NAVFAC
Naval Facilities Engineering Command

Off-Base Drinking Water Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Figure, SDG 1601579

Naval Air Station Oceana
Virginia Beach, Virginia

July 2019

January 10, 2017

Vista Work Order No. 1601579

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 December 17, 2016. This sample set was analyzed on a rush turn-around time, under your Project Name 'Oceana 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,

Karen Lopez for

Martha Maier
Laboratory Director

Vista Work Order No. 1601579
Case Narrative

Sample Condition on Receipt:

Seven groundwater 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.

Analytical Notes:

Modified EPA Method 537

The aqueous samples were extracted and analyzed for a selected list of 6 PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and 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 internal standard recoveries in the OPR were extremely high. After review of the peak responses, it was determined that the recovery standard solution was mis-spiked into the extract. The internal standard solution correctly quantified the concentrations of the target analytes, which are all within the acceptance criteria.

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

As requested, an MS/MSD was performed on sample "OC-RW01-1216". The recoveries and RPDs were all within the acceptance criteria.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C3-PFBS	H	6440
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C4-PFHpA	H	5480
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	18O2-PFHxS	H	6410
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C2-PFOA	H	4720
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C8-PFOS	H	2890
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C5-PFNA	H	4480

H = Recovery was outside laboratory acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1601579-01	OC-RW12-1216		16-Dec-16 09:08	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-02	OC-FB12-1216		16-Dec-16 09:10	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-03	OC-RW01-1216	MS/MSD	16-Dec-16 09:54	17-Dec-16 12:15	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
1601579-04	OC-FB01-121616		16-Dec-16 09:53	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-05	OC-RW03-1216		16-Dec-16 10:44	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-06	OC-FB03-121616		16-Dec-16 10:40	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-07	OC-RW03P-1216		16-Dec-16 10:45	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B6L0115	Lab Sample:	B6L0115-BLK1
Sample Size:	0.125 L	Date Extracted:	21-Dec-2016 8:27	Date Analyzed:	22-Dec-16 16:13 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	4.00	8.00	
PFHpA	ND	0.591	2.00	8.00	
PFHxS	ND	0.947	2.00	8.00	
PFOA	0.816	0.651	2.00	8.00	J
PFOS	ND	0.807	0.900	8.00	
PFNA	ND	0.810	2.00	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	97.4	60 - 150	
IS	13C4-PFHpA	88.4	60 - 150	
IS	18O2-PFHxS	92.4	60 - 150	
IS	13C2-PFOA	85.1	60 - 150	
IS	13C8-PFOS	101	60 - 150	
IS	13C5-PFNA	78.5	50 - 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	QC Batch:	B6L0115	Lab Sample:	B6L0115-BS1
Sample Size:	0.125 L	Date Extracted:	21-Dec-2016 8:27	Date Analyzed:	22-Dec-16 15:48 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	87.0	80.0	109	60 - 130
PFHpA	86.6	80.0	108	70 - 130
PFHxS	85.6	80.0	107	70 - 130
PFOA	90.3	80.0	113	70 - 130
PFOS	77.7	80.0	97.1	70 - 130
PFNA	92.6	80.0	116	50 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	6440	60 - 150
IS	13C4-PFHpA	5480	60 - 150
IS	18O2-PFHxS	6410	60 - 150
IS	13C2-PFOA	4720	60 - 150
IS	13C8-PFOS	2890	60 - 150
IS	13C5-PFNA	4480	50 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: OC-RW12-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:08
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.128 L

Laboratory Data

Lab Sample: 1601579-01 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 16:25 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.81	
PFHpA	ND	0.577	1.95	7.81	
PFHxS	ND	0.925	1.95	7.81	
PFOA	1.02	0.636	1.95	7.81	J, B
PFOS	ND	0.788	0.879	7.81	
PFNA	ND	0.791	1.95	7.81	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	88.6	60 - 150	
IS	13C4-PFHpA	81.4	60 - 150	
IS	18O2-PFHxS	88.5	60 - 150	
IS	13C2-PFOA	75.1	60 - 150	
IS	13C8-PFOS	86.8	60 - 150	
IS	13C5-PFNA	84.7	50 - 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: OC-FB12-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:10
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.128 L

Laboratory Data

Lab Sample: 1601579-02 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 16:37 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.83	
PFHpA	ND	0.579	1.95	7.83	
PFHxS	ND	0.927	1.95	7.83	
PFOA	0.746	0.637	1.95	7.83	J, B
PFOS	ND	0.790	0.879	7.83	
PFNA	ND	0.793	1.95	7.83	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	92.1	60 - 150	
IS	13C4-PFHpA	80.3	60 - 150	
IS	18O2-PFHxS	87.0	60 - 150	
IS	13C2-PFOA	83.8	60 - 150	
IS	13C8-PFOS	91.8	60 - 150	
IS	13C5-PFNA	83.8	50 - 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: OC-RW01-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:54
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.125 L

Laboratory Data

Lab Sample: 1601579-03 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 16:49 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	2.21	1.80	4.00	8.03	J
PFHpA	8.52	0.593	2.00	8.03	
PFHxS	32.5	0.950	2.00	8.03	
PFOA	24.6	0.653	2.00	8.03	B
PFOS	9.24	0.810	0.900	8.03	
PFNA	1.16	0.813	2.00	8.03	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C4-PFHpA	74.2	60 - 150	
IS	18O2-PFHxS	89.8	60 - 150	
IS	13C2-PFOA	74.5	60 - 150	
IS	13C8-PFOS	89.0	60 - 150	
IS	13C5-PFNA	72.8	50 - 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.

Matrix Spike Results

Modified EPA Method 537

Source Client ID: OC-RW01-1216
Source LabNumber: 1601579-03
Matrix: Aqueous
Sample Size: 0.132/0.131 L

QC Batch: B6L0115
Date Extracted: 21-Dec-2016 8:27

Lab Sample: B6L0115-MS1/B6L0115-MSD1
Date Analyzed: 22-Dec-16 17:01 Column: BEH C18
22-Dec-16 17:14 Column: BEH C18

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFBS	75.7	105		76.3	106	0.948		60 - 130	25
PFHpA	75.7	96.6		76.3	117	19.1		70 - 130	25
PFHxS	75.7	119		76.3	104	13.5		70 - 130	25
PFOA	75.7	102	B	76.3	105	2.90	B	70 - 130	25
PFOS	75.7	97.3		76.3	81.6	17.6		70 - 130	25
PFNA	75.7	111		76.3	110	0.905		50 - 130	25

	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C3-PFBS	101		97.0	
IS	13C4-PFHpA	87.9		81.9	
IS	18O2-PFHxS	85.9		95.1	
IS	13C2-PFOA	93.9		88.1	
IS	13C8-PFOS	87.4		106	
IS	13C5-PFNA	90.4		89.1	

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: OC-FB01-121616

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:53
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.130 L

Laboratory Data

Lab Sample: 1601579-04 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 17:26 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.72	3.85	7.70	
PFHpA	ND	0.569	1.92	7.70	
PFHxS	ND	0.911	1.92	7.70	
PFOA	0.912	0.627	1.92	7.70	J, B
PFOS	ND	0.777	0.865	7.70	
PFNA	ND	0.780	1.92	7.70	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	104	60 - 150	
IS	13C4-PFHpA	82.3	60 - 150	
IS	18O2-PFHxS	85.1	60 - 150	
IS	13C2-PFOA	76.3	60 - 150	
IS	13C8-PFOS	88.0	60 - 150	
IS	13C5-PFNA	92.5	50 - 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: OC-RW03-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 10:44
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.129 L

Laboratory Data

Lab Sample: 1601579-05 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 17:38 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.73	3.88	7.73	
PFHpA	ND	0.571	1.94	7.73	
PFHxS	ND	0.915	1.94	7.73	
PFOA	0.721	0.629	1.94	7.73	J, B
PFOS	ND	0.780	0.872	7.73	
PFNA	ND	0.783	1.94	7.73	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	99.3	60 - 150	
IS	13C4-PFHpA	79.5	60 - 150	
IS	18O2-PFHxS	88.0	60 - 150	
IS	13C2-PFOA	83.7	60 - 150	
IS	13C8-PFOS	94.5	60 - 150	
IS	13C5-PFNA	77.5	50 - 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: OC-FB03-121616

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 10:40
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.126 L

Laboratory Data

Lab Sample: 1601579-06 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 17:50 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.78	3.97	7.97	
PFHpA	ND	0.589	1.98	7.97	
PFHxS	ND	0.943	1.98	7.97	
PFOA	0.943	0.648	1.98	7.97	J, B
PFOS	ND	0.804	0.893	7.97	
PFNA	ND	0.807	1.98	7.97	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	99.7	60 - 150	
IS	13C4-PFHpA	85.2	60 - 150	
IS	18O2-PFHxS	87.9	60 - 150	
IS	13C2-PFOA	76.8	60 - 150	
IS	13C8-PFOS	111	60 - 150	
IS	13C5-PFNA	101	50 - 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: OC-RW03P-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 10:45
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.126 L

Laboratory Data

Lab Sample: 1601579-07 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 18:02 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.77	3.97	7.92	
PFHpA	ND	0.585	1.98	7.92	
PFHxS	ND	0.938	1.98	7.92	
PFOA	0.887	0.645	1.98	7.92	J, B
PFOS	ND	0.799	0.893	7.92	
PFNA	ND	0.802	1.98	7.92	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C4-PFHpA	85.9	60 - 150	
IS	18O2-PFHxS	93.4	60 - 150	
IS	13C2-PFOA	88.1	60 - 150	
IS	13C8-PFOS	100	60 - 150	
IS	13C5-PFNA	77.6	50 - 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.

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

CLEAN CTO WE14

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Laboratory Project ID: 1601579 Temp: -0.6 °C
Storage ID: WK-2 Storage Secured: Yes ☑ No ☐

Project ID: Oceana PFC Sampling P.O.#: 10006-7-105690 Sampler: KATHRYN SMITH (name)

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

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Tiffany Hill	CH2M	5701 Cleveland St, Suite 200	Virginia Beach	VA	541-768-3109	

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Kathryn Smith/VBO Kathryn Smith	12/16/16		B. Benedict B. Benedict	12/17/16	1221
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

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.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA 1613 2378-TCDD	EPA 1613 2378 TCDD/TCDF	EPA 1613 PCDD/PCDF	EPA 8290 2378-TCDD	EPA 8290 2378-TCDD/TCDF	EPA 8290 PCDD/PCDF	EPA 8280 2378-TCDD	EPA 8280 2378 TCDD/TCDF	EPA 8280 PCDD/PCDF	EPA 1668 TOTALS	EPA 1668 COPLANAR PCB's	EPA 1668 209 CONGENERS	EPA 1668 PBDE	EPA 1614 PAH	CARB429 WHO-29	CARB429 Mod. EPA 537 – Select PFCs	Comments
OC-RW12-1216	12/16/16	0908		2		GW																2	
OC-FB12-121616		0910		2		GW																2	
OC-RW01-1216		0954		2		GW																2	
OC-FB01-121616		0953		2		GW																2	
OC-RW01-1216-MS		0954		2		GW																2	Run QA/QC
OC-RW01-1216-SD		0954		2		GW																2	Run QA/QC
OC-RW03-1216		10:44		2		GW																2	
OC-FB03-121616		10:40		2		GW																2	
OC-RW03P-1216		10:45		2		GW																2	
				2		GW																2	

Special Instructions/Comments: PN 678440.5I.5I.01

SEND DOCUMENTATION AND RESULTS TO:

Name: See PO
Company: CH2M
Address:
City: State: Zip:
Phone: Fax:
Email:

Container Types: A = 1 Liter Amber, G = Glass Jar, P = PUF, T = MM5, O = Other:

Bottle Preservation Type: T = Thiosulfate, O = Other:

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:

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1601579 **TAT** 14

Samples Arrival:	**Date/Time** 12/17/16 1215	**Initials:** MBB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/17/16 1417	**Initials:** MBB	**Location:** WR-2 **Shelf/Rack:** B6

Delivered By:	FedEx	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice		Dry Ice	None	
Temp °C: 0.1 (uncorrected)	**Time:**			**Thermometer ID:** ~~IR-1~~ DT3		
Temp °C: -0.6 (corrected)	**Probe used:** Yes ☑ No ☐					

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7779 7384 2167	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Preservation Documented:	$Na_2S_2O_3$	Trizma			Yes	No	NA
Shipping Container	Vista	Client	Retain	Return	Dispose		

Comments:

BLA 09 06 2016

January 10, 2017

Vista Work Order No. 1601579

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 December 17, 2016. This sample set was analyzed on a rush turn-around time, under your Project Name 'Oceana 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,

Karen Lopez for

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. 1601579
Case Narrative

Sample Condition on Receipt:

Seven groundwater 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.

Analytical Notes:

Modified EPA Method 537

The aqueous samples were extracted and analyzed for a selected list of 6 PFAS using Modified EPA Method 537.

Holding Times

The samples were extracted and 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 internal standard recoveries in the OPR were extremely high. After review of the peak responses, it was determined that the recovery standard solution was mis-spiked into the extract. The internal standard solution correctly quantified the concentrations of the target analytes, which are all within the acceptance criteria.

The labeled standard recoveries outside the acceptance criteria are listed in the table below.

As requested, an MS/MSD was performed on sample "OC-RW01-1216". The recoveries and RPDs were all within the acceptance criteria.

QC Anomalies

LabNumber	SampleName	Analysis	Analyte	Flag	%Rec
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C3-PFBS	H	6440
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C4-PFHpA	H	5480
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	18O2-PFHxS	H	6410
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C2-PFOA	H	4720
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C8-PFOS	H	2890
B6L0115-BS1	B6L0115-BS1	Modified EPA Method 537	13C5-PFNA	H	4480

H = Recovery was outside laboratory acceptance criteria.

TABLE OF CONTENTS

Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1601579-01	OC-RW12-1216		16-Dec-16 09:08	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-02	OC-FB12-1216		16-Dec-16 09:10	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-03	OC-RW01-1216	MS/MSD	16-Dec-16 09:54	17-Dec-16 12:15	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
1601579-04	OC-FB01-121616		16-Dec-16 09:53	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-05	OC-RW03-1216		16-Dec-16 10:44	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-06	OC-FB03-121616		16-Dec-16 10:40	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL
1601579-07	OC-RW03P-1216		16-Dec-16 10:45	17-Dec-16 12:15	HDPE Bottle, 125 mL
					HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank — Modified EPA Method 537

Matrix:	Aqueous	QC Batch:	B6L0115	Lab Sample:	B6L0115-BLK1
Sample Size:	0.125 L	Date Extracted:	21-Dec-2016 8:27	Date Analyzed:	22-Dec-16 16:13 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.79	4.00	8.00	
PFHpA	ND	0.591	2.00	8.00	
PFHxS	ND	0.947	2.00	8.00	
PFOA	0.816	0.651	2.00	8.00	J
PFOS	ND	0.807	0.900	8.00	
PFNA	ND	0.810	2.00	8.00	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	97.4	60 - 150	
IS	13C4-PFHpA	88.4	60 - 150	
IS	18O2-PFHxS	92.4	60 - 150	
IS	13C2-PFOA	85.1	60 - 150	
IS	13C8-PFOS	101	60 - 150	
IS	13C5-PFNA	78.5	50 - 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	QC Batch:	B6L0115	Lab Sample:	B6L0115-BS1
Sample Size:	0.125 L	Date Extracted:	21-Dec-2016 8:27	Date Analyzed:	22-Dec-16 15:48 Column: BEH C18

Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits
PFBS	87.0	80.0	109	60 - 130
PFHpA	86.6	80.0	108	70 - 130
PFHxS	85.6	80.0	107	70 - 130
PFOA	90.3	80.0	113	70 - 130
PFOS	77.7	80.0	97.1	70 - 130
PFNA	92.6	80.0	116	50 - 130

	Labeled Standard	%R	LCL-UCL
IS	13C3-PFBS	6440	60 - 150
IS	13C4-PFHpA	5480	60 - 150
IS	18O2-PFHxS	6410	60 - 150
IS	13C2-PFOA	4720	60 - 150
IS	13C8-PFOS	2890	60 - 150
IS	13C5-PFNA	4480	50 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: OC-RW12-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:08
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.128 L

Laboratory Data

Lab Sample: 1601579-01 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 16:25 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.81	
PFHpA	ND	0.577	1.95	7.81	
PFHxS	ND	0.925	1.95	7.81	
PFOA	1.02	0.636	1.95	7.81	J, B
PFOS	ND	0.788	0.879	7.81	
PFNA	ND	0.791	1.95	7.81	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	88.6	60 - 150	
IS	13C4-PFHpA	81.4	60 - 150	
IS	18O2-PFHxS	88.5	60 - 150	
IS	13C2-PFOA	75.1	60 - 150	
IS	13C8-PFOS	86.8	60 - 150	
IS	13C5-PFNA	84.7	50 - 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: OC-FB12-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:10
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.128 L

Laboratory Data

Lab Sample: 1601579-02 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 16:37 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.75	3.91	7.83	
PFHpA	ND	0.579	1.95	7.83	
PFHxS	ND	0.927	1.95	7.83	
PFOA	0.746	0.637	1.95	7.83	J, B
PFOS	ND	0.790	0.879	7.83	
PFNA	ND	0.793	1.95	7.83	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	92.1	60 - 150	
IS	13C4-PFHpA	80.3	60 - 150	
IS	18O2-PFHxS	87.0	60 - 150	
IS	13C2-PFOA	83.8	60 - 150	
IS	13C8-PFOS	91.8	60 - 150	
IS	13C5-PFNA	83.8	50 - 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: OC-RW01-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:54
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.125 L

Laboratory Data

Lab Sample: 1601579-03 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 16:49 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	2.21	1.80	4.00	8.03	J
PFHpA	8.52	0.593	2.00	8.03	
PFHxS	32.5	0.950	2.00	8.03	
PFOA	24.6	0.653	2.00	8.03	B
PFOS	9.24	0.810	0.900	8.03	
PFNA	1.16	0.813	2.00	8.03	J

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C4-PFHpA	74.2	60 - 150	
IS	18O2-PFHxS	89.8	60 - 150	
IS	13C2-PFOA	74.5	60 - 150	
IS	13C8-PFOS	89.0	60 - 150	
IS	13C5-PFNA	72.8	50 - 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.

Matrix Spike Results

Modified EPA Method 537

Source Client ID: OC-RW01-1216
Source LabNumber: 1601579-03
Matrix: Aqueous
Sample Size: 0.132/0.131 L

QC Batch: B6L0115
Date Extracted: 21-Dec-2016 8:27

Lab Sample: B6L0115-MS1/B6L0115-MSD1
Date Analyzed: 22-Dec-16 17:01 Column: BEH C18
22-Dec-16 17:14 Column: BEH C18

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit
PFBS	75.7	105		76.3	106	0.948		60 - 130	25
PFHpA	75.7	96.6		76.3	117	19.1		70 - 130	25
PFHxS	75.7	119		76.3	104	13.5		70 - 130	25
PFOA	75.7	102	B	76.3	105	2.90	B	70 - 130	25
PFOS	75.7	97.3		76.3	81.6	17.6		70 - 130	25
PFNA	75.7	111		76.3	110	0.905		50 - 130	25

	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
IS	13C3-PFBS	101		97.0	
IS	13C4-PFHpA	87.9		81.9	
IS	18O2-PFHxS	85.9		95.1	
IS	13C2-PFOA	93.9		88.1	
IS	13C8-PFOS	87.4		106	
IS	13C5-PFNA	90.4		89.1	

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: OC-FB01-121616

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 9:53
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.130 L

Laboratory Data

Lab Sample: 1601579-04 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 17:26 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.72	3.85	7.70	
PFHpA	ND	0.569	1.92	7.70	
PFHxS	ND	0.911	1.92	7.70	
PFOA	0.912	0.627	1.92	7.70	J, B
PFOS	ND	0.777	0.865	7.70	
PFNA	ND	0.780	1.92	7.70	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	104	60 - 150	
IS	13C4-PFHpA	82.3	60 - 150	
IS	18O2-PFHxS	85.1	60 - 150	
IS	13C2-PFOA	76.3	60 - 150	
IS	13C8-PFOS	88.0	60 - 150	
IS	13C5-PFNA	92.5	50 - 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: OC-RW03-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 10:44
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.129 L

Laboratory Data

Lab Sample: 1601579-05 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 17:38 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.73	3.88	7.73	
PFHpA	ND	0.571	1.94	7.73	
PFHxS	ND	0.915	1.94	7.73	
PFOA	0.721	0.629	1.94	7.73	J, B
PFOS	ND	0.780	0.872	7.73	
PFNA	ND	0.783	1.94	7.73	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	99.3	60 - 150	
IS	13C4-PFHpA	79.5	60 - 150	
IS	18O2-PFHxS	88.0	60 - 150	
IS	13C2-PFOA	83.7	60 - 150	
IS	13C8-PFOS	94.5	60 - 150	
IS	13C5-PFNA	77.5	50 - 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: OC-FB03-121616

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 10:40
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.126 L

Laboratory Data

Lab Sample: 1601579-06 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 17:50 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.78	3.97	7.97	
PFHpA	ND	0.589	1.98	7.97	
PFHxS	ND	0.943	1.98	7.97	
PFOA	0.943	0.648	1.98	7.97	J, B
PFOS	ND	0.804	0.893	7.97	
PFNA	ND	0.807	1.98	7.97	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	99.7	60 - 150	
IS	13C4-PFHpA	85.2	60 - 150	
IS	18O2-PFHxS	87.9	60 - 150	
IS	13C2-PFOA	76.8	60 - 150	
IS	13C8-PFOS	111	60 - 150	
IS	13C5-PFNA	101	50 - 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: OC-RW03P-1216

Modified EPA Method 537

Client Data

Name: CH2M Hill
Project: Oceana CTO-WE14
Date Collected: 16-Dec-2016 10:45
Location:

Sample Data

Matrix: Groundwater
Sample Size: 0.126 L

Laboratory Data

Lab Sample: 1601579-07 Date Received: 17-Dec-2016 12:15
QC Batch: B6L0115 Date Extracted: 21-Dec-2016 8:27
Date Analyzed: 22-Dec-16 18:02 Column: BEH C18

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers
PFBS	ND	1.77	3.97	7.92	
PFHpA	ND	0.585	1.98	7.92	
PFHxS	ND	0.938	1.98	7.92	
PFOA	0.887	0.645	1.98	7.92	J, B
PFOS	ND	0.799	0.893	7.92	
PFNA	ND	0.802	1.98	7.92	

	Labeled Standard	%R	LCL-UCL	Qualifiers
IS	13C3-PFBS	101	60 - 150	
IS	13C4-PFHpA	85.9	60 - 150	
IS	18O2-PFHxS	93.4	60 - 150	
IS	13C2-PFOA	88.1	60 - 150	
IS	13C8-PFOS	100	60 - 150	
IS	13C5-PFNA	77.6	50 - 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.

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

CLEAN CTO WE14

Vista Analytical Laboratory

CHAIN OF CUSTODY

For Laboratory Use Only
Laboratory Project ID: 1601579 Temp: -0.6 °C
Storage ID: WK-2 Storage Secured: Yes ☑ No ☐

Project ID: Oceana PFC Sampling P.O.#: 10006-7-105690 Sampler: KATHRYN SMITH (name)

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

Invoice to: Name	Company	Address	City	State	Ph#	Fax#
Tiffany Hill	CH2M	5701 Cleveland St, Suite 200	Virginia Beach	VA	541-768-3109	

Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time
Kathryn Smith/VBO Kathryn Smith	12/16/16		B. Benedict B. Benedict	12/17/16	1221
Relinquished by (printed name and signature)	Date	Time	Received by (printed name and signature)	Date	Time

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

ATTN: Martha Maier

Method of Shipment: FedEx

Tracking No.:

Add Analysis(es) Requested

Sample ID	Date	Time	Location/Sample Description	Container(s) Quantity	Type	Matrix	EPA 1613 2378-TCDD	EPA 1613 2378 TCDD/TCDF	EPA 1613 PCDD/PCDF	EPA 8290 2378-TCDD	EPA 8290 2378-TCDD/TCDF	EPA 8290 PCDD/PCDF	EPA 8280 2378-TCDD	EPA 8280 2378 TCDD/TCDF	EPA 8280 PCDD/PCDF	EPA 1668 TOTALS	EPA 1668 COPLANAR PCB's	EPA 1668 209 CONGENERS	EPA 1668 PBDE	EPA 1614 PAH	CARB429 WHO-29	Mod. EPA 537 – Select PFCs	Comments
OC-RW12-1216	12/16/16	0908		2		GW															2		
OC-FB12-121616		0910		2		GW															2		
OC-RW01-1216		0954		2		GW															2		
OC-FB01-121616		0953		2		GW															2		
OC-RW01-1216-MS		0954		2		GW															2		Run QA/QC
OC-RW01-1216-SD		0954		2		GW															2		Run QA/QC
OC-RW03-1216		10:44		2		GW															2		
OC-FB03-121616	↓	10:40		2		GW															2		
OC-RW03P-1216	↓	10:45		2		GW															2		
				2		GW															2		

Special Instructions/Comments: PN 678440.SI.SI.01

SEND DOCUMENTATION AND RESULTS TO:

Name: See PO
Company: CH2M
Address:
City: State: Zip:
Phone: Fax:
Email:

Container Types: A = 1 Liter Amber, G = Glass Jar, P = PUF, T = MM5, O = Other:

Bottle Preservation Type: T = Thiosulfate, O = Other:

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:

SAMPLE LOG-IN CHECKLIST

Vista Analytical Laboratory

Vista Project #: 1601579 **TAT** 14

Samples Arrival:	**Date/Time** 12/17/16 1215	**Initials:** MBB	**Location:** WR-2 **Shelf/Rack:** NA
Logged In:	**Date/Time** 12/17/16 1417	**Initials:** MBB	**Location:** WR-2 **Shelf/Rack:** B6

Delivered By:	FedEx	UPS	On Trac	DHL	Hand Delivered	Other
Preservation:	Ice	Blue Ice		Dry Ice	None	
Temp °C: 0.1 (uncorrected)	**Time:**			**Thermometer ID:** ~~IR-1~~ DT3		
Temp °C: -0.6 (corrected)	**Probe used:** Yes ☑ No ☐					

	YES	NO	NA
Adequate Sample Volume Received?	✓		
Holding Time Acceptable?	✓		
Shipping Container(s) Intact?	✓		
Shipping Custody Seals Intact?	✓		
Shipping Documentation Present?	✓		
Airbill Trk # 7779 7384 2167	✓		
Sample Container Intact?	✓		
Sample Custody Seals Intact?			✓
Chain of Custody / Sample Documentation Present?	✓		
COC Anomaly/Sample Acceptance Form completed?		✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			✓

Preservation Documented:	$Na_2S_2O_3$	Trizma	Yes	No	NA
Shipping Container	Vista	Client	Retain	Return	Dispose

Comments:

BLA 09 06 2016

EXTRACTION INFORMATION

Process Sheet

Workorder: 1601579

Prep Expiration: 12/30/2016
Client: CH2M Hill

Workorder Due: 04-Jan-17 00:00

TAT: 18

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

Prep Batch: B6L0115

Prep Data Entered: 12/27/16 JS
Date and Initials

Version: UCMR 3 (6 Analyte)

Initial Sequence: S6L0047

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1601579-01	☑	OC-RW12-1216	17-Dec-16 12:15	WR-2 B-6	
1601579-02	☐	OC-FB12-1216 OC-FB12-121616	17-Dec-16 12:15	WR-2 B-6	
1601579-03	☑	OC-RW01-1216	17-Dec-16 12:15	WR-2 B-6	**MS/MSD**
1601579-04	☑	OC-FB01-121616	17-Dec-16 12:15	WR-2 B-6	
1601579-05	☑	OC-RW03-1216	17-Dec-16 12:15	WR-2 B-6	
1601579-06	☑	OC-FB03-121616	17-Dec-16 12:15	WR-2 B-6	
1601579-07	☑	OC-RW03P-1216	17-Dec-16 12:15	WR-2 B-6	

WO Comments: **List of 6, include Total PFOA.**

Vista PM:Martha Maier

Vial Box ID: Batman!

Sample Reconciled By: [signature] 12/21/16

Page 1 of 1

Percent Solids

Vista Analytical Laboratory

Project: BL0115 *Balance ID:* HRMS8

Sample ID	Chemist: NA Date: — Time: J Boat Wt.	Sample + Boat Wt.	Chemist: NA Date: — Time: J Residue + Boat Wt.	Chemist/Date JS 12/21/14 pH before	pH* after	Cl
1601579-01 (A)				8	2	0
-02 (B)				5	2	0
-03 "A"				5	2	0
-03 "B"				5	2	0
-03 "C"			JS 12/21/14	5	2	0
-04				5	2	0
-05 (A)				7	2	0
-06 (B)				5	2	0
-07 (A)				7	2	0
1601581-01				7	2	0
-02				7	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) 3 drops HCl added to adjust pH

(B) 2 drops HCl added to adjust pH JS 12/21/14

- *Methods 8280, 613, 1613, 8290, 1614 – pH <9*
- *Methods 1668/PCN – pH 2-3*
- *NCASI 551 – pH 1*

%Solids rmh 5/2011

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537 PFAS DOD (LOO as mRL)

B6L0115

Chemist: E-Schneider

Prep Date/Time: 21-Dec-16 08:27

Prepared using: LCMS - SPE Extraction-LCMS

C	VISTA Sample ID	Bottle + Sample (g)	Bottle Only (g)	Sample Amt. (L)	IS/NS CHEM/WIT DATE	SPE C6L0099	RS CHEM/WIT DATE
☐	B6L0115-BLK1	NA	NA	(0.125)	ES JS 12/21/16	JS 12/21/16	JSJP 12/21/16
☐	B6L0115-BS1	↓	↓	↓	↓	↓	↓
☐	B6L0115-MS1 1601579-03	159.28	27.21	0.13207			
☐	B6L0115-MSD1 1601579-03	158.34	27.24	0.13110			
☐	1601579-01	155.09	27.08	0.12801			
☐	1601579-02	154.59	26.89	0.12770			
☐	1601579-03	151.74	27.15	0.12459			
☐	1601579-04	157.03	27.16	0.12987			
☐	1601579-05	156.40	27.09	0.12931			
☐	1601579-06	152.63	27.11	0.12552			
☐	1601579-07	153.45	27.24	0.12621			
☐	1601581-01	151.42	26.93	0.12449			
☐	1601581-02	157.91	26.86	0.13105			

IS Name (J1) 16E2604, 10uL

NS Name (J3) 16E2905, 10uL

RS Name (J3) 16KL05, 10uL

SPE Chem: Strat xAW 33mm 200mg/6mL

Ele SOLV: 0.5% NH4OH in MeOH:MeCN

Final Volume(s) 1mL

Check Out: Chemist/Date: JS 12/21/16

Check In: Chemist/Date: NA

Balance ID: HRMS8

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_06.qld

Last Altered: Thursday, January 05, 2017 10:48:30 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:50:17 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:47:40
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-BLK1, Description: Method Blank, Name: 161222J1_06.wiff, Date: 22-Dec-2016, Time: 16:13:01

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9	1.919e0	6.610e3		0.125	3.61	0.0350	
2	2	PFHpA	318.9		7.152e3		0.125			
3	3	PFHxS	79.91	1.172e1	1.174e3		0.125	4.60		
4	4	PFOA	368.9	5.253e1	6.422e3		0.125	4.89	0.816	
5	5	PFOS	79.92	1.049e1	3.947e3		0.125	5.17	0.207	
6	6	PFNA	419.0		6.130e3		0.125			
7	7	13C3-PFBS	79.95	6.610e3	1.005e4	0.675	0.125	3.61	97.4	97.4
8	8	13C4-PFHpA	321.9	7.152e3	1.005e4	0.805	0.125	4.49	88.4	88.4
9	9	18O2-PFHxS	102.90	1.174e3	4.465e3	0.285	0.125	4.60	92.4	92.4
10	10	13C2-PFOA	369.9	6.422e3	7.856e3	0.960	0.125	4.89	85.1	85.1
11	11	13C8-PFOS	79.93	3.947e3	4.294e3	0.912	0.125	5.24	101	101
12	12	13C5-PFNA	422.9	6.130e3	8.286e3	0.943	0.125	5.20	78.5	78.5
13	13	13C5-PFHxA	273.0	1.005e4	1.005e4	1.000	0.125	3.96	100	100
14	14	13C3-PFHxS	80.01	4.465e3	4.465e3	1.000	0.125	4.60	100	100
15	15	13C8-PFOA	375.9	7.856e3	7.856e3	1.000	0.125	4.89	100	100
16	16	13C4-PFOS	79.94	4.294e3	4.294e3	1.000	0.125	5.24	100	100
17	17	13C9-PFNA	427.0	8.286e3	8.286e3	1.000	0.125	5.19	100	100
18	18	Total PFBS	79.9		6.610e3		0.125		0.0350	
19	19	Total PFHxS	79.91		1.174e3		0.125			
20	20	Total PFOA	368.9		6.422e3		0.125		0.816	
21	21	Total PFOS	79.92		3.947e3		0.125		0.207	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_06.qld

Last Altered: Thursday, January 05, 2017 10:48:30 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:50:17 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:47:40
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-BLK1, Description: Method Blank, Name: 161222J1_06.wiff, Date: 22-Dec-2016, Time: 16:13:01

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	1.919	6609.784	0.0

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.60	11.717	1174.261	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.89	52.528	6421.607	0.8

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.17	10.490	3947.406	0.2

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

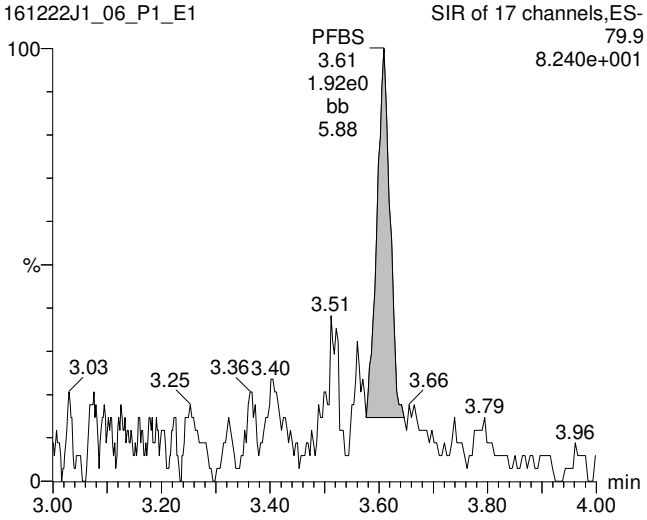
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_06.qld

Last Altered: Thursday, January 05, 2017 10:48:30 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:50:17 Pacific Standard Time

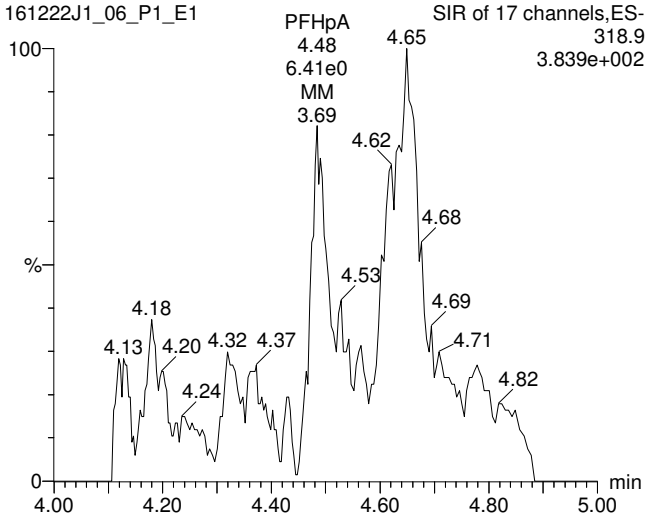
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:47:40
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-BLK1, Description: Method Blank, Name: 161222J1_06.wiff, Date: 22-Dec-2016, Time: 16:13:01, Instrument: , Lab: ©PE-SCIEX, User: sciex

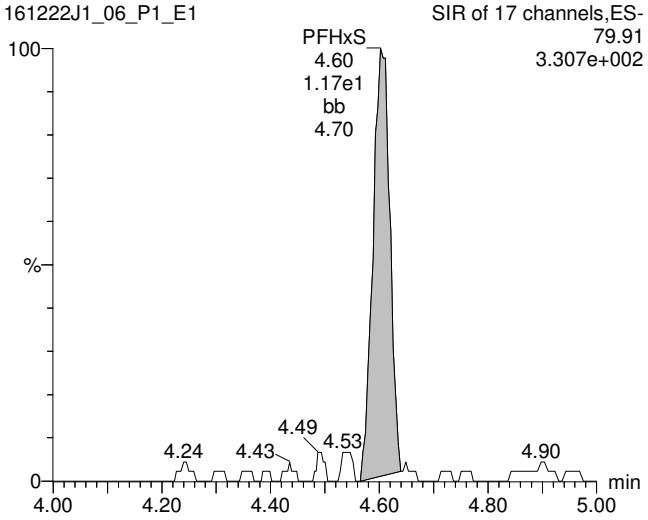
Total PFBS



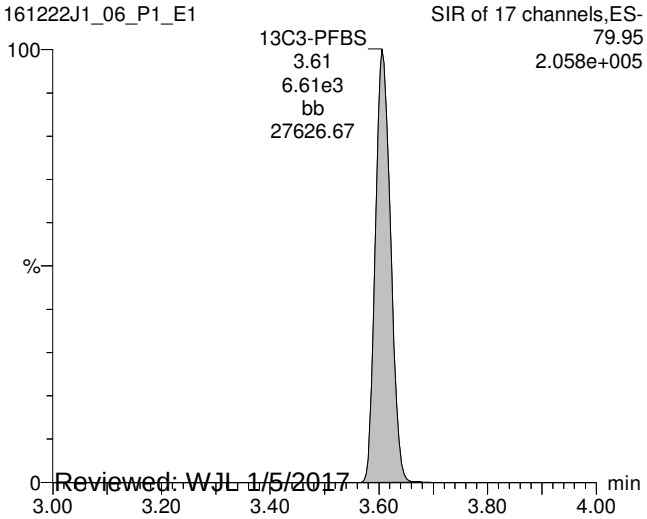
PFHpA



Total PFHxS



13C3-PFBS



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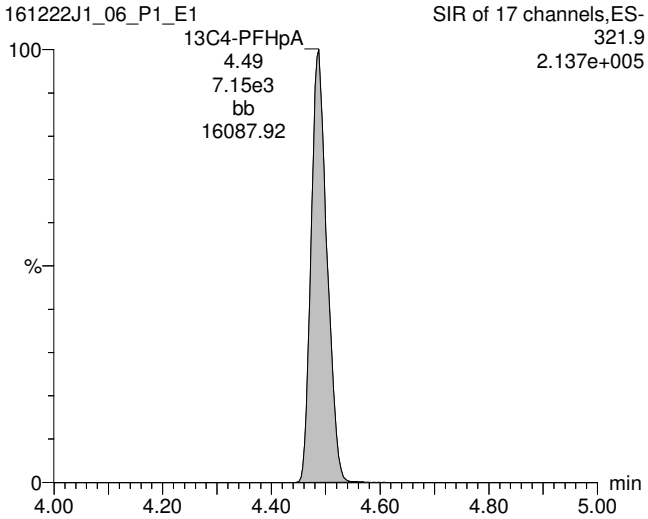
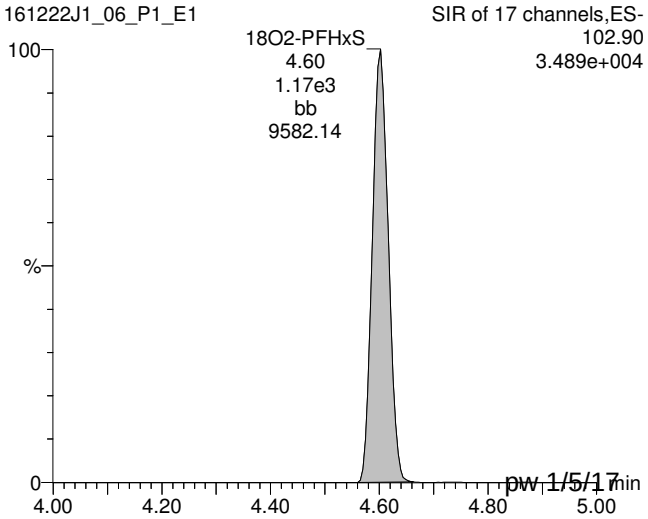


18O2-PFHxS



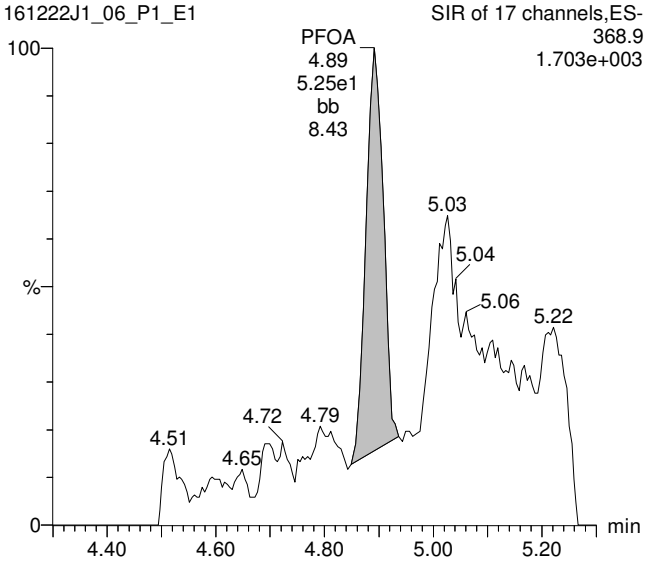
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_06.qld

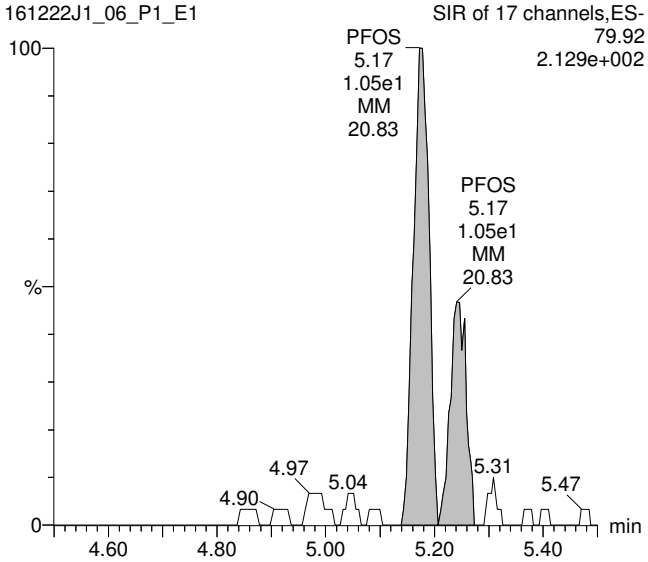
Last Altered: Thursday, January 05, 2017 10:48:30 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:50:17 Pacific Standard Time

ID: B6L0115-BLK1, Description: Method Blank, Name: 161222J1_06.wiff, Date: 22-Dec-2016, Time: 16:13:01, Instrument: , Lab: ©PE-SCIEX, User: sciex

Total PFOA



Total PFOS



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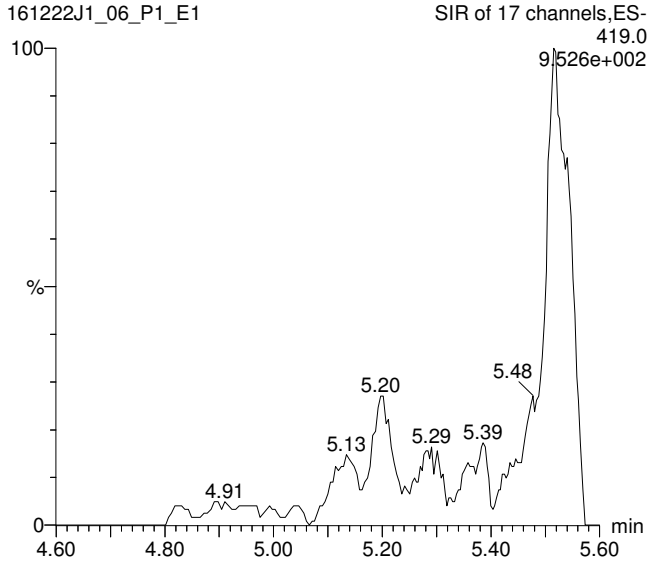
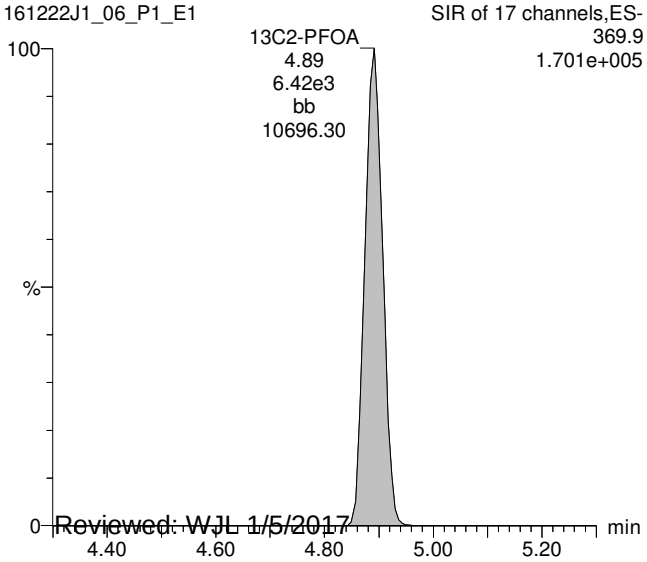
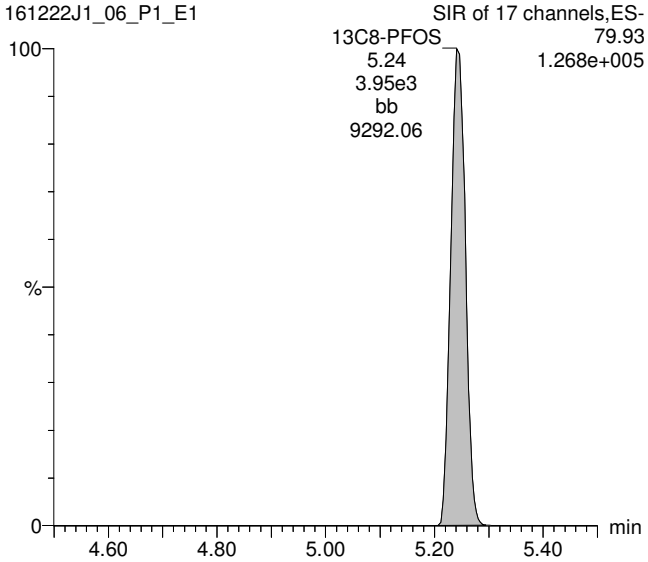


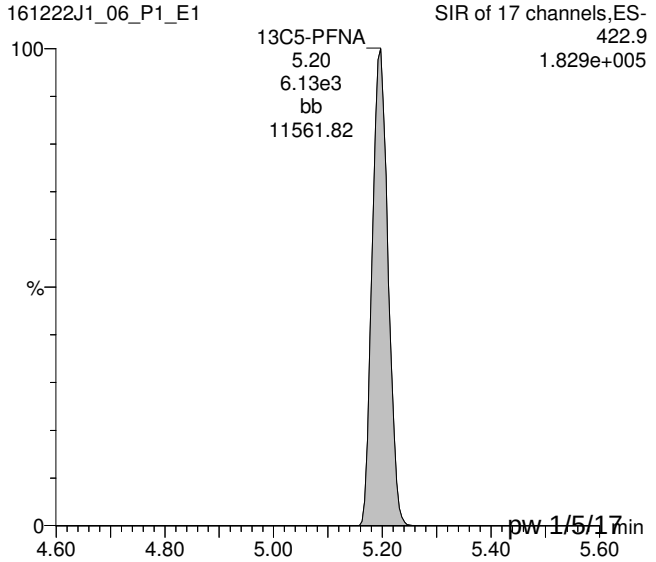
13C2-PFOA



13C8-PFOS



13C5-PFNA



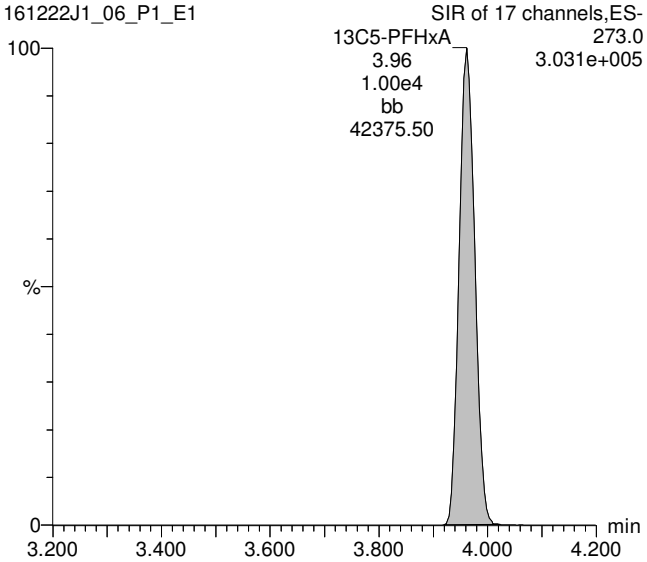
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_06.qld

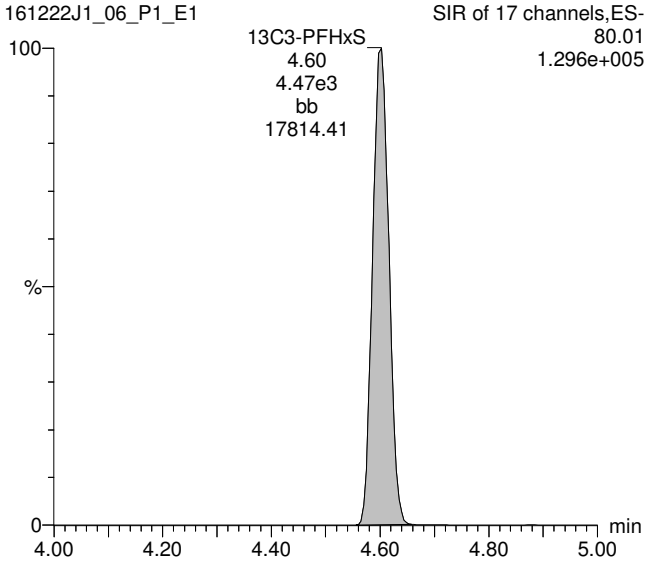
Last Altered: Thursday, January 05, 2017 10:48:30 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:50:17 Pacific Standard Time

ID: B6L0115-BLK1, Description: Method Blank, Name: 161222J1_06.wiff, Date: 22-Dec-2016, Time: 16:13:01, Instrument: , Lab: ©PE-SCIEX, User: sciex

13C5-PFHxA



13C3-PFHxS



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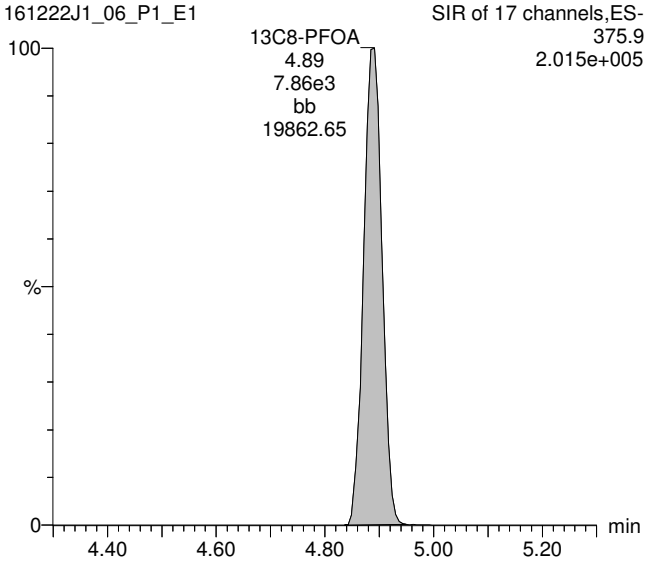
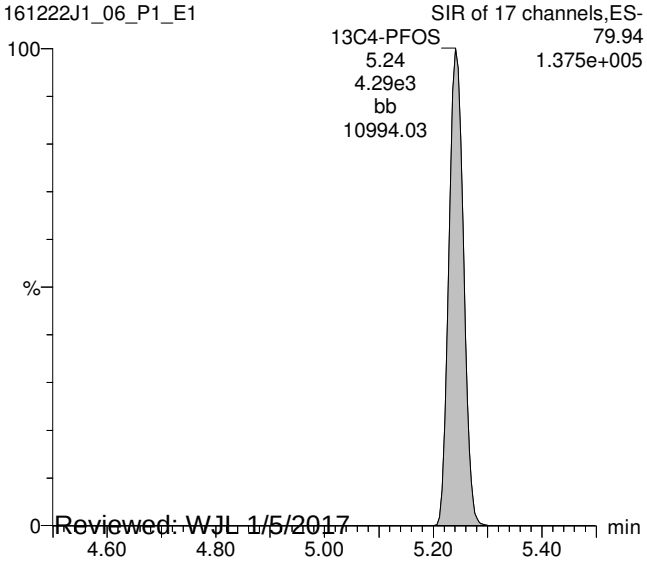
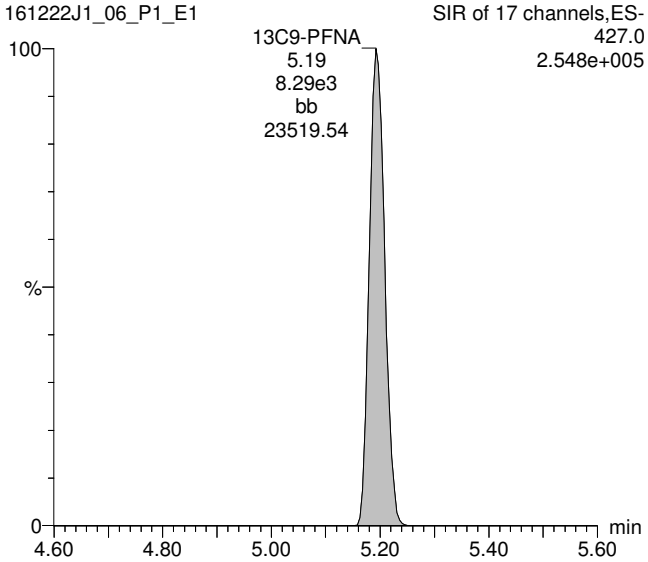


13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017

pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_04.qld

Last Altered: Thursday, January 05, 2017 11:35:58 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:36:33 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-BS1, Description: OPR, Name: 161222J1_04.wiff, Date: 22-Dec-2016, Time: 15:48:39

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec	
1	1	PFBS	79.9	4.741e3	6.675e3		0.125	3.61	87.0	109	
2	2	PFHpA	318.9	4.920e3	6.774e3		0.125	4.45	86.6	108	
3	3	PFHxS	79.91	3.004e3	1.179e3		0.125	4.56	85.6	107	
4	4	PFOA	368.9	5.415e3	6.190e3		0.125	4.84	90.3	113	
5	5	PFOS	79.92	3.874e3	3.930e3		0.125	5.23	77.7	97.1	
6	6	PFNA	419.0	4.650e3	6.186e3		0.125	5.17	92.6	116	
7	7	13C3-PFBS	79.95	6.675e3	1.534e2	0.675	0.125	3.61	6440	6440	H
8	8	13C4-PFHpA	321.9	6.774e3	1.534e2	0.805	0.125	4.45	5480	5480	H
9	9	18O2-PFHxS	102.90	1.179e3	6.467e1	0.285	0.125	4.56	6410	6410	H
10	10	13C2-PFOA	369.9	6.190e3	1.366e2	0.960	0.125	4.84	4720	4720	H
11	11	13C8-PFOS	79.93	3.930e3	1.490e2	0.912	0.125	5.23	2890	2890	H
12	12	13C5-PFNA	422.9	6.186e3	1.465e2	0.943	0.125	5.17	4480	4480	H
13	13	13C5-PFHxA	273.0	1.534e2	1.534e2	1.000	0.125	3.96	100	100	
14	14	13C3-PFHxS	80.01	6.467e1	6.467e1	1.000	0.125	4.56	100	100	
15	15	13C8-PFOA	375.9	1.366e2	1.366e2	1.000	0.125	4.84	100	100	
16	16	13C4-PFOS	79.94	1.490e2	1.490e2	1.000	0.125	5.23	100	100	
17	17	13C9-PFNA	427.0	1.465e2	1.465e2	1.000	0.125	5.16	100	100	
18	18	Total PFBS	79.9		6.675e3		0.125		87.0		
19	19	Total PFHxS	79.91		1.179e3		0.125		85.6		
20	20	Total PFOA	368.9		6.190e3		0.125		90.3		
21	21	Total PFOS	79.92		3.930e3		0.125		77.7		

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_04.qld

Last Altered: Thursday, January 05, 2017 11:35:58 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:36:33 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-BS1, Description: OPR, Name: 161222J1_04.wiff, Date: 22-Dec-2016, Time: 15:48:39

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	4740.580	6675.324	87.0

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.56	3004.289	1179.023	85.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.84	5414.874	6189.819	90.3

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.23	3874.124	3930.413	77.7

Vista Analytical Laboratory Q1

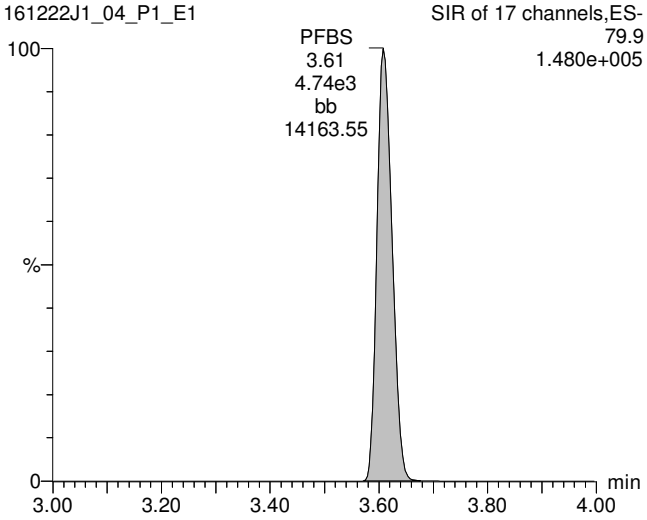
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_04.qld

Last Altered: Thursday, January 05, 2017 11:35:58 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:36:33 Pacific Standard Time

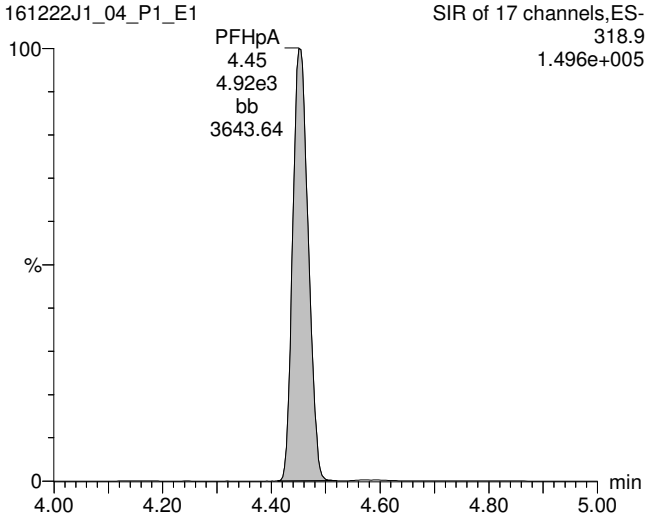
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-BS1, Description: OPR, Name: 161222J1_04.wiff, Date: 22-Dec-2016, Time: 15:48:39, Instrument: , Lab: ©PE-SCIEX, User: sciex

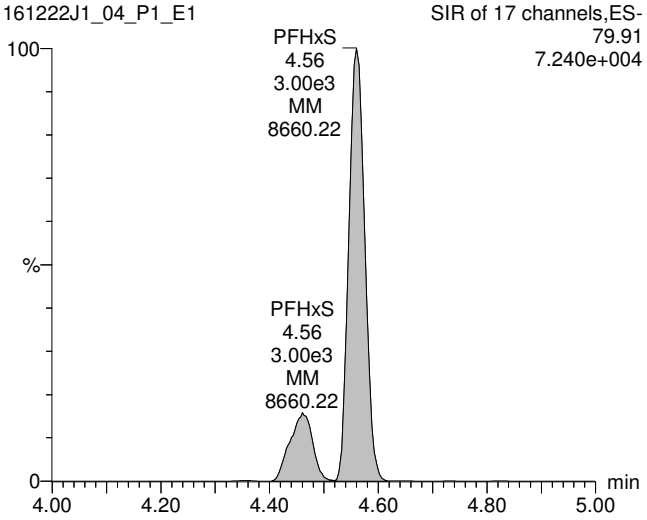
Total PFBS



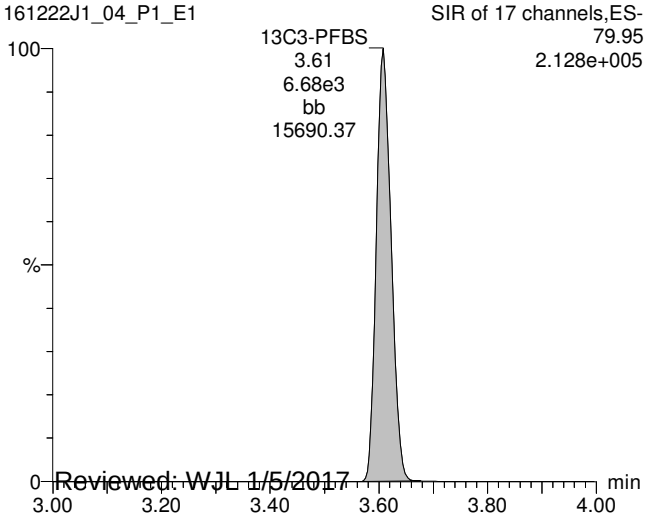
PFHpA



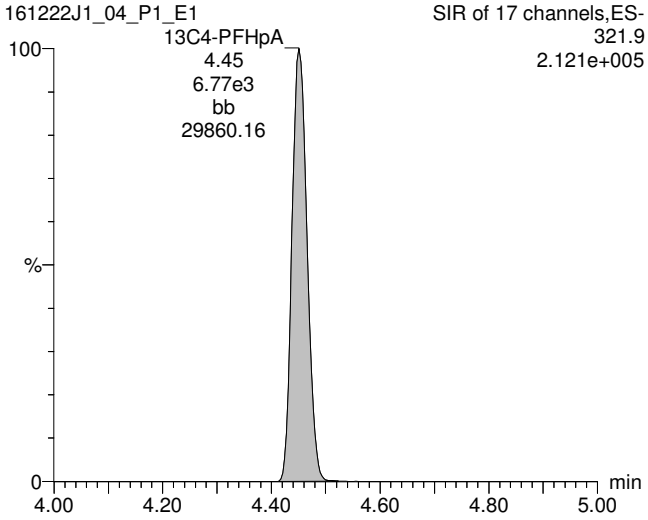
Total PFHxS



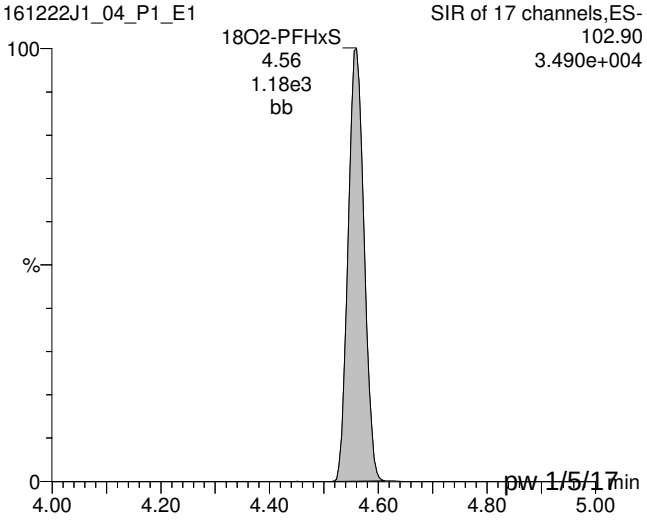
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



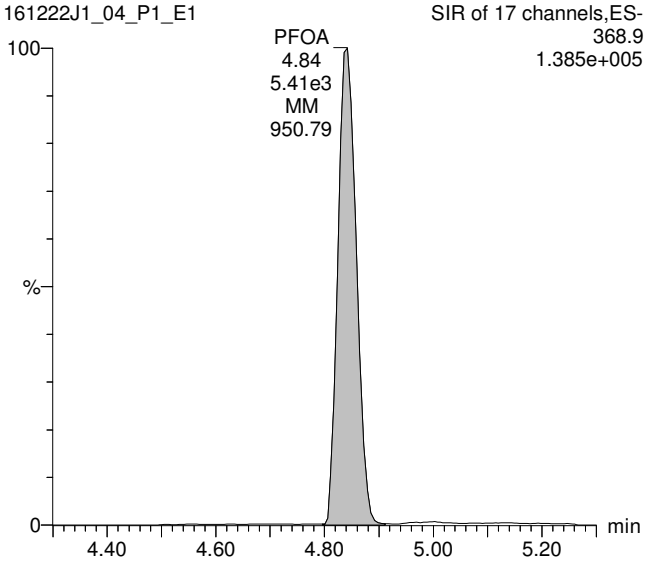
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_04.qld

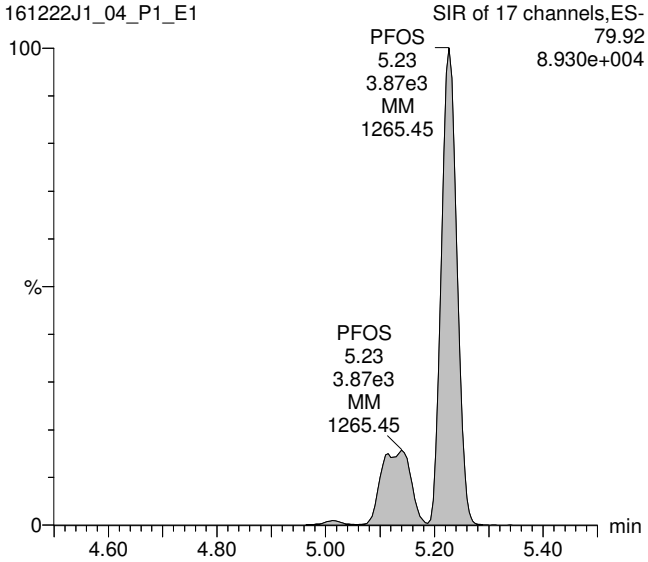
Last Altered: Thursday, January 05, 2017 11:35:58 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:36:33 Pacific Standard Time

ID: B6L0115-BS1, Description: OPR, Name: 161222J1_04.wiff, Date: 22-Dec-2016, Time: 15:48:39, Instrument: , Lab: ©PE-SCIEX, User: sciex

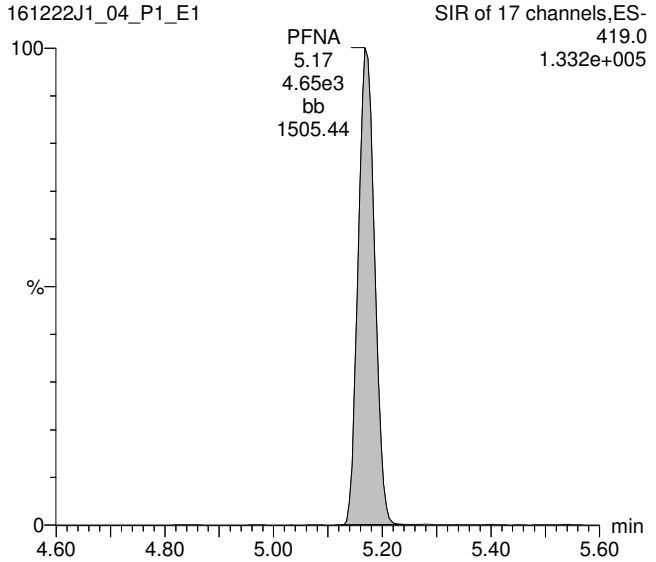
Total PFOA



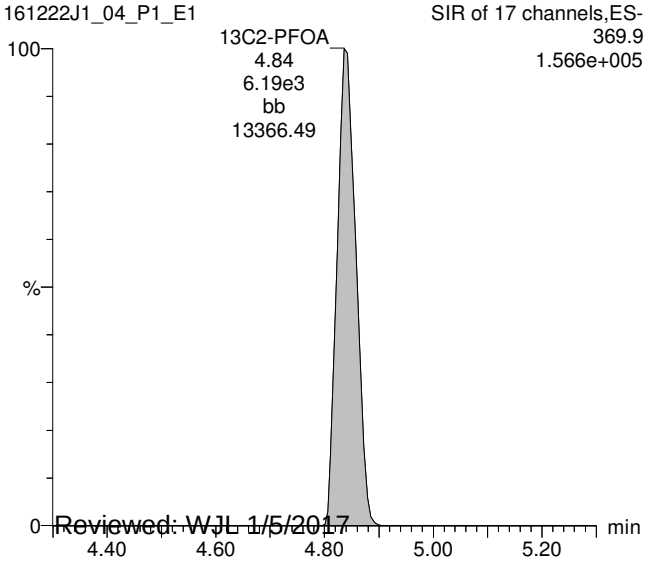
Total PFOS



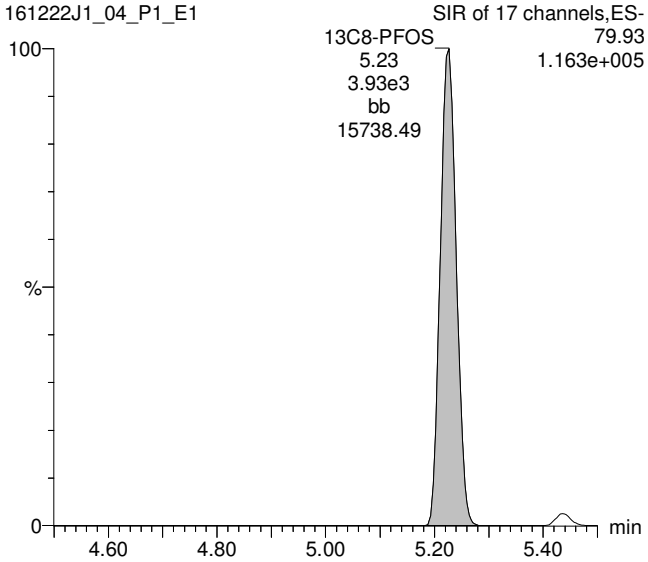
PFNA



13C2-PFOA



13C8-PFOS



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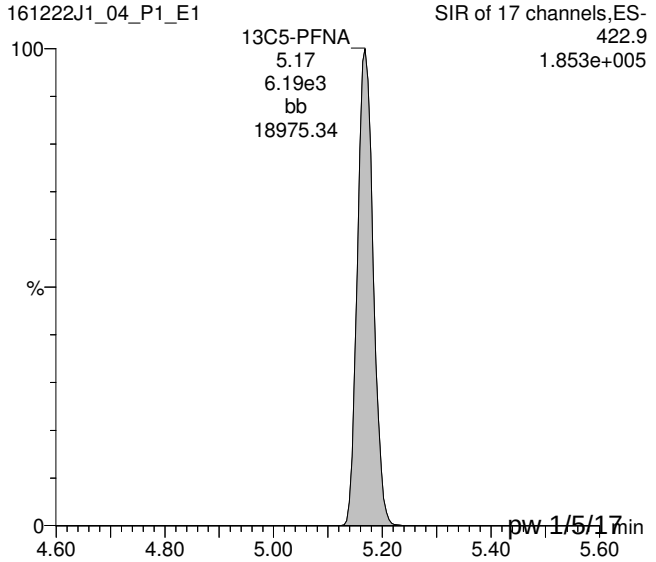
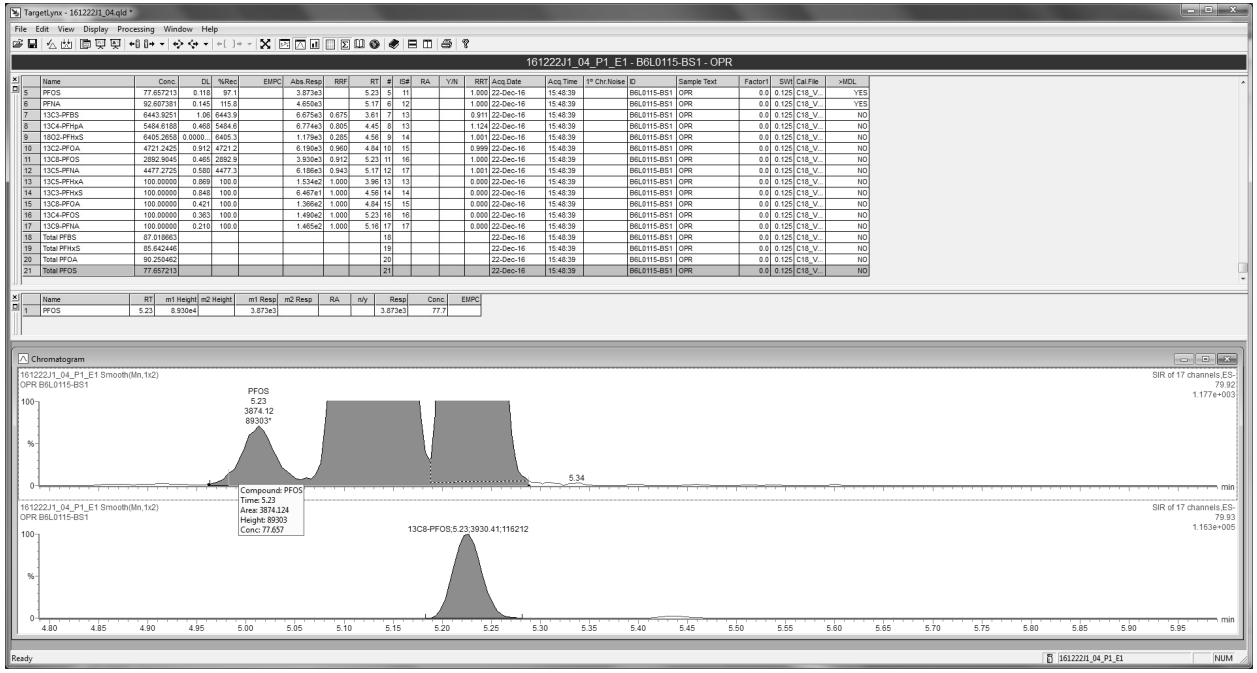


Reviewed: WJL 1/5/2017 pw 1/5/17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161222J1_04_P1_E1 - B6L0115-BS1 - OPR
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OPR B6L0115-BS1
PFOS
5.23
3874.12
89303*
SIR of 17 channels,ES-
79.92
1.177e+003
5.34
Compound: PFOS
Time: 5.23
Area: 3874.124
Height: 89303
Conc: 77.657
161222J1_04_P1_E1 Smooth(Mn,1x2)
OPR B6L0115-BS1
SIR of 17 channels,ES-
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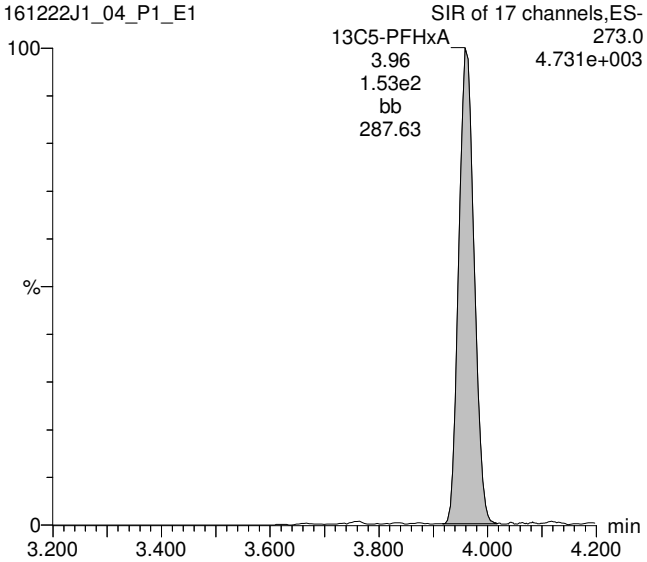
min
Ready
161222J1_04_P1_E1
NUM

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_04.qld

Last Altered: Thursday, January 05, 2017 11:35:58 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:36:33 Pacific Standard Time

ID: B6L0115-BS1, Description: OPR, Name: 161222J1_04.wiff, Date: 22-Dec-2016, Time: 15:48:39, Instrument: , Lab: ©PE-SCIEX, User: sciex

13C5-PFHxA



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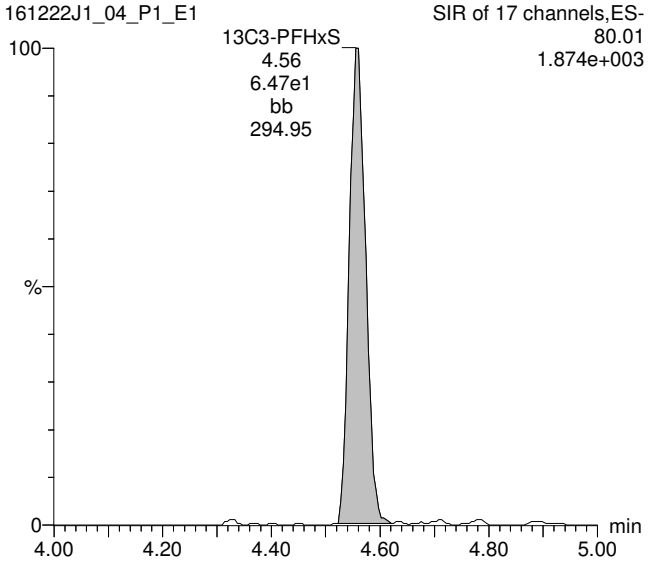

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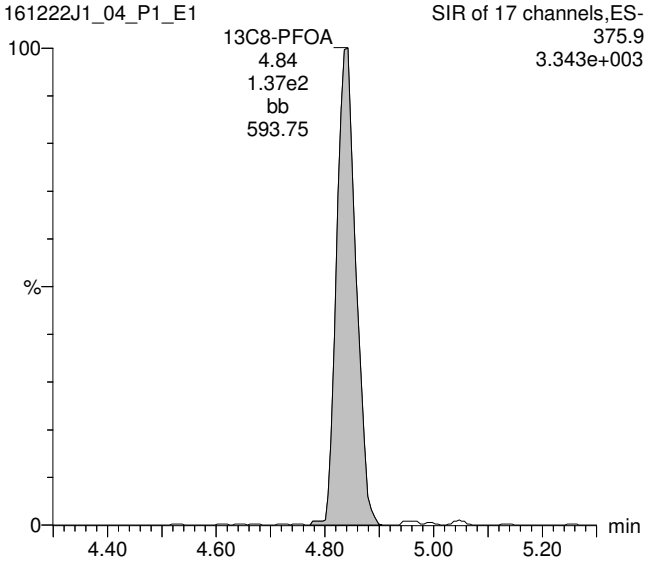

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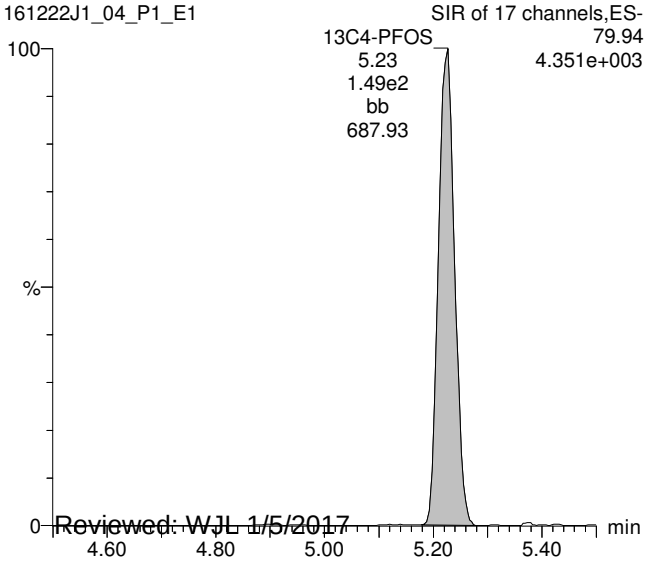
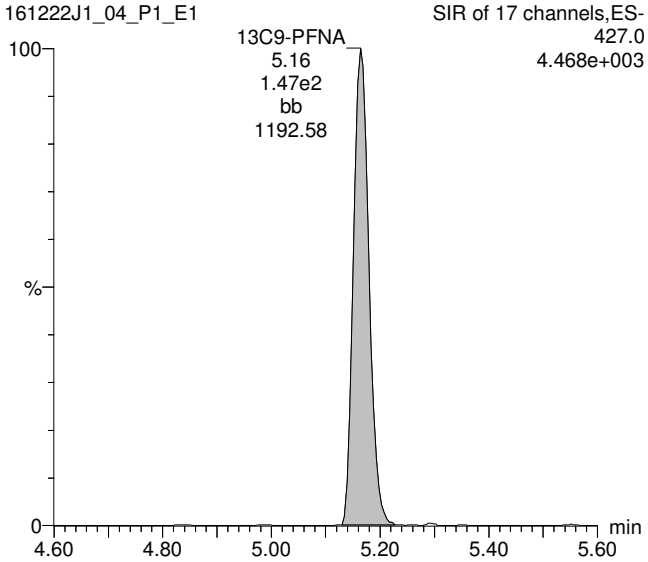


