



**Groundwater Investigation Sample Results,
Level 2 Laboratory Report, Level 4 Laboratory Report,
Electronic Data Deliverable, Data Validation Report,
and the Sample Location Figure, SDG 1700345**

*Naval Research Laboratory – Chesapeake Bay
Detachment
Chesapeake Beach, Maryland*

February 2019

April 04, 2017

Vista Work Order No. 1700345

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 March 18, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'NRL-CBD PFAS'.

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

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

Sincerely,



Martha Maier
Laboratory Director



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

Vista Work Order No. 1700345

Case Narrative

Sample Condition on Receipt:

Six groundwater samples and two water 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 samples were centrifuged prior to extraction.

The aqueous samples were extracted and analyzed for PFBS, PFOA and PFOS 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 OPR recoveries were within the method acceptance criteria

The labeled standard recoveries were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "CBD-AOA-MW08-0317".

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700345-01	CBD-AOA-MW05-0317		17-Mar-17 07:40	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-02	CBD-EB01-031717		17-Mar-17 07:55	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-03	CBD-AOA-MW06-0317		17-Mar-17 08:40	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-04	CBD-AOA-MW08-0317	MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD MS/MSD	17-Mar-17 10:10	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-05	CBD-SO4-MW01-0317		17-Mar-17 12:15	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-06	CBD-FB01-031717		17-Mar-17 09:40	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-07	CBD-SO3-MW01-0317		17-Mar-17 14:05	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-08	CBD-SO3-MW02-0317		17-Mar-17 15:25	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank						Modified EPA Method 537			
Matrix: Aqueous		QC Batch: B7C0099		Lab Sample: B7C0099-BLK1					
Sample Size: 0.125 L		Date Extracted: 20-Mar-2017 8:36		Date Analyzed: 21-Mar-17 00:25 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.79	4.00	8.00		IS 13C3-PFBS	97.8	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	84.8	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	93.2	60 - 150	

DL - Detection limit

RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

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

Sample ID: OPR

Modified EPA Method 537

Matrix: Aqueous Sample Size: 0.125 L	QC Batch: B7C0099 Date Extracted: 20-Mar-2017 8:36	Lab Sample: B7C0099-BS1 Date Analyzed: 20-Mar-17 23:47 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	90.3	80.0	113	60 - 130	IS 13C3-PFBS	97.5	60 - 150
PFOA	91.8	80.0	115	70 - 130	IS 13C2-PFOA	92.8	60 - 150
PFOS	86.3	80.0	108	70 - 130	IS 13C8-PFOS	96.4	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: CBD-AOA-MW05-0317

Modified EPA Method 537

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700345-01	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS		Sample Size:	0.123 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 7:40					Date Analyzed:	21-Mar-17 01:28 Column: BEH C18			
Location:	AOA-MW05									

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.81	4.07	8.11		IS 13C3-PFBS	107	60 - 150	
PFOA	ND	0.660	2.03	8.11		IS 13C2-PFOA	92.1	60 - 150	
PFOS	1.01	0.818	0.915	8.11	J	IS 13C8-PFOS	100	60 - 150	

DL - Detection limit
 RL - Reporting limit

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: CBD-EB01-031717**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Water		Lab Sample:	1700345-02	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.120 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 7:55				Date Analyzed:	21-Mar-17 01:41 Column: BEH C18			
Location:	EQUIP BLANK								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.87	4.17	8.36		IS 13C3-PFBS	96.4	60 - 150	
PFOA	ND	0.680	2.08	8.36		IS 13C2-PFOA	103	60 - 150	
PFOS	ND	0.844	0.938	8.36		IS 13C8-PFOS	97.8	60 - 150	

DL - Detection limit
 RL - Reporting limit

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: CBD-AOA-MW06-0317**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700345-03	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.127 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 8:40				Date Analyzed:	21-Mar-17 01:53 Column: BEH C18			
Location:	AOA-MW06								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.76	3.94	7.85		IS 13C3-PFBS	109	60 - 150	
PFOA	46.4	0.638	1.97	7.85		IS 13C2-PFOA	96.3	60 - 150	
PFOS	2.71	0.791	0.886	7.85	J	IS 13C8-PFOS	101	60 - 150	

