



**Groundwater Sample Results,
Level 2 Laboratory Report, Level 4 Laboratory Report,
Electronic Data Deliverable, Data Validation Report,
and the Sample Location Report, SDG 1601437**

*Naval Air Station Oceana
Virginia Beach, Virginia*

July 2019

November 29, 2016

Vista Work Order No. 1601437

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on October 27, 2016. This sample set was analyzed on a rush turn-around time, under your Project Name 'Oceana PFCs CTO-WE14'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1601437

Case Narrative

Sample Condition on Receipt:

Seven aqueous samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology.

The original results for these samples were reported in Vista Work Order #1601370. As requested, the samples with PFOS concentrations above the upper limit of the calibration curve were re-extracted using less volume. The results are reported from 1:50 dilutions of the extracts.

Analytical Notes:

Modified EPA Method 537

The samples contained particulate and were centrifuged prior to extraction.

A 10mL aliquot of each sample was extracted and analyzed for PFOS using Modified EPA Method 537.

Holding Times

The re-extractions of the samples were performed outside of the method hold time. The extracts were analyzed within the method hold times.

Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

The labeled standard recoveries for all QC and field samples were within the QAPP acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1601437-01	OW11-MW9-1016		25-Oct-16 10:30	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-02	OW11-MW9P-1016		25-Oct-16 10:35	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-03	OW11-MW1-1016		25-Oct-16 12:25	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-04	OW11-MW7-1016		25-Oct-16 13:20	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-05	OW11-MW5-1016	MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD	25-Oct-16 14:10	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-06	OW11-MW6-1016		26-Oct-16 09:45	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-07	OW11-MW4-1016		26-Oct-16 10:40	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank						Modified EPA Method 537			
Matrix: Aqueous		QC Batch: B6K0111		Lab Sample: B6K0111-BLK1					
Sample Size: 0.0100 L		Date Extracted: 16-Nov-2016 8:11		Date Analyzed: 18-Nov-16 22:32	Column: BEH C18				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFOS	ND	10.1	11.3	100		IS 13C8-PFOS	93.7	60 - 150	

LCL-UCL - Lower control limit - upper control limit
 Results reported to DL.
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix: Aqueous Sample Size: 0.0100 L	QC Batch: B6K0111 Date Extracted: 16-Nov-2016 8:11	Lab Sample: B6K0111-BS1 Date Analyzed: 22-Nov-16 12:32 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFOS	1170	1000	117	70 - 130	IS 13C8-PFOS	80.4	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: OW11-MW9-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-01	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 10:30					Date Analyzed:	28-Nov-16 23:41		Column:	BEH C18
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	91000	504	563.	5000	D	IS 13C8-PFOS	101	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW9P-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-02	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 10:35					Date Analyzed:	28-Nov-16 23:53		Column: BEH C18	
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	116000	504	563.	5000	D	IS 13C8-PFOS	77.0	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW1-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-03	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 12:25					Date Analyzed:	29-Nov-16 00:06 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	217000	504	563.	5000	D	IS 13C8-PFOS	81.6	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW7-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-04	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 13:20					Date Analyzed:	29-Nov-16 00:18 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	296000	504	563.	5000	D	IS 13C8-PFOS	72.7	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW5-1016

Modified EPA Method 537

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-05	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 14:10					Date Analyzed:	29-Nov-16 00:30		Column:	BEH C18
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	69500	504	563.	5000	D	IS 13C8-PFOS	93.2	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Matrix Spike Results

Modified EPA Method 537

Source Client ID: OW11-MW5-1016	QC Batch: B6K0111	Lab Sample: B6K0111-MS1/B6K0111-MSD1
Source LabNumber: 1601437-05	Date Extracted: 16-Nov-2016 8:11	Date Analyzed: 29-Nov-16 01:07 Column: BEH C18
Matrix: Aqueous		29-Nov-16 01:19 Column: BEH C18
Sample Size: 0.0100/0.0100 L		

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFOS	1000	1390	D, H	1000	1590	13.4	D, H	70 - 130	25	IS 13C8-PFOS	71.1	D	71.2	D

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW6-1016

Modified EPA Method 537

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-06	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	26-Oct-2016 9:45					Date Analyzed:	29-Nov-16 00:42 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	101000	504	563.	5000	D	IS 13C8-PFOS	90.0	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW4-1016

Modified EPA Method 537

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-07	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	26-Oct-2016 10:40					Date Analyzed:	29-Nov-16 00:55 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	33200	504	563.	5000	D	IS 13C8-PFOS	121	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
M	Estimated Maximum Possible Concentration. (CA Region 2 projects only)
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

CHAIN OF CUSTODY

EXACT COPY OF ORIGINAL
Init BBB 11/23/17
1601437

For Laboratory Use Only
Laboratory Project ID: 1601370 Temp 1.0 °C
Storage ID: WR 2 Storage Secured: Yes No

Project ID: CTO-WE14 OCEANA PFC P.O.#: 10006-7-105690 Sampler: R. McELHINNY
(name)

TAT Standard: 21 days
(check one): Rush (surcharge may apply)
 14 days 7 days Specify: _____

Invoice to: Name TIFFANY HILL Company CH2M Address 5701 CLEVELAND ST City VIRGINIA BEACH State VA Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
<u>MARITA CLAY maier</u>	<u>10/26/16</u>	<u>1515</u>	<u>Beth Benedict B. Benedict</u>	<u>10/27/16</u>	<u>0930</u>

SHIP TO: Vista Analytical Laboratory
1104 Windfield Way
El Dorado Hills, CA 95762
(916) 673-1520 * Fax (916) 673-0106

Method of Shipment: FEDEX

ATTN: MARTHA MAIER Tracking No.: _____

Sample ID	Date	Time	Location/Sample Description	Add Analysis(es) Requested																	Comments			
				Quantity	Type	Matrix	2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCB's	209 CONGENERS	PBDE	PAH		WHO-28	Mod. EPA 637	
* OW11-MW9-1016	10/25	1030	OCEANA SITE II	2	0	AQ																2		
* OW11-MW9P-1016	10/25	1035	OCEANA SITE II	2	0	AQ																	2	
OW11-MW8-1016	10/25	1120	OCEANA SITE II	2	0	AQ																	2	
* OW11-MW1-1016	10/25	1225	OCEANA SITE II	2	0	AQ																	2	
* OW11-MW7-1016	10/25	1320	OCEANA SITE II	2	0	AQ																	2	
* OW11-MW5-1016	10/25	1410	OCEANA SITE II	2	0	AQ																	2	
* OW11-MW5-1016-M5	10/25	1410	OCEANA SITE II	2	0	AQ																	2	
* OW11-MW5-1016-SD	10/25	1410	OCEANA SITE II	2	0	AQ																	2	
* OW11-MW6-1016	10/26	0945	OCEANA SITE II	2	0	AQ																	2	
* OW11-MW4-1016	10/26	1040	OCEANA SITE II	2	0	AQ																	2	

Special Instructions/Comments: * Samples relogged in to WO 1601437

SEND DOCUMENTATION AND RESULTS TO:

Name: TIFFANY HILL
Company: CH2M
Address: 5701 CLEVELAND ST
City: VIRGINIA BEACH State: VA Zip: 23462
Phone: 541-768-3107 Fax: _____
Email: TIFFANY.HILL@CH2M.COM

Container Types: A = 1 Liter Amber, G = Glass Jar
Bottle Preservation Type: T = Thiosulfate, O = Other: 125 mL

Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____

EXACT COPY OF ORIGINAL
 In: BBB 11/23/16

SAMPLE LOG-IN CHECKLIST



Vista Project #:

1601437
~~1601370~~ BBB

TAT

14

Samples Arrival:	Date/Time <u>10/27/16 0853</u>	Initials: <u>BBB</u>	Location: <u>WR-2</u>
Logged In:	Date/Time <u>10/27/16 1405</u>	Initials: <u>BBB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>A4</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
Temp °C: <u>1.3</u> (uncorrected)	Time: <u>0930</u>	Thermometer ID: IR-1	
Temp °C: <u>1.0</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill			
Trk # <u>7844 6670 4468</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?			<input checked="" type="checkbox"/>
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Preservation Documented:	<input type="checkbox"/> Na ₂ S ₂ O ₃	<input type="checkbox"/> Trizma	<input checked="" type="checkbox"/> NA
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

Sample label : OW-MW6-1016
 COC id : DW11-MW6-1016

November 29, 2016

Vista Work Order No. 1601437

Ms. Tiffany Hill
CH2M Hill
1100 NE Circle Blvd. Suite 300
Corvallis, OR 97330

Dear Ms. Hill,

Enclosed are the results for the sample set received at Vista Analytical Laboratory on October 27, 2016. This sample set was analyzed on a rush turn-around time, under your Project Name 'Oceana PFCs CTO-WE14'.

Vista Analytical Laboratory is committed to serving you effectively. If you require additional information, please contact me at 916-673-1520 or by email at mmaier@vista-analytical.com.

Thank you for choosing Vista as part of your analytical support team.

Sincerely,



Martha Maier
Laboratory Director



Vista Analytical Laboratory certifies that the report herein meets all the requirements set forth by NELAP for those applicable test methods. Results relate only to the samples as received by the laboratory. This report should not be reproduced except in full without the written approval of Vista.

Vista Work Order No. 1601437

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Analytical Notes:

Modified EPA Method 537

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A 10mL aliquot of each sample was extracted and analyzed for PFOS using Modified EPA Method 537.

Holding Times

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Quality Control

The Initial Calibration and Continuing Calibration Verifications met the method acceptance criteria.

A Method Blank and Ongoing Precision and Recovery (OPR) sample were extracted and analyzed with the preparation batch. No analytes were detected in the Method Blank above 1/2 the LOQ. The OPR recoveries were within the method acceptance criteria

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
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1601437-04	OW11-MW7-1016		25-Oct-16 13:20	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-05	OW11-MW5-1016	MS/MSD	25-Oct-16 14:10	27-Oct-16 08:53	HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
		MS/MSD			HDPE Bottle, 125 mL
1601437-06	OW11-MW6-1016		26-Oct-16 09:45	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1601437-07	OW11-MW4-1016		26-Oct-16 10:40	27-Oct-16 08:53	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank						Modified EPA Method 537			
Matrix: Aqueous		QC Batch: B6K0111		Lab Sample: B6K0111-BLK1		Date Analyzed: 18-Nov-16 22:32	Column: BEH C18		
Sample Size: 0.0100 L		Date Extracted: 16-Nov-2016 8:11							
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFOS	ND	10.1	11.3	100		IS 13C8-PFOS	93.7	60 - 150	

LCL-UCL - Lower control limit - upper control limit
 Results reported to DL.
 When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
 Only the linear isomer is reported for all other analytes.

Sample ID: OPR

Modified EPA Method 537

Matrix: Aqueous Sample Size: 0.0100 L	QC Batch: B6K0111 Date Extracted: 16-Nov-2016 8:11	Lab Sample: B6K0111-BS1 Date Analyzed: 22-Nov-16 12:32 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFOS	1170	1000	117	70 - 130	IS 13C8-PFOS	80.4	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: OW11-MW9-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-01	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 10:30					Date Analyzed:	28-Nov-16 23:41 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	91000	504	563.	5000	D	IS 13C8-PFOS	101	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW9P-1016

Modified EPA Method 537

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-02	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 10:35					Date Analyzed:	28-Nov-16 23:53 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	116000	504	563.	5000	D	IS 13C8-PFOS	77.0	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW1-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-03	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 12:25					Date Analyzed:	29-Nov-16 00:06		Column:	BEH C18
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	217000	504	563.	5000	D	IS 13C8-PFOS	81.6	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW7-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-04	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 13:20					Date Analyzed:	29-Nov-16 00:18 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	296000	504	563.	5000	D	IS 13C8-PFOS	72.7	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW5-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-05	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	25-Oct-2016 14:10					Date Analyzed:	29-Nov-16 00:30 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	69500	504	563.	5000	D	IS 13C8-PFOS	93.2	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Matrix Spike Results

Modified EPA Method 537

Source Client ID: OW11-MW5-1016	QC Batch: B6K0111	Lab Sample: B6K0111-MS1/B6K0111-MSD1
Source LabNumber: 1601437-05	Date Extracted: 16-Nov-2016 8:11	Date Analyzed: 29-Nov-16 01:07 Column: BEH C18
Matrix: Aqueous		29-Nov-16 01:19 Column: BEH C18
Sample Size: 0.0100/0.0100 L		

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFOS	1000	1390	D, H	1000	1590	13.4	D, H	70 - 130	25	IS 13C8-PFOS	71.1	D	71.2	D

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.
Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW6-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-06	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	26-Oct-2016 9:45					Date Analyzed:	29-Nov-16 00:42		Column:	BEH C18
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	101000	504	563.	5000	D	IS 13C8-PFOS	90.0	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

Sample ID: OW11-MW4-1016**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Aqueous		Lab Sample:	1601437-07	Date Received:	27-Oct-2016 8:53	
Project:	Oceana PFCs CTO-WE14		Sample Size:	0.0100 L		QC Batch:	B6K0111	Date Extracted:	16-Nov-2016 8:11	
Date Collected:	26-Oct-2016 10:40					Date Analyzed:	29-Nov-16 00:55 Column: BEH C18			
Location:	OCEANA SITE 11									
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFOS	33200	504	563.	5000	D	IS 13C8-PFOS	121	60 - 150	D	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

When reported, PFBS, PFHxS, PFOA and PFOS include both linear and branched isomers.

Only the linear isomer is reported for all other analytes.

DATA QUALIFIERS & ABBREVIATIONS

B	This compound was also detected in the method blank.
D	Dilution
E	The associated compound concentration exceeded the calibration range of the instrument.
H	Recovery and/or RPD was outside laboratory acceptance limits.
I	Chemical Interference
J	The amount detected is below the Reporting Limit/LOQ.
M	Estimated Maximum Possible Concentration. (CA Region 2 projects only)
*	See Cover Letter
Conc.	Concentration
NA	Not applicable
ND	Not Detected
TEQ	Toxic Equivalency

Unless otherwise noted, solid sample results are reported in dry weight. Tissue samples are reported in wet weight.

CERTIFICATIONS

Accrediting Authority	Certificate Number
California Department of Health – ELAP	2892
DoD ELAP - A2LA Accredited - ISO/IEC 17025:2005	3091.01
Florida Department of Health	E87777
Hawaii Department of Health	N/A
Louisiana Department of Environmental Quality	01977
Maine Department of Health	2014022
Nevada Division of Environmental Protection	CA004132015-1
New Jersey Department of Environmental Protection	CA003
New York Department of Health	11411
Oregon Laboratory Accreditation Program	4042-004
Pennsylvania Department of Environmental Protection	012
South Carolina Department of Health	87002001
Texas Commission on Environmental Quality	T104704189-15-6
Virginia Department of General Services	7923
Washington Department of Ecology	C584
Wisconsin Department of Natural Resources	998036160

Current certificates and lists of licensed parameters are located in the Quality Assurance office and are available upon request

NELAP Accredited Test Methods

MATRIX: Air	
Description of Test	Method
Determination of Polychlorinated p-Dioxins & Polychlorinated Dibenzofurans	EPA 23

MATRIX: Biological Tissue	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Drinking Water	
Description of Test	Method
2,3,7,8-Tetrachlorodibenzo- p-dioxin (2,3,7,8-TCDD) GC/HRMS	EPA 1613
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537

MATRIX: Non-Potable Water	
Description of Test	Method
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613B
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Pesticides in Water, Soil, Sediment, Biosolids, and Tissue by HRGC/HRMS	EPA 1699
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Dioxin by GC/HRMS	EPA 613
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A

MATRIX: Solids	
Description of Test	Method
Tetra-Octa Chlorinated Dioxins and Furans by Isotope Dilution GC/HRMS	EPA 1613
Tetra- through Octa-Chlorinated Dioxins and Furans by Isotope	EPA 1613B

Dilution GC/HRMS	
Brominated Diphenyl Ethers by HRGC/HRMS	EPA 1614A
Chlorinated Biphenyl Congeners in Water, Soil, Sediment, and Tissue by GC/HRMS	EPA 1668A/C
Perfluorinated Alkyl Acids in Drinking Water by SPE and LC/MS/MS	EPA 537
Polychlorinated Dibenzo-p-Dioxins and Polychlorinated Dibenzofurans by GC/HRMS	EPA 8280A/B
Polychlorinated Dibenzodioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by GC/HRMS	EPA 8290/8290A



CHAIN OF CUSTODY

EXACT COPY OF ORIGINAL

For Laboratory Use Only	
Laboratory Project ID: <u>1601370</u>	Temp: <u>1.0</u> °C
Storage ID: <u>WR 2</u>	Storage Secured: Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

Project ID: CTO-WE14 OCEANA PFC P.O.#: 10006-7-105690 Sampler: R. McELHINNY (name)

TAT (check one):
 21 days
 14 days
 7 days
 Rush (surcharge may apply)
 Specify: _____

Invoice to: Name TIFFANY HILL Company CH2M Address 5701 CLEVELAND ST City VIRGINIA BEACH State VA Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature) MARITA CLAY Date 10/26/16 Time 1515
 Received by (printed name and signature) B. Benedict Date 10/27/16 Time 0930

SHIP TO: Vista Analytical Laboratory
 1104 Windfield Way
 El Dorado Hills, CA 95762
 (916) 673-1520 * Fax (916) 673-0106
 Method of Shipment: FEDEX
 ATTN: MARTHA MAIER
 Tracking No.: _____

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	Add Analysis(es) Requested														Comments					
							2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378 TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCBs	209 CONGENERs	PBDE	PAH		WHO-28	Mod. EPA 837			
* OW11-MW9-1016	10/25	1030	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW9P-1016	10/25	1035	OCEANA SITE 11	2	0	AQ																			2	
OW11-MW8-1016	10/25	1120	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW1-1016	10/25	1225	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW7-1016	10/25	1320	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW5-1016	10/25	1410	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW5-1016-M5	10/25	1410	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW5-1016-SD	10/25	1410	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW6-1016	10/26	0945	OCEANA SITE 11	2	0	AQ																			2	
* OW11-MW4-1016	10/26	1040	OCEANA SITE 11	2	0	AQ																			2	

Special Instructions/Comments: * Samples relogged in to WO 1601437

SEND DOCUMENTATION AND RESULTS TO:

Name: TIFFANY HILL
 Company: CH2M
 Address: 5701 CLEVELAND ST
 City: VIRGINIA BEACH State: VA Zip: 23462
 Phone: 541-768-3107 Fax: _____
 Email: TIFFANY.HILL@CH2M.COM

Container Types: A = 1 Liter Amber, G = Glass Jar
 Bottle Preservation Type: T = Thiosulfate
 Matrix Types: AQ = Aqueous, DW = Drinking Water, EF = Effluent, PP = Pulp/Paper, SD = Sediment, P = PUF, T = MM5, O = Other: 125 mL
 O = Other: _____
 SL = Sludge, SO = Soil, WW = Wastewater, B = Blood/Serum, O = Other: _____

EXACT COPY OF ORIGINAL
 Init BBB 11/23/16

SAMPLE LOG-IN CHECKLIST



Vista Project #:

1601437
~~1601370~~ BBB

TAT

14

Samples Arrival:	Date/Time <u>10/27/16 0853</u>	Initials: <u>BBB</u>	Location: <u>WR-2</u>
Logged In:	Date/Time <u>10/27/16 1405</u>	Initials: <u>BBB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>A4</u>
Delivered By:	<input checked="" type="radio"/> FedEx	<input type="radio"/> UPS	<input type="radio"/> On Trac
Preservation:	<input checked="" type="radio"/> Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
Temp °C: <u>1.3</u> (uncorrected)	Time: <u>0930</u>	Thermometer ID: IR-1	
Temp °C: <u>1.0</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received?	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill			
Trk # <u>7844 6670 4468</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?			<input checked="" type="checkbox"/>
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			<input checked="" type="checkbox"/>
Preservation Documented:	<input type="checkbox"/> Na ₂ S ₂ O ₃	<input type="checkbox"/> Trizma	<input checked="" type="checkbox"/> NA
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input checked="" type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments:

Sample label : OW-MW6-1016
 COC id : DW11-MW6-1016

EXTRACTION INFORMATION

Process Sheet

Workorder: 1601437

Prep Expiration: 11/08/2016
Client: CH2M Hill

24-Nov-16 AC
Workorder Due: ~~10-Nov-16 00:00~~ 11/11/16
TAT: 14

Method: 537 PFAS DOD (LOQ as mRL)
Matrix: Aqueous

Prep Batch: B6K011

Prep Data Entered: 11/17/16 JS
Date and Initials

Version: PFOS only

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1601437-01	<input checked="" type="checkbox"/>	OW11-MW9-1016	27-Oct-16 08:53	WR-2 A-4	
1601437-02	<input checked="" type="checkbox"/>	OW11-MW9P-1016	27-Oct-16 08:53	WR-2 A-4	
1601437-03	<input checked="" type="checkbox"/>	OW11-MW1-1016	27-Oct-16 08:53	WR-2 A-4	
1601437-04	<input checked="" type="checkbox"/>	OW11-MW7-1016	27-Oct-16 08:53	WR-2 A-4	
1601437-05	<input checked="" type="checkbox"/>	OW11-MW5-1016	27-Oct-16 08:53	WR-2 A-4	MS/MSD
1601437-06	<input checked="" type="checkbox"/>	OW11-MW6-1016	27-Oct-16 08:53	WR-2 A-4	
1601437-07	<input checked="" type="checkbox"/>	OW11-MW4-1016	27-Oct-16 08:53	WR-2 A-4	

1x
10mls, 2x Spike

Vista PM: Martha Maier

Vial Box ID: Tardis

Sample Reconciled By: [Signature] 11/16/16
Page 1 of 1 JS/11/16

Percent Solids



Project: BL6K0111

Balance ID: HRMS 8

Sample ID	Chemist: <u>NA</u>		Chemist: <u>NA</u>		Chemist/Date		
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	pH before	pH after	°C	
1601437 - 01	(A)			5	2	0	
- 02				5	2	0	
- 03				5	2	0	
- 04				5	2	0	
- 05				5	2	0	
- 05ms				5	2	0	
- 05msd				5	2	0	
- 06				5	2	0	
- 07				5	2	0	

- Procedure:**
- Tare the balance.
 - Record Boat Weight.
 - Add 2 - 10 g of sample.
 - Record Wet Wt. + Boat Wt.
 - Dry in oven overnight at 107°C.
 - Tare the balance.
 - Record Residue + Boat Wt.

- Notes:**
- (A) 2 drops HCl used to adjust pH
JS 11/16/14
- Methods 8280, 613, 1613, 8290, 1614 - pH < 9
 - Methods 1668/PCN - pH 2-3
 - NCASI 551 - pH 1

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DOD (LOO as mRL)

B6K0111

Chemist: E. Schneider

Prep Date/Time: 16-Nov-16 08:11

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L) ^{ef 11/16/16}	IS/NS CHEM/WIT DATE	SPE	RS CHEM/WIT DATE
<input type="checkbox"/>	B6K0111-BLK1	NA	NA	0.01 (0.125)	JS 11/16/16	JS 11/16/16	JS 11/16/16
<input type="checkbox"/>	B6K0111-BS1	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	B6K0111-MS1 1601437-05 (A) (B)	↓	↓	0.010	↓	↓	↓
<input type="checkbox"/>	B6K0111-MSD1 1601437-05	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1601437-01	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1601437-02	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1601437-03	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1601437-04	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1601437-05	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1601437-06	↓	↓	↓	↓	↓	↓
<input type="checkbox"/>	1601437-07	↓	↓	↓	↓	↓	↓

CC6K0083

(A) Sample contained particulate, transferred to secondary container and centrifuged then decanted back into original container. Prior to dilution. JS to 11/16/16

(B) 10mL of original sample was transferred to new bottle and diluted up to 125mL using HPLC H₂O. JS 11/16/16

IS Name <u>16I2604, 10mL</u> (J2)	NS Name <u>16I1601, 10mL</u> (J1)	RS Name <u>16K1105, 10mL</u> (J3)	SPE Chem: <u>Strata X AW 33um 200mg/cm</u>	Check Out: Chemist/Date: <u>JS 11/16/16</u>
			Ele SOLV: <u>0.5% NH₄OH in MeOH + MeOH</u>	Check In: Chemist/Date: <u>JS 11/16/16</u>
			Final Volume(s) <u>1 mL</u>	Balance ID: <u>HRMSB</u>

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Dataset: U:\Q2.PRO\Results\161118J2\161118J2_28.qld

Last Altered: Saturday, November 26, 2016 15:40:19 Pacific Standard Time

Printed: Saturday, November 26, 2016 15:43:57 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: B6K0111-BLK1, Description: Method Blank, Name: 161118J2_28.wiff, Date: 18-Nov-2016, Time: 22:32:10

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	3.575e0	3.015e3		0.0100	5.08		
2	22 13C8-PFOS	79.93	3.015e3	3.386e3	0.950	0.0100	5.07	1170	93.7
3	29 13C4-PFOS	79.94	3.386e3	3.386e3	1.000	0.0100	5.07	1250	100
4	35 Total PFOS	79.92		3.015e3		0.0100		1.72	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161118J2\161118J2_28.qld

Last Altered: Saturday, November 26, 2016 15:40:19 Pacific Standard Time

Printed: Saturday, November 26, 2016 15:43:57 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: B6K0111-BLK1, Description: Method Blank, Name: 161118J2_28.wiff, Date: 18-Nov-2016, Time: 22:32:10

Total PFBS

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.40	7.709	1016.553	14.5
2	33 Total PFHxS	79.91	4.39	5.700	1016.553	13.8

Total PFOA

#	Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.68	54.084	5450.614	10.1

Total PFOS

#	Name	Trace	RT	Area	IS Area	Conc.
1	35 Total PFOS	79.92	4.99	10.034	3015.163	1.7
2	10 PFOS	79.92	5.08	3.575	3015.163	

Dataset: U:\Q2.PRO\Results\161118J2\161118J2_28.qld

Last Altered: Saturday, November 26, 2016 15:40:19 Pacific Standard Time

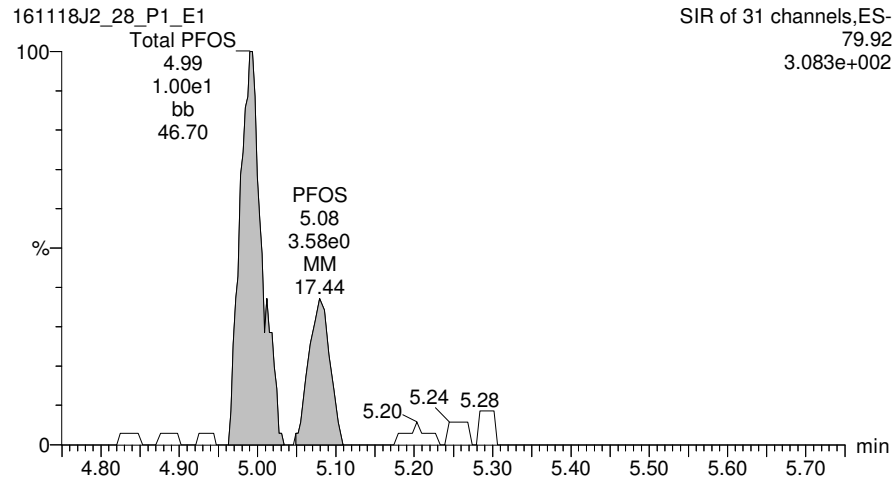
Printed: Saturday, November 26, 2016 15:43:57 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

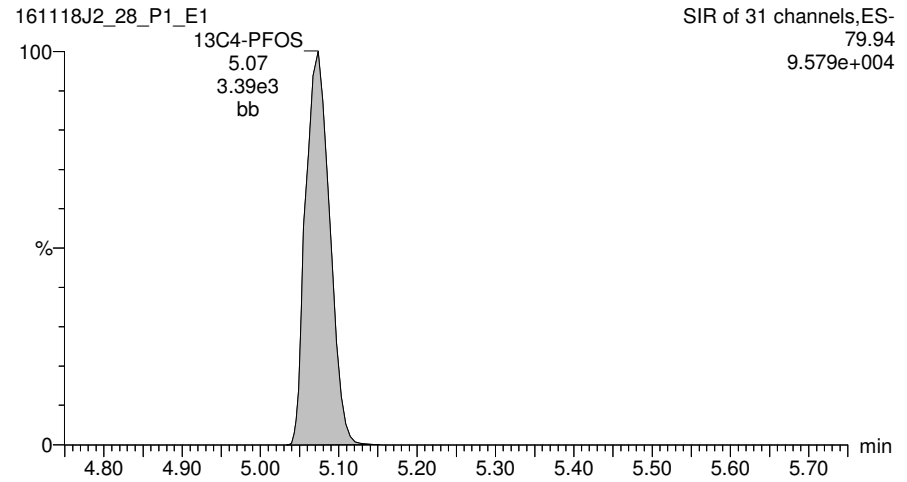
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: B6K0111-BLK1, Description: Method Blank, Name: 161118J2_28.wiff, Date: 18-Nov-2016, Time: 22:32:10, Instrument: , Lab: ©PE-SCIEX, User: sciex

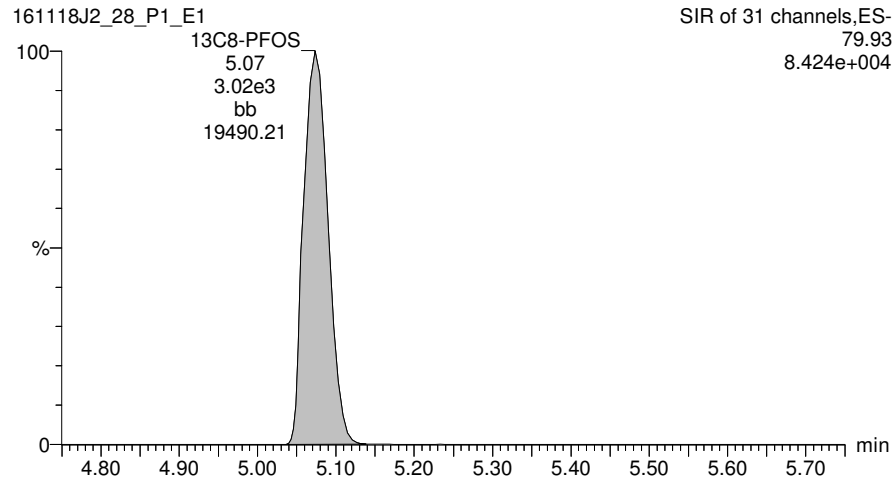
Total PFOS



13C4-PFOS



13C8-PFOS



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-14.qld

Last Altered: Tuesday, November 29, 2016 13:29:52 Pacific Standard Time

Printed: Tuesday, November 29, 2016 13:30:32 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_A_FULL_LINEAR.mdb 29 Nov 2016 13:19:21

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

ID: B6K0111-BS1 OPR 0.125, Description: OPR, Name: 161122G2_14, Date: 22-Nov-2016, Time: 12:32:23

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	499 >79.9	4.441e3	5.804e3		0.0100	4.77	1170	117
2	22 13C8-PFOS	507.0 > 79.9	5.804e3	7.649e3	0.944	0.0100	4.77	1010	80.4
3	31 13C4-PFOS	503.0 > 79.9	7.649e3	7.649e3	1.000	0.0100	4.77	1250	100
4	37 Total PFOS	499 > 79.9		5.804e3		0.0100		1170	

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-14.qld

Last Altered: Tuesday, November 29, 2016 13:29:52 Pacific Standard Time

Printed: Tuesday, November 29, 2016 13:30:32 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_A_FULL_LINEAR.mdb 29 Nov 2016 13:19:21

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

ID: B6K0111-BS1 OPR 0.125, Description: OPR, Name: 161122G2_14, Date: 22-Nov-2016, Time: 12:32:23

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	34 Total PFBS	299 > 79.7	3.17	11.322	4281.937	10.0
2	3 PFBS	299 > 79.7	3.10	8973.427	5026.740	1253.2

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	398.9 > 79.6	4.09	6725.673	4281.937	1142.4

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	36 Total PFOA	413 > 368.7	4.63	13.705	16617.293	
2	36 Total PFOA	413 > 368.7	4.51	12.135	16617.293	
3	36 Total PFOA	413 > 368.7	4.46	7.056	16617.293	
4	8 PFOA	413 > 368.7	4.37	15981.670	16617.293	1325.7
5	36 Total PFOA	413 > 368.7	4.27	18.721	16617.293	

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	499 > 79.9	4.77	4441.098	5804.427	1166.1

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-14.qld

Last Altered: Tuesday, November 29, 2016 13:29:52 Pacific Standard Time

Printed: Tuesday, November 29, 2016 13:30:32 Pacific Standard Time

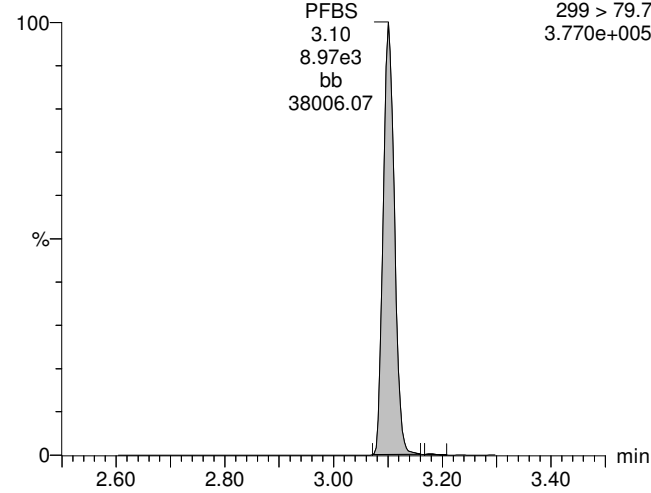
Method: U:\G1.pro\MethDB\PFAS_A_FULL_LINEAR.mdb 29 Nov 2016 13:19:21

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

ID: B6K0111-BS1 OPR 0.125, Description: OPR, Name: 161122G2_14, Date: 22-Nov-2016, Time: 12:32:23, Instrument: , Lab: , User:

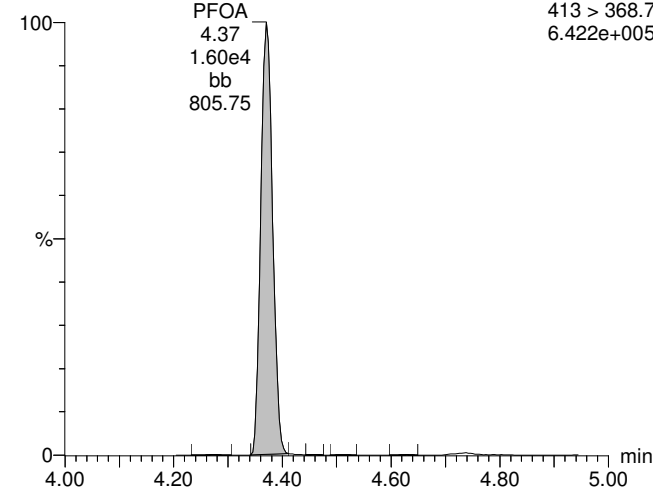
Total PFBS

161122G2_14



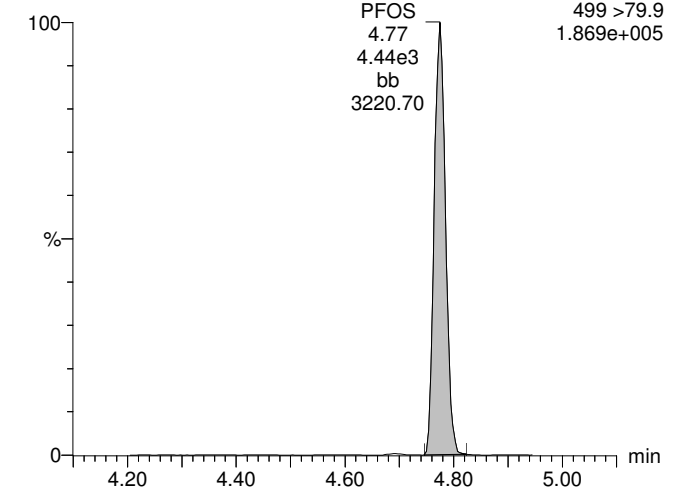
Total PFOA

161122G2_14



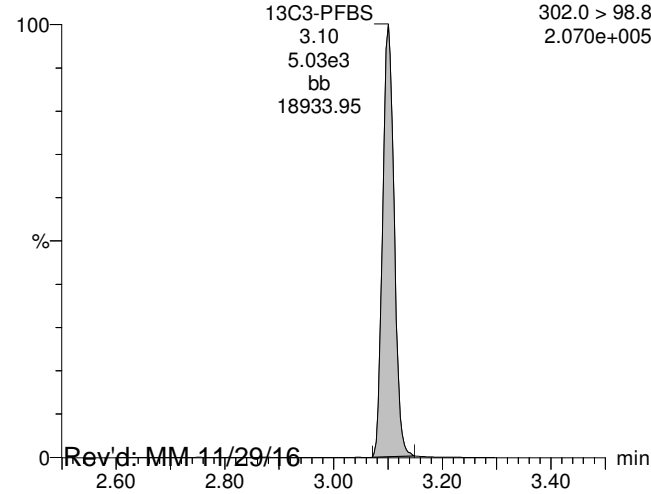
Total PFOS

161122G2_14



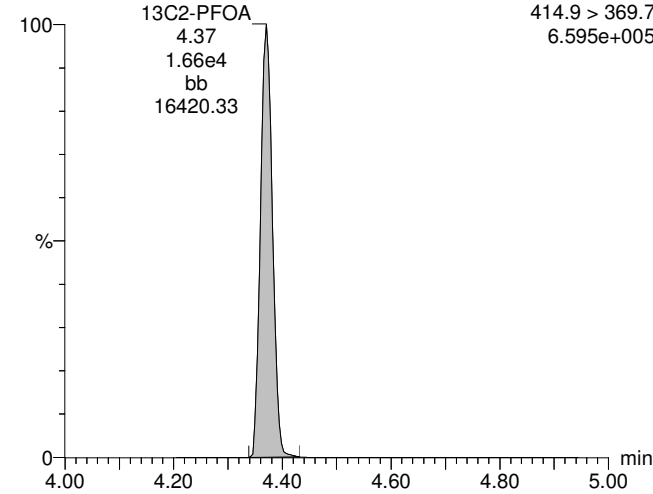
13C3-PFBS

161122G2_14



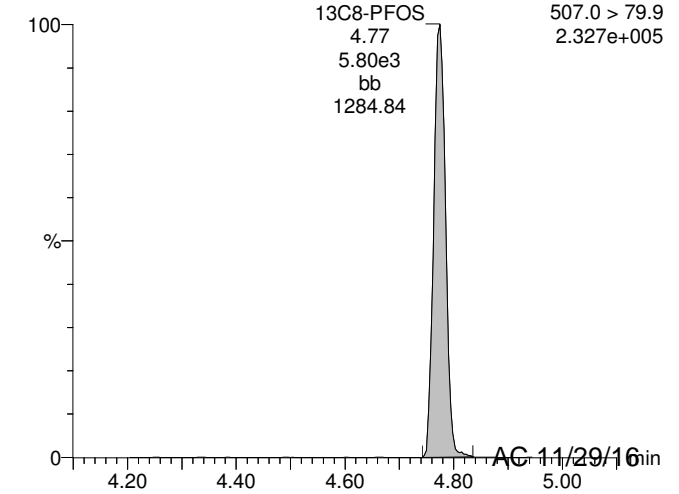
13C2-PFOA

161122G2_14



13C8-PFOS

161122G2_14



Rev'd: MM 11/29/16

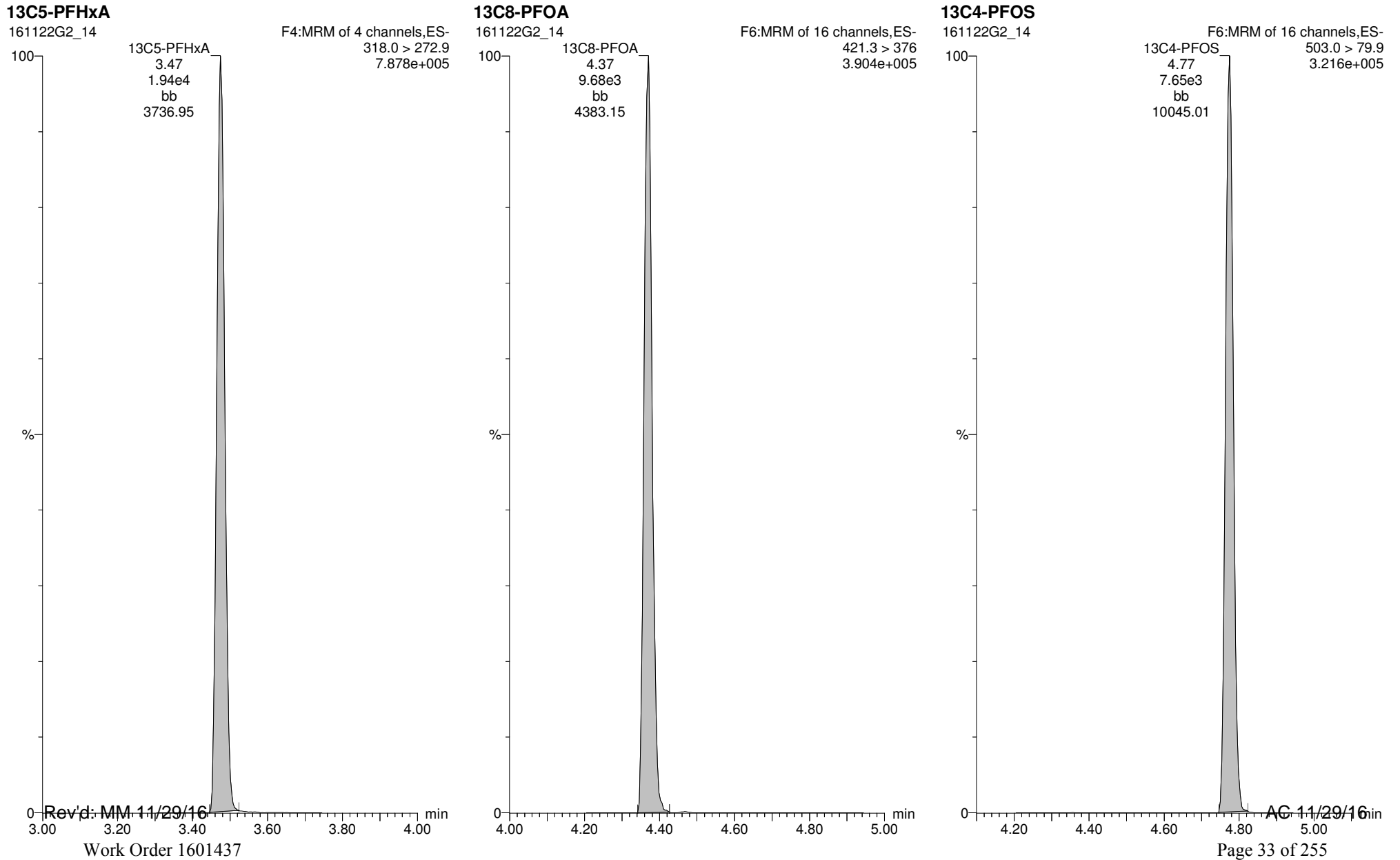
AC 11/29/16

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-14.qld

Last Altered: Tuesday, November 29, 2016 13:29:52 Pacific Standard Time

Printed: Tuesday, November 29, 2016 13:30:32 Pacific Standard Time

ID: B6K0111-BS1 OPR 0.125, Description: OPR, Name: 161122G2_14, Date: 22-Nov-2016, Time: 12:32:23, Instrument: , Lab: , User:



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_04.qld

Last Altered: Tuesday, November 29, 2016 09:56:31 Pacific Standard Time

Printed: Tuesday, November 29, 2016 09:56:57 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-01@50x, Description: OW11-MW9-1016, Name: 161128J2_04.wiff, Date: 28-Nov-2016, Time: 23:41:36

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	2.829e3	5.731e1		0.0100	5.06	53700	
2	22 13C8-PFOS	79.93	5.731e1	5.969e1	0.950	0.0100	5.06	1260	101
3	29 13C4-PFOS	79.94	5.969e1	5.969e1	1.000	0.0100	5.06	1250	100
4	35 Total PFOS	79.92		5.731e1		0.0100		91000	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_04.qld

Last Altered: Tuesday, November 29, 2016 09:56:31 Pacific Standard Time

Printed: Tuesday, November 29, 2016 09:56:57 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-01@50x, Description: OW11-MW9-1016, Name: 161128J2_04.wiff, Date: 28-Nov-2016, Time: 23:41:36

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	136.797	108.268	2040.9
2	32 Total PFBS	79.90	3.28	1.222	108.268	20.8
3	32 Total PFBS	79.90	3.26	1.879	108.268	30.6

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.38	1008.792	18.101	29606.9
2	33 Total PFHxS	79.91	4.29	173.627	18.101	3720.1

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.66	1280.137	102.726	
2	34 Total PFOA	368.90	4.56	110.795	102.726	1061.1

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.06	2828.958	57.311	53661.0
2	35 Total PFOS	79.92	4.95	1841.587	57.311	34931.4
3	35 Total PFOS	79.92	4.86	126.057	57.311	2389.3

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_04.qld

Last Altered: Tuesday, November 29, 2016 09:56:31 Pacific Standard Time

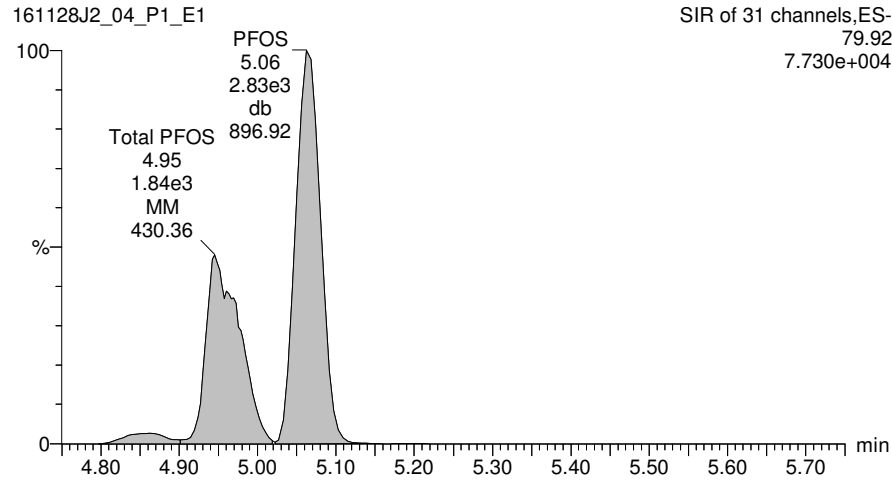
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Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

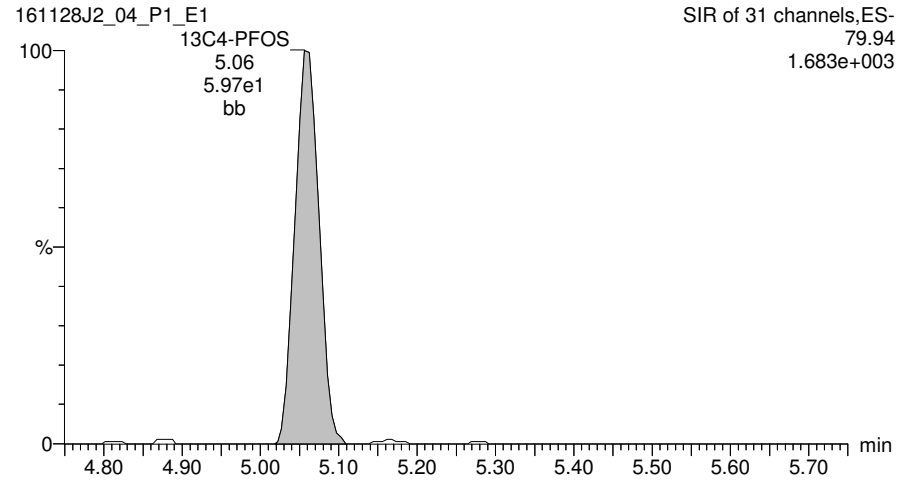
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-01@50x, Description: OW11-MW9-1016, Name: 161128J2_04.wiff, Date: 28-Nov-2016, Time: 23:41:36, Instrument: , Lab: ©PE-SCIEX, User: sciex

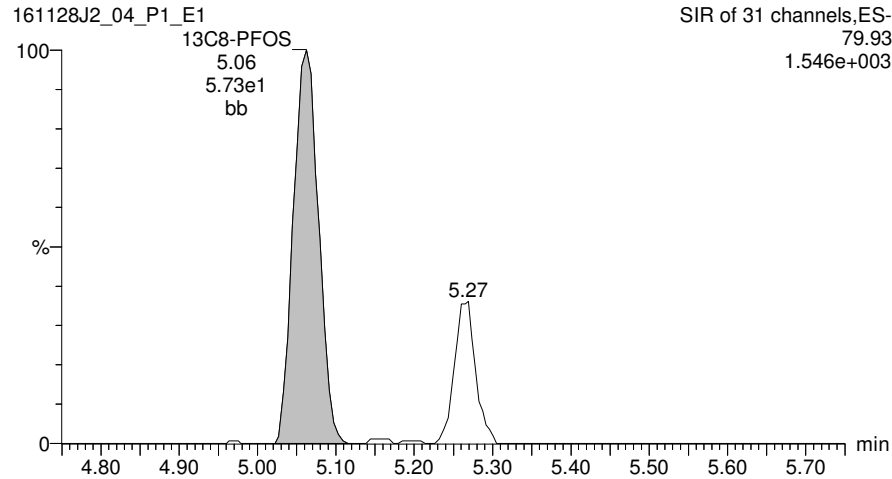
Total PFOS



13C4-PFOS



13C8-PFOS



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_05.qld

Last Altered: Tuesday, November 29, 2016 09:59:42 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:00:23 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-02@50x, Description: OW11-MW9P-1016, Name: 161128J2_05.wiff, Date: 28-Nov-2016, Time: 23:53:49

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	3.042e3	4.711e1		0.0100	5.06	70200	
2	22 13C8-PFOS	79.93	4.711e1	6.437e1	0.950	0.0100	5.06	963	77.0
3	29 13C4-PFOS	79.94	6.437e1	6.437e1	1.000	0.0100	5.06	1250	100
4	35 Total PFOS	79.92		4.711e1		0.0100		116000	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_05.qld

Last Altered: Tuesday, November 29, 2016 09:59:42 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:00:23 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-02@50x, Description: OW11-MW9P-1016, Name: 161128J2_05.wiff, Date: 28-Nov-2016, Time: 23:53:49

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	154.216	122.580	2032.1

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.38	1157.076	22.586	25799.5
2	33 Total PFHxS	79.91	4.29	205.945	22.586	3529.9
3	33 Total PFHxS	79.91	4.18	1.464	22.586	35.8

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.66	1399.879	106.685	
2	34 Total PFOA	368.90	4.56	111.661	106.685	1028.9

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.06	3042.319	47.109	70206.1
2	35 Total PFOS	79.92	4.95	1848.163	47.109	42648.4
3	35 Total PFOS	79.92	4.86	138.332	47.109	3190.4

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_05.qld

Last Altered: Tuesday, November 29, 2016 09:59:42 Pacific Standard Time

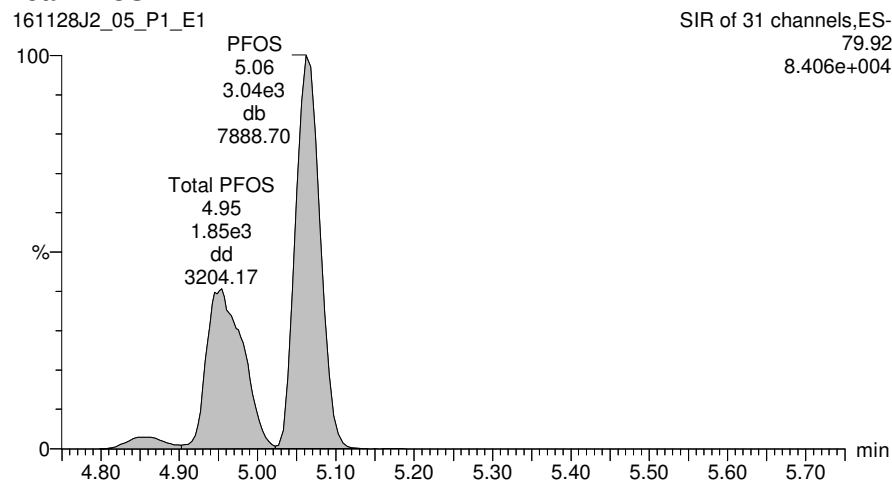
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Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

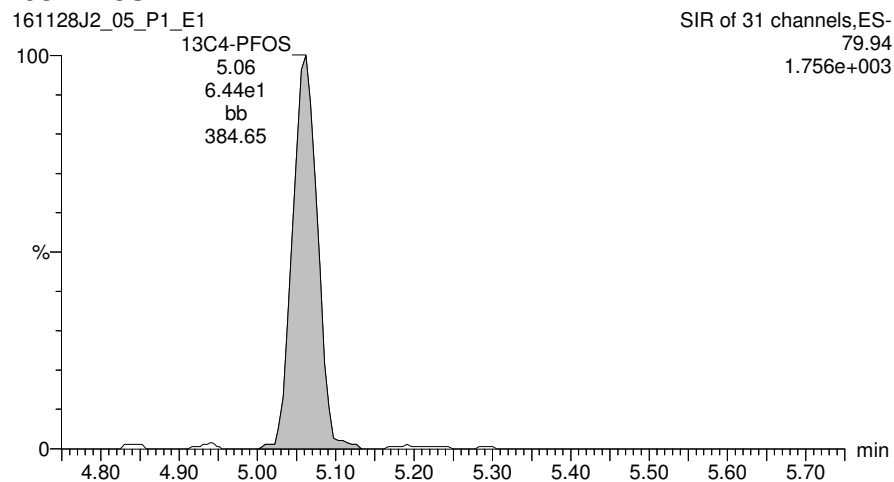
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ID: 1601437-02@50x, Description: OW11-MW9P-1016, Name: 161128J2_05.wiff, Date: 28-Nov-2016, Time: 23:53:49, Instrument: , Lab: ©PE-SCIEX, User: sciex

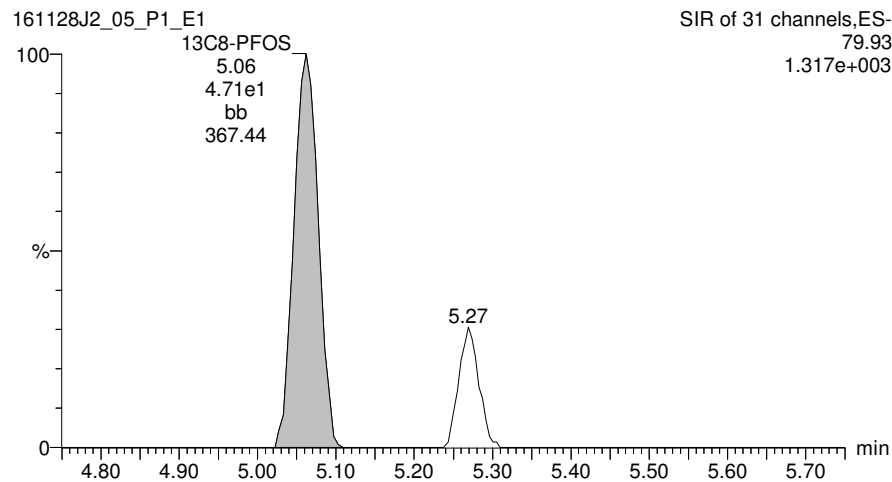
Total PFOS



13C4-PFOS



13C8-PFOS



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_06.qld

Last Altered: Tuesday, November 29, 2016 10:02:04 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:11:12 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-03@50x, Description: OW11-MW1-1016, Name: 161128J2_06.wiff, Date: 29-Nov-2016, Time: 00:06:02

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	8.444e3	6.433e1		0.0100	5.08	143000	
2	22 13C8-PFOS	79.93	6.433e1	8.300e1	0.950	0.0100	5.08	1020	81.6
3	29 13C4-PFOS	79.94	8.300e1	8.300e1	1.000	0.0100	5.07	1250	100
4	35 Total PFOS	79.92		6.433e1		0.0100		217000	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_06.qld

Last Altered: Tuesday, November 29, 2016 10:02:04 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:11:12 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-03@50x, Description: OW11-MW1-1016, Name: 161128J2_06.wiff, Date: 29-Nov-2016, Time: 00:06:02

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	125.174	125.382	1613.1
2	32 Total PFBS	79.90	3.26	3.054	125.382	41.9

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.39	1900.425	21.542	
2	33 Total PFHxS	79.91	4.29	231.741	21.542	4191.4
3	33 Total PFHxS	79.91	4.26	52.383	21.542	925.0

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.67	1839.495	116.835	
2	34 Total PFOA	368.90	4.58	56.434	116.835	468.7

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.08	8444.382	64.325	14271...
2	35 Total PFOS	79.92	4.96	4156.425	64.325	70244.8
3	35 Total PFOS	79.92	4.87	226.100	64.325	3819.4

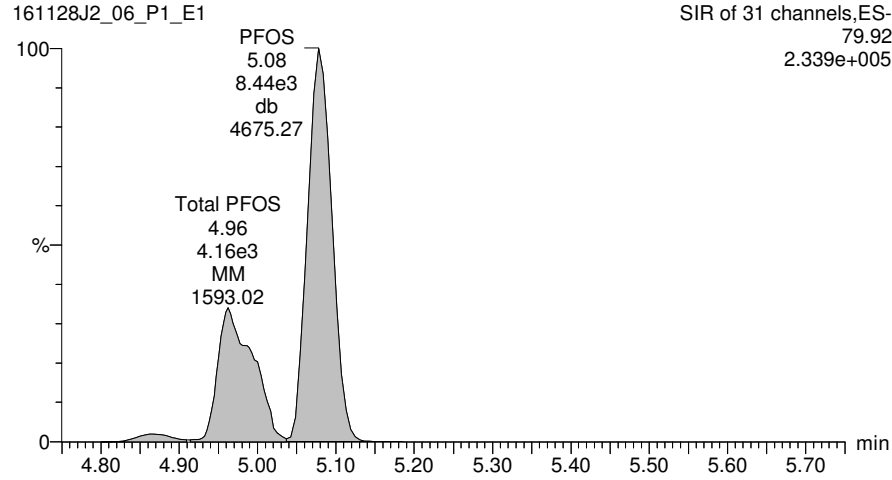
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Printed: Tuesday, November 29, 2016 10:11:12 Pacific Standard Time

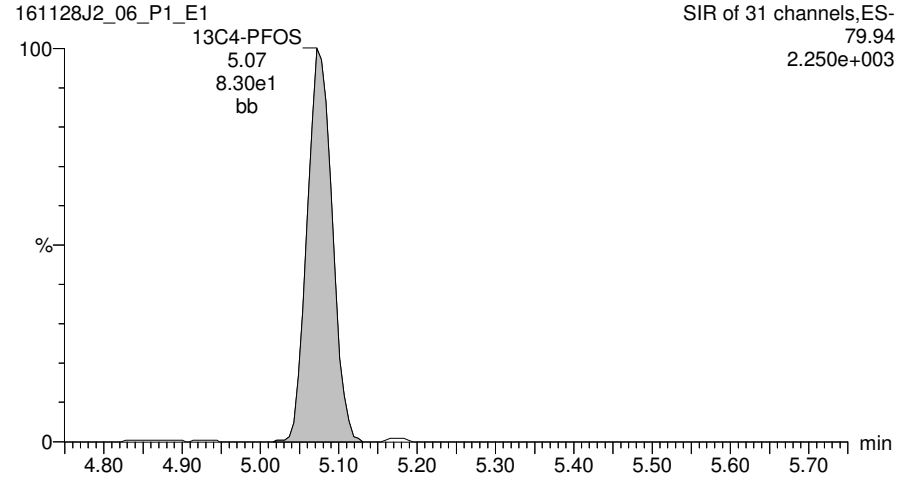
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ID: 1601437-03@50x, Description: OW11-MW1-1016, Name: 161128J2_06.wiff, Date: 29-Nov-2016, Time: 00:06:02, Instrument: , Lab: ©PE-SCIEX, User: sciex

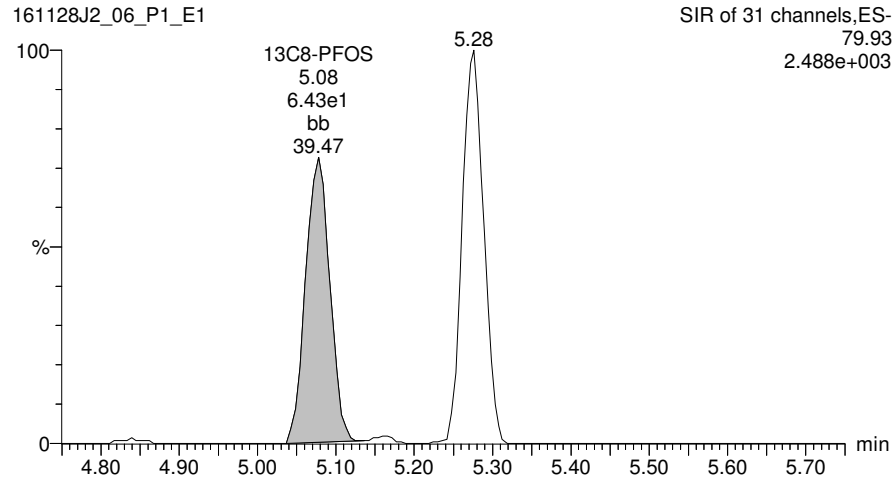
Total PFOS



13C4-PFOS



13C8-PFOS



Rev'd: MM 11/29/16

pw 11/29/16

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_07.qld

Last Altered: Tuesday, November 29, 2016 10:04:05 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:10:37 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-04@50x, Description: OW11-MW7-1016, Name: 161128J2_07.wiff, Date: 29-Nov-2016, Time: 00:18:18

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	8.518e3	4.938e1		0.0100	5.05	188000	
2	22 13C8-PFOS	79.93	4.938e1	7.150e1	0.950	0.0100	5.05	908	72.7
3	29 13C4-PFOS	79.94	7.150e1	7.150e1	1.000	0.0100	5.05	1250	100
4	35 Total PFOS	79.92		4.938e1		0.0100		296000	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_07.qld

Last Altered: Tuesday, November 29, 2016 10:04:05 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:10:37 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-04@50x, Description: OW11-MW7-1016, Name: 161128J2_07.wiff, Date: 29-Nov-2016, Time: 00:18:18

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	171.852	114.090	2432.5

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.38	1719.382	17.788	
2	33 Total PFHxS	79.91	4.29	311.248	17.788	7019.3
3	33 Total PFHxS	79.91	4.17	1.800	17.788	49.4

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.66	2472.697	93.347	
2	34 Total PFOA	368.90	4.57	155.472	93.347	1663.2

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.05	8518.444	49.376	18755...
2	35 Total PFOS	79.92	4.93	4619.431	49.376	10170...
3	35 Total PFOS	79.92	4.84	300.186	49.376	6607.5

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_07.qld

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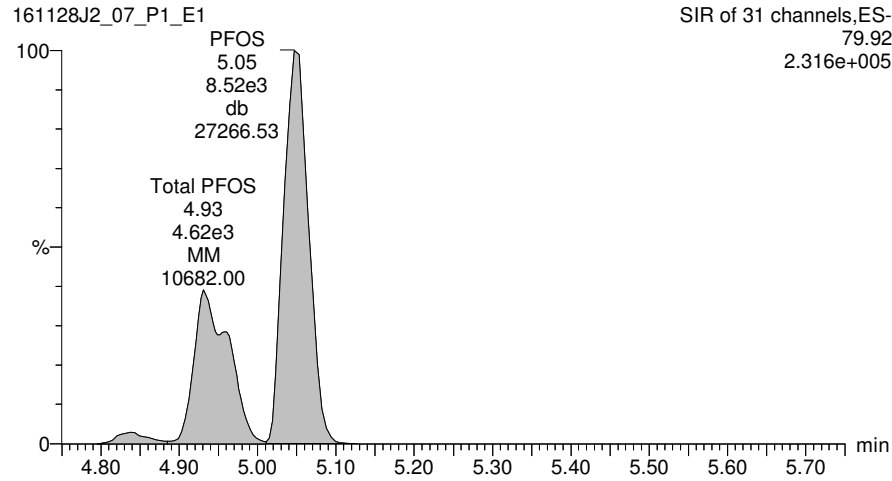
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Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

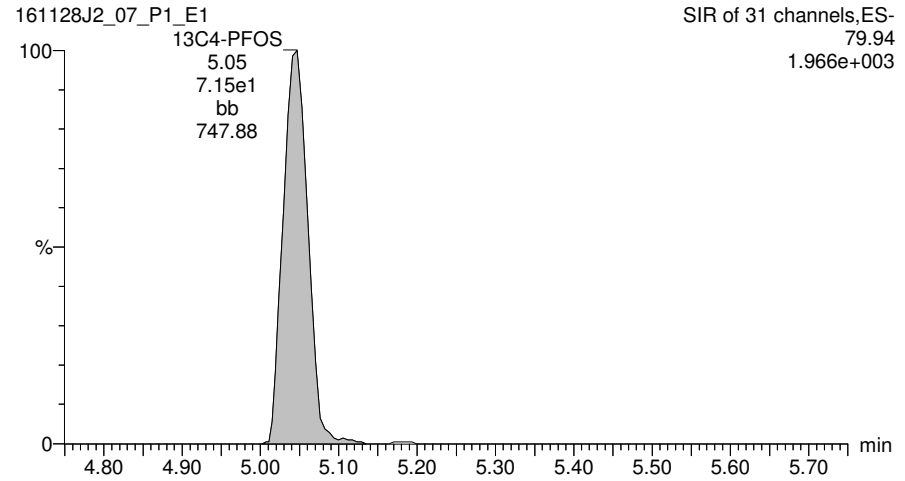
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ID: 1601437-04@50x, Description: OW11-MW7-1016, Name: 161128J2_07.wiff, Date: 29-Nov-2016, Time: 00:18:18, Instrument: , Lab: ©PE-SCIEX, User: sciex

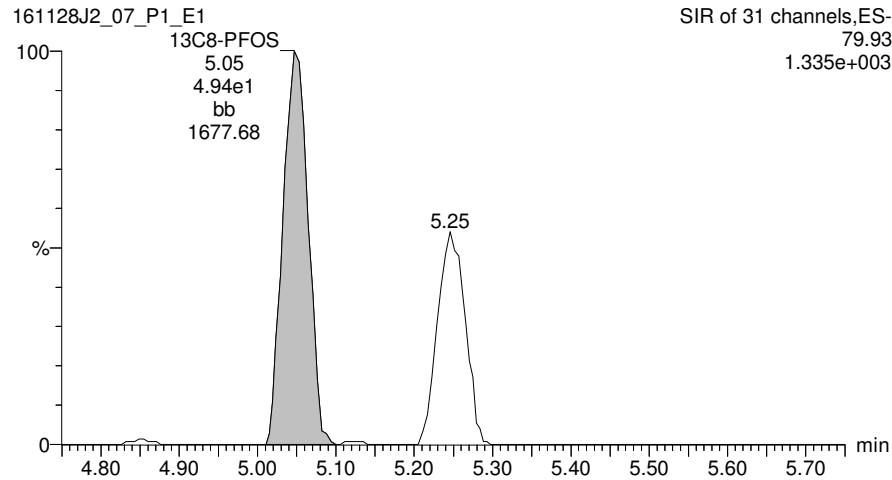
Total PFOS



13C4-PFOS



13C8-PFOS



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_08.qld

Last Altered: Tuesday, November 29, 2016 10:07:12 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:09:54 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-05@50x, Description: OW11-MW5-1016, Name: 161128J2_08.wiff, Date: 29-Nov-2016, Time: 00:30:33

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	2.053e3	5.238e1		0.0100	5.05	42600	
2	22 13C8-PFOS	79.93	5.238e1	5.916e1	0.950	0.0100	5.05	1160	93.2
3	29 13C4-PFOS	79.94	5.916e1	5.916e1	1.000	0.0100	5.04	1250	100
4	35 Total PFOS	79.92		5.238e1		0.0100		69500	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_08.qld

Last Altered: Tuesday, November 29, 2016 10:07:12 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:09:54 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-05@50x, Description: OW11-MW5-1016, Name: 161128J2_08.wiff, Date: 29-Nov-2016, Time: 00:30:33

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	250.741	109.345	3701.8
2	32 Total PFBS	79.90	3.26	5.473	109.345	83.4

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	33 Total PFHxS	79.91	4.18	2.639	20.634	59.3
2	6 PFHxS	79.91	4.39	1421.865	20.634	
3	33 Total PFHxS	79.91	4.29	207.830	20.634	3913.6
4	33 Total PFHxS	79.91	4.26	78.144	20.634	1441.6

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.66	519.848	104.104	5524.0

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.05	2053.133	52.382	42609.0
2	35 Total PFOS	79.92	4.94	1193.715	52.382	24772.6
3	35 Total PFOS	79.92	4.84	102.096	52.382	2117.0

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_08.qld

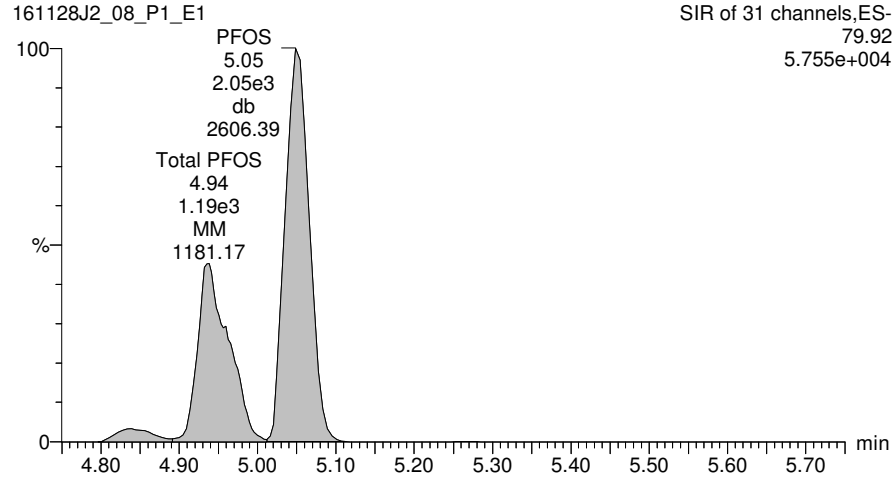
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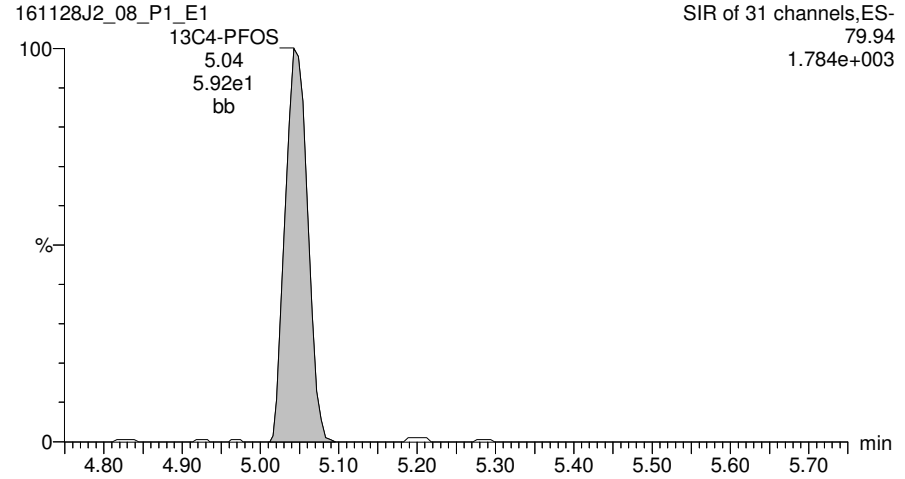
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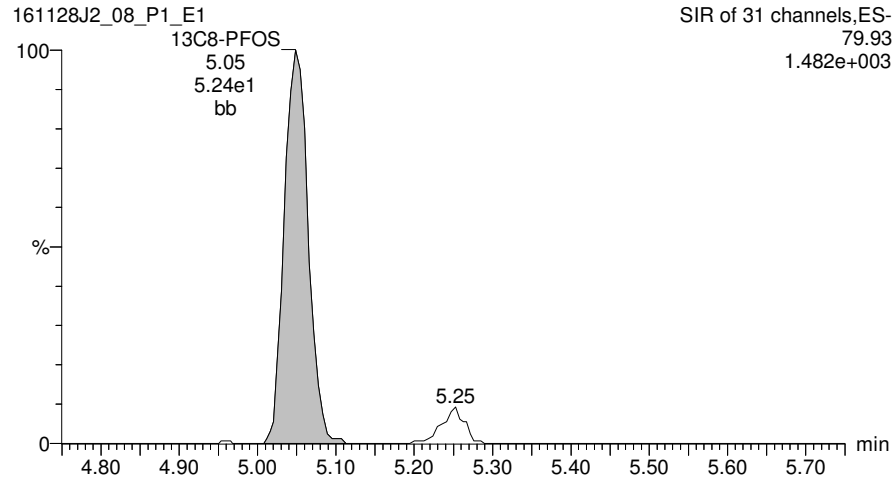
Total PFOS



13C4-PFOS



13C8-PFOS



Rev'd: MM 11/29/16

pw 11/29/16

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_11.qld

Last Altered: Tuesday, November 29, 2016 10:17:53 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:18:30 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: B6K0111-MS1@50x, Description: Matrix Spike, Name: 161128J2_11.wiff, Date: 29-Nov-2016, Time: 01:07:17

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	2.238e3	4.607e1		0.0100	5.05	52800	
2	22 13C8-PFOS	79.93	4.607e1	6.817e1	0.950	0.0100	5.05	889	71.1
3	29 13C4-PFOS	79.94	6.817e1	6.817e1	1.000	0.0100	5.05	1250	100
4	35 Total PFOS	79.92		4.607e1		0.0100		83400	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_11.qld

Last Altered: Tuesday, November 29, 2016 10:17:53 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:18:30 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: B6K0111-MS1@50x, Description: Matrix Spike, Name: 161128J2_11.wiff, Date: 29-Nov-2016, Time: 01:07:17

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	299.567	84.815	5700.4

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.39	1210.672	13.471	
2	33 Total PFHxS	79.91	4.29	243.410	13.471	7267.8
3	33 Total PFHxS	79.91	4.18	2.040	13.471	68.1

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.67	633.699	81.601	9740.2

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.05	2237.953	46.073	52804.9
2	35 Total PFOS	79.92	4.93	1193.355	46.073	28156.6
3	35 Total PFOS	79.92	4.84	102.088	46.073	2407.0

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_11.qld

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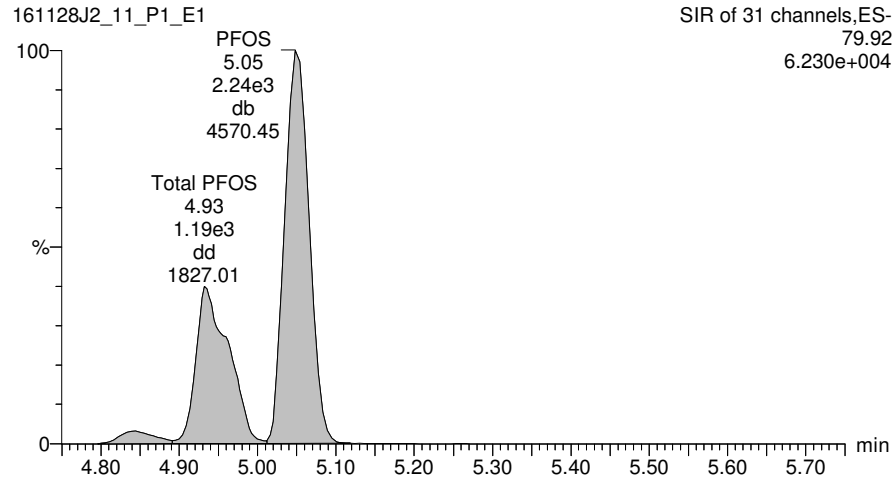
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Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

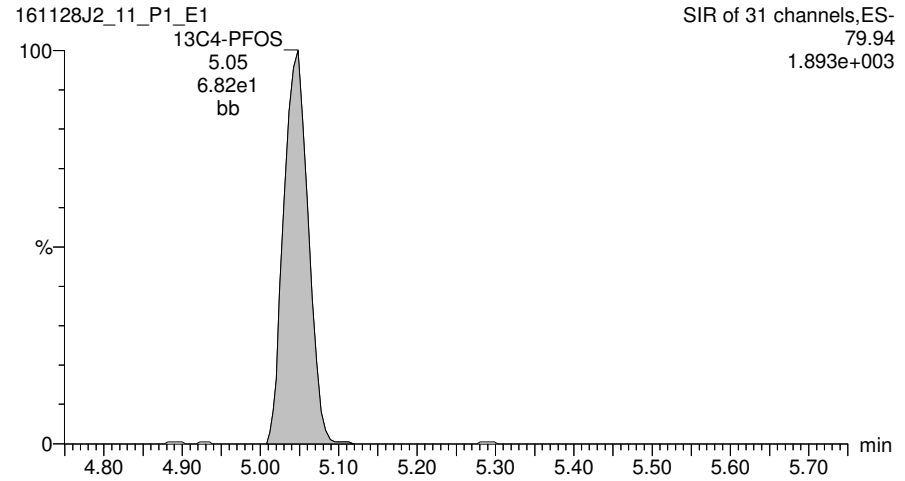
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ID: B6K0111-MS1@50x, Description: Matrix Spike, Name: 161128J2_11.wiff, Date: 29-Nov-2016, Time: 01:07:17, Instrument: , Lab: ©PE-SCIEX, User: sciex

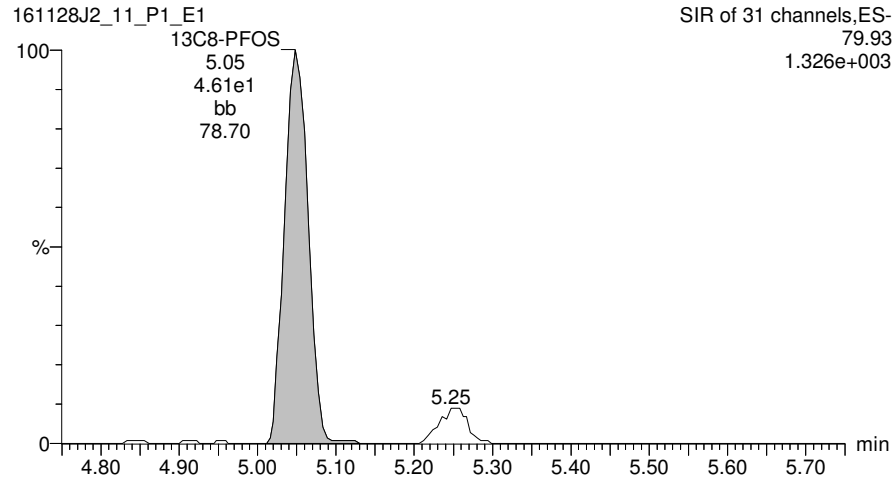
Total PFOS



13C4-PFOS



13C8-PFOS



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_12.qld

Last Altered: Tuesday, November 29, 2016 10:20:04 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:20:36 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: B6K0111-MSD1@50x, Description: Matrix Spike Dup, Name: 161128J2_12.wiff, Date: 29-Nov-2016, Time: 01:19:33

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	2.382e3	4.801e1		0.0100	5.06	53900	
2	22 13C8-PFOS	79.93	4.801e1	7.092e1	0.950	0.0100	5.06	890	71.2
3	29 13C4-PFOS	79.94	7.092e1	7.092e1	1.000	0.0100	5.05	1250	100
4	35 Total PFOS	79.92		4.801e1		0.0100		85400	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_12.qld

Last Altered: Tuesday, November 29, 2016 10:20:04 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:20:36 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: B6K0111-MSD1@50x, Description: Matrix Spike Dup, Name: 161128J2_12.wiff, Date: 29-Nov-2016, Time: 01:19:33

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	306.409	93.811	5271.6

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.38	1277.024	21.748	32602.4
2	33 Total PFHxS	79.91	4.29	257.284	21.748	4629.5
3	33 Total PFHxS	79.91	4.18	1.417	21.748	36.0

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.66	661.388	94.468	8430.8

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.06	2382.164	48.014	53935.4
2	35 Total PFOS	79.92	4.94	1292.067	48.014	29253.3
3	35 Total PFOS	79.92	4.84	96.548	48.014	2184.2

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_12.qld

Last Altered: Tuesday, November 29, 2016 10:20:04 Pacific Standard Time

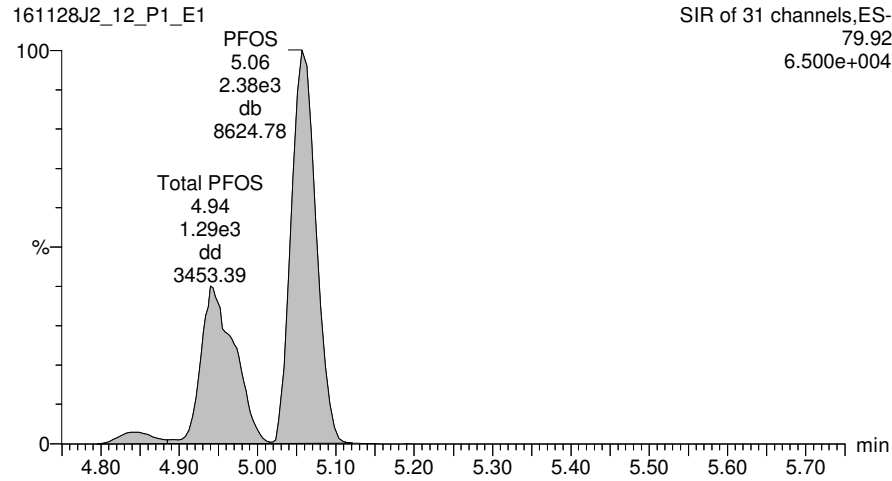
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Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

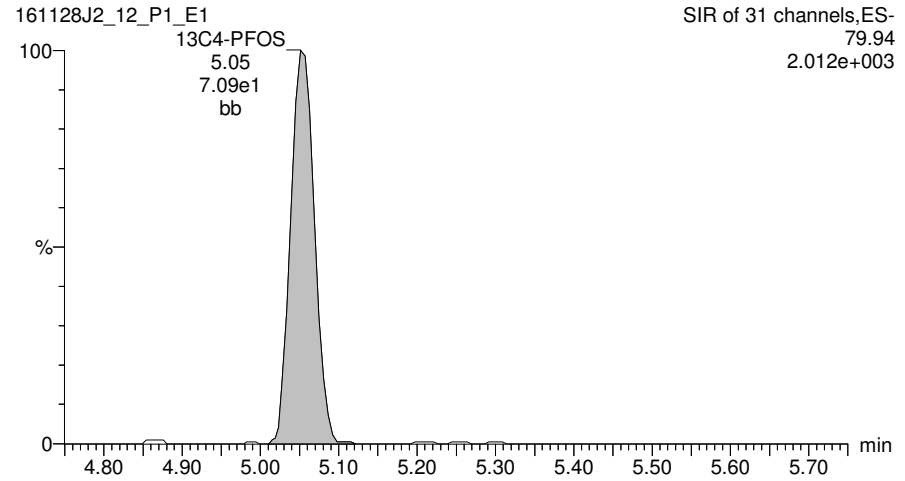
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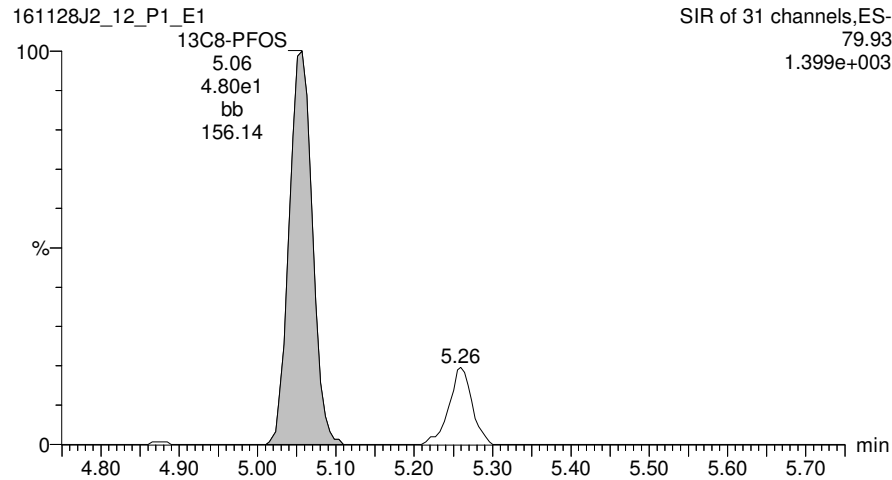
Total PFOS



13C4-PFOS



13C8-PFOS



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_09.qld

Last Altered: Tuesday, November 29, 2016 10:13:39 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:13:55 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-06@50x, Description: OW11-MW6-1016, Name: 161128J2_09.wiff, Date: 29-Nov-2016, Time: 00:42:50

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	3.553e3	5.883e1		0.0100	5.07	65700	
2	22 13C8-PFOS	79.93	5.883e1	6.879e1	0.950	0.0100	5.07	1120	90.0
3	29 13C4-PFOS	79.94	6.879e1	6.879e1	1.000	0.0100	5.07	1250	100
4	35 Total PFOS	79.92		5.883e1		0.0100		101000	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_09.qld

Last Altered: Tuesday, November 29, 2016 10:13:39 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:13:55 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-06@50x, Description: OW11-MW6-1016, Name: 161128J2_09.wiff, Date: 29-Nov-2016, Time: 00:42:50

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	262.835	102.498	4139.3

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	33 Total PFHxS	79.91	4.54	1.108	18.211	34.4
2	6 PFHxS	79.91	4.38	1793.208	18.211	
3	33 Total PFHxS	79.91	4.29	209.843	18.211	4503.5
4	33 Total PFHxS	79.91	4.26	88.000	18.211	1843.8
5	33 Total PFHxS	79.91	4.17	2.616	18.211	65.2

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.67	1498.436	101.380	
2	34 Total PFOA	368.90	4.57	187.495	101.380	1855.8

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	35 Total PFOS	79.92	4.86	133.658	58.831	2468.0
2	10 PFOS	79.92	5.07	3552.958	58.831	65653.4
3	35 Total PFOS	79.92	4.96	1788.243	58.831	33043.1

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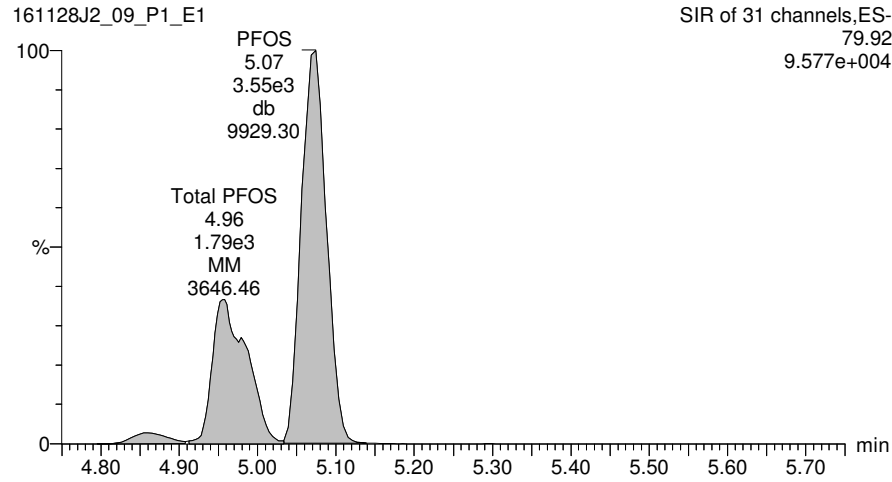
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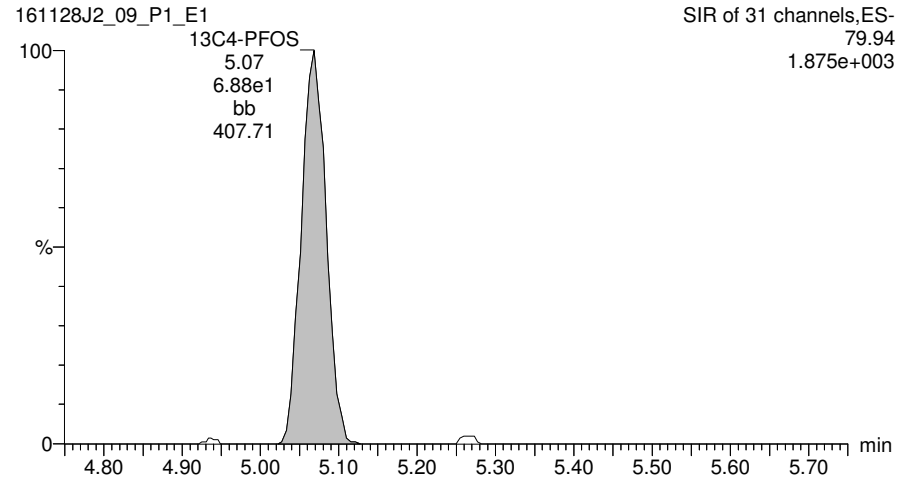
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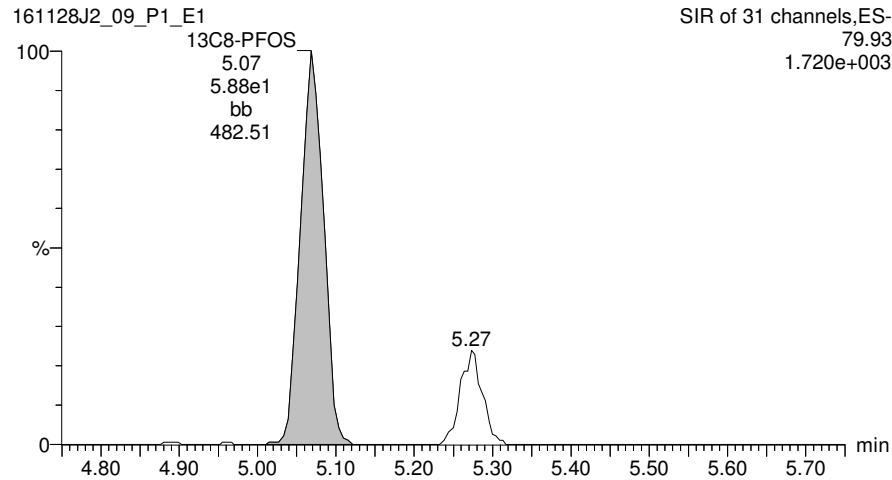
Total PFOS



13C4-PFOS



13C8-PFOS



Rev'd: MM 11/29/16

pw 11/29/16

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_10.qld

Last Altered: Tuesday, November 29, 2016 10:16:22 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:16:43 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-07@50x, Description: OW11-MW4-1016, Name: 161128J2_10.wiff, Date: 29-Nov-2016, Time: 00:55:04

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	79.92	1.021e3	6.572e1		0.0100	5.06	16900	
2	22 13C8-PFOS	79.93	6.572e1	5.732e1	0.950	0.0100	5.06	1510	121
3	29 13C4-PFOS	79.94	5.732e1	5.732e1	1.000	0.0100	5.05	1250	100
4	35 Total PFOS	79.92		6.572e1		0.0100		33200	

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_10.qld

Last Altered: Tuesday, November 29, 2016 10:16:22 Pacific Standard Time

Printed: Tuesday, November 29, 2016 10:16:43 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

ID: 1601437-07@50x, Description: OW11-MW4-1016, Name: 161128J2_10.wiff, Date: 29-Nov-2016, Time: 00:55:04

Total PFBS

	# Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	79.90	3.39	331.223	106.461	5021.6
2	32 Total PFBS	79.90	3.27	7.662	106.461	118.7

Total PFHxS

	# Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	79.91	4.39	1283.641	17.025	
2	33 Total PFHxS	79.91	4.29	212.381	17.025	4894.8
3	33 Total PFHxS	79.91	4.27	87.163	17.025	1955.0
4	33 Total PFHxS	79.91	4.18	3.386	17.025	85.8

Total PFOA

	# Name	Trace	RT	Area	IS Area	Conc.
1	8 PFOA	368.90	4.66	232.252	104.556	2251.4

Total PFOS

	# Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	79.92	5.06	1021.295	65.717	16893.1
2	35 Total PFOS	79.92	4.95	878.485	65.717	14530.7
3	35 Total PFOS	79.92	4.84	105.505	65.717	1743.4

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_10.qld

Last Altered: Tuesday, November 29, 2016 10:16:22 Pacific Standard Time

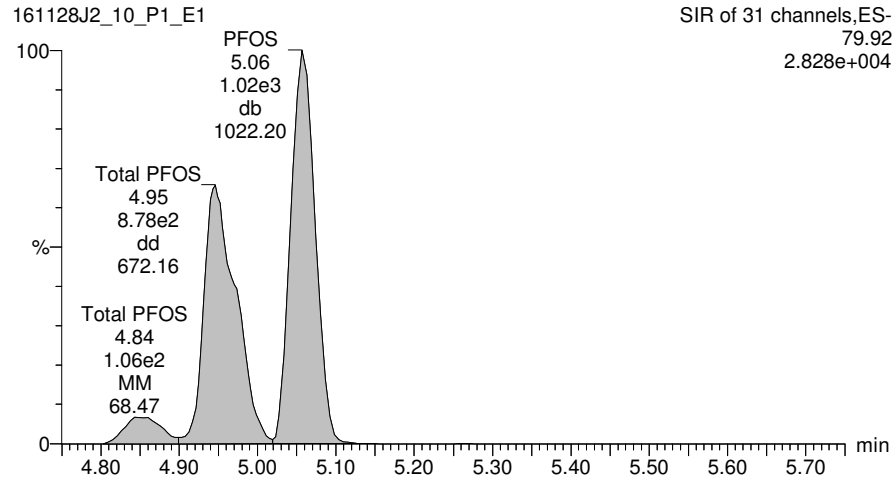
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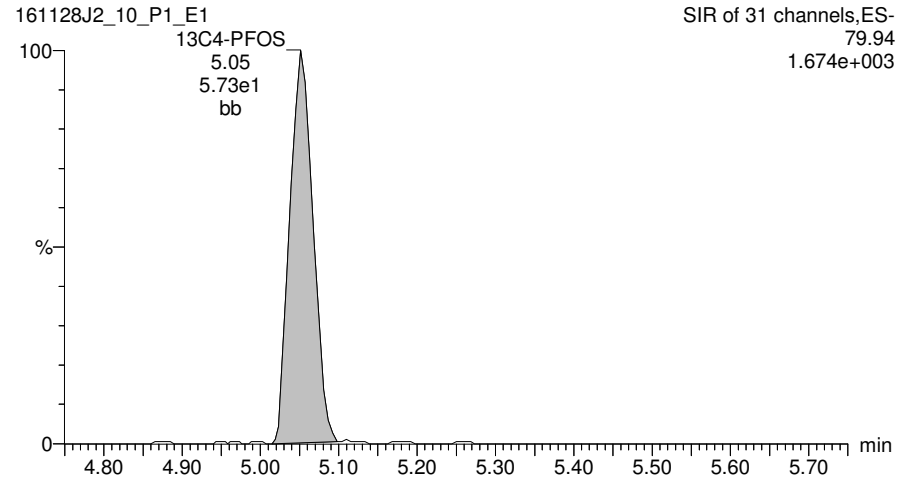
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ID: 1601437-07@50x, Description: OW11-MW4-1016, Name: 161128J2_10.wiff, Date: 29-Nov-2016, Time: 00:55:04, Instrument: , Lab: ©PE-SCIEX, User: sciex

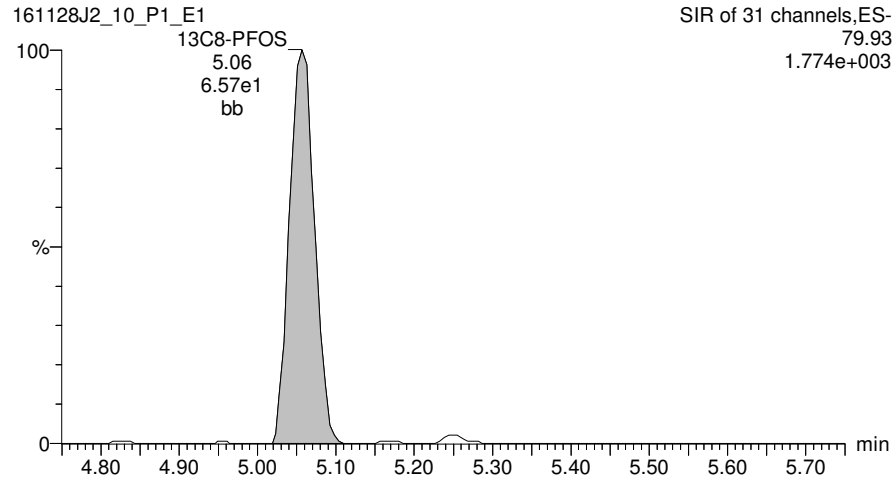
Total PFOS



13C4-PFOS



13C8-PFOS



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CONTINUING CALIBRATION

Dataset: U:\Q2.PRO\Results\161118J2\161118J2_41.qld

Last Altered: Monday, November 21, 2016 09:54:29 Pacific Standard Time

Printed: Monday, November 21, 2016 09:54:58 Pacific Standard Time

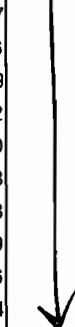
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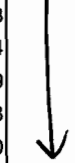
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#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	168.90	1.99e4	9.16e3	1.000	1.000	1.92	27.6	110.3
2	2 PFPeA	218.90	1.94e4	1.02e4	1.000	1.000	3.11	27.7	110.7
3	3 PFBS	79.90	9.93e3	5.85e3	1.000	1.000	3.40	27.4	109.6
4	4 PFHxA	268.90	1.72e4	3.74e3	1.000	1.000	3.80	27.7	110.9
5	5 PFHpA	318.90	1.32e4	7.88e3	1.000	1.000	4.28	25.3	101.2
6	6 PFHxS	79.91	7.37e3	1.11e3	1.000	1.000	4.40	25.5	102.0
7	7 6:2 FTS	406.90	4.34e3	2.32e3	1.000	1.000	4.63	24.5	97.8
8	8 PFOA	368.90	1.69e4	6.84e3	1.000	1.000	4.67	25.2	100.8
9	9 PFNA	419.00	1.05e4	6.45e3	1.000	1.000	5.01	25.0	99.9
10	10 PFOS	79.92	8.59e3	3.60e3	1.000	1.000	5.07	25.9	103.6
11	11 PFDA	469.00	8.28e3	3.80e3	1.000	1.000	5.30	27.6	110.4
12	12 8:2 FTS	506.90	2.19e3	1.17e3	1.000	1.000	5.28	26.0	104.0
13	13 13C3-PFBA	172.00	9.16e3	1.03e4	0.867	1.000	1.92	12.8	102.6
14	14 13C3-PFPeA	221.90	1.02e4	1.03e4	0.994	1.000	3.11	12.4	99.3
15	15 13C3-PFBS	79.95	5.85e3	1.03e4	0.564	1.000	3.40	12.6	100.4
16	16 13C2-PFHxA	269.90	3.74e3	1.03e4	0.907	1.000	3.80	4.99	99.9
17	17 13C4-PFHpA	321.90	7.88e3	1.03e4	0.742	1.000	4.28	12.9	102.8
18	18 18O2-PFHxS	102.90	1.11e3	4.30e3	0.271	1.000	4.39	11.9	95.0
19	19 13C2-6:2 FTS	408.90	2.32e3	1.07e4	0.224	1.000	4.63	12.1	97.2
20	20 13C2-PFOA	369.90	6.84e3	1.07e4	0.651	1.000	4.67	12.3	98.4
21	21 13C5-PFNA	422.90	6.45e3	6.24e3	1.002	1.000	5.01	12.9	103.1
22	22 13C8-PFOS	79.93	3.60e3	3.84e3	0.950	1.000	5.07	12.3	98.7
23	23 13C2-PFDA	470.00	3.80e3	4.90e3	0.827	1.000	5.30	11.7	93.9
24	24 13C2-8:2 FTS	508.70	1.17e3	4.90e3	0.260	1.000	5.27	11.5	92.0
25	25 13C4-PFBA	171.90	1.03e4	1.03e4	1.000	1.000	1.91	12.5	100.0
26	26 13C5-PFHxA	273.00	1.03e4	1.03e4	1.000	1.000	3.80	12.5	100.0
27	27 13C3-PFHxS	80.01	4.30e3	4.30e3	1.000	1.000	4.39	12.5	100.0
28	28 13C8-PFOA	375.90	1.07e4	1.07e4	1.000	1.000	4.67	12.5	100.0
29	29 13C4-PFOS	79.94	3.84e3	3.84e3	1.000	1.000	5.07	12.5	100.0
30	30 13C9-PFNA	427.00	6.24e3	6.24e3	1.000	1.000	5.01	12.5	100.0
31	Work Order 13C6-PFOS	474.00	4.90e3	4.90e3	1.000	1.000	5.30	12.5	100.0