13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_07.qld

Last Altered: Thursday, January 05, 2017 10:53:45 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:54:05 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:47:40
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-01, Description: OC-RW12-1216, Name: 161222J1_07.wiff, Date: 22-Dec-2016, Time: 16:25:16

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9		6.433e3		0.128			
2	2	PFHpA	318.9		7.048e3		0.128			
3	3	PFHxS	79.91	1.278e1	1.155e3		0.128	4.58		
4	4	PFOA	368.9	6.592e1	6.315e3		0.128	4.89	1.02	
5	5	PFOS	79.92	7.497e0	3.189e3		0.128	5.17	0.178	
6	6	PFNA	419.0		6.514e3		0.128			
7	7	13C3-PFBS	79.95	6.433e3	1.076e4	0.675	0.128	3.61	86.5	88.6
8	8	13C4-PFHpA	321.9	7.048e3	1.076e4	0.805	0.128	4.47	79.5	81.4
9	9	18O2-PFHxS	102.90	1.155e3	4.587e3	0.285	0.128	4.58	86.4	88.5
10	10	13C2-PFOA	369.9	6.315e3	8.758e3	0.960	0.128	4.88	73.3	75.1
11	11	13C8-PFOS	79.93	3.189e3	4.027e3	0.912	0.128	5.25	84.8	86.8
12	12	13C5-PFNA	422.9	6.514e3	8.156e3	0.943	0.128	5.20	82.7	84.7
13	13	13C5-PFHxA	273.0	1.076e4	1.076e4	1.000	0.128	3.97	97.6	100
14	14	13C3-PFHxS	80.01	4.587e3	4.587e3	1.000	0.128	4.58	97.6	100
15	15	13C8-PFOA	375.9	8.758e3	8.758e3	1.000	0.128	4.88	97.6	100
16	16	13C4-PFOS	79.94	4.027e3	4.027e3	1.000	0.128	5.25	97.6	100
17	17	13C9-PFNA	427.0	8.156e3	8.156e3	1.000	0.128	5.20	97.6	100
18	18	Total PFBS	79.9		6.433e3		0.128			
19	19	Total PFHxS	79.91		1.155e3		0.128			
20	20	Total PFOA	368.9		6.315e3		0.128		1.02	
21	21	Total PFOS	79.92		3.189e3		0.128		0.178	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_07.qld

Last Altered: Thursday, January 05, 2017 10:53:45 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:54:05 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:47:40
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-01, Description: OC-RW12-1216, Name: 161222J1_07.wiff, Date: 22-Dec-2016, Time: 16:25:16

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1							

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.58	12.780	1155.374	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.89	65.925	6315.309	1.0

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.17	7.497	3188.854	0.2

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

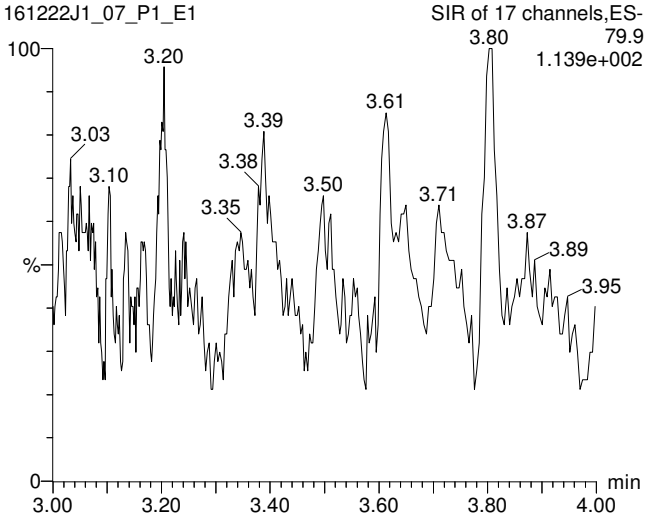
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_07.qld

Last Altered: Thursday, January 05, 2017 10:53:45 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:54:05 Pacific Standard Time

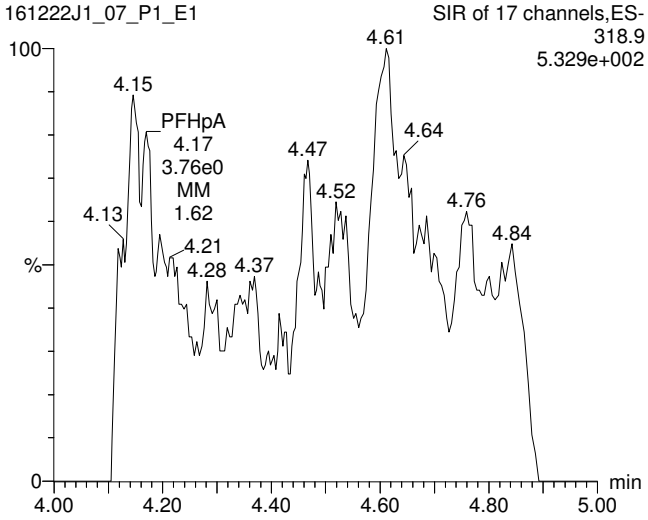
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:47:40
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-01, Description: OC-RW12-1216, Name: 161222J1_07.wiff, Date: 22-Dec-2016, Time: 16:25:16, Instrument: , Lab: ©PE-SCIEX, User: sciex

Total PFBS



PFHpA



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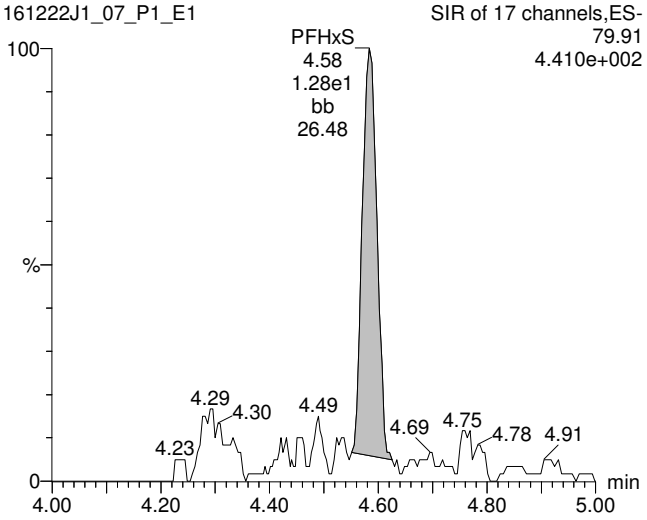
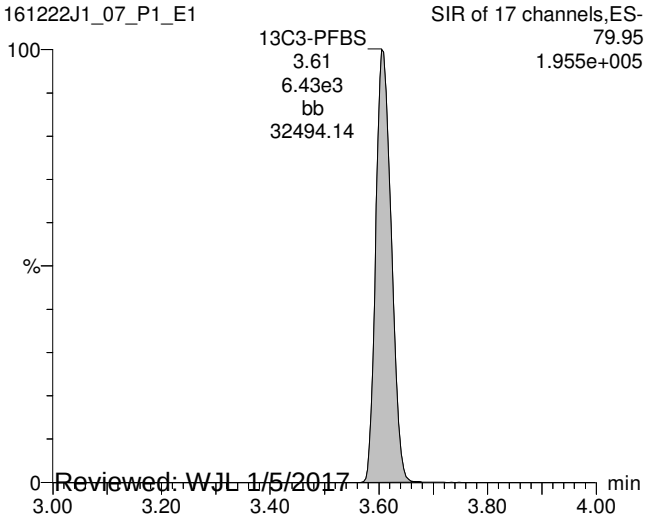
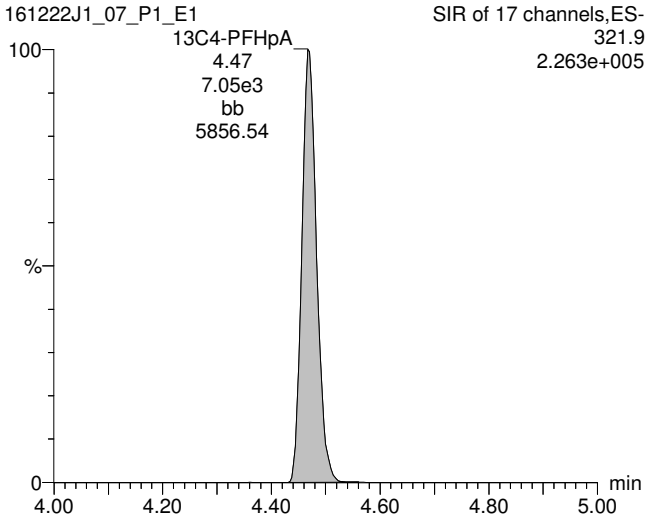


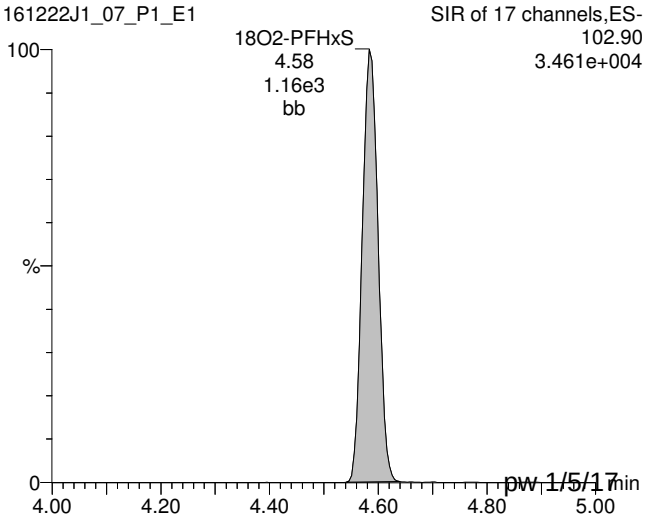
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



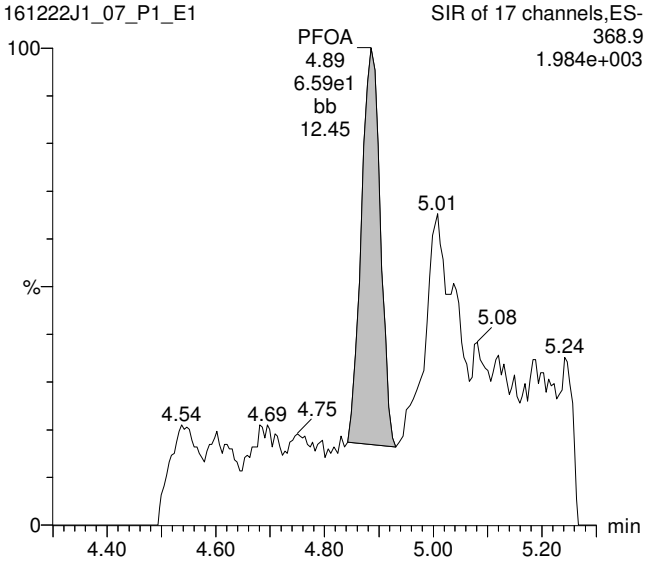
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_07.qld

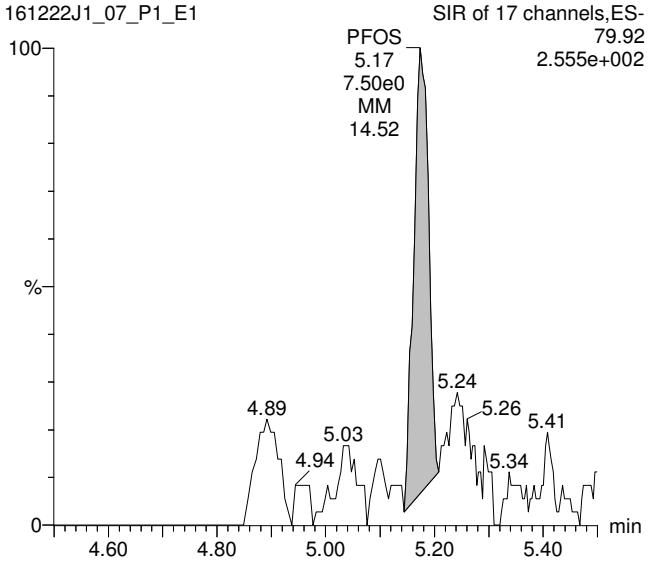
Last Altered: Thursday, January 05, 2017 10:53:45 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:54:05 Pacific Standard Time

ID: 1601579-01, Description: OC-RW12-1216, Name: 161222J1_07.wiff, Date: 22-Dec-2016, Time: 16:25:16, Instrument: , Lab: ©PE-SCIEX, User: sciex

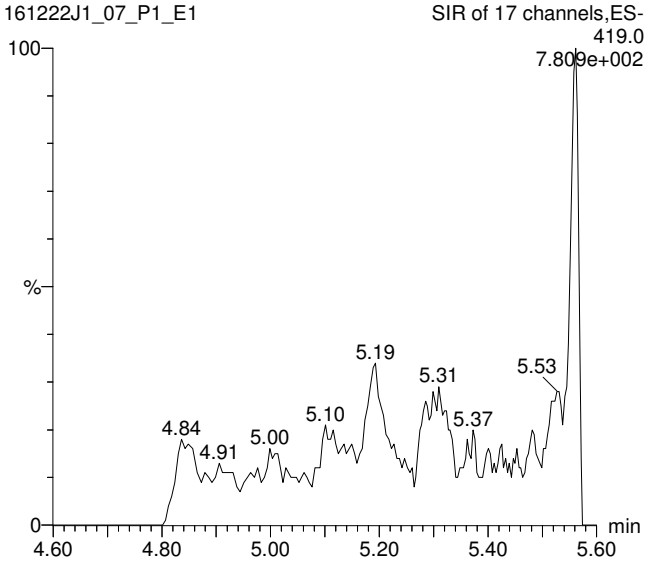
Total PFOA



Total PFOS



PFNA



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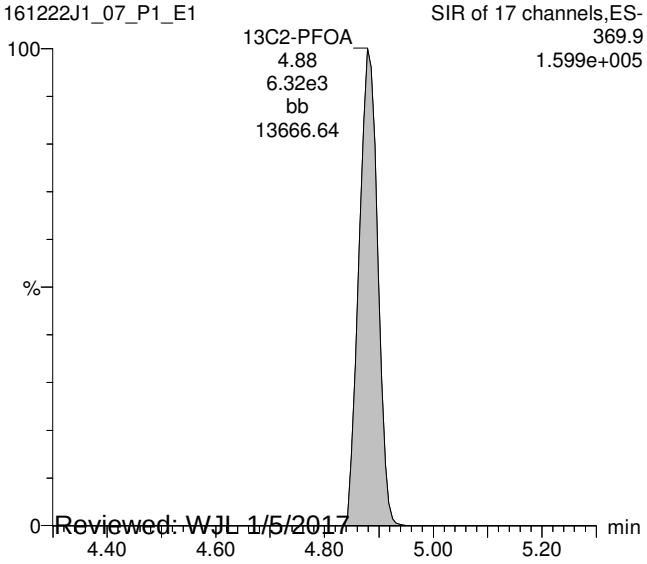
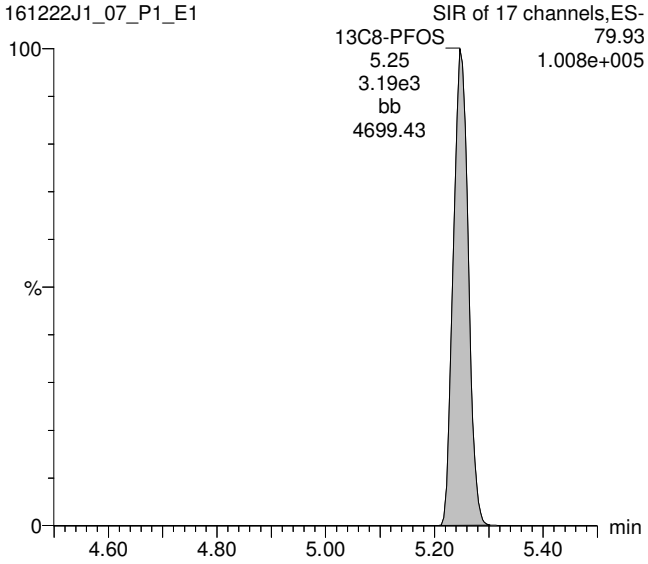
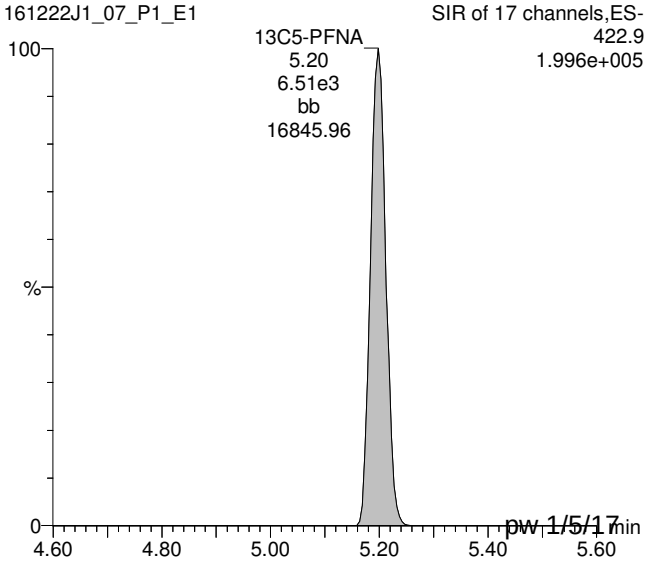


13C8-PFOS



13C5-PFNA



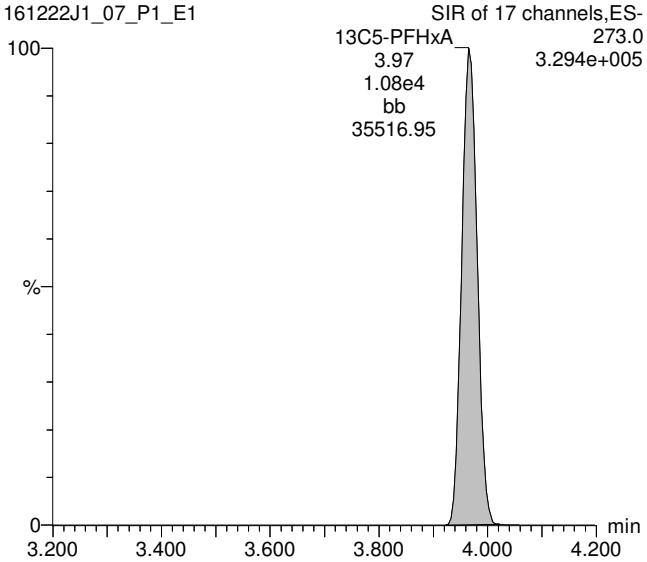
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_07.qld

Last Altered: Thursday, January 05, 2017 10:53:45 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:54:05 Pacific Standard Time

ID: 1601579-01, Description: OC-RW12-1216, Name: 161222J1_07.wiff, Date: 22-Dec-2016, Time: 16:25:16, Instrument: , Lab: ©PE-SCIEX, User: sciex

13C5-PFHxA



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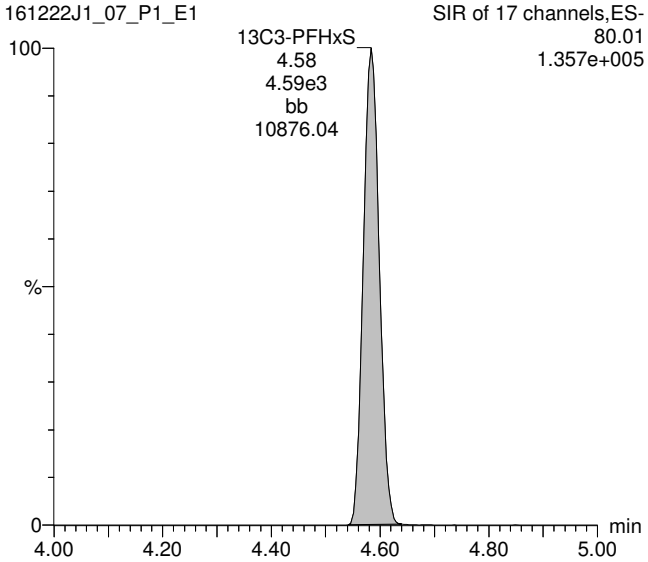
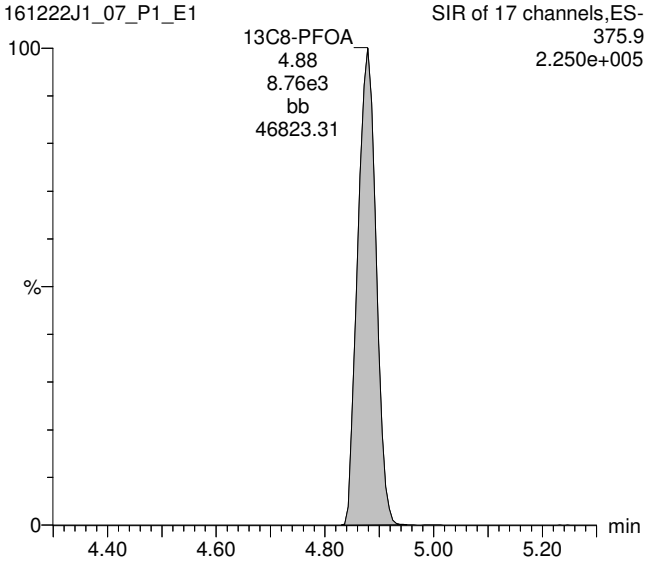
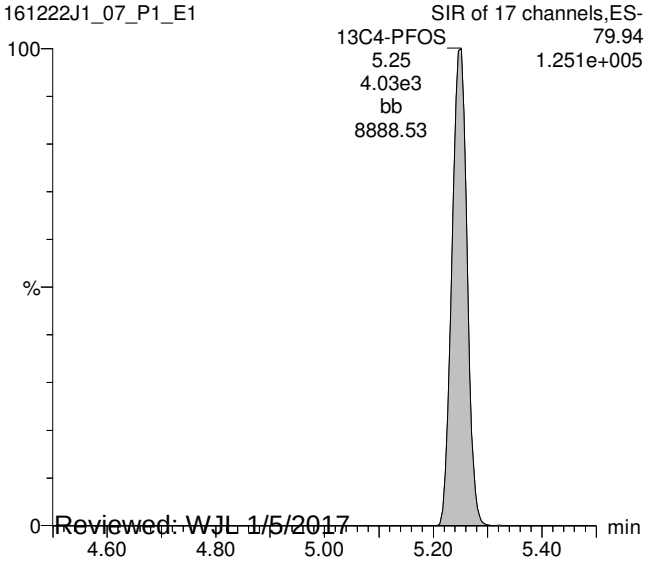


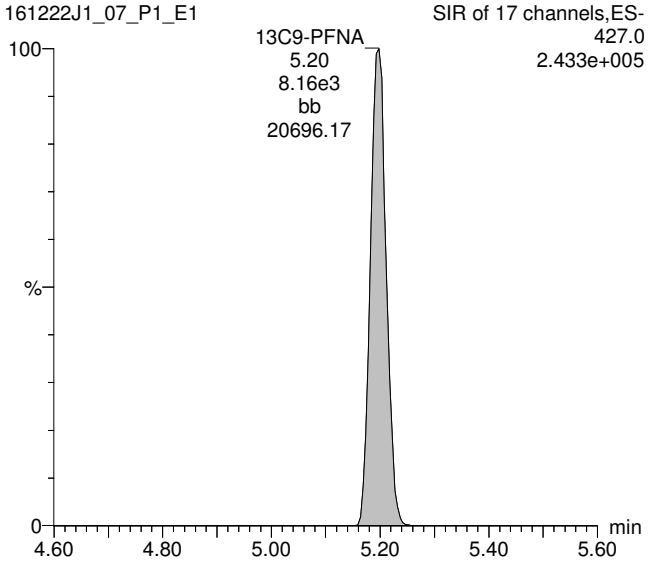
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_08.qld

Last Altered: Thursday, January 05, 2017 10:57:35 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:58:31 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-02, Description: OC-FB12-1216, Name: 161222J1_08.wiff, Date: 22-Dec-2016, Time: 16:37:25

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9	2.697e0	6.195e3		0.128	3.61	0.0514	
2	2	PFHpA	318.9		6.445e3		0.128			
3	3	PFHxS	79.91	1.337e1	1.098e3		0.128	4.57		
4	4	PFOA	368.9	4.862e1	6.364e3		0.128	4.85	0.746	
5	5	PFOS	79.92	1.109e1	3.426e3		0.128	5.12	0.246	
6	6	PFNA	419.0	6.612e0	6.163e3		0.128	5.15	0.127	
7	7	13C3-PFBS	79.95	6.195e3	9.964e3	0.675	0.128	3.61	90.1	92.1
8	8	13C4-PFHpA	321.9	6.445e3	9.964e3	0.805	0.128	4.46	78.6	80.3
9	9	18O2-PFHxS	102.90	1.098e3	4.435e3	0.285	0.128	4.57	85.1	87.0
10	10	13C2-PFOA	369.9	6.364e3	7.913e3	0.960	0.128	4.85	82.0	83.8
11	11	13C8-PFOS	79.93	3.426e3	4.093e3	0.912	0.128	5.20	89.8	91.8
12	12	13C5-PFNA	422.9	6.163e3	7.804e3	0.943	0.128	5.15	82.0	83.8
13	13	13C5-PFHxA	273.0	9.964e3	9.964e3	1.000	0.128	3.97	97.9	100
14	14	13C3-PFHxS	80.01	4.435e3	4.435e3	1.000	0.128	4.57	97.9	100
15	15	13C8-PFOA	375.9	7.913e3	7.913e3	1.000	0.128	4.85	97.9	100
16	16	13C4-PFOS	79.94	4.093e3	4.093e3	1.000	0.128	5.20	97.9	100
17	17	13C9-PFNA	427.0	7.804e3	7.804e3	1.000	0.128	5.14	97.9	100
18	18	Total PFBS	79.9		6.195e3		0.128		0.0514	
19	19	Total PFHxS	79.91		1.098e3		0.128			
20	20	Total PFOA	368.9		6.364e3		0.128		0.746	
21	21	Total PFOS	79.92		3.426e3		0.128		0.246	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_08.qld

Last Altered: Thursday, January 05, 2017 10:57:35 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:58:31 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-02, Description: OC-FB12-1216, Name: 161222J1_08.wiff, Date: 22-Dec-2016, Time: 16:37:25

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	2.697	6195.028	0.1

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.57	13.372	1097.685	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.85	48.620	6363.626	0.7

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.12	11.094	3426.321	0.2

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

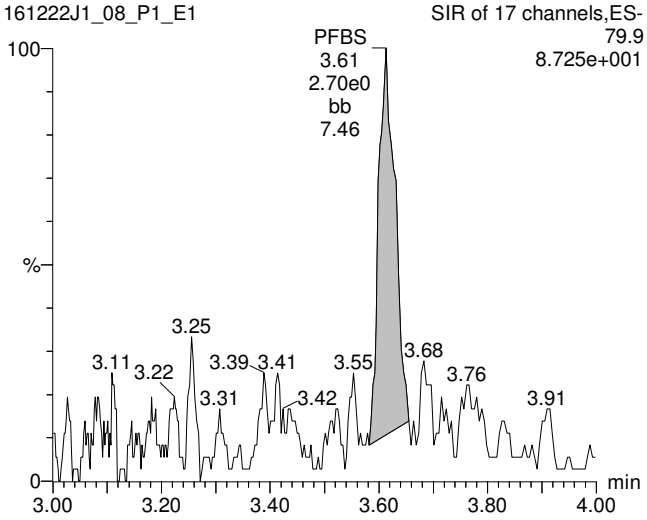
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_08.qld

Last Altered: Thursday, January 05, 2017 10:57:35 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:58:31 Pacific Standard Time

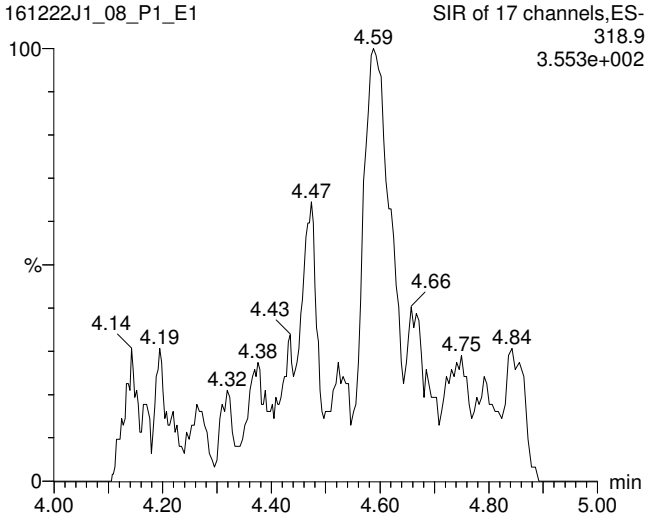
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-02, Description: OC-FB12-1216, Name: 161222J1_08.wiff, Date: 22-Dec-2016, Time: 16:37:25, Instrument: , Lab: ©PE-SCIEX, User: sciex

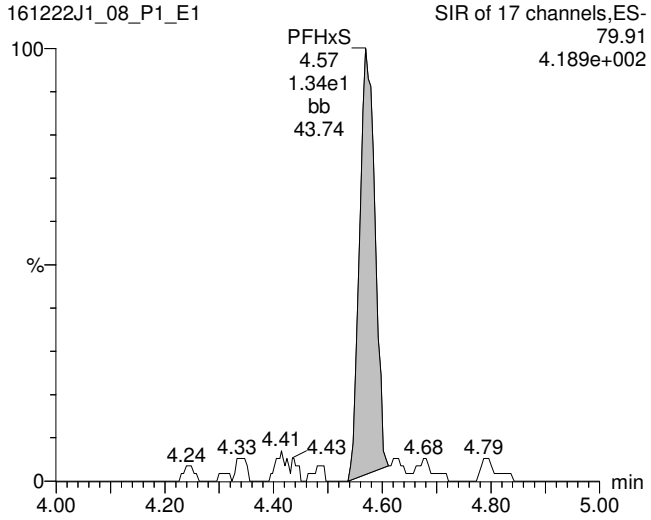
Total PFBS



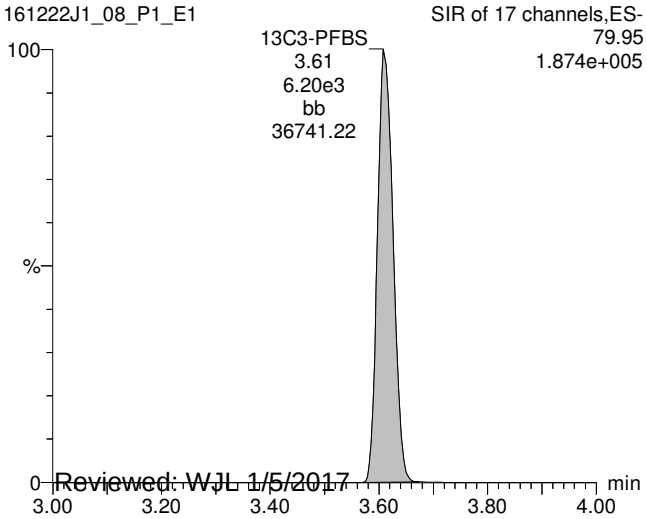
PFHpA



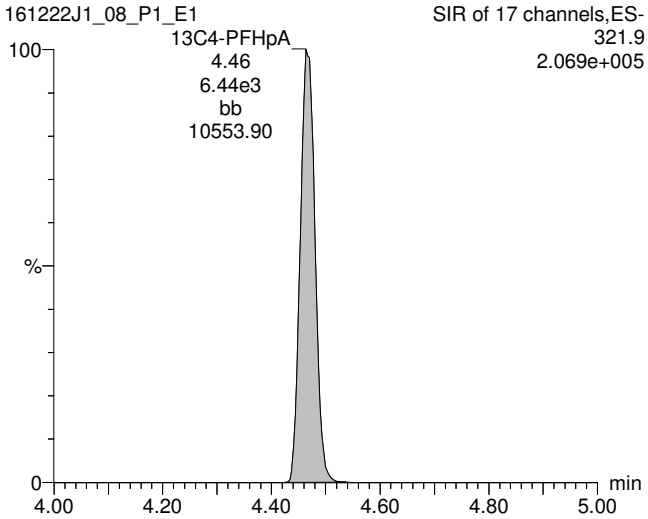
Total PFHxS



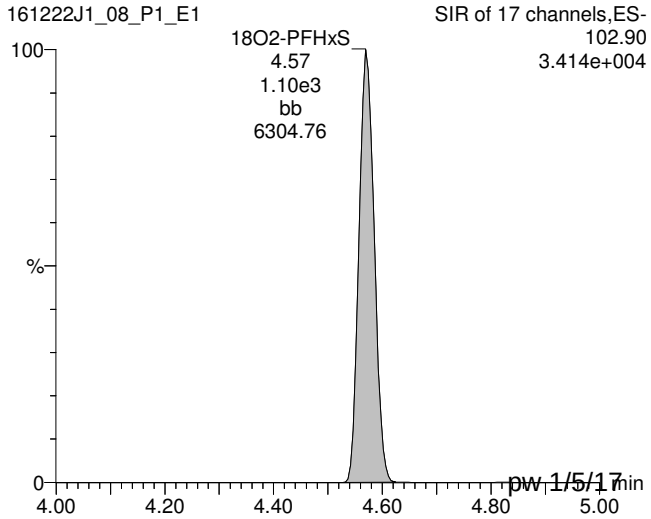
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



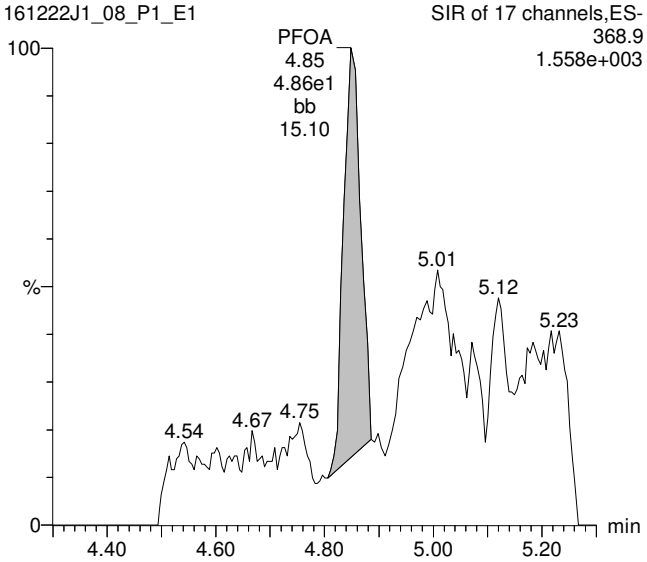
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_08.qld

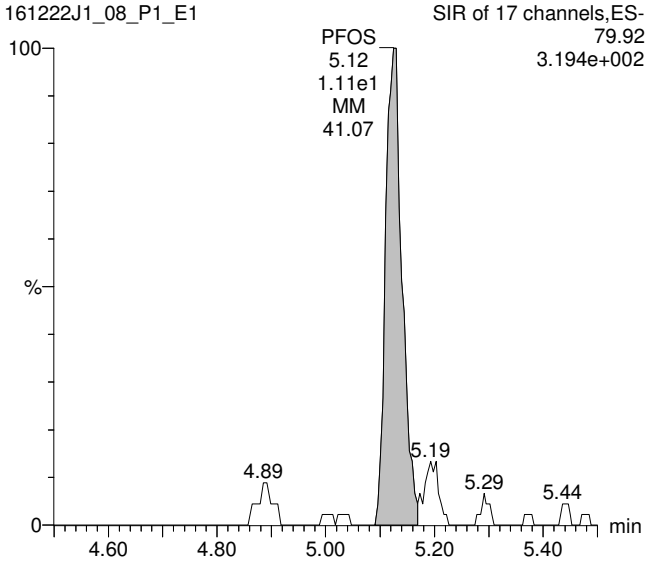
Last Altered: Thursday, January 05, 2017 10:57:35 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:58:31 Pacific Standard Time

ID: 1601579-02, Description: OC-FB12-1216, Name: 161222J1_08.wiff, Date: 22-Dec-2016, Time: 16:37:25, Instrument: , Lab: ©PE-SCIEX, User: sciex

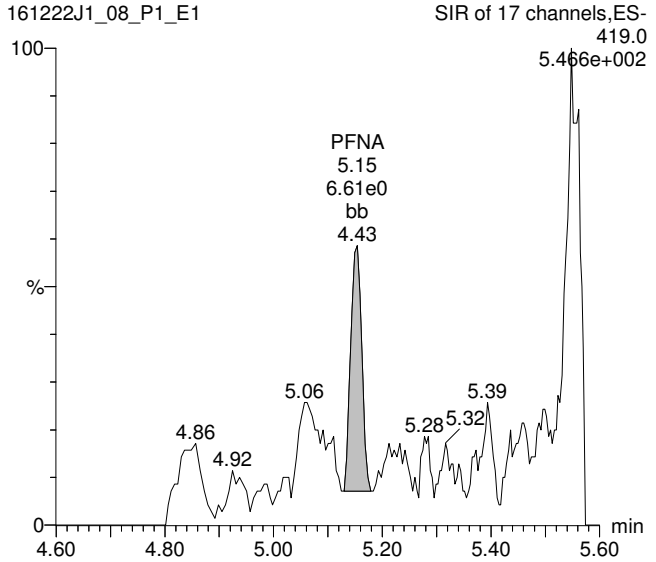
Total PFOA



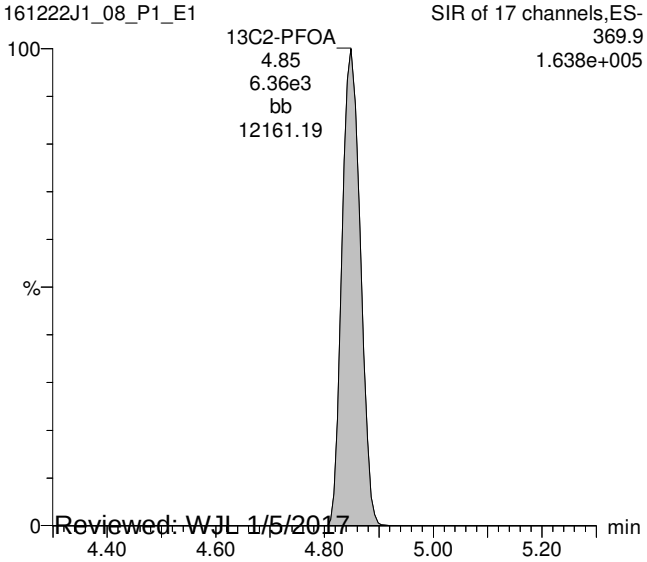
Total PFOS



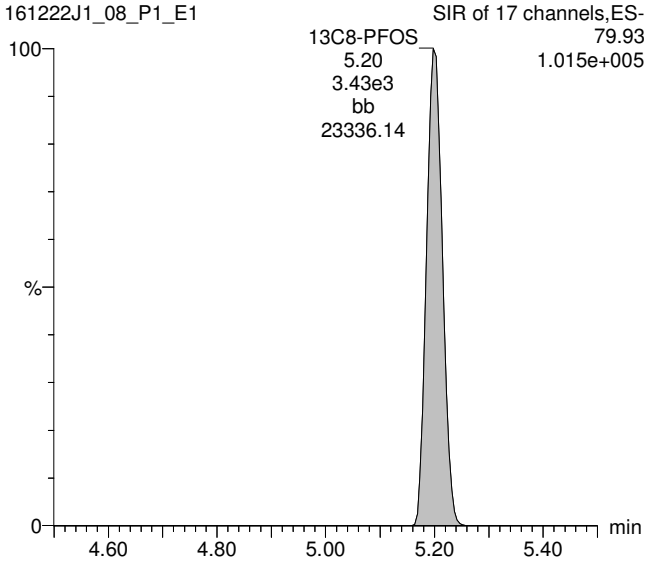
PFNA



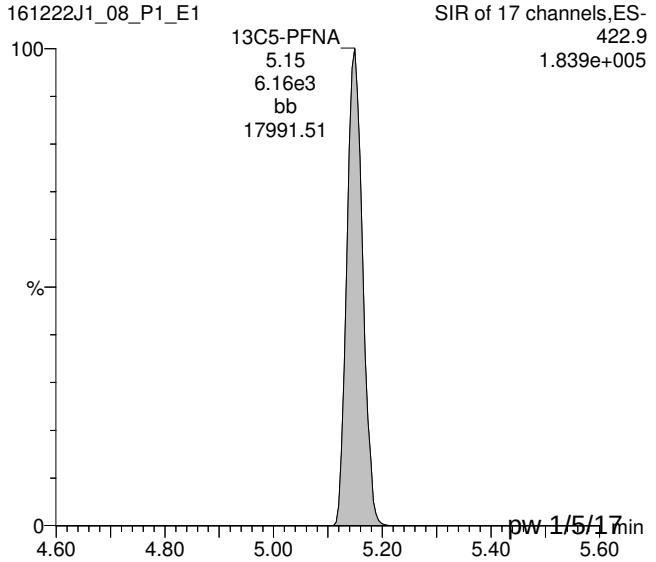
13C2-PFOA



13C8-PFOS



13C5-PFNA



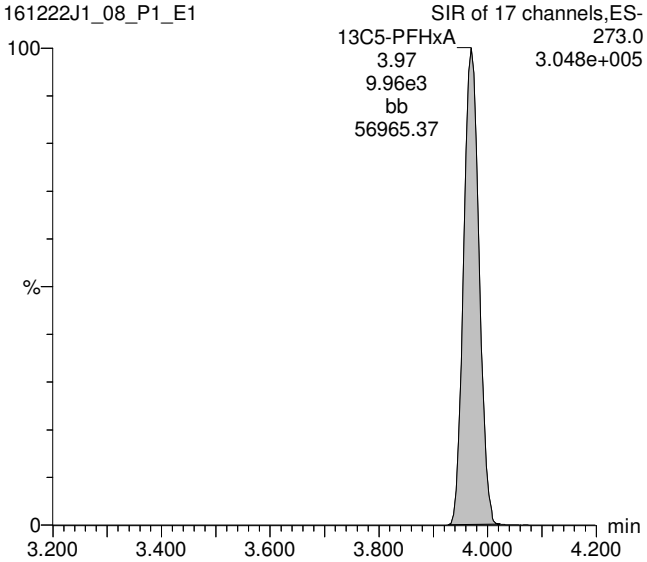
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_08.qld

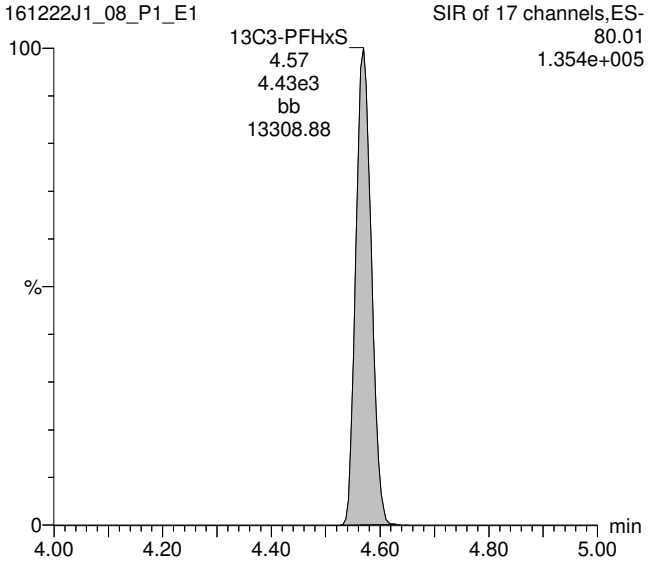
Last Altered: Thursday, January 05, 2017 10:57:35 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:58:31 Pacific Standard Time

ID: 1601579-02, Description: OC-FB12-1216, Name: 161222J1_08.wiff, Date: 22-Dec-2016, Time: 16:37:25, Instrument: , Lab: ©PE-SCIEX, User: sciex

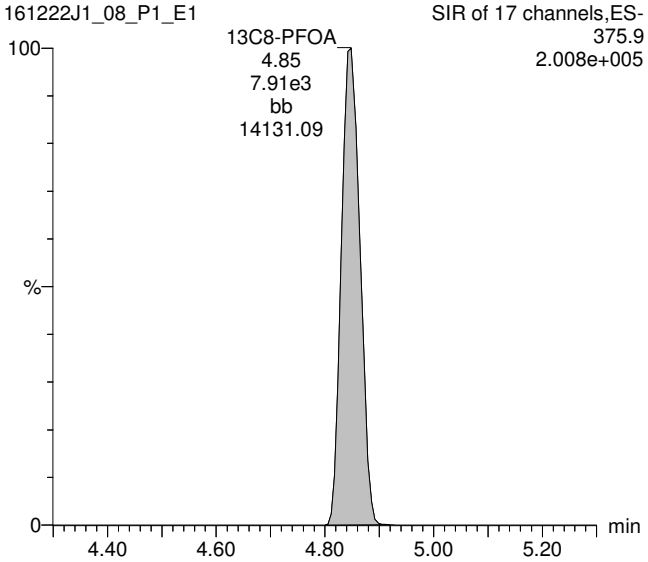
13C5-PFHxA



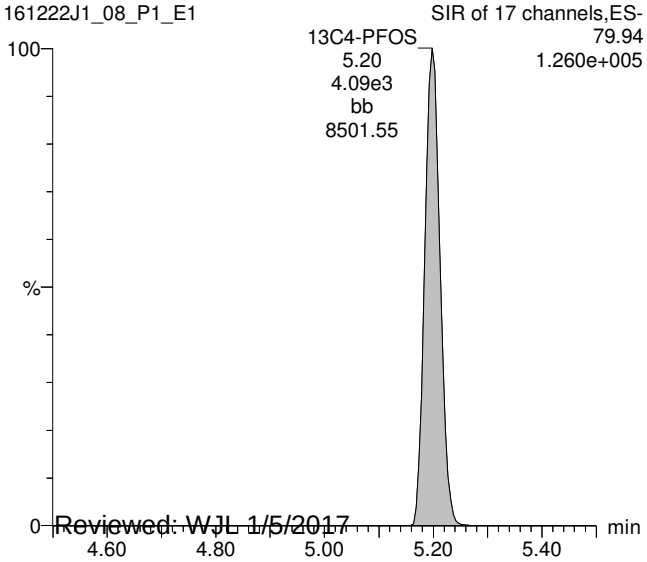
13C3-PFHxS



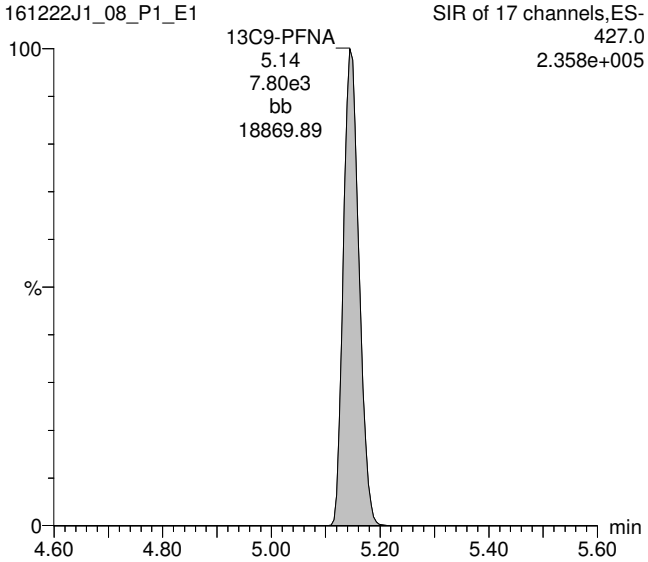
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_09.qld

Last Altered: Thursday, January 05, 2017 11:02:05 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:02:18 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-03, Description: OC-RW01-1216, Name: 161222J1_09.wiff, Date: 22-Dec-2016, Time: 16:49:39

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9	1.167e2	6.401e3		0.125	3.61	2.21	
2	2	PFHpA	318.9	4.081e2	5.616e3		0.125	4.46	8.52	
3	3	PFHxS	79.91	1.079e3	1.093e3		0.125	4.57	32.5	
4	4	PFOA	368.9	1.323e3	5.419e3		0.125	4.85	24.6	
5	5	PFOS	79.92	3.789e2	3.203e3		0.125	5.22	9.24	
6	6	PFNA	419.0	5.171e1	5.437e3		0.125	5.16	1.16	
7	7	13C3-PFBS	79.95	6.401e3	9.397e3	0.675	0.125	3.61	101	101
8	8	13C4-PFHpA	321.9	5.616e3	9.397e3	0.805	0.125	4.45	74.5	74.2
9	9	18O2-PFHxS	102.90	1.093e3	4.279e3	0.285	0.125	4.57	90.1	89.8
10	10	13C2-PFOA	369.9	5.419e3	7.581e3	0.960	0.125	4.85	74.7	74.5
11	11	13C8-PFOS	79.93	3.203e3	3.947e3	0.912	0.125	5.22	89.3	89.0
12	12	13C5-PFNA	422.9	5.437e3	7.926e3	0.943	0.125	5.16	73.0	72.8
13	13	13C5-PFHxA	273.0	9.397e3	9.397e3	1.000	0.125	3.97	100	100
14	14	13C3-PFHxS	80.01	4.279e3	4.279e3	1.000	0.125	4.57	100	100
15	15	13C8-PFOA	375.9	7.581e3	7.581e3	1.000	0.125	4.85	100	100
16	16	13C4-PFOS	79.94	3.947e3	3.947e3	1.000	0.125	5.22	100	100
17	17	13C9-PFNA	427.0	7.926e3	7.926e3	1.000	0.125	5.16	100	100
18	18	Total PFBS	79.9		6.401e3		0.125		2.21	
19	19	Total PFHxS	79.91		1.093e3		0.125		32.5	
20	20	Total PFOA	368.9		5.419e3		0.125		24.6	
21	21	Total PFOS	79.92		3.203e3		0.125		9.24	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_09.qld

Last Altered: Thursday, January 05, 2017 11:02:05 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:02:18 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-03, Description: OC-RW01-1216, Name: 161222J1_09.wiff, Date: 22-Dec-2016, Time: 16:49:39

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	116.666	6401.467	2.2

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.57	1079.415	1093.338	32.5

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.85	1323.440	5419.452	24.6

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.22	378.859	3203.116	9.2

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

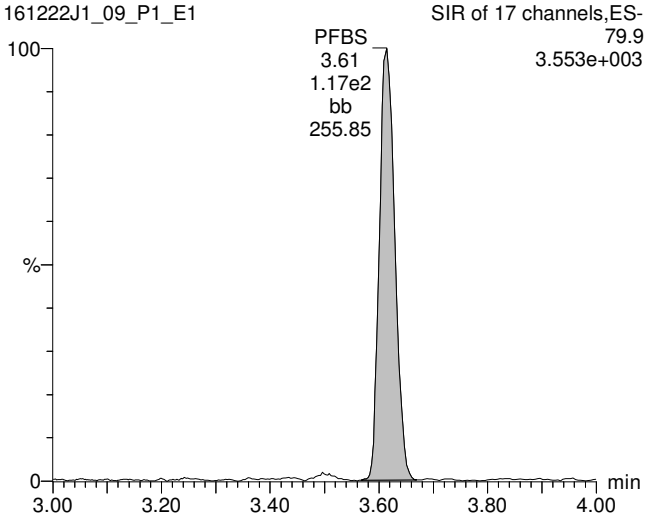
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_09.qld

Last Altered: Thursday, January 05, 2017 11:02:05 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:02:18 Pacific Standard Time

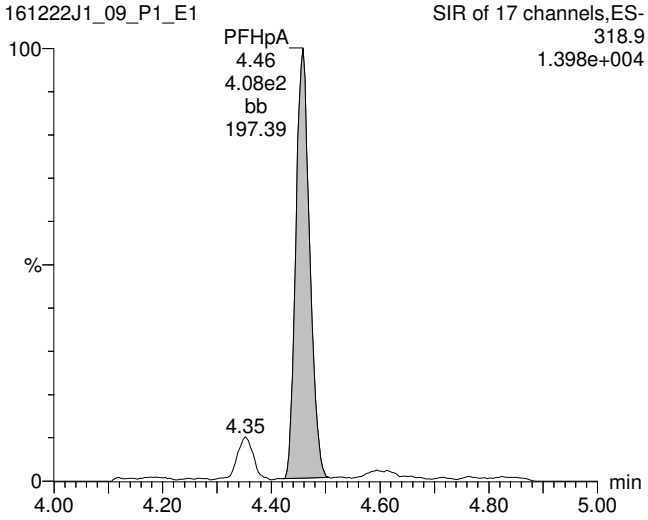
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-03, Description: OC-RW01-1216, Name: 161222J1_09.wiff, Date: 22-Dec-2016, Time: 16:49:39, Instrument: , Lab: ©PE-SCIEX, User: sciex

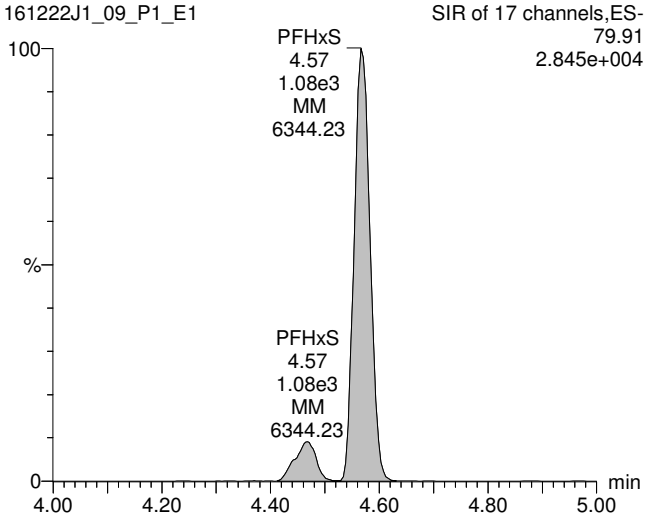
Total PFBS



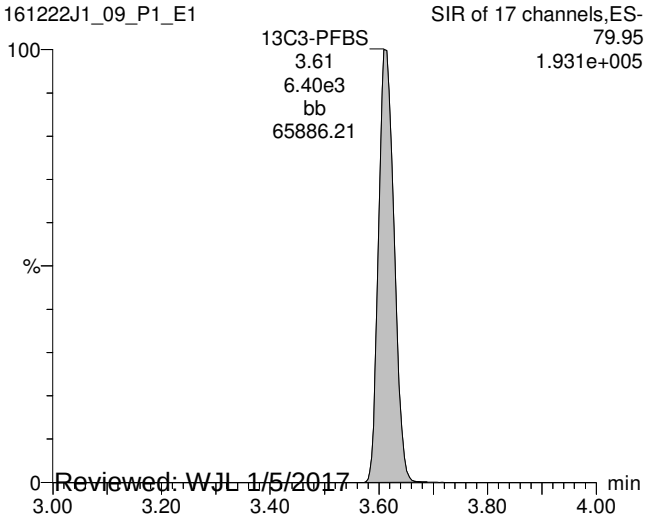
PFHpA



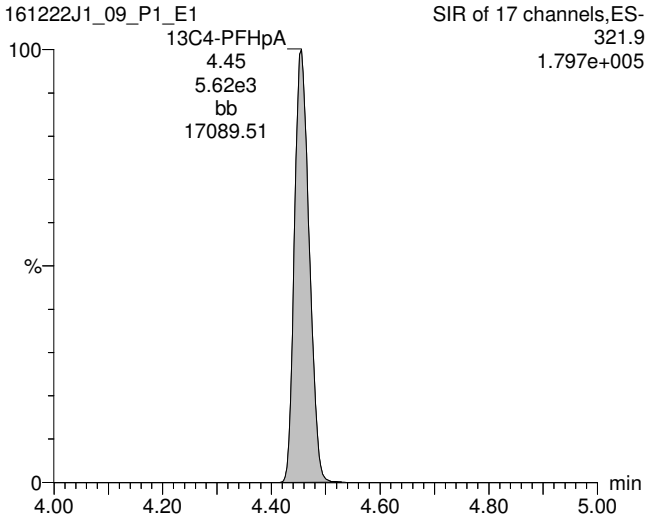
Total PFHxS



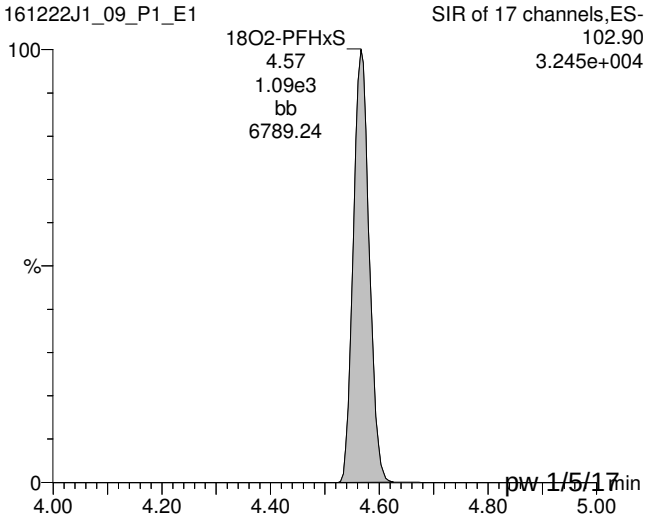
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



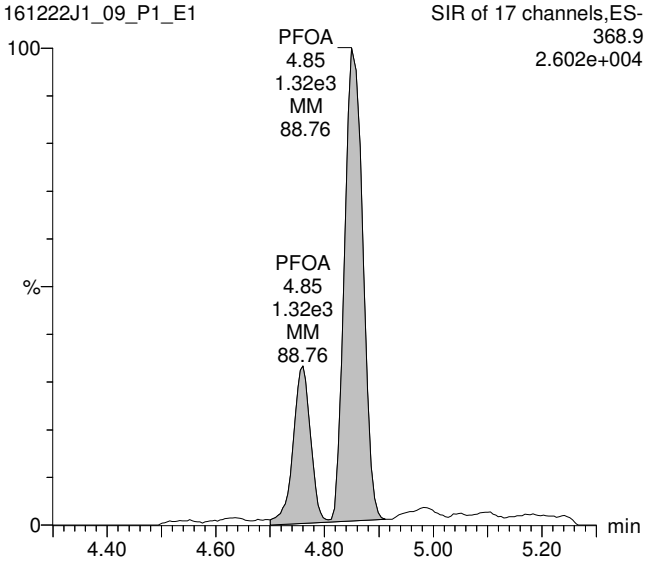
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_09.qld

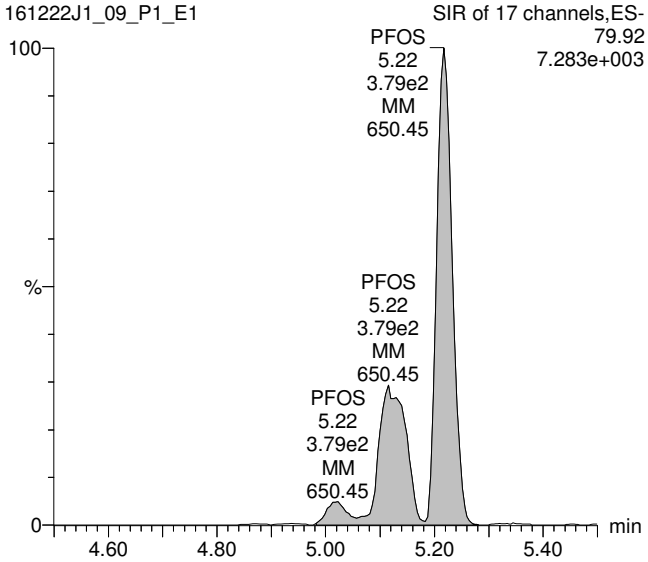
Last Altered: Thursday, January 05, 2017 11:02:05 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:02:18 Pacific Standard Time

ID: 1601579-03, Description: OC-RW01-1216, Name: 161222J1_09.wiff, Date: 22-Dec-2016, Time: 16:49:39, Instrument: , Lab: ©PE-SCIEX, User: sciex

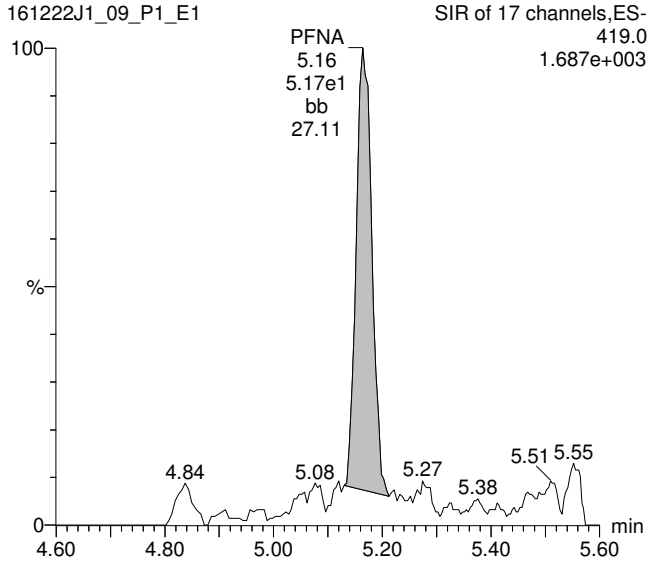
Total PFOA



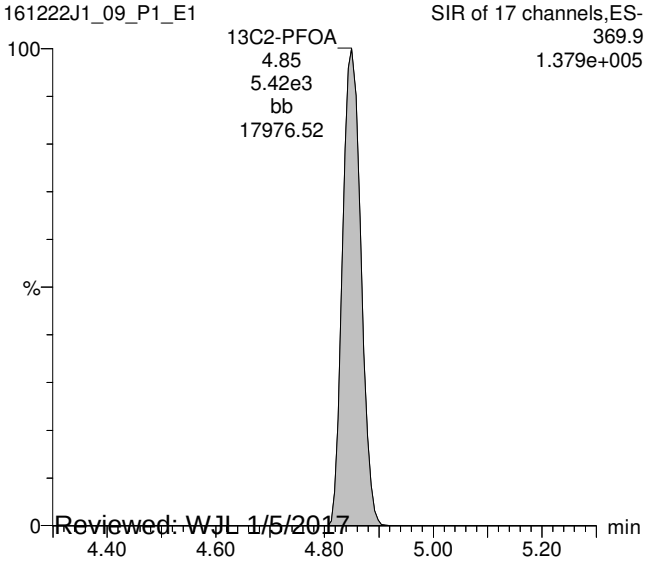
Total PFOS



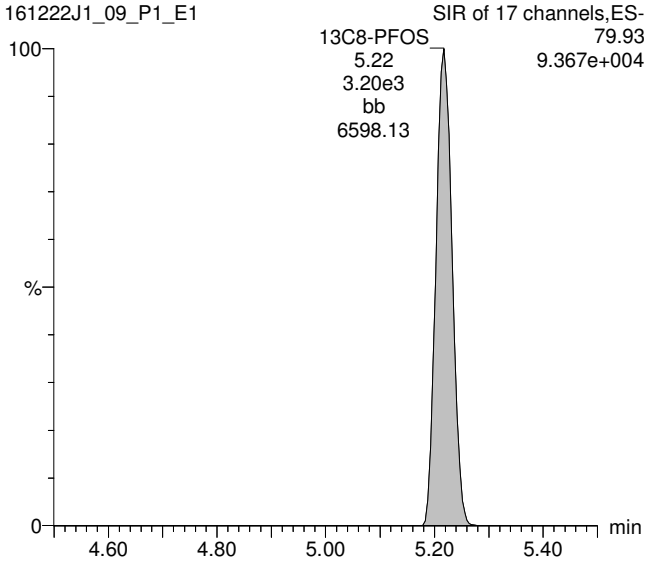
PFNA



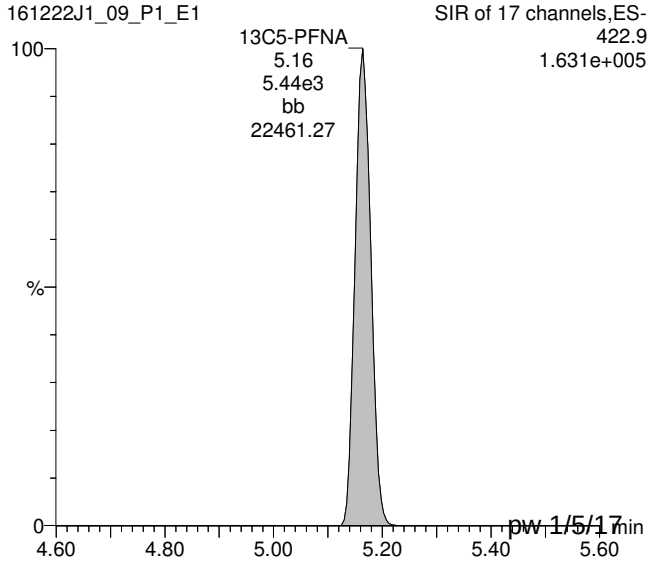
13C2-PFOA



13C8-PFOS



13C5-PFNA



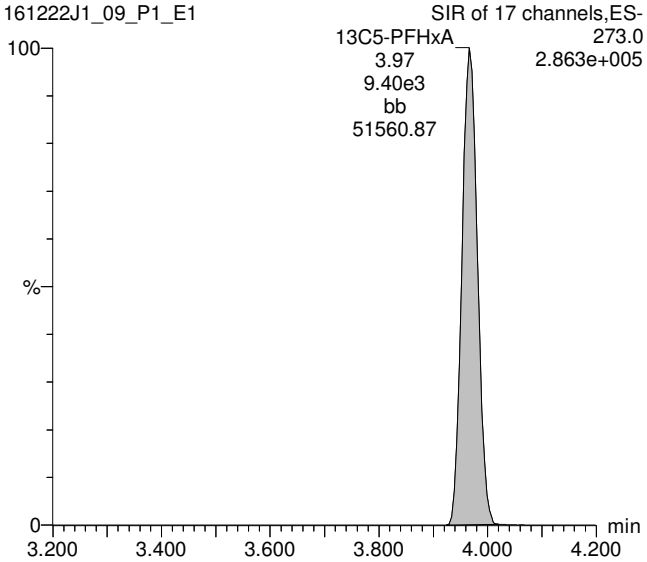
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_09.qld

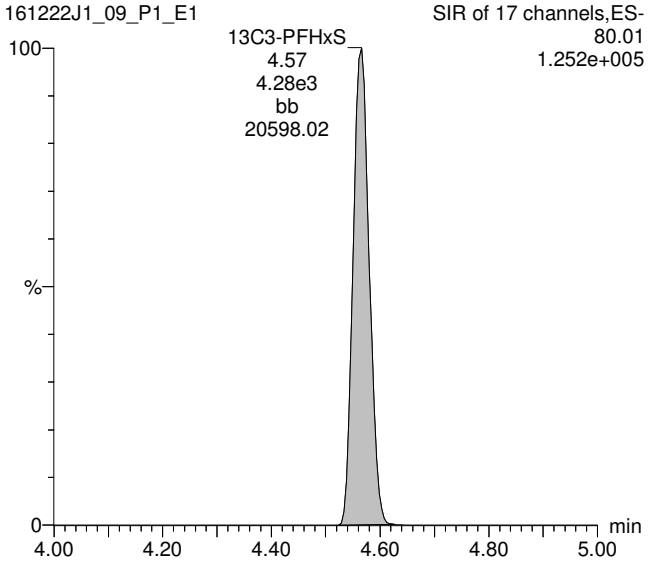
Last Altered: Thursday, January 05, 2017 11:02:05 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:02:18 Pacific Standard Time

ID: 1601579-03, Description: OC-RW01-1216, Name: 161222J1_09.wiff, Date: 22-Dec-2016, Time: 16:49:39, Instrument: , Lab: ©PE-SCIEX, User: sciex

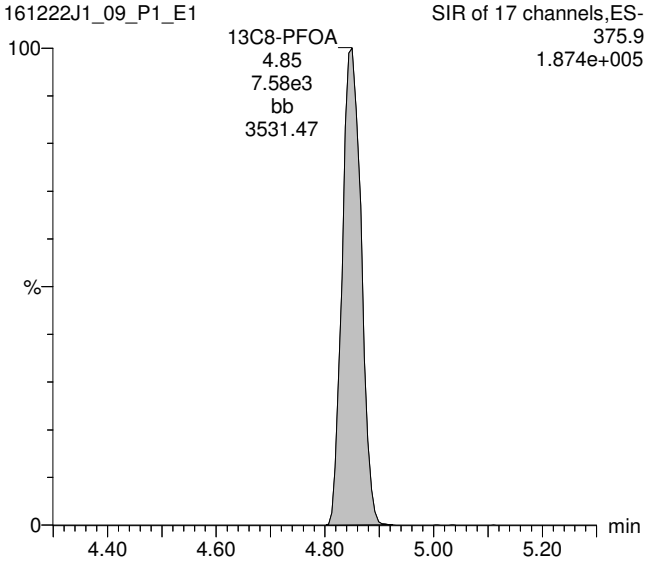
13C5-PFHxA



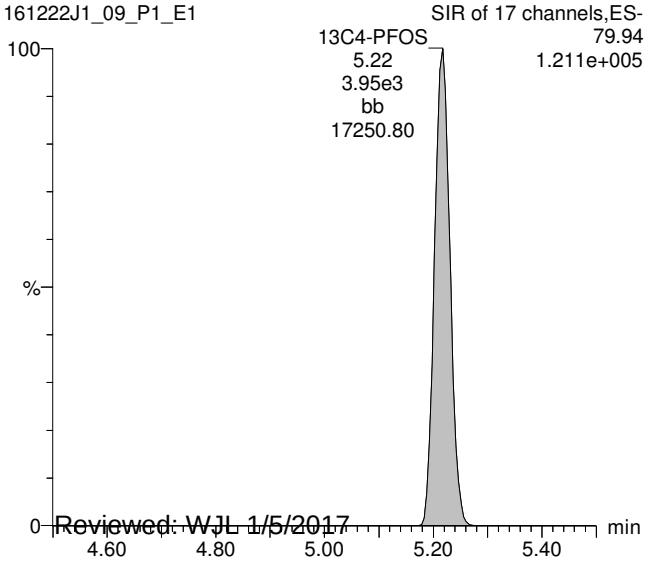
13C3-PFHxS



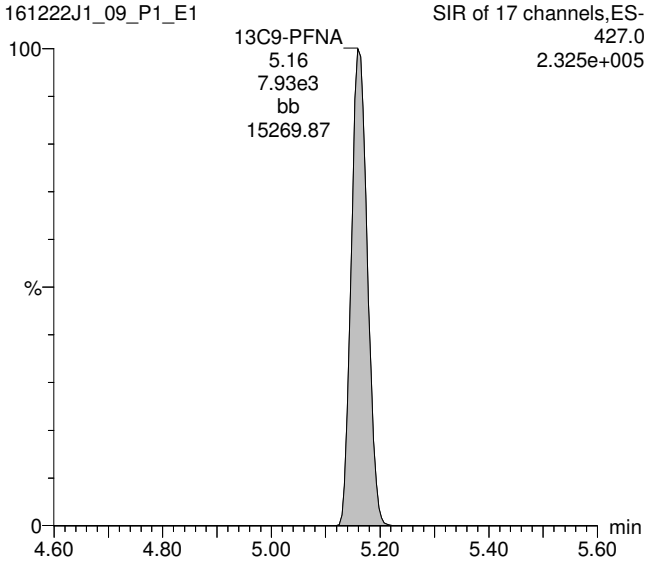
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_10.qld

Last Altered: Thursday, January 05, 2017 11:21:28 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:23:51 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-MS1, Description: Matrix Spike, Name: 161222J1_10.wiff, Date: 22-Dec-2016, Time: 17:01:51

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9	4.583e3	6.478e3		0.132	3.61	82.0	
2	2	PFHpA	318.9	4.879e3	6.743e3		0.132	4.45	81.7	
3	3	PFHxS	79.91	4.023e3	1.048e3		0.132	4.56	123	
4	4	PFOA	368.9	6.832e3	6.591e3		0.132	4.84	102	
5	5	PFOS	79.92	3.995e3	3.601e3		0.132	5.21	82.9	
6	6	PFNA	419.0	4.780e3	6.549e3		0.132	5.15	85.1	
7	7	13C3-PFBS	79.95	6.478e3	9.522e3	0.675	0.132	3.61	95.4	101
8	8	13C4-PFHpA	321.9	6.743e3	9.522e3	0.805	0.132	4.45	83.2	87.9
9	9	18O2-PFHxS	102.90	1.048e3	4.289e3	0.285	0.132	4.56	81.3	85.9
10	10	13C2-PFOA	369.9	6.591e3	7.314e3	0.960	0.132	4.84	88.8	93.9
11	11	13C8-PFOS	79.93	3.601e3	4.517e3	0.912	0.132	5.20	82.7	87.4
12	12	13C5-PFNA	422.9	6.549e3	7.686e3	0.943	0.132	5.15	85.5	90.4
13	13	13C5-PFHxA	273.0	9.522e3	9.522e3	1.000	0.132	3.96	94.6	100
14	14	13C3-PFHxS	80.01	4.289e3	4.289e3	1.000	0.132	4.56	94.6	100
15	15	13C8-PFOA	375.9	7.314e3	7.314e3	1.000	0.132	4.83	94.6	100
16	16	13C4-PFOS	79.94	4.517e3	4.517e3	1.000	0.132	5.20	94.6	100
17	17	13C9-PFNA	427.0	7.686e3	7.686e3	1.000	0.132	5.15	94.6	100
18	18	Total PFBS	79.9		6.478e3		0.132		82.0	
19	19	Total PFHxS	79.91		1.048e3		0.132		123	
20	20	Total PFOA	368.9		6.591e3		0.132		102	
21	21	Total PFOS	79.92		3.601e3		0.132		82.9	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_10.qld

Last Altered: Thursday, January 05, 2017 11:21:28 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:23:51 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-MS1, Description: Matrix Spike, Name: 161222J1_10.wiff, Date: 22-Dec-2016, Time: 17:01:51

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	4583.046	6478.318	82.0

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.56	4023.159	1048.253	122.7

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.84	6832.316	6590.625	101.9

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.21	3995.121	3601.467	82.9

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

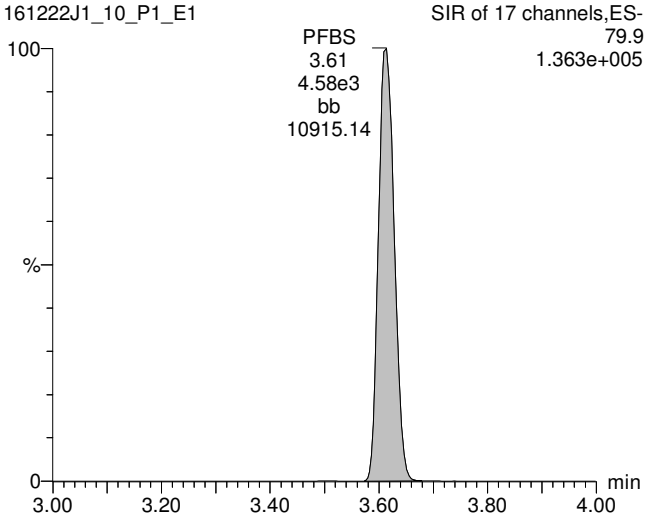
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_10.qld

Last Altered: Thursday, January 05, 2017 11:21:28 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:23:51 Pacific Standard Time

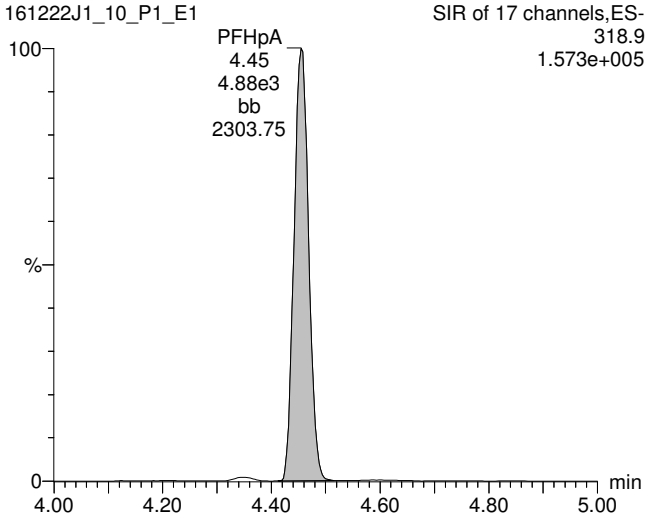
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-MS1, Description: Matrix Spike, Name: 161222J1_10.wiff, Date: 22-Dec-2016, Time: 17:01:51, Instrument: , Lab: ©PE-SCIEX, User: sciex

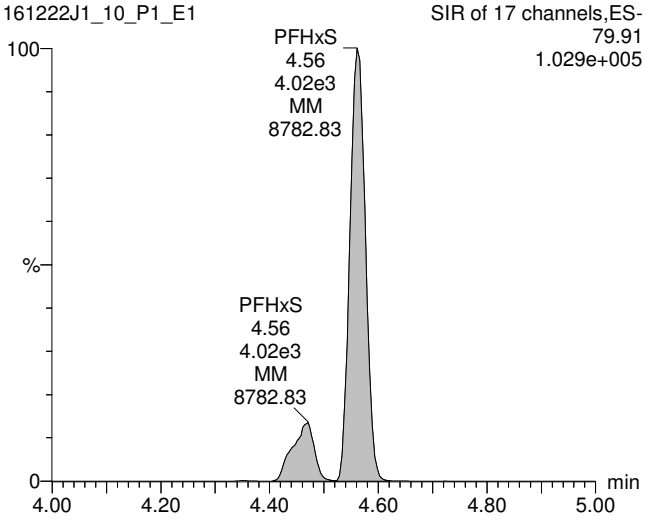
Total PFBS



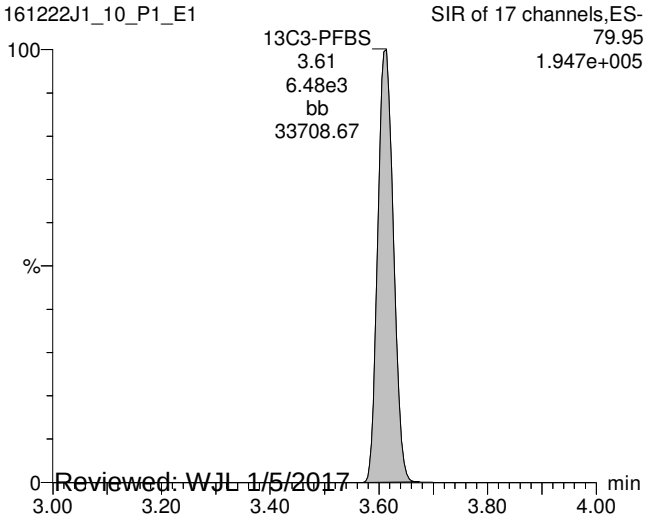
PFHpA



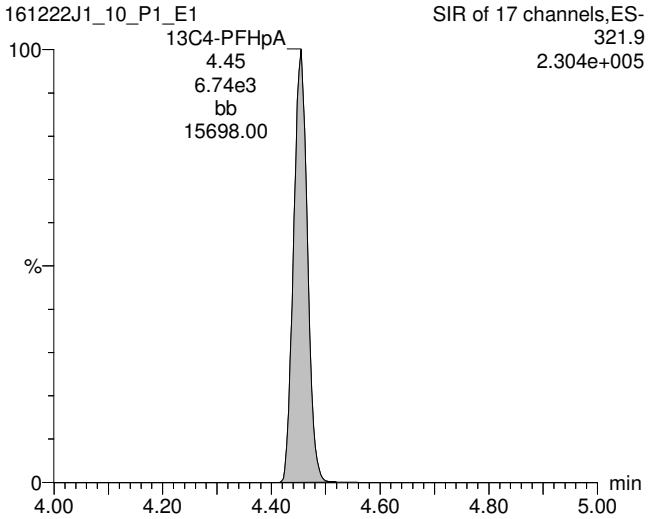
Total PFHxS



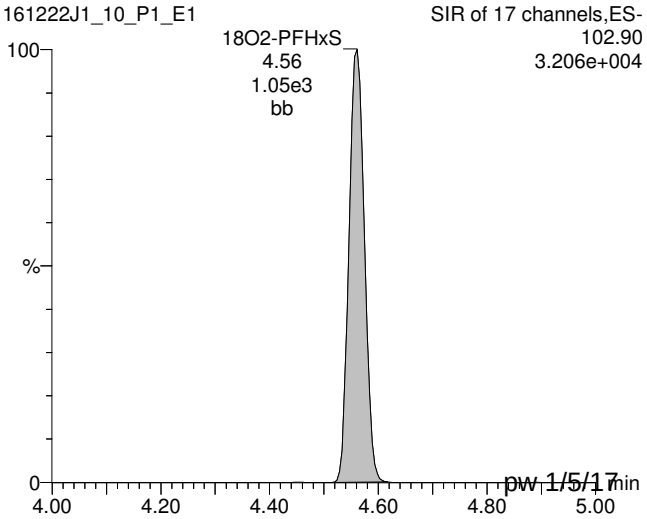
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