DL - Detection limit
 RL - Reporting limit

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: CBD-AOA-MW08-0317**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-04	Date Received:	18-Mar-2017 9:13		
Project:	NRL-CBD PFAS	Sample Size:	0.126 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36		
Date Collected:	17-Mar-2017 10:10			Date Analyzed:	21-Mar-17 02:06	Column:	BEH C18		
Location:	AOA-MW08				22-Mar-17 12:23	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	258	1.78	3.97	7.94		IS 13C3-PFBS	112	60 - 150	
PFOA	1890	6.46	19.8	79.4	D	IS 13C2-PFOA	116	60 - 150	D
PFOS	1330	8.00	8.93	79.4	D	IS 13C8-PFOS	117	60 - 150	D

DL - Detection limit

RL - Reporting limit

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: CBD-AOA-MW08-0317	QC Batch: B7C0099	Lab Sample: B7C0099-MS1/B7C0099-MSD1
Source LabNumber: 1700345-04	Date Extracted: 20-Mar-2017 8:36	Date Analyzed: 22-Mar-17 12:36 Column: BEH C18
Matrix: Aqueous		22-Mar-17 12:48 Column: BEH C18
Sample Size: 0.124/0.125 L		

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFBS	80.5	98.9		80.0	113	13.3		60 - 130	25	IS 13C3-PFBS	109		110	
PFOA	80.5	687	D, H	80.0	577	17.4	D, H	70 - 130	25	IS 13C2-PFOA	90.1	D	94.7	D
PFOS	80.5	45.8	D, H	80.0	12.6	114	D, H	70 - 130	25	IS 13C8-PFOS	93.1	D	102	D

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

Sample ID: CBD-SO4-MW01-0317**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700345-05	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.127 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 12:15				Date Analyzed:	21-Mar-17 02:44 Column: BEH C18			
Location:	SO4-MW01								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	8.44	1.77	3.94	7.90		IS 13C3-PFBS	99.4	60 - 150	
PFOA	21.5	0.643	1.97	7.90		IS 13C2-PFOA	96.7	60 - 150	
PFOS	266	0.797	0.886	7.90		IS 13C8-PFOS	89.3	60 - 150	

DL - Detection limit
 RL - Reporting limit

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: CBD-FB01-031717**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Water		Lab Sample:	1700345-06	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.124 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 9:40	Date Analyzed: 21-Mar-17 02:56 Column: BEH C18							
Location:	FIELD BLANK								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.81	4.03	8.09		IS 13C3-PFBS	104	60 - 150	
PFOA	ND	0.658	2.02	8.09		IS 13C2-PFOA	97.5	60 - 150	
PFOS	ND	0.816	0.907	8.09		IS 13C8-PFOS	98.6	60 - 150	

DL - Detection limit
 RL - Reporting limit

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: CBD-SO3-MW01-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-07	Date Received:	18-Mar-2017 9:13		
Project:	NRL-CBD PFAS	Sample Size:	0.122 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36		
Date Collected:	17-Mar-2017 14:05			Date Analyzed:	21-Mar-17 03:09	Column:	BEH C18		
Location:	SO3-MW01				22-Mar-17 13:01	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	7.09	1.83	4.10	8.19	J	IS 13C3-PFBS	110	60 - 150	
PFOA	116	0.666	2.05	8.19		IS 13C2-PFOA	103	60 - 150	
PFOS	1200	8.26	9.22	81.9	D	IS 13C8-PFOS	121	60 - 150	D

DL - Detection limit
 RL - Reporting limit

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: CBD-SO3-MW02-0317**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700345-08	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.122 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 15:25				Date Analyzed:	21-Mar-17 03:21 Column: BEH C18			
Location:	SO3-MW02								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	17.5	1.83	4.10	8.18		IS 13C3-PFBS	98.0	60 - 150	
PFOA	85.3	0.665	2.05	8.18		IS 13C2-PFOA	91.8	60 - 150	
PFOS	105	0.825	0.922	8.18		IS 13C8-PFOS	105	60 - 150	

DL - Detection limit
 RL - Reporting limit

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

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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