75-125



60-150



40-150

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1	161118J2_01	11/18/2016 17:01:53	IPA	IPA
2	161118J2_02	11/18/2016 17:14:07	ST161118J2-1 PFC C-2 16K1714	PFC C-2 16K1714 A
3	161118J2_03	11/18/2016 17:26:18	ST161118J2-2 PFC C-1 16K1715	PFC C-1 16K1715 A
4	161118J2_04	11/18/2016 17:38:30	ST161118J2-3 PFC C0 16K1716	PFC C0 16K1716 A
5	161118J2_05	11/18/2016 17:50:45	ST161118J2-4 PFC C1 16K1717	PFC C1 16K1717 A
6	161118J2_06	11/18/2016 18:03:03	ST161118J2-5 PFC C2 16K1718	PFC C2 16K1718 A
7	161118J2_07	11/18/2016 18:15:16	ST161118J2-6 PFC C3 16K1719	PFC C3 16K1719 A
8	161118J2_08	11/18/2016 18:27:31	ST161118J2-7 PFC C3.5 16K1720	PFC C3.5 16K1720 A
9	161118J2_09	11/18/2016 18:39:42	ST161118J2-8 PFC C4 16K1721	PFC C4 16K1721 A
10	161118J2_10	11/18/2016 18:51:58	ST161118J2-9 PFC C4.5 16K1722	PFC C4.5 16K1722 A
11	161118J2_11	11/18/2016 19:04:12	ST161118J2-10 PFC C5 16K1723	PFC C5 16K1723 A
12	161118J2_12	11/18/2016 19:16:24	IPA	IPA
13	161118J2_13	11/18/2016 19:28:40	SS161118J2-1 PFC SSS 16J1810	PFC SSS 16J1810 A
14	161118J2_14	11/18/2016 19:40:55	IPA	IPA
15	161118J2_15	11/18/2016 19:53:06	B6J0127-BS1	OPR
16	161118J2_16	11/18/2016 20:05:18	B6J0168-BS1	OPR
17	161118J2_17	11/18/2016 20:17:34	B6K0037-BS1	OPR
18	161118J2_18	11/18/2016 20:29:47	B6K0110-BS1	OPR
19	161118J2_19	11/18/2016 20:42:02	B6K0117-BS1	OPR
20	161118J2_20	11/18/2016 20:54:16	B6K0117-BSD1	OPR Dup
21	161118J2_21	11/18/2016 21:06:30	B6K0111-BS1	OPR
22	161118J2_22	11/18/2016 21:18:45	IPA	IPA
23	161118J2_23	11/18/2016 21:30:57	B6J0127-BLK1	Method Blank
24	161118J2_24	11/18/2016 21:43:12	B6J0168-BLK1	Method Blank
25	161118J2_25	11/18/2016 21:55:28	B6K0037-BLK1	Method Blank
26	161118J2_26	11/18/2016 22:07:40	B6K0110-BLK1	Method Blank
27	161118J2_27	11/18/2016 22:19:56	B6K0117-BLK1	Method Blank
28	161118J2_28	11/18/2016 22:32:10	B6K0111-BLK1	Method Blank
29	161118J2_29	11/18/2016 22:44:24	IPA	IPA
30	161118J2_30	11/18/2016 22:56:38	1601299-01	Sample No. I
31	161118J2_31	11/18/2016 23:08:49	1601299-02	Sample No. II
32	161118J2_32	11/18/2016 23:21:05	1601299-03	Sample No. III
33	161118J2_33	11/18/2016 23:33:20	1601299-04	Sample No. IV
34	161118J2_34	11/18/2016 23:45:31	1601299-06	Sample No. VI
35	161118J2_35	11/18/2016 23:57:48	1601299-07	Sample No. VII
36	161118J2_36	11/19/2016 00:10:03	1601299-05RE1	Sample No. V
37	161118J2_37	11/19/2016 00:22:16	1601379-01@20X	Sample #1
38	161118J2_38	11/19/2016 00:34:31	1601379-02@20X	Sample #2
39	161118J2_39	11/19/2016 00:46:45	1601379-03@20X	Sample #3
40	161118J2_40	11/19/2016 00:58:58	IPA	IPA
41	161118J2_41	11/19/2016 01:11:14	ST161118J2-11 PFC C3.5 16K1720	PFC C3.5 16K1720A
42	161118J2_42	11/19/2016 01:23:28	IPA	IPA
43	161118J2_43	11/19/2016 01:35:40	1601379-01	Sample #1
44	161118J2_44	11/19/2016 01:47:56	1601379-02	Sample #2
45	161118J2_45	11/19/2016 02:00:10	1601379-03	Sample #3
46	161118J2_46	11/19/2016 02:12:22	1601410-01	WURTS-EB008JH-110216
47	161118J2_47	11/19/2016 02:24:39	1601410-02	WURTS-VAS04006-32-35_FD
48	161118J2_48	11/19/2016 02:36:53	1601410-03	WURTS-VAS04006-42-45
49	161118J2_49	11/19/2016 02:49:08	1601410-04	WURTS-VAS04006-52-55
50	161118J2_50	11/19/2016 03:01:23	1601410-05	WURTS-VAS17001-21-24
51	161118J2_51	11/19/2016 03:13:40	1601410-06	WURTS-VAS17001-21-24_FD
52	161118J2_52	11/19/2016 03:25:55	1601410-07	WURTS-VAS17001-31-34
53	161118J2_53	11/19/2016 03:38:09	IPA	IPA
54	161118J2_54	11/19/2016 03:50:25	ST161118J2-12 PFC C3.5 16K1720	PFC C3.5 16K1720A
55	161118J2_55	11/19/2016 04:02:39	IPA	IPA
56	161118J2_56	11/19/2016 04:14:55	1601410-08	WURTS-VAS17001-41-44
57	161118J2_57	11/19/2016 04:27:09	1601410-09	WURTS-VAS17003-22-25

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58	161118J2_58	11/19/2016 04:39:19	1601410-10	WURTS-VAS17003-32-35
59	161118J2_59	11/19/2016 04:51:36	1601410-11	WURTS-VAS17003-42-45
60	161118J2_60	11/19/2016 05:03:50	1601410-12	WURTS-VAS17003-52-55
61	161118J2_61	11/19/2016 05:16:02	1601413-01	PFAS-ABT-MW-58-110316
62	161118J2_62	11/19/2016 05:28:17	1601413-02	PFAS-MW01-62-110316
63	161118J2_63	11/19/2016 05:40:32	1601413-03	PFAS-BW-MW-30-110316
64	161118J2_64	11/19/2016 05:52:47	1601413-04	PFAS-B82-MW-105-110316
65	161118J2_65	11/19/2016 06:04:59	1601413-05	PFAS-WG-DUP2-110416
66	161118J2_66	11/19/2016 06:17:15	IPA	IPA
67	161118J2_67	11/19/2016 06:29:31	ST161118J2-13 PFC C3.5 16K1720	PFC C3.5 16K1720A
68	161118J2_68	11/19/2016 06:41:45	IPA	IPA
69	161118J2_69	11/19/2016 06:54:01	1601413-06	PFAS-B82-MW-11D-110416
70	161118J2_70	11/19/2016 07:06:17	1601413-07	PFAS-B82-MW-11S-110416
71	161118J2_71	11/19/2016 07:18:32	1601413-08	PFAS-B82-MW-10D-110316
72	161118J2_72	11/19/2016 07:30:59	1601413-09	PFAS-B82-MW-09D-110316
73	161118J2_73	11/19/2016 07:43:18	1601413-10	PFAS-B82-MW-09S-110316
74	161118J2_74	11/19/2016 07:55:41	1601413-11	PFAS-B81-MW-46S-110416
75	161118J2_75	11/19/2016 08:07:55	1601413-12	EB1-WG-110316
76	161118J2_76	11/19/2016 08:20:11	1601413-13	PFAS-MW11-093-110416
77	161118J2_77	11/19/2016 08:32:43	1601413-14	PFAS-MW11-095-110416
78	161118J2_78	11/19/2016 08:45:15	1601413-15	PFAS-ABT-36-110416
79	161118J2_79	11/19/2016 08:57:48	IPA	IPA
80	161118J2_80	11/19/2016 09:10:17	ST161118J2-14 PFC C3.5 16K1720	PFC C3.5 16K1720A
81	161118J2_81	11/19/2016 09:22:47	IPA	IPA
82	161118J2_82	11/19/2016 09:35:19	1601413-16	PFAS-B81-MW-215-110416
83	161118J2_83	11/19/2016 09:47:51	1601413-17	PFAS-ABT-MW-20-110416
84	161118J2_84	11/19/2016 10:00:22	1601413-18	PFAS-WS-DUP1-110416
85	161118J2_85	11/19/2016 10:12:56	1601413-19	EB2-WG-110416
86	161118J2_86	11/19/2016 10:25:12	1601413-20	PFAS-B24-MW-03-110416
87	161118J2_87	11/19/2016 10:37:27	1601437-01	OW11-MW9-1016
88	161118J2_88	11/19/2016 10:49:38	1601437-02	OW11-MW9P-1016
89	161118J2_89	11/19/2016 11:01:53	1601437-03	OW11-MW1-1016
90	161118J2_90	11/19/2016 11:14:05	1601437-04	OW11-MW7-1016
91	161118J2_91	11/19/2016 11:26:21	1601437-05	OW11-MW5-1016
92	161118J2_92	11/19/2016 11:38:32	IPA	IPA
93	161118J2_93	11/19/2016 11:50:49	ST161118J2-15 PFC C3.5 16K1720	PFC C3.5 16K1720A
94	161118J2_94	11/19/2016 12:03:03	IPA	IPA
95	161118J2_95	11/19/2016 12:15:18	1601437-06	OW11-MW6-1016
96	161118J2_96	11/19/2016 12:27:29	1601437-07	OW11-MW4-1016
97	161118J2_97	11/19/2016 12:39:45	B6K0117-MS1	Matrix Spike
98	161118J2_98	11/19/2016 12:51:58	B6K0117-MSD1	Matrix Spike Dup
99	161118J2_99	11/19/2016 13:04:12	B6K0111-MS1	Matrix Spike
100	161118J2_100	11/19/2016 13:16:23	B6K0111-MSD1	Matrix Spike Dup
101	161118J2_101	11/19/2016 13:28:39	IPA	IPA
102	161118J2_102	11/19/2016 13:40:50	ST161118J2-16 PFC C3.5 16K1720	PFC C3.5 16K1720A
103	161118J2_103	11/19/2016 13:53:06	IPA	IPA

LC Calibration Standards Review Checklist

Q2

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AC 11/21/16

Full Mass Cal. Date: 10/14/16

Reviewed By: PW 11/22/16
Initials/Date

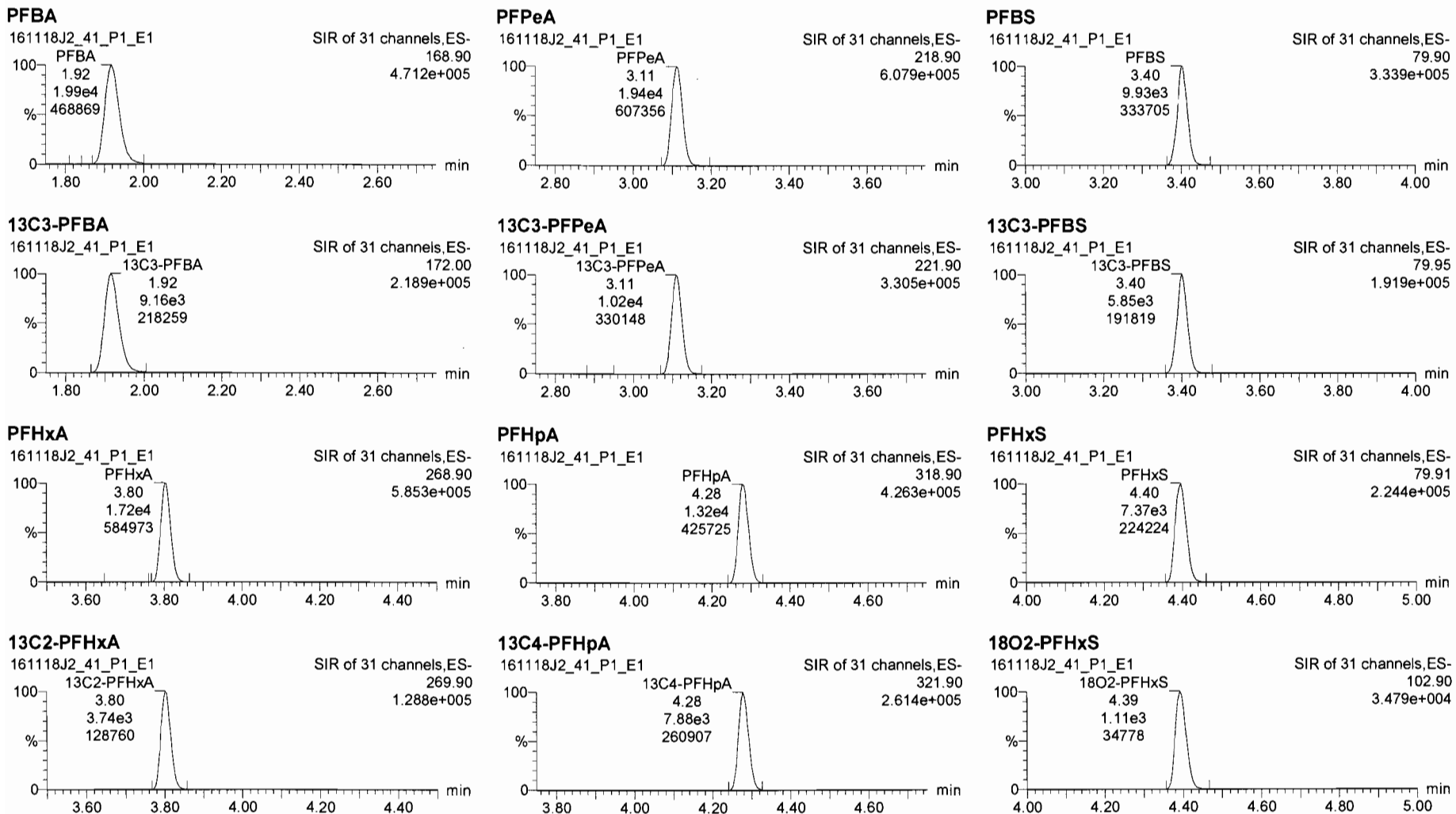
Comments:

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Last Altered: Monday, November 21, 2016 09:19:12 Pacific Standard Time
Printed: Monday, November 21, 2016 09:19:27 Pacific Standard Time

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Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161118J2_41.wiff, Date: 18-Nov-2016, Time: 17:11:14, ID: , Description:



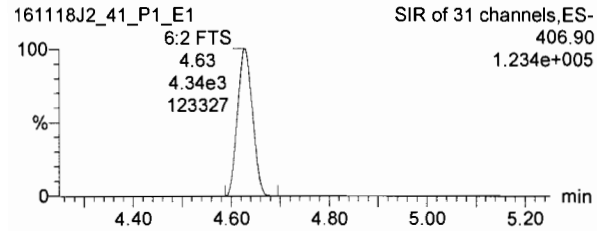
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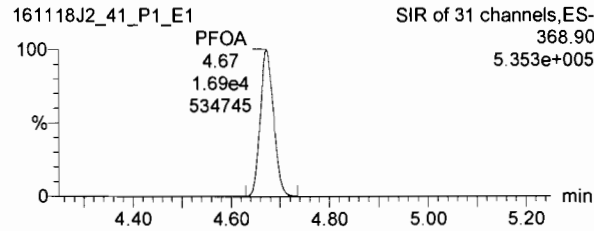
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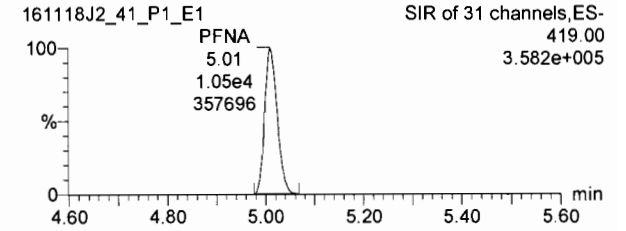
6:2 FTS



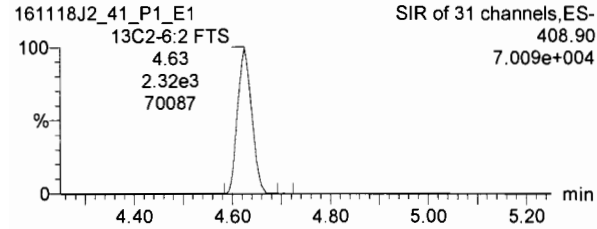
PFOA



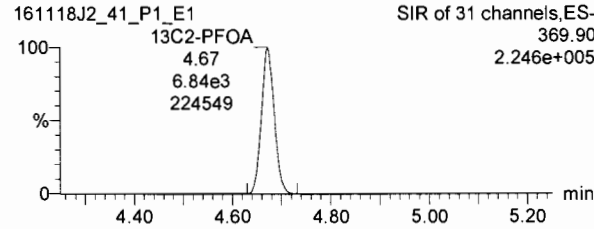
PFNA



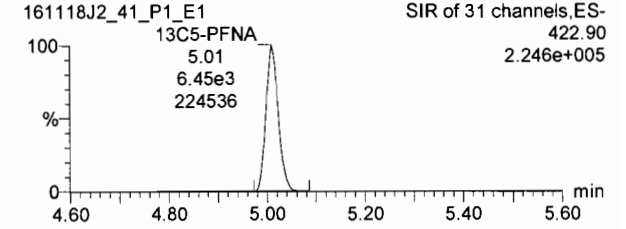
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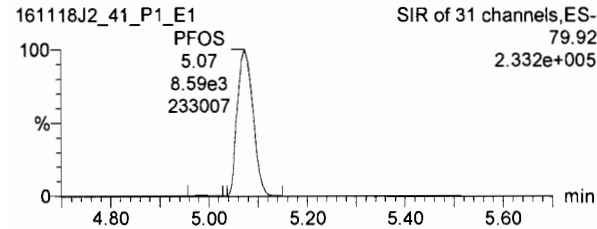
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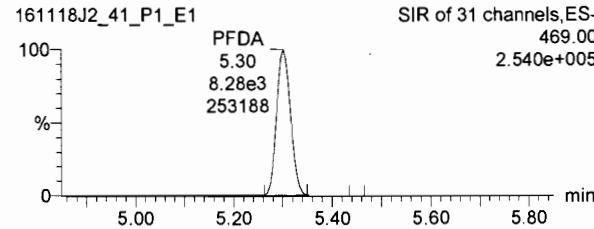
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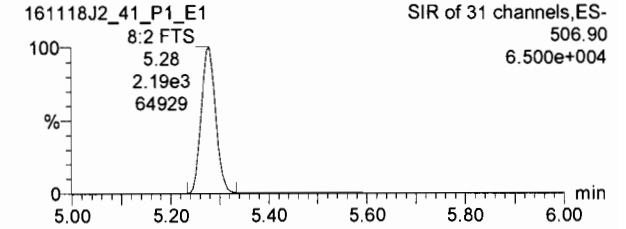
PFOS



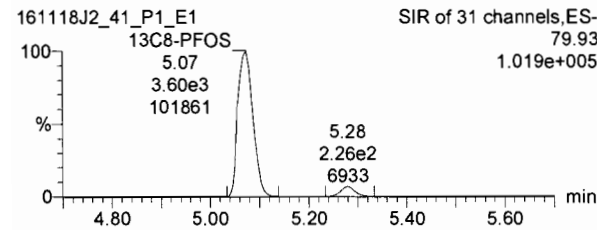
PFDA



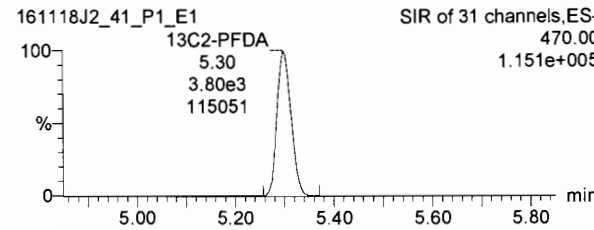
8:2 FTS



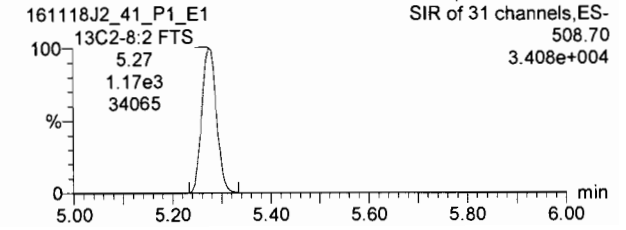
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



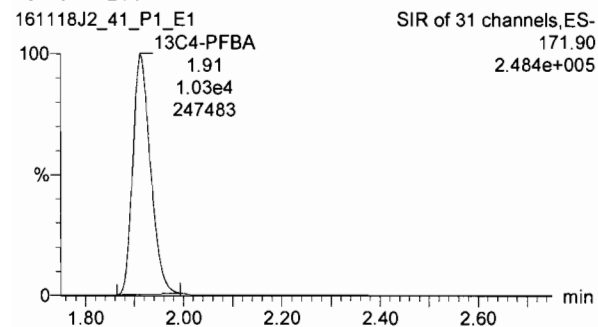
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Last Altered: Monday, November 21, 2016 09:19:12 Pacific Standard Time

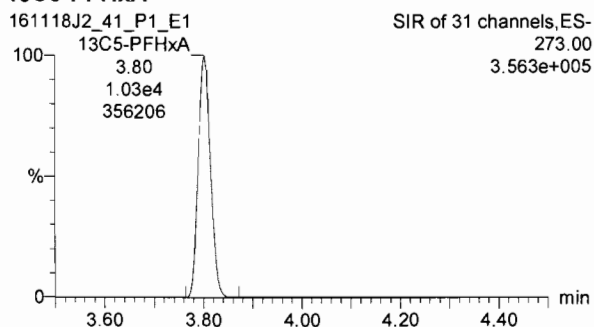
Printed: Monday, November 21, 2016 09:19:27 Pacific Standard Time

Name: 161118J2_41.wiff, Date: 18-Nov-2016, Time: 17:11:14, ID: , Description:

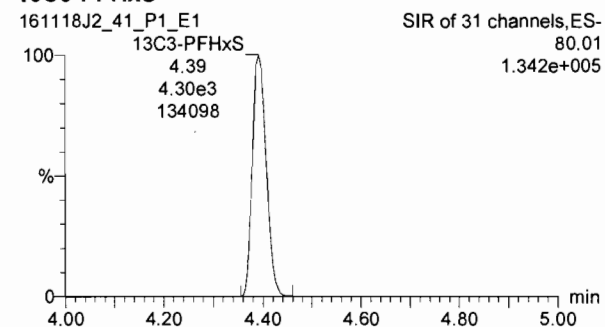
13C4-PFBA



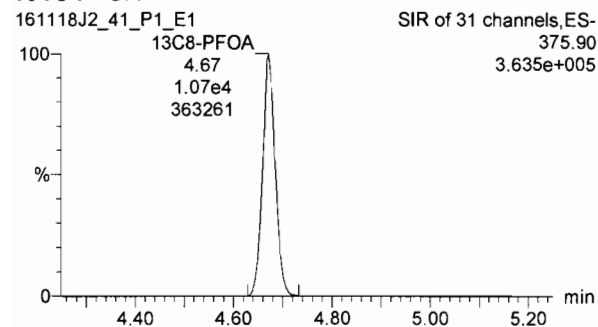
13C5-PFHxA



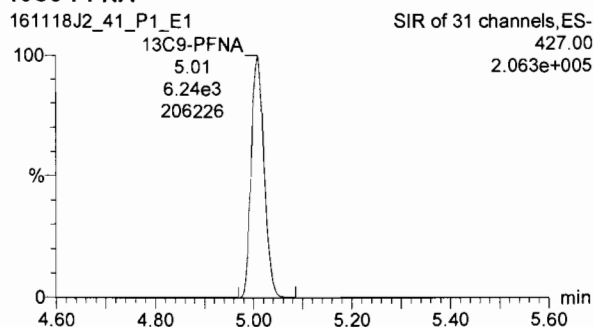
13C3-PFHxS



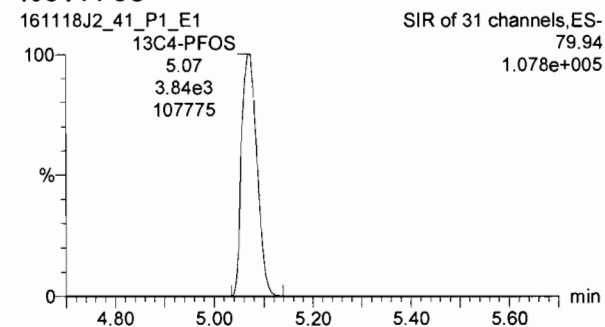
13C8-PFOA



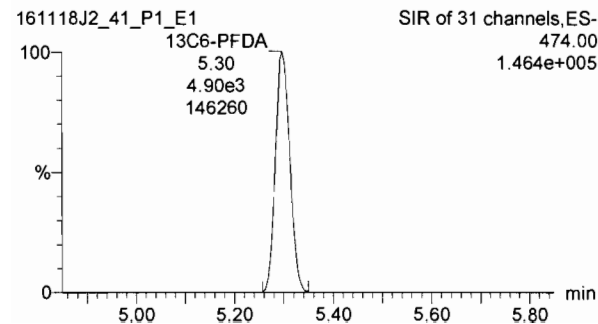
13C9-PFNA



13C4-PFOS



13C6-PFDA



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_02.qld

Last Altered: Tuesday, November 29, 2016 09:43:45 Pacific Standard Time
Printed: Tuesday, November 29, 2016 09:45:44 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161128J2_02.wiff, Date: 28-Nov-2016, Time: 23:17:06, ID: ST161128J2-1 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	168.90	4.35e4	2.04e4	1.000	1.92	1.92	27.2	108.6
2	2 PFPeA	218.90	4.41e4	2.34e4	1.000	3.10	3.10	27.3	109.4
3	3 PFBS	79.90	2.37e4	1.35e4	1.000	3.40	3.40	28.3	113.2
4	4 PFHxA	268.90	3.97e4	9.16e3	1.000	3.80	3.80	26.1	104.4
5	5 PFHpA	318.90	3.40e4	1.89e4	1.000	4.27	4.27	27.1	108.6
6	6 PFHxS	79.91	1.86e4	2.92e3	1.000	4.39	4.39	24.4	97.8
7	7 6:2 FTS	406.90	1.03e4	5.28e3	1.000	4.62	4.62	25.6	102.6
8	8 PFOA	368.90	3.83e4	1.77e4	1.000	4.66	4.66	21.9	87.7
9	9 PFNA	419.00	2.59e4	1.37e4	1.000	4.99	4.99	29.0	116.0
10	10 PFOS	79.92	1.19e4	5.34e3	1.000	5.06	5.06	24.3	97.0
11	11 PFDA	469.00	9.08e3	5.20e3	1.000	5.28	5.28	21.7	86.8
12	12 8:2 FTS	506.90	2.24e3	1.15e3	1.000	5.25	5.25	27.3	109.2
13	13 13C3-PFBA	172.00	2.04e4	2.34e4	0.867	1.92	1.92	12.5	100.4
14	14 13C3-PFPeA	221.90	2.34e4	2.46e4	0.994	1.000	3.10	12.0	95.6
15	15 13C3-PFBS	79.95	1.35e4	2.46e4	0.564	1.000	3.40	12.2	97.5
16	16 13C2-PFHxA	269.90	9.16e3	2.46e4	0.907	1.000	3.80	5.12	102.5
17	17 13C4-PFHpA	321.90	1.89e4	2.46e4	0.742	1.000	4.27	13.0	103.7
18	18 18O2-PFHxS	102.90	2.92e3	9.96e3	0.271	1.000	4.38	13.5	108.1
19	19 13C2-6:2 FTS	408.90	5.28e3	2.66e4	0.224	1.000	4.62	11.1	88.7
20	20 13C2-PFOA	369.90	1.77e4	2.66e4	0.651	1.000	4.66	12.7	101.9
21	21 13C5-PFNA	422.90	1.37e4	1.48e4	1.002	1.000	4.99	11.5	92.2
22	22 13C8-PFOS	79.93	5.34e3	5.61e3	0.950	1.000	5.05	12.5	100.3
23	23 13C2-PFDA	470.00	5.20e3	6.05e3	0.827	1.000	5.28	13.0	103.9
24	24 13C2-8:2 FTS	508.70	1.15e3	6.05e3	0.260	1.000	5.25	9.12	73.0
25	25 13C4-PFBA	171.90	2.34e4	2.34e4	1.000	1.000	1.91	12.5	100.0
26	26 13C5-PFHxA	273.00	2.46e4	2.46e4	1.000	1.000	3.80	12.5	100.0
27	27 13C3-PFHxS	80.01	9.96e3	9.96e3	1.000	1.000	4.38	12.5	100.0
28	28 13C8-PFOA	375.90	2.66e4	2.66e4	1.000	1.000	4.66	12.5	100.0
29	29 13C4-PFOS	79.94	5.61e3	5.61e3	1.000	1.000	5.05	12.5	100.0
30	30 13C9-PFNA	427.00	1.48e4	1.48e4	1.000	1.000	4.99	12.5	100.0
31	31 13C6-PFDA	474.00	6.05e3	6.05e3	1.000	1.000	5.27	12.5	100.0

75-125

60-150

40-150

60-150

50-150

60-150

40-150

PW
11/29/16

✓ AC
11/29/16

	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161128J2_01	11/28/2016 23:04:52	IPA	IPA
2	161128J2_02	11/28/2016 23:17:06	ST161128J2-1 PFC C3.5 16K2321	PFC C3.5 16K2321A
3	161128J2_03	11/28/2016 23:29:21	IPA	IPA
4	161128J2_04	11/28/2016 23:41:36	1601437-01@50x	OW11-MW9-1016
5	161128J2_05	11/28/2016 23:53:49	1601437-02@50x	OW11-MW9P-1016
6	161128J2_06	11/29/2016 00:06:02	1601437-03@50x	OW11-MW1-1016
7	161128J2_07	11/29/2016 00:18:18	1601437-04@50x	OW11-MW7-1016
8	161128J2_08	11/29/2016 00:30:33	1601437-05@50x	OW11-MW5-1016
9	161128J2_09	11/29/2016 00:42:50	1601437-06@50x	OW11-MW6-1016
10	161128J2_10	11/29/2016 00:55:04	1601437-07@50x	OW11-MW4-1016
11	161128J2_11	11/29/2016 01:07:17	B6K0111-MS1@50x	Matrix Spike
12	161128J2_12	11/29/2016 01:19:33	B6K0111-MSD1@50x	Matrix Spike Dup
13	161128J2_13	11/29/2016 01:31:48	IPA	IPA
14	161128J2_14	11/29/2016 01:44:04	B6K0123-BS1	OPR
15	161128J2_15	11/29/2016 01:56:19	IPA	IPA
16	161128J2_16	11/29/2016 02:08:34	B6K0123-BLK1	Method Blank
17	161128J2_17	11/29/2016 02:20:48	1601416-01	TW-2C
18	161128J2_18	11/29/2016 02:33:03	1601446-01	TW-1C
19	161128J2_19	11/29/2016 02:45:16	IPA	IPA
20	161128J2_20	11/29/2016 02:57:32	ST161128J2-2 PFC C3.5 16K2321	PFC C3.5 16K2321A
21	161128J2_21	11/29/2016 03:09:47	IPA	IPA

LC Calibration Standards Review Checkiist Q2

Calibration ID:	L M H	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manaul integrations	
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<u>↓ -2</u>	<u>L M H</u>	<u>↓</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>↓</u>
_____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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_____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Full Mass Cal. Date: 10/14/16

Reviewed By: AC 11/29/14
 Initials/Date

Comments:
 PFC List 1BA

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_02.qld

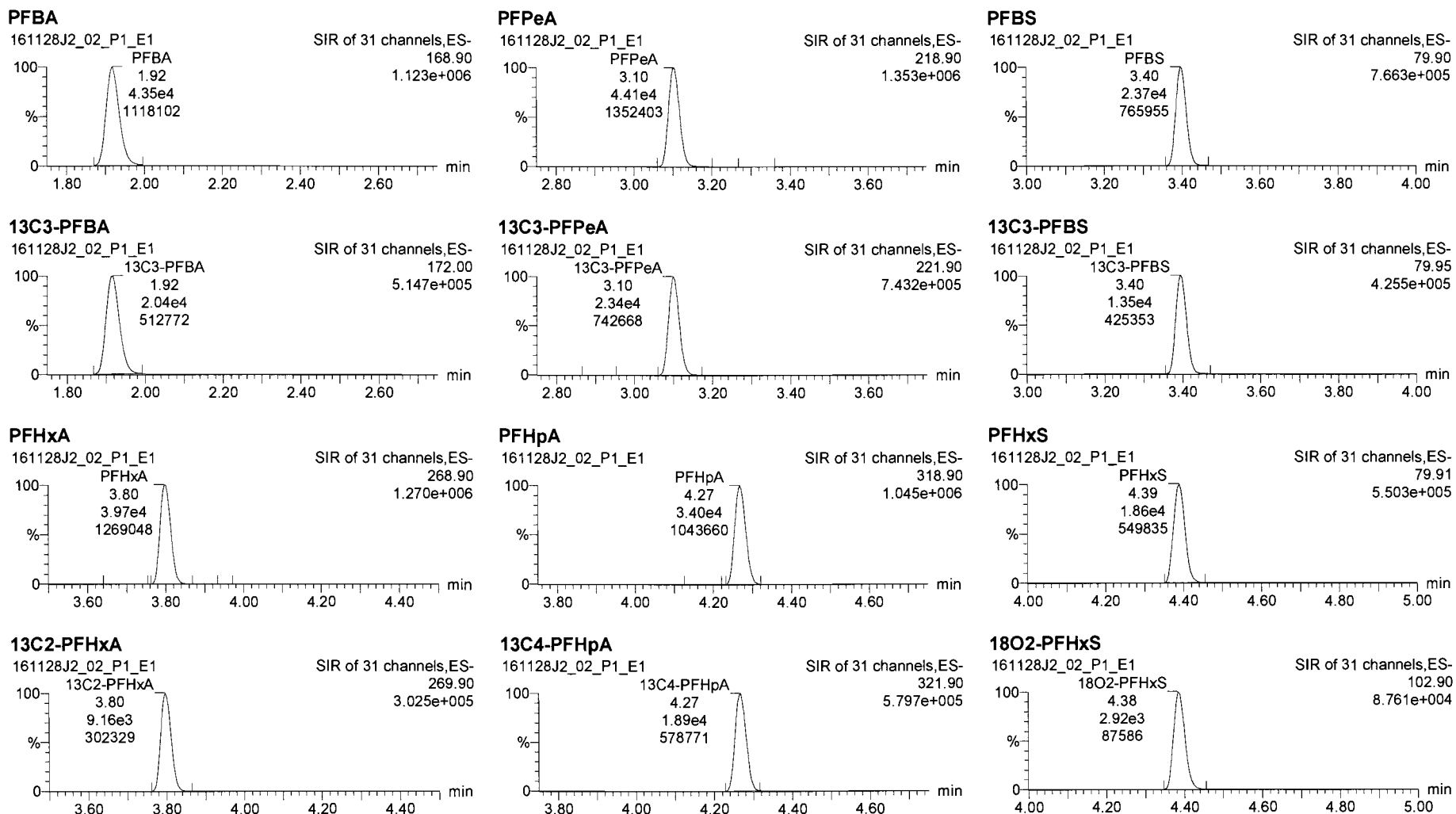
Last Altered: Tuesday, November 29, 2016 09:43:45 Pacific Standard Time

Printed: Tuesday, November 29, 2016 09:45:58 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161128J2_02.wiff, Date: 28-Nov-2016, Time: 23:17:06, ID: ST161128J2-1 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

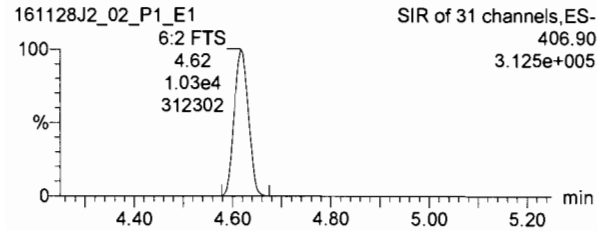


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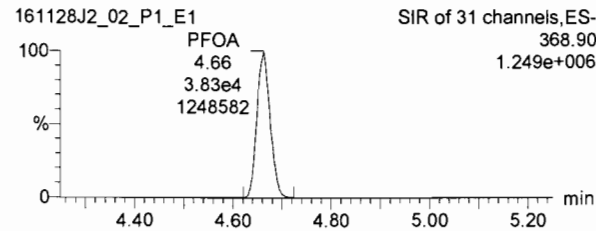
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Printed: Tuesday, November 29, 2016 09:45:58 Pacific Standard Time

Name: 161128J2_02.wiff, Date: 28-Nov-2016, Time: 23:17:06, ID: ST161128J2-1 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

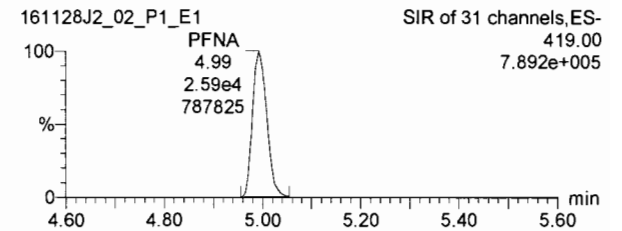
6:2 FTS



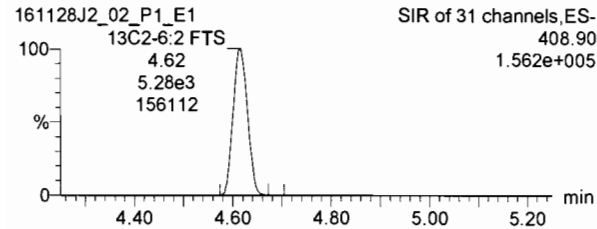
PFOA



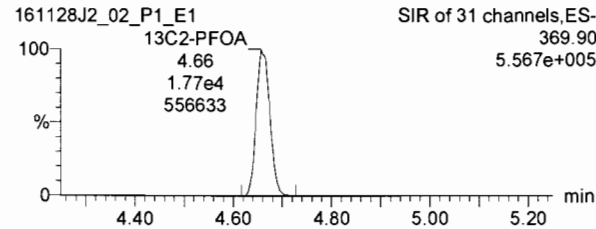
PFNA



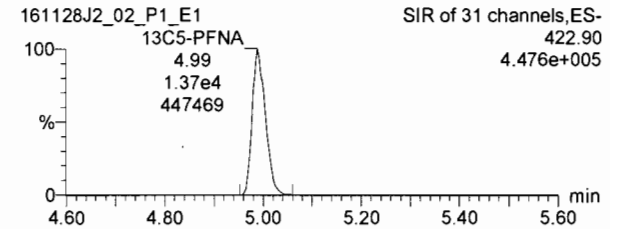
13C2-6:2 FTS



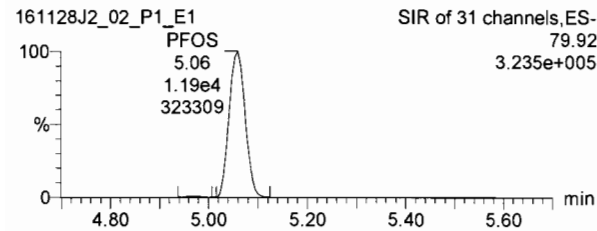
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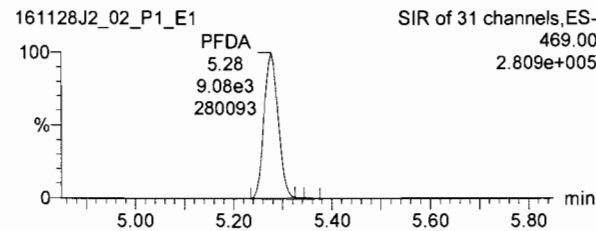
13C5-PFNA



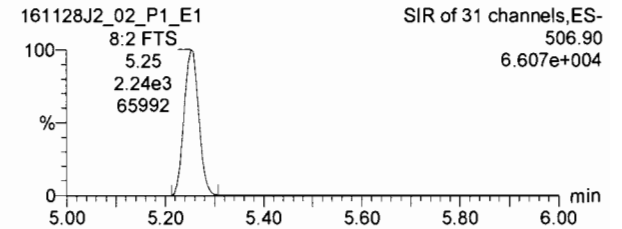
PFOS



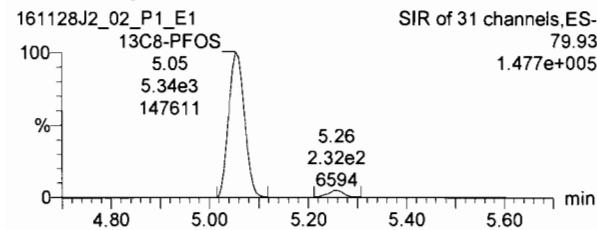
PFDA



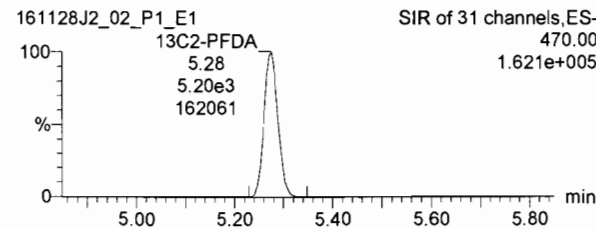
8:2 FTS



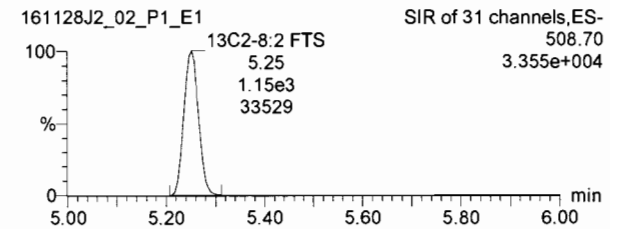
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



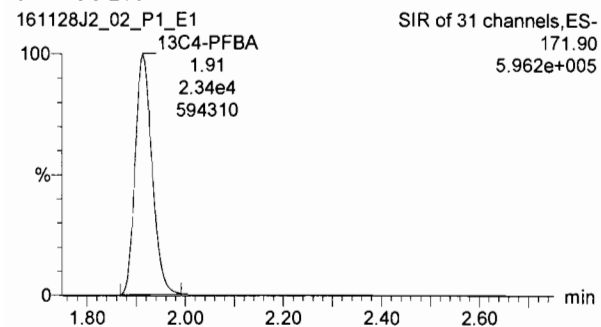
Dataset: U:\Q2.PRO\Results\161128J2\161128J2_02.qld

Last Altered: Tuesday, November 29, 2016 09:43:45 Pacific Standard Time

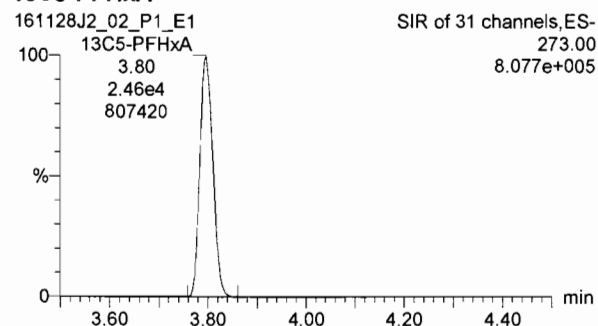
Printed: Tuesday, November 29, 2016 09:45:58 Pacific Standard Time

Name: 161128J2_02.wiff, Date: 28-Nov-2016, Time: 23:17:06, ID: ST161128J2-1 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

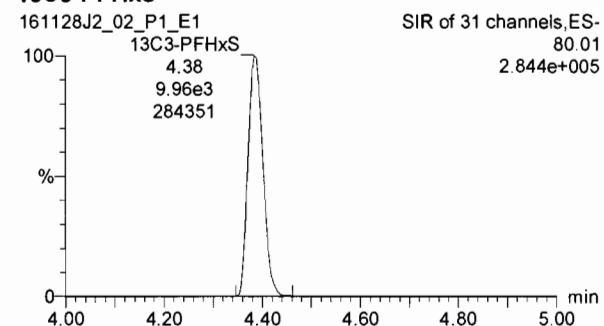
13C4-PFBA



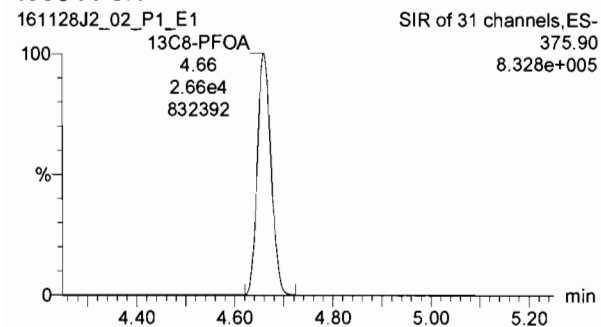
13C5-PFHxA



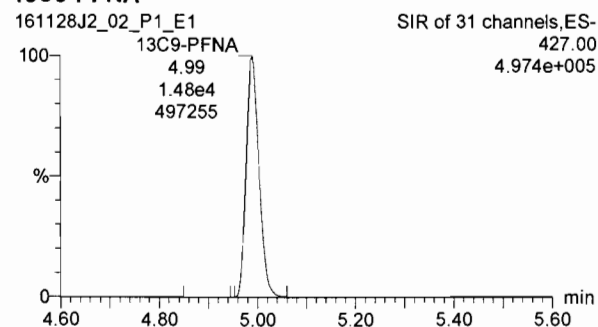
13C3-PFHxS



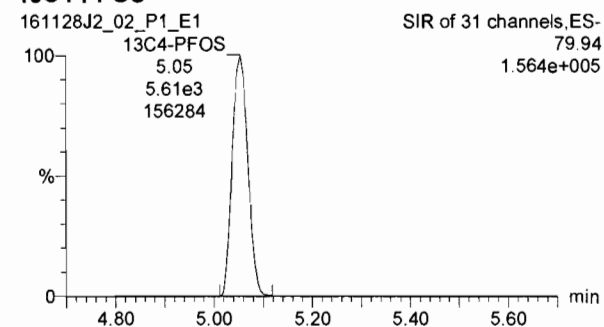
13C8-PFOA



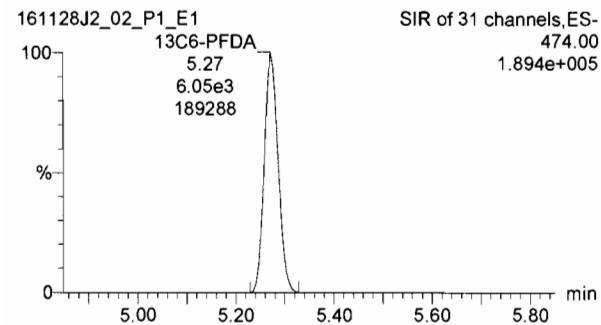
13C9-PFNA



13C4-PFOS



13C6-PFDA



Dataset: U:\Q2.PRO\Results\161128J2\161128J2_20.qld

Last Altered: Tuesday, November 29, 2016 09:46:45 Pacific Standard Time
Printed: Tuesday, November 29, 2016 09:47:41 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161128J2_20.wiff, Date: 29-Nov-2016, Time: 02:57:32, ID: ST161128J2-2 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	168.90	4.35e4	1.99e4		1.000	1.92	27.8	111.0
2	2 PFPeA	218.90	4.29e4	2.24e4		1.000	3.10	27.8	111.3
3	3 PFBS	79.90	2.25e4	1.31e4		1.000	3.39	27.7	110.8
4	4 PFHxA	268.90	3.66e4	8.60e3		1.000	3.79	25.6	102.5
5	5 PFHpA	318.90	3.20e4	1.74e4		1.000	4.26	27.8	111.3
6	6 PFHxS	79.91	1.72e4	2.57e3		1.000	4.38	25.6	102.6
7	7 6:2 FTS	406.90	9.47e3	4.71e3		1.000	4.62	26.5	105.9
8	8 PFOA	368.90	3.77e4	1.66e4		1.000	4.66	23.0	92.0
9	9 PFNA	419.00	2.35e4	1.28e4		1.000	4.99	28.0	112.0
10	10 PFOS	79.92	1.13e4	4.86e3		1.000	5.05	25.2	100.6
11	11 PFDA	469.00	8.31e3	4.31e3		1.000	5.27	24.1	96.6
12	12 8:2 FTS	506.90	2.21e3	1.06e3		1.000	5.25	29.3	117.0
13	13 13C3-PFBA	172.00	1.99e4	2.35e4	0.867	1.000	1.91	12.2	97.9
14	14 13C3-PFPeA	221.90	2.24e4	2.31e4	0.994	1.000	3.10	12.2	97.7
15	15 13C3-PFBS	79.95	1.31e4	2.31e4	0.564	1.000	3.39	12.6	101.0
16	16 13C2-PFHxA	269.90	8.60e3	2.31e4	0.907	1.000	3.79	5.14	102.7
17	17 13C4-PFHpA	321.90	1.74e4	2.31e4	0.742	1.000	4.26	12.7	101.8
18	18 18O2-PFHxS	102.90	2.57e3	9.37e3	0.271	1.000	4.38	12.6	101.2
19	19 13C2-6:2 FTS	408.90	4.71e3	2.53e4	0.224	1.000	4.61	10.4	83.3
20	20 13C2-PFOA	369.90	1.66e4	2.53e4	0.651	1.000	4.66	12.6	101.0
21	21 13C5-PFNA	422.90	1.28e4	1.33e4	1.002	1.000	4.98	12.0	96.3
22	22 13C8-PFOS	79.93	4.86e3	5.39e3	0.950	1.000	5.05	11.9	95.1
23	23 13C2-PFDA	470.00	4.31e3	4.95e3	0.827	1.000	5.27	13.1	105.2
24	24 13C2-8:2 FTS	508.70	1.06e3	4.95e3	0.260	1.000	5.25	10.3	82.5
25	25 13C4-PFBA	171.90	2.35e4	2.35e4	1.000	1.000	1.91	12.5	100.0
26	26 13C5-PFHxA	273.00	2.31e4	2.31e4	1.000	1.000	3.79	12.5	100.0
27	27 13C3-PFHxS	80.01	9.37e3	9.37e3	1.000	1.000	4.38	12.5	100.0
28	28 13C8-PFOA	375.90	2.53e4	2.53e4	1.000	1.000	4.66	12.5	100.0
29	29 13C4-PFOS	79.94	5.39e3	5.39e3	1.000	1.000	5.05	12.5	100.0
30	30 13C9-PFNA	427.00	1.33e4	1.33e4	1.000	1.000	4.99	12.5	100.0
31	31 13C6-PFDA	474.00	4.95e3	4.95e3	1.000	1.000	5.27	12.5	100.0

75-125

60-150

40-150

60-150

50-150

60-150

40-150

PW
11/29/16
✓ AC
11/29/16

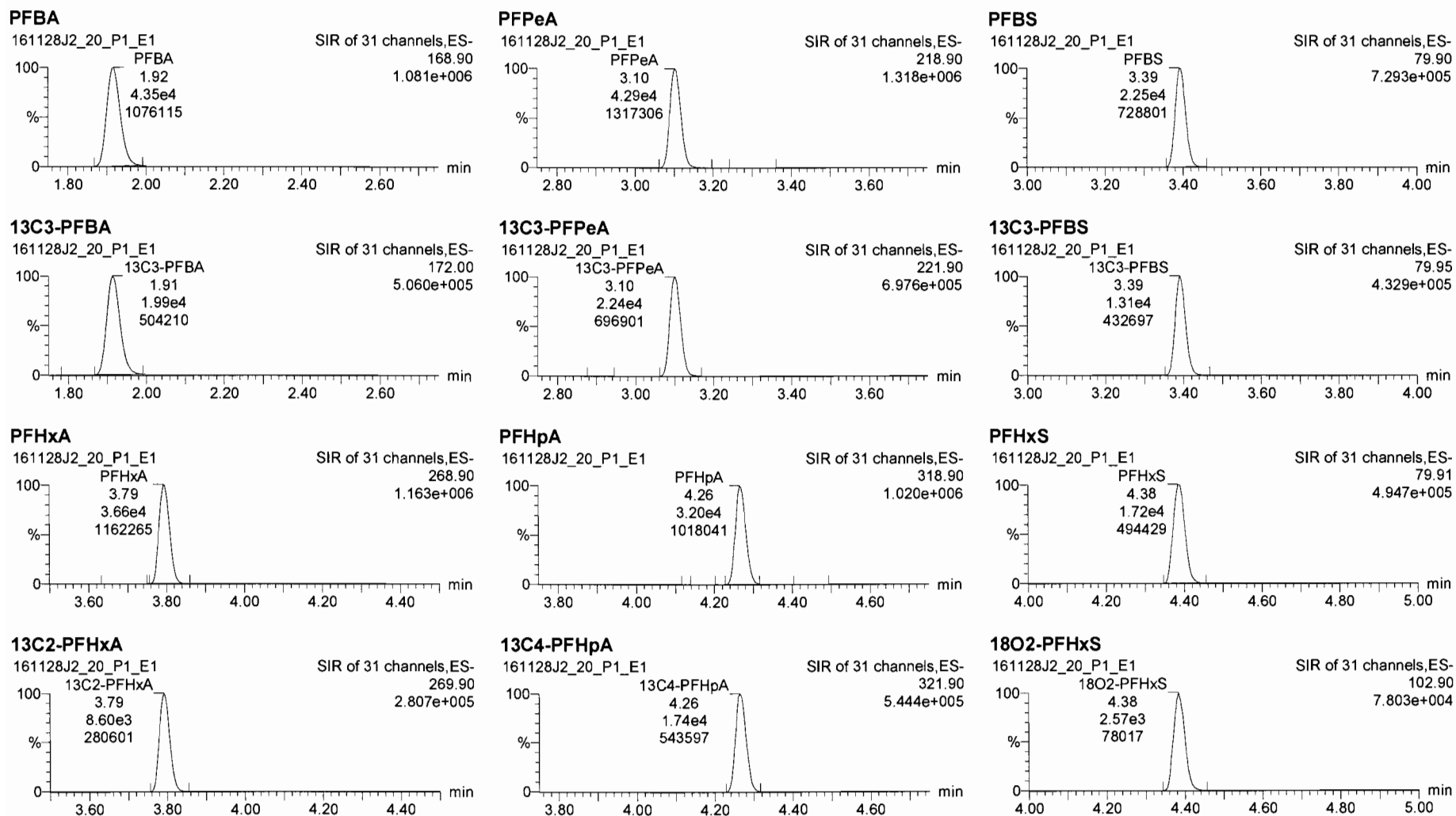
	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161128J2_01	11/28/2016 23:04:52	IPA	IPA
2	161128J2_02	11/28/2016 23:17:06	ST161128J2-1 PFC C3.5 16K2321	PFC C3.5 16K2321A
3	161128J2_03	11/28/2016 23:29:21	IPA	IPA
4	161128J2_04	11/28/2016 23:41:36	1601437-01@50x	OW11-MW9-1016
5	161128J2_05	11/28/2016 23:53:49	1601437-02@50x	OW11-MW9P-1016
6	161128J2_06	11/29/2016 00:06:02	1601437-03@50x	OW11-MW1-1016
7	161128J2_07	11/29/2016 00:18:18	1601437-04@50x	OW11-MW7-1016
8	161128J2_08	11/29/2016 00:30:33	1601437-05@50x	OW11-MW5-1016
9	161128J2_09	11/29/2016 00:42:50	1601437-06@50x	OW11-MW6-1016
10	161128J2_10	11/29/2016 00:55:04	1601437-07@50x	OW11-MW4-1016
11	161128J2_11	11/29/2016 01:07:17	B6K0111-MS1@50x	Matrix Spike
12	161128J2_12	11/29/2016 01:19:33	B6K0111-MSD1@50x	Matrix Spike Dup
13	161128J2_13	11/29/2016 01:31:48	IPA	IPA
14	161128J2_14	11/29/2016 01:44:04	B6K0123-BS1	OPR
15	161128J2_15	11/29/2016 01:56:19	IPA	IPA
16	161128J2_16	11/29/2016 02:08:34	B6K0123-BLK1	Method Blank
17	161128J2_17	11/29/2016 02:20:48	1601416-01	TW-2C
18	161128J2_18	11/29/2016 02:33:03	1601446-01	TW-1C
19	161128J2_19	11/29/2016 02:45:16	IPA	IPA
20	161128J2_20	11/29/2016 02:57:32	ST161128J2-2 PFC C3.5 16K2321	PFC C3.5 16K2321A
21	161128J2_21	11/29/2016 03:09:47	IPA	IPA

Dataset: U:\Q2.PRO\Results\161128J2\161128J2_20.qld

Last Altered: Tuesday, November 29, 2016 09:46:45 Pacific Standard Time
Printed: Tuesday, November 29, 2016 09:47:25 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 25 Nov 2016 08:57:09
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161128J2_20.wiff, Date: 29-Nov-2016, Time: 02:57:32, ID: ST161128J2-2 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

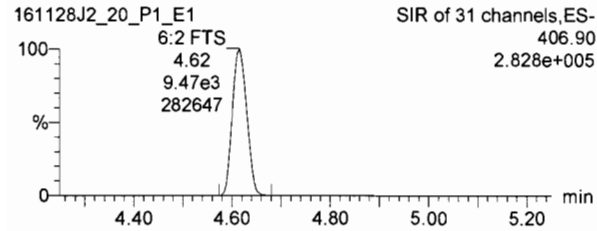


Dataset: U:\Q2.PRO\Results\161128J2\161128J2_20.qld

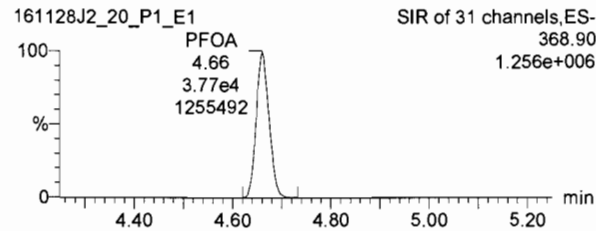
Last Altered: Tuesday, November 29, 2016 09:46:45 Pacific Standard Time
Printed: Tuesday, November 29, 2016 09:47:25 Pacific Standard Time

Name: 161128J2_20.wiff, Date: 29-Nov-2016, Time: 02:57:32, ID: ST161128J2-2 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

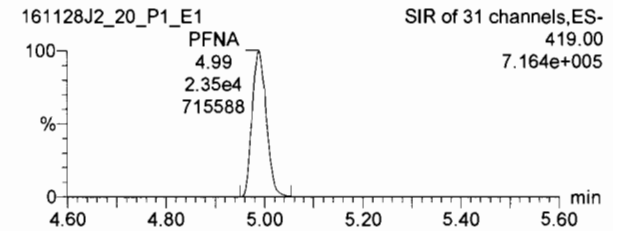
6:2 FTS



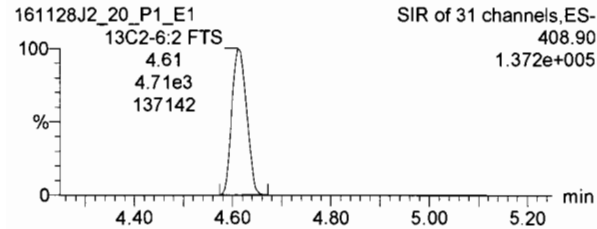
PFOA



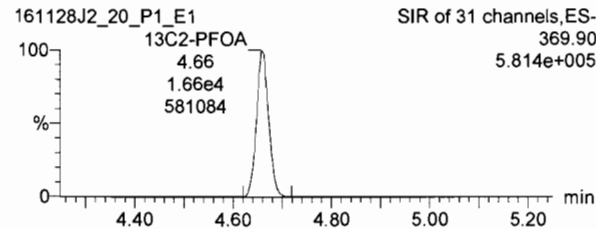
PFNA



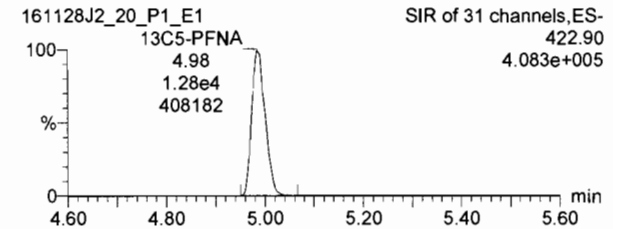
13C2-6:2 FTS



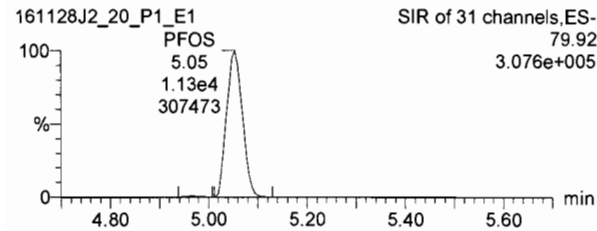
13C2-PFOA



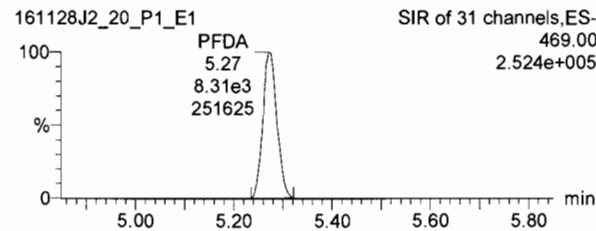
13C5-PFNA



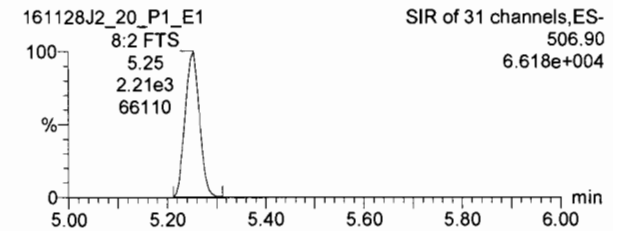
PFOS



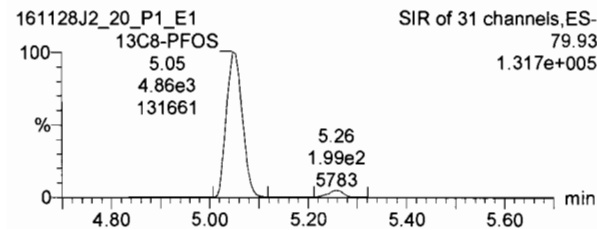
PFDA



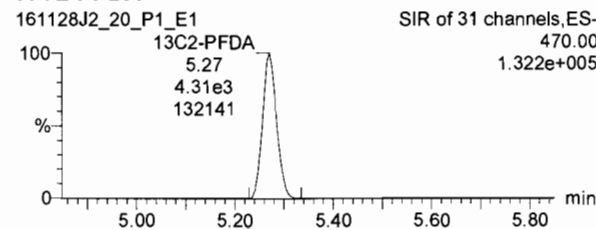
8:2 FTS



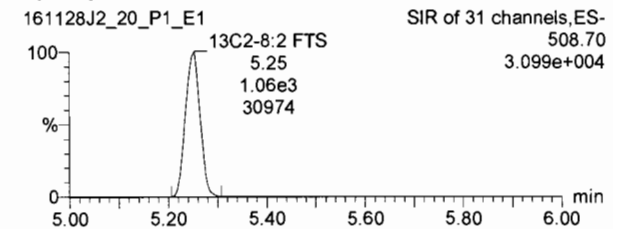
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

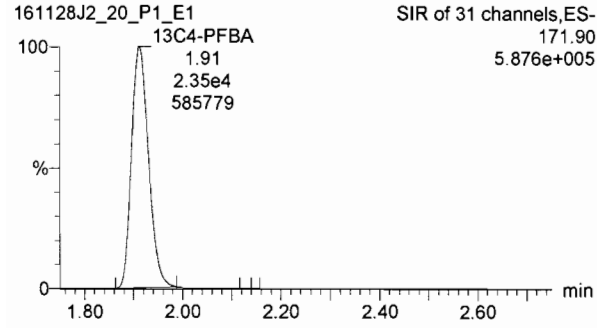


Dataset: U:\Q2.PRO\Results\161128J2\161128J2_20.qld

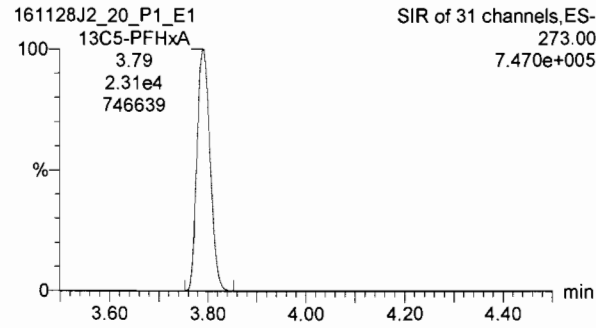
Last Altered: Tuesday, November 29, 2016 09:46:45 Pacific Standard Time
Printed: Tuesday, November 29, 2016 09:47:25 Pacific Standard Time

Name: 161128J2_20.wiff, Date: 29-Nov-2016, Time: 02:57:32, ID: ST161128J2-2 PFC C3.5 16K2321, Description: PFC C3.5 16K2321A

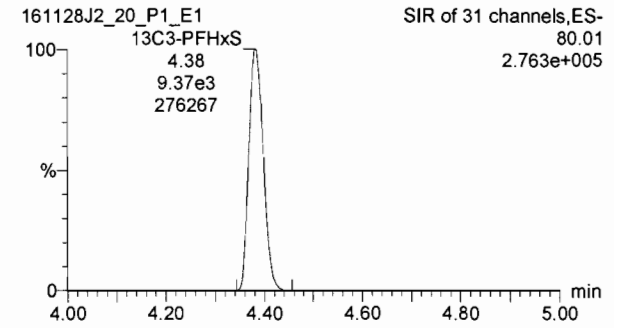
13C4-PFBA



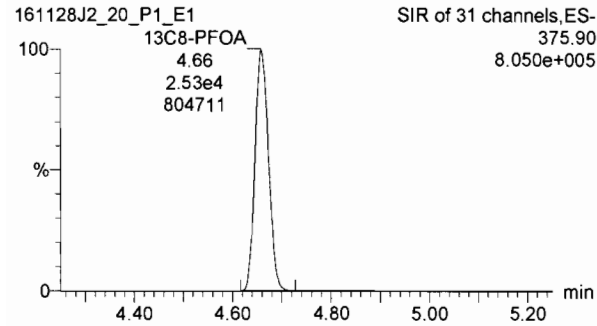
13C5-PFHxA



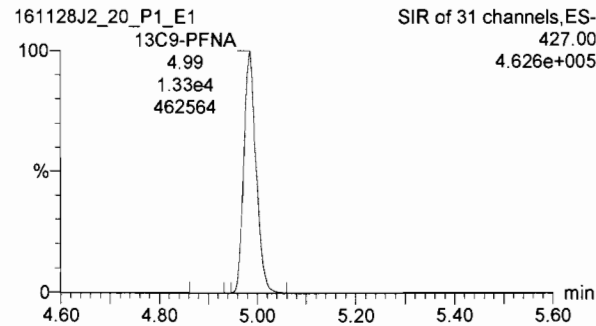
13C3-PFHxS



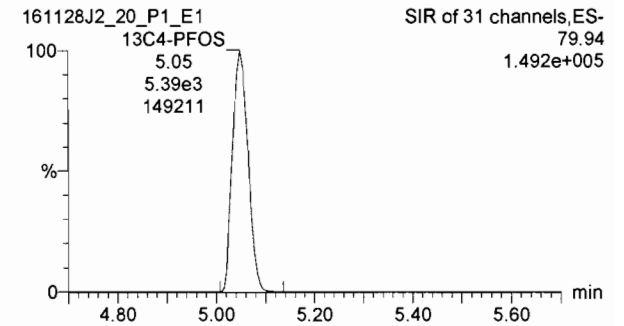
13C8-PFOA



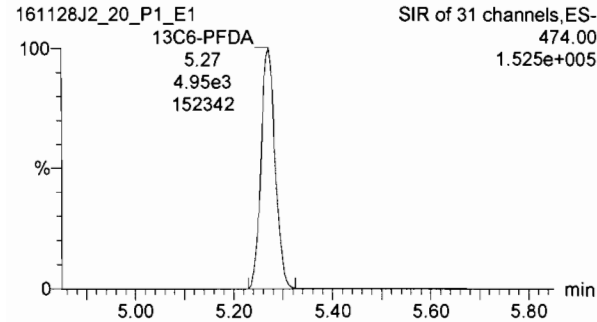
13C9-PFNA



13C4-PFOS



13C6-PFDA



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

Last Altered: Wednesday, November 23, 2016 3:59:34 PM Pacific Standard Time

Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_A_FULL_LINEAR.mdb 22 Nov 2016 14:48:20

Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

ID: ST161122G2-7 PFC CS3.5 16K1710, Description: PFC CS3.5 16K1710 A, Name: 161122G2_29, Date: 22-Nov-2016, Time: 15:55:12, Task:

#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBA	213.1 > 168.8	2.064e4	1.964e4		1.00	1.94	26.7	107
2	2 PFPeA	263.1 > 218.9	1.718e4	8.301e3		1.00	2.86	25.9	104
3	3 PFBS	299 > 79.7	2.126e4	5.900e3		1.00	3.11	25.2	101
4	4 PFHxA	313.2 > 268.9	1.513e4	4.472e3		1.00	3.48	28.2	113
5	5 PFHpA	363 > 318.9	4.605e4	1.351e4		1.00	3.98	27.5	110
6	6 PFHxS	398.9 > 79.6	2.005e4	5.895e3		1.00	4.09	24.7	98.9
7	7 6:2 FTS	427.1 > 407	6.087e3	6.713e3		1.00	4.33	25.5	102
8	8 PFOA	413 > 368.7	4.699e4	2.399e4		1.00	4.37	27.1	108
9	9 PFHpS	449 > 98.7	4.700e3	2.399e4		1.00	4.46	26.8	107
10	10 PFOS	499 > 79.9	1.346e4	7.510e3		1.00	4.78	27.0	108
11	11 PFNA	463 > 418.8	4.110e4	1.275e4		1.00	4.72	24.7	98.6
12	12 PFDA	513 > 468.8	1.290e4	1.024e4		1.00	5.02	26.4	106
13	13 8:2 FTS	527 > 506.9	5.322e3	4.474e3		1.00	4.99	30.5	122
14	14 13C3-PFBA	216.1 > 171.8	1.964e4	1.648e4	1.205	1.00	1.94	12.4	98.9
15	15 13C3-PFPeA	266 > 221.8	8.301e3	1.885e4	0.448	1.00	2.86	12.3	98.4
16	16 13C3-PFBS	302.0 > 98.8	5.900e3	1.885e4	0.302	1.00	3.11	13.0	104
17	17 13C2-PFHxA	315 > 269.8	4.472e3	1.885e4	0.620	1.00	3.48	4.79	95.7
18	18 13C4-PFHpA	367.2 > 321.8	1.351e4	1.199e4	1.139	1.00	3.98	12.4	98.9
19	19 18O2-PFHxS	403 > 102.6	5.895e3	1.199e4	0.449	1.00	4.09	13.7	109
20	20 13C2-6:2 FTS	429.1 > 408.9	6.713e3	6.202e3	1.073	1.00	4.33	12.6	101
21	21 13C2-PFOA	414.9 > 369.7	2.399e4	1.140e4	2.262	1.00	4.37	11.6	93.0
22	22 13C8-PFOS	507.0 > 79.9	7.510e3	8.750e3	0.944	1.00	4.78	11.4	91.0
23	23 13C5-PFNA	468.2 > 422.9	1.275e4	1.140e4	1.082	1.00	4.72	12.9	103
24	24 13C2-PFDA	515.1 > 469.9	1.024e4	1.009e4	1.019	1.00	5.02	12.4	99.6
25	25 13C2-8:2 FTS	529.1 > 508.7	4.474e3	6.202e3	0.569	1.00	4.99	15.9	127
26	26 13C4-PFBA	217 > 171.8	1.648e4	1.648e4	1.000	1.00	1.94	12.5	100
27	27 13C2-4:2 FTS	329.2 > 308.9	6.202e3	6.202e3	1.000	1.00	3.39	12.5	100
28	28 13C5-PFHxA	318.0 > 272.9	1.885e4	1.885e4	1.000	1.00	3.48	12.5	100
29	29 13C3-PFHxS	401.9 > 79.9	1.199e4	1.199e4	1.000	1.00	4.09	12.5	100
30	30 13C8-PFOA	421.3 > 376	1.140e4	1.140e4	1.000	1.00	4.37	12.5	100
31	31 13C4-PFOS	503.0 > 79.9	8.750e3	8.750e3	1.000	1.00	4.78	12.5	100

75-125
↓
60-150
↓
40-150
60-150
↓
50-150
60-150
↓
40-150

AMSC 11/23/16
PW
11/23/16

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

Last Altered: Wednesday, November 23, 2016 3:59:34 PM Pacific Standard Time

Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

ID: ST161122G2-7 PFC CS3.5 16K1710, Description: PFC CS3.5 16K1710 A, Name: 161122G2_29, Date: 22-Nov-2016, Time: 15:55:12, Task:

#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
32	13C9-PFNA	472.2 > 426.9	1.140e4	1.140e4	1.000	1.00	4.72	12.5	100
33	13C6-PFDA	519.1 > 473.7	1.009e4	1.009e4	1.000	1.00	5.02	12.5	100
34	Total PFBS	299 > 79.7		5.895e3		1.00		25.3	
35	Total PFHxS	398.9 > 79.6		5.895e3		1.00		24.7	
36	Total PFOA	413 > 368.7		2.399e4		1.00		27.1	
37	Total PFOS	499 > 79.9		7.510e3		1.00		27.3	

Dataset: Untitled

Last Altered: Wednesday, November 23, 2016 4:28:09 PM Pacific Standard Time

Printed: Wednesday, November 23, 2016 4:29:29 PM Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_A_FULL_LINEAR.mdb 22 Nov 2016 14:48:20
 Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	161122G2_1	IPA	22-Nov-16	09:47:54
2	161122G2_2	ST161122G2-2 PFC CS-1 16K1705	22-Nov-16	10:00:32
3	161122G2_3	ST161122G2-3 PFC CS0 16K1706	22-Nov-16	10:13:07
4	161122G2_4	ST161122G2-4 PFC CS1 16K1707	22-Nov-16	10:25:42
5	161122G2_5	ST161122G2-5 PFC CS2 16K1708	22-Nov-16	10:38:18
6	161122G2_6	ST161122G2-6 PFC CS3 16K1709	22-Nov-16	10:50:54
7	161122G2_7	ST161122G2-7 PFC CS3.5 16K1710	22-Nov-16	11:03:32
8	161122G2_8	ST161122G2-8 PFC CS4 16K1711	22-Nov-16	11:16:11
9	161122G2_9	ST161122G2-9 PFC CS4.5 16K1712	22-Nov-16	11:28:50
10	161122G2_10	ST161122G2-10 PFC CS5 16K1713	22-Nov-16	11:41:28
11	161122G2_11	IPA	22-Nov-16	11:54:03
12	161122G2_12	SS161122G2-1 PFC SS 16K2201	22-Nov-16	12:06:50
13	161122G2_13	IPA	22-Nov-16	12:19:32
14	161122G2_14	B6K0111-BS1 OPR 0.125	22-Nov-16	12:32:23
15	161122G2_15	B6K0125-BS1 OPR 0.125	22-Nov-16	12:58:17
16	161122G2_16	IPA	22-Nov-16	13:11:00
17	161122G2_17	B6K0125-BLK1 Method Blank 0.125	22-Nov-16	13:23:45
18	161122G2_18	1601433-01 WURTS_LF030/LF031_Eff-16110...	22-Nov-16	13:36:25
19	161122G2_19	1601433-02 WURTS-EB013JH-110816 0.12917	22-Nov-16	13:49:03
20	161122G2_20	1601433-03 WURTS-FB001Lab-110916 0.130...	22-Nov-16	14:01:41
21	161122G2_21	1601433-04 WURTS-FB002Novi-110916 0.12...	22-Nov-16	14:14:20
22	161122G2_22	1601433-05 WURTS-VAS05006-17-20 0.12957	22-Nov-16	14:26:54
23	161122G2_23	1601433-06 WURTS-VAS05006-27-30 0.12495	22-Nov-16	14:39:29
24	161122G2_24	1601433-07 WURTS-VAS05006-37-40 0.12989	22-Nov-16	14:52:05
25	161122G2_25	1601433-08 WURTS-VAS05006-47-50 0.12929	22-Nov-16	15:04:42
26	161122G2_26	1601433-09 WURTS-VAS17002-17-20 0.12603	22-Nov-16	15:17:18
27	161122G2_27	1601433-10 WURTS-VAS17002-27-30 0.12796	22-Nov-16	15:29:56
28	161122G2_28	IPA -11 AMSC 11/23/16	22-Nov-16	15:42:34
29	161122G2_29	ST161122G2-7 PFC CS3.5 16K1710	22-Nov-16	15:55:12
30	161122G2_30	IPA	22-Nov-16	16:07:50
31	161122G2_31	1601433-11 WURTS-VAS17002-37-40 0.1279	22-Nov-16	16:20:28

Dataset: Untitled

Last Altered: Wednesday, November 23, 2016 4:28:09 PM Pacific Standard Time
 Printed: Wednesday, November 23, 2016 4:29:29 PM Pacific Standard Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	161122G2_32	1601433-12 WURTS-VAS17002-46.5-49.5 0.1...	22-Nov-16	16:33:07
33	161122G2_33	1601433-13 WURTS-EB014JH-110916 0.12806	22-Nov-16	16:45:42
34	161122G2_34	1601433-14 WURTS-VAS11022-17-20 0.12232	22-Nov-16	16:58:17
35	161122G2_35	1601433-15 WURTS-VAS11022-17-20_FD 0.1...	22-Nov-16	17:10:54
36	161122G2_36	1601433-16 WURTS-VAS11022-27-30 0.12713	22-Nov-16	17:23:30
37	161122G2_37	1601433-17 WURTS-VAS11022-37-40 0.1263	22-Nov-16	17:36:06
38	161122G2_38	1601433-18 WURTS-VAS11022-47-450 0.128...	22-Nov-16	17:48:44
39	161122G2_39	IPA -12 AMSC 11/23/16	22-Nov-16	18:01:22
40	161122G2_40	ST161122G2_7 PFC CS3.5 16K1710	22-Nov-16	18:14:00
41	161122G2_41	IPA	22-Nov-16	18:26:38
42	161122G2_42	B6K0124-BS1 LCS 0.125	22-Nov-16	18:39:18
43	161122G2_43	B6K0124-BSD1 LCS Dup 0.125	22-Nov-16	18:51:56
44	161122G2_44	IPA	22-Nov-16	19:04:31
45	161122G2_45	B6K0124-BLK1 Method Blank 0.125	22-Nov-16	19:17:09
46	161122G2_46	1601365-07 SW-NRES031-FRB-10252016 0....	22-Nov-16	19:29:44
47	161122G2_47	1601365-09 SW-NRES032-FRB-10252016 0....	22-Nov-16	19:42:20
48	161122G2_48	1601398-02 SW-NRES020-FRB-110116 0.129...	22-Nov-16	19:54:56
49	161122G2_49	1601420-01 FTWG-MW-02-1116 0.10754	22-Nov-16	20:07:33
50	161122G2_50	1601420-02 OC-EB110816 0.13201	22-Nov-16	20:20:10
51	161122G2_51	1601420-03 OC-FB110816 0.1276	22-Nov-16	20:32:48
52	161122G2_52	IPA -13 AMSC 11/23/16	22-Nov-16	20:45:27
53	161122G2_53	ST161122G2_8 PFC CS3.5 16K1710	22-Nov-16	20:58:05
54	161122G2_54	IPA	22-Nov-16	21:10:43
55	161122G2_55	IPA	22-Nov-16	21:23:21
56	161122G2_56	PFTEDA QC F1	22-Nov-16	21:35:59
57	161122G2_57	PFTEDA QC F3	22-Nov-16	21:48:34
58	161122G2_58	PFTEDA QC F4	22-Nov-16	22:01:09
59	161122G2_59	IPA	22-Nov-16	22:13:45

LC Calibration Standards Review Checklist Q1

Calibration ID:	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
<u>ST161122 G2-11</u>	<u>N/A</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<u>N/A</u>
<u>-12</u>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<u>-13</u>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
_____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Full Mass Cal. Date: 11/21/16

Reviewed By: PW 11/23/16
Initials/Date

Comments:

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

Last Altered: Wednesday, November 23, 2016 3:59:34 PM Pacific Standard Time

Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

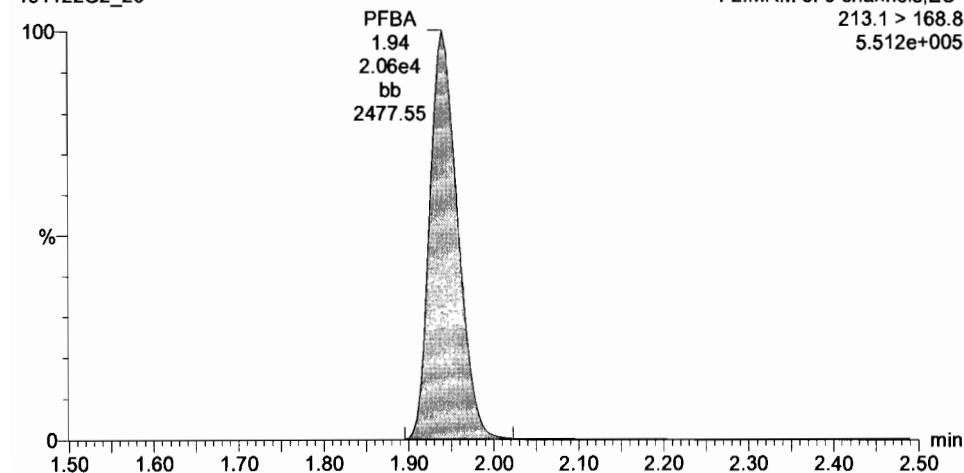
Method: U:\G1.PRO\MethDB\PFAS_A_FULL_LINEAR.mdb 22 Nov 2016 14:48:20

Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

ID: ST161122G2-7 PFC CS3.5 16K1710, Description: PFC CS3.5 16K1710 A, Name: 161122G2_29, Date: 22-Nov-2016, Time: 15:55:12, Instrument: , Lab: , User:

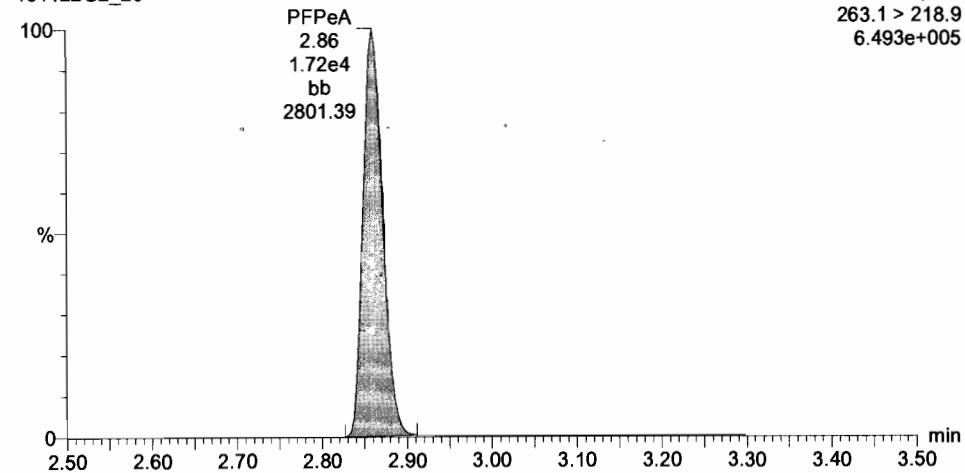
PFBA

161122G2_29



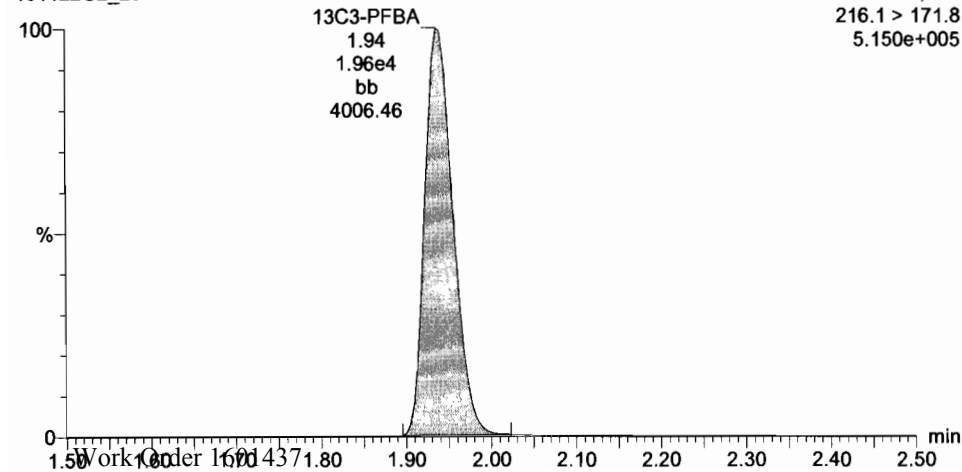
PFPeA

161122G2_29



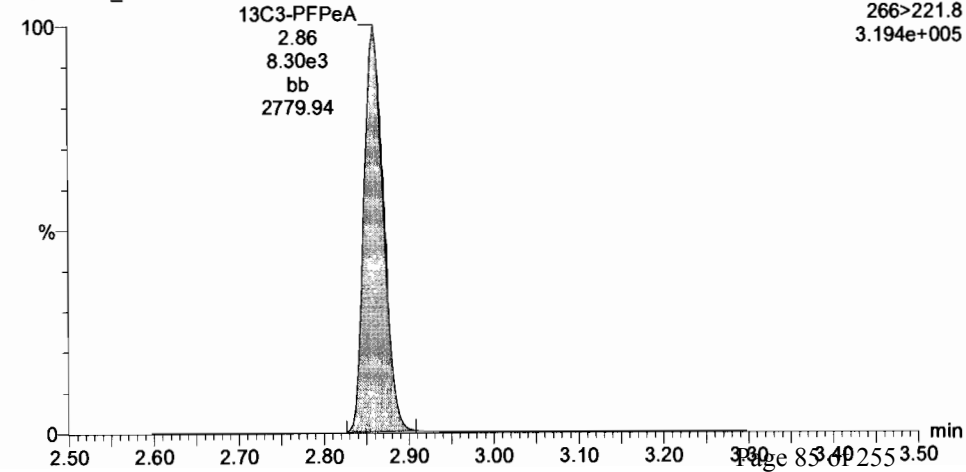
13C3-PFBA

161122G2_29



13C3-PFPeA

161122G2_29



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

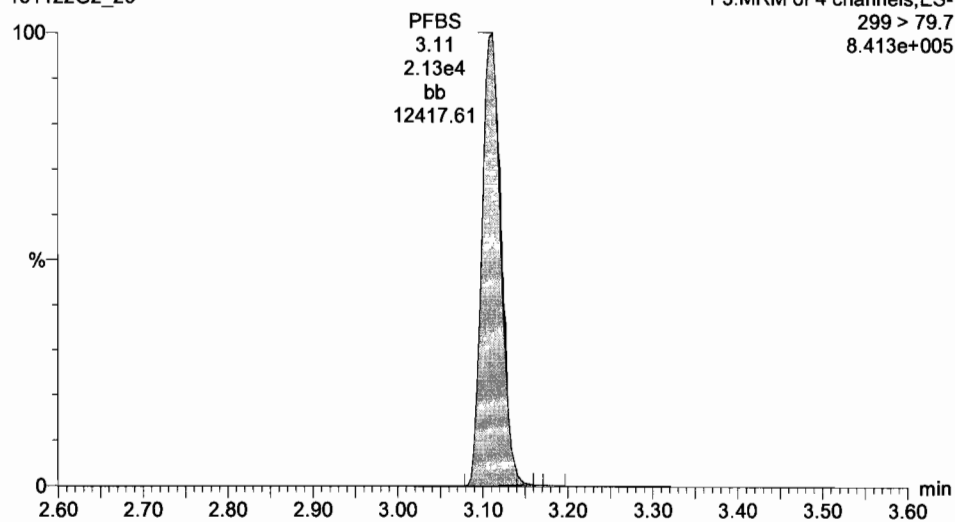
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Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

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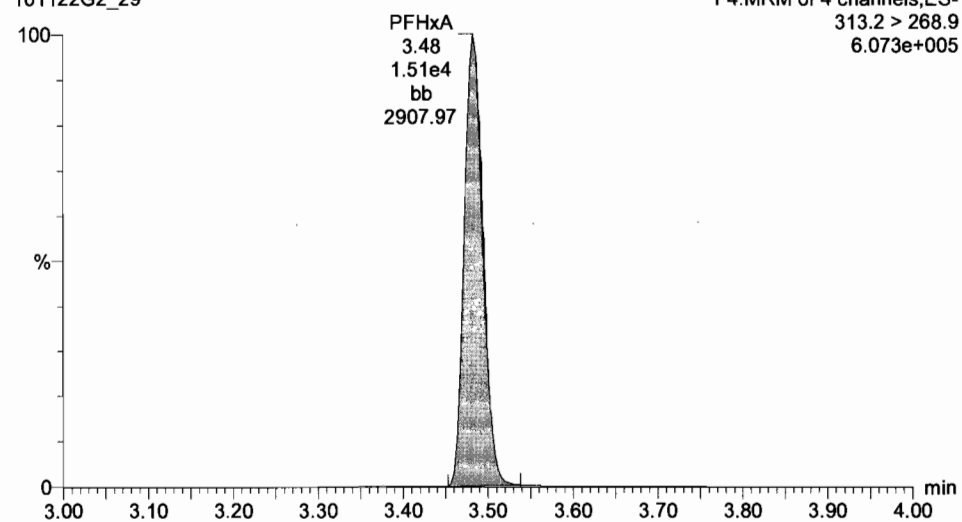
Total PFBS

161122G2_29



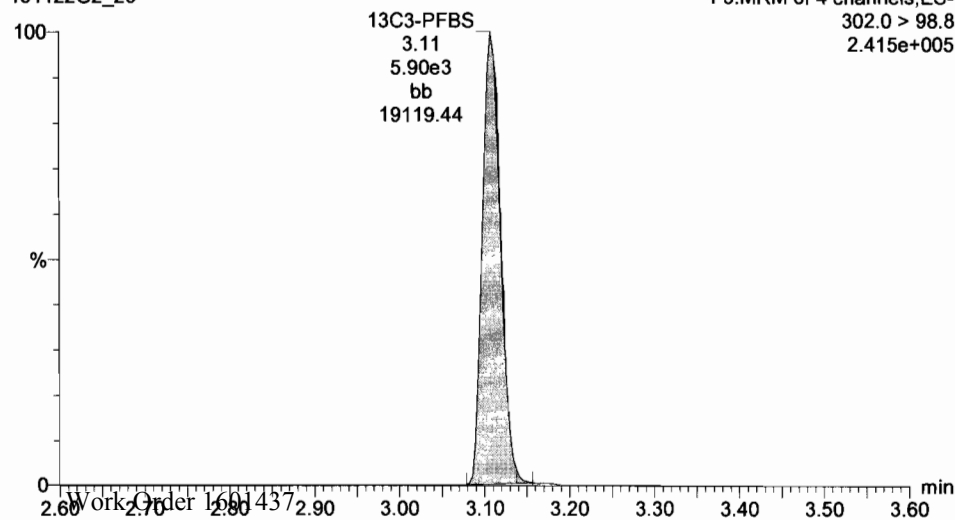
PFHxA

161122G2_29



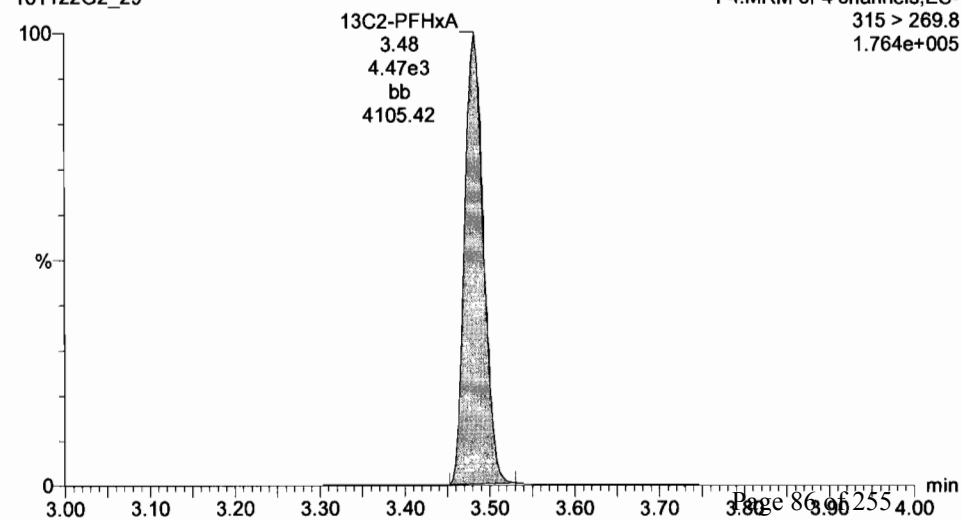
13C3-PFBS

161122G2_29



13C2-PFHxA

161122G2_29



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

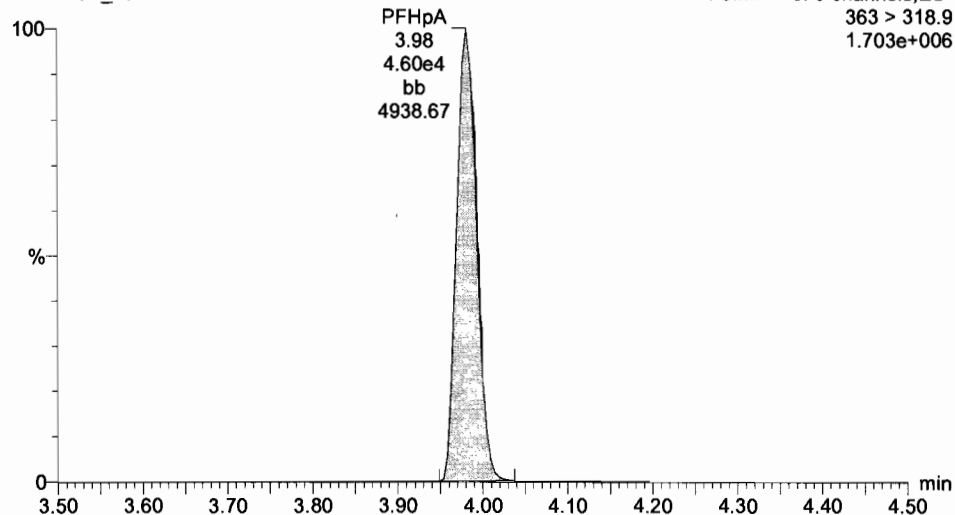
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Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

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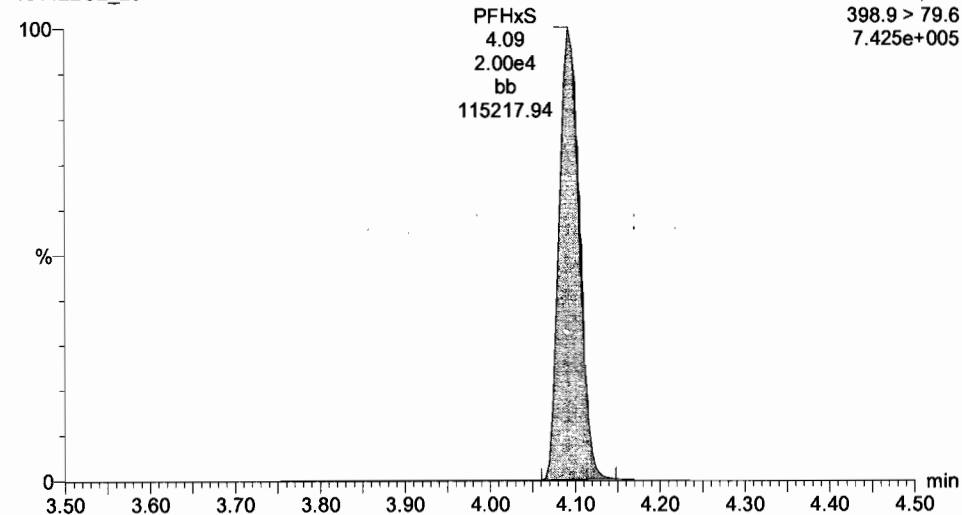
PFHpA