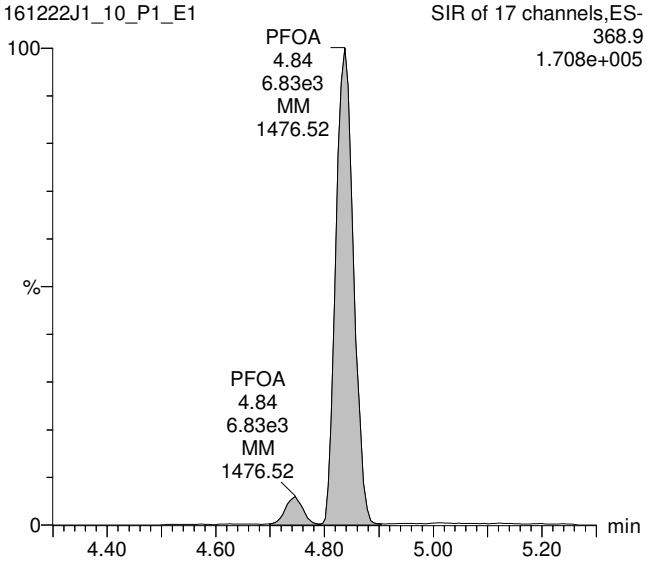
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_10.qld

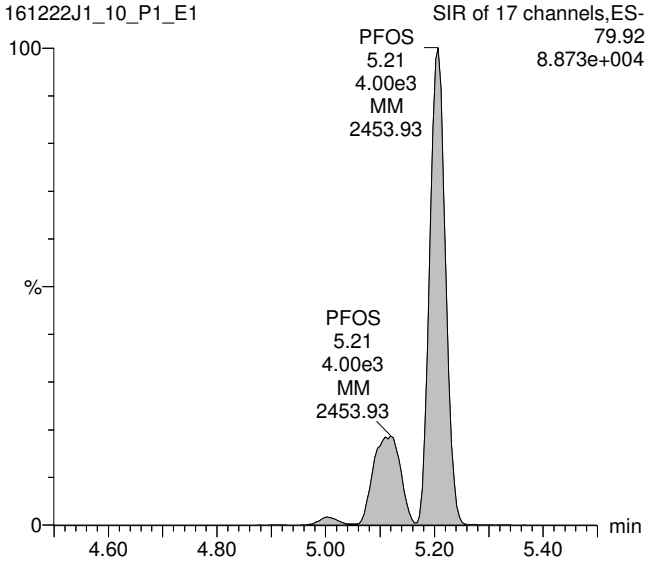
Last Altered: Thursday, January 05, 2017 11:21:28 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:23:51 Pacific Standard Time

ID: B6L0115-MS1, Description: Matrix Spike, Name: 161222J1_10.wiff, Date: 22-Dec-2016, Time: 17:01:51, Instrument: , Lab: ©PE-SCIEX, User: sciex

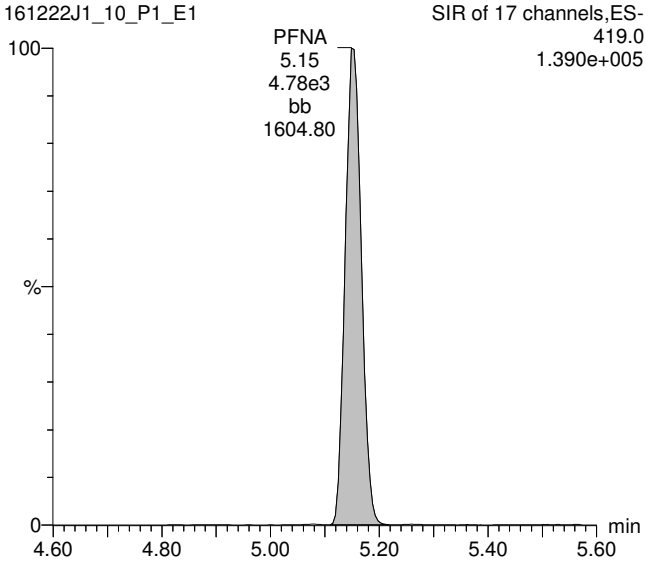
Total PFOA



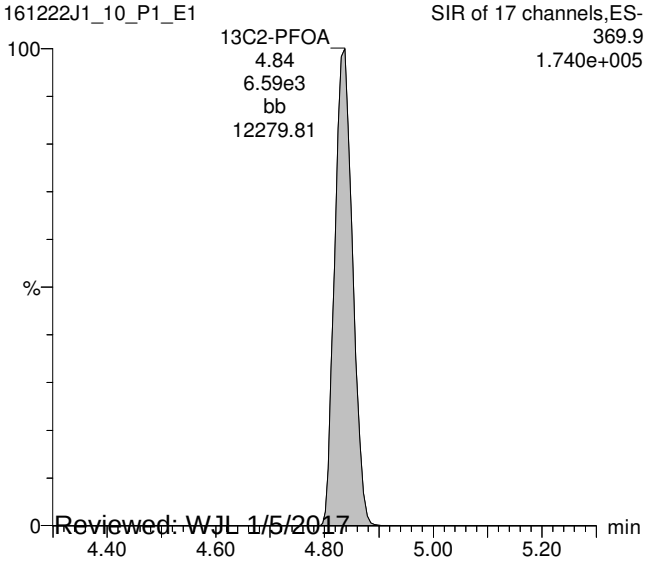
Total PFOS



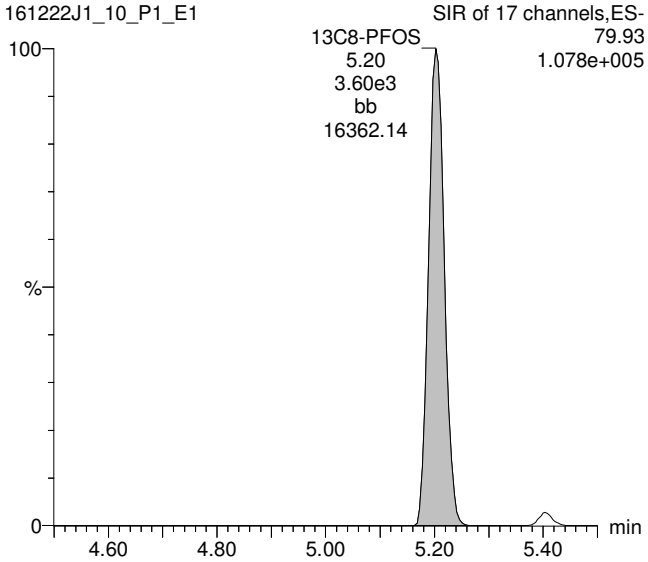
PFNA



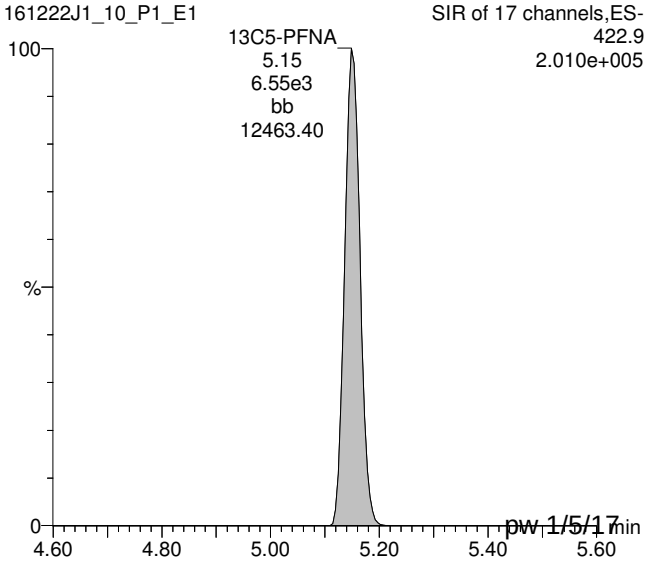
13C2-PFOA



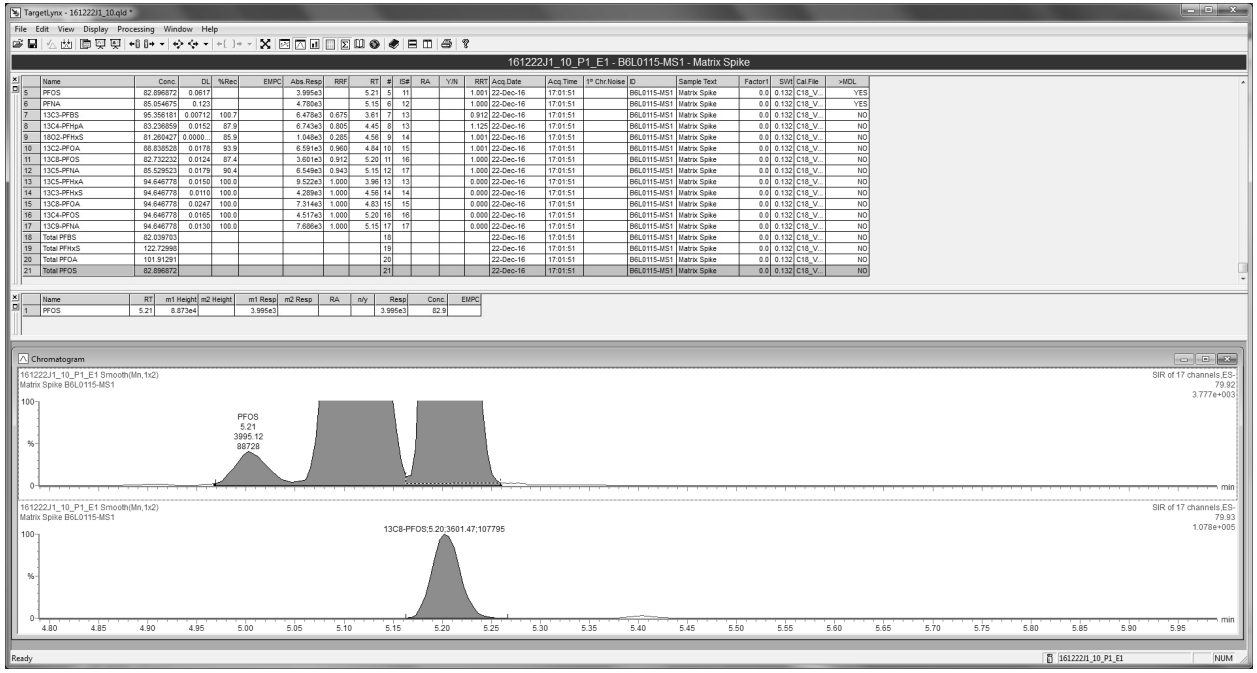
13C8-PFOS



13C5-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17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File Edit View Display Processing Window Help
161222J1_10_P1_E1 - B6L0115-MS1 - Matrix Spike
Chromatogram
161222J1_10_P1_E1 Smooth(Mn,1x2)
Matrix Spike B6L0115-MS1
SIR of 17 channels,ES-
79.92
3.777e+003
PFOS
5.21
3995.12
88728
min
161222J1_10_P1_E1 Smooth(Mn,1x2)
Matrix Spike B6L0115-MS1
SIR of 17 channels,ES-
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1.078e+005
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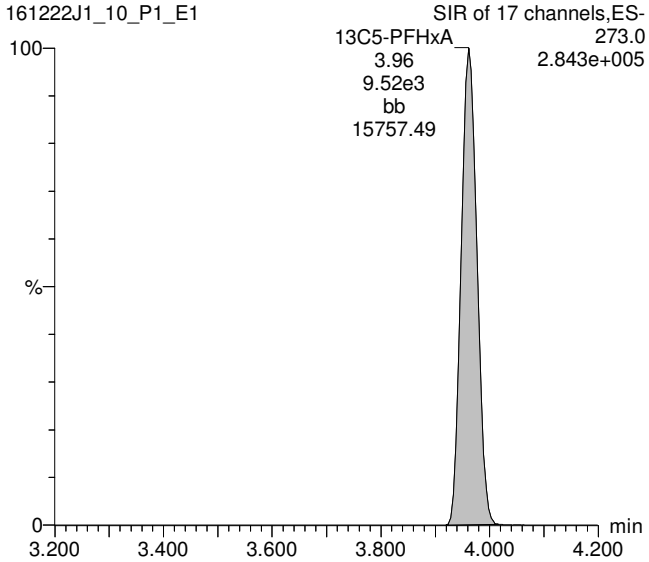
Ready
161222J1_10_P1_E1
NUM

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_10.qld

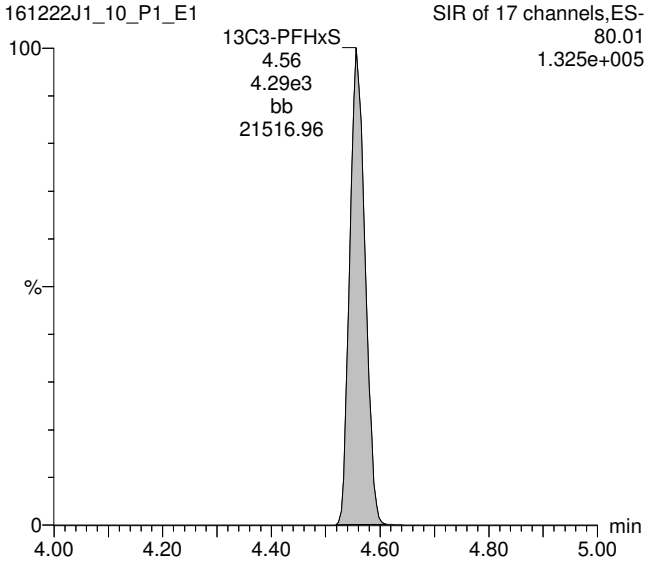
Last Altered: Thursday, January 05, 2017 11:21:28 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:23:51 Pacific Standard Time

ID: B6L0115-MS1, Description: Matrix Spike, Name: 161222J1_10.wiff, Date: 22-Dec-2016, Time: 17:01:51, Instrument: , Lab: ©PE-SCIEX, User: sciex

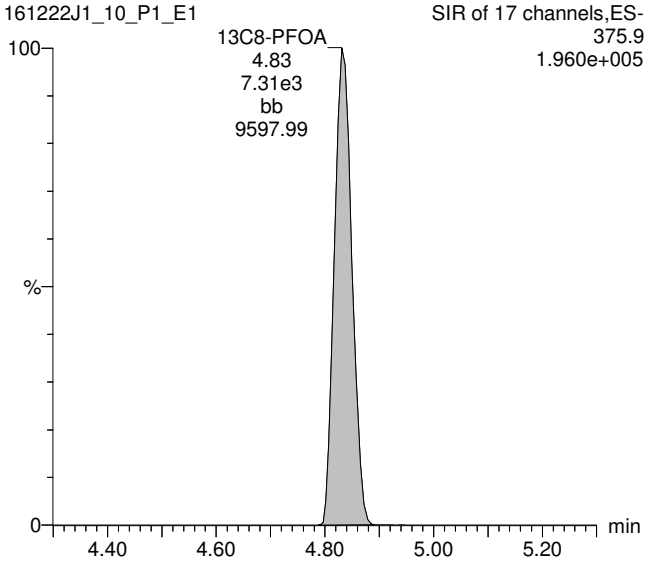
13C5-PFHxA



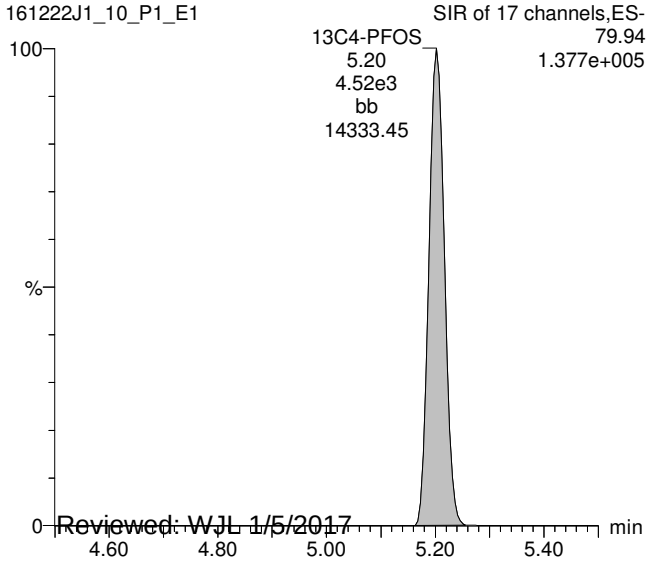
13C3-PFHxS



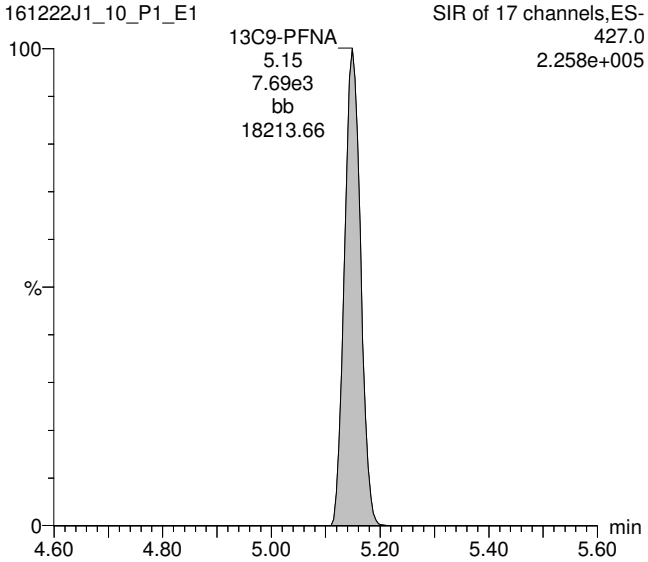
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_11.qld

Last Altered: Thursday, January 05, 2017 11:28:20 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:28:58 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-MSD1, Description: Matrix Spike Dup, Name: 161222J1_11.wiff, Date: 22-Dec-2016, Time: 17:14:01

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9	4.665e3	6.567e3		0.131	3.61	83.0	
2	2	PFHpA	318.9	5.677e3	6.614e3		0.131	4.48	98.0	
3	3	PFHxS	79.91	4.188e3	1.208e3		0.131	4.59	112	
4	4	PFOA	368.9	6.432e3	6.102e3		0.131	4.88	104	
5	5	PFOS	79.92	3.370e3	3.541e3		0.131	5.25	71.5	
6	6	PFNA	419.0	4.552e3	6.302e3		0.131	5.20	84.8	
7	7	13C3-PFBS	79.95	6.567e3	1.003e4	0.675	0.131	3.61	92.4	97.0
8	8	13C4-PFHpA	321.9	6.614e3	1.003e4	0.805	0.131	4.48	78.1	81.9
9	9	18O2-PFHxS	102.90	1.208e3	4.463e3	0.285	0.131	4.59	90.7	95.1
10	10	13C2-PFOA	369.9	6.102e3	7.215e3	0.960	0.131	4.88	84.0	88.1
11	11	13C8-PFOS	79.93	3.541e3	3.672e3	0.912	0.131	5.25	101	106
12	12	13C5-PFNA	422.9	6.302e3	7.498e3	0.943	0.131	5.20	85.0	89.1
13	13	13C5-PFHxA	273.0	1.003e4	1.003e4	1.000	0.131	3.97	95.3	100
14	14	13C3-PFHxS	80.01	4.463e3	4.463e3	1.000	0.131	4.59	95.3	100
15	15	13C8-PFOA	375.9	7.215e3	7.215e3	1.000	0.131	4.88	95.3	100
16	16	13C4-PFOS	79.94	3.672e3	3.672e3	1.000	0.131	5.25	95.3	100
17	17	13C9-PFNA	427.0	7.498e3	7.498e3	1.000	0.131	5.19	95.3	100
18	18	Total PFBS	79.9		6.567e3		0.131		83.0	
19	19	Total PFHxS	79.91		1.208e3		0.131		112	
20	20	Total PFOA	368.9		6.102e3		0.131		104	
21	21	Total PFOS	79.92		3.541e3		0.131		71.5	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_11.qld

Last Altered: Thursday, January 05, 2017 11:28:20 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:28:58 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-MSD1, Description: Matrix Spike Dup, Name: 161222J1_11.wiff, Date: 22-Dec-2016, Time: 17:14:01

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	4665.200	6567.087	83.0

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.59	4187.520	1207.965	111.6

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.88	6431.866	6101.599	104.5

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.25	3370.236	3541.481	71.5

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

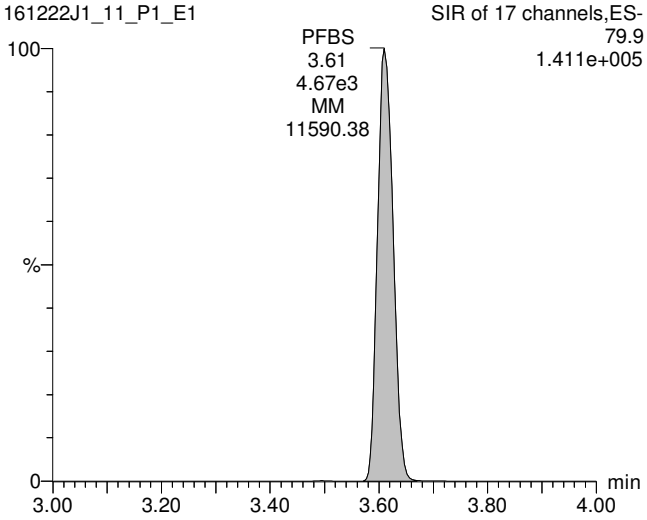
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_11.qld

Last Altered: Thursday, January 05, 2017 11:28:20 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:28:58 Pacific Standard Time

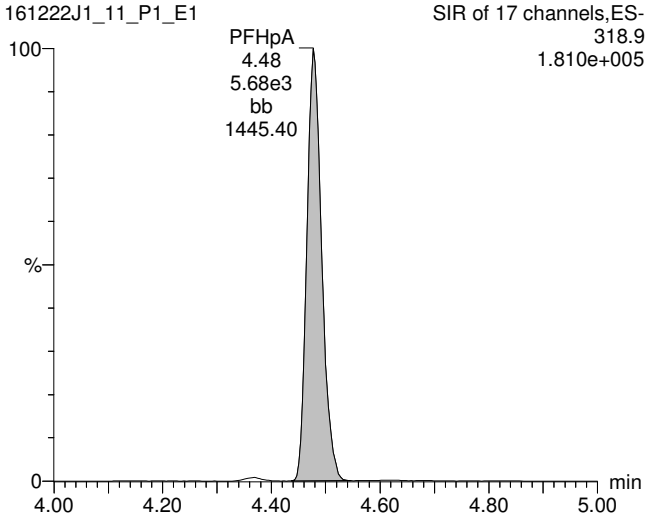
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: B6L0115-MSD1, Description: Matrix Spike Dup, Name: 161222J1_11.wiff, Date: 22-Dec-2016, Time: 17:14:01, Instrument: , Lab: ©PE-SCIEX, User: sciex

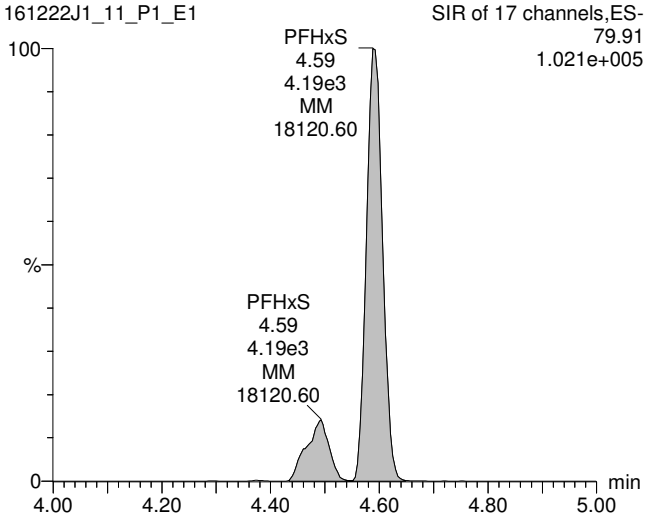
Total PFBS



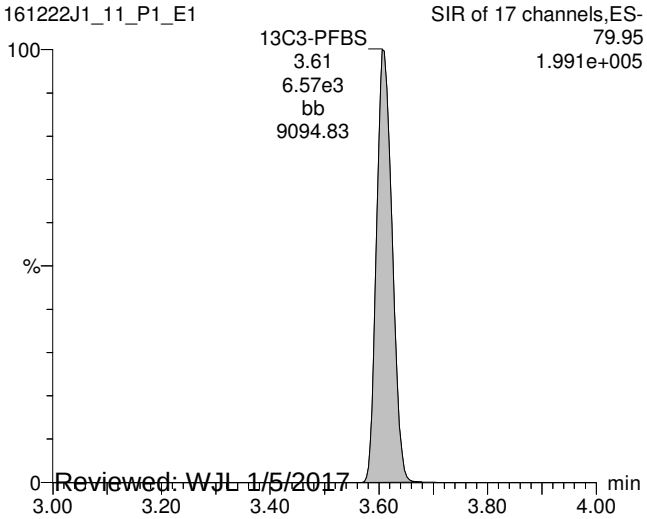
PFHpA



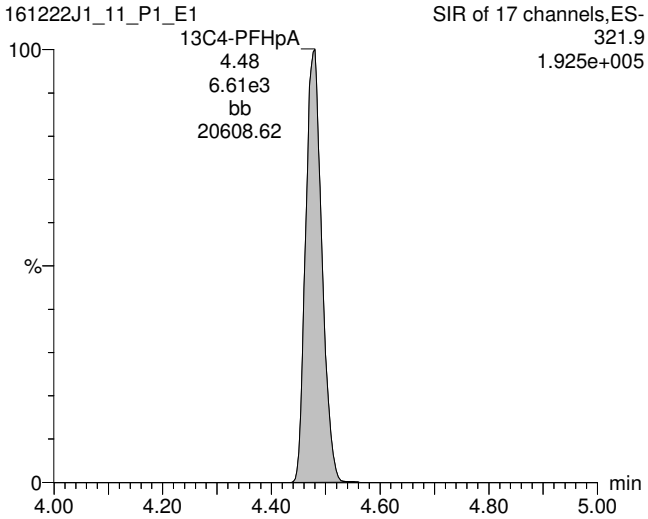
Total PFHxS



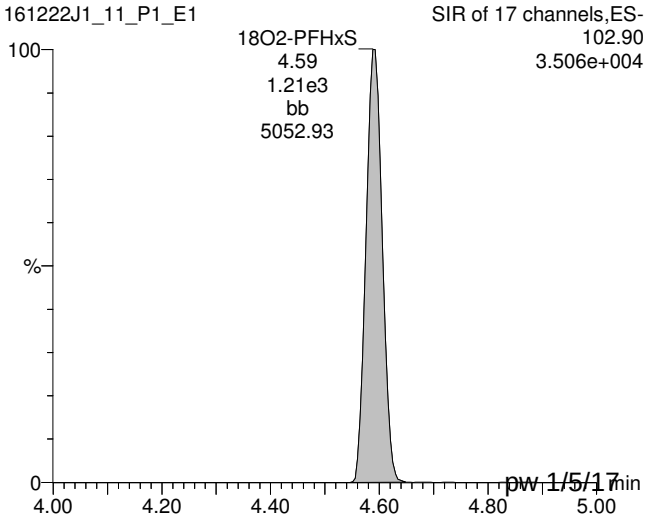
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



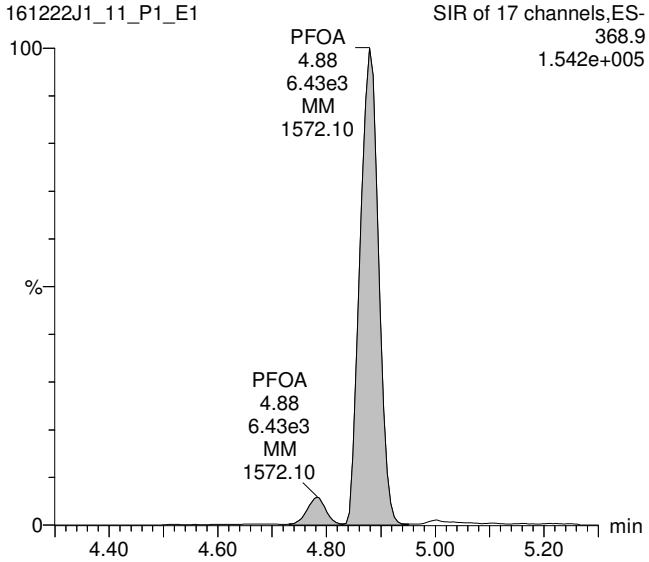
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_11.qld

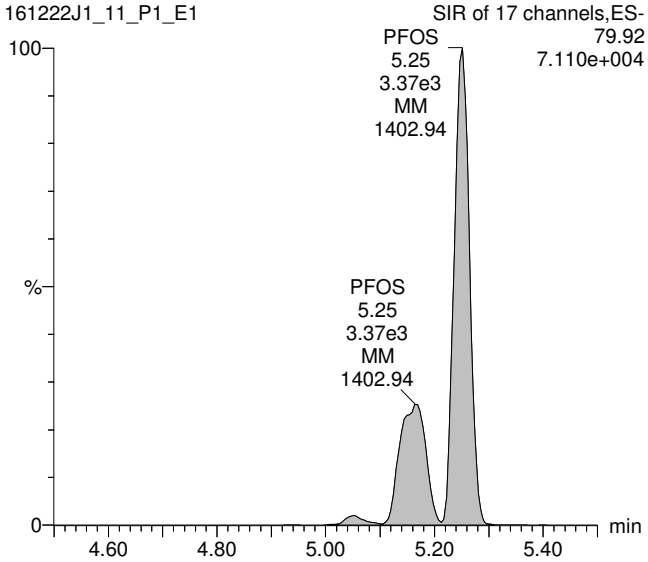
Last Altered: Thursday, January 05, 2017 11:28:20 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:28:58 Pacific Standard Time

ID: B6L0115-MSD1, Description: Matrix Spike Dup, Name: 161222J1_11.wiff, Date: 22-Dec-2016, Time: 17:14:01, Instrument: , Lab: ©PE-SCIEX, User: sciex

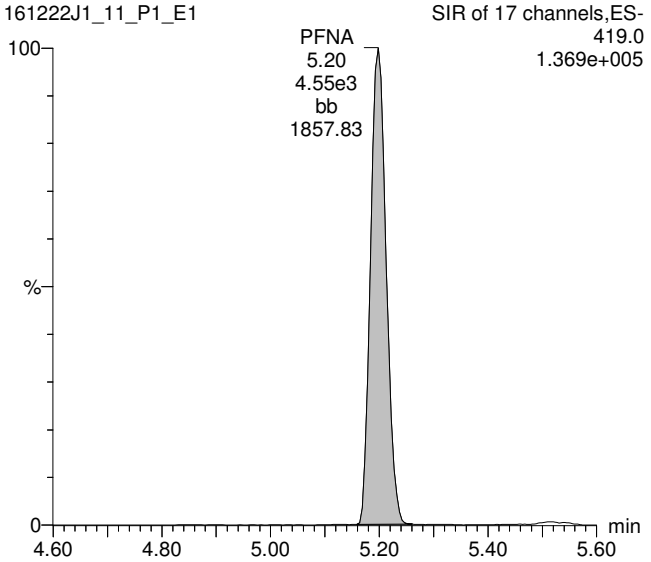
Total PFOA



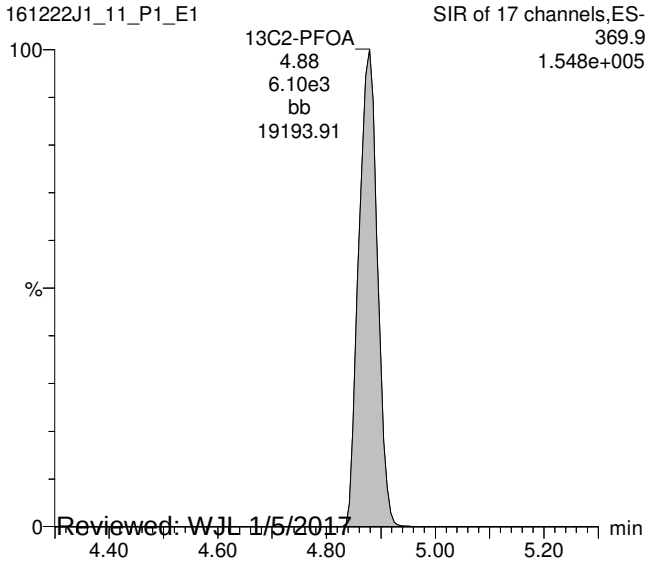
Total PFOS



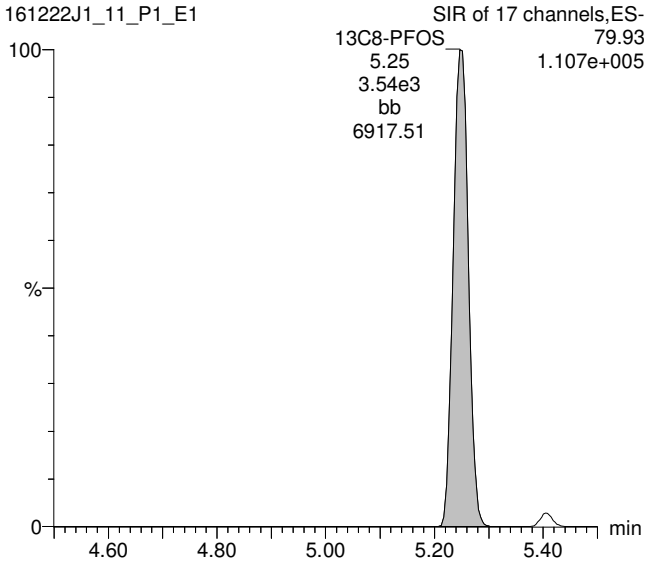
PFNA



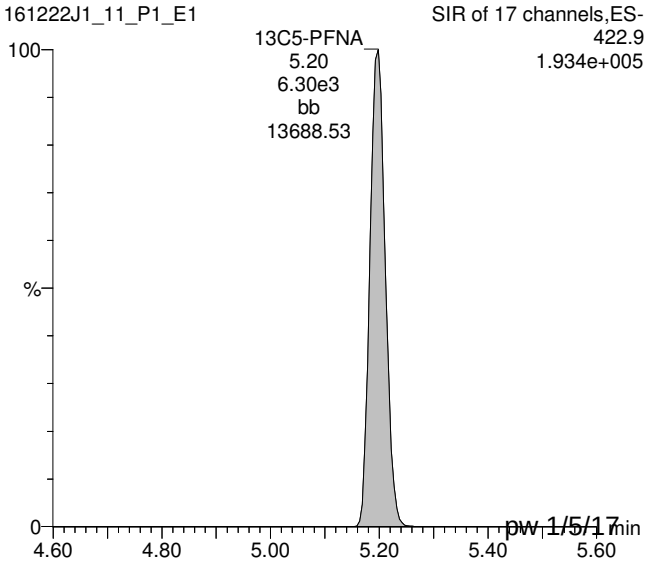
13C2-PFOA



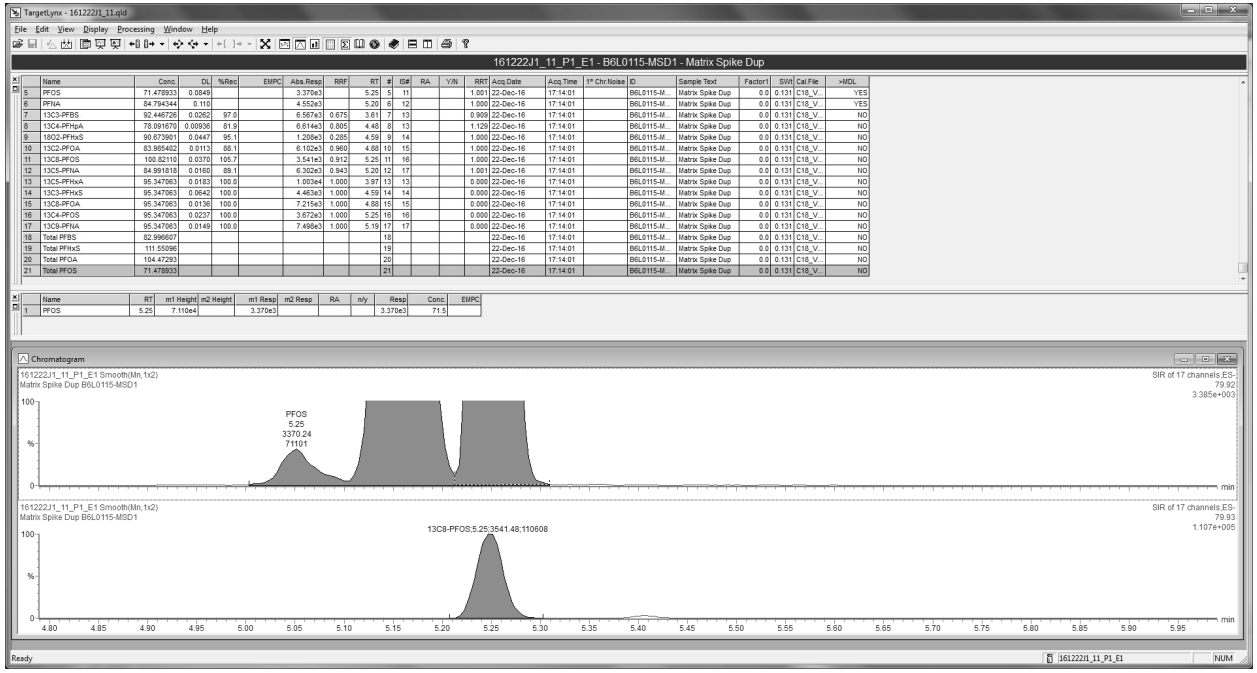
13C8-PFOS



13C5-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17



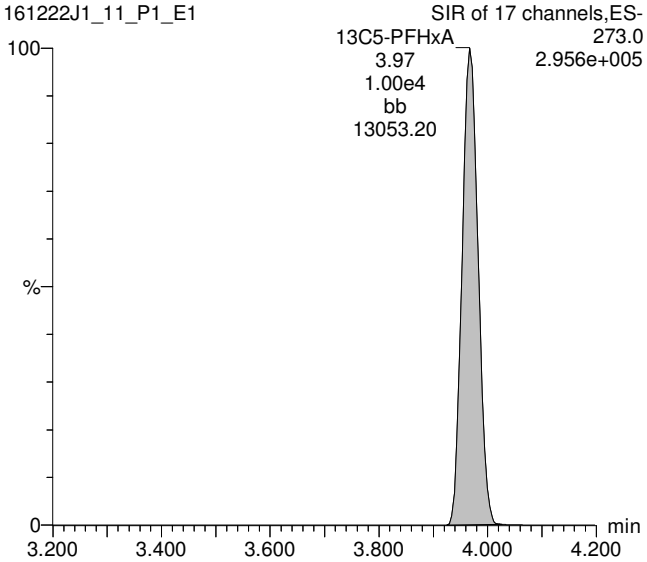
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_11.qld

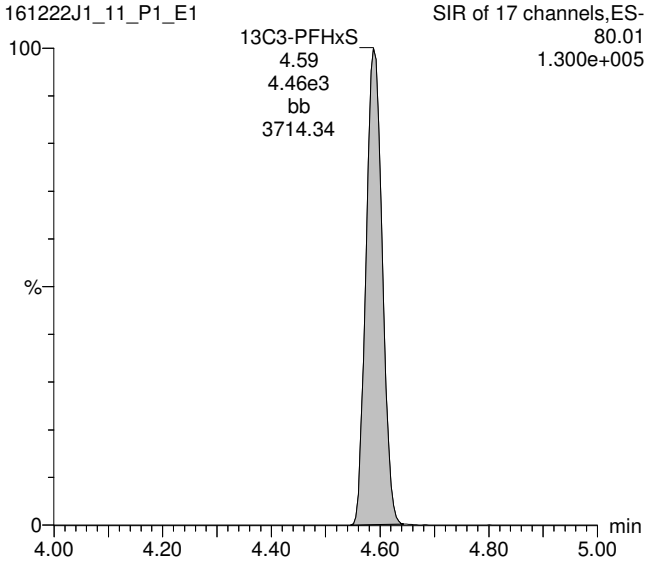
Last Altered: Thursday, January 05, 2017 11:28:20 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:28:58 Pacific Standard Time

ID: B6L0115-MSD1, Description: Matrix Spike Dup, Name: 161222J1_11.wiff, Date: 22-Dec-2016, Time: 17:14:01, Instrument: , Lab: ©PE-SCIEX, User: sciex

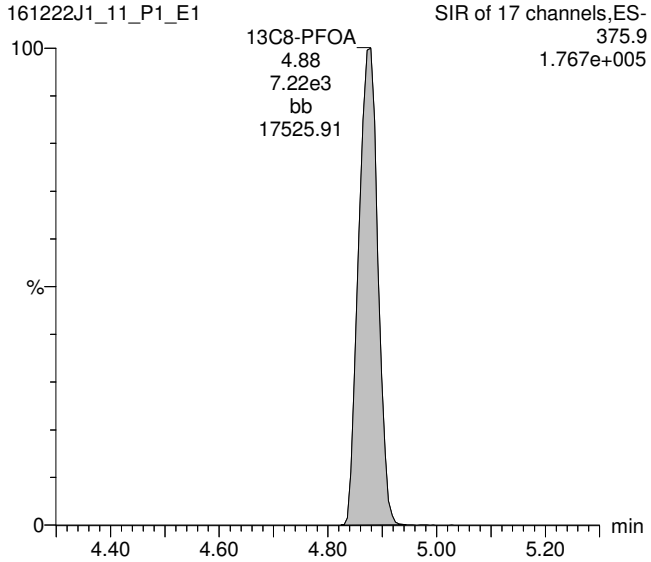
13C5-PFHxA



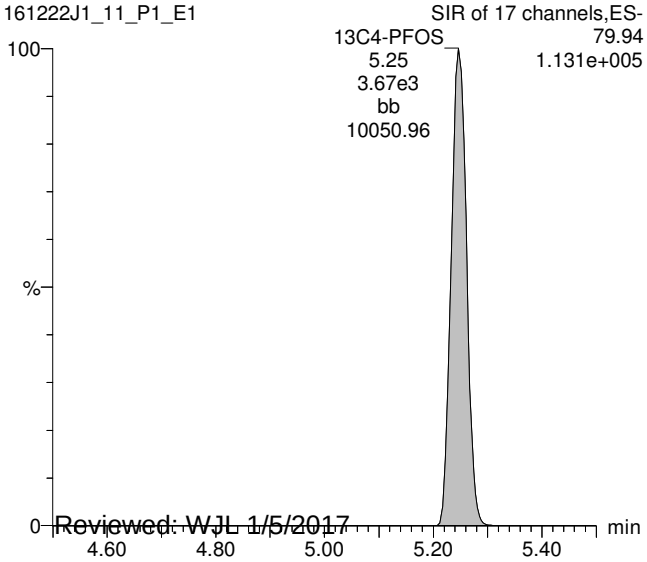
13C3-PFHxS



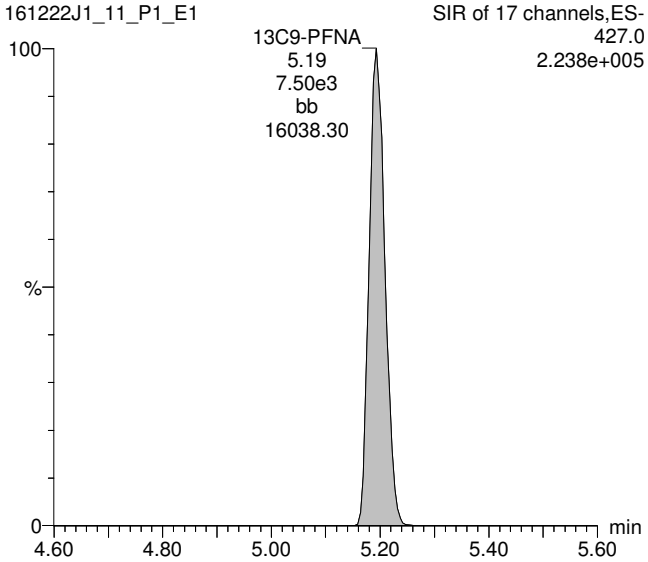
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017

pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_12.qld

Last Altered: Thursday, January 05, 2017 11:05:46 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:06:05 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-04, Description: OC-FB01-121616, Name: 161222J1_12.wiff, Date: 22-Dec-2016, Time: 17:26:16

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9	3.200e0	6.846e3		0.130	3.60	0.0543	
2	2	PFHpA	318.9	5.775e0	6.483e3		0.130	4.47	0.100	
3	3	PFHxS	79.91	1.305e1	1.139e3		0.130	4.58		
4	4	PFOA	368.9	5.366e1	5.645e3		0.130	4.87	0.912	
5	5	PFOS	79.92	1.175e1	3.190e3		0.130	5.17	0.275	
6	6	PFNA	419.0		6.434e3		0.130			
7	7	13C3-PFBS	79.95	6.846e3	9.788e3	0.675	0.130	3.61	99.7	104
8	8	13C4-PFHpA	321.9	6.483e3	9.788e3	0.805	0.130	4.46	79.2	82.3
9	9	18O2-PFHxS	102.90	1.139e3	4.703e3	0.285	0.130	4.58	81.9	85.1
10	10	13C2-PFOA	369.9	5.645e3	7.705e3	0.960	0.130	4.87	73.5	76.3
11	11	13C8-PFOS	79.93	3.190e3	3.976e3	0.912	0.130	5.25	84.7	88.0
12	12	13C5-PFNA	422.9	6.434e3	7.380e3	0.943	0.130	5.20	89.0	92.5
13	13	13C5-PFHxA	273.0	9.788e3	9.788e3	1.000	0.130	3.96	96.3	100
14	14	13C3-PFHxS	80.01	4.703e3	4.703e3	1.000	0.130	4.58	96.3	100
15	15	13C8-PFOA	375.9	7.705e3	7.705e3	1.000	0.130	4.87	96.3	100
16	16	13C4-PFOS	79.94	3.976e3	3.976e3	1.000	0.130	5.25	96.3	100
17	17	13C9-PFNA	427.0	7.380e3	7.380e3	1.000	0.130	5.19	96.3	100
18	18	Total PFBS	79.9		6.846e3		0.130		0.0543	
19	19	Total PFHxS	79.91		1.139e3		0.130			
20	20	Total PFOA	368.9		5.645e3		0.130		0.912	
21	21	Total PFOS	79.92		3.190e3		0.130		0.275	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_12.qld

Last Altered: Thursday, January 05, 2017 11:05:46 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:06:05 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-04, Description: OC-FB01-121616, Name: 161222J1_12.wiff, Date: 22-Dec-2016, Time: 17:26:16

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.60	3.200	6846.218	0.1

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.58	13.051	1139.235	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.87	53.657	5645.268	0.9

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.17	11.748	3190.494	0.3

Vista Analytical Laboratory Q1

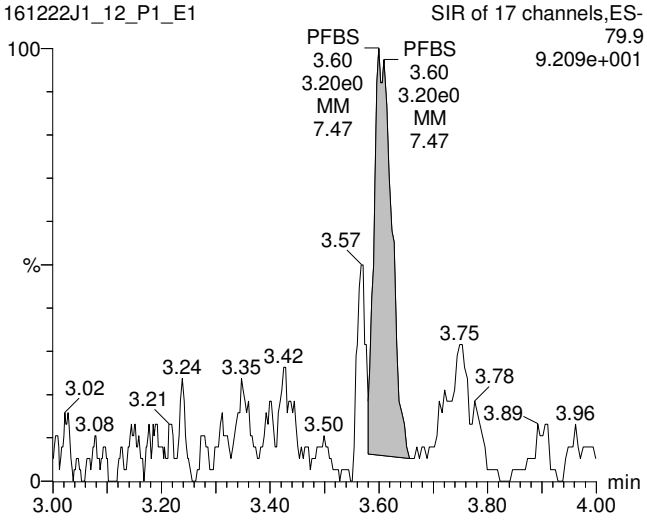
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_12.qld

Last Altered: Thursday, January 05, 2017 11:05:46 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:06:05 Pacific Standard Time

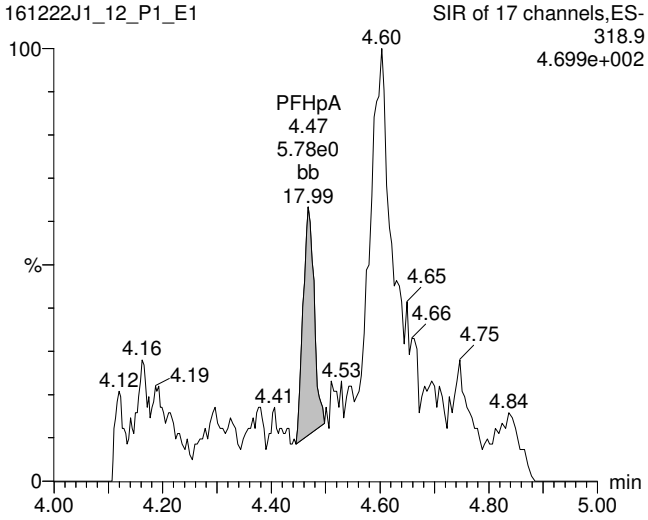
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-04, Description: OC-FB01-121616, Name: 161222J1_12.wiff, Date: 22-Dec-2016, Time: 17:26:16, Instrument: , Lab: ©PE-SCIEX, User: sciex

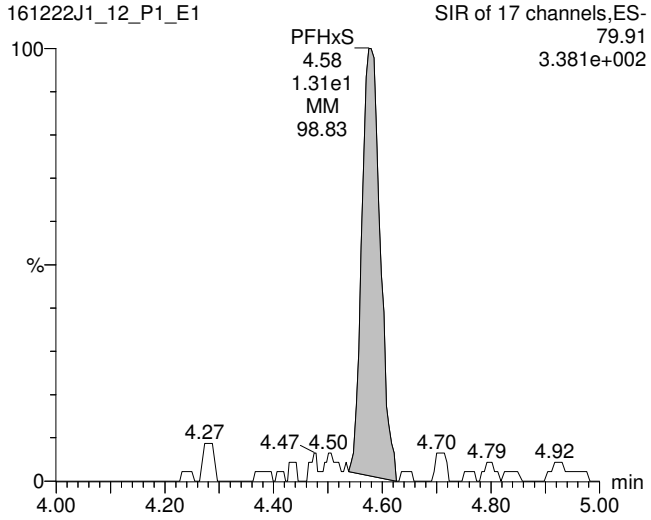
Total PFBS



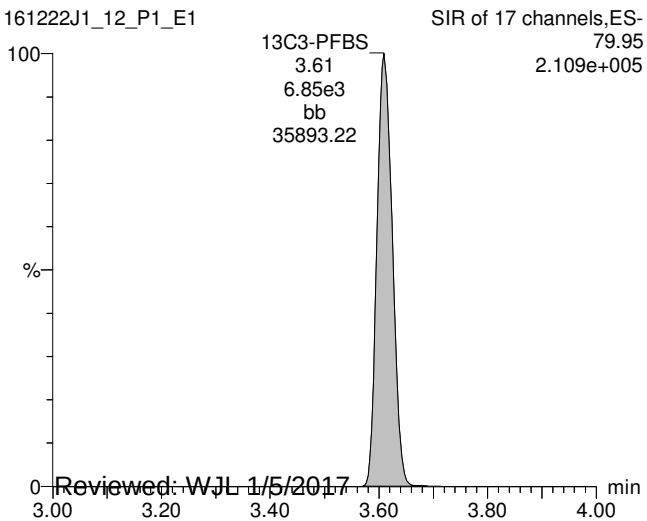
PFHpA



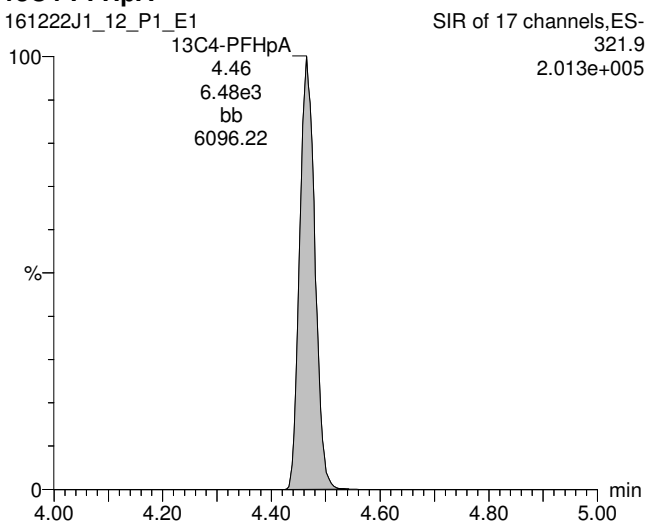
Total PFHxS



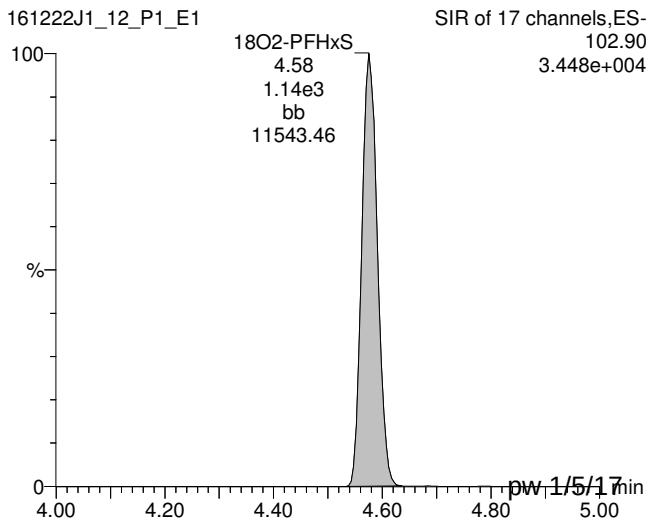
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



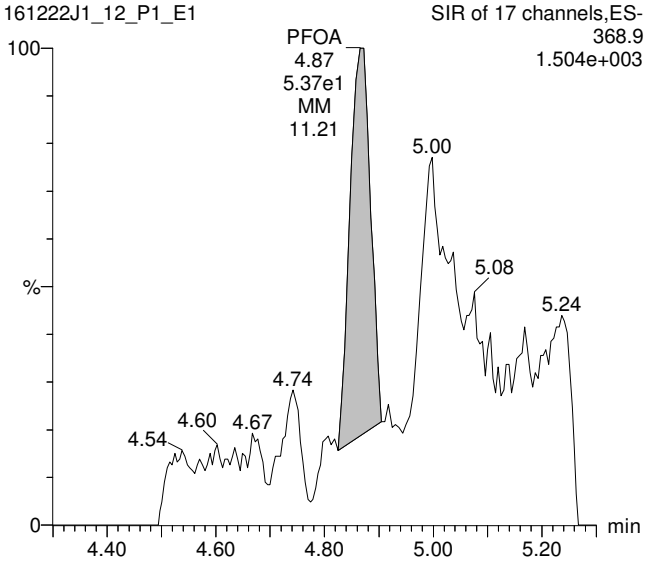
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_12.qld

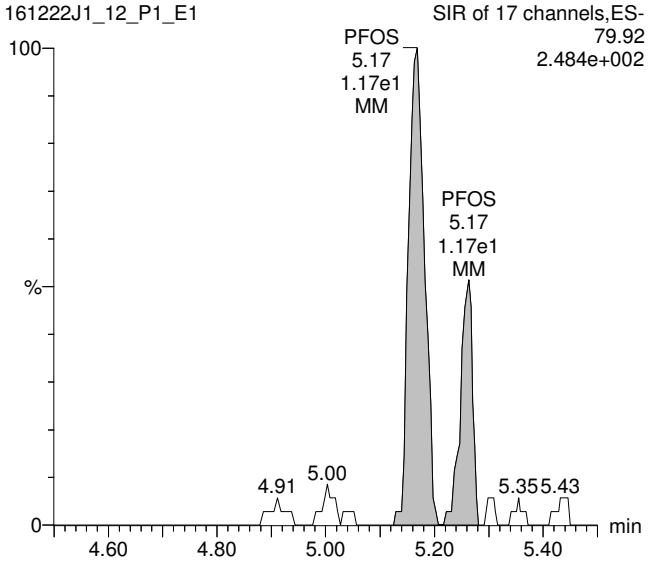
Last Altered: Thursday, January 05, 2017 11:05:46 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:06:05 Pacific Standard Time

ID: 1601579-04, Description: OC-FB01-121616, Name: 161222J1_12.wiff, Date: 22-Dec-2016, Time: 17:26:16, Instrument: , Lab: ©PE-SCIEX, User: sciex

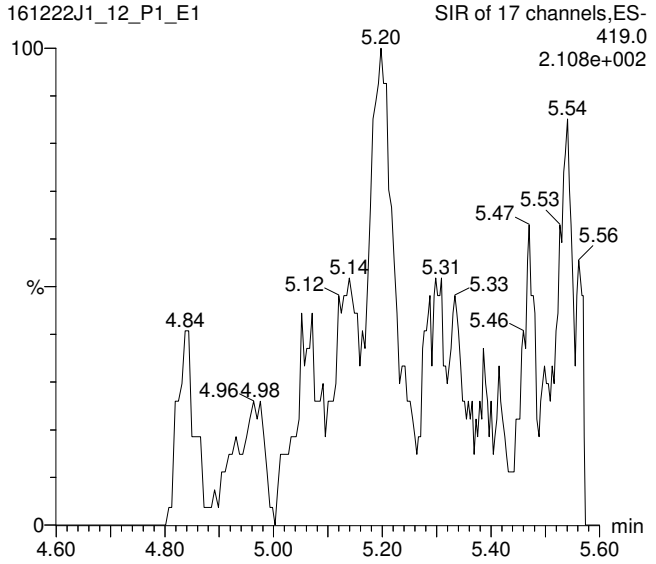
Total PFOA



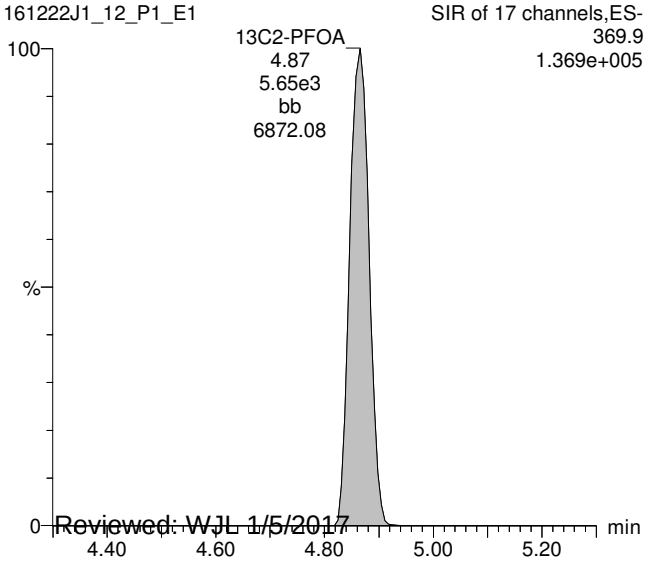
Total PFOS



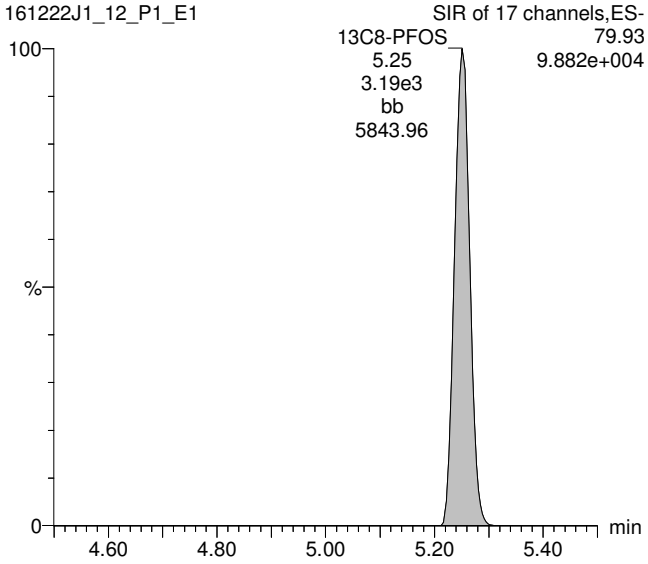
PFNA



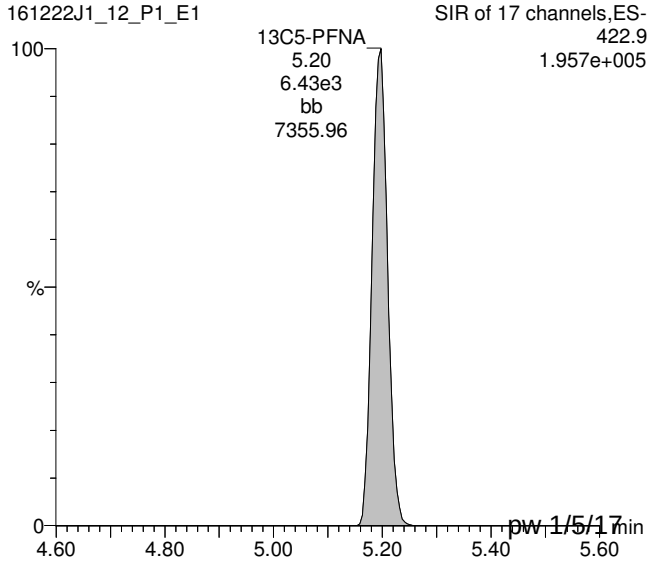
13C2-PFOA



13C8-PFOS



13C5-PFNA



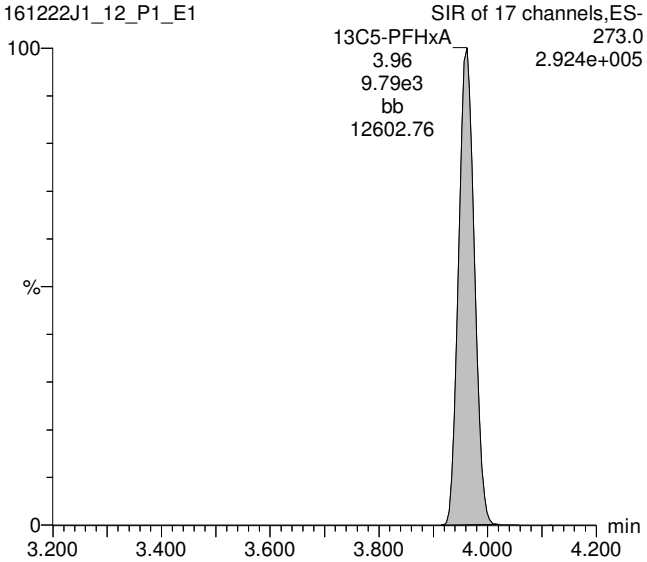
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_12.qld

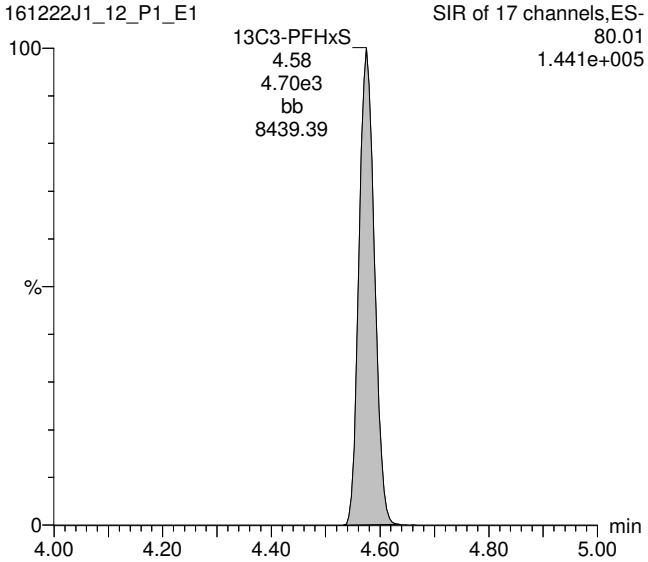
Last Altered: Thursday, January 05, 2017 11:05:46 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:06:05 Pacific Standard Time

ID: 1601579-04, Description: OC-FB01-121616, Name: 161222J1_12.wiff, Date: 22-Dec-2016, Time: 17:26:16, Instrument: , Lab: ©PE-SCIEX, User: sciex

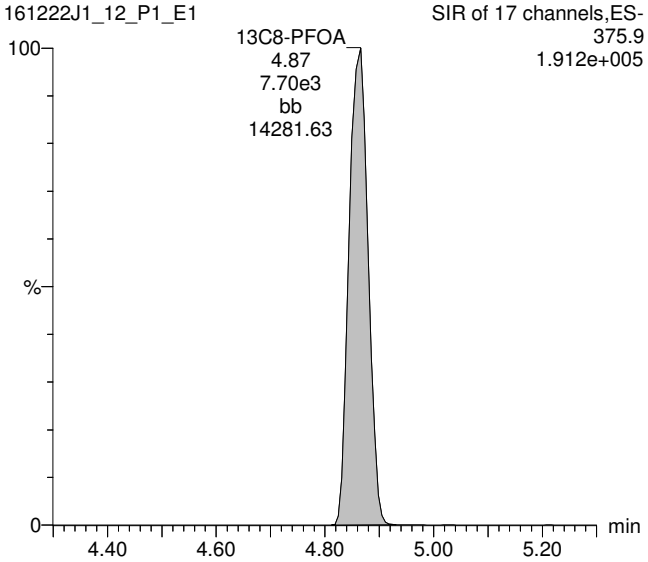
13C5-PFHxA



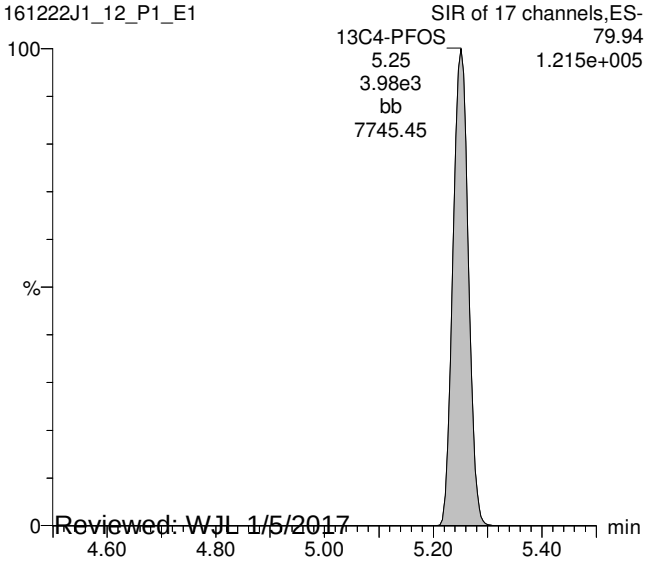
13C3-PFHxS



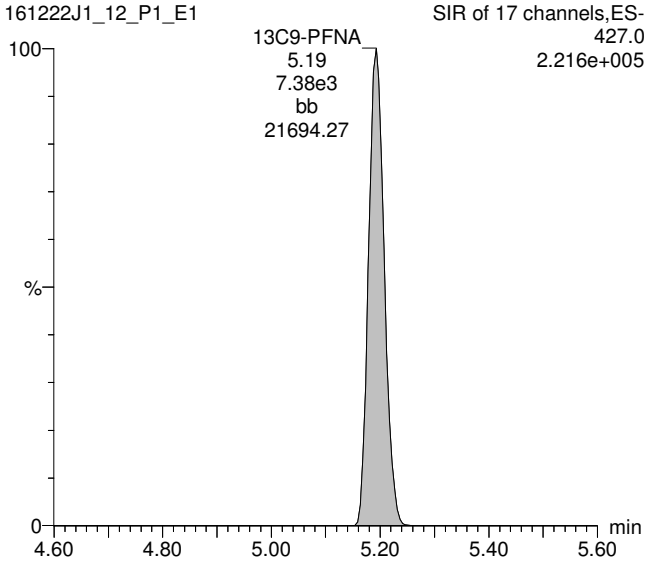
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_13.qld

Last Altered: Thursday, January 05, 2017 11:09:55 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:10:12 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-05, Description: OC-RW03-1216, Name: 161222J1_13.wiff, Date: 22-Dec-2016, Time: 17:38:25

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9		6.396e3		0.129			
2	2	PFHpA	318.9		6.107e3		0.129			
3	3	PFHxS	79.91	1.592e1	1.089e3		0.129	4.57		
4	4	PFOA	368.9	4.611e1	6.160e3		0.129	4.85	0.721	
5	5	PFOS	79.92	6.201e0	3.589e3		0.129	5.15	0.130	
6	6	PFNA	419.0		5.725e3		0.129			
7	7	13C3-PFBS	79.95	6.396e3	9.539e3	0.675	0.129	3.61	96.0	99.3
8	8	13C4-PFHpA	321.9	6.107e3	9.539e3	0.805	0.129	4.45	76.9	79.5
9	9	18O2-PFHxS	102.90	1.089e3	4.349e3	0.285	0.129	4.56	85.0	88.0
10	10	13C2-PFOA	369.9	6.160e3	7.662e3	0.960	0.129	4.85	81.0	83.7
11	11	13C8-PFOS	79.93	3.589e3	4.166e3	0.912	0.129	5.22	91.3	94.5
12	12	13C5-PFNA	422.9	5.725e3	7.833e3	0.943	0.129	5.17	74.9	77.5
13	13	13C5-PFHxA	273.0	9.539e3	9.539e3	1.000	0.129	3.97	96.7	100
14	14	13C3-PFHxS	80.01	4.349e3	4.349e3	1.000	0.129	4.56	96.7	100
15	15	13C8-PFOA	375.9	7.662e3	7.662e3	1.000	0.129	4.84	96.7	100
16	16	13C4-PFOS	79.94	4.166e3	4.166e3	1.000	0.129	5.22	96.7	100
17	17	13C9-PFNA	427.0	7.833e3	7.833e3	1.000	0.129	5.16	96.7	100
18	18	Total PFBS	79.9		6.396e3		0.129			
19	19	Total PFHxS	79.91		1.089e3		0.129			
20	20	Total PFOA	368.9		6.160e3		0.129		0.721	
21	21	Total PFOS	79.92		3.589e3		0.129		0.130	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_13.qld

Last Altered: Thursday, January 05, 2017 11:09:55 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:10:12 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-05, Description: OC-RW03-1216, Name: 161222J1_13.wiff, Date: 22-Dec-2016, Time: 17:38:25

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1							

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.57	15.924	1088.986	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.85	46.109	6160.447	0.7

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.15	6.201	3589.486	0.1

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

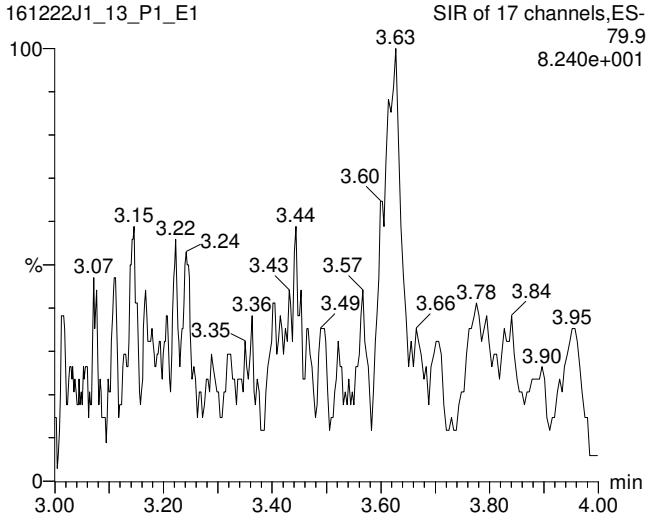
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_13.qld

Last Altered: Thursday, January 05, 2017 11:09:55 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:10:12 Pacific Standard Time

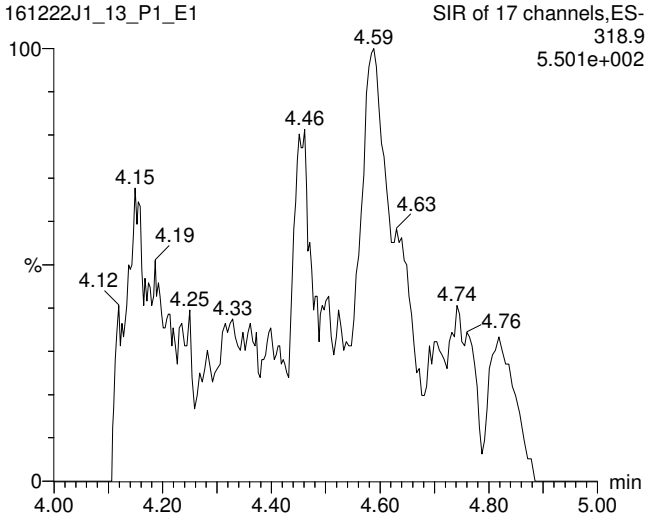
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-05, Description: OC-RW03-1216, Name: 161222J1_13.wiff, Date: 22-Dec-2016, Time: 17:38:25, Instrument: , Lab: ©PE-SCIEX, User: sciex

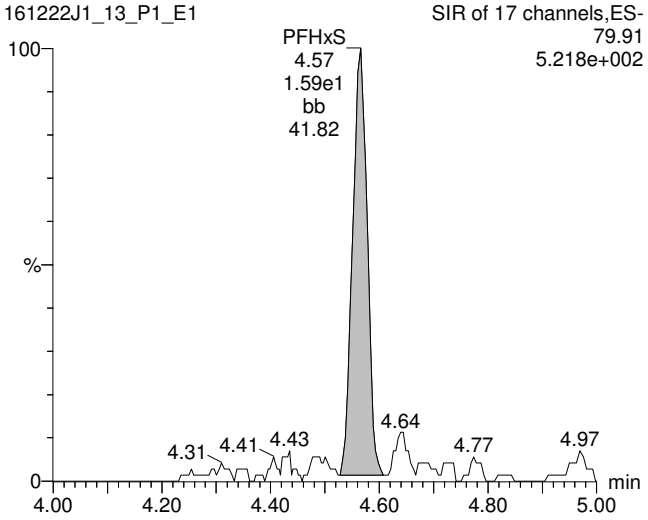
Total PFBS



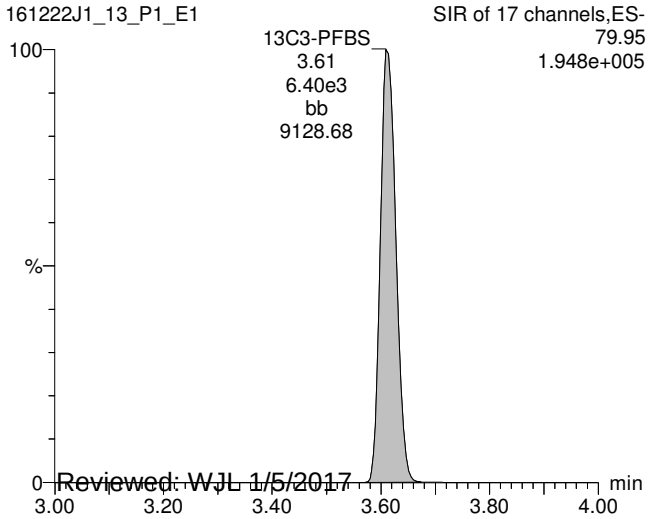
PFHpA



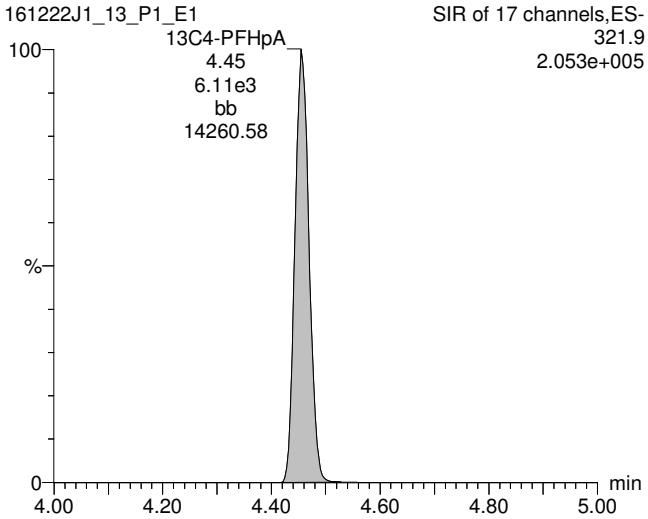
Total PFHxS



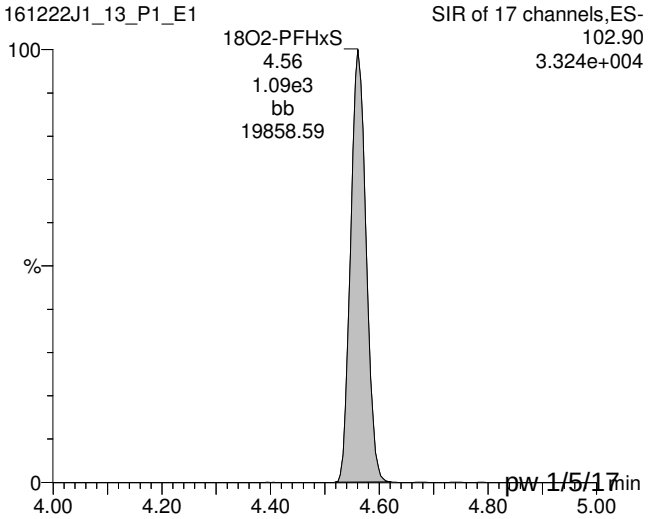
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



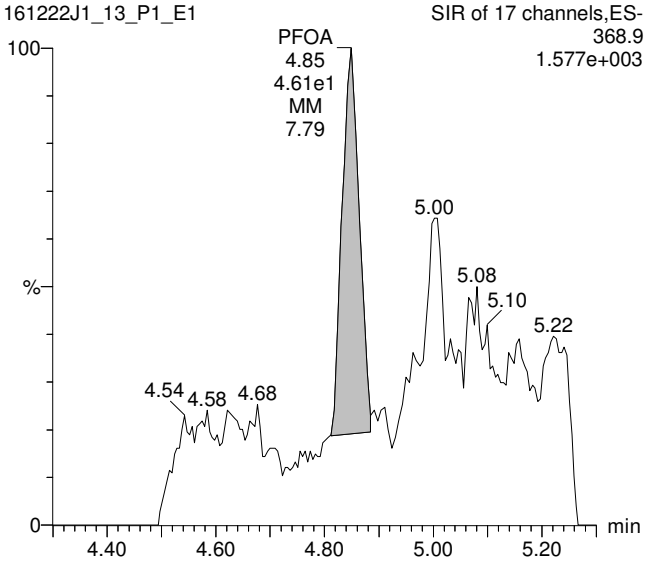
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_13.qld

