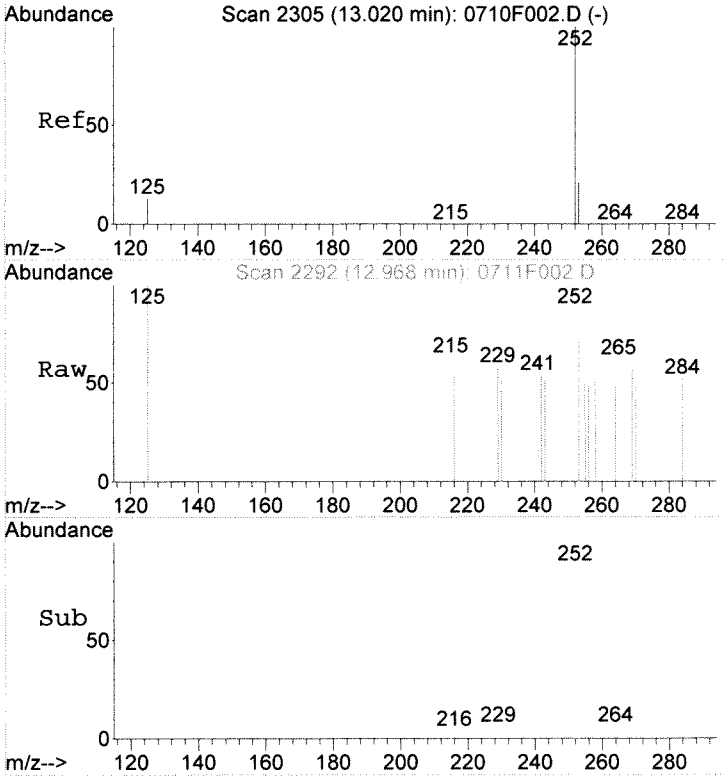


#29
Benzo(b)fluoranthene
Concen: 0.24 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 156

Ion	Ratio	Lower	Upper
252	100		
253	10.9	0.0	51.4
125	10.9	0.0	27.3

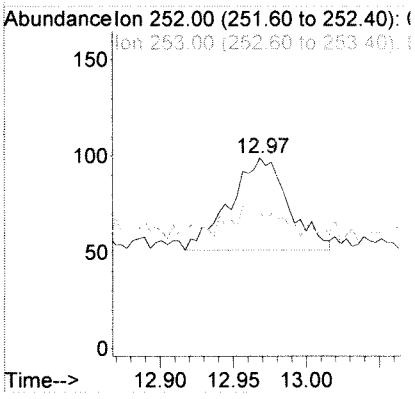




#31
Benzo(e)pyrene
Concen: 0.22 ng/ml
RT: 12.97 min Scan# 2292
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

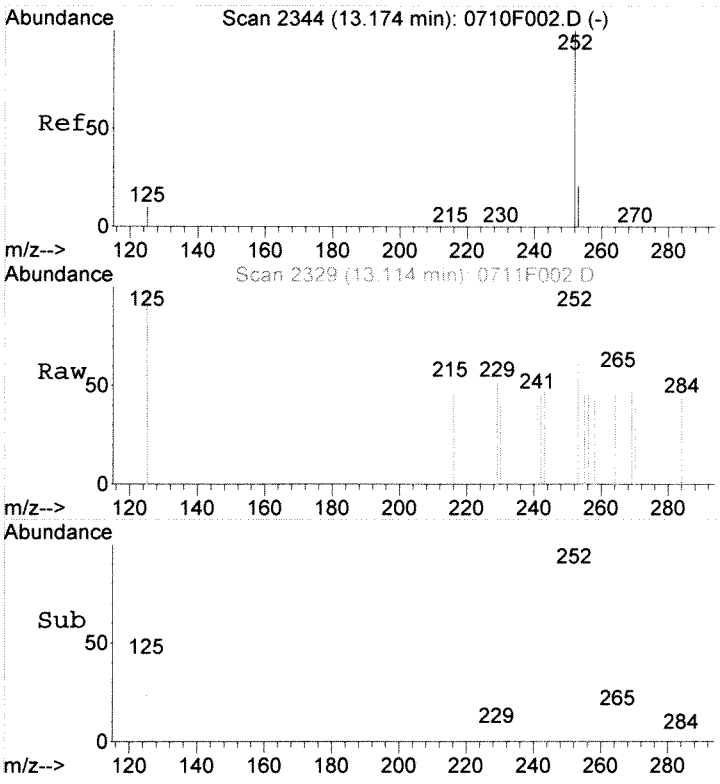
Tgt Ion:252 Resp: 134

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	51.3
125	0.0	0.0	30.8



7/16/18

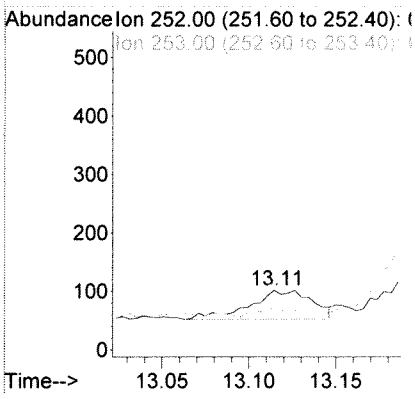
JUL 27 2018

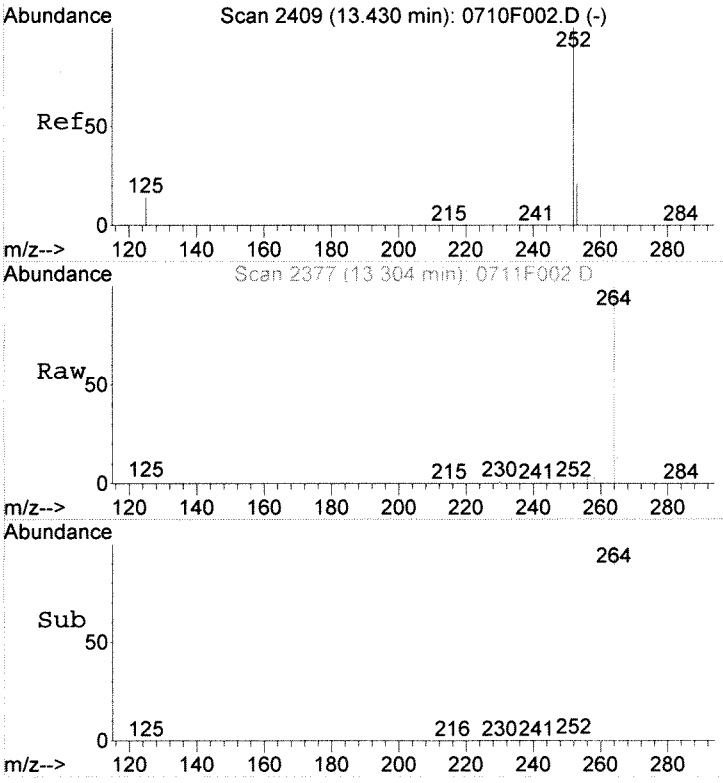


#32
Benzo(a)pyrene
Concen: 0.24 ng/ml
RT: 13.11 min Scan# 2329
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 126

Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	51.3
125	26.0	0.0	28.1

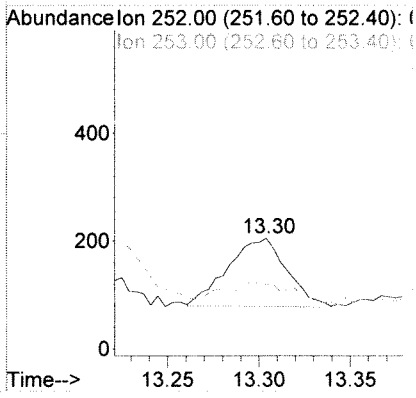




#33
Perylene
Concen: 0.51 ng/ml
RT: 13.30 min Scan# 2377
Delta R.T. -0.13 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

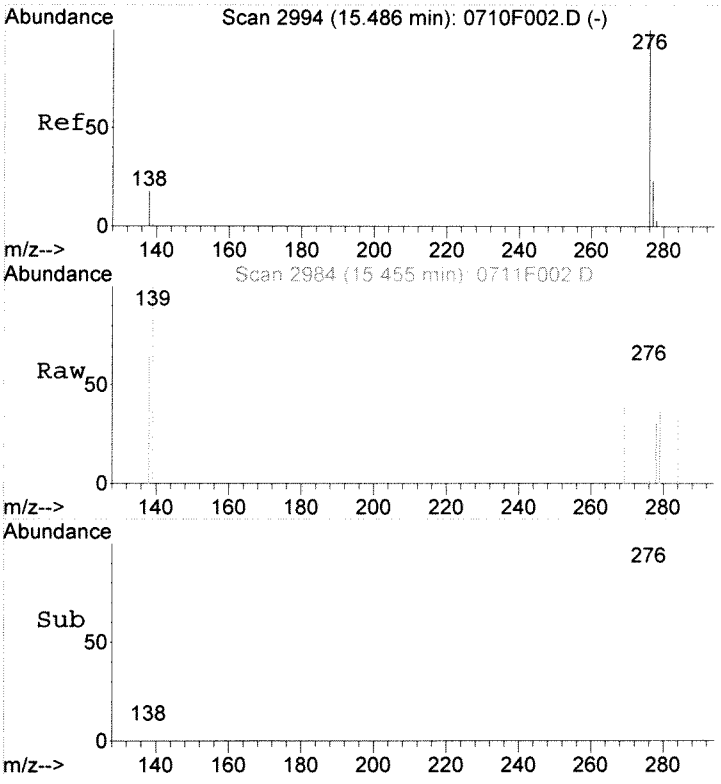
Tgt Ion:252 Resp: 287

Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.4
125	22.2	0.0	31.3



7/16/18

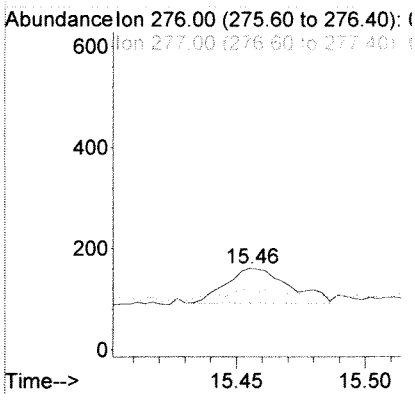
JUL 27 2018

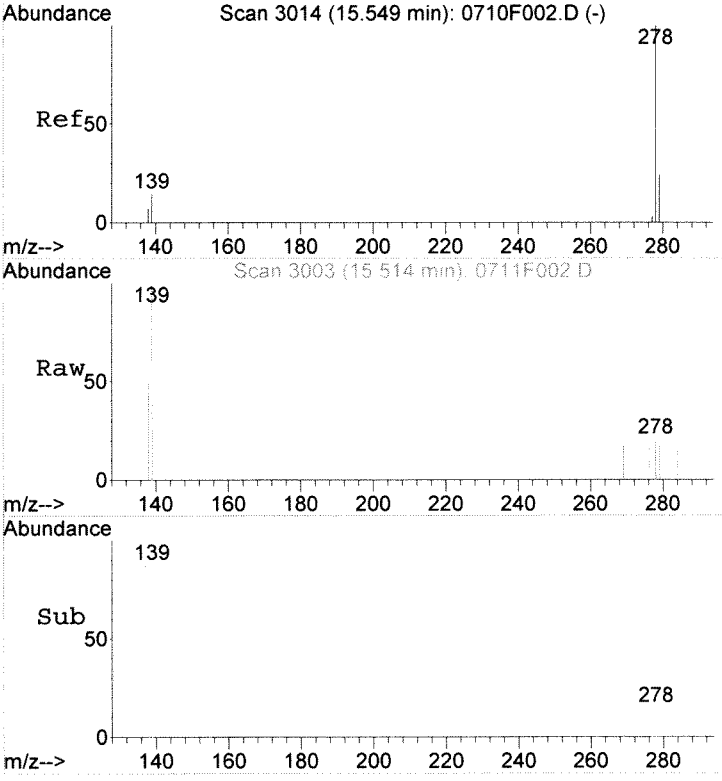


#34
Indeno(1,2,3-cd)pyrene
Concen: 0.25 ng/ml
RT: 15.46 min Scan# 2984
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 117

Ion	Ratio	Lower	Upper
276	100		
277	31.9	0.0	53.6
138	17.4	0.0	36.2

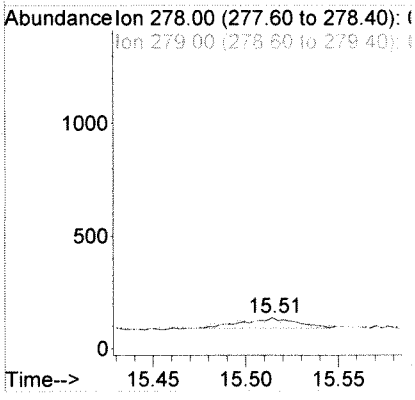




#35
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

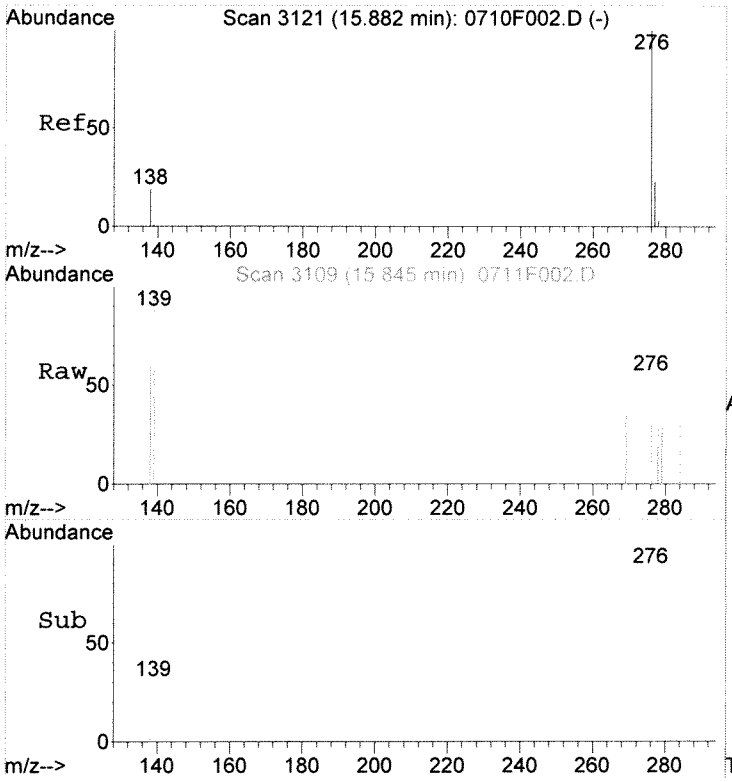
Tgt Ion:278 Resp: 95

Ion	Ratio	Lower	Upper
278	100		
279	31.3	0.0	53.6
139	702.1	0.0	33.4#



7/16/18

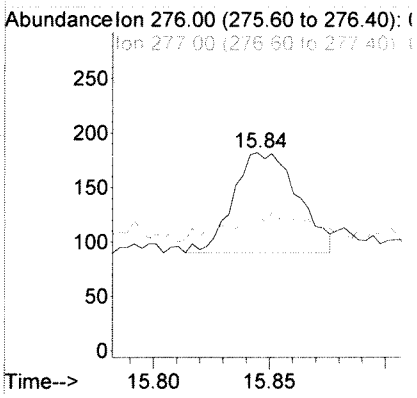
JUL 27 2018



#36
Benzo(g,h,i)perylene
Concen: 0.30 ng/ml
RT: 15.84 min Scan# 3109
Delta R.T. -0.05 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 178

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.5
138	23.9	0.0	37.2



7/16/18

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	66665	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	32181	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	67500	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72337	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	80376	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	416	2.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.22%			
13) Fluorene-d10	6.79	176	593	2.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.28%			
22) Fluoranthene-d10	8.58	212	796	1.90	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.19%			
25) Terphenyl-d14	8.93	244	986	3.00	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.30%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	947	2.59	ng/ml	96
4) 2-Methylnaphthalene	5.45	142	526	2.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	527	2.33	ng/ml	96
6) Biphenyl	5.86	154	672	2.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	469	2.33	ng/ml	96
9) Acenaphthylene	6.23	152	810	2.15	ng/ml	97
10) Acenaphthene	6.38	154	463	2.14	ng/ml	99
11) Dibenzofuran	6.53	168	724	2.09	ng/ml	90
12) 2,3,5-Trimethylnaphthalene	6.70	170	450	2.21	ng/ml	94
14) Fluorene	6.81	166	582	2.17	ng/ml	100
16) Dibenzothiophene	7.51	184	890	2.13	ng/ml	93
17) Phenanthrene	7.61	178	900m	2.18	ng/ml	
18) Anthracene	7.65	178	807	2.00	ng/ml	98
19) Carbazole	7.79	167	753	2.07	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	652	2.01	ng/ml	97
21) Fluoranthene	8.59	202	1013	2.02	ng/ml	97
24) Pyrene	8.79	202	1081	2.13	ng/ml#	48
26) Benz(a)anthracene	10.14	228	1082	2.36	ng/ml	98
27) Chrysene	10.19	228	887	1.96	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	956	1.91	ng/ml	95
30) Benzo(k)fluoranthene	12.31	252	934	1.86	ng/ml	94
31) Benzo(e)pyrene	12.97	252	971	1.99	ng/ml	96
32) Benzo(a)pyrene	13.12	252	876	2.08	ng/ml	90
33) Perylene	13.37	252	950	2.15	ng/ml	92
34) Indeno(1,2,3-cd)pyrene	15.45	276	990	2.67	ng/ml	94
35) Dibenz(a,h)anthracene	15.52	278	897	2.23	ng/ml	87
36) Benzo(g,h,i)perylene	15.85	276	1156	2.44	ng/ml	95

JUL 16 2018

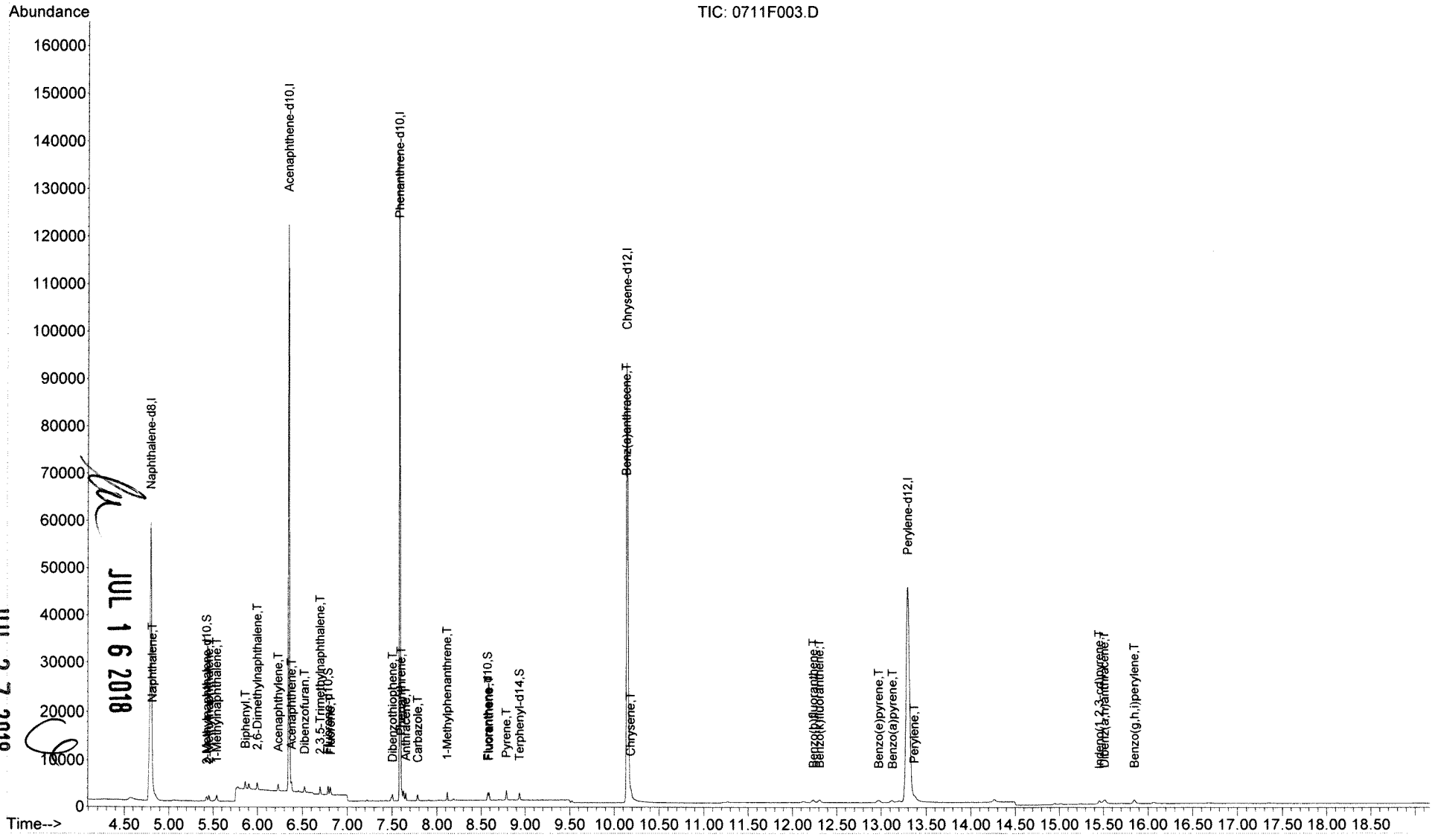
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F003.D 071118PAH.M Wed Jul 11 12:39:37 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

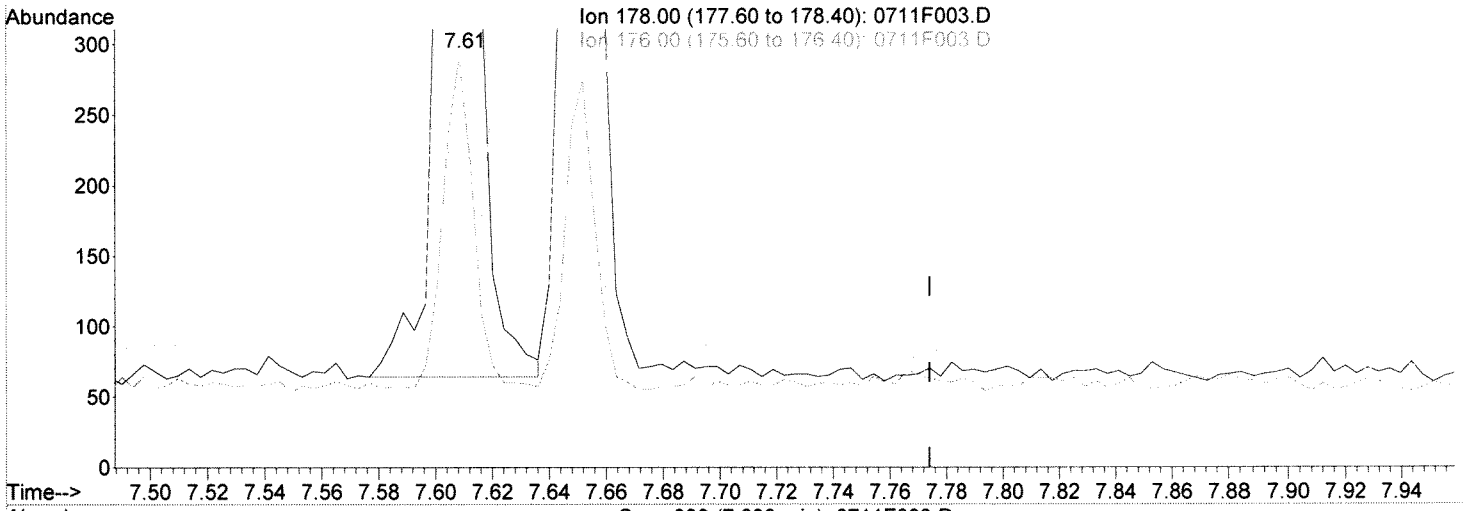


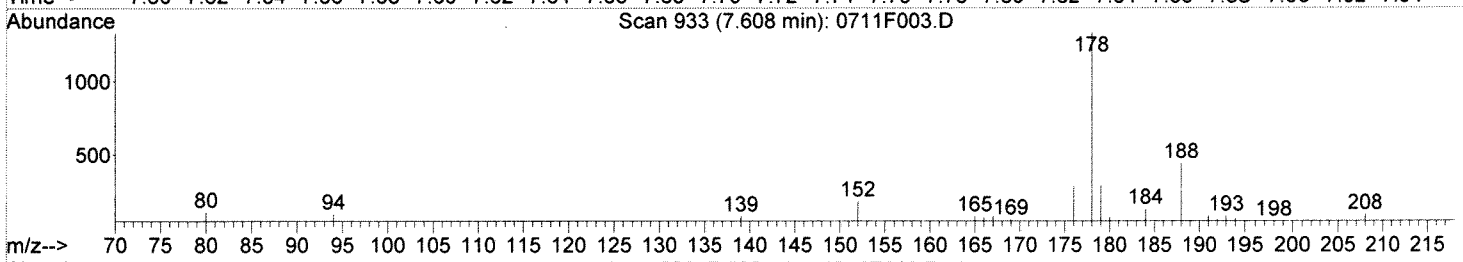
JUL 16 2018
JUL 27 2018

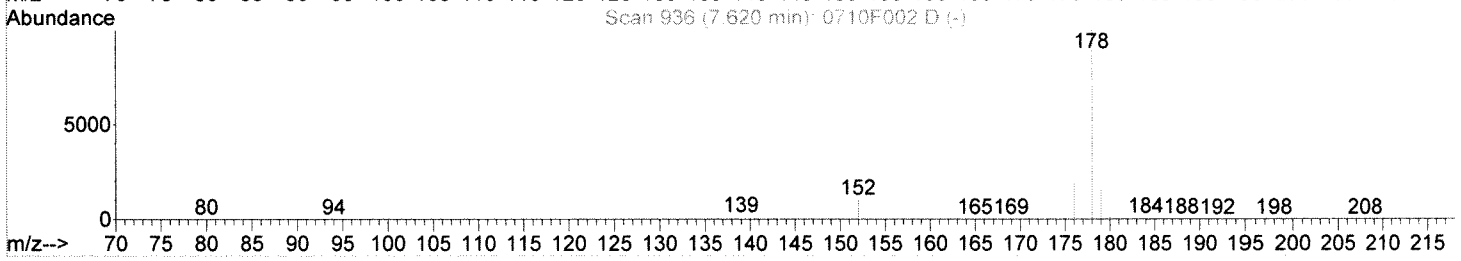
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.25ng/ml

response 927

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.38
179.00	15.20	15.85
0.00	0.00	0.00

Manual Integration:

Before

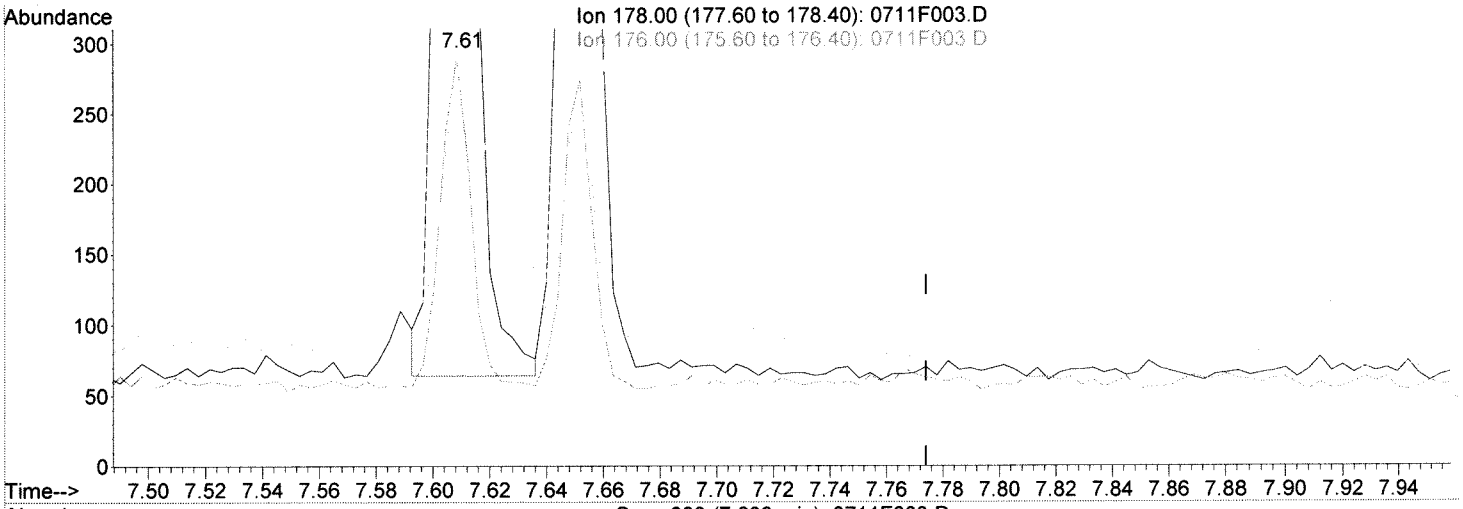
07/11/18

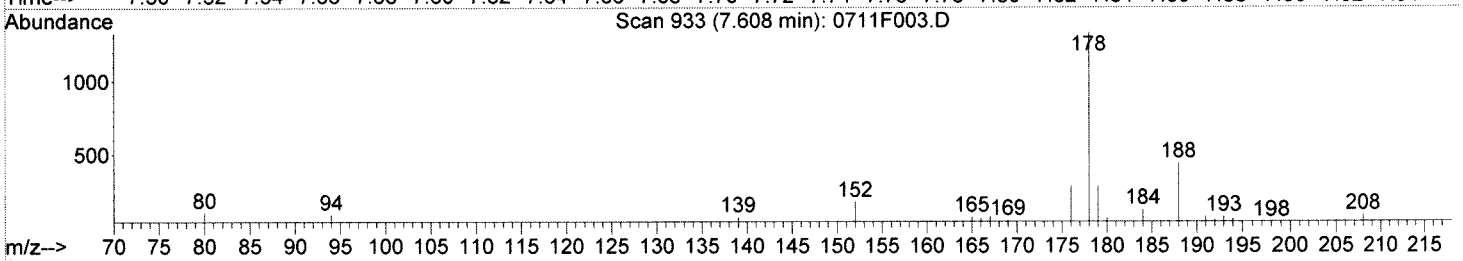
JUL 2 7 2018

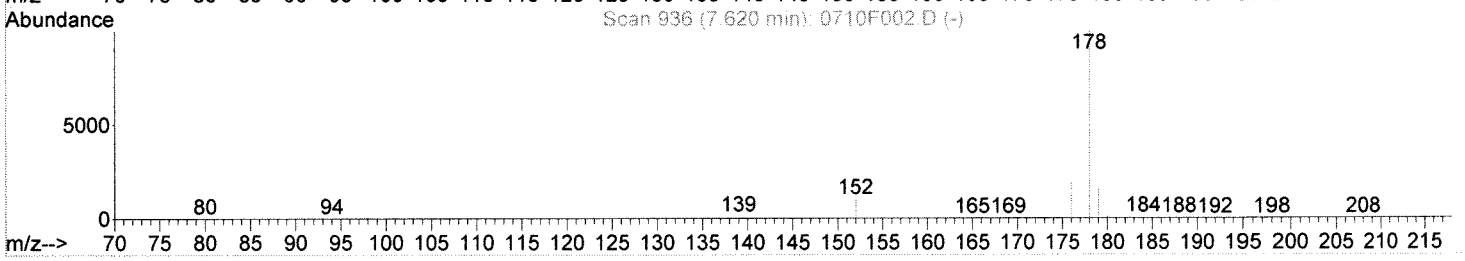
0711F003.D 071118PAH.M Wed Jul 11 12:35:11 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.18ng/ml m

response 900

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	21.77
179.00	15.20	21.70
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F003.D 071118PAH.M Wed Jul 11 12:35:17 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	63956	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30708	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63250	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72026	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	79651	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	763	4.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.42%			
13) Fluorene-d10	6.79	176	917	4.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
22) Fluoranthene-d10	8.58	212	1504	3.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.38%			
25) Terphenyl-d14	8.93	244	1510	4.62	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	1674	4.78	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	948	4.23	ng/ml	91
5) 1-Methylnaphthalene	5.54	142	937	4.32	ng/ml	90
6) Biphenyl	5.86	154	1229	4.45	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	808	4.19	ng/ml	95
9) Acenaphthylene	6.23	152	1442	4.02	ng/ml	97
10) Acenaphthene	6.38	154	846	4.11	ng/ml	95
11) Dibenzofuran	6.53	168	1300	3.94	ng/ml	91
12) 2,3,5-Trimethylnaphthalene	6.70	170	782	4.03	ng/ml	98
14) Fluorene	6.81	166	1032	4.03	ng/ml	99
16) Dibenzothiophene	7.51	184	1534	3.93	ng/ml	95
17) Phenanthrene	7.61	178	1684m	4.36	ng/ml	
18) Anthracene	7.65	178	1474	3.90	ng/ml	98
19) Carbazole	7.79	167	1414	4.15	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	1141	3.75	ng/ml	94
21) Fluoranthene	8.59	202	1825	3.88	ng/ml	96
24) Pyrene	8.79	202	2099	4.15	ng/ml#	16
26) Benz(a)anthracene	10.14	228	1900	4.17	ng/ml	100
27) Chrysene	10.19	228	1748	3.89	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	1853	3.73	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	1871	3.75	ng/ml	97
31) Benzo(e)pyrene	12.97	252	1822	3.77	ng/ml	96
32) Benzo(a)pyrene	13.12	252	1615	3.86	ng/ml	97
33) Perylene	13.38	252	1693	3.87	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.46	276	1753	4.76	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	1750	4.40	ng/ml	89
36) Benzo(g,h,i)perylene	15.85	276	2188	4.66	ng/ml	97

JUL 16 2018

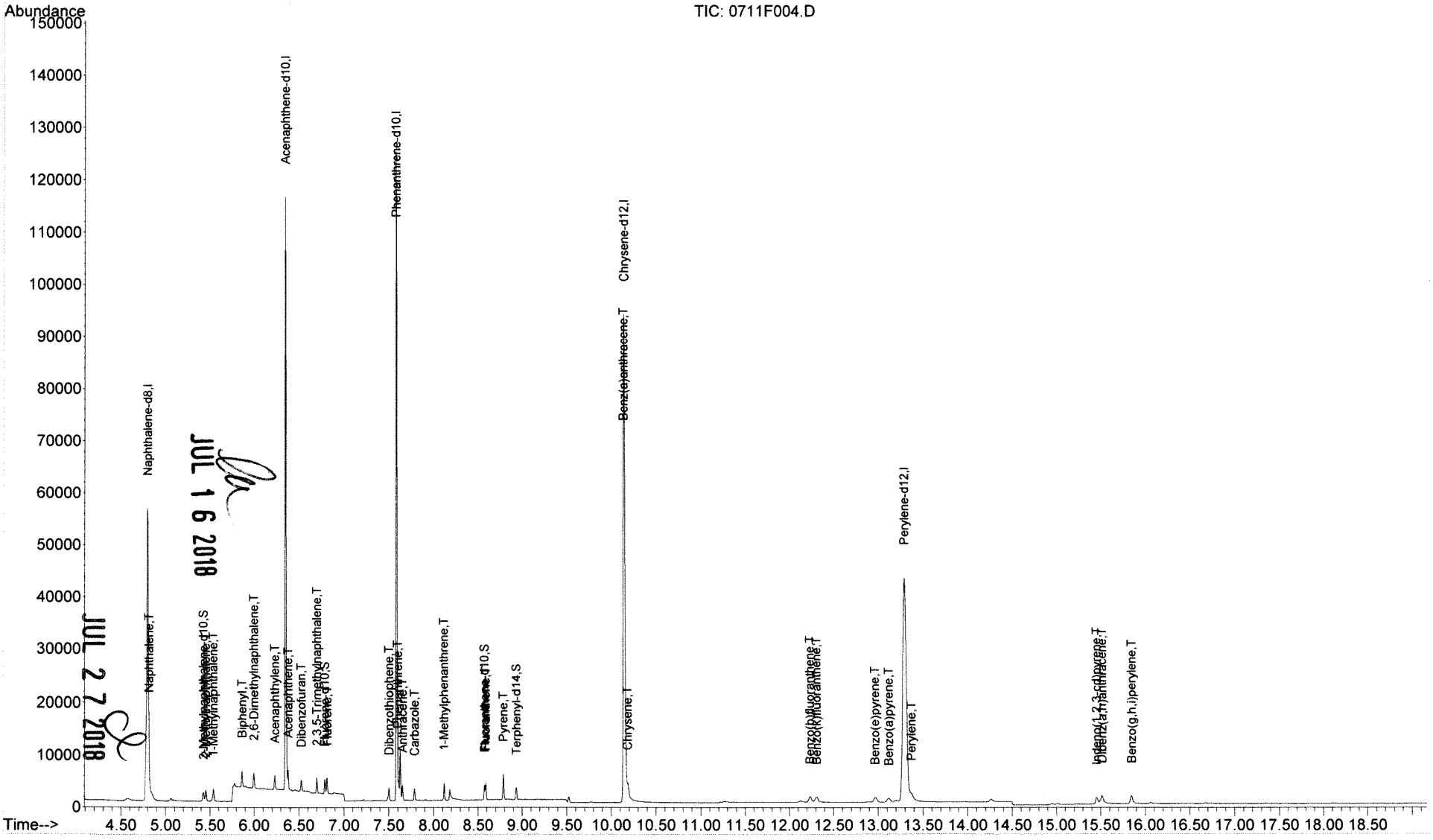
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F004.D 071118PAH.M Wed Jul 11 12:39:39 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