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

NELAP Accredited Test Methods

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

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

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

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

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

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



CHAIN OF CUSTODY

For Laboratory Use Only
 Laboratory Project ID: 1700345 Temp: 0.9 °C
 Storage ID: WR-2 Storage Secured: Yes No

Project ID: NRL-CBD PFAS P.O.#: 10006-7-106051 Sampler: Lisa Carter
 (name)

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

Invoice to: Name Tiffany Hill Company CH2M Address _____ City _____ State _____ Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature) Lisa Carter Date 3-17-17 Time 1730 Received by (printed name and signature) B. Benedict Date 03/18/17 Time 0919
 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 Mauer
 Method of Shipment: Fed-EX
 Tracking No.: _____

Add Analysis(es) Requested			Container(s)														
Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	TOTALS	COPLANAR PCB's	208 CONGENERS	PBDE	PAH	WHO-29	Mod. EPA 537

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	TOTALS	COPLANAR PCB's	208 CONGENERS	PBDE	PAH	WHO-29	Mod. EPA 537	Comments		
CBD- AOA -MW05-0317	3-17-17	0740	AOA-MW05	2	HDPE	GW																		
CBD-EB01-031717	3-17-17	0755	Equip Blank	2	"	W																		QC Equipment Blank
CBD- AOA -MW06-0317	3-17-17	0840	AOA-MW06	2	"	GW																		
CBD- AOA -MW08-0317	3-17-17	1010	AOA-MW08	2	"	GW																		
CBD- AOA -MW08-0317-MS	3-17-17	1010	AOA-MW08	2	"	GW																		QC-MS
CBD- AOA -MW08-0317-SD	3-17-17	1010	AOA-MW08	2	"	GW																		QC-SD
CBD-S04-MW01-0317	3-17-17	1215	S04-MW01	2	"	GW																		
CBD-FB01-031717	3-17-17	0940	Field Blank	2	"	W																		QC-Field Blank
CBD-S03-MW01-0317	3-17-17	1405	S03-MW01	2	"	GW																		
CBD-S03-MW02-0317	3-17-17		S03-MW02	2	"	GW																		

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
 Company: CH2M
 Address: 1100 NE Circle Blvd Suite 300
 City: Corvallis State: OR Zip: 97330
 Phone: 541-768-3109 Fax: _____
 Email: Tiffany.Hill@ch2m.com

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700345 TAT 7

Samples Arrival:	Date/Time <u>03/18/17 0913</u>	Initials: <u>BSB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>NA</u>			
Logged In:	Date/Time <u>03/18/17 0929</u>	Initials: <u>BSB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>E4</u>			
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice	<input type="checkbox"/> None		
Temp °C: <u>0.6</u> (uncorrected)	Time: <u>0919</u>		Thermometer ID: IR-1			
Temp °C: <u>0.9</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

		YES	NO	NA	
Adequate Sample Volume Received?	<u>A/B</u>	<input checked="" type="checkbox"/>			
Holding Time Acceptable?		<input checked="" type="checkbox"/>			
Shipping Container(s) Intact?		<input checked="" type="checkbox"/>			
Shipping Custody Seals Intact?		<input checked="" type="checkbox"/>			
Shipping Documentation Present?		<input checked="" type="checkbox"/>			
Airbill	Trk # <u>7859 4456 8837</u>	<input checked="" type="checkbox"/>			
Sample Container Intact?		<input checked="" type="checkbox"/>			
Sample Custody Seals Intact?				<input checked="" type="checkbox"/>	
Chain of Custody / Sample Documentation Present?		<input checked="" type="checkbox"/>			
COC Anomaly/Sample Acceptance Form completed?		<input checked="" type="checkbox"/>			
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				<input checked="" type="checkbox"/>	
Preservation Documented:	<input type="checkbox"/> Na ₂ S ₂ O ₃	<input type="checkbox"/> Trizma	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input type="checkbox"/> Retain	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose

Comments: Sample Label ID: CBD-SW03-MW01-0317 A/B
 Sample COC ID: CBD-S03-MW01-0317 ↓
 Sample Label collection time for "CBD-S03-MW02-0317": 1525