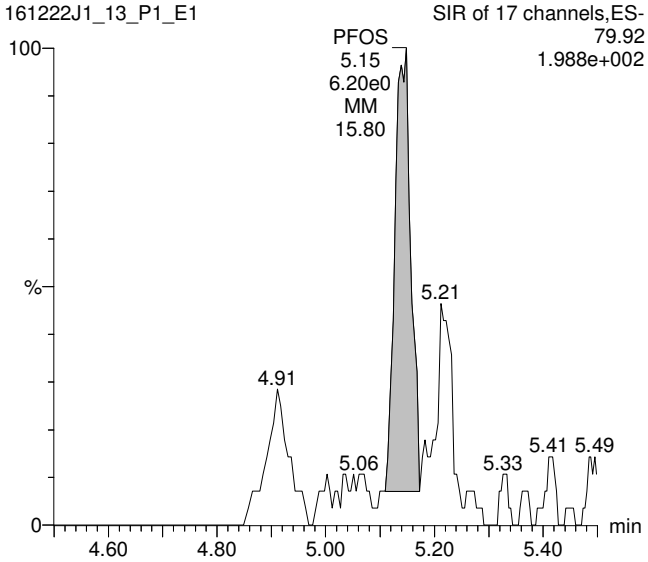
Last Altered: Thursday, January 05, 2017 11:09:55 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:10:12 Pacific Standard Time

ID: 1601579-05, Description: OC-RW03-1216, Name: 161222J1_13.wiff, Date: 22-Dec-2016, Time: 17:38:25, Instrument: , Lab: ©PE-SCIEX, User: sciex

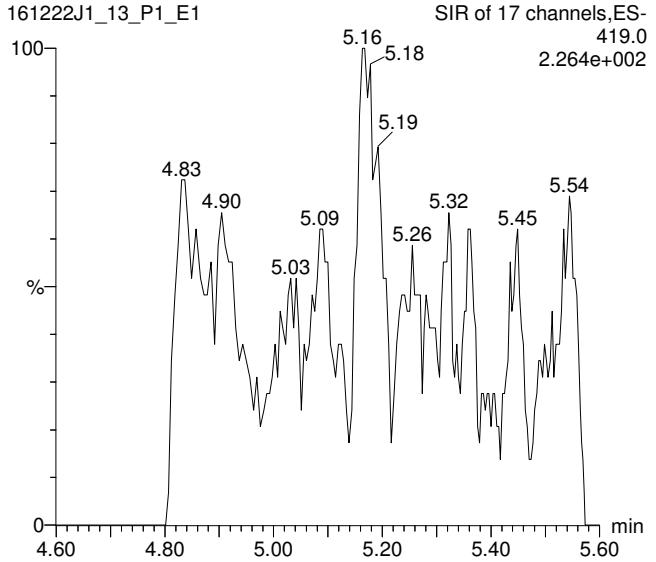
Total PFOA



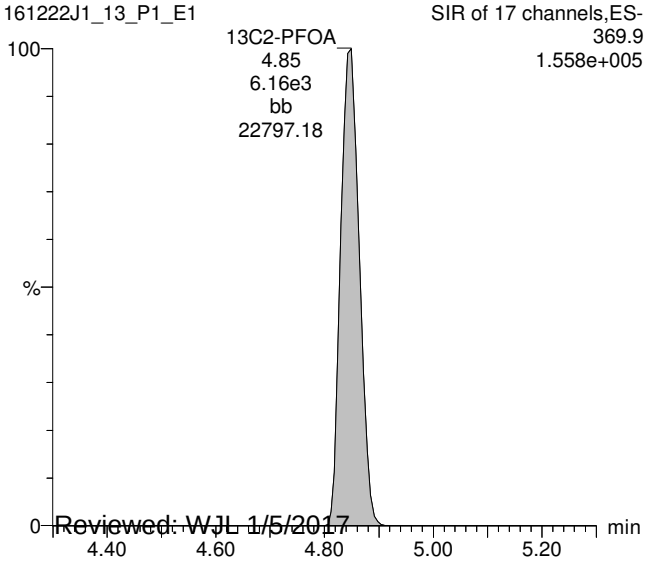
Total PFOS



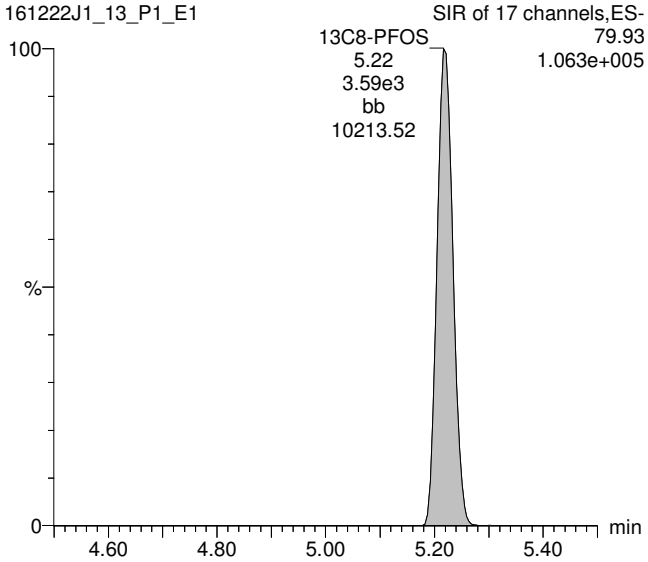
PFNA



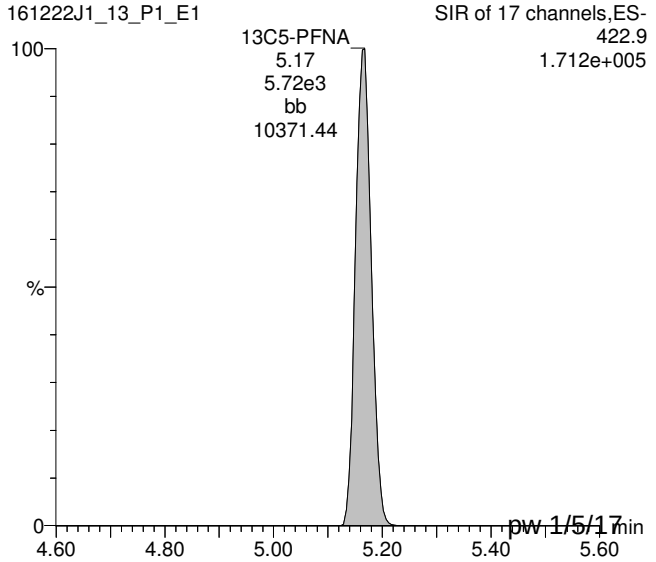
13C2-PFOA



13C8-PFOS



13C5-PFNA



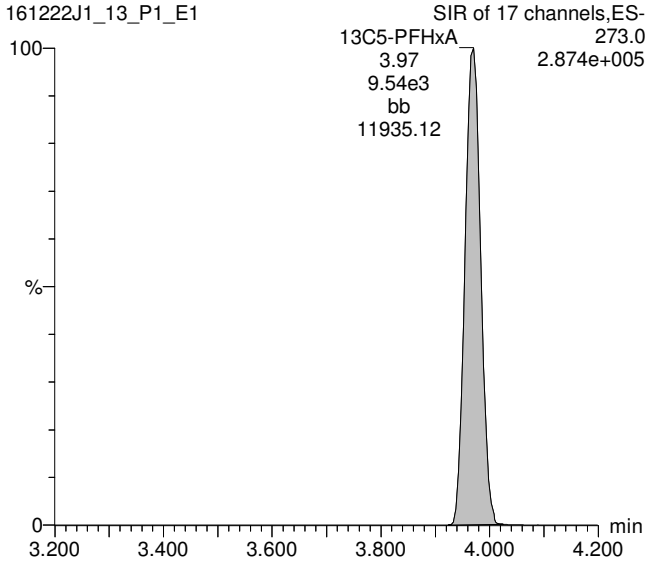
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_13.qld

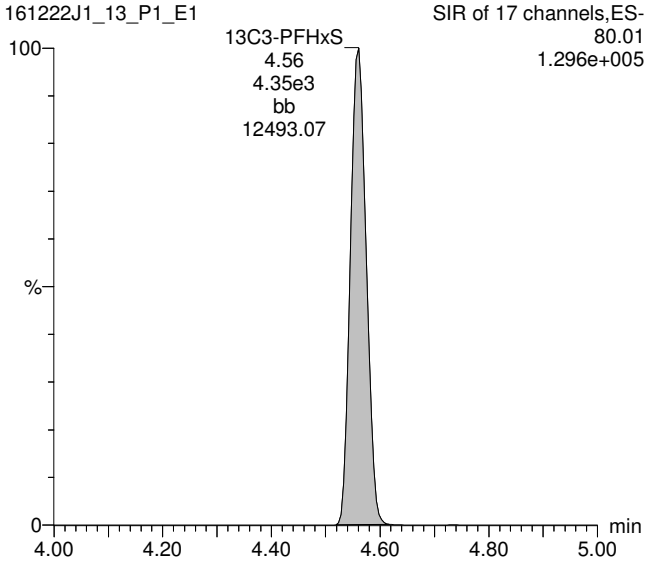
Last Altered: Thursday, January 05, 2017 11:09:55 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:10:12 Pacific Standard Time

ID: 1601579-05, Description: OC-RW03-1216, Name: 161222J1_13.wiff, Date: 22-Dec-2016, Time: 17:38:25, Instrument: , Lab: ©PE-SCIEX, User: sciex

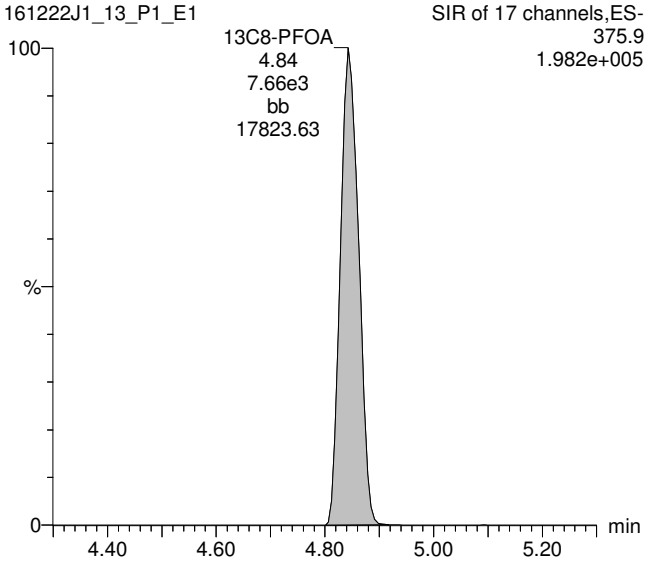
13C5-PFHxA



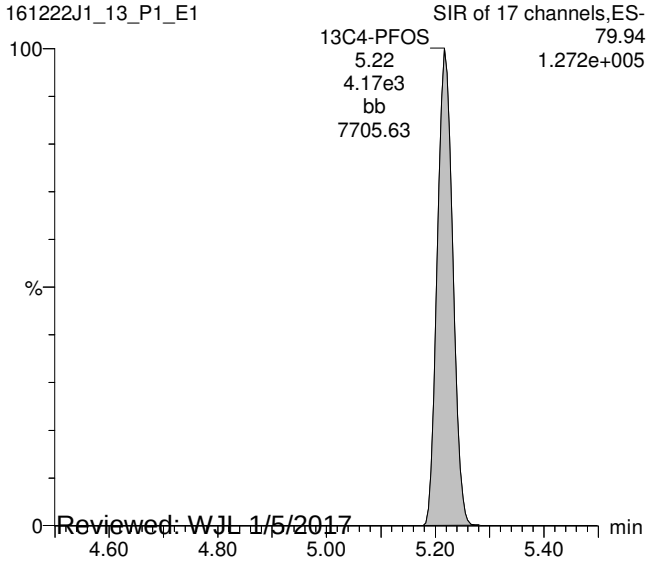
13C3-PFHxS



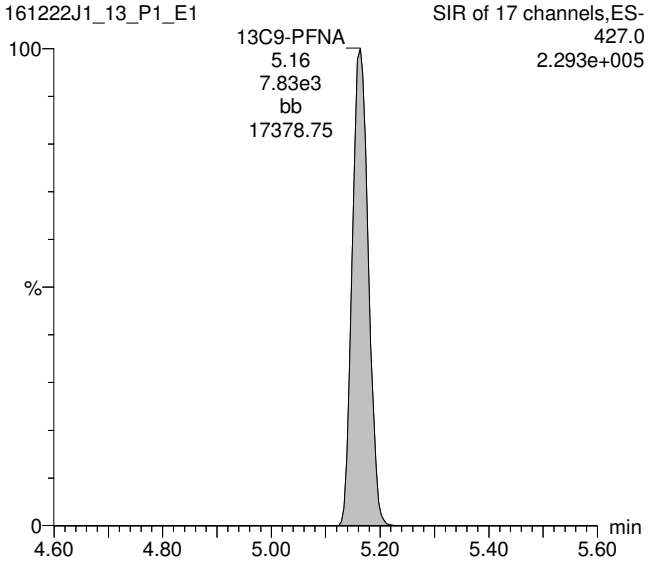
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_14.qld

Last Altered: Thursday, January 05, 2017 11:13:00 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:13:34 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-06, Description: OC-FB03-121616, Name: 161222J1_14.wiff, Date: 22-Dec-2016, Time: 17:50:40

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9	2.430e0	6.355e3		0.126	3.62	0.0459	
2	2	PFHpA	318.9	5.480e0	6.478e3		0.126	4.46	0.0982	
3	3	PFHxS	79.91	1.240e1	1.143e3		0.126	4.57		
4	4	PFOA	368.9	5.605e1	5.901e3		0.126	4.85	0.943	
5	5	PFOS	79.92	4.943e0	2.982e3		0.126	5.14	0.128	
6	6	PFNA	419.0		6.057e3		0.126			
7	7	13C3-PFBS	79.95	6.355e3	9.438e3	0.675	0.126	3.61	99.3	99.7
8	8	13C4-PFHpA	321.9	6.478e3	9.438e3	0.805	0.126	4.46	84.9	85.2
9	9	18O2-PFHxS	102.90	1.143e3	4.570e3	0.285	0.126	4.57	87.5	87.9
10	10	13C2-PFOA	369.9	5.901e3	8.008e3	0.960	0.126	4.85	76.4	76.8
11	11	13C8-PFOS	79.93	2.982e3	2.937e3	0.912	0.126	5.23	111	111
12	12	13C5-PFNA	422.9	6.057e3	6.348e3	0.943	0.126	5.17	101	101
13	13	13C5-PFHxA	273.0	9.438e3	9.438e3	1.000	0.126	3.97	99.6	100
14	14	13C3-PFHxS	80.01	4.570e3	4.570e3	1.000	0.126	4.57	99.6	100
15	15	13C8-PFOA	375.9	8.008e3	8.008e3	1.000	0.126	4.85	99.6	100
16	16	13C4-PFOS	79.94	2.937e3	2.937e3	1.000	0.126	5.23	99.6	100
17	17	13C9-PFNA	427.0	6.348e3	6.348e3	1.000	0.126	5.17	99.6	100
18	18	Total PFBS	79.9		6.355e3		0.126		0.0459	
19	19	Total PFHxS	79.91		1.143e3		0.126			
20	20	Total PFOA	368.9		5.901e3		0.126		0.943	
21	21	Total PFOS	79.92		2.982e3		0.126		0.128	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_14.qld

Last Altered: Thursday, January 05, 2017 11:13:00 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:13:34 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-06, Description: OC-FB03-121616, Name: 161222J1_14.wiff, Date: 22-Dec-2016, Time: 17:50:40

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.62	2.430	6354.841	0.0

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.57	12.403	1143.171	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.85	56.054	5900.890	0.9

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.14	4.943	2982.250	0.1

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

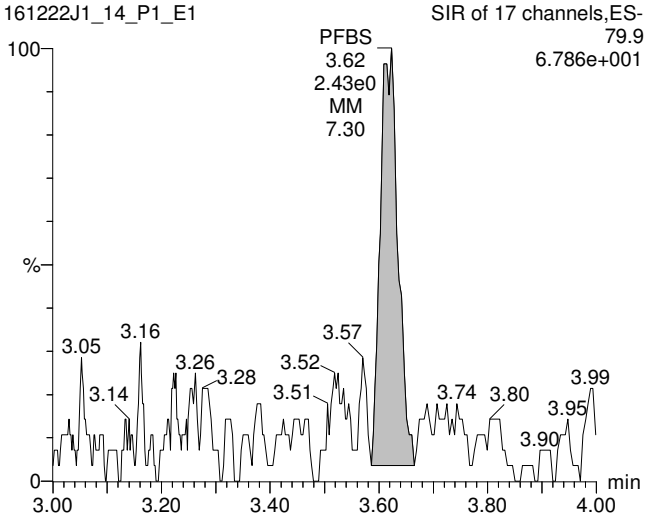
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_14.qld

Last Altered: Thursday, January 05, 2017 11:13:00 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:13:34 Pacific Standard Time

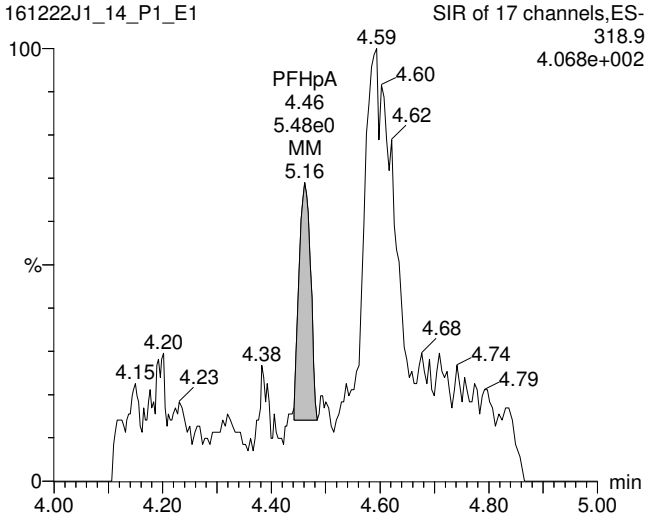
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-06, Description: OC-FB03-121616, Name: 161222J1_14.wiff, Date: 22-Dec-2016, Time: 17:50:40, Instrument: , Lab: ©PE-SCIEX, User: sciex

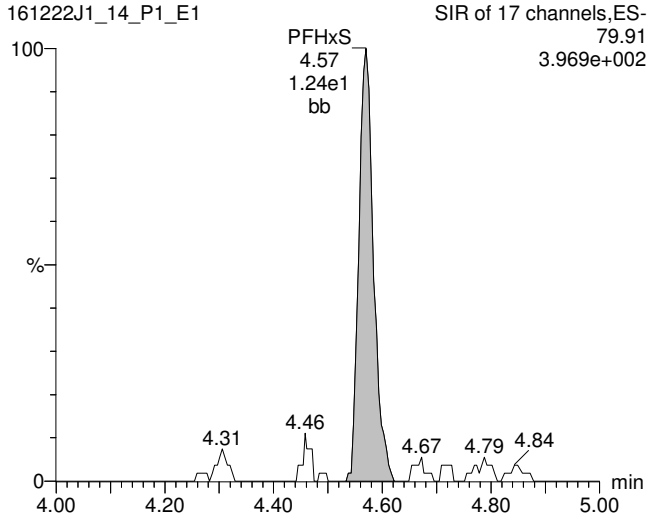
Total PFBS



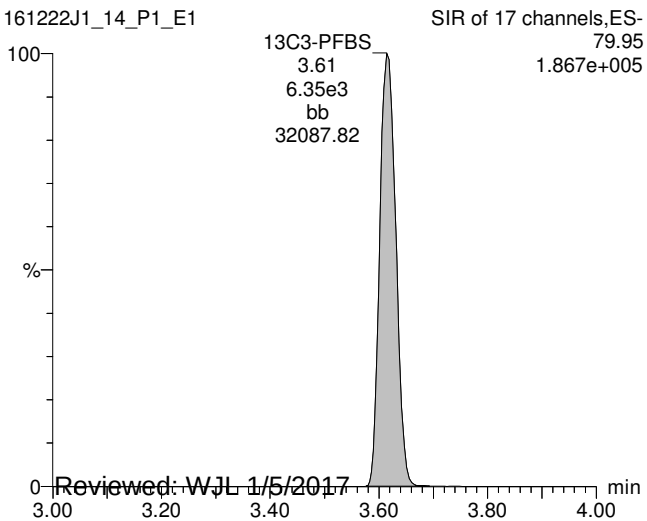
PFHpA



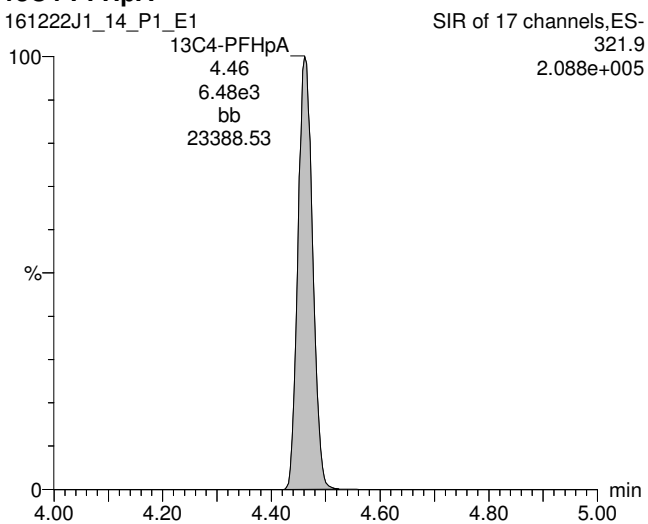
Total PFHxS



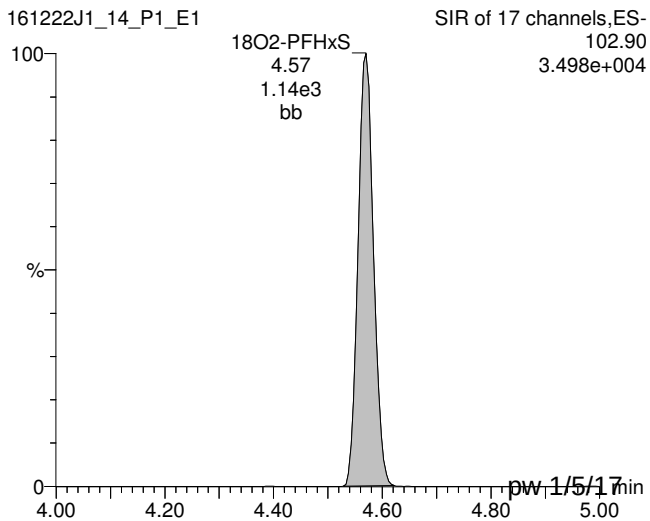
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



Reviewed: WJL 1/5/2017 pw 1/5/17

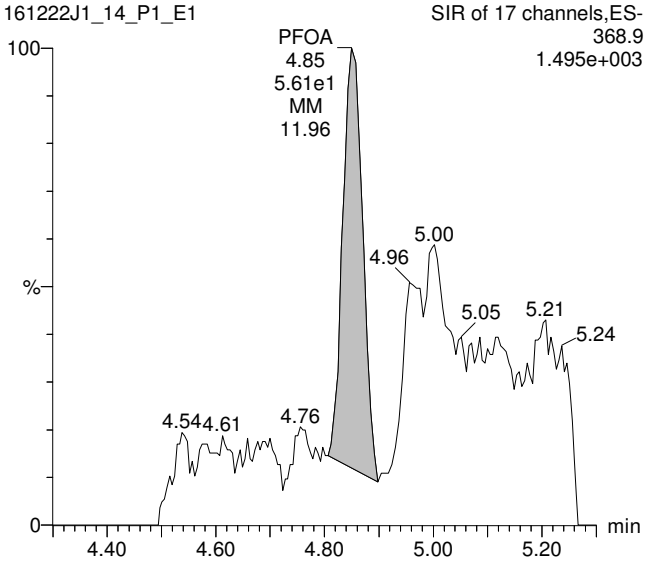
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_14.qld

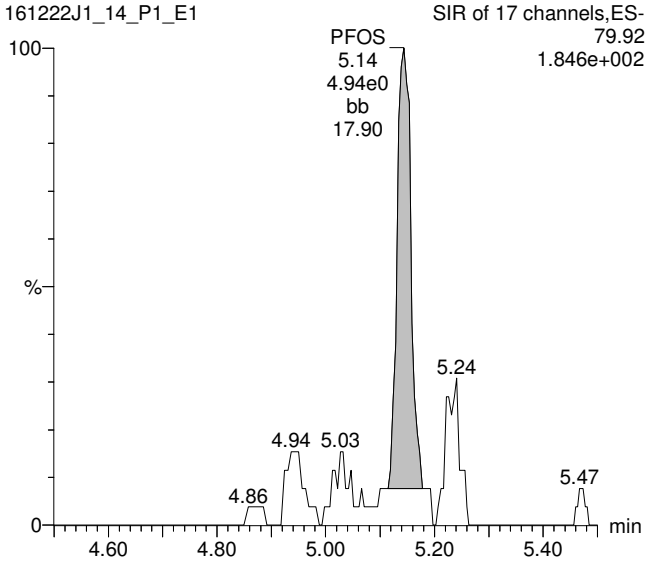
Last Altered: Thursday, January 05, 2017 11:13:00 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:13:34 Pacific Standard Time

ID: 1601579-06, Description: OC-FB03-121616, Name: 161222J1_14.wiff, Date: 22-Dec-2016, Time: 17:50:40, Instrument: , Lab: ©PE-SCIEX, User: sciex

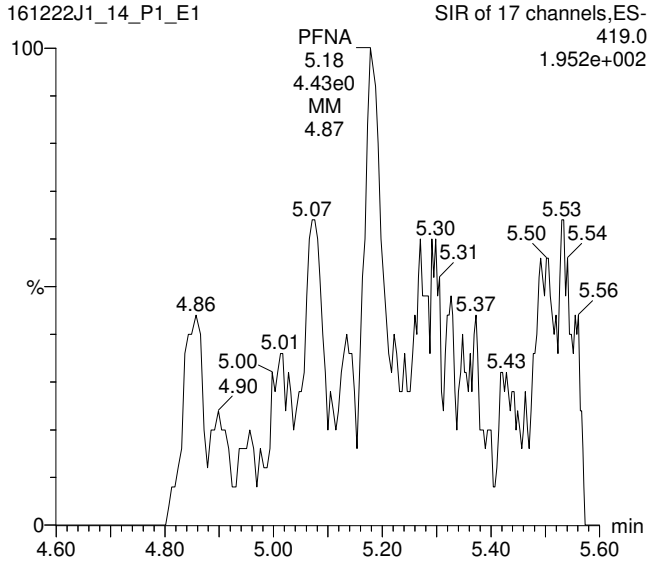
Total PFOA



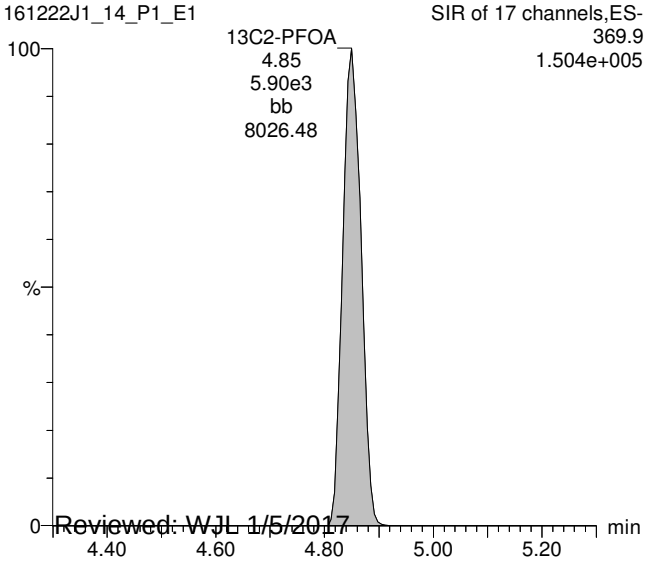
Total PFOS



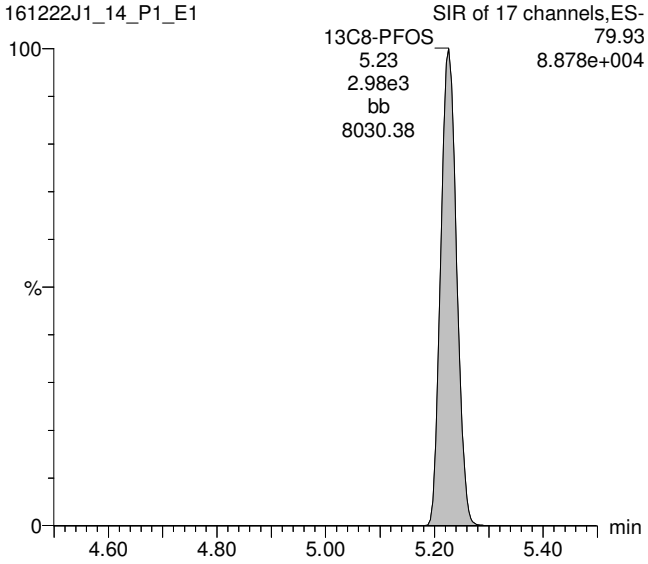
PFNA



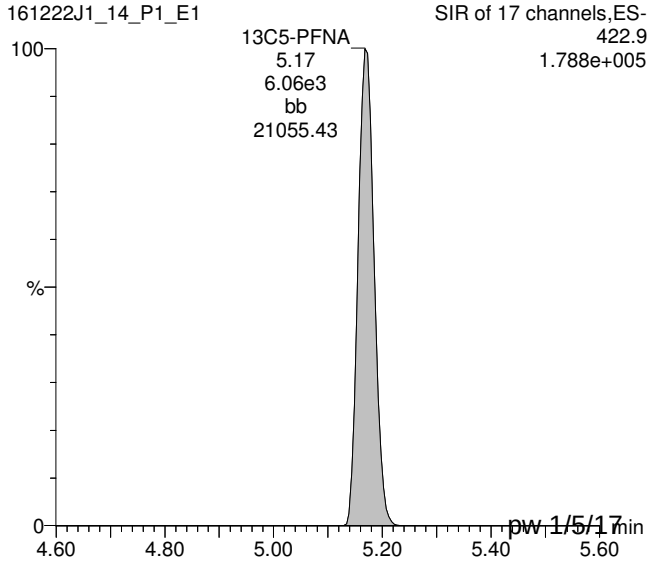
13C2-PFOA



13C8-PFOS



13C5-PFNA



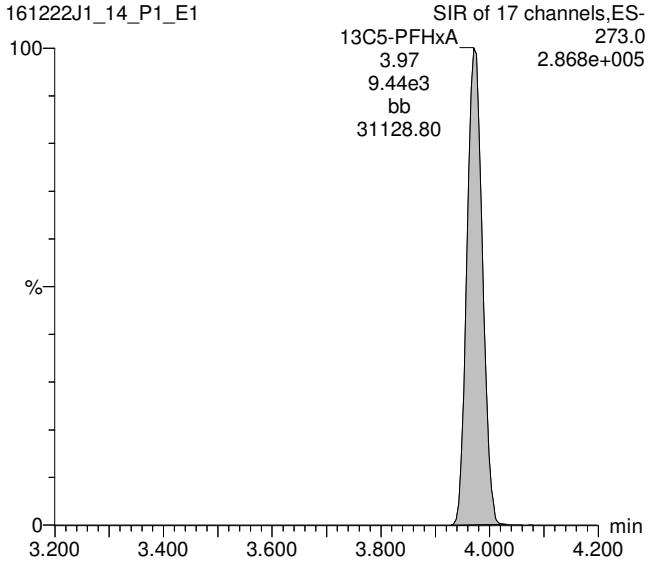
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_14.qld

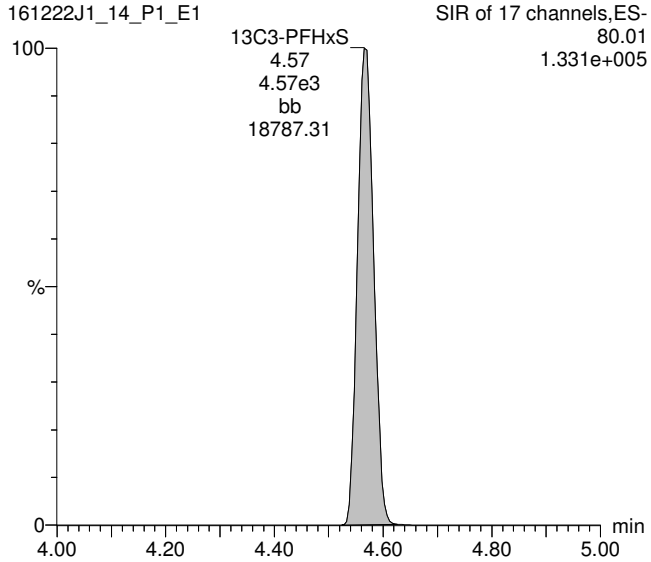
Last Altered: Thursday, January 05, 2017 11:13:00 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:13:34 Pacific Standard Time

ID: 1601579-06, Description: OC-FB03-121616, Name: 161222J1_14.wiff, Date: 22-Dec-2016, Time: 17:50:40, Instrument: , Lab: ©PE-SCIEX, User: sciex

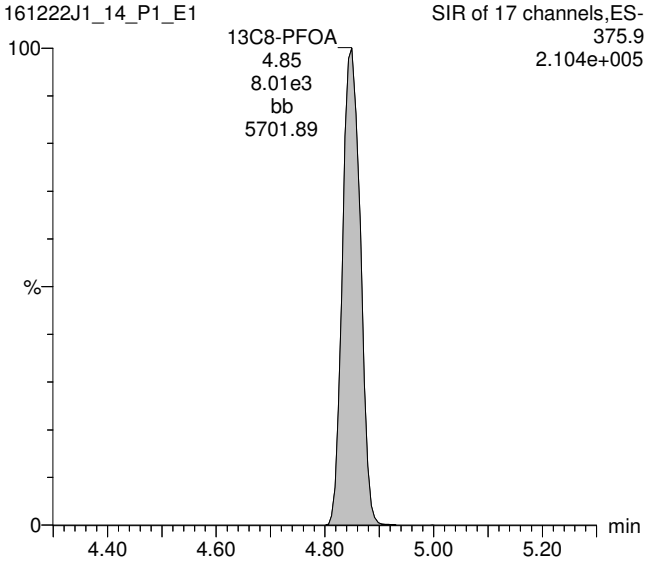
13C5-PFHxA



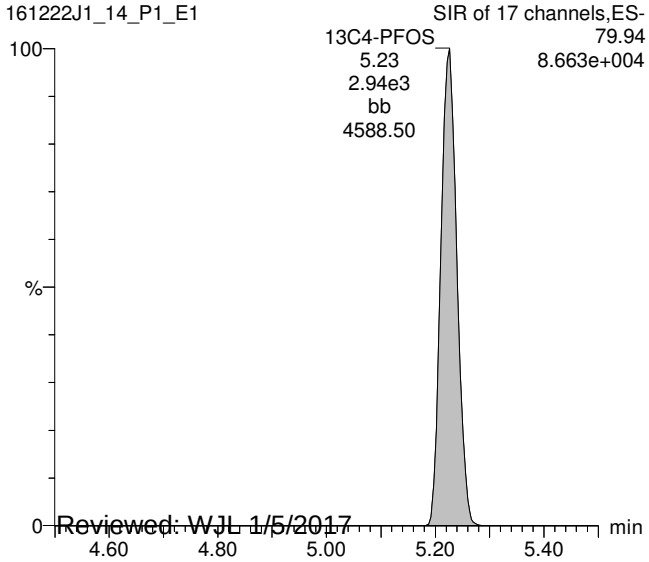
13C3-PFHxS



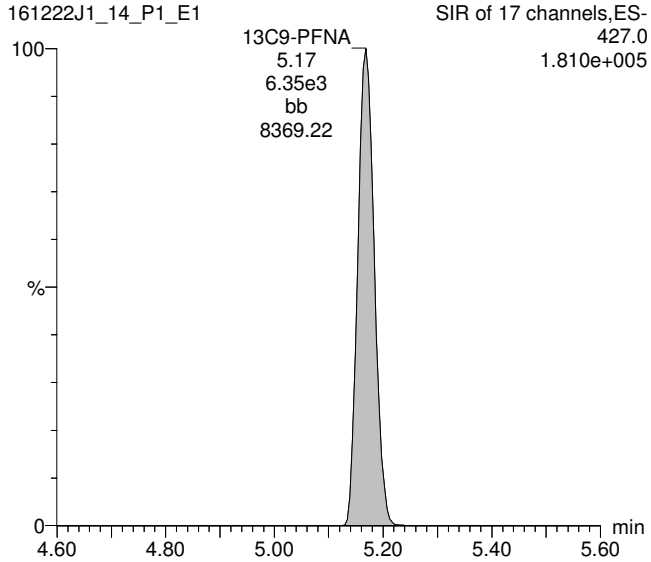
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017

pw 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_15.qld

Last Altered: Thursday, January 05, 2017 11:17:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:18:15 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-07, Description: OC-RW03P-1216, Name: 161222J1_15.wiff, Date: 22-Dec-2016, Time: 18:02:53

	#	Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1	PFBS	79.9		7.038e3		0.126			
2	2	PFHpA	318.9	6.769e0	7.107e3		0.126	4.48	0.110	
3	3	PFHxS	79.91	1.746e1	1.185e3		0.126	4.58		
4	4	PFOA	368.9	5.711e1	6.355e3		0.126	4.87	0.887	
5	5	PFOS	79.92	1.107e1	3.457e3		0.126	5.17	0.246	
6	6	PFNA	419.0		6.120e3		0.126			
7	7	13C3-PFBS	79.95	7.038e3	1.028e4	0.675	0.126	3.62	100	101
8	8	13C4-PFHpA	321.9	7.107e3	1.028e4	0.805	0.126	4.47	85.0	85.9
9	9	18O2-PFHxS	102.90	1.185e3	4.457e3	0.285	0.126	4.58	92.5	93.4
10	10	13C2-PFOA	369.9	6.355e3	7.510e3	0.960	0.126	4.87	87.3	88.1
11	11	13C8-PFOS	79.93	3.457e3	3.774e3	0.912	0.126	5.25	99.5	100
12	12	13C5-PFNA	422.9	6.120e3	8.362e3	0.943	0.126	5.19	76.9	77.6
13	13	13C5-PFHxA	273.0	1.028e4	1.028e4	1.000	0.126	3.97	99.0	100
14	14	13C3-PFHxS	80.01	4.457e3	4.457e3	1.000	0.126	4.58	99.0	100
15	15	13C8-PFOA	375.9	7.510e3	7.510e3	1.000	0.126	4.87	99.0	100
16	16	13C4-PFOS	79.94	3.774e3	3.774e3	1.000	0.126	5.25	99.0	100
17	17	13C9-PFNA	427.0	8.362e3	8.362e3	1.000	0.126	5.19	99.0	100
18	18	Total PFBS	79.9		7.038e3		0.126			
19	19	Total PFHxS	79.91		1.185e3		0.126			
20	20	Total PFOA	368.9		6.355e3		0.126		0.887	
21	21	Total PFOS	79.92		3.457e3		0.126		0.246	

Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_15.qld

Last Altered: Thursday, January 05, 2017 11:17:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:18:15 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-07, Description: OC-RW03P-1216, Name: 161222J1_15.wiff, Date: 22-Dec-2016, Time: 18:02:53

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1							

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.58	17.462	1184.966	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.87	57.111	6355.207	0.9

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.17	11.068	3456.844	0.2

Reviewed: WJL 1/5/2017 pw 1/5/17

Vista Analytical Laboratory Q1

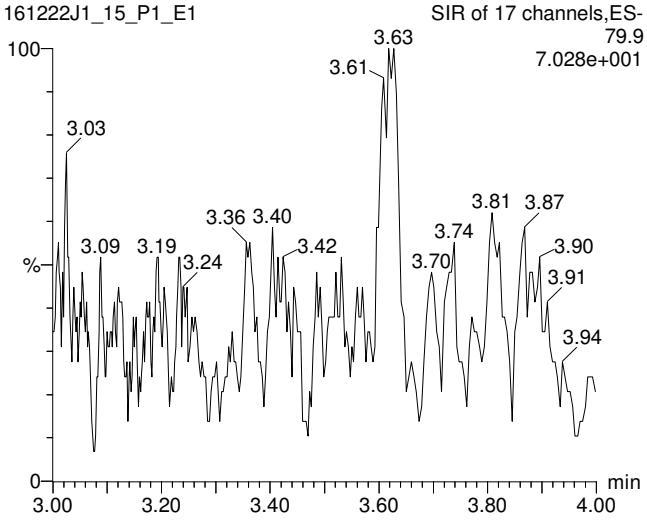
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_15.qld

Last Altered: Thursday, January 05, 2017 11:17:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:18:15 Pacific Standard Time

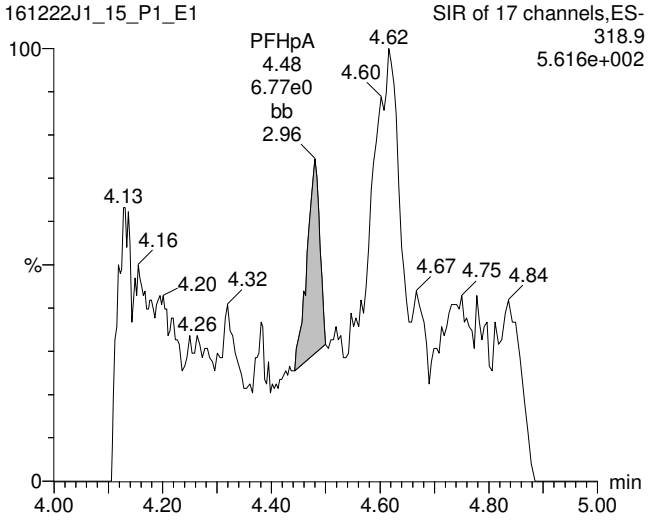
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 05 Jan 2017 10:57:10
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

ID: 1601579-07, Description: OC-RW03P-1216, Name: 161222J1_15.wiff, Date: 22-Dec-2016, Time: 18:02:53, Instrument: , Lab: ©PE-SCIEX, User: sciex

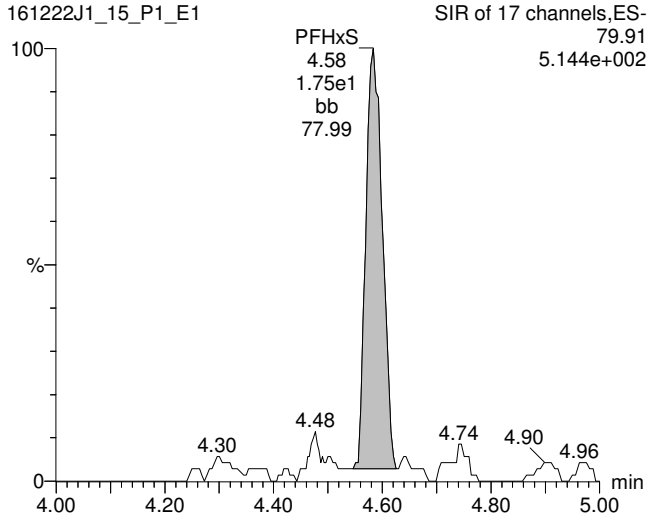
Total PFBS



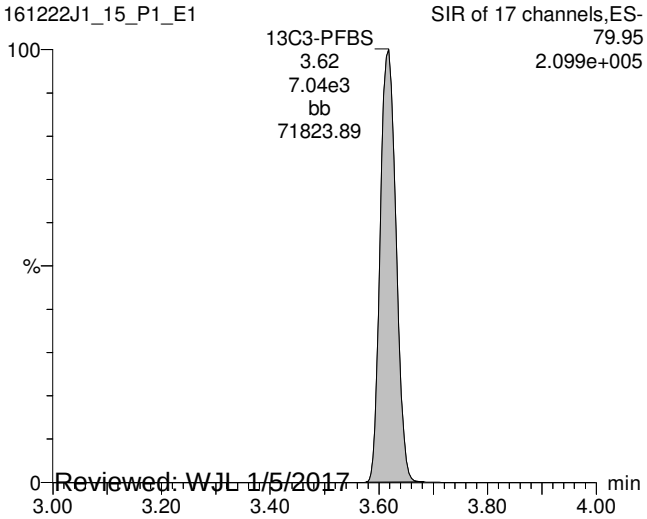
PFHpA



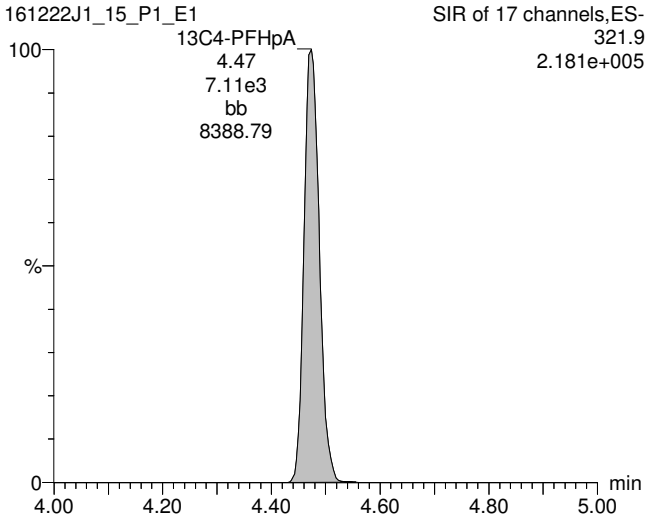
Total PFHxS



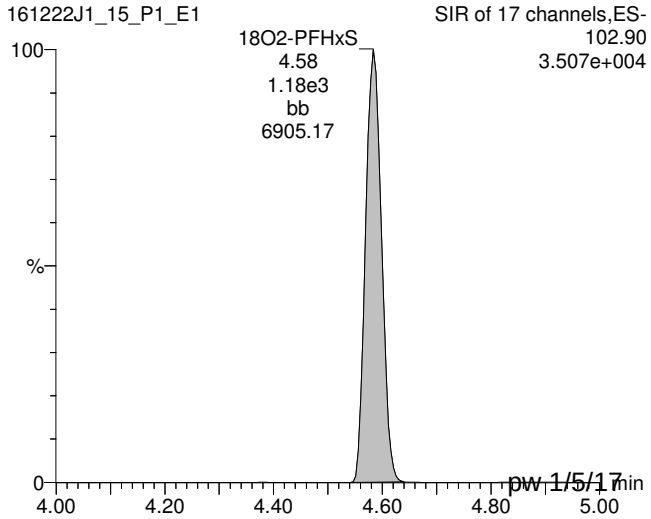
13C3-PFBS



13C4-PFHpA



18O2-PFHxS



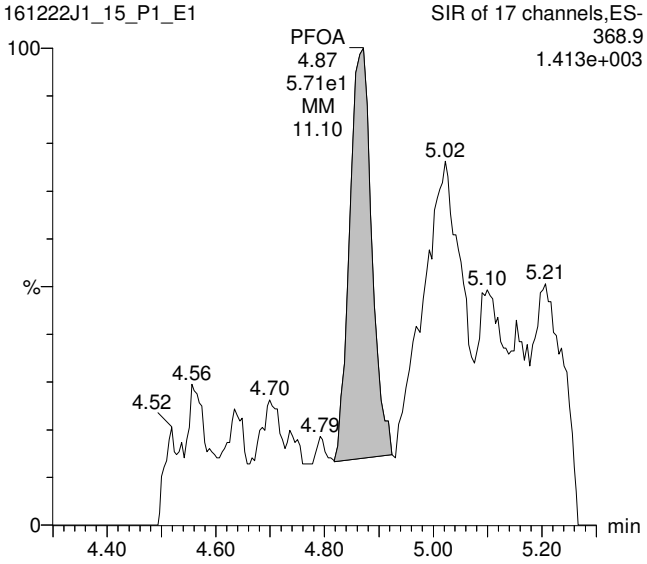
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_15.qld

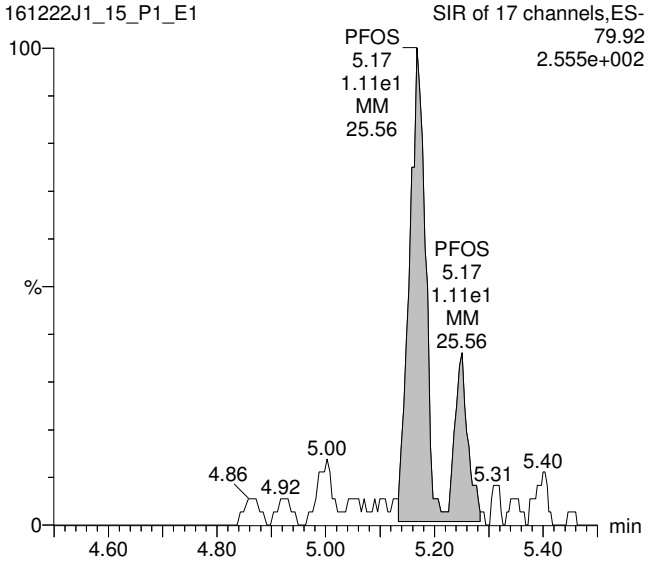
Last Altered: Thursday, January 05, 2017 11:17:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:18:15 Pacific Standard Time

ID: 1601579-07, Description: OC-RW03P-1216, Name: 161222J1_15.wiff, Date: 22-Dec-2016, Time: 18:02:53, Instrument: , Lab: ©PE-SCIEX, User: sciex

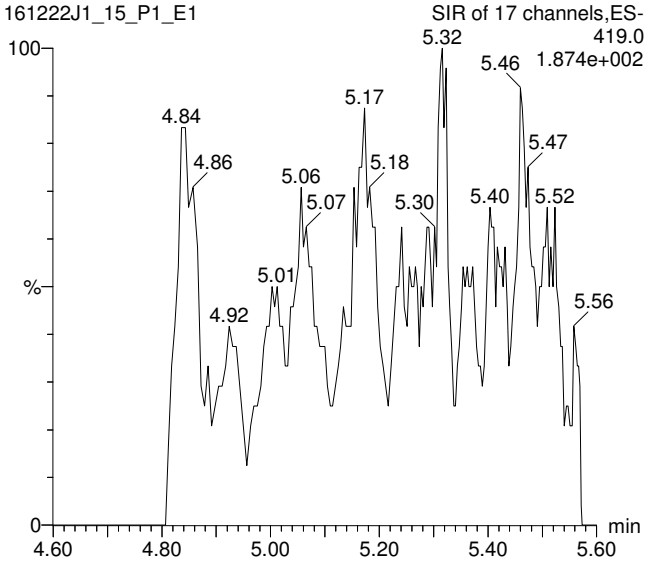
Total PFOA



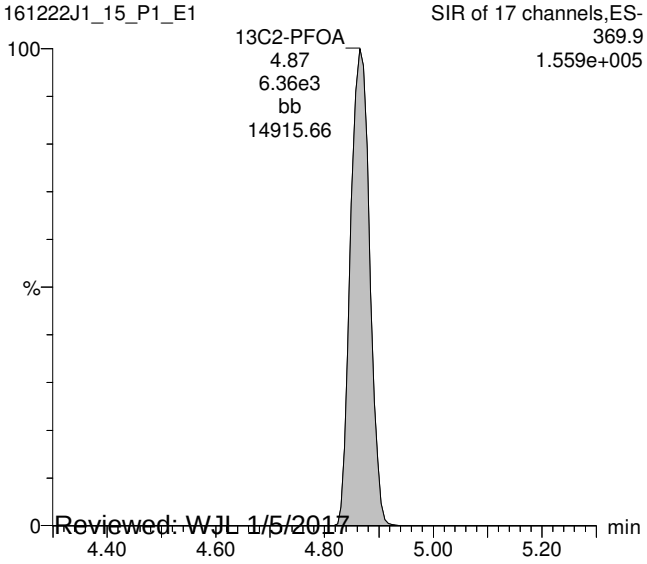
Total PFOS



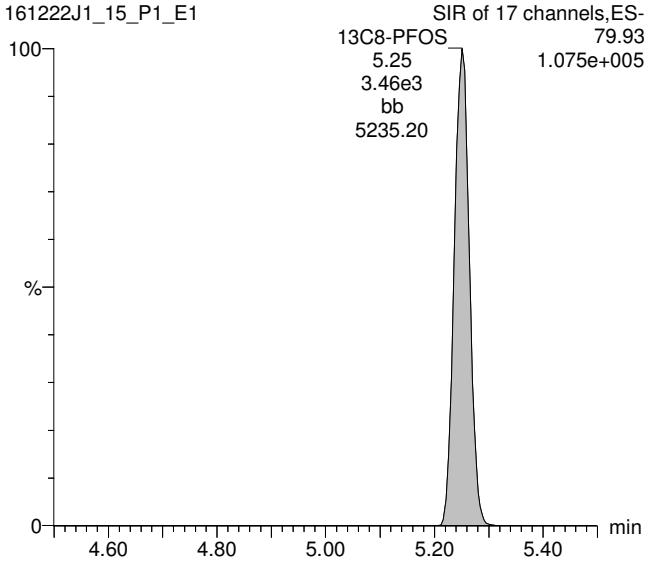
PFNA



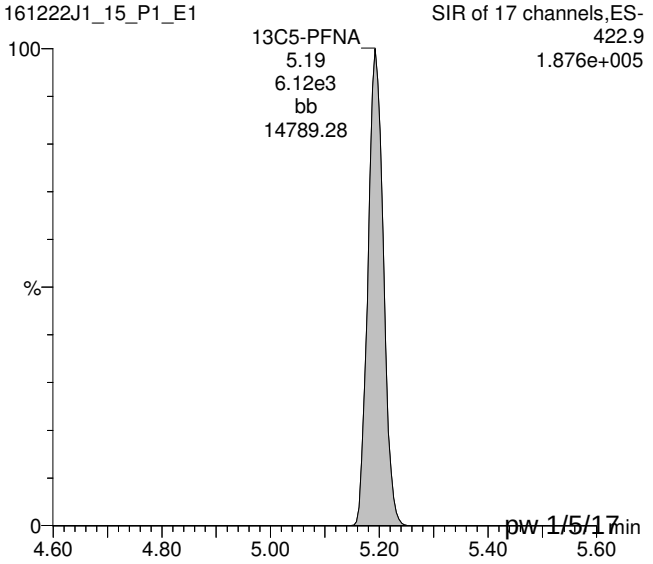
13C2-PFOA



13C8-PFOS



13C5-PFNA



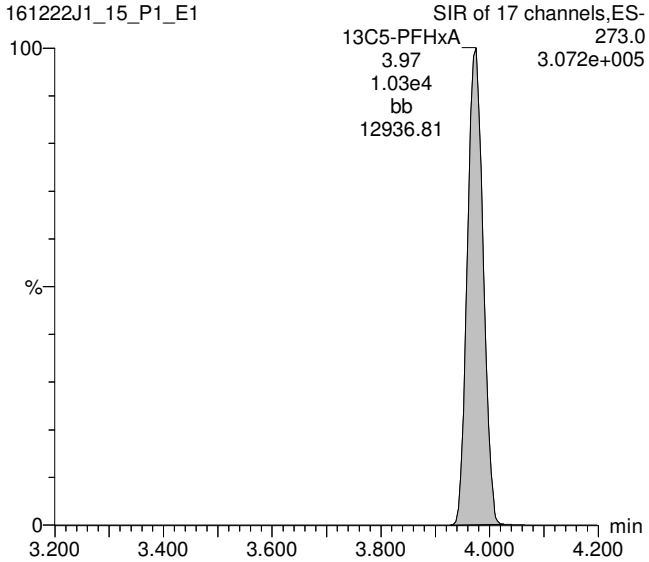
Reviewed: WJL 1/5/2017 pw 1/5/17

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_15.qld

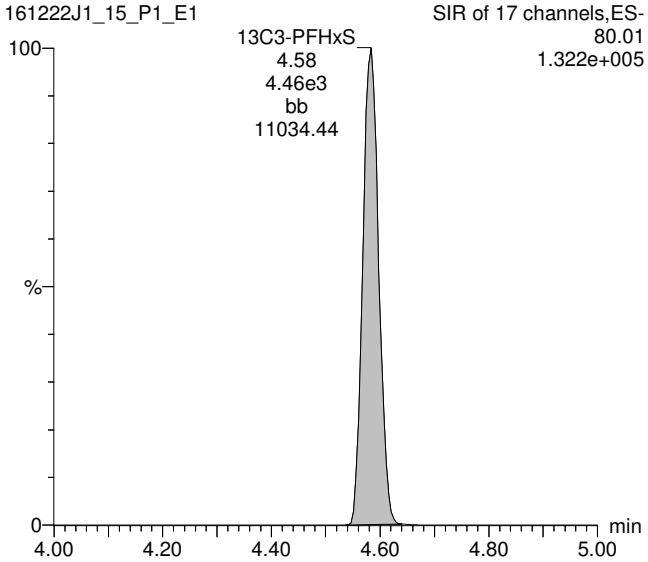
Last Altered: Thursday, January 05, 2017 11:17:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 11:18:15 Pacific Standard Time

ID: 1601579-07, Description: OC-RW03P-1216, Name: 161222J1_15.wiff, Date: 22-Dec-2016, Time: 18:02:53, Instrument: , Lab: ©PE-SCIEX, User: sciex

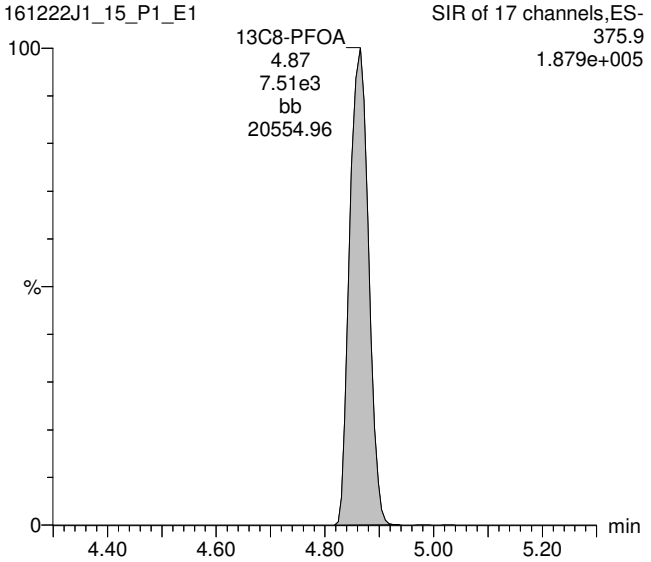
13C5-PFHxA



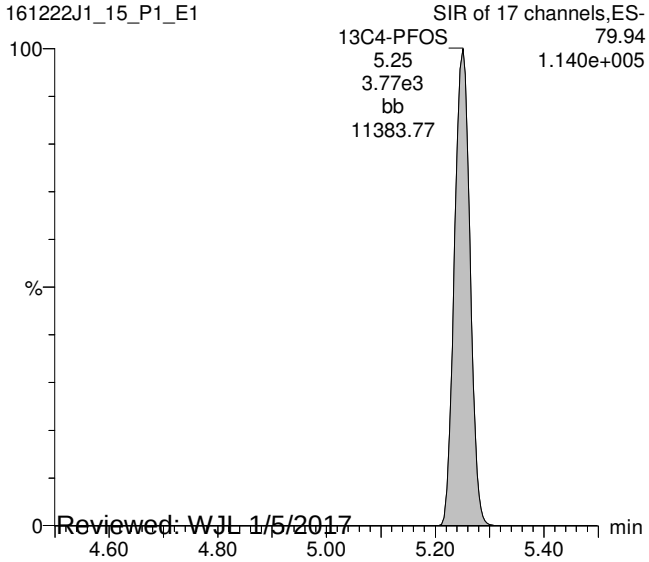
13C3-PFHxS



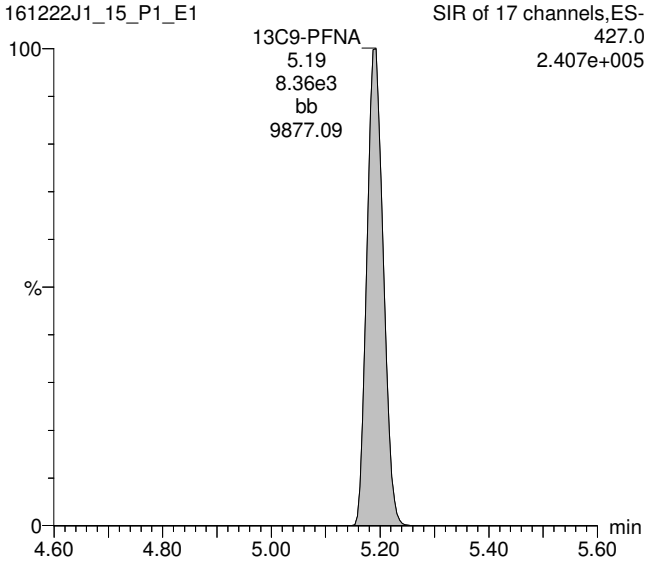
13C8-PFOA



13C4-PFOS



13C9-PFNA



Reviewed: WJL 1/5/2017 pw 1/5/17

CONTINUING CALIBRATION

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_02.qld

Last Altered: Thursday, January 05, 2017 10:28:11 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:29:21 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 03 Jan 2017 15:38:51
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161222J1_02.wiff, Date: 22-Dec-2016, Time: 15:24:16, ID: ST161222J1-1 PFC C3 16L2232, Description: PFC C3 16L2232 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	79.9	5.78e3	8.20e3		1.000	3.61	10.8	107.9
2	2	PFHpA	318.9	6.69e3	8.09e3		1.000	4.47	12.4	123.7
3	3	PFHxS	79.91	4.08e3	1.54e3		1.000	4.59	11.1	111.3
4	4	PFOA	368.9	6.80e3	8.64e3		1.000	4.88	10.1	101.2
5	5	PFOS	79.92	4.36e3	4.69e3		1.000	5.24	9.14	91.4
6	6	PFNA	419.0	6.24e3	8.96e3		1.000	5.19	10.7	107.1
7	7	13C3-PFBS	79.95	8.20e3	1.18e4	0.675	1.000	3.60	12.9	102.9
8	8	13C4-PFHpA	321.9	8.09e3	1.18e4	0.805	1.000	4.47	10.6	85.1
9	9	18O2-PFHxS	102.90	1.54e3	5.25e3	0.285	1.000	4.59	12.9	103.1
10	10	13C2-PFOA	369.9	8.64e3	9.14e3	0.960	1.000	4.88	12.3	98.5
11	11	13C8-PFOS	79.93	4.69e3	4.86e3	0.912	1.000	5.24	13.2	105.8
12	12	13C5-PFNA	422.9	8.96e3	9.05e3	0.943	1.000	5.19	13.1	104.9
13	13	13C5-PFHxA	273.0	1.18e4	1.18e4	1.000	1.000	3.96	12.5	100.0
14	14	13C3-PFHxS	80.01	5.25e3	5.25e3	1.000	1.000	4.58	12.5	100.0
15	15	13C8-PFOA	375.9	9.14e3	9.14e3	1.000	1.000	4.87	12.5	100.0
16	16	13C4-PFOS	79.94	4.86e3	4.86e3	1.000	1.000	5.23	12.5	100.0
17	17	13C9-PFNA	427.0	9.05e3	9.05e3	1.000	1.000	5.19	12.5	100.0
18	18	Total PFBS	79.9		8.20e3		1.000		10.8	
19	19	Total PFHxS	79.91		1.54e3		1.000		11.1	
20	20	Total PFOA	368.9		8.64e3		1.000		10.1	
21	21	Total PFOS	79.92		4.69e3		1.000		9.14	

75-125
60-150
50-150

PLW 1/5/17
AMSC 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_02.qld

Last Altered: Thursday, January 05, 2017 10:28:11 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:29:21 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 03 Jan 2017 15:38:51
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161222J1_02.wiff, Date: 22-Dec-2016, Time: 15:24:16, ID: ST161222J1-1 PFC C3 16L2232, Description: PFC C3 16L2232 A

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	5.78e3	8.20e3	10.8

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.59	4.08e3	1.54e3	11.1

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.88	6.80e3	8.64e3	10.1

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.24	4.36e3	4.69e3	9.14

Printing Time: 11:43:54
Printing Date: Thursday, January 05, 2017

	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161222J1_01	12/22/2016 15:12:03	IPA	IPA
2	161222J1_02	12/22/2016 15:24:16	ST161222J1-1 PFC C3 16L2232	PFC C3 16L2232 A
3	161222J1_03	12/22/2016 15:36:25	IPA	IPA
4	161222J1_04	12/22/2016 15:48:39	B6L0115-BS1	OPR
5	161222J1_05	12/22/2016 16:00:50	IPA	IPA
6	161222J1_06	12/22/2016 16:13:01	B6L0115-BLK1	Method Blank
7	161222J1_07	12/22/2016 16:25:16	1601579-01	OC-RW12-1216
8	161222J1_08	12/22/2016 16:37:25	1601579-02	OC-FB12-1216
9	161222J1_09	12/22/2016 16:49:39	1601579-03	OC-RW01-1216
10	161222J1_10	12/22/2016 17:01:51	B6L0115-MS1	Matrix Spike
11	161222J1_11	12/22/2016 17:14:01	B6L0115-MSD1	Matrix Spike Dup
12	161222J1_12	12/22/2016 17:26:16	1601579-04	OC-FB01-121616
13	161222J1_13	12/22/2016 17:38:25	1601579-05	OC-RW03-1216
14	161222J1_14	12/22/2016 17:50:40	1601579-06	OC-FB03-121616
15	161222J1_15	12/22/2016 18:02:53	1601579-07	OC-RW03P-1216
16	161222J1_16	12/22/2016 18:15:06	1601581-01	MATPEW035
17	161222J1_17	12/22/2016 18:27:17	1601581-02	MATPEW038
18	161222J1_18	12/22/2016 18:39:33	IPA	IPA
19	161222J1_19	12/22/2016 18:51:46	ST161222J1-2 PFC C3 16L2232	PFC C3 16L2232 A
20	161222J1_20	12/22/2016 19:03:58	IPA	IPA

LC Calibration Standards Review Checklist Q2

		Level	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manaul Integrations	NA
Calibration ID:	ST161222J1-1	L (M) H	☐ NA	☑	☑	☑	☑	☑	☐
Calibration ID:	↓ -2	L (M) H	☑ ↓	☑	☑	☑	☑	☑	☑ ↓
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐
Calibration ID:		L M H	☐	☐	☐	☐	☐	☐	☐

Full Mass Cal. Date: 10/14/16

Run Log Present: ☑

# of Samples per Sequence Checked: ☑

Reviewed By: AMSC 1/5/17
Initials/Date

Comments:
PFC List6

Vista Analytical Laboratory Q2

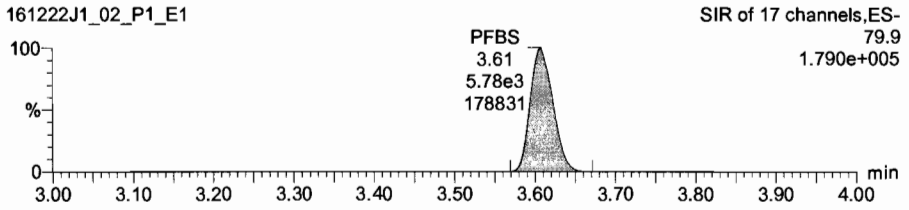
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_02.qld

Last Altered: Thursday, January 05, 2017 10:28:11 AM Pacific Standard Time
Printed: Thursday, January 05, 2017 10:30:35 AM Pacific Standard Time

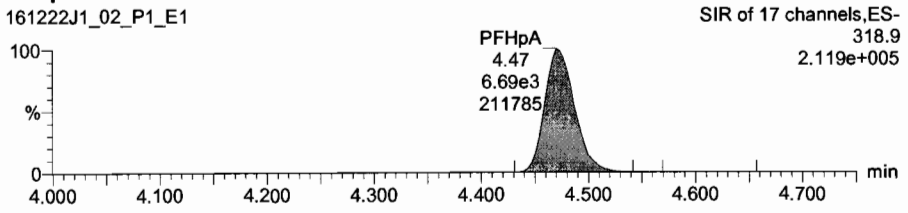
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 03 Jan 2017 15:38:51
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161222J1_02.wiff, Date: 22-Dec-2016, Time: 15:24:16, ID: ST161222J1-1 PFC C3 16L2232, Description: PFC C3 16L2232 A

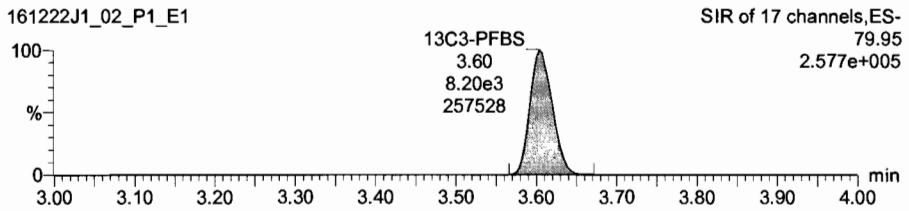
PFBS



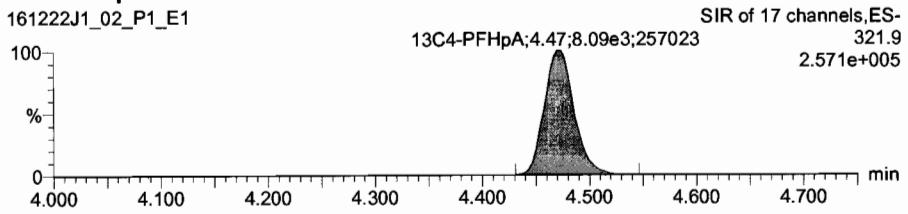
PFHpA



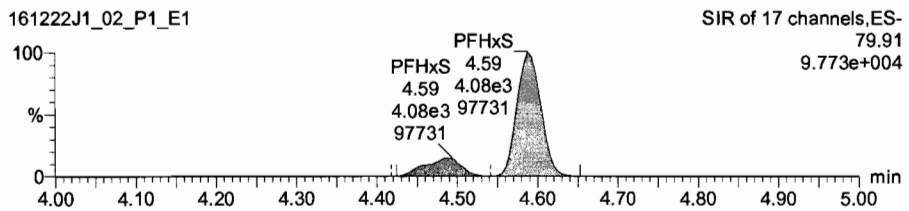
13C3-PFBS



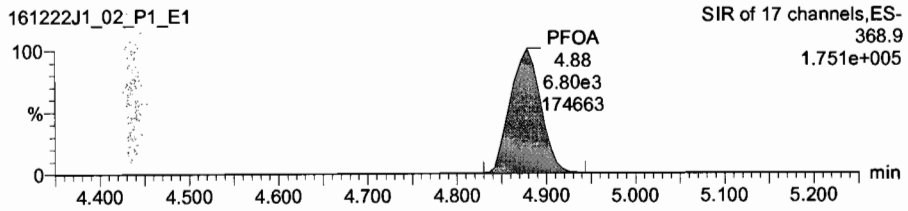
13C4-PFHpA



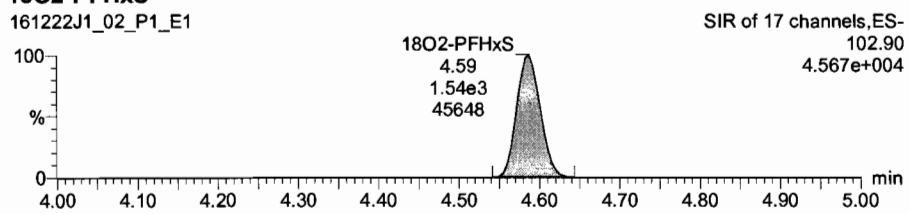
PFHxS



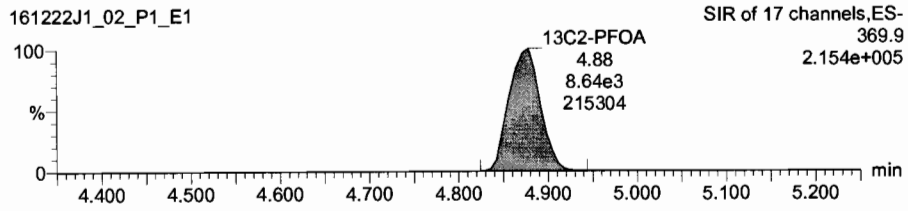
PFOA



18O2-PFHxS



13C2-PFOA



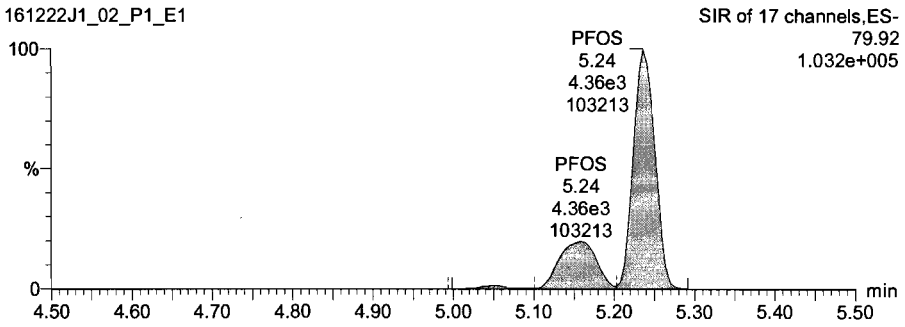
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_02.qld

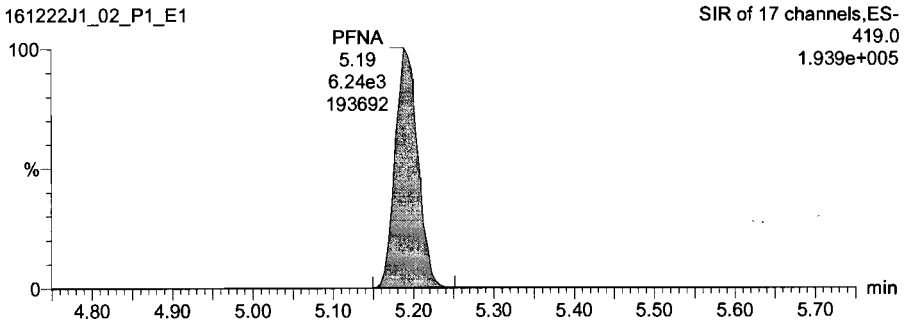
Last Altered: Thursday, January 05, 2017 10:28:11 AM Pacific Standard Time
Printed: Thursday, January 05, 2017 10:30:35 AM Pacific Standard Time

Name: 161222J1_02.wiff, Date: 22-Dec-2016, Time: 15:24:16, ID: ST161222J1-1 PFC C3 16L2232, Description: PFC C3 16L2232 A

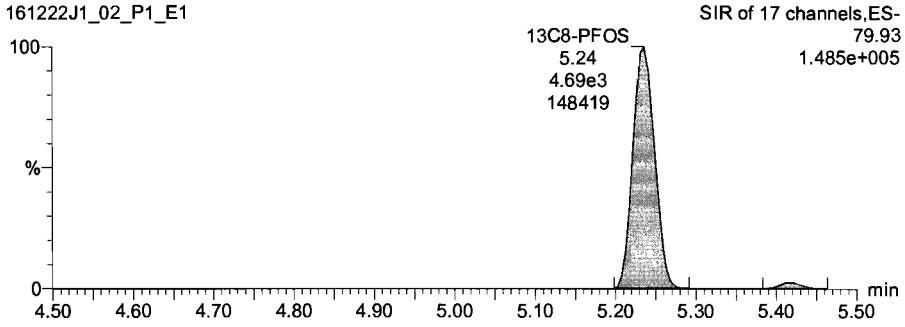
PFOS



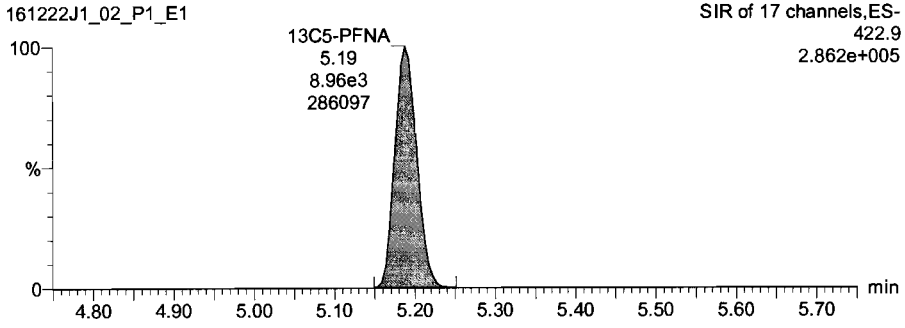
PFNA

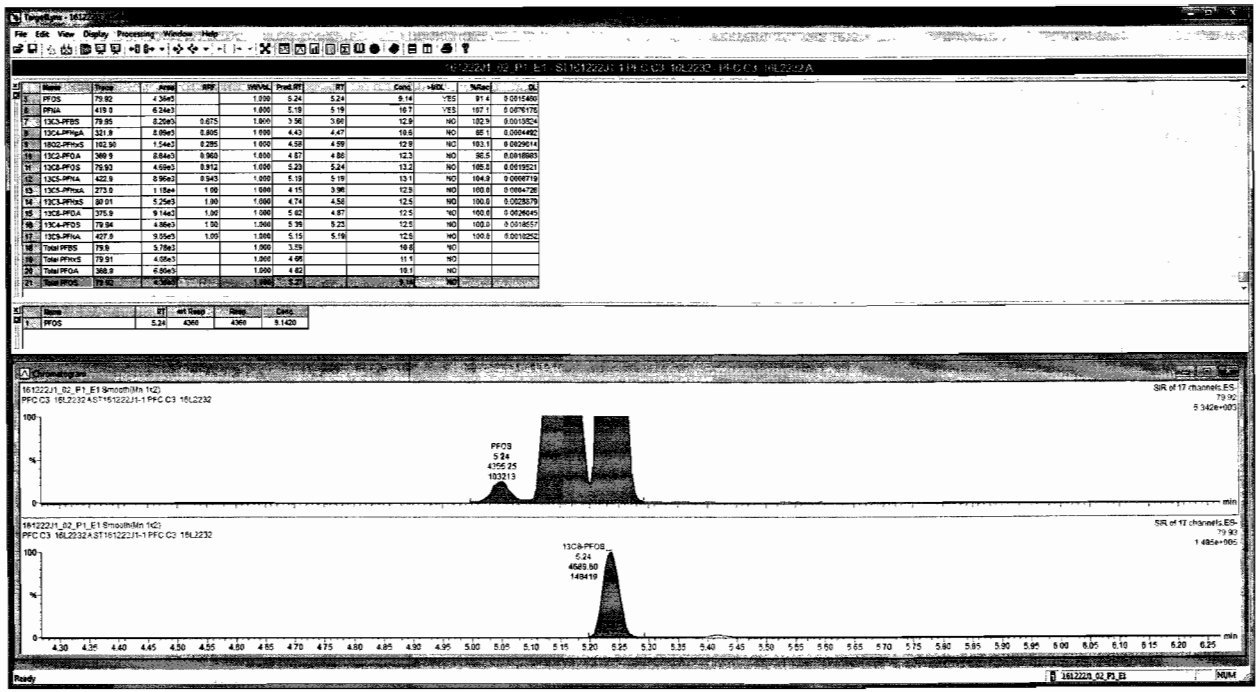


13C8-PFOS



13C5-PFNA




PFOS
5.24
4356.25
103213
13C8-PFOS
5.24
4589.80
149419

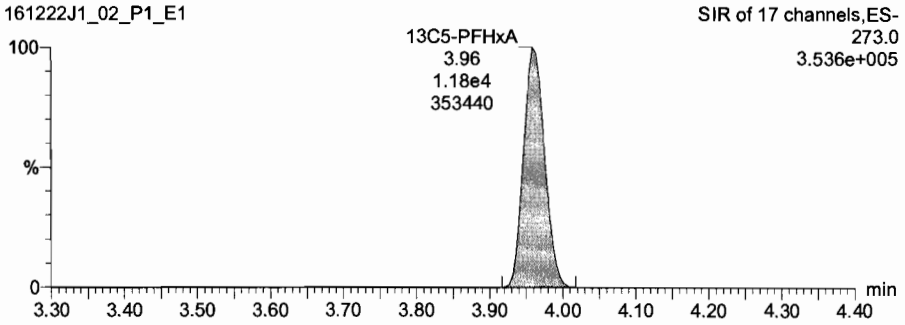
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_02.qld

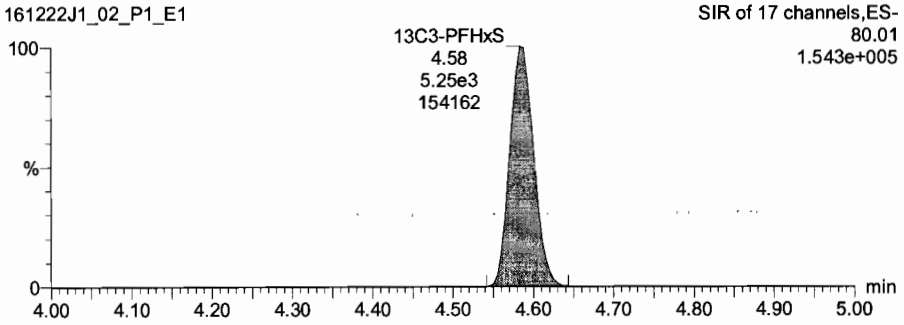
Last Altered: Thursday, January 05, 2017 10:28:11 AM Pacific Standard Time
Printed: Thursday, January 05, 2017 10:30:35 AM Pacific Standard Time