161122G2_29



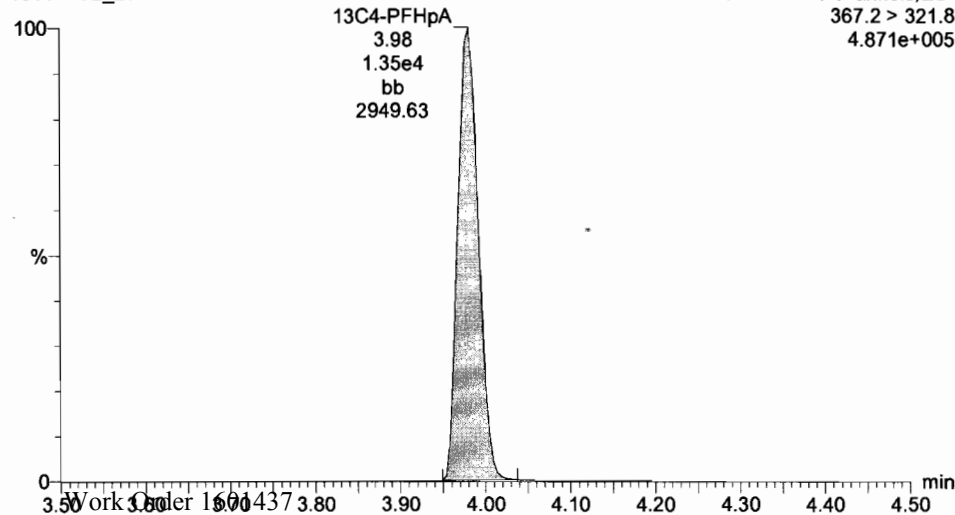
Total PFHxS

161122G2_29



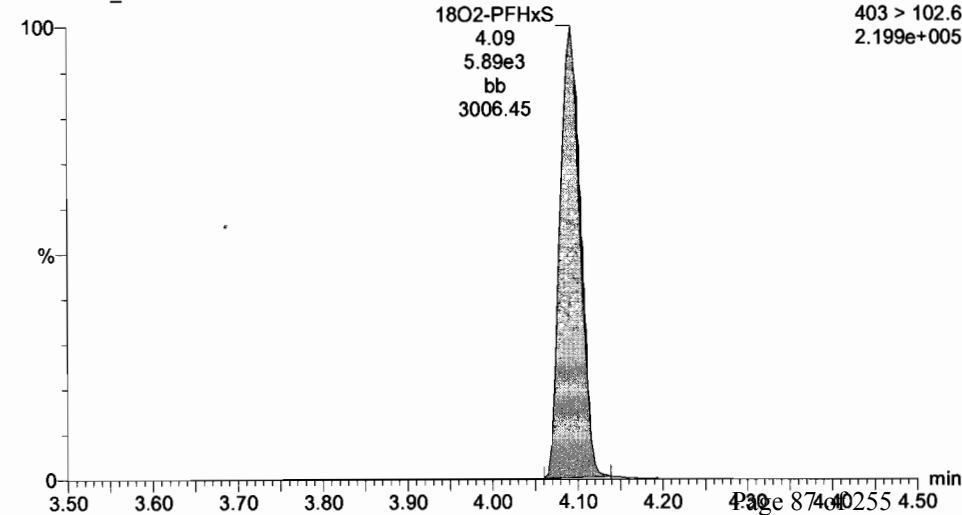
13C4-PFHpA

161122G2_29



18O2-PFHxS

161122G2_29



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

Last Altered: Wednesday, November 23, 2016 3:59:34 PM Pacific Standard Time

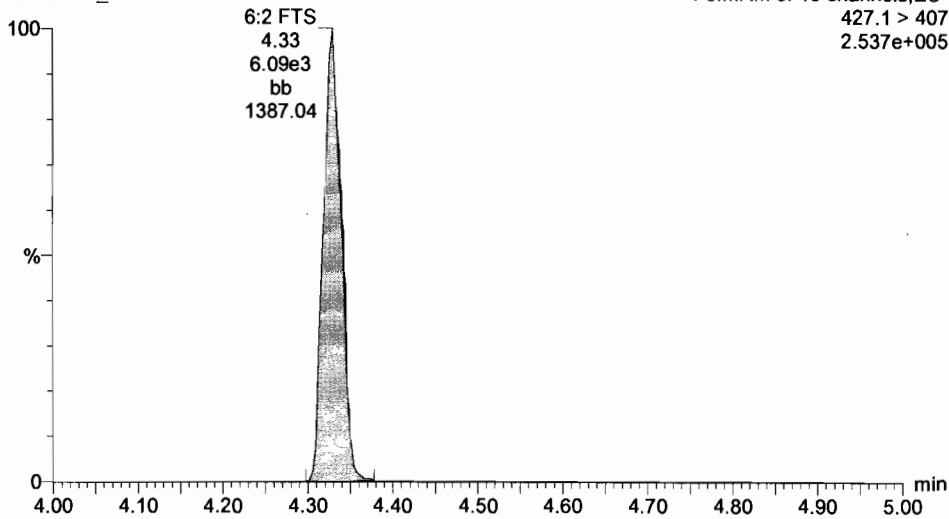
Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

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6:2 FTS

161122G2_29

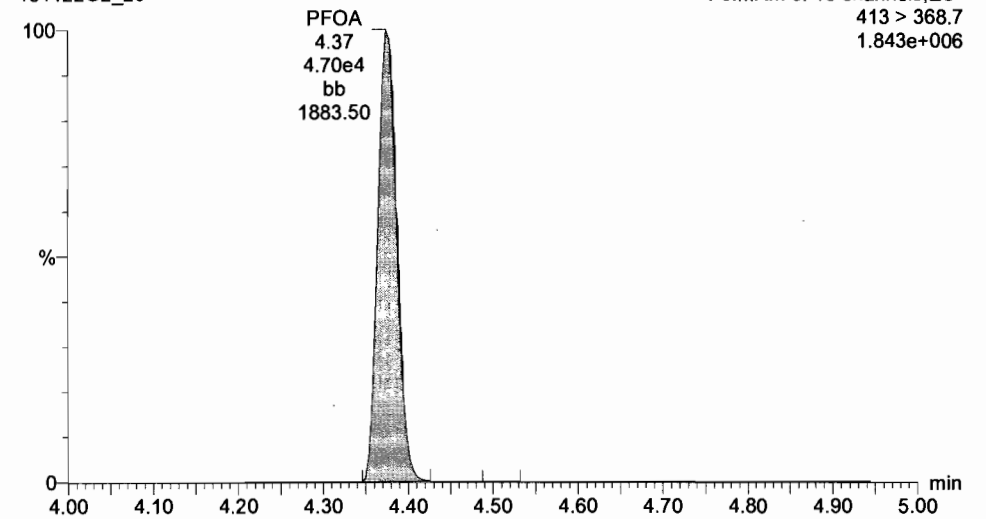
F6:MRM of 16 channels,ES-
427.1 > 407
2.537e+005



Total PFOA

161122G2_29

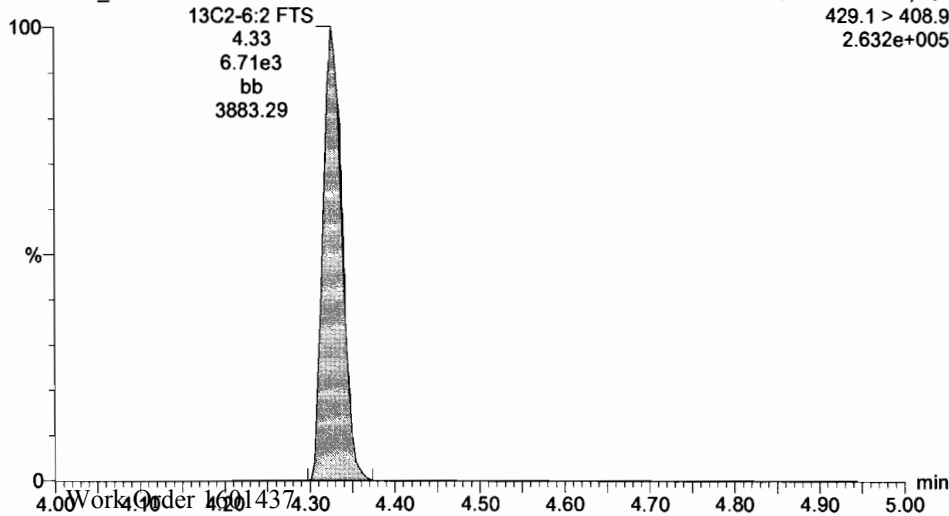
F6:MRM of 16 channels,ES-
413 > 368.7
1.843e+006



13C2-6:2 FTS

161122G2_29

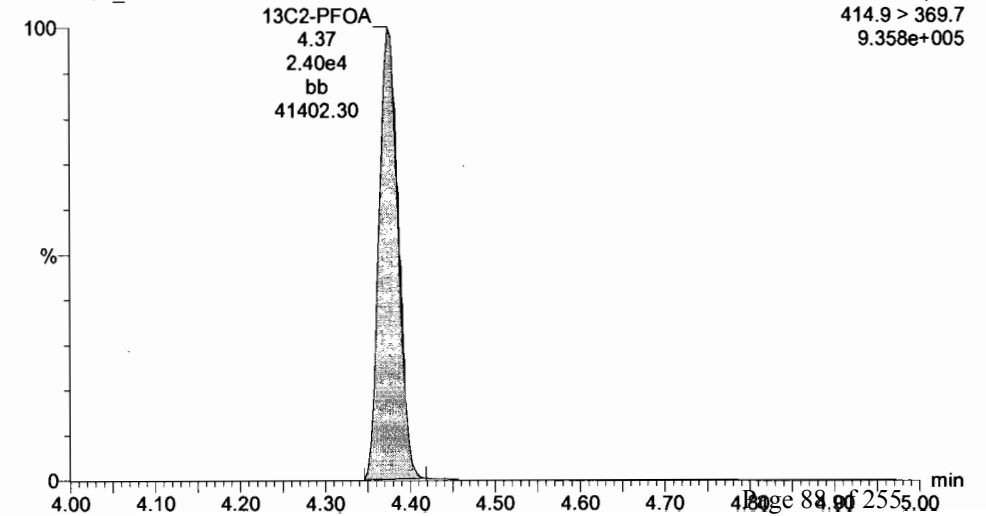
F6:MRM of 16 channels,ES-
429.1 > 408.9
2.632e+005



13C2-PFOA

161122G2_29

F6:MRM of 16 channels,ES-
414.9 > 369.7
9.358e+005

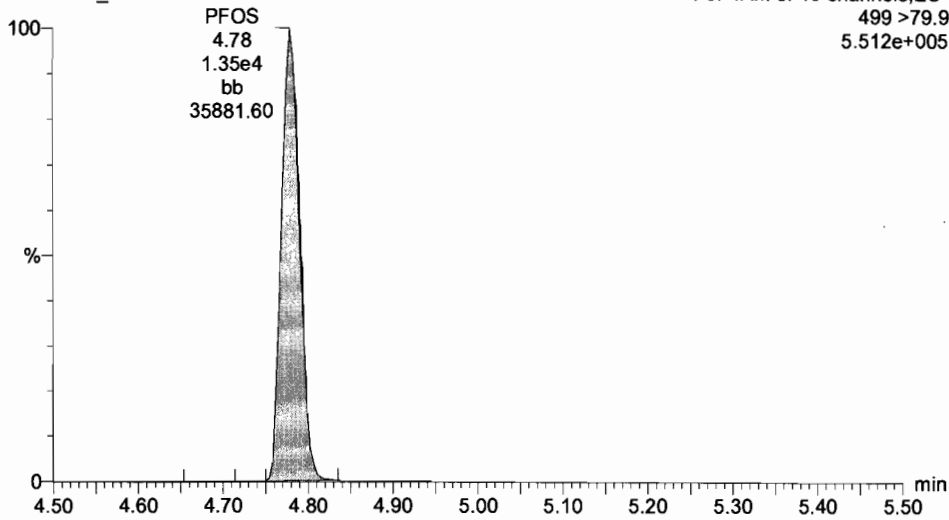


Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

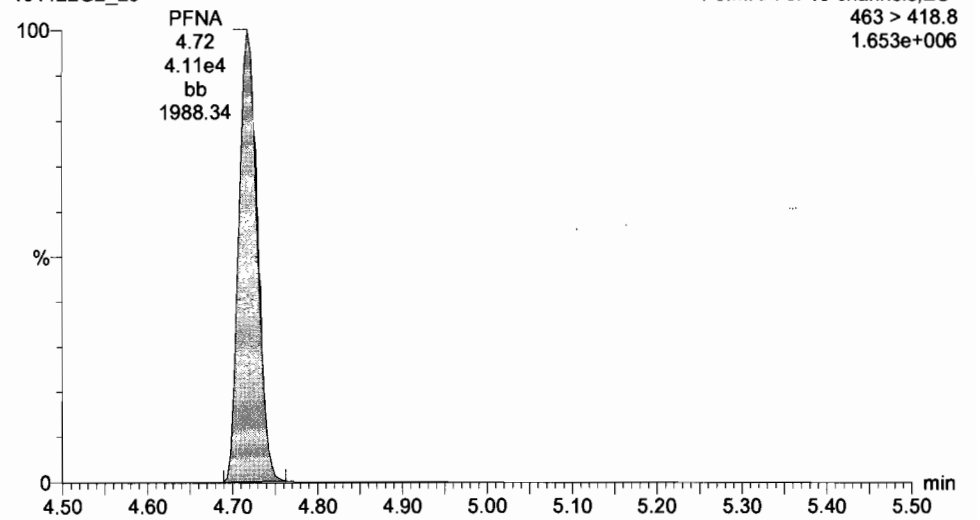
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Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

ID: ST161122G2-7 PFC CS3.5 16K1710, Description: PFC CS3.5 16K1710 A, Name: 161122G2_29, Date: 22-Nov-2016, Time: 15:55:12, Instrument: , Lab: , User:

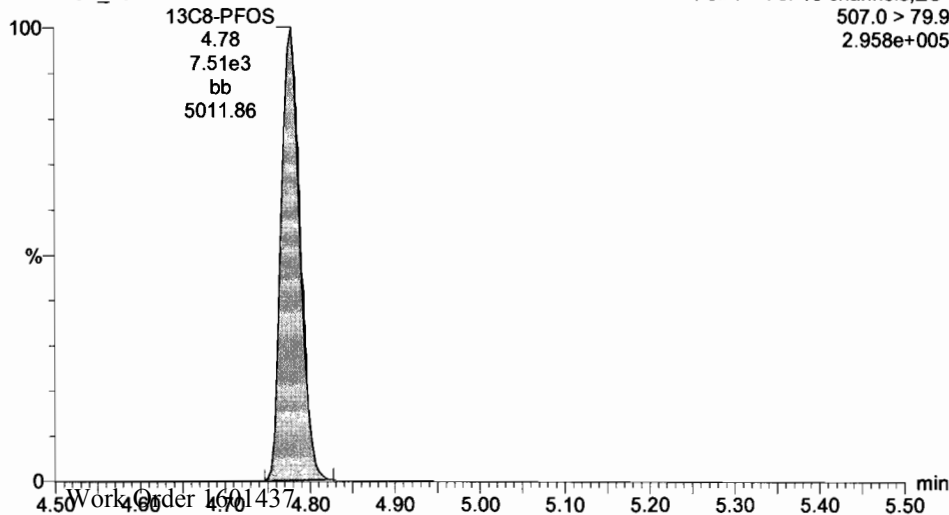
Total PFOS
161122G2_29



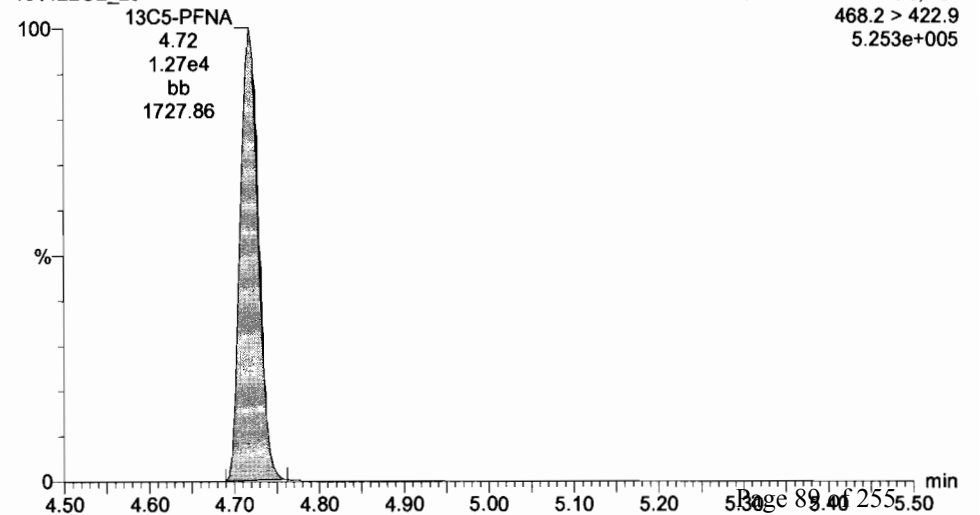
PFNA
161122G2_29



13C8-PFOS
161122G2_29



13C5-PFNA
161122G2_29



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

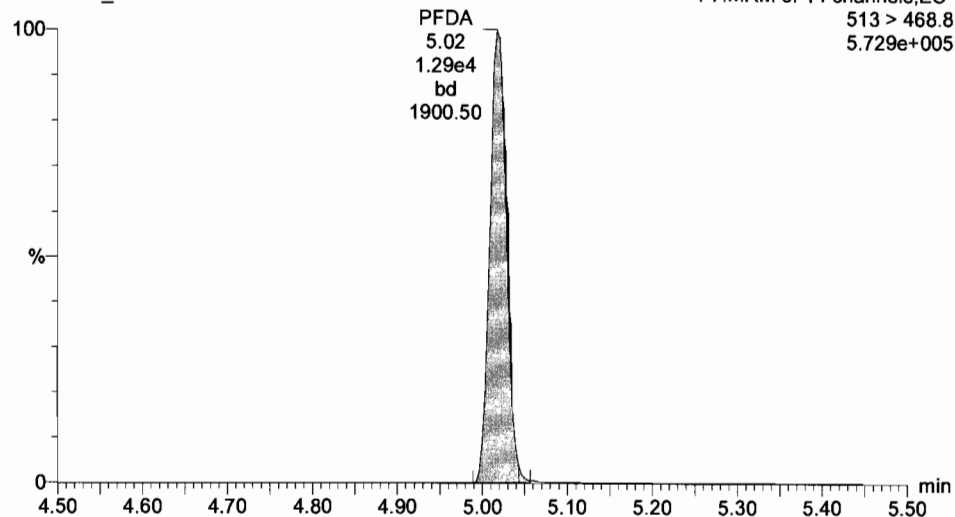
Last Altered: Wednesday, November 23, 2016 3:59:34 PM Pacific Standard Time

Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

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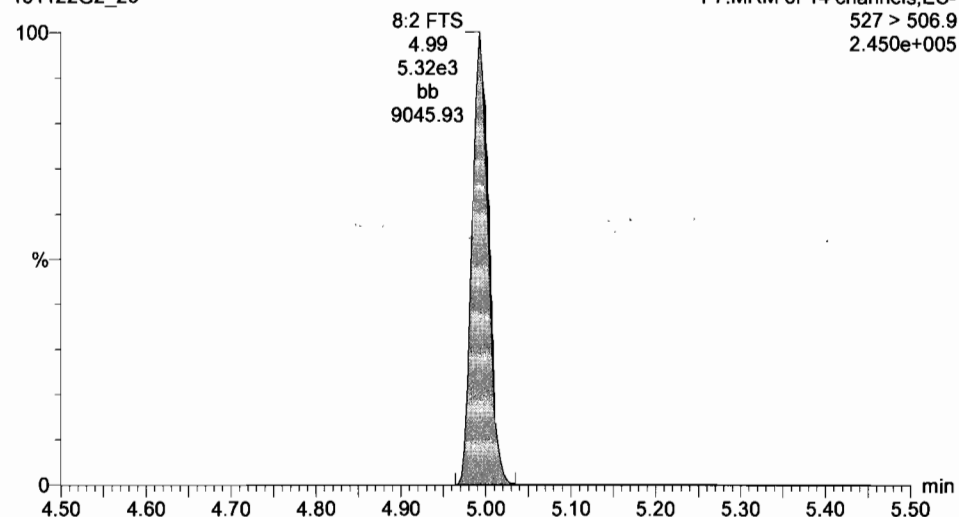
PFDA

161122G2_29



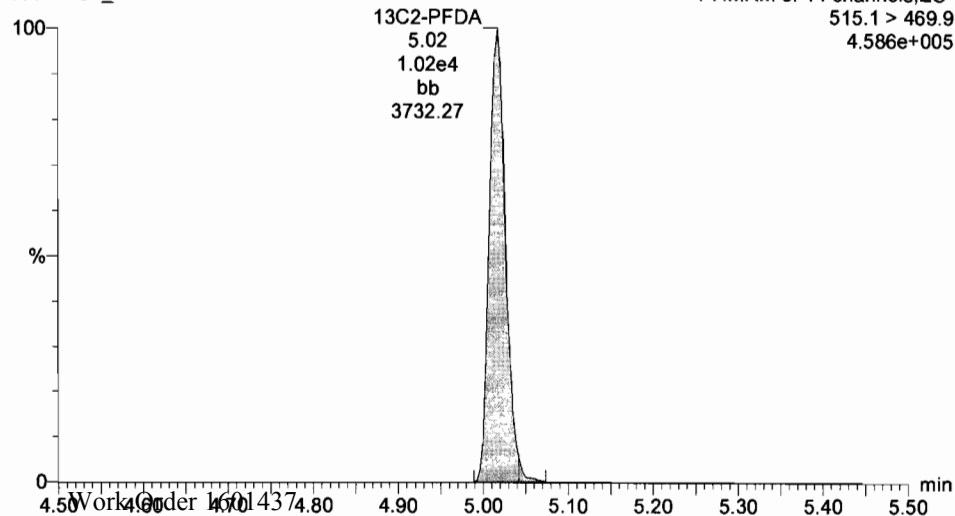
8:2 FTS

161122G2_29



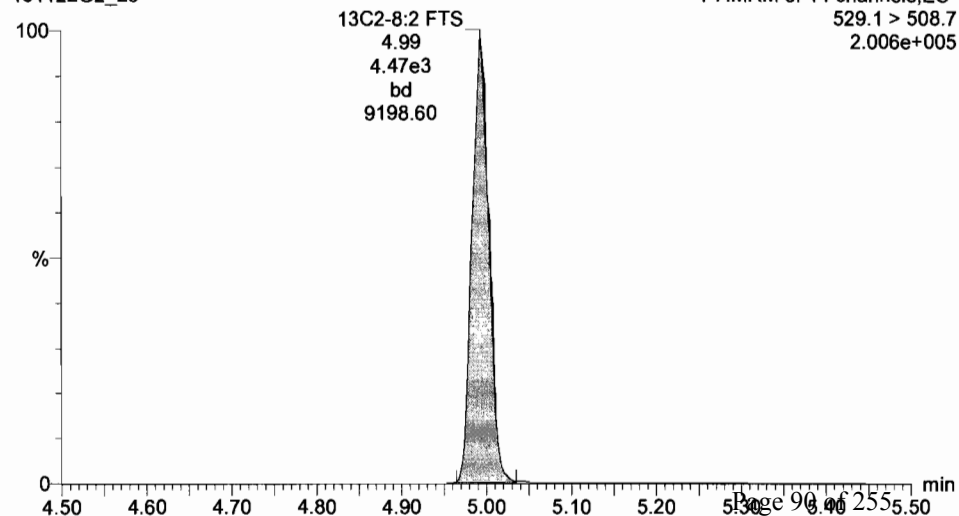
13C2-PFDA

161122G2_29



13C2-8:2 FTS

161122G2_29



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

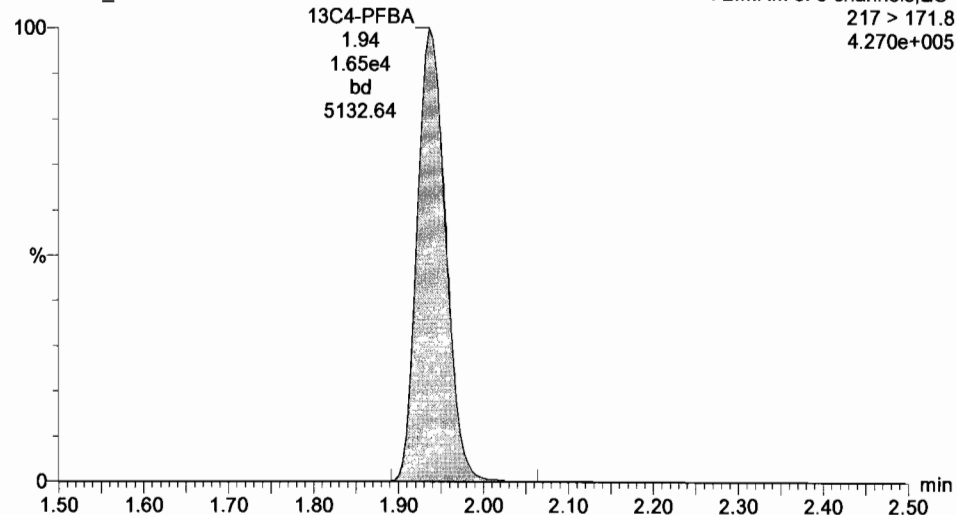
Last Altered: Wednesday, November 23, 2016 3:59:34 PM Pacific Standard Time

Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

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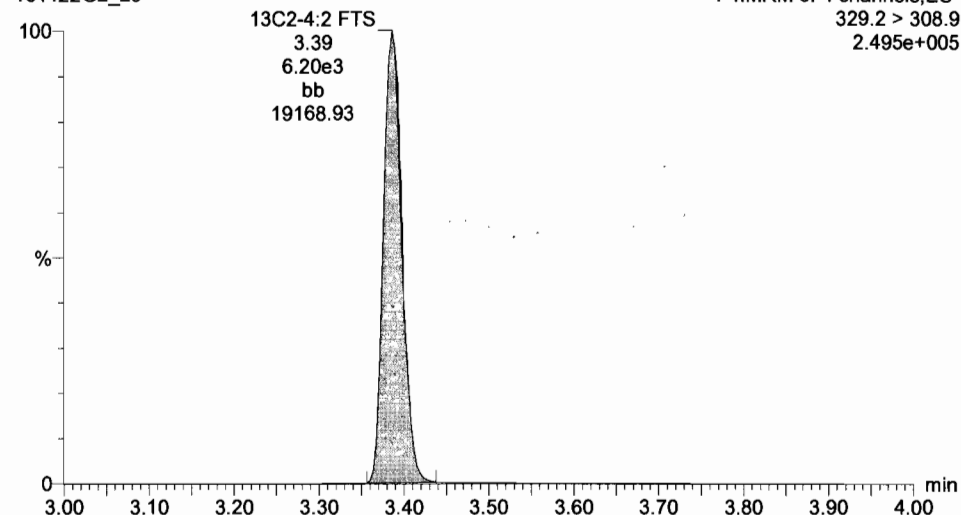
13C4-PFBA

161122G2_29



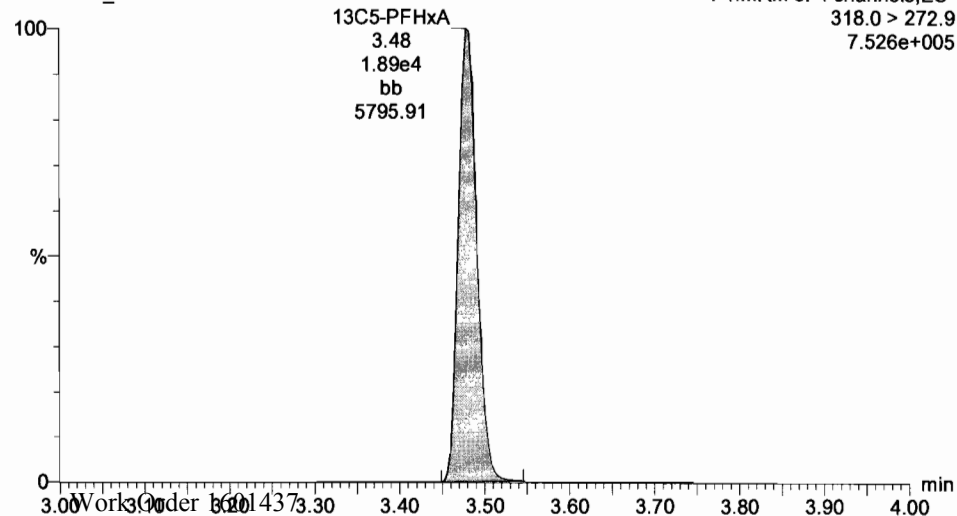
13C2-4:2 FTS

161122G2_29



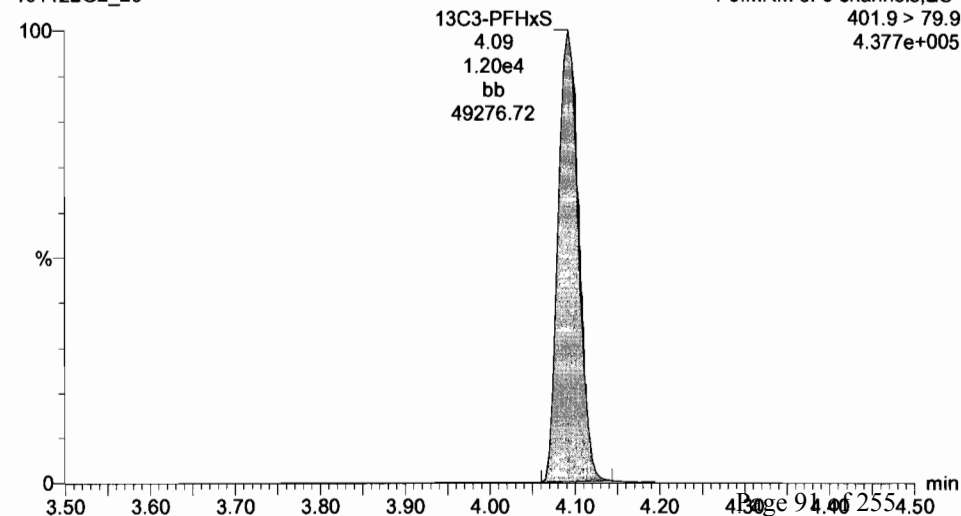
13C5-PFHxA

161122G2_29



13C3-PFHxS

161122G2_29



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-29.qld

Last Altered: Wednesday, November 23, 2016 3:59:34 PM Pacific Standard Time

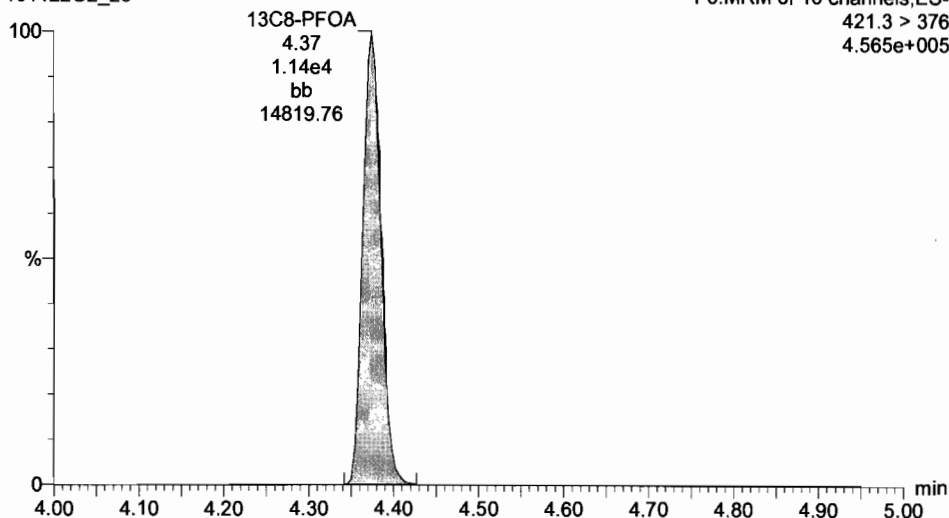
Printed: Wednesday, November 23, 2016 4:09:18 PM Pacific Standard Time

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13C8-PFOA

161122G2_29

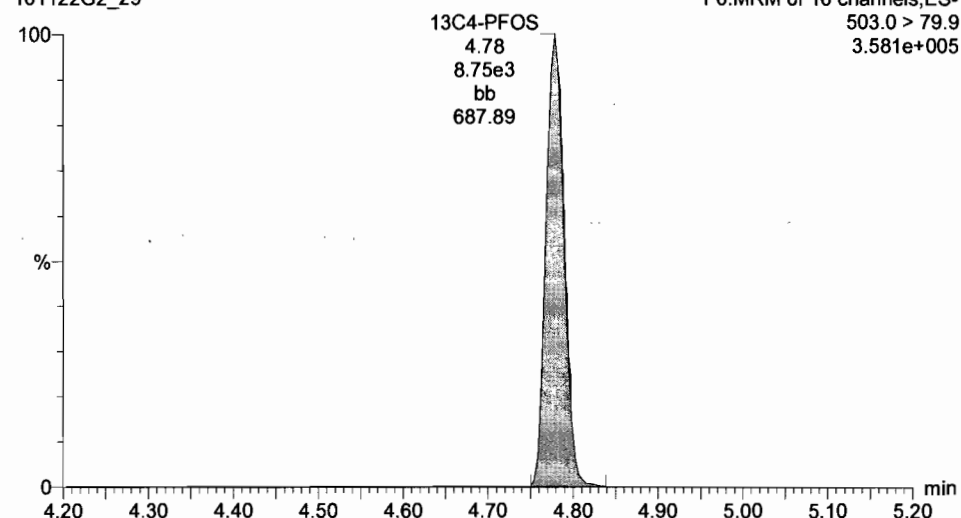
F6:MRM of 16 channels,ES-
421.3 > 376
4.565e+005



13C4-PFOS

161122G2_29

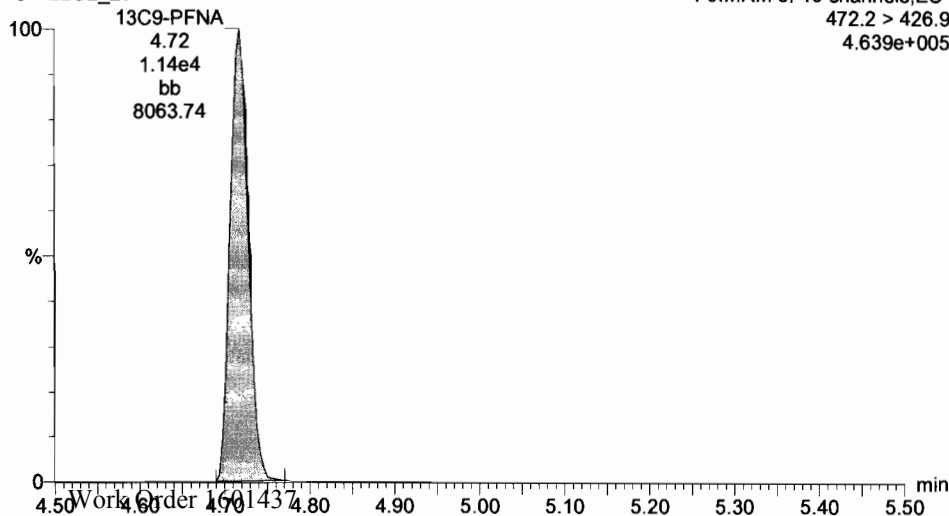
F6:MRM of 16 channels,ES-
503.0 > 79.9
3.581e+005



13C9-PFNA

161122G2_29

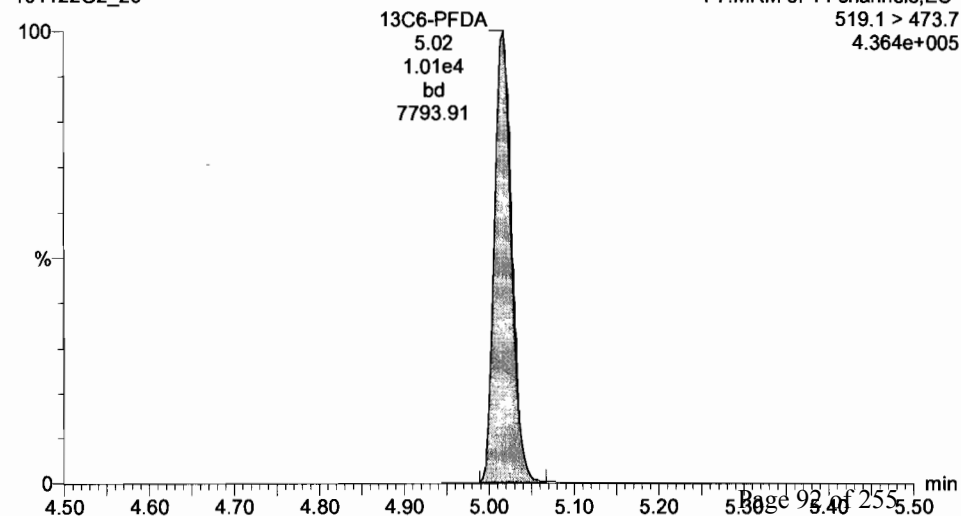
F6:MRM of 16 channels,ES-
472.2 > 426.9
4.639e+005



13C6-PFDA

161122G2_29

F7:MRM of 14 channels,ES-
519.1 > 473.7
4.364e+005



INITIAL CALIBRATION

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:59:09 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 19 Nov 2016 12:55:02

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Compound name: PFBA

Correlation coefficient: $r = 0.999219$, $r^2 = 0.998438$

Calibration curve: $0.982791 * x + 0.0230635$

Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	1.90	4.24e2	9.66e3	0.535	7.1	1.10
2	2 161118J2_04_P1_E1	1.00	1.91	7.90e2	1.01e4	0.972	-2.8	0.978
3	3 161118J2_05_P1_E1	2.00	1.91	1.58e3	1.05e4	1.88	-6.0	0.936
4	4 161118J2_06_P1_E1	5.00	1.91	3.59e3	9.99e3	4.55	-9.1	0.898
5	5 161118J2_07_P1_E1	10.0	1.91	8.91e3	1.04e4	10.9	9.2	1.08
6	6 161118J2_08_P1_E1	25.0	1.91	1.96e4	9.20e3	27.1	8.5	1.07
7	7 161118J2_09_P1_E1	50.0	1.91	3.98e4	9.95e3	50.8	1.7	1.00
8	8 161118J2_10_P1_E1	75.0	1.91	6.13e4	1.06e4	73.2	-2.4	0.960
9	9 161118J2_11_P1_E1	100	1.90	7.16e4	9.24e3	98.4	-1.6	0.968

AC
11/19/16

PW
11/21/16

Compound name: PFPeA

Correlation coefficient: $r = 0.998741$, $r^2 = 0.997484$

Calibration curve: $0.85968 * x + 0.0362224$

Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	3.11	4.30e2	1.11e4	0.524	4.7	0.973
2	2 161118J2_04_P1_E1	1.00	3.10	7.66e2	1.13e4	0.945	-5.5	0.848
3	3 161118J2_05_P1_E1	2.00	3.11	1.58e3	1.17e4	1.92	-4.1	0.842
4	4 161118J2_06_P1_E1	5.00	3.11	3.65e3	1.13e4	4.65	-6.9	0.807
5	5 161118J2_07_P1_E1	10.0	3.11	8.91e3	1.15e4	11.2	12.1	0.968
6	6 161118J2_08_P1_E1	25.0	3.11	1.96e4	1.02e4	27.9	11.8	0.962
7	7 161118J2_09_P1_E1	50.0	3.11	3.82e4	1.10e4	50.5	1.0	0.869
8	8 161118J2_10_P1_E1	75.0	3.10	5.94e4	1.17e4	73.8	-1.6	0.846
9	9 161118J2_11_P1_E1	100	3.11	6.78e4	1.02e4	97.0	-3.0	0.835

SS reinjected.
Both injections
are included.

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time
 Printed: Saturday, November 19, 2016 12:59:09 Pacific Standard Time

Compound name: PFBS

Correlation coefficient: $r = 0.999357$, $r^2 = 0.998715$

Calibration curve: $0.774866 * x + -0.0202219$

Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	3.40	2.02e2	6.31e3	0.543	8.7	0.802
2	2 161118J2_04_P1_E1	1.00	3.40	3.70e2	6.41e3	0.957	-4.3	0.722
3	3 161118J2_05_P1_E1	2.00	3.40	7.47e2	6.75e3	1.81	-9.5	0.691
4	4 161118J2_06_P1_E1	5.00	3.40	1.76e3	6.54e3	4.36	-12.8	0.672
5	5 161118J2_07_P1_E1	10.0	3.40	4.41e3	6.60e3	10.8	7.9	0.834
6	6 161118J2_08_P1_E1	25.0	3.40	9.83e3	6.03e3	26.4	5.4	0.816
7	7 161118J2_09_P1_E1	50.0	3.40	1.92e4	6.06e3	51.3	2.5	0.794
8	8 161118J2_10_P1_E1	75.0	3.40	2.90e4	6.40e3	73.1	-2.6	0.755
9	9 161118J2_11_P1_E1	100	3.40	3.44e4	5.59e3	99.3	-0.7	0.770

Compound name: PFHxA

Correlation coefficient: $r = 0.998535$, $r^2 = 0.997072$

Calibration curve: $0.829371 * x + 0.0163807$

Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	3.80	3.69e2	4.09e3	0.524	4.8	0.902
2	2 161118J2_04_P1_E1	1.00	3.80	6.83e2	4.14e3	0.977	-2.3	0.826
3	3 161118J2_05_P1_E1	2.00	3.80	1.34e3	4.46e3	1.79	-10.3	0.752
4	4 161118J2_06_P1_E1	5.00	3.80	3.15e3	4.17e3	4.52	-9.5	0.754
5	5 161118J2_07_P1_E1	10.0	3.80	7.88e3	4.20e3	11.3	13.0	0.939
6	6 161118J2_08_P1_E1	25.0	3.80	1.70e4	3.62e3	28.3	13.2	0.940
7	7 161118J2_09_P1_E1	50.0	3.80	3.29e4	4.00e3	49.6	-0.8	0.823
8	8 161118J2_10_P1_E1	75.0	3.80	5.07e4	4.17e3	73.3	-2.3	0.810
9	9 161118J2_11_P1_E1	100	3.80	5.96e4	3.66e3	98.2	-1.8	0.815

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:59:09 Pacific Standard Time

Compound name: PFHpA

Correlation coefficient: $r = 0.999224$, $r^2 = 0.998449$

Calibration curve: $0.825598 * x + -0.00188587$

Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	4.28	2.89e2	7.89e3	0.557	11.4	0.916
2	2 161118J2_04_P1_E1	1.00	4.27	5.60e2	7.91e3	1.08	7.6	0.886
3	3 161118J2_05_P1_E1	2.00	4.27	1.03e3	8.97e3	1.75	-12.6	0.720
4	4 161118J2_06_P1_E1	5.00	4.28	2.40e3	8.54e3	4.25	-15.0	0.701
5	5 161118J2_07_P1_E1	10.0	4.27	6.00e3	8.73e3	10.4	4.1	0.860
6	6 161118J2_08_P1_E1	25.0	4.28	1.36e4	7.71e3	26.7	6.8	0.881
7	7 161118J2_09_P1_E1	50.0	4.27	2.72e4	8.57e3	48.1	-3.9	0.794
8	8 161118J2_10_P1_E1	75.0	4.27	4.38e4	8.67e3	76.4	1.9	0.841
9	9 161118J2_11_P1_E1	100	4.27	4.99e4	7.61e3	99.3	-0.7	0.820

Compound name: PFHxS

Coefficient of Determination: $R^2 = 0.997308$

Calibration curve: $-0.00339694 * x^2 + 3.36003 * x + -0.393288$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	4.39	1.60e2	1.21e3	0.610	22.0	3.31
2	2 161118J2_04_P1_E1	1.00	4.40	3.00e2	1.22e3	1.03	3.1	3.07
3	3 161118J2_05_P1_E1	2.00	4.40	5.85e2	1.28e3	1.81	-9.3	2.85
4	4 161118J2_06_P1_E1	5.00	4.40	1.28e3	1.29e3	3.83	-23.4	2.48
5	5 161118J2_07_P1_E1	10.0	4.39	3.33e3	1.24e3	10.2	1.7	3.34
6	6 161118J2_08_P1_E1	25.0	4.40	7.64e3	1.10e3	26.6	6.4	3.46
7	7 161118J2_09_P1_E1	50.0	4.40	1.57e4	1.21e3	51.4	2.7	3.26
8	8 161118J2_10_P1_E1	75.0	4.39	2.39e4	1.35e3	71.5	-4.7	2.97
9	9 161118J2_11_P1_E1	100	4.39	2.78e4	1.13e3	102	1.6	3.06

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 6:2 FTS

Coefficient of Determination: $R^2 = 0.997896$

Calibration curve: $-0.00379453 * x^2 + 1.05162 * x + -0.0537721$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	4.63	8.82e1	2.25e3	0.518	3.6	0.980
2	2 161118J2_04_P1_E1	1.00	4.63	1.70e2	2.23e3	0.961	-3.9	0.953
3	3 161118J2_05_P1_E1	2.00	4.63	3.64e2	2.36e3	1.90	-5.0	0.966
4	4 161118J2_06_P1_E1	5.00	4.63	8.22e2	2.08e3	4.84	-3.2	0.989
5	5 161118J2_07_P1_E1	10.0	4.62	2.16e3	2.34e3	11.5	14.7	1.15
6	6 161118J2_08_P1_E1	25.0	4.64	4.19e3	2.35e3	23.2	-7.3	0.892
7	7 161118J2_09_P1_E1	50.0	4.63	9.45e3	2.73e3	50.5	0.9	0.867
8	8 161118J2_10_P1_E1	75.0	4.62	1.32e4	2.87e3	75.2	0.3	0.768
9	9 161118J2_11_P1_E1	100	4.62	1.58e4	2.93e3	100	0.1	0.672

Compound name: PFOA

Coefficient of Determination: $R^2 = 0.997857$

Calibration curve: $-0.00316403 * x^2 + 1.30489 * x + -0.00818696$

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	4.67	4.20e2	6.73e3	0.604	20.9	1.56
2	2 161118J2_04_P1_E1	1.00	4.67	6.86e2	7.03e3	0.944	-5.6	1.22
3	3 161118J2_05_P1_E1	2.00	4.68	1.42e3	7.65e3	1.79	-10.6	1.16
4	4 161118J2_06_P1_E1	5.00	4.67	3.16e3	7.34e3	4.17	-16.5	1.08
5	5 161118J2_07_P1_E1	10.0	4.66	7.24e3	6.63e3	10.7	7.4	1.36
6	6 161118J2_08_P1_E1	25.0	4.68	1.80e4	6.89e3	26.8	7.1	1.31
7	7 161118J2_09_P1_E1	50.0	4.67	3.40e4	7.68e3	48.0	-4.0	1.11
8	8 161118J2_10_P1_E1	75.0	4.67	4.86e4	7.62e3	74.4	-0.7	1.06
9	9 161118J2_11_P1_E1	100	4.67	5.64e4	7.07e3	101	1.2	0.997

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: PFNA

Correlation coefficient: $r = 0.999117$, $r^2 = 0.998235$

Calibration curve: $0.818566 * x + -0.00476162$

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	5.01	2.12e2	5.85e3	0.558	11.6	0.904
2	2 161118J2_04_P1_E1	1.00	5.00	3.84e2	6.59e3	0.896	-10.4	0.728
3	3 161118J2_05_P1_E1	2.00	5.02	8.03e2	6.89e3	1.78	-10.8	0.728
4	4 161118J2_06_P1_E1	5.00	5.00	1.89e3	5.98e3	4.82	-3.6	0.788
5	5 161118J2_07_P1_E1	10.0	4.99	4.85e3	6.45e3	11.5	14.9	0.940
6	6 161118J2_08_P1_E1	25.0	5.01	1.07e4	6.86e3	23.9	-4.4	0.782
7	7 161118J2_09_P1_E1	50.0	5.01	2.28e4	6.69e3	52.1	4.3	0.854
8	8 161118J2_10_P1_E1	75.0	4.99	3.67e4	7.65e3	73.3	-2.3	0.800
9	9 161118J2_11_P1_E1	100	5.00	4.09e4	6.27e3	99.6	-0.4	0.816

Compound name: PFOS

Correlation coefficient: $r = 0.997516$, $r^2 = 0.995038$

Calibration curve: $1.14981 * x + 0.021829$

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	5.07	1.47e2	3.06e3	0.501	0.2	1.20
2	2 161118J2_04_P1_E1	1.00	5.06	3.11e2	3.35e3	0.988	-1.2	1.16
3	3 161118J2_05_P1_E1	2.00	5.08	6.07e2	3.38e3	1.94	-3.2	1.12
4	4 161118J2_06_P1_E1	5.00	5.06	1.46e3	3.64e3	4.35	-13.0	1.00
5	5 161118J2_07_P1_E1	10.0	5.05	3.76e3	3.74e3	10.9	9.0	1.26
6	6 161118J2_08_P1_E1	25.0	5.07	8.96e3	3.27e3	29.7	19.0	1.37
7	7 161118J2_09_P1_E1	50.0	5.08	1.61e4	3.68e3	47.7	-4.6	1.10
8	8 161118J2_10_P1_E1	75.0	5.05	2.98e4	4.29e3	75.4	0.5	1.16
9	9 161118J2_11_P1_E1	100	5.06	3.07e4	3.44e3	97.0	-3.0	1.12

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: PFDA

Coefficient of Determination: R² = 0.994991
 Calibration curve: $-0.00347007 * x^2 + 1.08566 * x + -0.0891482$
 Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)
 Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	5.30	1.24e2	2.90e3	0.573	14.6	1.06
2	2 161118J2_04_P1_E1	1.00	5.28	2.45e2	3.23e3	0.957	-4.3	0.947
3	3 161118J2_05_P1_E1	2.00	5.31	4.89e2	3.43e3	1.73	-13.3	0.891
4	4 161118J2_06_P1_E1	5.00	5.29	1.19e3	3.48e3	4.09	-18.3	0.858
5	5 161118J2_07_P1_E1	10.0	5.28	3.03e3	3.83e3	9.49	-5.1	0.990
6	6 161118J2_08_P1_E1	25.0	5.29	8.23e3	3.72e3	28.0	12.2	1.11
7	7 161118J2_09_P1_E1	50.0	5.30	1.73e4	4.61e3	51.8	3.6	0.936
8	8 161118J2_10_P1_E1	75.0	5.27	2.38e4	5.18e3	67.7	-9.7	0.767
9	9 161118J2_11_P1_E1	100	5.28	2.69e4	4.43e3	105	5.3	0.758

Compound name: 8:2 FTS

Coefficient of Determination: R² = 0.996754
 Calibration curve: $-0.0034291 * x^2 + 0.988926 * x + -0.0486443$
 Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
 Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	0.500	5.27	3.13e1	9.39e2	0.471	-5.8	0.833
2	2 161118J2_04_P1_E1	1.00	5.26	7.68e1	9.83e2	1.04	4.0	0.976
3	3 161118J2_05_P1_E1	2.00	5.28	1.39e2	1.07e3	1.70	-15.2	0.809
4	4 161118J2_06_P1_E1	5.00	5.26	3.98e2	1.10e3	4.69	-6.2	0.903
5	5 161118J2_07_P1_E1	10.0	5.26	9.60e2	1.10e3	11.6	15.7	1.09
6	6 161118J2_08_P1_E1	25.0	5.27	2.18e3	1.18e3	25.8	3.1	0.927
7	7 161118J2_09_P1_E1	50.0	5.28	4.62e3	1.52e3	45.7	-8.5	0.760
8	8 161118J2_10_P1_E1	75.0	5.25	7.29e3	1.64e3	76.8	2.4	0.742
9	9 161118J2_11_P1_E1	100	5.26	7.46e3	1.43e3	102	1.7	0.651

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C3-PFBA

Response Factor: 0.866891

RRF SD: 0.0236312, Relative SD: 2.72597

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	1.90	9.66e3	1.15e4	12.1	-3.4	0.838
2	2 161118J2_04_P1_E1	12.5	1.90	1.01e4	1.16e4	12.6	0.6	0.872
3	3 161118J2_05_P1_E1	12.5	1.90	1.05e4	1.16e4	13.1	5.1	0.911
4	4 161118J2_06_P1_E1	12.5	1.90	9.99e3	1.18e4	12.2	-2.0	0.849
5	5 161118J2_07_P1_E1	12.5	1.91	1.04e4	1.17e4	12.7	1.9	0.883
6	6 161118J2_08_P1_E1	12.5	1.90	9.20e3	1.06e4	12.5	0.2	0.868
7	7 161118J2_09_P1_E1	12.5	1.90	9.95e3	1.16e4	12.4	-1.0	0.858
8	8 161118J2_10_P1_E1	12.5	1.91	1.06e4	1.21e4	12.7	1.8	0.883
9	9 161118J2_11_P1_E1	12.5	1.90	9.24e3	1.10e4	12.1	-3.1	0.840

Compound name: 13C3-PFPeA

Response Factor: 0.994106

RRF SD: 0.0301656, Relative SD: 3.03445

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	3.10	1.11e4	1.12e4	12.4	-0.7	0.987
2	2 161118J2_04_P1_E1	12.5	3.10	1.13e4	1.09e4	13.0	4.2	1.04
3	3 161118J2_05_P1_E1	12.5	3.10	1.17e4	1.15e4	12.9	3.0	1.02
4	4 161118J2_06_P1_E1	12.5	3.11	1.13e4	1.15e4	12.3	-1.2	0.982
5	5 161118J2_07_P1_E1	12.5	3.10	1.15e4	1.17e4	12.4	-0.8	0.986
6	6 161118J2_08_P1_E1	12.5	3.11	1.02e4	1.03e4	12.5	-0.3	0.991
7	7 161118J2_09_P1_E1	12.5	3.10	1.10e4	1.12e4	12.3	-1.5	0.979
8	8 161118J2_10_P1_E1	12.5	3.10	1.17e4	1.14e4	12.9	3.1	1.02
9	9 161118J2_11_P1_E1	12.5	3.10	1.02e4	1.08e4	11.8	-5.7	0.937

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C3-PFBS

Response Factor: 0.563832

RRF SD: 0.0242321, Relative SD: 4.29775

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	3.40	6.31e3	1.12e4	12.5	-0.2	0.563
2	2 161118J2_04_P1_E1	12.5	3.40	6.41e3	1.09e4	13.0	4.4	0.589
3	3 161118J2_05_P1_E1	12.5	3.40	6.75e3	1.15e4	13.1	4.4	0.589
4	4 161118J2_06_P1_E1	12.5	3.40	6.54e3	1.15e4	12.6	0.8	0.568
5	5 161118J2_07_P1_E1	12.5	3.40	6.60e3	1.17e4	12.5	0.3	0.566
6	6 161118J2_08_P1_E1	12.5	3.40	6.03e3	1.03e4	13.0	3.9	0.586
7	7 161118J2_09_P1_E1	12.5	3.40	6.06e3	1.12e4	12.0	-4.4	0.539
8	8 161118J2_10_P1_E1	12.5	3.40	6.40e3	1.14e4	12.4	-0.7	0.560
9	9 161118J2_11_P1_E1	12.5	3.40	5.59e3	1.08e4	11.4	-8.6	0.516

Compound name: 13C2-PFHxA

Response Factor: 0.907083

RRF SD: 0.0372162, Relative SD: 4.10285

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	5.00	3.80	4.09e3	1.12e4	5.03	0.5	0.912
2	2 161118J2_04_P1_E1	5.00	3.80	4.14e3	1.09e4	5.23	4.6	0.948
3	3 161118J2_05_P1_E1	5.00	3.79	4.46e3	1.15e4	5.36	7.1	0.972
4	4 161118J2_06_P1_E1	5.00	3.80	4.17e3	1.15e4	5.00	0.0	0.907
5	5 161118J2_07_P1_E1	5.00	3.80	4.20e3	1.17e4	4.95	-0.9	0.898
6	6 161118J2_08_P1_E1	5.00	3.80	3.62e3	1.03e4	4.85	-3.1	0.879
7	7 161118J2_09_P1_E1	5.00	3.80	4.00e3	1.12e4	4.91	-1.8	0.890
8	8 161118J2_10_P1_E1	5.00	3.79	4.17e3	1.14e4	5.03	0.6	0.913
9	9 161118J2_11_P1_E1	5.00	3.80	3.66e3	1.08e4	4.65	-7.0	0.844

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C4-PFHpA

Response Factor: 0.741732

RRF SD: 0.0267417, Relative SD: 3.60531

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	4.27	7.89e3	1.12e4	11.9	-5.1	0.704
2	2 161118J2_04_P1_E1	12.5	4.27	7.91e3	1.09e4	12.2	-2.2	0.725
3	3 161118J2_05_P1_E1	12.5	4.27	8.97e3	1.15e4	13.2	5.5	0.782
4	4 161118J2_06_P1_E1	12.5	4.28	8.54e3	1.15e4	12.5	0.1	0.742
5	5 161118J2_07_P1_E1	12.5	4.27	8.73e3	1.17e4	12.6	0.8	0.747
6	6 161118J2_08_P1_E1	12.5	4.28	7.71e3	1.03e4	12.6	1.1	0.750
7	7 161118J2_09_P1_E1	12.5	4.27	8.57e3	1.12e4	12.9	2.9	0.763
8	8 161118J2_10_P1_E1	12.5	4.27	8.67e3	1.14e4	12.8	2.3	0.759
9	9 161118J2_11_P1_E1	12.5	4.27	7.61e3	1.08e4	11.8	-5.3	0.702

Compound name: 18O2-PFHxS

Response Factor: 0.271084

RRF SD: 0.0155398, Relative SD: 5.73246

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	4.39	1.21e3	4.58e3	12.2	-2.8	0.264
2	2 161118J2_04_P1_E1	12.5	4.39	1.22e3	4.43e3	12.7	1.8	0.276
3	3 161118J2_05_P1_E1	12.5	4.39	1.28e3	4.57e3	13.0	3.7	0.281
4	4 161118J2_06_P1_E1	12.5	4.40	1.29e3	4.57e3	13.0	4.2	0.283
5	5 161118J2_07_P1_E1	12.5	4.39	1.24e3	4.83e3	11.9	-5.0	0.258
6	6 161118J2_08_P1_E1	12.5	4.40	1.10e3	4.35e3	11.7	-6.6	0.253
7	7 161118J2_09_P1_E1	12.5	4.39	1.21e3	4.71e3	11.8	-5.5	0.256
8	8 161118J2_10_P1_E1	12.5	4.39	1.35e3	4.47e3	13.9	11.0	0.301
9	9 161118J2_11_P1_E1	12.5	4.39	1.13e3	4.22e3	12.4	-0.8	0.269

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C2-6:2 FTS

Response Factor: 0.223576

RRF SD: 0.0338864, Relative SD: 15.1566

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	4.63	2.25e3	1.13e4	11.1	-11.0	0.199
2	2 161118J2_04_P1_E1	12.5	4.63	2.23e3	1.00e4	12.5	-0.1	0.223
3	3 161118J2_05_P1_E1	12.5	4.63	2.36e3	1.28e4	10.3	-17.3	0.185
4	4 161118J2_06_P1_E1	12.5	4.63	2.08e3	1.16e4	10.0	-20.0	0.179
5	5 161118J2_07_P1_E1	12.5	4.62	2.34e3	9.79e3	13.4	7.0	0.239
6	6 161118J2_08_P1_E1	12.5	4.63	2.35e3	1.11e4	11.8	-5.8	0.211
7	7 161118J2_09_P1_E1	12.5	4.63	2.73e3	1.16e4	13.1	5.0	0.235
8	8 161118J2_10_P1_E1	12.5	4.62	2.87e3	1.08e4	14.8	18.4	0.265
9	9 161118J2_11_P1_E1	12.5	4.62	2.93e3	1.06e4	15.5	23.9	0.277

Compound name: 13C2-PFOA

Response Factor: 0.651033

RRF SD: 0.0415144, Relative SD: 6.3767

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	4.67	6.73e3	1.13e4	11.4	-8.6	0.595
2	2 161118J2_04_P1_E1	12.5	4.67	7.03e3	1.00e4	13.5	7.9	0.703
3	3 161118J2_05_P1_E1	12.5	4.68	7.65e3	1.28e4	11.5	-7.8	0.600
4	4 161118J2_06_P1_E1	12.5	4.67	7.34e3	1.16e4	12.1	-2.9	0.632
5	5 161118J2_07_P1_E1	12.5	4.66	6.63e3	9.79e3	13.0	4.1	0.678
6	6 161118J2_08_P1_E1	12.5	4.68	6.89e3	1.11e4	11.9	-5.0	0.618
7	7 161118J2_09_P1_E1	12.5	4.67	7.68e3	1.16e4	12.7	1.6	0.662
8	8 161118J2_10_P1_E1	12.5	4.66	7.62e3	1.08e4	13.5	8.1	0.704
9	9 161118J2_11_P1_E1	12.5	4.67	7.07e3	1.06e4	12.8	2.6	0.668

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C5-PFNA

Response Factor: 1.00196

RRF SD: 0.0611671, Relative SD: 6.10474

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	5.00	5.85e3	6.09e3	12.0	-4.1	0.961
2	2 161118J2_04_P1_E1	12.5	4.99	6.59e3	6.13e3	13.4	7.3	1.07
3	3 161118J2_05_P1_E1	12.5	5.01	6.89e3	6.68e3	12.9	3.0	1.03
4	4 161118J2_06_P1_E1	12.5	5.00	5.98e3	6.62e3	11.3	-9.7	0.904
5	5 161118J2_07_P1_E1	12.5	4.99	6.45e3	6.34e3	12.7	1.6	1.02
6	6 161118J2_08_P1_E1	12.5	5.01	6.86e3	6.45e3	13.3	6.2	1.06
7	7 161118J2_09_P1_E1	12.5	5.01	6.69e3	6.76e3	12.3	-1.2	0.990
8	8 161118J2_10_P1_E1	12.5	4.99	7.65e3	7.29e3	13.1	4.7	1.05
9	9 161118J2_11_P1_E1	12.5	5.00	6.27e3	6.78e3	11.5	-7.7	0.925

Compound name: 13C8-PFOS

Response Factor: 0.950357

RRF SD: 0.0485013, Relative SD: 5.10348

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	5.07	3.06e3	3.20e3	12.6	0.9	0.959
2	2 161118J2_04_P1_E1	12.5	5.05	3.35e3	3.59e3	12.3	-1.8	0.933
3	3 161118J2_05_P1_E1	12.5	5.08	3.38e3	3.93e3	11.3	-9.5	0.860
4	4 161118J2_06_P1_E1	12.5	5.06	3.64e3	3.66e3	13.1	4.5	0.993
5	5 161118J2_07_P1_E1	12.5	5.05	3.74e3	3.92e3	12.6	0.5	0.955
6	6 161118J2_08_P1_E1	12.5	5.07	3.27e3	3.50e3	12.3	-1.6	0.935
7	7 161118J2_09_P1_E1	12.5	5.07	3.68e3	3.55e3	13.6	9.0	1.04
8	8 161118J2_10_P1_E1	12.5	5.05	4.29e3	4.48e3	12.6	0.9	0.959
9	9 161118J2_11_P1_E1	12.5	5.06	3.44e3	3.73e3	12.1	-2.9	0.923

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Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C2-PFDA

Response Factor: 0.827364

RRF SD: 0.0452081, Relative SD: 5.46412

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	5.29	2.90e3	3.19e3	13.8	10.2	0.912
2	2 161118J2_04_P1_E1	12.5	5.28	3.23e3	3.86e3	12.7	1.2	0.837
3	3 161118J2_05_P1_E1	12.5	5.31	3.43e3	4.26e3	12.1	-2.8	0.804
4	4 161118J2_06_P1_E1	12.5	5.28	3.48e3	4.40e3	11.9	-4.4	0.791
5	5 161118J2_07_P1_E1	12.5	5.28	3.83e3	4.78e3	12.1	-3.1	0.801
6	6 161118J2_08_P1_E1	12.5	5.29	3.72e3	4.92e3	11.4	-8.6	0.756
7	7 161118J2_09_P1_E1	12.5	5.30	4.61e3	5.39e3	12.9	3.4	0.855
8	8 161118J2_10_P1_E1	12.5	5.27	5.18e3	6.20e3	12.6	0.9	0.835
9	9 161118J2_11_P1_E1	12.5	5.28	4.43e3	5.19e3	12.9	3.3	0.855

Compound name: 13C2-8:2 FTS

Response Factor: 0.26028

RRF SD: 0.0208158, Relative SD: 7.99747

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	5.27	9.39e2	3.19e3	14.1	13.2	0.295
2	2 161118J2_04_P1_E1	12.5	5.26	9.83e2	3.86e3	12.2	-2.1	0.255
3	3 161118J2_05_P1_E1	12.5	5.28	1.07e3	4.26e3	12.1	-3.4	0.252
4	4 161118J2_06_P1_E1	12.5	5.26	1.10e3	4.40e3	12.0	-3.8	0.250
5	5 161118J2_07_P1_E1	12.5	5.26	1.10e3	4.78e3	11.0	-11.7	0.230
6	6 161118J2_08_P1_E1	12.5	5.27	1.18e3	4.92e3	11.5	-8.0	0.239
7	7 161118J2_09_P1_E1	12.5	5.27	1.52e3	5.39e3	13.5	8.2	0.282
8	8 161118J2_10_P1_E1	12.5	5.25	1.64e3	6.20e3	12.7	1.5	0.264
9	9 161118J2_11_P1_E1	12.5	5.26	1.43e3	5.19e3	13.3	6.1	0.276

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C4-PFBA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	1.90	1.15e4	1.15e4	12.5	0.0	1.00
2	2 161118J2_04_P1_E1	12.5	1.90	1.16e4	1.16e4	12.5	0.0	1.00
3	3 161118J2_05_P1_E1	12.5	1.90	1.16e4	1.16e4	12.5	0.0	1.00
4	4 161118J2_06_P1_E1	12.5	1.90	1.18e4	1.18e4	12.5	0.0	1.00
5	5 161118J2_07_P1_E1	12.5	1.91	1.17e4	1.17e4	12.5	0.0	1.00
6	6 161118J2_08_P1_E1	12.5	1.90	1.06e4	1.06e4	12.5	0.0	1.00
7	7 161118J2_09_P1_E1	12.5	1.90	1.16e4	1.16e4	12.5	0.0	1.00
8	8 161118J2_10_P1_E1	12.5	1.90	1.21e4	1.21e4	12.5	0.0	1.00
9	9 161118J2_11_P1_E1	12.5	1.90	1.10e4	1.10e4	12.5	0.0	1.00

Compound name: 13C5-PFHxA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	3.80	1.12e4	1.12e4	12.5	0.0	1.00
2	2 161118J2_04_P1_E1	12.5	3.80	1.09e4	1.09e4	12.5	0.0	1.00
3	3 161118J2_05_P1_E1	12.5	3.79	1.15e4	1.15e4	12.5	0.0	1.00
4	4 161118J2_06_P1_E1	12.5	3.79	1.15e4	1.15e4	12.5	0.0	1.00
5	5 161118J2_07_P1_E1	12.5	3.79	1.17e4	1.17e4	12.5	0.0	1.00
6	6 161118J2_08_P1_E1	12.5	3.80	1.03e4	1.03e4	12.5	0.0	1.00
7	7 161118J2_09_P1_E1	12.5	3.79	1.12e4	1.12e4	12.5	0.0	1.00
8	8 161118J2_10_P1_E1	12.5	3.79	1.14e4	1.14e4	12.5	0.0	1.00
9	9 161118J2_11_P1_E1	12.5	3.80	1.08e4	1.08e4	12.5	0.0	1.00

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Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C3-PFHxS

Response Factor: 1

RRF SD: 5.55112e-017, Relative SD: 5.55112e-015

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	4.39	4.58e3	4.58e3	12.5	0.0	1.00
2	2 161118J2_04_P1_E1	12.5	4.39	4.43e3	4.43e3	12.5	-0.0	1.00
3	3 161118J2_05_P1_E1	12.5	4.39	4.57e3	4.57e3	12.5	0.0	1.00
4	4 161118J2_06_P1_E1	12.5	4.40	4.57e3	4.57e3	12.5	0.0	1.00
5	5 161118J2_07_P1_E1	12.5	4.38	4.83e3	4.83e3	12.5	0.0	1.00
6	6 161118J2_08_P1_E1	12.5	4.40	4.35e3	4.35e3	12.5	-0.0	1.00
7	7 161118J2_09_P1_E1	12.5	4.39	4.71e3	4.71e3	12.5	0.0	1.00
8	8 161118J2_10_P1_E1	12.5	4.39	4.47e3	4.47e3	12.5	0.0	1.00
9	9 161118J2_11_P1_E1	12.5	4.39	4.22e3	4.22e3	12.5	0.0	1.00

Compound name: 13C8-PFOA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	4.67	1.13e4	1.13e4	12.5	0.0	1.00
2	2 161118J2_04_P1_E1	12.5	4.67	1.00e4	1.00e4	12.5	0.0	1.00
3	3 161118J2_05_P1_E1	12.5	4.68	1.28e4	1.28e4	12.5	0.0	1.00
4	4 161118J2_06_P1_E1	12.5	4.67	1.16e4	1.16e4	12.5	0.0	1.00
5	5 161118J2_07_P1_E1	12.5	4.66	9.79e3	9.79e3	12.5	0.0	1.00
6	6 161118J2_08_P1_E1	12.5	4.68	1.11e4	1.11e4	12.5	0.0	1.00
7	7 161118J2_09_P1_E1	12.5	4.67	1.16e4	1.16e4	12.5	0.0	1.00
8	8 161118J2_10_P1_E1	12.5	4.66	1.08e4	1.08e4	12.5	0.0	1.00
9	9 161118J2_11_P1_E1	12.5	4.67	1.06e4	1.06e4	12.5	0.0	1.00

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C4-PFOS

Response Factor: 1

RRF SD: 1.35974e-016, Relative SD: 1.35974e-014

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	5.07	3.20e3	3.20e3	12.5	0.0	1.00
2	2 161118J2_04_P1_E1	12.5	5.05	3.59e3	3.59e3	12.5	0.0	1.00
3	3 161118J2_05_P1_E1	12.5	5.08	3.93e3	3.93e3	12.5	0.0	1.00
4	4 161118J2_06_P1_E1	12.5	5.06	3.66e3	3.66e3	12.5	0.0	1.00
5	5 161118J2_07_P1_E1	12.5	5.05	3.92e3	3.92e3	12.5	0.0	1.00
6	6 161118J2_08_P1_E1	12.5	5.07	3.50e3	3.50e3	12.5	0.0	1.00
7	7 161118J2_09_P1_E1	12.5	5.07	3.55e3	3.55e3	12.5	0.0	1.00
8	8 161118J2_10_P1_E1	12.5	5.05	4.48e3	4.48e3	12.5	0.0	1.00
9	9 161118J2_11_P1_E1	12.5	5.05	3.73e3	3.73e3	12.5	0.0	1.00

Compound name: 13C9-PFNA

Response Factor: 1

RRF SD: 3.92523e-017, Relative SD: 3.92523e-015

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	5.01	6.09e3	6.09e3	12.5	0.0	1.00
2	2 161118J2_04_P1_E1	12.5	4.99	6.13e3	6.13e3	12.5	0.0	1.00
3	3 161118J2_05_P1_E1	12.5	5.02	6.68e3	6.68e3	12.5	0.0	1.00
4	4 161118J2_06_P1_E1	12.5	5.00	6.62e3	6.62e3	12.5	0.0	1.00
5	5 161118J2_07_P1_E1	12.5	4.99	6.34e3	6.34e3	12.5	0.0	1.00
6	6 161118J2_08_P1_E1	12.5	5.01	6.45e3	6.45e3	12.5	0.0	1.00
7	7 161118J2_09_P1_E1	12.5	5.01	6.76e3	6.76e3	12.5	0.0	1.00
8	8 161118J2_10_P1_E1	12.5	4.99	7.29e3	7.29e3	12.5	-0.0	1.00
9	9 161118J2_11_P1_E1	12.5	5.00	6.78e3	6.78e3	12.5	0.0	1.00

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Compound name: 13C6-PFDA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 161118J2_03_P1_E1	12.5	5.29	3.19e3	3.19e3	12.5	0.0	1.00
2	2 161118J2_04_P1_E1	12.5	5.28	3.86e3	3.86e3	12.5	0.0	1.00
3	3 161118J2_05_P1_E1	12.5	5.31	4.26e3	4.26e3	12.5	0.0	1.00
4	4 161118J2_06_P1_E1	12.5	5.28	4.40e3	4.40e3	12.5	0.0	1.00
5	5 161118J2_07_P1_E1	12.5	5.28	4.78e3	4.78e3	12.5	0.0	1.00
6	6 161118J2_08_P1_E1	12.5	5.29	4.92e3	4.92e3	12.5	0.0	1.00
7	7 161118J2_09_P1_E1	12.5	5.30	5.39e3	5.39e3	12.5	0.0	1.00
8	8 161118J2_10_P1_E1	12.5	5.27	6.20e3	6.20e3	12.5	0.0	1.00
9	9 161118J2_11_P1_E1	12.5	5.28	5.19e3	5.19e3	12.5	0.0	1.00

Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

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Method: U:\Q2.PRO\MethDB\PFC List 18_A No4-2FTS_161118.mdb 19 Nov 2016 12:55:02

Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

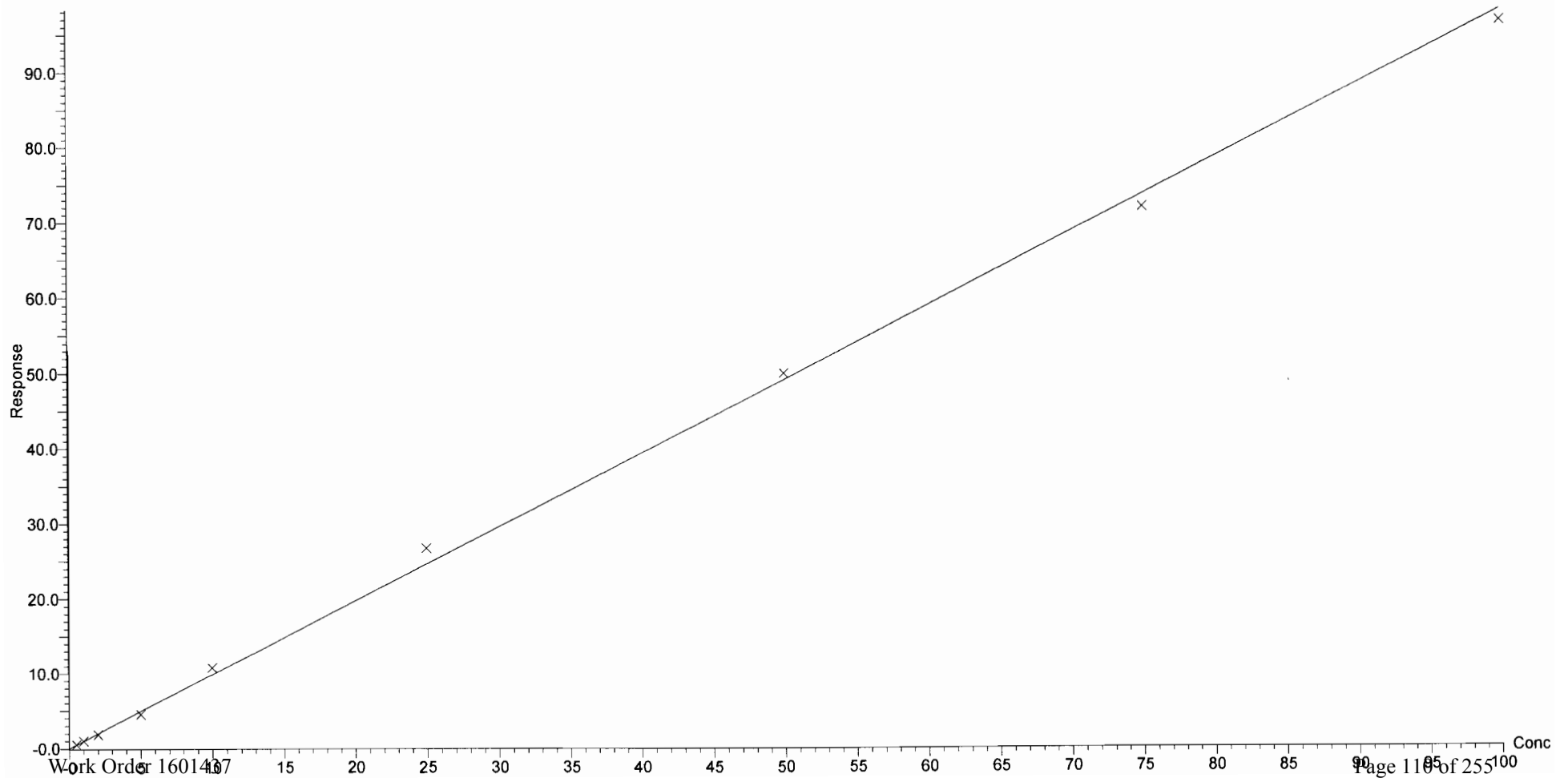
Compound name: PFBA

Correlation coefficient: $r = 0.999219$, $r^2 = 0.998438$

Calibration curve: $0.982791 * x + 0.0230635$

Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

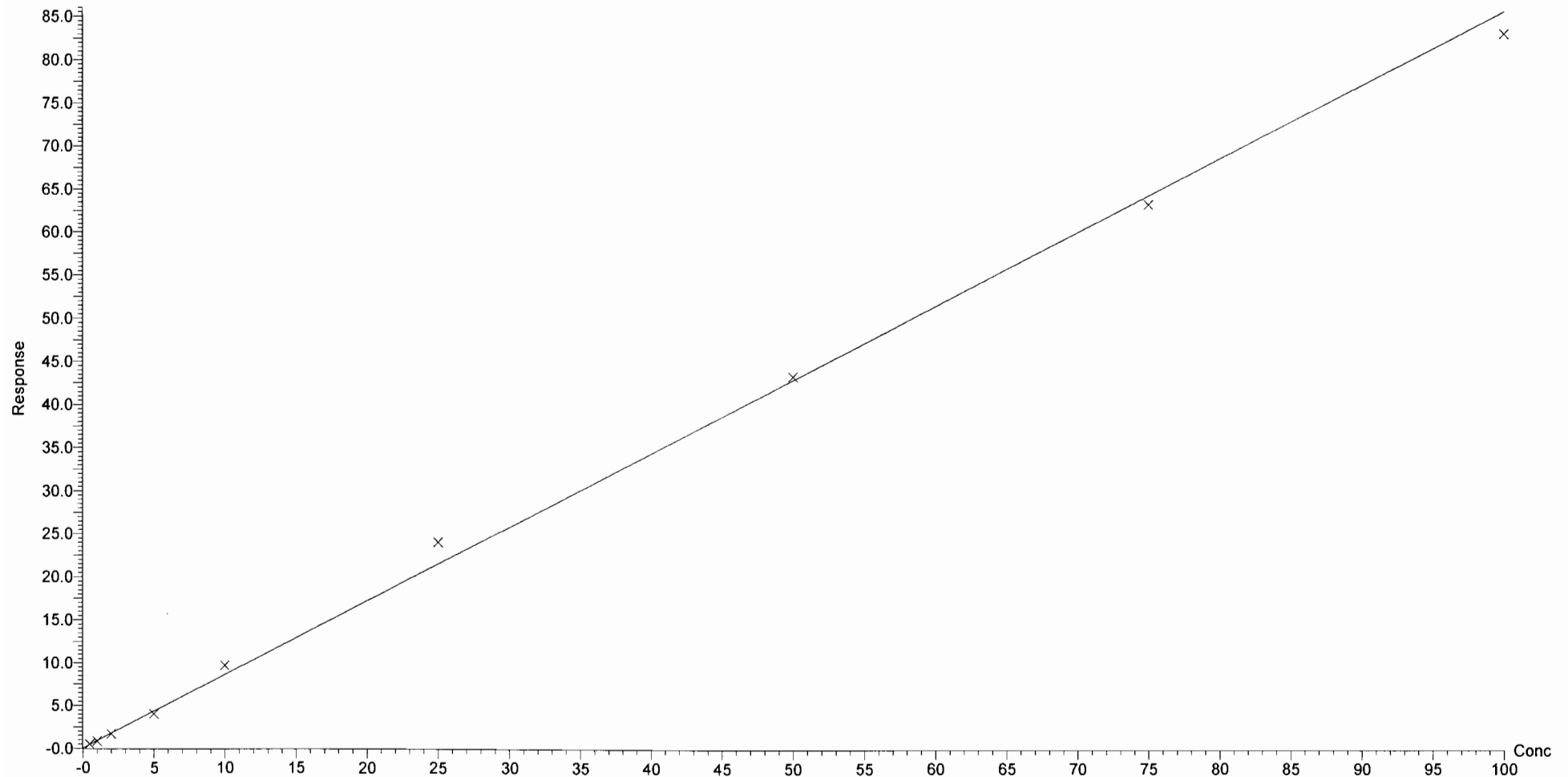
Compound name: PFPeA

Correlation coefficient: $r = 0.998741$, $r^2 = 0.997484$

Calibration curve: $0.85968 * x + 0.0362224$

Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

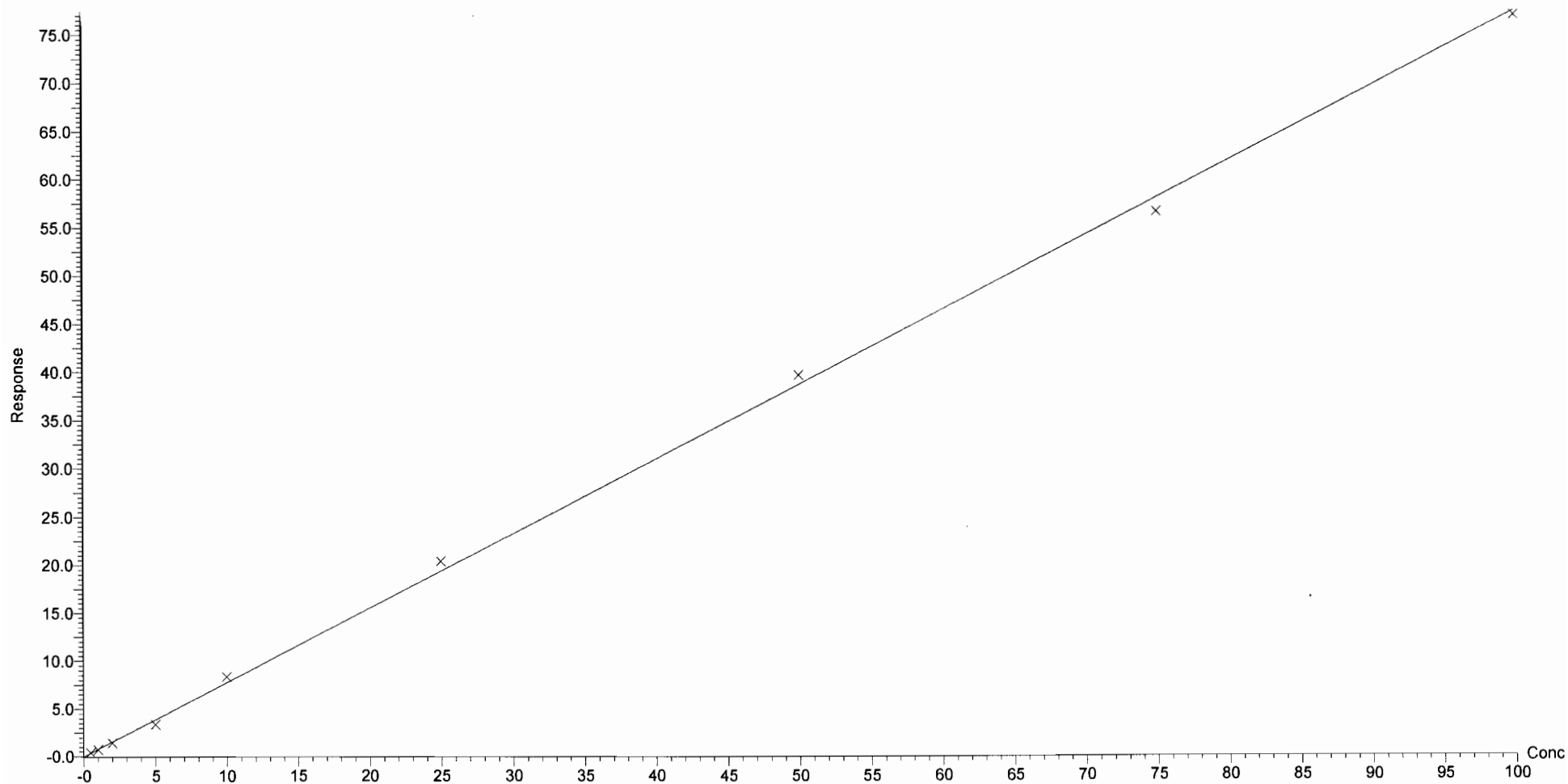
Compound name: PFBS

Correlation coefficient: $r = 0.999357$, $r^2 = 0.998715$

Calibration curve: $0.774866 * x + -0.0202219$

Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

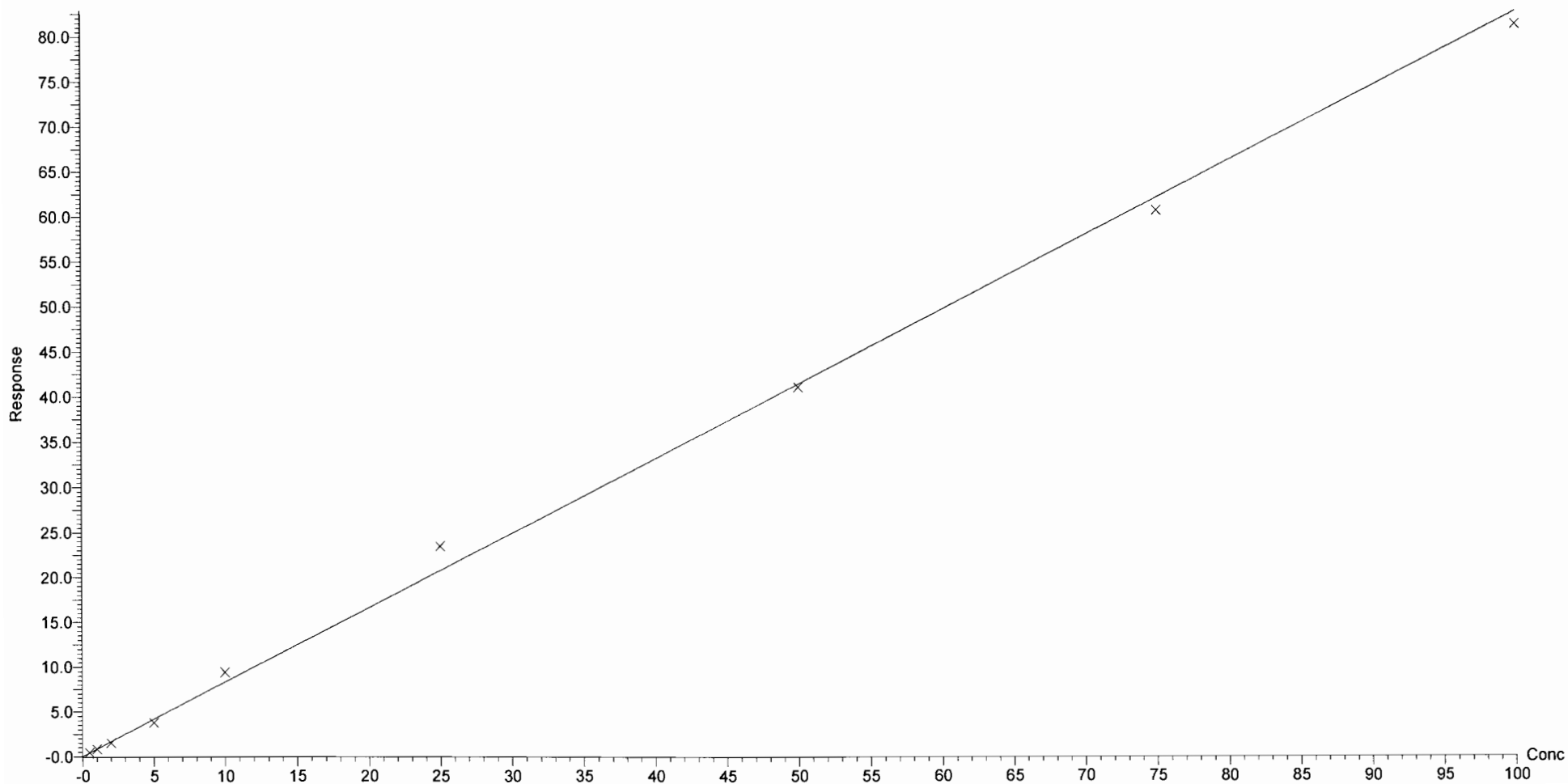
Compound name: PFHxA

Correlation coefficient: $r = 0.998535$, $r^2 = 0.997072$

Calibration curve: $0.829371 * x + 0.0163807$

Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)

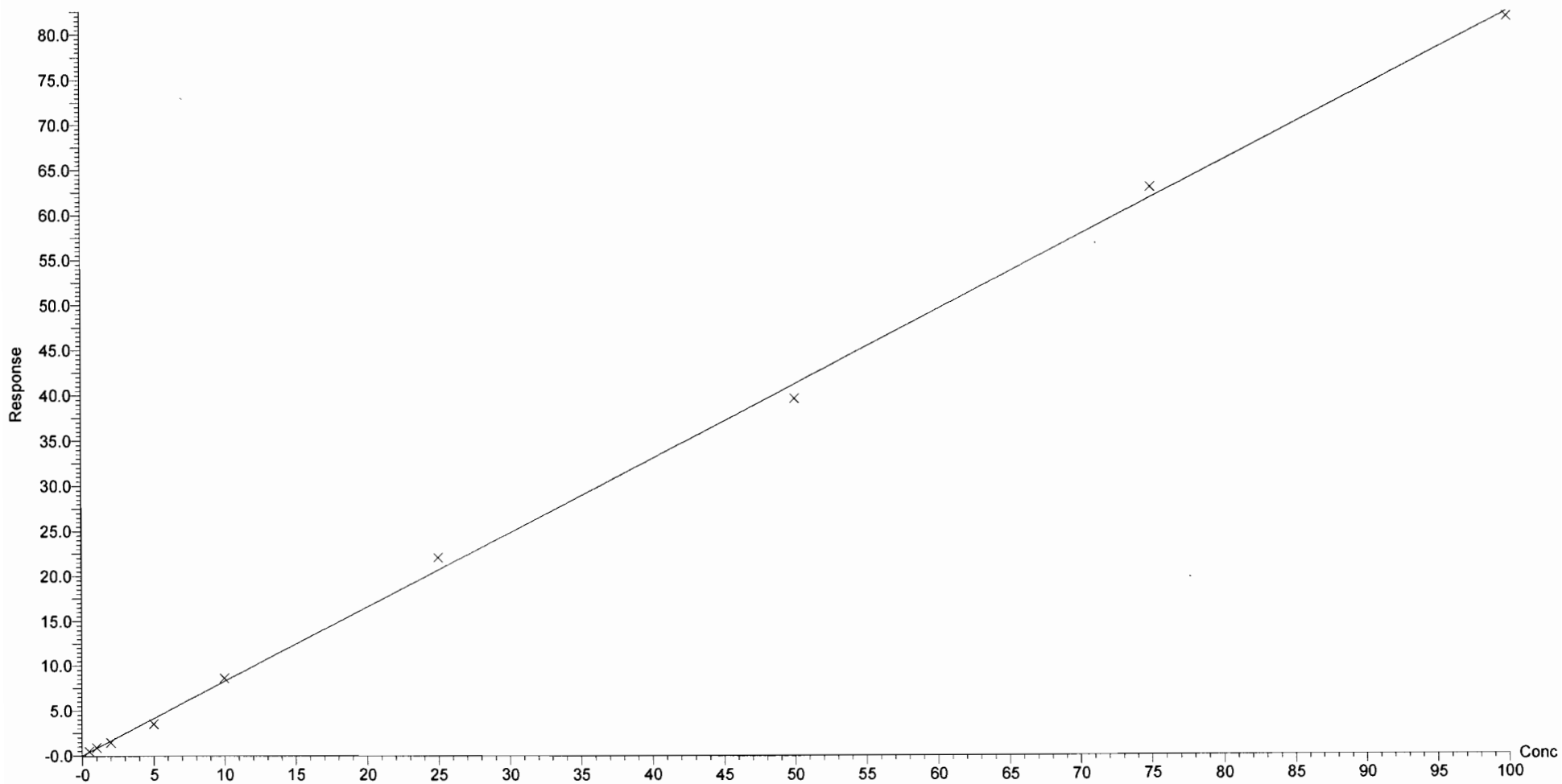
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time
Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

Compound name: PFHpA
Correlation coefficient: $r = 0.999224$, $r^2 = 0.998449$
Calibration curve: $0.825598 * x + -0.00188587$
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

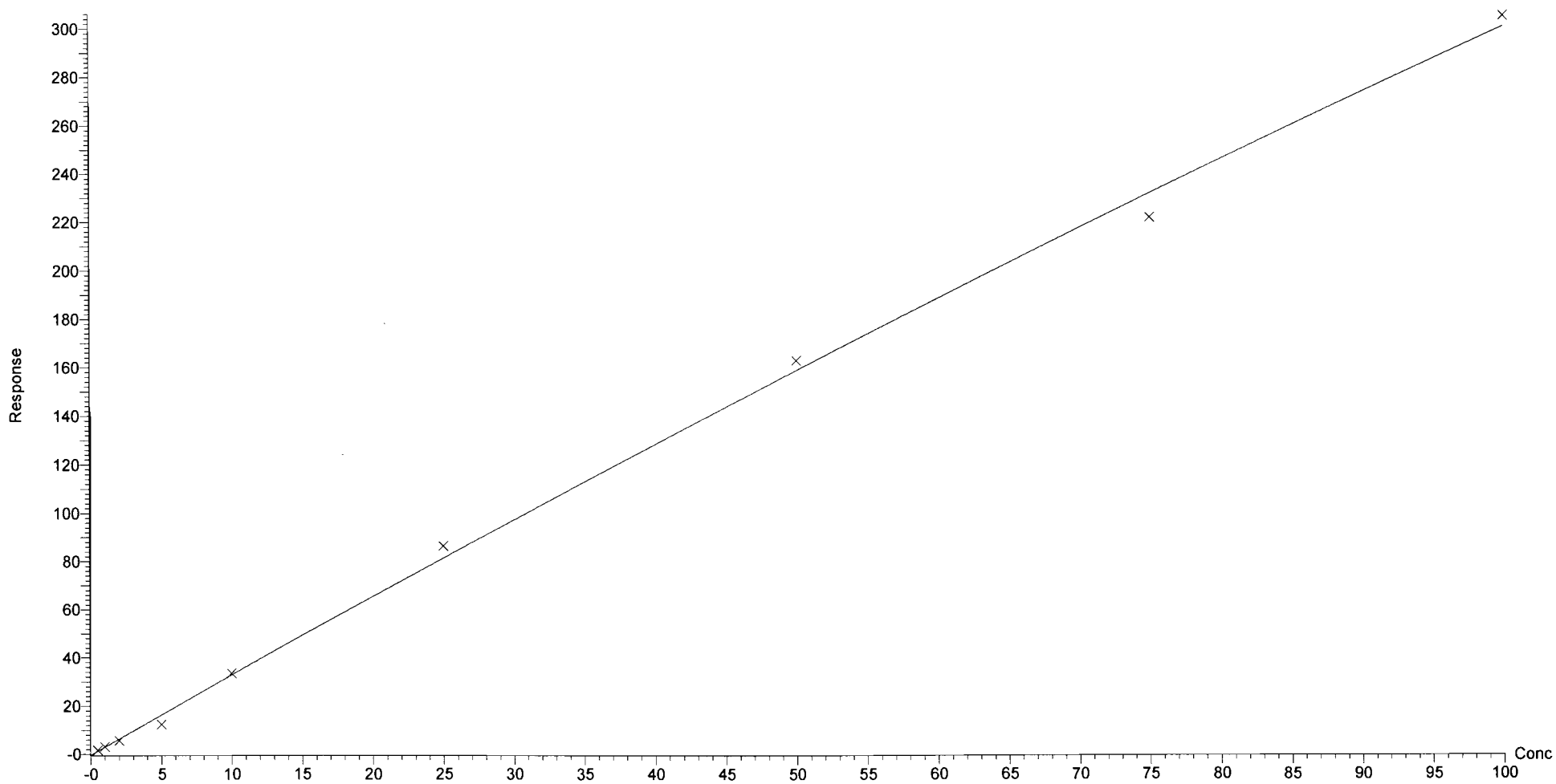
Compound name: PFHxS

Coefficient of Determination: $R^2 = 0.997308$

Calibration curve: $-0.00339694 * x^2 + 3.36003 * x + -0.393288$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

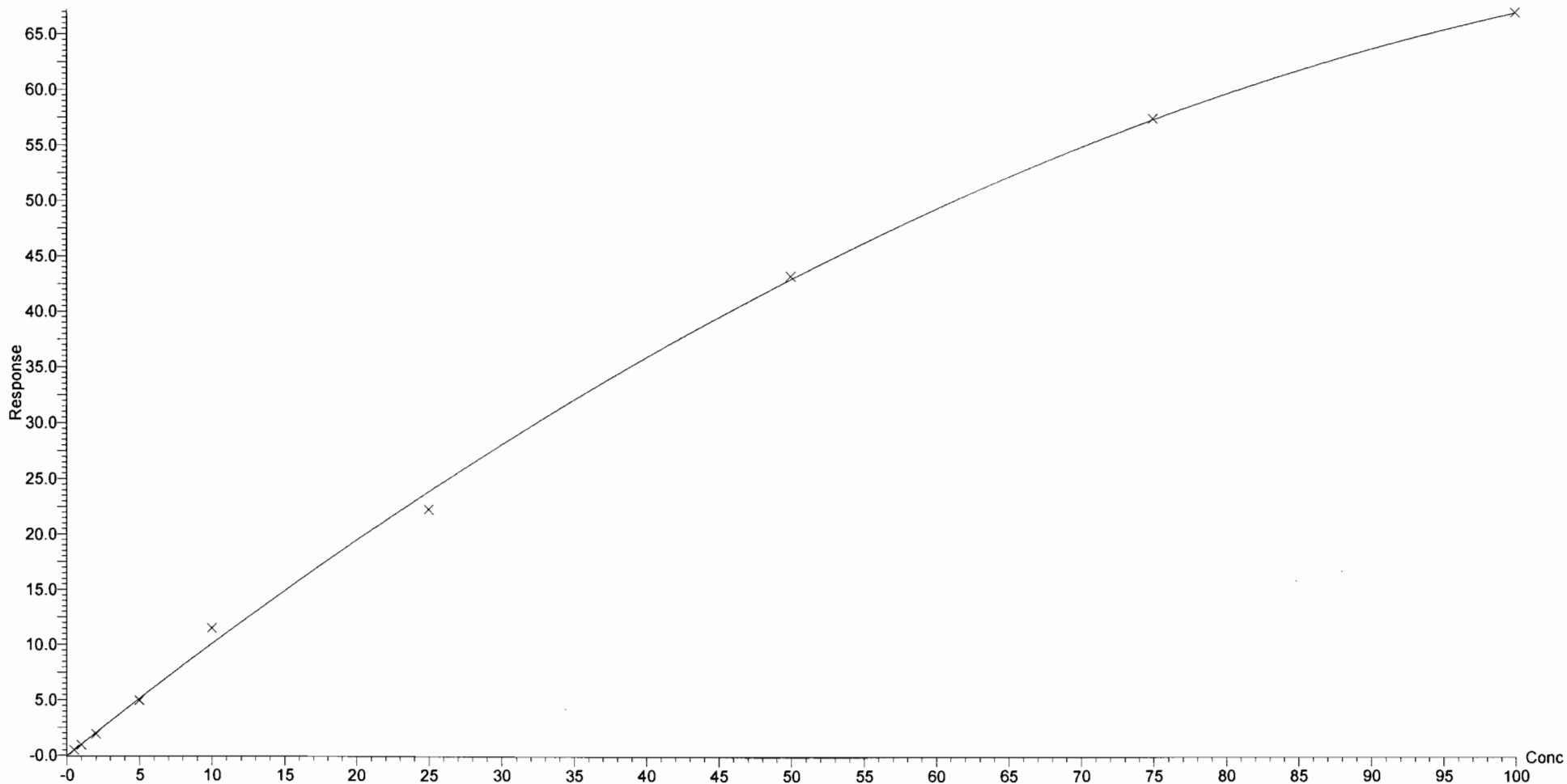


Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

Compound name: 6:2 FTS
Coefficient of Determination: $R^2 = 0.997896$
Calibration curve: $-0.00379453 * x^2 + 1.05162 * x + -0.0537721$
Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