Chain of Custody Anomaly/Sample Acceptance Form



Client: CH2M Hill
 Contact: Tiffany Hill
 Email: tiffany.hill@ch2m.com
 Phone: (541) 768-3109

Workorder Number: 1700345
 Date Received: 18-Mar-17 09:13
 Documented by/date: B.Benedict 03/18/2017

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|--|---|---|
| <input type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | | | |
|--|---|-----|-----------|
| <input type="checkbox"/> Temperature outside < 6°C Range | Samples Affected: _____ | | |
| Temperature _____°C | Ice Present? | Yes | No Melted |
| <input checked="" type="checkbox"/> Sample ID Discrepancy: See Comments | <input type="checkbox"/> Insufficient Sample Size | | |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken | | |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type | | |

Comments:
 COC ID: CBD-SO3-MW01-0317
 Sample Label ID: CBD-SWO3-MW01-0317

Client Authorization	
Proceed with Analysis: <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	Signature and Date <u>Karen J. J. 3-20-17</u>
Client Comments/Instructions <u>Per client, sample IDs are correct. on the COC.</u>	

April 04, 2017

Vista Work Order No. 1700345

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

Dear Ms. Hill,

Enclosed are the amended results for the sample set received at Vista Analytical Laboratory on March 18, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'NRL-CBD PFAS'.

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

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

Sincerely,



Martha Maier
Laboratory Director



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

Vista Work Order No. 1700345

Case Narrative

Sample Condition on Receipt:

Six groundwater samples and two water 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. This report was amended to include the chromatograms for the PFBS recovery standard, which were omitted from the original report.

Analytical Notes:

Modified EPA Method 537

The samples were centrifuged prior to extraction.

The aqueous samples were extracted and analyzed for PFBS, PFOA and PFOS 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 OPR recoveries were within the method acceptance criteria

The labeled standard recoveries were within the acceptance criteria.

As requested, an MS/MSD was performed on sample "CBD-AOA-MW08-0317".

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Sample Inventory Report

Vista Sample ID	Client Sample ID		Sampled	Received	Components/Containers
1700345-01	CBD-AOA-MW05-0317		17-Mar-17 07:40	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-02	CBD-EB01-031717		17-Mar-17 07:55	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-03	CBD-AOA-MW06-0317		17-Mar-17 08:40	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-04	CBD-AOA-MW08-0317	MS/MSD	17-Mar-17 10:10	18-Mar-17 09:13	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
1700345-05	CBD-SO4-MW01-0317		17-Mar-17 12:15	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-06	CBD-FB01-031717		17-Mar-17 09:40	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-07	CBD-SO3-MW01-0317		17-Mar-17 14:05	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700345-08	CBD-SO3-MW02-0317		17-Mar-17 15:25	18-Mar-17 09:13	HDPE Bottle, 125 mL HDPE Bottle, 125 mL

ANALYTICAL RESULTS

Sample ID: Method Blank						Modified EPA Method 537			
Matrix: Aqueous Sample Size: 0.125 L		QC Batch: B7C0099 Date Extracted: 20-Mar-2017 8:36		Lab Sample: B7C0099-BLK1 Date Analyzed: 21-Mar-17 00:25 Column: BEH C18					
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.79	4.00	8.00		IS 13C3-PFBS	97.8	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	84.8	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	93.2	60 - 150	

DL - Detection limit
RL - Reporting limit

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

Sample ID: OPR

Modified EPA Method 537

Matrix: Aqueous Sample Size: 0.125 L	QC Batch: B7C0099 Date Extracted: 20-Mar-2017 8:36	Lab Sample: B7C0099-BS1 Date Analyzed: 20-Mar-17 23:47 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	90.3	80.0	113	60 - 130	IS 13C3-PFBS	97.5	60 - 150
PFOA	91.8	80.0	115	70 - 130	IS 13C2-PFOA	92.8	60 - 150
PFOS	86.3	80.0	108	70 - 130	IS 13C8-PFOS	96.4	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: CBD-AOA-MW05-0317**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-01	Date Received:	18-Mar-2017 9:13		
Project:	NRL-CBD PFAS	Sample Size:	0.123 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36		
Date Collected:	17-Mar-2017 7:40			Date Analyzed:	21-Mar-17 01:28	Column:	BEH C18		
Location:	AOA-MW05								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.81	4.07	8.11		IS 13C3-PFBS	107	60 - 150	
PFOA	ND	0.660	2.03	8.11		IS 13C2-PFOA	92.1	60 - 150	
PFOS	1.01	0.818	0.915	8.11	J	IS 13C8-PFOS	100	60 - 150	