Name: 161222J1_02.wiff, Date: 22-Dec-2016, Time: 15:24:16, ID: ST161222J1-1 PFC C3 16L2232, Description: PFC C3 16L2232 A

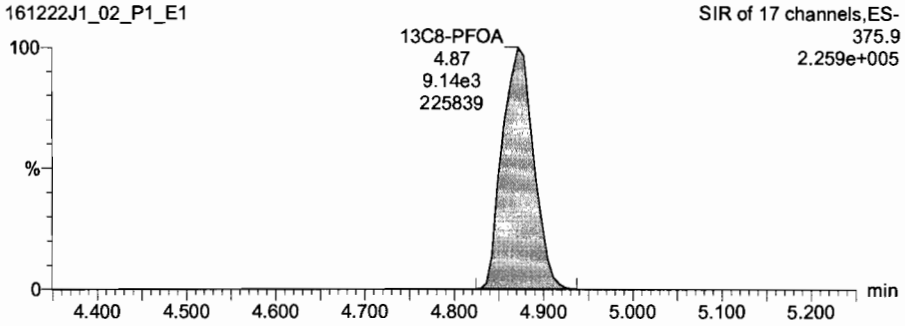
13C5-PFHxA



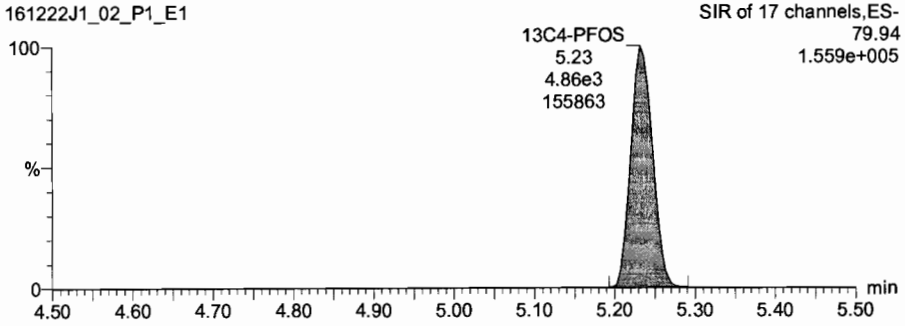
13C3-PFHxS



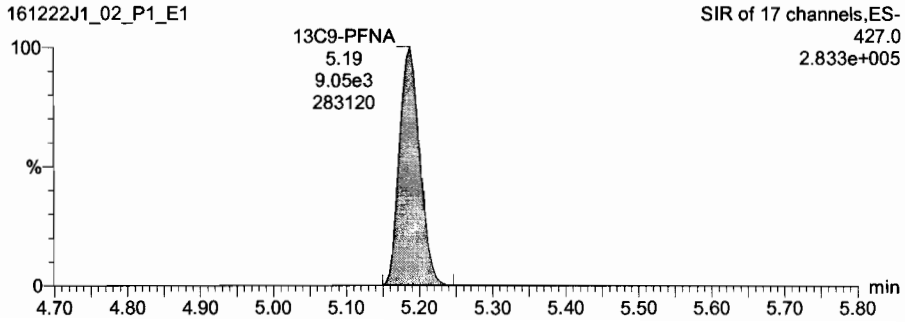
13C8-PFOA



13C4-PFOS



13C9-PFNA



Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_19.qld

Last Altered: Thursday, January 05, 2017 10:34:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:34:53 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 03 Jan 2017 15:38:51
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161222J1_19.wiff, Date: 22-Dec-2016, Time: 18:51:46, ID: ST161222J1-2 PFC C3 16L2232, Description: PFC C3 16L2232 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	79.9	5.48e3	8.03e3		1.000	3.61	10.4	104.4
2	2	PFHpA	318.9	6.64e3	8.90e3		1.000	4.47	11.1	111.2
3	3	PFHxS	79.91	3.86e3	1.49e3		1.000	4.58	10.9	108.9
4	4	PFOA	368.9	7.40e3	8.28e3		1.000	4.87	11.5	115.4
5	5	PFOS	79.92	4.30e3	4.55e3		1.000	5.25	9.30	93.0
6	6	PFNA	419.0	6.03e3	8.66e3		1.000	5.19	10.7	107.1
7	7	13C3-PFBS	79.95	8.03e3	1.15e4	0.675	1.000	3.61	13.0	103.8
8	8	13C4-PFHpA	321.9	8.90e3	1.15e4	0.805	1.000	4.46	12.1	96.5
9	9	18O2-PFHxS	102.90	1.49e3	5.07e3	0.285	1.000	4.58	12.9	103.4
10	10	13C2-PFOA	369.9	8.28e3	8.55e3	0.960	1.000	4.87	12.6	100.8
11	11	13C8-PFOS	79.93	4.55e3	4.35e3	0.912	1.000	5.25	14.3	114.7
12	12	13C5-PFNA	422.9	8.66e3	9.05e3	0.943	1.000	5.19	12.7	101.5
13	13	13C5-PFHxA	273.0	1.15e4	1.15e4	1.000	1.000	3.96	12.5	100.0
14	14	13C3-PFHxS	80.01	5.07e3	5.07e3	1.000	1.000	4.58	12.5	100.0
15	15	13C8-PFOA	375.9	8.55e3	8.55e3	1.000	1.000	4.86	12.5	100.0
16	16	13C4-PFOS	79.94	4.35e3	4.35e3	1.000	1.000	5.25	12.5	100.0
17	17	13C9-PFNA	427.0	9.05e3	9.05e3	1.000	1.000	5.19	12.5	100.0
18	18	Total PFBS	79.9		8.03e3		1.000		10.4	
19	19	Total PFHxS	79.91		1.49e3		1.000		10.9	
20	20	Total PFOA	368.9		8.28e3		1.000		11.5	
21	21	Total PFOS	79.92		4.55e3		1.000		9.30	

75-125
60-150
50-150

PW
1/5/17

Amsc 1/5/17

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_19.qld

Last Altered: Thursday, January 05, 2017 10:34:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:34:53 Pacific Standard Time

Method: U:\Q2.pro\MethDB\PFC List 6.mdb 03 Jan 2017 15:38:51
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161222J1_19.wiff, Date: 22-Dec-2016, Time: 18:51:46, ID: ST161222J1-2 PFC C3 16L2232, Description: PFC C3 16L2232 A

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.61	5.48e3	8.03e3	10.4

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.58	3.86e3	1.49e3	10.9

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.87	7.40e3	8.28e3	11.5

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.25	4.30e3	4.55e3	9.30

	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161222J1_01	12/22/2016 15:12:03	IPA	IPA
2	161222J1_02	12/22/2016 15:24:16	ST161222J1-1 PFC C3 16L2232	PFC C3 16L2232 A
3	161222J1_03	12/22/2016 15:36:25	IPA	IPA
4	161222J1_04	12/22/2016 15:48:39	B6L0115-BS1	OPR
5	161222J1_05	12/22/2016 16:00:50	IPA	IPA
6	161222J1_06	12/22/2016 16:13:01	B6L0115-BLK1	Method Blank
7	161222J1_07	12/22/2016 16:25:16	1601579-01	OC-RW12-1216
8	161222J1_08	12/22/2016 16:37:25	1601579-02	OC-FB12-1216
9	161222J1_09	12/22/2016 16:49:39	1601579-03	OC-RW01-1216
10	161222J1_10	12/22/2016 17:01:51	B6L0115-MS1	Matrix Spike
11	161222J1_11	12/22/2016 17:14:01	B6L0115-MSD1	Matrix Spike Dup
12	161222J1_12	12/22/2016 17:26:16	1601579-04	OC-FB01-121616
13	161222J1_13	12/22/2016 17:38:25	1601579-05	OC-RW03-1216
14	161222J1_14	12/22/2016 17:50:40	1601579-06	OC-FB03-121616
15	161222J1_15	12/22/2016 18:02:53	1601579-07	OC-RW03P-1216
16	161222J1_16	12/22/2016 18:15:06	1601581-01	MATPEW035
17	161222J1_17	12/22/2016 18:27:17	1601581-02	MATPEW038
18	161222J1_18	12/22/2016 18:39:33	IPA	IPA
19	161222J1_19	12/22/2016 18:51:46	ST161222J1-2 PFC C3 16L2232	PFC C3 16L2232 A
20	161222J1_20	12/22/2016 19:03:58	IPA	IPA

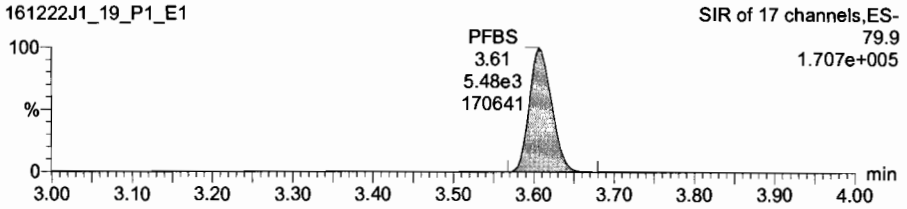
Dataset: U:\Q2.PRO\Results\161222J1\161222J1_19.qld

Last Altered: Thursday, January 05, 2017 10:34:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:35:13 Pacific Standard Time

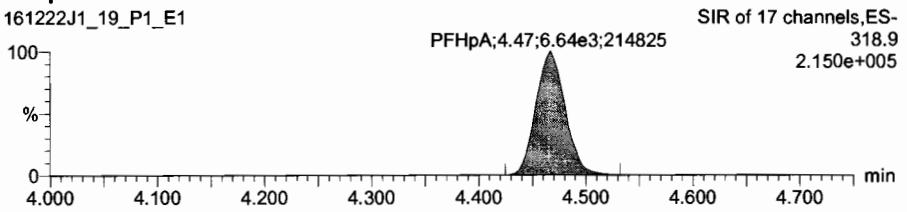
Method: U:\Q2.pro\MethDB\PFC List 6.mdb 03 Jan 2017 15:38:51
Calibration: U:\Q2.pro\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161222J1_19.wiff, Date: 22-Dec-2016, Time: 18:51:46, ID: ST161222J1-2 PFC C3 16L2232, Description: PFC C3 16L2232 A

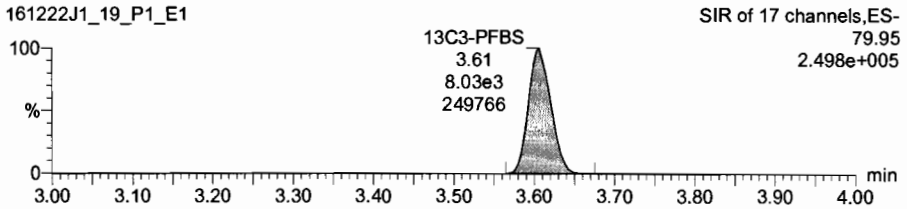
PFBS



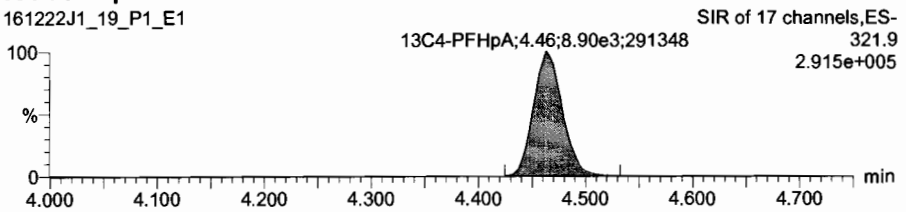
PFHpA



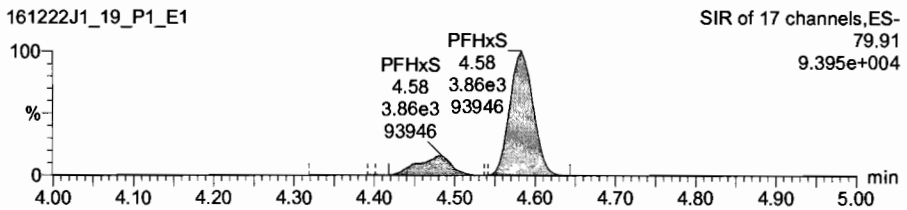
13C3-PFBS



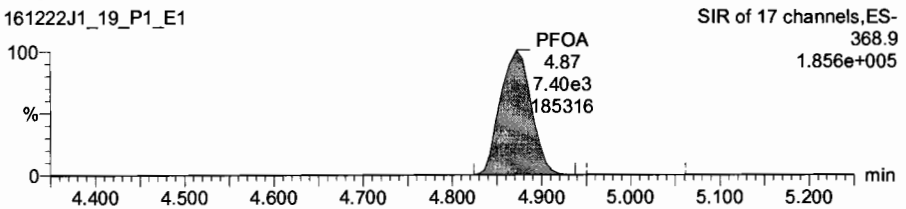
13C4-PFHpA



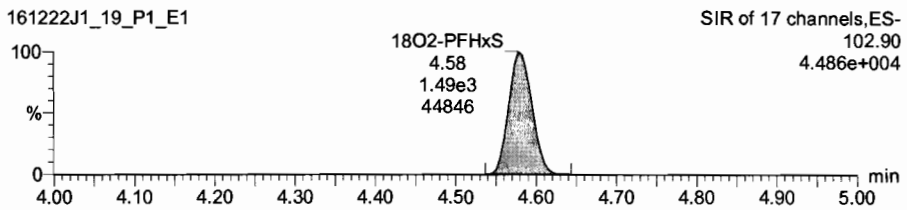
PFHxS



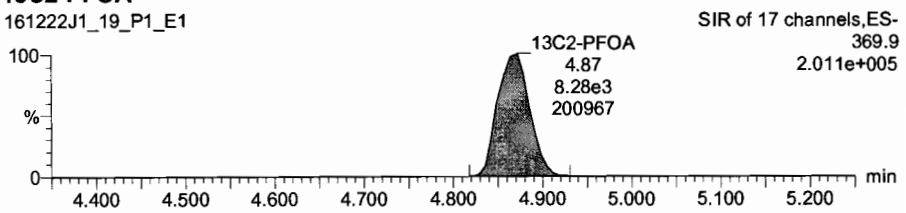
PFOA



18O2-PFHxS



13C2-PFOA



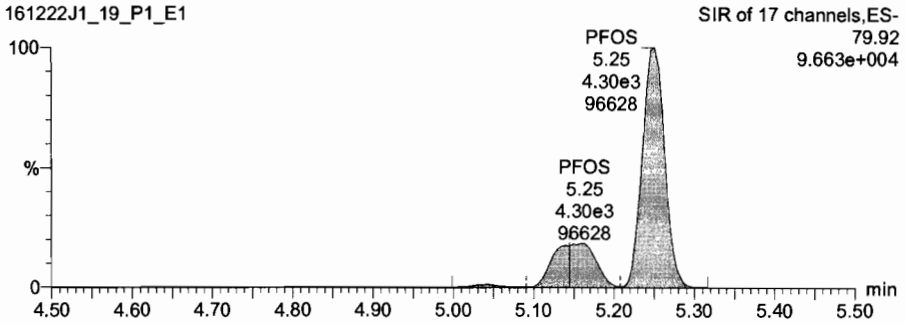
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_19.qld

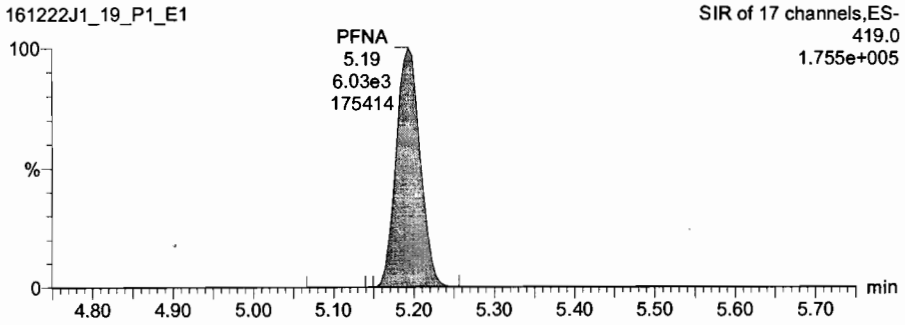
Last Altered: Thursday, January 05, 2017 10:34:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:35:13 Pacific Standard Time

Name: 161222J1_19.wiff, Date: 22-Dec-2016, Time: 18:51:46, ID: ST161222J1-2 PFC C3 16L2232, Description: PFC C3 16L2232 A

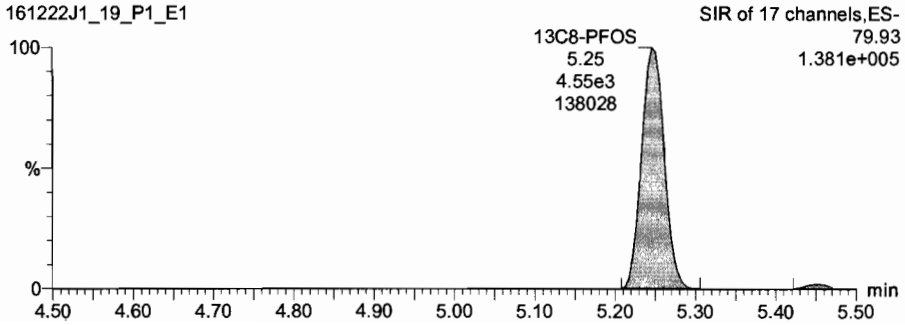
PFOS



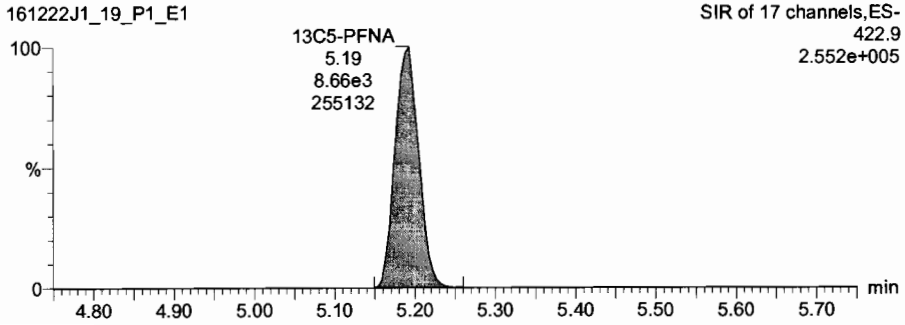
PFNA

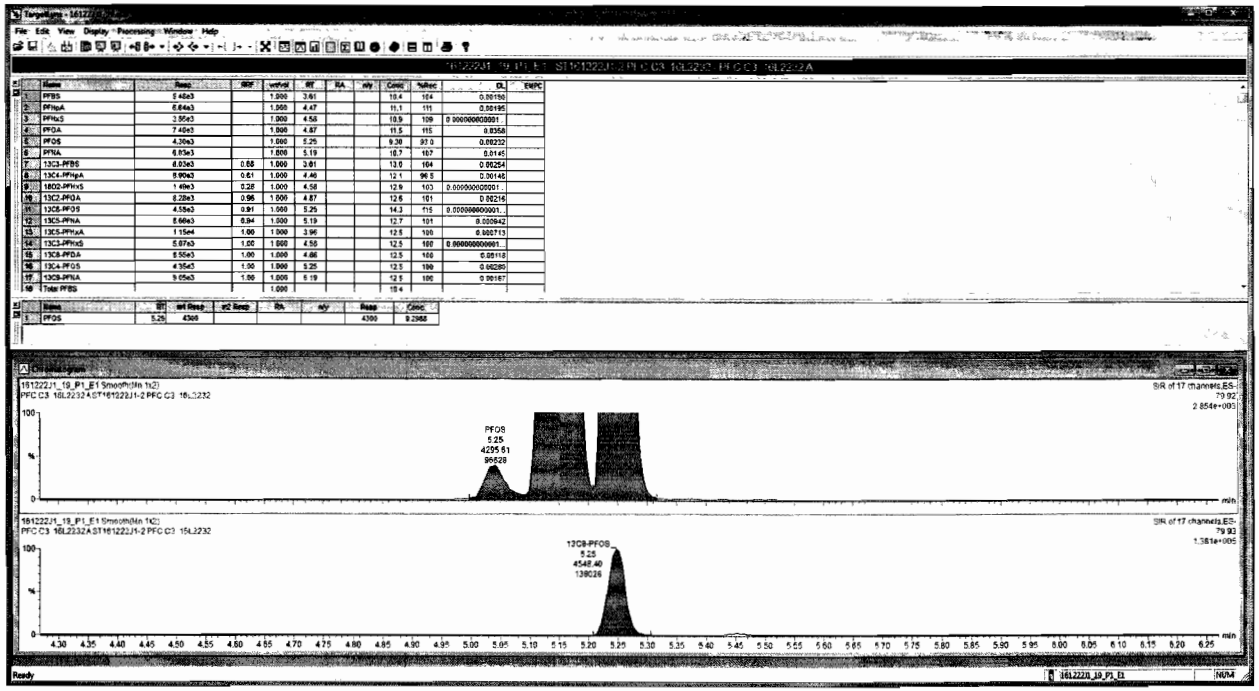


13C8-PFOS



13C5-PFNA




PFOS
5.25
4295.61
96528
13C8-PFOS
5.25
4548.46
139026

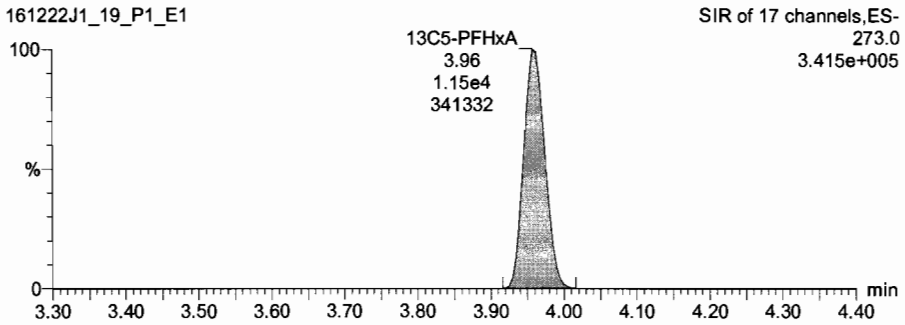
Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161222J1\161222J1_19.qld

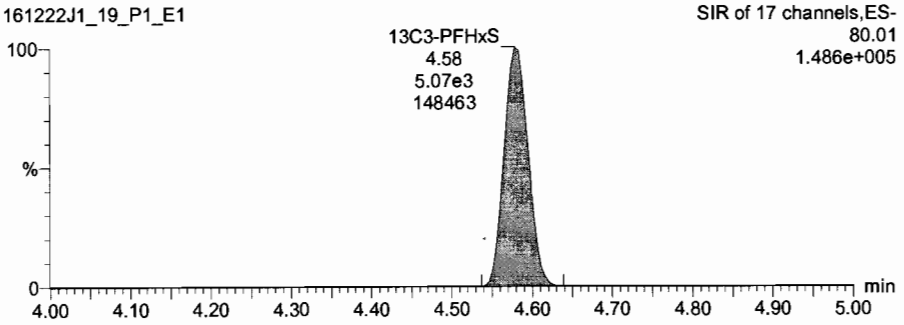
Last Altered: Thursday, January 05, 2017 10:34:29 Pacific Standard Time
Printed: Thursday, January 05, 2017 10:35:13 Pacific Standard Time

Name: 161222J1_19.wiff, Date: 22-Dec-2016, Time: 18:51:46, ID: ST161222J1-2 PFC C3 16L2232, Description: PFC C3 16L2232 A

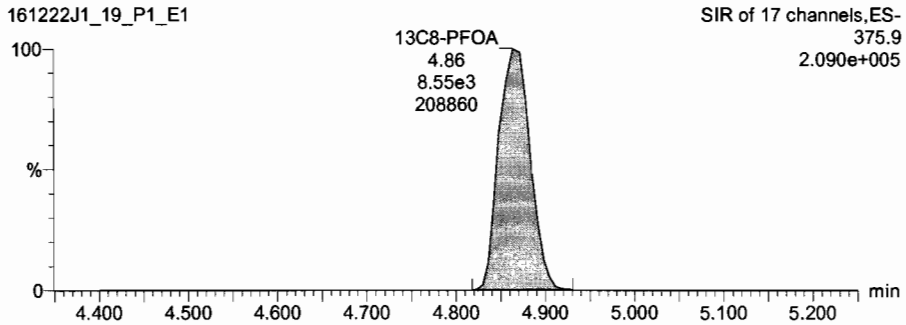
13C5-PFHxA



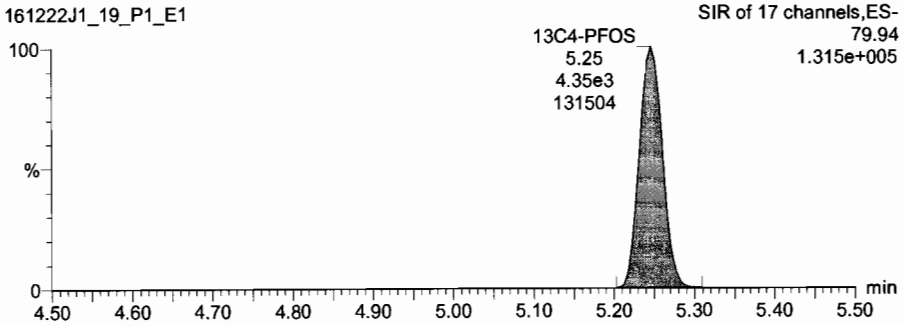
13C3-PFHxS



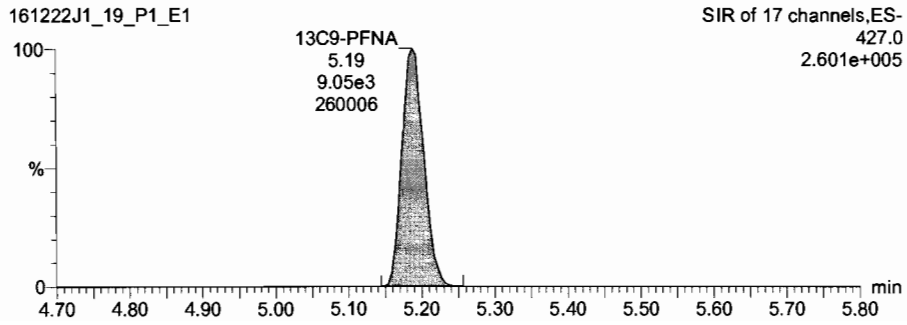
13C8-PFOA



13C4-PFOS



13C9-PFNA



INITIAL CALIBRATION

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:28:48 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 6.mdb 28 Sep 2016 09:48:55
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Compound name: PFBS
Coefficient of Determination: R^2 = 0.997475
Calibration curve: -0.00119746 * x^2 + 0.829131 * x
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	0.125	3.62	2.52e2	1.37e4	0.277	121.4	1.83
2	2	161221J5_03_P1_...	0.500	3.61	4.58e2	1.22e4	0.567	13.5	0.940
3	3	161221J5_04_P1_...	1.00	3.61	8.66e2	1.38e4	0.945	-5.5	0.783
4	4	161221J5_05_P1_...	2.00	3.62	1.69e3	1.34e4	1.91	-4.7	0.788
5	5	161221J5_06_P1_...	5.00	3.62	3.86e3	1.40e4	4.18	-16.4	0.689
6	6	161221J5_07_P1_...	10.0	3.62	1.28e4	1.74e4	11.3	12.9	0.921
7	7	161221J5_08_P1_...	50.0	3.61	3.74e4	1.23e4	49.4	-1.3	0.760
8	8	161221J5_09_P1_...	100	3.62	6.29e4	1.11e4	100	0.3	0.711

branched PFHxS, PFOA and PFOS included.
EXCLUDED CS-2 FROM CURVE FOR ALL
AMSC 12/22/16

Compound name: PFHpA
Coefficient of Determination: R^2 = 0.996588
Calibration curve: -0.00179083 * x^2 + 0.857781 * x
Response type: Internal Std (Ref 8), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	0.125	4.47	2.97e2	1.55e4	0.279	123.5	1.92
2	2	161221J5_03_P1_...	0.500	4.46	5.20e2	1.41e4	0.539	7.9	0.924
3	3	161221J5_04_P1_...	1.00	4.47	1.07e3	1.52e4	1.02	2.5	0.877
4	4	161221J5_05_P1_...	2.00	4.47	1.99e3	1.53e4	1.90	-5.2	0.810
5	5	161221J5_06_P1_...	5.00	4.46	4.41e3	1.64e4	3.95	-21.0	0.672
6	6	161221J5_07_P1_...	10.0	4.48	1.61e4	2.13e4	11.3	12.9	0.946
7	7	161221J5_08_P1_...	50.0	4.47	4.79e4	1.57e4	49.8	-0.5	0.765
8	8	161221J5_09_P1_...	100	4.47	8.13e4	1.50e4	100	0.0	0.679

AMSC 12/22/16

✓ AC 12/23/16

Vista Analytical Laboratory Q2

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:28:48 Pacific Standard Time

Compound name: PFHxS
Correlation coefficient: r = 0.998576, r^2 = 0.997154
Calibration curve: 2.92953 * x + 0.489921
Response type: Internal Std (Ref 9), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	0.125	4.58	2.37e2	2.93e3	0.178	42.1	8.08
2	2	161221J5_03_P1_...	0.500	4.58	3.66e2	2.22e3	0.537	7.3	4.12
3	3	161221J5_04_P1_...	1.00	4.58	6.44e2	2.53e3	0.921	-7.9	3.19
4	4	161221J5_05_P1_...	2.00	4.58	1.32e3	2.70e3	1.92	-4.2	3.05
5	5	161221J5_06_P1_...	5.00	4.57	2.79e3	2.61e3	4.40	-12.1	2.67
6	6	161221J5_07_P1_...	10.0	4.58	9.21e3	3.26e3	11.9	18.7	3.53
7	7	161221J5_08_P1_...	50.0	4.58	2.95e4	2.54e3	49.4	-1.2	2.90
8	8	161221J5_09_P1_...	100	4.58	5.35e4	2.29e3	99.5	-0.5	2.92

Compound name: PFOA
Coefficient of Determination: R^2 = 0.998930
Calibration curve: -0.0030052 * x^2 + 1.00321 * x
Response type: Internal Std (Ref 10), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	0.125	4.87	5.21e2	1.48e4	0.439	251.2	3.52
2	2	161221J5_03_P1_...	0.500	4.87	6.33e2	1.35e4	0.584	16.8	1.17
3	3	161221J5_04_P1_...	1.00	4.87	1.11e3	1.54e4	0.898	-10.2	0.898
4	4	161221J5_05_P1_...	2.00	4.88	2.26e3	1.59e4	1.78	-10.8	0.890
5	5	161221J5_06_P1_...	5.00	4.87	5.68e3	1.54e4	4.66	-6.8	0.922
6	6	161221J5_07_P1_...	10.0	4.87	1.58e4	1.93e4	10.6	5.8	1.03
7	7	161221J5_08_P1_...	50.0	4.86	5.31e4	1.55e4	50.2	0.3	0.855
8	8	161221J5_09_P1_...	100	4.87	8.83e4	1.57e4	99.8	-0.2	0.702

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Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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Compound name: PFOS
Coefficient of Determination: R^2 = 0.993870
Calibration curve: -0.00182598 * x^2 + 1.28653 * x
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	0.125	5.26	1.48e2	5.09e3	0.284	126.8	2.92
2	2	161221J5_03_P1_...	0.500	5.25	2.31e2	3.53e3	0.635	27.0	1.63
3	3	161221J5_04_P1_...	1.00	5.24	5.83e2	6.12e3	0.927	-7.3	1.19
4	4	161221J5_05_P1_...	2.00	5.26	1.06e3	5.61e3	1.84	-7.8	1.18
5	5	161221J5_06_P1_...	5.00	5.23	2.78e3	6.42e3	4.23	-15.3	1.08
6	6	161221J5_07_P1_...	10.0	5.24	4.12e3	3.32e3	12.2	22.4	1.55
7	7	161221J5_08_P1_...	50.0	5.23	3.18e4	7.00e3	47.3	-5.3	1.14
8	8	161221J5_09_P1_...	100	5.25	5.78e4	6.47e3	101	1.4	1.12

Compound name: PFNA
Coefficient of Determination: R^2 = 0.992980
Calibration curve: -0.00124359 * x^2 + 0.826142 * x
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	0.125	5.20	3.03e2	1.43e4	0.320	155.6	2.11
2	2	161221J5_03_P1_...	0.500	5.19	4.47e2	1.11e4	0.612	22.4	1.01
3	3	161221J5_04_P1_...	1.00	5.19	9.79e2	1.54e4	0.960	-4.0	0.792
4	4	161221J5_05_P1_...	2.00	5.20	2.07e3	1.50e4	2.09	4.4	0.860
5	5	161221J5_06_P1_...	5.00	5.17	4.35e3	1.59e4	4.17	-16.6	0.685
6	6	161221J5_07_P1_...	10.0	5.19	1.23e4	1.61e4	11.8	18.1	0.958
7	7	161221J5_08_P1_...	50.0	5.18	4.81e4	1.66e4	47.3	-5.4	0.726
8	8	161221J5_09_P1_...	100	5.19	7.94e4	1.40e4	101	1.4	0.710

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
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Compound name: 13C3-PFBS
Response Factor: 0.675286
RRF SD: 0.0275436, Relative SD: 4.07881
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	3.62	1.37e4	1.94e4	13.1	4.6	0.706
2	2	161221J5_03_P1_...	12.5	3.61	1.22e4	1.85e4	12.2	-2.3	0.660
3	3	161221J5_04_P1_...	12.5	3.61	1.38e4	2.03e4	12.6	0.9	0.681
4	4	161221J5_05_P1_...	12.5	3.62	1.34e4	2.04e4	12.1	-3.1	0.654
5	5	161221J5_06_P1_...	12.5	3.62	1.40e4	1.94e4	13.4	7.1	0.723
6	6	161221J5_07_P1_...	12.5	3.62	1.74e4	2.62e4	12.3	-1.8	0.663
7	7	161221J5_08_P1_...	12.5	3.61	1.23e4	1.82e4	12.5	-0.1	0.674
8	8	161221J5_09_P1_...	12.5	3.62	1.11e4	1.73e4	11.9	-5.2	0.640

Compound name: 13C4-PFHpA
Response Factor: 0.805164
RRF SD: 0.0485394, Relative SD: 6.0285
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	4.47	1.55e4	1.94e4	12.4	-0.9	0.798
2	2	161221J5_03_P1_...	12.5	4.47	1.41e4	1.85e4	11.8	-5.5	0.761
3	3	161221J5_04_P1_...	12.5	4.46	1.52e4	2.03e4	11.6	-7.1	0.748
4	4	161221J5_05_P1_...	12.5	4.48	1.53e4	2.04e4	11.7	-6.7	0.751
5	5	161221J5_06_P1_...	12.5	4.46	1.64e4	1.94e4	13.1	5.1	0.846
6	6	161221J5_07_P1_...	12.5	4.47	2.13e4	2.62e4	12.6	0.8	0.812
7	7	161221J5_08_P1_...	12.5	4.47	1.57e4	1.82e4	13.3	6.6	0.858
8	8	161221J5_09_P1_...	12.5	4.47	1.50e4	1.73e4	13.5	7.6	0.867

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
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Compound name: 18O2-PFHxS
Response Factor: 0.28464
RRF SD: 0.0180157, Relative SD: 6.32929
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	4.58	2.93e3	9.05e3	14.2	13.8	0.324
2	2	161221J5_03_P1_...	12.5	4.58	2.22e3	8.43e3	11.5	-7.6	0.263
3	3	161221J5_04_P1_...	12.5	4.58	2.53e3	9.10e3	12.2	-2.4	0.278
4	4	161221J5_05_P1_...	12.5	4.58	2.70e3	9.54e3	12.4	-0.5	0.283
5	5	161221J5_06_P1_...	12.5	4.57	2.61e3	9.45e3	12.1	-3.1	0.276
6	6	161221J5_07_P1_...	12.5	4.58	3.26e3	1.15e4	12.4	-0.6	0.283
7	7	161221J5_08_P1_...	12.5	4.58	2.54e3	8.66e3	12.9	3.1	0.294
8	8	161221J5_09_P1_...	12.5	4.58	2.29e3	8.26e3	12.2	-2.6	0.277

Compound name: 13C2-PFOA
Response Factor: 0.960052
RRF SD: 0.0569948, Relative SD: 5.93664
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	4.87	1.48e4	1.70e4	11.3	-9.3	0.871
2	2	161221J5_03_P1_...	12.5	4.86	1.35e4	1.47e4	12.0	-3.7	0.924
3	3	161221J5_04_P1_...	12.5	4.87	1.54e4	1.50e4	13.3	6.7	1.02
4	4	161221J5_05_P1_...	12.5	4.88	1.59e4	1.63e4	12.7	1.5	0.975
5	5	161221J5_06_P1_...	12.5	4.87	1.54e4	1.63e4	12.3	-1.5	0.946
6	6	161221J5_07_P1_...	12.5	4.86	1.93e4	2.12e4	11.8	-5.4	0.908
7	7	161221J5_08_P1_...	12.5	4.86	1.55e4	1.53e4	13.2	5.7	1.01
8	8	161221J5_09_P1_...	12.5	4.87	1.57e4	1.55e4	13.2	6.0	1.02

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
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Compound name: 13C8-PFOS
Response Factor: 0.912114
RRF SD: 0.0439853, Relative SD: 4.82235
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	5.26	5.09e3	5.74e3	12.1	-2.8	0.886
2	2	161221J5_03_P1_...	12.5	5.24	3.53e3	4.05e3	12.0	-4.3	0.873
3	3	161221J5_04_P1_...	12.5	5.24	6.12e3	6.91e3	12.1	-2.9	0.886
4	4	161221J5_05_P1_...	12.5	5.25	5.61e3	6.50e3	11.8	-5.4	0.863
5	5	161221J5_06_P1_...	12.5	5.23	6.42e3	6.46e3	13.6	8.9	0.993
6	6	161221J5_07_P1_...	12.5	5.24	3.32e3	3.55e3	12.8	2.7	0.937
7	7	161221J5_08_P1_...	12.5	5.23	7.00e3	7.64e3	12.6	0.5	0.916
8	8	161221J5_09_P1_...	12.5	5.25	6.47e3	6.86e3	12.9	3.4	0.943

Compound name: 13C5-PFNA
Response Factor: 0.942856
RRF SD: 0.0761182, Relative SD: 8.07316
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	5.20	1.43e4	1.56e4	12.2	-2.3	0.921
2	2	161221J5_03_P1_...	12.5	5.19	1.11e4	1.28e4	11.5	-8.2	0.866
3	3	161221J5_04_P1_...	12.5	5.18	1.54e4	1.56e4	13.1	5.1	0.991
4	4	161221J5_05_P1_...	12.5	5.20	1.50e4	1.67e4	11.9	-4.7	0.898
5	5	161221J5_06_P1_...	12.5	5.17	1.59e4	1.63e4	13.0	3.7	0.977
6	6	161221J5_07_P1_...	12.5	5.18	1.61e4	1.75e4	12.2	-2.5	0.919
7	7	161221J5_08_P1_...	12.5	5.17	1.66e4	1.51e4	14.5	16.2	1.10
8	8	161221J5_09_P1_...	12.5	5.19	1.40e4	1.60e4	11.6	-7.3	0.874

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
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Compound name: 13C5-PFHxA
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 13), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	3.98	1.94e4	1.94e4	12.5	0.0	1.00
2	2	161221J5_03_P1_...	12.5	3.97	1.85e4	1.85e4	12.5	0.0	1.00
3	3	161221J5_04_P1_...	12.5	3.97	2.03e4	2.03e4	12.5	0.0	1.00
4	4	161221J5_05_P1_...	12.5	3.97	2.04e4	2.04e4	12.5	0.0	1.00
5	5	161221J5_06_P1_...	12.5	3.97	1.94e4	1.94e4	12.5	0.0	1.00
6	6	161221J5_07_P1_...	12.5	3.97	2.62e4	2.62e4	12.5	0.0	1.00
7	7	161221J5_08_P1_...	12.5	3.97	1.82e4	1.82e4	12.5	0.0	1.00
8	8	161221J5_09_P1_...	12.5	3.98	1.73e4	1.73e4	12.5	0.0	1.00

Compound name: 13C3-PFHxS
Response Factor: 1
RRF SD: 0, Relative SD: 0
Response type: Internal Std (Ref 14), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	4.58	9.05e3	9.05e3	12.5	0.0	1.00
2	2	161221J5_03_P1_...	12.5	4.58	8.43e3	8.43e3	12.5	0.0	1.00
3	3	161221J5_04_P1_...	12.5	4.58	9.10e3	9.10e3	12.5	0.0	1.00
4	4	161221J5_05_P1_...	12.5	4.58	9.54e3	9.54e3	12.5	0.0	1.00
5	5	161221J5_06_P1_...	12.5	4.57	9.45e3	9.45e3	12.5	0.0	1.00
6	6	161221J5_07_P1_...	12.5	4.58	1.15e4	1.15e4	12.5	0.0	1.00
7	7	161221J5_08_P1_...	12.5	4.58	8.66e3	8.66e3	12.5	0.0	1.00
8	8	161221J5_09_P1_...	12.5	4.58	8.26e3	8.26e3	12.5	0.0	1.00

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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Compound name: 13C8-PFOA
Response Factor: 1
RRF SD: 1.25887e-016, Relative SD: 1.25887e-014
Response type: Internal Std (Ref 15), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	4.87	1.70e4	1.70e4	12.5	0.0	1.00
2	2	161221J5_03_P1_...	12.5	4.86	1.47e4	1.47e4	12.5	0.0	1.00
3	3	161221J5_04_P1_...	12.5	4.87	1.50e4	1.50e4	12.5	0.0	1.00
4	4	161221J5_05_P1_...	12.5	4.87	1.63e4	1.63e4	12.5	0.0	1.00
5	5	161221J5_06_P1_...	12.5	4.87	1.63e4	1.63e4	12.5	0.0	1.00
6	6	161221J5_07_P1_...	12.5	4.86	2.12e4	2.12e4	12.5	0.0	1.00
7	7	161221J5_08_P1_...	12.5	4.86	1.53e4	1.53e4	12.5	0.0	1.00
8	8	161221J5_09_P1_...	12.5	4.87	1.55e4	1.55e4	12.5	-0.0	1.00

Compound name: 13C4-PFOS
Response Factor: 1
RRF SD: 1.39174e-016, Relative SD: 1.39174e-014
Response type: Internal Std (Ref 16), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	5.26	5.74e3	5.74e3	12.5	0.0	1.00
2	2	161221J5_03_P1_...	12.5	5.24	4.05e3	4.05e3	12.5	0.0	1.00
3	3	161221J5_04_P1_...	12.5	5.23	6.91e3	6.91e3	12.5	-0.0	1.00
4	4	161221J5_05_P1_...	12.5	5.25	6.50e3	6.50e3	12.5	0.0	1.00
5	5	161221J5_06_P1_...	12.5	5.23	6.46e3	6.46e3	12.5	-0.0	1.00
6	6	161221J5_07_P1_...	12.5	5.24	3.55e3	3.55e3	12.5	0.0	1.00
7	7	161221J5_08_P1_...	12.5	5.23	7.64e3	7.64e3	12.5	-0.0	1.00
8	8	161221J5_09_P1_...	12.5	5.24	6.86e3	6.86e3	12.5	0.0	1.00

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Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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Compound name: 13C9-PFNA
Response Factor: 1
RRF SD: 1.32697e-016, Relative SD: 1.32697e-014
Response type: Internal Std (Ref 17), Area * (IS Conc. / IS Area)
Curve type: RF

	#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1	161221J5_02_P1_...	12.5	5.20	1.56e4	1.56e4	12.5	-0.0	1.00
2	2	161221J5_03_P1_...	12.5	5.19	1.28e4	1.28e4	12.5	0.0	1.00
3	3	161221J5_04_P1_...	12.5	5.18	1.56e4	1.56e4	12.5	0.0	1.00
4	4	161221J5_05_P1_...	12.5	5.20	1.67e4	1.67e4	12.5	0.0	1.00
5	5	161221J5_06_P1_...	12.5	5.17	1.63e4	1.63e4	12.5	-0.0	1.00
6	6	161221J5_07_P1_...	12.5	5.18	1.75e4	1.75e4	12.5	0.0	1.00
7	7	161221J5_08_P1_...	12.5	5.17	1.51e4	1.51e4	12.5	0.0	1.00
8	8	161221J5_09_P1_...	12.5	5.19	1.60e4	1.60e4	12.5	0.0	1.00

	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161221J5_01	12/21/2016 16:10:40	IPA	IPA
2	161221J5_02	12/21/2016 16:22:52	ST161221J5-1 PFC CS(-2) 16L1412 A	PFC CS(-2) 16L1412 A
3	161221J5_03	12/21/2016 16:35:08	ST161221J5-2 PFC CS(-1) 16L1413 A	PFC CS(-1) 16L1413 A
4	161221J5_04	12/21/2016 16:47:19	ST161221J5-3 PFC CS0 16L1414 A	PFC CS0 16L1414 A
5	161221J5_05	12/21/2016 16:59:32	ST161221J5-4 PFC CS1 16L1415 A	PFC CS1 16L1415 A
6	161221J5_06	12/21/2016 17:11:46	ST161221J5-5 PFC CS2 16L1416 A	PFC CS2 16L1416 A
7	161221J5_07	12/21/2016 17:23:58	ST161221J5-6 PFC CS3 16L1417 A	PFC CS3 16L1417 A
8	161221J5_08	12/21/2016 17:36:11	ST161221J5-7 PFC CS4 16L1418 A	PFC CS4 16L1418 A
9	161221J5_09	12/21/2016 17:48:23	ST161221J5-8 PFC CS5 16L1419 A	PFC CS5 16L1419 A
10	161221J5_10	12/21/2016 18:00:33	IPA	IPA
11	161221J5_11	12/21/2016 18:12:46	SS161221J5-1 PFC SSS 16K2201 A	PFC SSS 16K2201 A
12	161221J5_12	12/21/2016 18:24:57	IPA	IPA
13	161221J5_13	12/21/2016 18:37:09	B6L0096-BS1	OPR
14	161221J5_14	12/21/2016 18:49:21	IPA	IPA
15	161221J5_15	12/21/2016 19:01:34	B6L0096-BLK1	Method Blank
16	161221J5_16	12/21/2016 19:13:46	1601567-01	TW4-16
17	161221J5_17	12/21/2016 19:25:59	1601567-02	TW5-16
18	161221J5_18	12/21/2016 19:38:09	IPA	IPA
19	161221J5_19	12/21/2016 19:50:22	ST161221J5-9 PFC C3 16L1417	PFC C3 16L1417 A
20	161221J5_20	12/21/2016 20:02:35	IPA	IPA

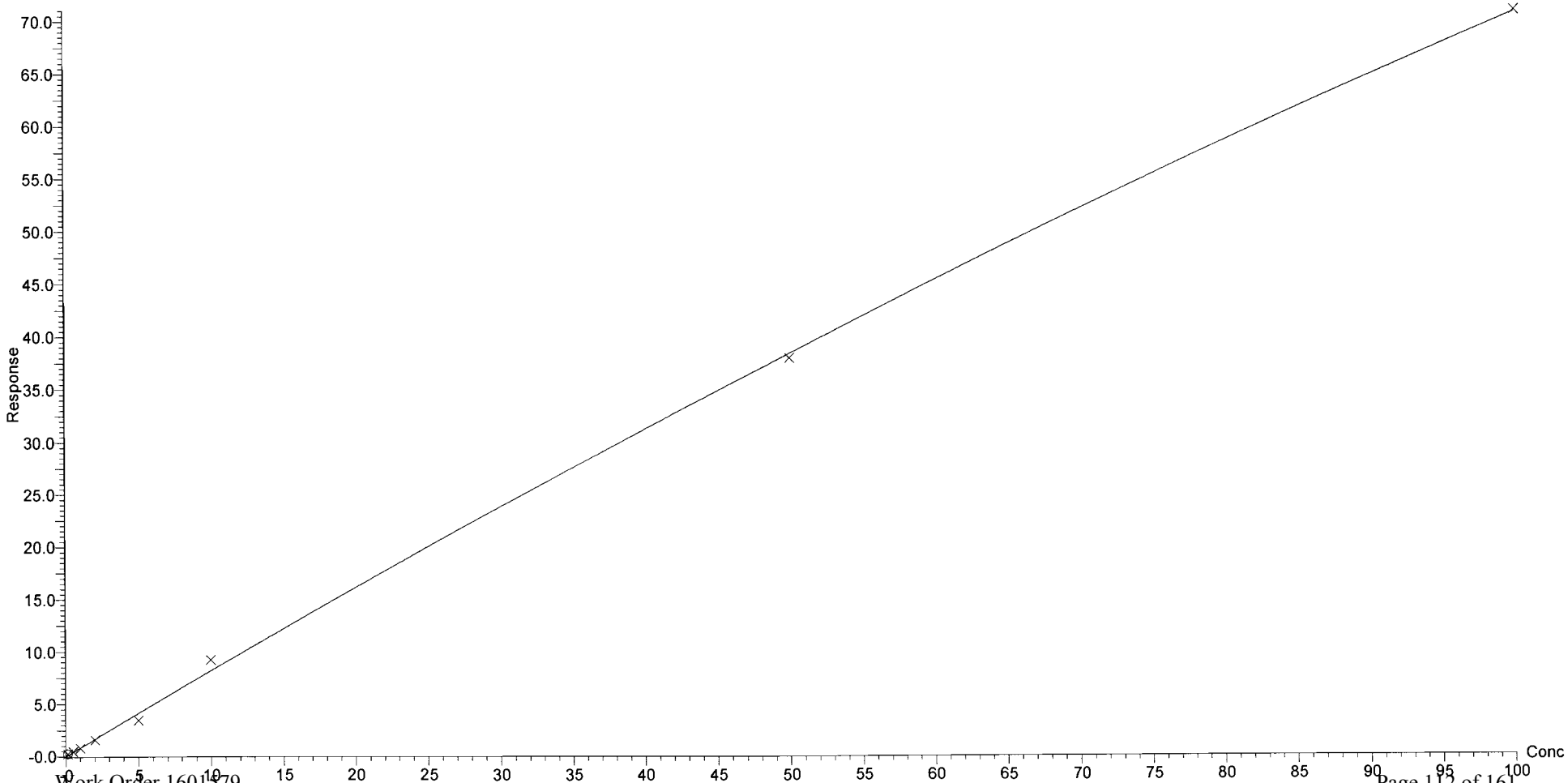
Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:29:12 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 6.mdb 28 Sep 2016 09:48:55
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

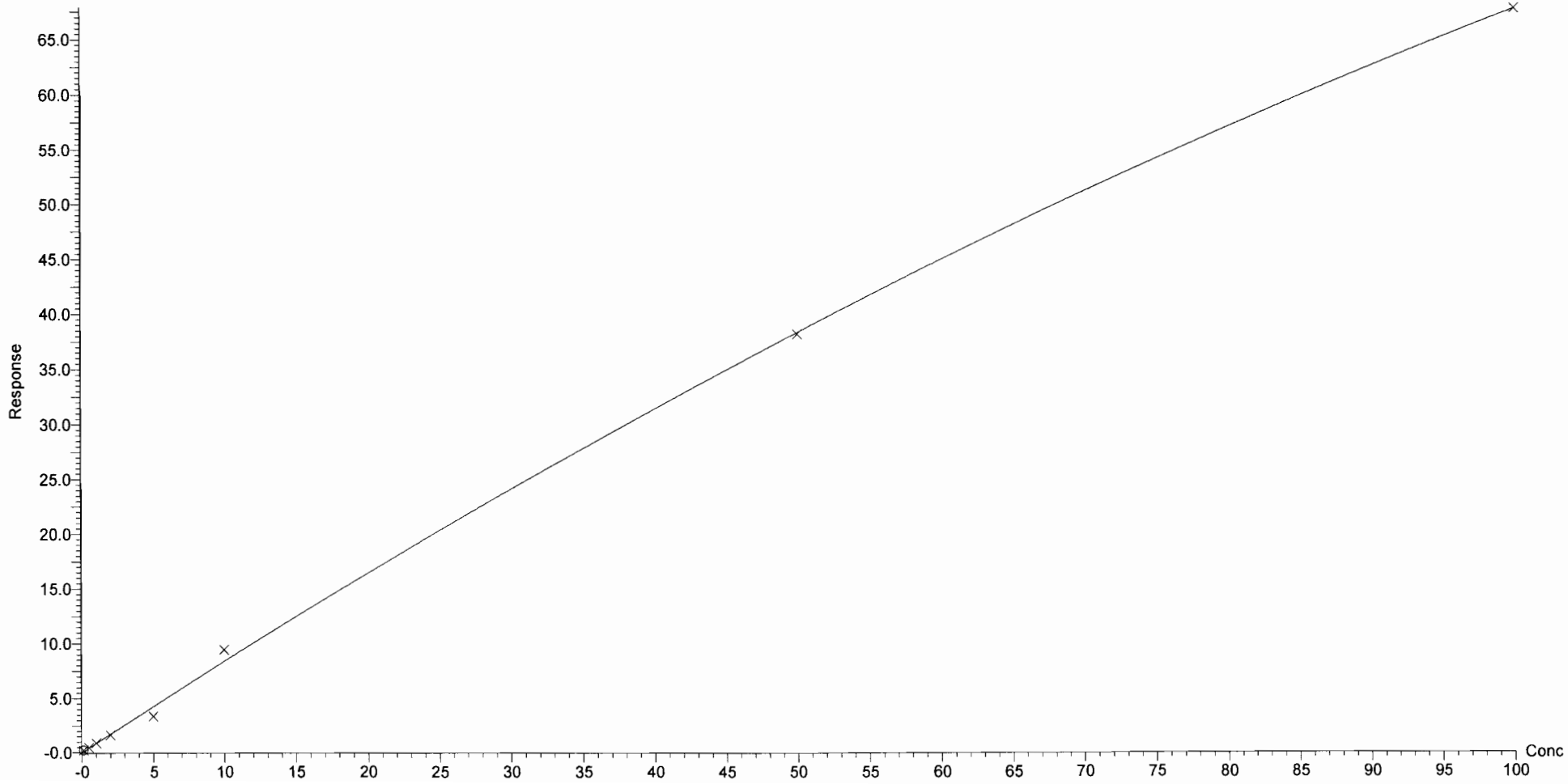
Compound name: PFBS
Coefficient of Determination: R^2 = 0.997475
Calibration curve: -0.00119746 * x^2 + 0.829131 * x
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:29:12 Pacific Standard Time

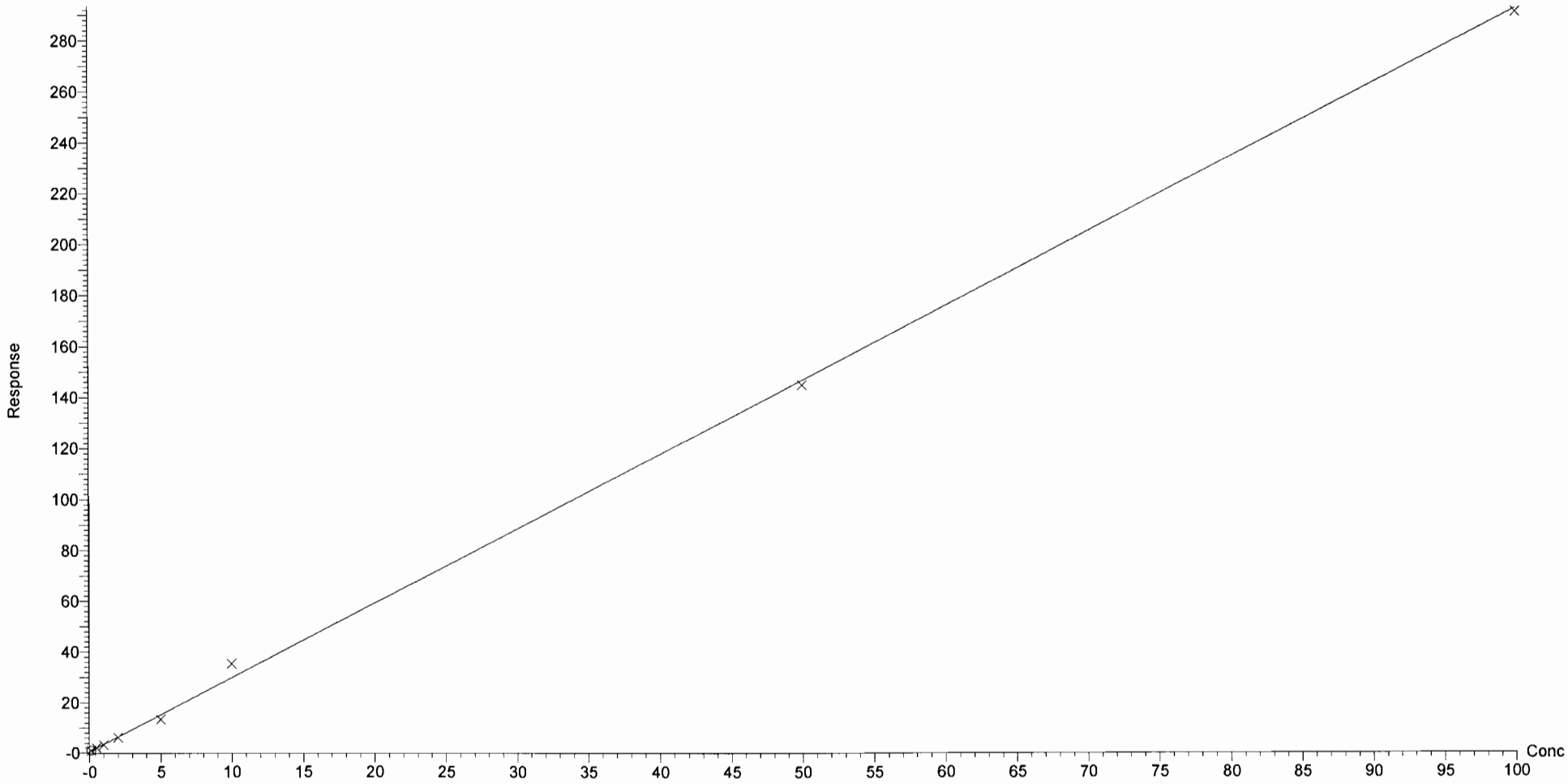
Compound name: PFHpA
Coefficient of Determination: R^2 = 0.996588
Calibration curve: -0.00179083 * x^2 + 0.857781 * x
Response type: Internal Std (Ref 8), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:29:12 Pacific Standard Time

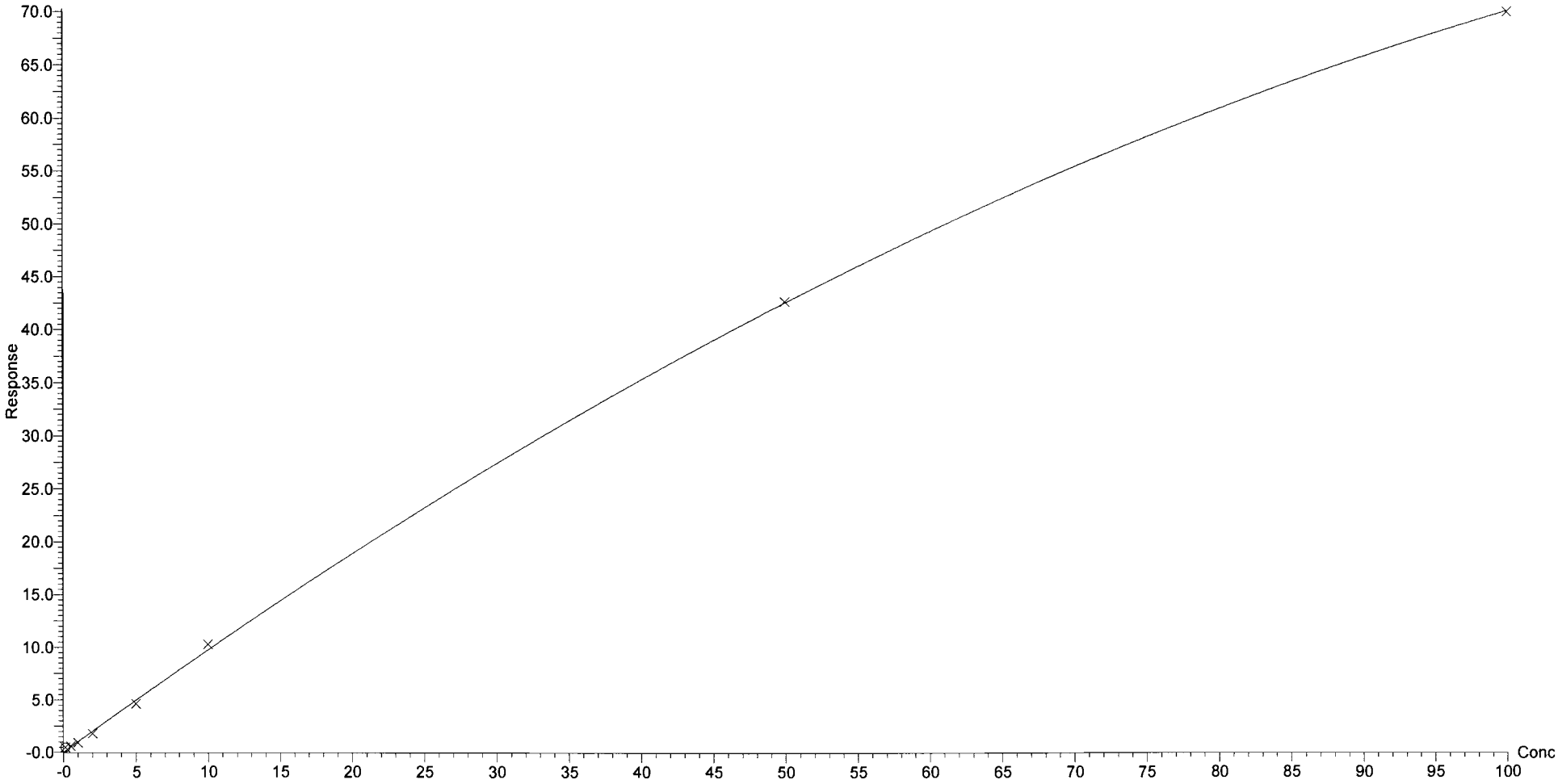
Compound name: PFHxS
Correlation coefficient: r = 0.998576, r^2 = 0.997154
Calibration curve: 2.92953 * x + 0.489921
Response type: Internal Std (Ref 9), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:29:12 Pacific Standard Time

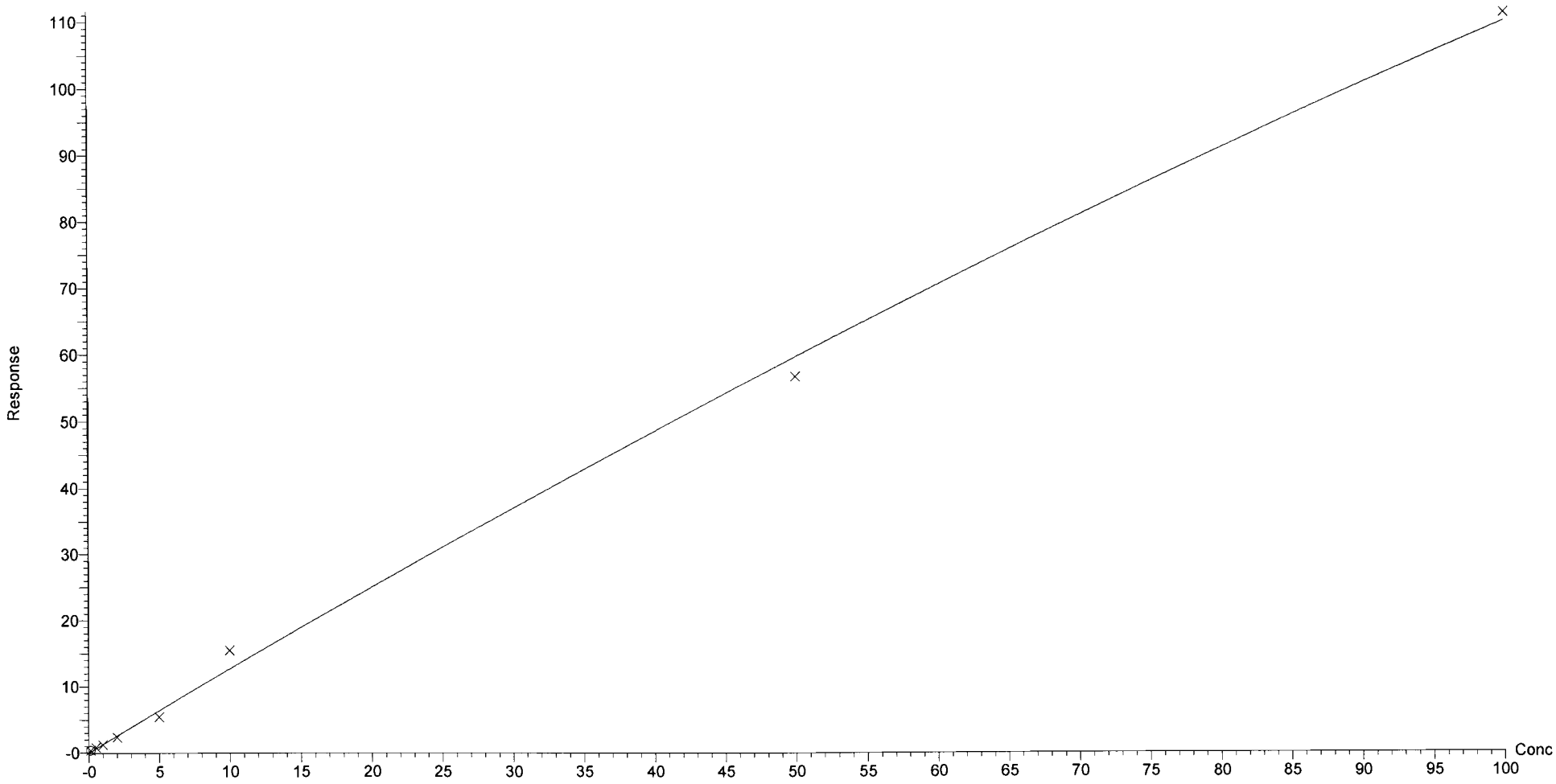
Compound name: PFOA
Coefficient of Determination: R^2 = 0.998930
Calibration curve: -0.0030052 * x^2 + 1.00321 * x
Response type: Internal Std (Ref 10), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:29:12 Pacific Standard Time

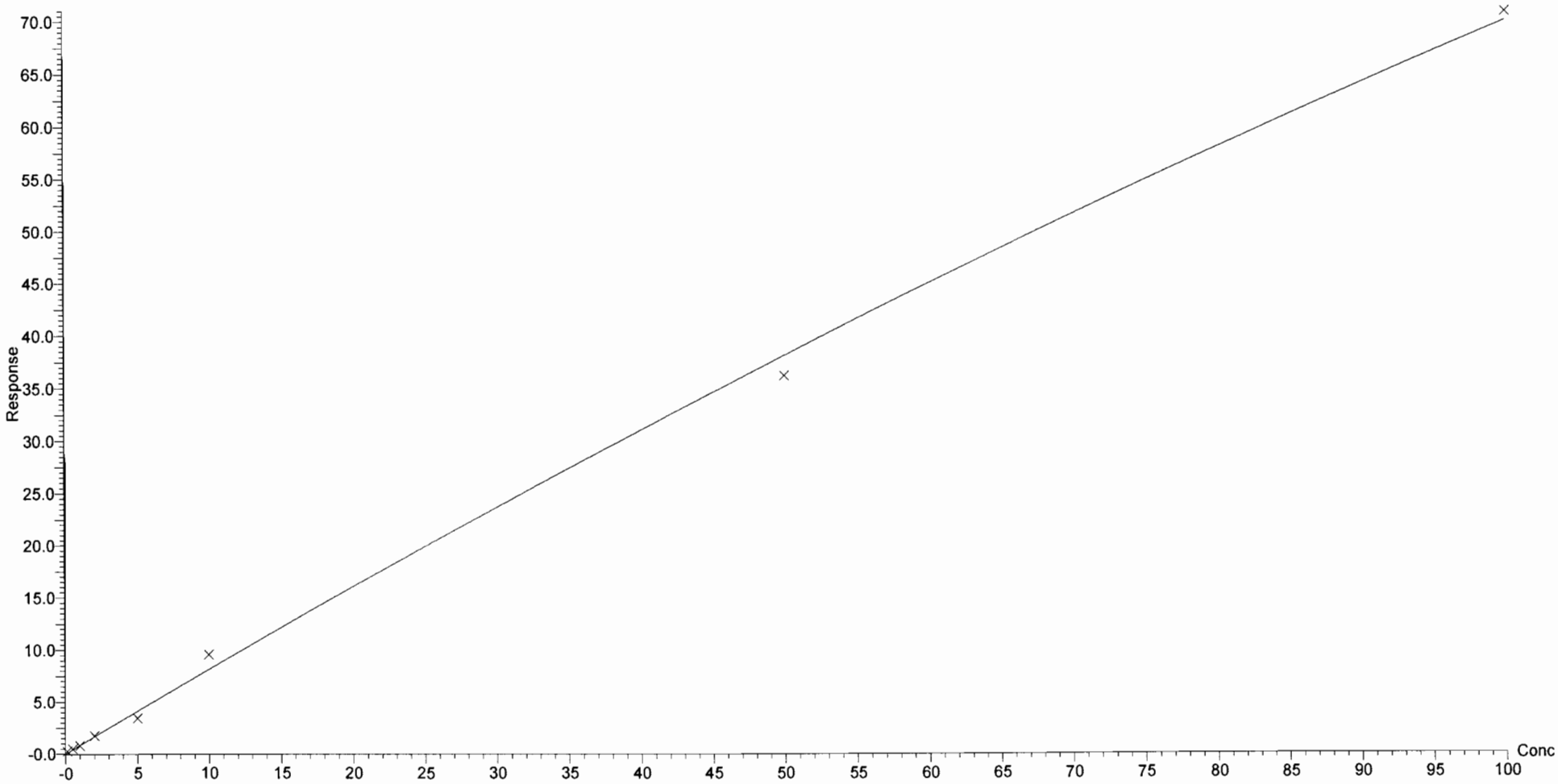
Compound name: PFOS
Coefficient of Determination: R^2 = 0.993870
Calibration curve: -0.00182598 * x^2 + 1.28653 * x
Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 11:27:02 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:29:12 Pacific Standard Time

Compound name: PFNA
Coefficient of Determination: R^2 = 0.992980
Calibration curve: -0.00124359 * x^2 + 0.826142 * x
Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)
Curve type: 2nd Order, Origin: Force, Weighting: 1/x, Axis trans: None



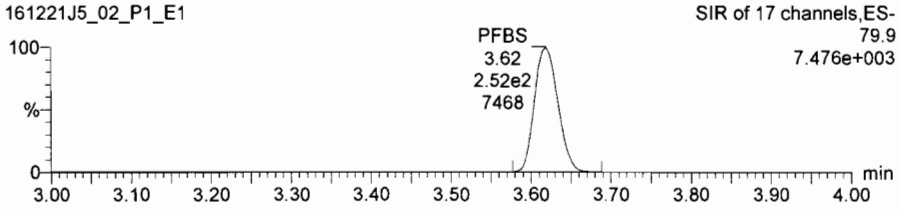
Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

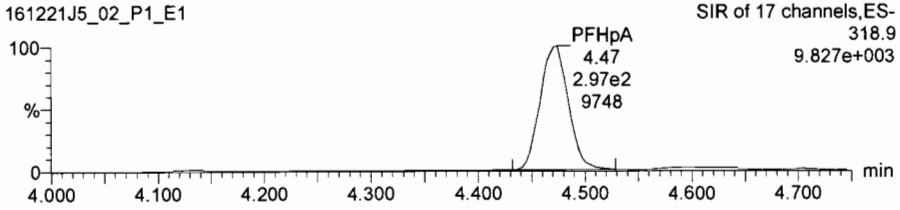
Method: U:\Q2.PRO\MethDB\PFC List 6.mdb 28 Sep 2016 09:48:55
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 08:44:23

Name: 161221J5_02.wiff, Date: 21-Dec-2016, Time: 16:22:52, ID: ST161221J5-1 PFC CS(-2) 16L1412 A, Description: PFC CS(-2) 16L1412 A

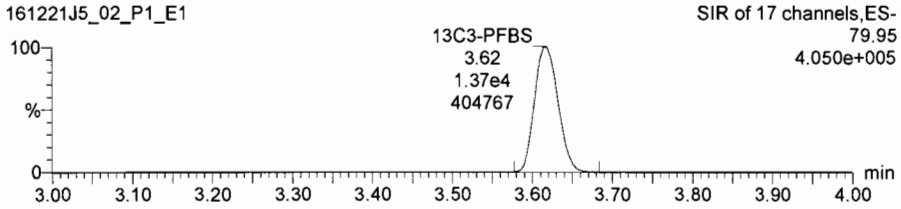
PFBS



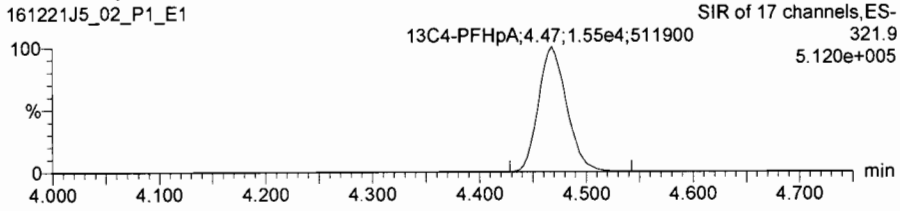
PFHpA



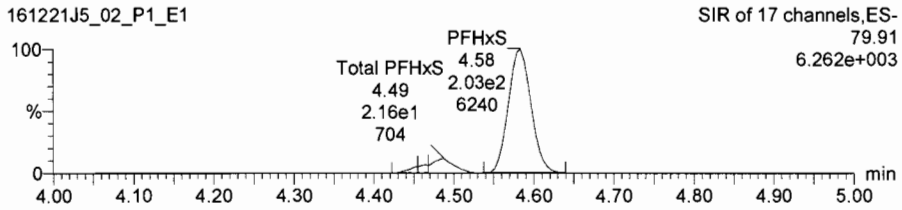
13C3-PFBS



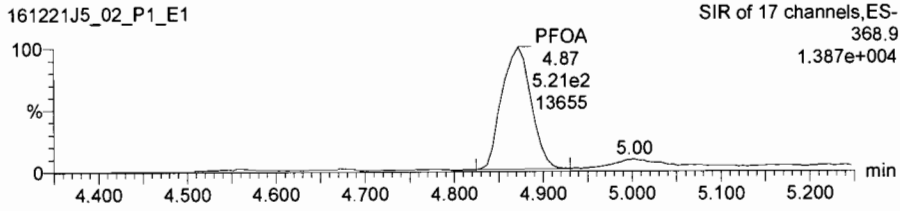
13C4-PFHpA



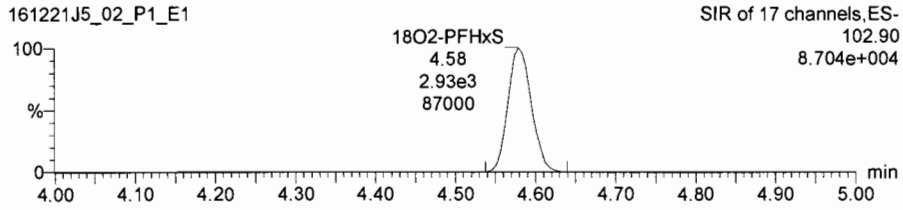
PFHxS



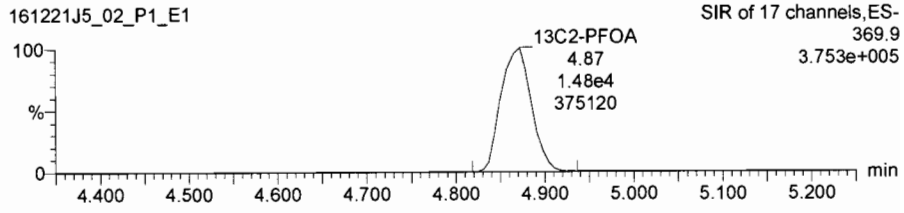
PFOA



18O2-PFHxS



13C2-PFOA

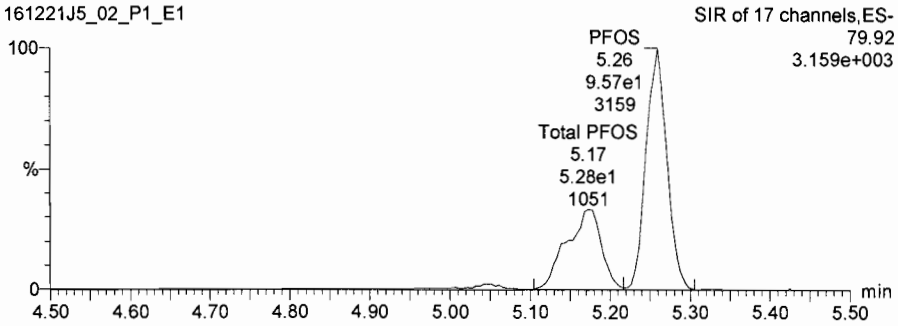


Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

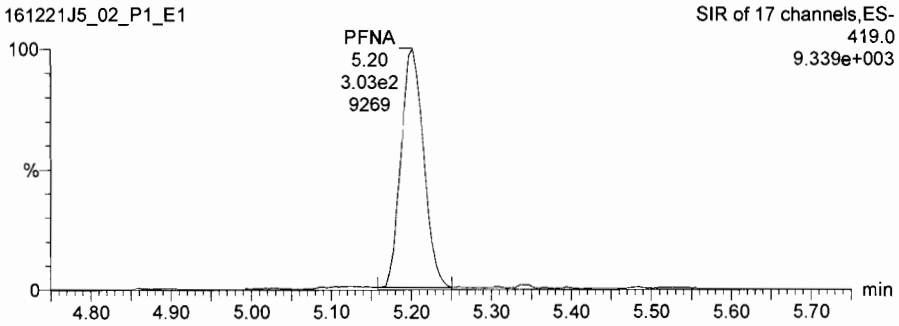
Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_02.wiff, Date: 21-Dec-2016, Time: 16:22:52, ID: ST161221J5-1 PFC CS(-2) 16L1412 A, Description: PFC CS(-2) 16L1412 A