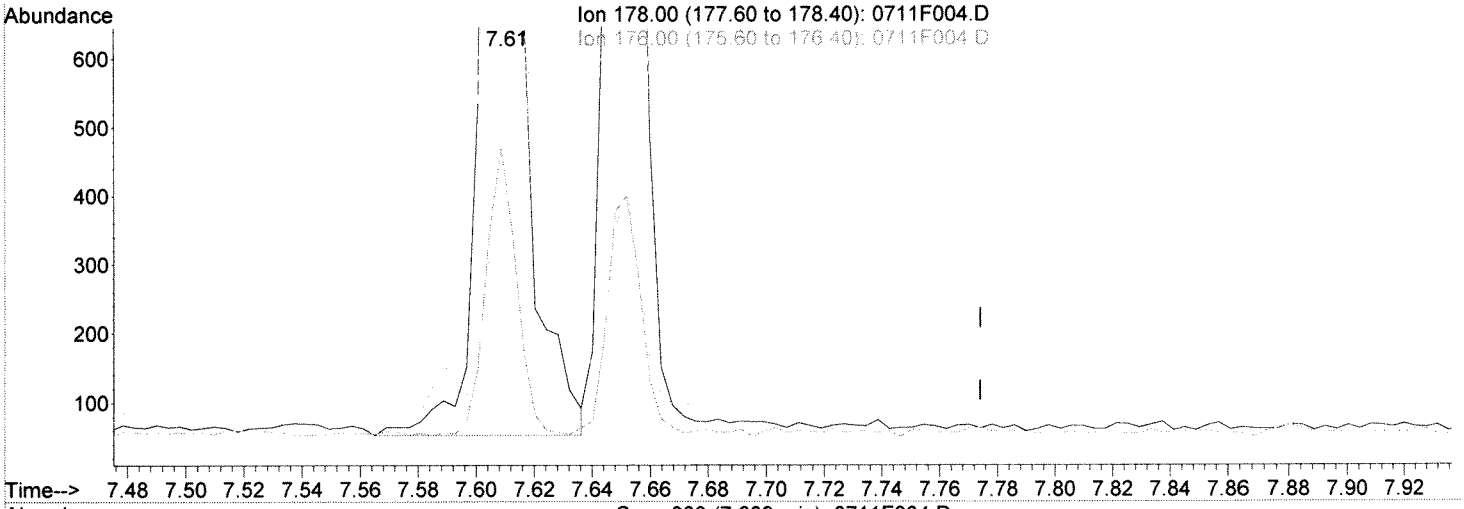
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

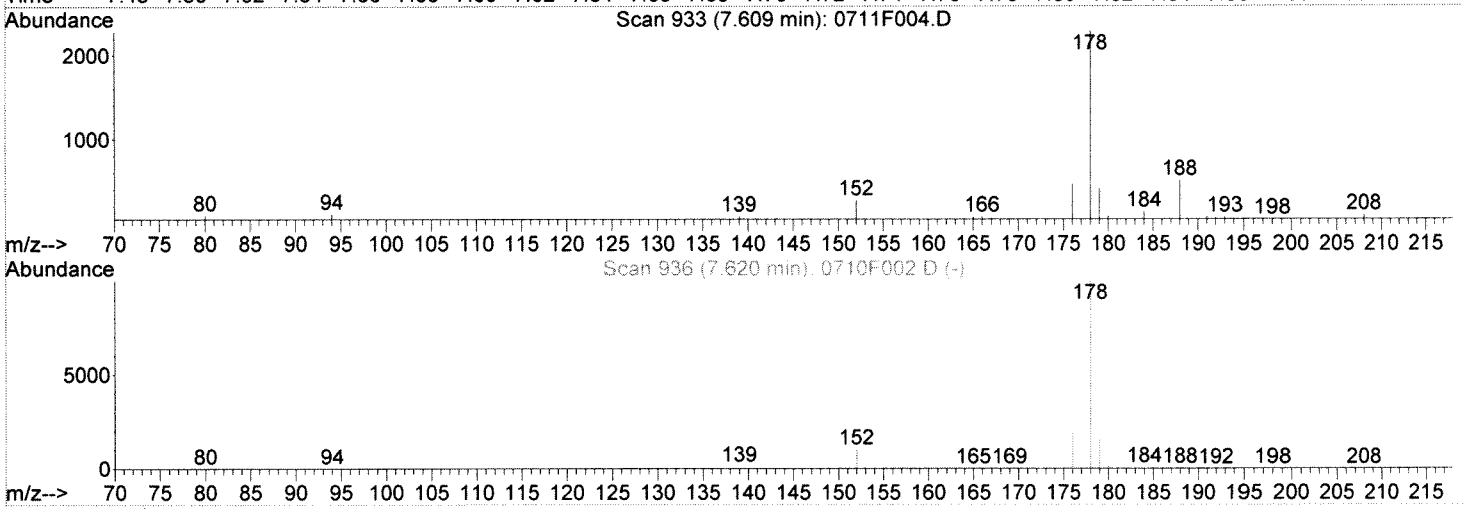


JUL 27 2018
JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration





TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.47ng/ml

response 1727

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.57
179.00	15.20	14.90
0.00	0.00	0.00

Manual Integration:

Before

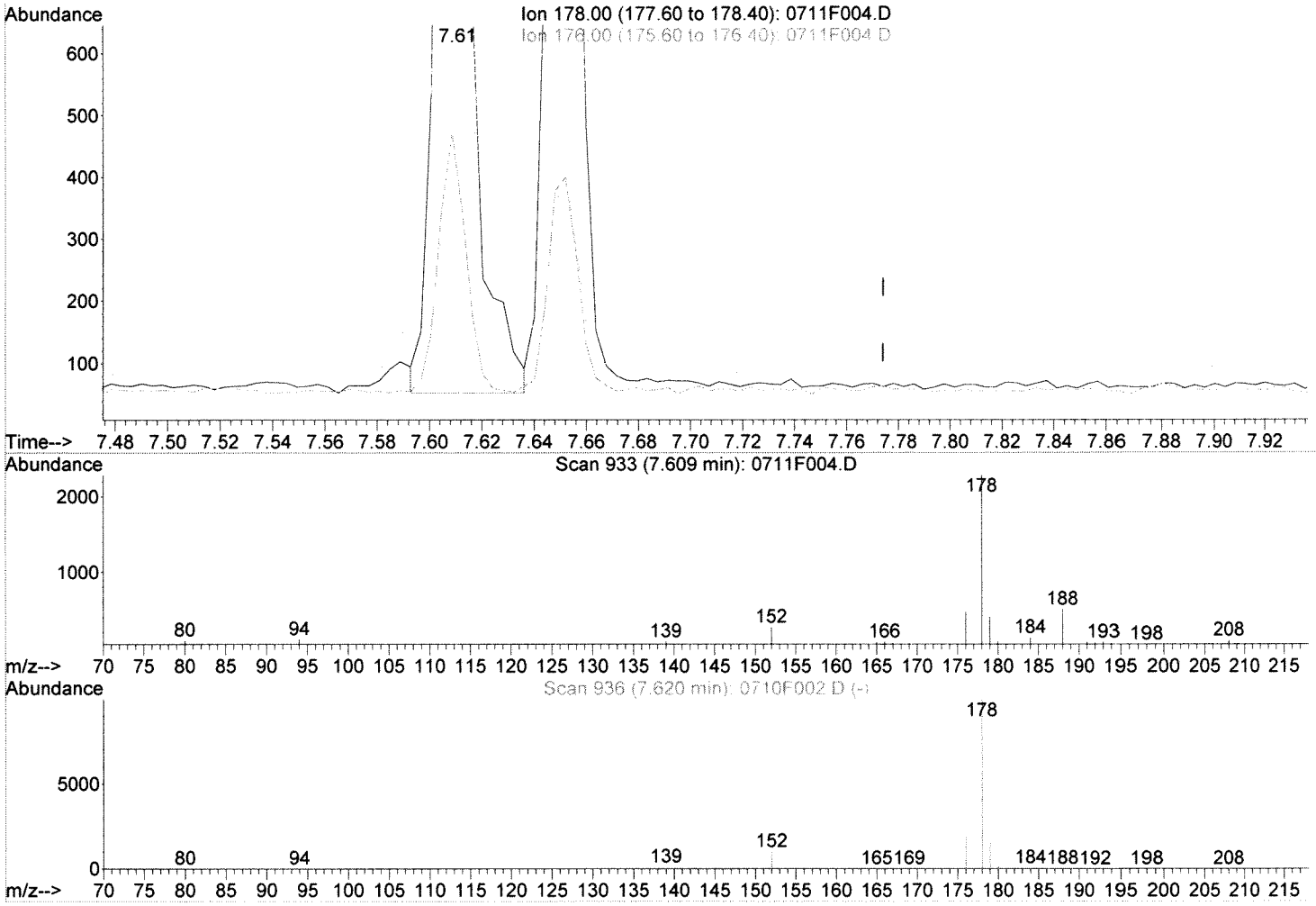
07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:50 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.36ng/ml m

response 1684

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	20.54
179.00	15.20	17.83
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:56 2018

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62880	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	29911	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	62211	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	69517	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	76895	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	1448	8.09	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.81%		
13) Fluorene-d10	6.79	176	1594	8.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
22) Fluoranthene-d10	8.58	212	2857	7.40	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.74%		
25) Terphenyl-d14	8.93	244	2597	8.23	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.82%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	2996	8.69	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	1845	8.38	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	1728	8.11	ng/ml	94
6) Biphenyl	5.86	154	2298	8.46	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	1535	8.10	ng/ml	97
9) Acenaphthylene	6.23	152	2743	7.85	ng/ml	99
10) Acenaphthene	6.38	154	1596	7.95	ng/ml	95
11) Dibenzofuran	6.53	168	2645	8.22	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	1455	7.70	ng/ml	94
14) Fluorene	6.81	166	1936	7.77	ng/ml	100
16) Dibenzothiophene	7.51	184	2951	7.68	ng/ml	94
17) Phenanthrene	7.61	178	3111	8.18	ng/ml	99
18) Anthracene	7.65	178	2901	7.81	ng/ml	99
19) Carbazole	7.78	167	2691	8.03	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	2211	7.38	ng/ml	97
21) Fluoranthene	8.59	202	3571	7.72	ng/ml	99
24) Pyrene	8.79	202	3832	7.85	ng/ml	83
26) Benz(a)anthracene	10.13	228	3494	7.94	ng/ml	98
27) Chrysene	10.19	228	3411	7.86	ng/ml	98
29) Benzo(b)fluoranthene	12.24	252	3544	7.39	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	3488	7.25	ng/ml	97
31) Benzo(e)pyrene	12.97	252	3487	7.47	ng/ml	95
32) Benzo(a)pyrene	13.12	252	3161	7.84	ng/ml	97
33) Perylene	13.37	252	3327	7.88	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.46	276	3272	9.21	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	3362	8.75	ng/ml	96
36) Benzo(g,h,i)perylene	15.85	276	4042	8.91	ng/ml	98

JUL 16 2018

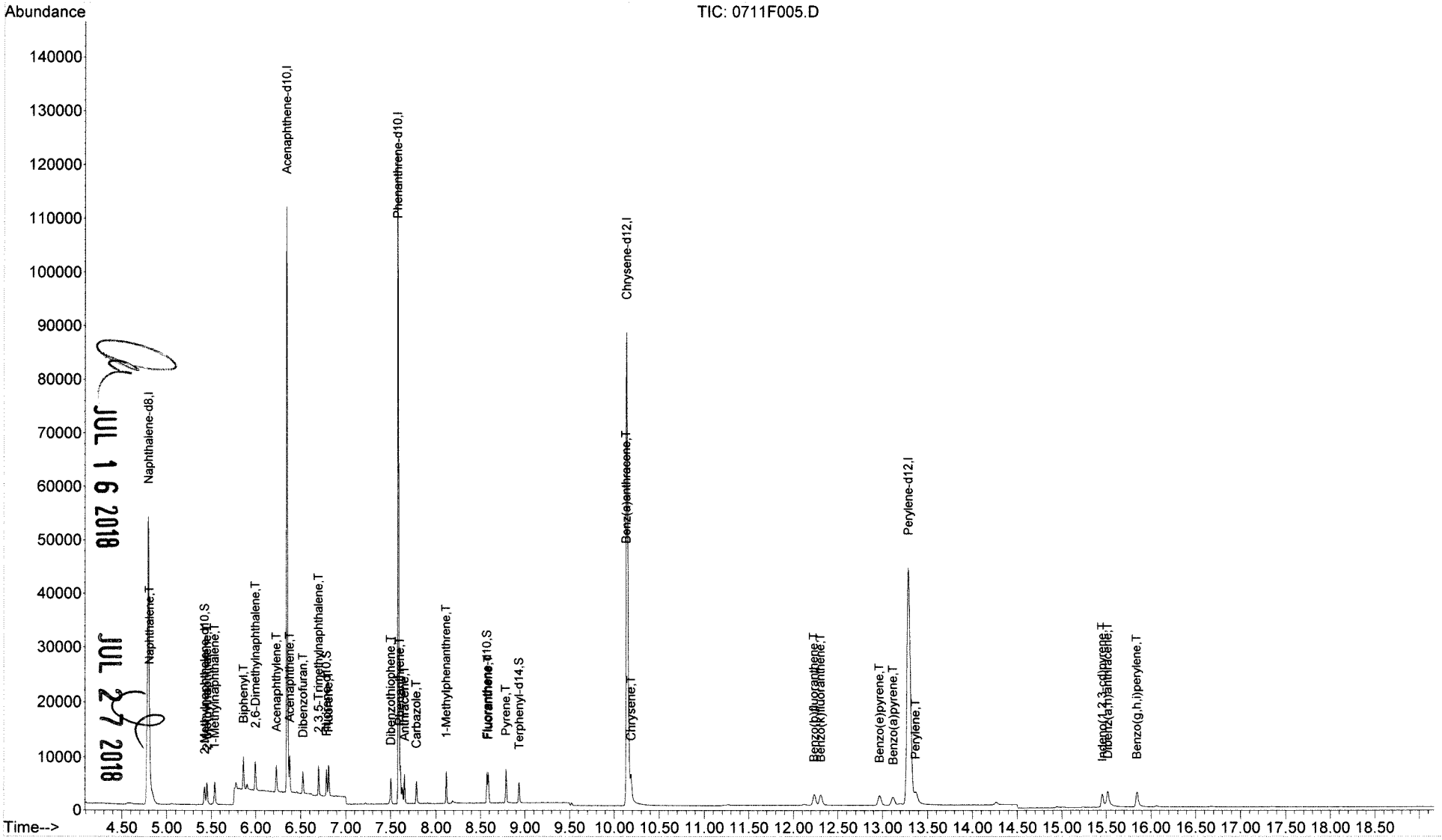
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F005.D 071118PAH.M Wed Jul 11 12:39:41 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Page 565 of 632

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	65840	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30682	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63668	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68947	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73587	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	3694	19.72	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.97%		
13) Fluorene-d10	6.79	176	3914	19.51	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.95%		
22) Fluoranthene-d10	8.58	212	7036	17.81	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.78%		
25) Terphenyl-d14	8.93	244	5981	19.10	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.91%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	7540	20.90	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	4709	20.41	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	4545	20.37	ng/ml	98
6) Biphenyl	5.86	154	5875	20.65	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	3939	19.85	ng/ml	98
9) Acenaphthylene	6.23	152	7137	19.90	ng/ml	97
10) Acenaphthene	6.38	154	4220	20.50	ng/ml	98
11) Dibenzofuran	6.53	168	6406	19.41	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	3696	19.07	ng/ml	95
14) Fluorene	6.81	166	5030	19.67	ng/ml	99
16) Dibenzothiophene	7.51	184	7587	19.29	ng/ml	95
17) Phenanthrene	7.61	178	7852	20.19	ng/ml	100
18) Anthracene	7.65	178	7270	19.13	ng/ml	99
19) Carbazole	7.78	167	6767	19.72	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	5509	17.97	ng/ml	96
21) Fluoranthene	8.59	202	8985	18.97	ng/ml	99
24) Pyrene	8.79	202	9434	19.48	ng/ml	92
26) Benz(a)anthracene	10.14	228	8203	18.81	ng/ml	99
27) Chrysene	10.19	228	8248	19.16	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	8538	18.60	ng/ml	97
30) Benzo(k)fluoranthene	12.31	252	8727	18.95	ng/ml	99
31) Benzo(e)pyrene	12.97	252	8307	18.60	ng/ml	96
32) Benzo(a)pyrene	13.12	252	7683	19.90	ng/ml	98
33) Perylene	13.38	252	8269m	20.48	ng/ml	
34) Indeno(1,2,3-cd)pyrene	15.46	276	7779	22.89	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	8645m	23.51	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	9837	22.66	ng/ml	98

JUL 16 2018

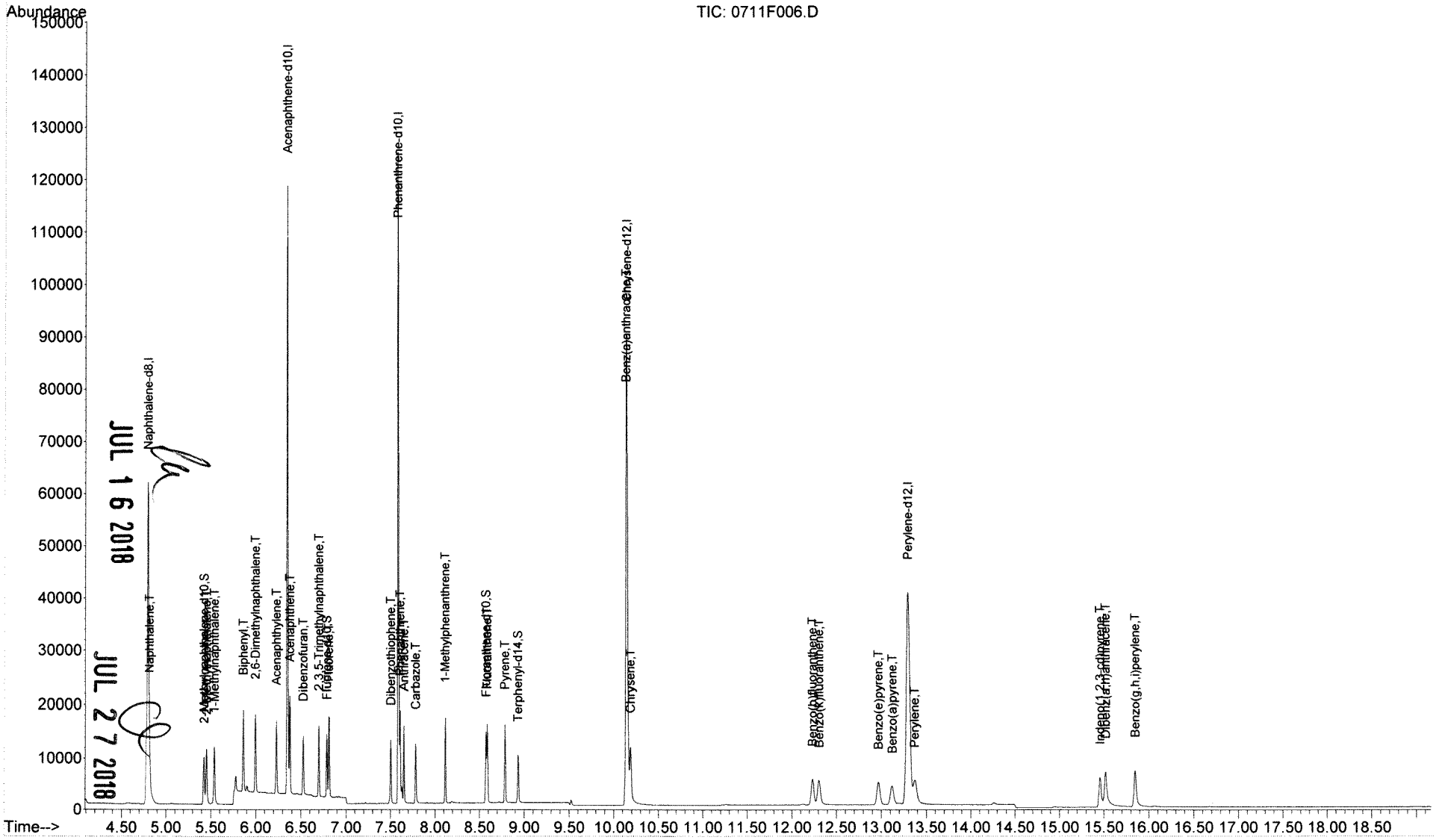
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F006.D 071118PAH.M Wed Jul 11 12:39:43 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

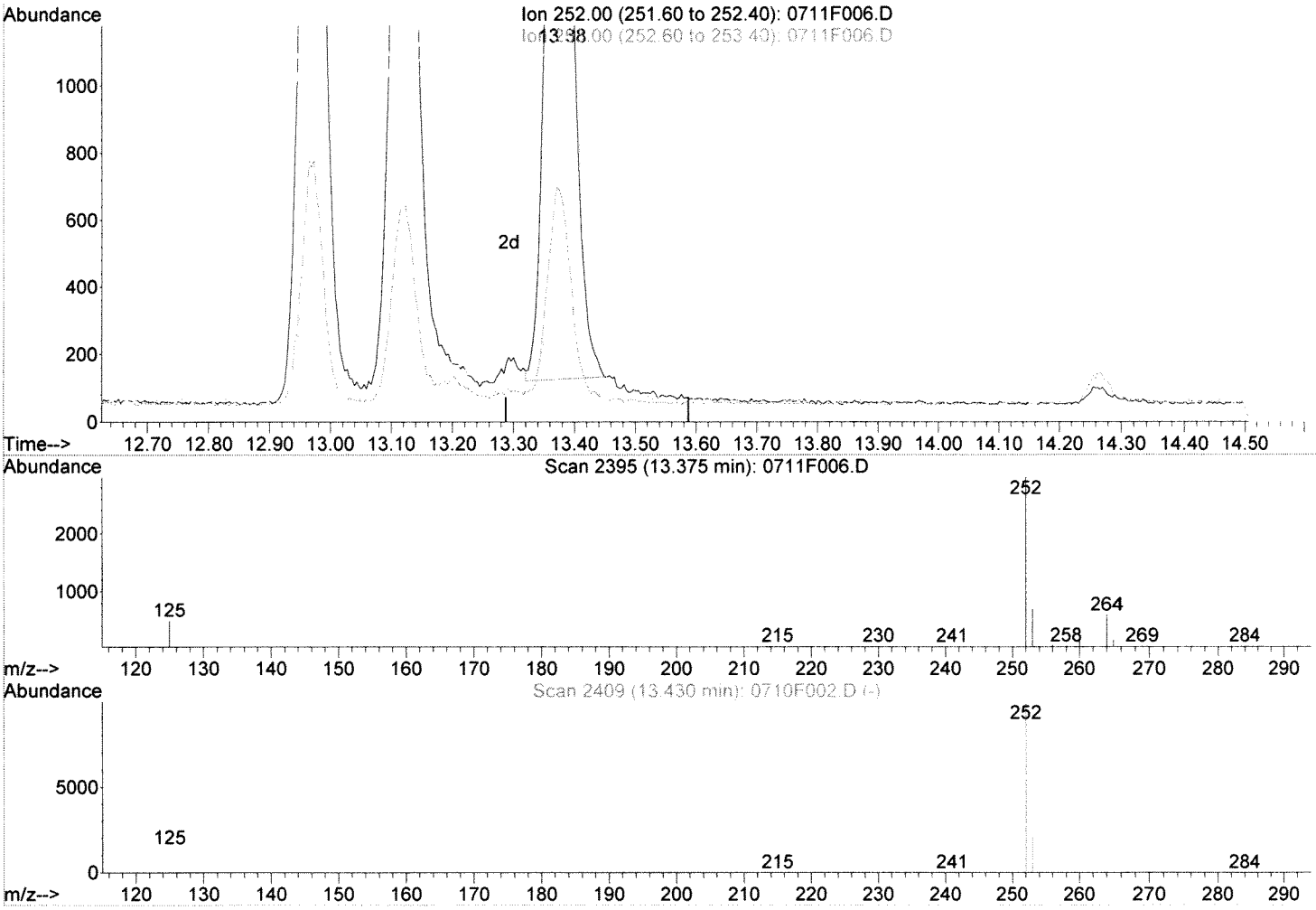


JUL 16 2018
JUL 27 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 19.01ng/ml

response 7678

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	21.61
125.00	11.30	14.83
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

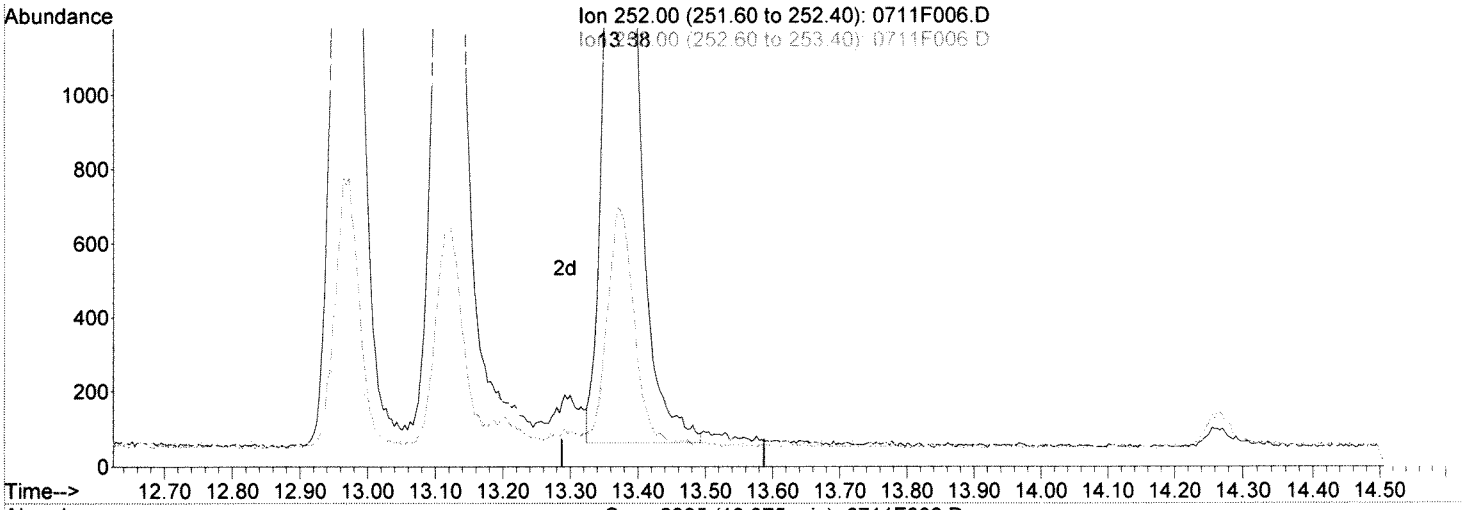
JUL 27 2018

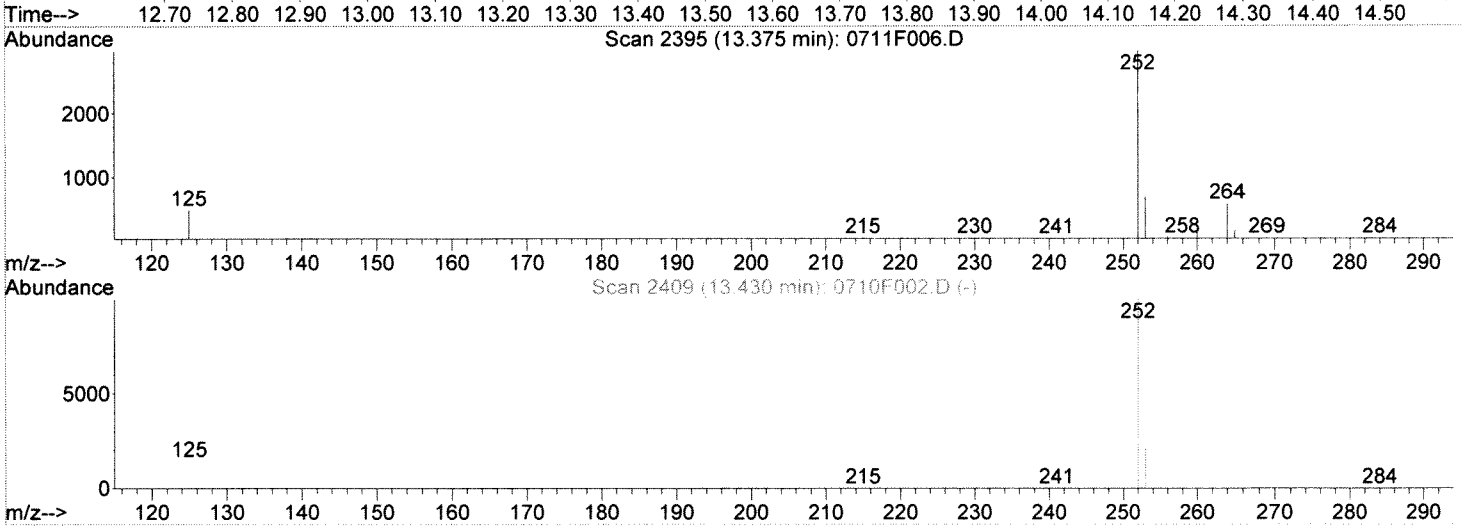
0711F006.D 071118PAH.M Wed Jul 11 12:36:54 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration





TIC: 0711F006.D

(33) Perylene (T)

13.38min 20.48ng/ml m

response 8269

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	23.07
125.00	11.30	16.52
0.00	0.00	0.00

Manual Integration:

After

BLC

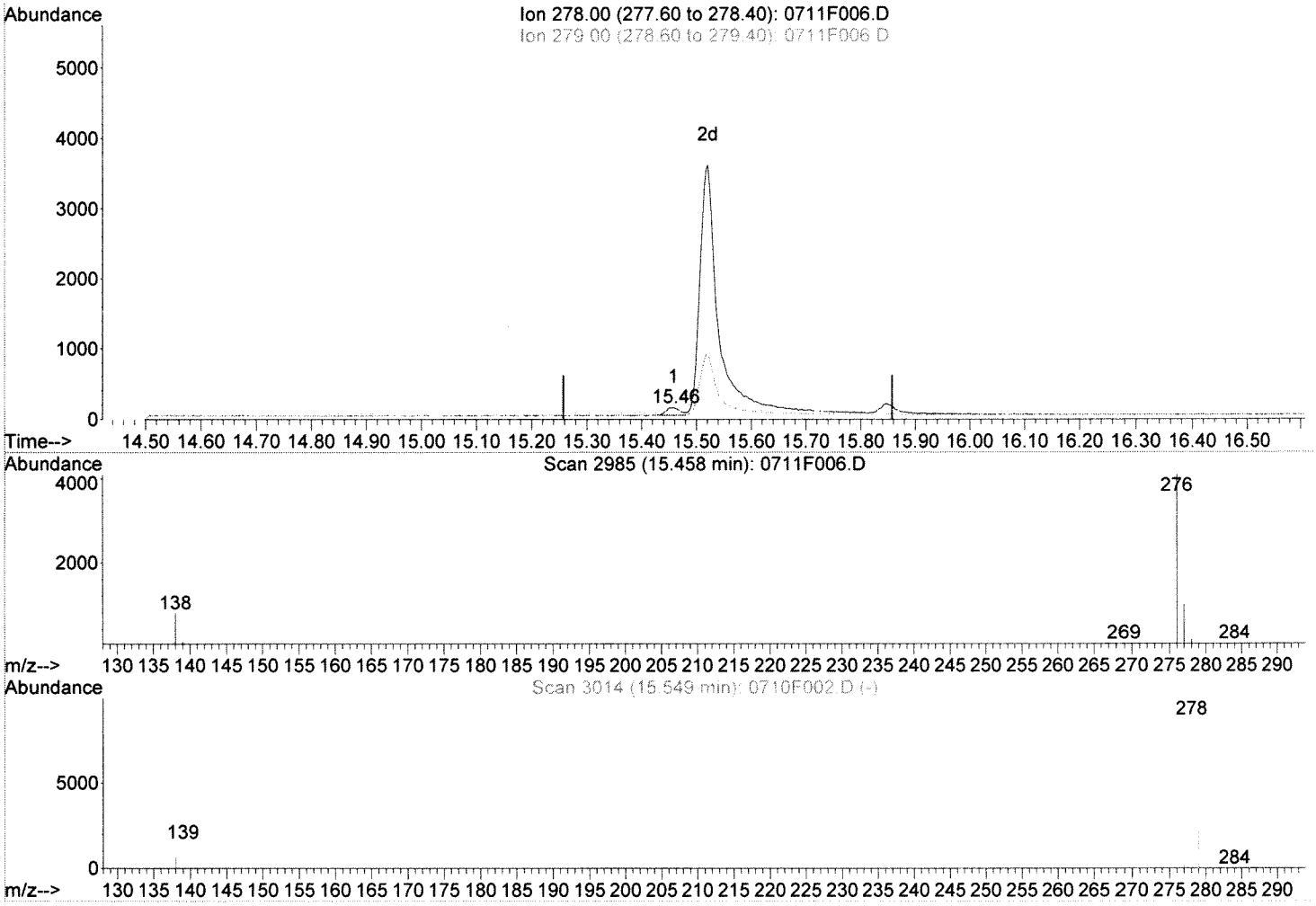
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:01 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.46min 0.54ng/ml

response 199

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	2.68
139.00	13.40	20.54
0.00	0.00	0.00

Manual Integration:

Before

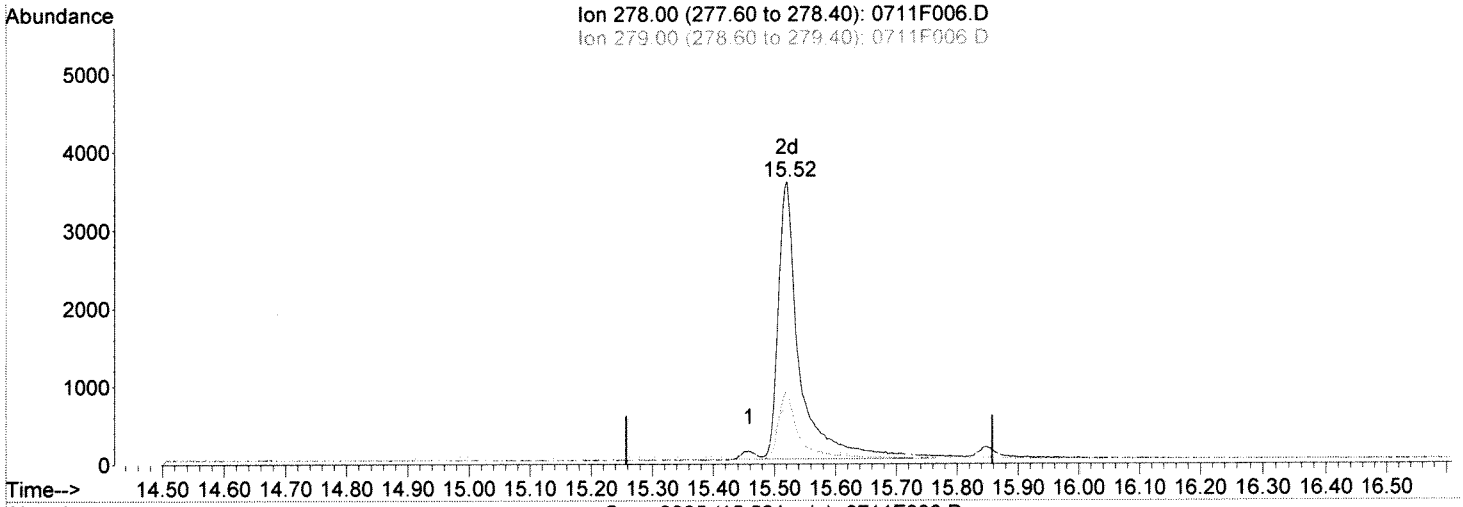
07/11/18

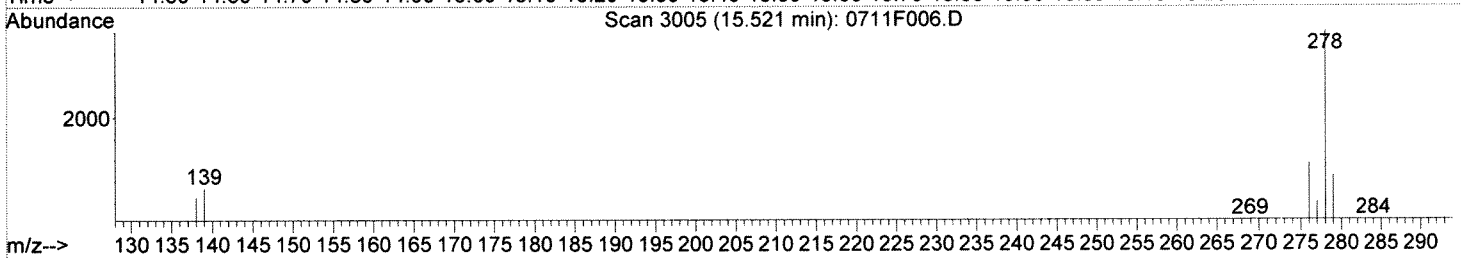
JUL 27 2018

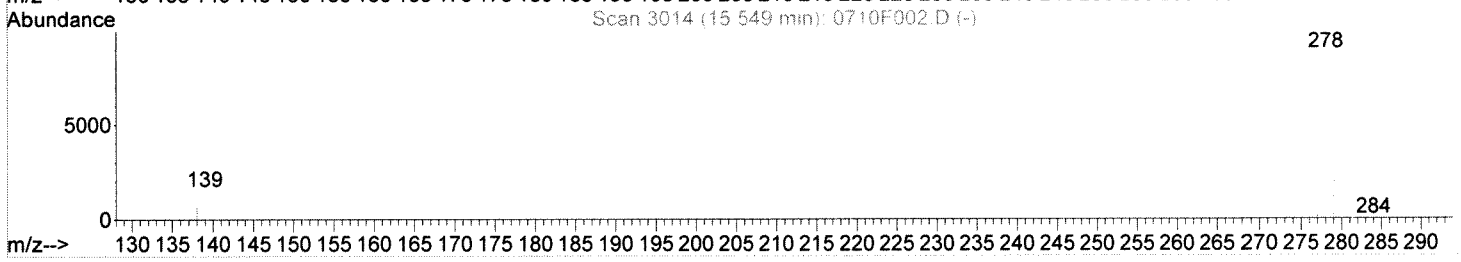
0711F006.D 071118PAH.M Wed Jul 11 12:37:06 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.52min 23.51ng/ml m

response 8645

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	25.00
139.00	13.40	18.72
0.00	0.00	0.00

Manual Integration:

After

WP

07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:15 2018

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62407	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	28255	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	58489	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68483	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	75974	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	17559	98.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.89%		
13) Fluorene-d10	6.79	176	17680	95.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.57%		
22) Fluoranthene-d10	8.58	212	35144	96.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.68%		
25) Terphenyl-d14	8.93	244	28477	91.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.16%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	35255	103.08	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	22418	102.54	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	21213	100.29	ng/ml	96
6) Biphenyl	5.86	154	27265	101.12	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	18574	98.74	ng/ml	96
9) Acenaphthylene	6.23	152	33544	101.56	ng/ml	98
10) Acenaphthene	6.38	154	19460	102.65	ng/ml	97
11) Dibenzofuran	6.53	168	31402	103.33	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	17703	99.17	ng/ml	95
14) Fluorene	6.81	166	24009	101.96	ng/ml	99
16) Dibenzothiophene	7.51	184	36360	100.61	ng/ml	95
17) Phenanthrene	7.61	178	36499	102.14	ng/ml	100
18) Anthracene	7.65	178	35340	101.23	ng/ml	100
19) Carbazole	7.78	167	33613	106.65	ng/ml	99
20) 1-Methylphenanthrene	8.12	192	26919	95.59	ng/ml	97
21) Fluoranthene	8.59	202	44895	103.20	ng/ml	99
24) Pyrene	8.79	202	45944	95.52	ng/ml	96
26) Benz(a)anthracene	10.14	228	41105	94.87	ng/ml	99
27) Chrysene	10.19	228	42544	99.49	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	45690	96.41	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	46655	98.13	ng/ml	97
31) Benzo(e)pyrene	12.97	252	43163	93.59	ng/ml	96
32) Benzo(a)pyrene	13.12	252	39807	99.87	ng/ml	98
33) Perylene	13.37	252	42088	100.96	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	40462	115.30	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	42729	112.54	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	48457	108.12	ng/ml	97

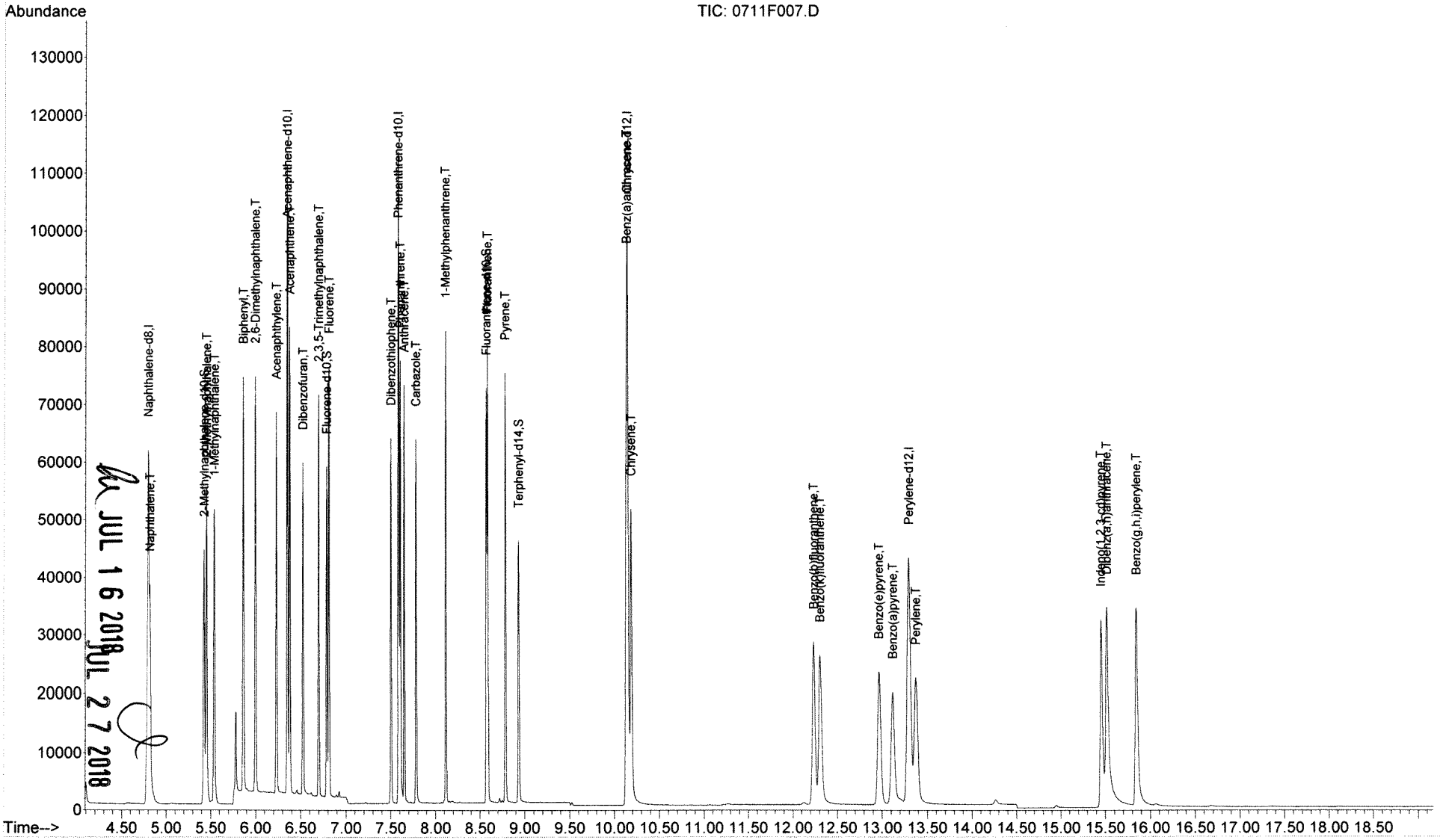
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F007.D 071118PAH.M Wed Jul 11 12:39:45 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60069	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	26067	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	52800	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	67787	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73997	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	32722	191.47	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	19.15%		
13) Fluorene-d10	6.79	176	32332	189.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	18.97%		
22) Fluoranthene-d10	8.58	212	66735	203.67	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	20.37%		
25) Terphenyl-d14	8.93	244	55795	181.26	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	18.13%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	66650	202.46	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	41546	197.42	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	39085	191.97	ng/ml	97
6) Biphenyl	5.86	154	50271	193.70	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	34463	190.34	ng/ml	96
9) Acenaphthylene	6.23	152	62756	205.96	ng/ml	98
10) Acenaphthene	6.38	154	36120	206.52	ng/ml	97
11) Dibenzofuran	6.53	168	59730	213.03	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	32934	199.97	ng/ml	94
14) Fluorene	6.81	166	43762	201.45	ng/ml	98
16) Dibenzothiophene	7.51	184	66748	204.59	ng/ml	95
17) Phenanthrene	7.61	178	65833	204.08	ng/ml	100
18) Anthracene	7.65	178	64253	203.88	ng/ml	100
19) Carbazole	7.78	167	63253	222.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	49439	194.49	ng/ml	96
21) Fluoranthene	8.59	202	84302	214.65	ng/ml	99
24) Pyrene	8.79	202	87628	184.06	ng/ml	96
26) Benz(a)anthracene	10.14	228	83249	194.11	ng/ml	99
27) Chrysene	10.19	228	84873	200.51	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	92957	201.38	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	93553	202.03	ng/ml	98
31) Benzo(e)pyrene	12.98	252	86431	192.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	79516	204.81	ng/ml	97
33) Perylene	13.38	252	84071	207.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	80179	234.58	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	81499	220.39	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	93626	214.49	ng/ml	98

JUL 16 2018

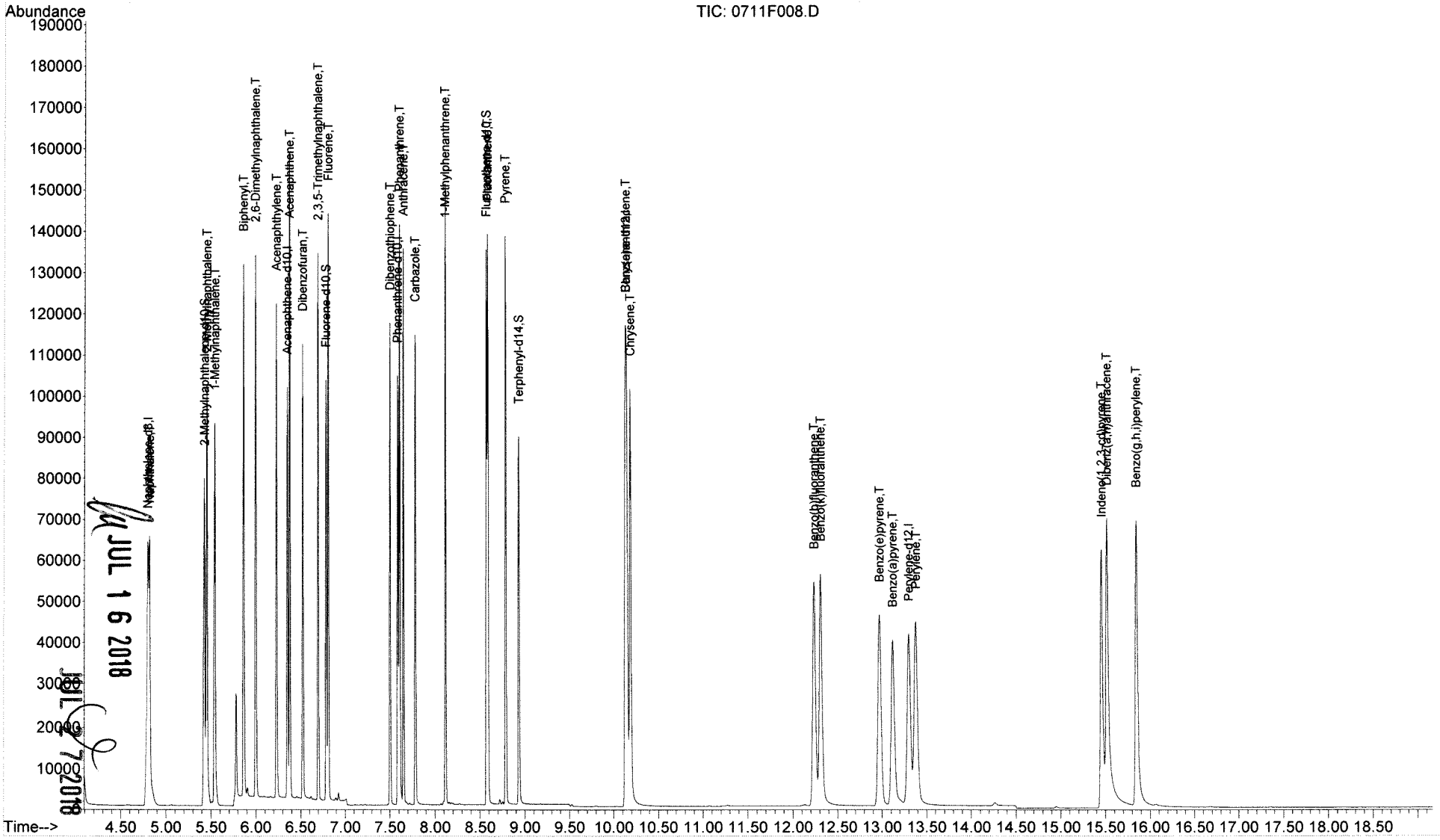
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F008.D 071118PAH.M Wed Jul 11 12:39:47 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60855	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	25959	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	53916	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68964	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73742	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	64749	373.97	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	37.40%		
13) Fluorene-d10	6.79	176	65104	383.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	38.36%		
22) Fluoranthene-d10	8.57	212	140750	420.66	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	42.07%		
25) Terphenyl-d14	8.93	244	115110	367.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	36.76%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	132311	396.73	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	80537	377.75	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	75991	368.41	ng/ml	97
6) Biphenyl	5.86	154	98008	372.75	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	68675	374.39	ng/ml	97
9) Acenaphthylene	6.23	152	125730	414.35	ng/ml	98
10) Acenaphthene	6.38	154	71389	409.87	ng/ml	98
11) Dibenzofuran	6.53	168	116544	417.39	ng/ml	89
12) 2,3,5-Trimethylnaphthalene	6.70	170	66608	406.13	ng/ml	96
14) Fluorene	6.81	166	86674	400.65	ng/ml	98
16) Dibenzothiophene	7.51	184	136509	409.76	ng/ml	95
17) Phenanthrene	7.61	178	131946	400.56	ng/ml	100
18) Anthracene	7.65	178	131533	408.72	ng/ml	100
19) Carbazole	7.79	167	129213	444.76	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	103724	399.59	ng/ml	96
21) Fluoranthene	8.59	202	170758	425.79	ng/ml	98
24) Pyrene	8.79	202	181666	375.07	ng/ml	98
26) Benz(a)anthracene	10.13	228	175185	401.51	ng/ml	99
27) Chrysene	10.19	228	172838	401.35	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	191741	416.82	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	189521	410.69	ng/ml	98
31) Benzo(e)pyrene	12.98	252	177594	396.74	ng/ml	98
32) Benzo(a)pyrene	13.13	252	163551	422.73	ng/ml	98
33) Perylene	13.39	252	170900	422.34	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	155556	456.69	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	157213	426.62	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	179053	411.61	ng/ml	98

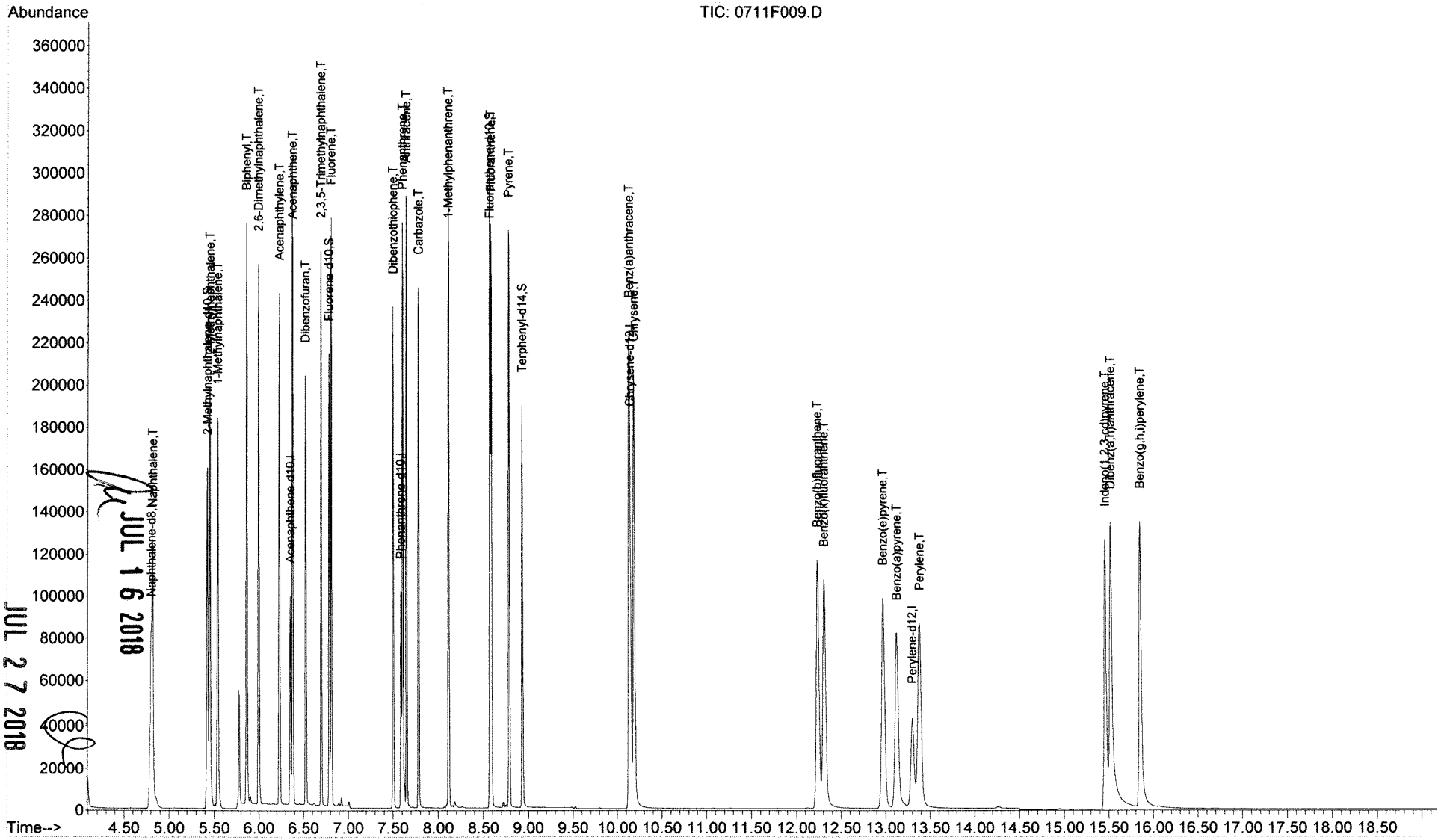
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F009.D 071118PAH.M Wed Jul 11 12:39:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:43 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	56166	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24545	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48486	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	66294	200.00	ng/ml	-0.02
28) Perylene-d12	13.31	264	71447	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	151032	945.14	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 94.51%			
13) Fluorene-d10	6.79	176	148985	928.35	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.84%			
22) Fluoranthene-d10	8.58	212	340058	1130.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 113.02%			
25) Terphenyl-d14	8.93	244	277429	921.60	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.16%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	297897	967.80	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	182505	927.49	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	175312	920.89	ng/ml	96
6) Biphenyl	5.86	154	227465	937.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	159932	944.68	ng/ml	95
9) Acenaphthylene	6.23	152	295411	1029.62	ng/ml	98
10) Acenaphthene	6.38	154	165340	1003.96	ng/ml	97
11) Dibenzofuran	6.53	168	271937	1030.03	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	155038	999.76	ng/ml	95
14) Fluorene	6.81	166	195757	957.01	ng/ml	99
16) Dibenzothiophene	7.51	184	312192	1042.05	ng/ml	95
17) Phenanthrene	7.61	178	297804	1005.31	ng/ml	99
18) Anthracene	7.65	178	294958	1019.19	ng/ml	100
19) Carbazole	7.79	167	299519	1146.42	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	241204	1033.28	ng/ml	96
21) Fluoranthene	8.59	202	395859	1097.64	ng/ml	98
24) Pyrene	8.79	202	440109	945.25	ng/ml	99
26) Benz(a)anthracene	10.14	228	438415	1045.28	ng/ml	100
27) Chrysene	10.19	228	417827	1009.33	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	477033	1070.32	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	460183	1029.25	ng/ml	98
31) Benzo(e)pyrene	12.99	252	441018	1016.88	ng/ml	97
32) Benzo(a)pyrene	13.14	252	410977	1096.36	ng/ml	98
33) Perylene	13.39	252	424046	1081.60	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.47	276	362154	1097.39	ng/ml	98
35) Dibenz(a,h)anthracene	15.53	278	365022	1022.35	ng/ml	98
36) Benzo(g,h,i)perylene	15.86	276	398340	945.13	ng/ml	97

JUL 16 2018

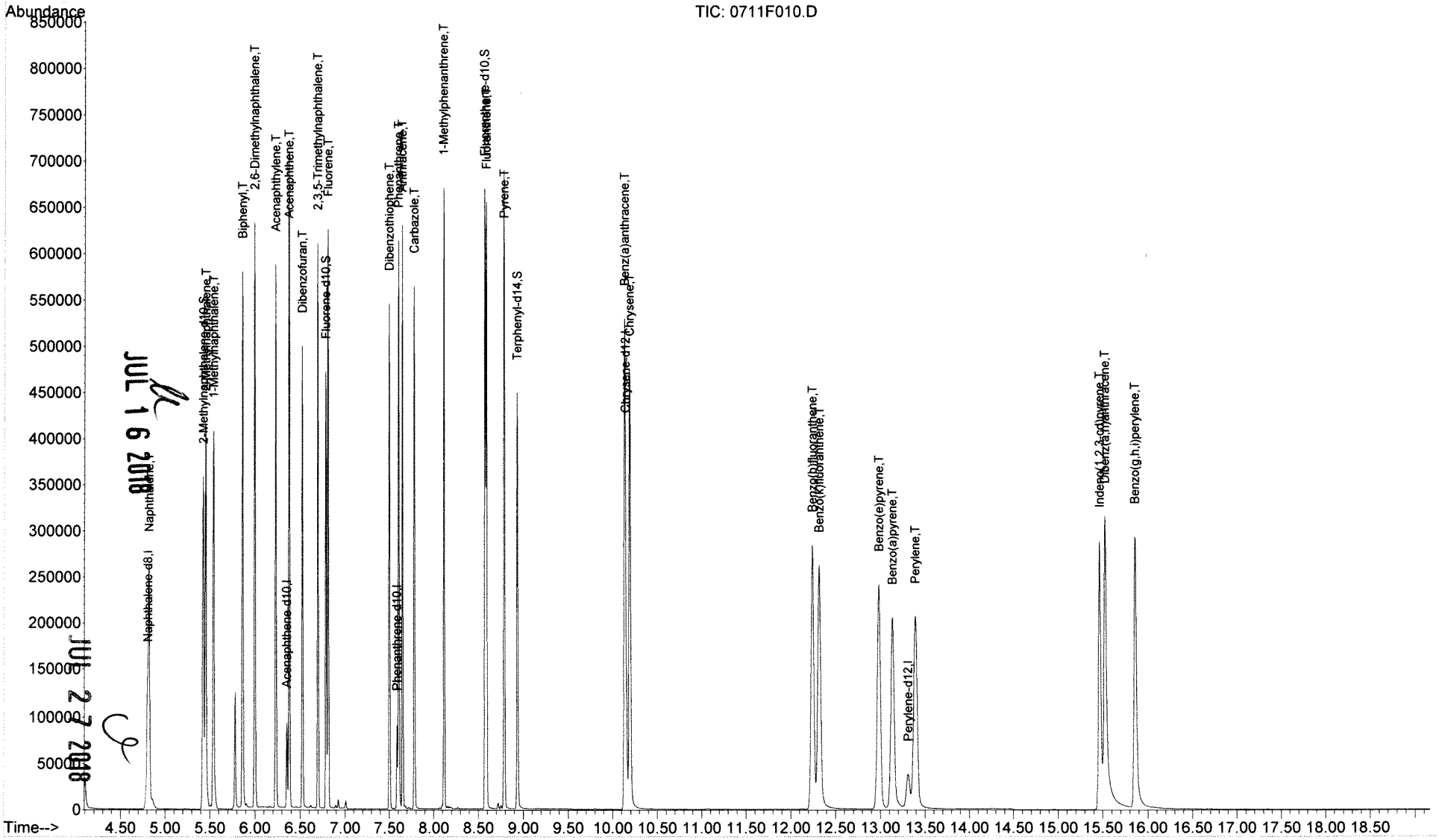
(#) = qualifier out of range (m) = manual integration
0711F010.D 071118PAH.M Wed Jul 11 12:39:51 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	55374	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	23531	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48251	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	63306	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	68587	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	230897	1465.59	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.56%			
13) Fluorene-d10	6.79	176	234277	1522.73	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 152.27%			
22) Fluoranthene-d10	8.58	212	547746	1829.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 182.93%			
25) Terphenyl-d14	8.93	244	420524	1462.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.29%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	454242	1496.83	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	277659	1431.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	268229	1429.12	ng/ml	95
6) Biphenyl	5.87	154	351048	1467.28	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	248732	1490.21	ng/ml	94
9) Acenaphthylene	6.23	152	457982	1665.02	ng/ml	98
10) Acenaphthene	6.38	154	258921	1639.94	ng/ml	98
11) Dibenzofuran	6.53	168	422115	1667.76	ng/ml	98
12) 2,3,5-Trimethylnaphthalene	6.70	170	241367	1623.53	ng/ml	87
14) Fluorene	6.81	166	306456	1562.75	ng/ml	99
16) Dibenzothiophene	7.51	184	493134	1654.02	ng/ml	98
17) Phenanthrene	7.61	178	470025	1594.41	ng/ml	99
18) Anthracene	7.65	178	468569	1626.97	ng/ml	99
19) Carbazole	7.79	167	483938	1861.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	392769	1690.76	ng/ml	98
21) Fluoranthene	8.59	202	637771	1777.03	ng/ml	97
24) Pyrene	8.79	202	701707	1578.23	ng/ml	96
26) Benz(a)anthracene	10.14	228	679766	1697.22	ng/ml	100
27) Chrysene	10.20	228	647039	1636.80	ng/ml	100
29) Benzo(b)fluoranthene	12.26	252	726698	1698.48	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	707952	1649.45	ng/ml	98
31) Benzo(e)pyrene	13.00	252	677816	1628.04	ng/ml	97
32) Benzo(a)pyrene	13.15	252	636746	1769.47	ng/ml	98
33) Perylene	13.41	252	650819	1729.25	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	546709	1725.70	ng/ml	98
35) Dibenz(a,h)anthracene	15.54	278	550676	1606.64	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	588669	1454.97	ng/ml	97

JUL 16 2018

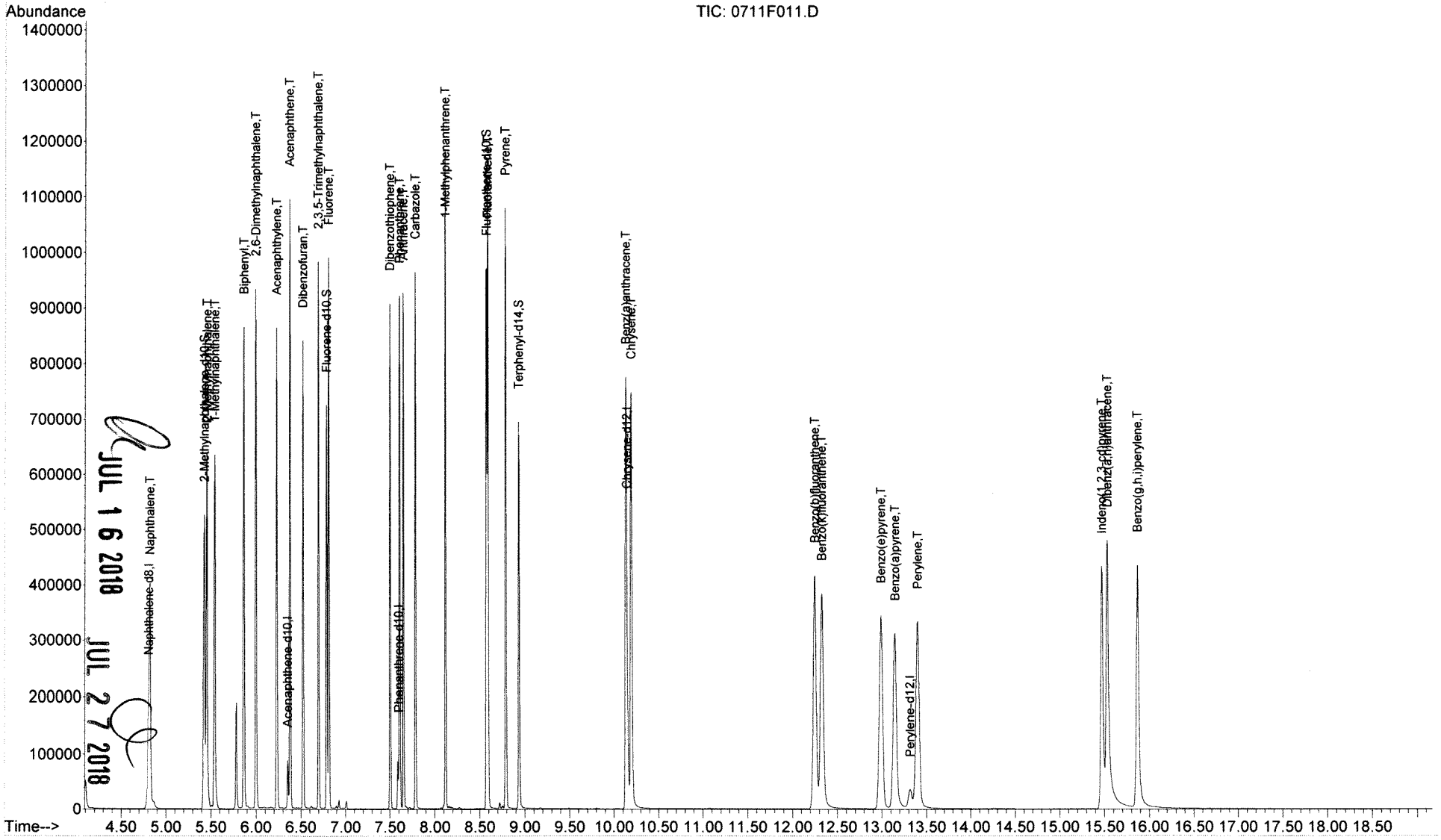
(#) = qualifier out of range (m) = manual integration
0711F011.D 071118PAH.M Wed Jul 11 12:39:53 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	54095	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24200	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	49476	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	65411	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	71109	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	284926	1851.30	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 185.13%			
13) Fluorene-d10	6.79	176	291344	1841.30	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 184.13%			
22) Fluoranthene-d10	8.58	212	688154	2241.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 224.13%			
25) Terphenyl-d14	8.94	244	524001	1764.19	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 176.42%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	576774	1945.54	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	343280	1811.34	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	333329	1817.97	ng/ml	96
6) Biphenyl	5.87	154	430613	1842.39	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	307734	1887.29	ng/ml	92
9) Acenaphthylene	6.23	152	565493	1999.05	ng/ml	97
10) Acenaphthene	6.38	154	319877	1970.02	ng/ml	97
11) Dibenzofuran	6.53	168	511819	1966.28	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	300656	1966.42	ng/ml	85
14) Fluorene	6.81	166	378044	1874.51	ng/ml	98
16) Dibenzothiophene	7.51	184	607108	1985.89	ng/ml	98
17) Phenanthrene	7.61	178	575834	1904.97	ng/ml	99
18) Anthracene	7.66	178	577074	1954.11	ng/ml	99
19) Carbazole	7.79	167	599144	2247.37	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	493413	2071.41	ng/ml	97
21) Fluoranthene	8.60	202	799381	2172.18	ng/ml	96
24) Pyrene	8.79	202	889035	1935.21	ng/ml	94
26) Benz(a)anthracene	10.14	228	854373	2064.52	ng/ml	99
27) Chrysene	10.20	228	809465	1981.79	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	904886	2039.94	ng/ml	98
30) Benzo(k)fluoranthene	12.34	252	885676	1990.34	ng/ml	98
31) Benzo(e)pyrene	13.00	252	842879	1952.70	ng/ml	97
32) Benzo(a)pyrene	13.16	252	795301	2131.70	ng/ml	98
33) Perylene	13.41	252	811546	2079.83	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	682068	2076.61	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	690770	1943.89	ng/ml	97
36) Benzo(g,h,i)perylene	15.88	276	738118	1759.65	ng/ml	96