DL - Detection limit
 RL - Reporting limit

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: CBD-EB01-031717**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Water		Lab Sample:	1700345-02	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.120 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 7:55				Date Analyzed:	21-Mar-17 01:41 Column: BEH C18			
Location:	EQUIP BLANK								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.87	4.17	8.36		IS 13C3-PFBS	96.4	60 - 150	
PFOA	ND	0.680	2.08	8.36		IS 13C2-PFOA	103	60 - 150	
PFOS	ND	0.844	0.938	8.36		IS 13C8-PFOS	97.8	60 - 150	

DL - Detection limit
 RL - Reporting limit

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: CBD-AOA-MW06-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data					
P ame:	CG2M Gill	Matrix:	wruHndRater	Lab Sample:	17003Fo-03	Date v eceiNed:	18-Mar-2017 9:13		
j ru4ect:	P v L-CBD j . AS	Sample Size:	05127 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36		
Date Collected:	17-Mar-2017 8:F0			Date Analyzed:	21-Mar-17 01:o3	CulHmn:	BEG C18		
Lucatium:	AOA-MW06								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
j . BS	PD	1576	39F	78o		IS 13C3-j . BS	109	60 - 1o0	
j . OA	F6F	0538	197	78o		IS 13C2-j . OA	963	60 - 1o0	
j . OS	251	0591	0886	78o	J	IS 13C8-j . OS	101	60 - 1o0	

DL - Detectiun limit
v L - v eputing limit

LCL-UCL - LuRer cuntrl limit - Hpper cuntrl limit
v esHts repurtd tu DL5
When repurtd, j . BS, j . GxS, j . OA and j . OS inclHle both linear and branched isumer5
Only the linear isumer is repurtd fur all uther analytes5

Sample ID: CBD-AOA-MW08-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-04	Date Received:	18-Mar-2017 9:13		
Project:	NRL-CBD PFAS	Sample Size:	0.126 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36		
Date Collected:	17-Mar-2017 10:10			Date Analyzed:	21-Mar-17 02:06	Column:	BEH C18		
Location:	AOA-MW08				22-Mar-17 12:23	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	258	1.78	3.97	7.94		IS 13C3-PFBS	112	60 - 150	
PFOA	1890	6.46	19.8	79.4	D	IS 13C2-PFOA	116	60 - 150	D
PFOS	1330	8.00	8.93	79.4	D	IS 13C8-PFOS	117	60 - 150	D

DL - Detection limit
 RL - Reporting limit

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: CBD-AOA-MW08-0317	QC Batch: B7C0099	Lab Sample: B7C0099-MS1/B7C0099-MSD1
Source LabNumber: 1700345-04	Date Extracted: 20-Mar-2017 8:36	Date Analyzed: 22-Mar-17 12:36 Column: BEH C18
Matrix: Aqueous		22-Mar-17 12:48 Column: BEH C18
Sample Size: 0.124/0.125 L		

Analyte	Spike-MS (ng/L)	MS %R	MS Qual.	Spike-MSD (ng/L)	MSD %R	RPD	MSD Qual.	%R Limit	%RPD Limit	Labeled Standard	MS %R	MS Qualifiers	MSD %R	MS Qual.
PFBS	80.5	98.9		80.0	113	13.3		60 - 130	25	IS 13C3-PFBS	109		110	
PFOA	80.5	687	D, H	80.0	577	17.4	D, H	70 - 130	25	IS 13C2-PFOA	90.1	D	94.7	D
PFOS	80.5	45.8	D, H	80.0	12.6	114	D, H	70 - 130	25	IS 13C8-PFOS	93.1	D	102	D