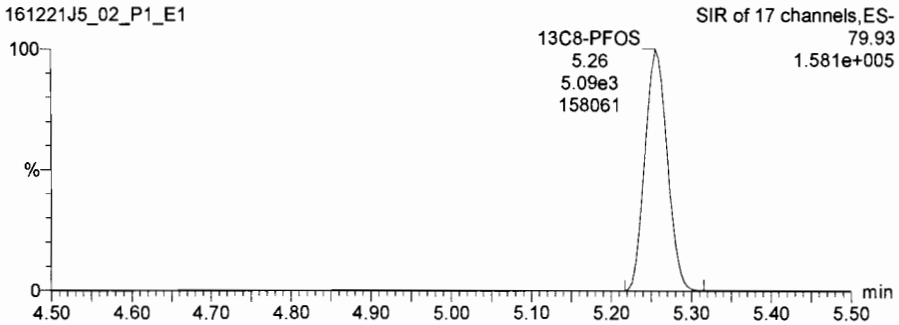
PFOS



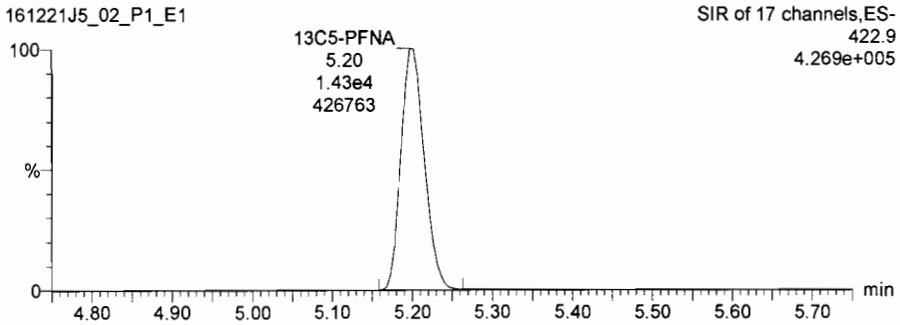
PFNA



13C8-PFOS



13C5-PFNA

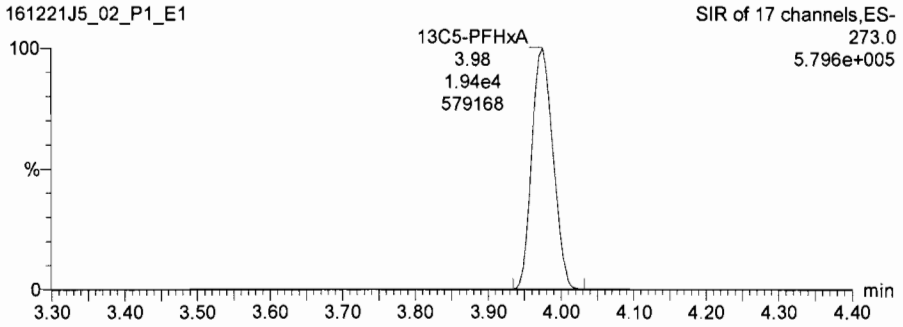


Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

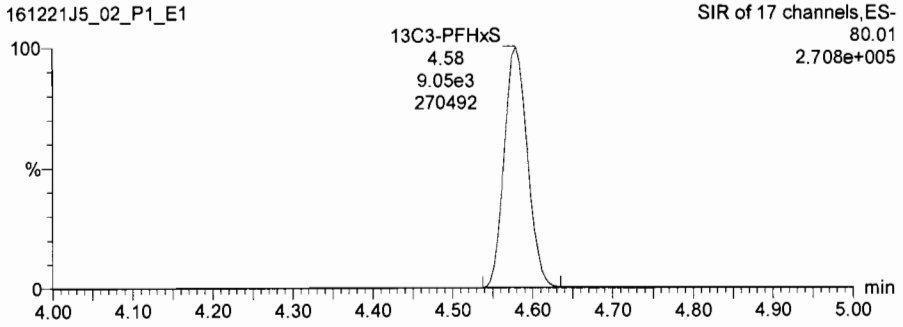
Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_02.wiff, Date: 21-Dec-2016, Time: 16:22:52, ID: ST161221J5-1 PFC CS(-2) 16L1412 A, Description: PFC CS(-2) 16L1412 A

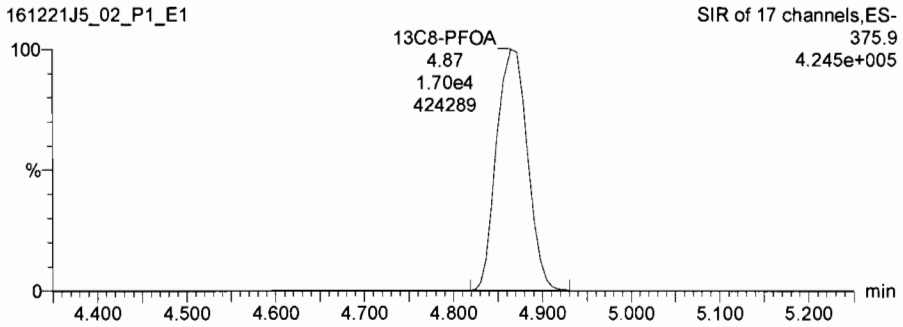
13C5-PFHxA



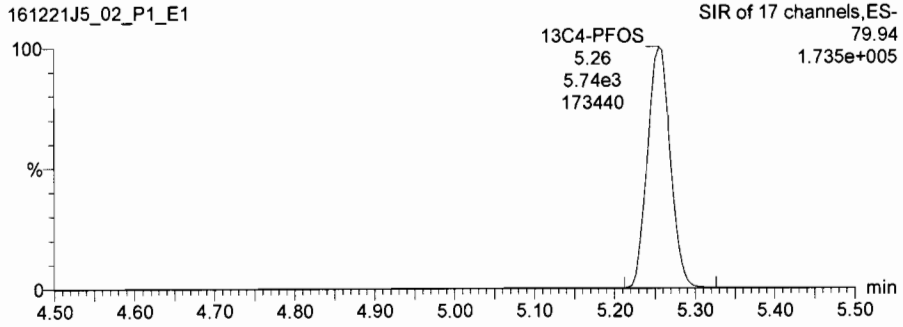
13C3-PFHxS



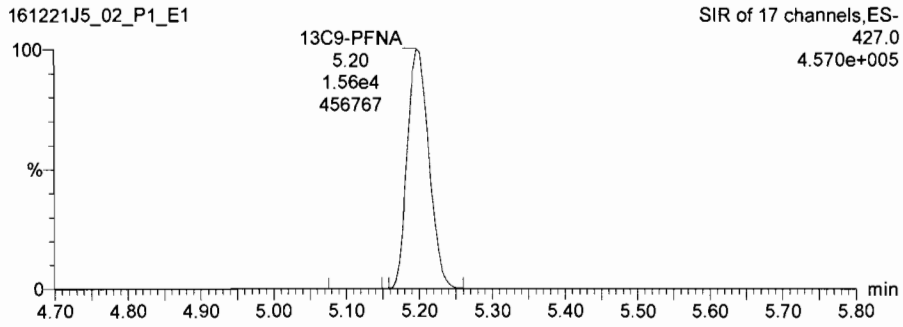
13C8-PFOA



13C4-PFOS



13C9-PFNA

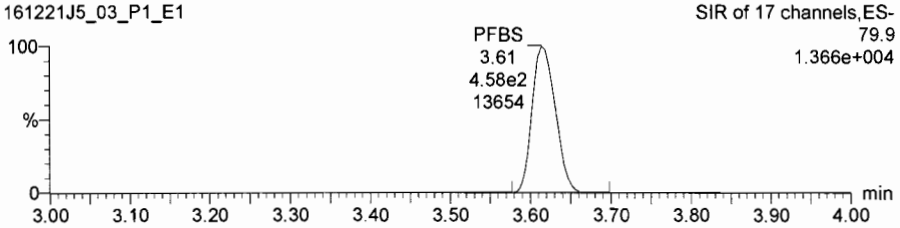


Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

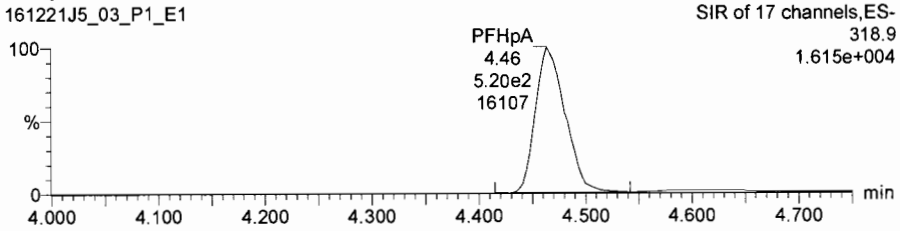
Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_03.wiff, Date: 21-Dec-2016, Time: 16:35:08, ID: ST161221J5-2 PFC CS(-1) 16L1413 A, Description: PFC CS(-1) 16L1413 A

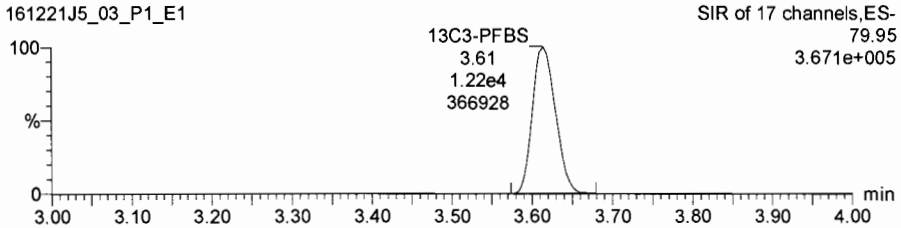
PFBS



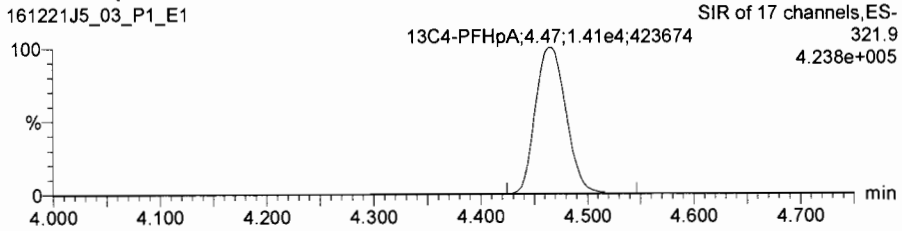
PFHpA



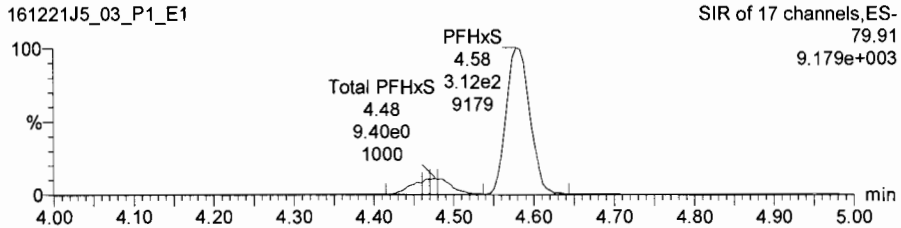
13C3-PFBS



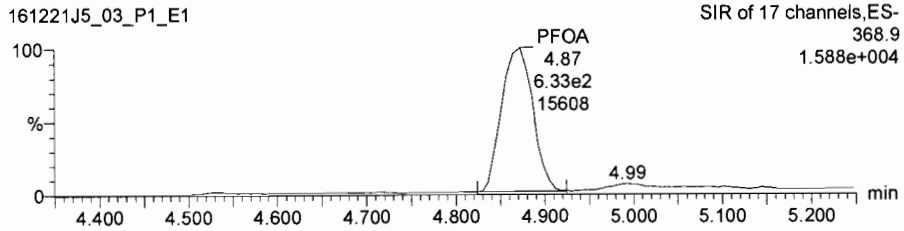
13C4-PFHpA



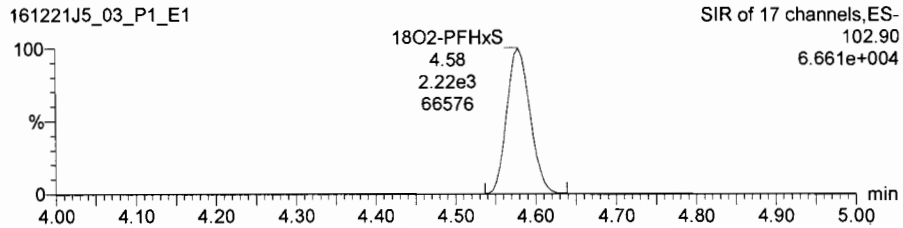
PFHxS



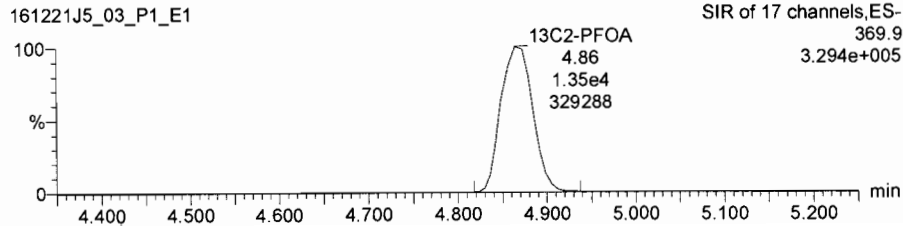
PFOA

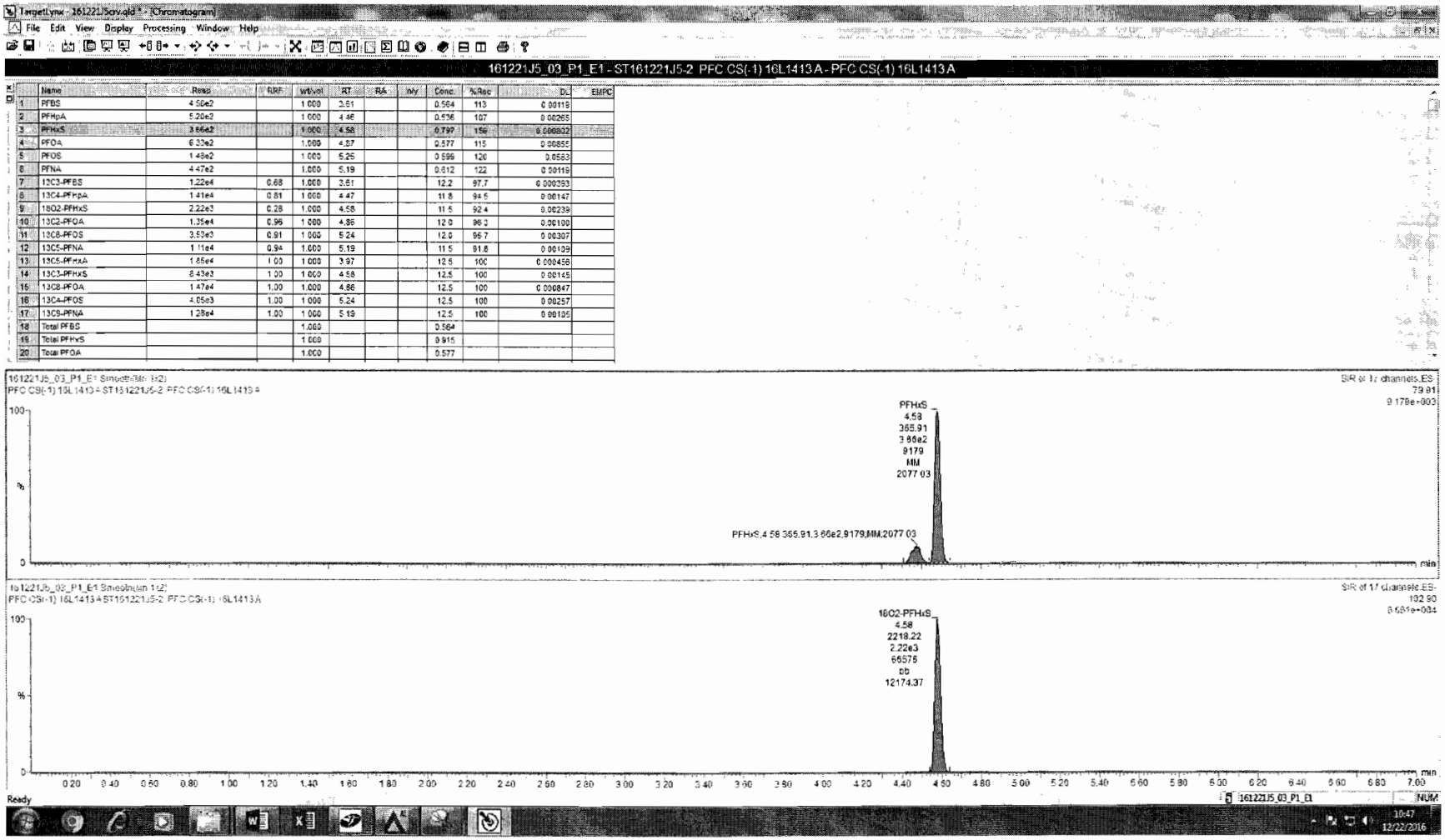


18O2-PFHxS



13C2-PFOA





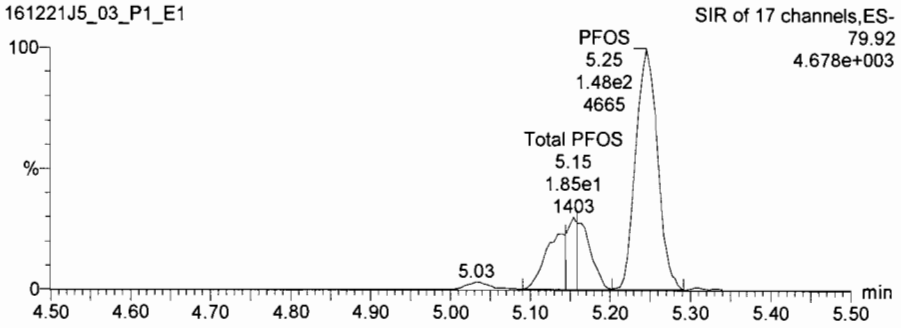
	Name	Resp	RRF	wt/vol	RT	RA	Inv	Conc	%Rec	DL	EMPC
1	PFBS	4.56e2		1.000	3.81			0.564	113	0.00119	
2	PFHpA	5.20e2		1.000	4.46			0.536	107	0.00265	
3	PFHxS	3.66e2		1.000	4.58			0.797	159	0.000832	
4	PFOA	6.33e2		1.000	4.87			0.577	115	0.00855	
5	PFOS	1.48e2		1.000	5.25			0.599	120	0.0583	
6	PFNA	4.47e2		1.000	5.19			0.612	122	0.00119	
7	13C3-PFBS	1.22e4	0.68	1.000	3.81			12.2	97.7	0.000393	
8	13C4-PFHpA	1.41e4	0.81	1.000	4.47			11.8	94.5	0.00147	
9	18O2-PFHxS	2.22e3	0.28	1.000	4.58			11.5	92.4	0.00239	
10	13C2-PFOA	1.35e4	0.96	1.000	4.86			12.0	96.0	0.00100	
11	13C8-PFOS	3.53e3	0.91	1.000	5.24			12.0	96.7	0.00307	
12	13C5-PFNA	1.11e4	0.94	1.000	5.19			11.5	91.8	0.00139	
13	13C5-PFHxA	1.85e4	1.00	1.000	3.97			12.5	100	0.000456	
14	13C3-PFHxS	8.43e3	1.00	1.000	4.58			12.5	100	0.00145	
15	13C8-PFOA	1.47e4	1.00	1.000	4.86			12.5	100	0.000847	
16	13C4-PFOS	4.05e3	1.00	1.000	5.24			12.5	100	0.00257	
17	13C9-PFNA	1.28e4	1.00	1.000	5.19			12.5	100	0.00105	
18	Total PFBS			1.000				0.564			
19	Total PFHxS			1.000				0.915			
20	Total PFOA			1.000				0.577			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

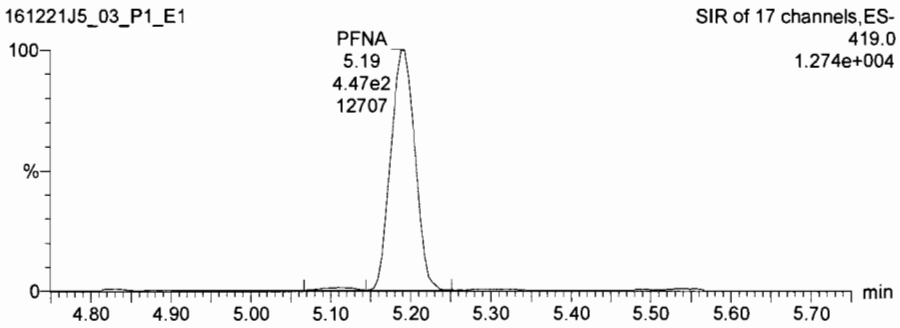
Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_03.wiff, Date: 21-Dec-2016, Time: 16:35:08, ID: ST161221J5-2 PFC CS(-1) 16L1413 A, Description: PFC CS(-1) 16L1413 A

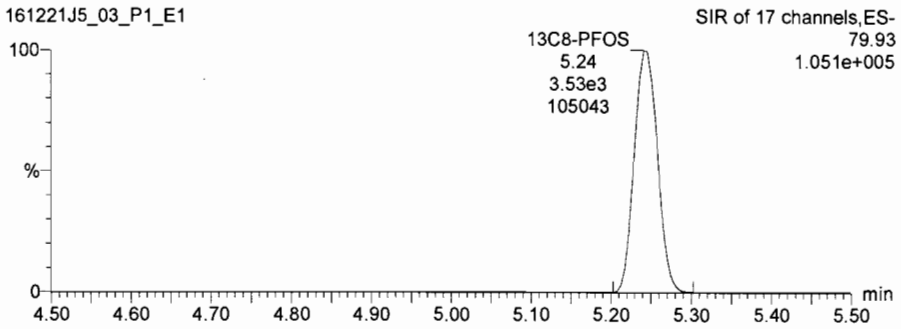
PFOS



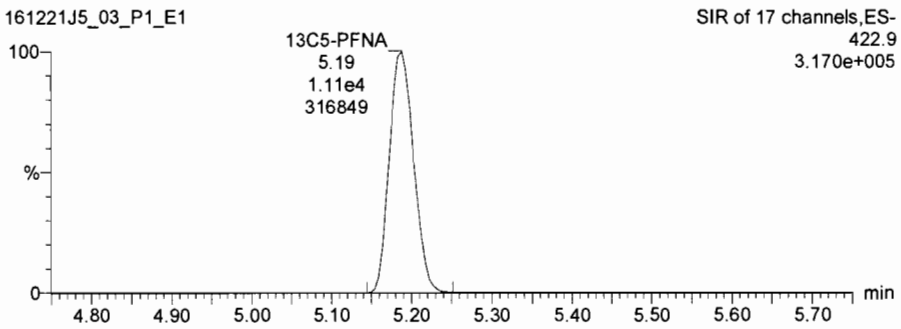
PFNA

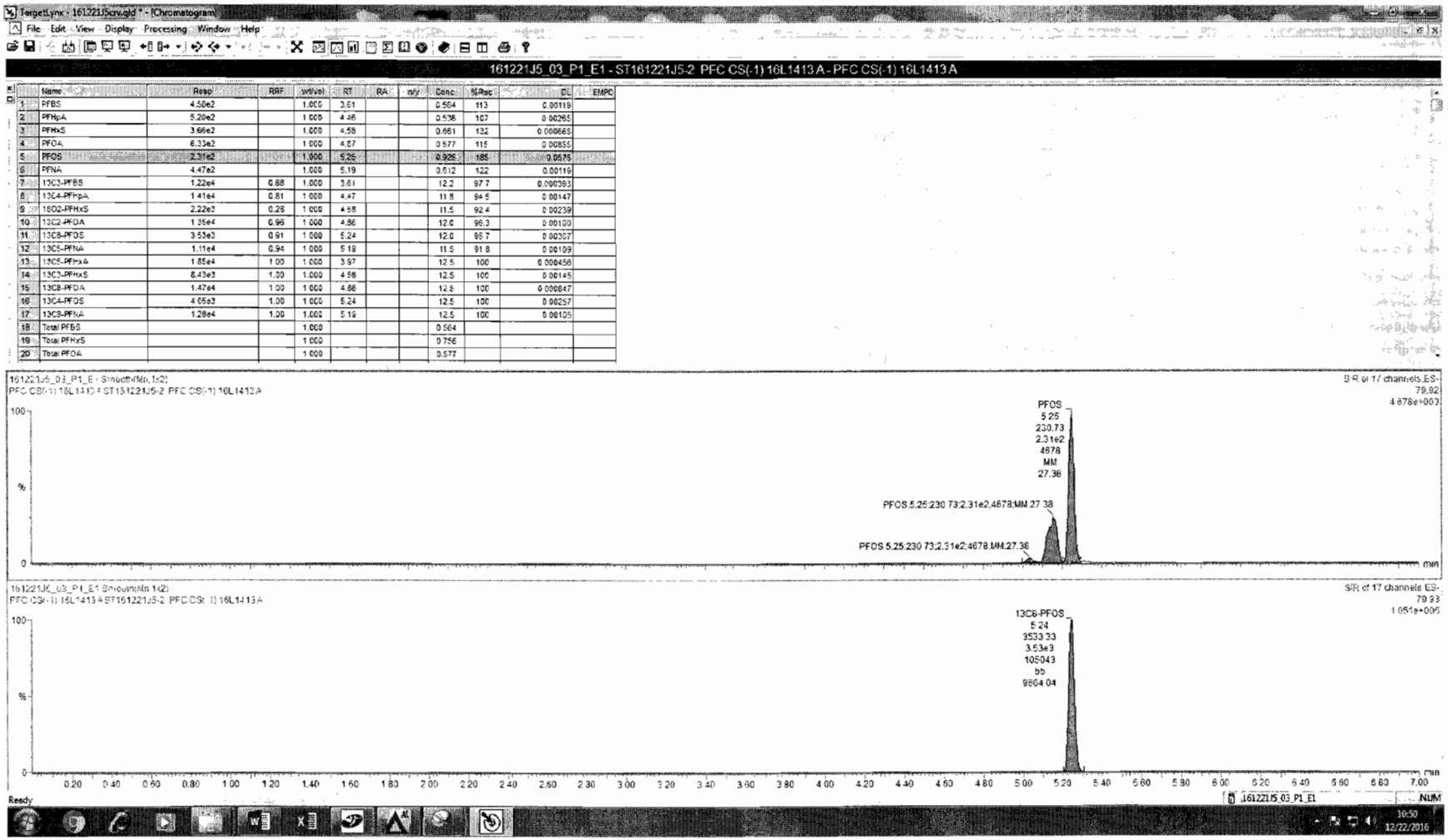


13C8-PFOS



13C5-PFNA





	Name	Resp	RRF	wt/vol	RT	RA	m/y	Conc	%Rec	DL	EMPC
1	PFBS	4.50e2		1.000	3.61			0.564	113	0.00119	
2	PFHpA	5.20e2		1.000	4.46			0.536	107	0.00265	
3	PFHxS	3.66e2		1.000	4.58			0.661	132	0.000665	
4	PFOA	6.33e2		1.000	4.87			0.577	115	0.00855	
5	PFOS	2.31e2		1.000	5.25			0.925	185	0.0575	
6	PFNA	4.47e2		1.000	5.19			0.612	122	0.00119	
7	13C3-PFBS	1.22e4	0.68	1.000	3.61			12.2	97.7	0.000393	
8	13C4-PFHpA	1.41e4	0.81	1.000	4.47			11.8	94.5	0.00147	
9	18O2-PFHxS	2.22e3	0.28	1.000	4.58			11.5	92.4	0.00239	
10	13C2-PFOA	1.25e4	0.96	1.000	4.86			12.0	96.0	0.00100	
11	13C8-PFOS	3.53e3	0.91	1.000	5.24			12.0	95.7	0.00307	
12	13C5-PFNA	1.11e4	0.94	1.000	5.19			11.5	91.8	0.00109	
13	13C5-PFHxA	1.85e4	1.00	1.000	3.97			12.5	100	0.000456	
14	13C3-PFHxS	8.43e3	1.00	1.000	4.58			12.5	100	0.00145	
15	13C8-PFOA	1.47e4	1.00	1.000	4.86			12.5	100	0.000847	
16	13C4-PFOS	4.65e3	1.00	1.000	5.24			12.5	100	0.00257	
17	13C9-PFNA	1.28e4	1.00	1.000	5.19			12.5	100	0.00105	
18	Total PFBS			1.000				0.564			
19	Total PFHxS			1.000				0.756			
20	Total PFOA			1.000				0.577			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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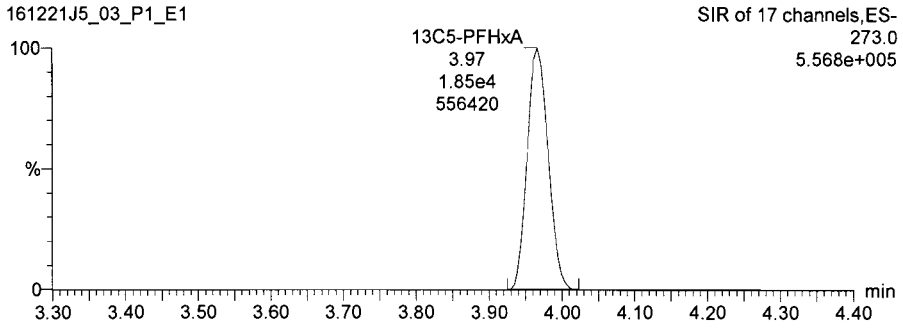
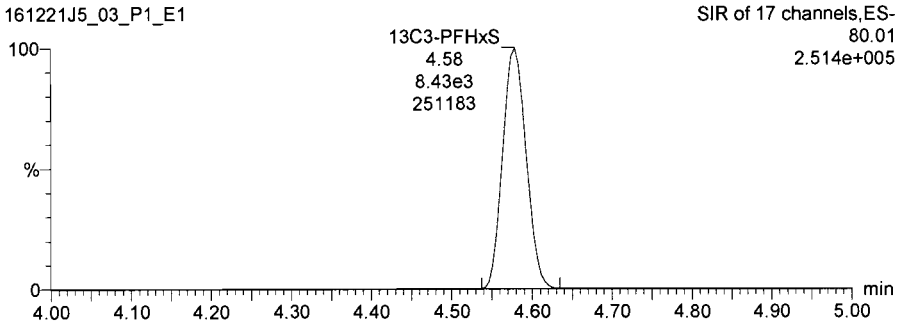
Name: 161221J5_03.wiff, Date: 21-Dec-2016, Time: 16:35:08, ID: ST161221J5-2 PFC CS(-1) 16L1413 A, Description: PFC CS(-1) 16L1413 A

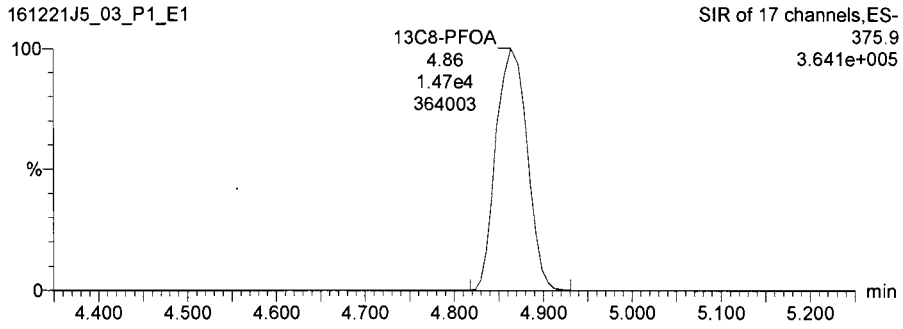
13C5-PFHxA



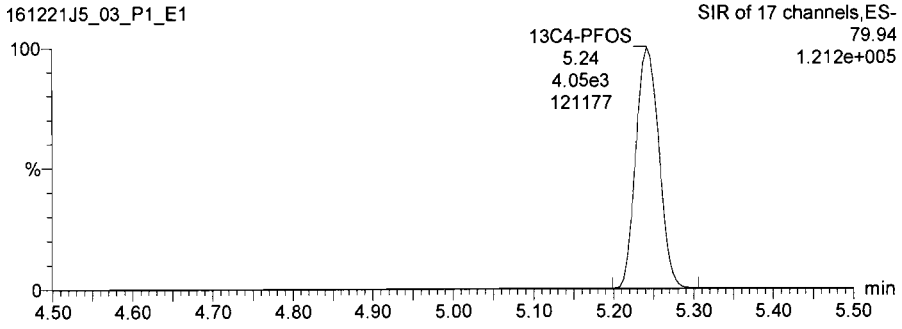
13C3-PFHxS



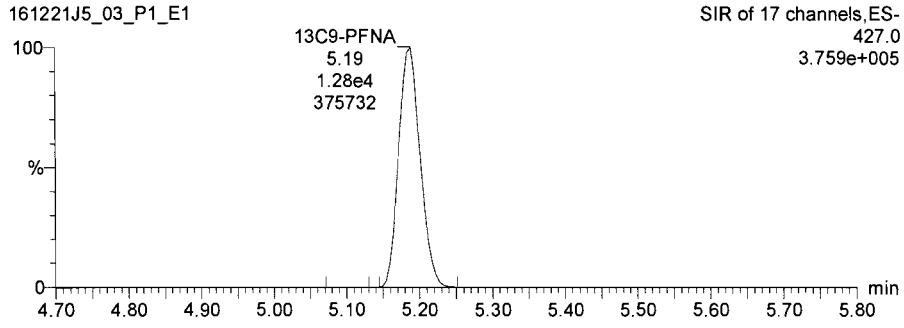
13C8-PFOA



13C4-PFOS



13C9-PFNA



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Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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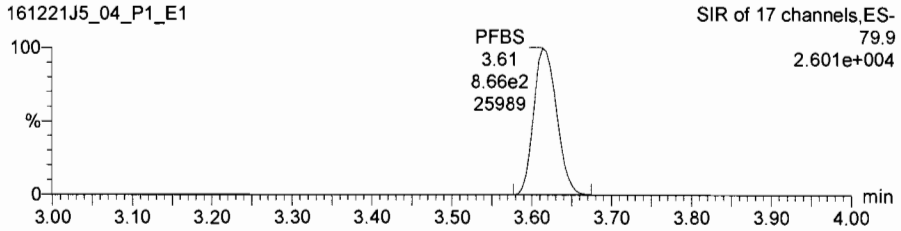
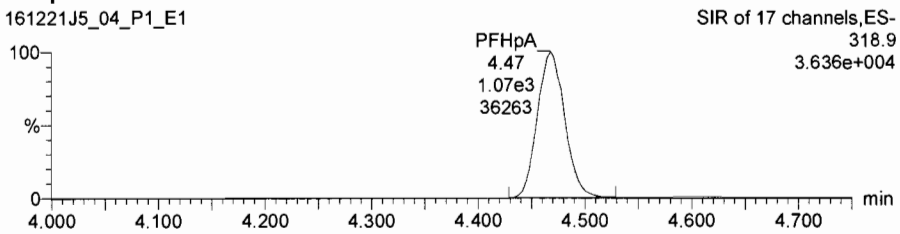
Name: 161221J5_04.wiff, Date: 21-Dec-2016, Time: 16:47:19, ID: ST161221J5-3 PFC CS0 16L1414 A, Description: PFC CS0 16L1414 A

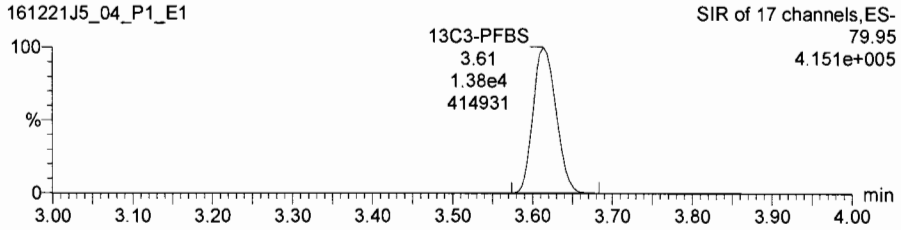
PFBS



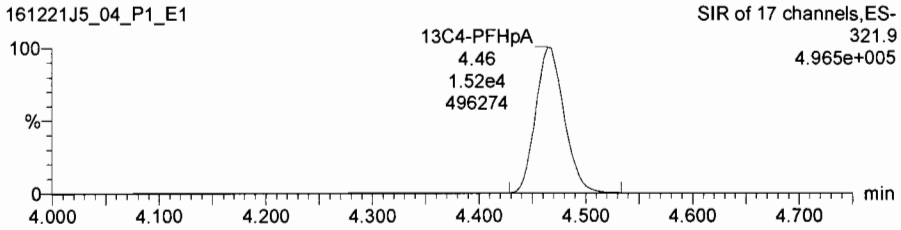
PFHpA



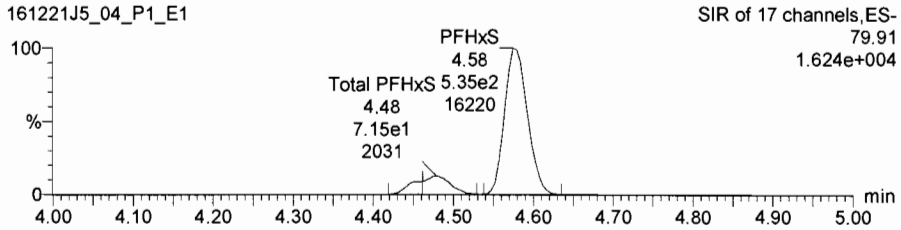
13C3-PFBS



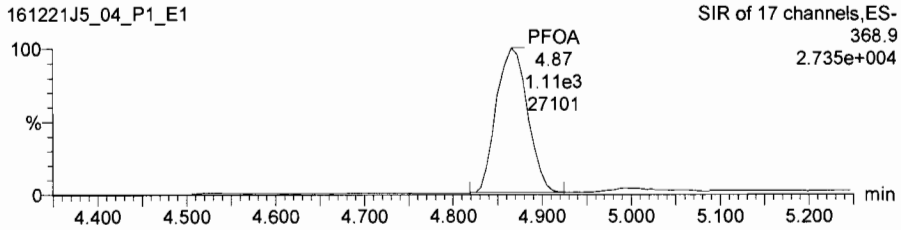
13C4-PFHpA



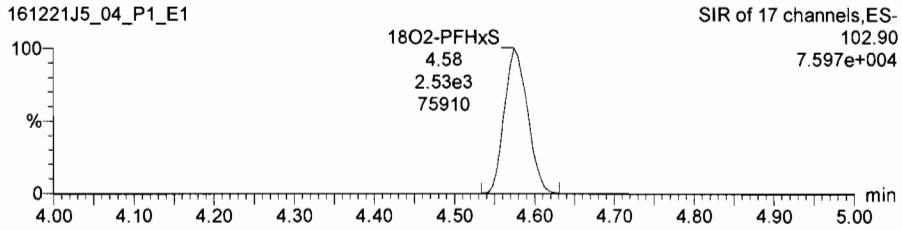
PFHxS



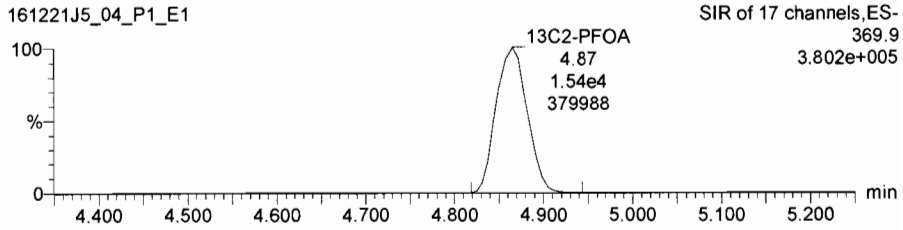
PFOA

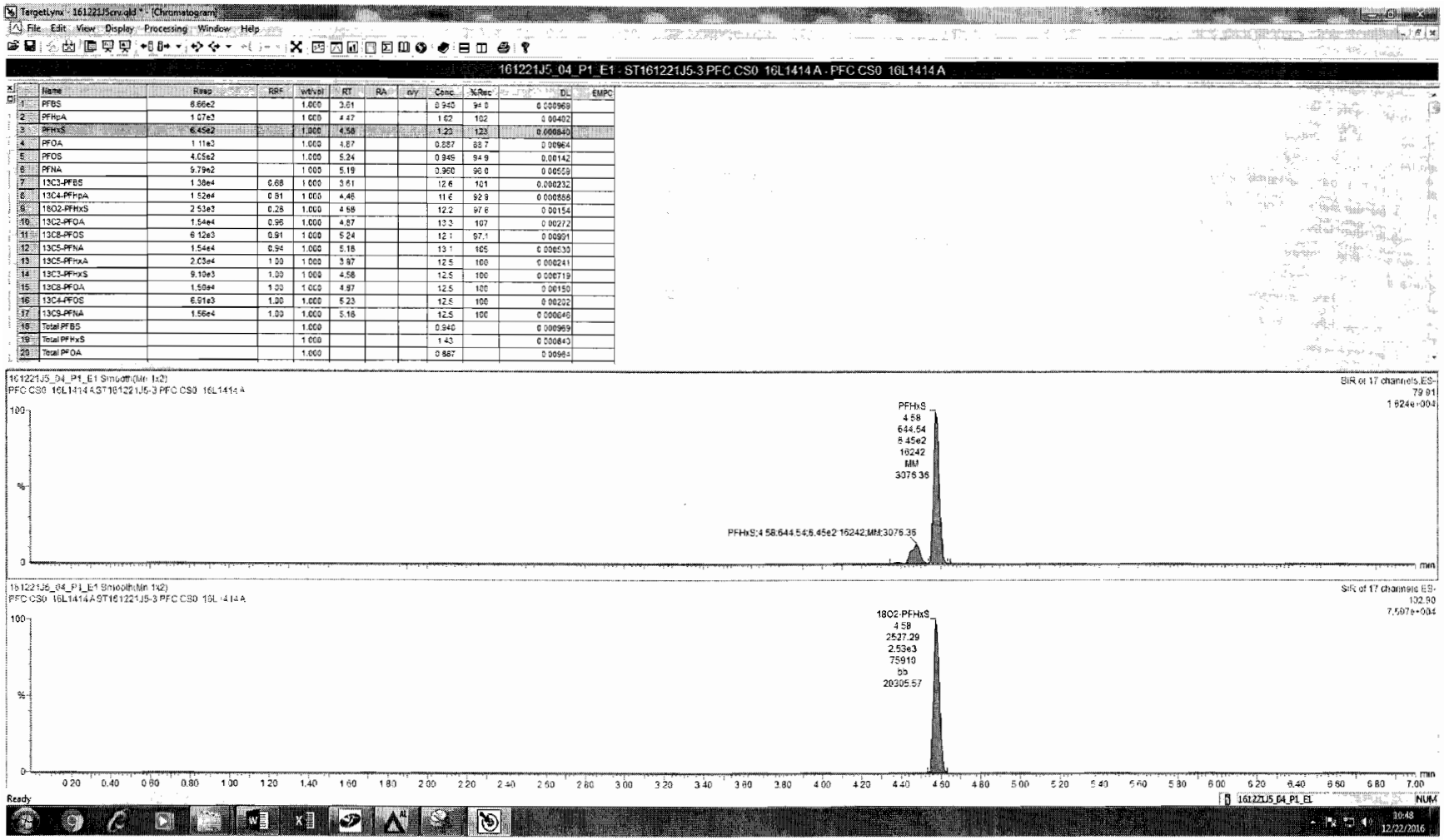


18O2-PFHxS



13C2-PFOA





	Name	Resp	RRF	wt/vol	RT	RA	o/y	Conc	%Rec	DL	EMPC
1	PFBS	8.66e2		1.000	3.61			0.948	94.8	0.000969	
2	PFHpA	1.07e3		1.000	4.47			1.02	102	0.00402	
3	PFHxS	8.45e2		1.000	4.58			1.23	123	0.000840	
4	PFOA	1.11e3		1.000	4.87			0.887	88.7	0.00964	
5	PFOS	4.05e2		1.000	5.24			0.949	94.9	0.00142	
6	PFNA	9.79e2		1.000	5.19			0.960	96.0	0.00559	
7	13C3-PFBS	1.38e4	0.68	1.000	3.61			12.6	101	0.000232	
8	13C4-PFHpA	1.52e4	0.81	1.000	4.46			11.6	92.9	0.000886	
9	18O2-PFHxS	2.53e3	0.28	1.000	4.58			12.2	97.6	0.00154	
10	13C2-PFOA	1.54e4	0.96	1.000	4.87			12.3	107	0.00272	
11	13C8-PFOS	6.12e3	0.91	1.000	5.24			12.1	97.1	0.00991	
12	13C5-PFNA	1.54e4	0.94	1.000	5.18			13.1	105	0.000530	
13	13C5-PFHxA	2.03e4	1.00	1.000	3.97			12.5	100	0.000241	
14	13C3-PFHxS	9.10e3	1.00	1.000	4.58			12.5	100	0.000719	
15	13C8-PFOA	1.50e4	1.00	1.000	4.87			12.5	100	0.00150	
16	13C4-PFOS	6.91e3	1.00	1.000	5.23			12.5	100	0.00202	
17	13C9-PFNA	1.56e4	1.00	1.000	5.18			12.5	100	0.000646	
18	Total PFBS			1.000				0.948		0.000969	
19	Total PFHxS			1.000				1.43		0.000840	
20	Total PFOA			1.000				0.887		0.00964	

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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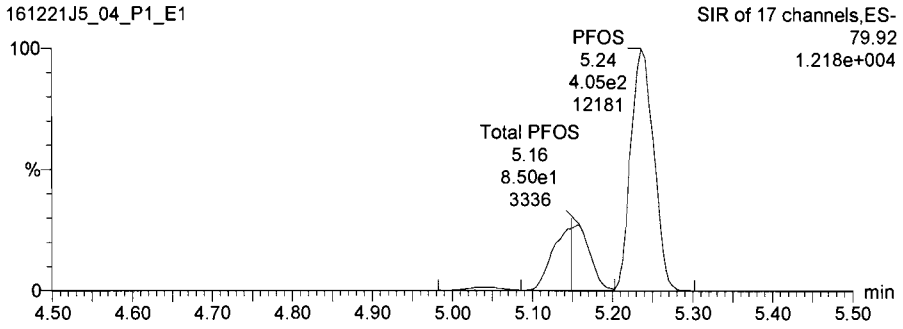
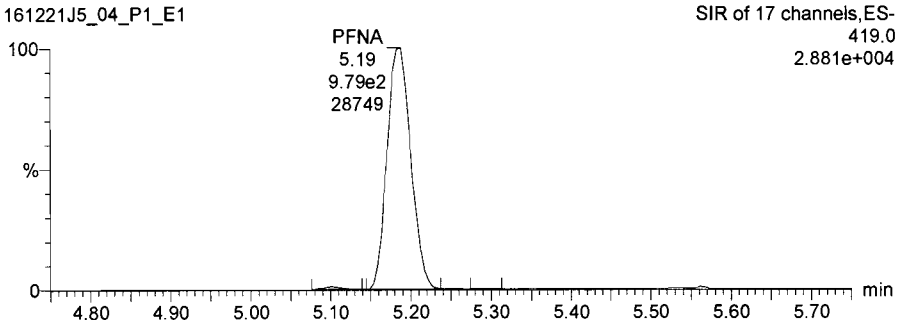
Name: 161221J5_04.wiff, Date: 21-Dec-2016, Time: 16:47:19, ID: ST161221J5-3 PFC CS0 16L1414 A, Description: PFC CS0 16L1414 A

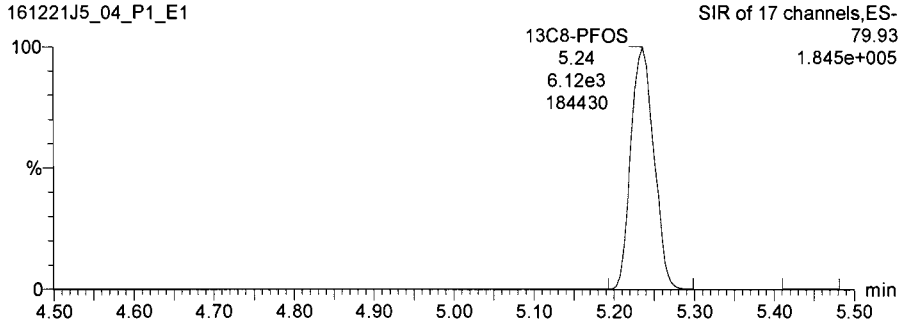
PFOS



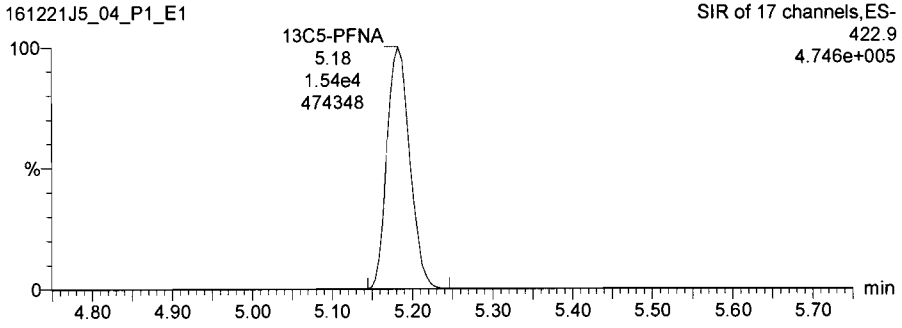
PFNA

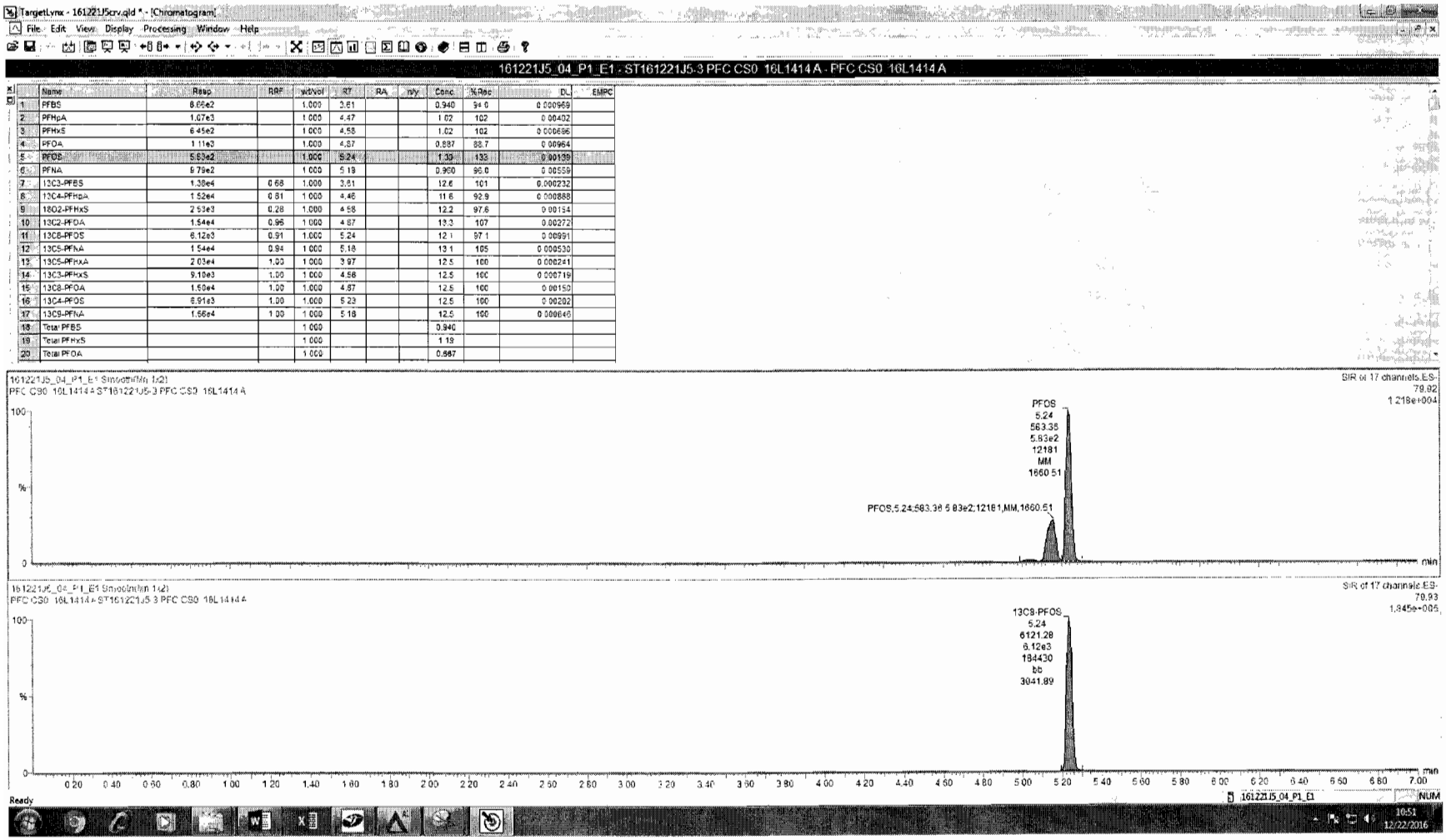


13C8-PFOS



13C5-PFNA





	Name	Resp	RRF	wt/vol	RT	RA	n/y	Conc	%Rec	DL	EMPC
1	PFBS	8.66e2		1.000	3.81			0.940	94.0	0.000969	
2	PFHpA	1.07e3		1.000	4.47			1.02	102	0.000402	
3	PFHxS	6.45e2		1.000	4.58			1.02	102	0.000696	
4	PFOA	1.11e3		1.000	4.87			0.887	88.7	0.00964	
5	PFOS	5.83e2		1.000	5.24			1.33	133	0.00139	
6	PFNA	9.79e2		1.000	5.18			0.960	96.0	0.00559	
7	13C3-PFBS	1.38e4	0.68	1.000	3.81			12.6	101	0.000232	
8	13C4-PFHpA	1.52e4	0.81	1.000	4.46			11.6	92.9	0.000888	
9	18O2-PFHxS	2.53e3	0.28	1.000	4.58			12.2	97.6	0.00154	
10	13C2-PFOA	1.54e4	0.95	1.000	4.87			13.3	107	0.00272	
11	13C8-PFOS	6.12e3	0.91	1.000	5.24			12.1	97.1	0.00991	
12	13C5-PFNA	1.54e4	0.94	1.000	5.18			13.1	105	0.000530	
13	13C5-PFHxA	2.03e4	1.00	1.000	3.97			12.5	100	0.000241	
14	13C3-PFHxS	9.10e3	1.00	1.000	4.58			12.5	100	0.000719	
15	13C8-PFOA	1.50e4	1.00	1.000	4.87			12.5	100	0.00150	
16	13C4-PFOS	8.91e3	1.00	1.000	5.23			12.5	100	0.00202	
17	13C9-PFNA	1.56e4	1.00	1.000	5.18			12.5	100	0.000646	
18	Total PFBS			1.000				0.940			
19	Total PFHxS			1.000				1.19			
20	Total PFOA			1.000				0.887			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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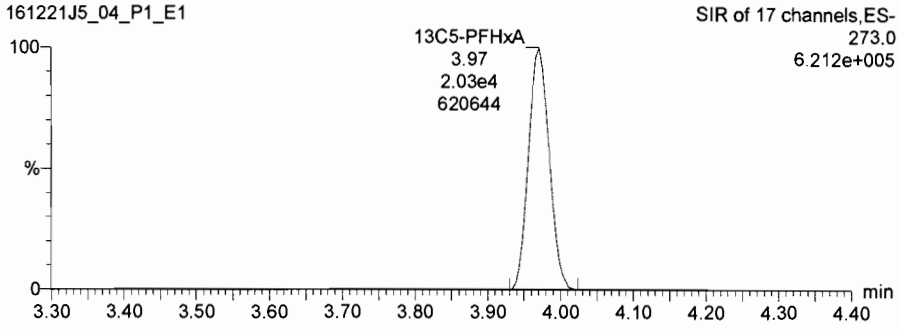
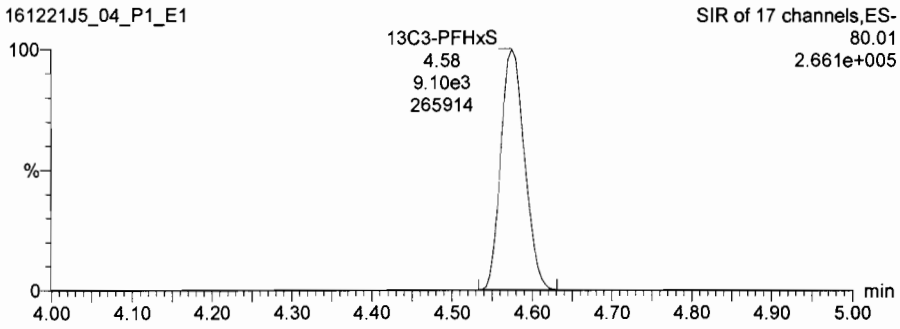
Name: 161221J5_04.wiff, Date: 21-Dec-2016, Time: 16:47:19, ID: ST161221J5-3 PFC CS0 16L1414 A, Description: PFC CS0 16L1414 A

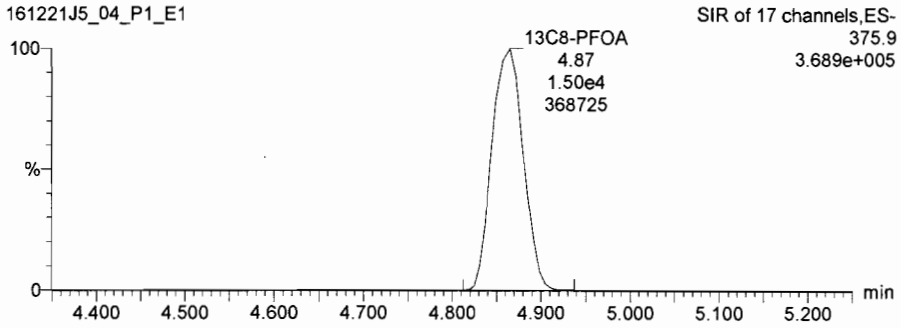
13C5-PFHxA



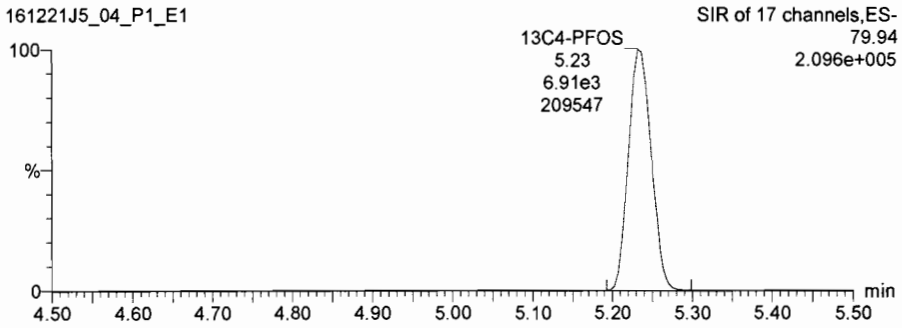
13C3-PFHxS



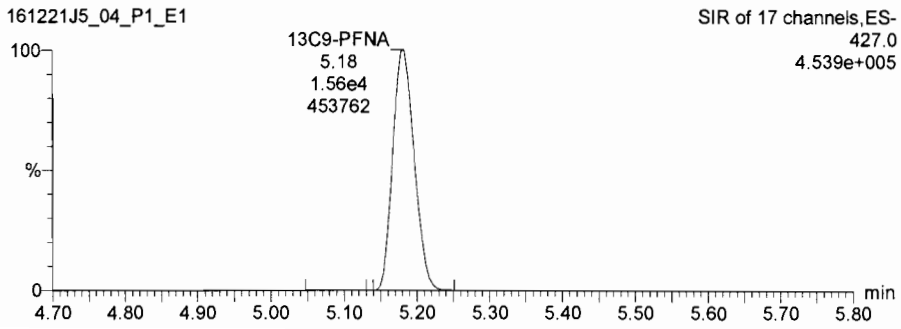
13C8-PFOA



13C4-PFOS



13C9-PFNA



Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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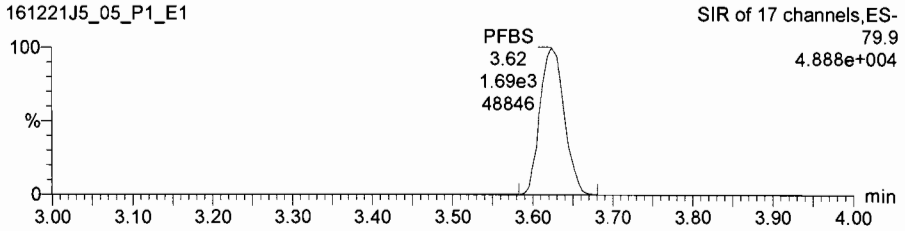
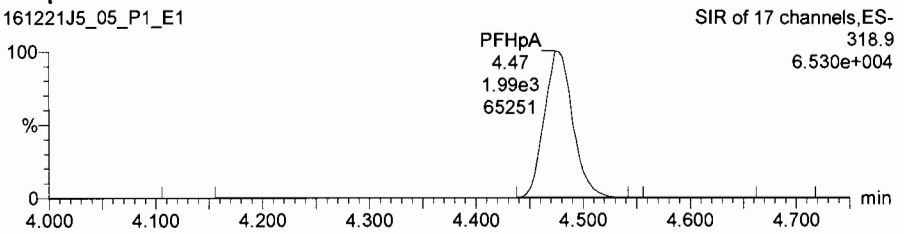
Name: 161221J5_05.wiff, Date: 21-Dec-2016, Time: 16:59:32, ID: ST161221J5-4 PFC CS1 16L1415 A, Description: PFC CS1 16L1415 A

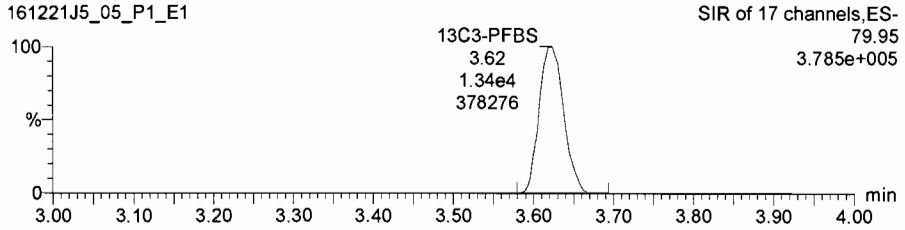
PFBS



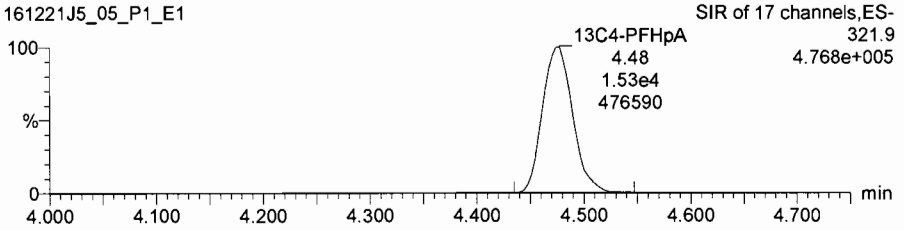
PFHpA



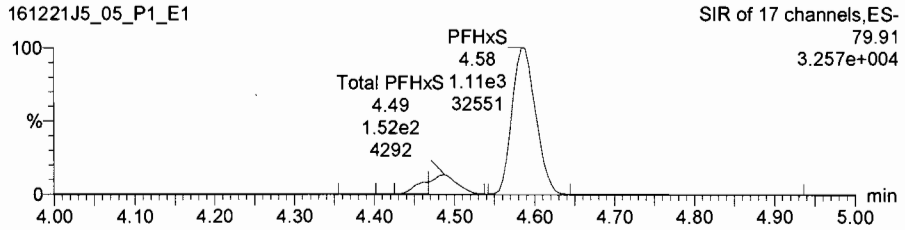
13C3-PFBS



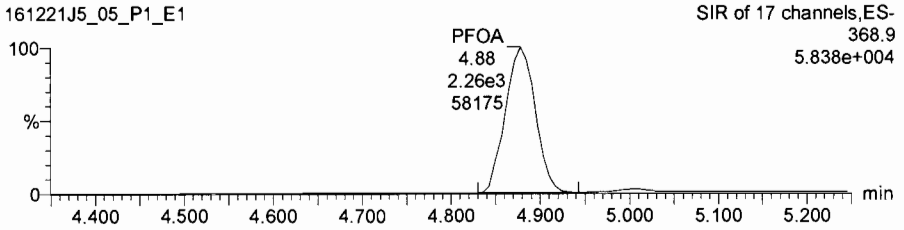
13C4-PFHpA



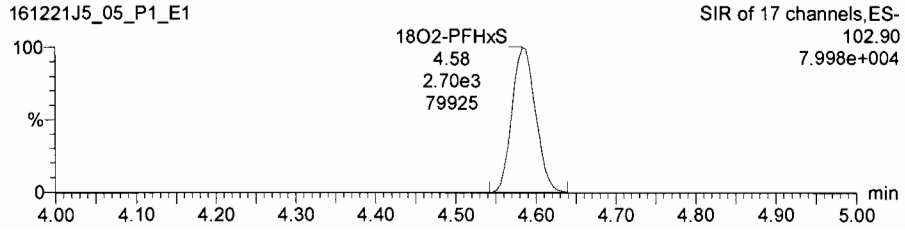
PFHxS



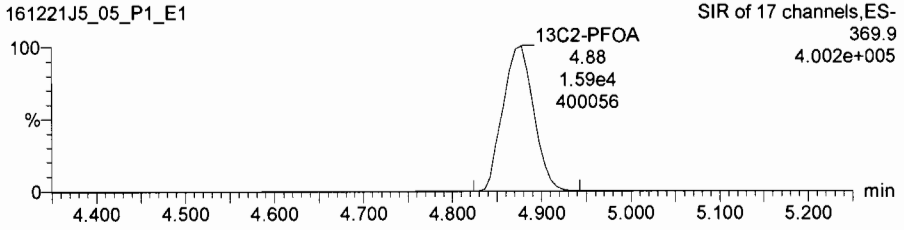
PFOA

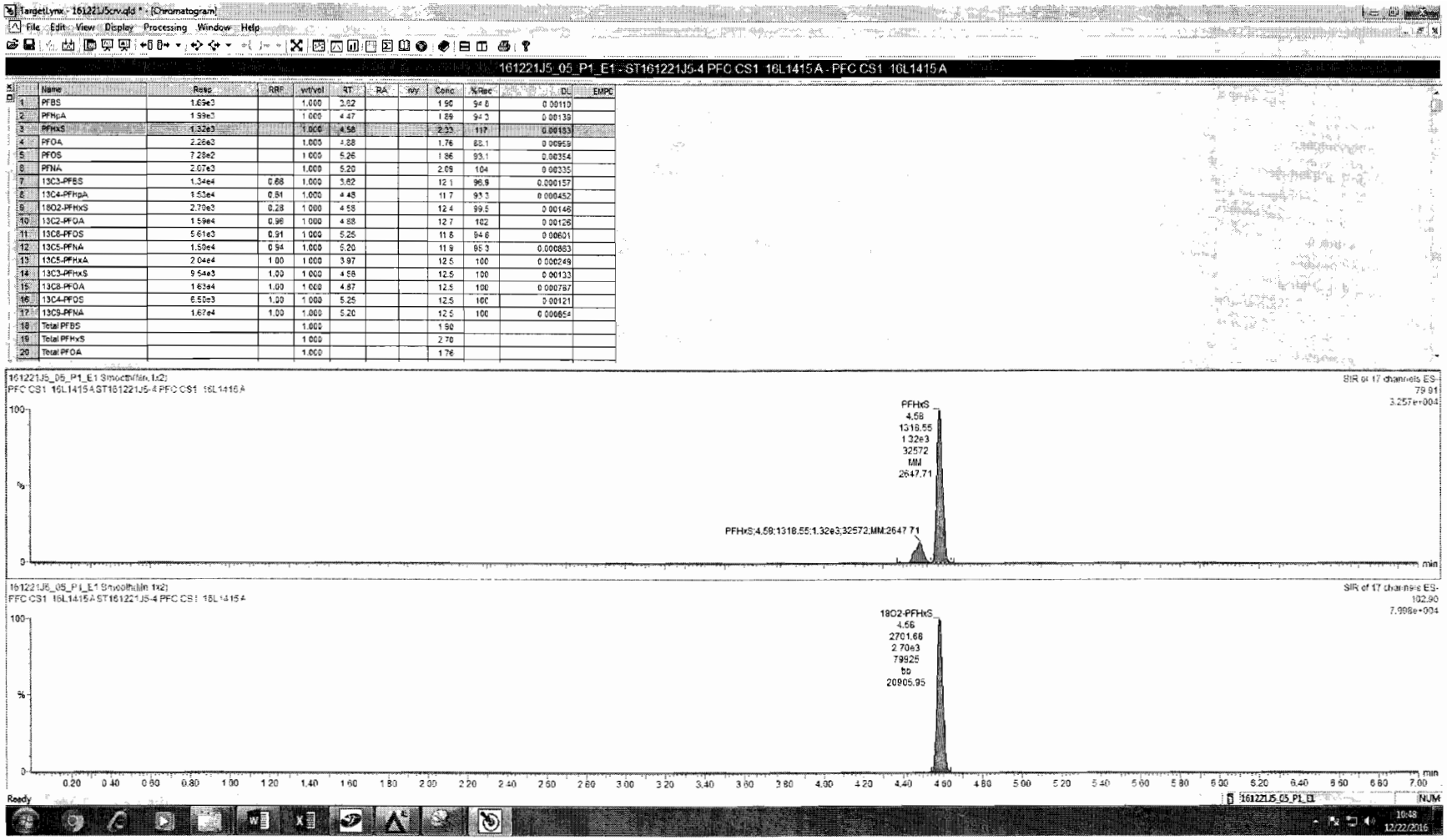


18O2-PFHxS



13C2-PFOA





	Name	Resp	RRF	wt/vol	RT	RA	ray	Conc	%Rec	DL	EMPC
1	PFBS	1.69e3		1.000	3.82			1.90	94.8	0.00110	
2	PFHpA	1.99e3		1.000	4.47			1.89	94.5	0.00139	
3	PFHxS	1.32e3		1.000	4.58			2.33	117	0.00183	
4	PFOA	2.26e3		1.000	4.88			1.76	88.1	0.00959	
5	PFOS	7.28e2		1.000	5.26			1.86	93.1	0.00354	
6	PFNA	2.07e3		1.000	5.20			2.09	104	0.00335	
7	13C3-PFBS	1.34e4	0.88	1.000	3.82			12.1	96.9	0.000157	
8	13C4-PFHpA	1.53e4	0.91	1.000	4.48			11.7	93.3	0.000452	
9	18O2-PFHxS	2.70e3	0.28	1.000	4.55			12.4	99.5	0.00146	
10	13C2-PFOA	1.59e4	0.96	1.000	4.88			12.7	102	0.00126	
11	13C8-PFOS	9.61e3	0.91	1.000	5.25			11.8	94.6	0.00601	
12	13C5-PFNA	1.50e4	0.94	1.000	5.20			11.9	95.3	0.000883	
13	13C5-PFHxA	2.04e4	1.00	1.000	3.97			12.5	100	0.000249	
14	13C3-PFHxS	9.54e3	1.00	1.000	4.58			12.5	100	0.00133	
15	13C8-PFOA	1.63e4	1.00	1.000	4.87			12.5	100	0.000787	
16	13C4-PFOS	6.50e3	1.00	1.000	5.25			12.5	100	0.00121	
17	13C9-PFNA	1.67e4	1.00	1.000	5.20			12.5	100	0.000854	
18	Total PFBS			1.000				1.90			
19	Total PFHxS			1.000				2.76			
20	Total PFOA			1.000				1.76			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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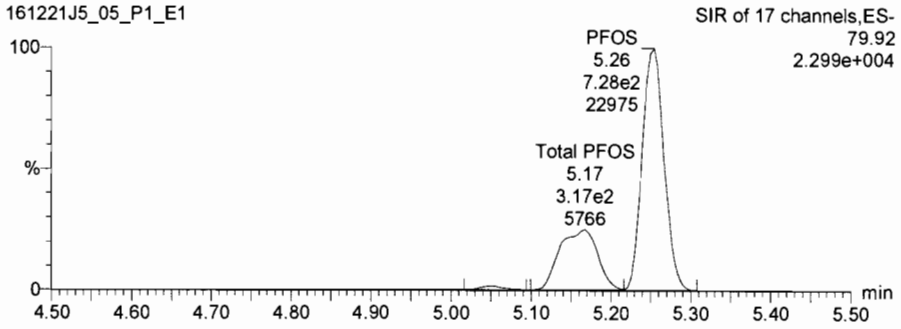
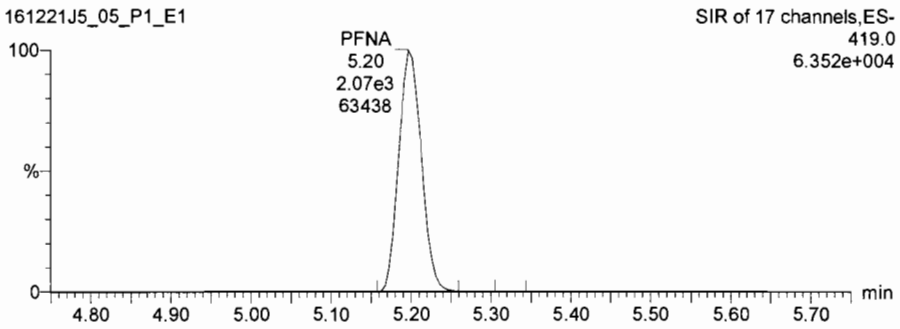
Name: 161221J5_05.wiff, Date: 21-Dec-2016, Time: 16:59:32, ID: ST161221J5-4 PFC CS1 16L1415 A, Description: PFC CS1 16L1415 A

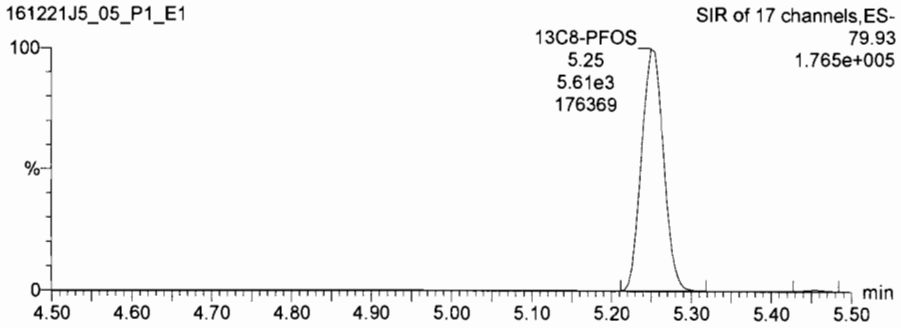
PFOS



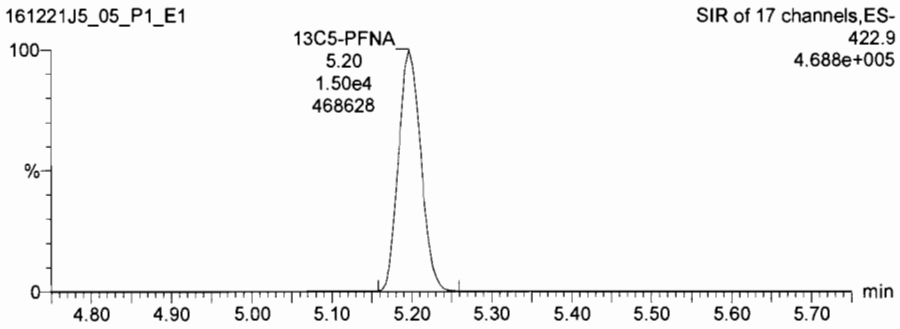
PFNA

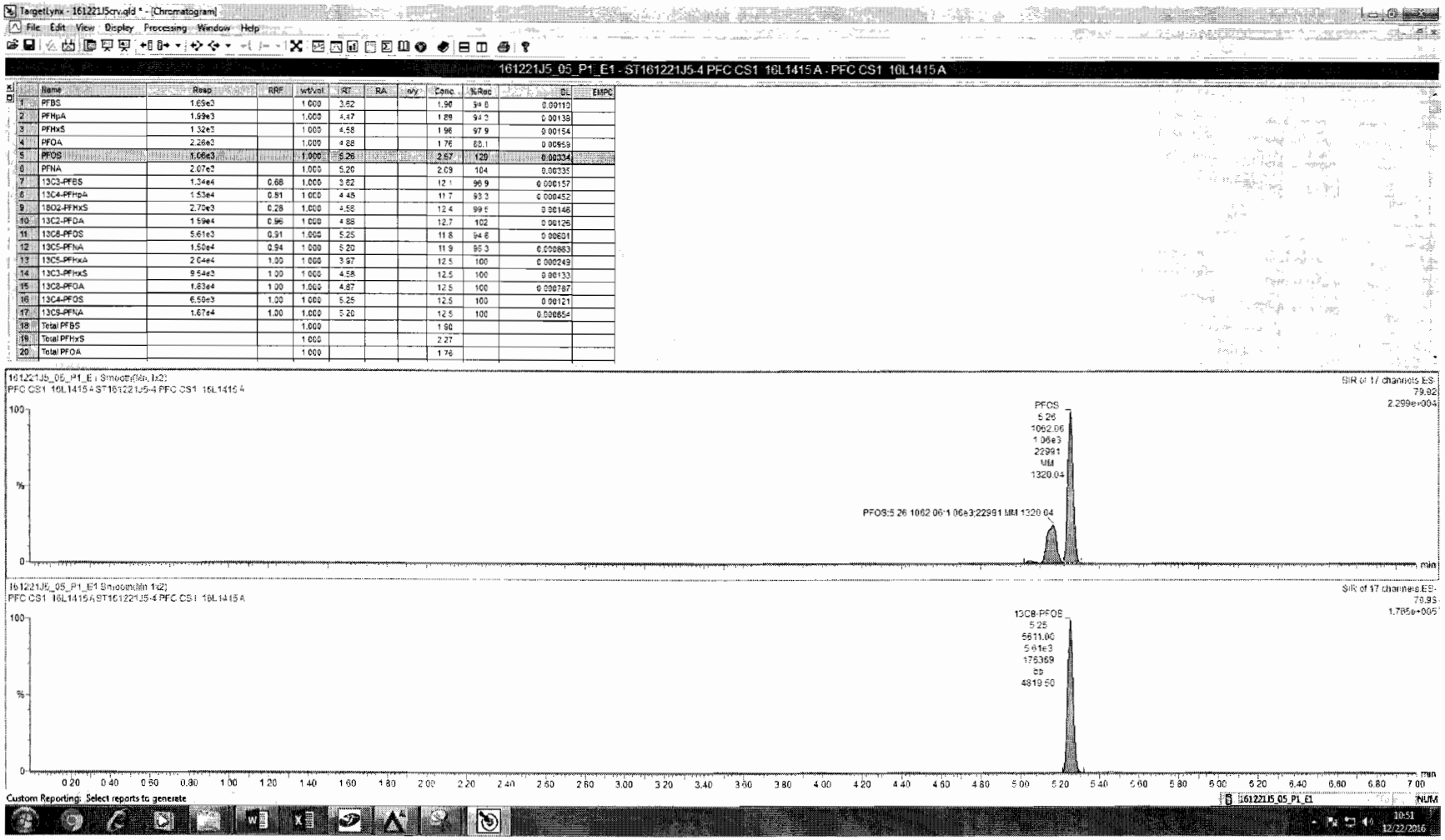


13C8-PFOS



13C5-PFNA





	Name	Resp	RRF	wtVal	RT	RA	o/y	Conc.	%Rec	DL	EMPC
1	PFBS	1.65e3		1.000	3.82			1.90	94.8	0.00110	
2	PFHpA	1.99e3		1.000	4.47			1.88	94.2	0.00139	
3	PFHxS	1.32e3		1.000	4.58			1.96	97.9	0.00154	
4	PFOA	2.26e2		1.000	4.88			1.76	88.1	0.00959	
5	PFOS	1.06e3		1.000	5.26			2.57	129	0.00334	
6	PFNA	2.07e2		1.000	5.20			2.09	104	0.00335	
7	13C3-PFBS	1.34e4	0.68	1.000	3.82			12.1	96.9	0.000157	
8	13C4-PFHpA	1.53e4	0.81	1.000	4.45			11.7	93.3	0.000452	
9	18O2-PFHxS	2.75e3	0.28	1.000	4.58			12.4	99.5	0.00146	
10	13C2-PFDA	1.59e4	0.96	1.000	4.88			12.7	102	0.00126	
11	13C8-PFOS	5.61e3	0.91	1.000	5.25			11.8	94.6	0.00601	
12	13C5-PFNA	1.50e4	0.94	1.000	5.20			11.9	95.3	0.000883	
13	13C5-PFHxA	2.04e4	1.00	1.000	3.97			12.5	100	0.000249	
14	13C3-PFHxS	9.54e3	1.00	1.000	4.58			12.5	100	0.00133	
15	13C8-PFOA	1.83e4	1.00	1.000	4.87			12.5	100	0.000787	
16	13C4-PFOS	6.59e3	1.00	1.000	5.25			12.5	100	0.00121	
17	13C9-PFNA	1.67e4	1.00	1.000	5.20			12.5	100	0.000854	
18	Total PFBS			1.000				1.90			
19	Total PFHxS			1.000				2.27			
20	Total PFOA			1.000				1.76			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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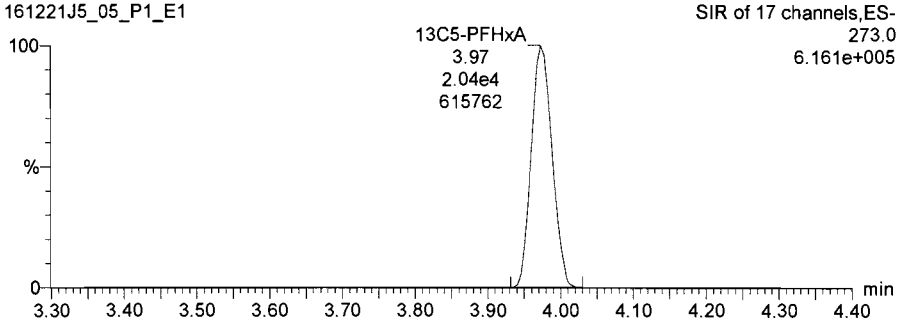
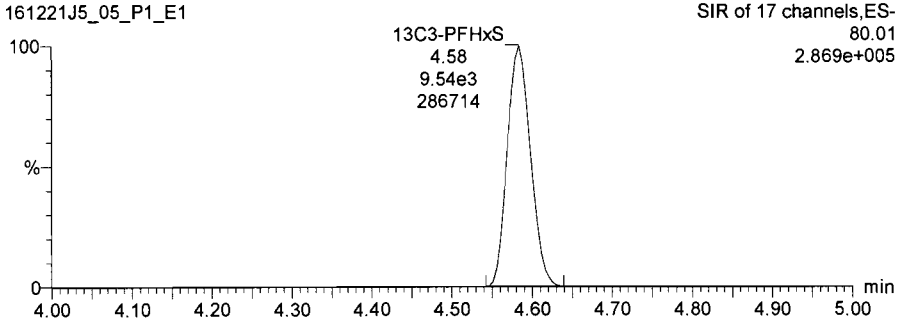
Name: 161221J5_05.wiff, Date: 21-Dec-2016, Time: 16:59:32, ID: ST161221J5-4 PFC CS1 16L1415 A, Description: PFC CS1 16L1415 A