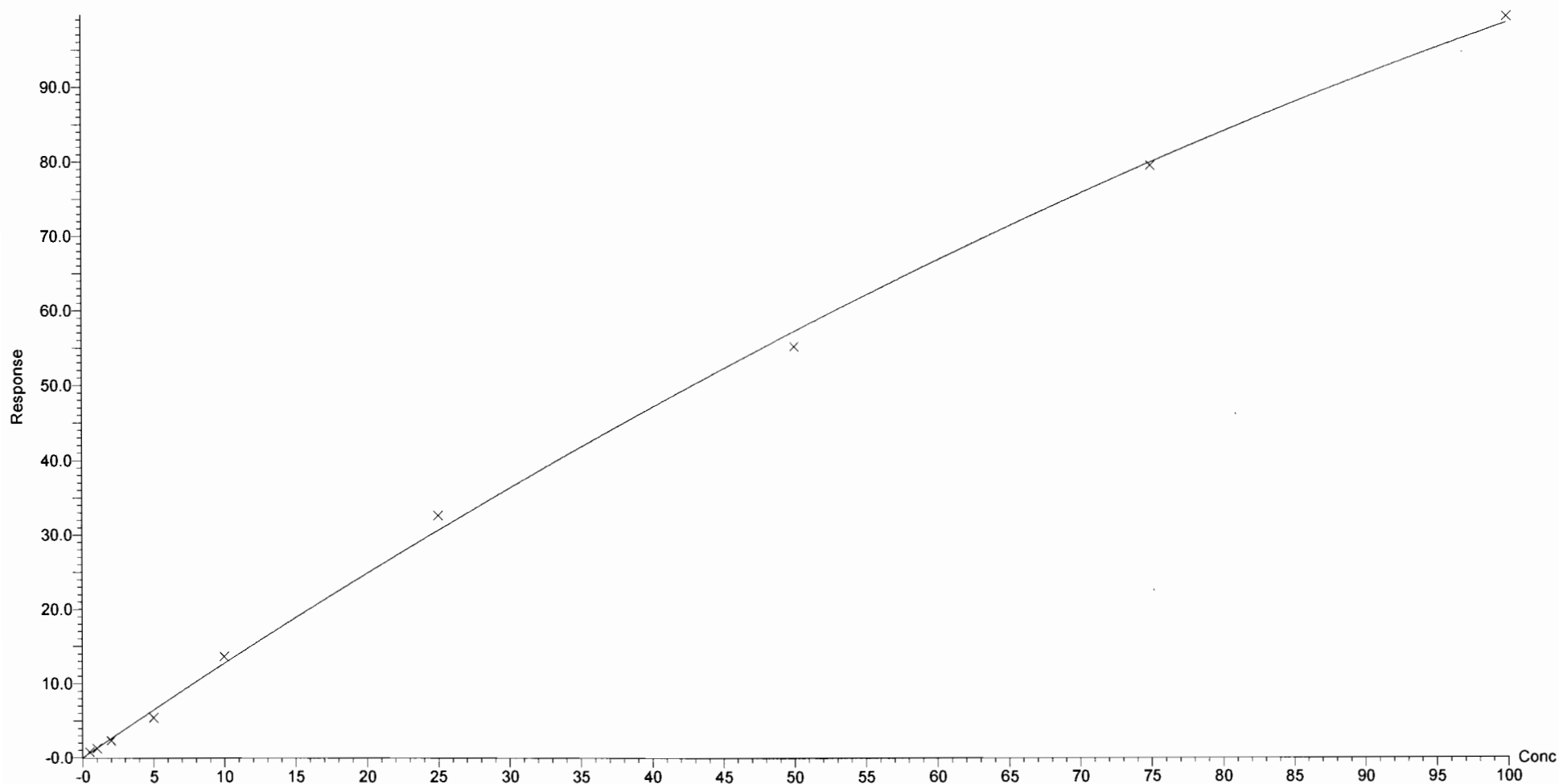
Compound name: PFOA

Coefficient of Determination: $R^2 = 0.997857$

Calibration curve: $-0.00316403 * x^2 + 1.30489 * x + -0.00818696$

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

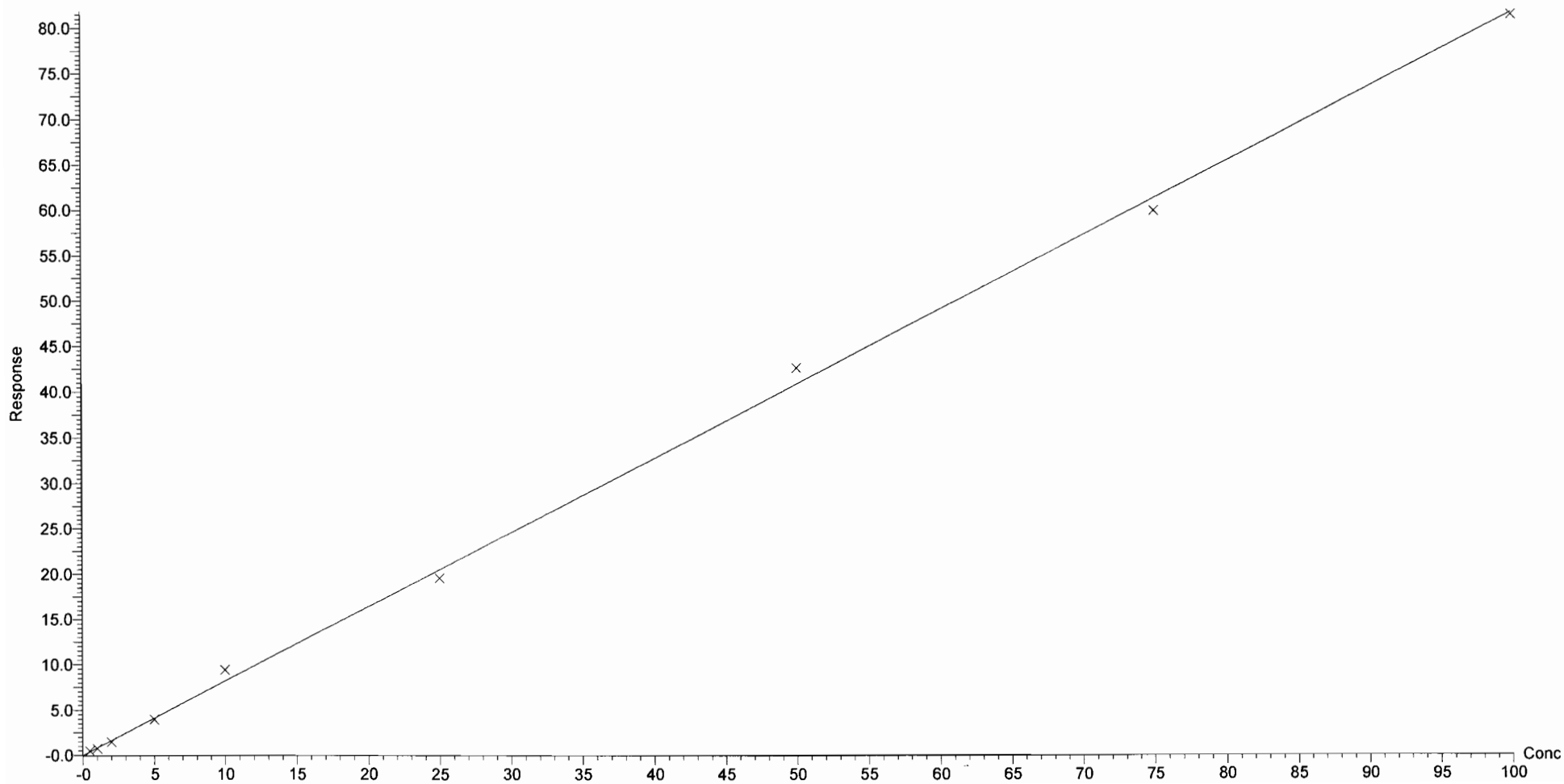
Compound name: PFNA

Correlation coefficient: $r = 0.999117$, $r^2 = 0.998235$

Calibration curve: $0.818566 * x + -0.00476162$

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

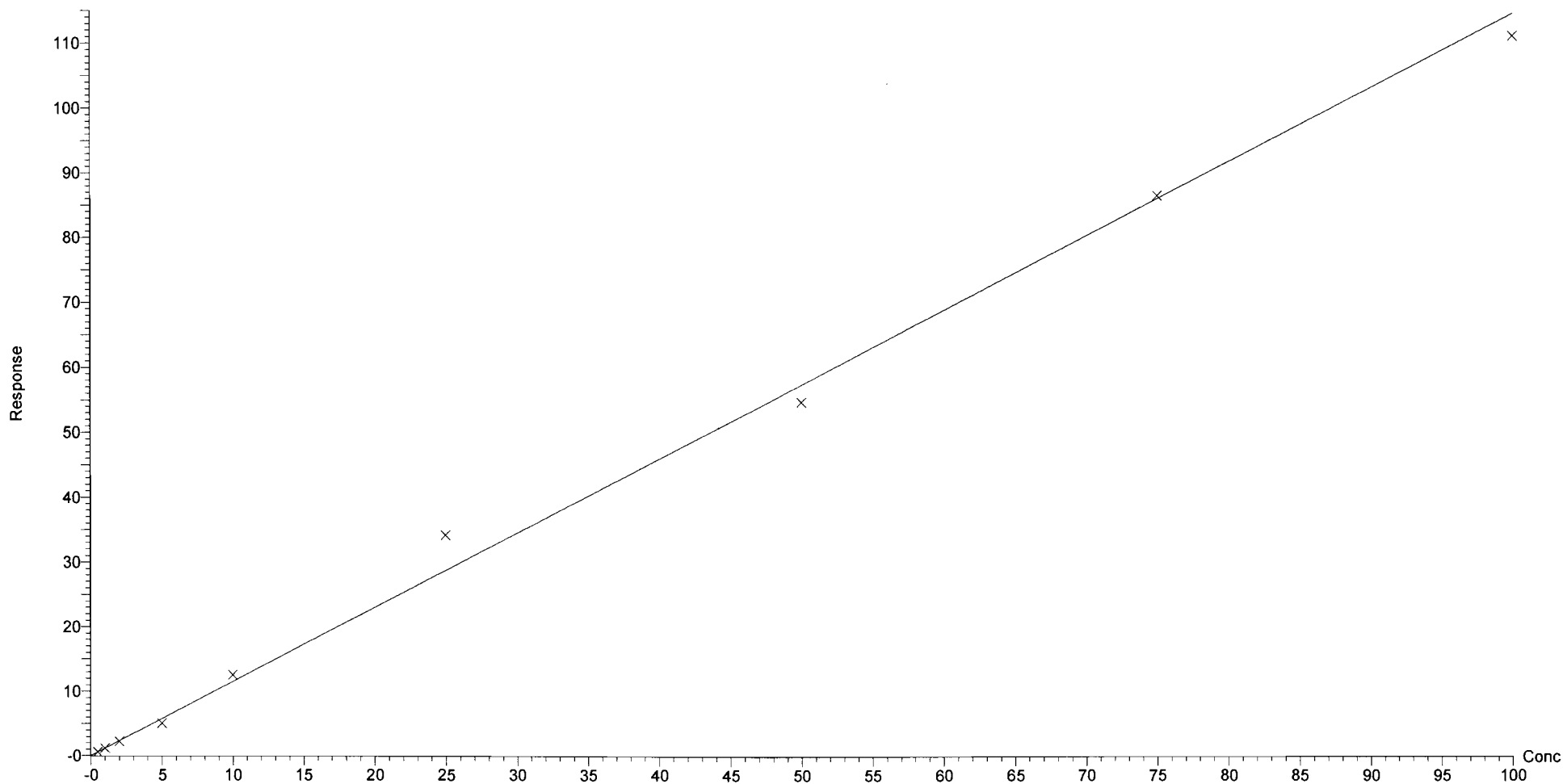
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time
Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

Compound name: PFOS
Correlation coefficient: $r = 0.997516$, $r^2 = 0.995038$
Calibration curve: $1.14981 * x + 0.021829$
Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

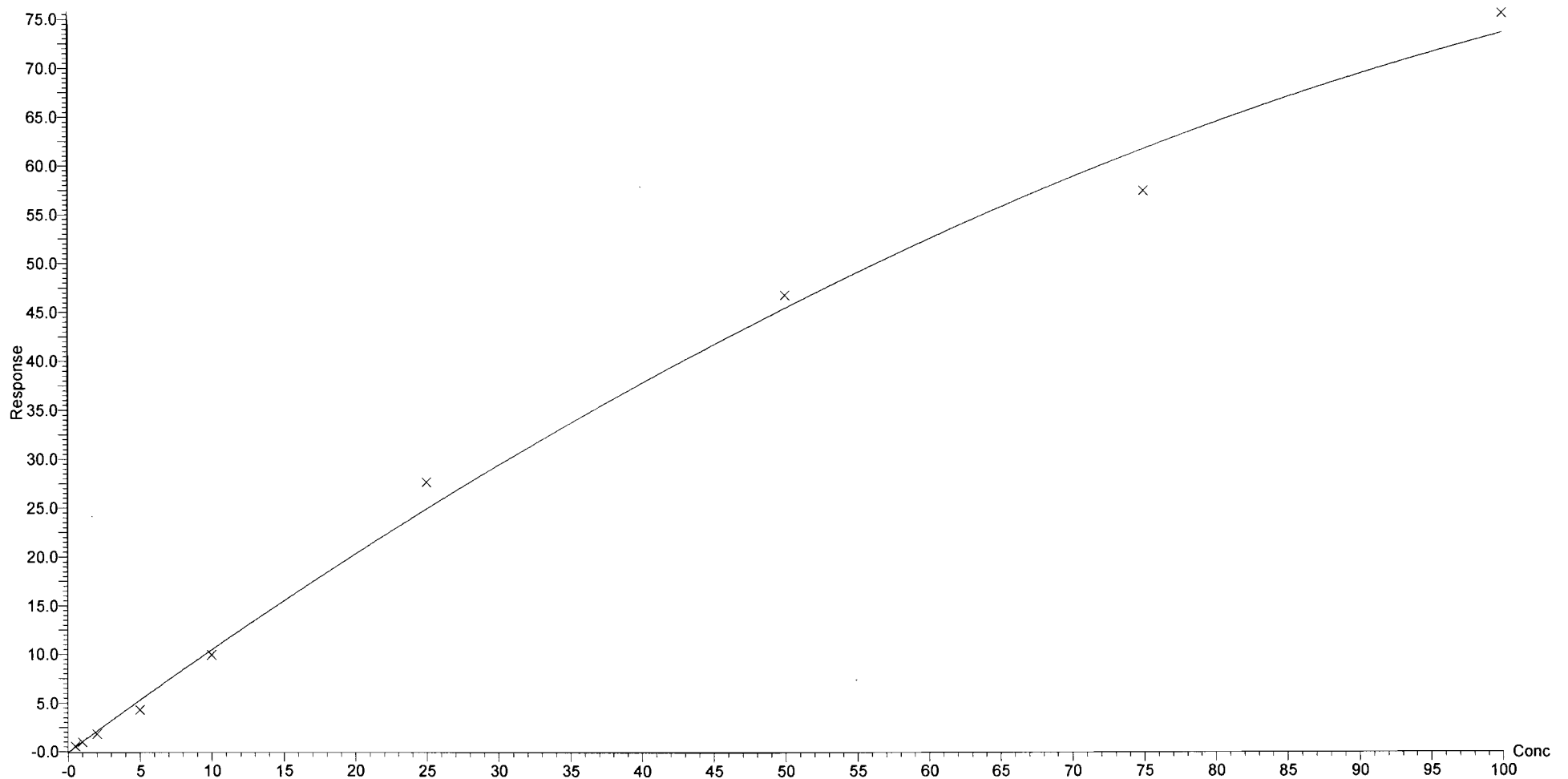
Compound name: PFDA

Coefficient of Determination: $R^2 = 0.994991$

Calibration curve: $-0.00347007 * x^2 + 1.08566 * x + -0.0891482$

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161118J2\161118J2-CRV.qld

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

Printed: Saturday, November 19, 2016 12:57:59 Pacific Standard Time

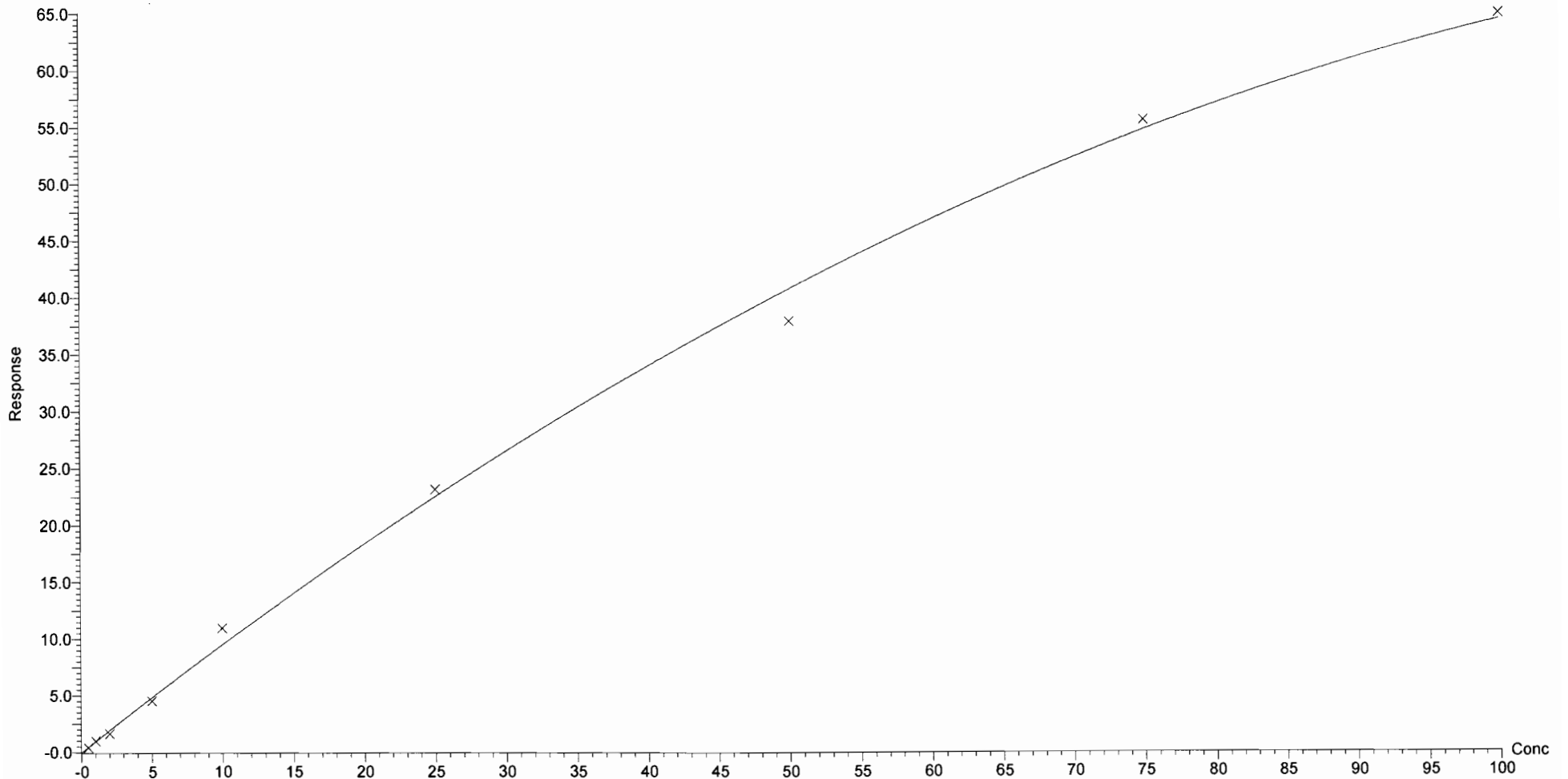
Compound name: 8:2 FTS

Coefficient of Determination: $R^2 = 0.996754$

Calibration curve: $-0.0034291 * x^2 + 0.988926 * x + -0.0486443$

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Include, Weighting: 1/x, Axis trans: None



Sample Name	Acquisition Date	Sample ID	Sample Comment
1 161118J2_01	11/18/2016 17:01:53	IPA	IPA
2 161118J2_02	11/18/2016 17:14:07	ST161118J2-1 PFC C-2 16K1714	PFC C-2 16K1714 A
3 161118J2_03	11/18/2016 17:26:18	ST161118J2-2 PFC C-1 16K1715	PFC C-1 16K1715 A
4 161118J2_04	11/18/2016 17:38:30	ST161118J2-3 PFC C0 16K1716	PFC C0 16K1716 A
5 161118J2_05	11/18/2016 17:50:45	ST161118J2-4 PFC C1 16K1717	PFC C1 16K1717 A
6 161118J2_06	11/18/2016 18:03:03	ST161118J2-5 PFC C2 16K1718	PFC C2 16K1718 A
7 161118J2_07	11/18/2016 18:15:16	ST161118J2-6 PFC C3 16K1719	PFC C3 16K1719 A
8 161118J2_08	11/18/2016 18:27:31	ST161118J2-7 PFC C3.5 16K1720	PFC C3.5 16K1720 A
9 161118J2_09	11/18/2016 18:39:42	ST161118J2-8 PFC C4 16K1721	PFC C4 16K1721 A
10 161118J2_10	11/18/2016 18:51:58	ST161118J2-9 PFC C4.5 16K1722	PFC C4.5 16K1722 A
11 161118J2_11	11/18/2016 19:04:12	ST161118J2-10 PFC C5 16K1723	PFC C5 16K1723 A
12 161118J2_12	11/18/2016 19:16:24	IPA	IPA
13 161118J2_13	11/18/2016 19:28:40	SS161118J2-1 PFC SSS 16J1810	PFC SSS 16J1810 A
14 161118J2_14	11/18/2016 19:40:55	IPA	IPA
15 161118J2_15	11/18/2016 19:53:06	B6J0127-BS1	OPR
16 161118J2_16	11/18/2016 20:05:18	B6J0168-BS1	OPR
17 161118J2_17	11/18/2016 20:17:34	B6K0037-BS1	OPR
18 161118J2_18	11/18/2016 20:29:47	B6K0110-BS1	OPR
19 161118J2_19	11/18/2016 20:42:02	B6K0117-BS1	OPR
20 161118J2_20	11/18/2016 20:54:16	B6K0117-BS01	OPR Dup
21 161118J2_21	11/18/2016 21:06:30	B6K0111-BS1	OPR
22 161118J2_22	11/18/2016 21:18:45	IPA	IPA
23 161118J2_23	11/18/2016 21:30:57	B6J0127-BLK1	Method Blank
24 161118J2_24	11/18/2016 21:43:12	B6J0168-BLK1	Method Blank
25 161118J2_25	11/18/2016 21:55:28	B6K0037-BLK1	Method Blank
26 161118J2_26	11/18/2016 22:07:40	B6K0110-BLK1	Method Blank
27 161118J2_27	11/18/2016 22:19:56	B6K0117-BLK1	Method Blank
28 161118J2_28	11/18/2016 22:32:14	B6K0111-BLK1	Method Blank
29 161118J2_29	11/18/2016 22:44:24	IPA	IPA
30 161118J2_30	11/18/2016 22:56:38	1601299-01	Sample No. I
31 161118J2_31	11/18/2016 23:08:49	1601299-02	Sample No. II
32 161118J2_32	11/18/2016 23:21:05	1601299-03	Sample No. III
33 161118J2_33	11/18/2016 23:33:20	1601299-04	Sample No. IV
34 161118J2_34	11/18/2016 23:45:31	1601299-06	Sample No. VI
35 161118J2_35	11/18/2016 23:57:48	1601299-07	Sample No. VII
36 161118J2_36	11/19/2016 00:10:03	1601299-05RE1	Sample No. V
37 161118J2_37	11/19/2016 00:22:16	1601379-01@20X	Sample #1
38 161118J2_38	11/19/2016 00:34:31	1601379-02@20X	Sample #2
39 161118J2_39	11/19/2016 00:46:45	1601379-03@20X	Sample #3
40 161118J2_40	11/19/2016 00:58:58	IPA	IPA
41 161118J2_41	11/19/2016 01:11:14	ST161118J2-11 PFC C3.5 16K1720	PFC C3.5 16K1720A
42 161118J2_42	11/19/2016 01:23:28	IPA	IPA
43 161118J2_43	11/19/2016 01:35:40	1601379-01	Sample #1
44 161118J2_44	11/19/2016 01:47:56	1601379-02	Sample #2
45 161118J2_45	11/19/2016 02:00:10	1601379-03	Sample #3
46 161118J2_46	11/19/2016 02:12:22	1601410-01	WURTS-EB008JH-110216
47 161118J2_47	11/19/2016 02:24:39	1601410-02	WURTS-VAS04006-32-35_FD
48 161118J2_48	11/19/2016 02:36:53	1601410-03	WURTS-VAS04006-42-45
49 161118J2_49	11/19/2016 02:49:08	1601410-04	WURTS-VAS04006-52-55
50 161118J2_50	11/19/2016 03:01:23	1601410-05	WURTS-VAS17001-21-24
51 161118J2_51	11/19/2016 03:13:40	1601410-06	WURTS-VAS17001-21-24_FD
52 161118J2_52	11/19/2016 03:25:55	1601410-07	WURTS-VAS17001-31-34
53 161118J2_53	11/19/2016 03:38:09	IPA	IPA
54 161118J2_54	11/19/2016 03:50:25	ST161118J2-12 PFC C3.5 16K1720	PFC C3.5 16K1720A
55 161118J2_55	11/19/2016 04:02:39	IPA	IPA
56 161118J2_56	11/19/2016 04:14:55	1601410-08	WURTS-VAS17001-41-44
57 161118J2_57	11/19/2016 04:27:09	1601410-09	WURTS-VAS17003-22-25

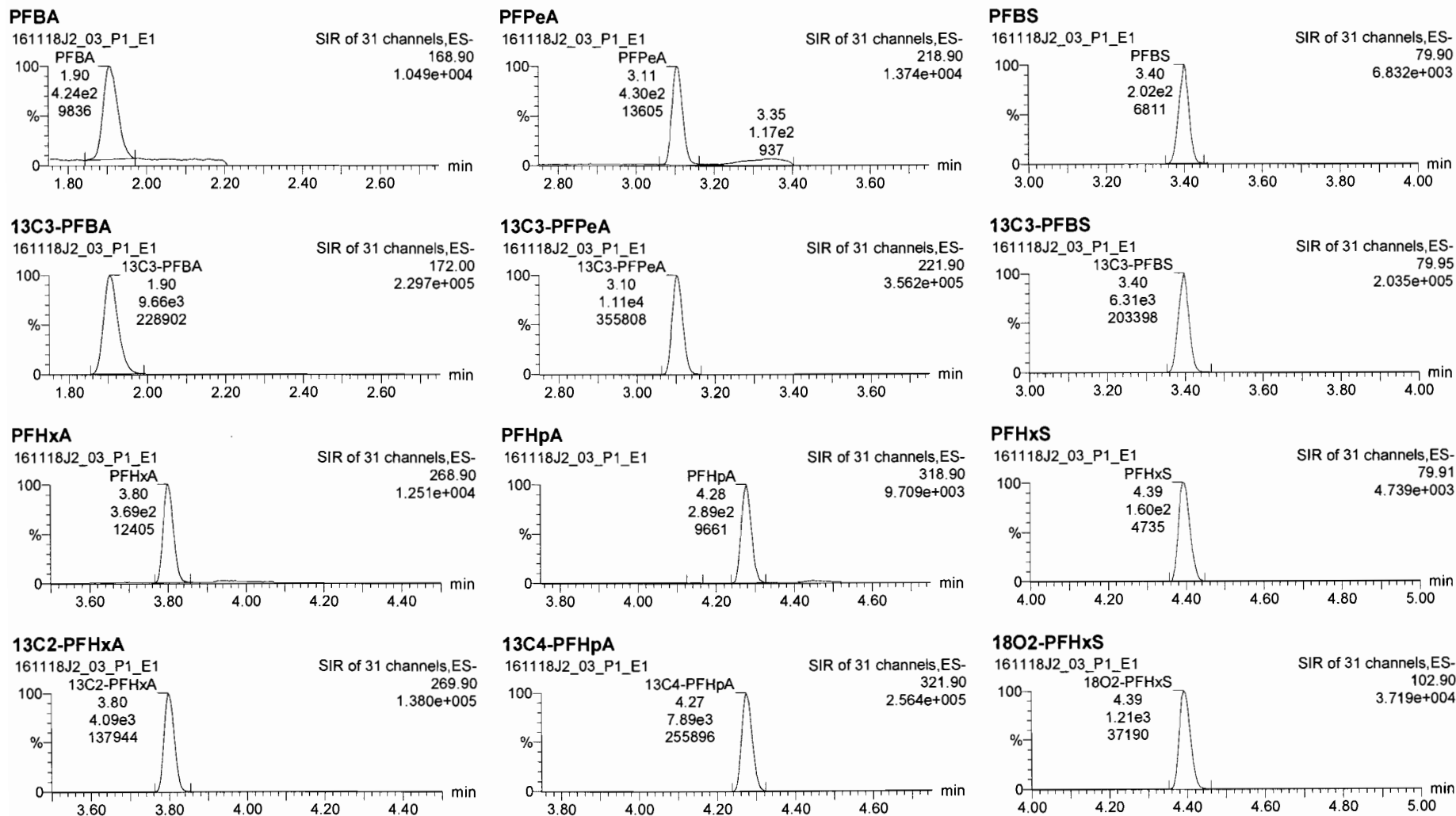
Sample Name	Acquisition Date	Sample ID	Sample Comment
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59 161118J2_59	11/19/2016 04:51:36	1601410-11	WURTS-VAS17003-42-45
60 161118J2_60	11/19/2016 05:03:50	1601410-12	WURTS-VAS17003-52-55
61 161118J2_61	11/19/2016 05:16:02	1601413-01	PFAS-AB1-MW-58-110316
62 161118J2_62	11/19/2016 05:28:17	1601413-02	PFAS-MW01-62-110316
63 161118J2_63	11/19/2016 05:40:32	1601413-03	PFAS-BW-MW-30-110316
64 161118J2_64	11/19/2016 05:52:47	1601413-04	PFAS-B82-MW-105-110316
65 161118J2_65	11/19/2016 06:04:59	1601413-05	PFAS-WG-DUP2-110416
66 161118J2_66	11/19/2016 06:17:15	IPA	IPA
67 161118J2_67	11/19/2016 06:29:31	ST161118J2-13 PFC C3.5	PFC C3.5 16K1720A
68 161118J2_68	11/19/2016 06:41:45	IPA	IPA
69 161118J2_69	11/19/2016 06:54:01	1601413-06	PFAS-B82-MW-11D-110416
70 161118J2_70	11/19/2016 07:06:17	1601413-07	PFAS-B82-MW-11S-110416
71 161118J2_71	11/19/2016 07:18:32	1601413-08	PFAS-B82-MW-10D-110316
72 161118J2_72	11/19/2016 07:30:59	1601413-09	PFAS-B82-MW-09D-110316
73 161118J2_73	11/19/2016 07:43:18	1601413-10	PFAS-B82-MW-09S-110316
74 161118J2_74	11/19/2016 07:55:41	1601413-11	PFAS-B81-MW-46S-110416
75 161118J2_75	11/19/2016 08:07:55	1601413-12	EB1-WG-110316
76 161118J2_76	11/19/2016 08:20:11	1601413-13	PFAS-MW11-093-110416
77 161118J2_77	11/19/2016 08:32:43	1601413-14	PFAS-MW11-095-110416
78 161118J2_78	11/19/2016 08:45:15	1601413-15	PFAS-AB1-36-110416
79 161118J2_79	11/19/2016 08:57:48	IPA	IPA
80 161118J2_80	11/19/2016 09:10:17	ST161118J2-14 PFC C3.5	PFC C3.5 16K1720A
81 161118J2_81	11/19/2016 09:22:47	IPA	IPA
82 161118J2_82	11/19/2016 09:35:19	1601413-16	PFAS-B81-MW-215-110416
83 161118J2_83	11/19/2016 09:47:51	1601413-17	PFAS-AB1-MW-20-110416
84 161118J2_84	11/19/2016 10:00:22	1601413-18	PFAS-WS-DUP1-110416
85 161118J2_85	11/19/2016 10:12:56	1601413-19	EB2-WG-110416
86 161118J2_86	11/19/2016 10:25:12	1601413-20	PFAS-B24-MW-03-110416
87 161118J2_87	11/19/2016 10:37:27	1601437-01	OW11-MW9-1016
88 161118J2_88	11/19/2016 10:49:38	1601437-02	OW11-MW9P-1016
89 161118J2_89	11/19/2016 11:01:53	1601437-03	OW11-MW1-1016
90 161118J2_90	11/19/2016 11:14:05	1601437-04	OW11-MW7-1016
91 161118J2_91	11/19/2016 11:26:21	1601437-05	OW11-MW5-1016
92 161118J2_92	11/19/2016 11:38:32	IPA	IPA
93 161118J2_93	11/19/2016 11:50:49	ST161118J2-15 PFC C3.5	PFC C3.5 16K1720A
94 161118J2_94	11/19/2016 12:03:03	IPA	IPA
95 161118J2_95	11/19/2016 12:15:18	1601437-06	OW11-MW6-1016
96 161118J2_96	11/19/2016 12:27:29	1601437-07	OW11-MW4-1016
97 161118J2_97	11/19/2016 12:39:45	B6K0117-MS1	Matrix Spike
98 161118J2_98	11/19/2016 12:51:58	B6K0117-MSD1	Matrix Spike Dup
99 161118J2_99	11/19/2016 13:04:12	B6K0111-MS1	Matrix Spike
100 161118J2_100	11/19/2016 13:16:23	B6K0111-MSD1	Matrix Spike Dup
101 161118J2_101	11/19/2016 13:28:39	IPA	IPA
102 161118J2_102	11/19/2016 13:40:50	ST161118J2-16 PFC C3.5	PFC C3.5 16K1720A
103 161118J2_103	11/19/2016 13:53:06	IPA	IPA

Dataset: Untitled

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time
Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

Method: U:\Q2.PROMethDB\PFC List 18_A No4-2FTS_161118.mdb 19 Nov 2016 12:55:02
Calibration: 19 Nov 2016 12:55:25

Name: 161118J2_03.wiff, Date: 18-Nov-2016, Time: 17:26:18, ID: ST161118J2-2 PFC C-1 16K1715, Description: PFC C-1 16K1715 A

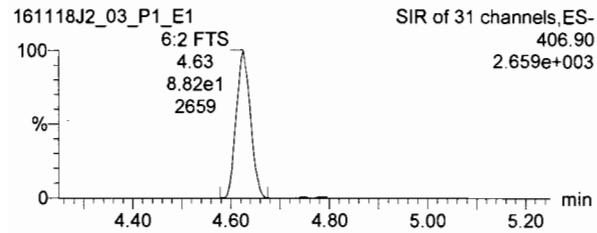


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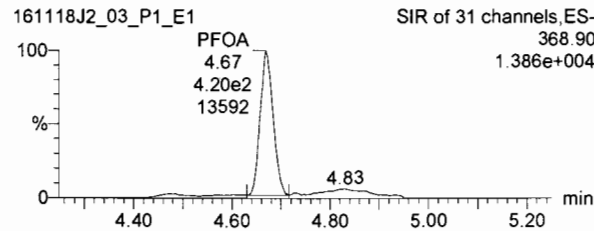
Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time
Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

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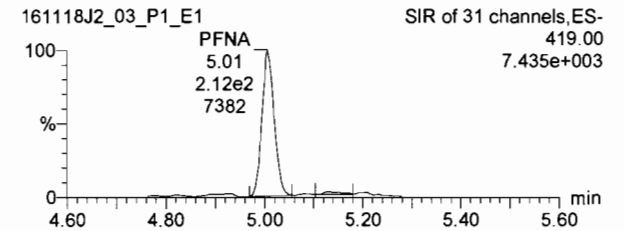
6:2 FTS



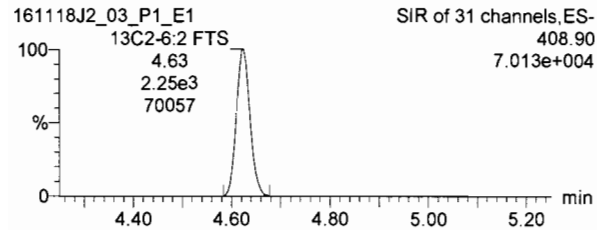
PFOA



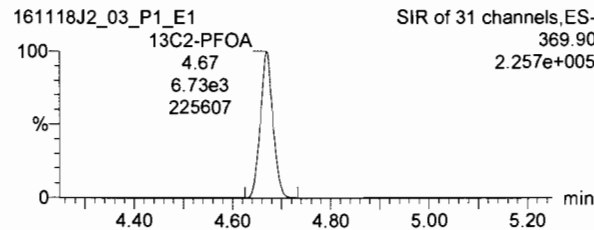
PFNA



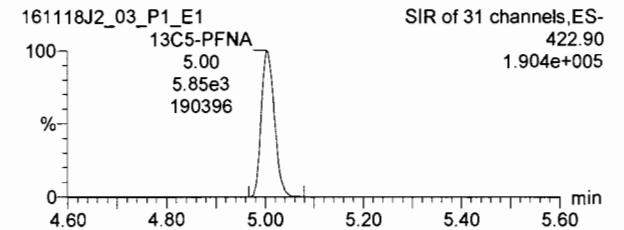
13C2-6:2 FTS



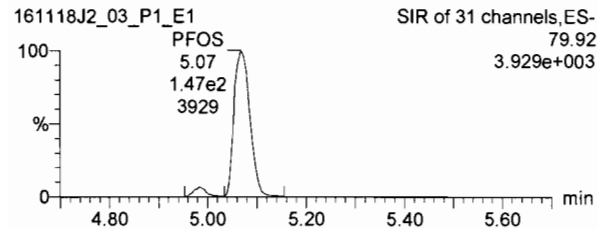
13C2-PFOA



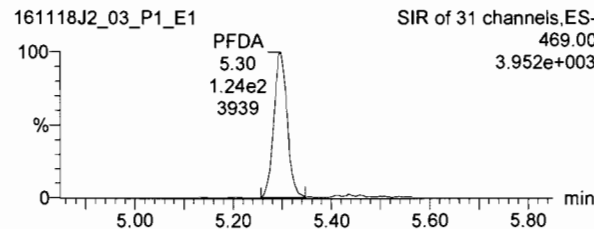
13C5-PFNA



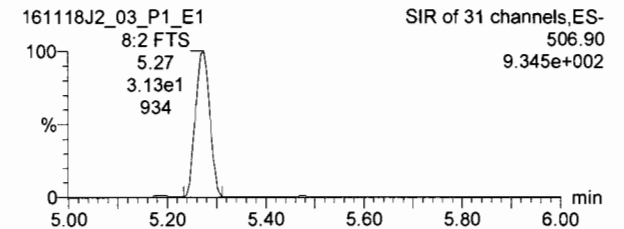
PFOS



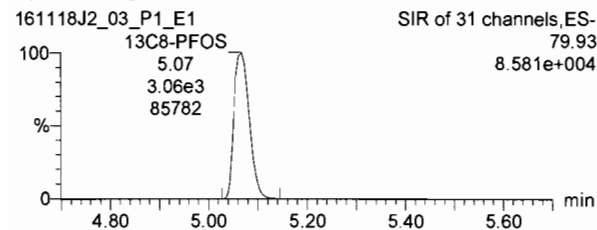
PFDA



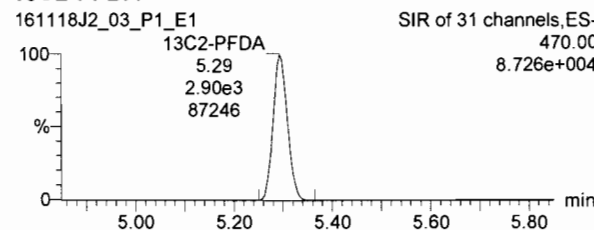
8:2 FTS



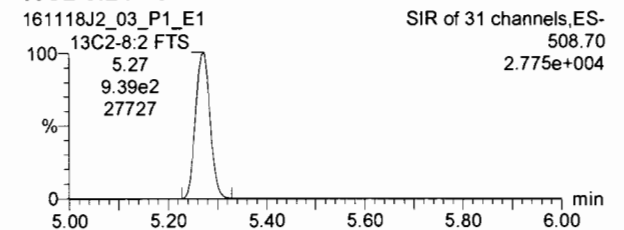
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

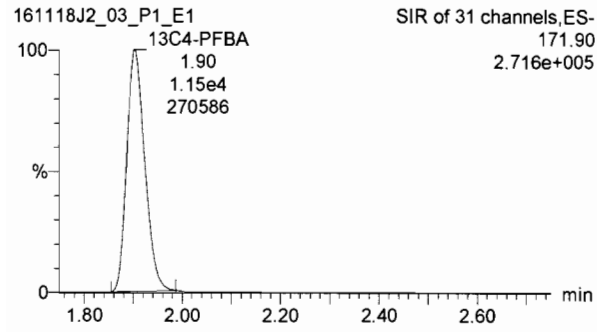


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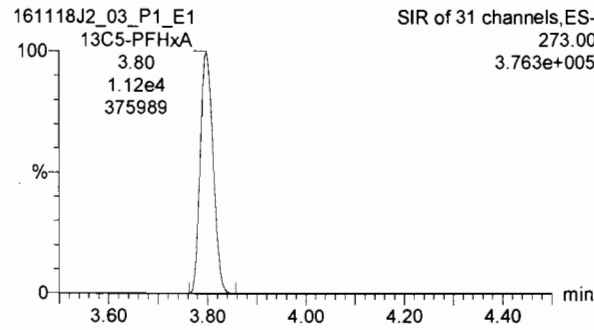
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Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

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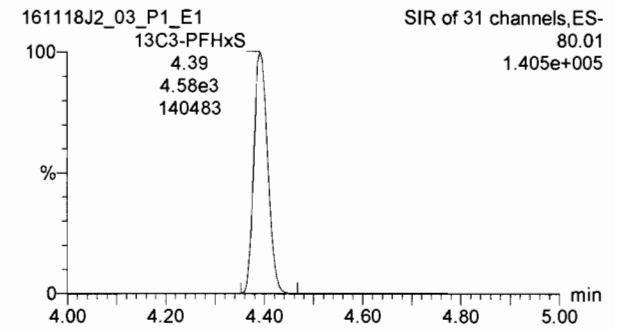
13C4-PFBA



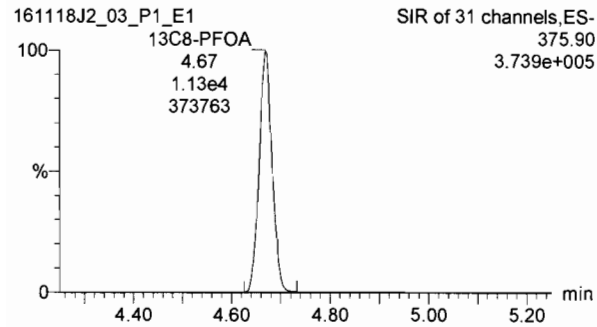
13C5-PFHxA



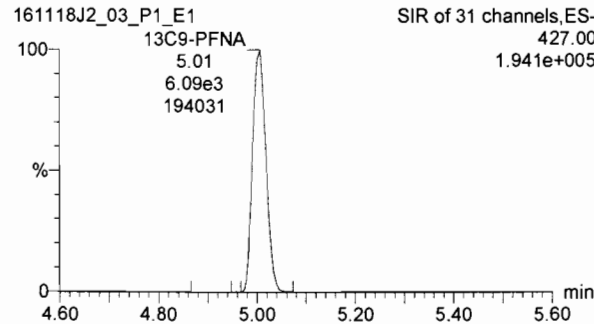
13C3-PFHxS



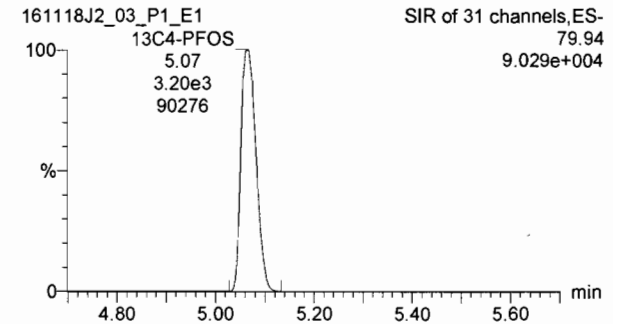
13C8-PFOA



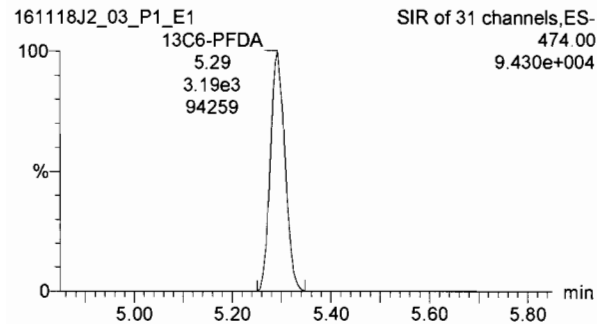
13C9-PFNA



13C4-PFOS



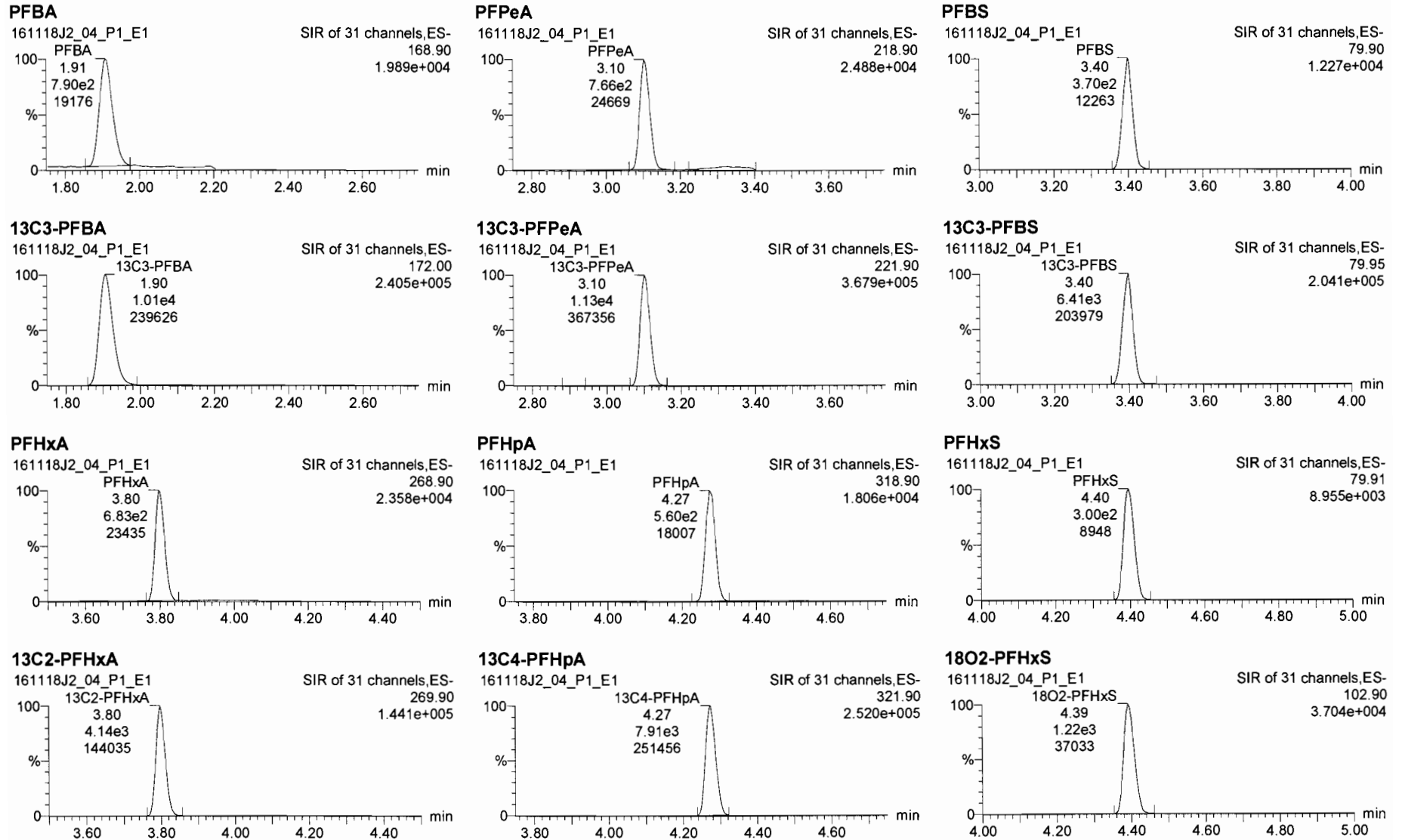
13C6-PFDA



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Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time
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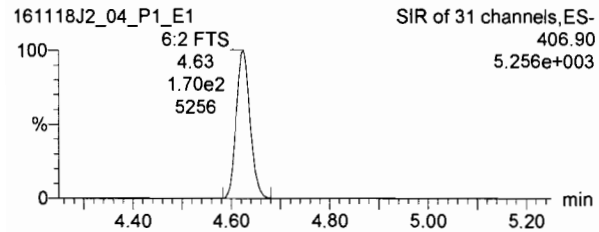


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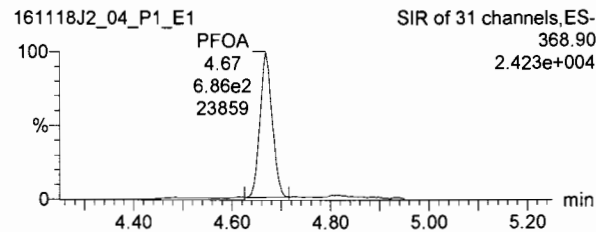
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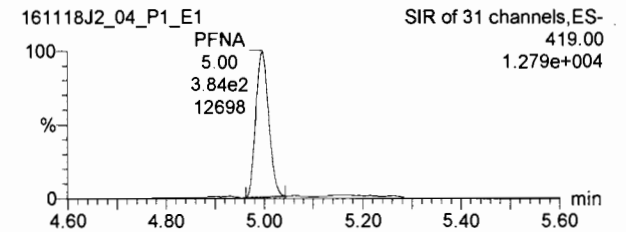
6:2 FTS



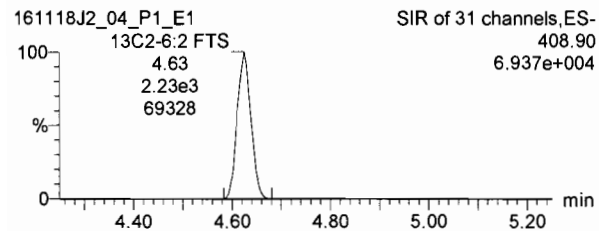
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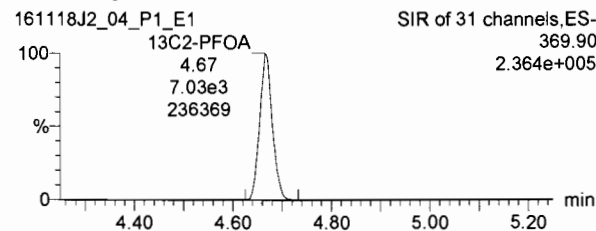
PFNA



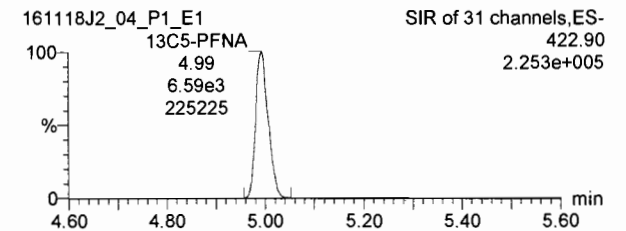
13C2-6:2 FTS



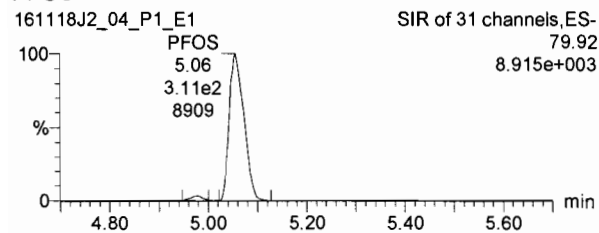
13C2-PFOA



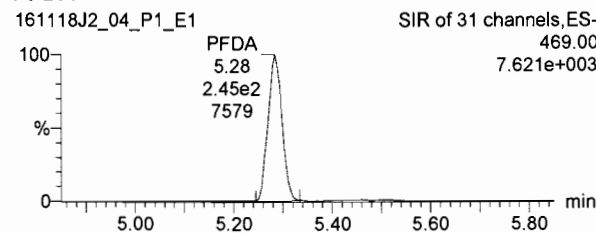
13C5-PFNA



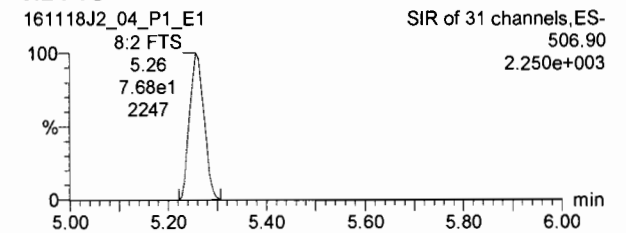
PFOS



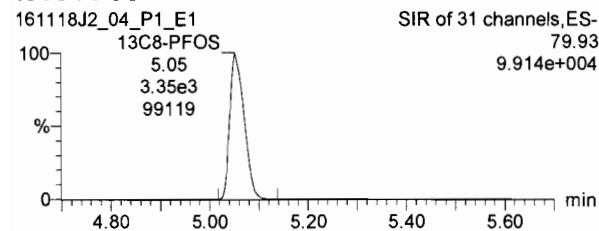
PFDA



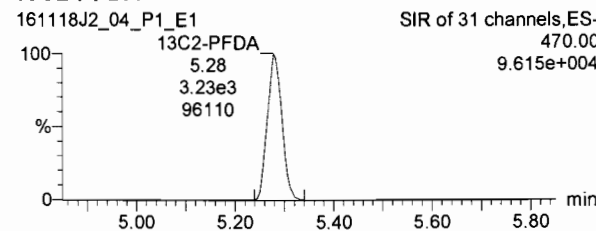
8:2 FTS



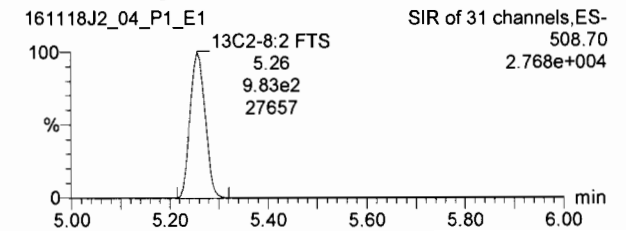
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



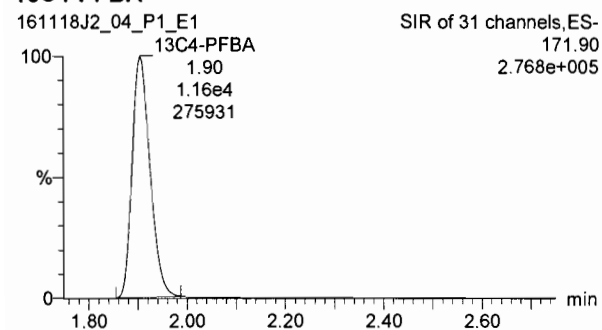
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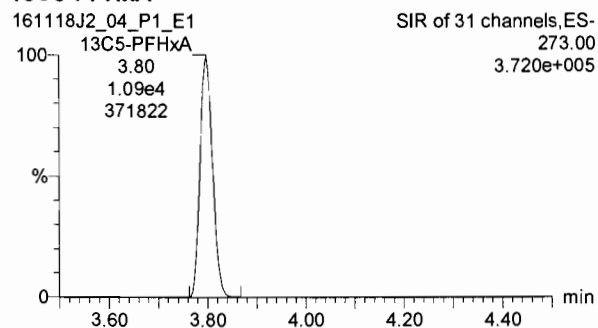
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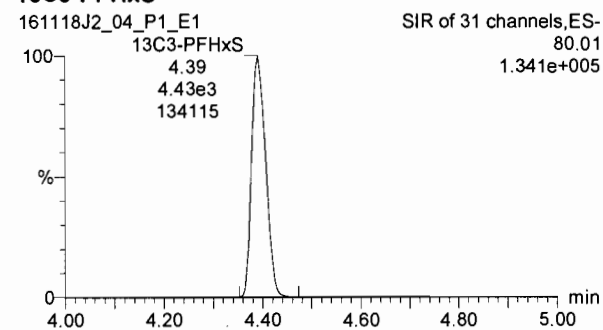
13C4-PFBA



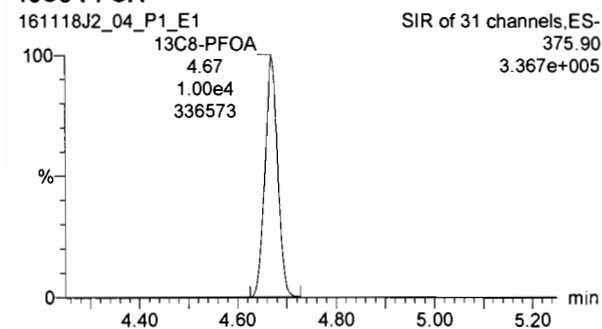
13C5-PFHxA



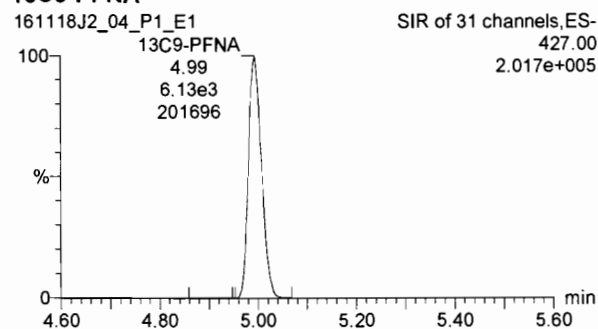
13C3-PFHxS



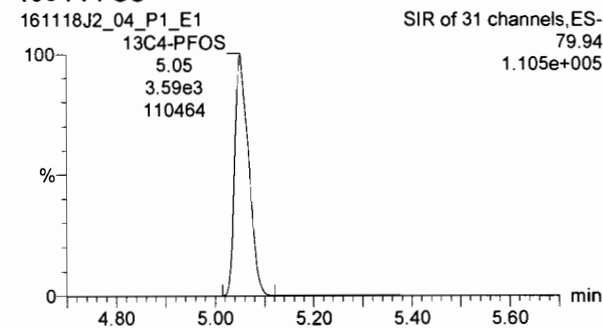
13C8-PFOA



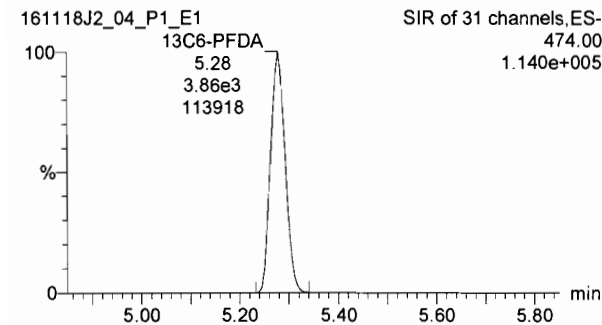
13C9-PFNA



13C4-PFOS



13C6-PFDA

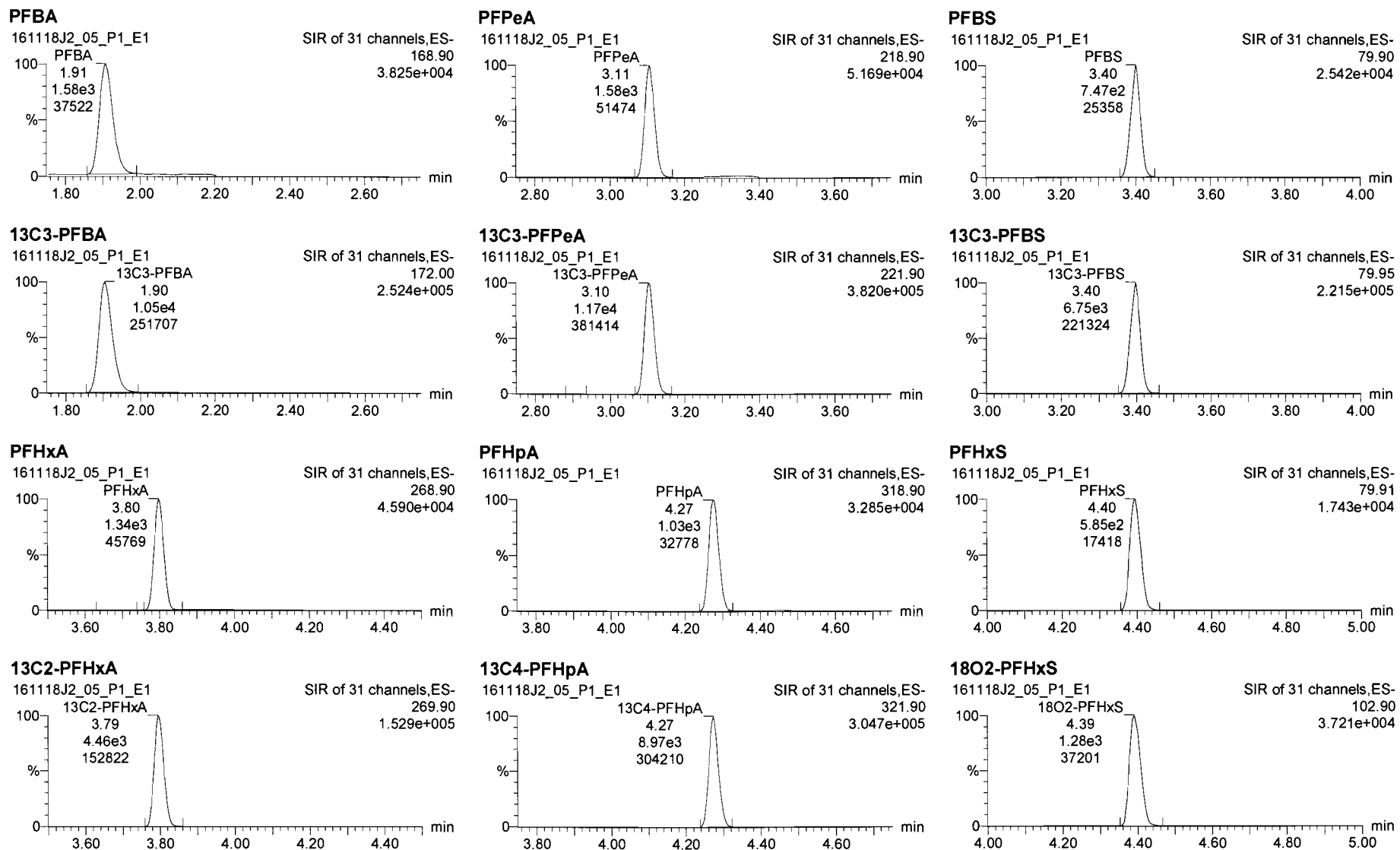


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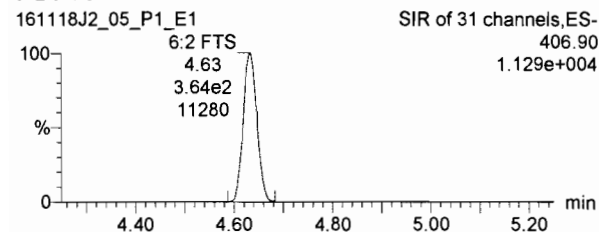


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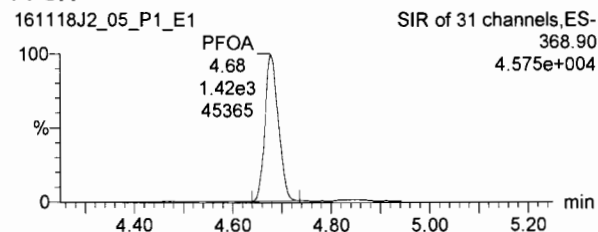
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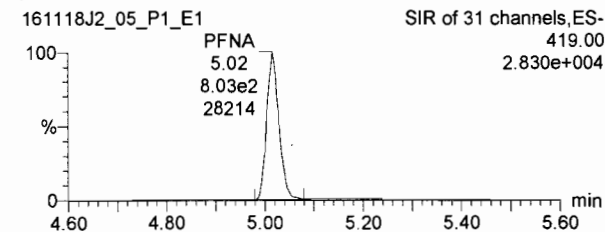
6:2 FTS



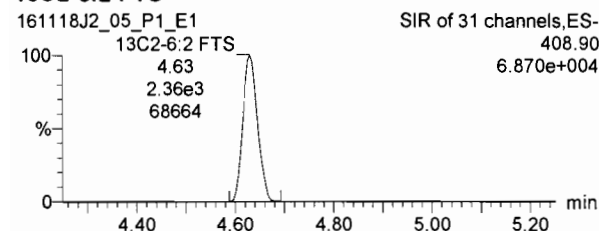
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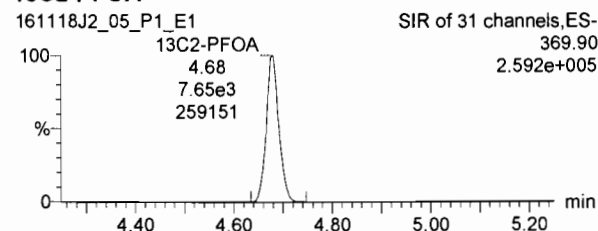
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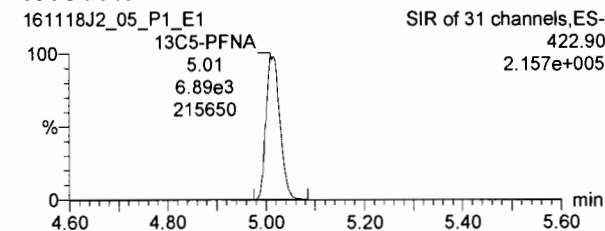
13C2-6:2 FTS



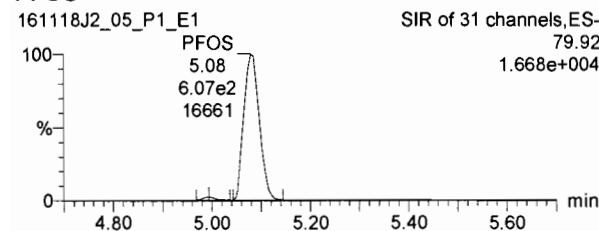
13C2-PFOA



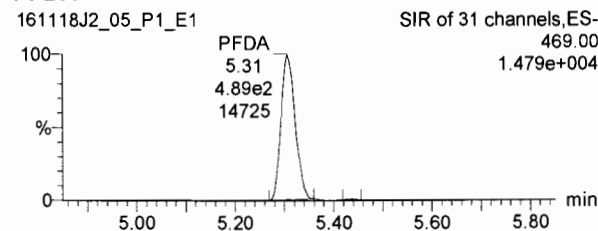
13C5-PFNA



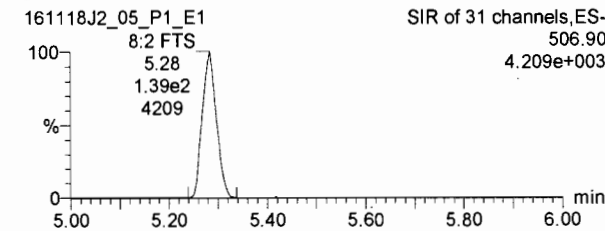
PFOS



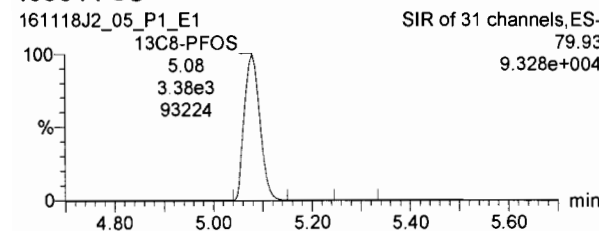
PFDA



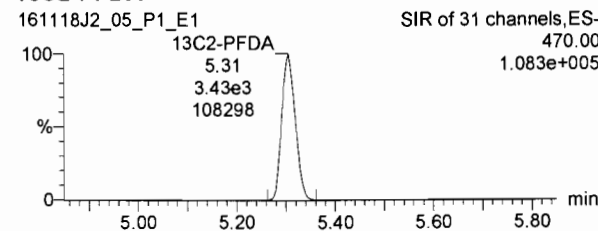
8:2 FTS



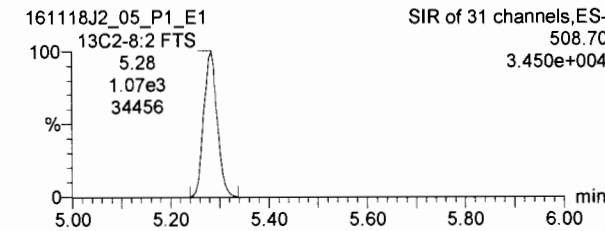
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



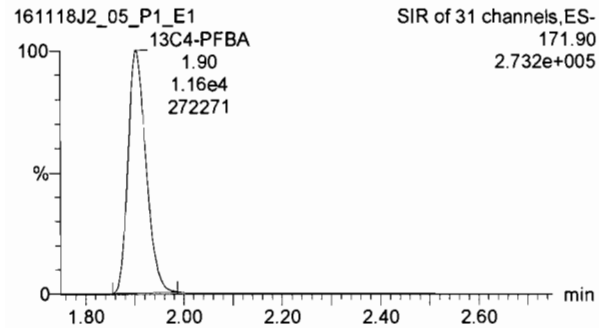
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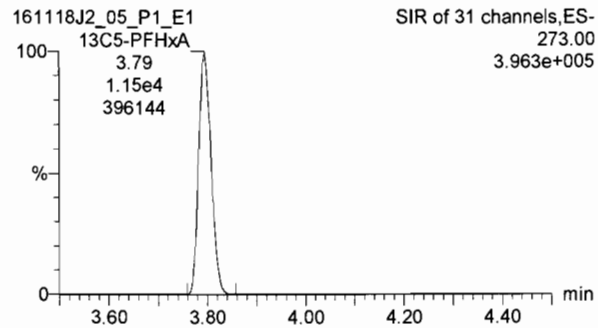
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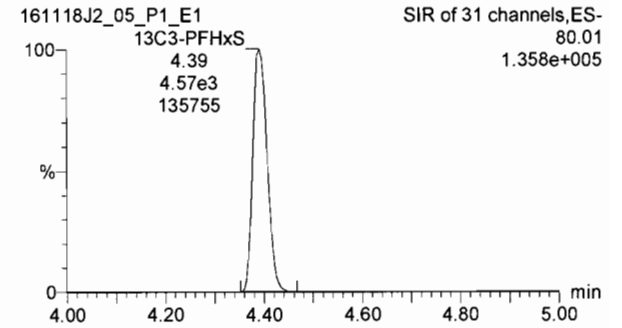
13C4-PFBA



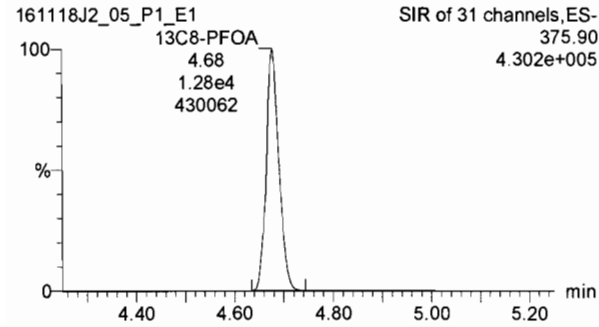
13C5-PFHxA



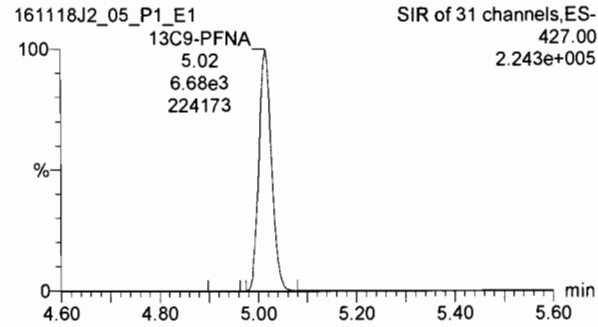
13C3-PFHxS



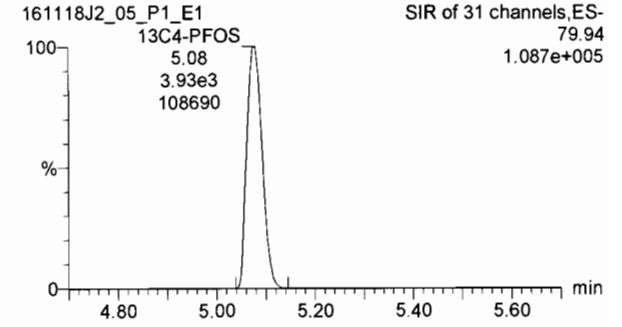
13C8-PFOA



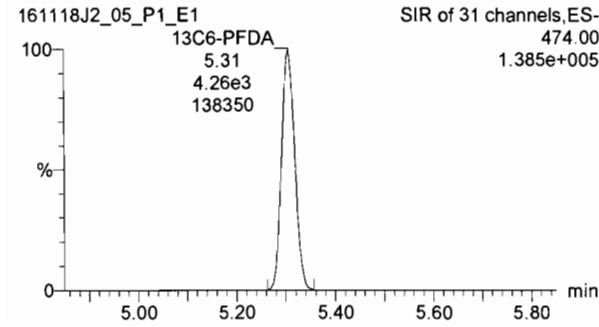
13C9-PFNA



13C4-PFOS



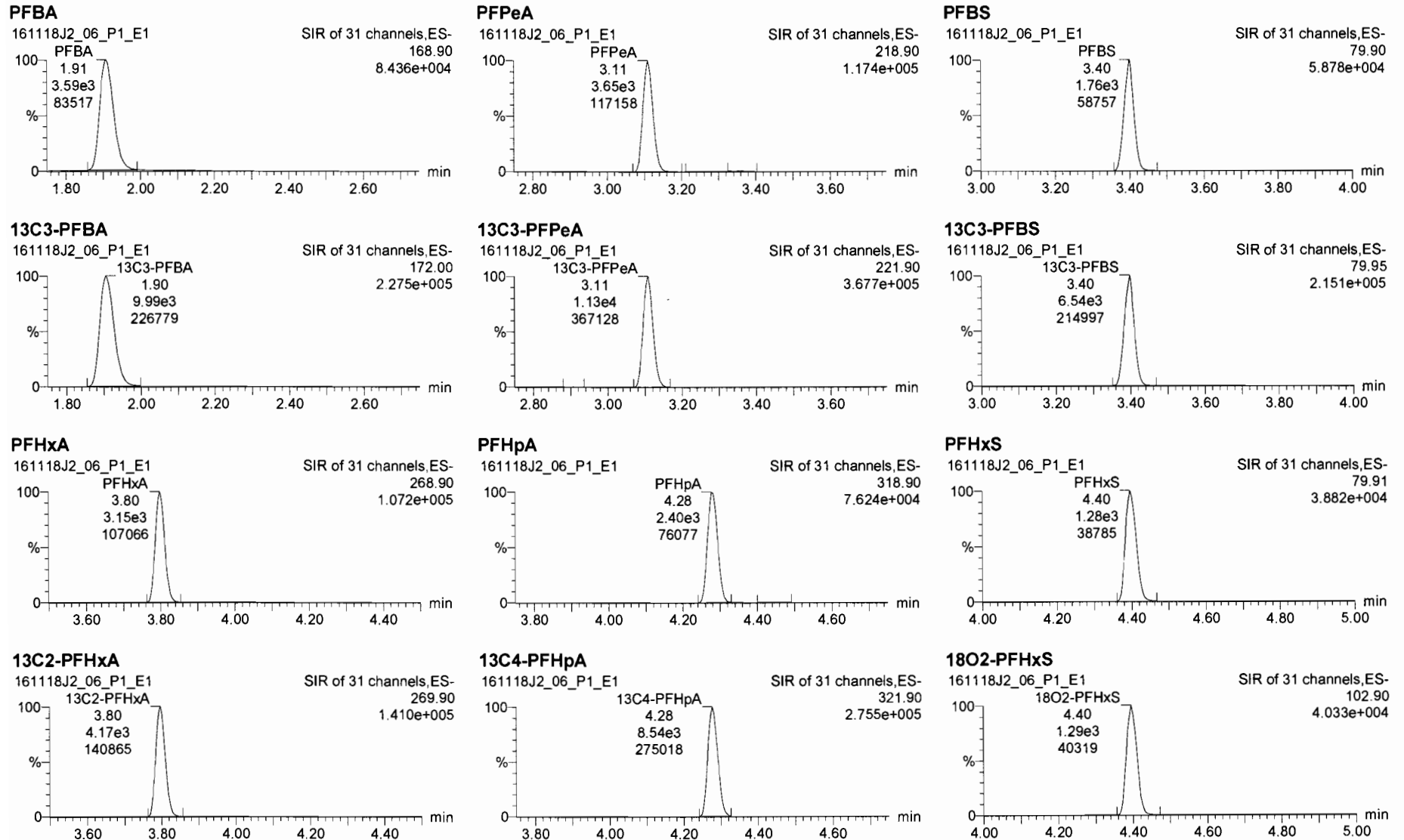
13C6-PFDA



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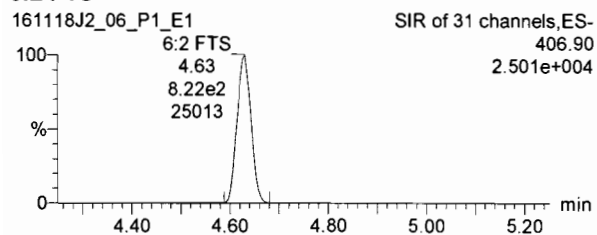


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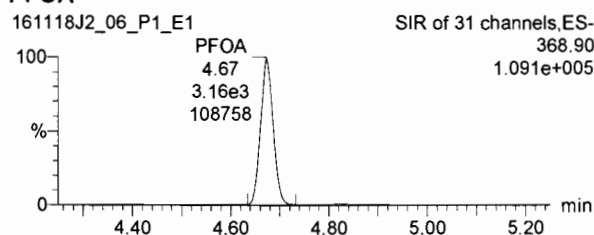
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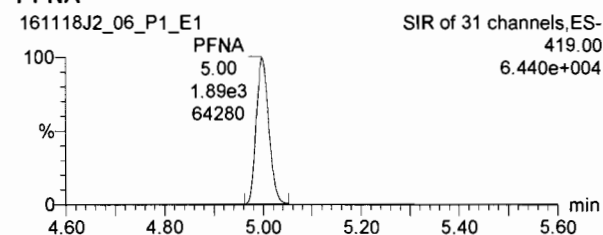
6:2 FTS



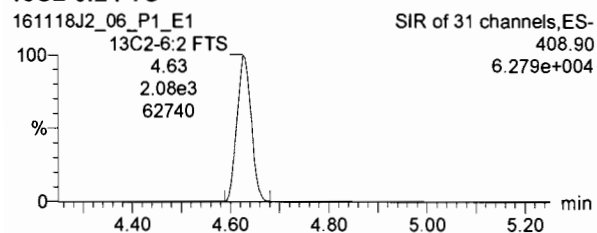
PFOA



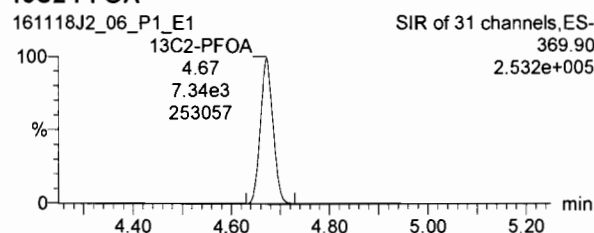
PFNA



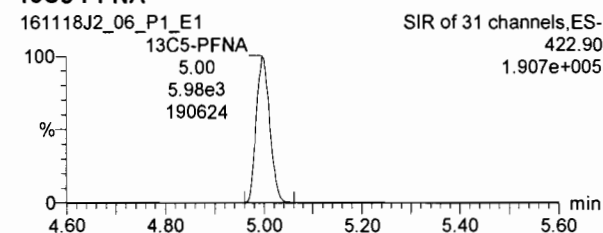
13C2-6:2 FTS



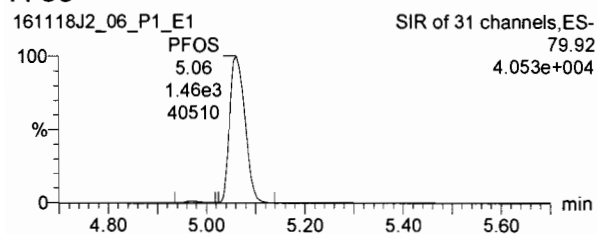
13C2-PFOA



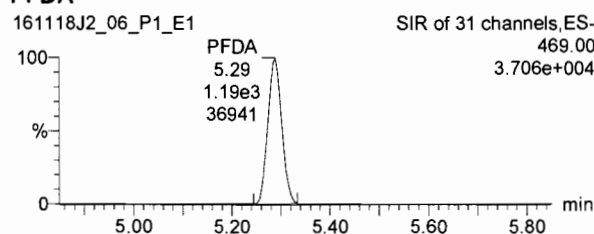
13C5-PFNA



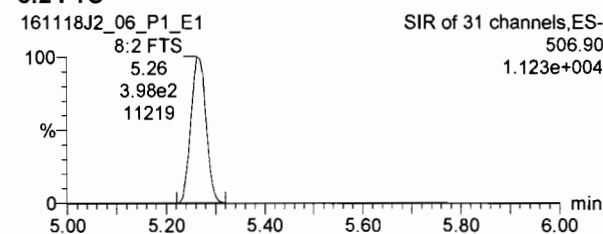
PFOS



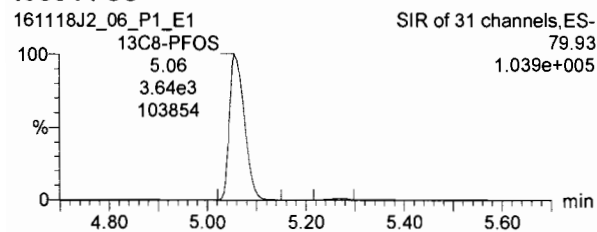
PFDA



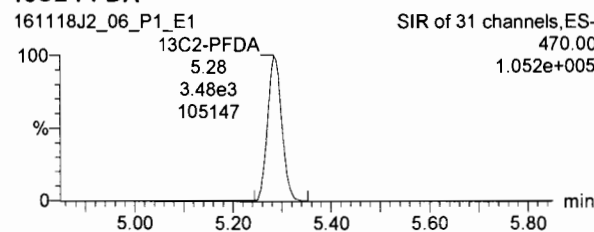
8:2 FTS



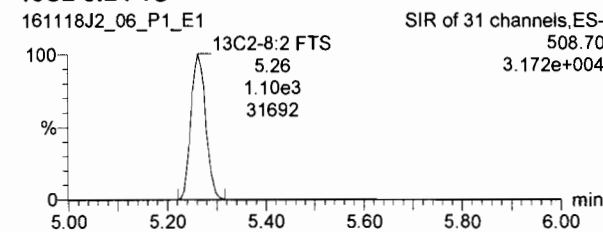
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

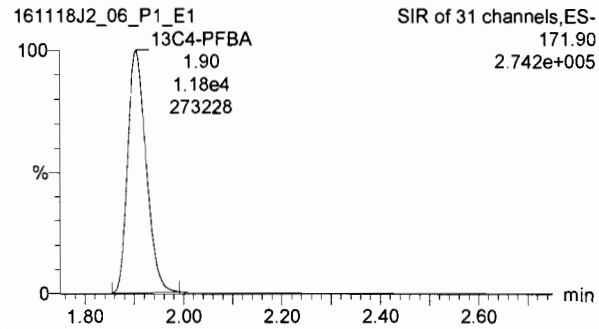


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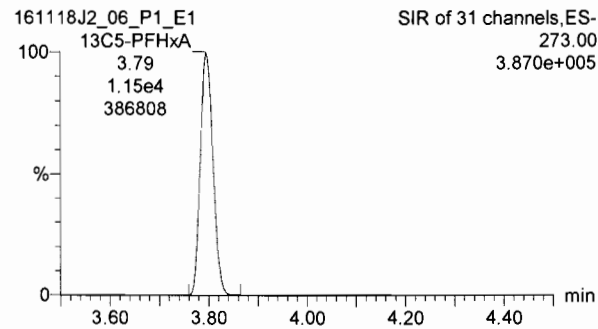
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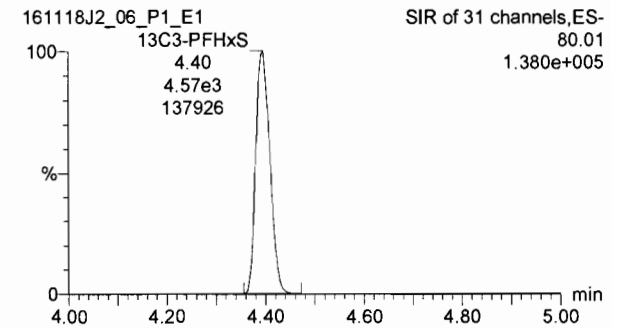
13C4-PFBA



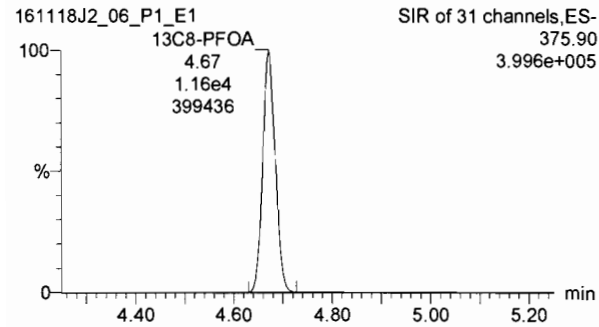
13C5-PFHxA



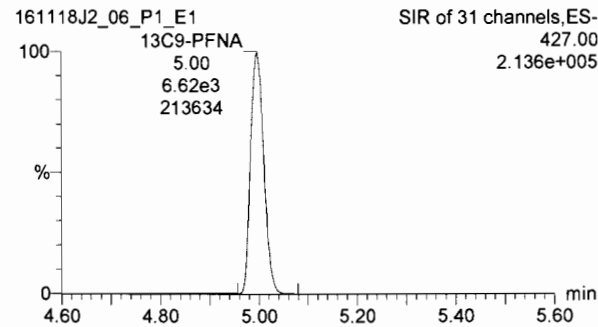
13C3-PFHxS



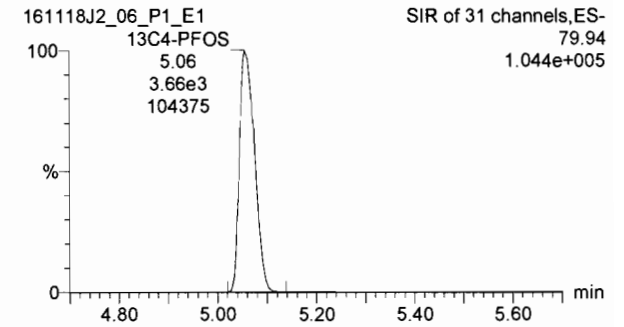
13C8-PFOA



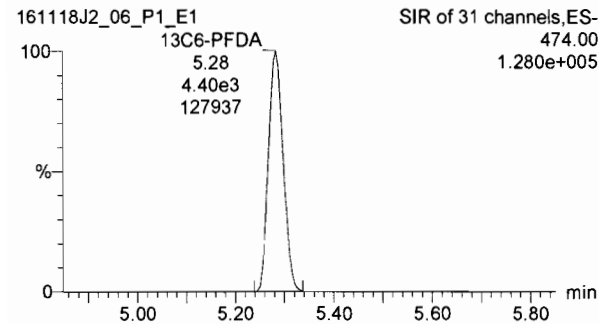
13C9-PFNA



13C4-PFOS



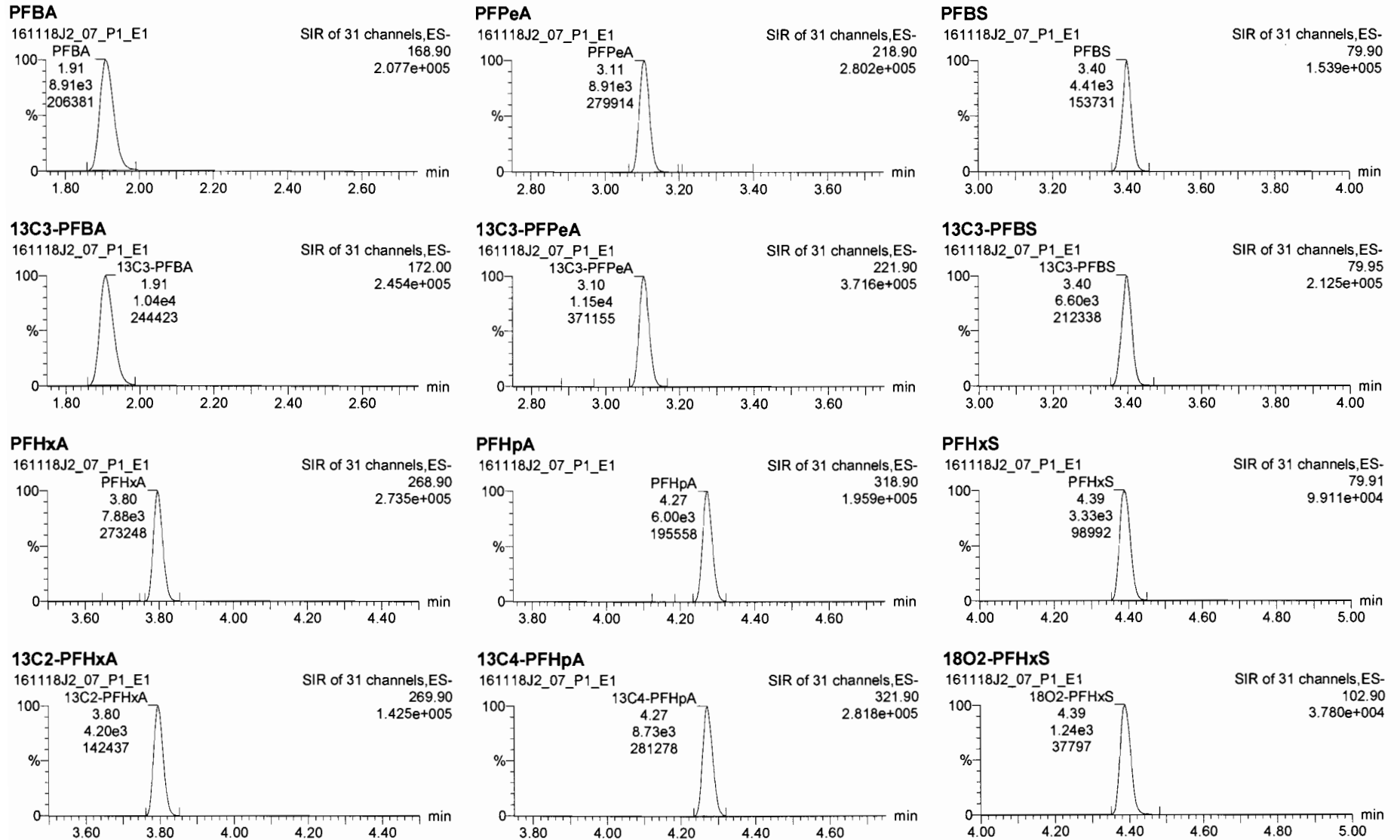
13C6-PFDA



Dataset: Untitled

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Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

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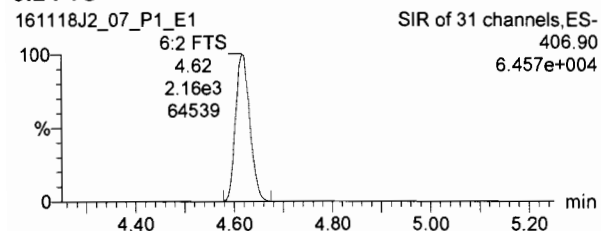


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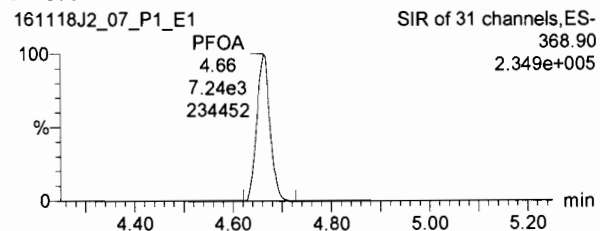
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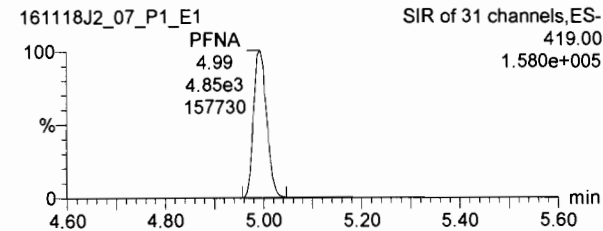
6:2 FTS



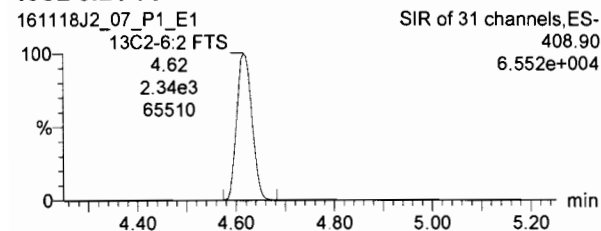
PFOA



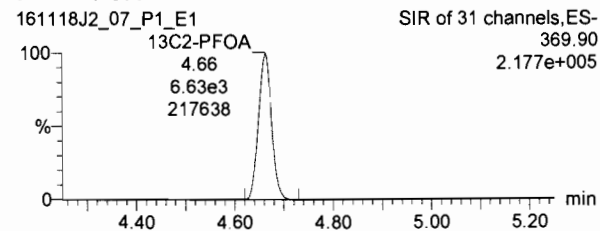
PFNA



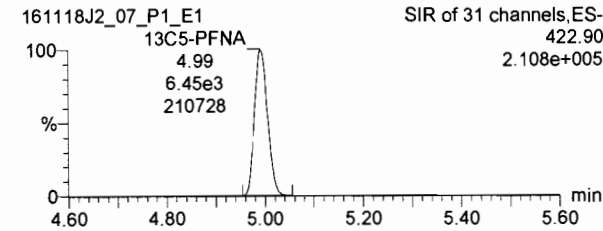
13C2-6:2 FTS



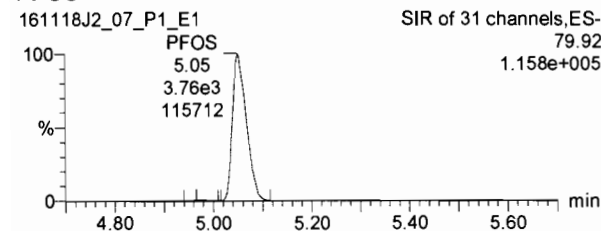
13C2-PFOA



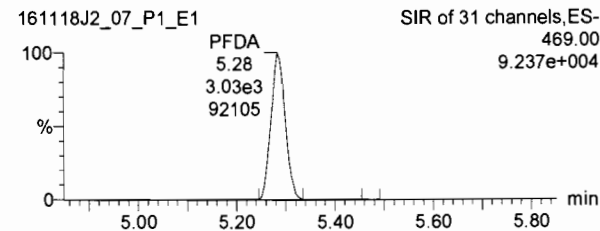
13C5-PFNA



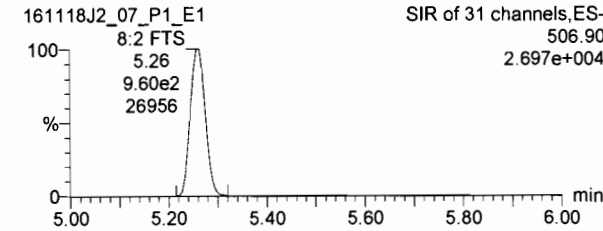
PFOS



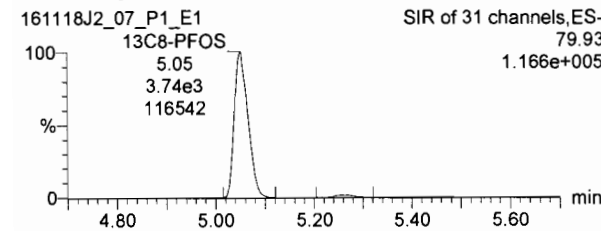
PFDA



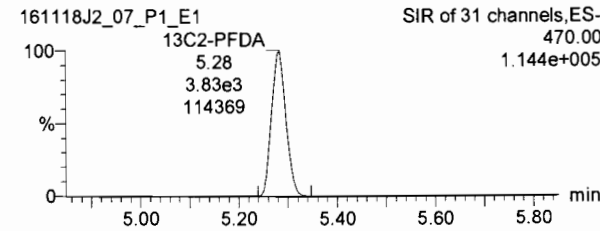
8:2 FTS



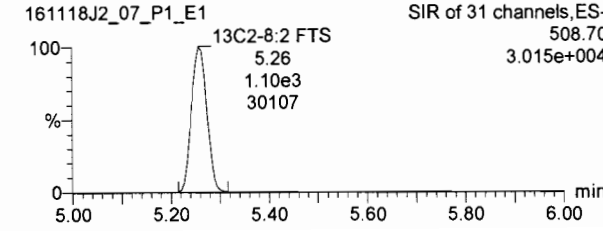
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS

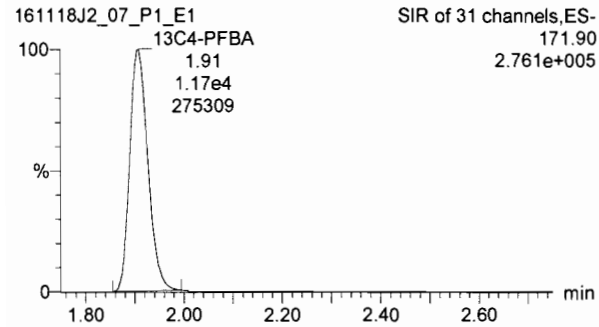


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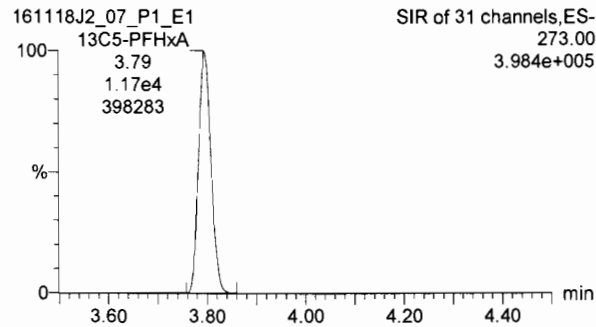
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Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

Name: 161118J2_07.wiff, Date: 18-Nov-2016, Time: 18:15:16, ID: ST161118J2-6 PFC C3 16K1719, Description: PFC C3 16K1719 A