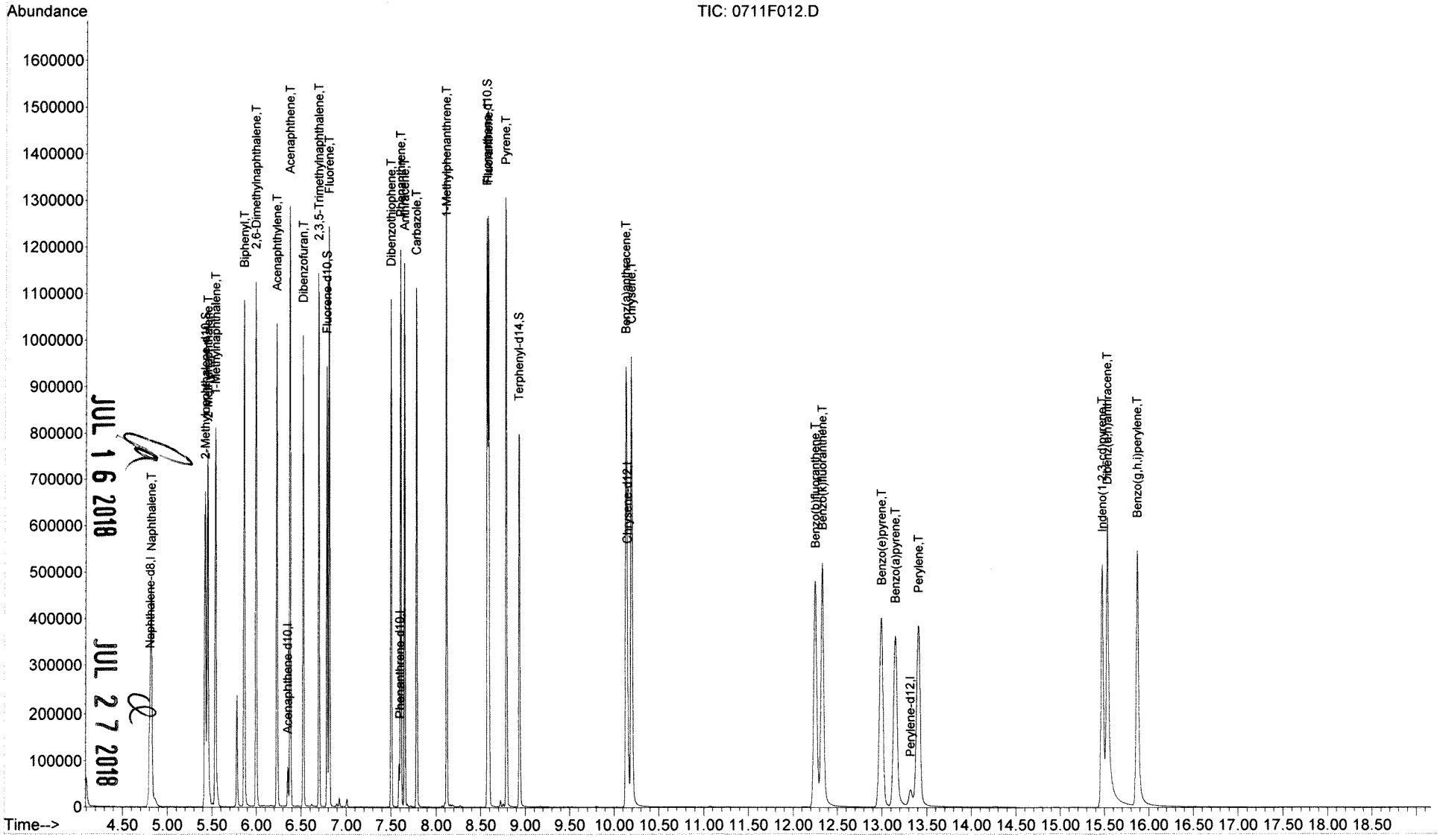
JUL 16 2018 JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F012.D 071118PAH.M Wed Jul 11 12:39:55 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 09:14:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	50172	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	22986	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	46192	200.00	ng/ml	0.00
23) Chrysene-d12	10.15	240	62964	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	67346	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	56170	401.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.11%			
13) Fluorene-d10	6.79	176	57243	389.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 38.95%			
22) Fluoranthene-d10	8.58	212	119281	409.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.97%			
25) Terphenyl-d14	8.93	244	103386	378.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 37.86%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	106807	368.80	ng/ml	100
4) 2-Methylnaphthalene	5.46	142	68576	392.65	ng/ml	100
5) 1-Methylnaphthalene	5.54	142	61930	368.40	ng/ml	99
6) Biphenyl	5.86	154	91235	418.55	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	63157	421.23	ng/ml	96
9) Acenaphthylene	6.23	152	107131	390.61	ng/ml	100
10) Acenaphthene	6.38	154	60647	384.94	ng/ml	98
11) Dibenzofuran	6.53	168	94217	372.67	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	59485	408.19	ng/ml	96
14) Fluorene	6.81	166	73545	385.97	ng/ml	100
16) Dibenzothiophene	7.51	184	123550	428.83	ng/ml	99
17) Phenanthrene	7.61	178	110081	382.02	ng/ml	100
18) Anthracene	7.65	178	109389	397.66	ng/ml	100
19) Carbazole	7.79	167	115133	428.87	ng/ml	100
20) 1-Methylphenanthrene	8.12	192	91182	417.77	ng/ml	100
21) Fluoranthene	8.59	202	147363	414.16	ng/ml	100
24) Pyrene	8.79	202	151769	351.32	ng/ml	92
26) Benz(a)anthracene	10.14	228	153003	375.85	ng/ml	99
27) Chrysene	10.19	228	151585	388.75	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	170488	409.75	ng/ml	100
30) Benzo(k)fluoranthene	12.32	252	172528	417.98	ng/ml	100
31) Benzo(e)pyrene	12.98	252	162645	410.10	ng/ml	100
32) Benzo(a)pyrene	13.13	252	146112	400.43	ng/ml	99
33) Perylene	13.39	252	166849	435.90	ng/ml	100
34) Indeno(1,2,3-cd)pyrene	15.46	276	133756	373.83	ng/ml	99
35) Dibenz(a,h)anthracene	15.52	278	139306	384.07	ng/ml	100
36) Benzo(g,h,i)perylene	15.85	276	152959	365.05	ng/ml	100

JUL 16 2018

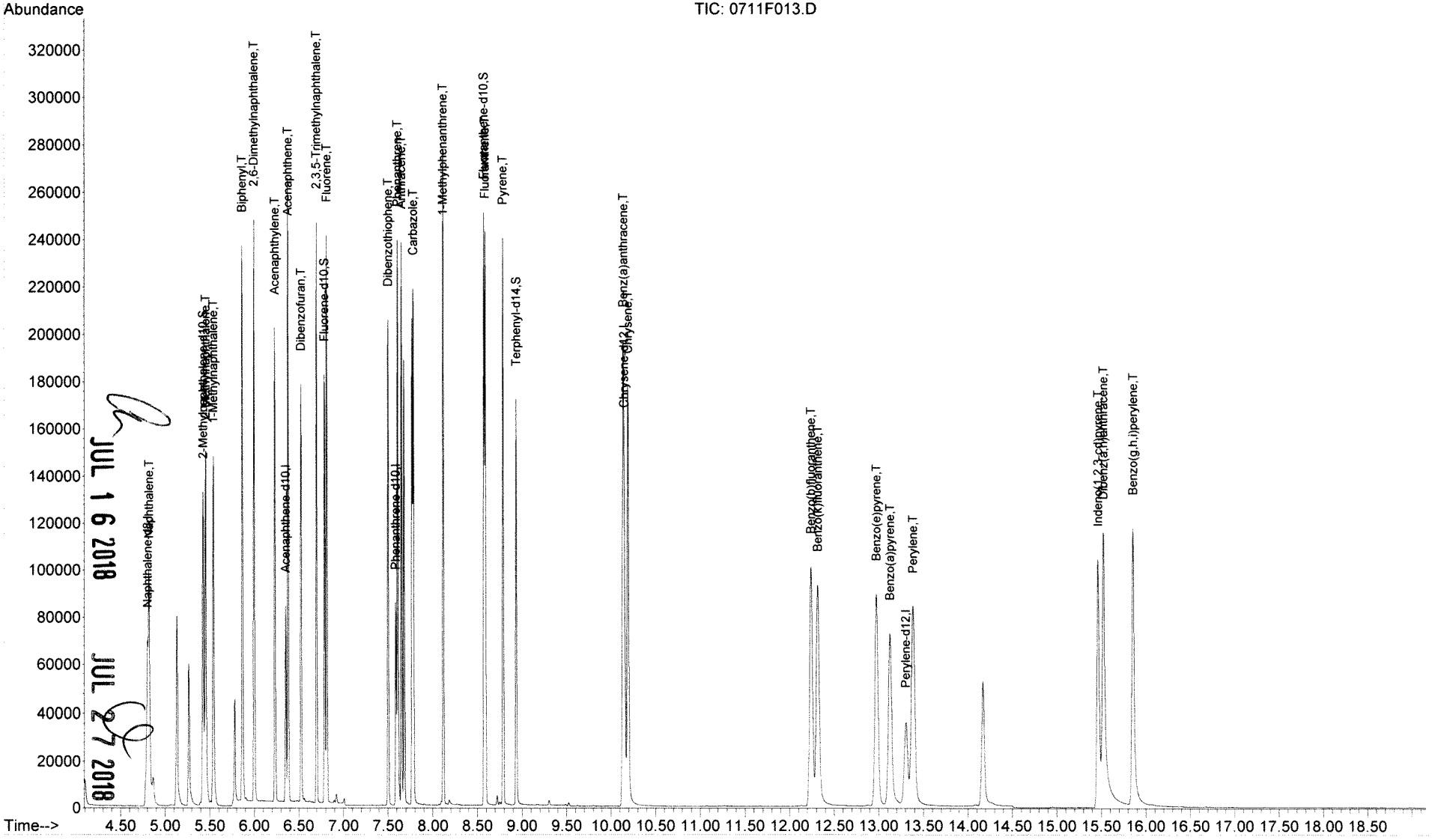
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F013.D 071118PAH.M Mon Jul 16 09:14:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:14 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



JUL 16 2018

JUL 27 2018

Injection Log

Directory: J:\MS14\DATA\110118

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	1101F001.D	1.	DFTPP @ 10ug/mL | SVM59-57A		1 Nov 2018 09:32
2	2	1101F002.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-81A		1 Nov 2018 10:01
3	3	1101F003.D	1.	KWG1805410-3 MB		1 Nov 2018 10:30
4	4	1101F004.D	1.	KWG1805410-1 LCS		1 Nov 2018 10:59
5	5	1101F005.D	1.	KWG1805410-2 DLCS		1 Nov 2018 11:28
6	6	1101F006.D	1.	K1810277-001		1 Nov 2018 11:58
7	7	1101F007.D	1.	K1810277-002		1 Nov 2018 12:27
8	8	1101F008.D	1.	K1810277-003	Needs Dilutions	1 Nov 2018 12:56
9	9	1101F009.D	1.	K1810277-004		1 Nov 2018 13:25
10	10	1101F010.D	1.	K1810277-005		1 Nov 2018 13:55
11	11	1101F011.D	1.	KWG1805607-3 MB		1 Nov 2018 14:24
12	12	1101F012.D	1.	KWG1805607-1 LCS		1 Nov 2018 14:53
13	13	1101F013.D	1.	KWG1805607-2 DLCS		1 Nov 2018 15:23
14	14	1101F014.D	1.	K1810430-012		1 Nov 2018 15:52
15	15	1101F015.D	1.	K1810516-001		1 Nov 2018 16:22
16	16	1101F016.D	1.	KWG1805487-3 MB		1 Nov 2018 16:51
17	17	1101F017.D	1.	KWG1805487-1 LCS		1 Nov 2018 17:20
18	18	1101F018.D	1.	KWG1805487-2 DLCS		1 Nov 2018 17:50
19	19	1101F019.D	1.	K1810420-001		1 Nov 2018 18:19
20	20	1101F020.D	1.	K1810420-002		1 Nov 2018 18:49
21	2	1101F021.D	1.	SIM-PAH CCV @0.4ug/mL | SVM59-81A		1 Nov 2018 19:18

*Lims # 614497
CAL15779
11/9/18

S

Injection Log

Directory: J:\MS14\DATA\071118

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	0711F001.D	1.	DFTPP @ 10ug/mL | SVM59-5B		11 Jul 2018 07:24
2	2	0711F002.D	1.	IB		11 Jul 2018 07:50
3	3	0711F003.D	1.	SIM-PAH ICAL @.002ug/mL | SVM59-4A		11 Jul 2018 08:16
4	4	0711F004.D	1.	SIM-PAH ICAL @.004ug/mL | SVM59-4B		11 Jul 2018 08:42
5	5	0711F005.D	1.	SIM-PAH ICAL @.008ug/mL | SVM59-4C		11 Jul 2018 09:08
6	6	0711F006.D	1.	SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D		11 Jul 2018 09:34
7	7	0711F007.D	1.	SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E		11 Jul 2018 10:00
8	8	0711F008.D	1.	SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F		11 Jul 2018 10:26
9	9	0711F009.D	1.	SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G		11 Jul 2018 10:52
10	10	0711F010.D	1.	SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H		11 Jul 2018 11:18
11	11	0711F011.D	1.	SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I		11 Jul 2018 11:44
12	12	0711F012.D	1.	SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J		11 Jul 2018 12:10
13	13	0711F013.D	1.	SIM-PAH ICV @ 0.4ug/mL | SVM59-4K		11 Jul 2018 12:36
~~14~~	~~14~~	~~0711F014.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 13:02~~
~~15~~	~~15~~	~~0711F015.D~~	~~1.~~	~~KQ1808822-3 MB~~		~~11 Jul 2018 13:28~~
~~16~~	~~16~~	~~0711F016.D~~	~~1.~~	~~KQ1808822-1 LCS~~		~~11 Jul 2018 13:55~~
~~17~~	~~17~~	~~0711F017.D~~	~~1.~~	~~KQ1808822-2 DLCS~~		~~11 Jul 2018 14:21~~
~~18~~	~~18~~	~~0711F018.D~~	~~1.~~	~~K1806167-007~~		~~11 Jul 2018 14:47~~
~~19~~	~~19~~	~~0711F019.D~~	~~1.~~	~~K1806167-008~~		~~11 Jul 2018 15:14~~
~~20~~	~~20~~	~~0711F020.D~~	~~1.~~	~~K1805517-004~~		~~11 Jul 2018 15:40~~
~~21~~	~~21~~	~~0711F021.D~~	~~1.~~	~~K1805519-006~~		~~11 Jul 2018 16:07~~
~~22~~	~~14~~	~~0711F022.D~~	~~1.~~	~~SIM-PAH CCV @ 0.4ug/mL | SVM59-24A~~		~~11 Jul 2018 16:34~~

SIM-PAH ICAL

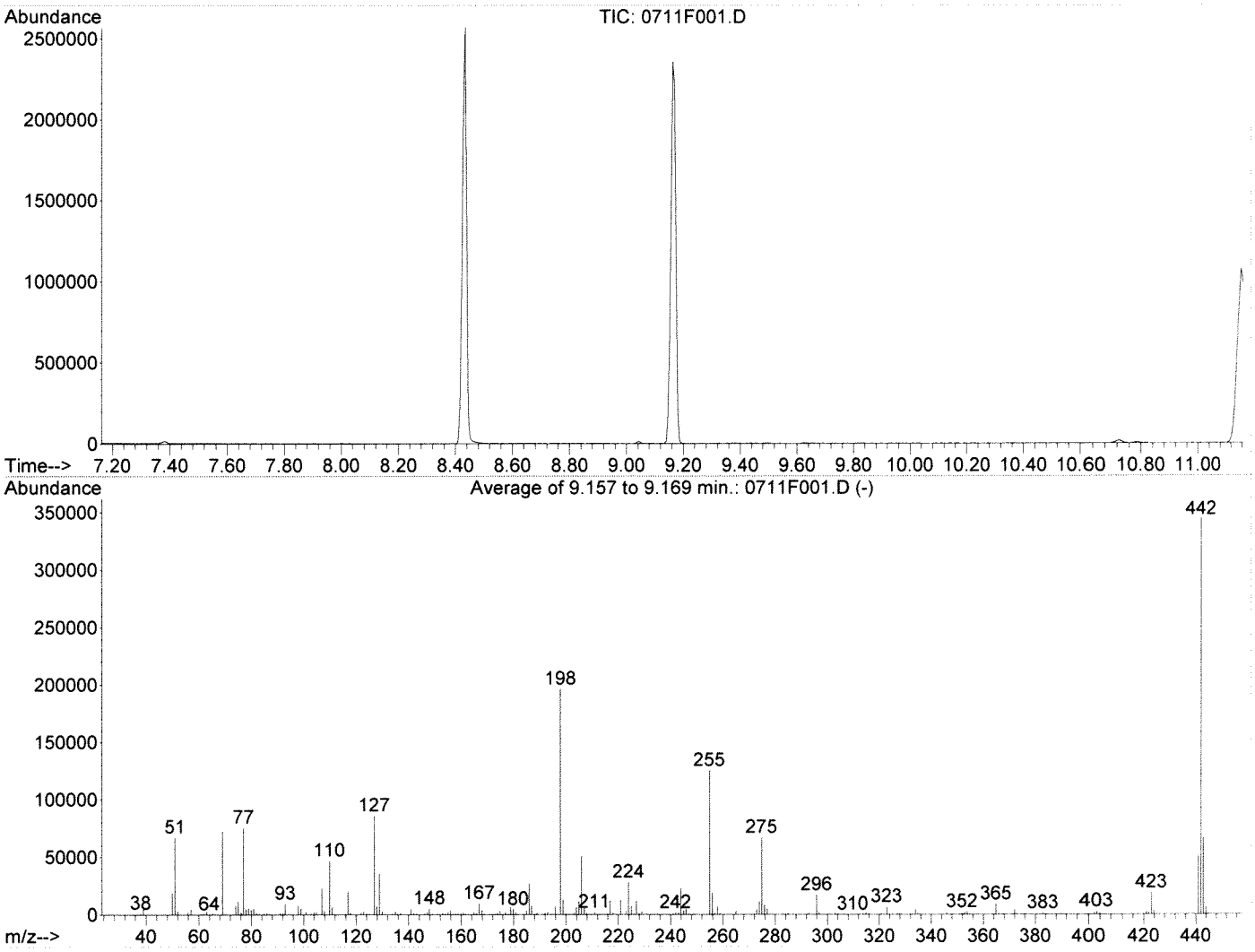
CAL15779

JUL 16 2018

JUL 27 2018

DFTPP

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix



AutoFind: Scans 522, 523, 524; Background Corrected with Scan 516

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	34.2	67178	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	37.1	72816	PASS
70	69	0.00	2	0.8	565	PASS
127	198	10	80	43.8	86077	PASS
197	198	0.00	2	0.0	0	PASS
198	442	30	100	56.9	196352	PASS
199	198	5	9	6.5	12793	PASS
275	198	10	60	34.1	67032	PASS
365	442	1	50	2.6	8831	PASS
441	443	0.01	100	76.0	51069	PASS
442	442	30	100	100.0	344981	PASS
443	442	15	24	19.5	67152	PASS

JUL 16 2018

JUL 27 2018

J:\MS14\DATA\071118\0711F001.D A_DFTPP.M Mon Jul 16 09:16:46 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
36.95	422	52.00	3270	66.10	60	77.00	75757
38.00	1061	52.95	252	66.90	133	78.00	5265
39.00	5050	54.95	367	67.20	111	78.95	6051
39.90	450	55.95	2219	68.95	72816	79.95	4460
41.00	145	57.00	4515	69.85	565	81.00	5387
42.95	189	57.90	205	70.90	56	81.95	1583
44.00	59	60.95	997	73.05	769	82.95	1369
44.90	126	61.95	1079	74.00	8076	83.90	282
48.10	73	63.00	2719	75.00	11602	84.95	1177
50.00	19013	63.95	413	76.00	1399	85.95	1822
51.00	67178	65.00	1325	76.20	1668	86.95	803

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
87.95	285	99.95	506	112.85	198	124.90	1126
88.90	130	100.90	2768	114.80	159	126.95	86077
90.95	1445	101.90	87	116.05	1356	127.95	7121
92.00	1657	102.90	1279	116.90	20493	128.90	35413
92.95	9598	103.95	2203	117.85	1421	129.95	2909
93.90	764	104.90	2137	118.85	202	130.90	596
94.90	260	106.95	23325	120.00	347	131.85	286
95.95	399	107.95	3588	121.05	223	132.90	113
97.00	184	109.90	46866	121.90	1845	133.85	1020
97.95	7812	110.95	6574	122.90	2792	134.90	2878
98.90	5707	111.90	845	123.95	974	135.85	1123

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
136.95	1387	146.95	2258	157.90	1033	168.90	418
137.90	180	147.90	5200	158.85	675	169.10	172
138.10	80	148.95	1069	159.90	1384	169.85	345
138.95	357	149.90	242	160.90	2084	170.40	79
139.95	518	150.95	648	161.85	666	170.90	499
140.90	4757	151.75	466	162.95	226	171.80	868
141.90	1547	152.90	1588	163.95	352	172.95	967
142.90	919	153.90	1093	164.85	2040	173.90	1870
143.90	287	154.95	2265	165.85	1502	174.90	3597
144.85	308	155.95	3794	166.90	9686	176.00	1075
145.95	1008	156.95	752	167.90	4018	176.90	1875

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
177.95	723	186.90	8039	198.90	12793	210.30	330
178.90	6732	187.95	833	199.90	953	210.90	2074
179.90	4619	188.90	1815	201.35	1105	211.80	146
180.90	2110	189.85	379	202.90	1391	212.90	61
181.95	406	190.95	863	203.95	6760	214.10	53
182.70	66	191.90	2255	204.95	11699	214.95	698
182.95	174	192.95	2443	205.95	51016	215.85	1357
183.80	140	193.90	500	206.95	6909	216.90	12207
183.95	404	194.90	286	207.90	1813	217.85	1663
184.95	3360	195.90	6967	208.90	543	218.90	142
185.90	27480	197.90	196352	209.90	294	220.90	12633

JUL 16 2018

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
222.90	3179	233.85	760	244.95	3370	255.90	18613
223.90	28144	234.90	857	245.90	4758	256.95	1466
224.95	7360	235.90	530	246.90	1019	257.90	7031
225.95	994	236.90	879	247.80	162	258.95	1297
226.90	12054	237.80	67	248.10	77	259.80	131
227.85	1634	238.85	481	248.85	832	260.95	199

JUL 27 2018

229.95	377	240.85	634	250.90	178	264.90	3018
230.90	992	241.90	1624	251.85	276	265.85	450
231.90	200	243.00	1778	252.95	599	269.95	129
232.90	244	243.90	23113	254.90	125421	270.90	256

Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
271.95	496	284.85	977	301.85	234	316.95	160
272.90	4336	285.95	143	302.95	2145	320.95	658
273.90	11367	288.75	165	303.95	691	321.95	381
274.90	67032	289.80	209	307.85	308	322.95	6548
275.90	8655	291.85	178	308.80	217	323.95	1035
276.90	5306	292.90	1246	309.85	251	324.80	52
277.90	771	293.95	326	310.90	52	325.85	184
278.85	205	295.90	17068	312.95	171	326.90	968
281.95	112	296.90	2301	313.90	944	327.80	661
282.90	631	297.80	68	314.90	2064	331.85	496
283.90	432	300.90	235	315.90	1065	332.85	680

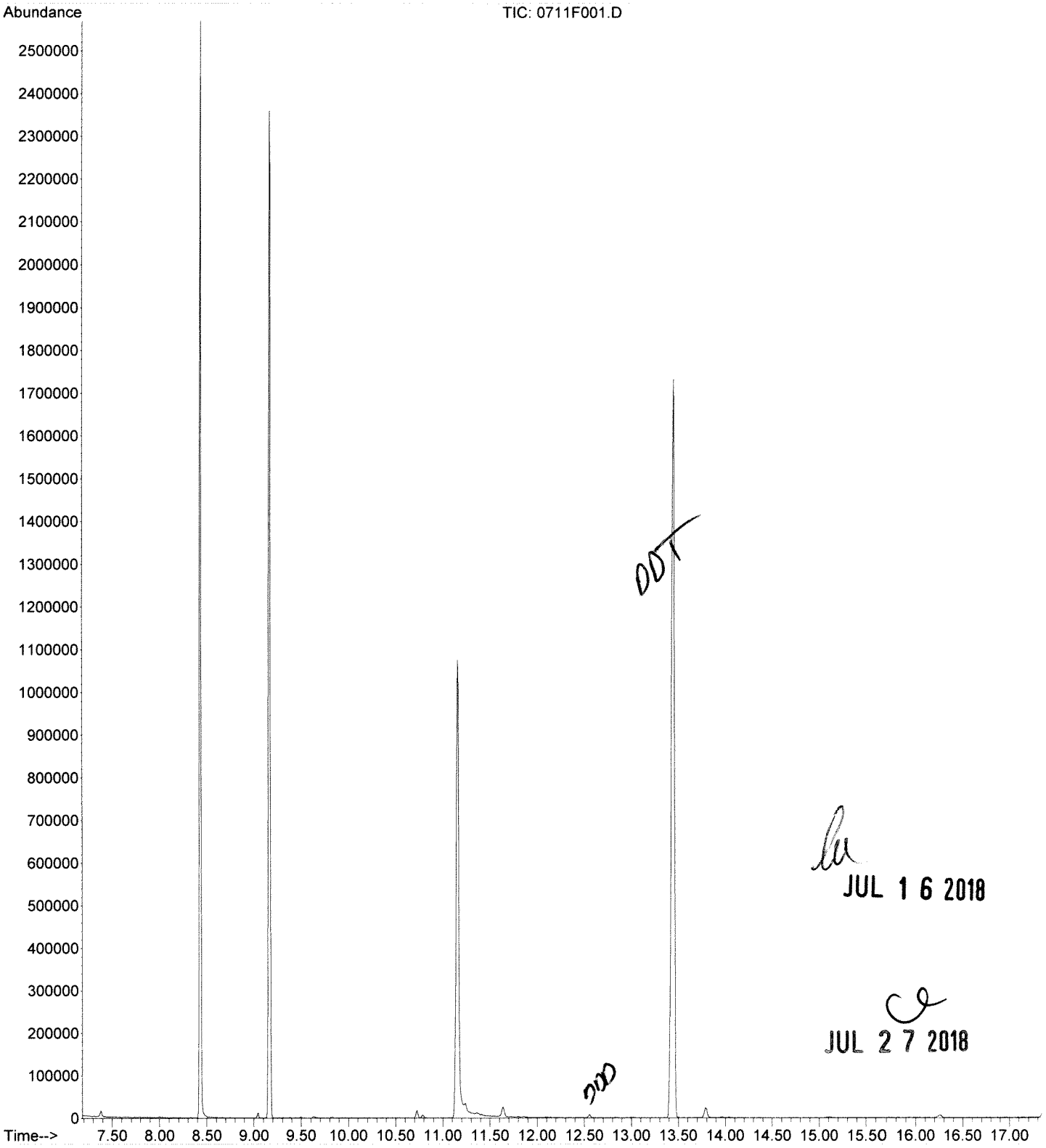
Average of 9.157 to 9.169 min.: 0711F001.D
DFTPP @ 10ug/mL | SVM59-5B
Modified:subtracted

m/z	abund.	m/z	abund.	m/z	abund.	m/z	abund.
333.90	4464	353.90	2529	382.95	1153	420.95	2473
334.90	1166	354.90	486	383.85	376	421.95	2435
339.80	51	358.85	126	389.95	690	422.95	18744
340.85	729	364.90	8831	390.95	465	423.90	3777
341.80	50	365.90	1261	391.90	350	424.95	479
342.00	143	369.95	218	400.90	274	439.40	77
345.90	1535	370.85	633	401.90	1735	441.00	51069
346.75	180	371.95	3936	402.90	2497	442.00	344981
350.75	114	372.90	1005	403.90	1060	443.00	67152
351.90	2058	373.85	127	404.80	57	443.95	6376
352.90	1618	376.90	51	415.00	64	444.90	445

JUL 16 2018

JUL 27 2018

File : J:\MS14\DATA\071118\0711F001.D
Operator : LWeiskopf
Acquired : 11 Jul 2018 7:24 am using AcqMethod SIMLOC
Instrument : MS14
Sample Name: DFTPP @ 10ug/mL | SVM59-5B
Misc Info :
Vial Number: 1



1	6.551	rBV	0.059		4433	6.534	6.593
2	6.628	rVB	0.059		4930	6.610	6.669
3	7.069	rBV	0.153		93262	7.022	7.175
4	7.381	rVB	0.094		22489	7.357	7.451
5	7.781	rVB	0.053		2074	7.769	7.822
6	7.904	rVB	0.047		3184	7.887	7.934
7	7.998	rVV	0.035		2540	7.981	8.016
8	8.434	rBV	0.124		2626380	8.398	8.522
9	8.751	rBV	0.041		2434	8.728	8.769
10	9.045	rVB	0.094		15370	8.992	9.086
11	9.163	rBV	0.118		2833533	9.104	9.222
12	9.310	rBV	0.053		2540	9.286	9.339
13	9.381	rVB	0.047		2669	9.363	9.410
14	9.498	rVB	0.047		3470	9.475	9.522
15	9.628	rBV	0.082		7018	9.598	9.681
16	9.822	rBV	0.076		4234	9.781	9.857
17	10.728	rBV	0.071		25758	10.686	10.757
18	10.786	rBV	0.059		9354	10.757	10.816
19	11.157	rBV	0.141		2070977	11.080	11.222
20	11.639	rVB	0.094		47781	11.592	11.686
21	11.851	rVB	0.071		6566	11.833	11.904
22	12.092	rBV	0.076		4460	12.051	12.127
23	12.551	rVB	0.082	OOO	12363	12.510	12.592
24	12.827	rVB	0.082		3949	12.804	12.886
25	12.998	rBV	0.047		2358	12.969	13.016
26	13.445	rBV	0.118	OOT	3799669	13.374	13.492
27	13.786	rBV	0.129		55536	13.727	13.857
28	13.963	rBV	0.071		3973	13.916	13.986
29	14.033	rBV	0.041		2081	14.021	14.063
30	15.086	rBV	0.065		3243	15.033	15.098
31	15.110	rVB	0.047		3085	15.098	15.145
32	16.257	rBV	0.106		18961	16.192	16.298
33	17.351	rBV	0.124		41324	17.298	17.421
34	17.821	rBV	0.035		2171	17.798	17.833
35	17.868	rBV	0.047		3073	17.833	17.880
36	18.098	rBV	0.159		129861	18.039	18.198
37	18.645	rVB	0.141		212579	18.615	18.756
38	19.092	rBV	0.165		383897	19.056	19.221
39	19.545	rBV	0.153		391093	19.509	19.662
40	20.103	rBV	0.153		441132	20.062	20.215
41	20.692	rBV	0.118		334151	20.650	20.768

OOT Breakdown

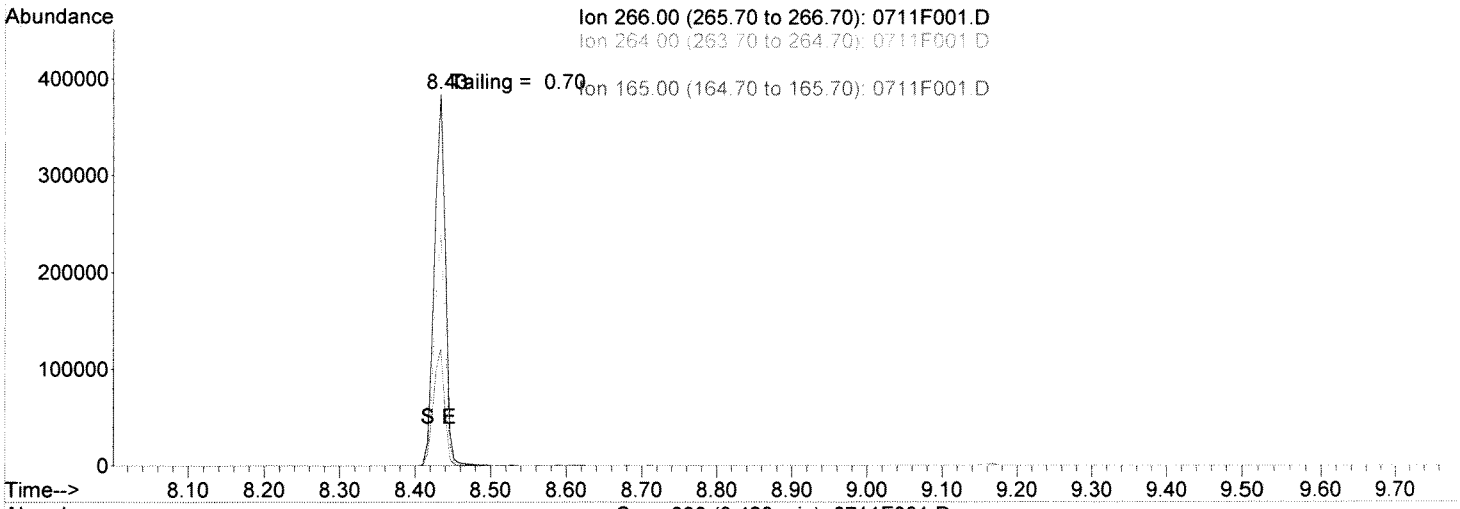
= 0.3%

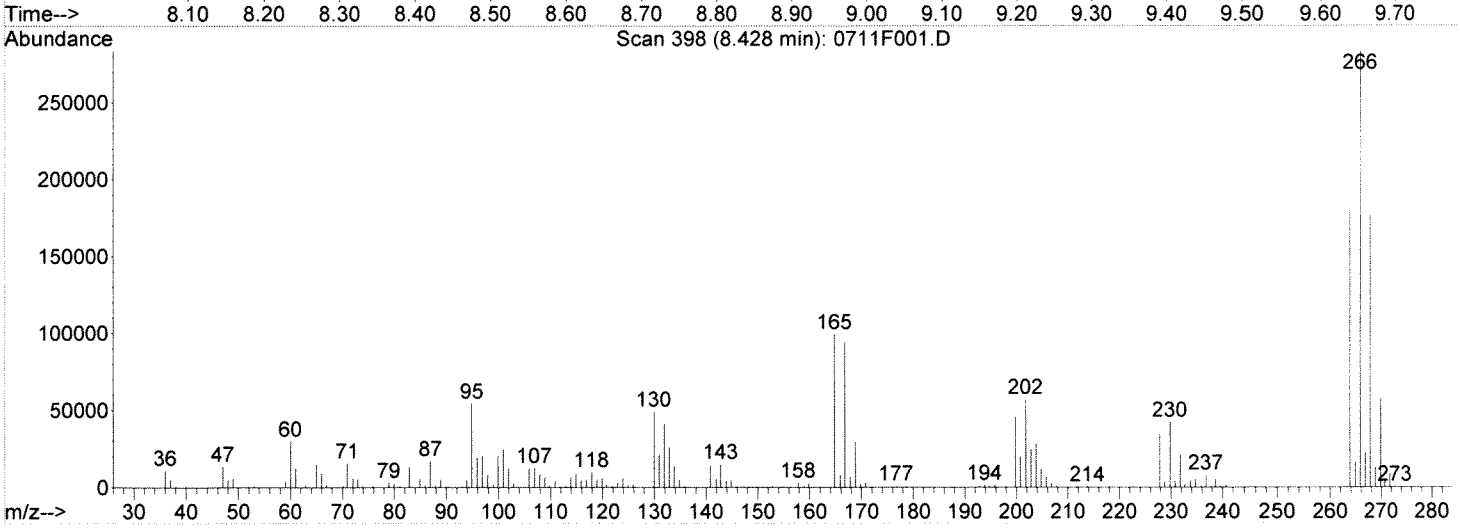
JUL 16 2018

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(1) Pentachlorophenol

7.37min 0.00ng/ml

response 0

Ion	Exp%	Act%
266.00	100	0.00
264.00	62.30	0.00#
268.00	72.30	0.00#
165.00	42.00	0.00#