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

Sample ID: CBD-SO4-MW01-0317

Modified EPA Method 537

Client Data		Sample Data			Laboratory Data				
P ame:	CG2M Gill	Matrix:	wruHndRater	Lab Sample:	17003o. -0.	Date v eceiNed:	18-Mar-2017	9:13	
j ruFect:	P v L-CBD j 4AS	Sample Size:	05l27 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017	8:36	
Date Collected:	17-Mar-2017 12:1.			Date Analyzed:	21-Mar-17 02:00	CulHmn:	BEG C18		
Lucatium:	SOo-MW01								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
j 4BS	85o	1577	35o	750		IS 13C3-j 4BS	995b	60 - 1. 0	
j 4OA	215	05o3	157	750		IS 13C2-j 4OA	9657	60 - 1. 0	
j 4OS	266	05797	0586	750		IS 13C8-j 4OS	895	60 - 1. 0	

DL - Detectiun limit
 v L - v eputing limit

LCL-UCL - LuRer cuntrl limit - Hpper cuntrl limit
 v esHts repurted tu DL5
 When repurted, j 4BS, j 4GxS, j 4OA and j 4OS inclHle both linear and branched isumers5
 Only the linear isumer is repurted fur all uther analytes5

Sample ID: CBD-FB01-031717

Modified EPA Method 537

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Water		Lab Sample:	1700354-06	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.125 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 9:50				Date Analyzed:	21-Mar-17 02:46 Column: BEH C18			
Location:	FUELD BLANI								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.81	5.03	8.09		13C3-PFBS	105	60 - 140	
PFKA	ND	0.648	2.02	8.09		13C2-PFKA	97.4	60 - 140	
PFKS	ND	0.816	0.907	8.09		13C8-PFKS	98.6	60 - 140	

DL - Detection limit
 RL - ReportinOlimit

LCL-g CL - Lower control limit - upper control limit
 Results reported to DL.
 When reported, PFBS, PFHxS, PFKA and PFKS include both linear and branched isomers.
 Knlly the linear isomer is reported for all other analytes.

Sample ID: CBD-SO3-MW01-0317

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	170034F-07	Date Received:	18-Mar-2017 9:13		
Project:	NRL-CBD P. AS	Sample Size:	05122 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36		
Date Collected:	17-Mar-2017 14:0F			Date Analyzed:	21-Mar-17 03:09	Column:	BEH C18		
Location:	SO3-MW01				22-Mar-17 13:01	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
P. BS	759	153	450	859	J	IS 13C3-P. BS	110	60 - 1F0	
P. OA	116	0566	25F	859		IS 13C2-P. OA	103	60 - 1F0	
P. OS	1200	8526	952	819	D	IS 13C8-P. OS	121	60 - 1F0	D

DL - Detection limit
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
 Results reported to DL5
 When reported, P. BS, P. HxS, P. OA and P. OS include both linear and branched isomers5
 Only the linear isomer is reported for all other analytes5

Sample ID: CBD-SO3-MW02-0317

Modified EPA Method 537

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	170035F-08	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD P. AS	Sample Size:	0422 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 1F:2F				Date Analyzed:	21-Mar-17 03:21 Column: BEH C18			
Location:	SO3-MW02								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
P. BS	174F	143	540	848		IS 13C3-P. BS	984	60 - 1F0	
P. OA	8F4B	0466F	240F	848		IS 13C2-P. OA	914	60 - 1F0	
P. OS	10F	0422F	0422	848		IS 13C8-P. OS	10F	60 - 1F0	

DL - Detection limit
 RL - Reporting limit

LCL-UCL - Lower control limit - upper control limit
 Results reported to DL4
 When reported, P. BS, P. HxS, P. OA and P. OS include both linear and branched isomers4
 Only the linear isomer is reported for all other analytes4

DATA QUALIFIERS & ABBREVIATIONS

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

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

CERTIFICATIONS

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

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

NELAP Accredited Test Methods

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

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

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

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

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

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



CHAIN OF CUSTODY

For Laboratory Use Only
 Laboratory Project ID: 1700345 Temp: 0.9 °C
 Storage ID: WR-2 Storage Secured: Yes No

Project ID: NRL-CBD PFAS P.O.#: 10006-7-106051 Sampler: Lisa Carter
 (name)

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

Invoice to: Name Tiffany Hill Company CH2M Address _____ City _____ State _____ Ph# 541-768-3109 Fax# _____