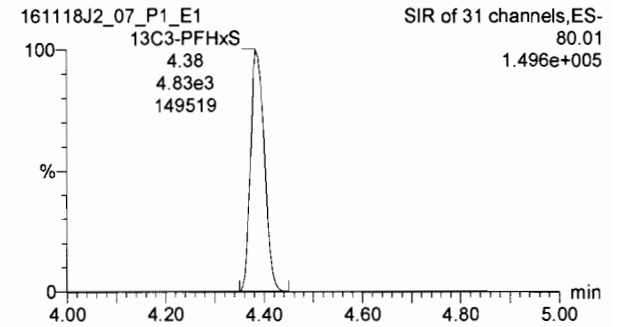
13C4-PFBA



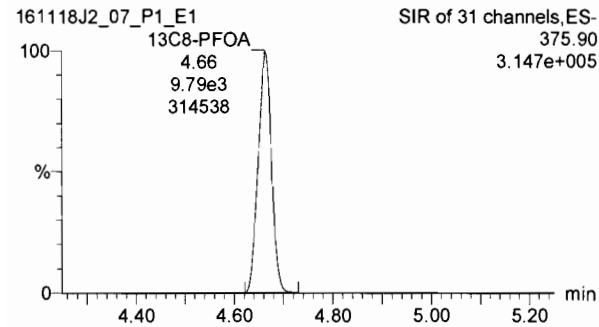
13C5-PFHxA



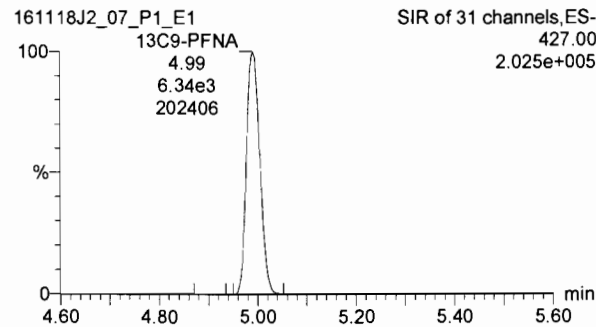
13C3-PFHxS



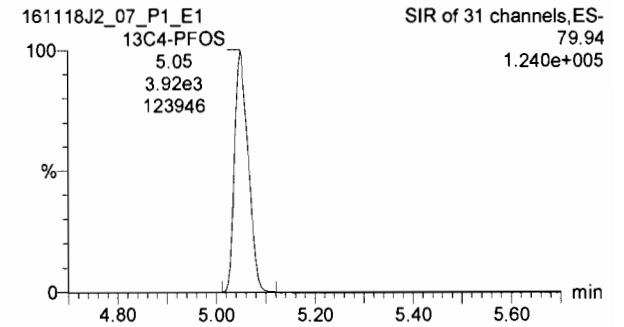
13C8-PFOA



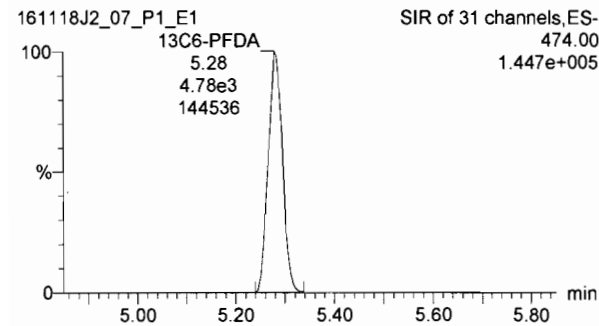
13C9-PFNA



13C4-PFOS



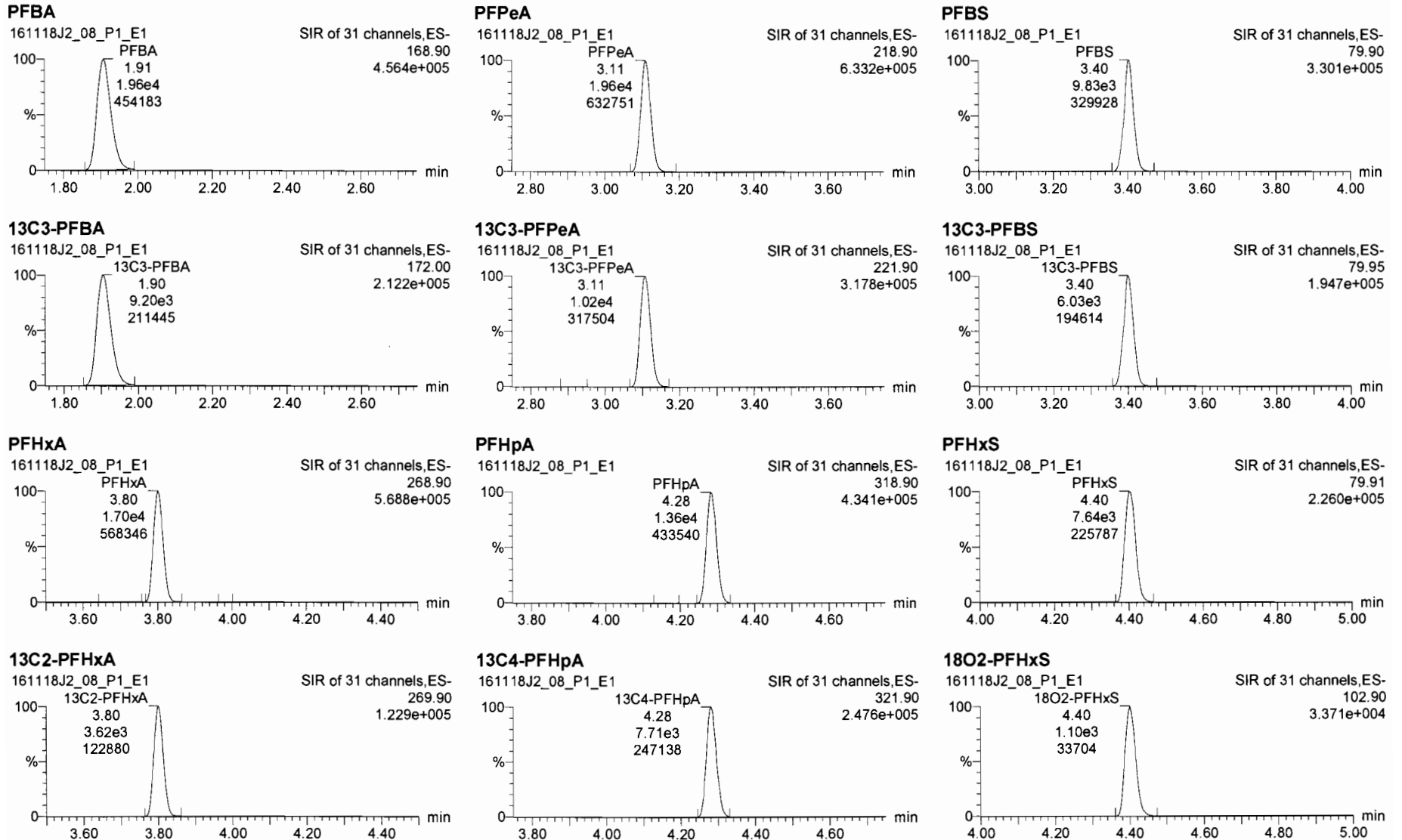
13C6-PFDA



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Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

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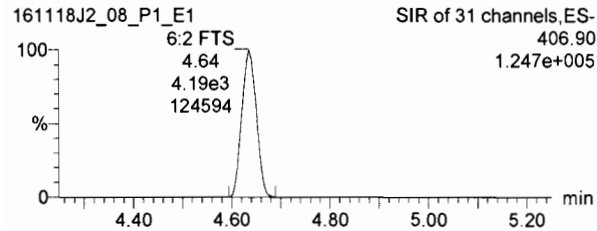
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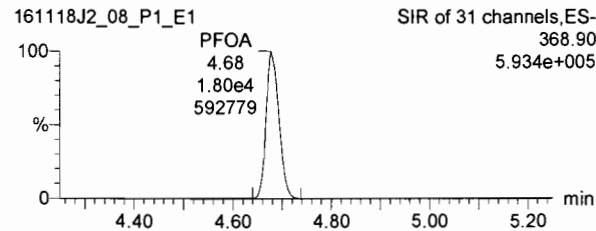
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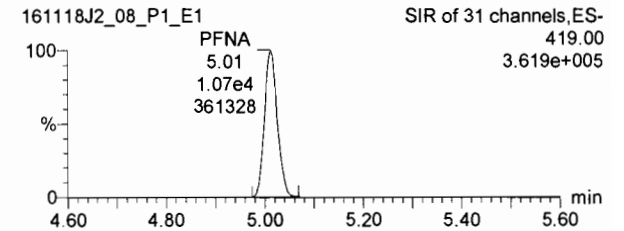
6:2 FTS



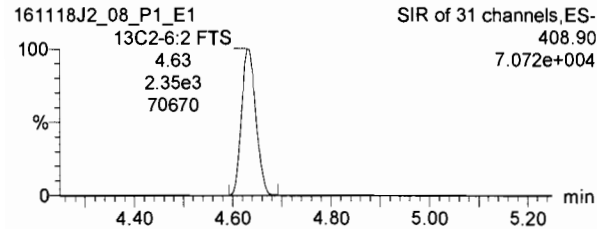
PFOA



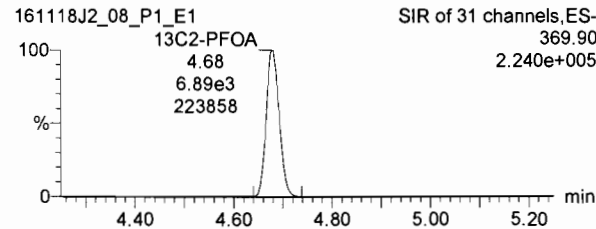
PFNA



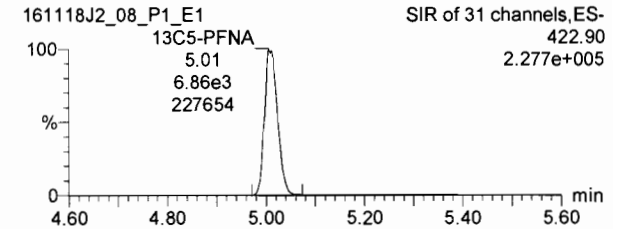
13C2-6:2 FTS



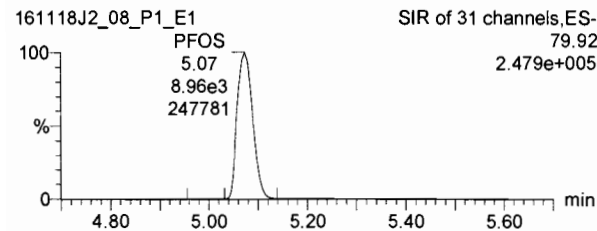
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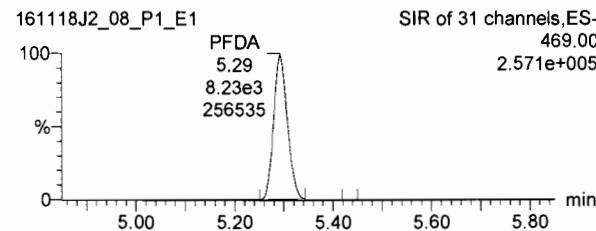
13C5-PFNA



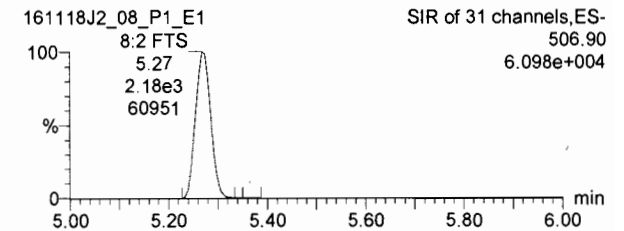
PFOS



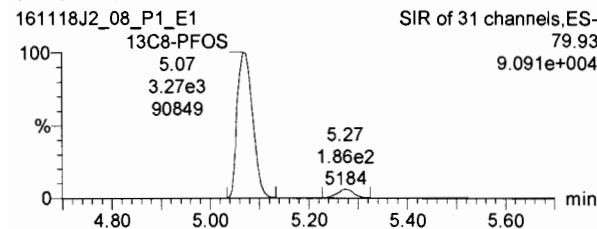
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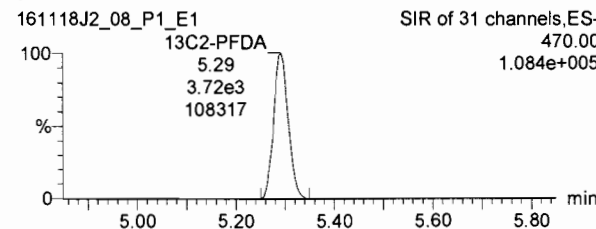
8:2 FTS



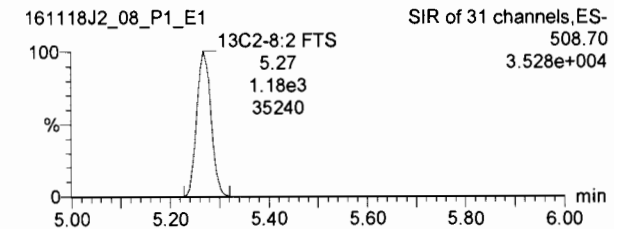
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



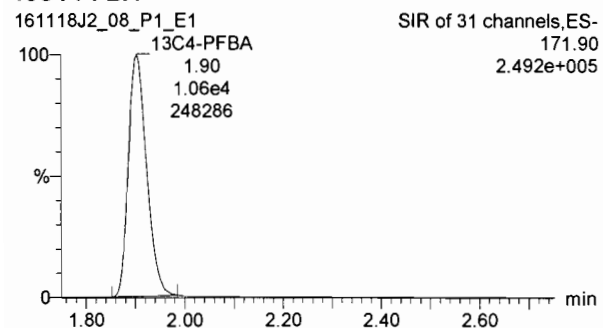
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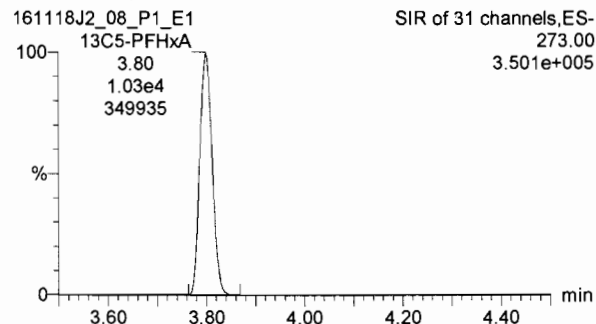
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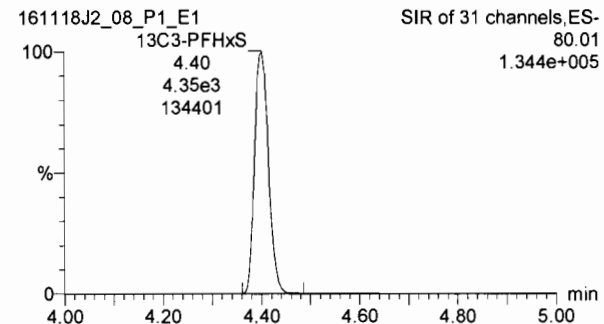
13C4-PFBA



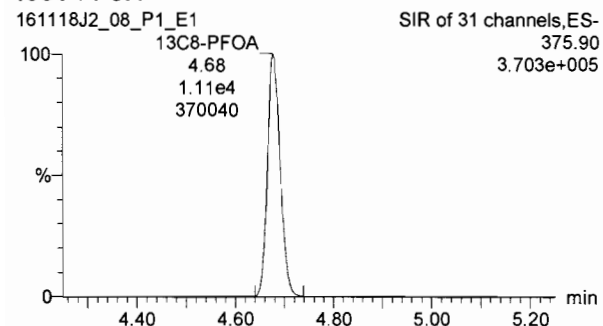
13C5-PFHxA



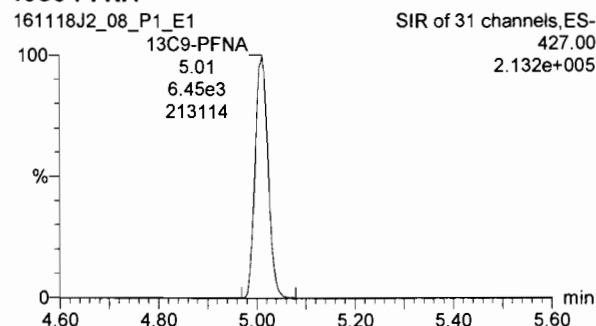
13C3-PFHxS



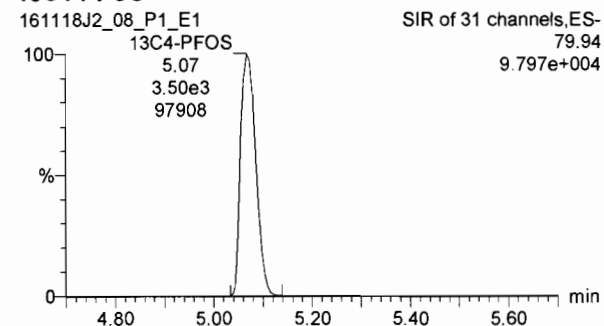
13C8-PFOA



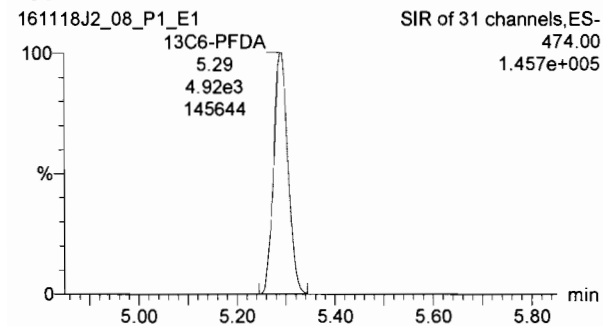
13C9-PFNA



13C4-PFOS



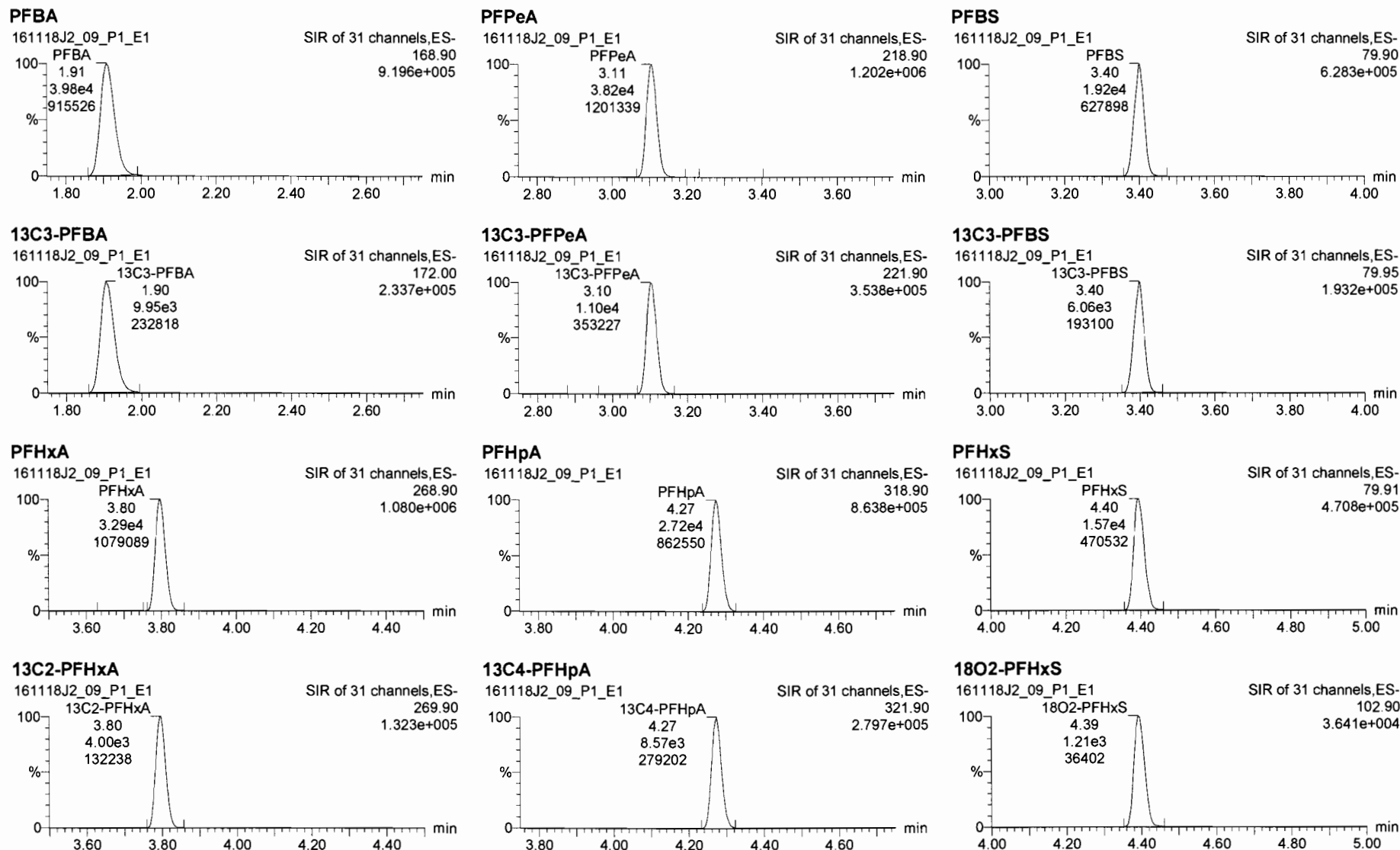
13C6-PFDA



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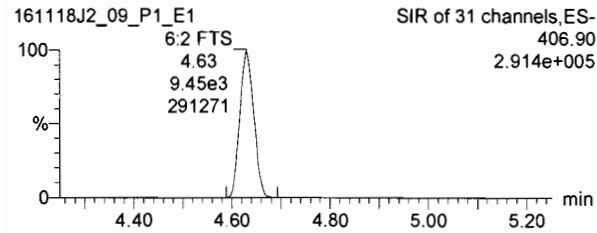


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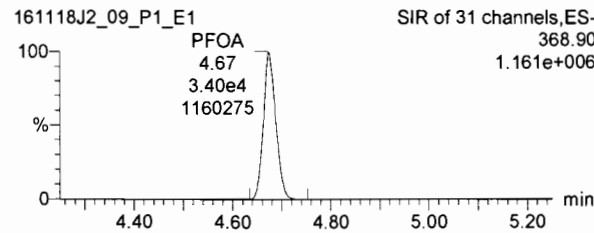
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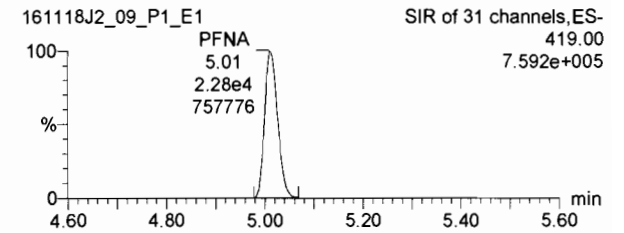
6:2 FTS



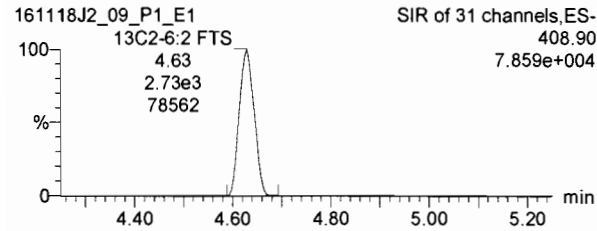
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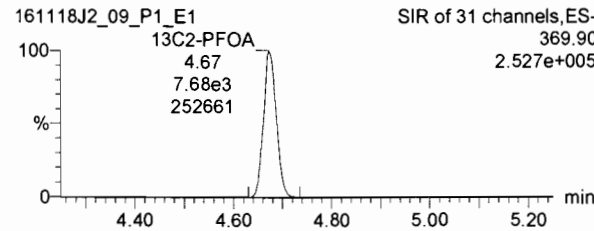
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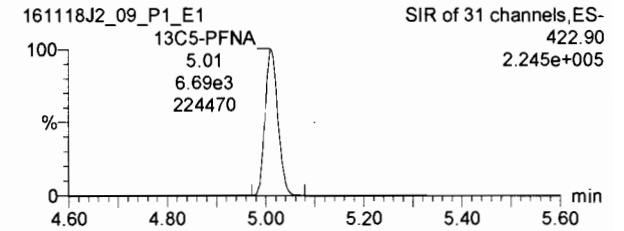
13C2-6:2 FTS



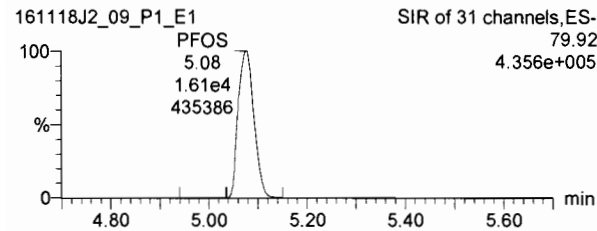
13C2-PFOA



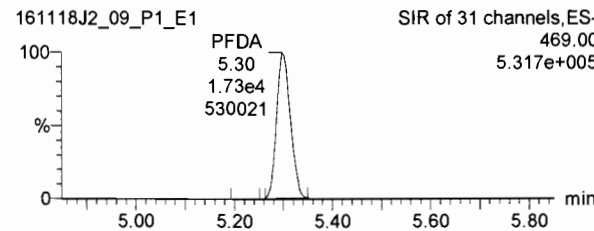
13C5-PFNA



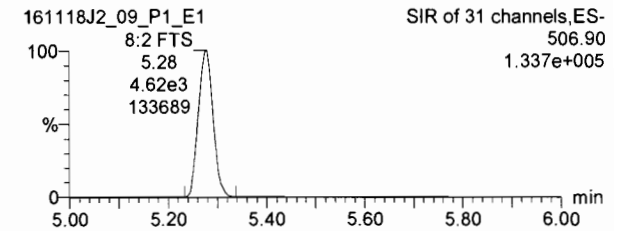
PFOS



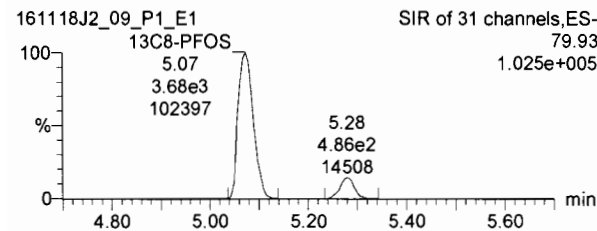
PFDA



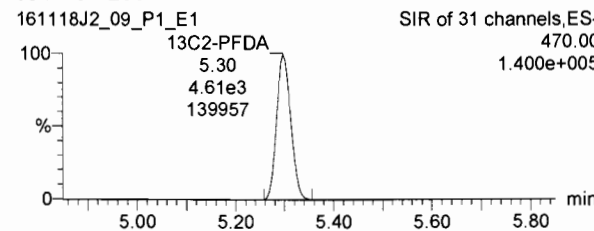
8:2 FTS



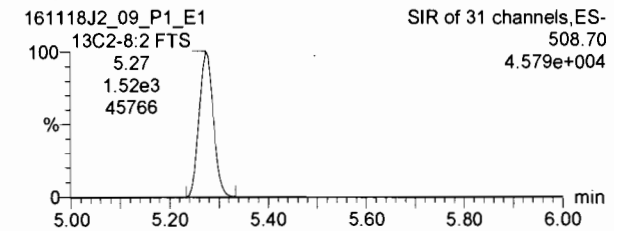
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



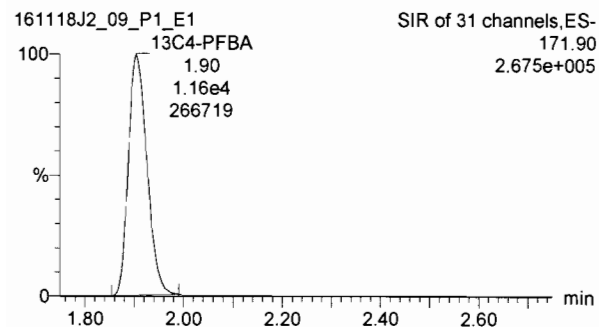
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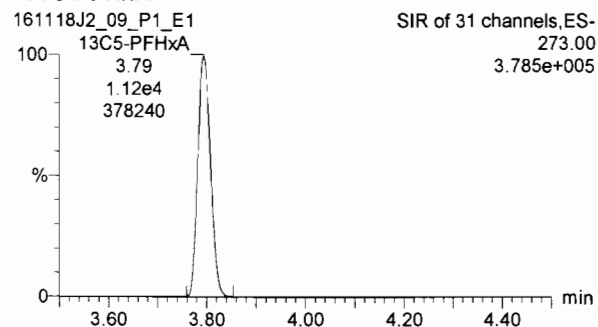
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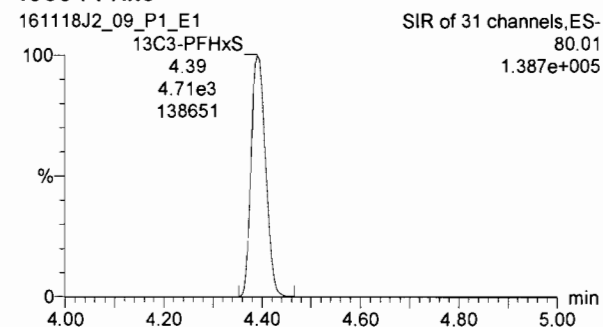
13C4-PFBA



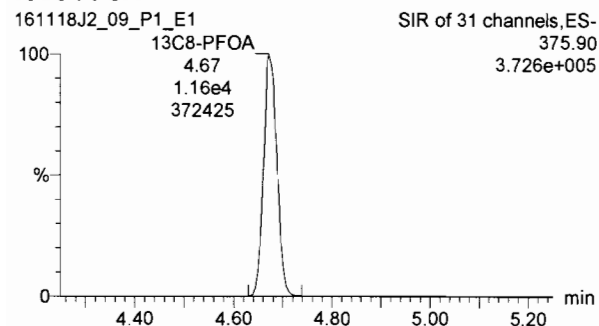
13C5-PFHxA



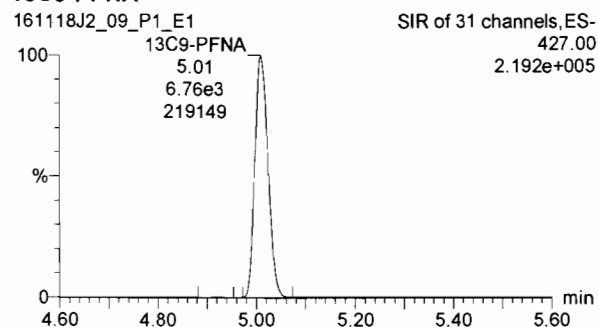
13C3-PFHxS



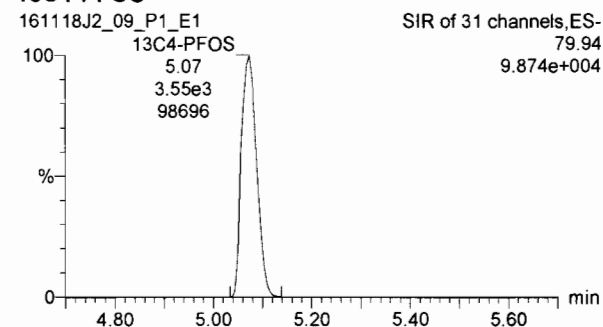
13C8-PFOA



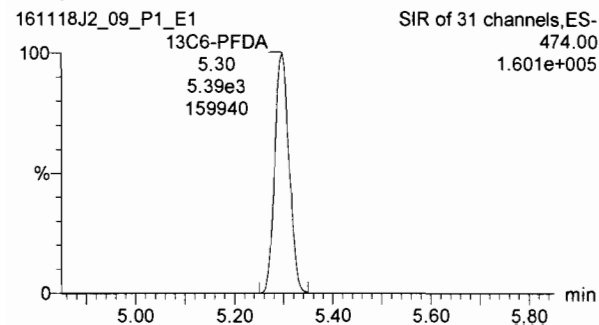
13C9-PFNA



13C4-PFOS



13C6-PFDA

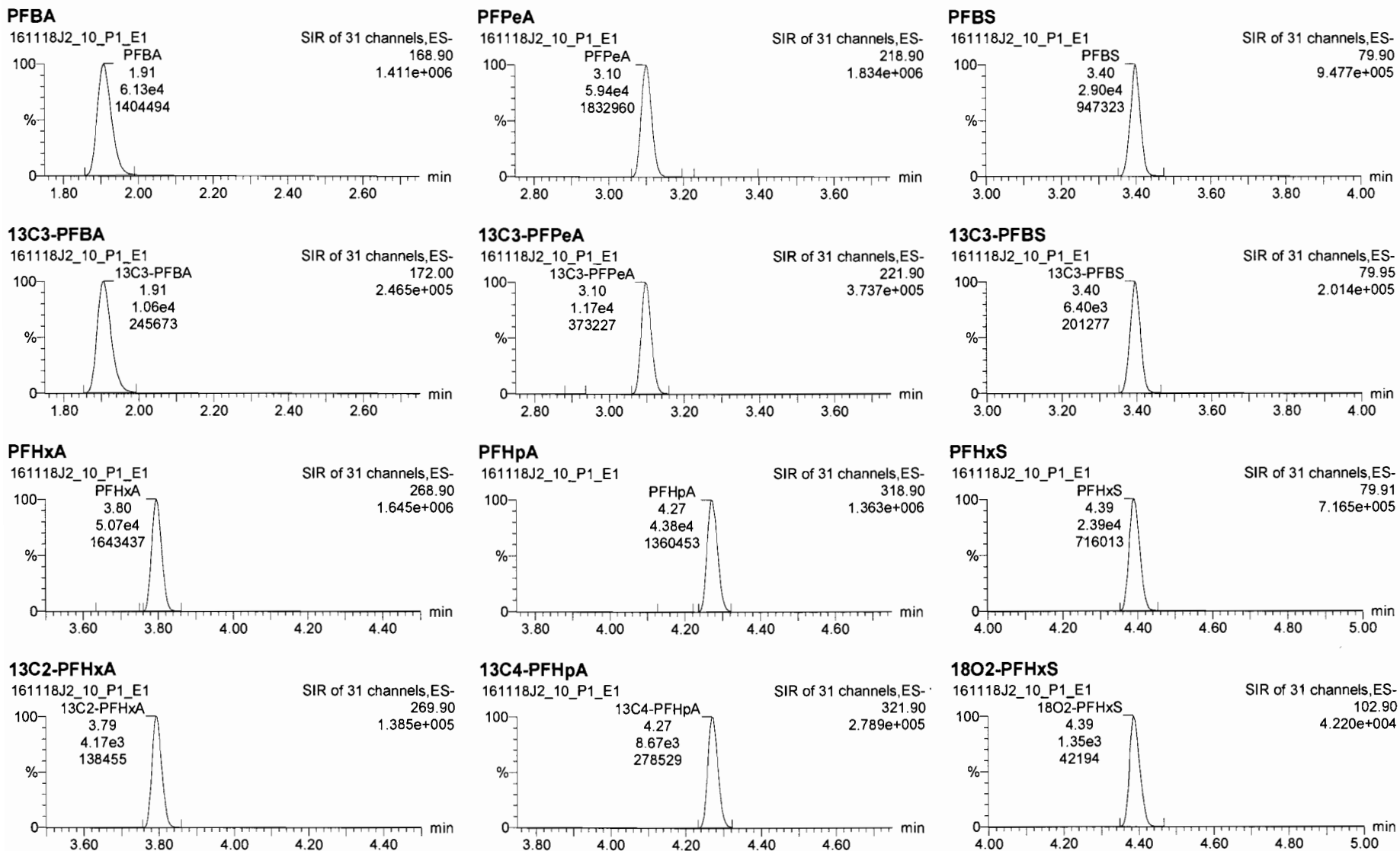


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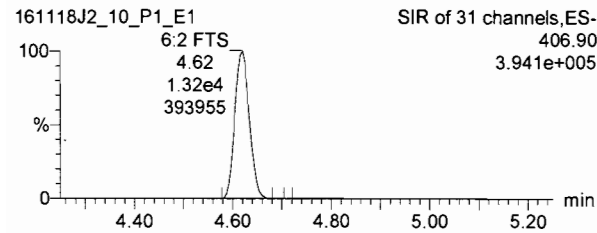


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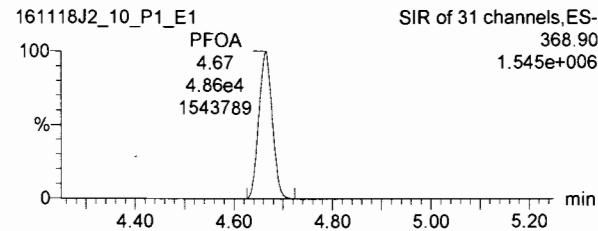
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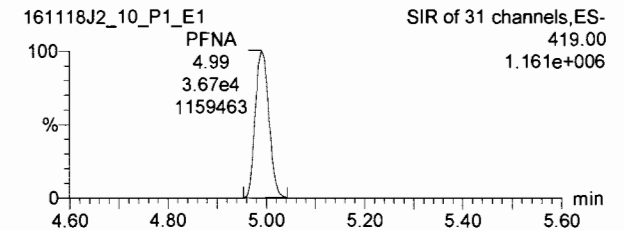
6:2 FTS



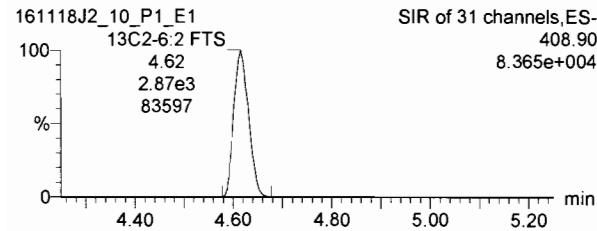
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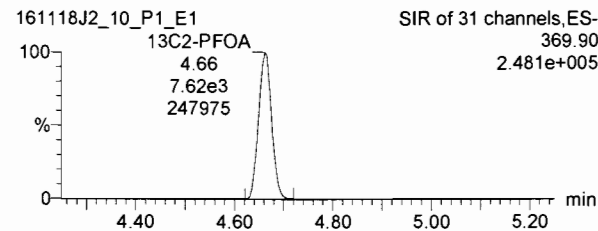
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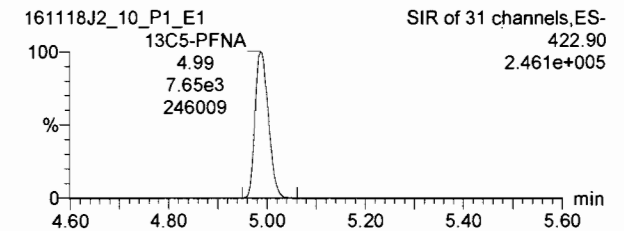
13C2-6:2 FTS



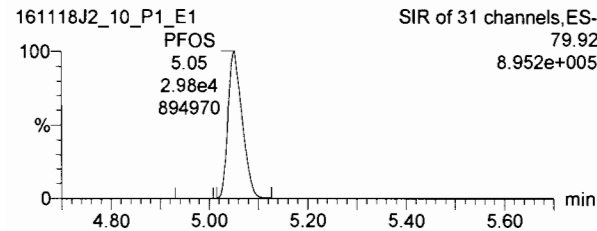
13C2-PFOA



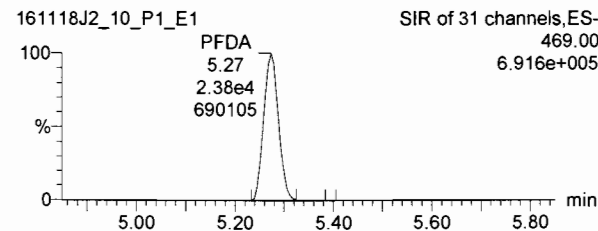
13C5-PFNA



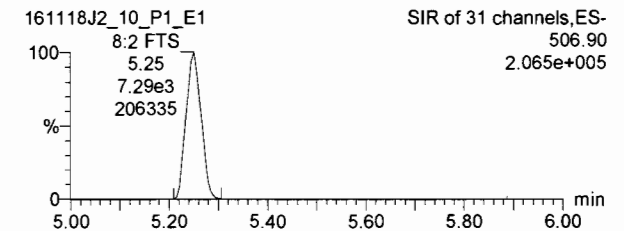
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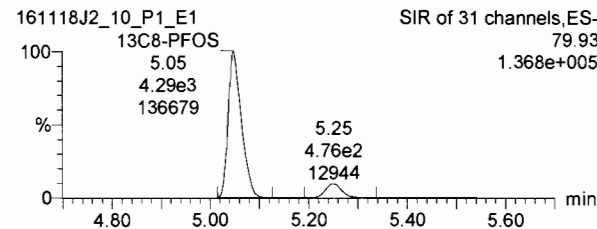
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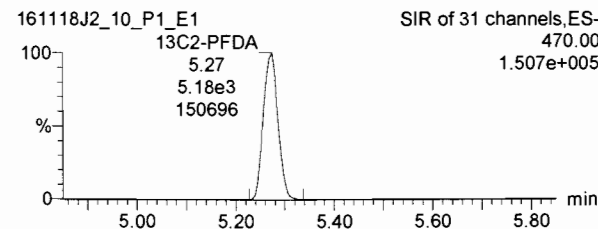
8:2 FTS



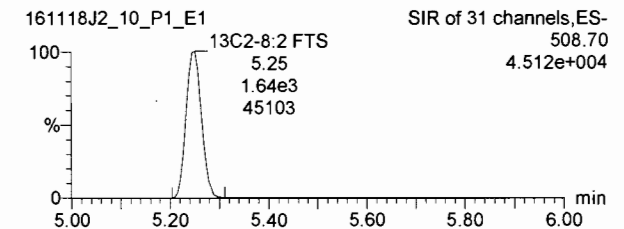
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



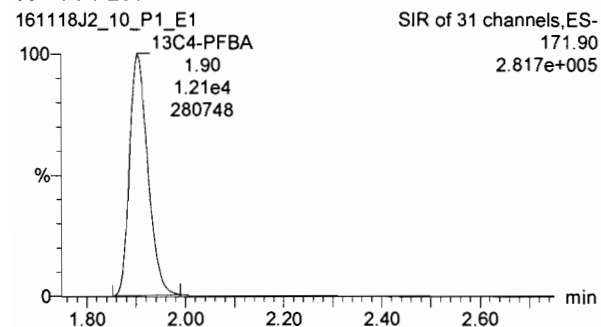
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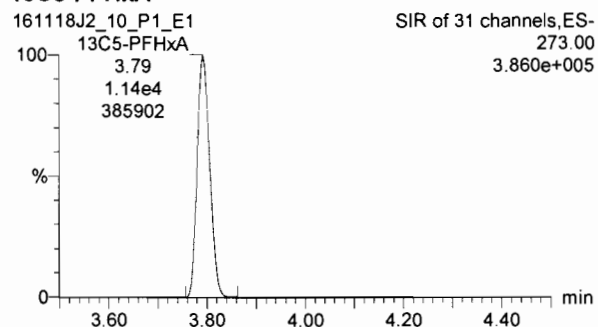
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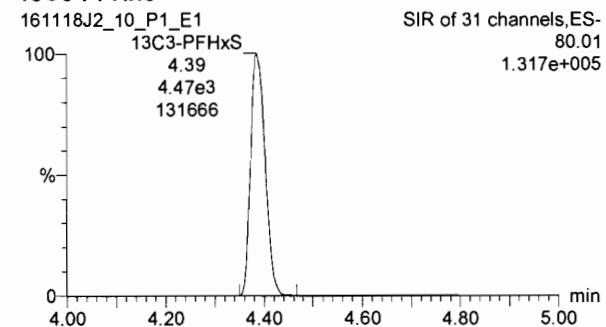
13C4-PFBA



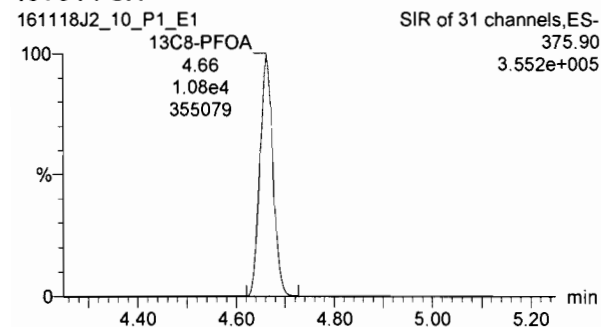
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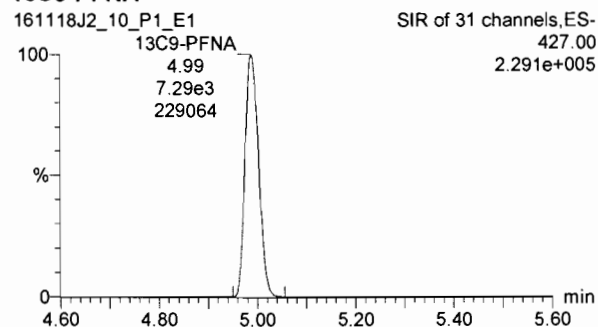
13C3-PFHxS



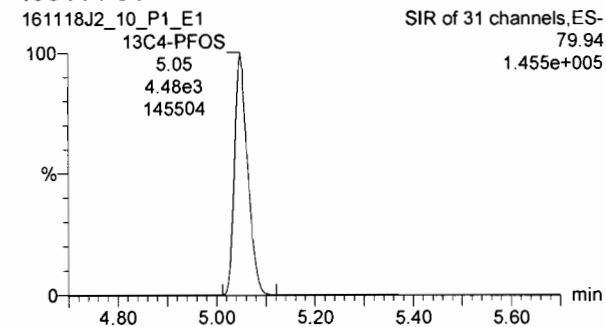
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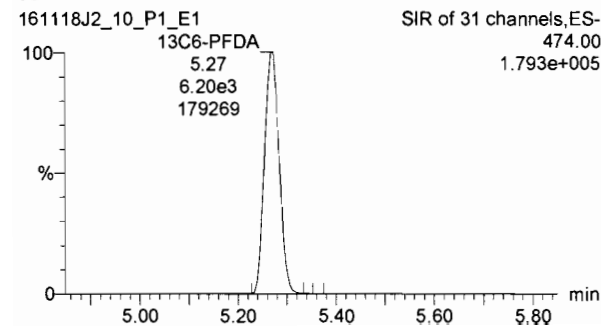
13C9-PFNA



13C4-PFOS



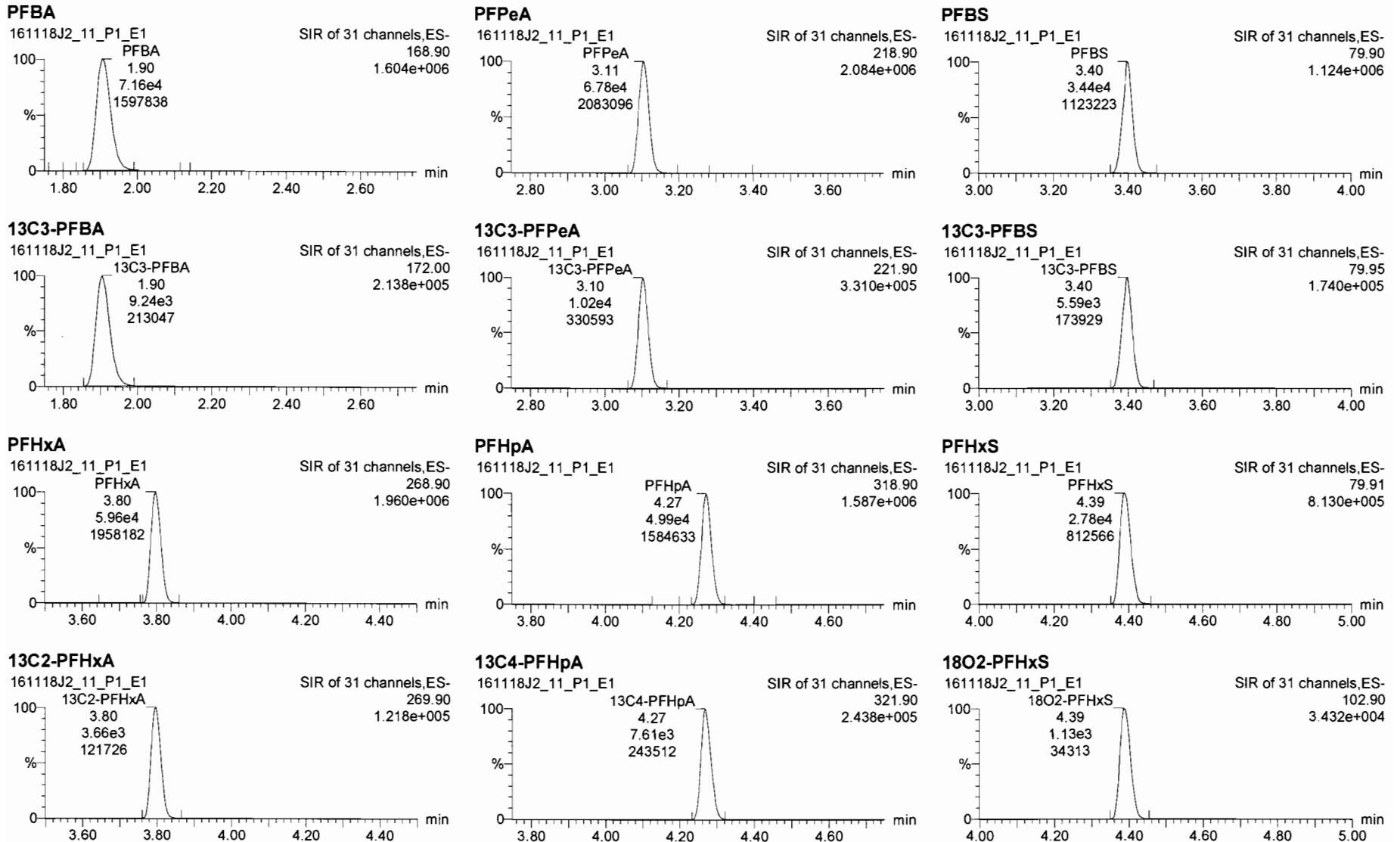
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Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

Name: 161118J2_11.wiff, Date: 18-Nov-2016, Time: 19:04:12, ID: ST161118J2-10 PFC C5 16K1723, Description: PFC C5 16K1723 A



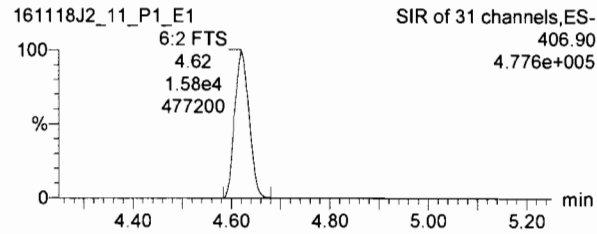
Dataset: Untitled

Last Altered: Saturday, November 19, 2016 12:55:25 Pacific Standard Time

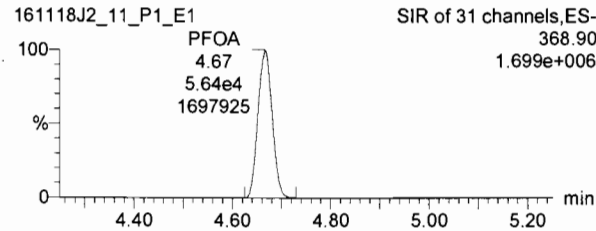
Printed: Saturday, November 19, 2016 12:55:40 Pacific Standard Time

Name: 161118J2_11.wiff, Date: 18-Nov-2016, Time: 19:04:12, ID: ST161118J2-10 PFC C5 16K1723, Description: PFC C5 16K1723 A

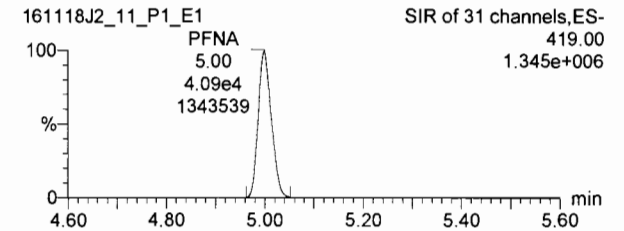
6:2 FTS



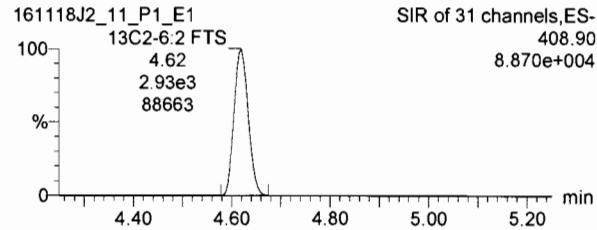
PFOA



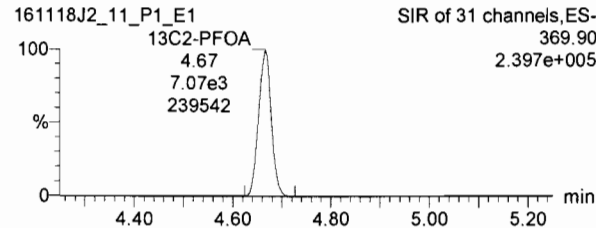
PFNA



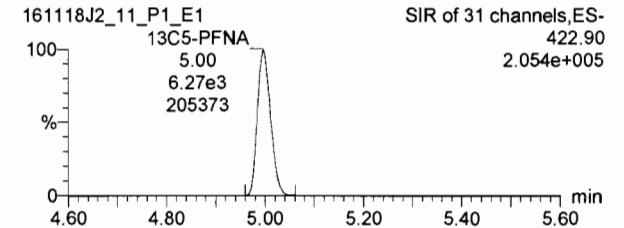
13C2-6:2 FTS



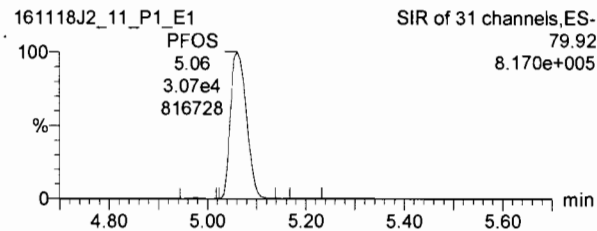
13C2-PFOA



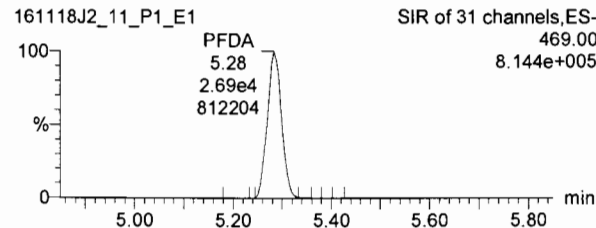
13C5-PFNA



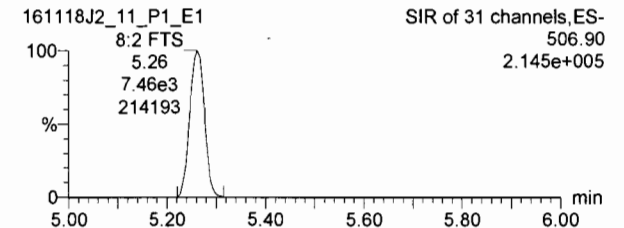
PFOS



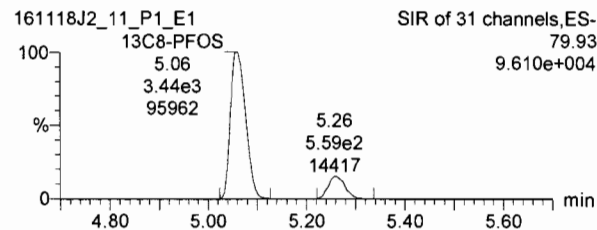
PFDA



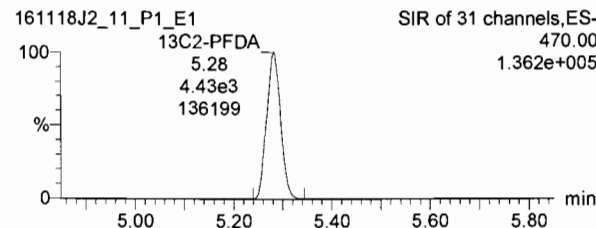
8:2 FTS



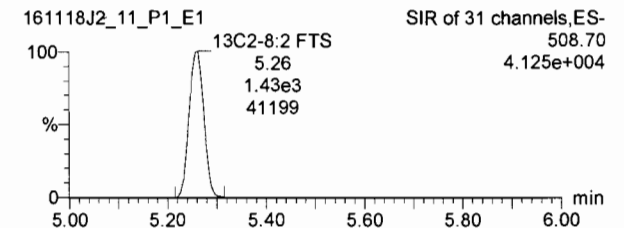
13C8-PFOS



13C2-PFDA



13C2-8:2 FTS



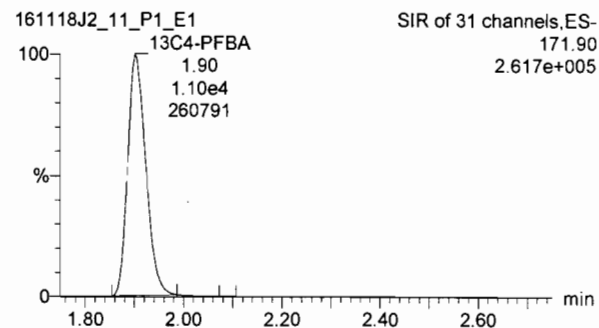
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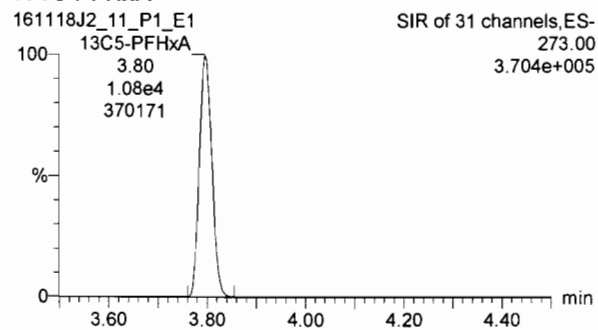
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Name: 161118J2_11.wiff, Date: 18-Nov-2016, Time: 19:04:12, ID: ST161118J2-10 PFC C5 16K1723, Description: PFC C5 16K1723 A

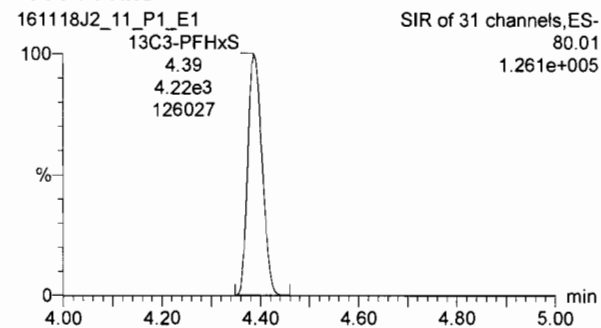
13C4-PFBA



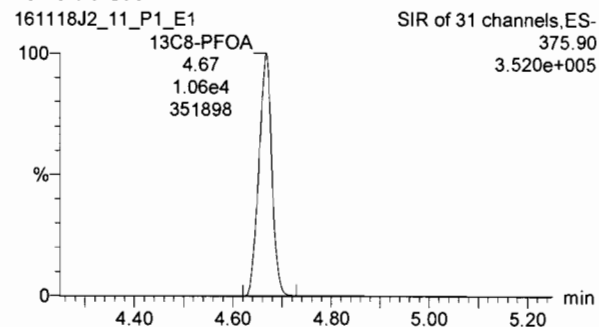
13C5-PFHxA



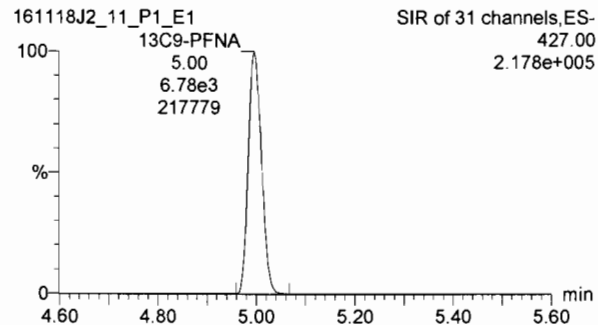
13C3-PFHxS



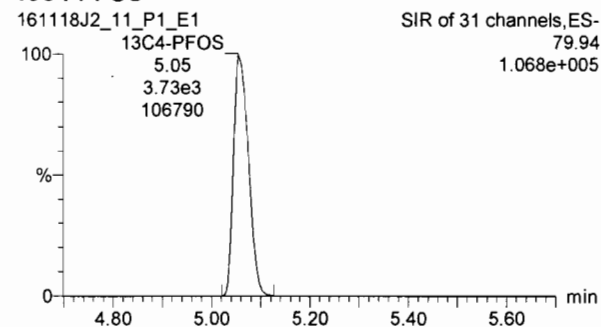
13C8-PFOA



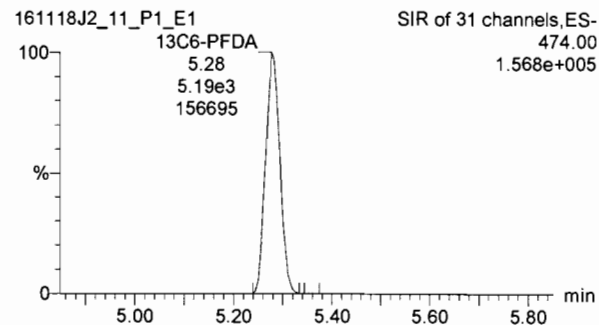
13C9-PFNA



13C4-PFOS



13C6-PFDA



Dataset: U:\Q2.PRO\Results\161118J2\161118J2_13.qld

Last Altered: Monday, November 21, 2016 15:52:24 Pacific Standard Time

Printed: Monday, November 21, 2016 15:53:35 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 18_A No4-2FTS_161118.mdb 19 Nov 2016 12:55:02

Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161118J2_13.wiff, Date: 18-Nov-2016, Time: 19:28:40, ID: SS161118J2-1 PFC SSS 16J1810, Description: PFC SSS 16J1810 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	168.90	2.63e4	1.10e4		1.000	1.91	30.4	121.4
2	2 PFPeA	218.90	2.00e4	1.26e4		1.000	3.11	23.1	92.5
3	3 PFBS	79.90	1.17e4	6.92e3		1.000	3.40	27.2	108.7
4	4 PFHxA	268.90	2.22e4	4.28e3		1.000	3.80	31.2	124.8
5	5 PFHpA	318.90	1.84e4	8.37e3		1.000	4.28	33.2	132.8
6	6 PFHxS	79.91	6.70e3	1.12e3		1.000	4.40	22.9	91.7
7	7 6:2 FTS	406.90	4.86e3	2.41e3		1.000	4.63	26.6	106.3
8	8 PFOA	368.90	1.49e4	6.69e3		1.000	4.67	22.6	90.3
9	9 PFNA	419.00	1.14e4	5.85e3		1.000	5.01	29.8	119.2
10	10 PFOS	79.92	5.24e3	2.56e3		1.000	5.06	22.2	88.9
11	11 PFDA	469.00	4.84e3	2.16e3		1.000	5.29	28.5	113.9
12	12 8:2 FTS	506.90	1.30e3	6.66e2		1.000	5.27	27.4	109.5
13	13 13C3-PFBA	172.00	1.10e4	1.26e4	0.867	1.000	1.91	12.6	100.4
14	14 13C3-PFPeA	221.90	1.26e4	1.21e4	0.994	1.000	3.11	13.0	104.1
15	15 13C3-PFBS	79.95	6.92e3	1.21e4	0.564	1.000	3.40	12.6	101.1
16	16 13C2-PFHxA	269.90	4.28e3	1.21e4	0.907	1.000	3.80	4.86	97.1
17	17 13C4-PFHpA	321.90	8.37e3	1.21e4	0.742	1.000	4.28	11.6	92.9
18	18 18O2-PFHxS	102.90	1.12e3	4.29e3	0.271	1.000	4.40	12.0	96.2
19	19 13C2-6:2 FTS	408.90	2.41e3	1.00e4	0.224	1.000	4.63	13.4	107.3
20	20 13C2-PFOA	369.90	6.69e3	1.00e4	0.651	1.000	4.67	12.8	102.2
21	21 13C5-PFNA	422.90	5.85e3	5.95e3	1.002	1.000	5.00	12.3	98.2
22	22 13C8-PFOS	79.93	2.56e3	2.54e3	0.950	1.000	5.06	13.3	106.0
23	23 13C2-PFDA	470.00	2.16e3	2.56e3	0.827	1.000	5.29	12.8	102.1
24	24 13C2-8:2 FTS	508.70	6.66e2	2.56e3	0.260	1.000	5.26	12.5	100.0
25	25 13C4-PFBA	171.90	1.26e4	1.26e4	1.000	1.000	1.91	12.5	100.0
26	26 13C5-PFHxA	273.00	1.21e4	1.21e4	1.000	1.000	3.80	12.5	100.0
27	27 13C3-PFHxS	80.01	4.29e3	4.29e3	1.000	1.000	4.39	12.5	100.0
28	28 13C8-PFOA	375.90	1.00e4	1.00e4	1.000	1.000	4.67	12.5	100.0
29	29 13C4-PFOS	79.94	2.54e3	2.54e3	1.000	1.000	5.06	12.5	100.0
30	30 13C9-PFNA	427.00	5.95e3	5.95e3	1.000	1.000	5.00	12.5	100.0
31	Work Order 161118J2	474.00	2.56e3	2.56e3	1.000	1.000	5.28	12.5	100.0

75-125
Ⓐ

Ⓐ outside method limits.
AC 11/21/16

Dataset: Untitled

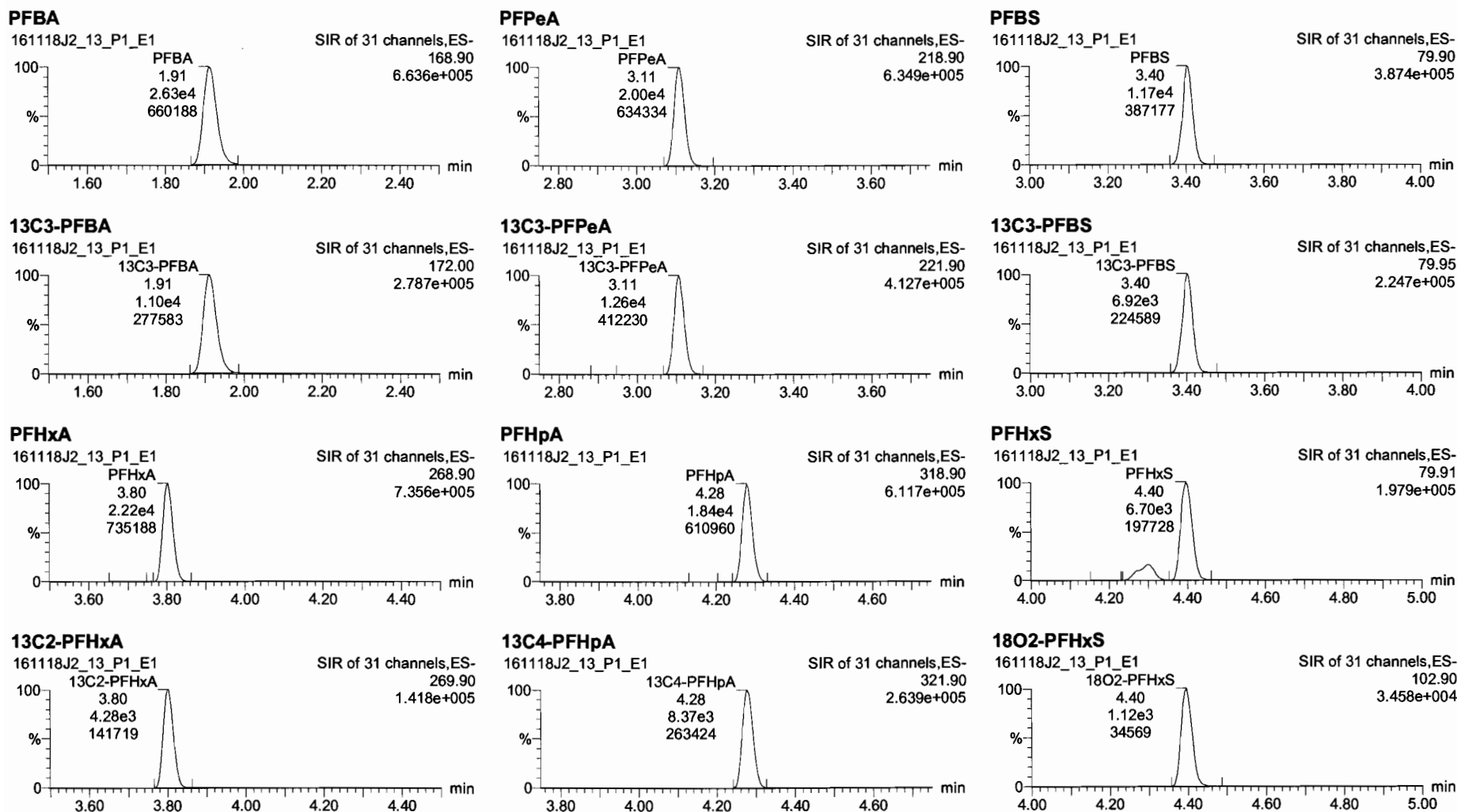
Last Altered: Monday, November 21, 2016 15:51:43 Pacific Standard Time

Printed: Monday, November 21, 2016 15:51:59 Pacific Standard Time

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Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

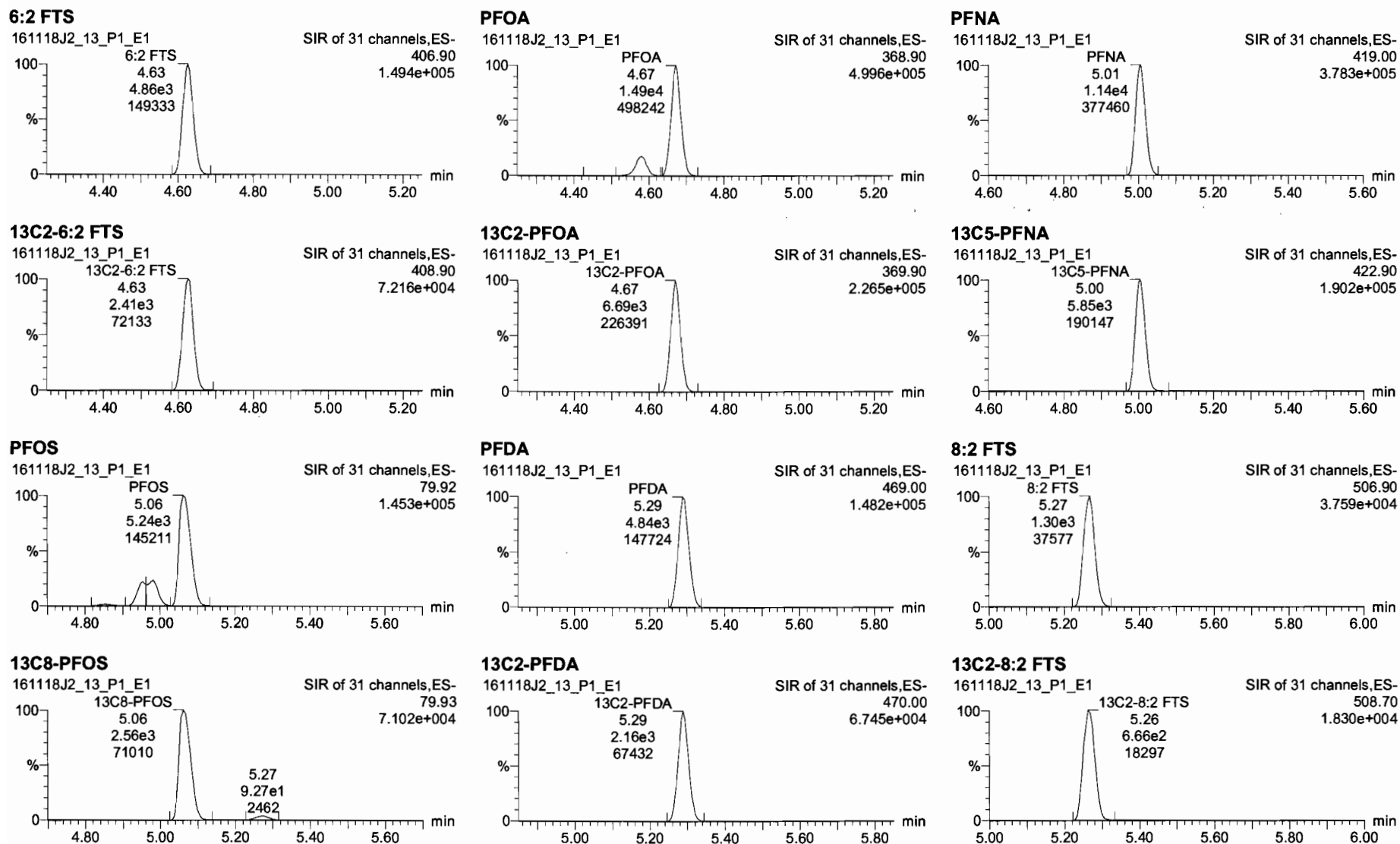
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Dataset: Untitled

Last Altered: Monday, November 21, 2016 15:51:43 Pacific Standard Time
Printed: Monday, November 21, 2016 15:51:59 Pacific Standard Time

Name: 161118J2_13.wiff, Date: 18-Nov-2016, Time: 19:28:40, ID: SS161118J2-1 PFC SSS 16J1810, Description: PFC SSS 16J1810 A

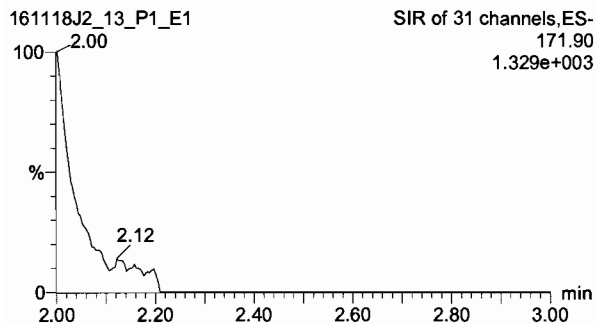


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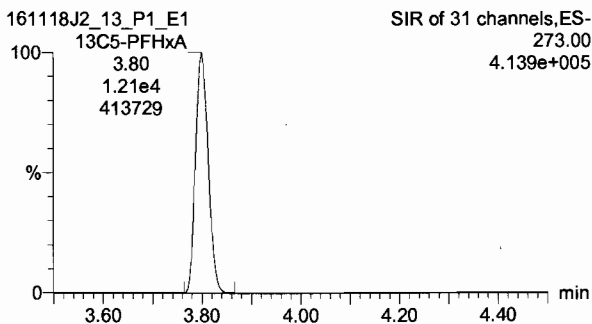
Last Altered: Monday, November 21, 2016 15:51:43 Pacific Standard Time
Printed: Monday, November 21, 2016 15:51:59 Pacific Standard Time

Name: 161118J2_13.wiff, Date: 18-Nov-2016, Time: 19:28:40, ID: SS161118J2-1 PFC SSS 16J1810, Description: PFC SSS 16J1810 A

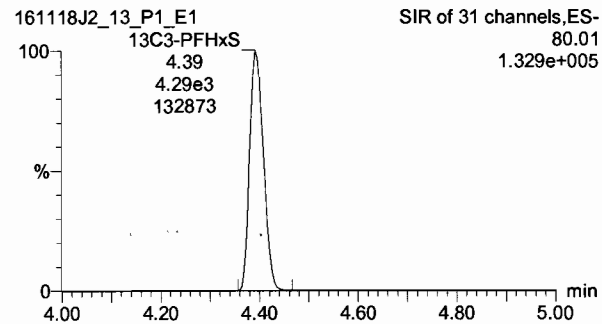
13C4-PFBA



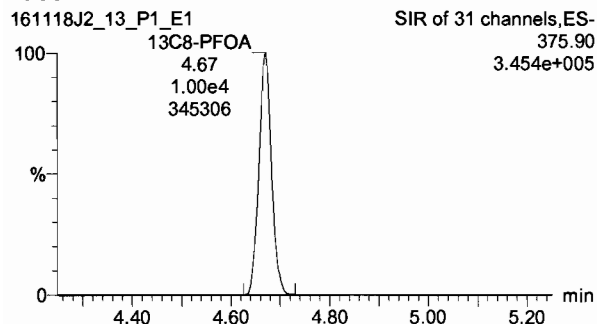
13C5-PFHxA



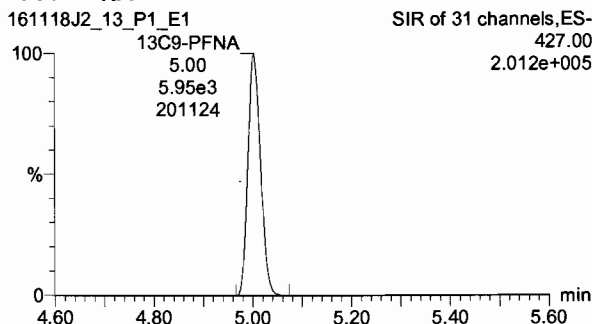
13C3-PFHxS



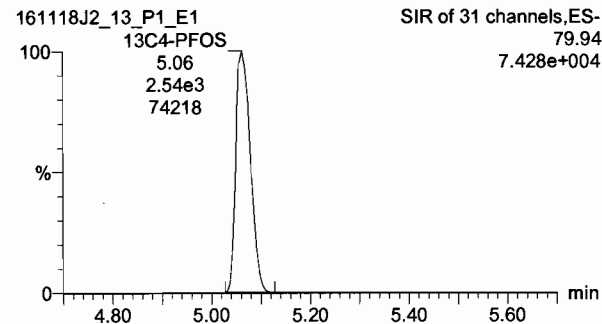
13C8-PFOA



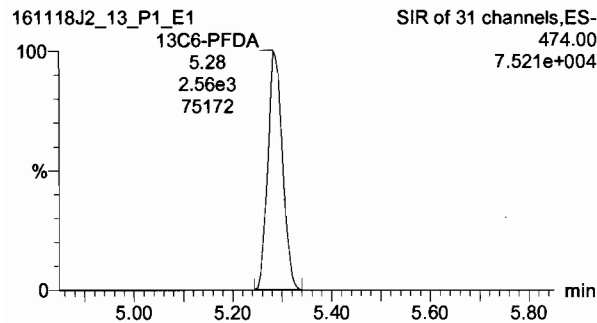
13C9-PFNA



13C4-PFOS



13C6-PFDA



Dataset: U:\Q2.PRO\Results\161121J4\161121J4_04.qld

Last Altered: Tuesday, November 22, 2016 08:55:40 Pacific Standard Time

Printed: Tuesday, November 22, 2016 10:09:28 Pacific Standard Time

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Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161121J4_04.wiff, Date: 21-Nov-2016, Time: 12:25:30, ID: SS161118J2-1 PFC SSS 16J1810, Description: PFC SSS 16J1810 A

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2	2 PFPeA	218.90	2.17e4	1.38e4	1.000	1.000	3.07	22.8	91.2
3	3 PFBS	79.90	1.26e4	7.52e3	1.000	1.000	3.38	27.0	108.0
4	4 PFHxA	268.90	2.43e4	4.88e3	1.000	1.000	3.78	30.0	119.9
5	5 PFHpA	318.90	2.15e4	1.04e4	1.000	1.000	4.25	31.2	124.9
6	6 PFHxS	79.91	8.48e3	1.52e3	1.000	1.000	4.37	21.4	85.6
7	7 6:2 FTS	406.90	5.93e3	2.88e3	1.000	1.000	4.60	27.2	109.0
8	8 PFOA	368.90	1.80e4	8.36e3	1.000	1.000	4.65	21.8	87.2
9	9 PFNA	419.00	1.28e4	6.34e3	1.000	1.000	4.97	30.8	123.3
10	10 PFOS	79.92	5.20e3	2.47e3	1.000	1.000	5.03	22.8	91.3
11	11 PFDA	469.00	4.19e3	1.94e3	1.000	1.000	5.26	27.4	109.6
12	12 8:2 FTS	506.90	1.24e3	6.02e2	1.000	1.000	5.23	28.9	115.5
13	13 13C3-PFBA	172.00	1.15e4	1.29e4	0.867	1.000	1.85	12.9	103.5
14	14 13C3-PFPeA	221.90	1.38e4	1.38e4	0.994	1.000	3.07	12.5	100.3
15	15 13C3-PFBS	79.95	7.52e3	1.38e4	0.564	1.000	3.37	12.0	96.3
16	16 13C2-PFHxA	269.90	4.88e3	1.38e4	0.907	1.000	3.78	4.86	97.2
17	17 13C4-PFHpA	321.90	1.04e4	1.38e4	0.742	1.000	4.25	12.7	101.4
18	18 18O2-PFHxS	102.90	1.52e3	5.28e3	0.271	1.000	4.37	13.2	106.0
19	19 13C2-6:2 FTS	408.90	2.88e3	9.25e3	0.224	1.000	4.60	17.4	139.0
20	20 13C2-PFOA	369.90	8.36e3	9.25e3	0.651	1.000	4.64	17.3	138.8
21	21 13C5-PFNA	422.90	6.34e3	6.66e3	1.002	1.000	4.97	11.9	94.9
22	22 13C8-PFOS	79.93	2.47e3	2.59e3	0.950	1.000	5.03	12.6	100.6
23	23 13C2-PFDA	470.00	1.94e3	2.51e3	0.827	1.000	5.26	11.6	93.1
24	24 13C2-8:2 FTS	508.70	6.02e2	2.51e3	0.260	1.000	5.23	11.5	92.1
25	25 13C4-PFBA	171.90	1.29e4	1.29e4	1.000	1.000	1.85	12.5	100.0
26	26 13C5-PFHxA	273.00	1.38e4	1.38e4	1.000	1.000	3.78	12.5	100.0
27	27 13C3-PFHxS	80.01	5.28e3	5.28e3	1.000	1.000	4.37	12.5	100.0
28	28 13C8-PFOA	375.90	9.25e3	9.25e3	1.000	1.000	4.64	12.5	100.0
29	29 13C4-PFOS	79.94	2.59e3	2.59e3	1.000	1.000	5.03	12.5	100.0
30	30 13C9-PFNA	427.00	6.66e3	6.66e3	1.000	1.000	4.97	12.5	100.0
31	31 13C8-PFDA	474.00	2.51e3	2.51e3	1.000	1.000	5.25	12.5	100.0

75-125
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Ⓐ

Ⓐ % recovery based on linear isomer only.

AC
11/22/16

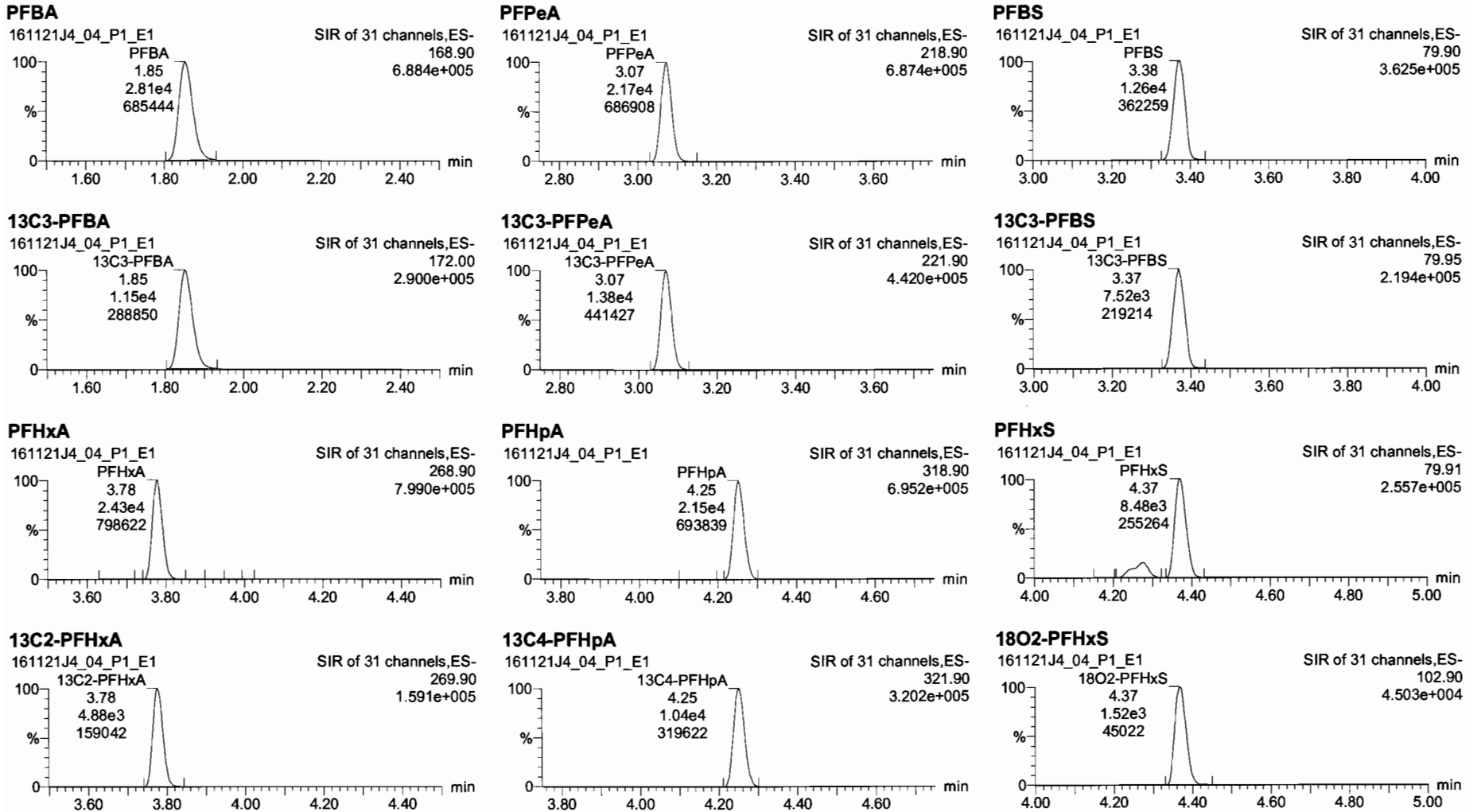
Sample Name	Acquisition Date	Sample ID	Sample Comment
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2 161121J4_02	11/21/2016 12:01:00	ST161120J2-1 PFC C3.5 16K1421	PFC C3.5 16K1421 A
3 161121J4_03	11/21/2016 12:13:14	IPA	IPA
4 161121J4_04	11/21/2016 12:25:30	SS161118J2-1 PFC SSS 16J1810	PFC SSS 16J1810 A
5 161121J4_05	11/21/2016 12:37:43	IPA	IPA
6 161121J4_06	11/21/2016 12:49:58	B6K0124-BS1	OPR
7 161121J4_07	11/21/2016 13:02:12	B6K0124-BSD1	OPR Dup
8 161121J4_08	11/21/2016 13:14:25	IPA	IPA
9 161121J4_09	11/21/2016 13:26:39	B6K0124-BLK1	Method Blank
10 161121J4_10	11/21/2016 13:38:53	IPA	IPA
11 161121J4_11	11/21/2016 13:51:06	1601447-01	OF-INF01-111116
12 161121J4_12	11/21/2016 14:03:22	1601447-02	OF-GAC-EFF01-111116
13 161121J4_13	11/21/2016 14:15:40	IPA	IPA
14 161121J4_14	11/21/2016 14:27:55	ST161120J2-2 PFC C3.5 16K1421	PFC C3.5 16K1421 A
15 161121J4_15	11/21/2016 14:40:09	IPA	IPA

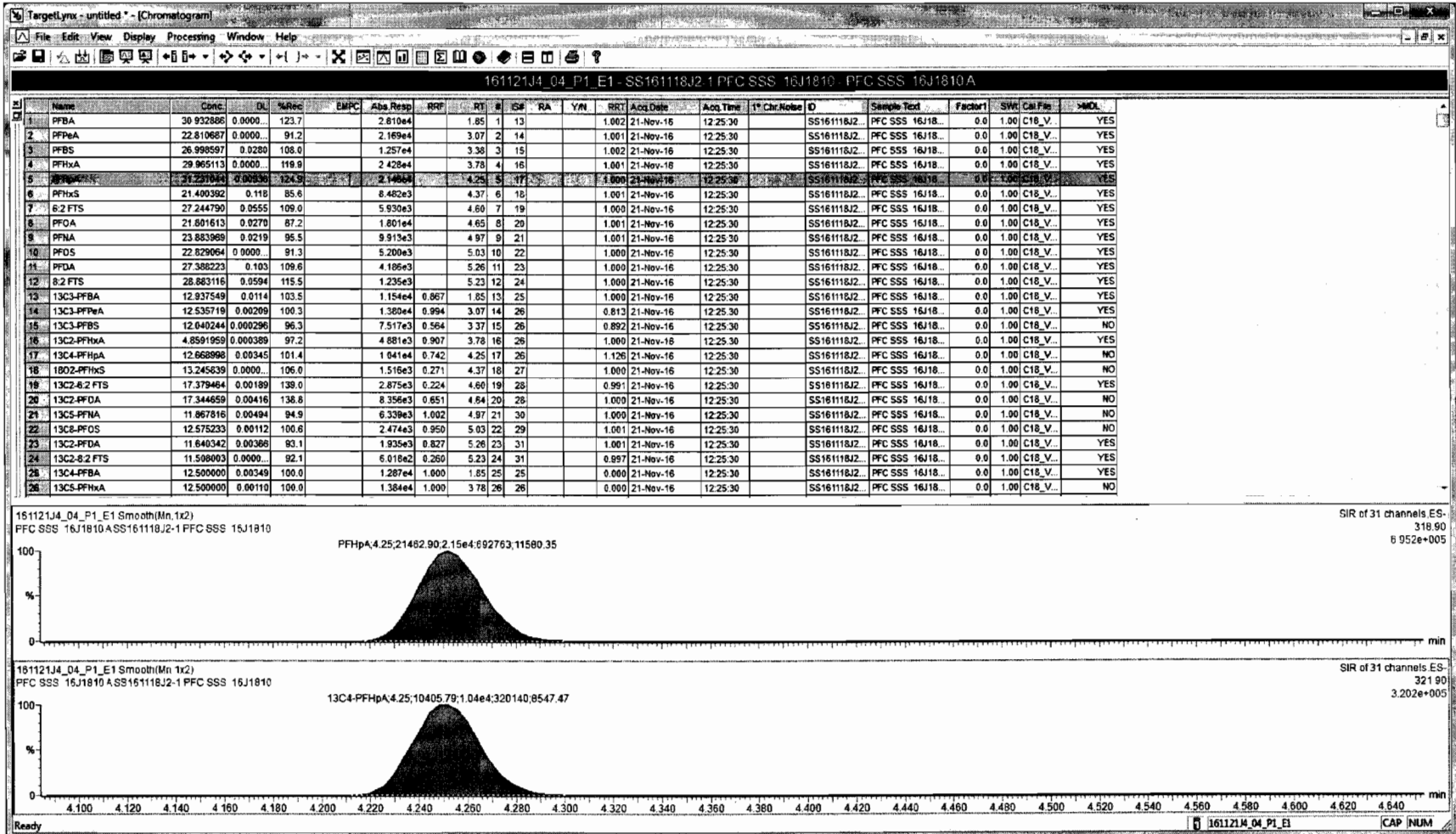
Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 08:53:22 Pacific Standard Time
Printed: Tuesday, November 22, 2016 08:53:36 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 18_A No4-2FTS_161118.mdb 19 Nov 2016 12:55:02
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_11-18-16_L18_A.cdb 19 Nov 2016 12:55:25

Name: 161121J4_04.wiff, Date: 21-Nov-2016, Time: 12:25:30, ID: SS161118J2-1 PFC SSS 16J1810, Description: PFC SSS 16J1810 A

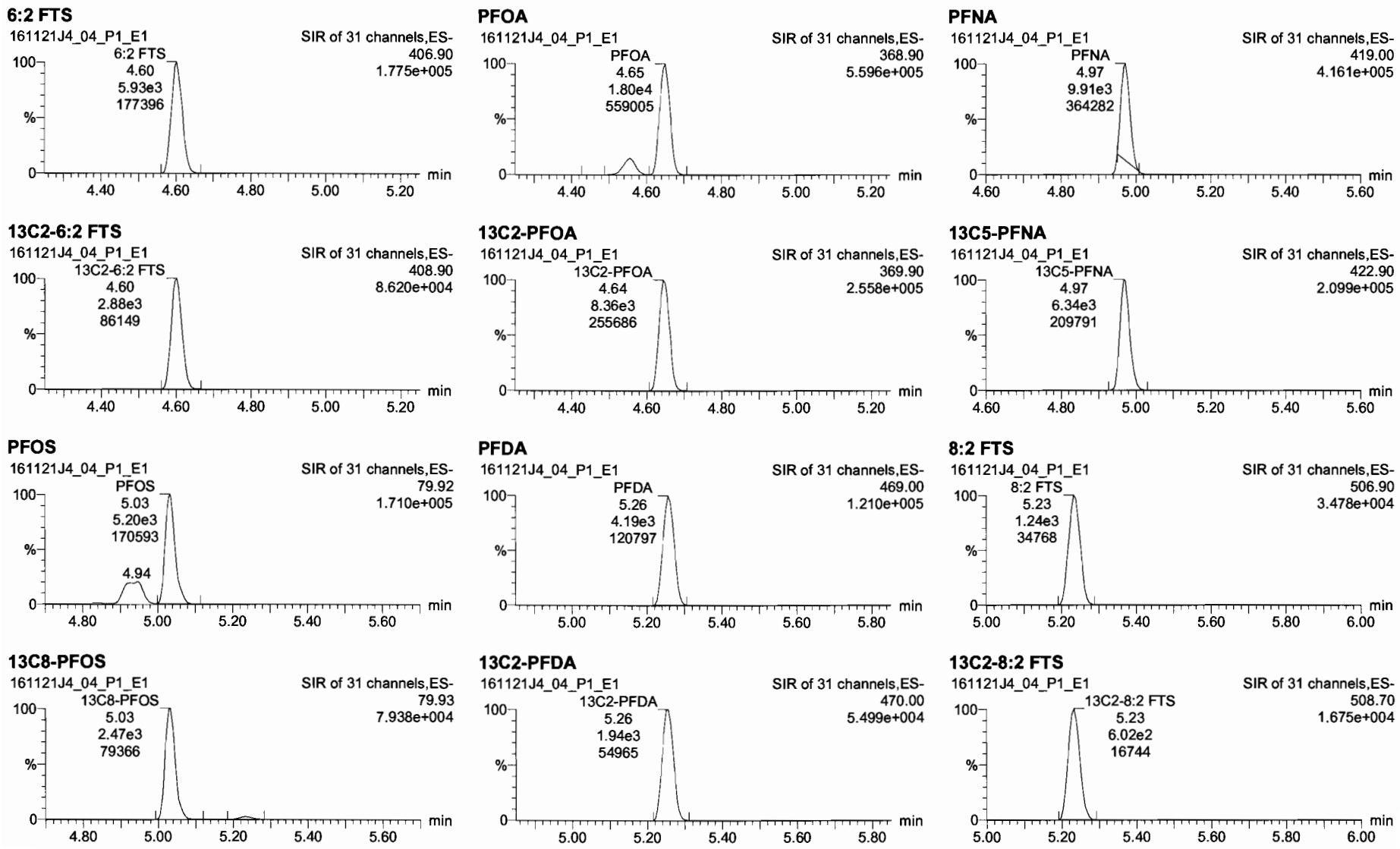


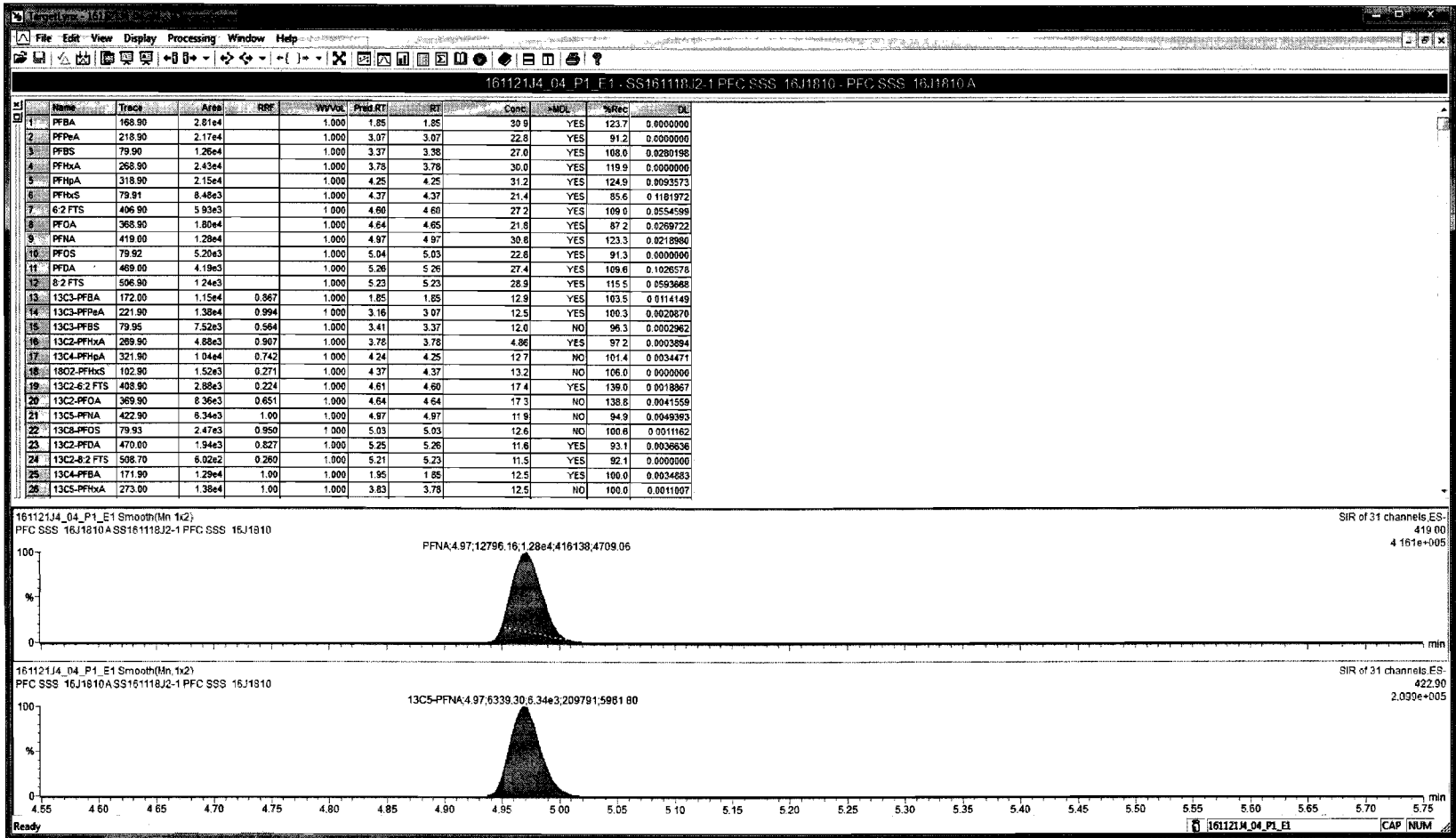


Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 08:53:22 Pacific Standard Time
Printed: Tuesday, November 22, 2016 08:53:36 Pacific Standard Time

Name: 161121J4_04.wiff, Date: 21-Nov-2016, Time: 12:25:30, ID: SS161118J2-1 PFC SSS 16J1810, Description: PFC SSS 16J1810 A



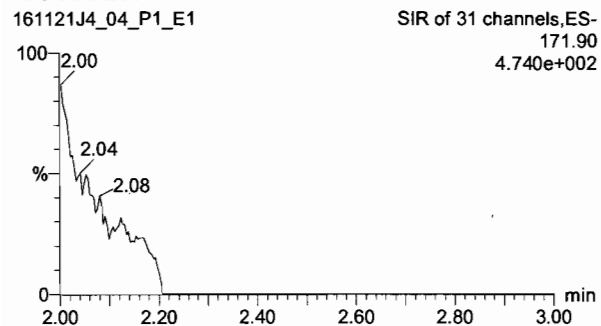


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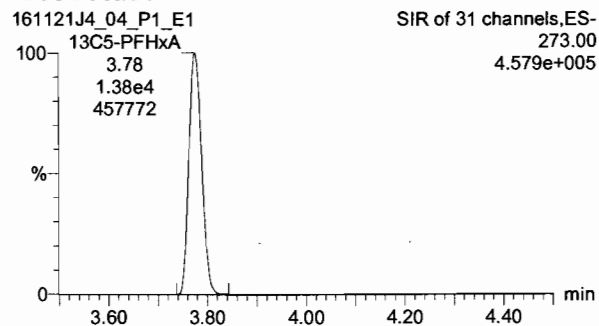
Last Altered: Tuesday, November 22, 2016 08:53:22 Pacific Standard Time
Printed: Tuesday, November 22, 2016 08:53:36 Pacific Standard Time

Name: 161121J4_04.wiff, Date: 21-Nov-2016, Time: 12:25:30, ID: SS161118J2-1 PFC SSS 16J1810, Description: PFC SSS 16J1810 A

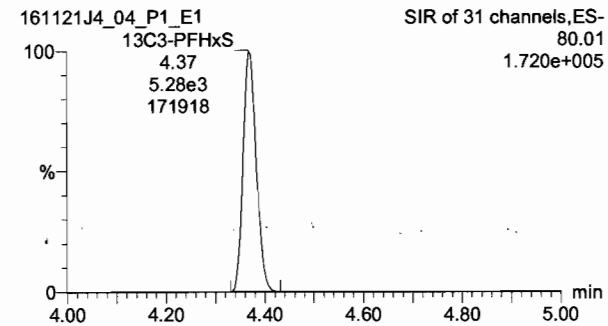
13C4-PFBA



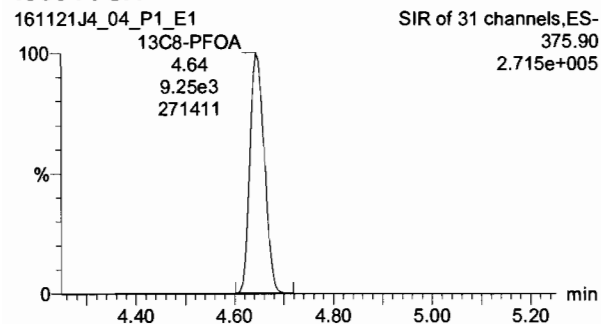
13C5-PFHxA



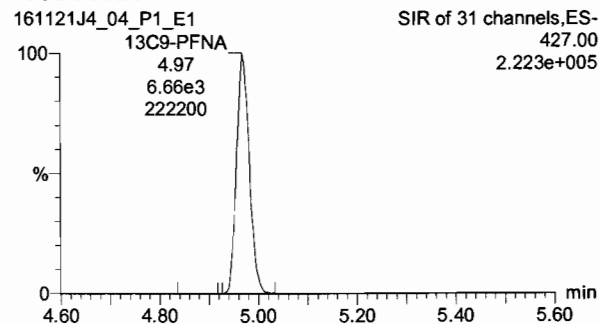
13C3-PFHxS



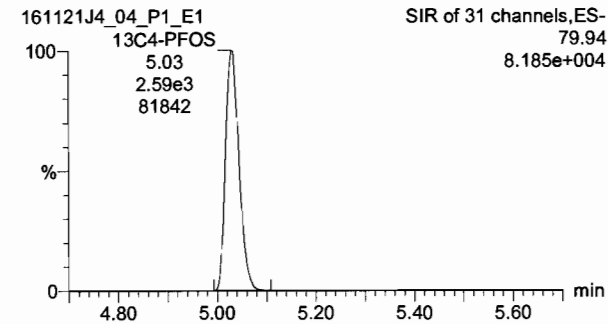
13C8-PFOA



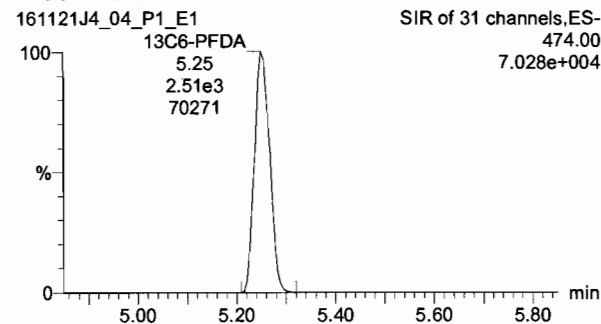
13C9-PFNA



13C4-PFOS



13C6-PFDA



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:27:47 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_A_FULL_LINEAR.mdb 22 Nov 2016 14:48:05

Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

Compound name: PFBA

Correlation coefficient: $r = 0.999216$, $r^2 = 0.998432$

Calibration curve: $0.492927 * x + -0.0410615$

Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	1.93	4.29e2	2.07e4	0.608	0.518	21.7
2	2 161122G2_3	1.00	1.93	7.79e2	2.25e4	0.959	0.432	-4.1
3	3 161122G2_4	2.00	1.93	1.63e3	2.32e4	1.86	0.439	-6.8
4	4 161122G2_5	5.00	1.93	3.55e3	2.31e4	3.97	0.383	-20.6
5	5 161122G2_6	10.0	1.93	8.96e3	2.17e4	10.6	0.516	5.6
6	6 161122G2_7	25.0	1.93	1.94e4	1.87e4	26.4	0.519	5.5
7	7 161122G2_8	50.0	1.93	3.75e4	1.90e4	50.0	0.492	0.0
8	8 161122G2_9	75.0	1.93	5.74e4	1.98e4	73.5	0.482	-2.0
9	9 161122G2_10	100	1.93	7.24e4	1.83e4	101	0.496	0.7

AC
11/22/16

Compound name: PFPeA

Correlation coefficient: $r = 0.999341$, $r^2 = 0.998683$

Calibration curve: $1.00273 * x + -0.119981$

Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	2.85	3.66e2	9.28e3	0.611	0.986	22.2
2	2 161122G2_3	1.00	2.85	6.80e2	9.67e3	0.996	0.879	-0.4
3	3 161122G2_4	2.00	2.86	1.32e3	9.90e3	1.79	0.836	-10.6
4	4 161122G2_5	5.00	2.85	3.20e3	1.02e4	4.02	0.782	-19.6
5	5 161122G2_6	10.0	2.85	8.05e3	9.55e3	10.6	1.05	6.4
6	6 161122G2_7	25.0	2.85	1.68e4	8.18e3	25.7	1.03	2.7
7	7 161122G2_8	50.0	2.85	3.26e4	8.27e3	49.3	0.986	-1.5
8	8 161122G2_9	75.0	2.85	4.96e4	8.14e3	76.0	1.01	1.4
9	9 161122G2_10	100	2.85	5.76e4	7.23e3	99.5	0.996	-0.5

CS 4.5 & 5 excluded
from 6:2 FTS regression.