OK -2%

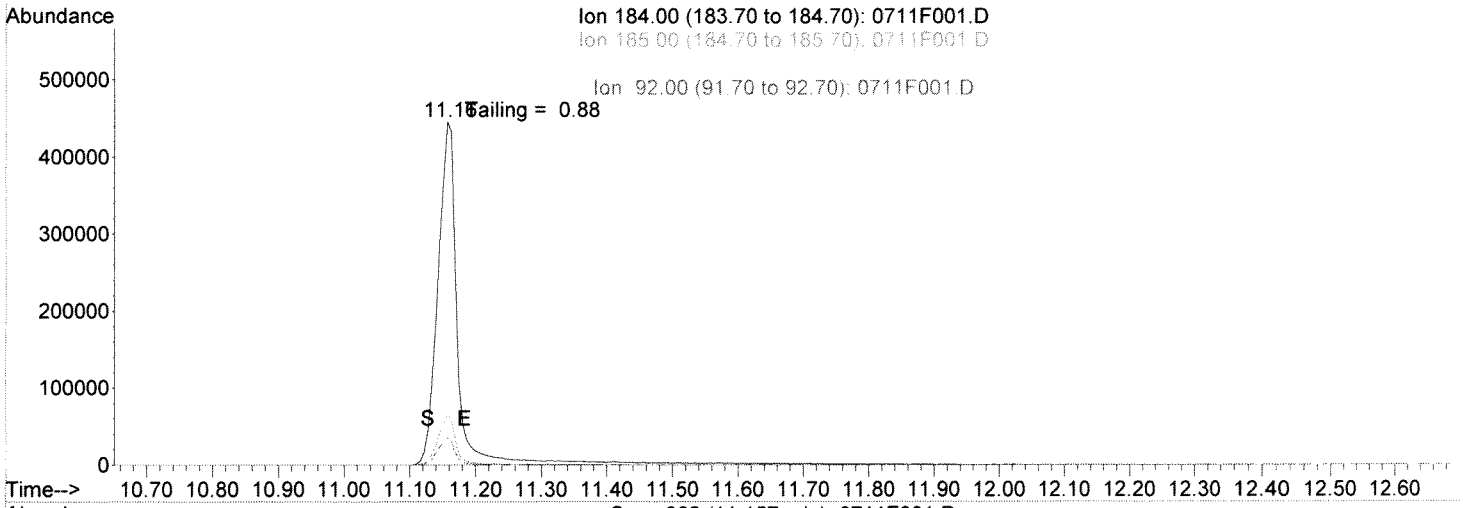
JUL 16 2018

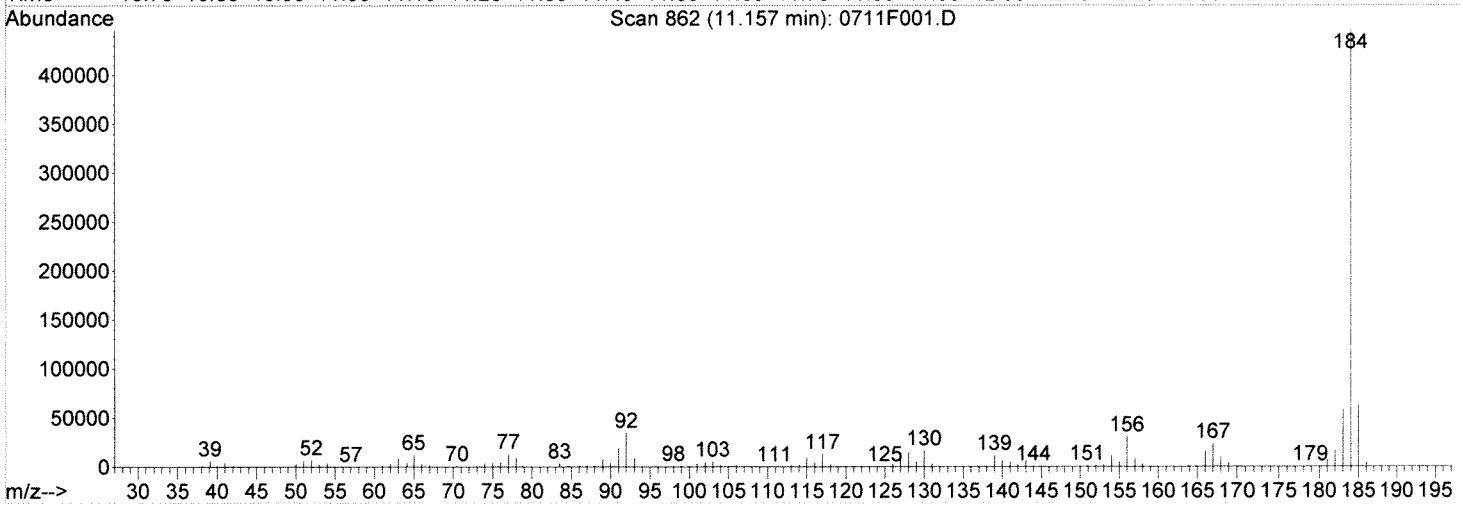
JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:15 2018

Data File : J:\MS14\DATA\071118\0711F001.D Vial: 1
Acq On : 11 Jul 2018 7:24 am Operator: LWeiskopf
Sample : DFTPP @ 10ug/mL | SVM59-5B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: rteint.p
Quant Time: Jul 11 7:49 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\A_DFTPP.M (RTE Integrator)
Title : dftpp tune mix
Last Update : Tue Oct 17 14:59:38 2017
Response via : Single Level Calibration





TIC: 0711F001.D

(3) Benzidine (T)

8.69min 0.00ug/ml

response 0

Ion	Exp%	Act%
184.00	100	0.00
185.00	14.70	0.00
156.00	9.50	0.00
92.00	7.60	0.00

JUL 16 2018

JUL 27 2018

0711F001.D A_DFTPP.M Mon Jul 16 09:17:28 2018

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	71486	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	36864	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	76395	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	90682	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	102113	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	0.00	152	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
13) Fluorene-d10	6.79	176	201	0.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.08%		
22) Fluoranthene-d10	0.00	212	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
25) Terphenyl-d14	0.00	244	0	0.00	ng/ml	
Spiked Amount 1000.000			Recovery =	0.00%		
Target Compounds						Qvalue
2) Naphthalene	4.83	128	323	0.82	ng/ml	94
21) Fluoranthene	8.59	202	116	0.20	ng/ml	70
26) Benz(a)anthracene	10.15	228	342	0.60	ng/ml	73
27) Chrysene	10.19	228	118	0.21	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	156	0.24	ng/ml	81
31) Benzo(e)pyrene	12.97	252	134	0.22	ng/ml	85
32) Benzo(a)pyrene	13.11	252	126	0.24	ng/ml	75
33) Perylene	13.30	252	287	0.51	ng/ml	85
34) Indeno(1,2,3-cd)pyrene	15.46	276	117	0.25	ng/ml	89
35) Dibenz(a,h)anthracene	15.51	278	95	0.19	ng/ml#	1
36) Benzo(g,h,i)perylene	15.84	276	178	0.30	ng/ml	89

< 1/2 MRL

7/16/18

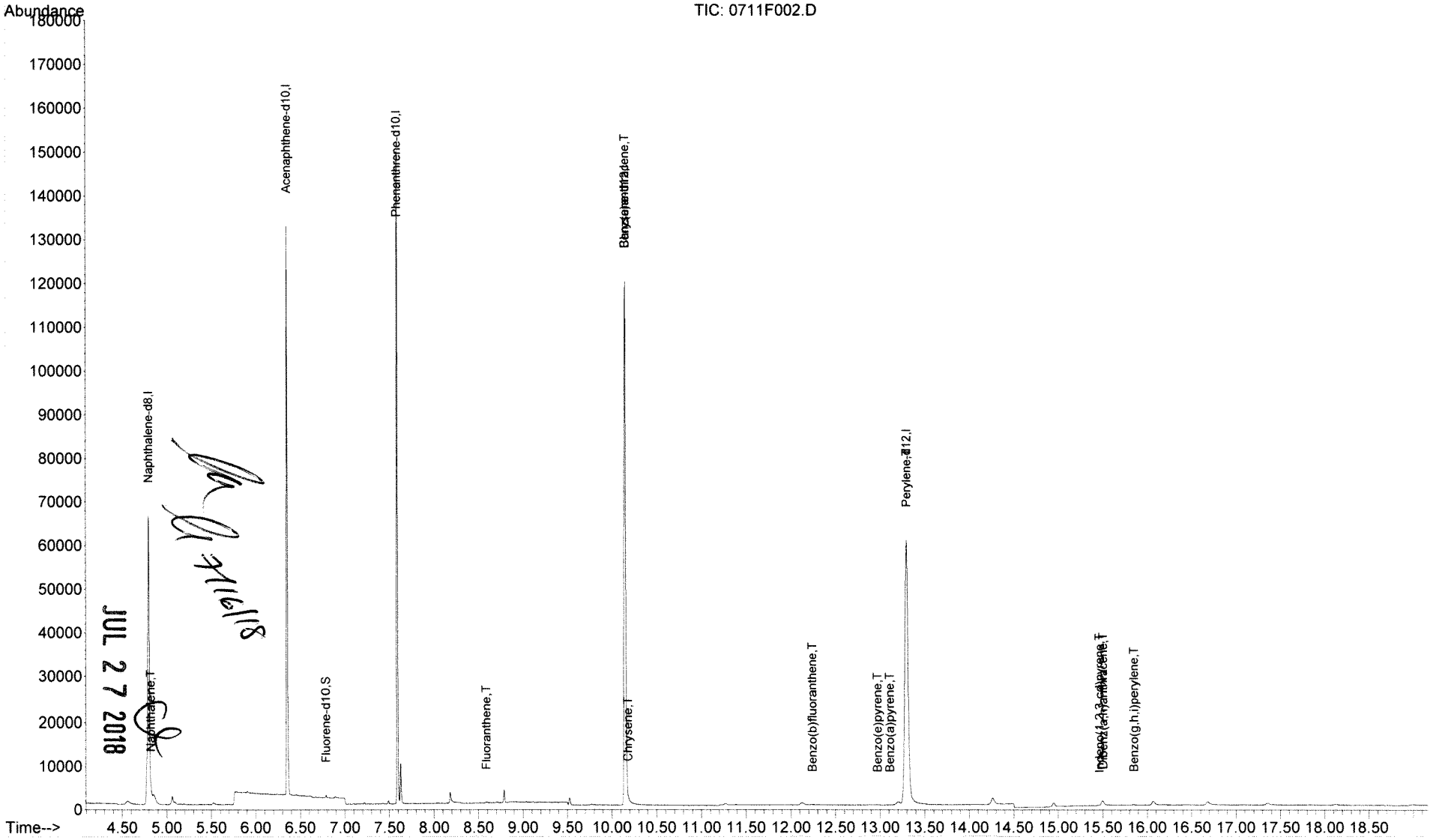
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F002.D 071118PAH.M Mon Jul 16 09:16:23 2018 Page 1

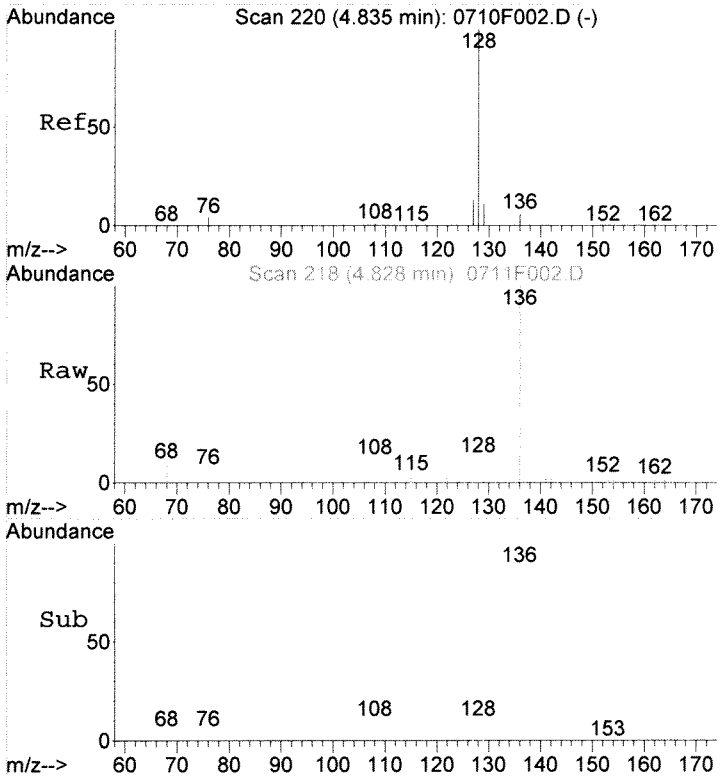
Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F002.D Vial: 2
Acq On : 11 Jul 2018 7:50 am Operator: LWeiskopf
Sample : IB Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:16 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration



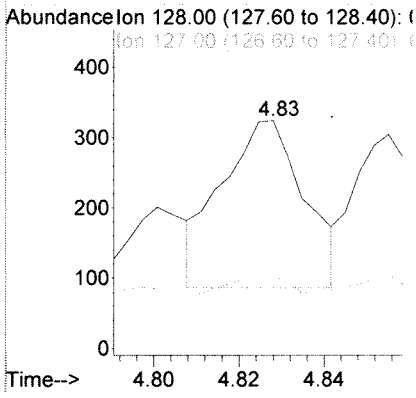
JUL 27 2018

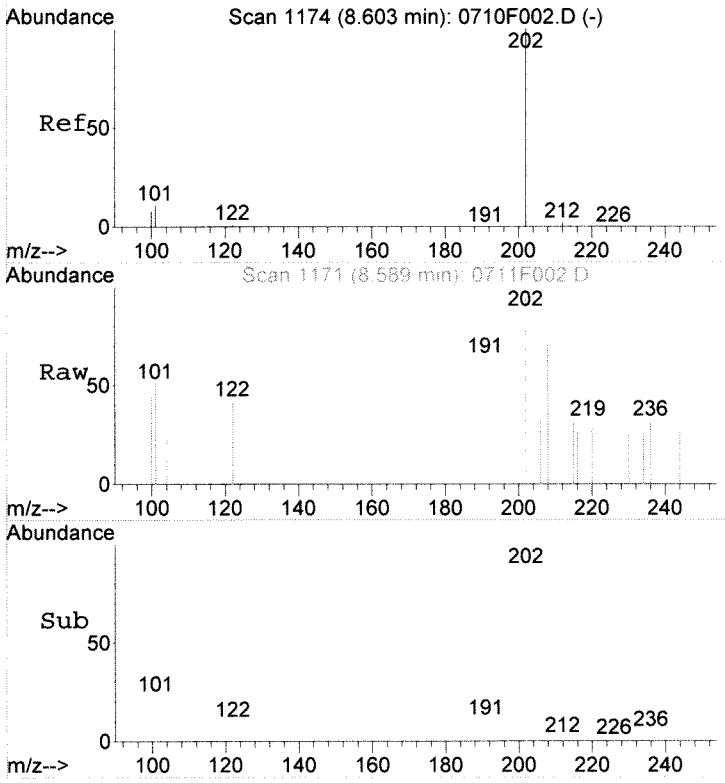


#2
Naphthalene
Concen: 0.82 ng/ml
RT: 4.83 min Scan# 218
Delta R.T. -0.01 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:128 Resp: 323

Ion	Ratio	Lower	Upper
128	100		
127	11.9	0.0	42.4
129	15.2	0.0	30.8

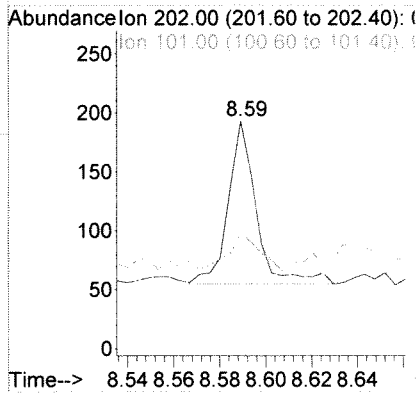




#21
Fluoranthene
Concen: 0.20 ng/ml
RT: 8.59 min Scan# 1171
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

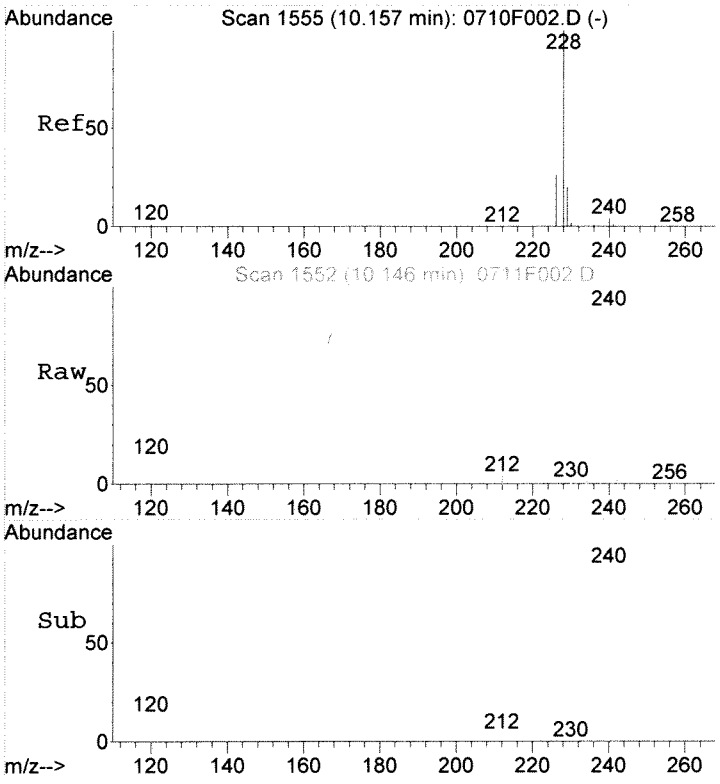
Tgt Ion:202 Resp: 116

Ion	Ratio	Lower	Upper
202	100		
101	17.4	0.0	40.7
100	23.9	0.0	27.5



7/16/18

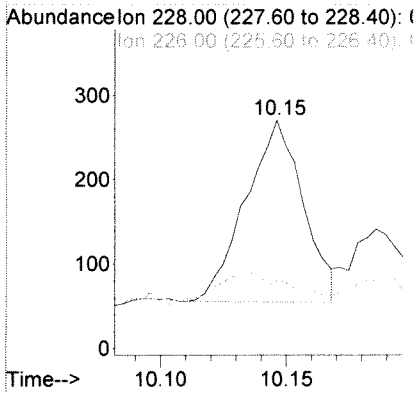
JUL 27 2018

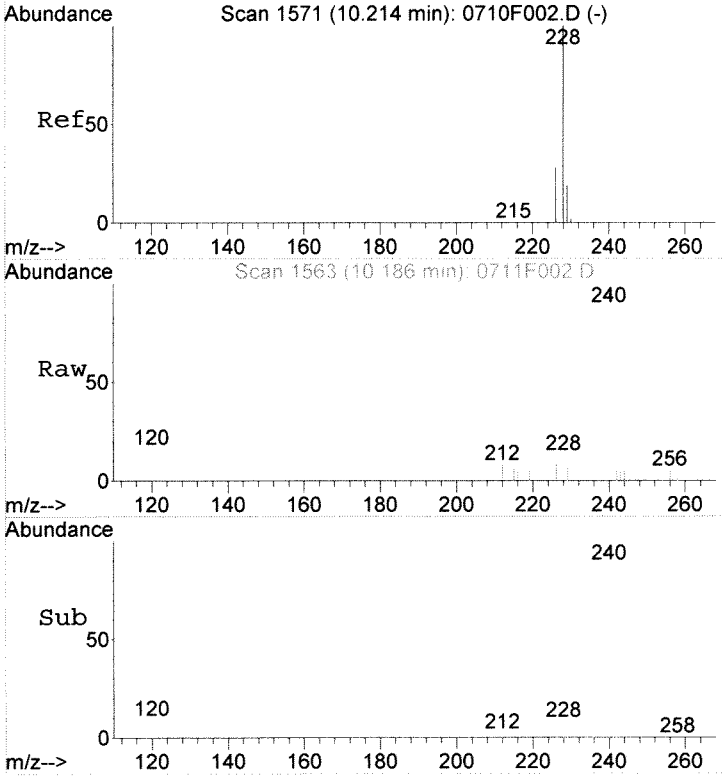


#26
Benz(a)anthracene
Concen: 0.60 ng/ml
RT: 10.15 min Scan# 1552
Delta R.T. -0.02 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:228 Resp: 342

Ion	Ratio	Lower	Upper
228	100		
226	9.8	0.0	56.0
229	28.8	0.0	39.5

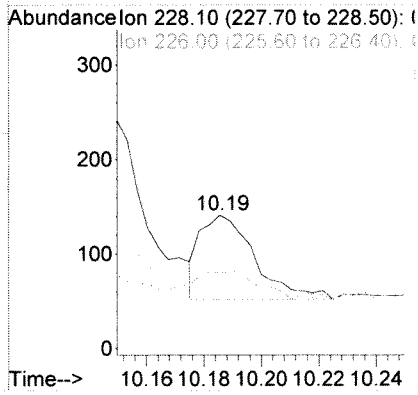




#27
Chrysene
Concen: 0.21 ng/ml
RT: 10.19 min Scan# 1563
Delta R.T. -0.03 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

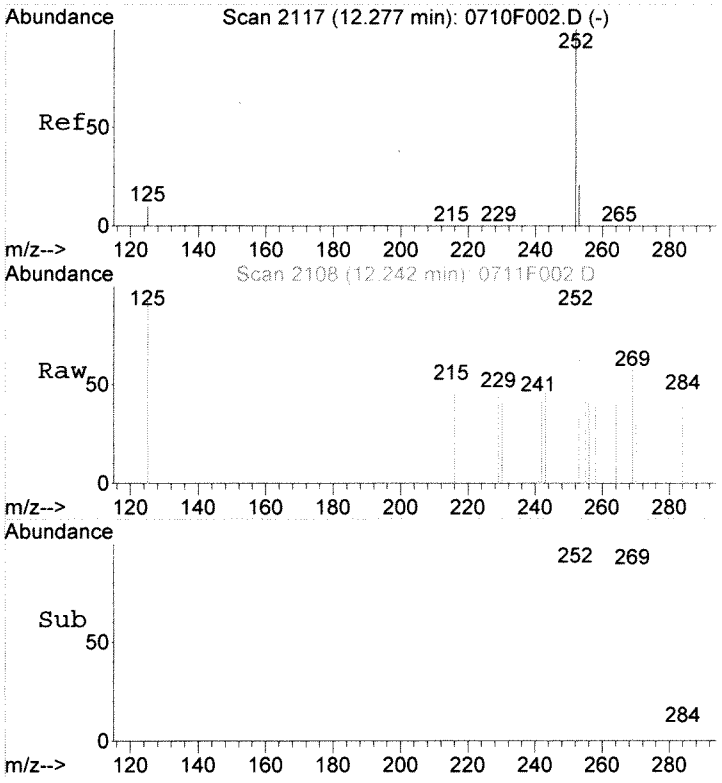
Tgt Ion:228 Resp: 118

Ion	Ratio	Lower	Upper
228	100		
226	31.5	0.0	58.6
229	18.0	0.0	39.4



7/16/18

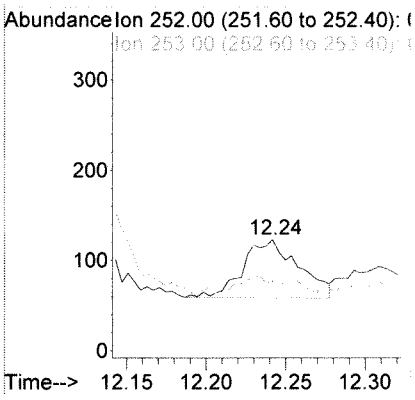
JUL 27 2018

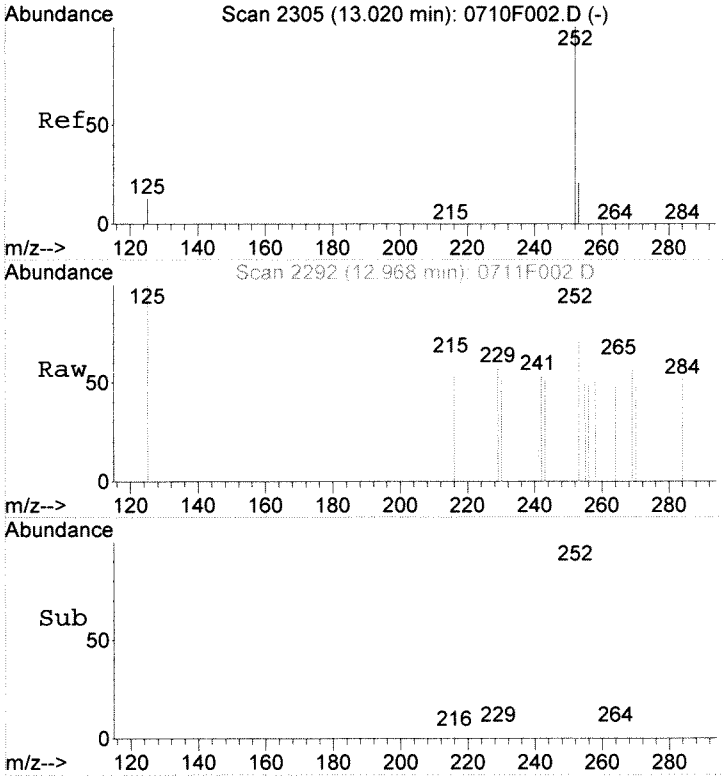


#29
Benzo(b)fluoranthene
Concen: 0.24 ng/ml
RT: 12.24 min Scan# 2108
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252 Resp: 156

Ion	Ratio	Lower	Upper
252	100		
253	10.9	0.0	51.4
125	10.9	0.0	27.3

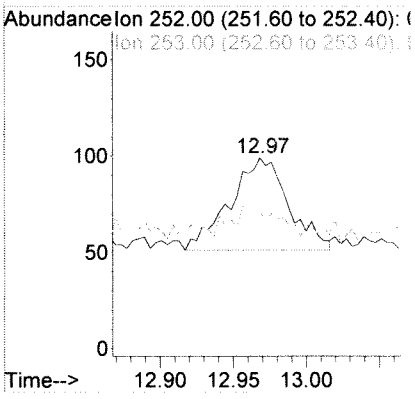




#31
Benzo(e)pyrene
Concen: 0.22 ng/ml
RT: 12.97 min Scan# 2292
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

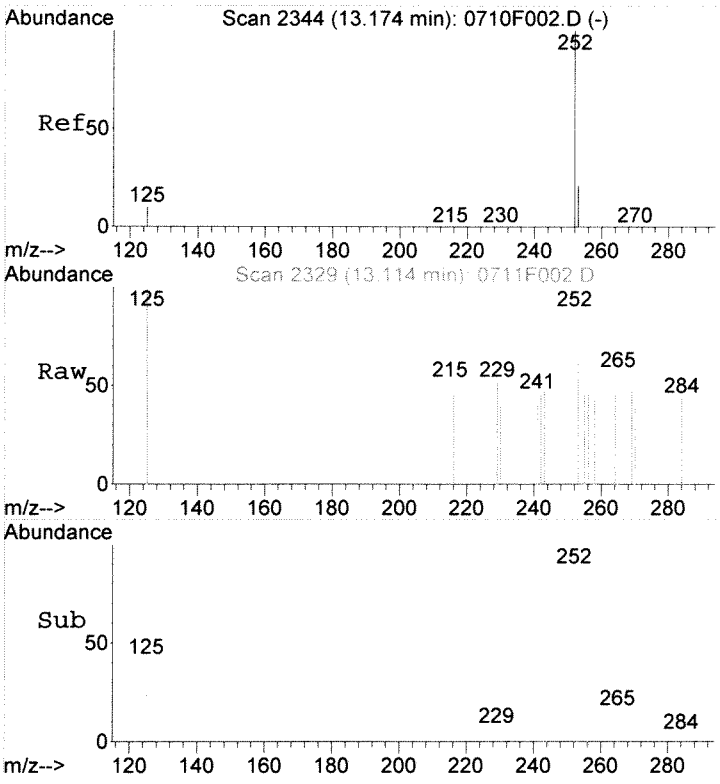
Tgt Ion:252 Resp: 134

Ion	Ratio	Lower	Upper
252	100		
253	25.0	0.0	51.3
125	0.0	0.0	30.8



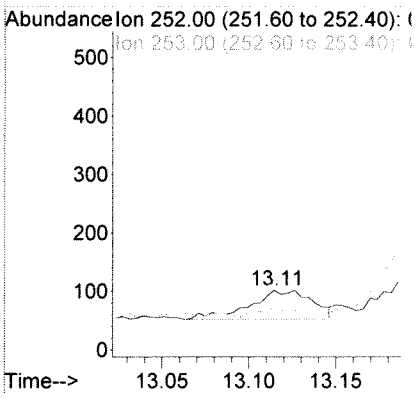
7/16/18

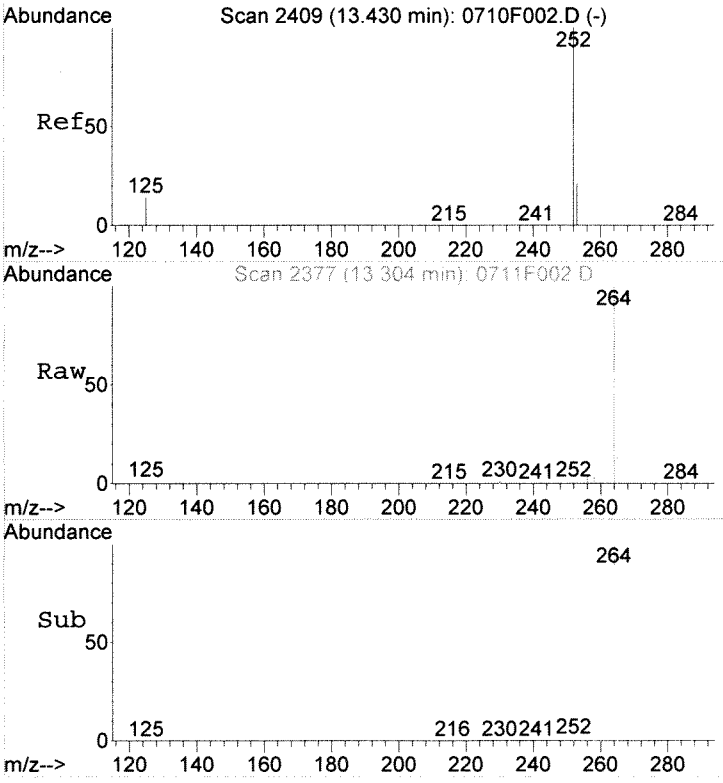
JUL 27 2018



#32
Benzo(a)pyrene
Concen: 0.24 ng/ml
RT: 13.11 min Scan# 2329
Delta R.T. -0.06 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

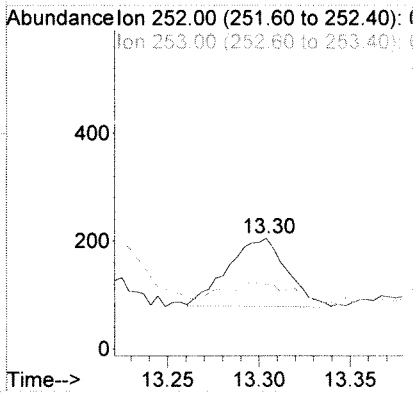
Tgt Ion:252	Resp:	126	
Ion	Ratio	Lower	Upper
252	100		
253	14.0	0.0	51.3
125	26.0	0.0	28.1





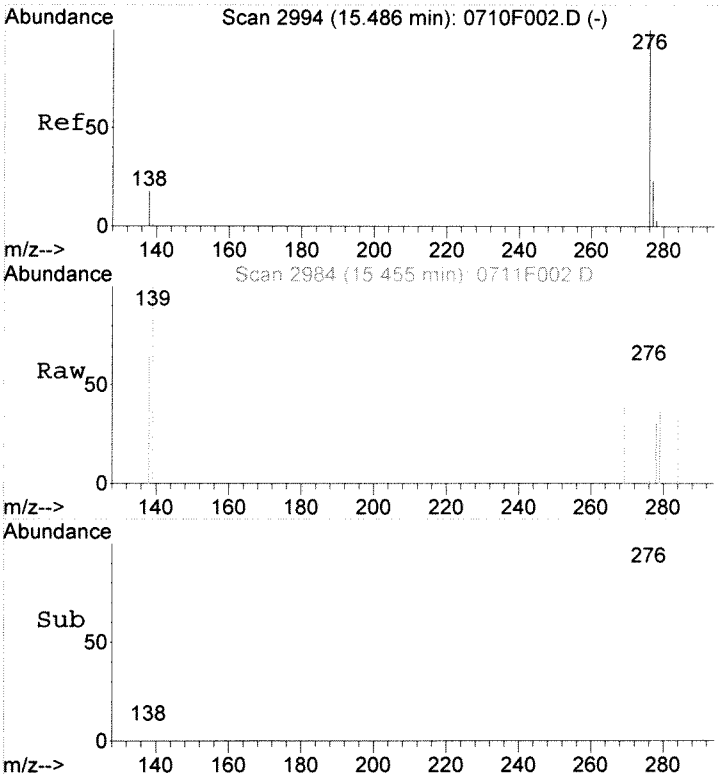
#33
Perylene
Concen: 0.51 ng/ml
RT: 13.30 min Scan# 2377
Delta R.T. -0.13 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:252	Resp:	287	
Ion	Ratio	Lower	Upper
252	100		
253	25.4	0.0	51.4
125	22.2	0.0	31.3



7/16/18

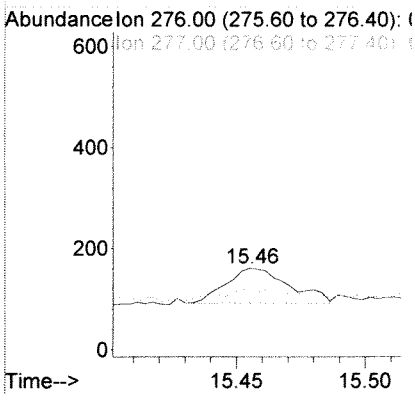
JUL 27 2018

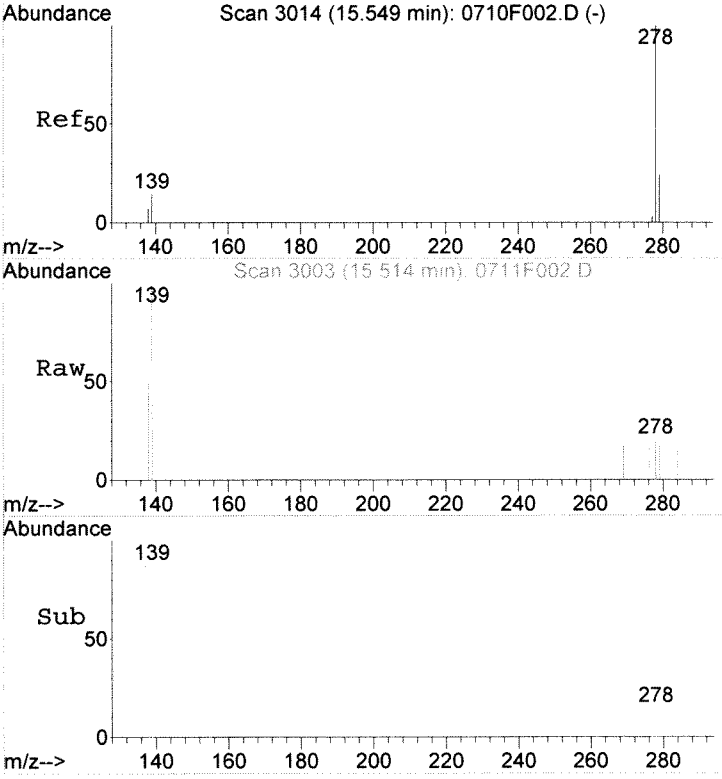


#34
Indeno(1,2,3-cd)pyrene
Concen: 0.25 ng/ml
RT: 15.46 min Scan# 2984
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 117

Ion	Ratio	Lower	Upper
276	100		
277	31.9	0.0	53.6
138	17.4	0.0	36.2

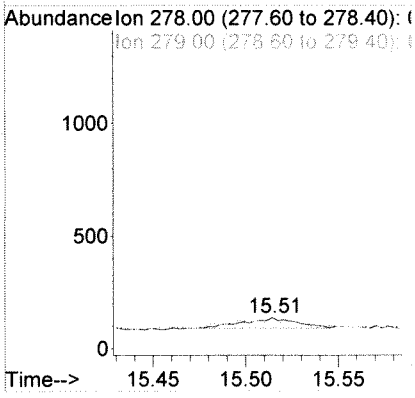




#35
Dibenz(a,h)anthracene
Concen: 0.19 ng/ml
RT: 15.51 min Scan# 3003
Delta R.T. -0.04 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