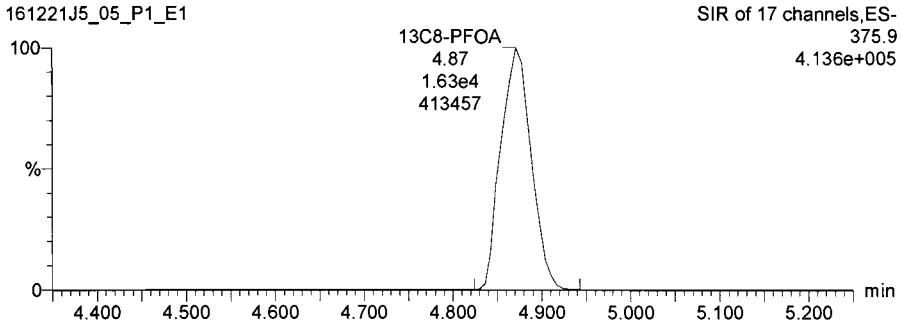
13C5-PFHxA



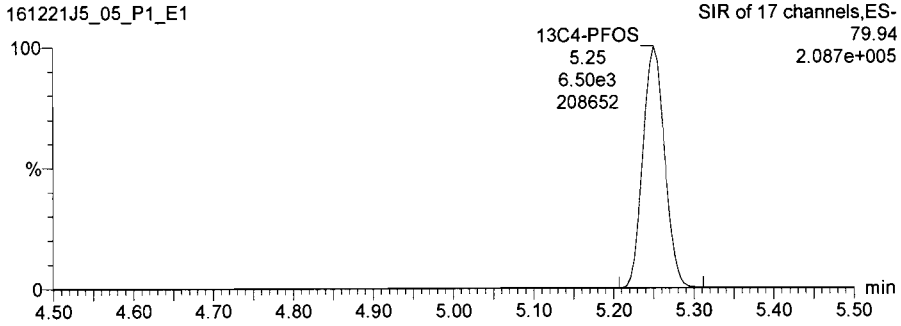
13C3-PFHxS



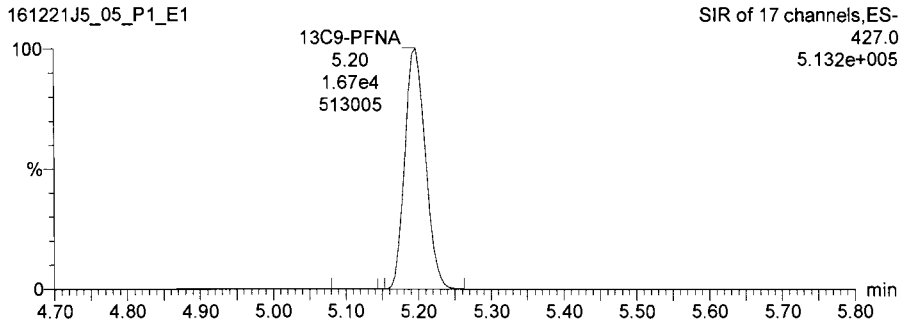
13C8-PFOA



13C4-PFOS



13C9-PFNA



Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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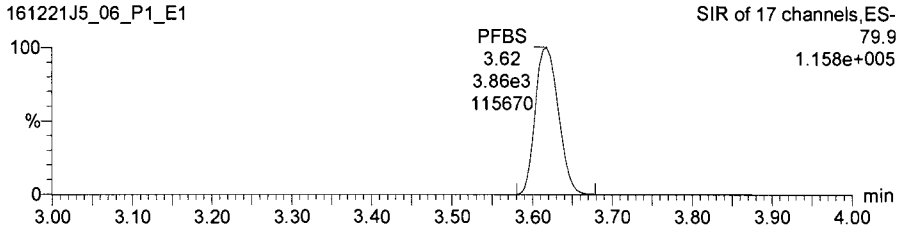
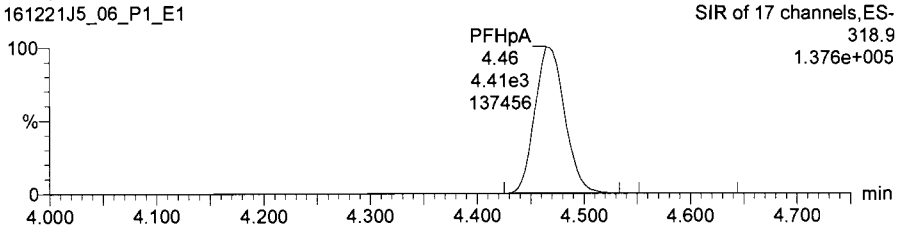
Name: 161221J5_06.wiff, Date: 21-Dec-2016, Time: 17:11:46, ID: ST161221J5-5 PFC CS2 16L1416 A, Description: PFC CS2 16L1416 A

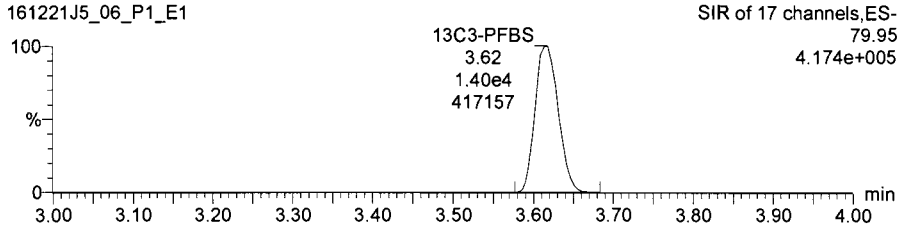
PFBS



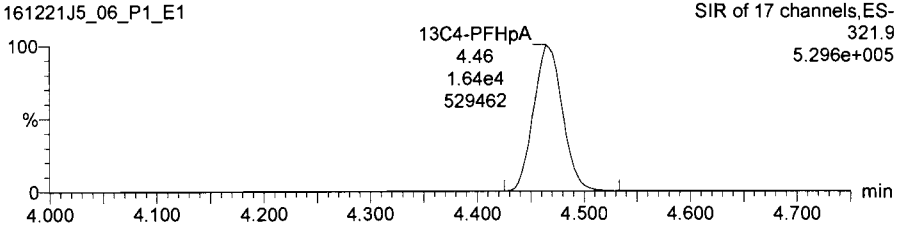
PFHpA



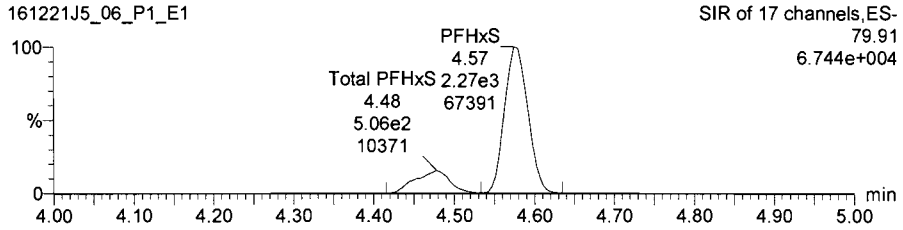
13C3-PFBS



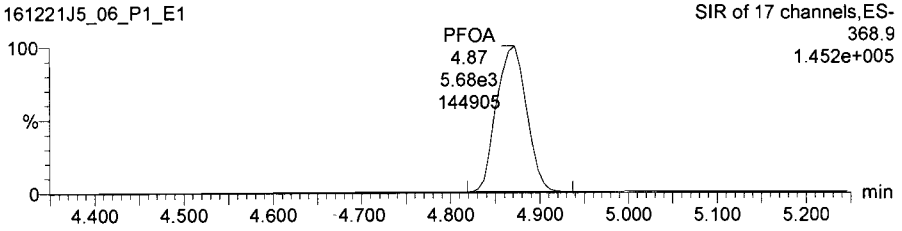
13C4-PFHpA



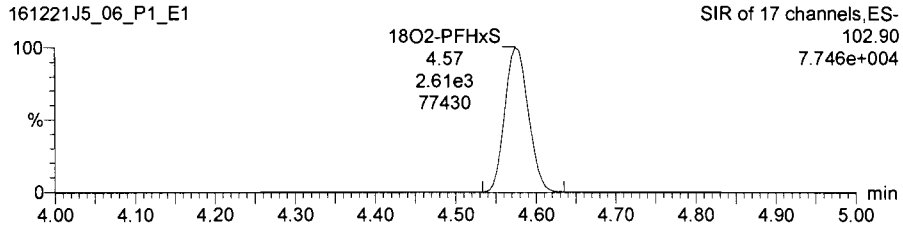
PFHxS



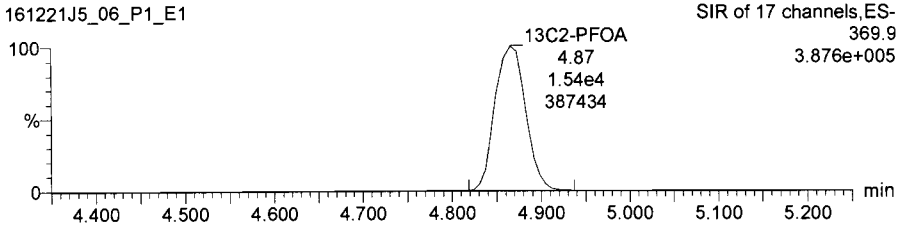
PFOA

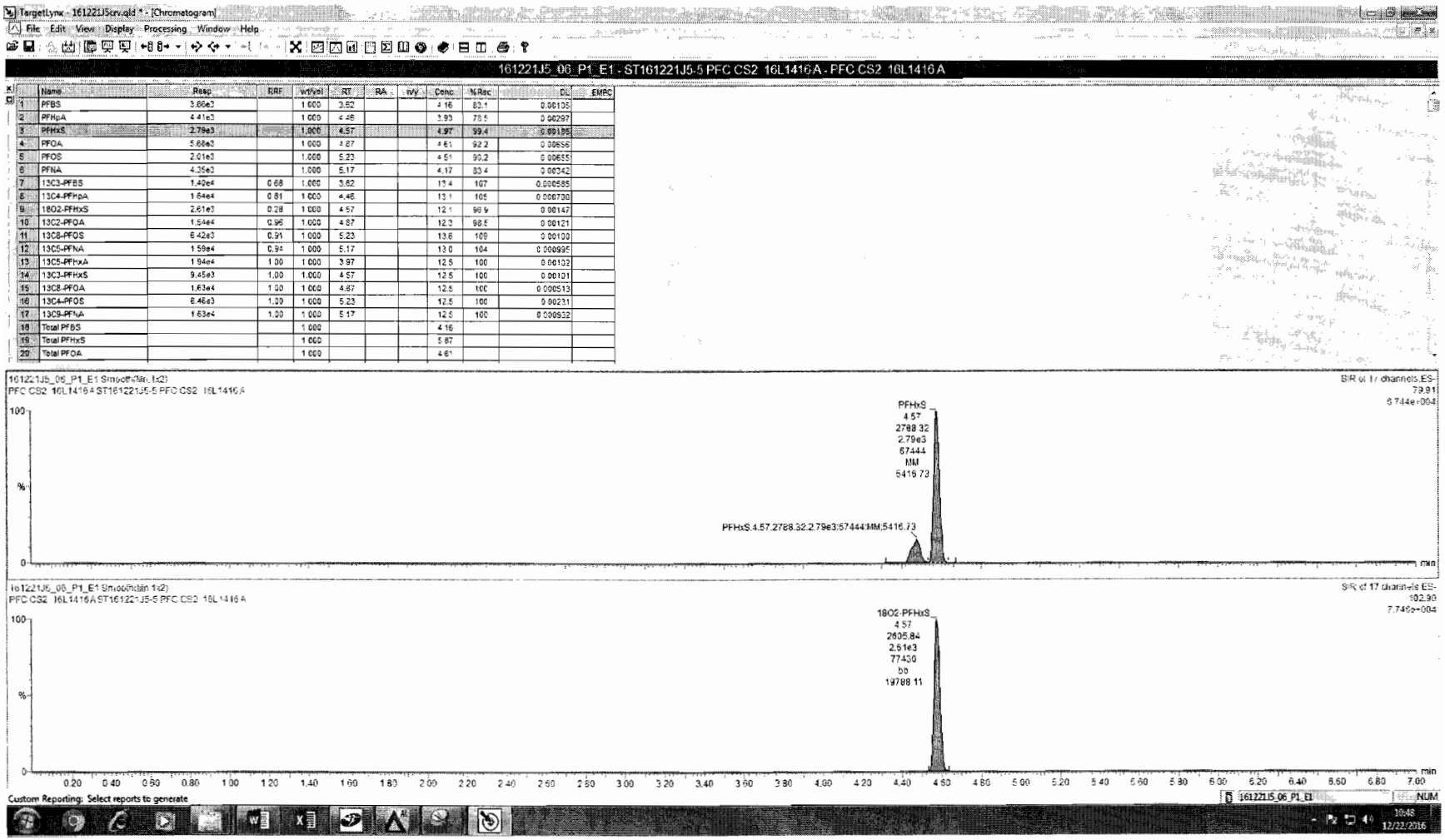


18O2-PFHxS



13C2-PFOA





	Name	Resp	RRF	wt/vol	RT	RA	rvy	Conc	%Rec	DL	EMPC
1	PFBS	3.66e2		1.000	3.62			4.16	83.1	0.00105	
2	PFHpA	4.41e3		1.000	4.46			3.93	78.5	0.00297	
3	PFHxS	2.79e3		1.000	4.57			4.97	99.4	0.00185	
4	PFOA	5.68e3		1.000	4.87			4.61	92.2	0.00656	
5	PFOS	2.01e3		1.000	5.23			4.51	90.2	0.00655	
6	PFNA	4.35e3		1.000	5.17			4.17	83.4	0.00342	
7	13C3-PFBS	1.40e4	0.68	1.000	3.62			13.4	107	0.000585	
8	13C4-PFHpA	1.64e4	0.81	1.000	4.46			13.1	105	0.000730	
9	18O2-PFHxS	2.61e3	0.28	1.000	4.57			12.1	96.9	0.00147	
10	13C2-PFOA	1.54e4	0.96	1.000	4.87			12.2	98.5	0.00121	
11	13C8-PFOS	6.42e3	0.91	1.000	5.23			13.6	109	0.00100	
12	13C5-PFNA	1.59e4	0.94	1.000	5.17			13.0	104	0.000995	
13	13C5-PFHxA	1.94e4	1.00	1.000	3.97			12.5	100	0.00102	
14	13C3-PFHxS	9.45e3	1.00	1.000	4.57			12.5	100	0.00101	
15	13C8-PFOA	1.63e4	1.00	1.000	4.87			12.5	100	0.000513	
16	13C4-PFOS	6.46e3	1.00	1.000	5.23			12.5	100	0.00231	
17	13C9-PFNA	1.63e4	1.00	1.000	5.17			12.5	100	0.000932	
18	Total PFBS			1.000				4.16			
19	Total PFHxS			1.000				5.87			
20	Total PFOA			1.000				4.61			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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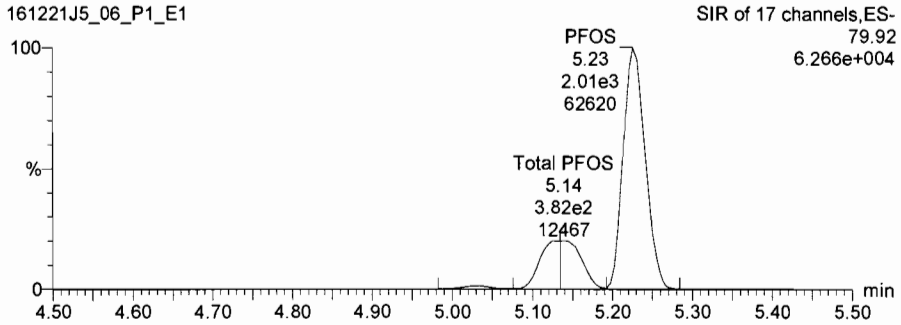
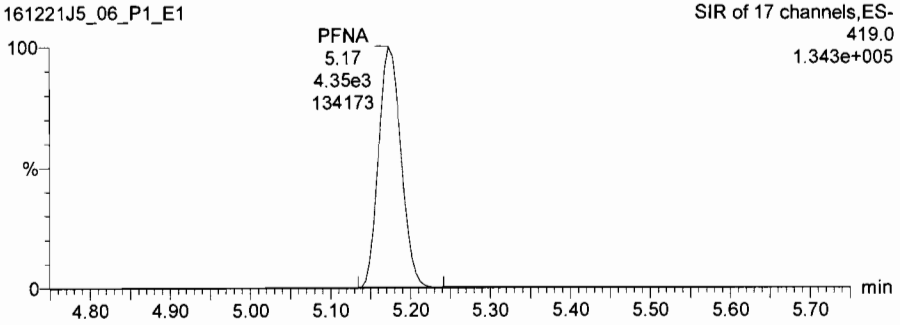
Name: 161221J5_06.wiff, Date: 21-Dec-2016, Time: 17:11:46, ID: ST161221J5-5 PFC CS2 16L1416 A, Description: PFC CS2 16L1416 A

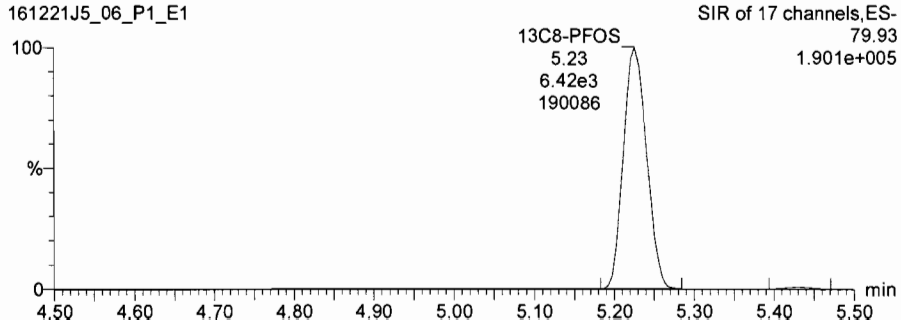
PFOS



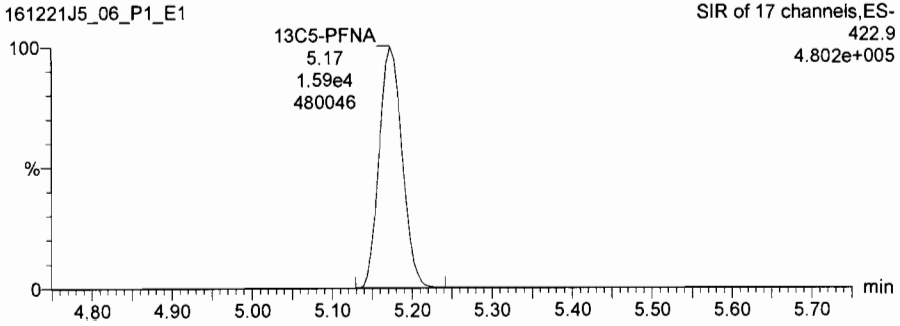
PFNA

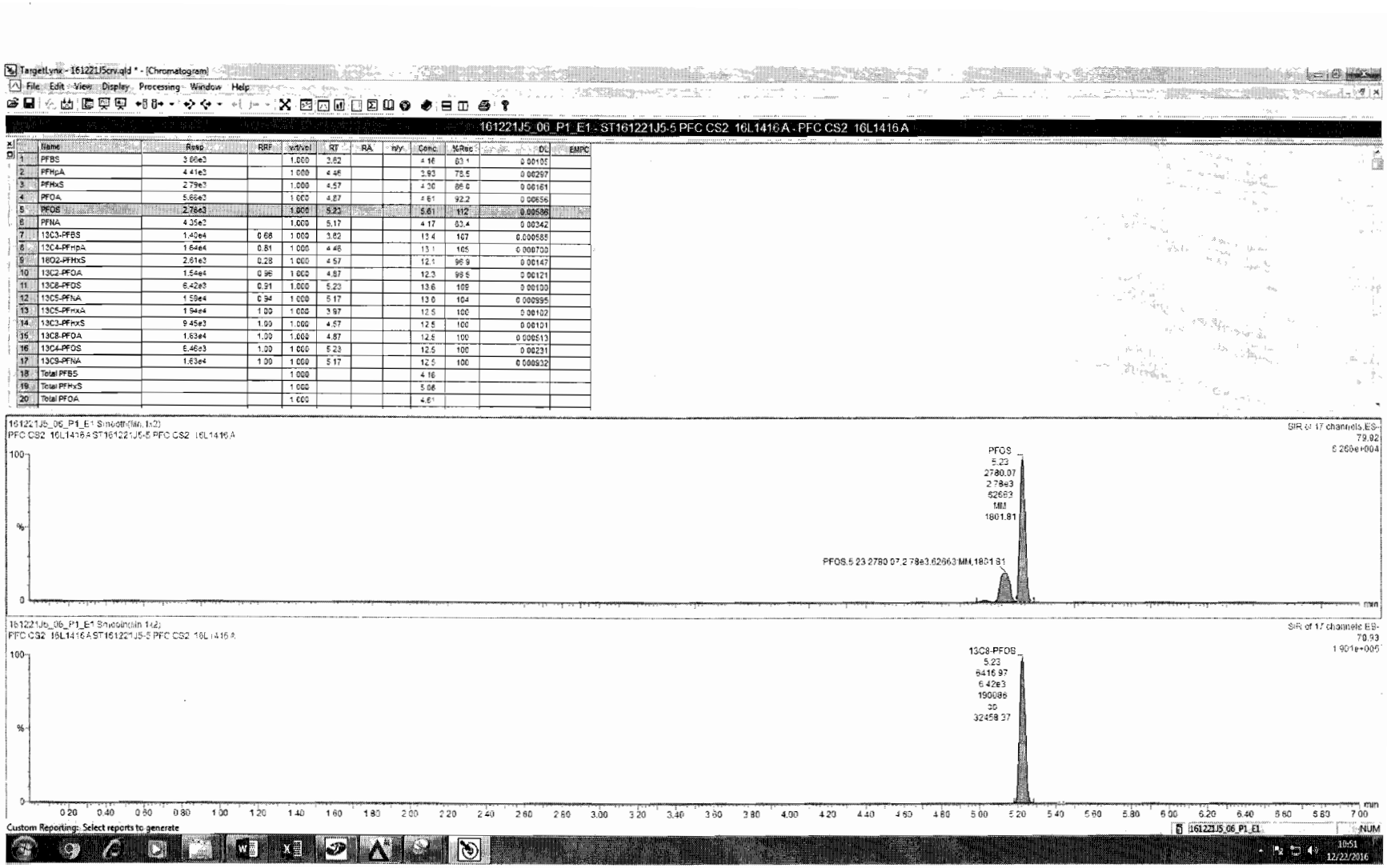


13C8-PFOS



13C5-PFNA





	Name	Resp	RRF	wt/vol	RT	RA	m/y	Conc	%Rec	DL	EMPC
1	PFBS	3.66e3		1.000	3.82			4.16	83.1	0.00105	
2	PFHpA	4.41e3		1.000	4.46			3.93	78.5	0.00297	
3	PFHxS	2.79e3		1.000	4.57			4.30	86.0	0.00161	
4	PFOA	5.66e3		1.000	4.87			4.61	92.2	0.00656	
5	PFOS	2.78e3		1.000	5.23			5.61	112	0.00586	
6	PFNA	4.35e2		1.000	5.17			4.17	83.4	0.00342	
7	13C3-PFBS	1.40e4	0.68	1.000	3.82			13.4	107	0.000685	
8	13C4-PFHpA	1.64e4	0.81	1.000	4.46			13.1	105	0.000700	
9	18O2-PFHxS	2.61e3	0.28	1.000	4.57			12.1	96.9	0.00147	
10	13C2-PFOA	1.54e4	0.96	1.000	4.87			12.3	98.5	0.00121	
11	13C8-PFOS	6.42e3	0.91	1.000	5.23			13.6	109	0.00100	
12	13C5-PFNA	1.59e4	0.94	1.000	5.17			13.0	104	0.000995	
13	13C5-PFHxA	1.94e4	1.00	1.000	3.97			12.5	100	0.00102	
14	13C3-PFHxS	9.45e3	1.00	1.000	4.57			12.5	100	0.00101	
15	13C8-PFOA	1.63e4	1.00	1.000	4.87			12.5	100	0.000513	
16	13C4-PFOS	6.46e3	1.00	1.000	5.23			12.5	100	0.00231	
17	13C9-PFNA	1.63e4	1.00	1.000	5.17			12.5	100	0.000932	
18	Total PFBS			1.000				4.16			
19	Total PFHxS			1.000				5.66			
20	Total PFOA			1.000				4.61			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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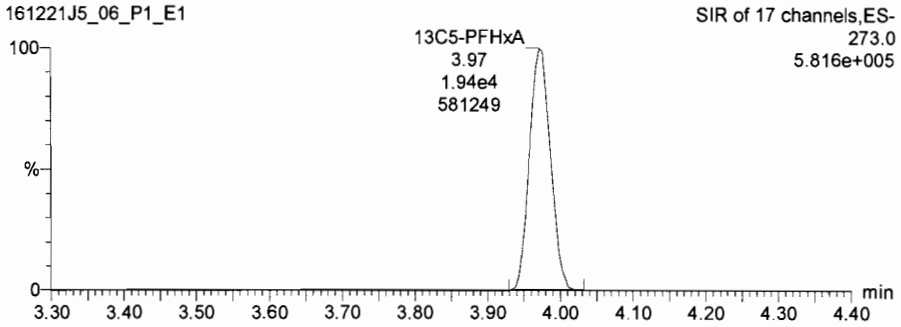
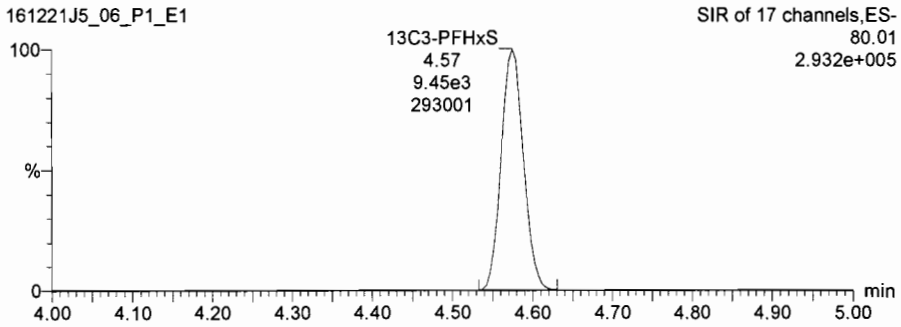
Name: 161221J5_06.wiff, Date: 21-Dec-2016, Time: 17:11:46, ID: ST161221J5-5 PFC CS2 16L1416 A, Description: PFC CS2 16L1416 A

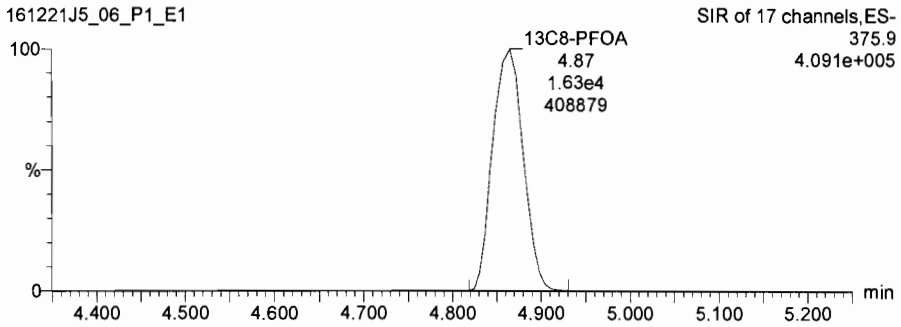
13C5-PFHxA



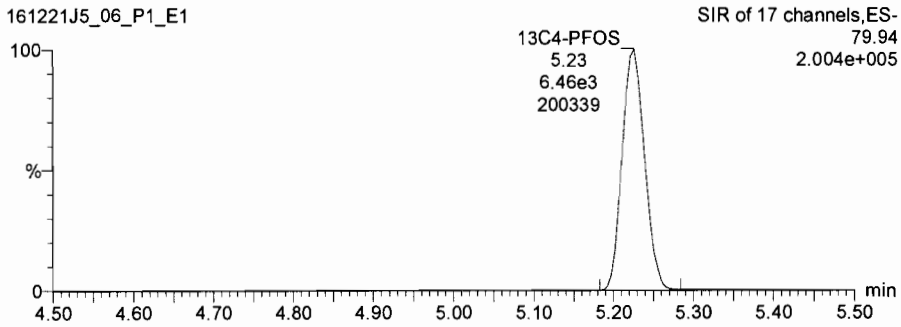
13C3-PFHxS



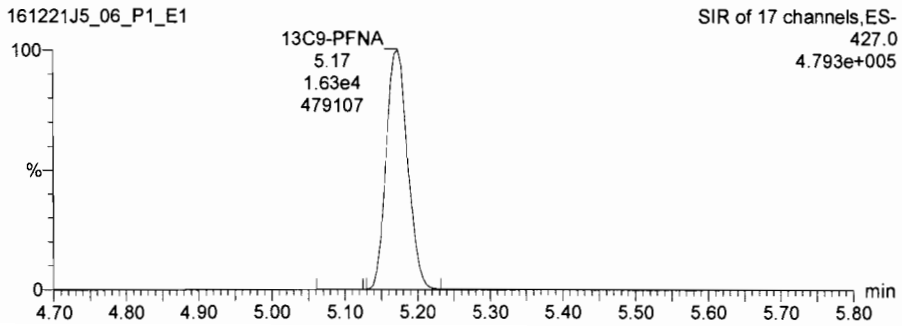
13C8-PFOA



13C4-PFOS



13C9-PFNA



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Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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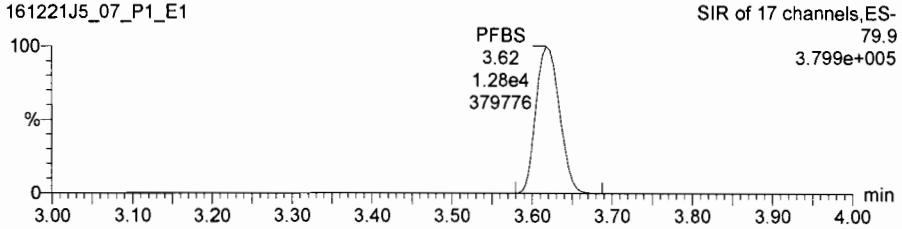
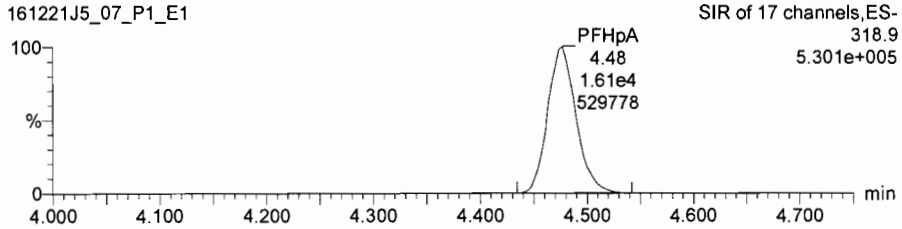
Name: 161221J5_07.wiff, Date: 21-Dec-2016, Time: 17:23:58, ID: ST161221J5-6 PFC CS3 16L1417 A, Description: PFC CS3 16L1417 A

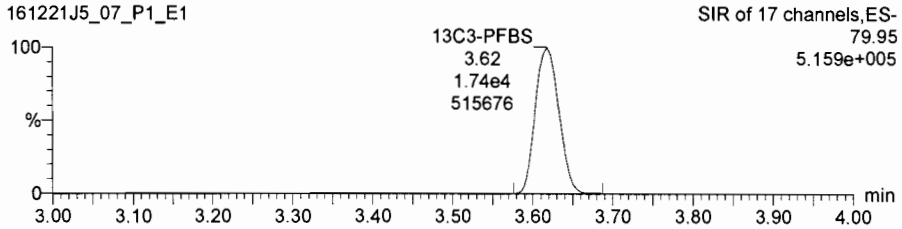
PFBS



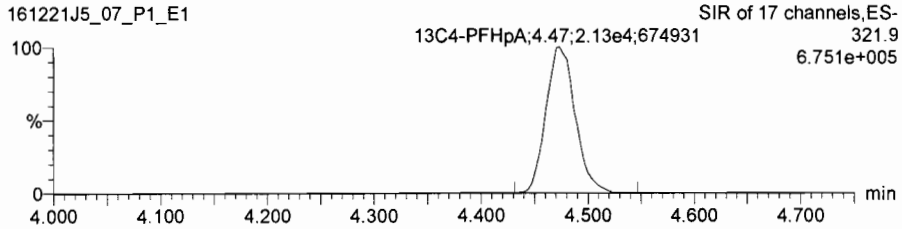
PFHpA



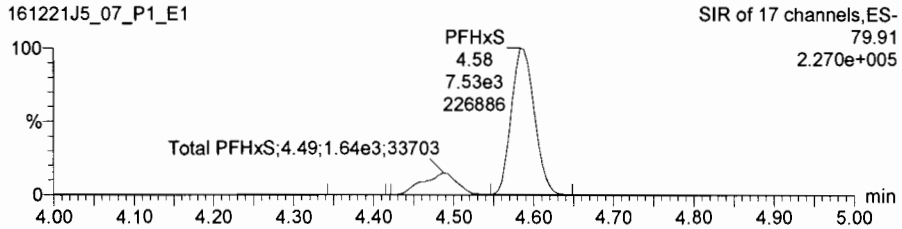
13C3-PFBS



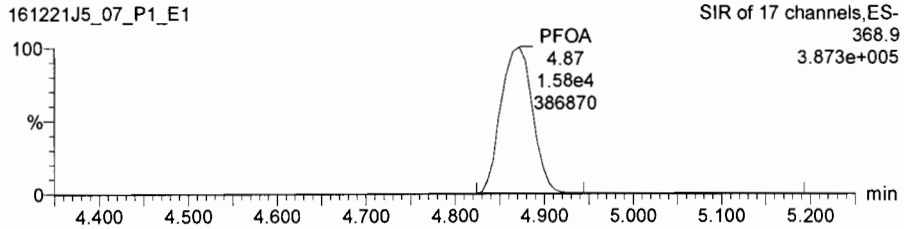
13C4-PFHpA



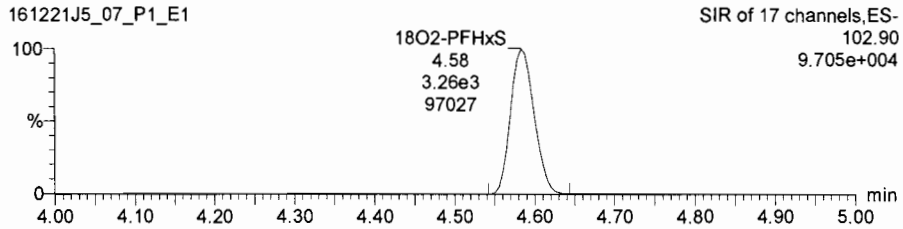
PFHxS



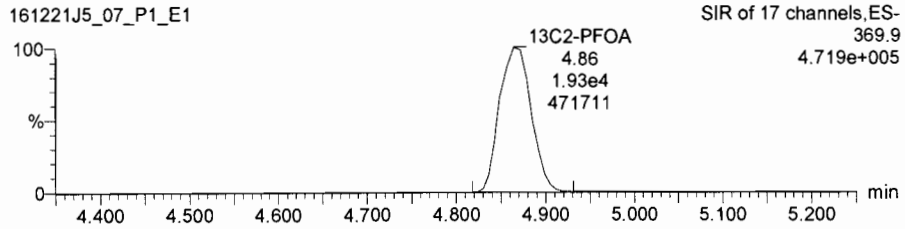
PFOA

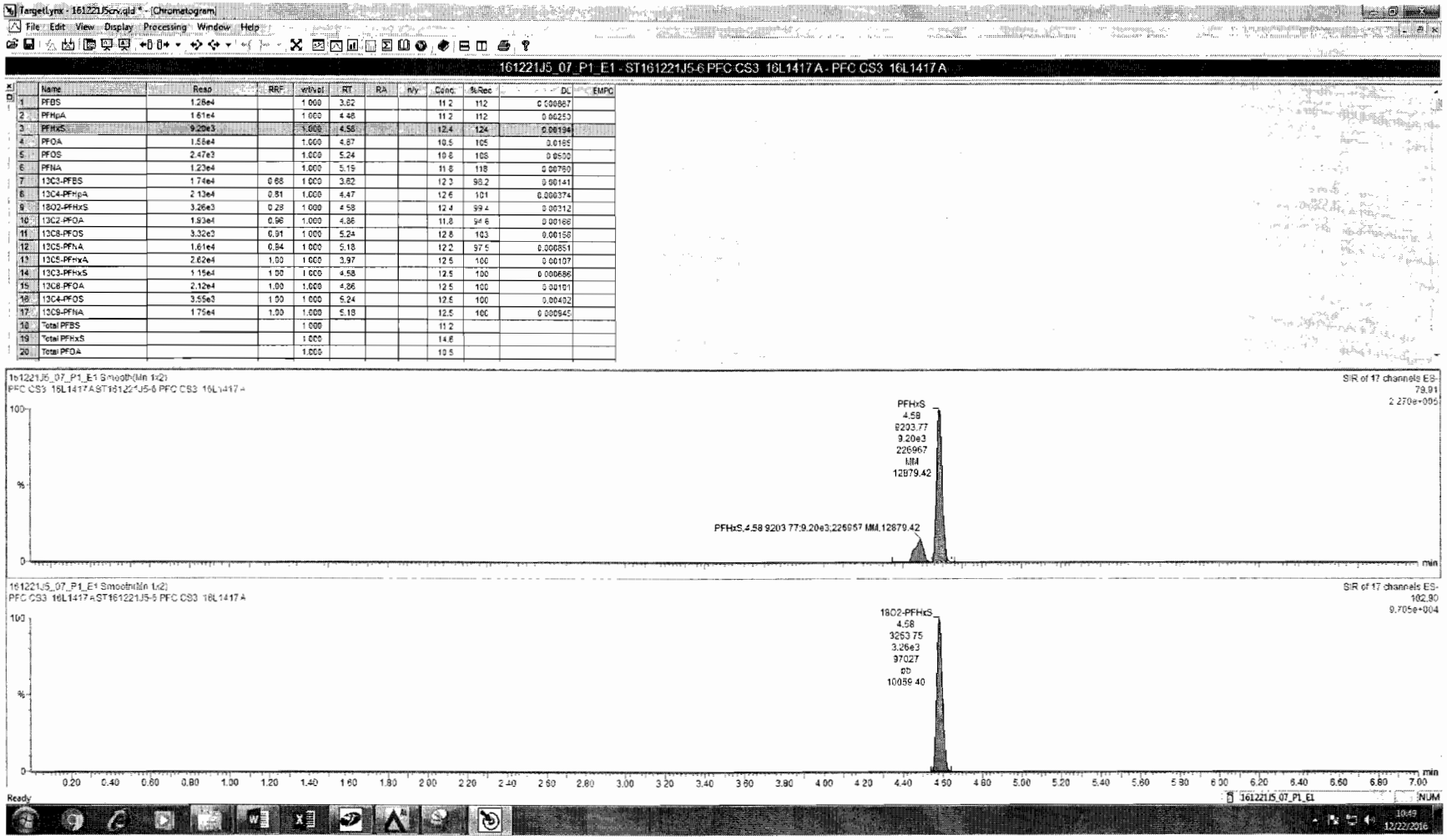


18O2-PFHxS



13C2-PFOA

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File Edit View Display Processing Window Help
161221J5_07_P1_E1 - ST161221J5-6 PFC CS3 16L1417 A - PFC CS3 16L1417 A
PFHxS
4.58
9203.77
9.20e3
226967
MM
12879.42
PFHxS,4.58,9203.77,9.20e3,226967,MM,12879.42
SIR of 17 channels ES-
78.91
2.270e+005
1802-PFHxS
4.58
3253.75
3.26e3
97027
MM
10059.40
SIR of 17 channels ES-
102.90
9.705e+004
min
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NUM
12/22/2016

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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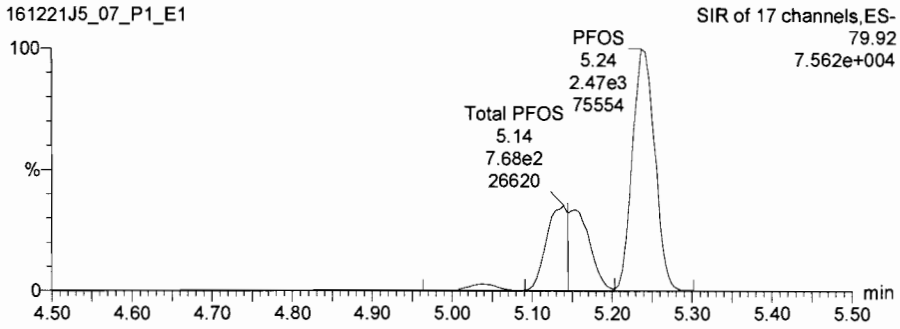
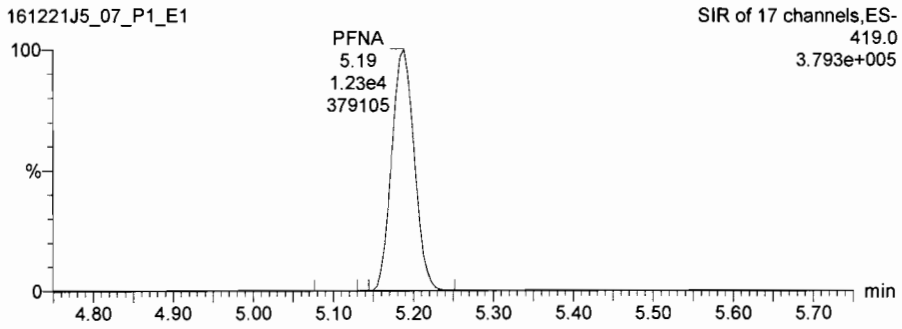
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_07.wiff, Date: 21-Dec-2016, Time: 17:23:58, ID: ST161221J5-6 PFC CS3 16L1417 A, Description: PFC CS3 16L1417 A

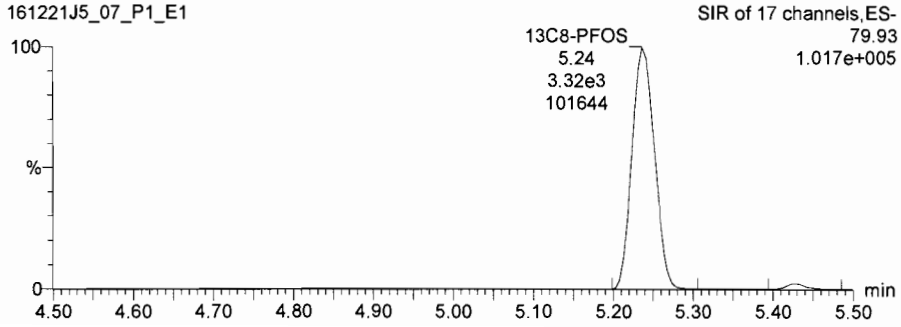
PFOS



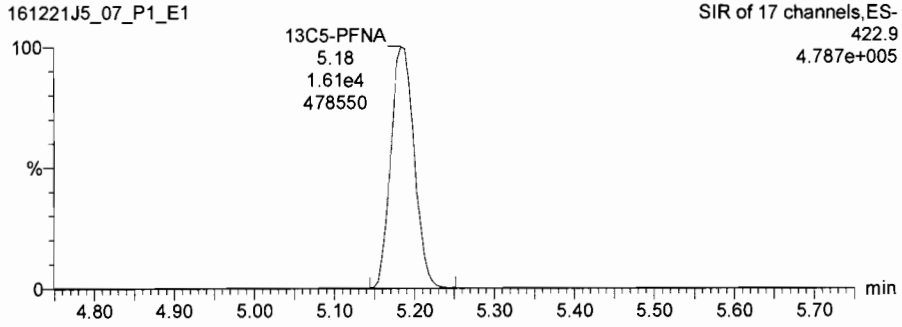
PFNA

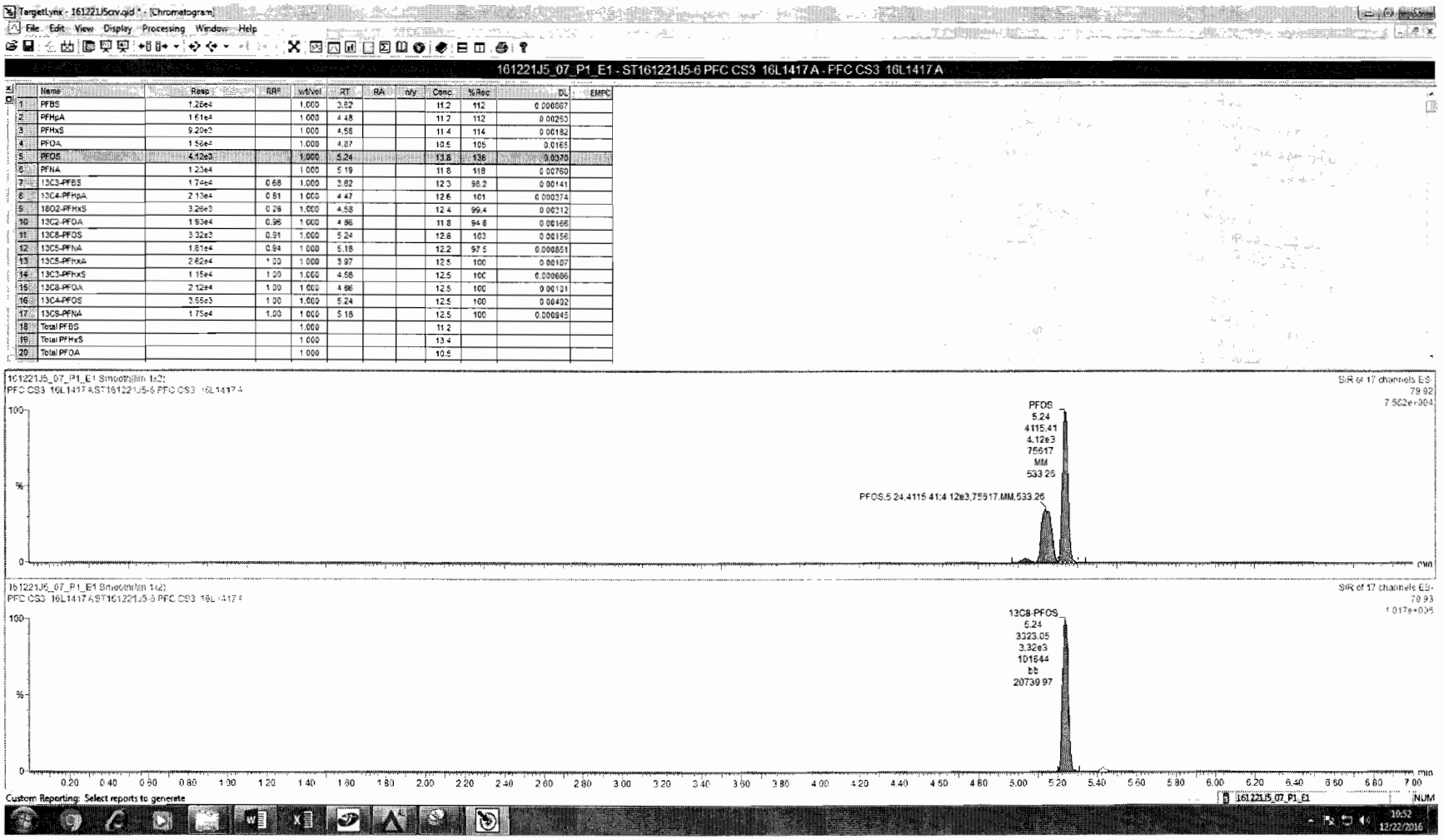


13C8-PFOS



13C5-PFNA





	Name	Resp	RRF	wt/vol	RT	RA	qty	Conc	%Rec	DL	EMPC
1	PFBS	1.26e4		1.000	3.82			11.2	112	0.000887	
2	PFHpA	1.61e4		1.000	4.48			11.2	112	0.00255	
3	PFHxS	9.20e3		1.000	4.58			11.4	114	0.00182	
4	PFOA	1.56e4		1.000	4.87			10.5	105	0.0165	
5	PFOS	4.12e3		1.000	5.24			13.8	138	0.0370	
6	PFNA	1.23e4		1.000	5.19			11.8	118	0.00760	
7	13C3-PFBS	1.74e4	0.68	1.000	3.82			12.3	98.2	0.00141	
8	13C4-PFHpA	2.13e4	0.61	1.000	4.47			12.6	101	0.000374	
9	18O2-PFHxS	3.26e3	0.28	1.000	4.58			12.4	99.4	0.00212	
10	13C2-PFOA	1.53e4	0.96	1.000	4.86			11.8	94.8	0.00166	
11	13C8-PFOS	3.32e3	0.91	1.000	5.24			12.8	103	0.00156	
12	13C5-PFNA	1.61e4	0.94	1.000	5.18			12.2	97.5	0.000851	
13	13C5-PFHxA	2.62e4	1.00	1.000	3.97			12.5	100	0.00107	
14	13C3-PFHxS	1.15e4	1.00	1.000	4.58			12.5	100	0.000686	
15	13C8-PFOA	2.12e4	1.00	1.000	4.86			12.5	100	0.00101	
16	13C4-PFOS	3.55e3	1.00	1.000	5.24			12.5	100	0.00432	
17	13C9-PFNA	1.75e4	1.00	1.000	5.18			12.5	100	0.000845	
18	Total PFBS			1.000				11.2			
19	Total PFHxS			1.000				13.4			
20	Total PFOA			1.000				10.5			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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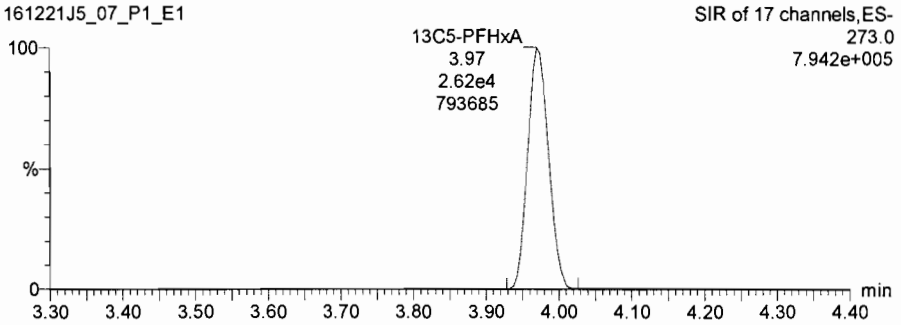
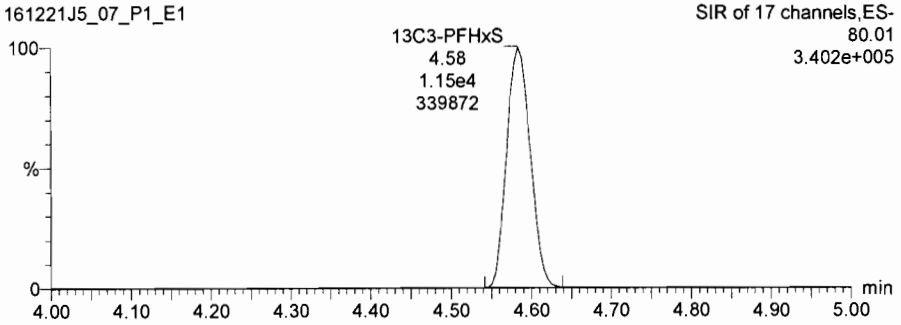
Name: 161221J5_07.wiff, Date: 21-Dec-2016, Time: 17:23:58, ID: ST161221J5-6 PFC CS3 16L1417 A, Description: PFC CS3 16L1417 A

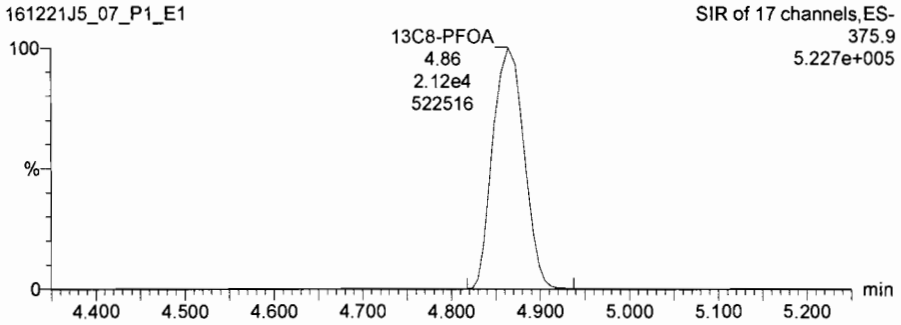
13C5-PFHxA



13C3-PFHxS



13C8-PFOA



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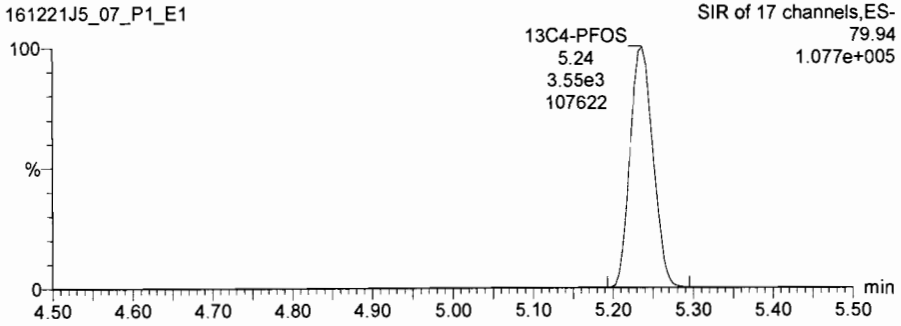

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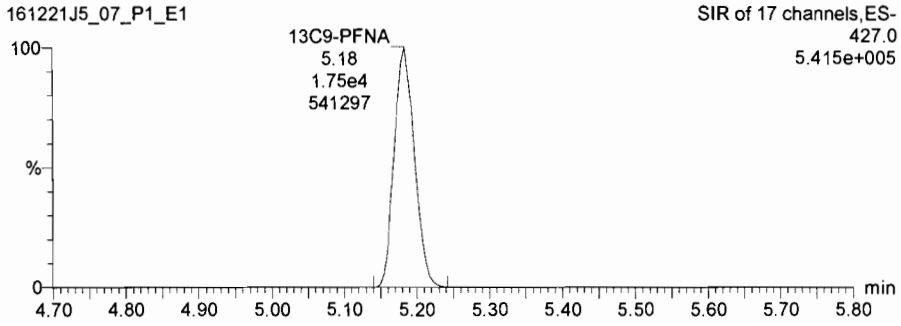

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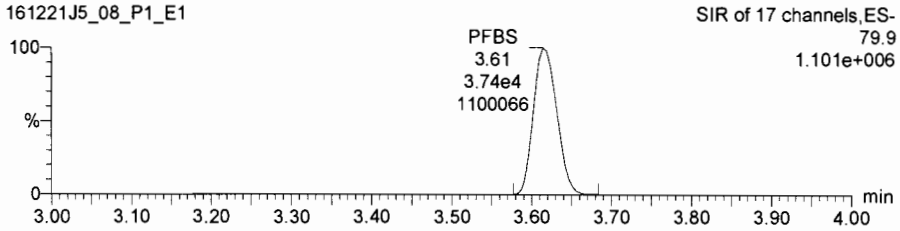
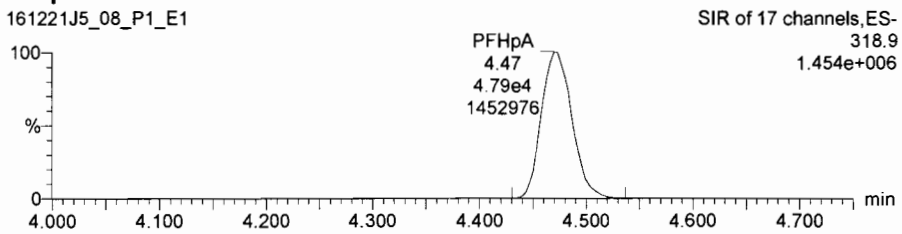
Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_08.wiff, Date: 21-Dec-2016, Time: 17:36:11, ID: ST161221J5-7 PFC CS4 16L1418 A, Description: PFC CS4 16L1418 A

PFBS



PFHpA



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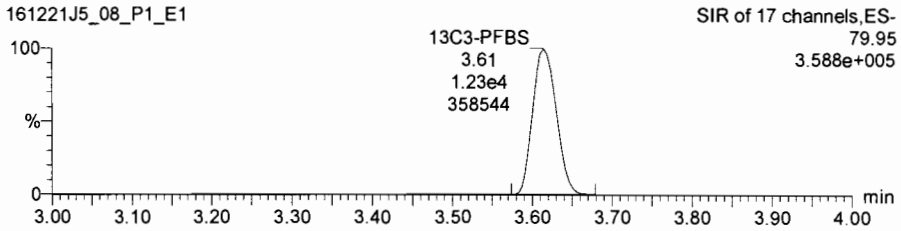
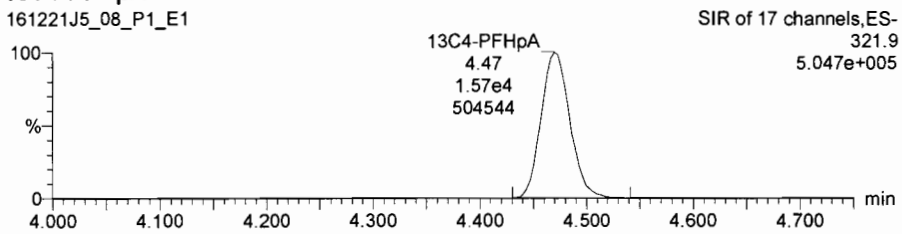
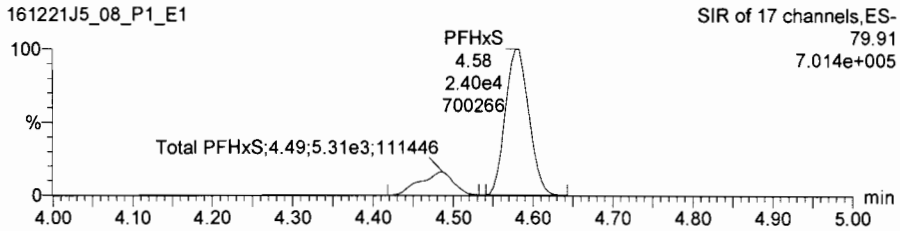


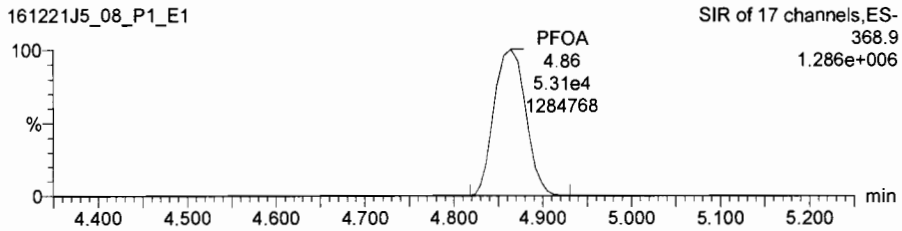
13C4-PFHpA



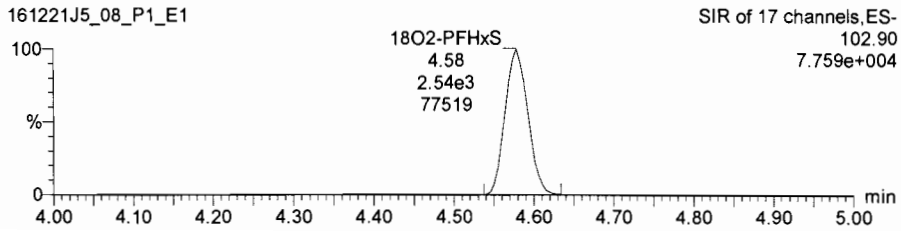
PFHxS



PFOA



18O2-PFHxS



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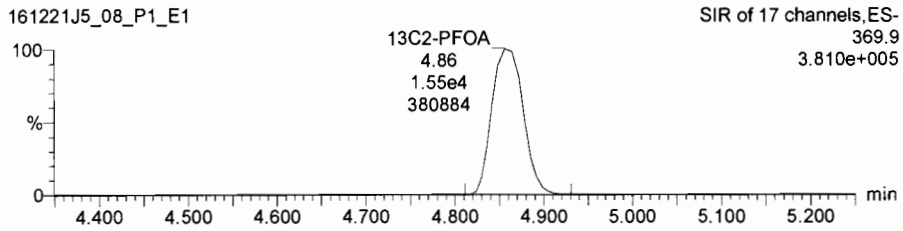

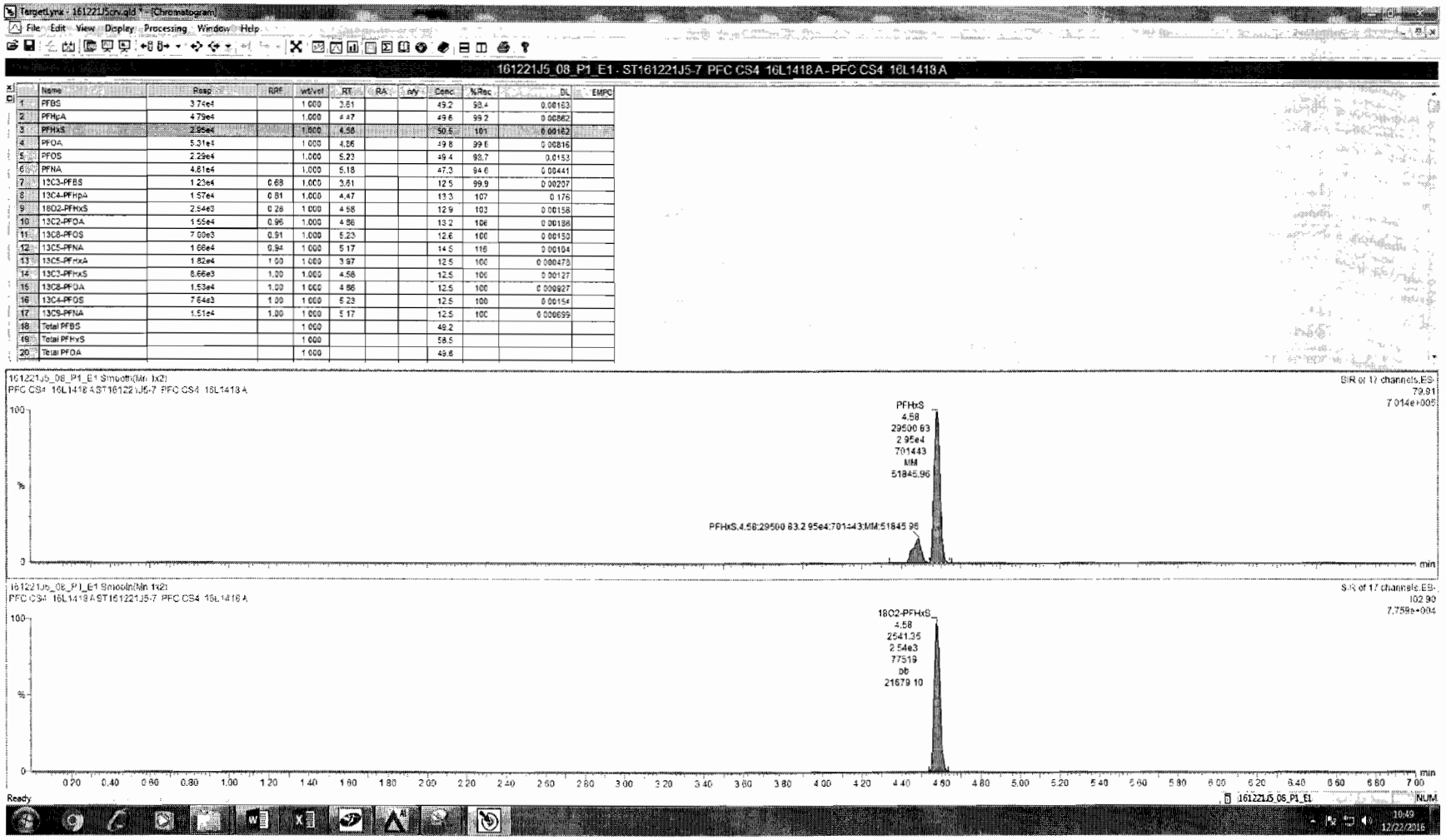

	Name	Resp	RRF	wt/vol	RT	RA	dev	Conc	%Rec	DL	EMPC
1	PFBS	3.74e4		1.000	3.81			49.2	98.4	0.00163	
2	PFHpA	4.75e4		1.000	4.47			49.8	99.2	0.00862	
3	PFHxS	2.95e4		1.000	4.58			50.5	101	0.00162	
4	PFOA	5.31e4		1.000	4.86			49.8	99.6	0.00816	
5	PFOS	2.29e4		1.000	5.23			49.4	98.7	0.0153	
6	PFNA	4.81e4		1.000	5.18			47.3	94.6	0.00441	
7	13C3-PFBS	1.23e4	0.68	1.000	3.81			12.5	99.9	0.00207	
8	13C4-PFHpA	1.57e4	0.81	1.000	4.47			13.3	107	0.176	
9	18O2-PFHxS	2.54e3	0.28	1.000	4.58			12.9	103	0.00158	
10	13C2-PFOA	1.55e4	0.96	1.000	4.86			13.2	106	0.00186	
11	13C8-PFOS	7.00e3	0.91	1.000	5.23			12.6	100	0.00150	
12	13C5-PFNA	1.66e4	0.94	1.000	5.17			14.5	116	0.00104	
13	13C5-PFHxA	1.82e4	1.00	1.000	3.97			12.5	100	0.000478	
14	13C3-PFHxS	8.66e3	1.00	1.000	4.58			12.5	100	0.00127	
15	13C8-PFOA	1.53e4	1.00	1.000	4.86			12.5	100	0.000927	
16	13C4-PFOS	7.64e3	1.00	1.000	5.23			12.5	100	0.00154	
17	13C9-PFNA	1.51e4	1.00	1.000	5.17			12.5	100	0.000699	
18	Total PFBS			1.000				49.2			
19	Total PFHxS			1.000				58.5			
20	Total PFOA			1.000				49.8			

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Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
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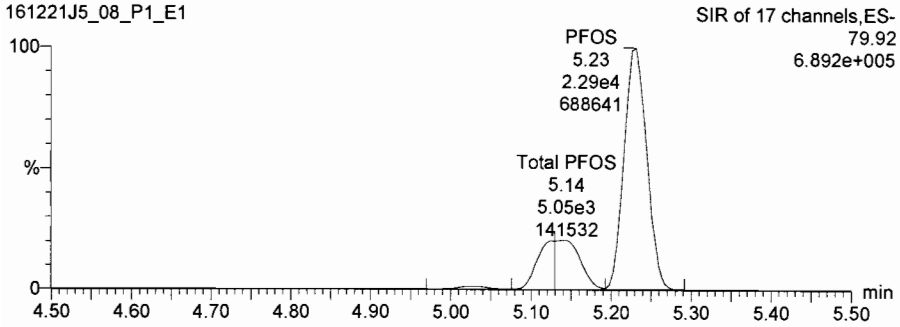
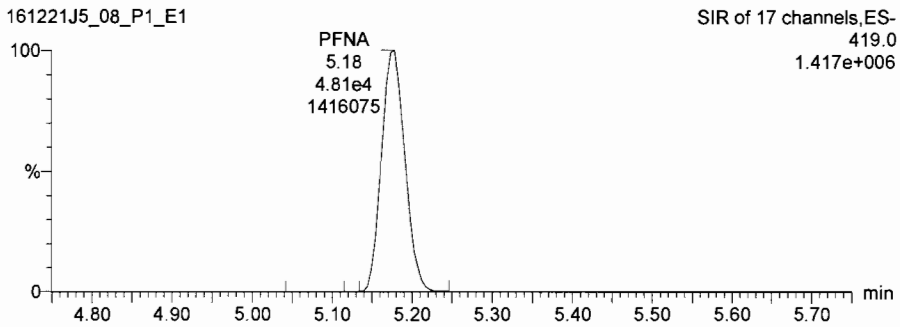
Name: 161221J5_08.wiff, Date: 21-Dec-2016, Time: 17:36:11, ID: ST161221J5-7 PFC CS4 16L1418 A, Description: PFC CS4 16L1418 A

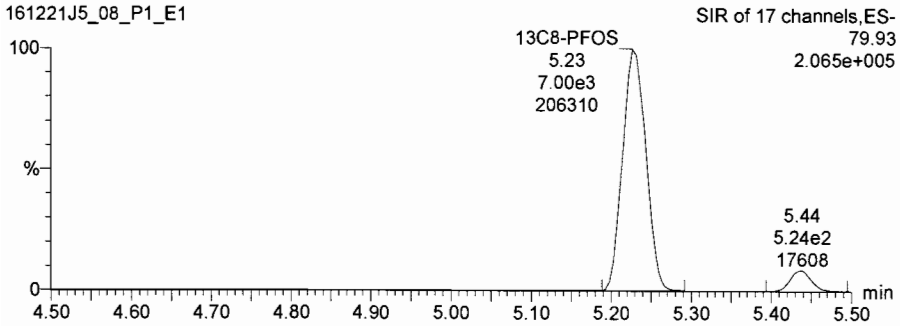
PFOS



PFNA



13C8-PFOS



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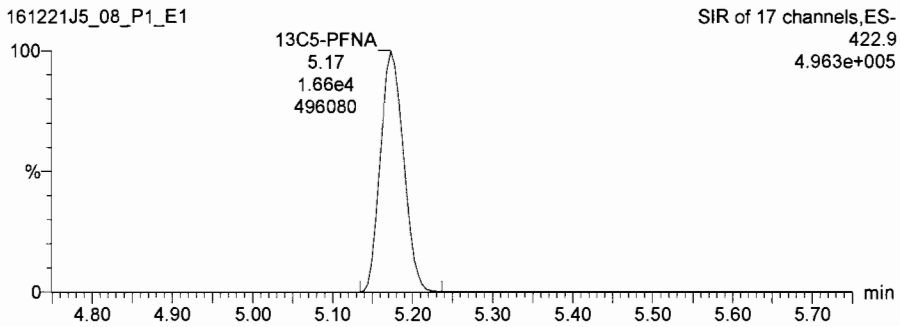

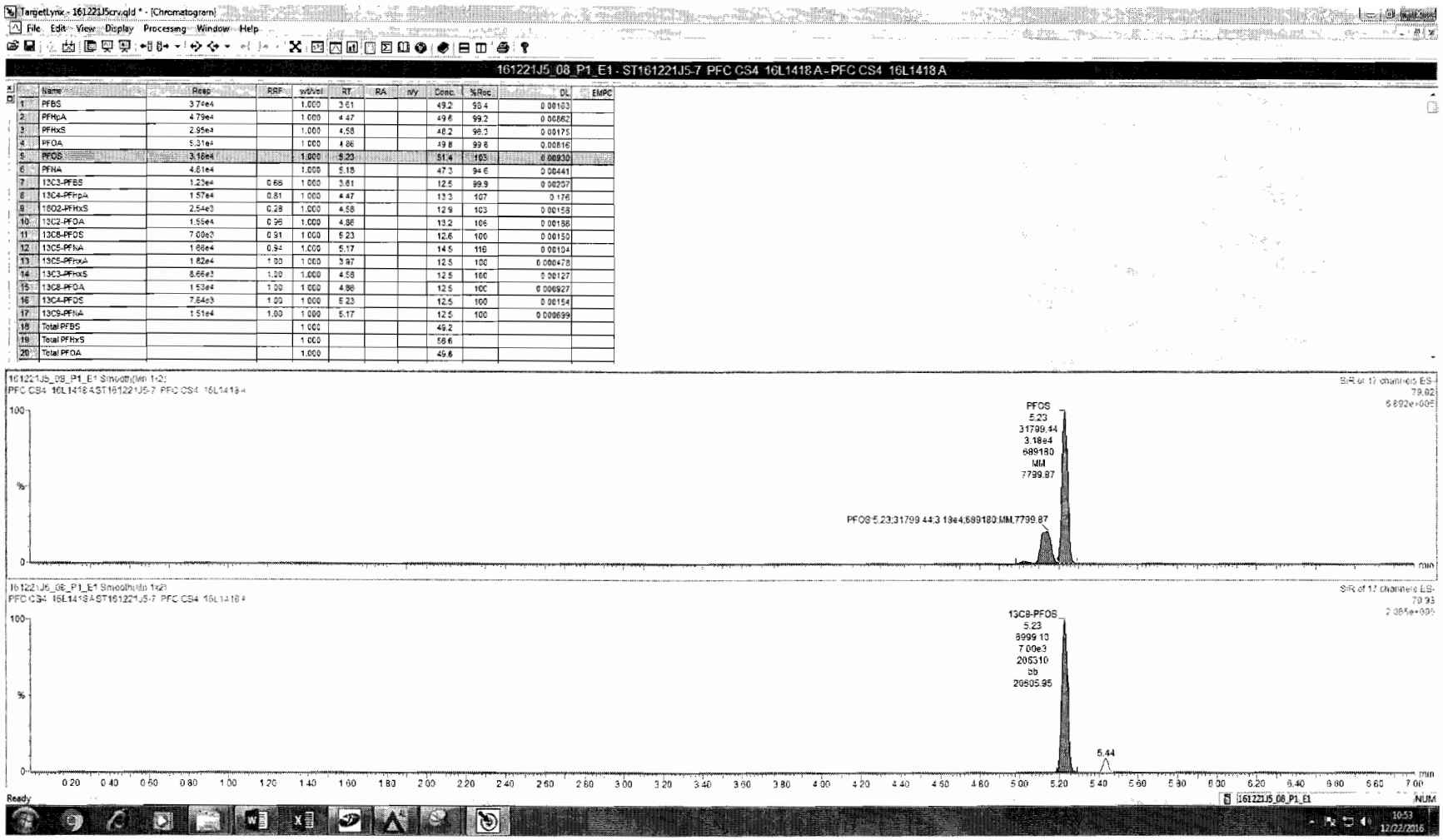

	Name	Resp	RRF	wt/vol	RT	RA	n/y	Conc.	%Rec	DL	EMPC
1	PFBS	3.74e4		1.000	3.61			49.2	98.4	0.00183	
2	PFHpA	4.79e4		1.000	4.47			49.6	99.2	0.00862	
3	PFHxS	2.95e3		1.000	4.58			48.2	96.3	0.00175	
4	PFOA	5.31e4		1.000	4.86			49.8	99.6	0.00816	
5	PFOS	3.18e4		1.000	5.23			51.4	103	0.00930	
6	PFNA	4.61e4		1.000	5.18			47.3	94.6	0.00441	
7	12C3-PFBS	1.23e4	0.66	1.000	3.61			12.5	99.9	0.00257	
8	13C4-PFHpA	1.57e4	0.81	1.000	4.47			13.3	107	0.176	
9	18O2-PFHxS	2.54e3	0.28	1.000	4.58			12.9	103	0.00158	
10	13C2-PFOA	1.56e4	0.96	1.000	4.86			13.2	106	0.00188	
11	13C8-PFOS	7.00e3	0.91	1.000	5.23			12.6	100	0.00150	
12	13C5-PFNA	1.66e4	0.94	1.000	5.17			14.5	116	0.00104	
13	13C5-PFHxA	1.82e4	1.00	1.000	3.97			12.5	100	0.000478	
14	13C3-PFHxS	8.66e3	1.00	1.000	4.58			12.5	100	0.00127	
15	13C8-PFOA	1.53e4	1.00	1.000	4.86			12.5	100	0.000927	
16	13C4-PFOS	7.64e3	1.00	1.000	5.23			12.5	100	0.00154	
17	13C9-PFNA	1.51e4	1.00	1.000	5.17			12.5	100	0.000699	
18	Total PFBS			1.000				49.2			
19	Total PFHxS			1.000				56.6			
20	Total PFOA			1.000				49.8			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

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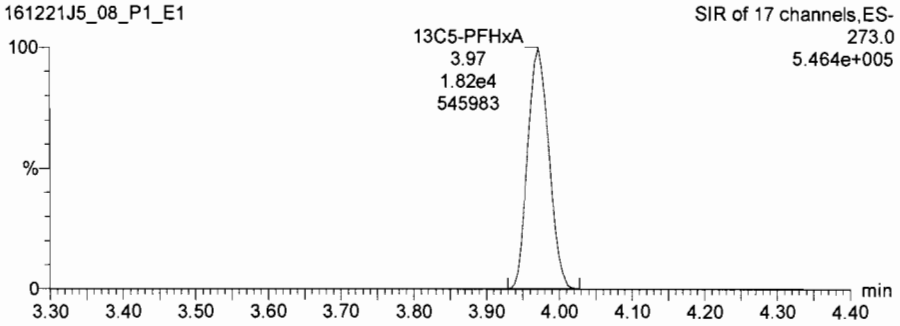
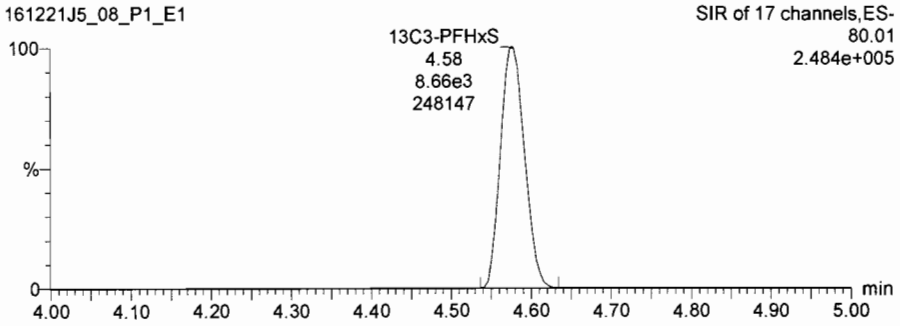
Name: 161221J5_08.wiff, Date: 21-Dec-2016, Time: 17:36:11, ID: ST161221J5-7 PFC CS4 16L1418 A, Description: PFC CS4 16L1418 A