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: PFBS

Correlation coefficient: $r = 0.999283$, $r^2 = 0.998566$

Calibration curve: $1.79216 * x + -0.145672$

Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	3.10	4.84e2	6.26e3	0.620	1.93	24.1
2	2 161122G2_3	1.00	3.10	8.53e2	6.27e3	1.03	1.70	3.1
3	3 161122G2_4	2.00	3.10	1.59e3	6.78e3	1.72	1.47	-14.0
4	4 161122G2_5	5.00	3.10	4.15e3	7.36e3	4.01	1.41	-19.7
5	5 161122G2_6	10.0	3.10	9.73e3	6.40e3	10.7	1.90	7.0
6	6 161122G2_7	25.0	3.10	2.06e4	5.76e3	25.0	1.79	-0.1
7	7 161122G2_8	50.0	3.10	3.75e4	5.35e3	48.9	1.75	-2.2
8	8 161122G2_9	75.0	3.10	5.77e4	5.29e3	76.2	1.82	1.6
9	9 161122G2_10	100	3.10	7.03e4	4.89e3	100	1.80	0.4

Compound name: PFHxA

Correlation coefficient: $r = 0.999245$, $r^2 = 0.998491$

Calibration curve: $0.598427 * x + 0.0095449$

Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	3.47	3.91e2	5.21e3	0.612	0.751	22.3
2	2 161122G2_3	1.00	3.47	6.55e2	5.44e3	0.989	0.602	-1.1
3	3 161122G2_4	2.00	3.47	1.13e3	5.54e3	1.69	0.512	-15.3
4	4 161122G2_5	5.00	3.47	2.82e3	5.55e3	4.23	0.508	-15.5
5	5 161122G2_6	10.0	3.47	6.63e3	5.30e3	10.4	0.625	4.3
6	6 161122G2_7	25.0	3.47	1.40e4	4.52e3	25.9	0.621	3.6
7	7 161122G2_8	50.0	3.47	2.69e4	4.31e3	52.1	0.624	4.2
8	8 161122G2_9	75.0	3.47	4.00e4	4.48e3	74.5	0.594	-0.7
9	9 161122G2_10	100	3.47	4.95e4	4.22e3	98.0	0.587	-2.0

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: PFHpA

Correlation coefficient: $r = 0.999639$, $r^2 = 0.999279$

Calibration curve: $1.55279 * x + -0.138431$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	3.98	9.73e2	1.51e4	0.608	1.61	21.5
2	2 161122G2_3	1.00	3.98	1.74e3	1.58e4	0.979	1.38	-2.1
3	3 161122G2_4	2.00	3.98	3.68e3	1.71e4	1.82	1.34	-9.2
4	4 161122G2_5	5.00	3.98	8.49e3	1.63e4	4.28	1.30	-14.3
5	5 161122G2_6	10.0	3.98	2.03e4	1.60e4	10.3	1.58	3.0
6	6 161122G2_7	25.0	3.98	4.48e4	1.42e4	25.4	1.57	1.7
7	7 161122G2_8	50.0	3.98	8.30e4	1.36e4	49.2	1.52	-1.7
8	8 161122G2_9	75.0	3.98	1.27e5	1.35e4	75.5	1.56	0.7
9	9 161122G2_10	100	3.98	1.54e5	1.23e4	100	1.56	0.4

Compound name: PFHxS

Correlation coefficient: $r = 0.998761$, $r^2 = 0.997524$

Calibration curve: $1.72095 * x + -0.0266266$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	4.09	4.64e2	6.01e3	0.576	1.93	15.3
2	2 161122G2_3	1.00	4.09	8.63e2	6.30e3	1.01	1.71	1.1
3	3 161122G2_4	2.00	4.09	1.70e3	7.02e3	1.78	1.51	-11.2
4	4 161122G2_5	5.00	4.09	3.79e3	6.33e3	4.36	1.49	-12.8
5	5 161122G2_6	10.0	4.09	8.81e3	6.15e3	10.4	1.79	4.1
6	6 161122G2_7	25.0	4.09	2.00e4	5.33e3	27.2	1.87	8.9
7	7 161122G2_8	50.0	4.09	3.53e4	5.46e3	47.1	1.62	-5.9
8	8 161122G2_9	75.0	4.09	5.41e4	5.36e3	73.4	1.68	-2.2
9	9 161122G2_10	100	4.09	7.00e4	4.95e3	103	1.77	2.7

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: 6:2 FTS

Coefficient of Determination: $R^2 = 0.978941$

Calibration curve: $0.00135992 * x^2 + 0.414129 * x + -0.114975$

Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Exclude, Weighting: $1/x^2$, Axis trans: None

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc	RRF	%Dev
1	1 161122G2_2	0.500	4.33	4.92e1	6.03e3	0.523	0.204	4.6
2	2 161122G2_3	1.00	4.33	1.34e2	6.29e3	0.919	0.267	-8.1
3	3 161122G2_4	2.00	4.33	3.55e2	6.05e3	2.03	0.366	1.7
4	4 161122G2_5	5.00	4.32	9.08e2	6.94e3	4.17	0.327	-16.6
5	5 161122G2_6	10.0	4.32	1.95e3	5.43e3	10.7	0.449	7.3
6	6 161122G2_7	25.0	4.32	5.91e3	5.54e3	29.6	0.534	18.5
7	7 161122G2_8	50.0	4.32	9.32e3	5.35e3	45.9	0.436	-8.1
8	8 161122G2_9	75.0	4.32	1.61e4	7.05e3	58.2	0.381	-22.5
9	9 161122G2_10	100	4.32	2.02e4	6.58e3	74.5	0.383	-25.5

Compound name: PFOA

Correlation coefficient: $r = 0.999524$, $r^2 = 0.999048$

Calibration curve: $0.899906 * x + 0.0917344$

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: $1/x$, Axis trans: None

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc	RRF	%Dev
1	1 161122G2_2	0.500	4.37	1.09e3	2.40e4	0.527	1.13	5.5
2	2 161122G2_3	1.00	4.37	2.24e3	2.87e4	0.983	0.976	-1.7
3	3 161122G2_4	2.00	4.37	4.08e3	2.79e4	1.93	0.915	-3.4
4	4 161122G2_5	5.00	4.37	9.24e3	2.85e4	4.40	0.811	-11.9
5	5 161122G2_6	10.0	4.37	2.04e4	2.60e4	10.8	0.982	8.1
6	6 161122G2_7	25.0	4.37	4.59e4	2.44e4	26.0	0.941	4.2
7	7 161122G2_8	50.0	4.37	8.53e4	2.35e4	50.3	0.908	0.7
8	8 161122G2_9	75.0	4.37	1.30e5	2.38e4	75.6	0.908	0.8
9	9 161122G2_10	100	4.37	1.53e5	2.17e4	97.9	0.882	-2.1

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: PFHpS

Correlation coefficient: $r = 0.997800$, $r^2 = 0.995604$

Calibration curve: $0.0921515 * x + -0.0228444$

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	4.45	5.82e1	2.40e4	0.577	0.0606	15.3
2	2 161122G2_3	1.00	4.45	1.24e2	2.87e4	0.834	0.0540	-16.6
3	3 161122G2_4	2.00	4.45	3.98e2	2.79e4	2.18	0.0892	9.2
4	4 161122G2_5	5.00	4.45	9.47e2	2.85e4	4.76	0.0832	-4.8
5	5 161122G2_6	10.0	4.45	1.65e3	2.60e4	8.86	0.0794	-11.4
6	6 161122G2_7	25.0	4.45	5.10e3	2.44e4	28.6	0.105	14.5
7	7 161122G2_8	50.0	4.45	8.06e3	2.35e4	46.8	0.0858	-6.4
8	8 161122G2_9	75.0	4.45	1.27e4	2.38e4	72.8	0.0891	-3.0
9	9 161122G2_10	100	4.45	1.64e4	2.17e4	103	0.0948	3.1

Compound name: PFOS

Correlation coefficient: $r = 0.996761$, $r^2 = 0.993532$

Calibration curve: $0.83439 * x + -0.165838$

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	4.78	1.21e2	5.26e3	0.543	0.574	8.5
2	2 161122G2_3	1.00	4.77	3.67e2	7.35e3	0.947	0.624	-5.3
3	3 161122G2_4	2.00	4.77	8.56e2	8.95e3	1.63	0.598	-18.4
4	4 161122G2_5	5.00	4.77	2.17e3	6.87e3	4.93	0.790	-1.4
5	5 161122G2_6	10.0	4.77	4.69e3	7.23e3	9.90	0.810	-1.0
6	6 161122G2_7	25.0	4.77	1.42e4	6.95e3	30.8	1.02	23.3
7	7 161122G2_8	50.0	4.78	1.92e4	5.80e3	49.9	0.830	-0.1
8	8 161122G2_9	75.0	4.77	3.52e4	7.19e3	73.6	0.817	-1.8
9	9 161122G2_10	100	4.77	4.44e4	6.93e3	96.1	0.800	-3.9

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: PFNA

Correlation coefficient: $r = 0.997674$, $r^2 = 0.995354$

Calibration curve: $1.64181 * x + -0.17063$

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	4.72	5.63e2	1.06e4	0.509	1.33	1.7
2	2 161122G2_3	1.00	4.71	1.61e3	1.33e4	1.02	1.51	2.5
3	3 161122G2_4	2.00	4.71	3.31e3	1.23e4	2.16	1.68	7.8
4	4 161122G2_5	5.00	4.71	7.19e3	1.28e4	4.37	1.40	-12.5
5	5 161122G2_6	10.0	4.71	1.72e4	1.33e4	10.0	1.63	0.1
6	6 161122G2_7	25.0	4.71	4.06e4	1.21e4	25.6	1.67	2.3
7	7 161122G2_8	50.0	4.71	6.88e4	1.04e4	50.5	1.65	1.0
8	8 161122G2_9	75.0	4.71	1.10e5	1.23e4	68.0	1.49	-9.3
9	9 161122G2_10	100	4.71	1.49e5	1.07e4	106	1.74	6.3

Compound name: PFDA

Correlation coefficient: $r = 0.998669$, $r^2 = 0.997340$

Calibration curve: $0.596457 * x + -0.0200723$

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	5.01	1.30e2	6.01e3	0.486	0.540	-2.7
2	2 161122G2_3	1.00	5.01	3.72e2	8.51e3	0.949	0.546	-5.1
3	3 161122G2_4	2.00	5.01	8.65e2	8.73e3	2.11	0.620	5.6
4	4 161122G2_5	5.00	5.01	1.70e3	8.07e3	4.44	0.526	-11.1
5	5 161122G2_6	10.0	5.01	3.83e3	7.02e3	11.5	0.683	14.8
6	6 161122G2_7	25.0	5.01	1.25e4	1.01e4	26.1	0.622	4.4
7	7 161122G2_8	50.0	5.01	1.45e4	6.60e3	46.1	0.550	-7.7
8	8 161122G2_9	75.0	5.01	3.19e4	8.88e3	75.4	0.599	0.5
9	9 161122G2_10	100	5.01	4.34e4	8.96e3	101	0.605	1.5

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: 8:2 FTS

Coefficient of Determination: R² = 0.984052

Calibration curve: -0.000479329 * x² + 0.502189 * x + 0.00235356

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	0.500	4.99	4.13e1	2.12e3	0.479	0.486	-4.1
2	2 161122G2_3	1.00	4.99	1.45e2	3.66e3	0.984	0.496	-1.6
3	3 161122G2_4	2.00	4.99	2.64e2	2.69e3	2.44	0.613	22.1
4	4 161122G2_5	5.00	4.99	4.56e2	2.74e3	4.16	0.416	-16.8
5	5 161122G2_6	10.0	4.99	1.14e3	3.15e3	9.07	0.452	-9.3
6	6 161122G2_7	25.0	4.99	4.23e3	3.62e3	29.9	0.584	19.7
7	7 161122G2_8	50.0	4.99	4.24e3	2.69e3	40.8	0.394	-18.4
8	8 161122G2_9	75.0	4.99	1.23e4	3.97e3	84.1	0.518	12.1
9	9 161122G2_10	100	4.99	1.62e4	4.58e3	96.8	0.441	-3.2

Compound name: 13C3-PFBA

Response Factor: 1.20506

RRF SD: 0.0553973, Relative SD: 4.59706

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	1.93	2.07e4	1.76e4	12.2	1.18	-2.2
2	2 161122G2_3	12.5	1.93	2.25e4	1.85e4	12.6	1.22	1.0
3	3 161122G2_4	12.5	1.93	2.32e4	1.80e4	13.4	1.29	7.0
4	4 161122G2_5	12.5	1.93	2.31e4	1.91e4	12.6	1.21	0.8
5	5 161122G2_6	12.5	1.93	2.17e4	1.69e4	13.3	1.29	6.8
6	6 161122G2_7	12.5	1.93	1.87e4	1.58e4	12.3	1.18	-2.0
7	7 161122G2_8	12.5	1.93	1.90e4	1.64e4	12.1	1.16	-3.6
8	8 161122G2_9	12.5	1.93	1.98e4	1.66e4	12.4	1.20	-0.7
9	9 161122G2_10	12.5	1.93	1.83e4	1.63e4	11.6	1.12	-7.1

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Compound name: 13C3-PFPeA

Response Factor: 0.447597

RRF SD: 0.0175301, Relative SD: 3.9165

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	2.85	9.28e3	2.07e4	12.5	0.448	0.1
2	2 161122G2_3	12.5	2.85	9.67e3	2.17e4	12.4	0.445	-0.6
3	3 161122G2_4	12.5	2.85	9.90e3	2.11e4	13.1	0.469	4.8
4	4 161122G2_5	12.5	2.85	1.02e4	2.20e4	13.0	0.466	4.1
5	5 161122G2_6	12.5	2.85	9.55e3	2.15e4	12.4	0.445	-0.6
6	6 161122G2_7	12.5	2.85	8.18e3	1.89e4	12.1	0.434	-3.1
7	7 161122G2_8	12.5	2.85	8.27e3	1.78e4	13.0	0.465	3.9
8	8 161122G2_9	12.5	2.85	8.14e3	1.84e4	12.4	0.443	-1.0
9	9 161122G2_10	12.5	2.85	7.23e3	1.75e4	11.6	0.414	-7.5

Compound name: 13C3-PFBS

Response Factor: 0.302055

RRF SD: 0.0171236, Relative SD: 5.66905

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	3.10	6.26e3	2.07e4	12.5	0.302	0.1
2	2 161122G2_3	12.5	3.10	6.27e3	2.17e4	11.9	0.288	-4.6
3	3 161122G2_4	12.5	3.10	6.78e3	2.11e4	13.3	0.321	6.4
4	4 161122G2_5	12.5	3.10	7.36e3	2.20e4	13.8	0.335	10.8
5	5 161122G2_6	12.5	3.10	6.40e3	2.15e4	12.3	0.298	-1.4
6	6 161122G2_7	12.5	3.10	5.76e3	1.89e4	12.6	0.306	1.1
7	7 161122G2_8	12.5	3.10	5.35e3	1.78e4	12.5	0.301	-0.4
8	8 161122G2_9	12.5	3.10	5.29e3	1.84e4	11.9	0.288	-4.7
9	9 161122G2_10	12.5	3.10	4.89e3	1.75e4	11.6	0.280	-7.3

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Compound name: 13C2-PFHxA

Response Factor: 0.619528

RRF SD: 0.0178176, Relative SD: 2.876

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	5.00	3.47	5.21e3	2.07e4	5.07	0.628	1.4
2	2 161122G2_3	5.00	3.47	5.44e3	2.17e4	5.05	0.626	1.0
3	3 161122G2_4	5.00	3.47	5.54e3	2.11e4	5.29	0.656	5.9
4	4 161122G2_5	5.00	3.47	5.55e3	2.20e4	5.09	0.631	1.8
5	5 161122G2_6	5.00	3.47	5.30e3	2.15e4	4.98	0.617	-0.4
6	6 161122G2_7	5.00	3.47	4.52e3	1.89e4	4.83	0.598	-3.4
7	7 161122G2_8	5.00	3.47	4.31e3	1.78e4	4.89	0.606	-2.2
8	8 161122G2_9	5.00	3.47	4.48e3	1.84e4	4.92	0.610	-1.5
9	9 161122G2_10	5.00	3.47	4.22e3	1.75e4	4.87	0.603	-2.6

Compound name: 13C4-PFHpA

Response Factor: 1.13869

RRF SD: 0.046436, Relative SD: 4.078

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	3.98	1.51e4	1.32e4	12.6	1.14	0.5
2	2 161122G2_3	12.5	3.97	1.58e4	1.36e4	12.7	1.16	1.9
3	3 161122G2_4	12.5	3.98	1.71e4	1.42e4	13.2	1.21	5.8
4	4 161122G2_5	12.5	3.97	1.63e4	1.48e4	12.1	1.10	-3.3
5	5 161122G2_6	12.5	3.97	1.60e4	1.44e4	12.2	1.11	-2.4
6	6 161122G2_7	12.5	3.97	1.42e4	1.23e4	12.7	1.16	1.7
7	7 161122G2_8	12.5	3.97	1.36e4	1.16e4	12.8	1.17	2.7
8	8 161122G2_9	12.5	3.97	1.35e4	1.17e4	12.7	1.15	1.3
9	9 161122G2_10	12.5	3.97	1.23e4	1.18e4	11.5	1.05	-8.2

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Compound name: 18O2-PFHxS

Response Factor: 0.449434

RRF SD: 0.0241405, Relative SD: 5.37132

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.09	6.01e3	1.32e4	12.6	0.455	1.1
2	2 161122G2_3	12.5	4.09	6.30e3	1.36e4	12.9	0.463	3.1
3	3 161122G2_4	12.5	4.09	7.02e3	1.42e4	13.7	0.494	9.8
4	4 161122G2_5	12.5	4.09	6.33e3	1.48e4	11.9	0.428	-4.8
5	5 161122G2_6	12.5	4.09	6.15e3	1.44e4	11.9	0.427	-5.0
6	6 161122G2_7	12.5	4.09	5.33e3	1.23e4	12.1	0.434	-3.4
7	7 161122G2_8	12.5	4.08	5.46e3	1.16e4	13.0	0.468	4.2
8	8 161122G2_9	12.5	4.09	5.36e3	1.17e4	12.7	0.456	1.5
9	9 161122G2_10	12.5	4.09	4.95e3	1.18e4	11.7	0.420	-6.6

Compound name: 13C2-6:2 FTS

Response Factor: 1.07309

RRF SD: 0.0967215, Relative SD: 9.01333

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.33	6.03e3	5.89e3	11.9	1.02	-4.5
2	2 161122G2_3	12.5	4.33	6.29e3	5.82e3	12.6	1.08	0.7
3	3 161122G2_4	12.5	4.33	6.05e3	5.56e3	12.7	1.09	1.3
4	4 161122G2_5	12.5	4.32	6.94e3	5.84e3	13.8	1.19	10.8
5	5 161122G2_6	12.5	4.32	5.43e3	5.76e3	11.0	0.942	-12.2
6	6 161122G2_7	12.5	4.32	5.54e3	4.77e3	13.5	1.16	8.2
7	7 161122G2_8	12.5	4.32	5.35e3	5.78e3	10.8	0.925	-13.8
8	8 161122G2_9	12.5	4.32	7.05e3	5.95e3	13.8	1.18	10.3
9	9 161122G2_10	12.5	4.32	6.58e3	6.18e3	12.4	1.06	-0.8

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Compound name: 13C2-PFOA

Response Factor: 2.26193

RRF SD: 0.103705, Relative SD: 4.58481

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.37	2.40e4	1.14e4	11.7	2.12	-6.4
2	2 161122G2_3	12.5	4.37	2.87e4	1.22e4	13.0	2.36	4.4
3	3 161122G2_4	12.5	4.37	2.79e4	1.22e4	12.6	2.28	0.8
4	4 161122G2_5	12.5	4.37	2.85e4	1.19e4	13.3	2.40	6.0
5	5 161122G2_6	12.5	4.37	2.60e4	1.12e4	12.9	2.33	3.0
6	6 161122G2_7	12.5	4.37	2.44e4	1.17e4	11.5	2.09	-7.7
7	7 161122G2_8	12.5	4.37	2.35e4	1.03e4	12.6	2.28	0.9
8	8 161122G2_9	12.5	4.37	2.38e4	1.06e4	12.4	2.24	-1.2
9	9 161122G2_10	12.5	4.37	2.17e4	9.56e3	12.5	2.27	0.2

Compound name: 13C8-PFOS

Response Factor: 0.943547

RRF SD: 0.0953243, Relative SD: 10.1028

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.77	5.26e3	6.09e3	11.4	0.863	-8.5
2	2 161122G2_3	12.5	4.77	7.35e3	8.00e3	12.2	0.918	-2.7
3	3 161122G2_4	12.5	4.77	8.95e3	7.63e3	15.5	1.17	24.2
4	4 161122G2_5	12.5	4.77	6.87e3	7.71e3	11.8	0.892	-5.5
5	5 161122G2_6	12.5	4.77	7.23e3	7.12e3	13.5	1.02	7.6
6	6 161122G2_7	12.5	4.77	6.95e3	7.59e3	12.1	0.917	-2.9
7	7 161122G2_8	12.5	4.77	5.80e3	6.40e3	12.0	0.906	-4.0
8	8 161122G2_9	12.5	4.77	7.19e3	7.90e3	12.1	0.910	-3.5
9	9 161122G2_10	12.5	4.77	6.93e3	7.73e3	11.9	0.898	-4.9

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Compound name: 13C5-PFNA

Response Factor: 1.08198

RRF SD: 0.109173, Relative SD: 10.0901

Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.71	1.06e4	9.86e3	12.4	1.07	-0.7
2	2 161122G2_3	12.5	4.71	1.33e4	1.10e4	14.0	1.21	11.8
3	3 161122G2_4	12.5	4.71	1.23e4	1.19e4	12.0	1.04	-4.3
4	4 161122G2_5	12.5	4.71	1.28e4	1.06e4	14.0	1.21	12.3
5	5 161122G2_6	12.5	4.71	1.33e4	1.18e4	13.0	1.13	4.1
6	6 161122G2_7	12.5	4.71	1.21e4	1.04e4	13.4	1.16	7.4
7	7 161122G2_8	12.5	4.71	1.04e4	1.14e4	10.5	0.909	-16.0
8	8 161122G2_9	12.5	4.71	1.23e4	1.16e4	12.3	1.07	-1.4
9	9 161122G2_10	12.5	4.71	1.07e4	1.14e4	10.8	0.938	-13.3

Compound name: 13C2-PFDA

Response Factor: 1.01921

RRF SD: 0.0876435, Relative SD: 8.59913

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	5.01	6.01e3	6.35e3	11.6	0.947	-7.1
2	2 161122G2_3	12.5	5.01	8.51e3	9.85e3	10.6	0.864	-15.2
3	3 161122G2_4	12.5	5.01	8.73e3	8.39e3	12.8	1.04	2.1
4	4 161122G2_5	12.5	5.01	8.07e3	7.46e3	13.3	1.08	6.1
5	5 161122G2_6	12.5	5.01	7.02e3	6.59e3	13.1	1.07	4.5
6	6 161122G2_7	12.5	5.01	1.01e4	9.85e3	12.5	1.02	0.3
7	7 161122G2_8	12.5	5.01	6.60e3	5.70e3	14.2	1.16	13.6
8	8 161122G2_9	12.5	5.01	8.88e3	8.46e3	12.9	1.05	2.9
9	9 161122G2_10	12.5	5.01	8.96e3	9.48e3	11.6	0.945	-7.3

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Compound name: 13C2-8:2 FTS

Response Factor: 0.568768

RRF SD: 0.137212, Relative SD: 24.1245

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.99	2.12e3	5.89e3	7.93	0.361	-36.6
2	2 161122G2_3	12.5	4.99	3.66e3	5.82e3	13.8	0.629	10.6
3	3 161122G2_4	12.5	4.99	2.69e3	5.56e3	10.6	0.483	-15.1
4	4 161122G2_5	12.5	4.99	2.74e3	5.84e3	10.3	0.468	-17.7
5	5 161122G2_6	12.5	4.99	3.15e3	5.76e3	12.0	0.546	-4.1
6	6 161122G2_7	12.5	4.99	3.62e3	4.77e3	16.7	0.759	33.4
7	7 161122G2_8	12.5	4.99	2.69e3	5.78e3	10.2	0.466	-18.0
8	8 161122G2_9	12.5	4.99	3.97e3	5.95e3	14.7	0.667	17.3
9	9 161122G2_10	12.5	4.99	4.58e3	6.18e3	16.3	0.740	30.1

Compound name: 13C4-PFBA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)

Curve type: RF

	#.Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	1.93	1.76e4	1.76e4	12.5	1.00	0.0
2	2 161122G2_3	12.5	1.92	1.85e4	1.85e4	12.5	1.00	0.0
3	3 161122G2_4	12.5	1.93	1.80e4	1.80e4	12.5	1.00	0.0
4	4 161122G2_5	12.5	1.93	1.91e4	1.91e4	12.5	1.00	0.0
5	5 161122G2_6	12.5	1.93	1.69e4	1.69e4	12.5	1.00	0.0
6	6 161122G2_7	12.5	1.93	1.58e4	1.58e4	12.5	1.00	0.0
7	7 161122G2_8	12.5	1.93	1.64e4	1.64e4	12.5	1.00	0.0
8	8 161122G2_9	12.5	1.93	1.66e4	1.66e4	12.5	1.00	0.0
9	9 161122G2_10	12.5	1.92	1.63e4	1.63e4	12.5	1.00	0.0

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Compound name: 13C2-4:2 FTS

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 27), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	3.37	5.89e3	5.89e3	12.5	1.00	0.0
2	2 161122G2_3	12.5	3.37	5.82e3	5.82e3	12.5	1.00	0.0
3	3 161122G2_4	12.5	3.37	5.56e3	5.56e3	12.5	1.00	0.0
4	4 161122G2_5	12.5	3.38	5.84e3	5.84e3	12.5	1.00	0.0
5	5 161122G2_6	12.5	3.38	5.76e3	5.76e3	12.5	1.00	0.0
6	6 161122G2_7	12.5	3.38	4.77e3	4.77e3	12.5	1.00	0.0
7	7 161122G2_8	12.5	3.38	5.78e3	5.78e3	12.5	1.00	0.0
8	8 161122G2_9	12.5	3.38	5.95e3	5.95e3	12.5	1.00	0.0
9	9 161122G2_10	12.5	3.38	6.18e3	6.18e3	12.5	1.00	0.0

Compound name: 13C5-PFHxA

Response Factor: 1

RRF SD: 3.92523e-017, Relative SD: 3.92523e-015

Response type: Internal Std (Ref 28), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	3.47	2.07e4	2.07e4	12.5	1.00	0.0
2	2 161122G2_3	12.5	3.46	2.17e4	2.17e4	12.5	1.00	0.0
3	3 161122G2_4	12.5	3.47	2.11e4	2.11e4	12.5	1.00	0.0
4	4 161122G2_5	12.5	3.47	2.20e4	2.20e4	12.5	1.00	0.0
5	5 161122G2_6	12.5	3.47	2.15e4	2.15e4	12.5	1.00	0.0
6	6 161122G2_7	12.5	3.47	1.89e4	1.89e4	12.5	1.00	0.0
7	7 161122G2_8	12.5	3.47	1.78e4	1.78e4	12.5	1.00	0.0
8	8 161122G2_9	12.5	3.47	1.84e4	1.84e4	12.5	1.00	-0.0
9	9 161122G2_10	12.5	3.47	1.75e4	1.75e4	12.5	1.00	0.0

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Compound name: 13C3-PFHxS

Response Factor: 1

RRF SD: 7.85046e-017, Relative SD: 7.85046e-015

Response type: Internal Std (Ref 29), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.09	1.32e4	1.32e4	12.5	1.00	0.0
2	2 161122G2_3	12.5	4.09	1.36e4	1.36e4	12.5	1.00	0.0
3	3 161122G2_4	12.5	4.09	1.42e4	1.42e4	12.5	1.00	0.0
4	4 161122G2_5	12.5	4.09	1.48e4	1.48e4	12.5	1.00	0.0
5	5 161122G2_6	12.5	4.09	1.44e4	1.44e4	12.5	1.00	0.0
6	6 161122G2_7	12.5	4.09	1.23e4	1.23e4	12.5	1.00	0.0
7	7 161122G2_8	12.5	4.09	1.16e4	1.16e4	12.5	1.00	0.0
8	8 161122G2_9	12.5	4.09	1.17e4	1.17e4	12.5	1.00	0.0
9	9 161122G2_10	12.5	4.09	1.18e4	1.18e4	12.5	1.00	0.0

Compound name: 13C8-PFOA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 30), Area * (IS Conc. / IS Area)

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.37	1.14e4	1.14e4	12.5	1.00	0.0
2	2 161122G2_3	12.5	4.37	1.22e4	1.22e4	12.5	1.00	0.0
3	3 161122G2_4	12.5	4.37	1.22e4	1.22e4	12.5	1.00	0.0
4	4 161122G2_5	12.5	4.37	1.19e4	1.19e4	12.5	1.00	0.0
5	5 161122G2_6	12.5	4.37	1.12e4	1.12e4	12.5	1.00	0.0
6	6 161122G2_7	12.5	4.37	1.17e4	1.17e4	12.5	1.00	0.0
7	7 161122G2_8	12.5	4.37	1.03e4	1.03e4	12.5	1.00	0.0
8	8 161122G2_9	12.5	4.37	1.06e4	1.06e4	12.5	1.00	0.0
9	9 161122G2_10	12.5	4.37	9.56e3	9.56e3	12.5	1.00	0.0

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: 13C4-PFOS

Response Factor: 1

RRF SD: 7.85046e-017, Relative SD: 7.85046e-015

Response type: Internal Std (Ref 31), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.78	6.09e3	6.09e3	12.5	1.00	0.0
2	2 161122G2_3	12.5	4.77	8.00e3	8.00e3	12.5	1.00	0.0
3	3 161122G2_4	12.5	4.78	7.63e3	7.63e3	12.5	1.00	0.0
4	4 161122G2_5	12.5	4.77	7.71e3	7.71e3	12.5	1.00	0.0
5	5 161122G2_6	12.5	4.77	7.12e3	7.12e3	12.5	1.00	0.0
6	6 161122G2_7	12.5	4.77	7.59e3	7.59e3	12.5	1.00	0.0
7	7 161122G2_8	12.5	4.78	6.40e3	6.40e3	12.5	1.00	0.0
8	8 161122G2_9	12.5	4.77	7.90e3	7.90e3	12.5	1.00	0.0
9	9 161122G2_10	12.5	4.77	7.73e3	7.73e3	12.5	1.00	0.0

Compound name: 13C9-PFNA

Response Factor: 1

RRF SD: 0, Relative SD: 0

Response type: Internal Std (Ref 32), Area * (IS Conc. / IS Area)

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	4.71	9.86e3	9.86e3	12.5	1.00	0.0
2	2 161122G2_3	12.5	4.71	1.10e4	1.10e4	12.5	1.00	0.0
3	3 161122G2_4	12.5	4.71	1.19e4	1.19e4	12.5	1.00	0.0
4	4 161122G2_5	12.5	4.71	1.06e4	1.06e4	12.5	1.00	0.0
5	5 161122G2_6	12.5	4.71	1.18e4	1.18e4	12.5	1.00	0.0
6	6 161122G2_7	12.5	4.71	1.04e4	1.04e4	12.5	1.00	0.0
7	7 161122G2_8	12.5	4.71	1.14e4	1.14e4	12.5	1.00	0.0
8	8 161122G2_9	12.5	4.71	1.16e4	1.16e4	12.5	1.00	0.0
9	9 161122G2_10	12.5	4.71	1.14e4	1.14e4	12.5	1.00	0.0

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: 13C6-PFDA

Response Factor: 1

RRF SD: 3.92523e-017, Relative SD: 3.92523e-015

Response type: Internal Std (Ref 33), Area * (IS Conc. / IS Area)

Curve type: RF

	#-Name	Std. Conc	RT	Resp	IS Resp	Conc.	RRF	%Dev
1	1 161122G2_2	12.5	5.01	6.35e3	6.35e3	12.5	1.00	0.0
2	2 161122G2_3	12.5	5.01	9.85e3	9.85e3	12.5	1.00	0.0
3	3 161122G2_4	12.5	5.01	8.39e3	8.39e3	12.5	1.00	0.0
4	4 161122G2_5	12.5	5.01	7.46e3	7.46e3	12.5	1.00	0.0
5	5 161122G2_6	12.5	5.01	6.59e3	6.59e3	12.5	1.00	0.0
6	6 161122G2_7	12.5	5.01	9.85e3	9.85e3	12.5	1.00	0.0
7	7 161122G2_8	12.5	5.01	5.70e3	5.70e3	12.5	1.00	0.0
8	8 161122G2_9	12.5	5.01	8.46e3	8.46e3	12.5	1.00	-0.0
9	9 161122G2_10	12.5	5.01	9.48e3	9.48e3	12.5	1.00	0.0

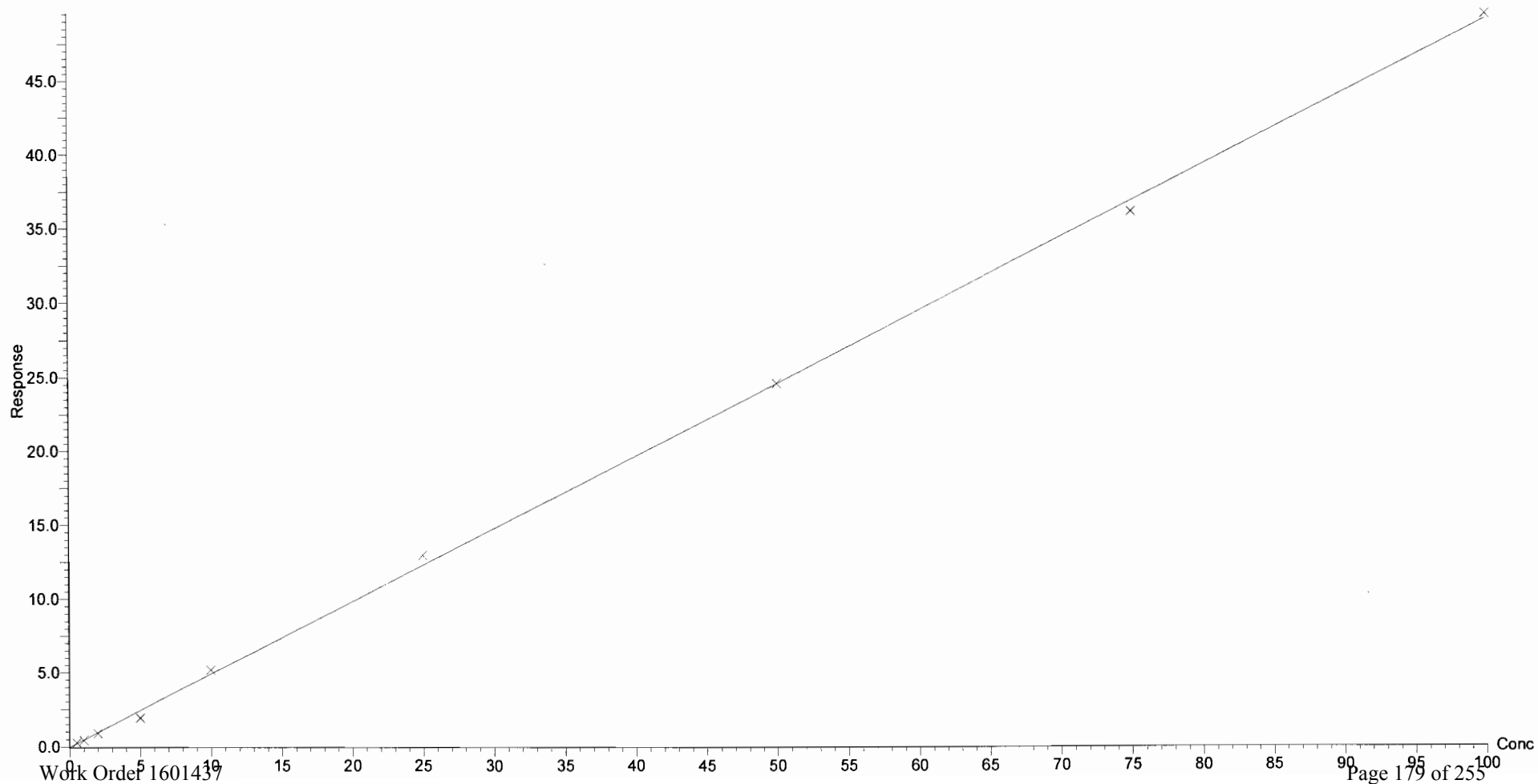
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Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:26:22 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_A_FULL_LINEAR.mdb 22 Nov 2016 14:48:05
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

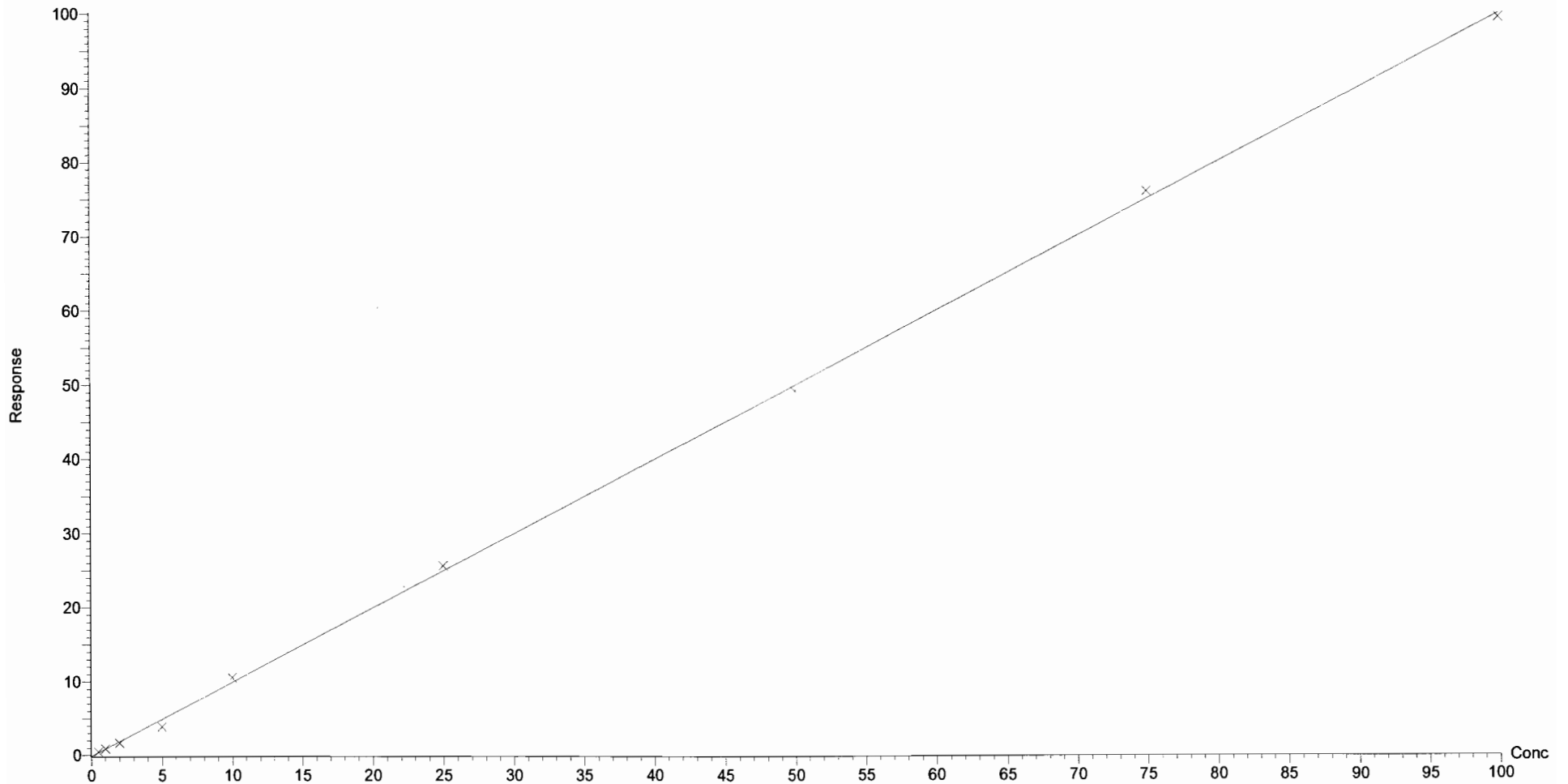
Compound name: PFBA
Correlation coefficient: $r = 0.999216$, $r^2 = 0.998432$
Calibration curve: $0.492927 * x + -0.0410615$
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

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Compound name: PFPeA
Correlation coefficient: $r = 0.999341$, $r^2 = 0.998683$
Calibration curve: $1.00273 * x + -0.119981$
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

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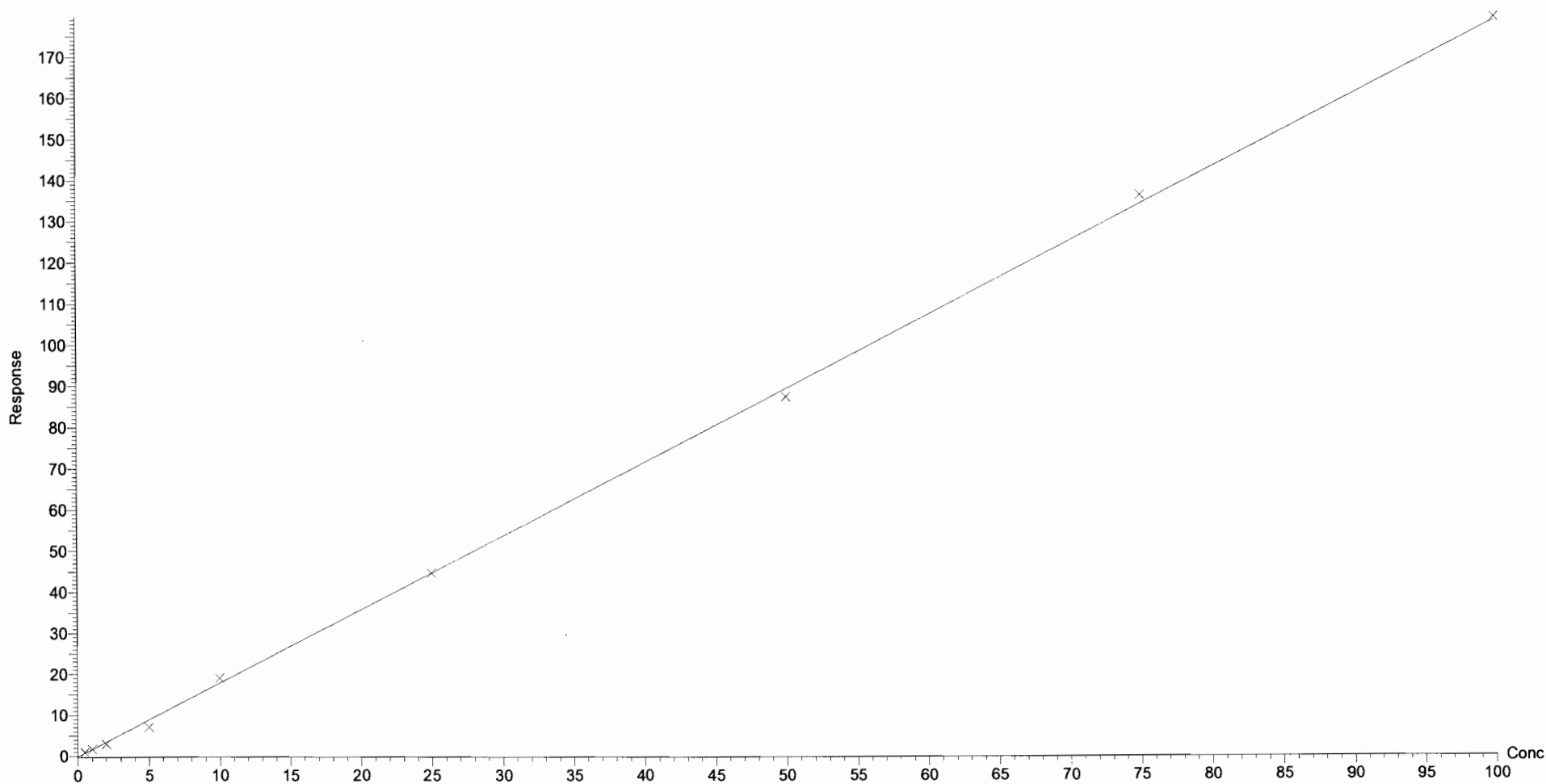
Compound name: PFBS

Correlation coefficient: $r = 0.999283$, $r^2 = 0.998566$

Calibration curve: $1.79216 * x + -0.145672$

Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:26:22 Pacific Standard Time

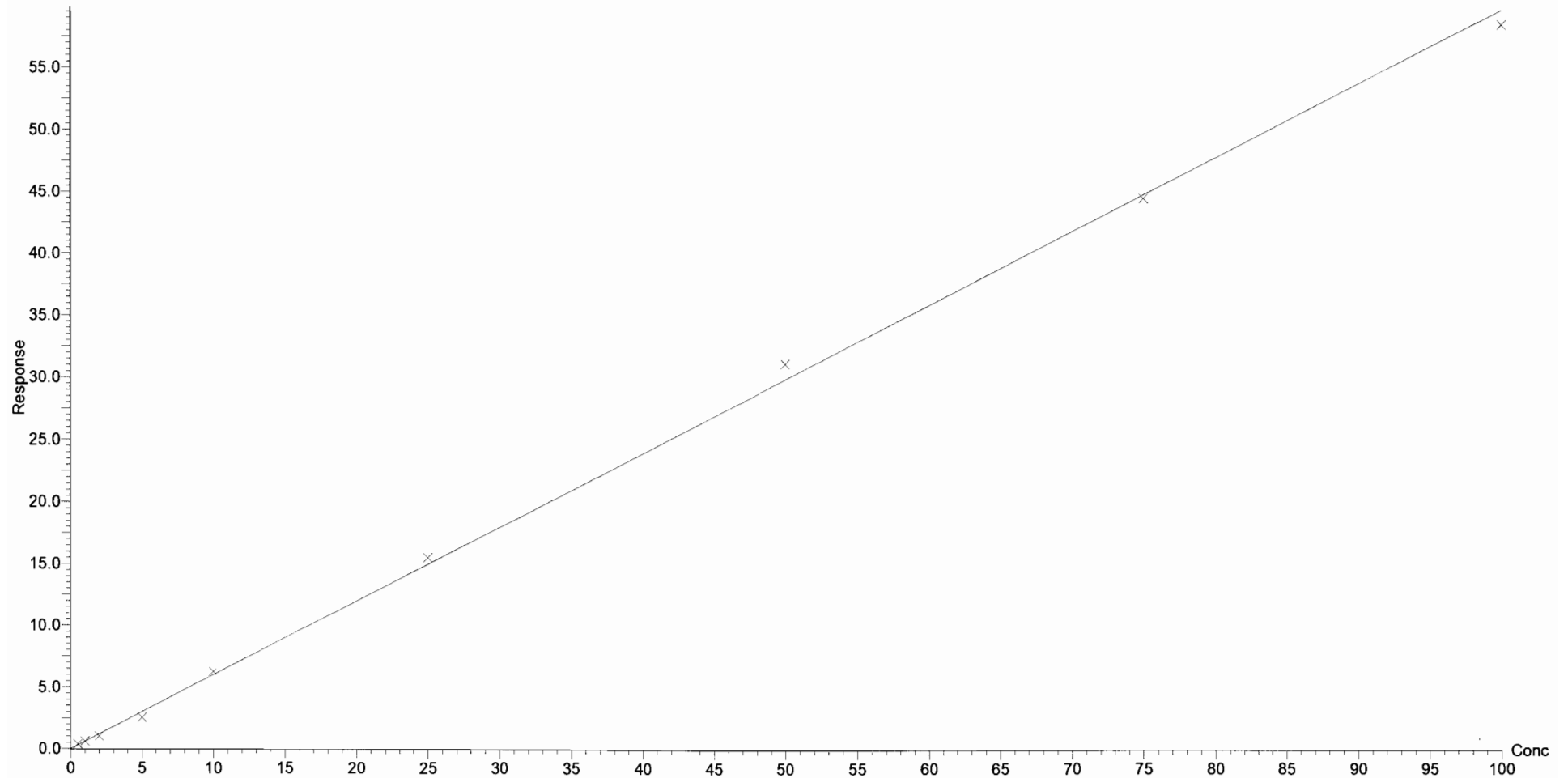
Compound name: PFHxA

Correlation coefficient: $r = 0.999245$, $r^2 = 0.998491$

Calibration curve: $0.598427 * x + 0.0095449$

Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

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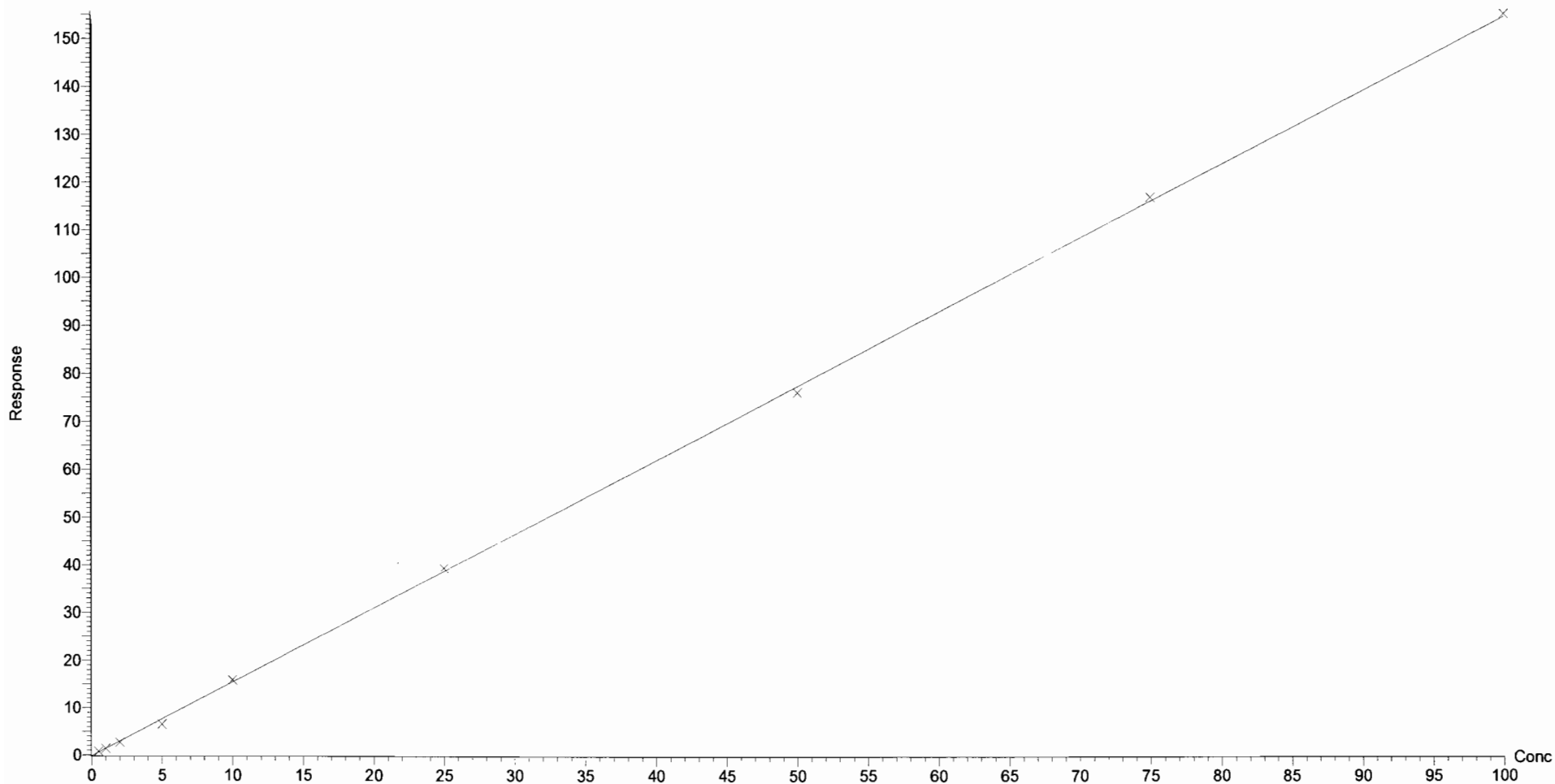
Compound name: PFHpA

Correlation coefficient: $r = 0.999639$, $r^2 = 0.999279$

Calibration curve: $1.55279 * x + -0.138431$

Response type: Internal Std (Ref 18), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:26:22 Pacific Standard Time

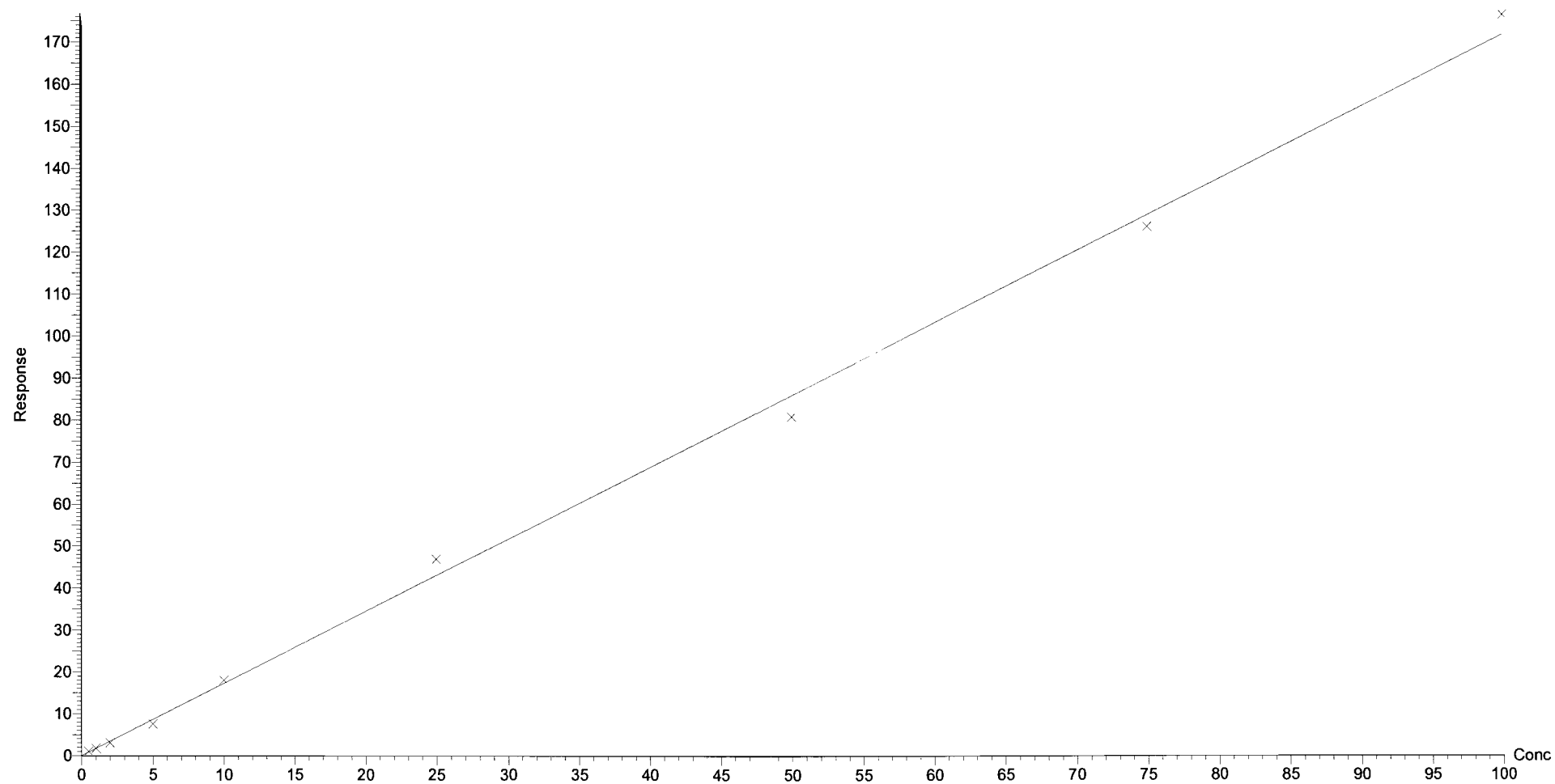
Compound name: PFHxS

Correlation coefficient: $r = 0.998761$, $r^2 = 0.997524$

Calibration curve: $1.72095 * x + -0.0266266$

Response type: Internal Std (Ref 19), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

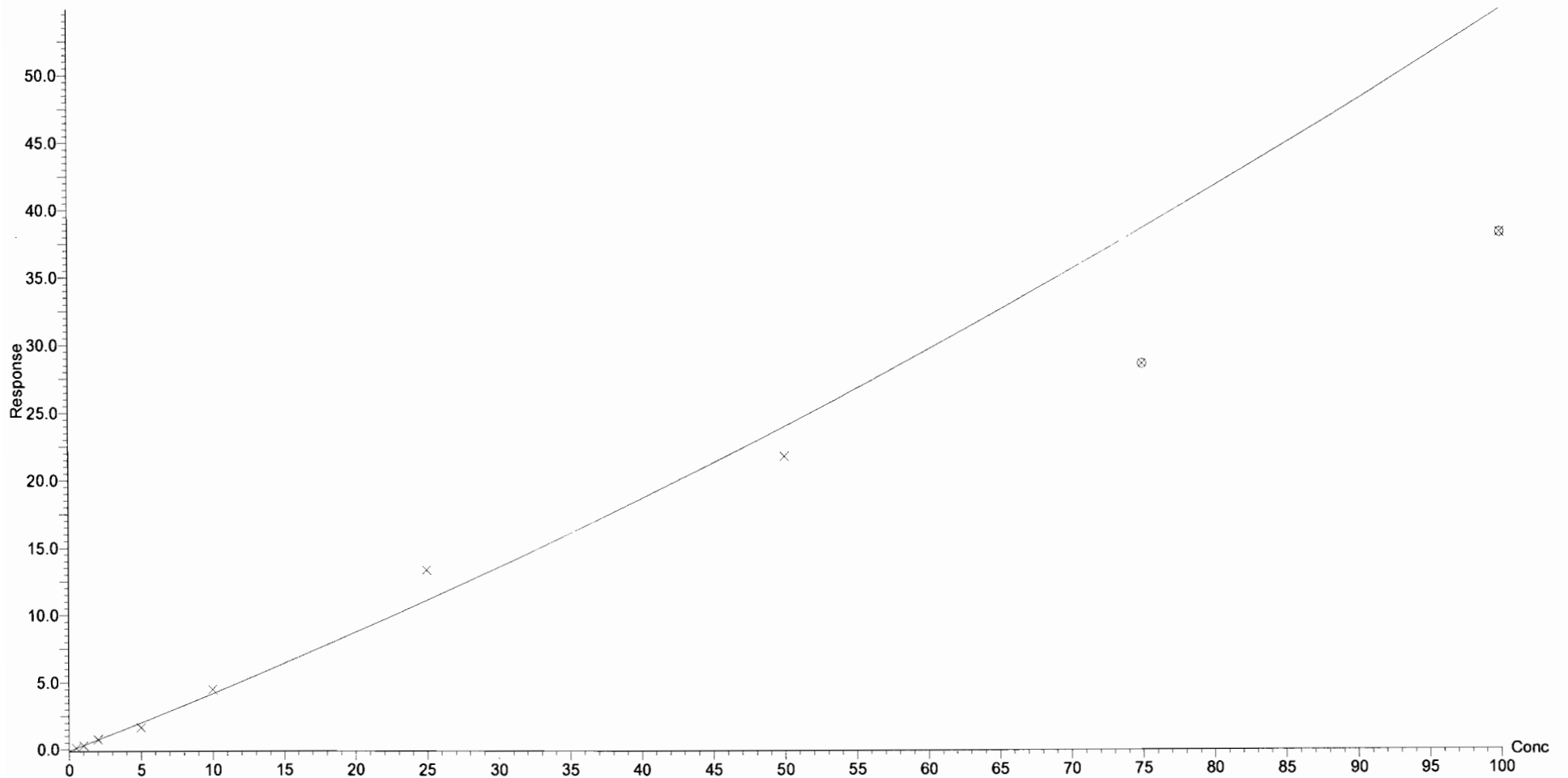


Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:26:22 Pacific Standard Time

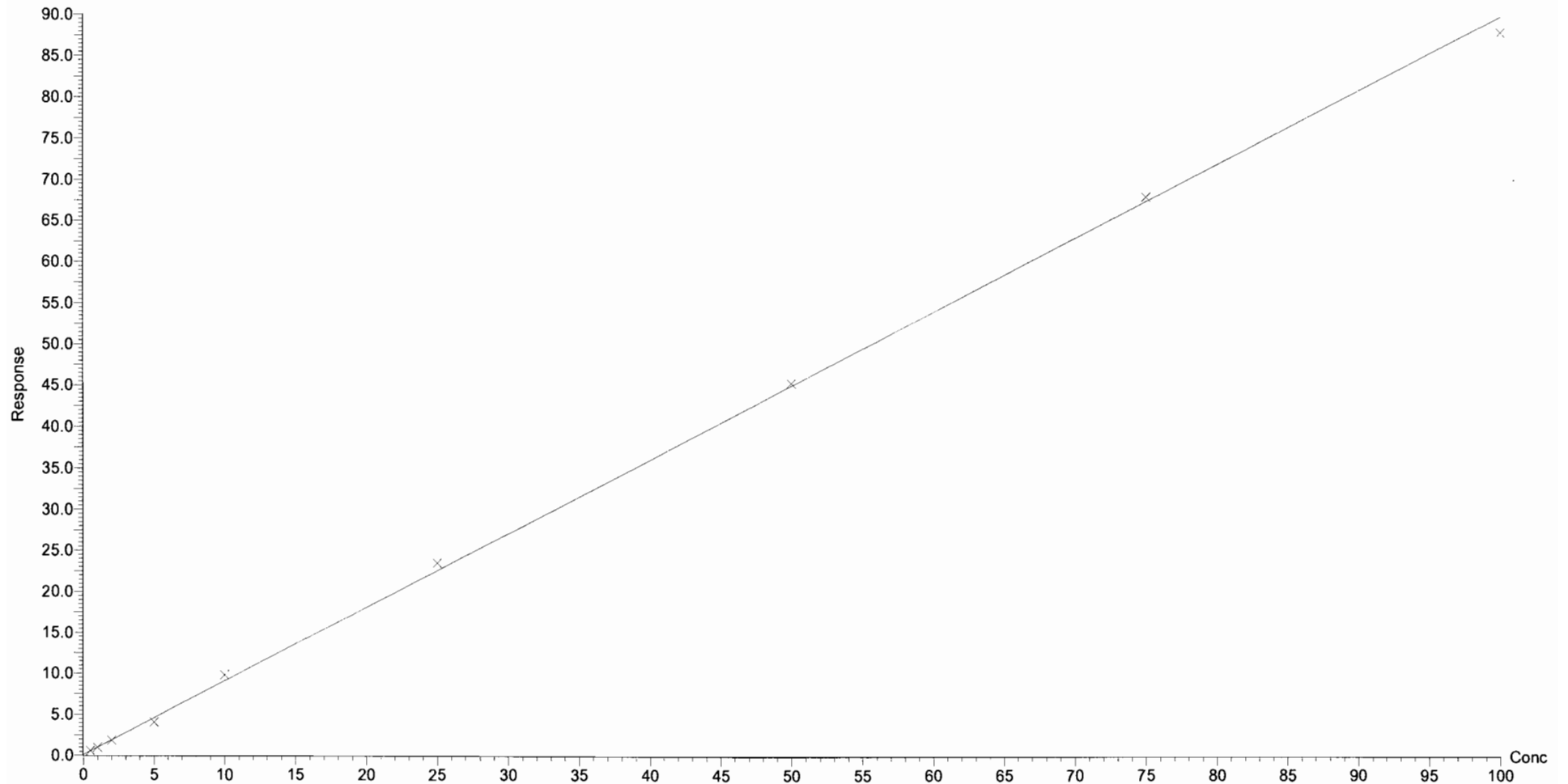
Compound name: 6:2 FTS
Coefficient of Determination: $R^2 = 0.978941$
Calibration curve: $0.00135992 * x^2 + 0.414129 * x + -0.114975$
Response type: Internal Std (Ref 20), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Exclude, Weighting: $1/x^2$, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time
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Compound name: PFOA
Correlation coefficient: $r = 0.999524$, $r^2 = 0.999048$
Calibration curve: $0.899906 * x + 0.0917344$
Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

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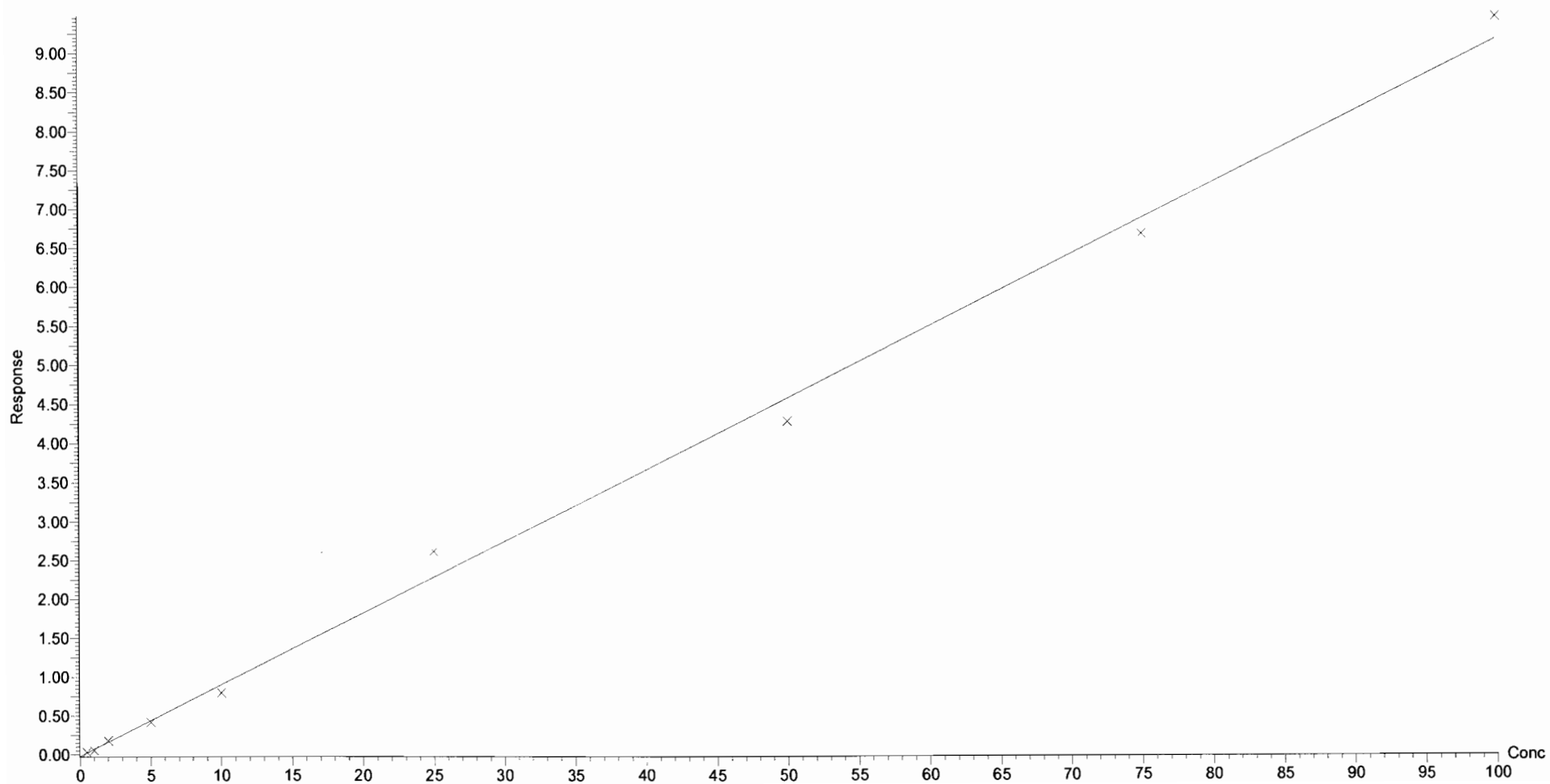
Compound name: PFHpS

Correlation coefficient: $r = 0.997800$, $r^2 = 0.995604$

Calibration curve: $0.0921515 * x + -0.0228444$

Response type: Internal Std (Ref 21), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:26:22 Pacific Standard Time

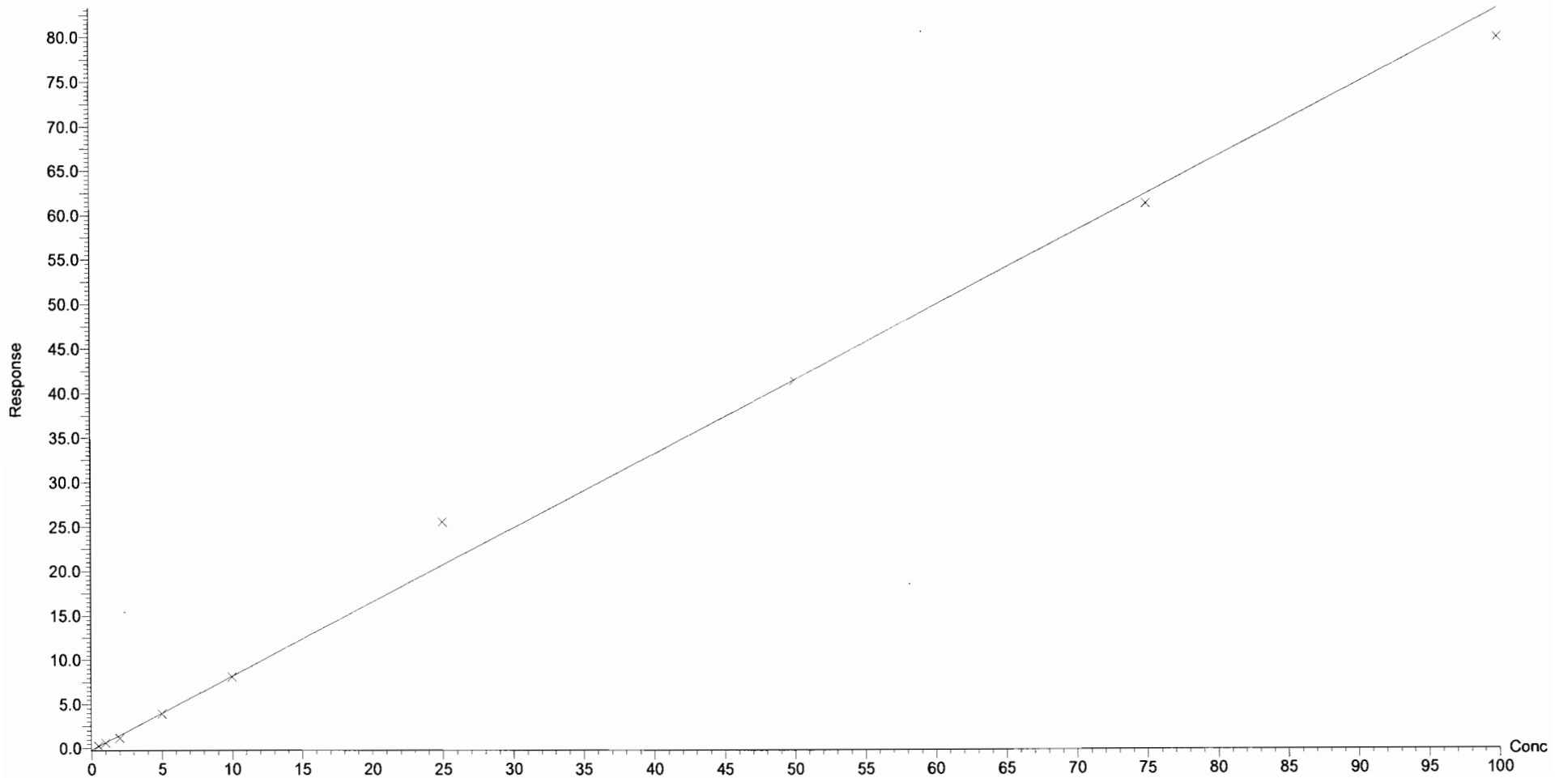
Compound name: PFOS

Correlation coefficient: $r = 0.996761$, $r^2 = 0.993532$

Calibration curve: $0.83439 * x + -0.165838$

Response type: Internal Std (Ref 22), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:26:22 Pacific Standard Time

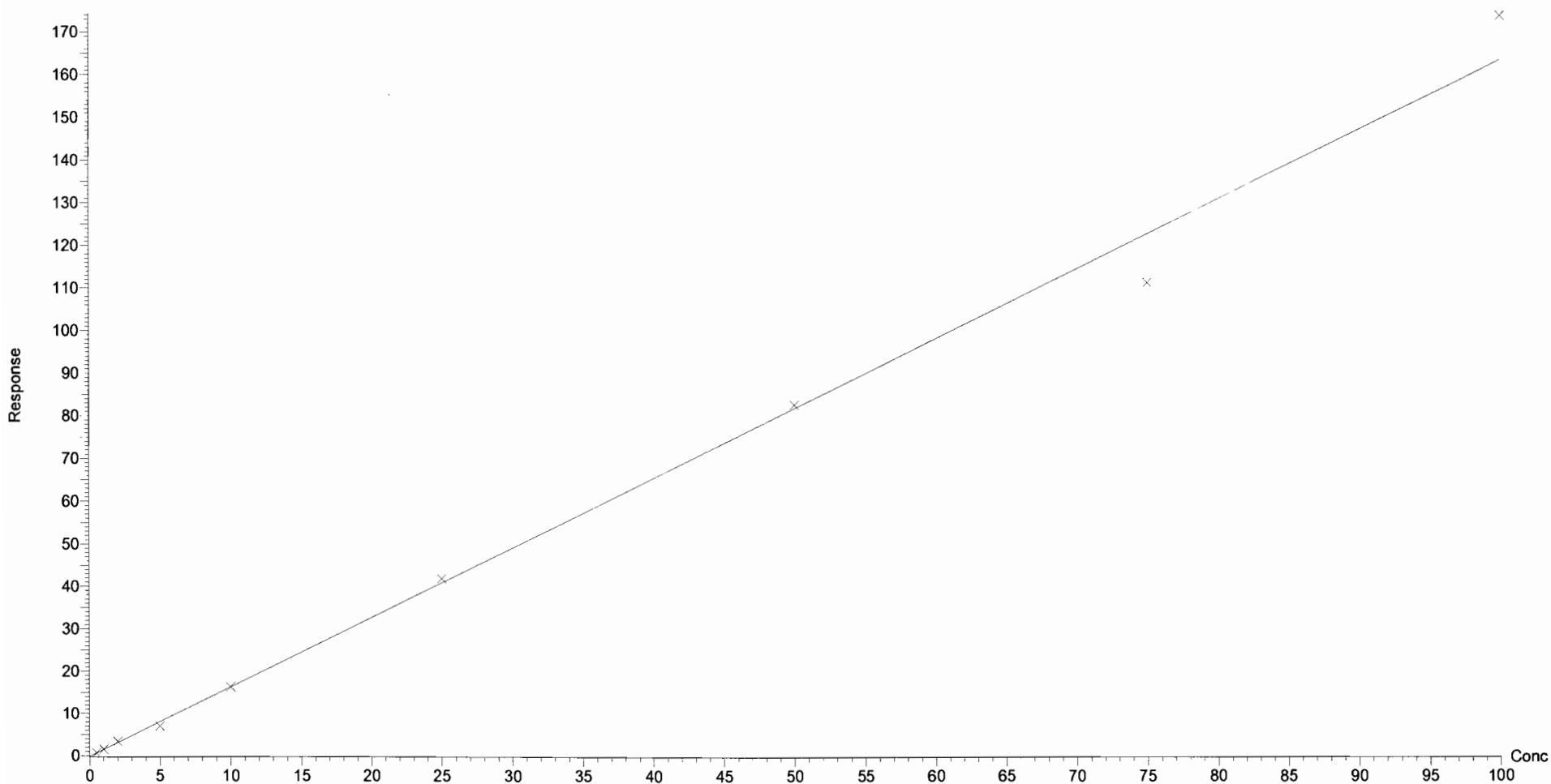
Compound name: PFNA

Correlation coefficient: $r = 0.997674$, $r^2 = 0.995354$

Calibration curve: $1.64181 * x + -0.17063$

Response type: Internal Std (Ref 23), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

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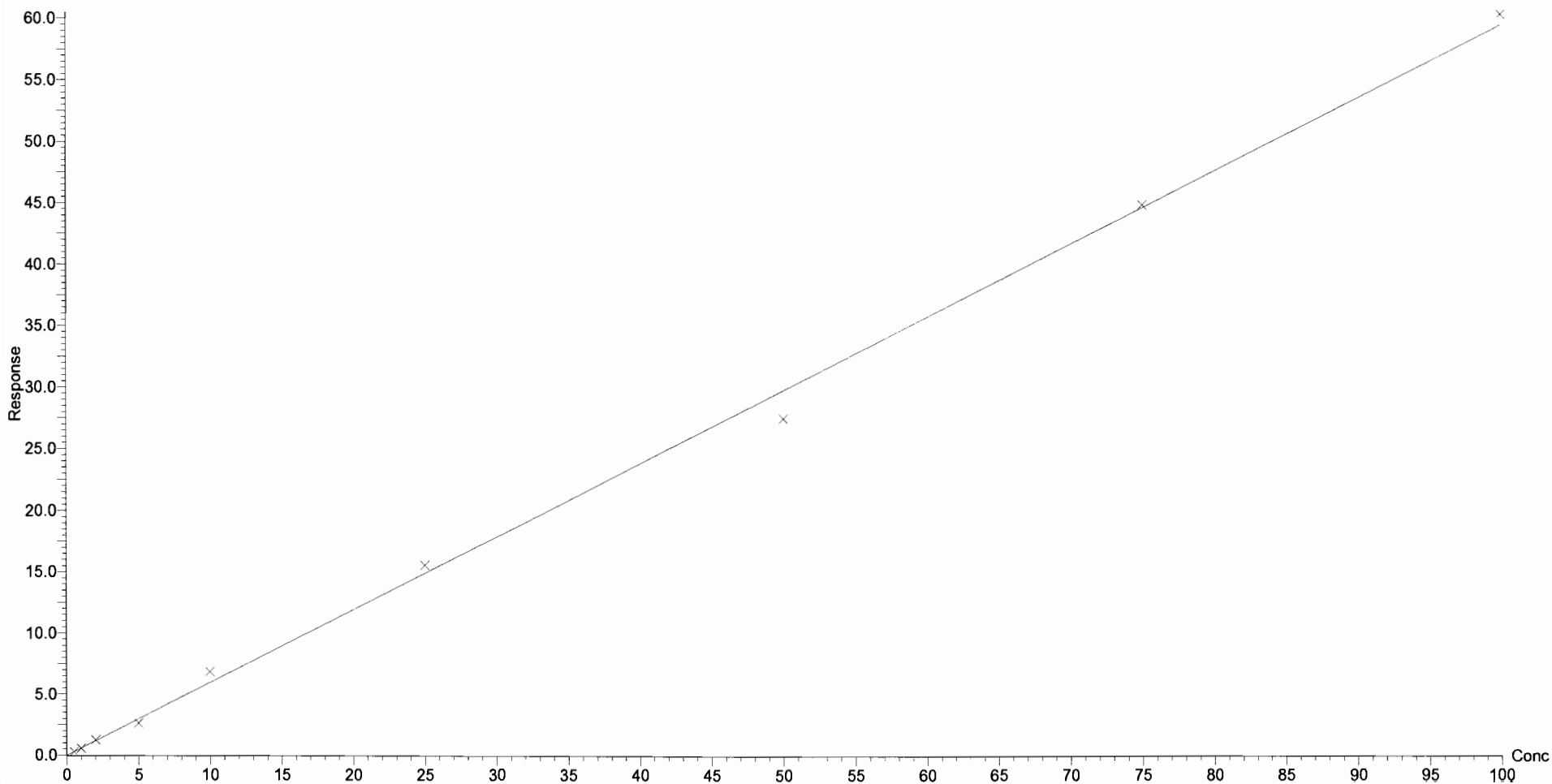
Compound name: PFDA

Correlation coefficient: $r = 0.998669$, $r^2 = 0.997340$

Calibration curve: $0.596457 * x + -0.0200723$

Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)

Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-CRV.qld

Last Altered: Tuesday, November 22, 2016 15:25:21 Pacific Standard Time

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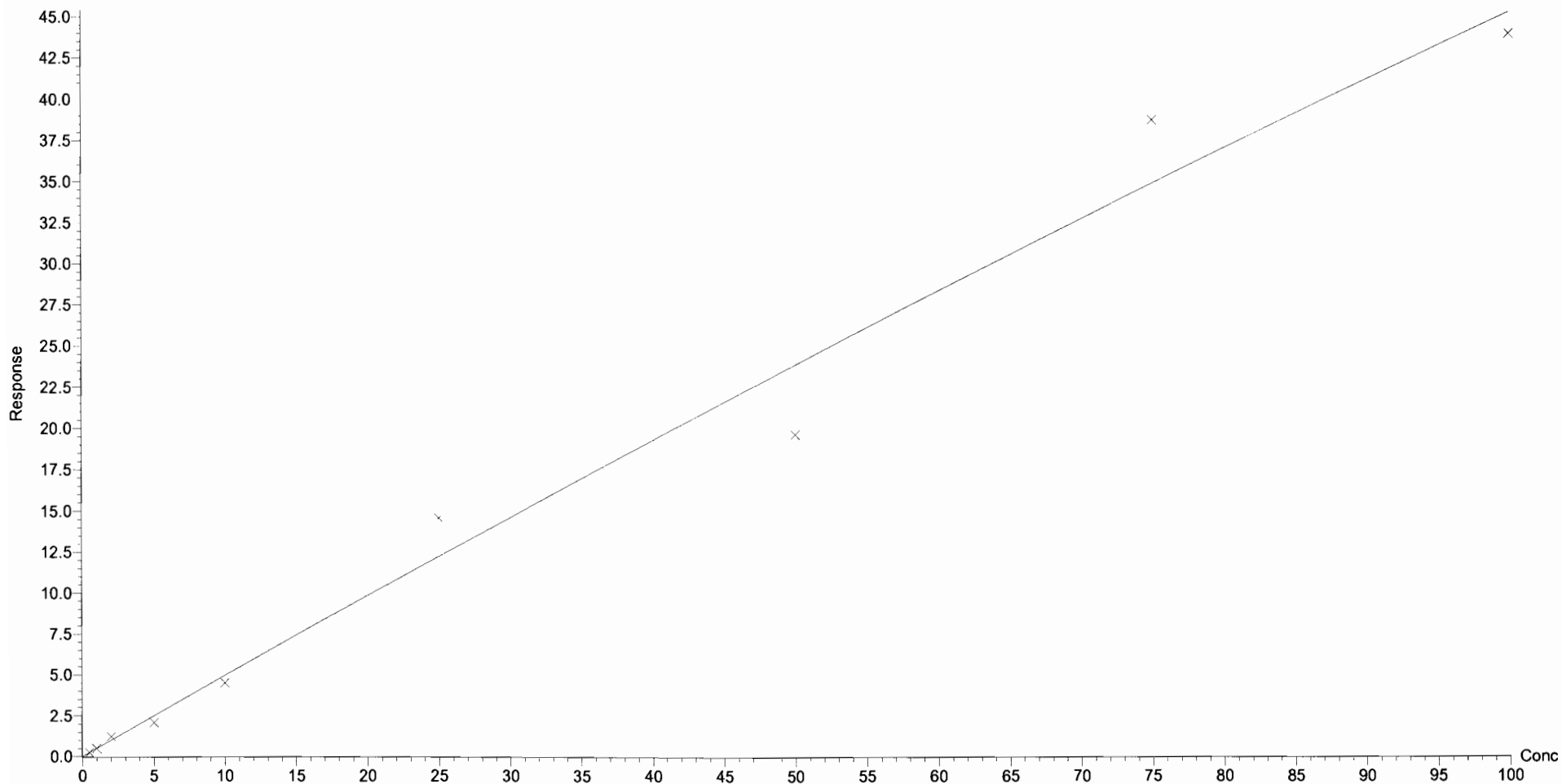
Compound name: 8:2 FTS

Coefficient of Determination: $R^2 = 0.984052$

Calibration curve: $-0.000479329 * x^2 + 0.502189 * x + 0.00235356$

Response type: Internal Std (Ref 25), Area * (IS Conc. / IS Area)

Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 15:08:21 Pacific Standard Time
Printed: Tuesday, November 22, 2016 15:09:10 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_A_FULL_LINEAR.mdb 22 Nov 2016 14:48:20
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 14:59:27

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	161122G2_1	IPA	22-Nov-16	09:47:54
2	161122G2_2	ST161122G2-2 PFC CS-1 16K1705	22-Nov-16	10:00:32
3	161122G2_3	ST161122G2-3 PFC CS0 16K1706	22-Nov-16	10:13:07
4	161122G2_4	ST161122G2-4 PFC CS1 16K1707	22-Nov-16	10:25:42
5	161122G2_5	ST161122G2-5 PFC CS2 16K1708	22-Nov-16	10:38:18
6	161122G2_6	ST161122G2-6 PFC CS3 16K1709	22-Nov-16	10:50:54
7	161122G2_7	ST161122G2-7 PFC CS3.5 16K1710	22-Nov-16	11:03:32
8	161122G2_8	ST161122G2-8 PFC CS4 16K1711	22-Nov-16	11:16:11
9	161122G2_9	ST161122G2-9 PFC CS4.5 16K1712	22-Nov-16	11:28:50
10	161122G2_10	ST161122G2-10 PFC CS5 16K1713	22-Nov-16	11:41:28
11	161122G2_11	IPA	22-Nov-16	11:54:03
12	161122G2_12	SS161122G2-1 PFC SS 16K2201	22-Nov-16	12:06:50
13	161122G2_13	IPA	22-Nov-16	12:19:32

Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

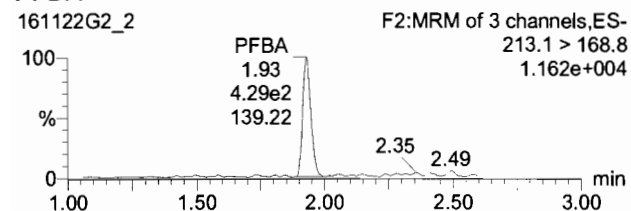
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Method: U:\G1.PRO\MethDB\PFAS_A_FULL_LINEAR.mdb 22 Nov 2016 14:48:05

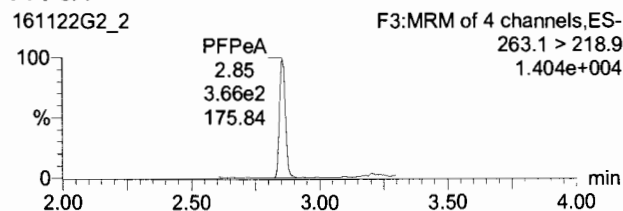
Calibration: 22 Nov 2016 14:43:00

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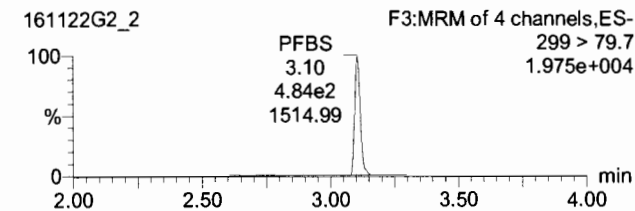
PFBA



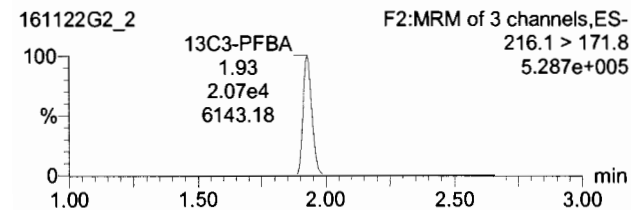
PFPeA



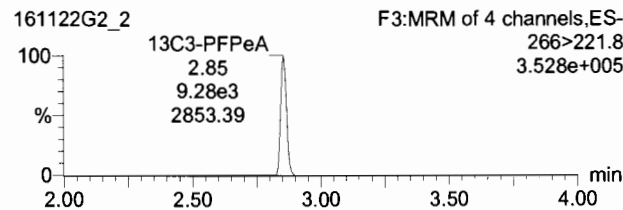
PFBS



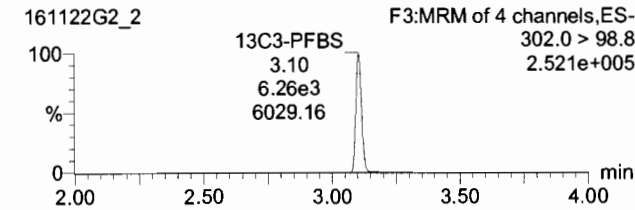
13C3-PFBA



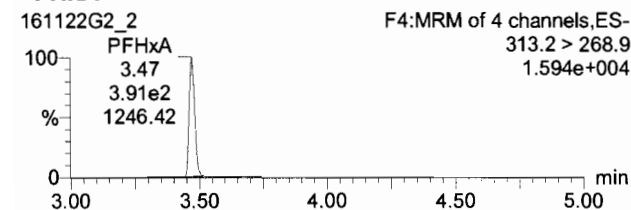
13C3-PFPeA



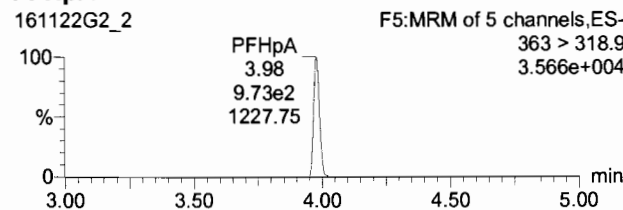
13C3-PFBS



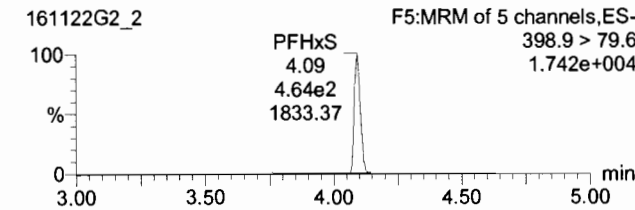
PFHxA



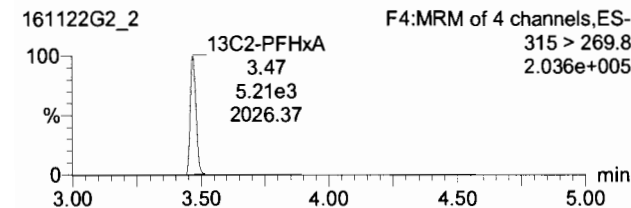
PFHpA



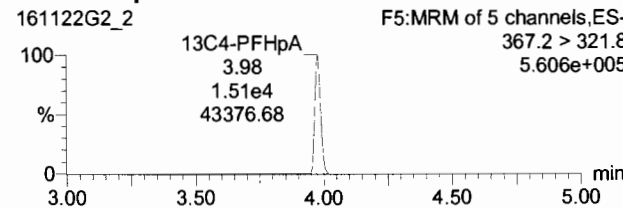
PFHxS



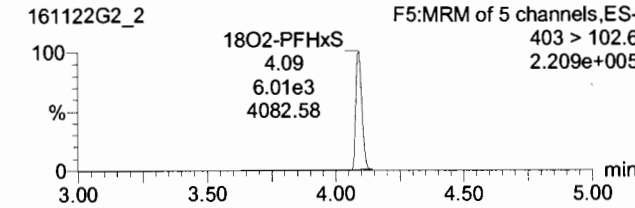
13C2-PFHxA



13C4-PFHpA



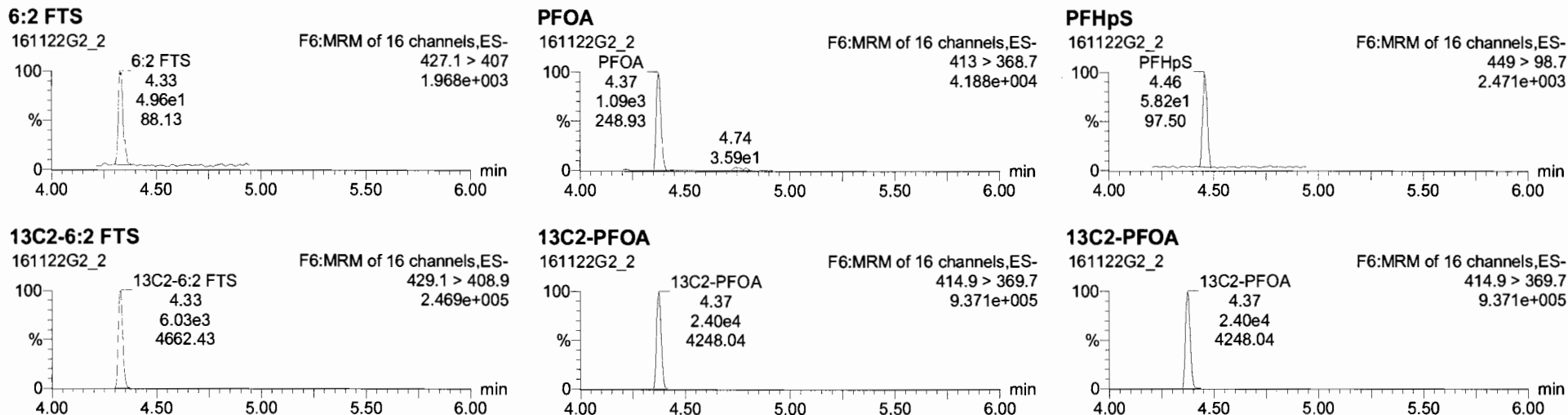
18O2-PFHxS



Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

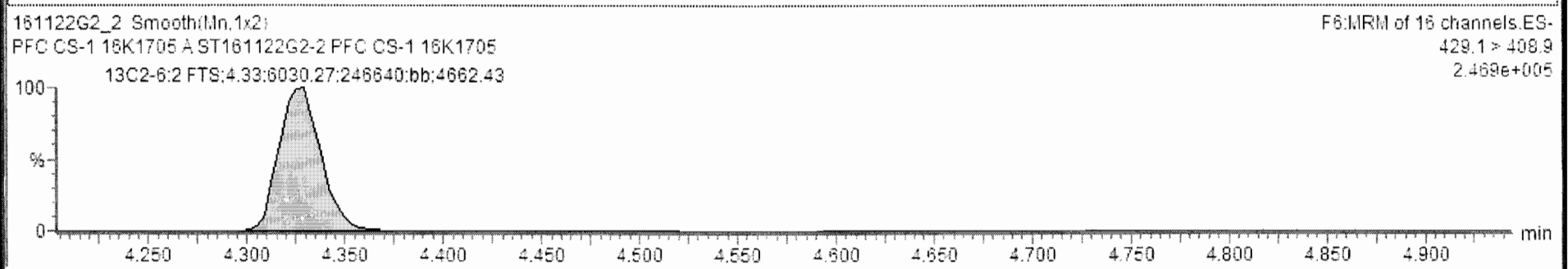
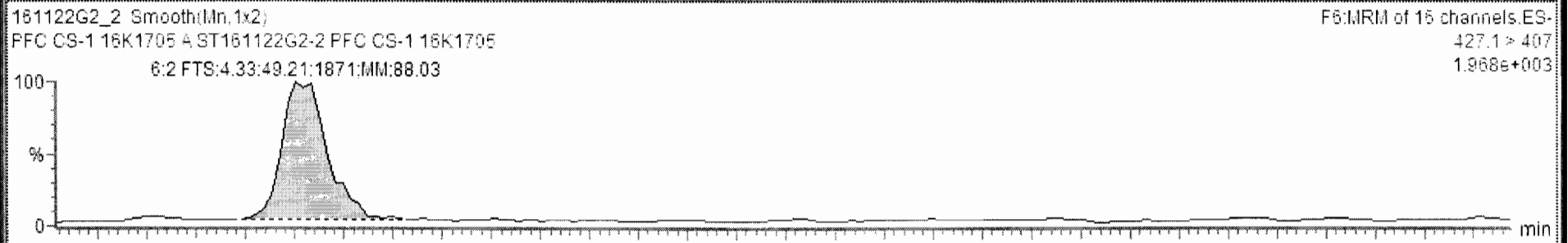
Name: 161122G2_2, Date: 22-Nov-2016, Time: 10:00:32, ID: ST161122G2-2 PFC CS-1 16K1705, Description: PFC CS-1 16K1705 A