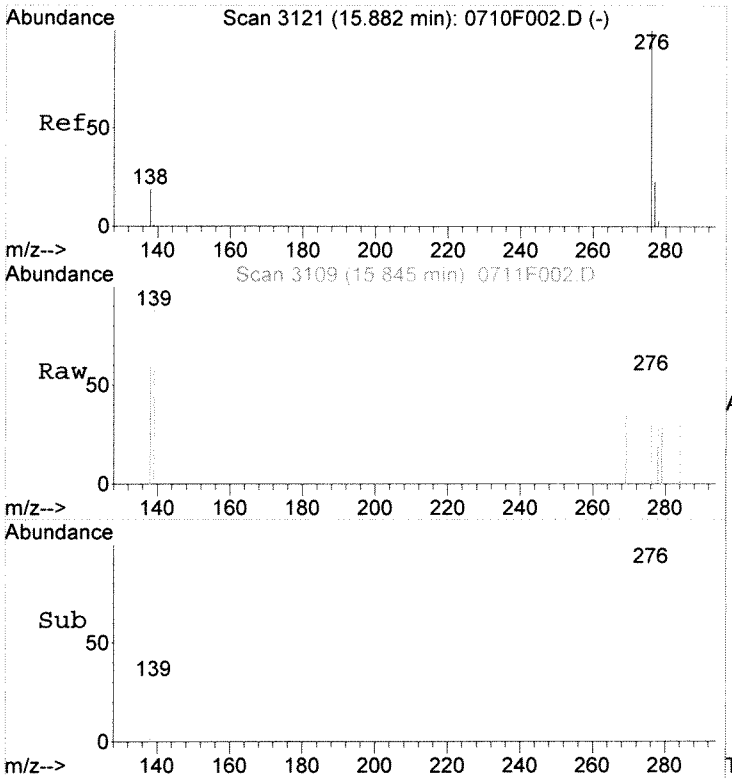
Tgt Ion:278 Resp: 95

Ion	Ratio	Lower	Upper
278	100		
279	31.3	0.0	53.6
139	702.1	0.0	33.4#



7/16/18

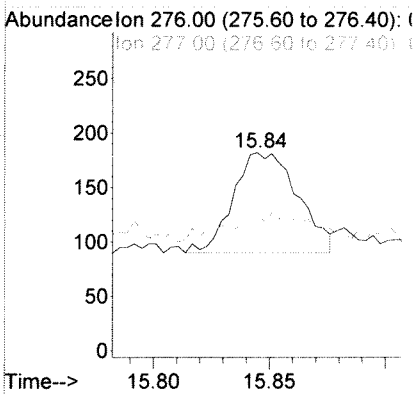
JUL 27 2018



#36
Benzo(g,h,i)perylene
Concen: 0.30 ng/ml
RT: 15.84 min Scan# 3109
Delta R.T. -0.05 min
Lab File: 0711F002.D
Acq: 11 Jul 2018 7:50 am

Tgt Ion:276 Resp: 178

Ion	Ratio	Lower	Upper
276	100		
277	27.2	0.0	53.5
138	23.9	0.0	37.2



7/16/18

JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:39 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	66665	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	32181	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	67500	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72337	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	80376	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	416	2.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.22%		
13) Fluorene-d10	6.79	176	593	2.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.28%		
22) Fluoranthene-d10	8.58	212	796	1.90	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.19%		
25) Terphenyl-d14	8.93	244	986	3.00	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	0.30%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	947	2.59	ng/ml	96
4) 2-Methylnaphthalene	5.45	142	526	2.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	527	2.33	ng/ml	96
6) Biphenyl	5.86	154	672	2.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	469	2.33	ng/ml	96
9) Acenaphthylene	6.23	152	810	2.15	ng/ml	97
10) Acenaphthene	6.38	154	463	2.14	ng/ml	99
11) Dibenzofuran	6.53	168	724	2.09	ng/ml	90
12) 2,3,5-Trimethylnaphthalene	6.70	170	450	2.21	ng/ml	94
14) Fluorene	6.81	166	582	2.17	ng/ml	100
16) Dibenzothiophene	7.51	184	890	2.13	ng/ml	93
17) Phenanthrene	7.61	178	900m	2.18	ng/ml	
18) Anthracene	7.65	178	807	2.00	ng/ml	98
19) Carbazole	7.79	167	753	2.07	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	652	2.01	ng/ml	97
21) Fluoranthene	8.59	202	1013	2.02	ng/ml	97
24) Pyrene	8.79	202	1081	2.13	ng/ml#	48
26) Benz(a)anthracene	10.14	228	1082	2.36	ng/ml	98
27) Chrysene	10.19	228	887	1.96	ng/ml	96
29) Benzo(b)fluoranthene	12.24	252	956	1.91	ng/ml	95
30) Benzo(k)fluoranthene	12.31	252	934	1.86	ng/ml	94
31) Benzo(e)pyrene	12.97	252	971	1.99	ng/ml	96
32) Benzo(a)pyrene	13.12	252	876	2.08	ng/ml	90
33) Perylene	13.37	252	950	2.15	ng/ml	92
34) Indeno(1,2,3-cd)pyrene	15.45	276	990	2.67	ng/ml	94
35) Dibenz(a,h)anthracene	15.52	278	897	2.23	ng/ml	87
36) Benzo(g,h,i)perylene	15.85	276	1156	2.44	ng/ml	95

JUL 16 2018

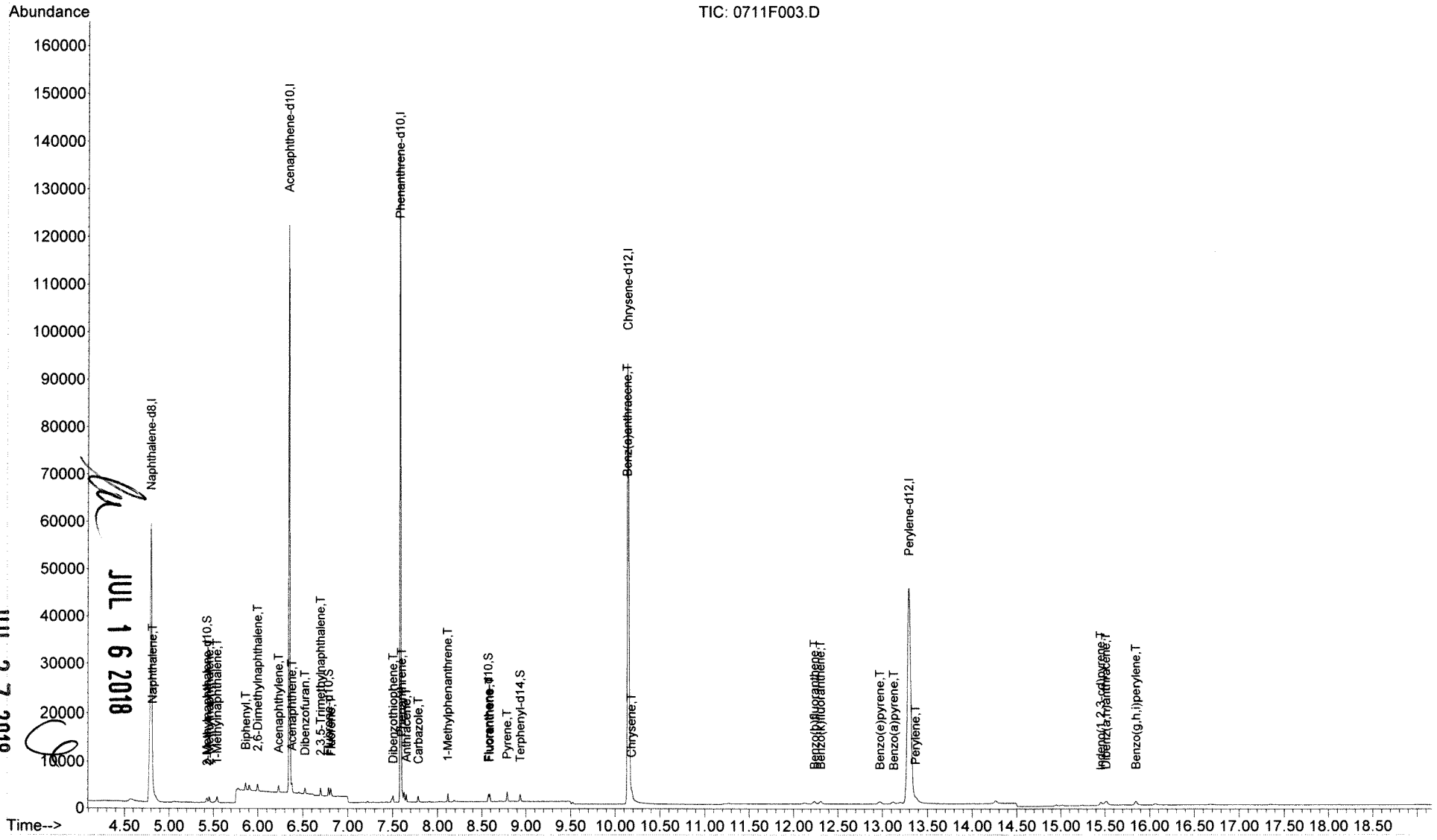
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F003.D 071118PAH.M Wed Jul 11 12:39:37 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



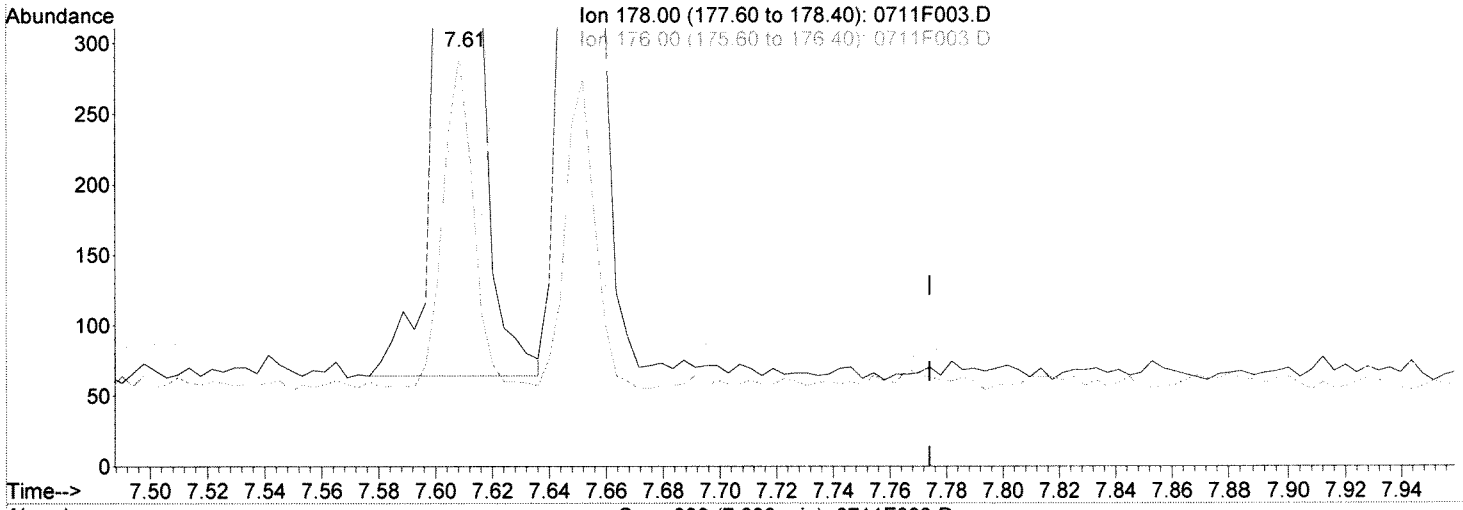
0711F003.D 071118PAH.M Wed Jul 11 12:39:38 2018 Page 2

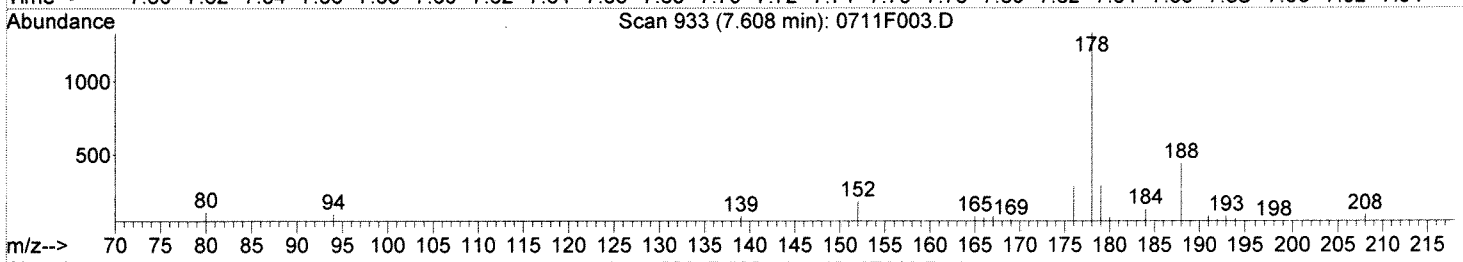
Page 604 of 632
JUL 16 2018
JUL 27 2018

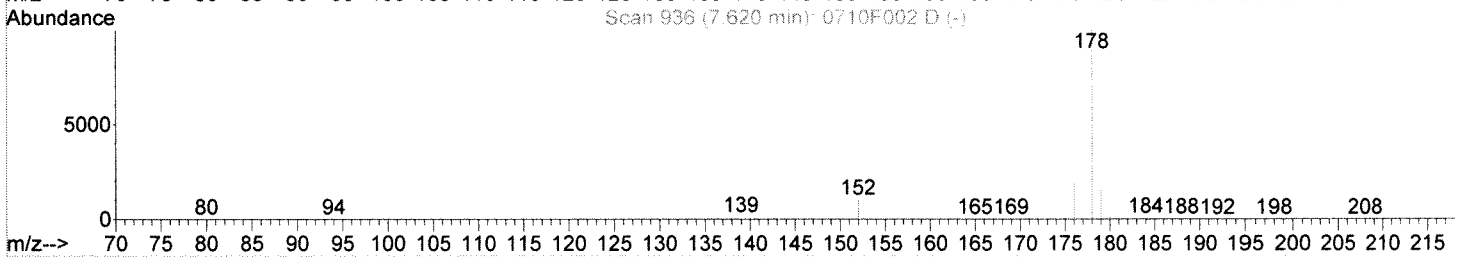
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.25ng/ml

response 927

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.38
179.00	15.20	15.85
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

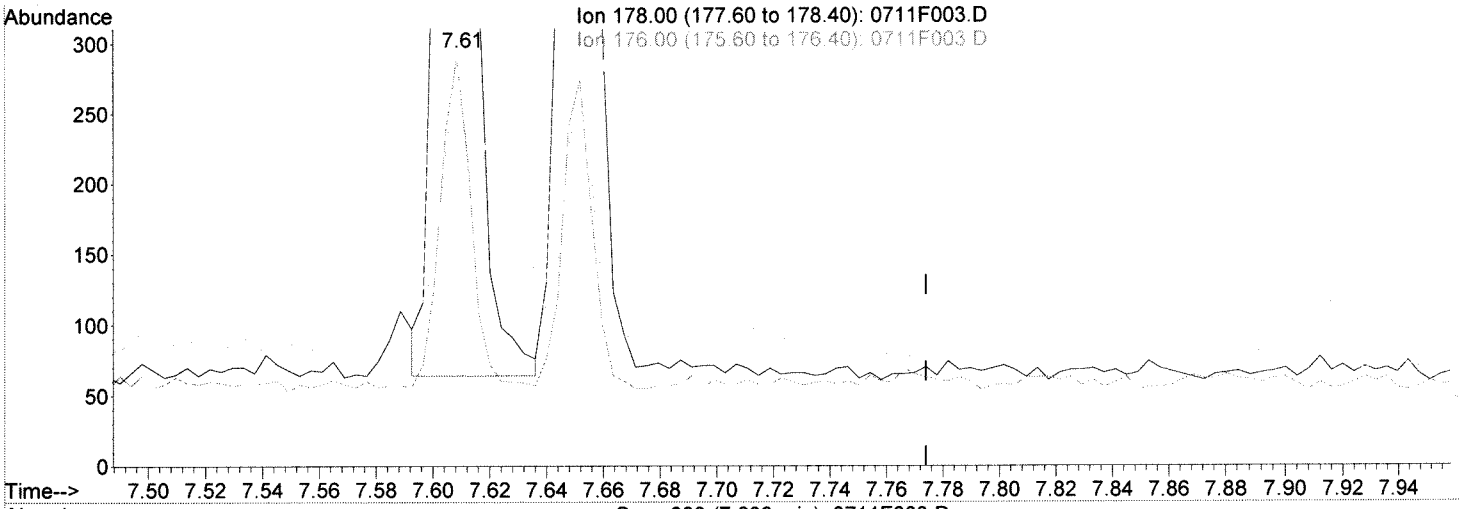
JUL 2 7 2018

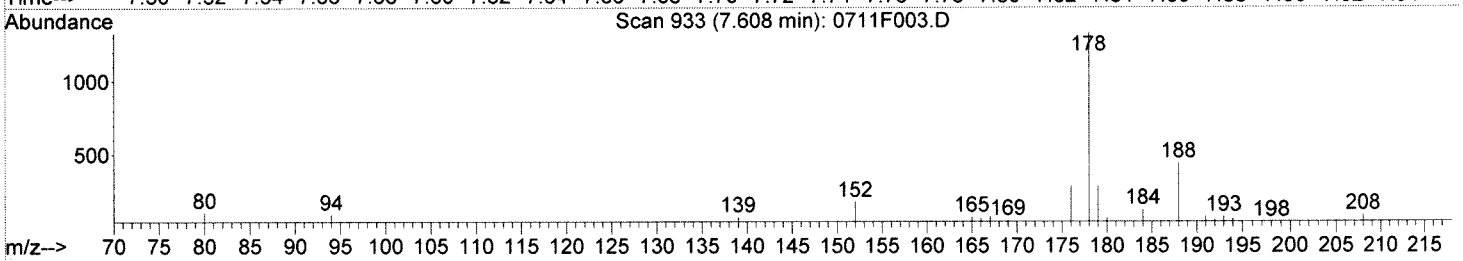
0711F003.D 071118PAH.M Wed Jul 11 12:35:11 2018

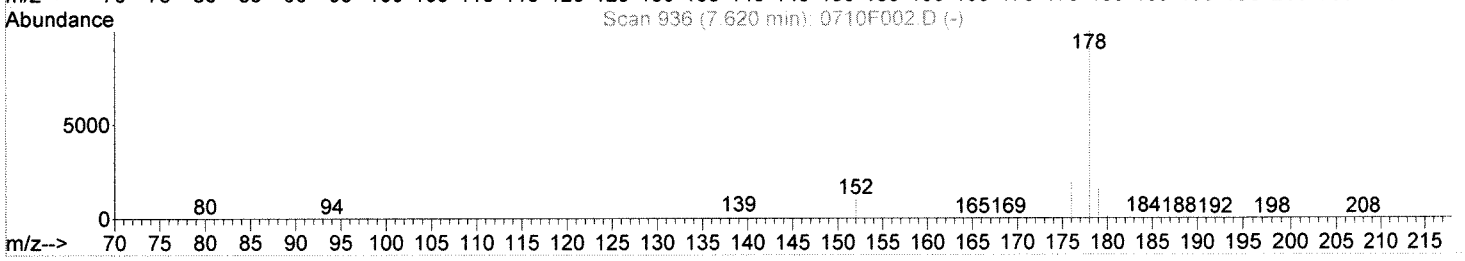
Quantitation Report (Quan)

Data File : J:\MS14\DATA\071118\0711F003.D Vial: 3
Acq On : 11 Jul 2018 8:16 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.002ug/mL | SVM59-4A Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration







TIC: 0711F003.D

(17) Phenanthrene (T)

7.61min 2.18ng/ml m

response 900

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	21.77
179.00	15.20	21.70
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F003.D 071118PAH.M Wed Jul 11 12:35:17 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	63956	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30708	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63250	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	72026	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	79651	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	763	4.19	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.42%			
13) Fluorene-d10	6.79	176	917	4.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
22) Fluoranthene-d10	8.58	212	1504	3.83	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.38%			
25) Terphenyl-d14	8.93	244	1510	4.62	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.46%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	1674	4.78	ng/ml	100
4) 2-Methylnaphthalene	5.45	142	948	4.23	ng/ml	91
5) 1-Methylnaphthalene	5.54	142	937	4.32	ng/ml	90
6) Biphenyl	5.86	154	1229	4.45	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	808	4.19	ng/ml	95
9) Acenaphthylene	6.23	152	1442	4.02	ng/ml	97
10) Acenaphthene	6.38	154	846	4.11	ng/ml	95
11) Dibenzofuran	6.53	168	1300	3.94	ng/ml	91
12) 2,3,5-Trimethylnaphthalene	6.70	170	782	4.03	ng/ml	98
14) Fluorene	6.81	166	1032	4.03	ng/ml	99
16) Dibenzothiophene	7.51	184	1534	3.93	ng/ml	95
17) Phenanthrene	7.61	178	1684m	4.36	ng/ml	
18) Anthracene	7.65	178	1474	3.90	ng/ml	98
19) Carbazole	7.79	167	1414	4.15	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	1141	3.75	ng/ml	94
21) Fluoranthene	8.59	202	1825	3.88	ng/ml	96
24) Pyrene	8.79	202	2099	4.15	ng/ml#	16
26) Benz(a)anthracene	10.14	228	1900	4.17	ng/ml	100
27) Chrysene	10.19	228	1748	3.89	ng/ml	98
29) Benzo(b)fluoranthene	12.23	252	1853	3.73	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	1871	3.75	ng/ml	97
31) Benzo(e)pyrene	12.97	252	1822	3.77	ng/ml	96
32) Benzo(a)pyrene	13.12	252	1615	3.86	ng/ml	97
33) Perylene	13.38	252	1693	3.87	ng/ml	96
34) Indeno(1,2,3-cd)pyrene	15.46	276	1753	4.76	ng/ml	96
35) Dibenz(a,h)anthracene	15.52	278	1750	4.40	ng/ml	89
36) Benzo(g,h,i)perylene	15.85	276	2188	4.66	ng/ml	97

JUL 16 2018

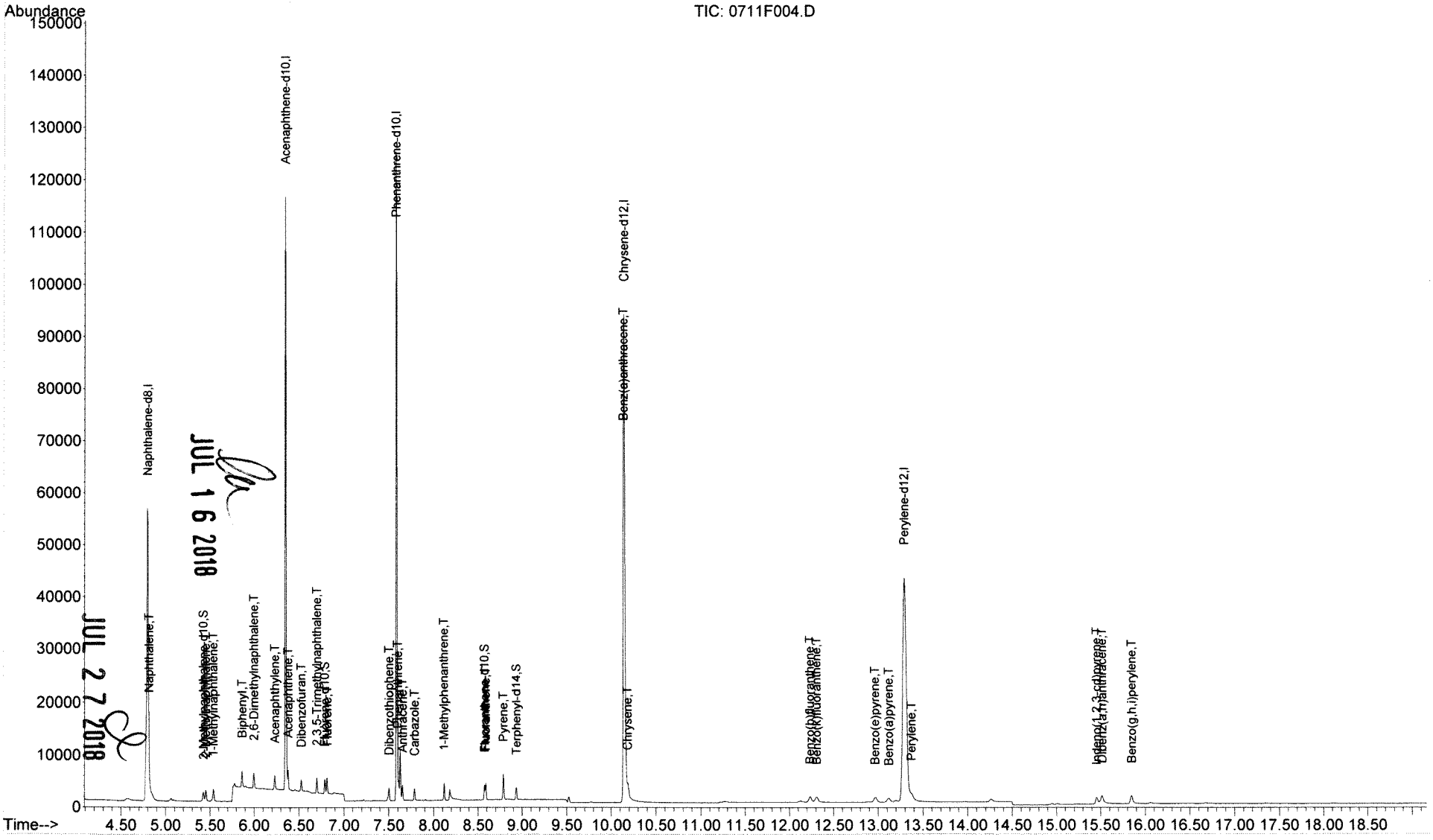
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F004.D 071118PAH.M Wed Jul 11 12:39:39 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: 071118PAH.RES

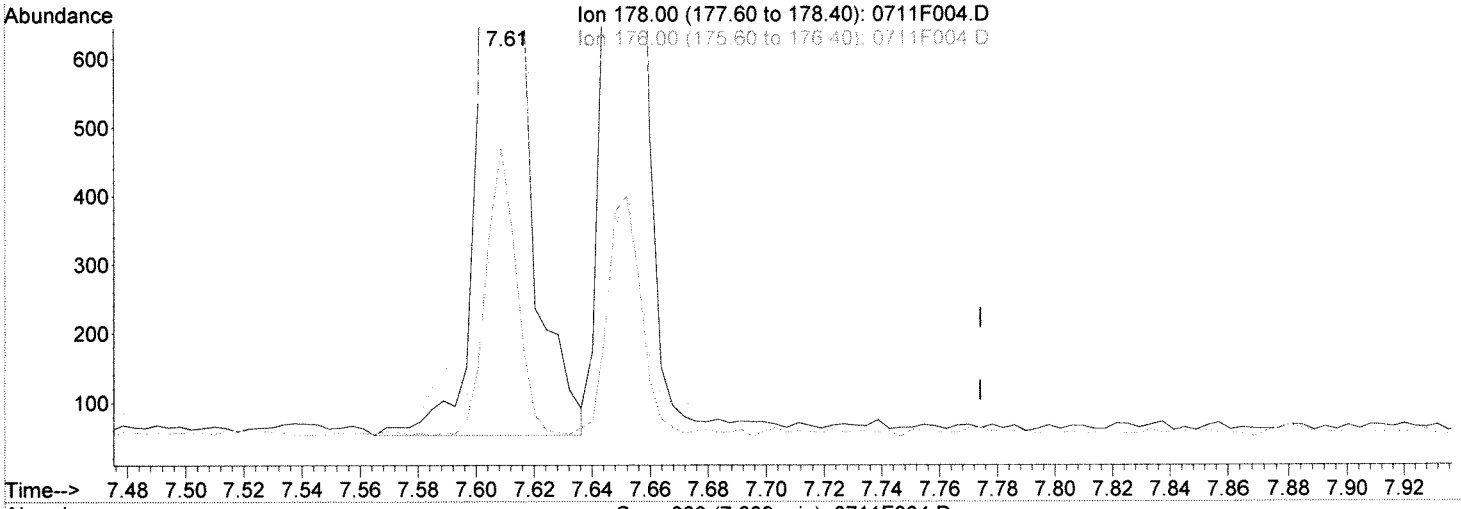
Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration

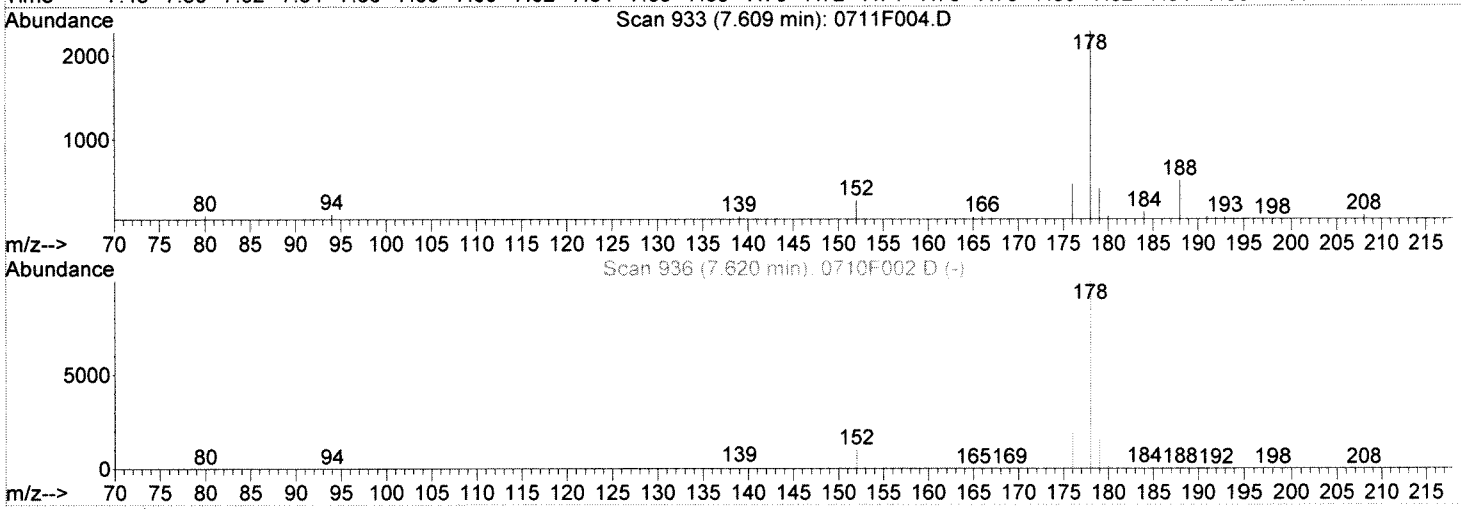


JUL 27 2018 JUL 16 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration





TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.47ng/ml

response 1727

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	18.57
179.00	15.20	14.90
0.00	0.00	0.00

Manual Integration:

Before

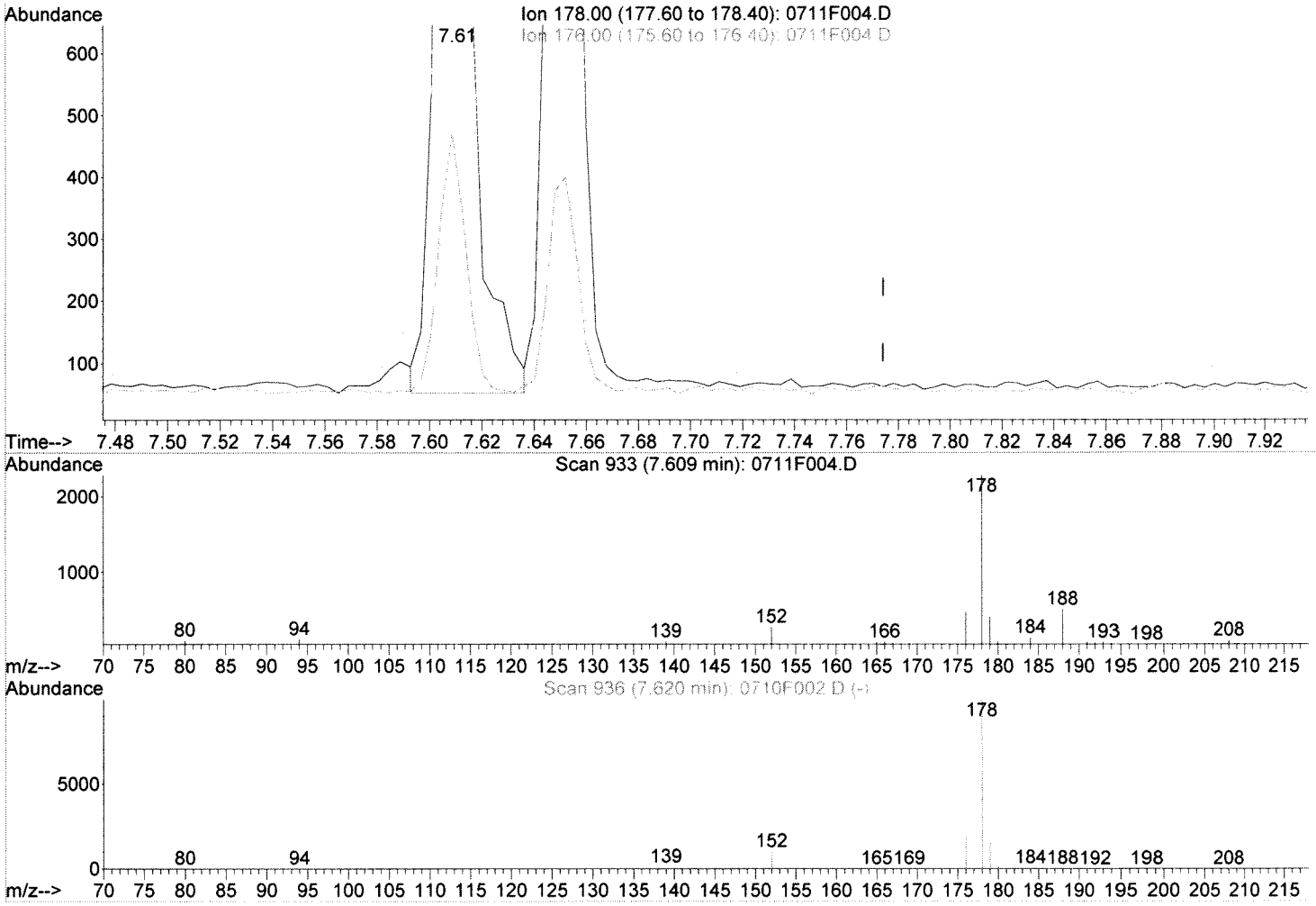
07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:50 2018

Data File : J:\MS14\DATA\071118\0711F004.D Vial: 4
Acq On : 11 Jul 2018 8:42 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.004ug/mL | SVM59-4B Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:35 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F004.D

(17) Phenanthrene (T)

7.61min 4.36ng/ml m

response 1684

Ion	Exp%	Act%
178.00	100	100
176.00	18.50	20.54
179.00	15.20	17.83
0.00	0.00	0.00

Manual Integration:

After

IC-Overintegrated

07/11/18

JUL 27 2018

0711F004.D 071118PAH.M Wed Jul 11 12:35:56 2018

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:40 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62880	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	29911	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	62211	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	69517	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	76895	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	1448	8.09	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.81%			
13) Fluorene-d10	6.79	176	1594	8.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.82%			
22) Fluoranthene-d10	8.58	212	2857	7.40	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.74%			
25) Terphenyl-d14	8.93	244	2597	8.23	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 0.82%			
Target Compounds						Qvalue
2) Naphthalene	4.81	128	2996	8.69	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	1845	8.38	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	1728	8.11	ng/ml	94
6) Biphenyl	5.86	154	2298	8.46	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	1535	8.10	ng/ml	97
9) Acenaphthylene	6.23	152	2743	7.85	ng/ml	99
10) Acenaphthene	6.38	154	1596	7.95	ng/ml	95
11) Dibenzofuran	6.53	168	2645	8.22	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	1455	7.70	ng/ml	94
14) Fluorene	6.81	166	1936	7.77	ng/ml	100
16) Dibenzothiophene	7.51	184	2951	7.68	ng/ml	94
17) Phenanthrene	7.61	178	3111	8.18	ng/ml	99
18) Anthracene	7.65	178	2901	7.81	ng/ml	99
19) Carbazole	7.78	167	2691	8.03	ng/ml	96
20) 1-Methylphenanthrene	8.12	192	2211	7.38	ng/ml	97
21) Fluoranthene	8.59	202	3571	7.72	ng/ml	99
24) Pyrene	8.79	202	3832	7.85	ng/ml	83
26) Benz(a)anthracene	10.13	228	3494	7.94	ng/ml	98
27) Chrysene	10.19	228	3411	7.86	ng/ml	98
29) Benzo(b)fluoranthene	12.24	252	3544	7.39	ng/ml	96
30) Benzo(k)fluoranthene	12.31	252	3488	7.25	ng/ml	97
31) Benzo(e)pyrene	12.97	252	3487	7.47	ng/ml	95
32) Benzo(a)pyrene	13.12	252	3161	7.84	ng/ml	97
33) Perylene	13.37	252	3327	7.88	ng/ml	95
34) Indeno(1,2,3-cd)pyrene	15.46	276	3272	9.21	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	3362	8.75	ng/ml	96
36) Benzo(g,h,i)perylene	15.85	276	4042	8.91	ng/ml	98

JUL 16 2018

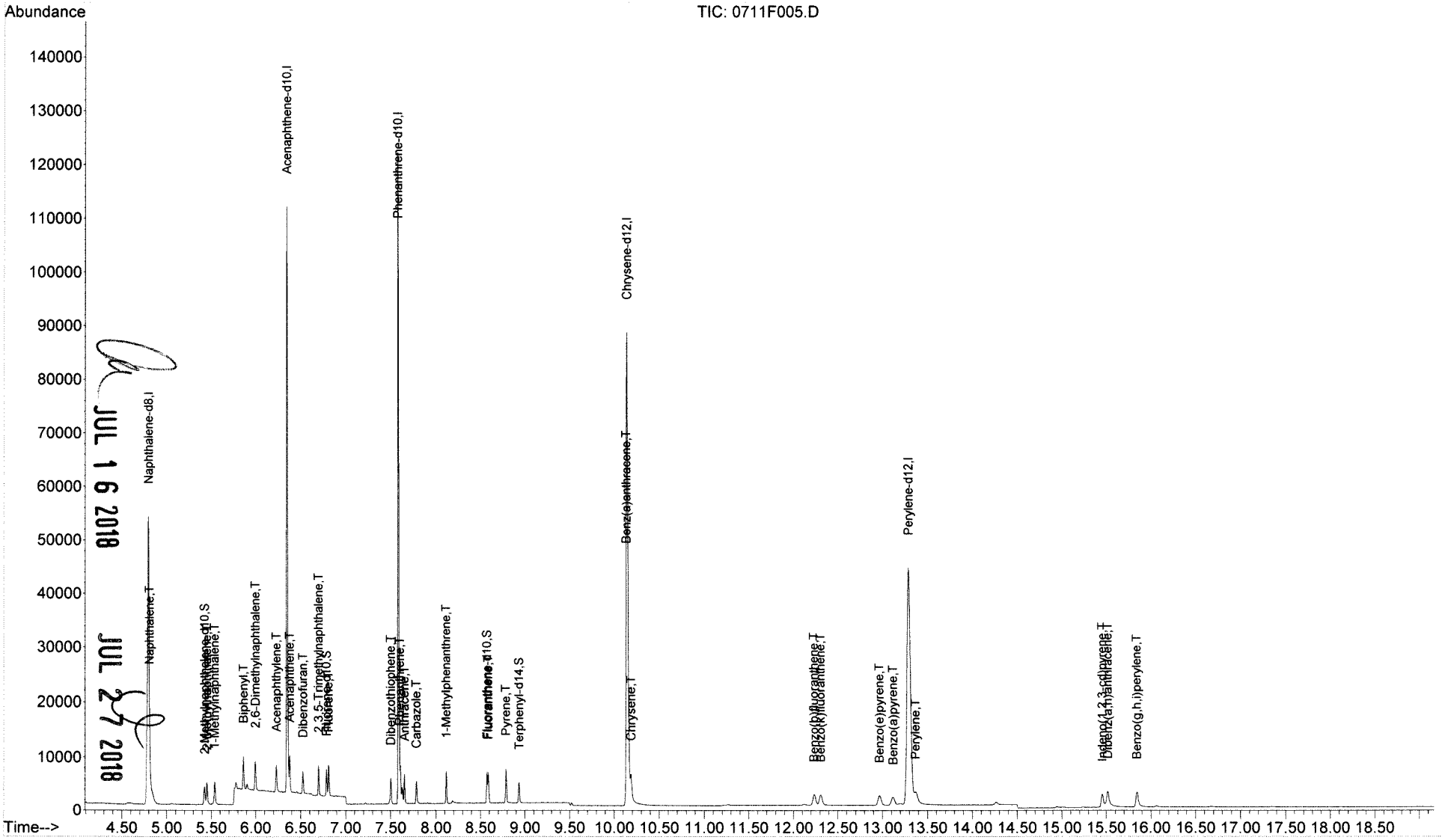
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F005.D 071118PAH.M Wed Jul 11 12:39:41 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F005.D Vial: 5
Acq On : 11 Jul 2018 9:08 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @.008ug/mL | SVM59-4C Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	65840	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	30682	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	63668	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68947	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73587	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	3694	19.72	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.97%		
13) Fluorene-d10	6.79	176	3914	19.51	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.95%		
22) Fluoranthene-d10	8.58	212	7036	17.81	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.78%		
25) Terphenyl-d14	8.93	244	5981	19.10	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	1.91%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	7540	20.90	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	4709	20.41	ng/ml	98
5) 1-Methylnaphthalene	5.54	142	4545	20.37	ng/ml	98
6) Biphenyl	5.86	154	5875	20.65	ng/ml	94
7) 2,6-Dimethylnaphthalene	6.00	156	3939	19.85	ng/ml	98
9) Acenaphthylene	6.23	152	7137	19.90	ng/ml	97
10) Acenaphthene	6.38	154	4220	20.50	ng/ml	98
11) Dibenzofuran	6.53	168	6406	19.41	ng/ml	92
12) 2,3,5-Trimethylnaphthalene	6.70	170	3696	19.07	ng/ml	95
14) Fluorene	6.81	166	5030	19.67	ng/ml	99
16) Dibenzothiophene	7.51	184	7587	19.29	ng/ml	95
17) Phenanthrene	7.61	178	7852	20.19	ng/ml	100
18) Anthracene	7.65	178	7270	19.13	ng/ml	99
19) Carbazole	7.78	167	6767	19.72	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	5509	17.97	ng/ml	96
21) Fluoranthene	8.59	202	8985	18.97	ng/ml	99
24) Pyrene	8.79	202	9434	19.48	ng/ml	92
26) Benz(a)anthracene	10.14	228	8203	18.81	ng/ml	99
27) Chrysene	10.19	228	8248	19.16	ng/ml	99
29) Benzo(b)fluoranthene	12.23	252	8538	18.60	ng/ml	97
30) Benzo(k)fluoranthene	12.31	252	8727	18.95	ng/ml	99
31) Benzo(e)pyrene	12.97	252	8307	18.60	ng/ml	96
32) Benzo(a)pyrene	13.12	252	7683	19.90	ng/ml	98
33) Perylene	13.38	252	8269m	20.48	ng/ml	
34) Indeno(1,2,3-cd)pyrene	15.46	276	7779	22.89	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	8645m	23.51	ng/ml	
36) Benzo(g,h,i)perylene	15.85	276	9837	22.66	ng/ml	98

JUL 16 2018

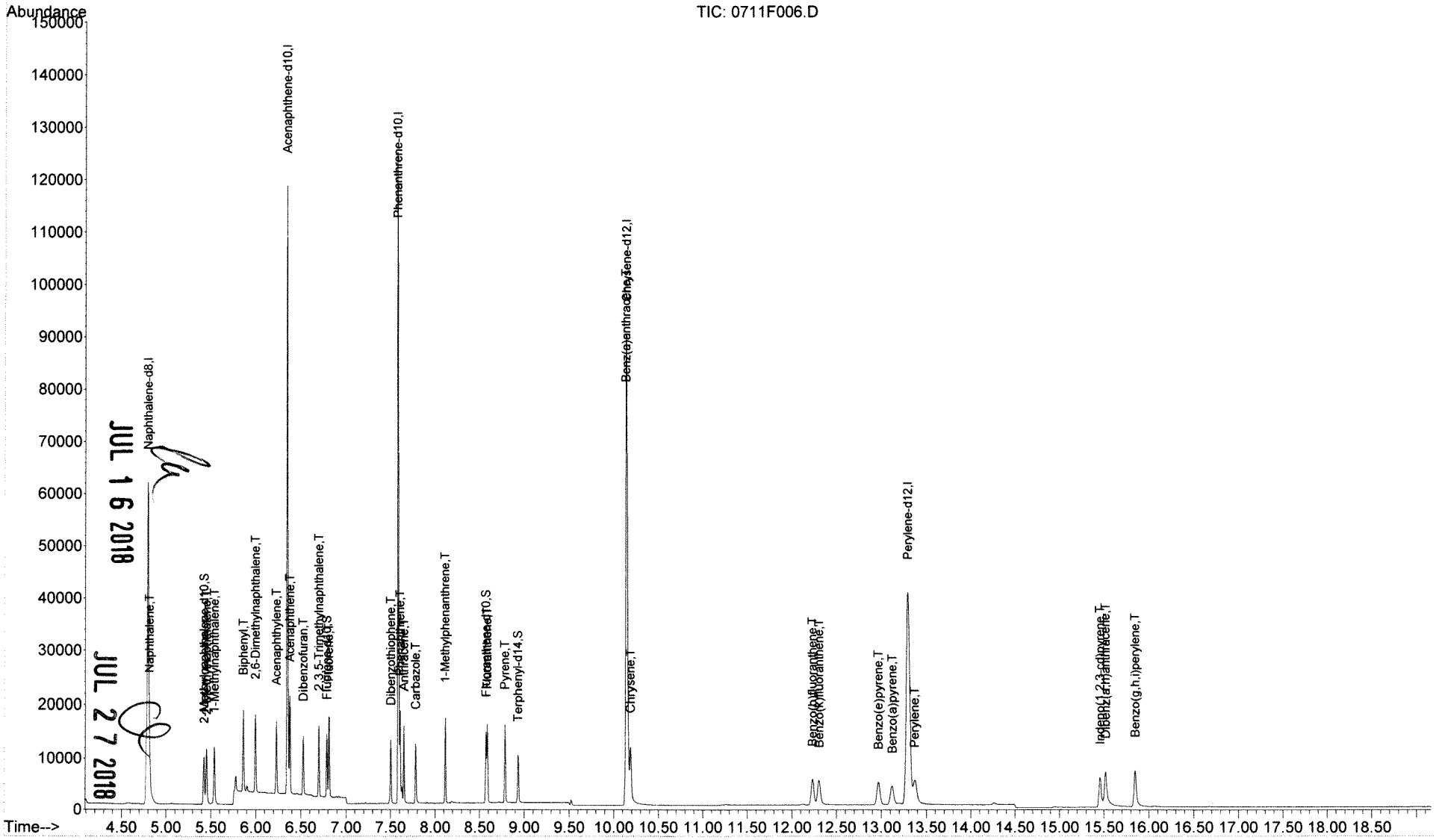
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F006.D 071118PAH.M Wed Jul 11 12:39:43 2018 Page 1

Quantitation Report (QT Reviewed)

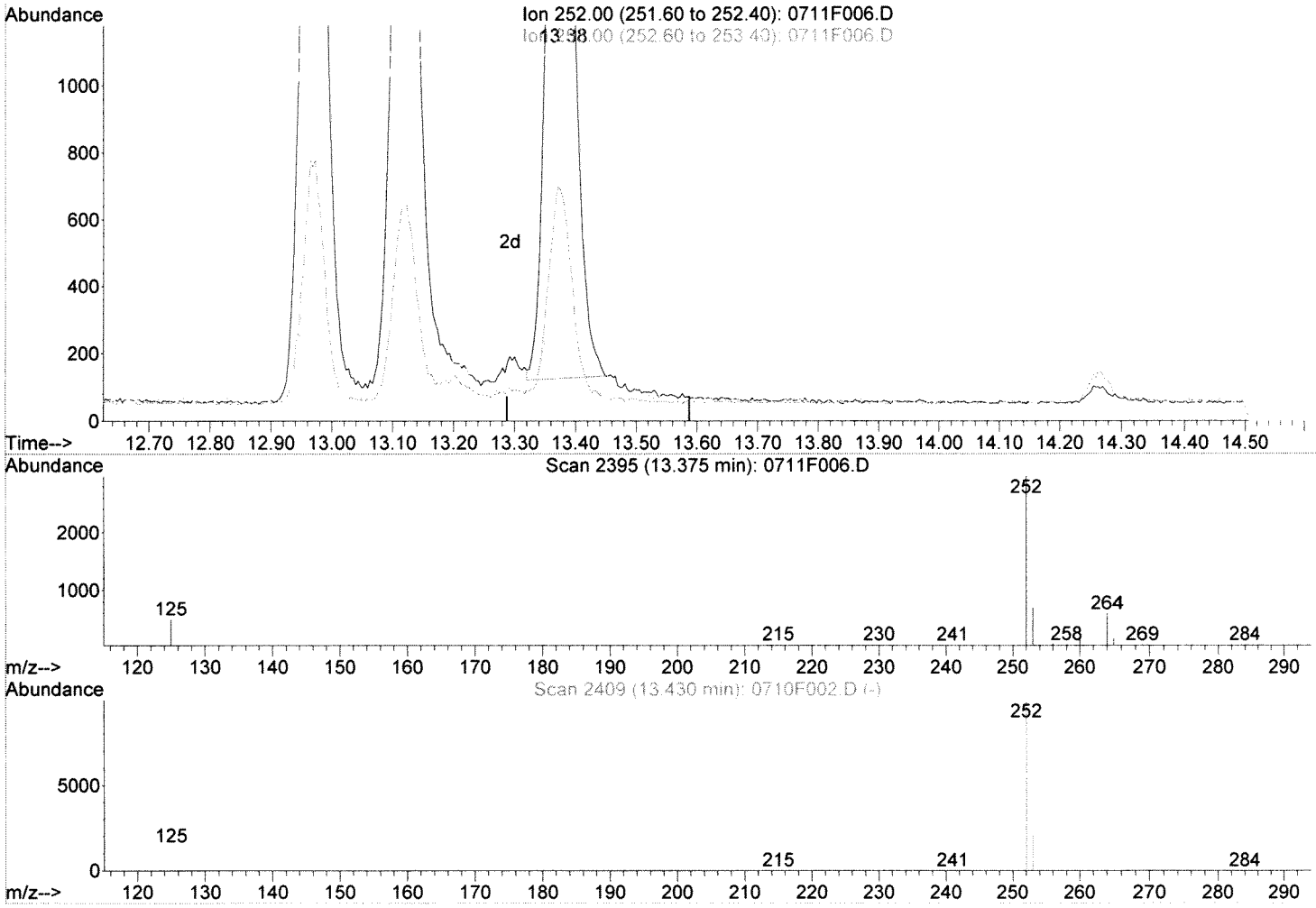
Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(33) Perylene (T)

13.38min 19.01ng/ml

response 7678

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	21.61
125.00	11.30	14.83
0.00	0.00	0.00

Manual Integration:

Before

07/11/18

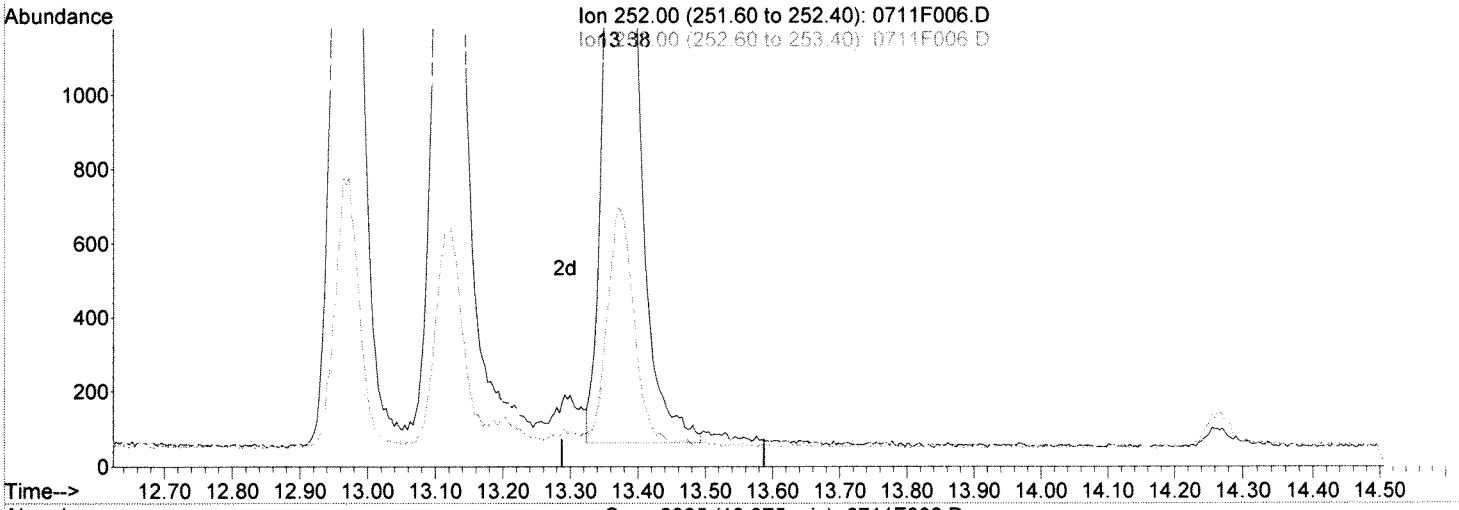
JUL 27 2018

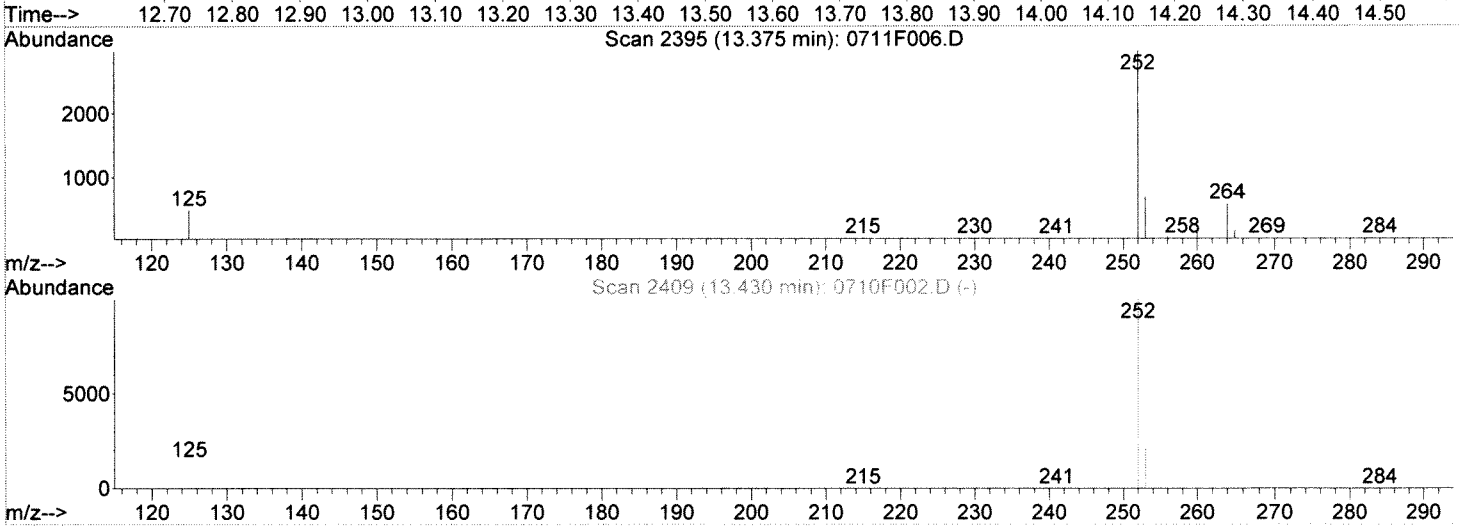
0711F006.D 071118PAH.M Wed Jul 11 12:36:54 2018

Quantitation Report (Qedit)

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration





TIC: 0711F006.D

(33) Perylene (T)

13.38min 20.48ng/ml m

response 8269

Ion	Exp%	Act%
252.00	100	100
253.00	21.40	23.07
125.00	11.30	16.52
0.00	0.00	0.00

Manual Integration:

After

BLC

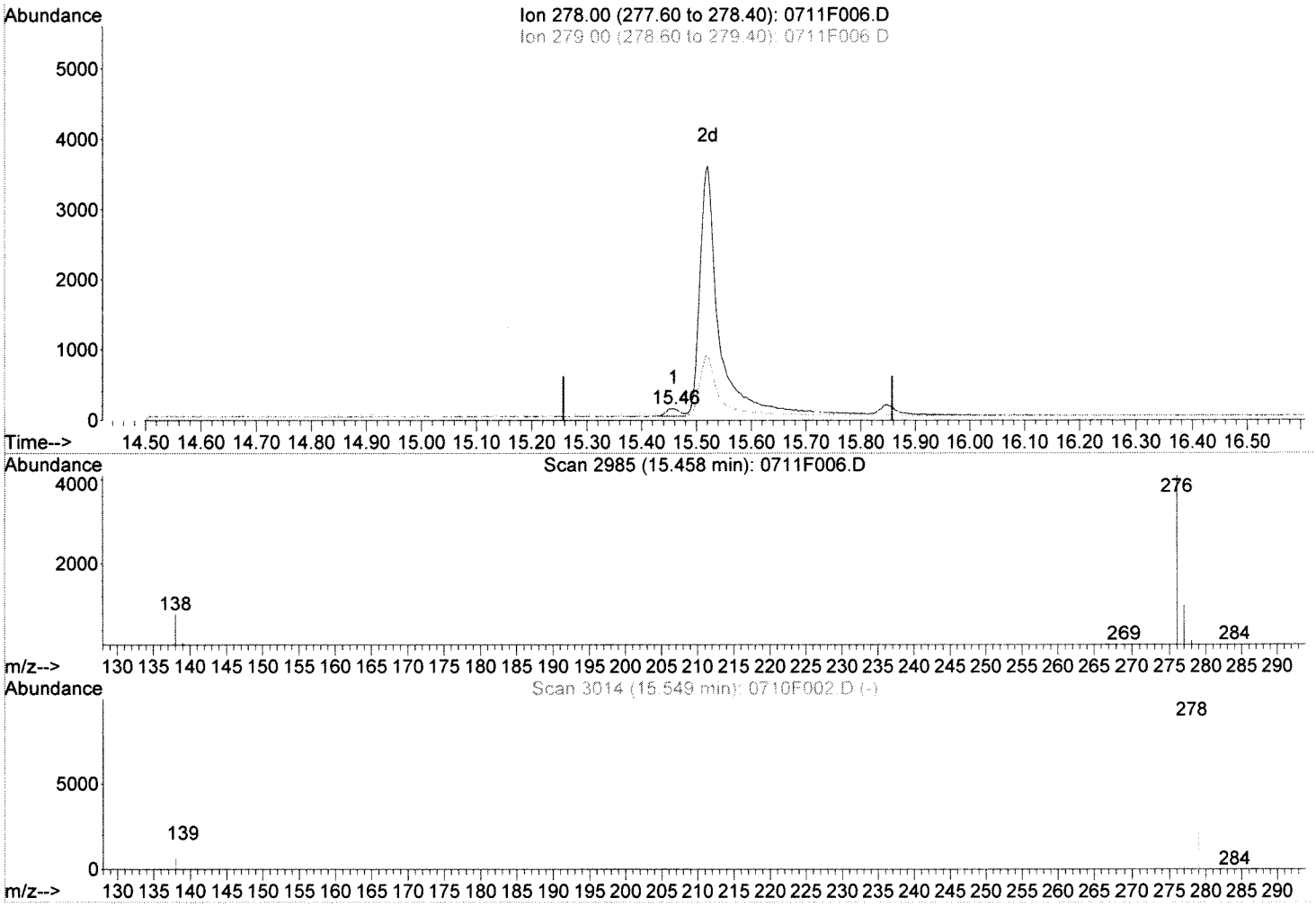
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:01 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:36 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.46min 0.54ng/ml

response 199

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	2.68
139.00	13.40	20.54
0.00	0.00	0.00

Manual Integration:

Before

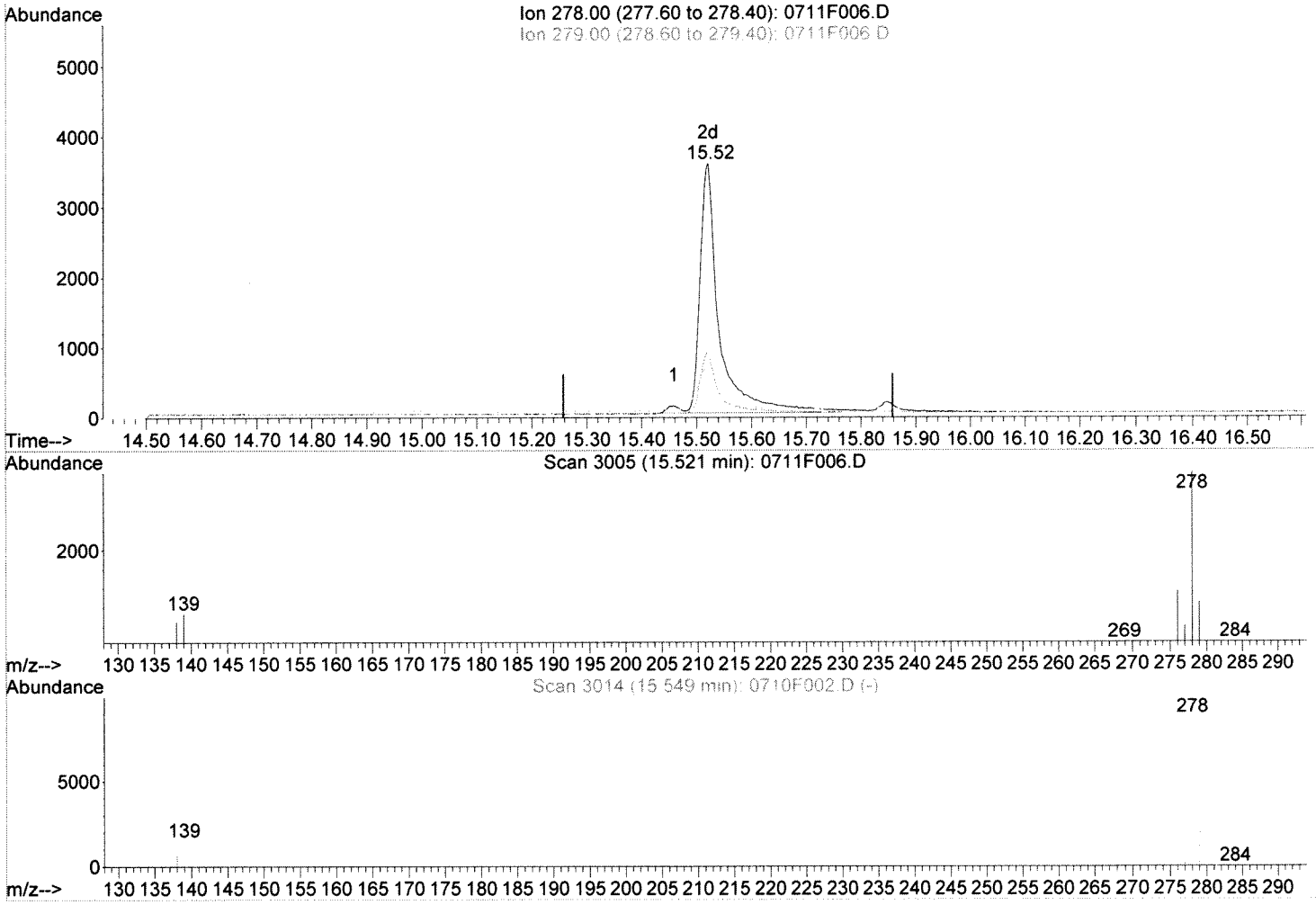
07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:06 2018

Data File : J:\MS14\DATA\071118\0711F006.D Vial: 6
Acq On : 11 Jul 2018 9:34 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.02ug/mL | SVM59-4D Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:37 2018 Quant Results File: temp.res

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Multiple Level Calibration



TIC: 0711F006.D

(35) Dibenz(a,h)anthracene (T)

15.52min 23.51ng/ml m

response 8645

Ion	Exp%	Act%
278.00	100	100
279.00	23.60	25.00
139.00	13.40	18.72
0.00	0.00	0.00

Manual Integration:

After

WP

07/11/18

JUL 27 2018

0711F006.D 071118PAH.M Wed Jul 11 12:37:15 2018

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:41 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	62407	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	28255	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	58489	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68483	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	75974	200.00	ng/ml	-0.06
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	17559	98.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.89%		
13) Fluorene-d10	6.79	176	17680	95.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.57%		
22) Fluoranthene-d10	8.58	212	35144	96.82	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.68%		
25) Terphenyl-d14	8.93	244	28477	91.57	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	9.16%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	35255	103.08	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	22418	102.54	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	21213	100.29	ng/ml	96
6) Biphenyl	5.86	154	27265	101.12	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	18574	98.74	ng/ml	96
9) Acenaphthylene	6.23	152	33544	101.56	ng/ml	98
10) Acenaphthene	6.38	154	19460	102.65	ng/ml	97
11) Dibenzofuran	6.53	168	31402	103.33	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	17703	99.17	ng/ml	95
14) Fluorene	6.81	166	24009	101.96	ng/ml	99
16) Dibenzothiophene	7.51	184	36360	100.61	ng/ml	95
17) Phenanthrene	7.61	178	36499	102.14	ng/ml	100
18) Anthracene	7.65	178	35340	101.23	ng/ml	100
19) Carbazole	7.78	167	33613	106.65	ng/ml	99
20) 1-Methylphenanthrene	8.12	192	26919	95.59	ng/ml	97
21) Fluoranthene	8.59	202	44895	103.20	ng/ml	99
24) Pyrene	8.79	202	45944	95.52	ng/ml	96
26) Benz(a)anthracene	10.14	228	41105	94.87	ng/ml	99
27) Chrysene	10.19	228	42544	99.49	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	45690	96.41	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	46655	98.13	ng/ml	97
31) Benzo(e)pyrene	12.97	252	43163	93.59	ng/ml	96
32) Benzo(a)pyrene	13.12	252	39807	99.87	ng/ml	98
33) Perylene	13.37	252	42088	100.96	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	40462	115.30	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	42729	112.54	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	48457	108.12	ng/ml	97

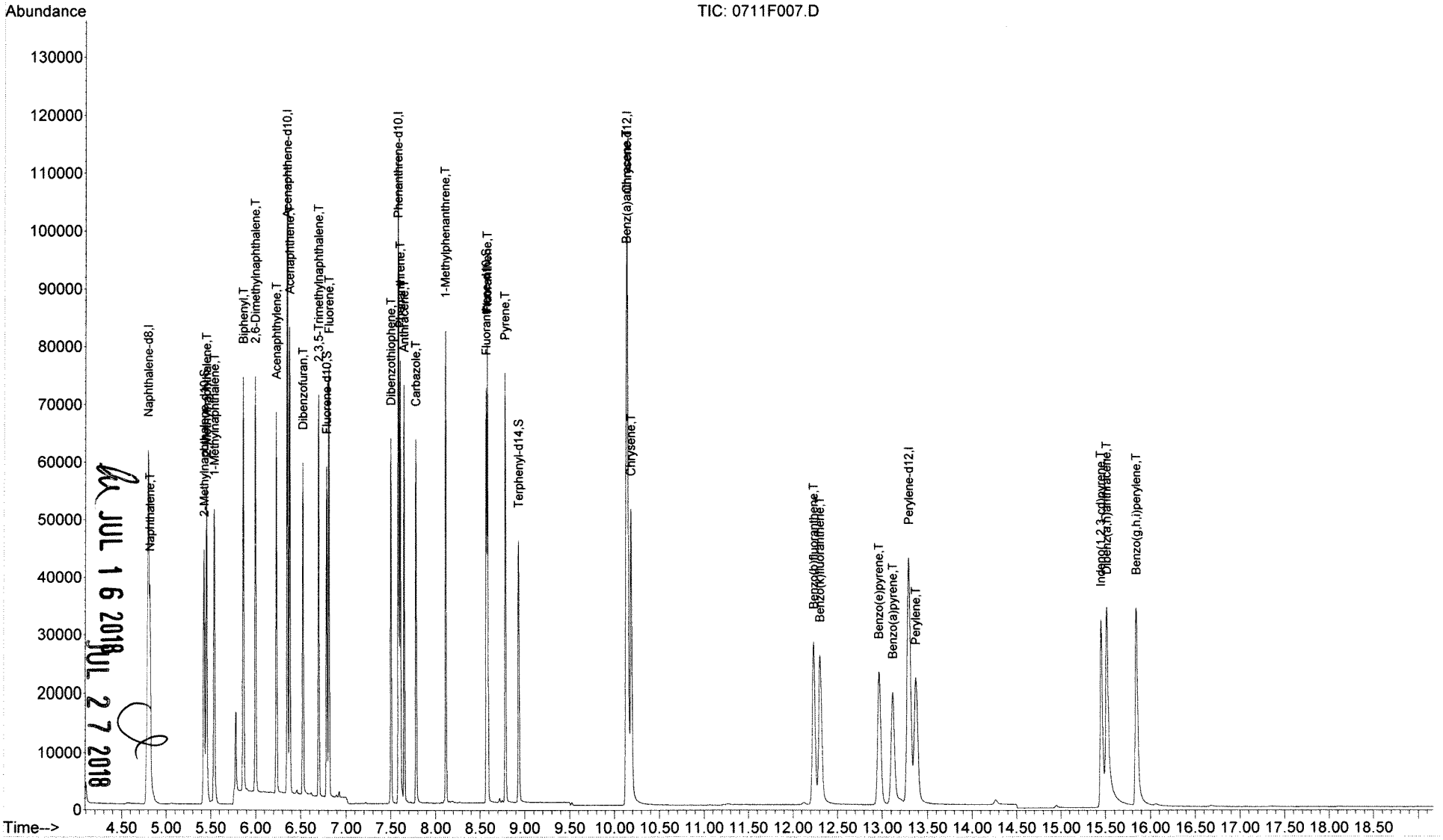
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F007.D 071118PAH.M Wed Jul 11 12:39:45 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F007.D Vial: 7
Acq On : 11 Jul 2018 10:00 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.1ug/mL | SVM59-4E Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60069	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	26067	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	52800	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	67787	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73997	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	32722	191.47	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	19.15%		
13) Fluorene-d10	6.79	176	32332	189.70	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	18.97%		
22) Fluoranthene-d10	8.58	212	66735	203.67	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	20.37%		
25) Terphenyl-d14	8.93	244	55795	181.26	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	18.13%		
Target Compounds						Qvalue
2) Naphthalene	4.82	128	66650	202.46	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	41546	197.42	ng/ml	94
5) 1-Methylnaphthalene	5.54	142	39085	191.97	ng/ml	97
6) Biphenyl	5.86	154	50271	193.70	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	34463	190.34	ng/ml	96
9) Acenaphthylene	6.23	152	62756	205.96	ng/ml	98
10) Acenaphthene	6.38	154	36120	206.52	ng/ml	97
11) Dibenzofuran	6.53	168	59730	213.03	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	32934	199.97	ng/ml	94
14) Fluorene	6.81	166	43762	201.45	ng/ml	98
16) Dibenzothiophene	7.51	184	66748	204.59	ng/ml	95
17) Phenanthrene	7.61	178	65833	204.08	ng/ml	100
18) Anthracene	7.65	178	64253	203.88	ng/ml	100
19) Carbazole	7.78	167	63253	222.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	49439	194.49	ng/ml	96
21) Fluoranthene	8.59	202	84302	214.65	ng/ml	99
24) Pyrene	8.79	202	87628	184.06	ng/ml	96
26) Benz(a)anthracene	10.14	228	83249	194.11	ng/ml	99
27) Chrysene	10.19	228	84873	200.51	ng/ml	99
29) Benzo(b)fluoranthene	12.24	252	92957	201.38	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	93553	202.03	ng/ml	98
31) Benzo(e)pyrene	12.98	252	86431	192.42	ng/ml	97
32) Benzo(a)pyrene	13.12	252	79516	204.81	ng/ml	97
33) Perylene	13.38	252	84071	207.05	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	80179	234.58	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	81499	220.39	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	93626	214.49	ng/ml	98