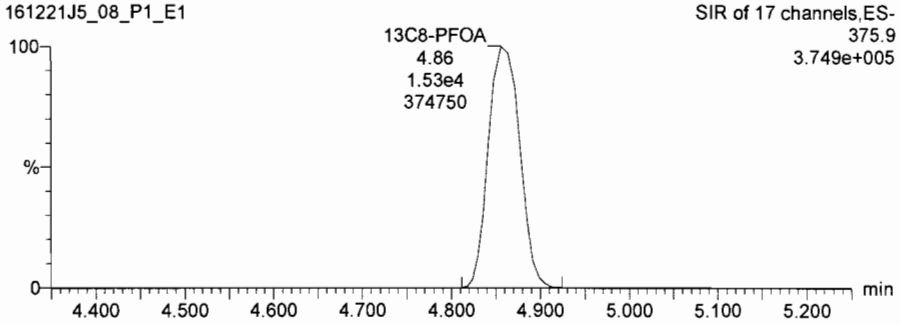
13C5-PFHxA



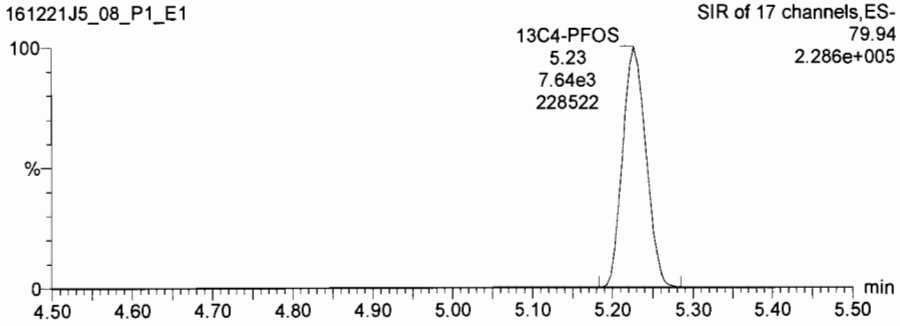
13C3-PFHxS



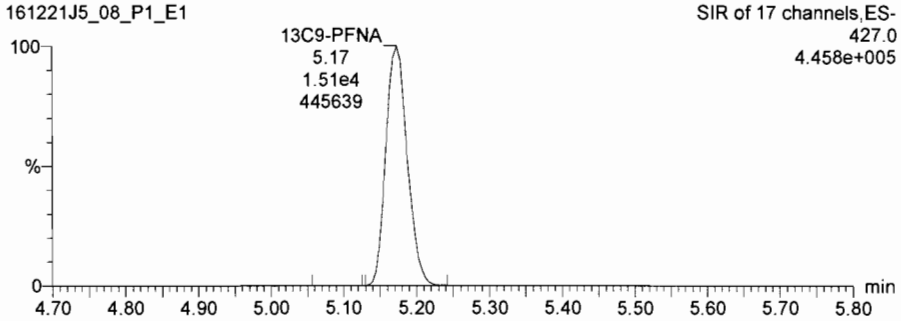
13C8-PFOA



13C4-PFOS



13C9-PFNA



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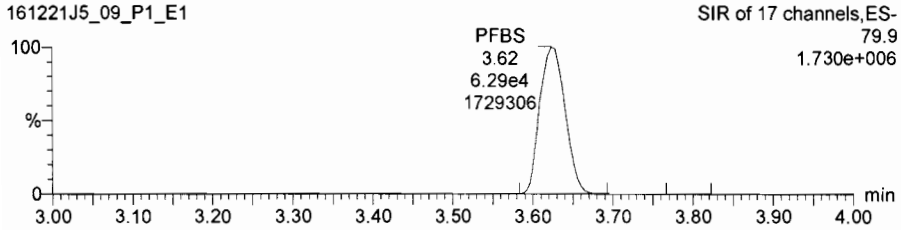
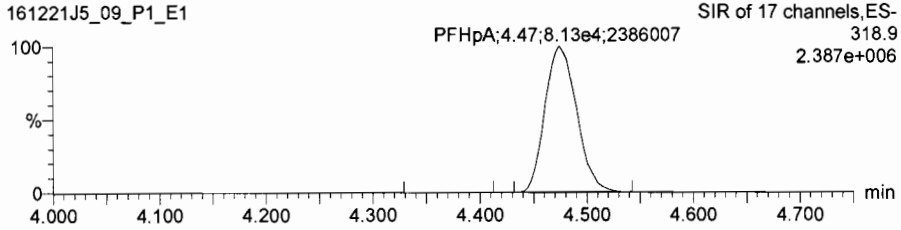
Name: 161221J5_09.wiff, Date: 21-Dec-2016, Time: 17:48:23, ID: ST161221J5-8 PFC CS5 16L1419 A, Description: PFC CS5 16L1419 A

PFBS



PFHpA



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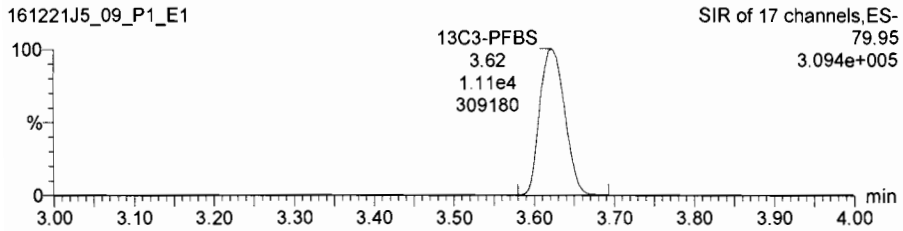

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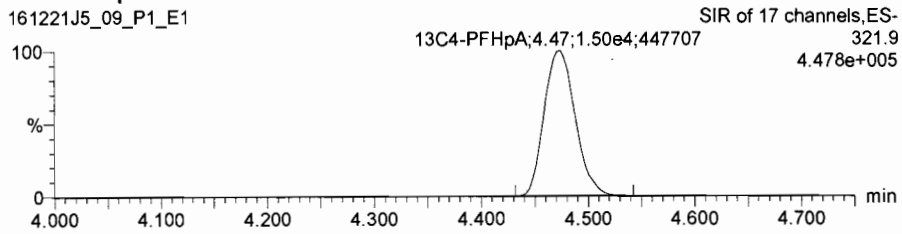
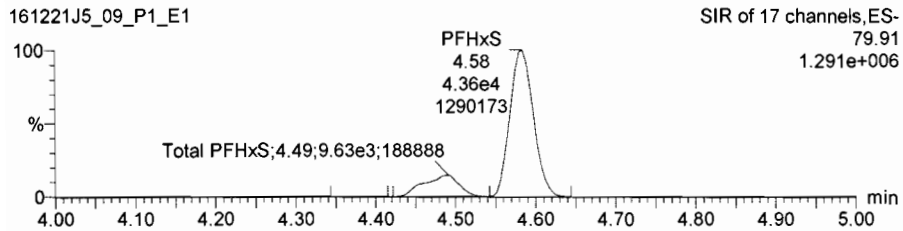
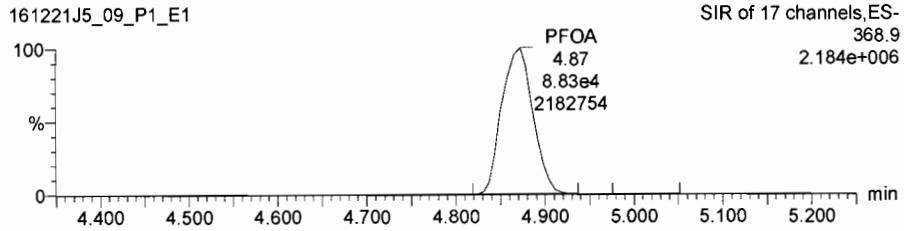


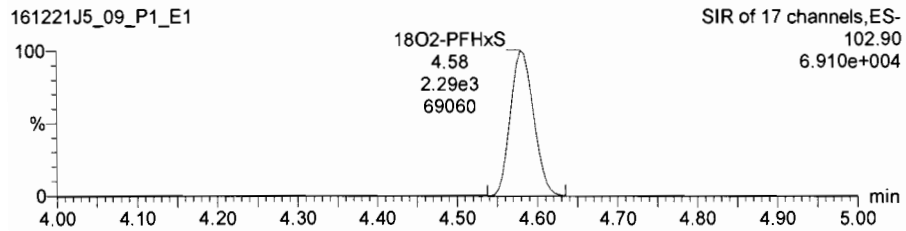
PFHxS



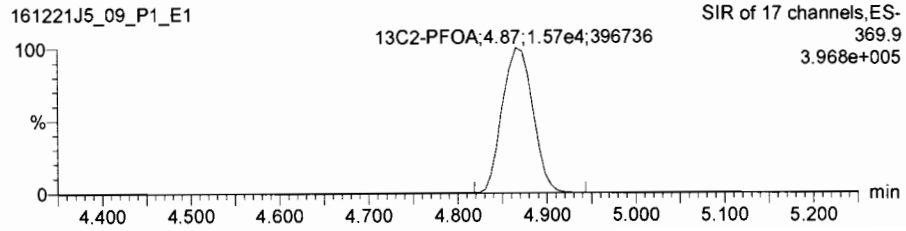
PFOA

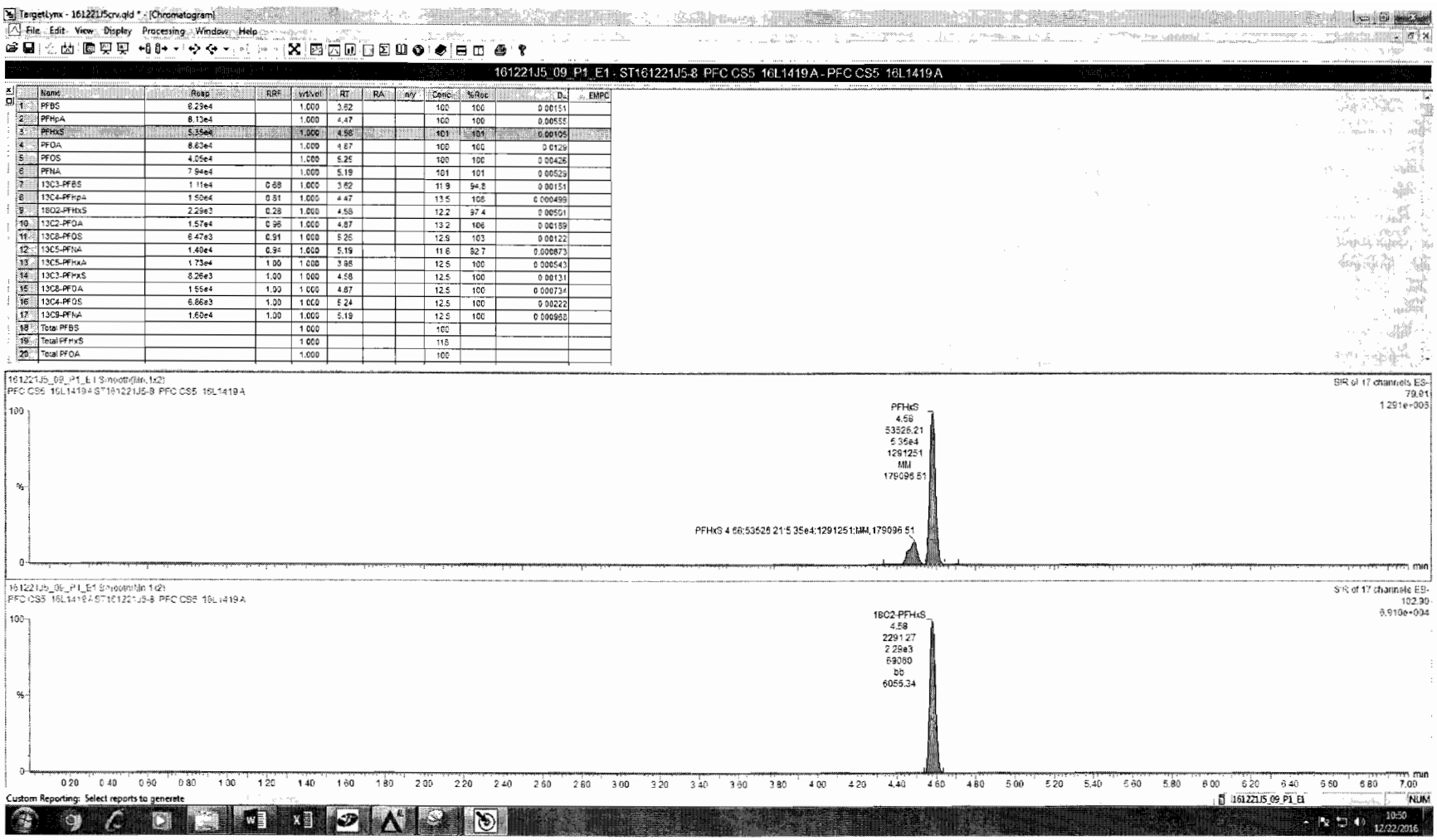


18O2-PFHxS



13C2-PFOA





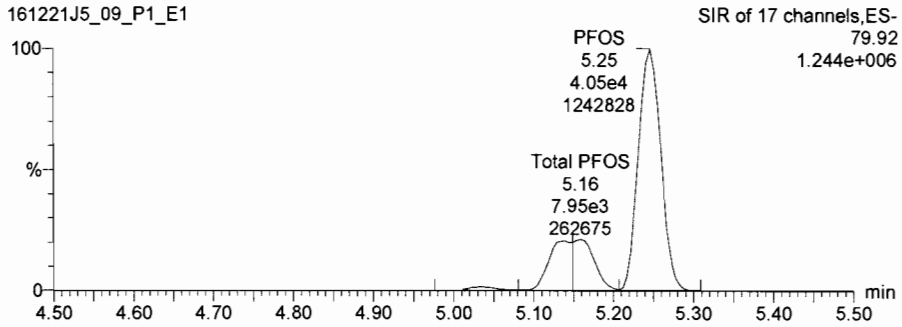
	Name	Resp	RRF	vrt\vel	RT	RA	n/y	Conc	%Rec	D...	EMPC
1	PFBS	6.23e4		1.000	3.62			100	100	0.00151	
2	PFHpA	8.13e4		1.000	4.47			100	100	0.00555	
3	PFHxS	5.35e4		1.000	4.58			101	101	0.00105	
4	PFOA	8.63e4		1.000	4.87			100	100	0.0129	
5	PFOS	4.05e4		1.000	5.25			100	100	0.00426	
6	PFNA	7.94e4		1.000	5.19			101	101	0.00529	
7	13C3-PFBS	1.11e4	0.68	1.000	3.62			11.9	94.8	0.00151	
8	13C4-PFHpA	1.50e4	0.81	1.000	4.47			13.5	108	0.000499	
9	1802-PFHxS	2.29e3	0.28	1.000	4.58			12.2	97.4	0.00551	
10	13C2-PFOA	1.57e4	0.96	1.000	4.87			13.2	106	0.00189	
11	13C8-PFOS	6.47e3	0.91	1.000	5.25			12.9	103	0.00122	
12	13C5-PFNA	1.40e4	0.94	1.000	5.19			11.6	92.7	0.000873	
13	13C5-PFHxA	1.73e4	1.00	1.000	3.86			12.5	100	0.000543	
14	13C3-PFHxS	8.26e3	1.00	1.000	4.58			12.5	100	0.00131	
15	13C8-PFOA	1.55e4	1.00	1.000	4.87			12.5	100	0.000734	
16	13C4-PFOS	6.86e3	1.00	1.000	5.24			12.5	100	0.00222	
17	13C9-PFNA	1.60e4	1.00	1.000	5.19			12.5	100	0.000988	
18	Total PFBS			1.000				100			
19	Total PFHxS			1.000				116			
20	Total PFOA			1.000				100			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

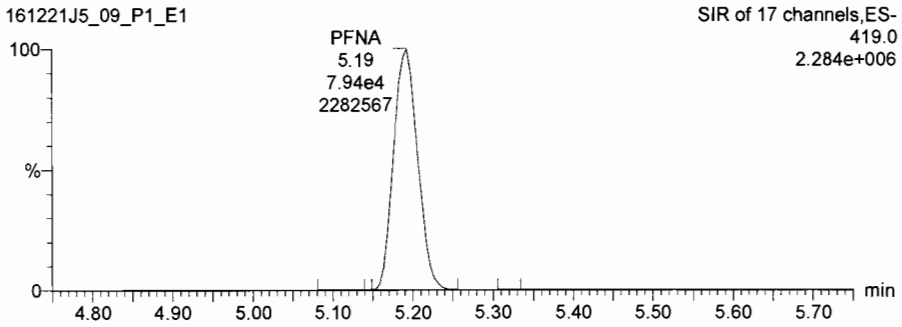
Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_09.wiff, Date: 21-Dec-2016, Time: 17:48:23, ID: ST161221J5-8 PFC CS5 16L1419 A, Description: PFC CS5 16L1419 A

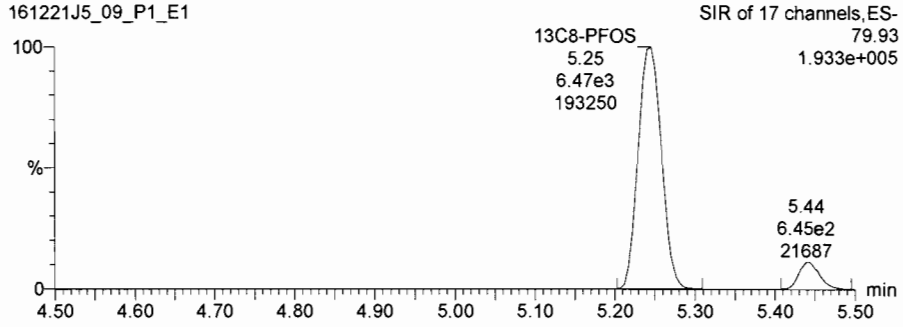
PFOS



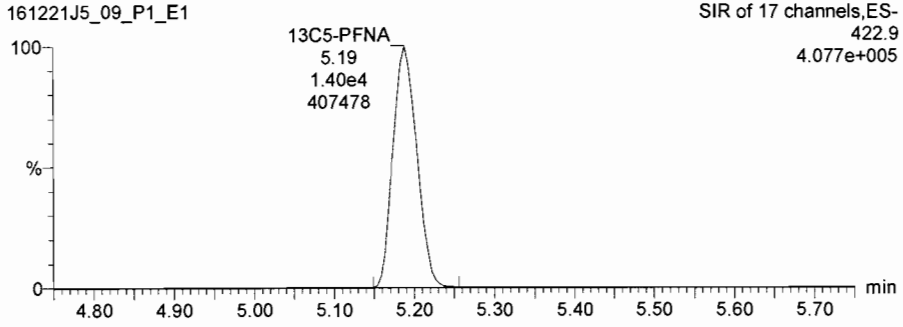
PFNA

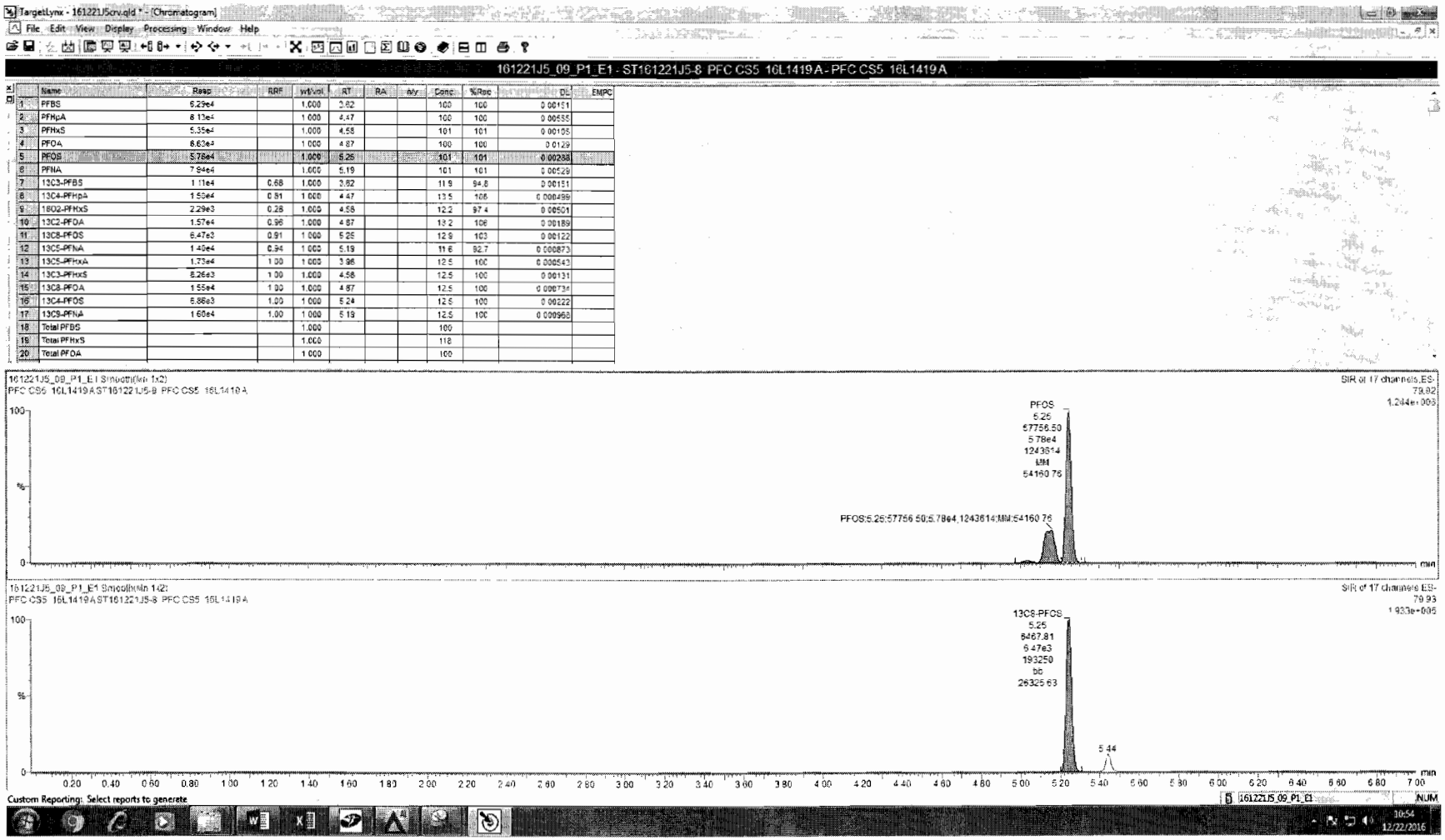


13C8-PFOS



13C5-PFNA





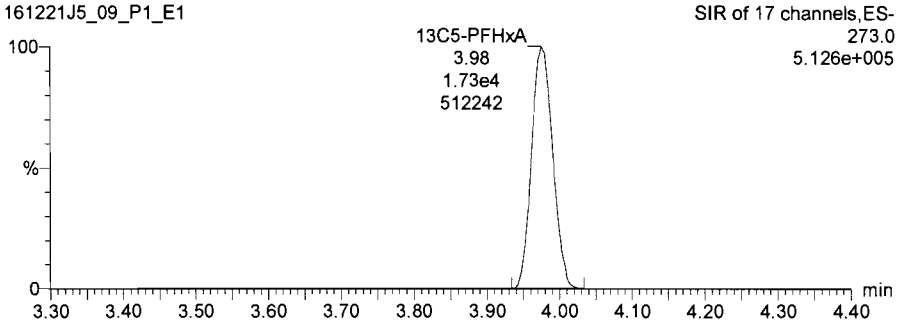
	Name	Resp	RRF	wt/vol	RT	RA	Qty	Conc	%Rec	DL	EMPC
1	PFBS	6.29e4		1.000	3.82			100	100	0.00151	
2	PFHpA	8.13e4		1.000	4.47			100	100	0.00555	
3	PFHxS	5.35e4		1.000	4.58			101	101	0.00105	
4	PFOA	8.63e4		1.000	4.87			100	100	0.0129	
5	PFOS	5.78e4		1.000	5.25			101	101	0.00238	
6	PFNA	7.94e4		1.000	5.19			101	101	0.00529	
7	13C3-PFBS	1.11e4	0.68	1.000	3.82			11.9	94.8	0.00151	
8	13C4-PFHpA	1.50e4	0.81	1.000	4.47			13.5	106	0.000499	
9	18O2-PFHxS	2.29e3	0.28	1.000	4.58			12.2	97.4	0.00501	
10	13C2-PFOA	1.57e4	0.96	1.000	4.87			12.2	106	0.00189	
11	13C8-PFOS	6.47e3	0.91	1.000	5.25			12.9	103	0.00122	
12	13C5-PFNA	1.40e4	0.94	1.000	5.19			11.6	92.7	0.000873	
13	13C5-PFHxA	1.73e4	1.00	1.000	3.96			12.5	100	0.000543	
14	13C3-PFHxS	8.26e3	1.00	1.000	4.58			12.5	100	0.00131	
15	13C8-PFOA	1.55e4	1.00	1.000	4.87			12.5	100	0.000734	
16	13C4-PFOS	6.86e3	1.00	1.000	5.24			12.5	100	0.00222	
17	13C9-PFNA	1.60e4	1.00	1.000	5.19			12.5	100	0.000968	
18	Total PFBS			1.000				100			
19	Total PFHxS			1.000				118			
20	Total PFOA			1.000				100			

Dataset: U:\Q2.PRO\Results\161221J5\161221J5crv.qld

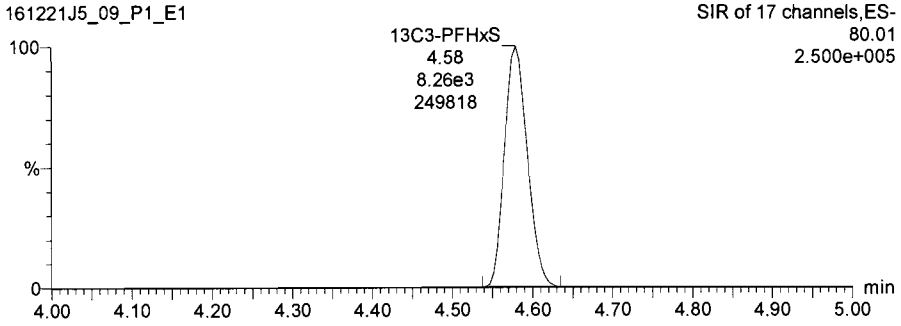
Last Altered: Thursday, December 22, 2016 08:55:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 08:56:41 Pacific Standard Time

Name: 161221J5_09.wiff, Date: 21-Dec-2016, Time: 17:48:23, ID: ST161221J5-8 PFC CS5 16L1419 A, Description: PFC CS5 16L1419 A

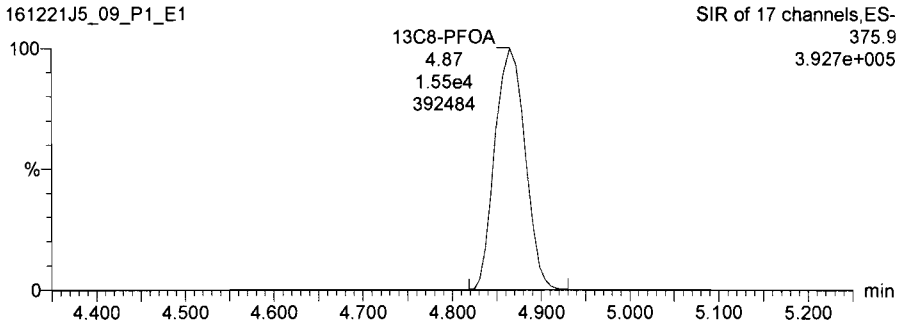
13C5-PFHxA



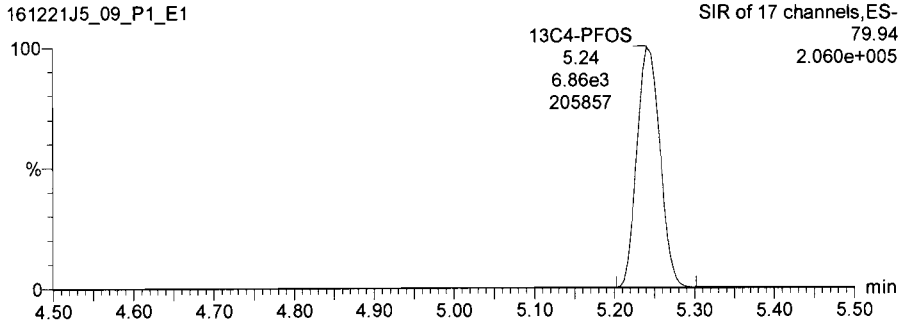
13C3-PFHxS



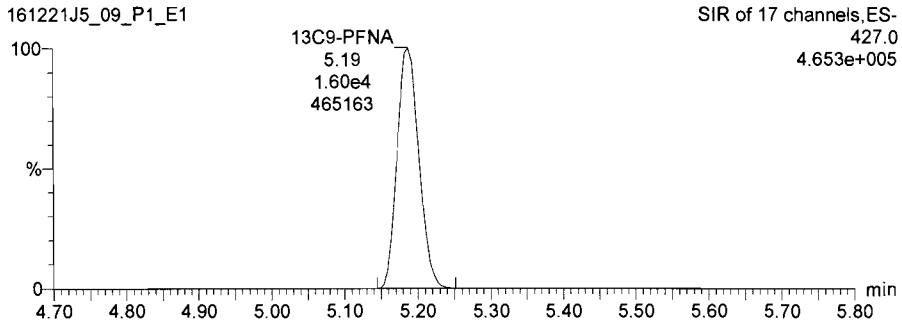
13C8-PFOA



13C4-PFOS



13C9-PFNA



Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161221J5\161221J5_11.qld

Last Altered: Thursday, December 22, 2016 11:39:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:40:51 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 6.mdb 28 Sep 2016 09:48:55
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161221J5_11.wiff, Date: 21-Dec-2016, Time: 18:12:46, ID: SS161221J5-1 PFC SSS 16K2201 A, Description: PFC SSS 16K2201 A

	#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1	PFBS	79.9	2.19e4	1.41e4		0.000	3.62	24.2	96.7
2	2	PFHpA	318.9	3.20e4	1.81e4		0.000	4.48	27.3	109.4
3	3	PFHxS	79.91	1.77e4	2.84e3		0.000	4.59	26.4	105.5
4	4	PFOA	368.9	3.02e4	1.62e4		0.000	4.88	25.2	100.9
5	5	PFOS	79.92	1.07e4	4.55e3		0.000	5.24	23.5	94.1
6	6	PFNA	419.0	2.49e4	1.51e4		0.000	5.19	25.9	103.7
7	7	13C3-PFBS	79.95	1.41e4	1.81e4	0.675	0.000	3.61	14.5	115.6
8	8	13C4-PFHpA	321.9	1.81e4	1.81e4	0.805	0.000	4.47	15.5	124.2
9	9	18O2-PFHxS	102.90	2.84e3	8.36e3	0.285	0.000	4.59	14.9	119.3
10	10	13C2-PFOA	369.9	1.62e4	1.50e4	0.960	0.000	4.88	14.0	112.0
11	11	13C8-PFOS	79.93	4.55e3	4.02e3	0.912	0.000	5.24	15.5	124.3
12	12	13C5-PFNA	422.9	1.51e4	1.23e4	0.943	0.000	5.19	16.3	130.1
13	13	13C5-PFHxA	273.0	1.81e4	1.81e4	1.000	0.000	3.97	12.5	100.0
14	14	13C3-PFHxS	80.01	8.36e3	8.36e3	1.000	0.000	4.59	12.5	100.0
15	15	13C8-PFOA	375.9	1.50e4	1.50e4	1.000	0.000	4.87	12.5	100.0
16	16	13C4-PFOS	79.94	4.02e3	4.02e3	1.000	0.000	5.24	12.5	100.0
17	17	13C9-PFNA	427.0	1.23e4	1.23e4	1.000	0.000	5.18	12.5	100.0
18	18	Total PFBS	79.9		1.41e4		0.000		24.2	
19	19	Total PFHxS	79.91		2.84e3		0.000		31.0	
20	20	Total PFOA	368.9		1.62e4		0.000		29.0	
21	21	Total PFOS	79.92		4.55e3		0.000		30.4	

75-125 ↓

branched PFHxS, PFOA and PFOS included.
AMS c 12/22/16

✓AC 12/23/16

Vista Analytical Laboratory Q1

Dataset: U:\Q2.PRO\Results\161221J5\161221J5_11.qld

Last Altered: Thursday, December 22, 2016 11:39:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:40:51 Pacific Standard Time

Method: U:\Q2.PRO\MethDB\PFC List 6.mdb 28 Sep 2016 09:48:55
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161221J5_11.wiff, Date: 21-Dec-2016, Time: 18:12:46, ID: SS161221J5-1 PFC SSS 16K2201 A, Description: PFC SSS 16K2201 A

Total PFBS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	1	PFBS	79.9	3.62	2.19e4	1.41e4	24.2

Total PFHxS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	3	PFHxS	79.91	4.59	1.77e4	2.84e3	26.4
2	19	Total PFHxS	79.91	4.49	3.17e3	2.84e3	4.59
3	19	Total PFHxS	79.91	4.38	1.76e1	2.84e3	

Total PFOA

	#	Name	Trace	RT	Area	IS Area	Conc.
1	4	PFOA	368.9	4.88	3.02e4	1.62e4	25.2
2	20	Total PFOA	368.9	4.78	4.73e3	1.62e4	3.68
3	20	Total PFOA	368.9	4.66	8.11e1	1.62e4	0.0626

Total PFOS

	#	Name	Trace	RT	Area	IS Area	Conc.
1	5	PFOS	79.92	5.24	1.07e4	4.55e3	23.5
2	21	Total PFOS	79.92	5.15	1.55e3	4.55e3	3.33
3	21	Total PFOS	79.92	5.14	1.50e3	4.55e3	3.21
4	21	Total PFOS	79.92	5.04	1.66e2	4.55e3	0.353

	Sample Name	Acquisition Date	Sample ID	Sample Comment
1	161221J5_01	12/21/2016 16:10:40	IPA	IPA
2	161221J5_02	12/21/2016 16:22:52	ST161221J5-1 PFC CS(-2) 16L1412 A	PFC CS(-2) 16L1412 A
3	161221J5_03	12/21/2016 16:35:08	ST161221J5-2 PFC CS(-1) 16L1413 A	PFC CS(-1) 16L1413 A
4	161221J5_04	12/21/2016 16:47:19	ST161221J5-3 PFC CS0 16L1414 A	PFC CS0 16L1414 A
5	161221J5_05	12/21/2016 16:59:32	ST161221J5-4 PFC CS1 16L1415 A	PFC CS1 16L1415 A
6	161221J5_06	12/21/2016 17:11:46	ST161221J5-5 PFC CS2 16L1416 A	PFC CS2 16L1416 A
7	161221J5_07	12/21/2016 17:23:58	ST161221J5-6 PFC CS3 16L1417 A	PFC CS3 16L1417 A
8	161221J5_08	12/21/2016 17:36:11	ST161221J5-7 PFC CS4 16L1418 A	PFC CS4 16L1418 A
9	161221J5_09	12/21/2016 17:48:23	ST161221J5-8 PFC CS5 16L1419 A	PFC CS5 16L1419 A
10	161221J5_10	12/21/2016 18:00:33	IPA	IPA
11	161221J5_11	12/21/2016 18:12:46	SS161221J5-1 PFC SSS 16K2201 A	PFC SSS 16K2201 A
12	161221J5_12	12/21/2016 18:24:57	IPA	IPA
13	161221J5_13	12/21/2016 18:37:09	B6L0096-BS1	OPR
14	161221J5_14	12/21/2016 18:49:21	IPA	IPA
15	161221J5_15	12/21/2016 19:01:34	B6L0096-BLK1	Method Blank
16	161221J5_16	12/21/2016 19:13:46	1601567-01	TW4-16
17	161221J5_17	12/21/2016 19:25:59	1601567-02	TW5-16
18	161221J5_18	12/21/2016 19:38:09	IPA	IPA
19	161221J5_19	12/21/2016 19:50:22	ST161221J5-9 PFC C3 16L1417	PFC C3 16L1417 A
20	161221J5_20	12/21/2016 20:02:35	IPA	IPA

Vista Analytical Laboratory Q2

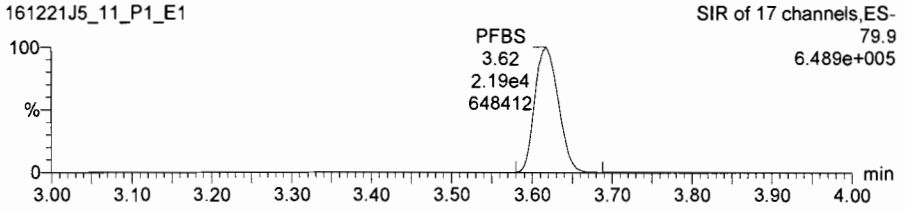
Dataset: U:\Q2.PRO\Results\161221J5\161221J5_11.qld

Last Altered: Thursday, December 22, 2016 11:39:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:40:31 Pacific Standard Time

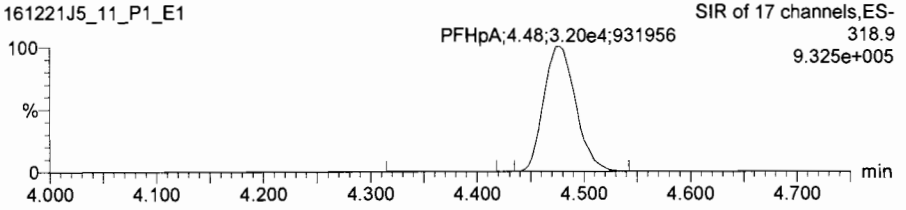
Method: U:\Q2.PRO\MethDB\PFC List 6.mdb 28 Sep 2016 09:48:55
Calibration: U:\Q2.PRO\CurveDB\C18_VAL-PFC_Q2_12-21-16_L6_A.cdb 22 Dec 2016 11:27:02

Name: 161221J5_11.wiff, Date: 21-Dec-2016, Time: 18:12:46, ID: SS161221J5-1 PFC SSS 16K2201 A, Description: PFC SSS 16K2201 A

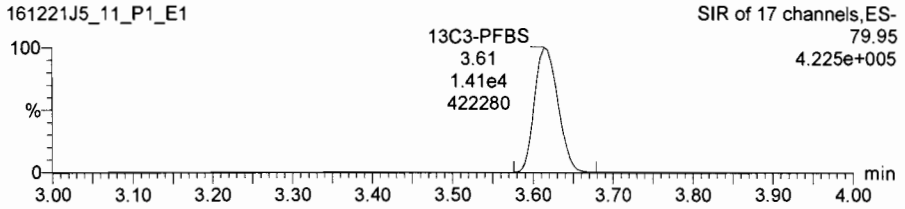
PFBS



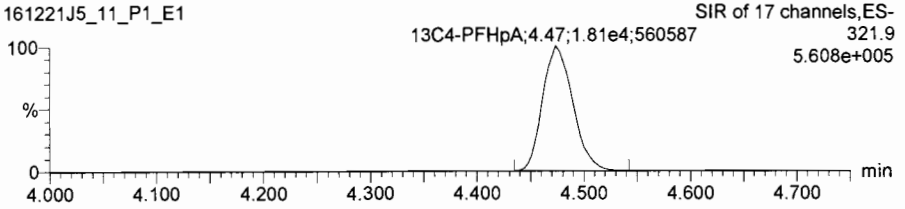
PFHpA



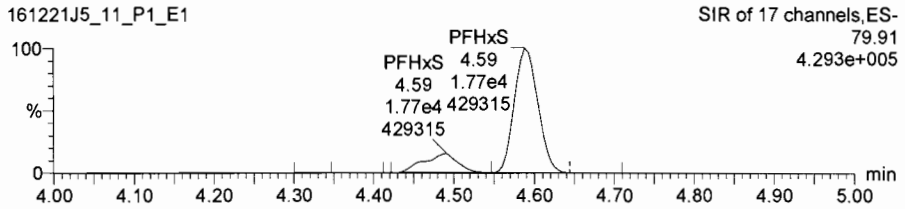
13C3-PFBS



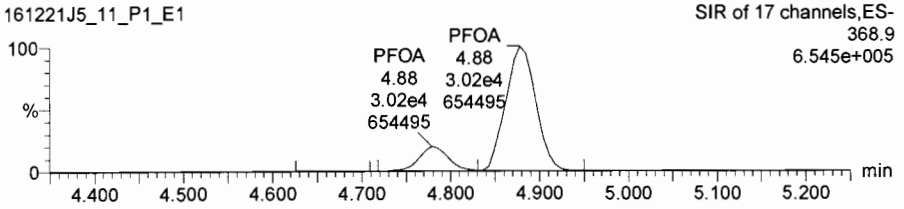
13C4-PFHpA



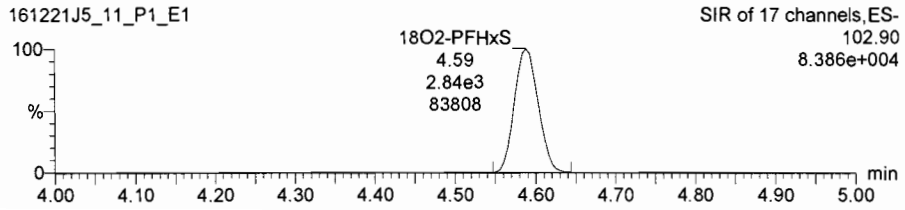
PFHxS



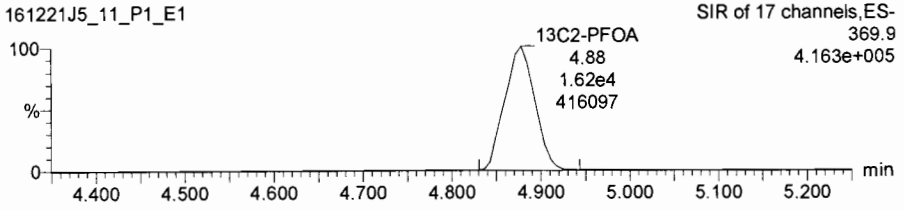
PFOA



18O2-PFHxS



13C2-PFOA



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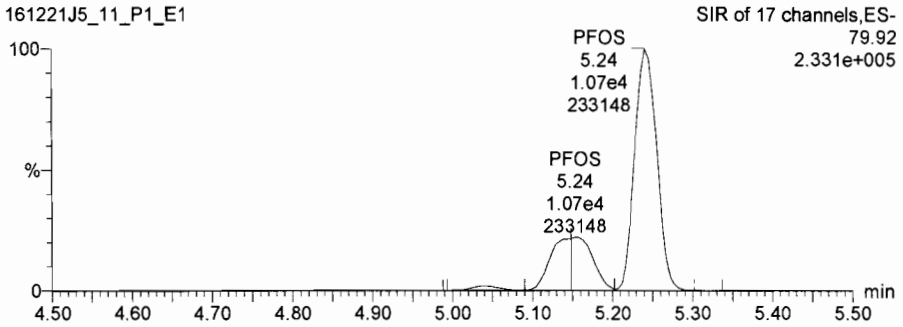
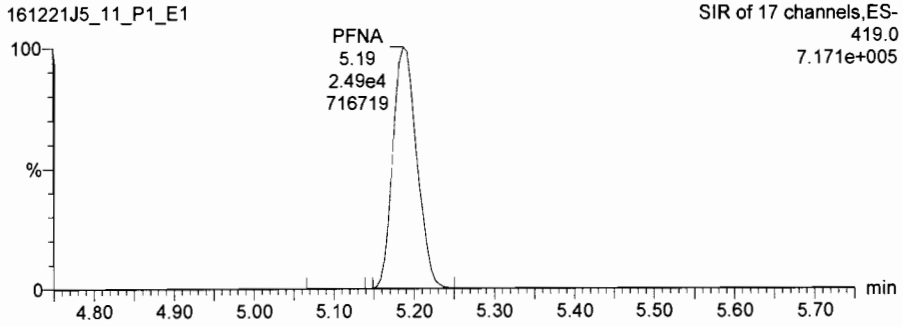
Last Altered: Thursday, December 22, 2016 11:39:45 Pacific Standard Time
Printed: Thursday, December 22, 2016 11:40:31 Pacific Standard Time

Name: 161221J5_11.wiff, Date: 21-Dec-2016, Time: 18:12:46, ID: SS161221J5-1 PFC SSS 16K2201 A, Description: PFC SSS 16K2201 A

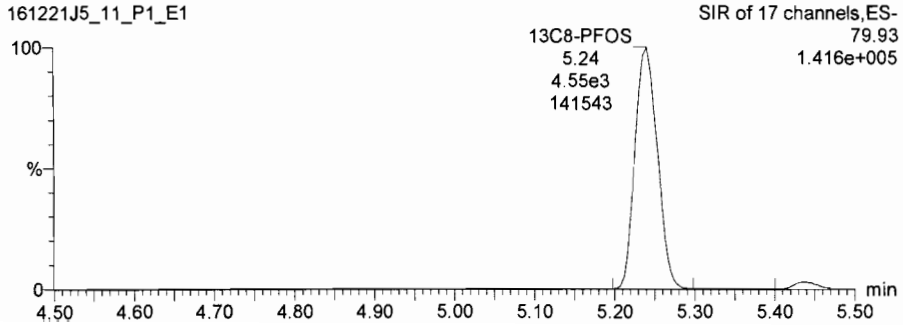
PFOS



PFNA



13C8-PFOS



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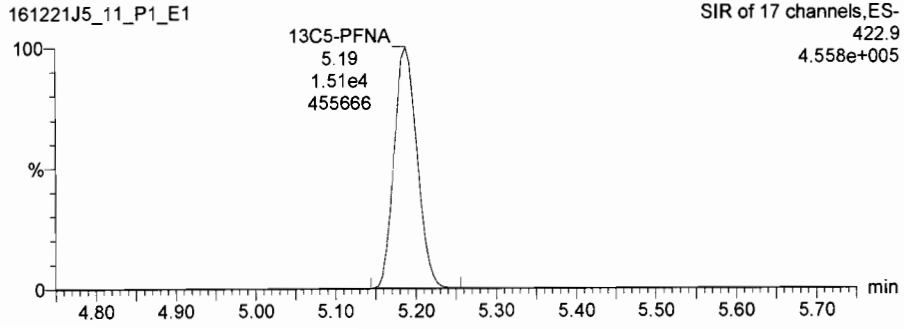

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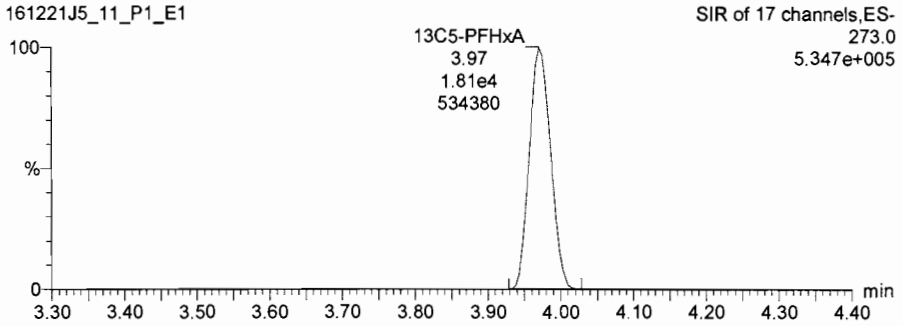

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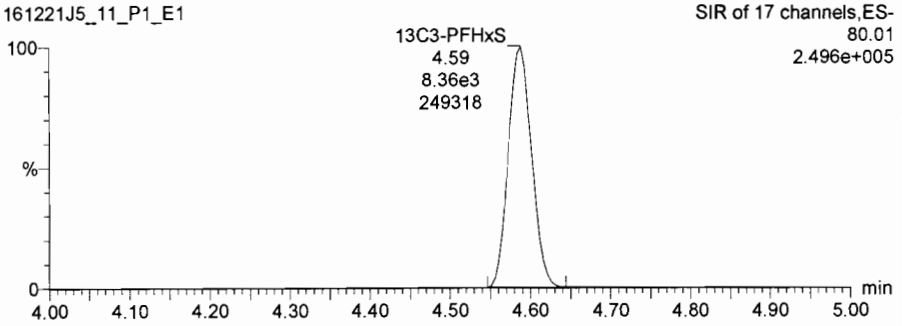

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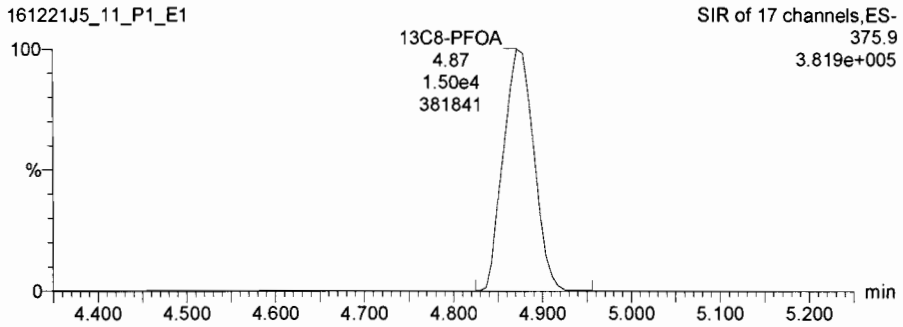

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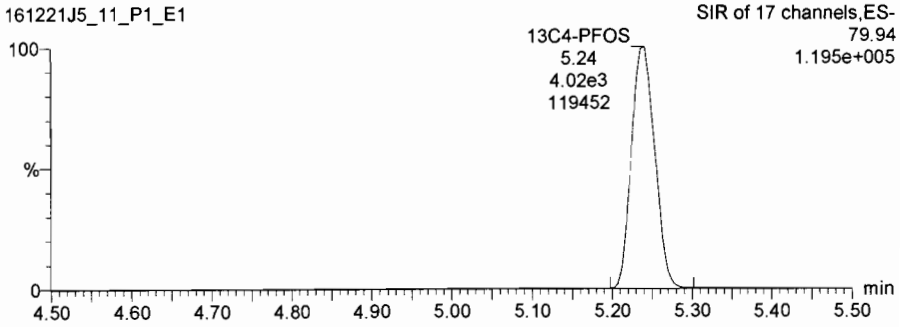

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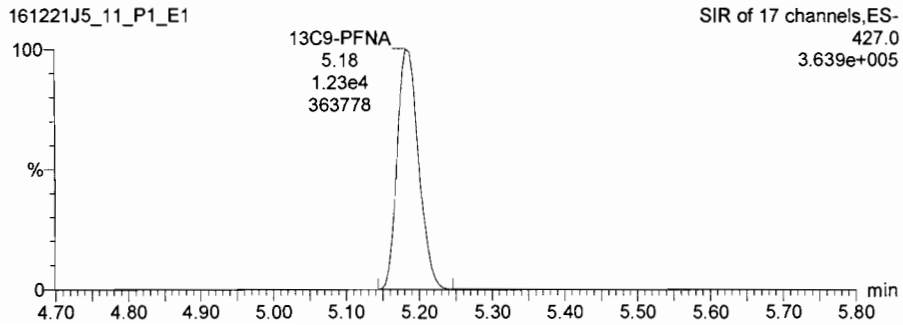

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N6247016D9000	WE14		OCEANA_NAS	OC-RW12-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:08	12/17/2016			20161221	08:27:00	20161222	16:25:00	1601579-01	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.95	NG_L	U		PR	TRG								5.0	0.577	1.95	7.81	1601579	S6L0047		
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N6247016D9000	WE14		OCEANA_NAS	OC-FB12-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:10	12/17/2016			20161221	08:27:00	20161222	16:37:00	1601579-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.879	NG_L	U		PR	TRG								5.0	0.790	0.879	7.83	1601579	S6L0047		
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N6247016D9000	WE14		OCEANA_NAS	OC-RW01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:54	12/17/2016			20161221	08:27:00	20161222	16:49:00	1601579-03	1	-999			13C3-PFBS	13C3-PFBS		101	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
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N6247016D9000	WE14		OCEANA_NAS	OC-RW01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:54	12/17/2016			20161221	08:27:00	20161222	16:49:00	1601579-03	1	-999			13C8-PFOS	13C8-PFOS		89.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:54	12/17/2016			20161221	08:27:00	20161222	16:49:00	1601579-03	1	-999			13C5-PFNA	13C5-PFNA		72.8	PCT_REC			PR	IS		SLSA	150	50					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.85	NG_L	U		PR	TRG								5.0	1.72	3.85	7.70	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.92	NG_L	U		PR	TRG								5.0	0.569	1.92	7.70	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.92	NG_L	U		PR	TRG								5.0	0.911	1.92	7.70	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		0.912	NG_L	JB		PR	TRG								5.0	0.627	1.92	7.70	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.865	NG_L	U		PR	TRG								5.0	0.777	0.865	7.70	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.92	NG_L	U		PR	TRG								5.0	0.780	1.92	7.70	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			13C3-PFBS	13C3-PFBS		104	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			13C4-PFHpA	13C4-PFHpA		82.3	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			18O2-PFHxS	18O2-PFHxS		85.1	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			13C2-PFOA	13C2-PFOA		76.3	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			13C8-PFOS	13C8-PFOS		88.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB01-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 09:53	12/17/2016			20161221	08:27:00	20161222	17:26:00	1601579-04	1	-999			13C5-PFNA	13C5-PFNA		92.5	PCT_REC			PR	IS		SLSA	150	50					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.88	NG_L	U		PR	TRG								5.0	1.73	3.88	7.73	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.94	NG_L	U		PR	TRG								5.0	0.571	1.94	7.73	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.94	NG_L	U		PR	TRG								5.0	0.915	1.94	7.73	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		0.721	NG_L	JB		PR	TRG								5.0	0.629	1.94	7.73	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.872	NG_L	U		PR	TRG								5.0	0.780	0.872	7.73	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.94	NG_L	U		PR	TRG								5.0	0.783	1.94	7.73	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			13C3-PFBS	13C3-PFBS		99.3	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			13C4-PFHpA	13C4-PFHpA		79.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			18O2-PFHxS	18O2-PFHxS		88.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			13C2-PFOA	13C2-PFOA		83.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			13C8-PFOS	13C8-PFOS		94.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:44	12/17/2016			20161221	08:27:00	20161222	17:38:00	1601579-05	1	-999			13C5-PFNA	13C5-PFNA		77.5	PCT_REC			PR	IS		SLSA	150	50					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.97	NG_L	U		PR	TRG								5.0	1.78	3.97	7.97	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.98	NG_L	U		PR	TRG								5.0	0.589	1.98	7.97	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.98	NG_L	U		PR	TRG								5.0	0.943	1.98	7.97	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		0.943	NG_L	JB		PR	TRG								5.0	0.648	1.98	7.97	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.893	NG_L	U		PR	TRG								5.0	0.804	0.893	7.97	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.98	NG_L	U		PR	TRG								5.0	0.807	1.98	7.97	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			13C3-PFBS	13C3-PFBS		99.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			13C4-PFHpA	13C4-PFHpA		85.2	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			18O2-PFHxS	18O2-PFHxS		87.9	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			13C2-PFOA	13C2-PFOA		76.8	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			13C8-PFOS	13C8-PFOS		111	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-FB03-121616	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:40	12/17/2016			20161221	08:27:00	20161222	17:50:00	1601579-06	1	-999			13C5-PFNA	13C5-PFNA		101	PCT_REC			PR	IS		SLSA	150	50					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.97	NG_L	U		PR	TRG								5.0	1.77	3.97	7.92	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.98	NG_L	U		PR	TRG								5.0	0.585	1.98	7.92	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.98	NG_L	U		PR	TRG								5.0	0.938	1.98	7.92	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		0.887	NG_L	JB		PR	TRG								5.0	0.645	1.98	7.92	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.893	NG_L	U		PR	TRG								5.0	0.799	0.893	7.92	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.98	NG_L	U		PR	TRG								5.0	0.802	1.98	7.92	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			13C3-PFBS	13C3-PFBS		101	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			13C4-PFHpA	13C4-PFHpA		85.9	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			18O2-PFHxS	18O2-PFHxS		93.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			13C2-PFOA	13C2-PFOA		88.1	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			13C8-PFOS	13C8-PFOS		100	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW03P-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/16/2016 10:45	12/17/2016			20161221	08:27:00	20161222	18:02:00	1601579-07	1	-999			13C5-PFNA	13C5-PFNA		77.6	PCT_REC			PR	IS		SLSA	150	50					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U		PR	TRG								5.0	1.79	4.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		2.00	NG_L	U		PR	TRG								5.0	0.591	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		2.00	NG_L	U		PR	TRG								5.0	0.947	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		0.816	NG_L	J		PR	TRG								5.0	0.651	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U		PR	TRG								5.0	0.807	0.900	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		2.00	NG_L	U		PR	TRG								5.0	0.810	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			13C3-PFBS	13C3-PFBS		97.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			13C4-PFHpA	13C4-PFHpA		88.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			18O2-PFHxS	18O2-PFHxS		92.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			13C2-PFOA	13C2-PFOA		85.1	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			13C8-PFOS	13C8-PFOS		101	PCT_REC			PR	IS		SLSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	16:13:00	B6L0115-BLK1	1	-999			13C5-PFNA	13C5-PFNA		78.5	PCT_REC			PR	IS		SLSA	150	50					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		87.0	NG_L			PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		86.6	NG_L			PR	TRG		LSA	130	70					5.0	0.591	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		85.6	NG_L			PR	TRG		LSA	130	70					5.0	0.947	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		90.3	NG_L	B		PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		77.7	NG_L			PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		92.6	NG_L			PR	TRG		LSA	130	50					5.0	0.810	2.00	8.00	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			13C3-PFBS	13C3-PFBS		6440	PCT_REC			PR	IS		LSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			13C4-PFHpA	13C4-PFHpA		5480	PCT_REC			PR	IS		LSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			18O2-PFHxS	18O2-PFHxS		6410	PCT_REC			PR	IS		LSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			13C2-PFOA	13C2-PFOA		4720	PCT_REC			PR	IS		LSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			13C8-PFOS	13C8-PFOS		2890	PCT_REC			PR	IS		LSA	150	60					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	15:48:00	B6L0115-BS1	1	-999			13C5-PFNA	13C5-PFNA		4480	PCT_REC			PR	IS		LSA	150	50					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		82.0	NG_L			PR	TRG		LSA	130	60					5.0	1.69	3.79	7.57	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		81.7	NG_L			PR	TRG		LSA	130	70					5.0	0.559	1.89	7.57	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		123	NG_L			PR	TRG		LSA	130	70					5.0	0.896	1.89	7.57	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		102	NG_L	B		PR	TRG		LSA	130	70					5.0	0.616	1.89	7.57	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		82.9	NG_L			PR	TRG		LSA	130	70					5.0	0.764	0.852	7.57	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		85.1	NG_L			PR	TRG		LSA	130	50					5.0	0.767	1.89	7.57	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			13C3-PFBS	13C3-PFBS		101	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			13C4-PFHpA	13C4-PFHpA		87.9	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			18O2-PFHxS	18O2-PFHxS		85.9	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			13C2-PFOA	13C2-PFOA		93.9	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			13C8-PFOS	13C8-PFOS		87.4	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MS	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:01:00	B6L0115-MS1	1	-999			13C5-PFNA	13C5-PFNA		90.4	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		83.0	NG_L			PR	TRG		LSA	130	60					5.0	1.71	3.82	7.63	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		98.0	NG_L			PR	TRG		LSA	130	70					5.0	0.564	1.91	7.63	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		112	NG_L			PR	TRG		LSA	130	70					5.0	0.903	1.91	7.63	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		104	NG_L	B		PR	TRG		LSA	130	70					5.0	0.621	1.91	7.63	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		71.5	NG_L			PR	TRG		LSA	130	70					5.0	0.769	0.859	7.63	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		84.8	NG_L			PR	TRG		LSA	130	50					5.0	0.772	1.91	7.63	1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			13C3-PFBS	13C3-PFBS		97.0	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			13C4-PFHpA	13C4-PFHpA		81.9	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			18O2-PFHxS	18O2-PFHxS		95.1	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			13C2-PFOA	13C2-PFOA		88.1	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			13C8-PFOS	13C8-PFOS		106	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	Matrix Spike Dup	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	MSD	W	4	12/21/2016 08:27	12/21/2016			20161221	08:27:00	20161222	17:14:00	B6L0115-MSD1	1	-999			13C5-PFNA	13C5-PFNA		89.1	PCT_REC			PR	IS		LSA	150	150					5.0				1601579	S6L0047		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.94	NG_L	U		PR	TRG								5.0	1.76	3.94	7.88	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.97	NG_L	U		PR	TRG								5.0	0.582	1.97	7.88	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.97	NG_L	U		PR	TRG								5.0	0.933	1.97	7.88	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.97	NG_L	U		PR	TRG								5.0	0.641	1.97	7.88	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.886	NG_L	U		PR	TRG								5.0	0.795	0.886	7.88	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.97	NG_L	U		PR	TRG								5.0	0.798	1.97	7.88	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			13C3-PFBS	13C3-PFBS		92.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			13C4-PFHpA	13C4-PFHpA		82.6	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			18O2-PFHxS	18O2-PFHxS		86.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			13C2-PFOA	13C2-PFOA		85.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			13C8-PFOS	13C8-PFOS		83.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW04-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:36	12/20/2016			20161229	09:08:00	20170103	19:07:00	1601587-01	1	-999			13C5-PFNA	13C5-PFNA		75.3	PCT_REC			PR	IS		SLSA	150	50					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.94	NG_L	U		PR	TRG								5.0	1.76	3.94	7.86	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.97	NG_L	U		PR	TRG								5.0	0.581	1.97	7.86	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.97	NG_L	U		PR	TRG								5.0	0.930	1.97	7.86	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.97	NG_L	U		PR	TRG								5.0	0.640	1.97	7.86	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.886	NG_L	U		PR	TRG								5.0	0.793	0.886	7.86	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.97	NG_L	U		PR	TRG								5.0	0.796	1.97	7.86	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			13C3-PFBS	13C3-PFBS		87.9	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			13C4-PFHpA	13C4-PFHpA		79.8	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			18O2-PFHxS	18O2-PFHxS		75.9	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			13C2-PFOA	13C2-PFOA		72.6	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			13C8-PFOS	13C8-PFOS		76.6	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB04-121916	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/19/2016 10:34	12/20/2016			20161229	09:08:00	20170103	19:19:00	1601587-02	1	-999			13C5-PFNA	13C5-PFNA		81.4	PCT_REC			PR	IS		SLSA	150	50					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U		PR	TRG								5.0	1.79	4.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		2.00	NG_L	U		PR	TRG								5.0	0.591	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		2.00	NG_L	U		PR	TRG								5.0	0.947	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.00	NG_L	U		PR	TRG								5.0	0.651	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U		PR	TRG								5.0	0.807	0.900	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		2.00	NG_L	U		PR	TRG								5.0	0.810	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C3-PFBS	13C3-PFBS		95.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C4-PFHpA	13C4-PFHpA		92.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			18O2-PFHxS	18O2-PFHxS		90.8	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C2-PFOA	13C2-PFOA		83.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C8-PFOS	13C8-PFOS		91.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C5-PFNA	13C5-PFNA		104	PCT_REC			PR	IS		SLSA	150	50					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		89.7	NG_L			PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		87.0	NG_L			PR	TRG		LSA	130	70					5.0	0.591	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		89.1	NG_L			PR	TRG		LSA	130	70					5.0	0.947	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		98.2	NG_L			PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		83.3	NG_L			PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		66.4	NG_L			PR	TRG		LSA	130	50					5.0	0.810	2.00	8.00	1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C3-PFBS	13C3-PFBS		95.5	PCT_REC			PR	IS		LSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C4-PFHpA	13C4-PFHpA		85.6	PCT_REC			PR	IS		LSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			18O2-PFHxS	18O2-PFHxS		83.2	PCT_REC			PR	IS		LSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C2-PFOA	13C2-PFOA		77.1	PCT_REC			PR	IS		LSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C8-PFOS	13C8-PFOS		79.3	PCT_REC			PR	IS		LSA	150	60					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C5-PFNA	13C5-PFNA		86.1	PCT_REC			PR	IS		LSA	150	50					5.0				1601587	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U		PR	TRG								5.0	1.79	4.00	7.99	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		2.00	NG_L	U		PR	TRG								5.0	0.591	2.00	7.99	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		2.00	NG_L	U		PR	TRG								5.0	0.946	2.00	7.99	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.00	NG_L	U		PR	TRG								5.0	0.651	2.00	7.99	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U		PR	TRG								5.0	0.806	0.900	7.99	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		2.00	NG_L	U		PR	TRG								5.0	0.809	2.00	7.99	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			13C3-PFBS	13C3-PFBS		78.9	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			13C4-PFHpA	13C4-PFHpA		70.3	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			18O2-PFHxS	18O2-PFHxS		82.1	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			13C2-PFOA	13C2-PFOA		72.8	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			13C8-PFOS	13C8-PFOS		69.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW13-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:11	12/22/2016			20161229	09:08:00	20170103	19:32:00	1601595-01	1	-999			13C5-PFNA	13C5-PFNA		65.7	PCT_REC			PR	IS		SLSA	150	50					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.88	NG_L	U		PR	TRG								5.0	1.73	3.88	7.74	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.94	NG_L	U		PR	TRG								5.0	0.572	1.94	7.74	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.94	NG_L	U		PR	TRG								5.0	0.916	1.94	7.74	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.94	NG_L	U		PR	TRG								5.0	0.630	1.94	7.74	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.872	NG_L	U		PR	TRG								5.0	0.781	0.872	7.74	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.94	NG_L	U		PR	TRG								5.0	0.783	1.94	7.74	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			13C3-PFBS	13C3-PFBS		91.1	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			13C4-PFHpA	13C4-PFHpA		81.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			18O2-PFHxS	18O2-PFHxS		80.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			13C2-PFOA	13C2-PFOA		81.2	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			13C8-PFOS	13C8-PFOS		90.2	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-FB13-122116	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/21/2016 09:02	12/22/2016			20161229	09:08:00	20170103	19:44:00	1601595-02	1	-999			13C5-PFNA	13C5-PFNA		75.8	PCT_REC			PR	IS		SLSA	150	50					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U		PR	TRG								5.0	1.79	4.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		2.00	NG_L	U		PR	TRG								5.0	0.591	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		2.00	NG_L	U		PR	TRG								5.0	0.947	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.00	NG_L	U		PR	TRG								5.0	0.651	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U		PR	TRG								5.0	0.807	0.900	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		2.00	NG_L	U		PR	TRG								5.0	0.810	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C3-PFBS	13C3-PFBS		95.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C4-PFHpA	13C4-PFHpA		92.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			18O2-PFHxS	18O2-PFHxS		90.8	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C2-PFOA	13C2-PFOA		83.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C8-PFOS	13C8-PFOS		91.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C5-PFNA	13C5-PFNA		104	PCT_REC			PR	IS		SLSA	150	50					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		89.7	NG_L			PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		87.0	NG_L			PR	TRG		LSA	130	70					5.0	0.591	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		89.1	NG_L			PR	TRG		LSA	130	70					5.0	0.947	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		98.2	NG_L			PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		83.3	NG_L			PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		66.4	NG_L			PR	TRG		LSA	130	50					5.0	0.810	2.00	8.00	1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C3-PFBS	13C3-PFBS		95.5	PCT_REC			PR	IS		LSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C4-PFHpA	13C4-PFHpA		85.6	PCT_REC			PR	IS		LSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			18O2-PFHxS	18O2-PFHxS		83.2	PCT_REC			PR	IS		LSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C2-PFOA	13C2-PFOA		77.1	PCT_REC			PR	IS		LSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C8-PFOS	13C8-PFOS		79.3	PCT_REC			PR	IS		LSA	150	60					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C5-PFNA	13C5-PFNA		86.1	PCT_REC			PR	IS		LSA	150	50					5.0				1601595	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.91	NG_L	U		PR	TRG								5.0	1.75	3.91	7.81	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.95	NG_L	U		PR	TRG								5.0	0.577	1.95	7.81	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.95	NG_L	U		PR	TRG								5.0	0.925	1.95	7.81	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.95	NG_L	U		PR	TRG								5.0	0.636	1.95	7.81	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.879	NG_L	U		PR	TRG								5.0	0.788	0.879	7.81	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.95	NG_L	U		PR	TRG								5.0	0.791	1.95	7.81	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			13C3-PFBS	13C3-PFBS		91.2	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			13C4-PFHpA	13C4-PFHpA		86.1	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			18O2-PFHxS	18O2-PFHxS		87.2	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			13C2-PFOA	13C2-PFOA		82.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			13C8-PFOS	13C8-PFOS		85.8	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-WL01-1216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:27	12/23/2016			20161229	09:08:00	20170103	19:56:00	1601602-01	1	-999			13C5-PFNA	13C5-PFNA		80.7	PCT_REC			PR	IS		SLSA	150	50					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.82	NG_L	U		PR	TRG								5.0	1.71	3.82	7.65	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.91	NG_L	U		PR	TRG								5.0	0.565	1.91	7.65	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.91	NG_L	U		PR	TRG								5.0	0.906	1.91	7.65	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.91	NG_L	U		PR	TRG								5.0	0.623	1.91	7.65	1601602	S7A0003		

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analysis_Group	Analytical_Method	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Method	Result_Type	Lab_QC_Type	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier	GC_Column_Type	Analysis_Result_Type	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.859	NG_L	U		PR	TRG									5.0	0.772	0.859	7.65	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.91	NG_L	U		PR	TRG									5.0	0.775	1.91	7.65	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			13C3-PFBS	13C3-PFBS		80.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			13C4-PFHpA	13C4-PFHpA		66.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			18O2-PFHxS	18O2-PFHxS		68.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			13C2-PFOA	13C2-PFOA		73.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			13C8-PFOS	13C8-PFOS		81.7	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OCSTR-FB01-122216	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	12/22/2016 10:20	12/23/2016			20161229	09:08:00	20170103	20:08:00	1601602-02	1	-999			13C5-PFNA	13C5-PFNA		70.4	PCT_REC			PR	IS		SLSA	150	50					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U		PR	TRG									5.0	1.79	4.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		2.00	NG_L	U		PR	TRG									5.0	0.591	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		2.00	NG_L	U		PR	TRG									5.0	0.947	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.00	NG_L	U		PR	TRG									5.0	0.651	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U		PR	TRG									5.0	0.807	0.900	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		2.00	NG_L	U		PR	TRG									5.0	0.810	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C3-PFBS	13C3-PFBS		95.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C4-PFHpA	13C4-PFHpA		92.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			18O2-PFHxS	18O2-PFHxS		90.8	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C2-PFOA	13C2-PFOA		83.0	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C8-PFOS	13C8-PFOS		91.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:43:00	B6L0144-BLK1	1	-999			13C5-PFNA	13C5-PFNA		104	PCT_REC			PR	IS		SLSA	150	50					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		89.7	NG_L			PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		87.0	NG_L			PR	TRG		LSA	130	70					5.0	0.591	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		89.1	NG_L			PR	TRG		LSA	130	70					5.0	0.947	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		98.2	NG_L			PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		83.3	NG_L			PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		66.4	NG_L			PR	TRG		LSA	130	50					5.0	0.810	2.00	8.00	1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C3-PFBS	13C3-PFBS		95.5	PCT_REC			PR	IS		LSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C4-PFHpA	13C4-PFHpA		85.6	PCT_REC			PR	IS		LSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			18O2-PFHxS	18O2-PFHxS		83.2	PCT_REC			PR	IS		LSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C2-PFOA	13C2-PFOA		77.1	PCT_REC			PR	IS		LSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C8-PFOS	13C8-PFOS		79.3	PCT_REC			PR	IS		LSA	150	60					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	12/29/2016 09:08	12/29/2016			20161229	09:08:00	20170103	18:06:00	B6L0144-BS1	1	-999			13C5-PFNA	13C5-PFNA		86.1	PCT_REC			PR	IS		LSA	150	50					5.0				1601602	S7A0003		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.94	NG_L	U		PR	TRG									5.0	1.76	3.94	7.89	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.97	NG_L	U		PR	TRG									5.0	0.583	1.97	7.89	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.97	NG_L	U		PR	TRG									5.0	0.933	1.97	7.89	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.97	NG_L	U		PR	TRG									5.0	0.642	1.97	7.89	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.886	NG_L	U		PR	TRG									5.0	0.795	0.886	7.89	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.97	NG_L	U		PR	TRG									5.0	0.798	1.97	7.89	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			13C3-PFBS	13C3-PFBS		107	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			13C4-PFHpA	13C4-PFHpA		96.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			18O2-PFHxS	18O2-PFHxS		99.1	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			13C2-PFOA	13C2-PFOA		95.4	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			13C8-PFOS	13C8-PFOS		103	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-RW10-0117	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:04	01/04/2017			20170109	13:40:00	20170111	17:03:00	1700006-01	1	-999			13C5-PFNA	13C5-PFNA		97.8	PCT_REC			PR	IS		SLSA	150	50					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		3.97	NG_L	U		PR	TRG									5.0	1.78	3.97	7.97	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		1.98	NG_L	U		PR	TRG									5.0	0.589	1.98	7.97	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		1.98	NG_L	U		PR	TRG									5.0	0.943	1.98	7.97	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		1.98	NG_L	U		PR	TRG									5.0	0.648	1.98	7.97	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.893	NG_L	U		PR	TRG									5.0	0.804	0.893	7.97	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		1.98	NG_L	U		PR	TRG									5.0	0.807	1.98	7.97	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			13C3-PFBS	13C3-PFBS		118	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			13C4-PFHpA	13C4-PFHpA		104	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			18O2-PFHxS	18O2-PFHxS		97.9	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			13C2-PFOA	13C2-PFOA		117	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			13C8-PFOS	13C8-PFOS		107	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	OC-FB10-010317	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	REG	W	4	01/03/2017 17:00	01/04/2017			20170109	13:40:00	20170111	17:16:00	1700006-02	1	-999			13C5-PFNA	13C5-PFNA		110	PCT_REC			PR	IS		SLSA	150	50					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		4.00	NG_L	U		PR	TRG									5.0	1.79	4.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		2.00	NG_L	U		PR	TRG									5.0	0.591	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		2.00	NG_L	U		PR	TRG									5.0	0.947	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		2.00	NG_L	U		PR	TRG									5.0	0.651	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		0.900	NG_L	U		PR	TRG									5.0	0.807	0.900	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		2.00	NG_L	U		PR	TRG									5.0	0.810	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			13C3-PFBS	13C3-PFBS		117	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			13C4-PFHpA	13C4-PFHpA		94.5	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			18O2-PFHxS	18O2-PFHxS		101	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			13C2-PFOA	13C2-PFOA		121	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			13C8-PFOS	13C8-PFOS		105	PCT_REC			PR	IS		SLSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	Blank	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BLK	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:49:00	B7A0039-BLK1	1	-999			13C5-PFNA	13C5-PFNA		93.2	PCT_REC			PR	IS		SLSA	150	50					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			Perfluorobutanesulfonic acid (PFBS)	375-73-5		90.0	NG_L			PR	TRG		LSA	130	60					5.0	1.79	4.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			Perfluoroheptanoic acid (PFHpA)	375-85-9		95.4	NG_L			PR	TRG		LSA	130	70					5.0	0.591	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			Perfluorohexanesulfonic acid (PFHxS)	355-46-4		94.8	NG_L			PR	TRG		LSA	130	70					5.0	0.947	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			Perfluorooctanoic acid (PFOA)	335-67-1		95.6	NG_L			PR	TRG		LSA	130	70					5.0	0.651	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			Perfluorooctane Sulfonate (PFOS)	1763-23-1		92.4	NG_L			PR	TRG		LSA	130	70					5.0	0.807	0.900	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			Perfluorononanoic acid (PFNA)	375-95-1		103	NG_L			PR	TRG		LSA	130	50					5.0	0.810	2.00	8.00	1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			13C3-PFBS	13C3-PFBS		111	PCT_REC			PR	IS		LSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			13C4-PFHpA	13C4-PFHpA		98.0	PCT_REC			PR	IS		LSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			18O2-PFHxS	18O2-PFHxS		99.3	PCT_REC			PR	IS		LSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			13C2-PFOA	13C2-PFOA		98.7	PCT_REC			PR	IS		LSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			13C8-PFOS	13C8-PFOS		111	PCT_REC			PR	IS		LSA	150	60					5.0				1700006	S7A0019		
N6247016D9000	WE14		OCEANA_NAS	LCS	NONS	SVOA	537_MOD	ORG	VISTA	VISTA ANALYTICAL LABORATORY, INC.	NONE	WET	METHOD	000	BS	W	4	01/09/2017 13:40	01/09/2017			20170109	13:40:00	20170111	14:12:00	B7A0039-BS1	1	-999			13C5-PFNA	13C5-PFNA		80.0	PCT_REC			PR	IS		LSA	150	50					5.0				1700006	S7A0019		

Data Validation Summary

Oceana CTO-WE44, NALF Fentress

TO: Tiffany Hill/CVO
Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: January 19, 2017

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
1601579	OC-RW12-1216	Water
1601579	OC-FB12-121616	Water
1601579	OC-RW01-1216	Water
1601579	OC-FB01-121616	Water
1601579	OC-RW03-1216	Water
1601579	OC-FB03-121616	Water
1601579	OC-RW03P-1216	Water
1601587	OC-RW04-1216	Water
1601587	OC-FB04-121916	Water
1601595	OC-RW13-1216	Water
1601595	OC-FB13-122116	Water
1601602	OCSTR-WL01-1216	Water

SDG	Sample Name	Matrix
1601602	OCSTR-FB01-122216	Water
1700006	OC-RW10-0117	Water
1700006	OC-FB10-010317	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 Organic Data Review (August 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 12/16/16 through 1/03/17. Samples were received at the laboratory 12/17/16 through 1/4/17. All sample preparation and analyses were performed within holding time requirements.

Blanks

Target compounds were detected in the method blanks for SDG 1601579 as listed in the table below. Affected data are summarized in **Attachment 1**.

Blank ID	Compound	Conc.	Units
B6L0115-BLK1	Perfluorooctanoic acid (PFOA)	0.816	NG_L

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

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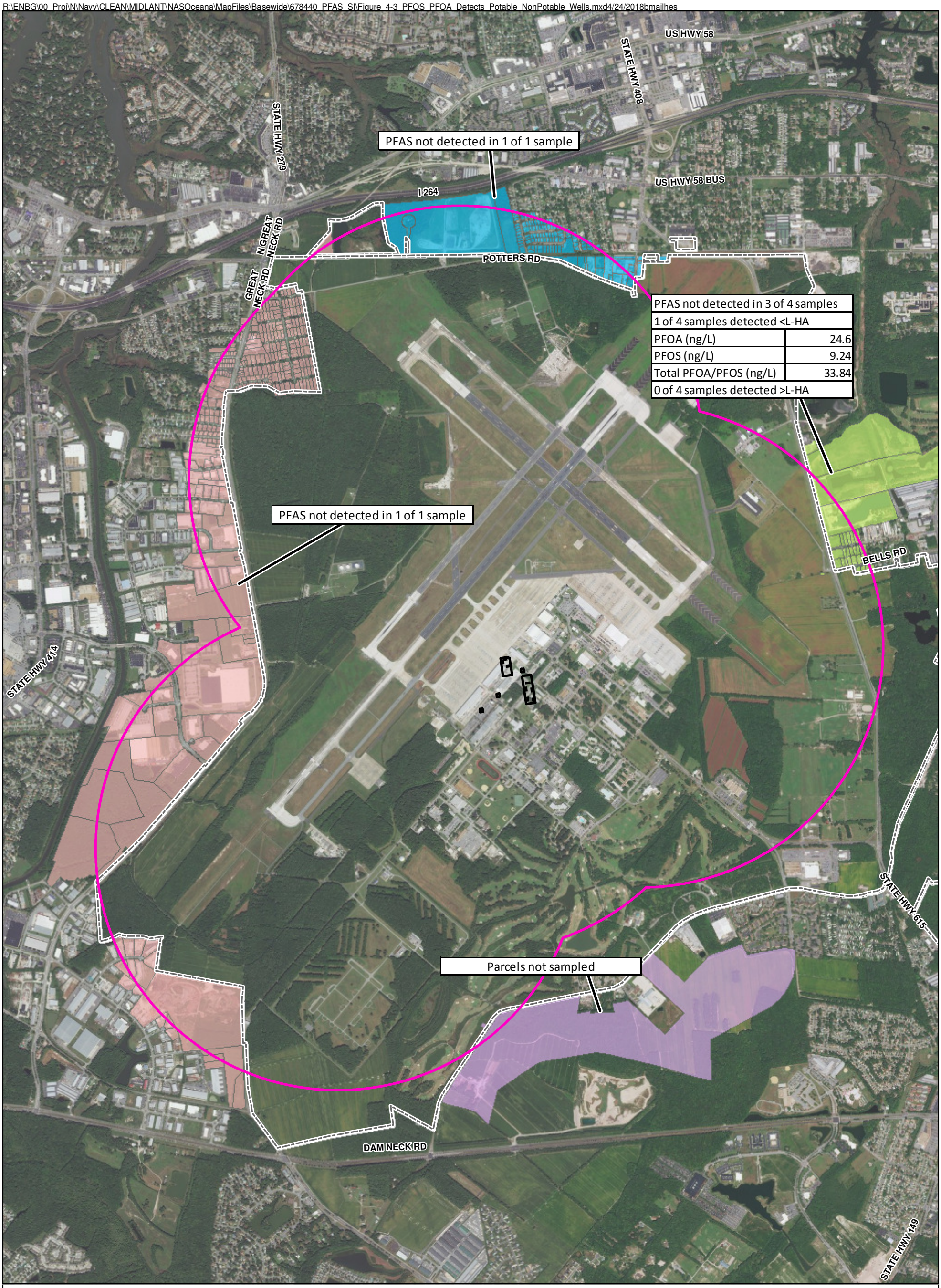

Legend

- Non-Core Target Treatment Area (2004)
- Core Target Treatment Area (2004) (Core)
- Sampling Area
- Installation Boundary

Off-Base Parcels

- East
- North
- South
- West

N
W E
S

0 1,000 2,000 4,000 Feet

Imagery Source: ©2017 Esri

Figure 4-3
COCs Detections in Potable Wells Sampled from Parcels Located Off-Base
Basewide Per- and Polyfluoroalkyl Substances Site Inspection Report
NAS Oceana, Virginia Beach, Virginia

ch2m