161122G2_2 - ST161122G2-2 PFC CS-1 16K1705 - PFC CS-1 16K1705 A

Name	Trace	Area	Response	RRF	Wt/VoL	RT	Conc.	%Rec	DL	%RSD	Coeff. Of D...
1	PFBA	213.1 > 168.8	4.29e2	0.259	0.518	1.93	0.608	121.7	0.0932282		0.9984
2	PFPeA	263.1 > 218.9	3.66e2	0.493	0.986	2.85	0.611	122.2	0.1266747		0.9987
3	PFBS	299 > 79.7	4.84e2	0.966	1.932	3.10	0.620	124.1	0.0821816		0.9986
4	PFHxA	313.2 > 268.9	3.91e2	0.376	0.751	3.47	0.612	122.3	0.0000000		0.9985
5	PFHpA	363 > 318.9	9.73e2	0.805	1.610	3.98	0.608	121.5	0.0901896		0.9993
6	PFHxS	398.9 > 79.8	4.64e2	0.965	1.931	4.09	0.576	115.3	0.0162512		0.9975
7	6:2 FTS	427.1 > 407	4.92e1	0.102	0.204	4.33	0.523	104.6	0.2638680		0.9789
8	PFOA	413 > 368.7	1.09e3	0.566	1.133	4.37	0.527	105.5	0.0000000		0.9990
9	PFHpS	449 > 98.7	5.82e1	0.030	0.081	4.46	0.577	115.3	0.2567614		0.9958
10	PFOS	499 > 79.9	1.21e2	0.287	0.574	4.76	0.543	108.5	0.2386134		0.9935
11	PFNA	463 > 418.8	5.63e2	0.664	1.329	4.72	0.509	101.7	0.1047001		0.9954
12	PFDA	513 > 468.8	1.30e2	0.270	0.540	5.01	0.486	97.3	0.0368964		0.9973
13	6:2 FTS	527 > 506.9	4.13e1	0.243	0.486	4.99	0.485	97.0	0.0169968		0.9823



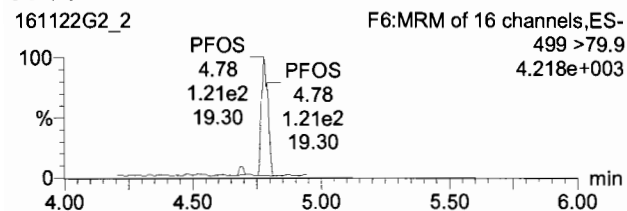
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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

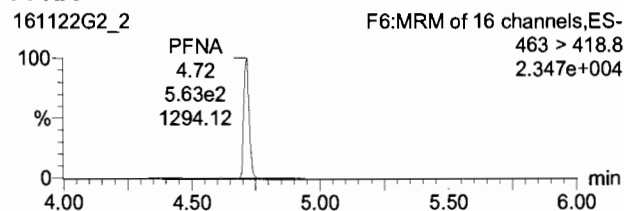
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_2, Date: 22-Nov-2016, Time: 10:00:32, ID: ST161122G2-2 PFC CS-1 16K1705, Description: PFC CS-1 16K1705 A

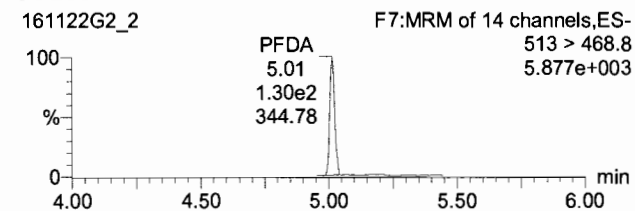
PFOS



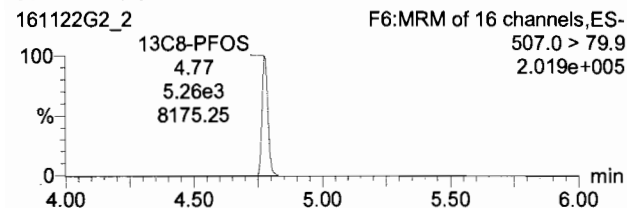
PFNA



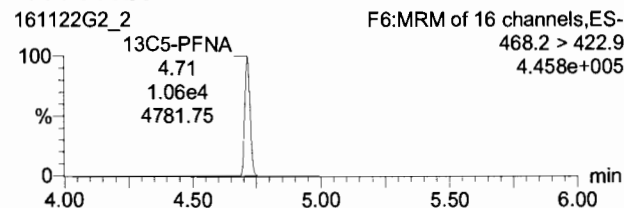
PFDA



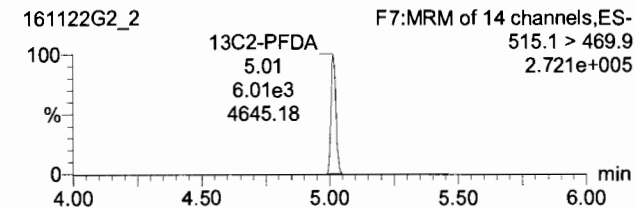
13C8-PFOS



13C5-PFNA



13C2-PFDA



Dataset: Untitled

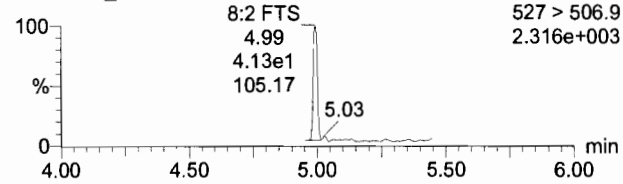
Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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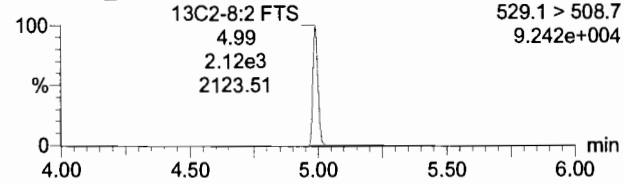
8:2 FTS

161122G2_2



13C2-8:2 FTS

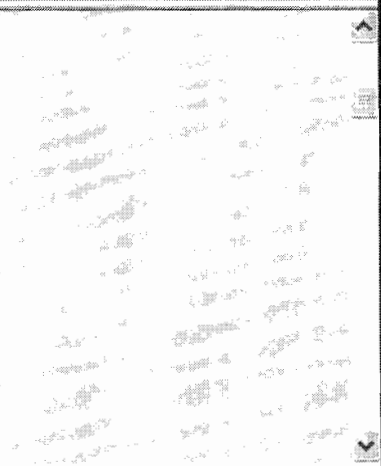
161122G2_2





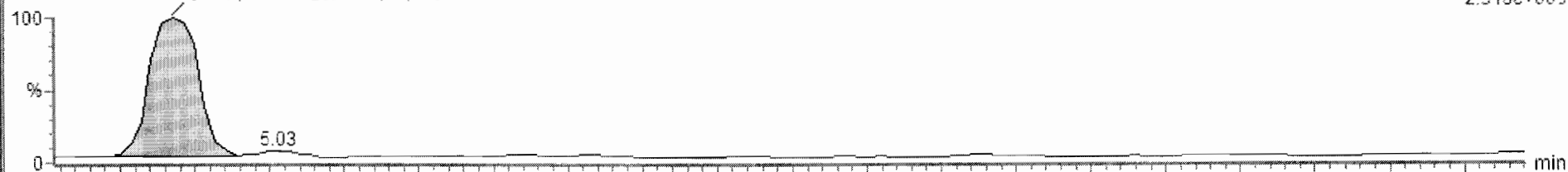
161122G2_2 - ST161122G2-2 PFC CS-1 16K1705 - PFC CS-1 16K1705 A

Name	Trace	Area	RRF	Wt/Vol	Pred. RT	RT	Conc.	>MDL	%Rec	DL
4 PFHxA	313.2 > 268.9	3.91e2		1.000	3.47	3.47	0.612	NO	122.3	0.0000000
5 PFHpA	263 > 318.9	9.73e2		1.000	3.98	3.98	0.608	NO	121.5	0.0903976
6 PFHxS	398.9 > 79.6	4.64e2		1.000	4.09	4.09	0.578	NO	115.3	0.0164070
7 6:2 FTS	427.1 > 407	4.92e1		1.000	4.33	4.33	0.645	NO	129.1	0.4501268
8 PFOA	413 > 365.7	1.09e3		1.000	4.37	4.37	0.527	NO	105.5	0.0000000
9 PFHpS	449 > 98.7	5.82e1		1.000	4.37	4.45	0.577	NO	115.3	0.2585335
10 PFOS	499 > 79.9	1.21e2		1.000	4.78	4.78	0.543	NO	108.5	0.2465854
11 PFNA	463 > 418.8	5.63e2		1.000	4.71	4.72	0.509	NO	101.7	0.1048546
12 PFDA	513 > 468.8	1.30e2		1.000	5.01	5.01	0.486	NO	97.3	0.0375452
13 8:2 FTS	527 > 506.9	4.13e1		1.000	4.99	4.99	0.479	NO	95.9	0.0123962
14 13C3-PFBA	216.1 > 171.8	2.07e4	1.21	1.000	1.93	1.93	12.2	NO	97.8	0.0060004
15 13C3-PFPeA	266 > 221.8	9.28e3	0.448	1.000	2.83	2.85	12.5	NO	100.1	0.0125741
16 13C3-PFBS	302.0 > 96.8	6.26e3	0.302	1.000	3.09	3.10	12.5	NO	100.1	0.0062980



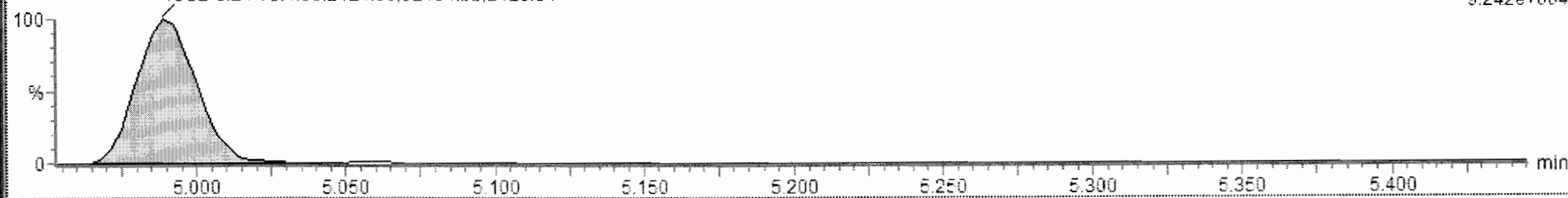
161122G2_2 Smooth(Mn,1x2)
 PFC CS-1 16K1705 A ST161122G2-2 PFC CS-1 16K1705
 8:2 FTS;4.99:41.28:2211;bb:105.17

F7:MRM of 14 channels.ES-
 527 > 506.9
 2.316e+003



161122G2_2 Smooth(Mn,1x2)
 PFC CS-1 16K1705 A ST161122G2-2 PFC CS-1 16K1705
 13C2-8:2 FTS;4.99:2124.00:92194;bb:2123.51

F7:MRM of 14 channels.ES-
 529.1 > 508.7
 9.242e+004



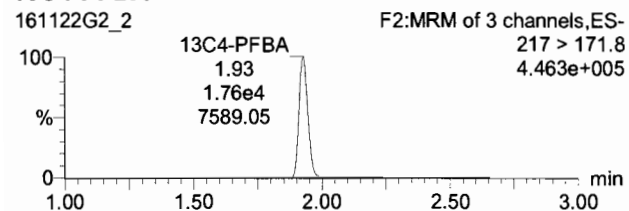
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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

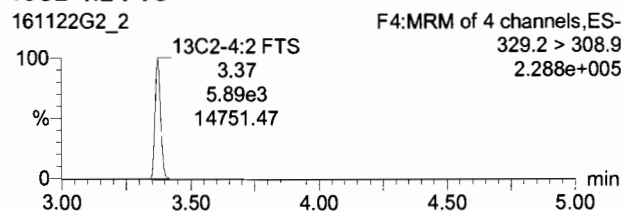
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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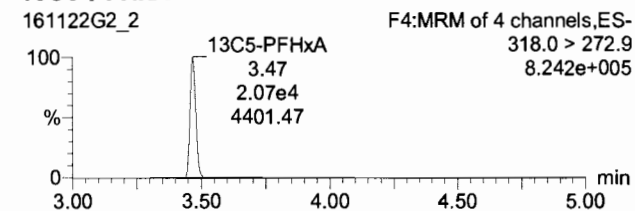
13C4-PFBA



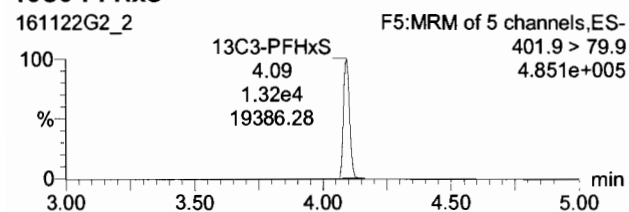
13C2-4:2 FTS



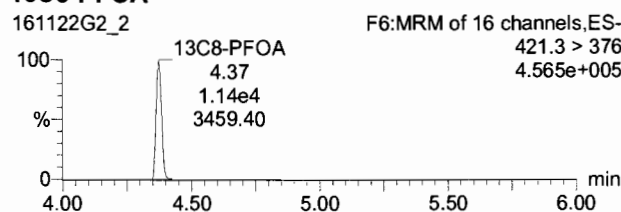
13C5-PFHxA



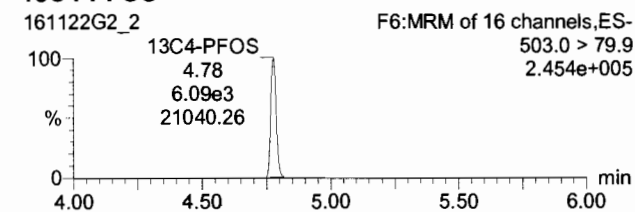
13C3-PFHxS



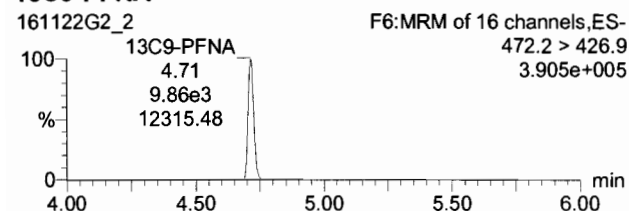
13C8-PFOA



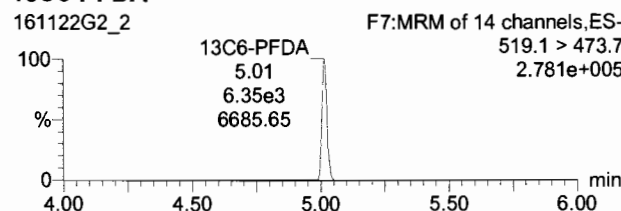
13C4-PFOS



13C9-PFNA



13C6-PFDA

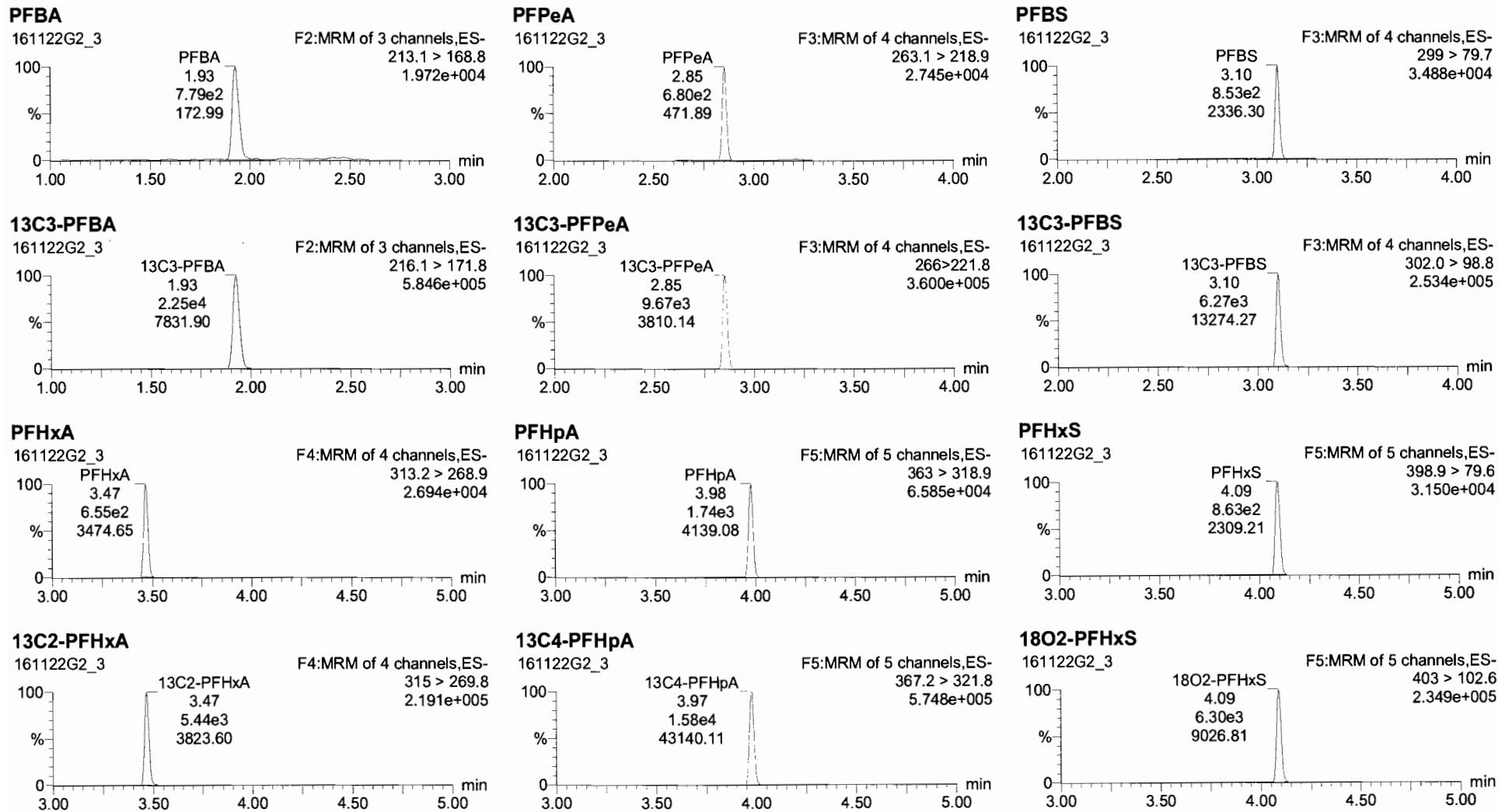


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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_3, Date: 22-Nov-2016, Time: 10:13:07, ID: ST161122G2-3 PFC CS0 16K1706, Description: PFC CS0 16K1706 A

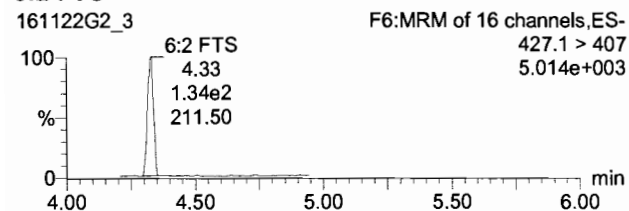


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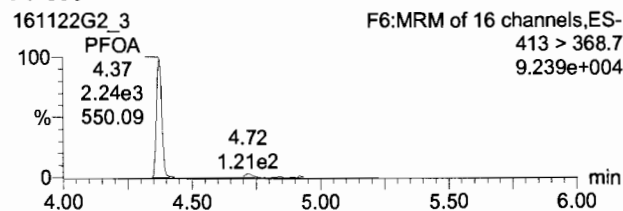
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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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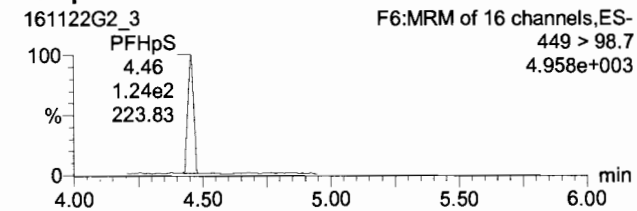
6:2 FTS



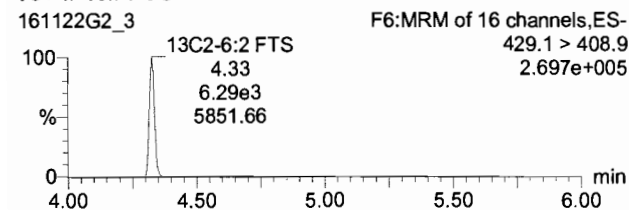
PFOA



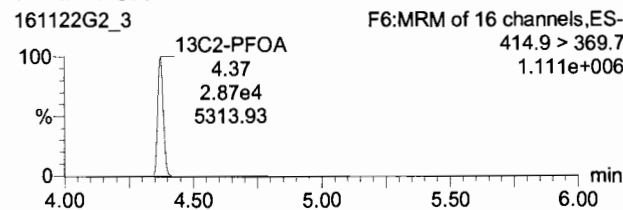
PFHpS



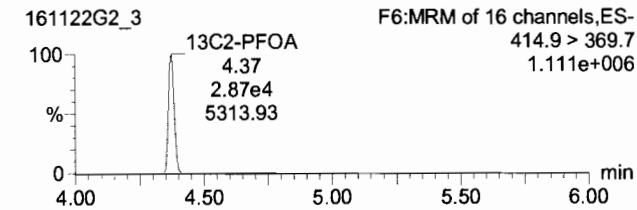
13C2-6:2 FTS



13C2-PFOA



13C2-PFOA



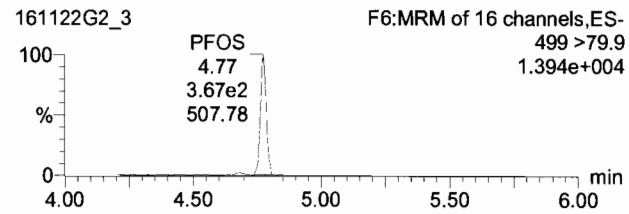
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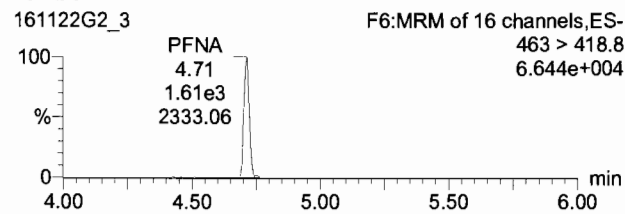
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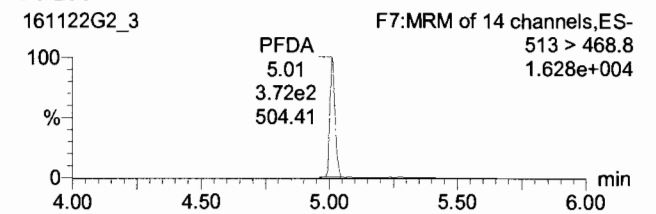
PFOS



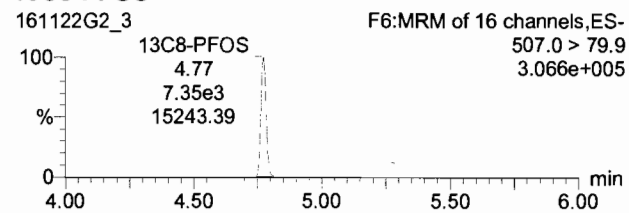
PFNA



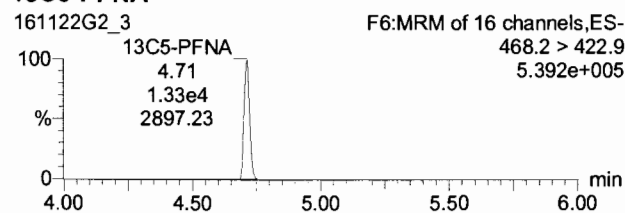
PFDA



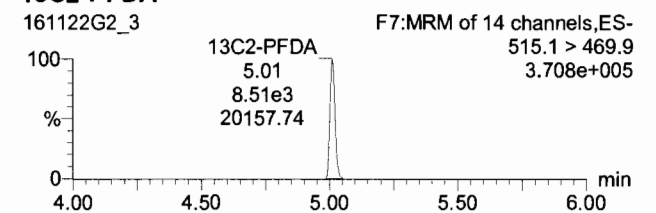
13C8-PFOS



13C5-PFNA



13C2-PFDA



Dataset: Untitled

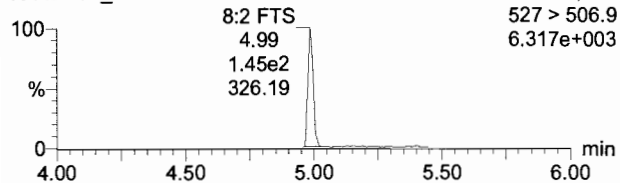
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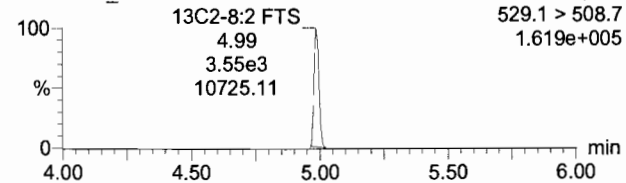
8:2 FTS

161122G2_3



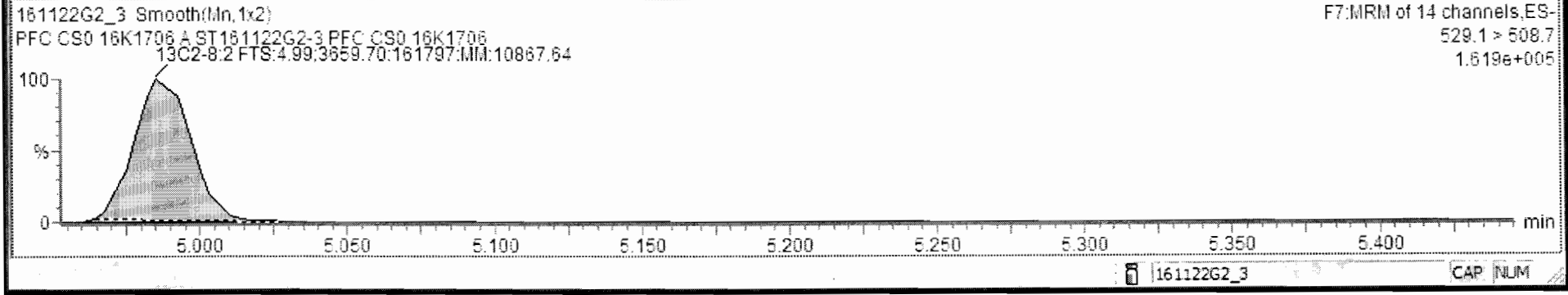
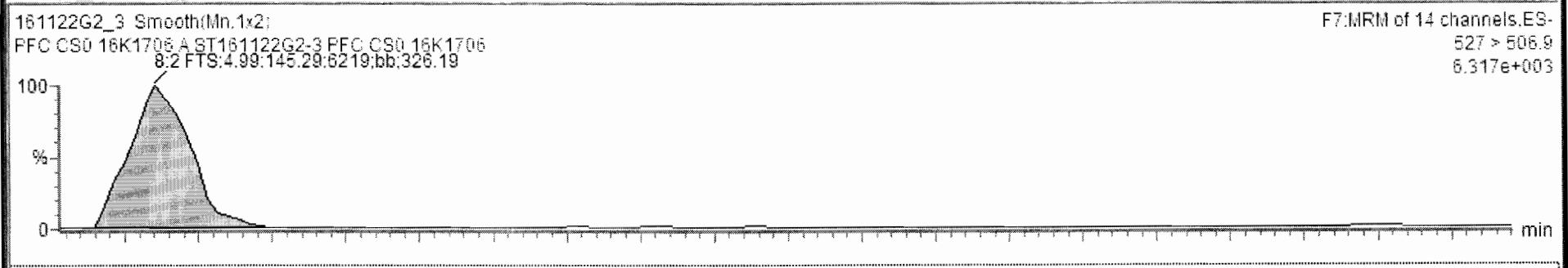
13C2-8:2 FTS

161122G2_3



161122G2_3 - ST161122G2-3 PFC CS0 16K1706 - PFC CS0 16K1706 A

Name	Trace	Area	RRF	Wt/Vol	Pred. RT	RT	Conc.	>MDL	%Rec	DL
4 PFHxA	313.2 > 268.9	6.55e2		1.000	3.47	3.47	0.989	NO	98.9	0.0000000
5 PFHpA	363 > 318.9	1.74e3		1.000	3.97	3.98	0.979	NO	97.9	0.0697062
6 PFHxS	398.9 > 79.6	8.63e2		1.000	4.09	4.09	1.01	NO	101.1	0.0165248
7 6:2 FTS	427.1 > 407	1.34e2		1.000	4.33	4.33	0.971	NO	97.1	0.4490742
8 PFOA	413 > 368.7	2.24e3		1.000	4.37	4.37	0.983	NO	98.3	0.0000000
9 PFHpS	449 > 98.7	1.24e2		1.000	4.37	4.45	0.834	NO	83.4	0.2545461
10 PFOS	499 > 79.9	3.67e2		1.000	4.78	4.77	0.947	NO	94.7	0.2020921
11 PFNA	483 > 418.8	1.81e3		1.000	4.71	4.71	1.02	NO	102.5	0.1049328
12 PFDA	513 > 468.8	3.72e2		1.000	5.01	5.01	0.949	NO	94.9	0.0381871
13 8:2 FTS	527 > 506.9	1.45e2		1.000	4.99	4.99	0.984	NO	98.4	0.0027010
14 13C3-PFBA	216.1 > 171.8	2.25e4	1.21	1.000	1.92	1.92	12.8	NO	101.0	0.0041450
15 13C3-PFPeA	286 > 221.8	9.67e3	0.448	1.000	2.83	2.85	12.4	NO	99.4	0.0077179
16 13C3-PFBS	302.0 > 98.8	6.27e3	0.302	1.000	3.09	3.10	11.9	NO	95.4	0.0023082



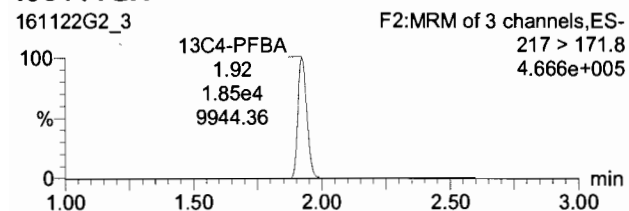
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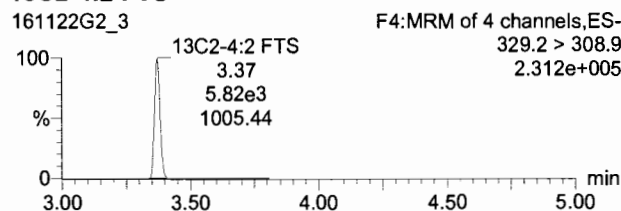
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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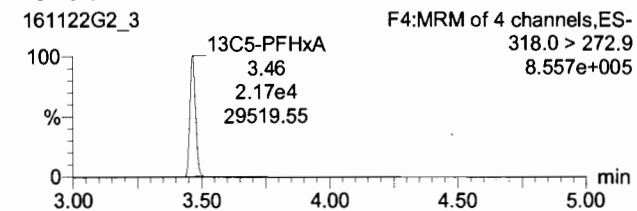
13C4-PFBA



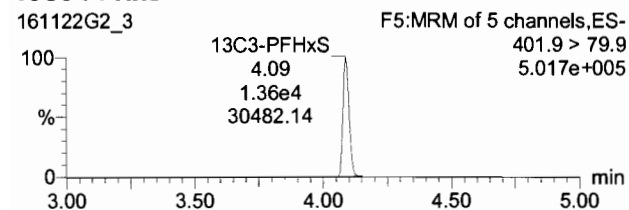
13C2-4:2 FTS



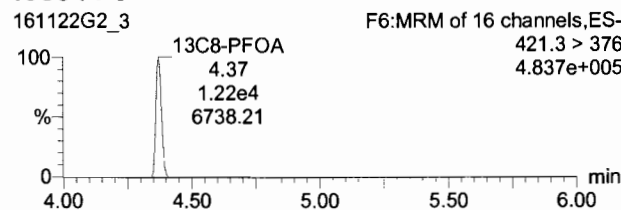
13C5-PFHxA



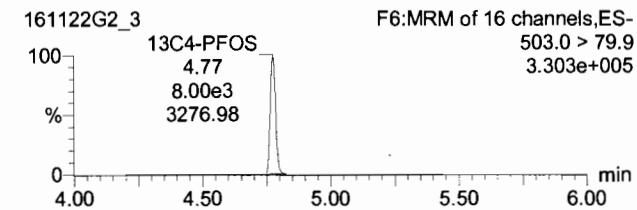
13C3-PFHxS



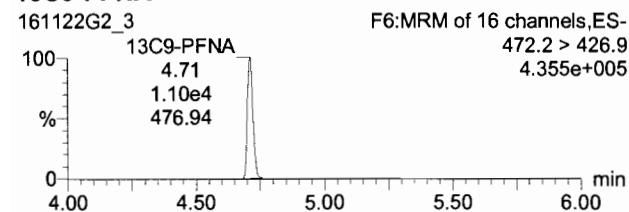
13C8-PFOA



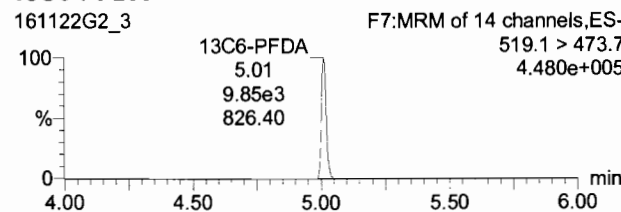
13C4-PFOS



13C9-PFNA



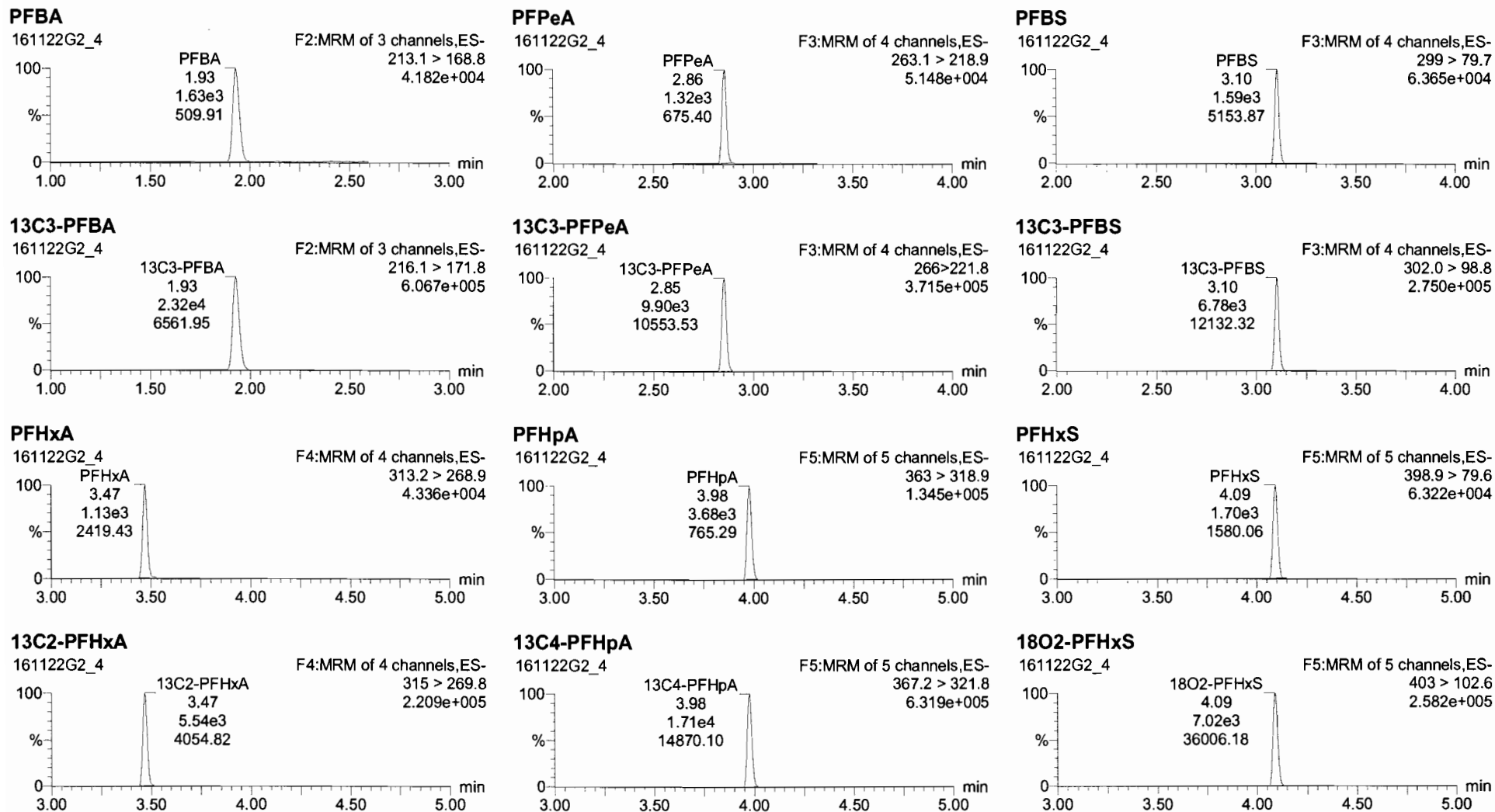
13C6-PFDA



Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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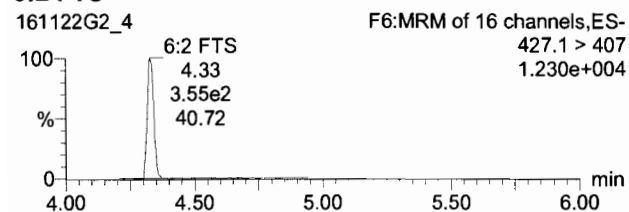
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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

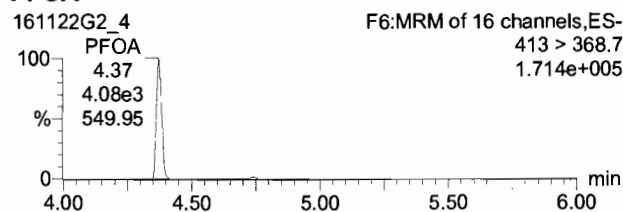
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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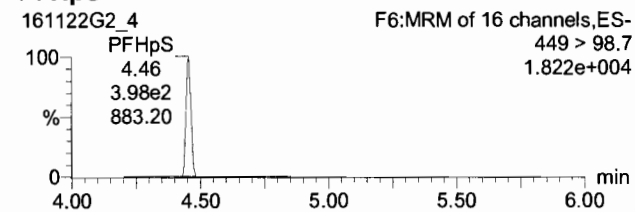
6:2 FTS



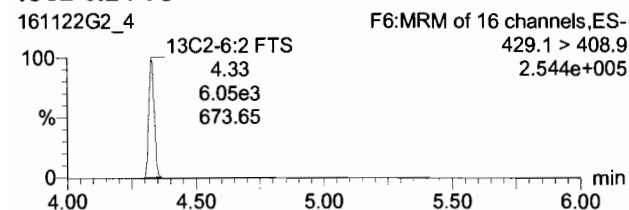
PFOA



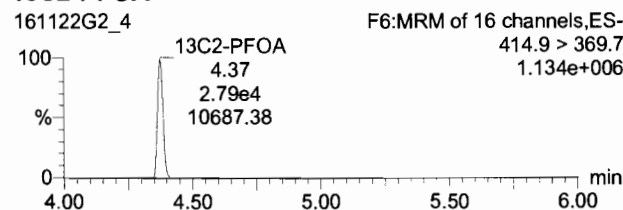
PFHpS



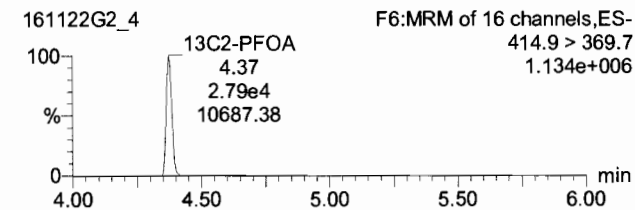
13C2-6:2 FTS



13C2-PFOA



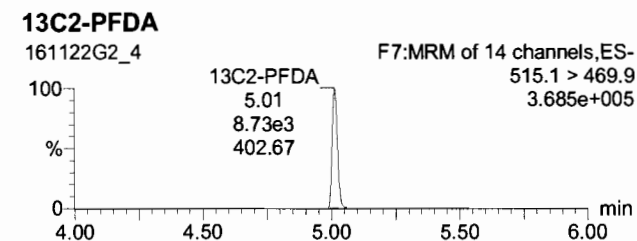
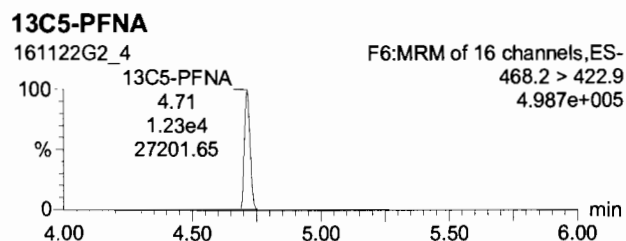
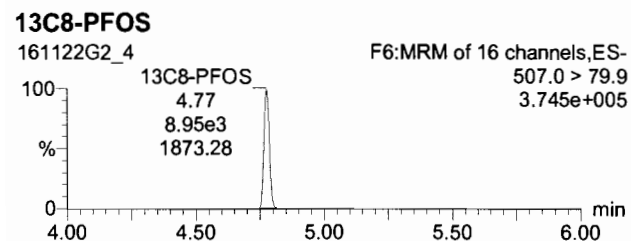
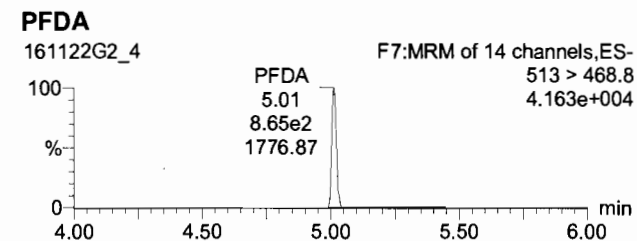
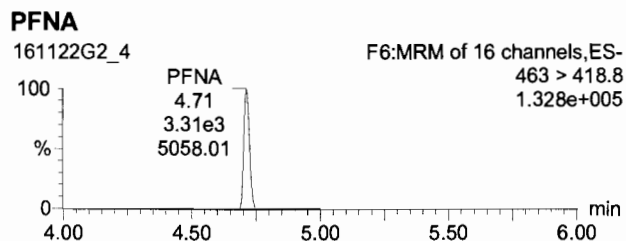
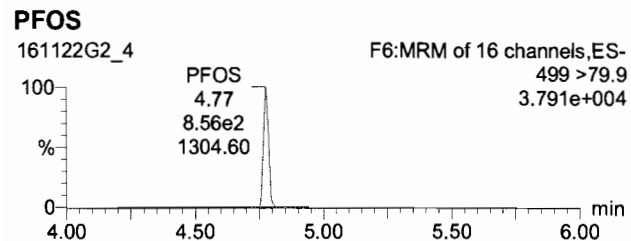
13C2-PFOA



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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_4, Date: 22-Nov-2016, Time: 10:25:42, ID: ST161122G2-4 PFC CS1 16K1707, Description: PFC CS1 16K1707 A



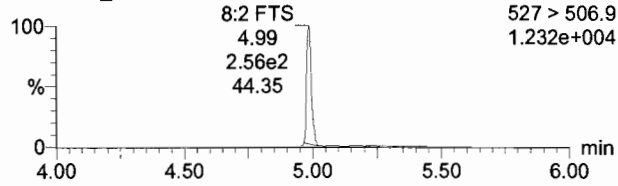
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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_4, Date: 22-Nov-2016, Time: 10:25:42, ID: ST161122G2-4 PFC CS1 16K1707, Description: PFC CS1 16K1707 A

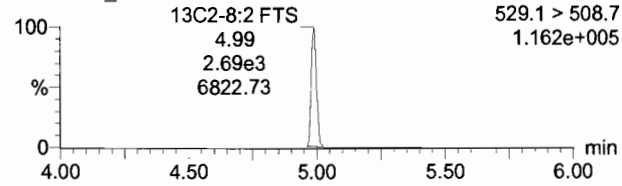
8:2 FTS

161122G2_4



13C2-8:2 FTS

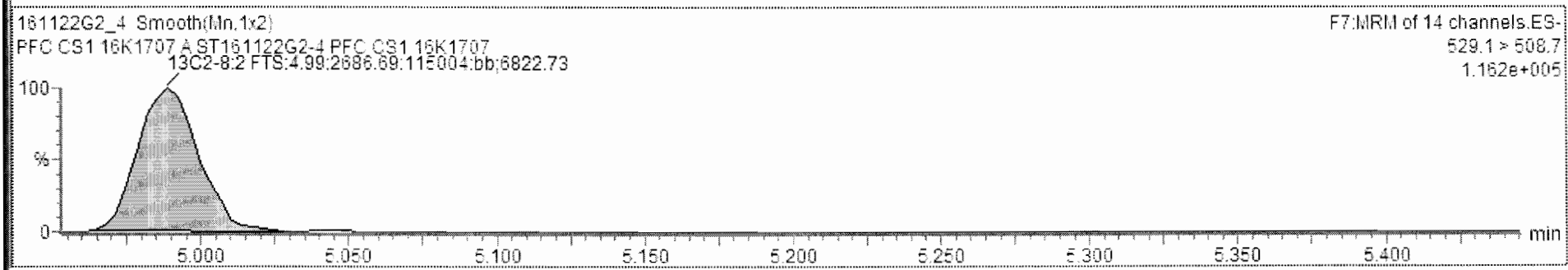
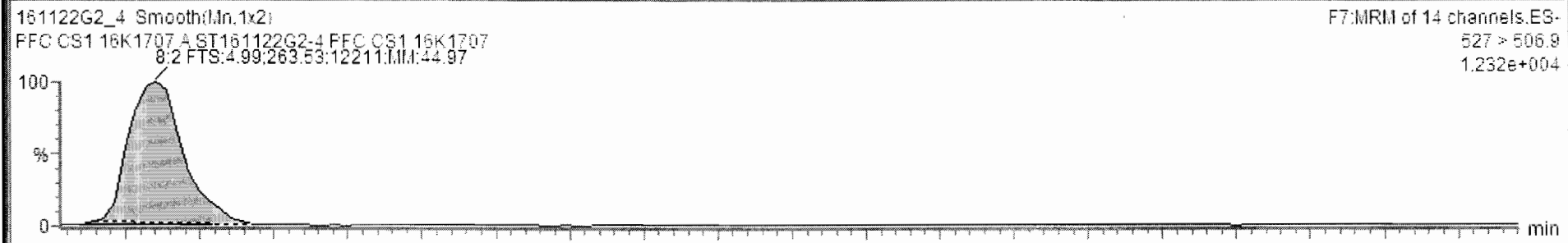
161122G2_4





161122G2_4 - ST161122G2-4 PFC CS1 16K1707 - PFC CS1 16K1707 A

Name	Trace	Area	RRF	Wt/VoL	Pred.RT	RT	Conc.	>MDL	%Rec	DL
4	PFHxA	313.2 > 268.9	1.13e3	1.000	3.47	3.47	1.69	NO	84.7	0.0000000
5	PFHpA	263 > 318.9	3.68e3	1.000	3.98	2.98	1.82	NO	90.8	0.0947461
6	PFHxS	398.9 > 79.6	1.70e3	1.000	4.09	4.09	1.78	NO	88.8	0.0182811
7	6:2 FTS	427.1 > 407	3.55e2	1.000	4.33	4.33	1.90	NO	94.8	0.5167321
8	PFOA	413 > 368.7	4.08e3	1.000	4.37	4.37	1.93	NO	98.8	0.0000000
9	PFHpS	449 > 98.7	3.98e2	1.000	4.37	4.45	2.18	NO	109.2	0.2540463
10	PFOS	499 > 79.9	8.56e2	1.000	4.78	4.77	1.63	NO	81.8	0.2016580
11	PFNA	483 > 418.8	3.31e3	1.000	4.71	4.71	2.16	NO	107.8	0.1049312
12	PFDA	513 > 468.8	8.65e2	1.000	5.01	5.01	2.11	NO	105.6	0.0369790
13	6:2 FTS	527 > 506.9	2.64e2	1.000	4.99	4.99	2.44	NO	122.1	0.1423108
14	13C3-PFBA	216.1 > 171.8	2.32e4	1.21	1.93	1.93	13.4	NO	107.0	0.0051901
15	13C3-PFPeA	266 > 221.8	9.90e3	0.448	2.83	2.85	13.1	NO	104.8	0.0029331
16	13C3-PFBS	302.0 > 98.8	6.78e3	0.302	3.09	3.10	13.3	NO	106.4	0.0028004



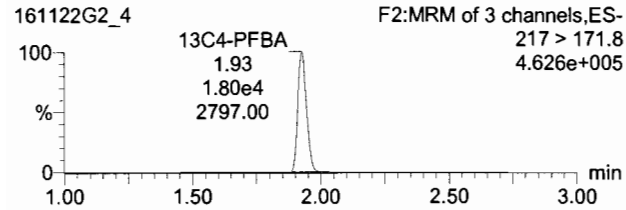
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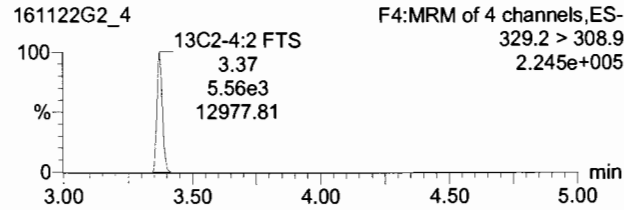
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Name: 161122G2_4, Date: 22-Nov-2016, Time: 10:25:42, ID: ST161122G2-4 PFC CS1 16K1707, Description: PFC CS1 16K1707 A

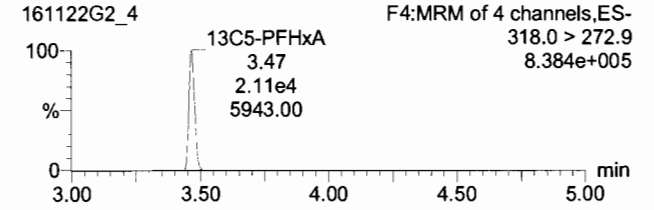
13C4-PFBA



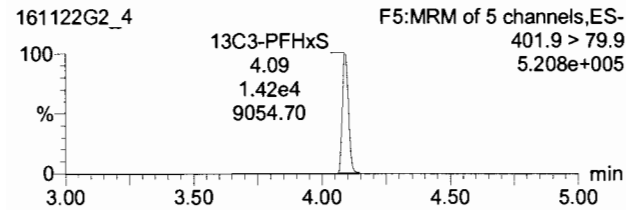
13C2-4:2 FTS



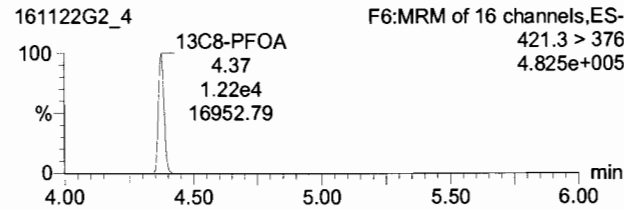
13C5-PFHxA



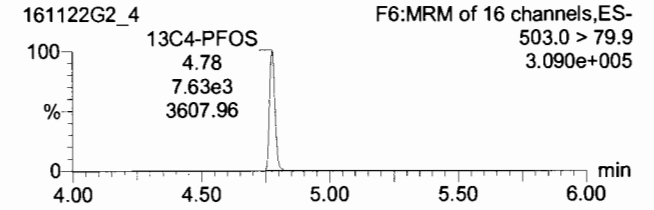
13C3-PFHxS



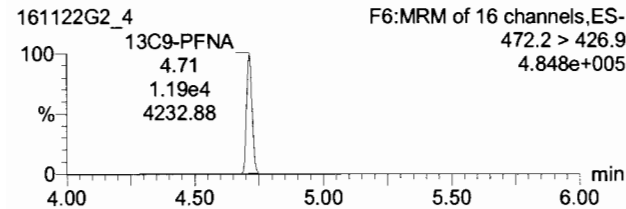
13C8-PFOA



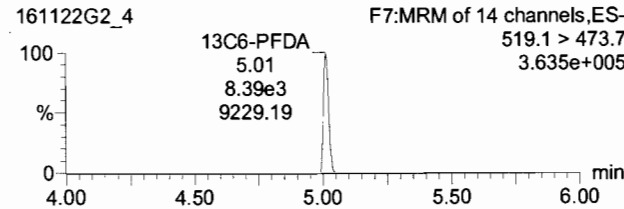
13C4-PFOS



13C9-PFNA



13C6-PFDA



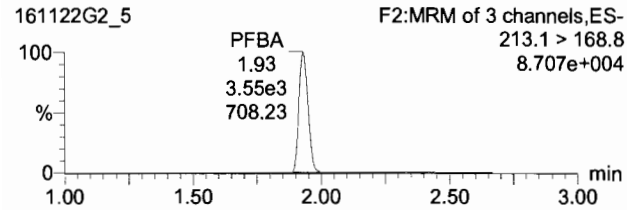
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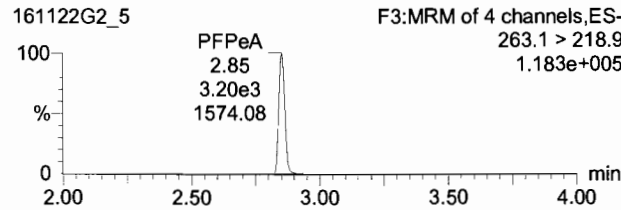
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_5, Date: 22-Nov-2016, Time: 10:38:18, ID: ST161122G2-5 PFC CS2 16K1708, Description: PFC CS2 16K1708 A

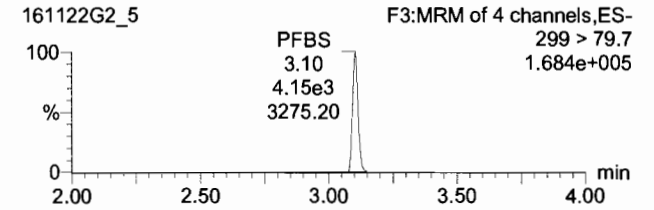
PFBA



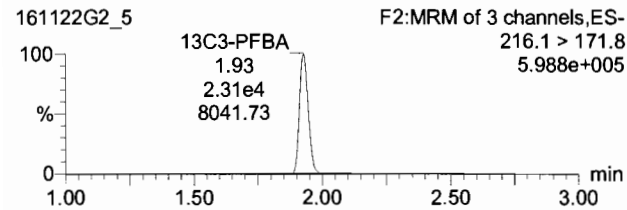
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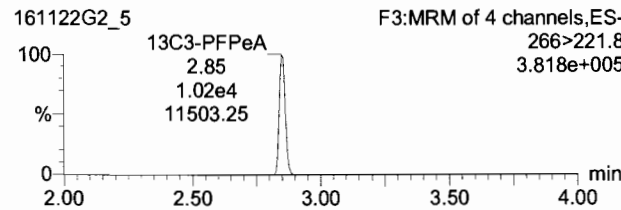
PFBS



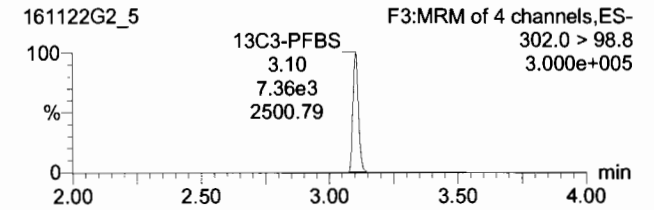
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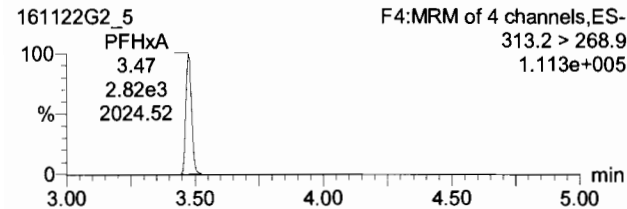
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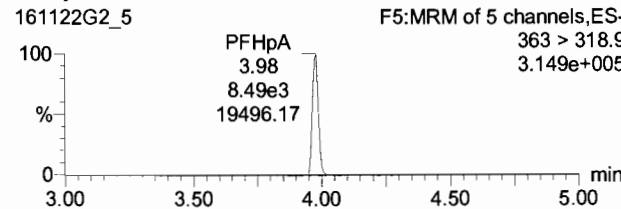
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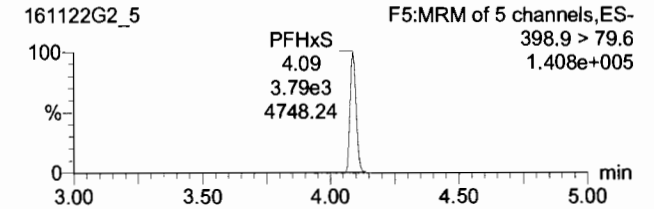
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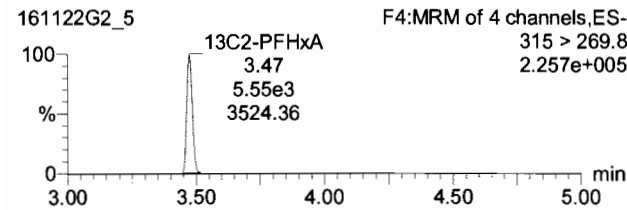
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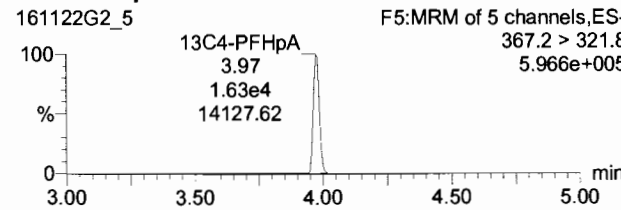
PFHxS



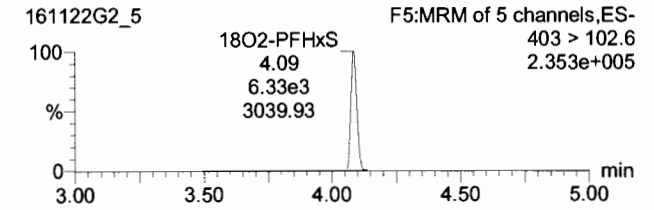
13C2-PFHxA



13C4-PFHpA



18O2-PFHxS



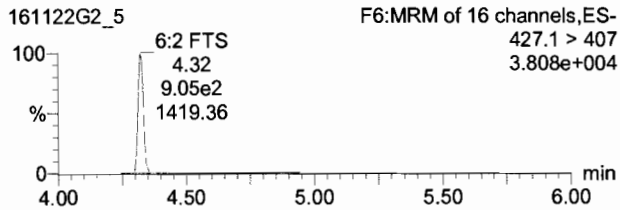
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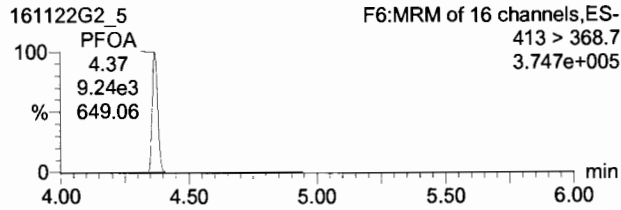
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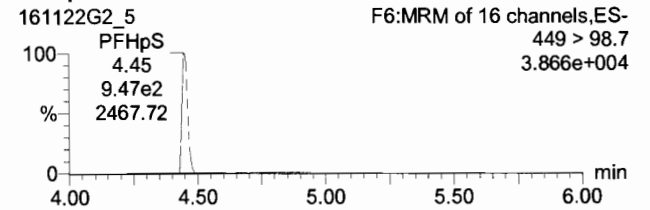
6:2 FTS



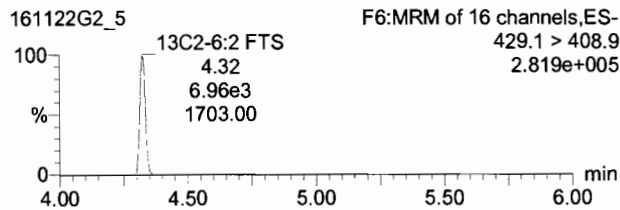
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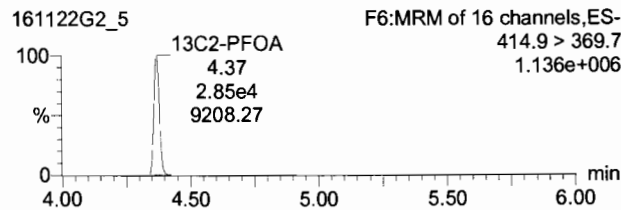
PFHpS



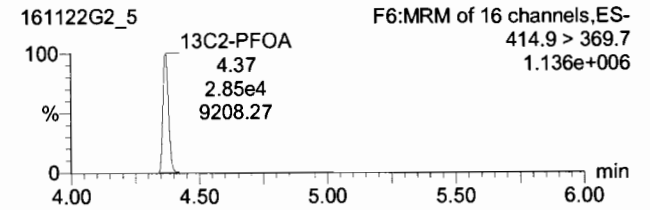
13C2-6:2 FTS



13C2-PFOA



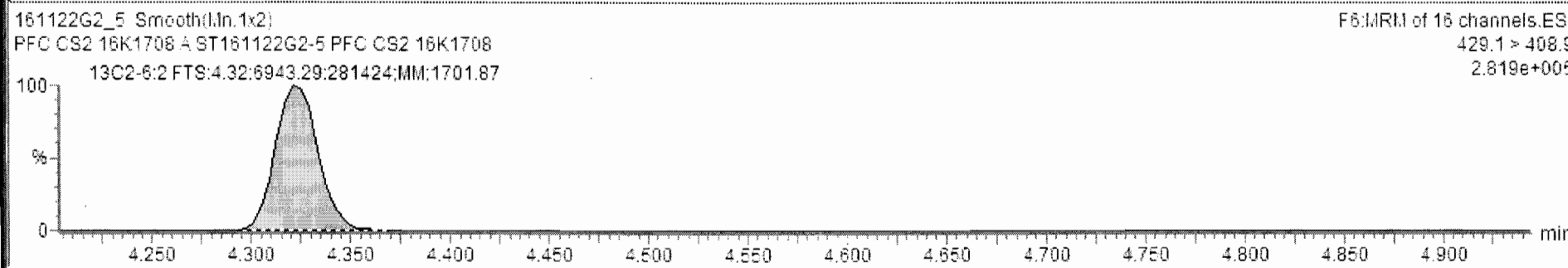
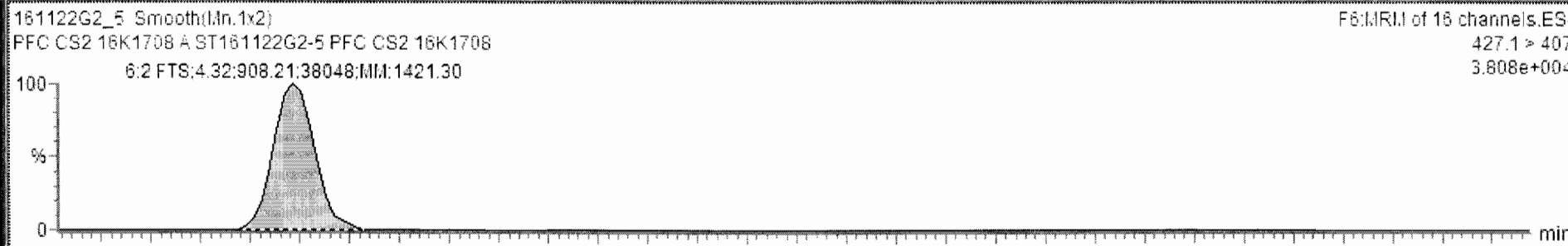
13C2-PFOA





161122G2_5 - ST161122G2-5 PFC CS2 16K1708 - PFC CS2 16K1708 A

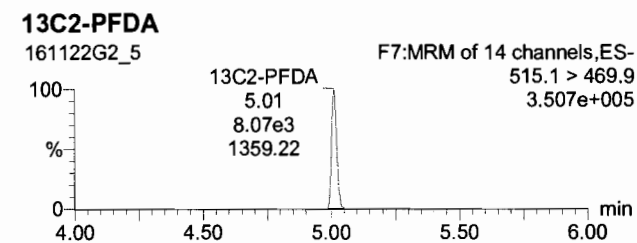
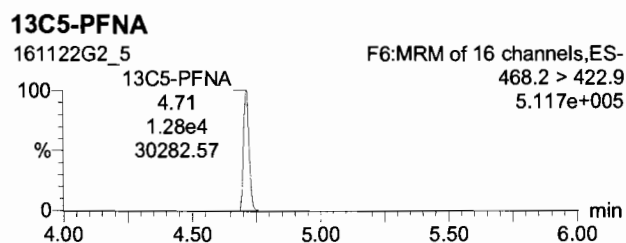
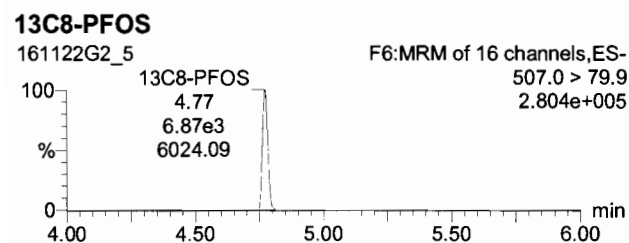
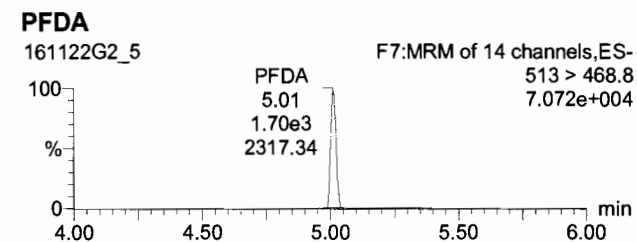
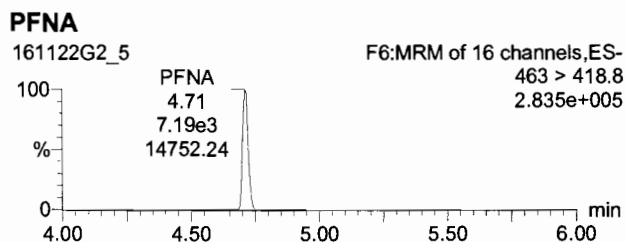
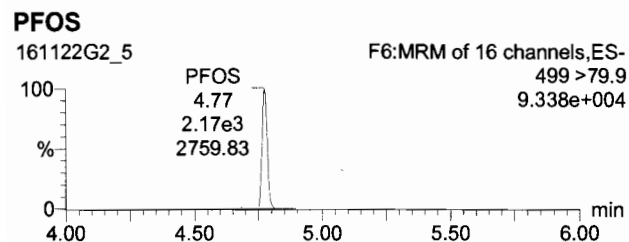
Name	Trace	Area	Response	RRF	Wt/Vol	RT	Conc.	%Rec	DL	%RSD	Coeff. Of D...
4	PFHxA	313.2 > 268.9	2.82e3	2.538	0.508	1.000	3.47	4.23	84.5	0.0000000	0.9985
5	PFHpA	363 > 318.9	8.49e3	8.514	1.303	1.000	3.98	4.28	85.7	0.0898946	0.9993
6	PFHxS	398.9 > 79.6	3.79e3	7.475	1.495	1.000	4.09	4.36	87.2	0.0177626	0.9975
7	6:2 FTS	427.1 > 407	9.08e2	1.635	0.327	1.000	4.32	4.17	83.4	0.2827957	0.9789
8	PFOA	413 > 368.7	9.24e3	4.054	0.811	1.000	4.37	4.40	88.1	0.0000000	0.9990
9	PFHpS	449 > 98.7	9.47e2	0.416	0.083	1.000	4.45	4.76	95.2	0.2525704	0.9956
10	PFOS	499 > 79.9	2.17e3	3.949	0.790	1.000	4.77	4.93	98.6	0.2032607	0.9935
11	PFNA	463 > 418.8	7.19e3	7.012	1.402	1.000	4.71	4.37	87.5	0.1046439	0.9954
12	PFDA	513 > 468.8	1.70e3	2.630	0.526	1.000	5.01	4.44	88.9	0.0382137	0.9973
13	8:2 FTS	527 > 506.9	4.40e2	2.081	0.416	1.000	4.99	4.15	82.9	0.0149202	0.9823
14	13C3-PFBA	216.1 > 171.8	2.31e4	15.177	1.214	1.000	1.93	12.6	100.8	0.0039178	4.60
15	13C3-PFPeA	266 > 221.8	1.02e4	5.822	0.466	1.000	2.85	13.0	104.1	0.0026412	3.92
16	13C3-PFBS	302.0 > 98.8	7.36e3	4.183	0.335	1.000	3.10	13.8	110.8	0.0141320	5.67



Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time
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Name: 161122G2_5, Date: 22-Nov-2016, Time: 10:38:18, ID: ST161122G2-5 PFC CS2 16K1708, Description: PFC CS2 16K1708 A



Dataset: Untitled

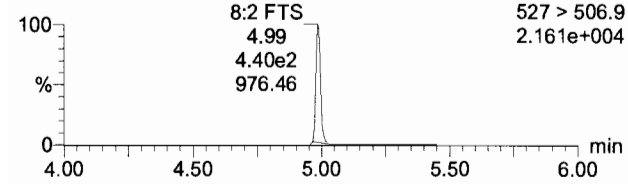
Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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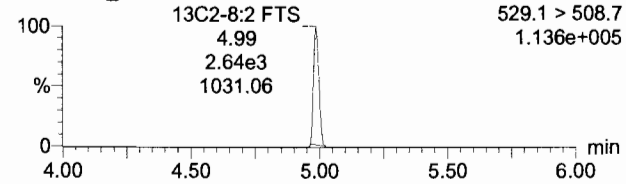
8:2 FTS

161122G2_5



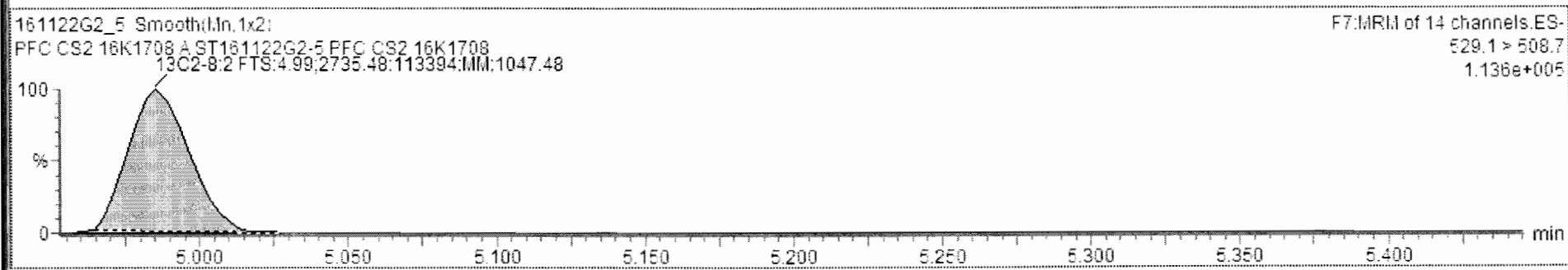
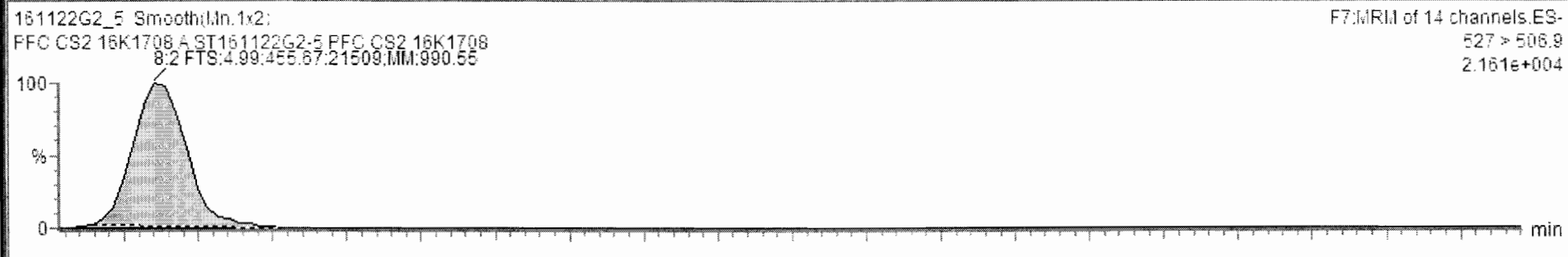
13C2-8:2 FTS

161122G2_5



161122G2_5 - ST161122G2-5 PFC CS2 16K1708 - PFC CS2 16K1708 A

Name	Trace	Area	RRF	Wt/Vol	Pred. RT	RT	Conc.	>MDL	%Rec	DL
4	PFHxA	313.2 > 268.9	2.82e3	1.000	3.47	3.47	4.23	NO	84.5	0.0000000
5	PFHpA	363 > 318.9	8.49e3	1.000	3.97	3.98	4.28	NO	85.7	0.0896946
6	PFHxS	398.9 > 79.6	3.79e3	1.000	4.09	4.09	4.36	YES	87.2	0.0177626
7	6:2 FTS	427.1 > 407	9.08e2	1.000	4.32	4.32	3.89	NO	73.9	0.4496157
8	PFOA	413 > 368.7	9.24e3	1.000	4.37	4.37	4.40	YES	88.1	0.0000000
9	PFHpS	449 > 98.7	9.47e2	1.000	4.37	4.45	4.76	YES	95.2	0.2525704
10	PFOS	499 > 79.9	2.17e3	1.000	4.77	4.77	4.93	YES	98.6	0.2032607
11	PFNA	463 > 418.8	7.19e3	1.000	4.71	4.71	4.37	YES	87.5	0.1046438
12	PFDA	513 > 468.8	1.70e3	1.000	5.01	5.01	4.44	NO	88.9	0.0382137
13	8:2 FTS	527 > 508.9	4.56e2	1.000	4.99	4.99	4.16	NO	83.2	0.0072296
14	13C3-PFB4	216.1 > 171.8	2.31e4	1.21	1.93	1.93	12.6	NO	100.8	0.0038178
15	13C3-PFPeA	266 > 221.8	1.02e4	0.448	2.84	2.85	13.0	NO	104.1	0.0026412
16	13C3-PFBS	302.0 > 98.8	7.36e3	0.302	3.10	3.10	13.8	NO	110.8	0.0141320



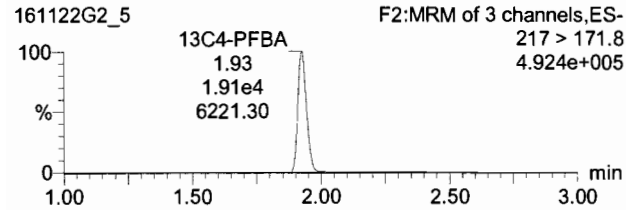
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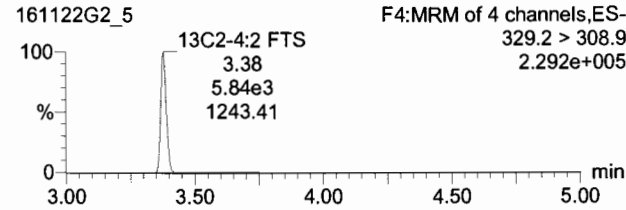
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Name: 161122G2_5, Date: 22-Nov-2016, Time: 10:38:18, ID: ST161122G2-5 PFC CS2 16K1708, Description: PFC CS2 16K1708 A

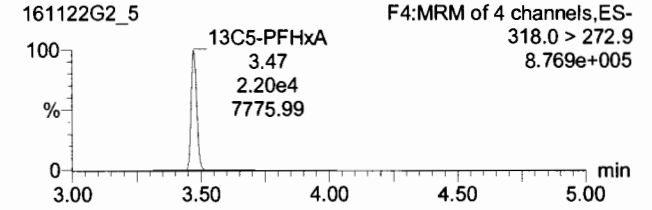
13C4-PFBA



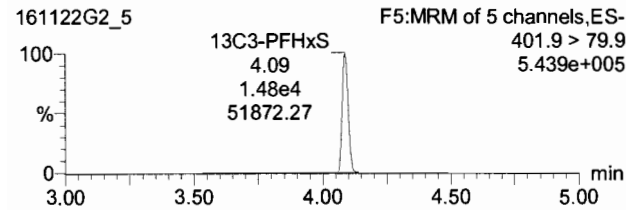
13C2-4:2 FTS



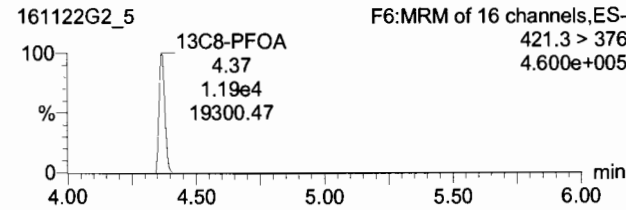
13C5-PFHxA



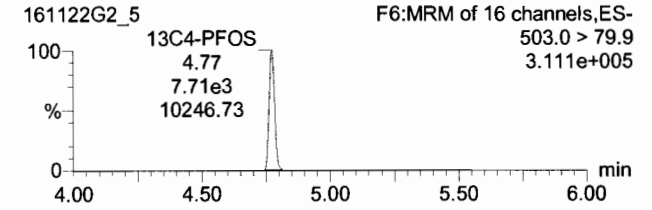
13C3-PFHxS



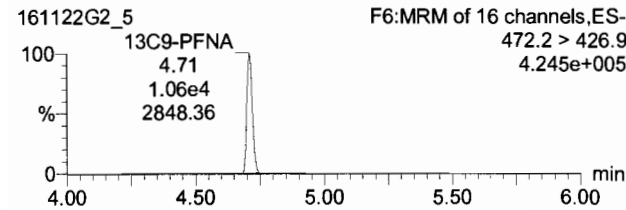
13C8-PFOA



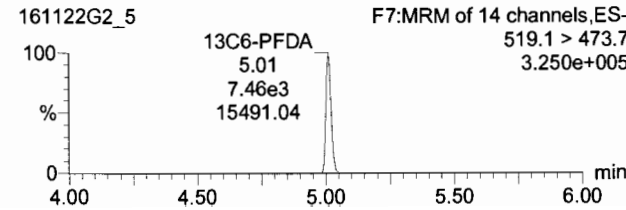
13C4-PFOS



13C9-PFNA



13C6-PFDA

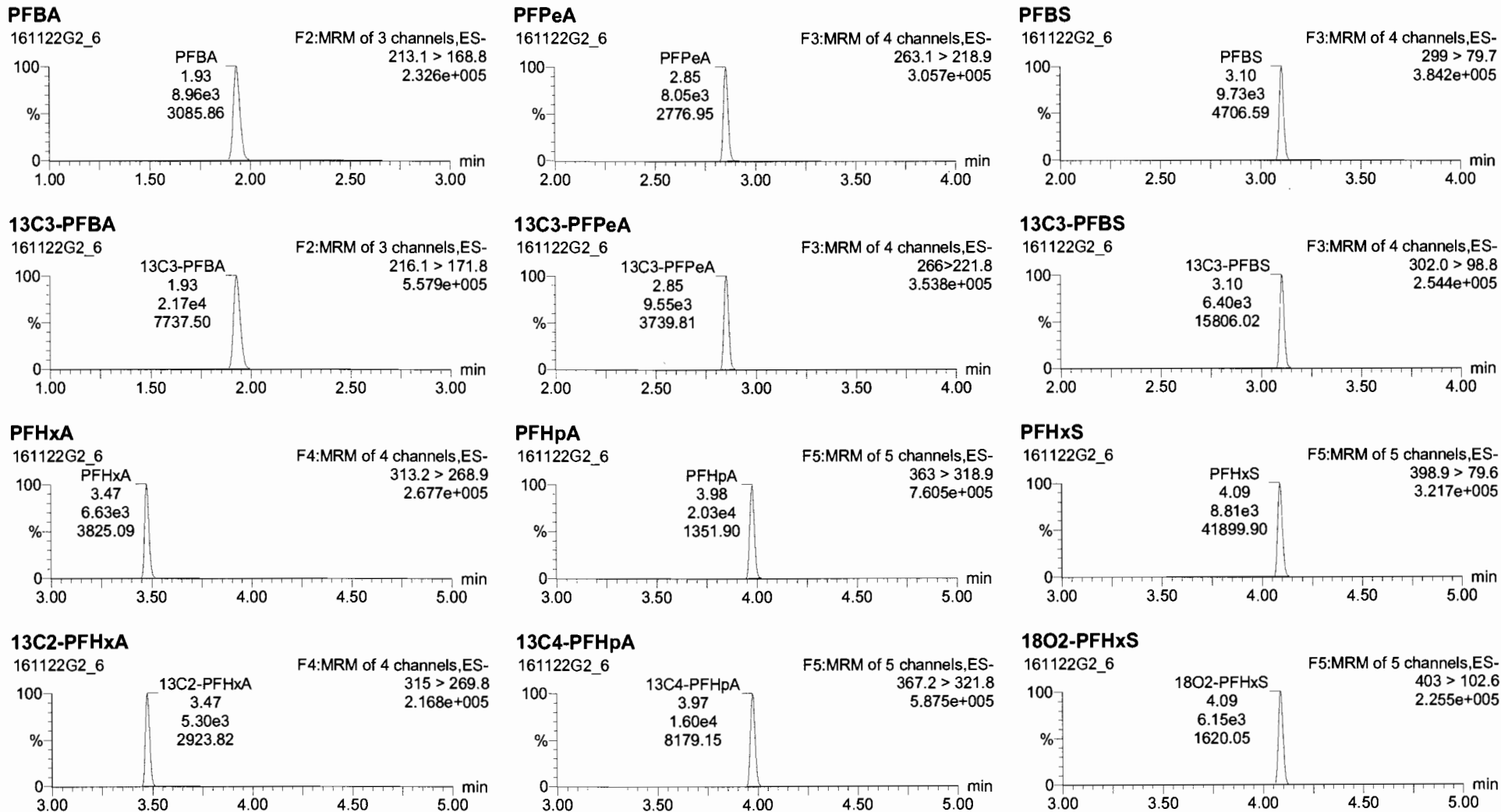


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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_6, Date: 22-Nov-2016, Time: 10:50:54, ID: ST161122G2-6 PFC CS3 16K1709, Description: PFC CS3 16K1709 A



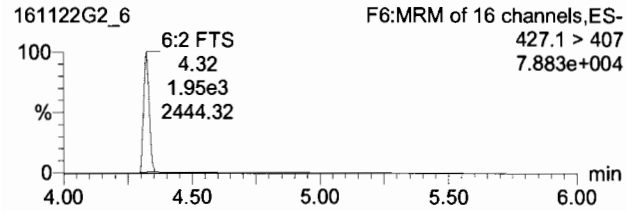
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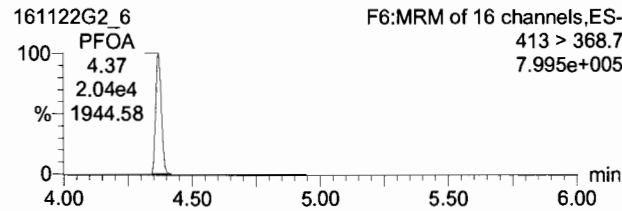
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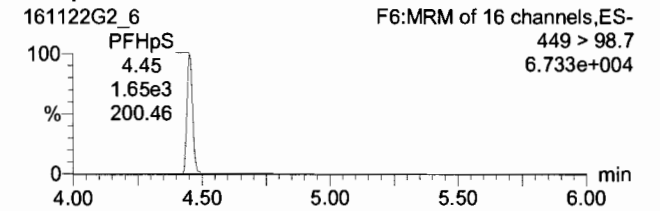
6:2 FTS



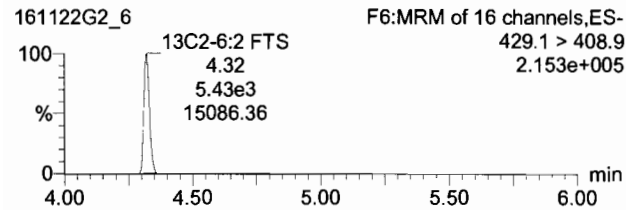
PFOA



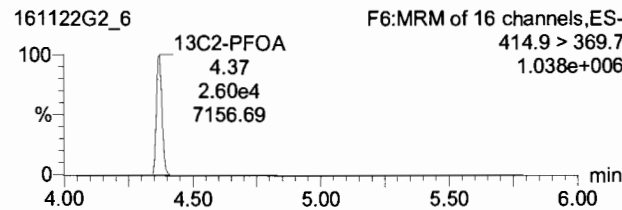
PFHpS



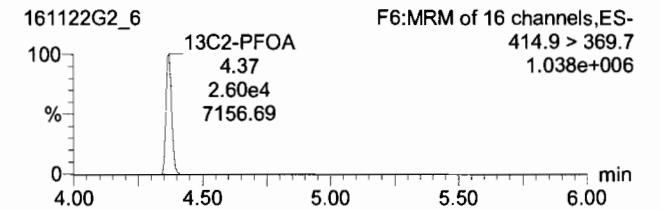
13C2-6:2 FTS



13C2-PFOA



13C2-PFOA



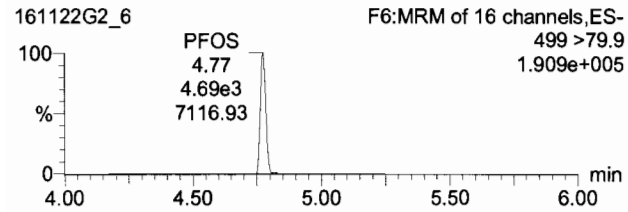
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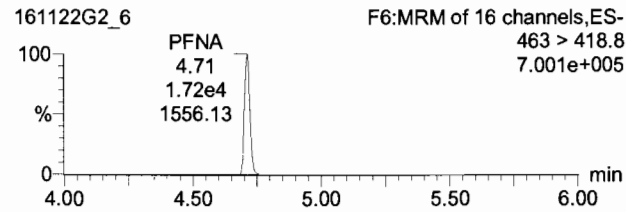
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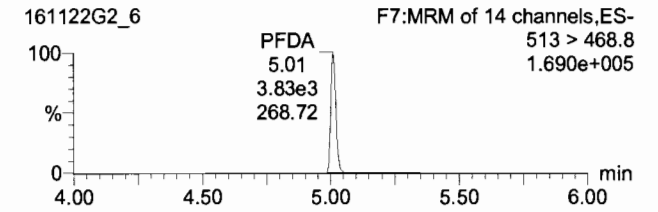
PFOS



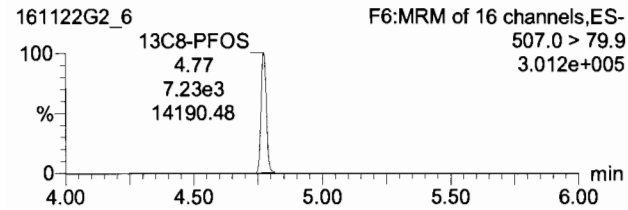
PFNA



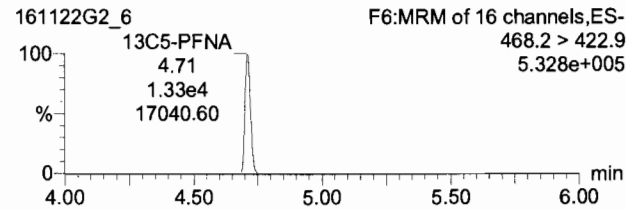
PFDA



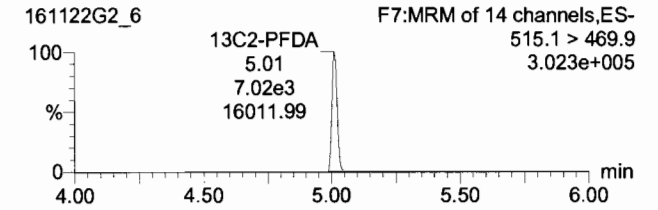
13C8-PFOS



13C5-PFNA



13C2-PFDA



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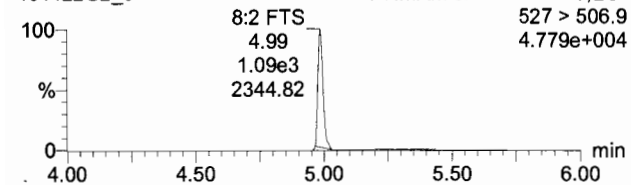
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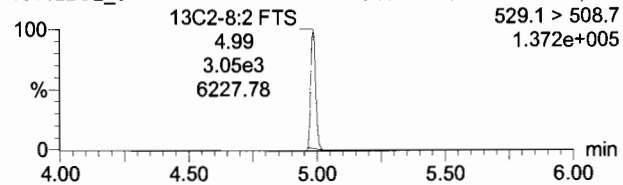
8:2 FTS

161122G2_6



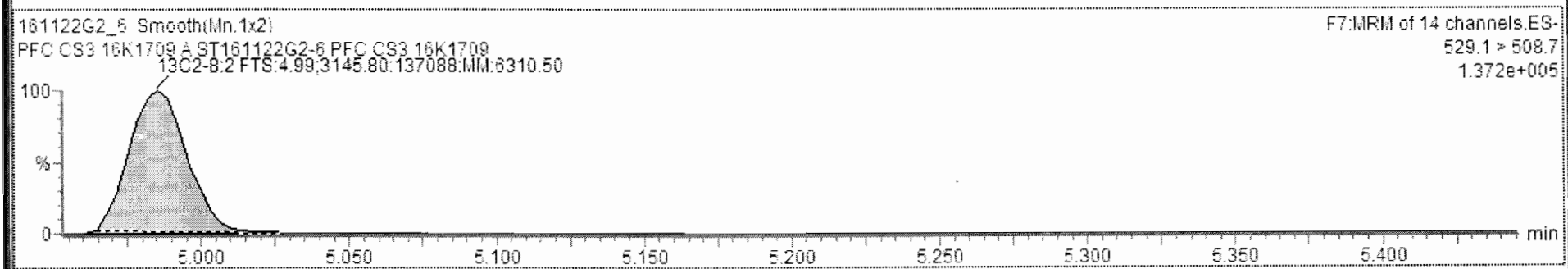
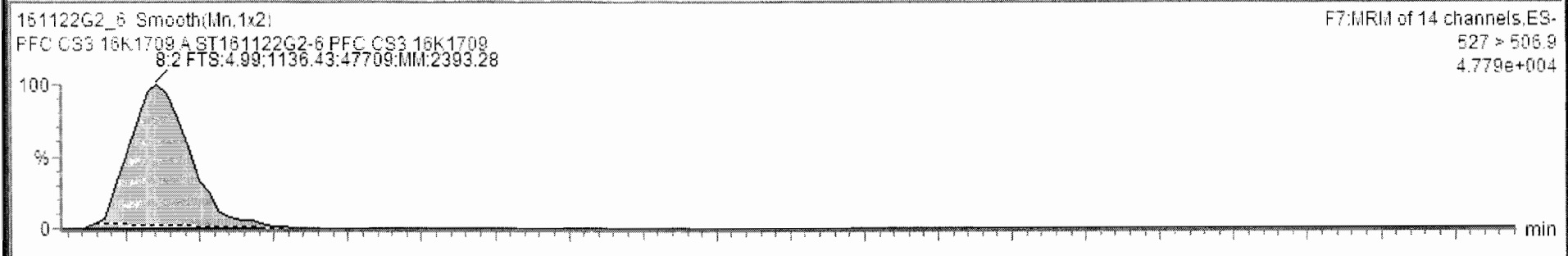
13C2-8:2 FTS

161122G2_6



161122G2_6 - ST161122G2-6 PFC CS3 16K1709 - PFC CS3 16K1709 A

Name	Trace	Area	RRF	Wt/VoL	Pred.RT	RT	Conc.	>MDL	%Rec	DL
4	PFHxA	313.2 > 268.9	6.63e3	1.000	3.47	3.47	10.4	YES	104.3	0.0000000
5	PFHpA	363 > 318.9	2.03e4	1.000	3.97	3.98	10.3	YES	103.0	0.1083914
6	PFHxS	398.9 > 79.6	8.81e3	1.000	4.09	4.09	10.4	YES	104.1	0.0160911
7	6:2 FTS	427.1 > 407	1.95e3	1.000	4.32	4.32	9.48	YES	94.8	0.4529547
8	PFOA	413 > 368.7	2.04e4	1.000	4.37	4.37	10.8	YES	108.1	0.0000000
9	PFHpS	449 > 98.7	1.65e3	1.000	4.37	4.45	8.86	YES	88.6	0.3575371
10	PFOS	459 > 79.9	4.69e3	1.000	4.76	4.77	9.90	YES	99.0	0.2020896
11	PFNA	463 > 418.8	1.72e4	1.000	4.71	4.71	10.0	YES	100.1	0.1200018
12	PFDA	513 > 468.8	3.83e3	1.000	5.01	5.01	11.5	NO	114.8	0.1427597
13	8:2 FTS	527 > 506.9	1.14e3	1.000	4.99	4.99	9.07	YES	90.7	0.0043622
14	13C3-PFBA	216.1 > 171.8	2.17e4	1.21	1.93	1.93	13.3	NO	106.8	0.0044280
15	13C3-PFPeA	266 > 221.8	9.55e3	0.448	2.84	2.85	12.4	NO	99.4	0.0076173
16	13C3-PFBS	302.0 > 98.8	6.40e3	0.302	3.10	3.10	12.3	NO	98.6	0.0019245



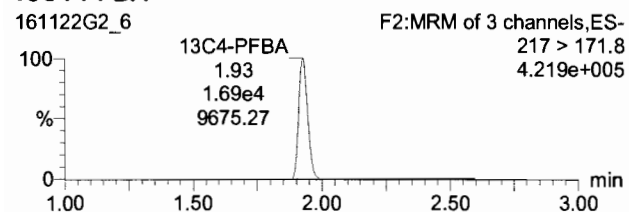
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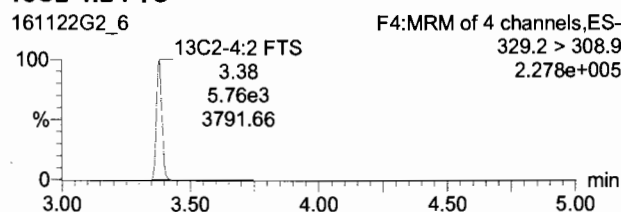
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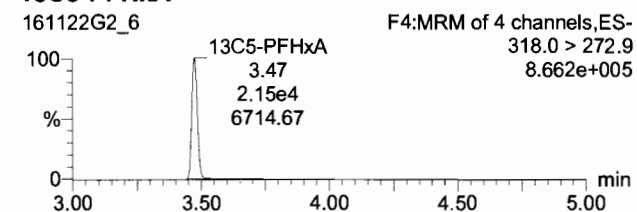
13C4-PFBA