JUL 16 2018

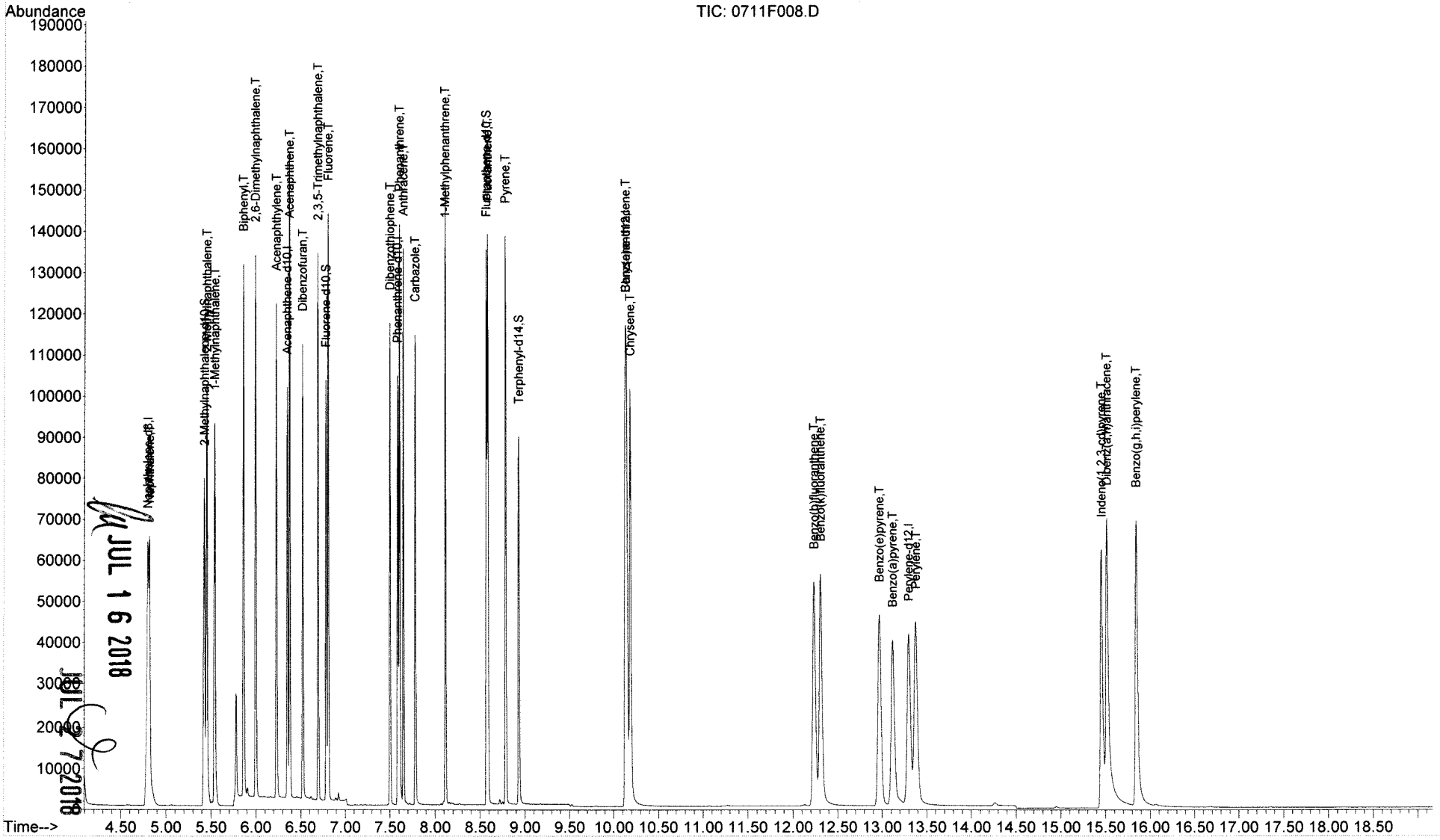
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F008.D 071118PAH.M Wed Jul 11 12:39:47 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F008.D Vial: 8
Acq On : 11 Jul 2018 10:26 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.2ug/mL | SVM59-4F Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:42 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	60855	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	25959	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	53916	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	68964	200.00	ng/ml	-0.03
28) Perylene-d12	13.30	264	73742	200.00	ng/ml	-0.05
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	64749	373.97	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	37.40%		
13) Fluorene-d10	6.79	176	65104	383.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	38.36%		
22) Fluoranthene-d10	8.57	212	140750	420.66	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	42.07%		
25) Terphenyl-d14	8.93	244	115110	367.58	ng/ml	-0.02
Spiked Amount 1000.000			Recovery =	36.76%		
Target Compounds						Qvalue
2) Naphthalene	4.81	128	132311	396.73	ng/ml	98
4) 2-Methylnaphthalene	5.45	142	80537	377.75	ng/ml	95
5) 1-Methylnaphthalene	5.54	142	75991	368.41	ng/ml	97
6) Biphenyl	5.86	154	98008	372.75	ng/ml	96
7) 2,6-Dimethylnaphthalene	6.00	156	68675	374.39	ng/ml	97
9) Acenaphthylene	6.23	152	125730	414.35	ng/ml	98
10) Acenaphthene	6.38	154	71389	409.87	ng/ml	98
11) Dibenzofuran	6.53	168	116544	417.39	ng/ml	89
12) 2,3,5-Trimethylnaphthalene	6.70	170	66608	406.13	ng/ml	96
14) Fluorene	6.81	166	86674	400.65	ng/ml	98
16) Dibenzothiophene	7.51	184	136509	409.76	ng/ml	95
17) Phenanthrene	7.61	178	131946	400.56	ng/ml	100
18) Anthracene	7.65	178	131533	408.72	ng/ml	100
19) Carbazole	7.79	167	129213	444.76	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	103724	399.59	ng/ml	96
21) Fluoranthene	8.59	202	170758	425.79	ng/ml	98
24) Pyrene	8.79	202	181666	375.07	ng/ml	98
26) Benz(a)anthracene	10.13	228	175185	401.51	ng/ml	99
27) Chrysene	10.19	228	172838	401.35	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	191741	416.82	ng/ml	98
30) Benzo(k)fluoranthene	12.31	252	189521	410.69	ng/ml	98
31) Benzo(e)pyrene	12.98	252	177594	396.74	ng/ml	98
32) Benzo(a)pyrene	13.13	252	163551	422.73	ng/ml	98
33) Perylene	13.39	252	170900	422.34	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.46	276	155556	456.69	ng/ml	98
35) Dibenz(a,h)anthracene	15.52	278	157213	426.62	ng/ml	98
36) Benzo(g,h,i)perylene	15.85	276	179053	411.61	ng/ml	98

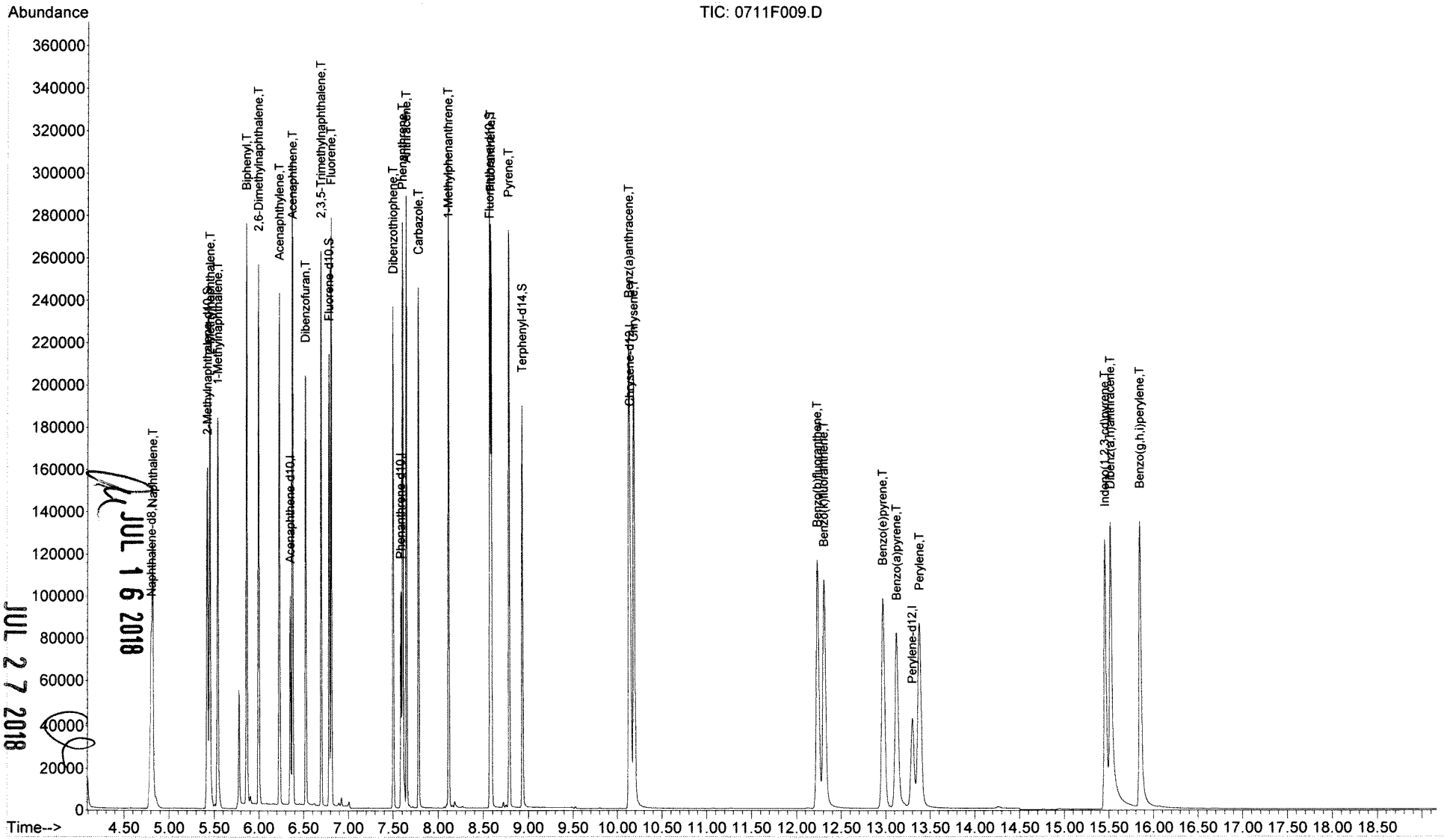
JUL 16 2018
JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F009.D 071118PAH.M Wed Jul 11 12:39:49 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F009.D Vial: 9
Acq On : 11 Jul 2018 10:52 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 0.4ug/mL | SVM59-4G Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:43 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	56166	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24545	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48486	200.00	ng/ml	-0.02
23) Chrysene-d12	10.15	240	66294	200.00	ng/ml	-0.02
28) Perylene-d12	13.31	264	71447	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	151032	945.14	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 94.51%			
13) Fluorene-d10	6.79	176	148985	928.35	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.84%			
22) Fluoranthene-d10	8.58	212	340058	1130.15	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 113.02%			
25) Terphenyl-d14	8.93	244	277429	921.60	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 92.16%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	297897	967.80	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	182505	927.49	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	175312	920.89	ng/ml	96
6) Biphenyl	5.86	154	227465	937.33	ng/ml	95
7) 2,6-Dimethylnaphthalene	6.00	156	159932	944.68	ng/ml	95
9) Acenaphthylene	6.23	152	295411	1029.62	ng/ml	98
10) Acenaphthene	6.38	154	165340	1003.96	ng/ml	97
11) Dibenzofuran	6.53	168	271937	1030.03	ng/ml	94
12) 2,3,5-Trimethylnaphthalene	6.70	170	155038	999.76	ng/ml	95
14) Fluorene	6.81	166	195757	957.01	ng/ml	99
16) Dibenzothiophene	7.51	184	312192	1042.05	ng/ml	95
17) Phenanthrene	7.61	178	297804	1005.31	ng/ml	99
18) Anthracene	7.65	178	294958	1019.19	ng/ml	100
19) Carbazole	7.79	167	299519	1146.42	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	241204	1033.28	ng/ml	96
21) Fluoranthene	8.59	202	395859	1097.64	ng/ml	98
24) Pyrene	8.79	202	440109	945.25	ng/ml	99
26) Benz(a)anthracene	10.14	228	438415	1045.28	ng/ml	100
27) Chrysene	10.19	228	417827	1009.33	ng/ml	99
29) Benzo(b)fluoranthene	12.25	252	477033	1070.32	ng/ml	98
30) Benzo(k)fluoranthene	12.32	252	460183	1029.25	ng/ml	98
31) Benzo(e)pyrene	12.99	252	441018	1016.88	ng/ml	97
32) Benzo(a)pyrene	13.14	252	410977	1096.36	ng/ml	98
33) Perylene	13.39	252	424046	1081.60	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.47	276	362154	1097.39	ng/ml	98
35) Dibenz(a,h)anthracene	15.53	278	365022	1022.35	ng/ml	98
36) Benzo(g,h,i)perylene	15.86	276	398340	945.13	ng/ml	97

JUL 16 2018

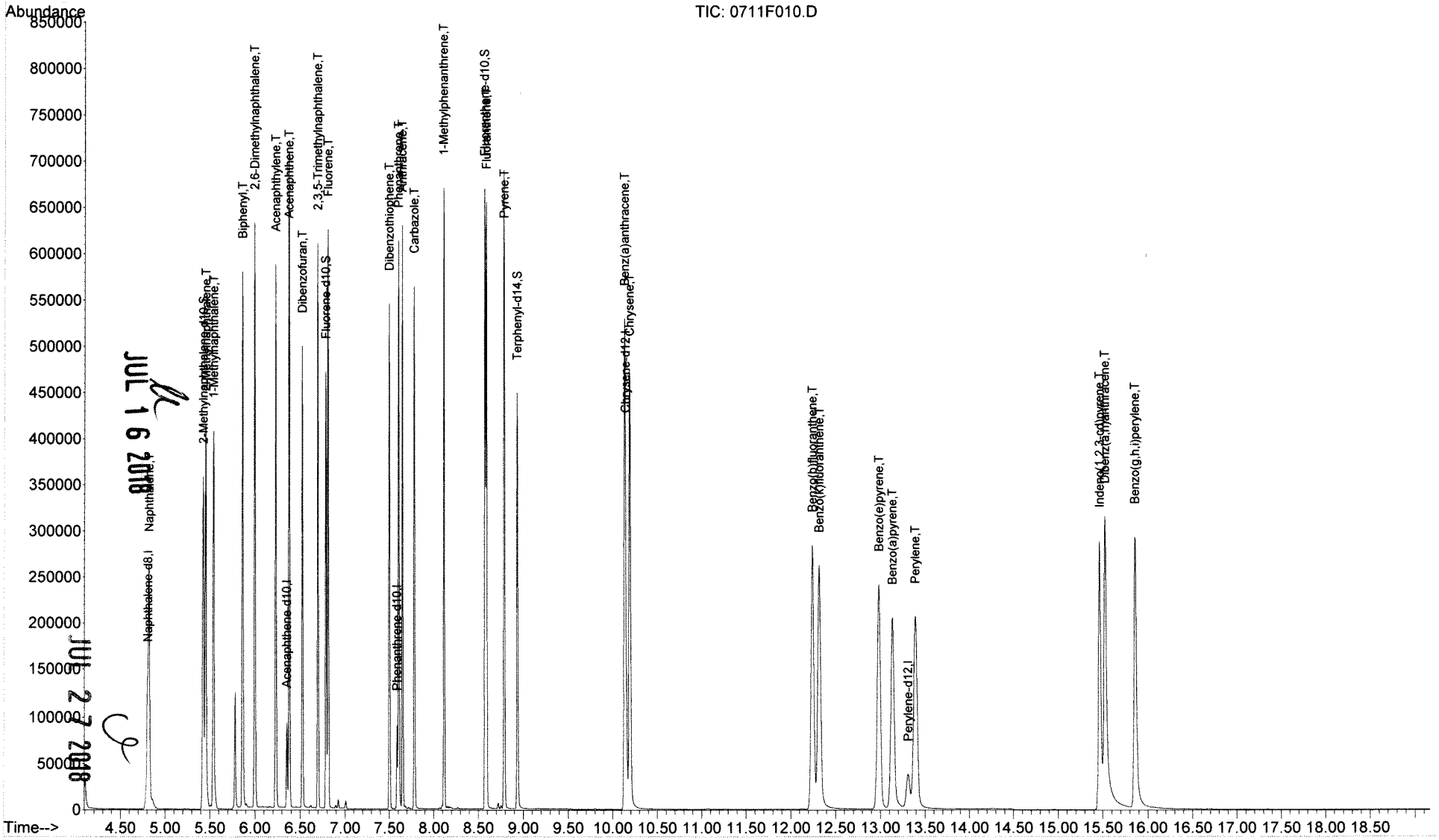
(#) = qualifier out of range (m) = manual integration
0711F010.D 071118PAH.M Wed Jul 11 12:39:51 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F010.D Vial: 10
Acq On : 11 Jul 2018 11:18 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.0ug/mL | SVM59-4H Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	55374	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	23531	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	48251	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	63306	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	68587	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	230897	1465.59	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.56%			
13) Fluorene-d10	6.79	176	234277	1522.73	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 152.27%			
22) Fluoranthene-d10	8.58	212	547746	1829.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 182.93%			
25) Terphenyl-d14	8.93	244	420524	1462.89	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 146.29%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	454242	1496.83	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	277659	1431.25	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	268229	1429.12	ng/ml	95
6) Biphenyl	5.87	154	351048	1467.28	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	248732	1490.21	ng/ml	94
9) Acenaphthylene	6.23	152	457982	1665.02	ng/ml	98
10) Acenaphthene	6.38	154	258921	1639.94	ng/ml	98
11) Dibenzofuran	6.53	168	422115	1667.76	ng/ml	98
12) 2,3,5-Trimethylnaphthalene	6.70	170	241367	1623.53	ng/ml	87
14) Fluorene	6.81	166	306456	1562.75	ng/ml	99
16) Dibenzothiophene	7.51	184	493134	1654.02	ng/ml	98
17) Phenanthrene	7.61	178	470025	1594.41	ng/ml	99
18) Anthracene	7.65	178	468569	1626.97	ng/ml	99
19) Carbazole	7.79	167	483938	1861.32	ng/ml	98
20) 1-Methylphenanthrene	8.12	192	392769	1690.76	ng/ml	98
21) Fluoranthene	8.59	202	637771	1777.03	ng/ml	97
24) Pyrene	8.79	202	701707	1578.23	ng/ml	96
26) Benz(a)anthracene	10.14	228	679766	1697.22	ng/ml	100
27) Chrysene	10.20	228	647039	1636.80	ng/ml	100
29) Benzo(b)fluoranthene	12.26	252	726698	1698.48	ng/ml	98
30) Benzo(k)fluoranthene	12.33	252	707952	1649.45	ng/ml	98
31) Benzo(e)pyrene	13.00	252	677816	1628.04	ng/ml	97
32) Benzo(a)pyrene	13.15	252	636746	1769.47	ng/ml	98
33) Perylene	13.41	252	650819	1729.25	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	546709	1725.70	ng/ml	98
35) Dibenz(a,h)anthracene	15.54	278	550676	1606.64	ng/ml	98
36) Benzo(g,h,i)perylene	15.88	276	588669	1454.97	ng/ml	97

JUL 16 2018

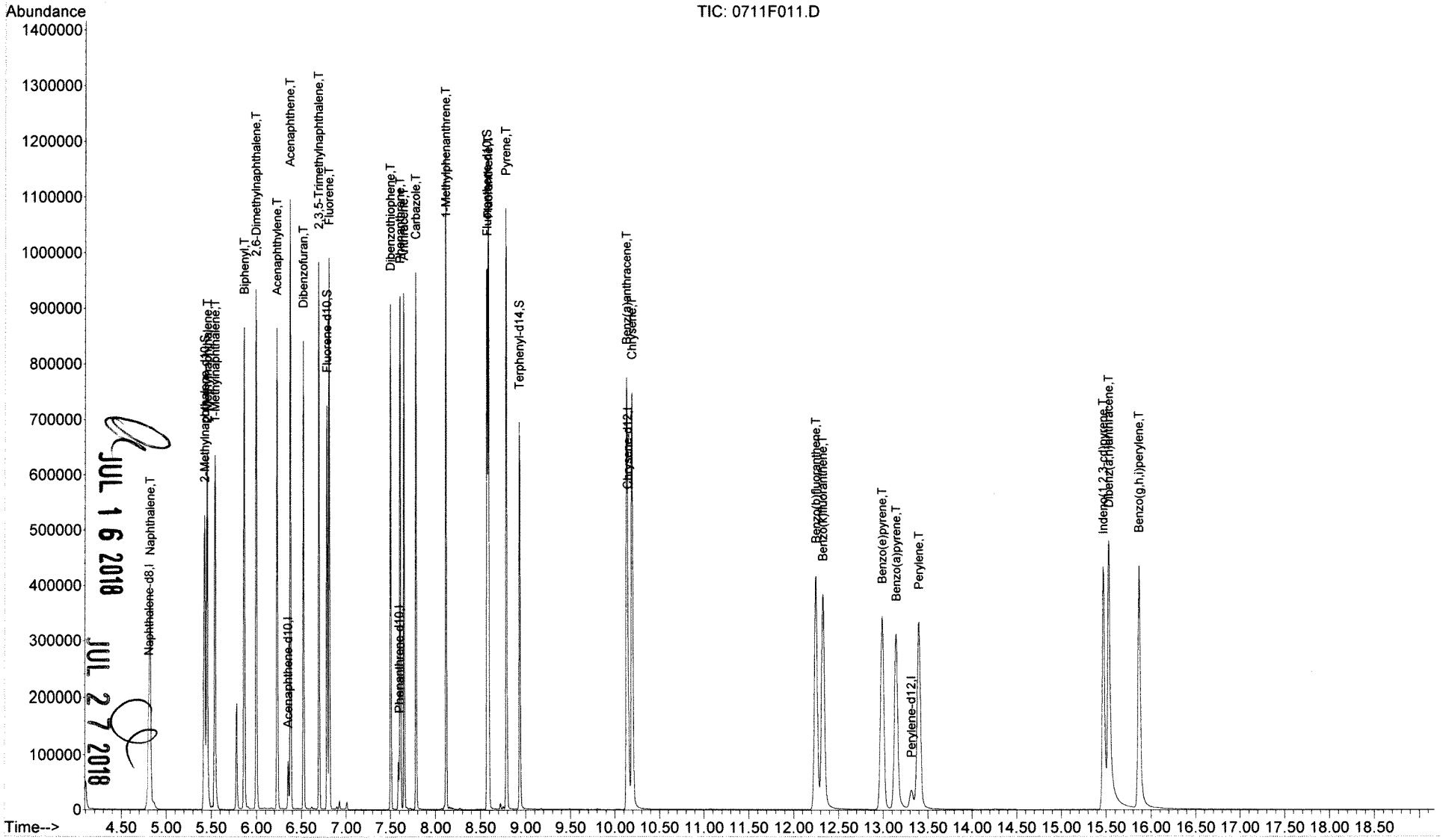
(#) = qualifier out of range (m) = manual integration
0711F011.D 071118PAH.M Wed Jul 11 12:39:53 2018

JUL 27 2018

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F011.D Vial: 11
Acq On : 11 Jul 2018 11:44 am Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 1.6ug/mL | SVM59-4I Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34:44 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	54095	200.00	ng/ml	-0.02
8) Acenaphthene-d10	6.35	164	24200	200.00	ng/ml	-0.02
15) Phenanthrene-d10	7.59	188	49476	200.00	ng/ml	-0.02
23) Chrysene-d12	10.16	240	65411	200.00	ng/ml	-0.02
28) Perylene-d12	13.32	264	71109	200.00	ng/ml	-0.04
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	284926	1851.30	ng/ml	-0.02
Spiked Amount 1000.000			Recovery = 185.13%			
13) Fluorene-d10	6.79	176	291344	1841.30	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 184.13%			
22) Fluoranthene-d10	8.58	212	688154	2241.25	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 224.13%			
25) Terphenyl-d14	8.94	244	524001	1764.19	ng/ml	-0.01
Spiked Amount 1000.000			Recovery = 176.42%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	576774	1945.54	ng/ml	98
4) 2-Methylnaphthalene	5.46	142	343280	1811.34	ng/ml	96
5) 1-Methylnaphthalene	5.54	142	333329	1817.97	ng/ml	96
6) Biphenyl	5.87	154	430613	1842.39	ng/ml	97
7) 2,6-Dimethylnaphthalene	6.00	156	307734	1887.29	ng/ml	92
9) Acenaphthylene	6.23	152	565493	1999.05	ng/ml	97
10) Acenaphthene	6.38	154	319877	1970.02	ng/ml	97
11) Dibenzofuran	6.53	168	511819	1966.28	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	300656	1966.42	ng/ml	85
14) Fluorene	6.81	166	378044	1874.51	ng/ml	98
16) Dibenzothiophene	7.51	184	607108	1985.89	ng/ml	98
17) Phenanthrene	7.61	178	575834	1904.97	ng/ml	99
18) Anthracene	7.66	178	577074	1954.11	ng/ml	99
19) Carbazole	7.79	167	599144	2247.37	ng/ml	97
20) 1-Methylphenanthrene	8.12	192	493413	2071.41	ng/ml	97
21) Fluoranthene	8.60	202	799381	2172.18	ng/ml	96
24) Pyrene	8.79	202	889035	1935.21	ng/ml	94
26) Benz(a)anthracene	10.14	228	854373	2064.52	ng/ml	99
27) Chrysene	10.20	228	809465	1981.79	ng/ml	99
29) Benzo(b)fluoranthene	12.26	252	904886	2039.94	ng/ml	98
30) Benzo(k)fluoranthene	12.34	252	885676	1990.34	ng/ml	98
31) Benzo(e)pyrene	13.00	252	842879	1952.70	ng/ml	97
32) Benzo(a)pyrene	13.16	252	795301	2131.70	ng/ml	98
33) Perylene	13.41	252	811546	2079.83	ng/ml	97
34) Indeno(1,2,3-cd)pyrene	15.48	276	682068	2076.61	ng/ml	97
35) Dibenz(a,h)anthracene	15.54	278	690770	1943.89	ng/ml	97
36) Benzo(g,h,i)perylene	15.88	276	738118	1759.65	ng/ml	96

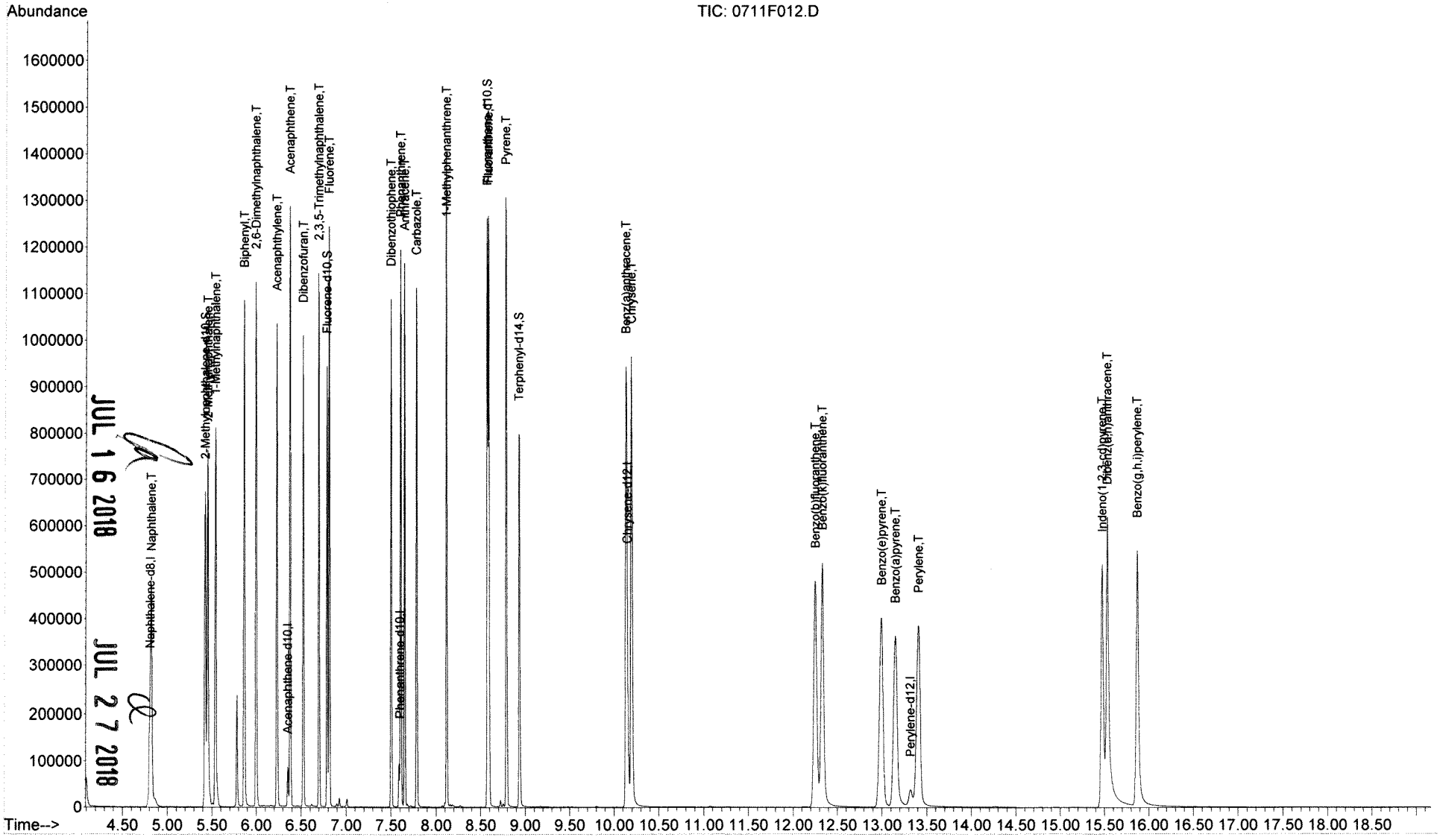
JUL 16 2018 JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F012.D 071118PAH.M Wed Jul 11 12:39:55 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F012.D Vial: 12
Acq On : 11 Jul 2018 12:10 pm Operator: LWeiskopf
Sample : SIM-PAH ICAL @ 2.0ug/mL | SVM59-4J Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 11 12:34 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Thu Jul 05 10:29:47 2018
Response via : Initial Calibration



JUL 16 2018
JUL 27 2018

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 09:14:15 2018 Quant Results File: 071118PAH.RES

Quant Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration
DataAcq Meth : A_PAHAT05

Internal Standards	R.T.	QIon	Response	Conc	Units	Dev(Min)
1) Naphthalene-d8	4.80	136	50172	200.00	ng/ml	0.00
8) Acenaphthene-d10	6.35	164	22986	200.00	ng/ml	0.00
15) Phenanthrene-d10	7.59	188	46192	200.00	ng/ml	0.00
23) Chrysene-d12	10.15	240	62964	200.00	ng/ml	0.00
28) Perylene-d12	13.30	264	67346	200.00	ng/ml	0.00
System Monitoring Compounds						
3) 2-Methylnaphthalene-d10	5.43	152	56170	401.09	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.11%			
13) Fluorene-d10	6.79	176	57243	389.48	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 38.95%			
22) Fluoranthene-d10	8.58	212	119281	409.73	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 40.97%			
25) Terphenyl-d14	8.93	244	103386	378.56	ng/ml	0.00
Spiked Amount 1000.000			Recovery = 37.86%			
Target Compounds						Qvalue
2) Naphthalene	4.82	128	106807	368.80	ng/ml	100
4) 2-Methylnaphthalene	5.46	142	68576	392.65	ng/ml	100
5) 1-Methylnaphthalene	5.54	142	61930	368.40	ng/ml	99
6) Biphenyl	5.86	154	91235	418.55	ng/ml	99
7) 2,6-Dimethylnaphthalene	6.00	156	63157	421.23	ng/ml	96
9) Acenaphthylene	6.23	152	107131	390.61	ng/ml	100
10) Acenaphthene	6.38	154	60647	384.94	ng/ml	98
11) Dibenzofuran	6.53	168	94217	372.67	ng/ml	95
12) 2,3,5-Trimethylnaphthalene	6.70	170	59485	408.19	ng/ml	96
14) Fluorene	6.81	166	73545	385.97	ng/ml	100
16) Dibenzothiophene	7.51	184	123550	428.83	ng/ml	99
17) Phenanthrene	7.61	178	110081	382.02	ng/ml	100
18) Anthracene	7.65	178	109389	397.66	ng/ml	100
19) Carbazole	7.79	167	115133	428.87	ng/ml	100
20) 1-Methylphenanthrene	8.12	192	91182	417.77	ng/ml	100
21) Fluoranthene	8.59	202	147363	414.16	ng/ml	100
24) Pyrene	8.79	202	151769	351.32	ng/ml	92
26) Benz(a)anthracene	10.14	228	153003	375.85	ng/ml	99
27) Chrysene	10.19	228	151585	388.75	ng/ml	100
29) Benzo(b)fluoranthene	12.24	252	170488	409.75	ng/ml	100
30) Benzo(k)fluoranthene	12.32	252	172528	417.98	ng/ml	100
31) Benzo(e)pyrene	12.98	252	162645	410.10	ng/ml	100
32) Benzo(a)pyrene	13.13	252	146112	400.43	ng/ml	99
33) Perylene	13.39	252	166849	435.90	ng/ml	100
34) Indeno(1,2,3-cd)pyrene	15.46	276	133756	373.83	ng/ml	99
35) Dibenz(a,h)anthracene	15.52	278	139306	384.07	ng/ml	100
36) Benzo(g,h,i)perylene	15.85	276	152959	365.05	ng/ml	100

JUL 16 2018

JUL 27 2018

(#) = qualifier out of range (m) = manual integration
0711F013.D 071118PAH.M Mon Jul 16 09:14:44 2018 Page 1

Quantitation Report (QT Reviewed)

Data File : J:\MS14\DATA\071118\0711F013.D Vial: 13
Acq On : 11 Jul 2018 12:36 pm Operator: LWeiskopf
Sample : SIM-PAH ICV @ 0.4ug/mL | SVM59-4K Inst : MS14
Misc : Multiplr: 1.00
MS Integration Params: RTEINT.P
Quant Time: Jul 16 9:14 2018 Quant Results File: 071118PAH.RES

Method : J:\MS14\METHODS\SIM\071118PAH.M (RTE Integrator)
Title : PAHS and ALKYLATED HOMOLOGS
Last Update : Wed Jul 11 12:42:44 2018
Response via : Initial Calibration