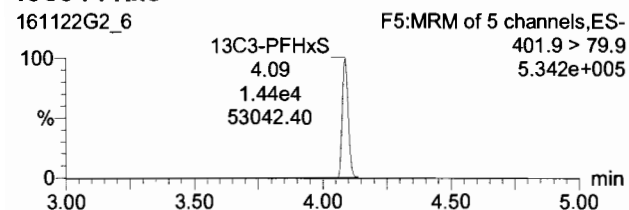
13C2-4:2 FTS



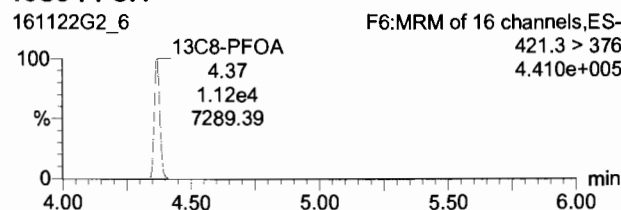
13C5-PFHxA



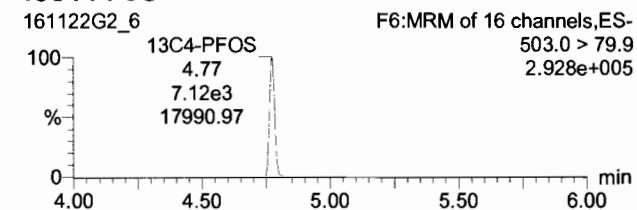
13C3-PFHxS



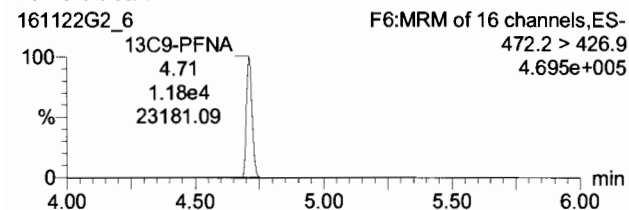
13C8-PFOA



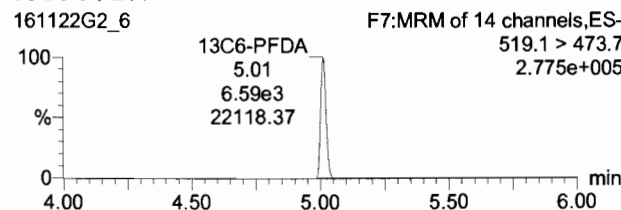
13C4-PFOS



13C9-PFNA



13C6-PFDA

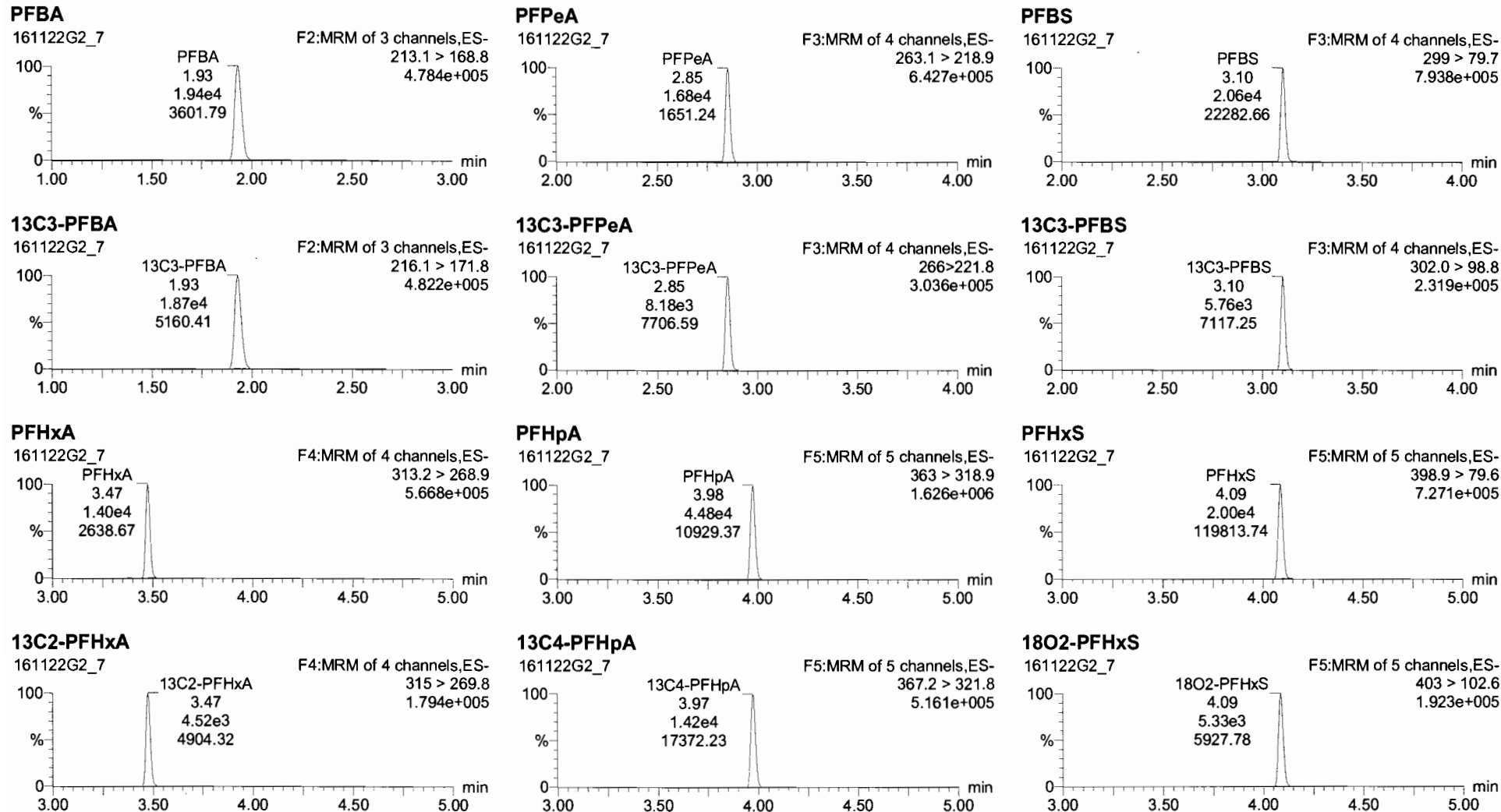


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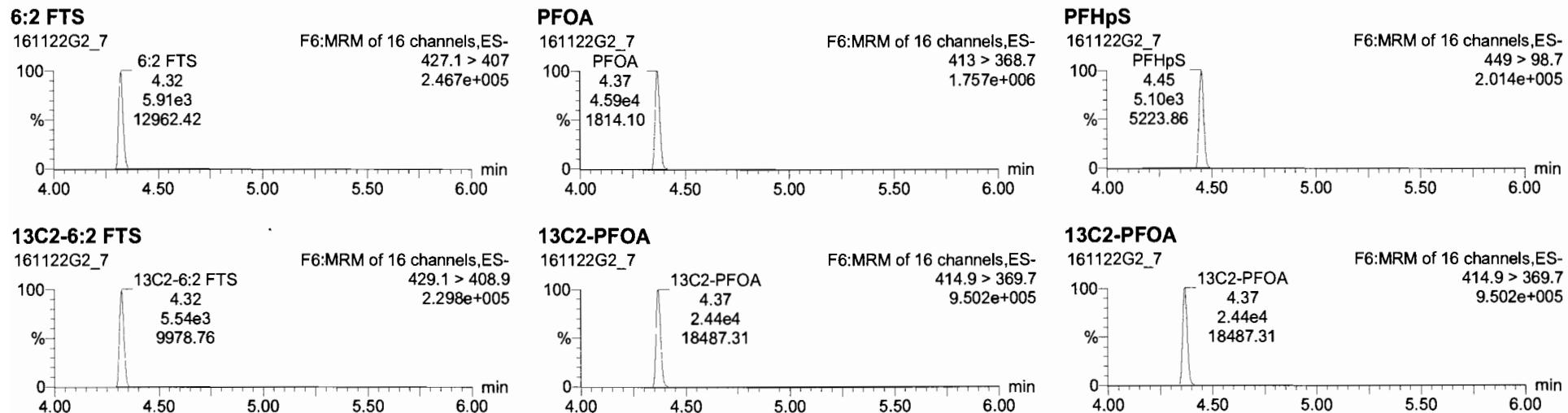
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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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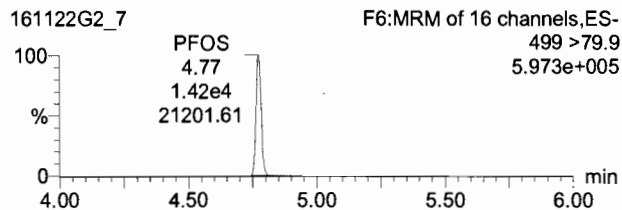
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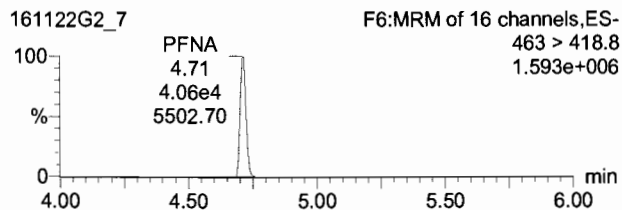
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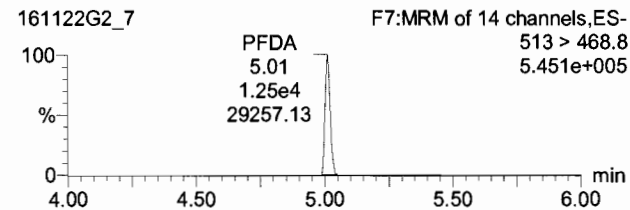
PFOS



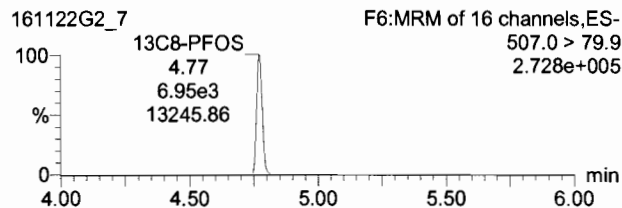
PFNA



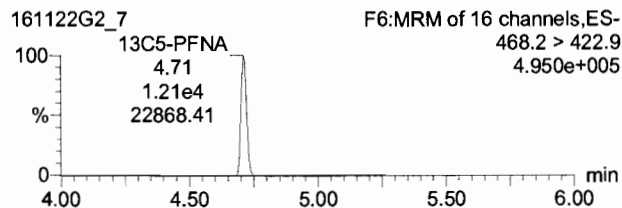
PFDA



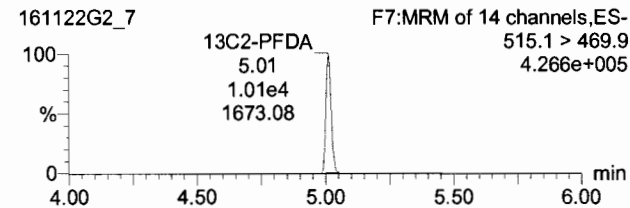
13C8-PFOS



13C5-PFNA



13C2-PFDA



Dataset: Untitled

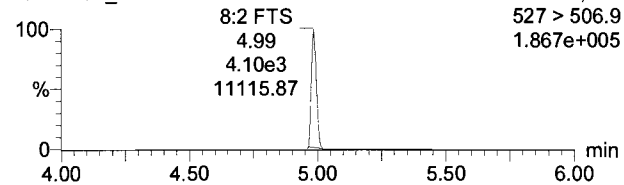
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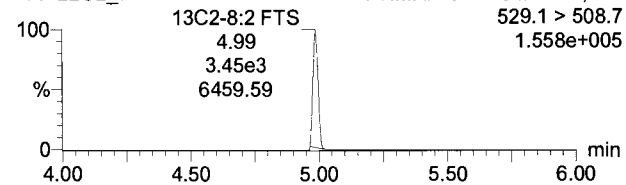
8:2 FTS

161122G2_7



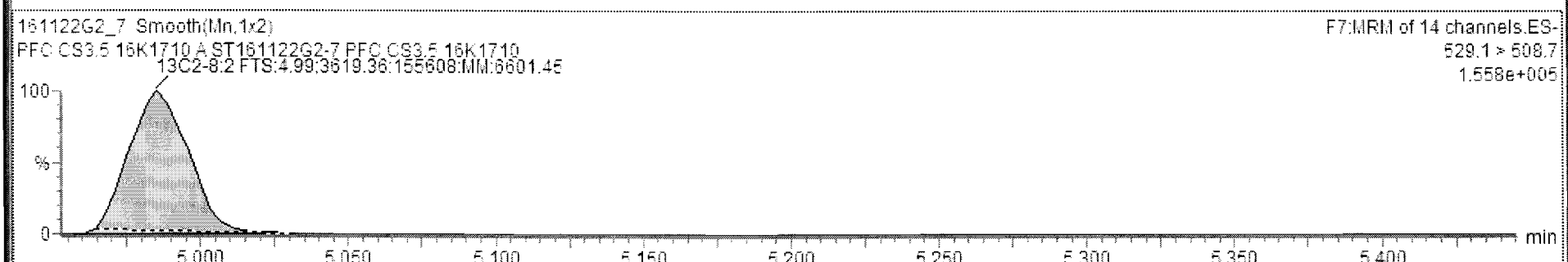
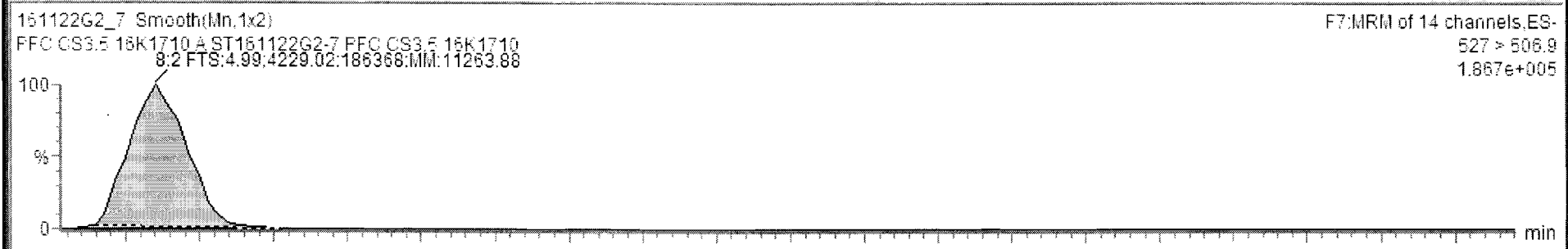
13C2-8:2 FTS

161122G2_7



161122G2_7 - ST161122G2-7 PFC CS3.5 16K1710 - PFC CS3.5 16K1710 A

Name	Trace	Area	RRF	Wt/VoL	Pred.RT	RT	Conc.	>MDL	%Rec	DL
4	PFHxA	313.2 > 268.9	1.40e4	1.000	3.47	3.47	25.9	YES	103.8	0.0090379
5	PFHpA	363 > 318.9	4.48e4	1.000	3.97	3.98	25.4	YES	101.7	0.0949494
6	PFHxS	398.9 > 79.6	2.00e4	1.000	4.09	4.09	27.2	YES	108.9	0.0160447
7	6:2 FTS	427.1 > 407	5.91e3	1.000	4.32	4.32	28.5	YES	113.9	0.4488833
8	PFOA	413 > 368.7	4.59e4	1.000	4.37	4.37	26.0	YES	104.2	0.0000000
9	PFHpS	449 > 98.7	5.10e3	1.000	4.37	4.45	28.6	YES	114.5	0.2816466
10	PFOS	459 > 79.9	1.42e4	1.000	4.77	4.77	30.8	YES	123.3	0.2026154
11	PFNA	463 > 418.8	4.06e4	1.000	4.71	4.71	25.6	YES	102.3	0.1150548
12	PFDA	513 > 468.8	1.25e4	1.000	5.01	5.01	26.1	NO	104.4	0.0359396
13	8:2 FTS	527 > 506.9	4.23e3	1.000	4.99	4.99	29.9	YES	119.7	0.0019300
14	13C3-PFBA	216.1 > 171.8	1.87e4	1.21	1.93	1.93	12.3	NO	98.0	0.0058610
15	13C3-PFPeA	266 > 221.8	6.18e3	0.448	2.84	2.85	12.1	NO	98.9	0.0036860
16	13C3-PFBS	302.0 > 98.8	5.76e3	0.302	3.10	3.10	12.6	NO	101.1	0.0045157

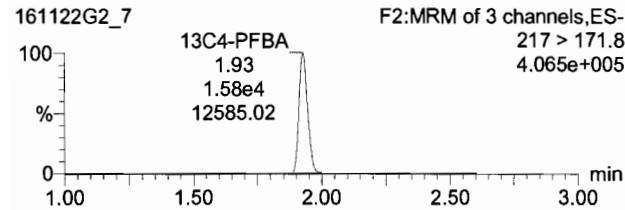


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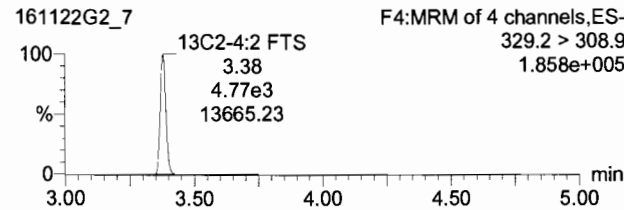
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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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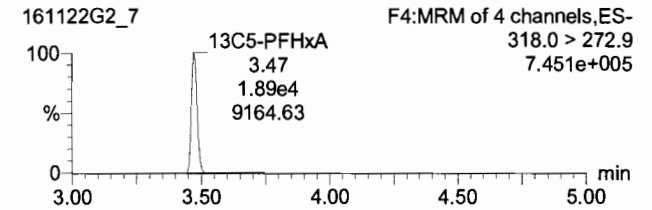
13C4-PFBA



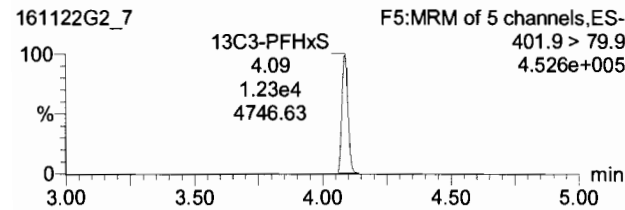
13C2-4:2 FTS



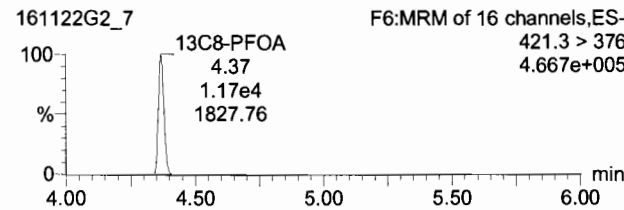
13C5-PFHxA



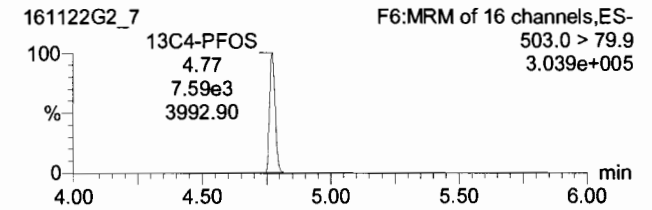
13C3-PFHxS



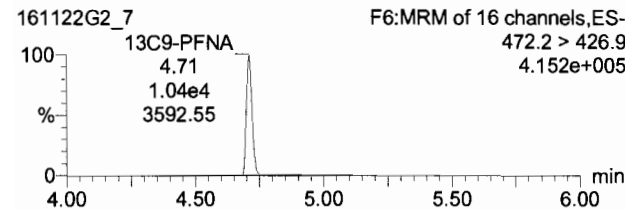
13C8-PFOA



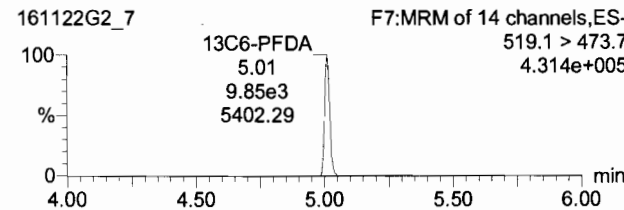
13C4-PFOS



13C9-PFNA



13C6-PFDA

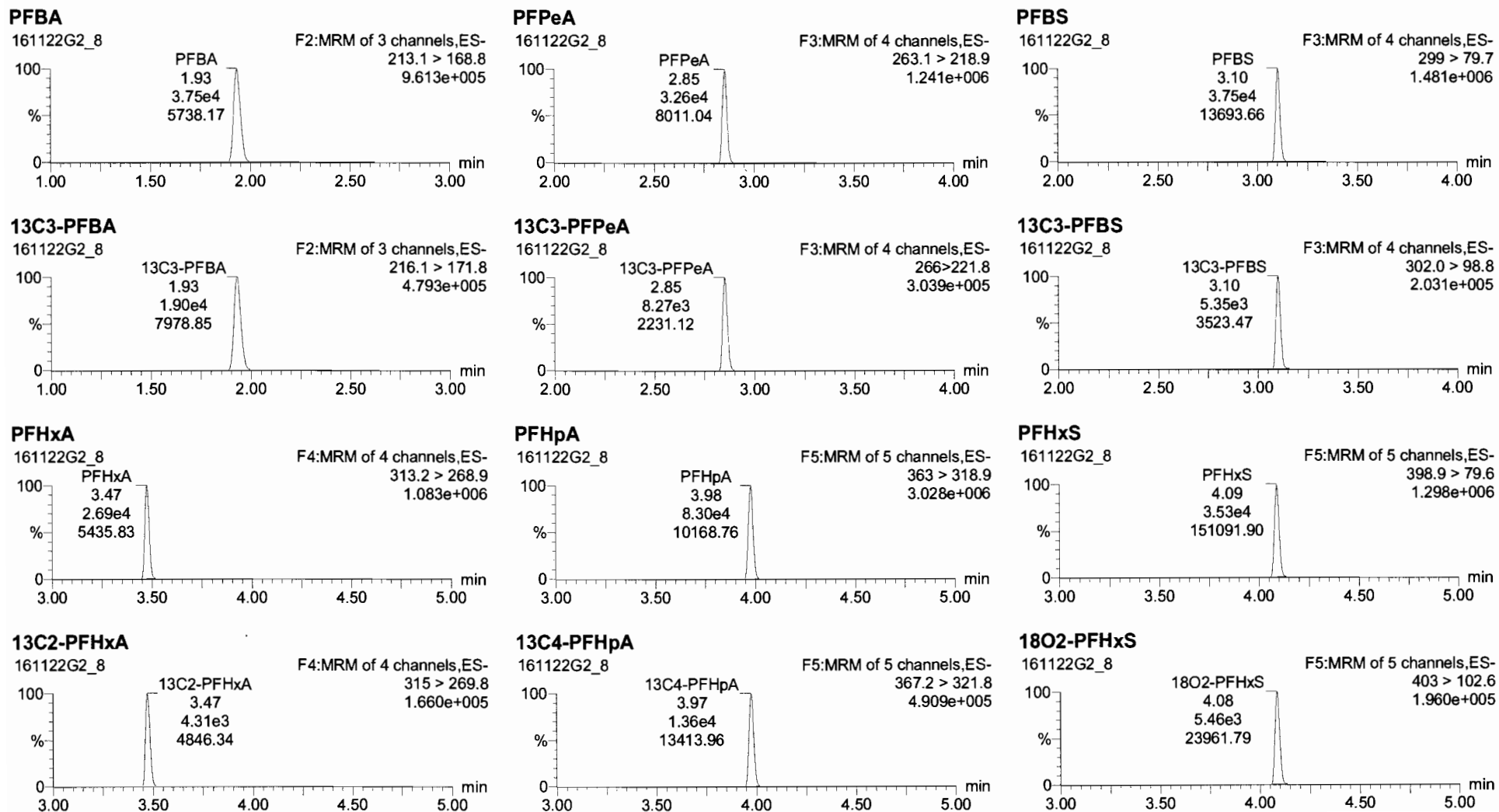


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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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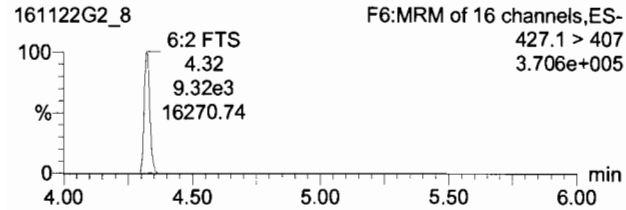
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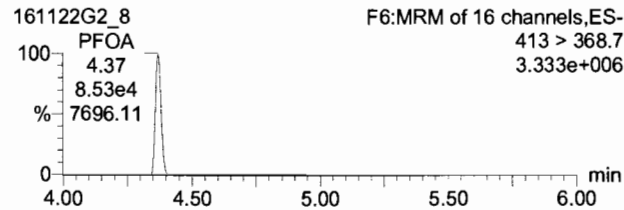
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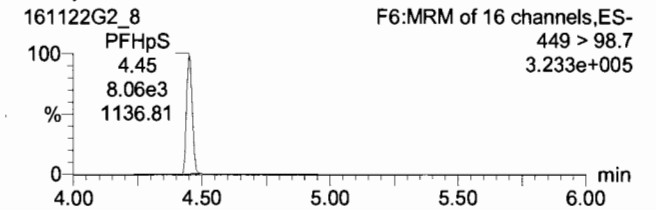
6:2 FTS



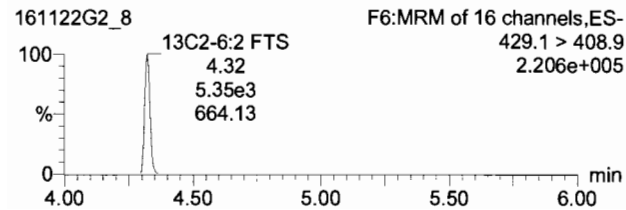
PFOA



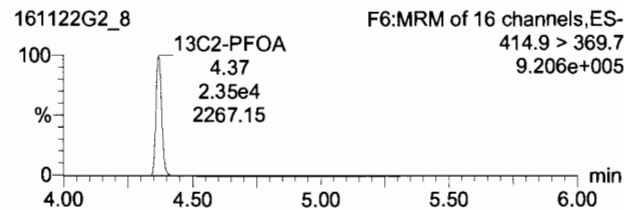
PFHpS



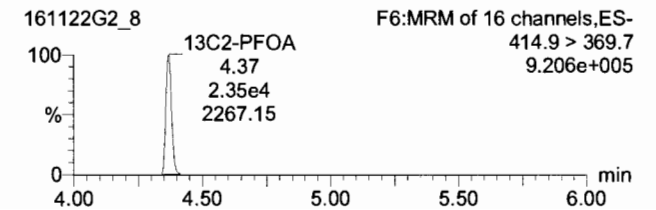
13C2-6:2 FTS



13C2-PFOA



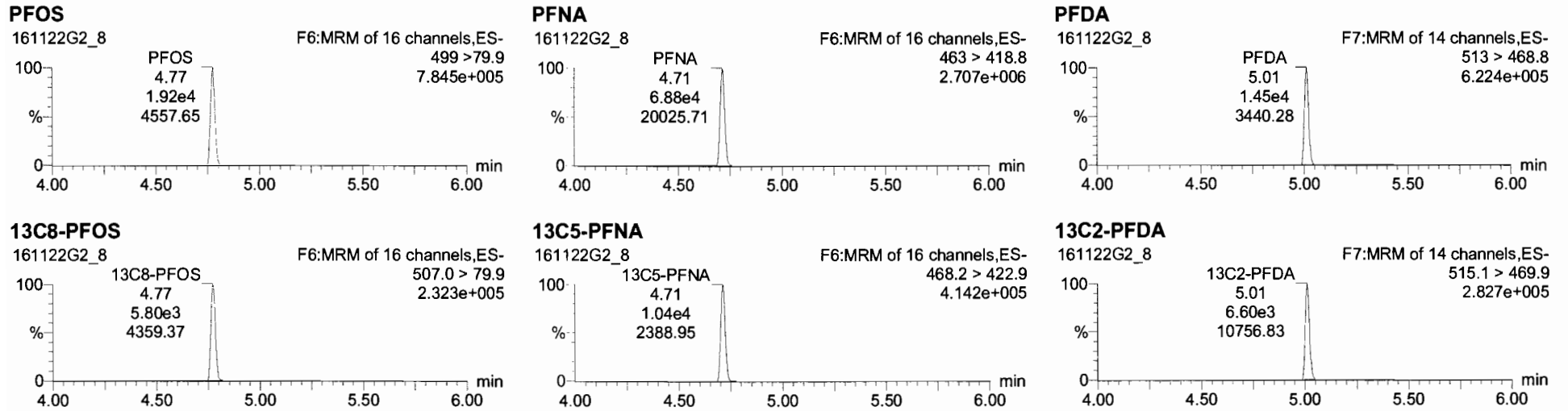
13C2-PFOA



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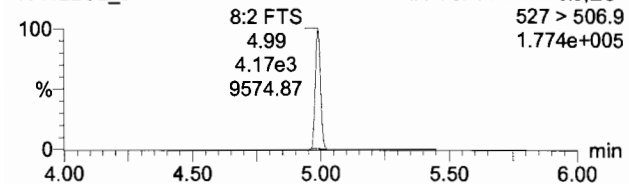
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Name: 161122G2_8, Date: 22-Nov-2016, Time: 11:16:11, ID: ST161122G2-8 PFC CS4 16K1711, Description: PFC CS4 16K1711 A

8:2 FTS

161122G2_8

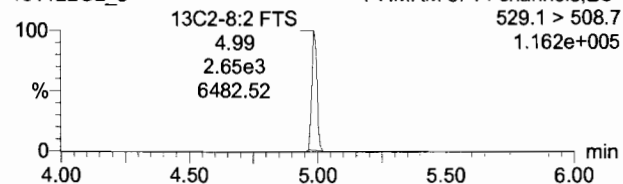
F7:MRM of 14 channels,ES-



13C2-8:2 FTS

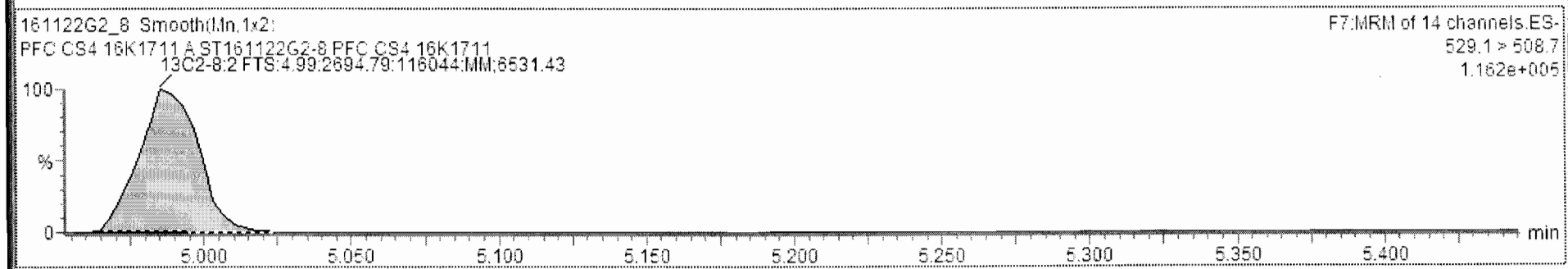
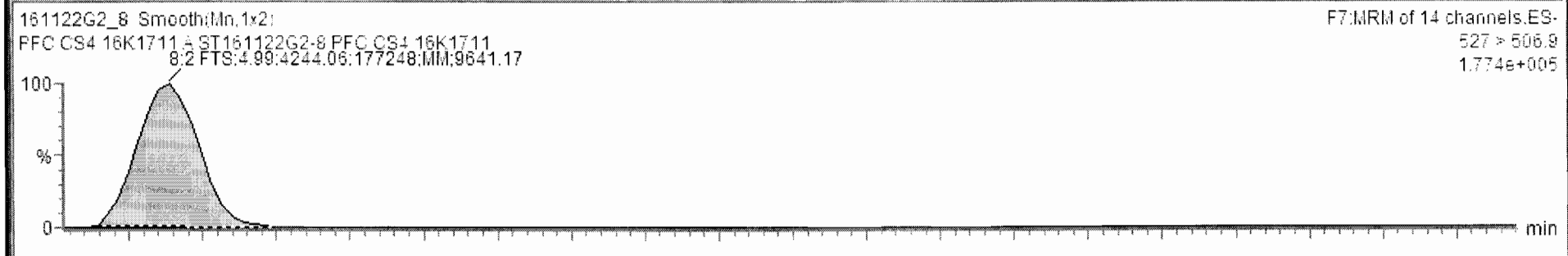
161122G2_8

F7:MRM of 14 channels,ES-



161122G2_8 - ST161122G2-8 PFC CS4 16K1711 - PFC CS4 16K1711 A

Name	Trace	Area	RRF	Wt/VoL	Pred.RT	RT	Conc.	>MDL	%Rec	DL
4	PFHxA	313.2 > 268.9		1.000	3.47	3.47	52.1	YES	104.2	0.0090824
5	PFHpA	363 > 318.9		1.000	3.97	3.98	49.2	YES	98.3	0.1013540
6	PFHxS	398.9 > 79.6		1.000	4.08	4.09	47.1	YES	94.1	0.0162677
7	6:2 FTS	427.1 > 407		1.000	4.32	4.32	48.3	YES	96.7	0.4501120
8	PFOA	413 > 368.7		1.000	4.37	4.37	50.3	YES	100.7	0.0000000
9	PFHpS	449 > 98.7		1.000	4.37	4.45	46.8	YES	93.6	0.3525158
10	PFOS	499 > 79.9		1.000	4.78	4.78	49.9	YES	99.9	0.2265026
11	PFNA	483 > 418.8		1.000	4.71	4.71	50.5	YES	101.0	0.1101360
12	PFDA	513 > 468.8		1.000	5.01	5.01	46.1	NO	92.3	0.0671726
13	8:2 FTS	527 > 506.9		1.000	4.99	4.99	40.8	YES	81.6	0.0051719
14	13C3-PFBA	216.1 > 171.8	1.21	1.000	1.93	1.93	12.1	NO	96.4	0.0037281
15	13C3-PFPeA	266 > 221.8	0.448	1.000	2.84	2.85	13.0	NO	103.9	0.0135113
16	13C3-PFBS	302.0 > 98.8	0.302	1.000	3.10	3.10	12.5	NO	99.6	0.0084692



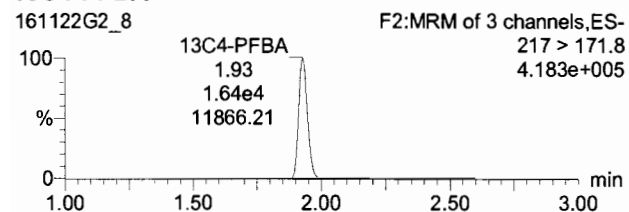
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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

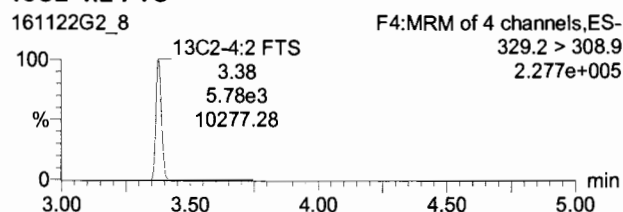
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_8, Date: 22-Nov-2016, Time: 11:16:11, ID: ST161122G2-8 PFC CS4 16K1711, Description: PFC CS4 16K1711 A

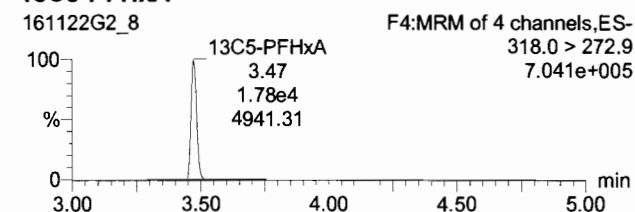
13C4-PFBA



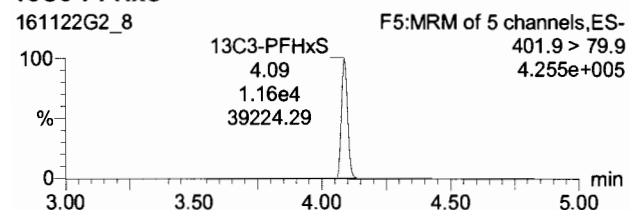
13C2-4:2 FTS



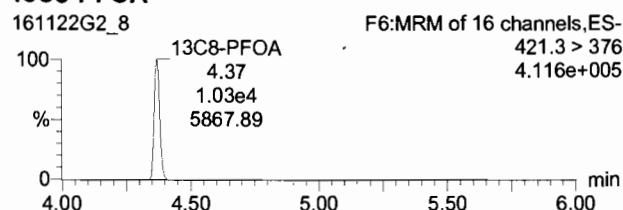
13C5-PFHxA



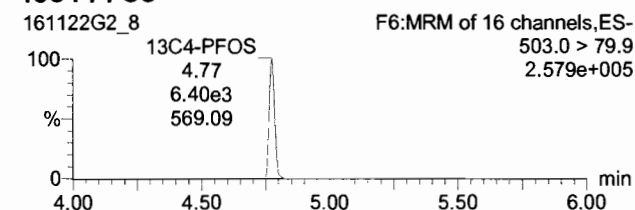
13C3-PFHxS



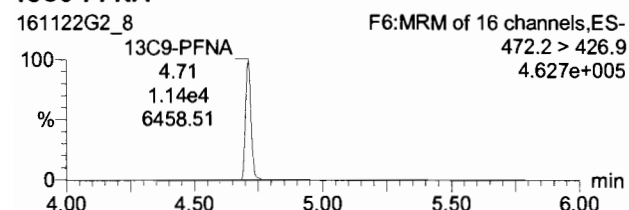
13C8-PFOA



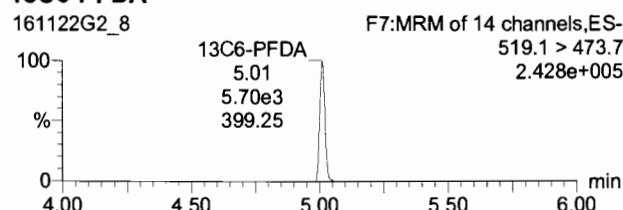
13C4-PFOS



13C9-PFNA



13C6-PFDA

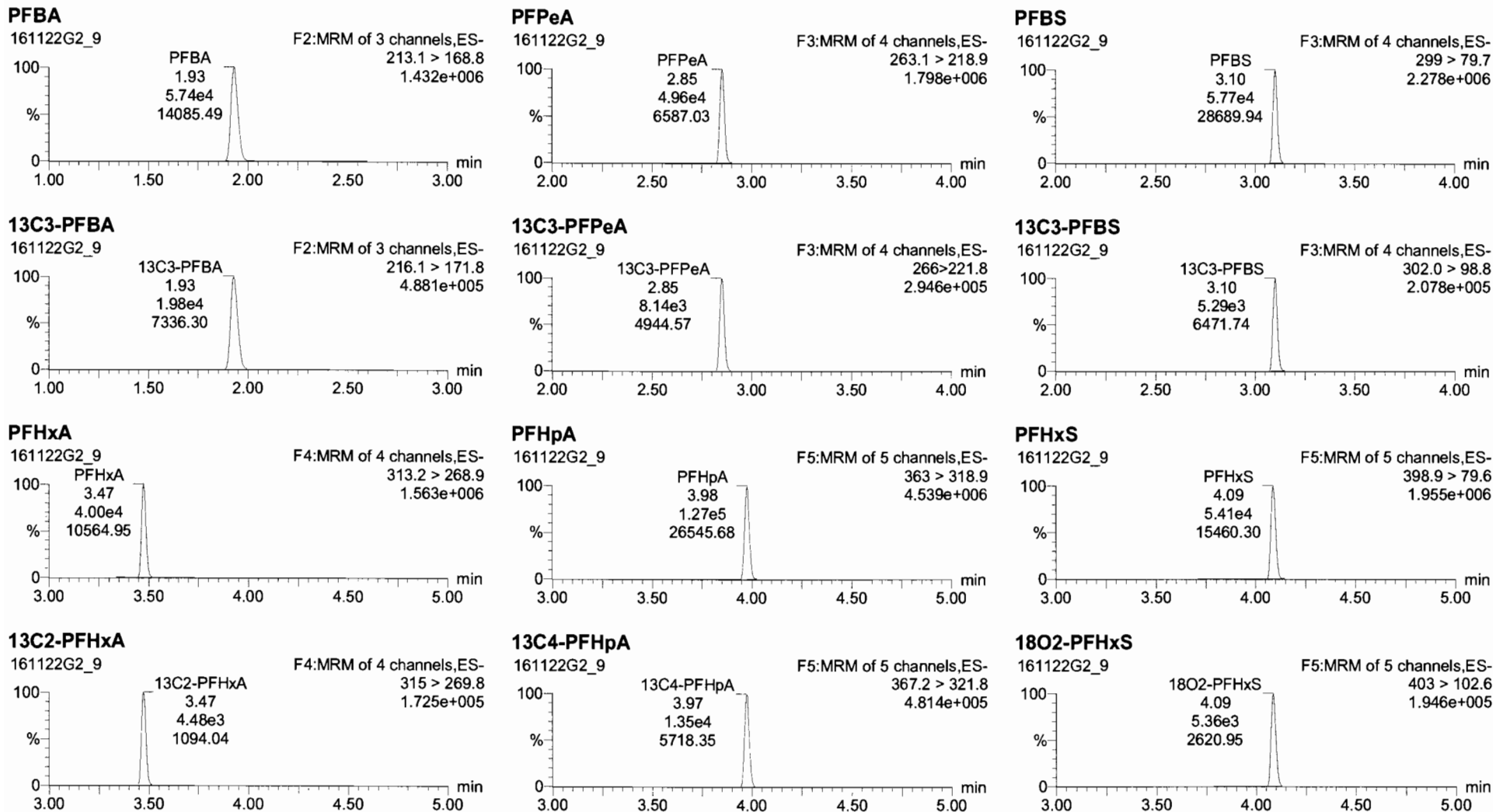


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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_9, Date: 22-Nov-2016, Time: 11:28:50, ID: ST161122G2-9 PFC CS4.5 16K1712, Description: PFC CS4.5 16K17121 A



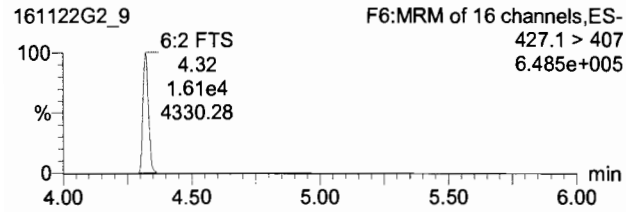
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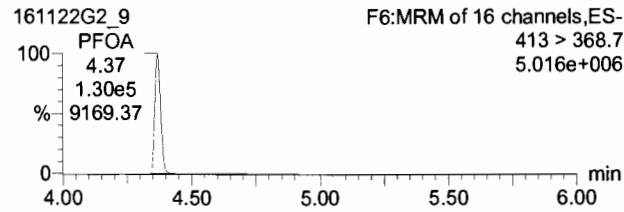
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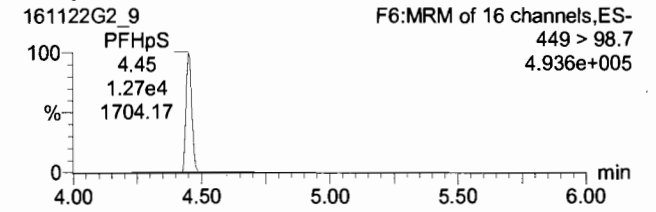
6:2 FTS



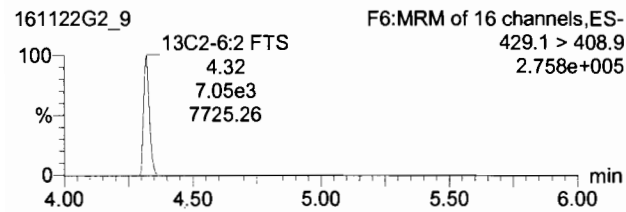
PFOA



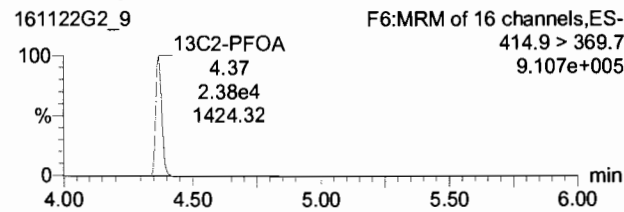
PFHpS



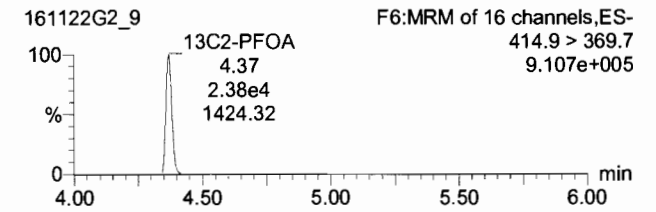
13C2-6:2 FTS



13C2-PFOA



13C2-PFOA



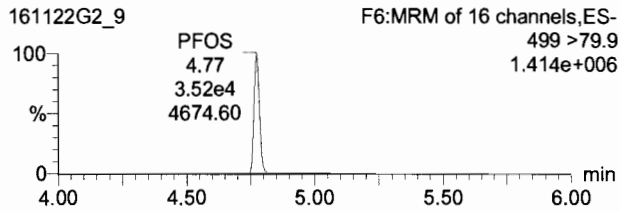
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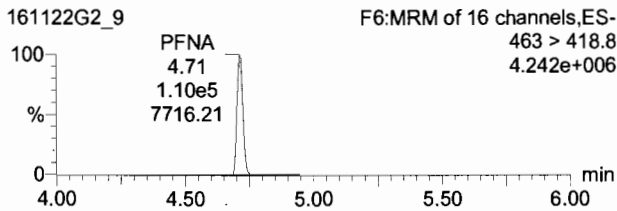
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Name: 161122G2_9, Date: 22-Nov-2016, Time: 11:28:50, ID: ST161122G2-9 PFC CS4.5 16K1712, Description: PFC CS4.5 16K17121 A

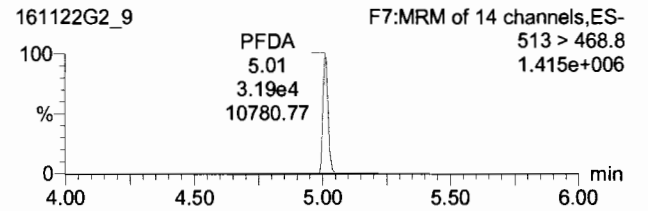
PFOS



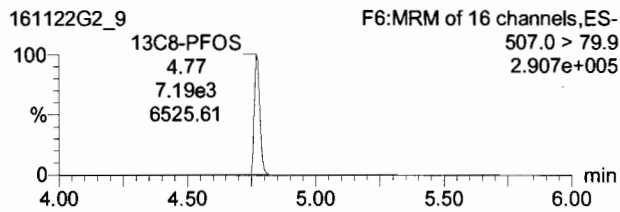
PFNA



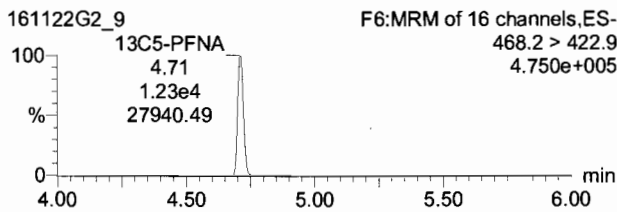
PFDA



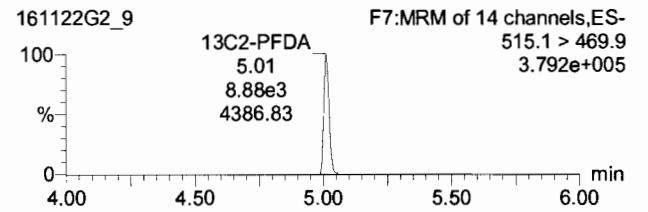
13C8-PFOS



13C5-PFNA



13C2-PFDA



Dataset: Untitled

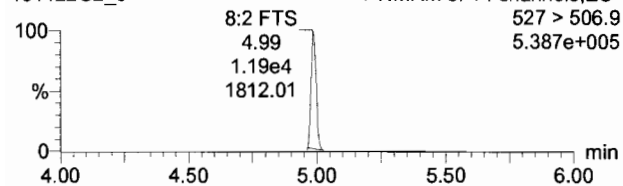
Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_9, Date: 22-Nov-2016, Time: 11:28:50, ID: ST161122G2-9 PFC CS4.5 16K1712, Description: PFC CS4.5 16K17121 A

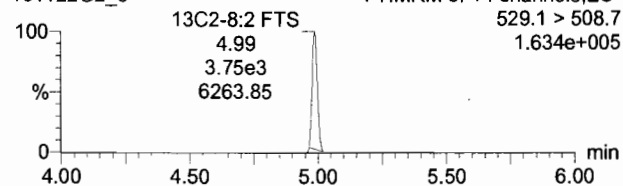
8:2 FTS

161122G2_9



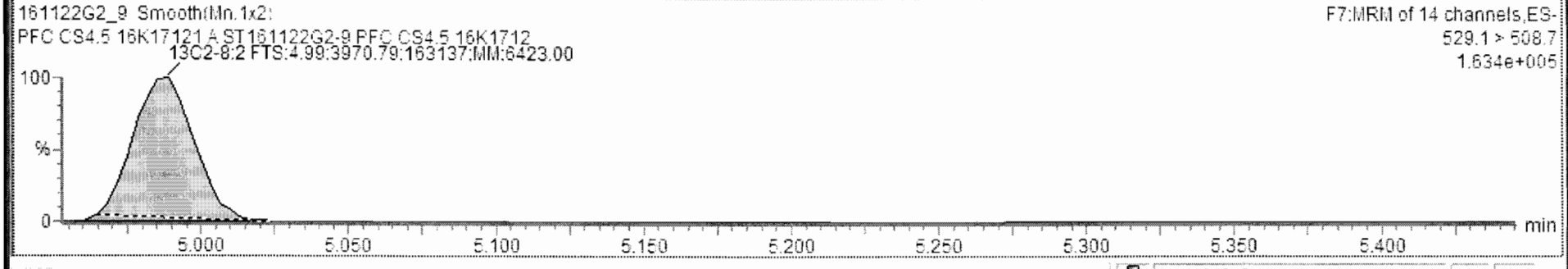
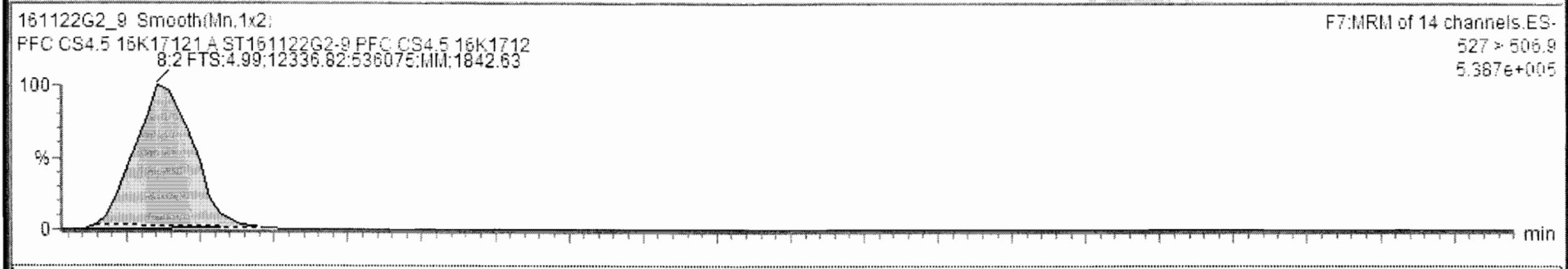
13C2-8:2 FTS

161122G2_9



161122G2_9 - ST161122G2-9 PFC CS4.5 16K1712 - PFC CS4.5 16K17121 A

Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
4	PFHxA	313.2 > 288.9	4.00e4	1.000	3.47	3.47	74.5	YES	99.3	0.0019930
5	PFHpA	363 > 318.9	1.27e5	1.000	3.97	3.98	75.5	YES	100.7	0.0962936
6	PFHxS	398.9 > 79.6	5.41e4	1.000	4.09	4.09	73.4	YES	97.8	0.0272887
7	6:2 FTS	427.1 > 407	1.61e4	1.000	4.32	4.32	66.1	YES	88.1	0.4772740
8	PFOA	413 > 368.7	1.30e5	1.000	4.37	4.37	75.6	YES	100.8	0.0000000
9	PFHpS	449 > 98.7	1.27e4	1.000	4.37	4.45	72.8	YES	97.0	0.3559161
10	PFOS	499 > 79.9	3.52e4	1.000	4.77	4.77	73.6	YES	98.2	0.2377618
11	PFNA	463 > 418.8	1.10e5	1.000	4.71	4.71	68.0	YES	90.7	0.1259394
12	PFDA	513 > 468.8	3.19e4	1.000	5.01	5.01	75.4	NO	100.5	0.0517738
13	8:2 FTS	527 > 506.9	1.23e4	1.000	4.99	4.99	84.1	YES	112.1	0.1062973
14	13C3-PFBA	216.1 > 171.8	1.98e4	1.21	1.93	1.93	12.4	NO	99.3	0.0041429
15	13C3-PFPeA	266 > 221.8	8.14e3	0.448	2.84	2.85	12.4	NO	99.0	0.0056902
16	13C3-PFBS	302.0 > 98.8	5.29e3	0.302	3.10	3.10	11.9	NO	95.3	0.0045397



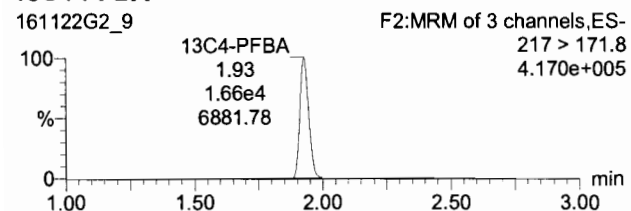
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Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time

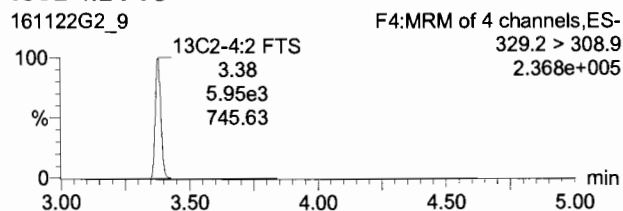
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_9, Date: 22-Nov-2016, Time: 11:28:50, ID: ST161122G2-9 PFC CS4.5 16K1712, Description: PFC CS4.5 16K17121 A

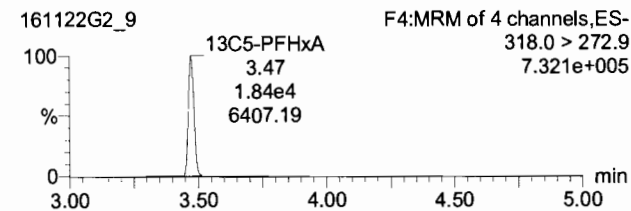
13C4-PFBA



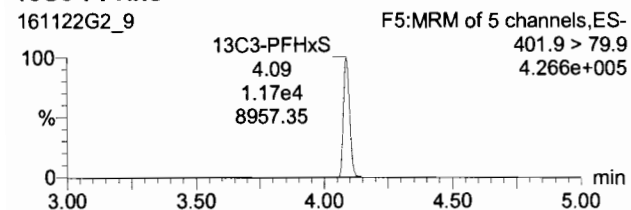
13C2-4:2 FTS



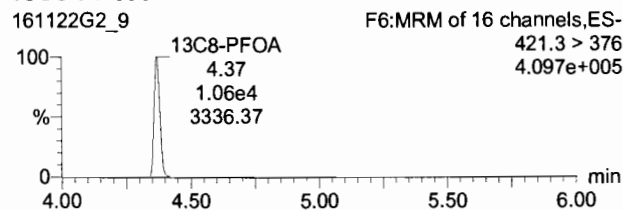
13C5-PFHxA



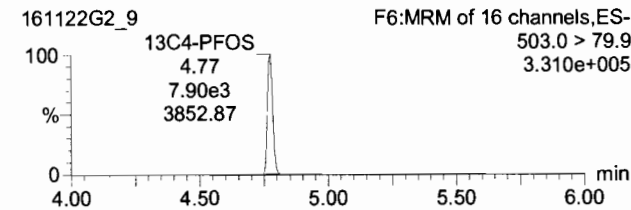
13C3-PFHxS



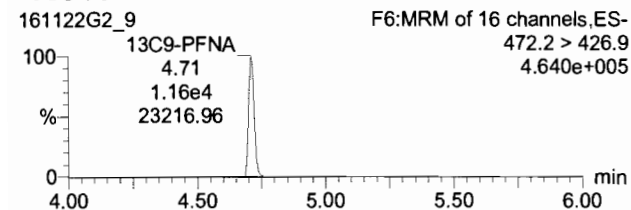
13C8-PFOA



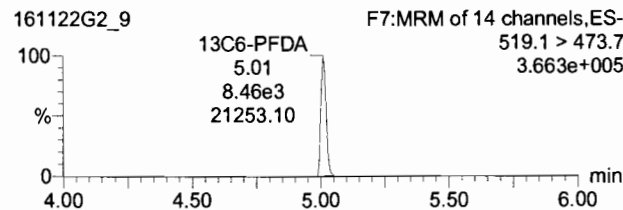
13C4-PFOS



13C9-PFNA



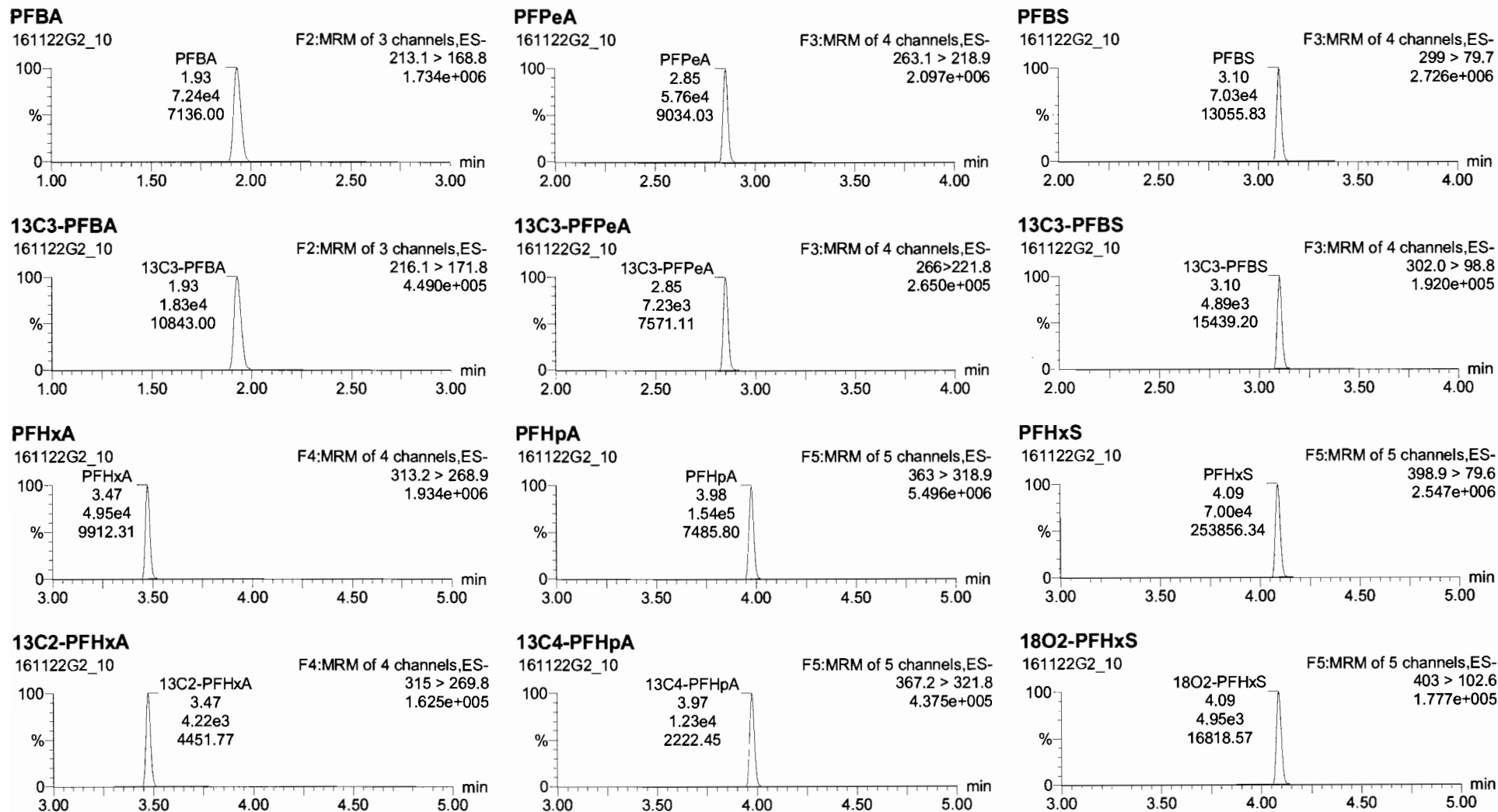
13C6-PFDA



Dataset: Untitled

Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

Name: 161122G2_10, Date: 22-Nov-2016, Time: 11:41:28, ID: ST161122G2-10 PFC CS5 16K1713, Description: PFC CS5 16K1713 A

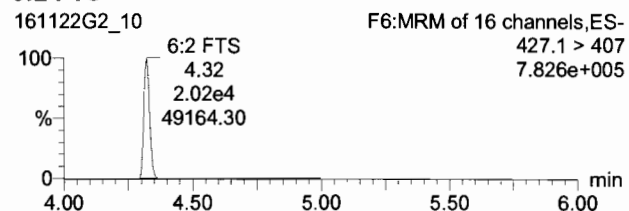


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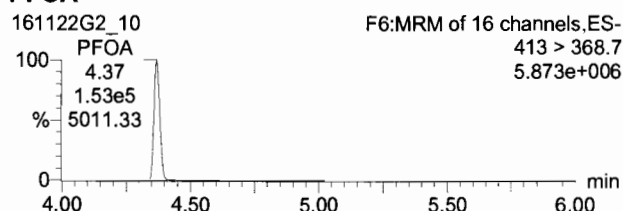
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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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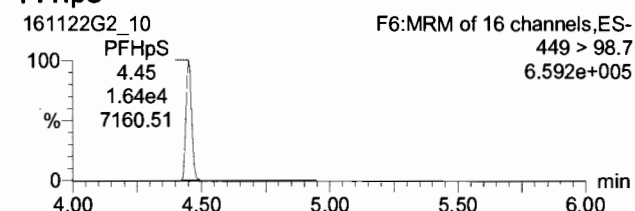
6:2 FTS



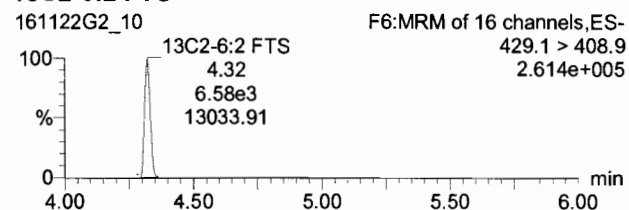
PFOA



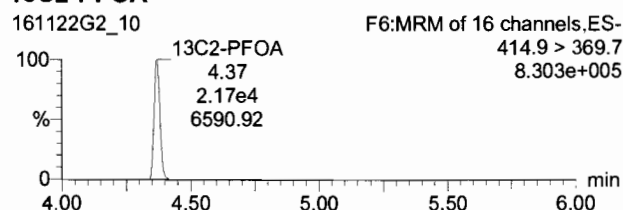
PFHpS



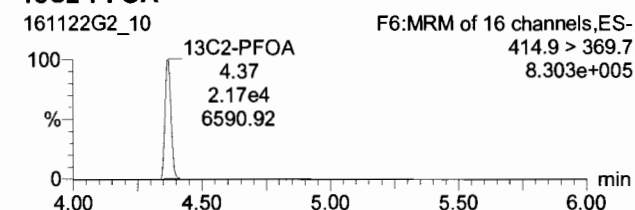
13C2-6:2 FTS



13C2-PFOA



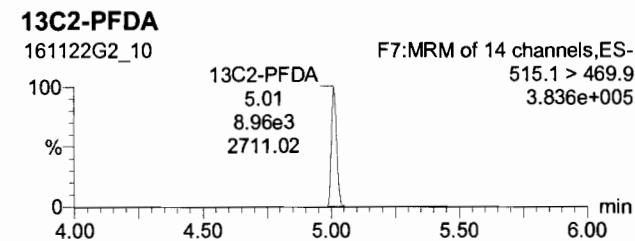
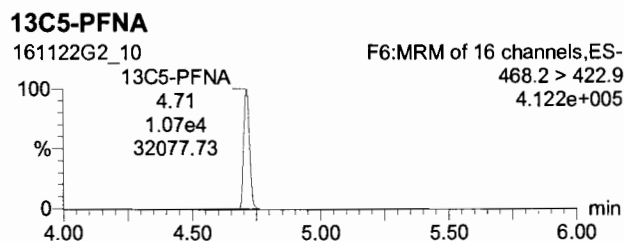
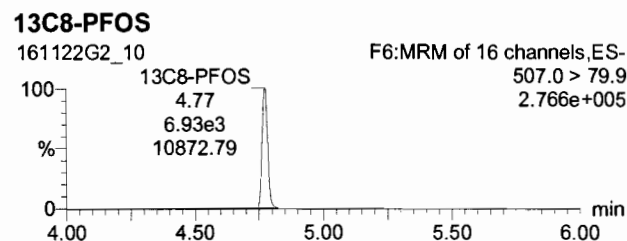
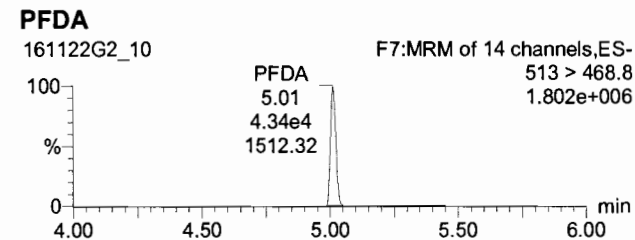
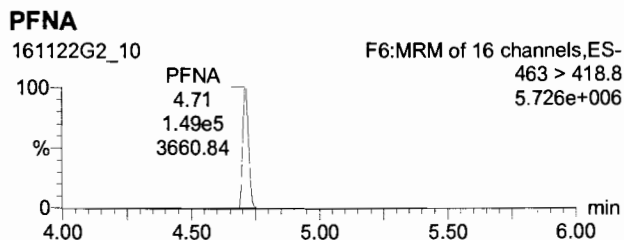
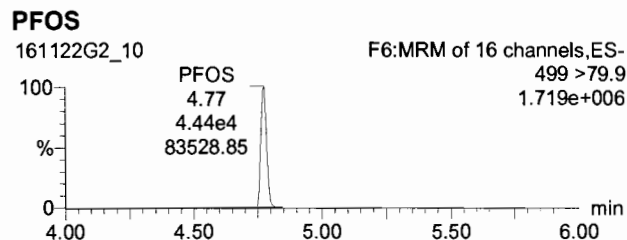
13C2-PFOA



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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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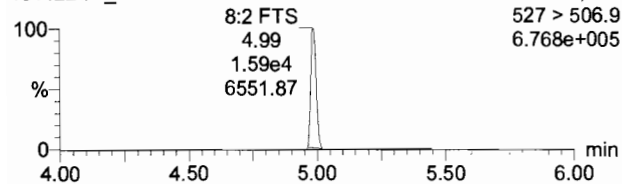
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Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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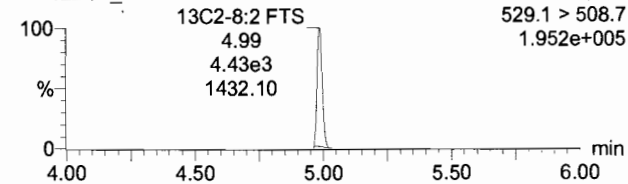
8:2 FTS

161122G2_10



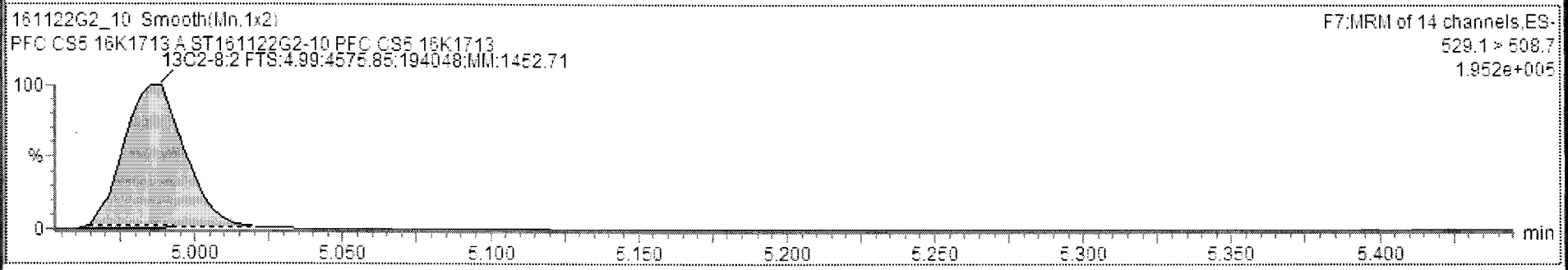
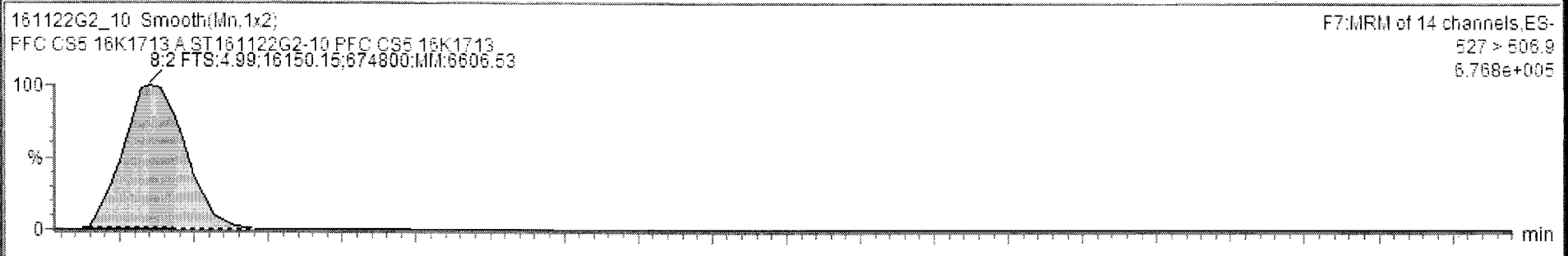
13C2-8:2 FTS

161122G2_10



161122G2_10 - ST161122G2-10 PFC CS5 16K1713 - PFC CS5 16K1713 A

Name	Trace	Area	RRF	Wt/Vol	Pred.RT	RT	Conc.	>MDL	%Rec	DL
4	PFHxA	313.2 > 268.9	4.95e4	1.000	3.47	3.47	98.0	YES	98.0	0.0091413
5	PFHpA	263 > 218.9	1.54e5	1.000	3.97	3.98	100	YES	100.4	0.1228809
6	PFHxS	398.9 > 79.8	7.00e4	1.000	4.09	4.09	103	YES	102.7	0.0184978
7	8:2 FTS	427.1 > 407	2.02e4	1.000	4.32	4.32	95.3	YES	95.3	0.4475018
8	PFOA	413 > 368.7	1.53e5	1.000	4.37	4.37	97.9	YES	97.9	0.0000000
9	PFHpS	449 > 98.7	1.64e4	1.000	4.37	4.45	103	YES	103.1	0.2855073
10	PFOS	499 > 79.9	4.44e4	1.000	4.78	4.77	96.1	YES	96.1	0.2015366
11	PFNA	483 > 418.8	1.49e5	1.000	4.71	4.71	106	YES	106.2	0.1762378
12	PFDA	513 > 468.8	4.34e4	1.000	5.01	5.01	101	NO	101.5	0.1963398
13	8:2 FTS	527 > 506.9	1.62e4	1.000	4.99	4.99	96.8	YES	96.8	0.0280690
14	13C3-PFBA	218.1 > 171.8	1.83e4	1.21	1.92	1.93	11.6	NO	92.9	0.0026509
15	13C3-PFPeA	286 > 221.8	7.23e3	0.448	2.84	2.85	11.6	NO	92.5	0.0036027
16	13C3-PFBS	302.0 > 98.8	4.89e3	0.302	3.10	3.10	11.6	NO	92.7	0.0018920

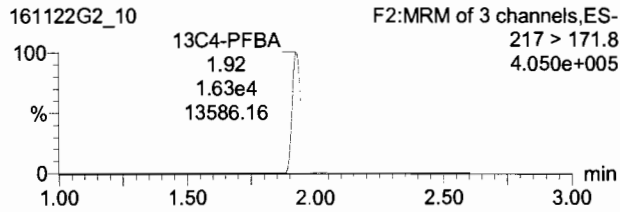


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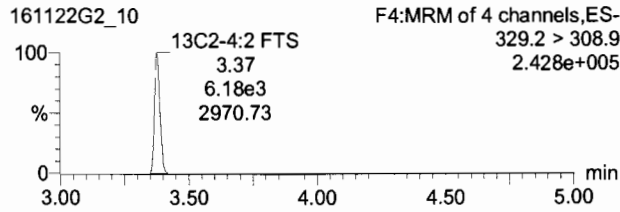
Last Altered: Tuesday, November 22, 2016 14:43:00 Pacific Standard Time
Printed: Tuesday, November 22, 2016 14:47:59 Pacific Standard Time

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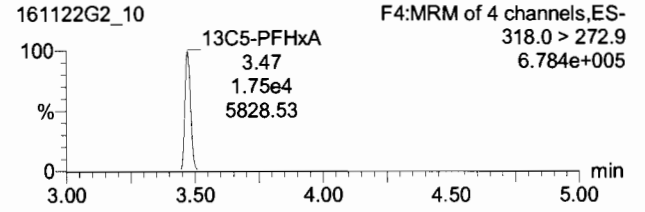
13C4-PFBA



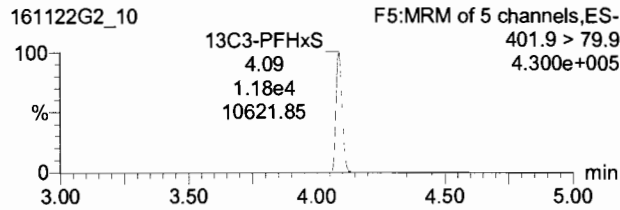
13C2-4:2 FTS



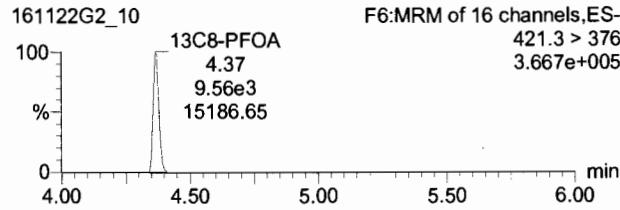
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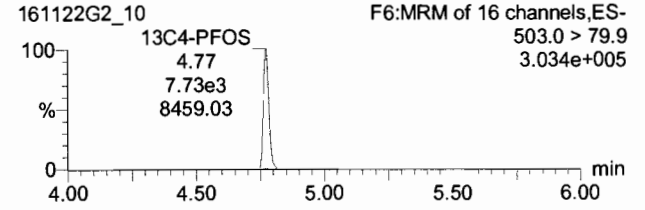
13C3-PFHxS



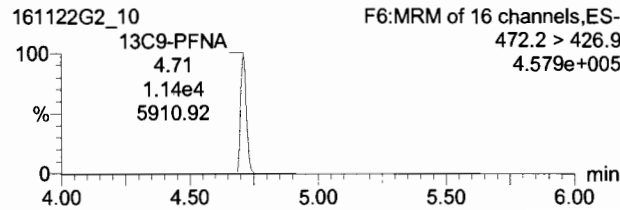
13C8-PFOA



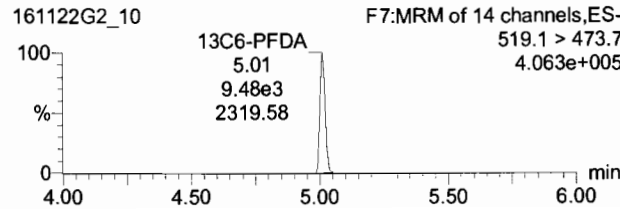
13C4-PFOS



13C9-PFNA



13C6-PFDA



Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-12.qld

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Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 15:25:21

Name: 161122G2_12, Date: 22-Nov-2016, Time: 12:06:50, ID: SS161122G2-1 PFC SS 16K2201, Description: PFC SS 16K2201

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	213.1 > 168.8	1.99e4	1.93e4	1.000	1.94	1.94	26.3	105.2
2	2 PFPeA	263.1 > 218.9	1.36e4	8.81e3	1.000	2.85	2.85	19.4	77.4
3	3 PFBS	299 > 79.7	1.87e4	6.07e3	1.000	3.10	3.10	21.5	86.2
4	4 PFHxA	313.2 > 268.9	1.51e4	4.56e3	1.000	3.47	3.47	27.6	110.5
5	5 PFHpA	363 > 318.9	4.67e4	1.40e4	1.000	3.98	3.98	26.9	107.5
6	6 PFHxS	398.9 > 79.6	1.55e4	5.82e3	1.000	4.09	4.09	19.4	77.7
7	7 6:2 FTS	427.1 > 407	4.23e3	5.80e3	1.000	4.32	4.32	20.8	83.4
8	8 PFOA	413 > 368.7	3.78e4	2.49e4	1.000	4.37	4.37	21.0	82.9
9	9 PFHpS	449 > 98.7	4.68e3	2.49e4	1.000	4.45	4.45	25.7	103.0
10	10 PFOS	499 > 79.9	9.75e3	7.54e3	1.000	4.77	4.77	19.6	78.3
11	11 PFNA	463 > 418.8	4.01e4	1.20e4	1.000	4.71	4.71	25.5	102.1
12	12 PFDA	513 > 468.8	1.01e4	9.03e3	1.000	5.01	5.01	23.6	94.4
13	13 8:2 FTS	527 > 506.9	2.65e3	2.91e3	1.000	4.99	4.99	23.2	92.8
14	14 13C3-PFBA	216.1 > 171.8	1.93e4	1.41e4	1.205	1.94	1.94	14.2	113.8
15	15 13C3-PFPeA	266 > 221.8	8.81e3	1.61e4	0.448	2.85	2.85	15.3	122.1
16	16 13C3-PFBS	302.0 > 98.8	6.07e3	1.61e4	0.302	3.10	3.10	15.6	124.7
17	17 13C2-PFHxA	315 > 269.8	4.56e3	1.61e4	0.620	3.47	3.47	5.71	114.1
18	18 13C4-PFHpA	367.2 > 321.8	1.40e4	1.10e4	1.139	3.97	3.97	14.1	112.6
19	19 18O2-PFHxS	403 > 102.6	5.82e3	1.10e4	0.449	4.09	4.09	14.8	118.2
20	20 13C2-6:2 FTS	429.1 > 408.9	5.80e3	4.58e3	1.073	4.32	4.32	14.8	118.1
21	21 13C2-PFOA	414.9 > 369.7	2.49e4	8.18e3	2.262	4.37	4.37	16.8	134.6
22	22 13C8-PFOS	507.0 > 79.9	7.54e3	6.29e3	0.944	4.77	4.77	15.9	127.2
23	23 13C5-PFNA	468.2 > 422.9	1.20e4	9.84e3	1.082	4.71	4.71	14.1	113.0
24	24 13C2-PFDA	515.1 > 469.9	9.03e3	6.86e3	1.019	5.01	5.01	16.1	129.0
25	25 13C2-8:2 FTS	529.1 > 508.7	2.91e3	4.58e3	0.569	4.99	4.99	14.0	111.7
26	26 13C4-PFBA	217 > 171.8	1.41e4	1.41e4	1.000	1.94	1.94	12.5	100.0
27	27 13C2-4:2 FTS	329.2 > 308.9	4.58e3	4.58e3	1.000	3.38	3.38	12.5	100.0
28	28 13C5-PFHxA	318.0 > 272.9	1.61e4	1.61e4	1.000	3.47	3.47	12.5	100.0
29	29 13C3-PFHxS	401.9 > 79.9	1.10e4	1.10e4	1.000	4.09	4.09	12.5	100.0
30	30 13C8-PFOA	421.3 > 376	8.18e3	8.18e3	1.000	4.37	4.37	12.5	100.0
31	31 13C4-PFOS	503.0 > 79.9	6.29e3	6.29e3	1.000	4.77	4.77	12.5	100.0

75-125
↓

AC
11/22/16
PW
11/23/16

Ⓐ Percent recovery based on linear isomer only.

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-12.qld

Last Altered: Tuesday, November 22, 2016 15:30:24 Pacific Standard Time

Printed: Tuesday, November 22, 2016 15:30:54 Pacific Standard Time

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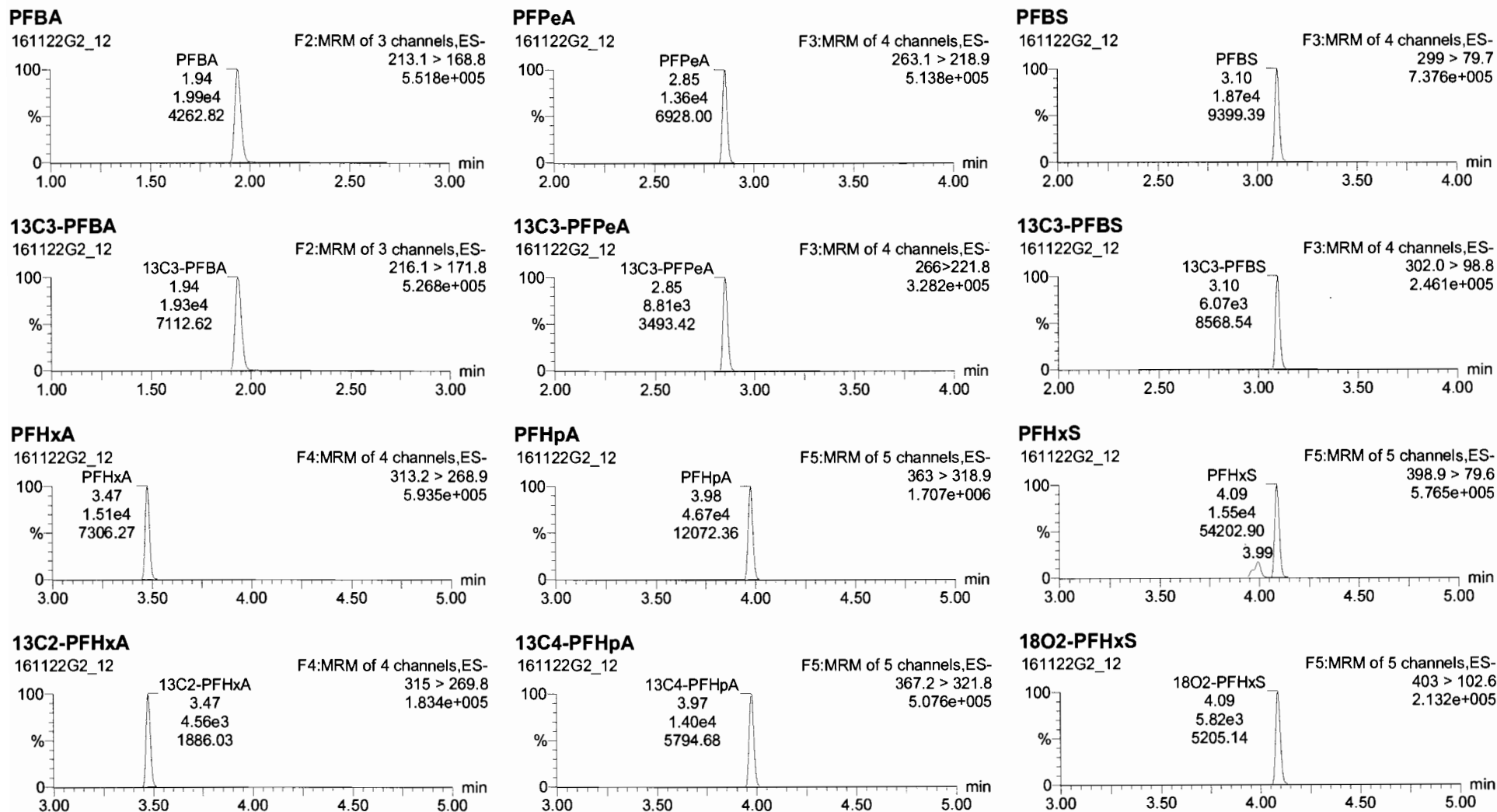
#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc	%Rec
32	32 13C9-PFNA	472.2 > 426.9	9.84e3	9.84e3	1.000	1.000	4.71	12.5	100.0
33	33 13C6-PFDA	519.1 > 473.7	6.86e3	6.86e3	1.000	1.000	5.01	12.5	100.0

Dataset: U:\G1.PRO\Results\2016\161122G2\161122G2-1.qld

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Printed: Tuesday, November 22, 2016 15:11:00 Pacific Standard Time

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Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_11-22-16_FULL_A.cdb 22 Nov 2016 14:59:27

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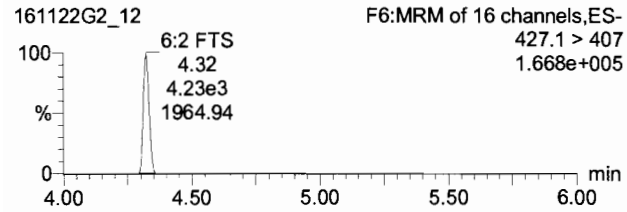


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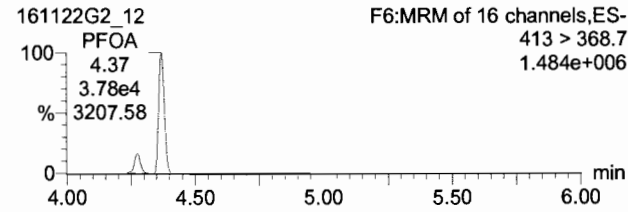
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Printed: Tuesday, November 22, 2016 15:11:00 Pacific Standard Time

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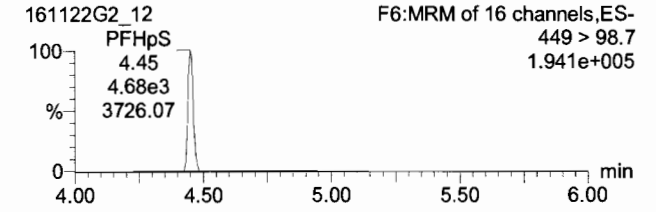
6:2 FTS



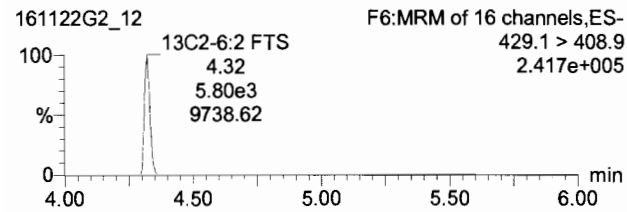
PFOA



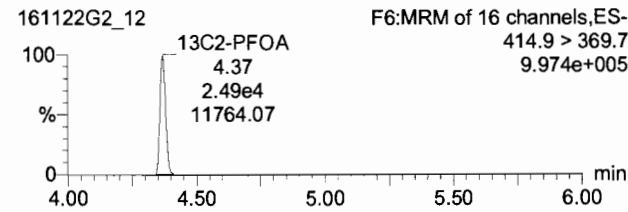
PFHpS



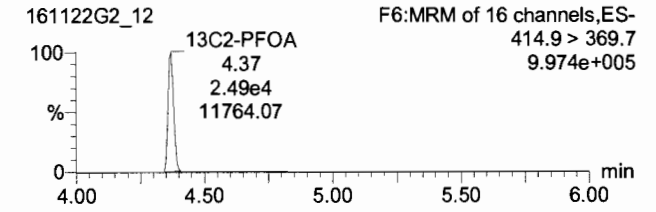
13C2-6:2 FTS



13C2-PFOA



13C2-PFOA

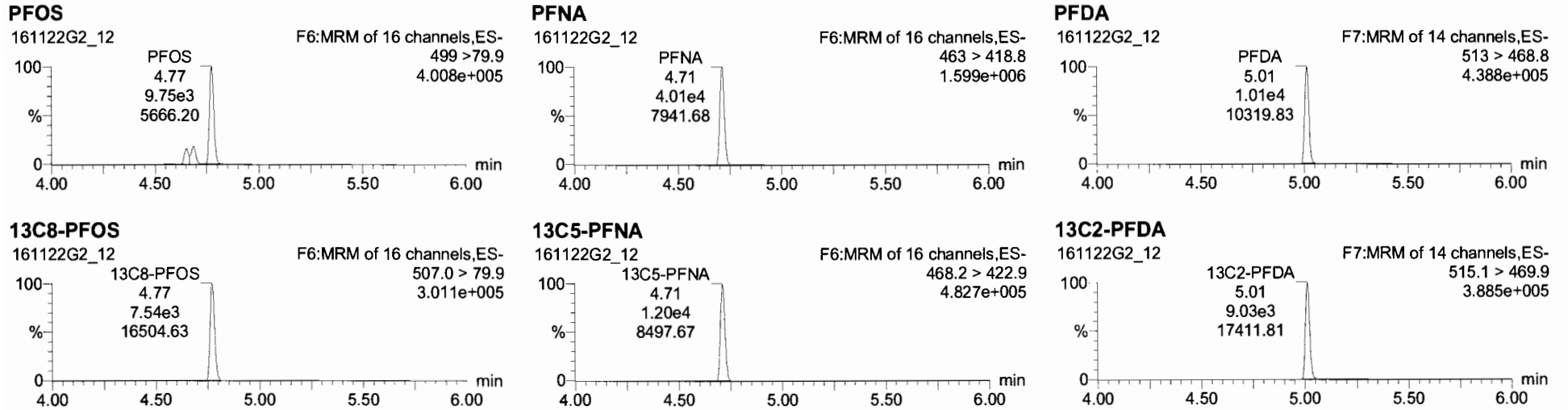


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Printed: Tuesday, November 22, 2016 15:11:00 Pacific Standard Time

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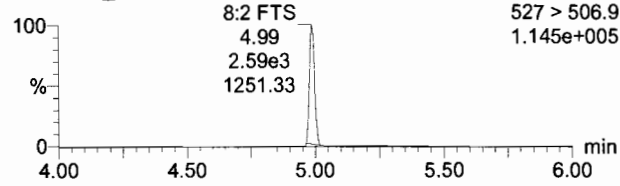
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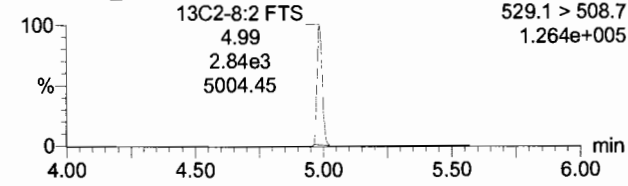
8:2 FTS

161122G2_12



13C2-8:2 FTS

161122G2_12

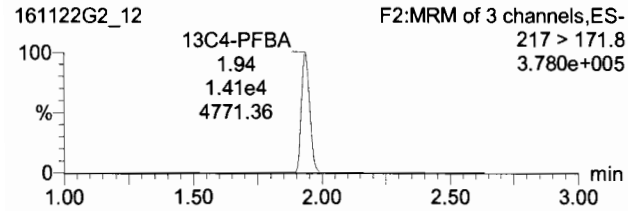


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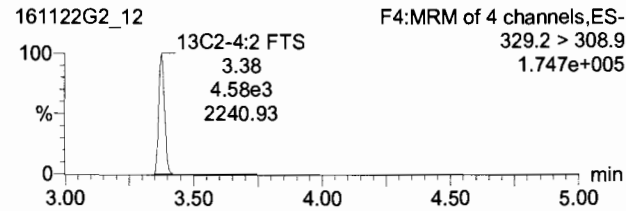
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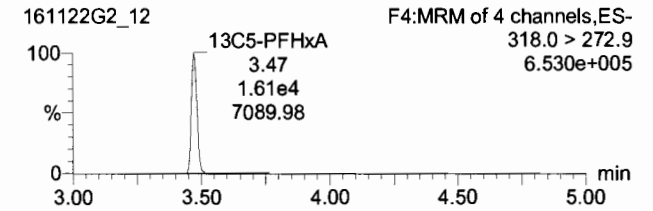
13C4-PFBA



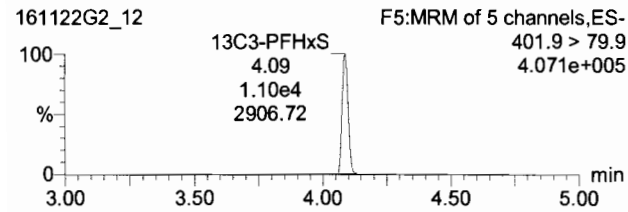
13C2-4:2 FTS



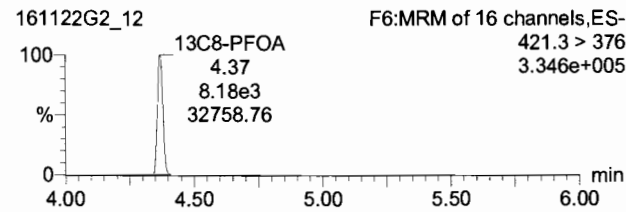
13C5-PFHxA



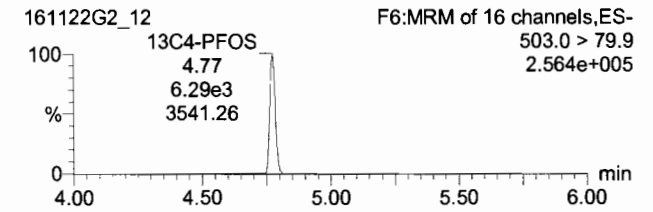
13C3-PFHxS



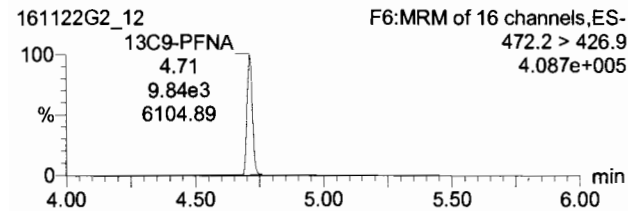
13C8-PFOA



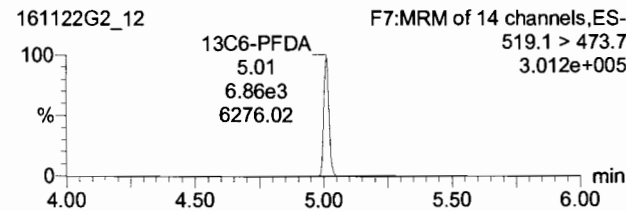
13C4-PFOS



13C9-PFNA



13C6-PFDA



Data Validation Summary

Oceana CTO-WE44, NALF Fentress

TO: Tiffany Hill/CVO
Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: December 9, 2016

Introduction

The following data validation report discusses the data validation process and findings for Vista Analytical in the Sample Delivery Groups (SDGs) listed in the table below.

Samples were analyzed using the following analytical methods:

- 537 MOD Perfluorinated Hydrocarbons

The samples included in these SDGs are listed in the table below.

SDG	Sample Name	Matrix
1601370	OW11-MW9-1016	Water
1601370	OW11-MW9P-1016	Water
1601370	OW11-MW8-1016	Water
1601370	OW11-MW1-1016	Water
1601370	OW11-MW7-1016	Water
1601370	OW11-MW5-1016	Water
1601370	OW11-MW6-1016	Water
1601370	OW11-MW4-1016	Water
1601370	MW-BG13-1016	Water
1601370	MW-BG13P-1016	Water
1601370	MW-BG12-1016	Water
1601388	MW-BG07-1016	Water

SDG	Sample Name	Matrix
1601388	MW-BG06-1016	Water
1601388	MW-BG05-1016	Water
1601388	MW-BG05P-1016	Water
1601388	MW-BG04-1016	Water
1601388	OC-FB-102816	Water
1601388	MW-BG01-1016	Water
1601388	MW-BG09-1016	Water
1601388	OC-MW04-1016	Water
1601388	MW-BG11-1016	Water
1601401	203MW-19-1116	Water
1601401	JTC-MW-B-1116	Water
1601401	MW-BG10-1116	Water
1601401	OW2C-MW19-1116	Water
1601401	OW2E-MW19-1116	Water
1601401	OW2B-MW41-1116	Water
1601401	OC-EB-110216	Water
1601401	OC-MW03-1116	Water
1601401	OC-MW01-1116	Water
1601401	OC-FB-110216	Water
1601401	OC-MW02-1116	Water
1601401	OW26-MW1-1116	Water
1601401	OW26-MW1P 1116	Water
1601420	FTWG-MW-02-1116	Water
1601420	OC-EB110816	Water
1601420	OC-FB110816	Water
1601437	OW11-MW1-1016	Water
1601437	OW11-MW4-1016	Water
1601437	OW11-MW5-1016	Water
1601437	OW11-MW6-1016	Water
1601437	OW11-MW7-1016	Water
1601437	OW11-MW9-1016	Water
1601437	OW11-MW9P-1016	Water

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: Sampling and Analysis Plan Basewide Site Inspection for Perfluorinated Compounds Naval Air Station Oceana Virginia Beach, Virginia CTO-WE44 (October 2016) and National Functional Guidelines for Superfund Organic Methods Data Review (September 2016), as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Tuning Instrument
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Laboratory Control Samples
- Isotope Dilution Analyte
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact.

Technical Holding Times

According to the chain of custody records, sampling was performed on 10/25/16 through 11/8/16. Samples were received at the laboratory 10/27/16 through 11/9/16. All sample preparation and analyses were originally performed within holding time requirements with the exception of selected samples in SDG 1601437, which were re-extracted 15 days out of holding time. These samples were reanalyzed for Perfluorooctane Sulfonate (PFOS) only due to the high concentration detected in the original sample analysis. Affected data are summarized in **Attachment 1**.

Blanks

Target compounds were detected in the method blanks, equipment blanks, and field blanks as listed in the table below. Affected data are summarized in **Attachment 1**.

Blank ID	Compound	Conc.	Units
B6K0053-BLK1	Perfluorooctane Sulfonate (PFOS)	1.48	NG_L
B6K0124-BLK1	Perfluorooctane Sulfonate (PFOS)	1.71	NG_L
B6K0001-BLK1	Perfluorooctanoic acid (PFOA)	0.818	NG_L
B6K0053-BLK1	Perfluorononanoic acid (PFNA)	0.933	NG_L
OC-FB-110216	Perfluorooctanoic acid (PFOA)	0.691	NG_L
OC-EB-110216	Perfluorooctanoic acid (PFOA)	0.731	NG_L
OC-FB110816	Perfluorononanoic acid (PFNA)	0.866	NG_L
B6K0124-BLK1	Perfluoroheptanoic acid (PFHpA)	0.802	NG_L

Field Duplicate Precision

Native sample MW-BG13-1016 and field duplicate MW-BG13P-1016 did not meet precision criteria for perfluorohexanesulfonic acid (PFHxS) and PFOS. Affected data are summarized in **Attachment 1**.

Internal Standards

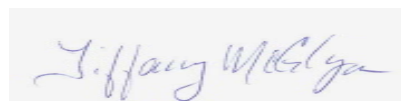
Sample MW-BG13P-1016 exhibited low recoveries in the internal standards. Samples OW26-MW1-1116 and OW26-MW1P 1116 exhibited high recoveries in the internal standards. Affected data are summarized in **Attachment 1**.

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCBL	Continuing Calibration Blank Contamination
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data

Value	Description
MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

LOCATION_NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESC	SDG	COORD_X	COORD_Y	ANALYTICAL_METHOD_GRP_DESC	SAMPLE_NAME	SAMPLE_MATRIX	SAMPLE_MATRIX_DESC	COLLECT_DATE
OW11-MW1	SWMU 00011	OCEANA_NAS	WLM	Monitoring well	1601437	12204154.41	3469512.364	Perfluoroalkyl Compounds	OW11-MW1-1016	WG	Ground water	25-Oct-16
OW11-MW4	SWMU 00011	OCEANA_NAS	WLM	Monitoring well	1601437	12204229.74	3470008.49	Perfluoroalkyl Compounds	OW11-MW4-1016	WG	Ground water	26-Oct-16
OW11-MW6	SWMU 00011	OCEANA_NAS	WLM	Monitoring well	1601437	12204048.46	3469674.36	Perfluoroalkyl Compounds	OW11-MW6-1016	WG	Ground water	26-Oct-16
OW11-MW9	SWMU 00011	OCEANA_NAS	WLM	Monitoring well	1601437	12203595.35	3469304.89	Perfluoroalkyl Compounds	OW11-MW9-1016	WG	Ground water	25-Oct-16
OW11-MW9	SWMU 00011	OCEANA_NAS	WLM	Monitoring well	1601437	12203595.35	3469304.89	Perfluoroalkyl Compounds	OW11-MW9P-1016	WG	Ground water	25-Oct-16
OW11-MW7	SWMU 00011	OCEANA_NAS	WLM	Monitoring well	1601437	12204007.21	3469402.59	Perfluoroalkyl Compounds	OW11-MW7-1016	WG	Ground water	25-Oct-16
OW11-MW5	SWMU 00011	OCEANA_NAS	WLM	Monitoring well	1601437	12204163.31	3469793.88	Perfluoroalkyl Compounds	OW11-MW5-1016	WG	Ground water	25-Oct-16