Relinquished by (printed name and signature) Lisa Carter Date 3-17-17 Time 1730 Received by (printed name and signature) B. Benedict Date 03/18/17 Time 0919

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

Add Analysis(es) Requested			EPA 1613	EPA 8290	EPA 8280	EPA 1668	EPA 1614	CARB429
Container(s)								
Tracking No.:								

Sample ID	Date	Time	Location/Sample Description	Quantity	Type	Matrix	2378-TCDD	2378-TCDF	PCDD/PCDF	2378-TCDD	2378-TCDF	PCDD/PCDF	2378-TCDD	2378-TCDF	PCDD/PCDF	TOTALS	COPLANAR PCBs	20g CONGENERS	PBDE	PAH	WHO-29	Mod EPA 537	Comments	
CBD-ADA-MW05-0317	3-17-17	0740	ADA-MW05	2	HDPE	GW																		
CBD-EB01-031717	3-17-17	0755	Equip Blank	2	"	W																		QC Equipment Blank
CBD-ADA-MW06-0317	3-17-17	0840	ADA-MW06	2	"	GW																		
CBD-ADA-MW08-0317	3-17-17	1010	ADA-MW08	2	"	GW																		
CBD-ADA-MW08-0317-MS	3-17-17	1010	ADA-MW08	2	"	GW																		QC-MS
CBD-ADA-MW08-0317-SD	3-17-17	1010	ADA-MW08	2	"	GW																		QC-SD
CBD-S04-MW01-0317	3-17-17	1215	S04-MW01	2	"	GW																		
CBD-FB01-031717	3-17-17	0940	Field Blank	2	"	W																		QC-Field Blank
CBD-S03-MW01-0317	3-17-17	1405	S03-MW01	2	"	GW																		
CBD-S03-MW02-0317	3-17-17		S03-MW02	2	"	GW																		

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:

Name: Tiffany Hill
 Company: CH2M
 Address: 1100 NE Circle Blvd Suite 300
 City: Corvallis State: OR Zip: 97330
 Phone: 541-768-3109 Fax: _____
 Email: Tiffany.Hill@ch2m.com

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700345 TAT 7

Samples Arrival:	Date/Time <u>03/18/17 0913</u>	Initials: <u>BSB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>NA</u>
Logged In:	Date/Time <u>03/18/17 0929</u>	Initials: <u>BSB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>E4</u>
Delivered By:	<input checked="" type="checkbox"/> FedEx	<input type="checkbox"/> UPS	<input type="checkbox"/> On Trac
	<input type="checkbox"/> DHL	<input type="checkbox"/> Hand Delivered	<input type="checkbox"/> Other
Preservation:	<input checked="" type="checkbox"/> Ice	<input type="checkbox"/> Blue Ice	<input type="checkbox"/> Dry Ice
	<input type="checkbox"/> None		
Temp °C: <u>0.6</u> (uncorrected)	Time: <u>0919</u>		Thermometer ID: IR-1
Temp °C: <u>0.9</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

	YES	NO	NA
Adequate Sample Volume Received? <u>A/B</u>	<input checked="" type="checkbox"/>		
Holding Time Acceptable?	<input checked="" type="checkbox"/>		
Shipping Container(s) Intact?	<input checked="" type="checkbox"/>		
Shipping Custody Seals Intact?	<input checked="" type="checkbox"/>		
Shipping Documentation Present?	<input checked="" type="checkbox"/>		
Airbill			
Trk # <u>7859 4456 8837</u>	<input checked="" type="checkbox"/>		
Sample Container Intact?	<input checked="" type="checkbox"/>		
Sample Custody Seals Intact?			<input checked="" type="checkbox"/>
Chain of Custody / Sample Documentation Present?	<input checked="" type="checkbox"/>		
COC Anomaly/Sample Acceptance Form completed?	<input checked="" type="checkbox"/>		
If Chlorinated or Drinking Water Samples, Acceptable Preservation?			
Preservation Documented:	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> NA
Shipping Container	<input checked="" type="checkbox"/> Vista	<input type="checkbox"/> Client	<input type="checkbox"/> Retain
	<input type="checkbox"/> Return	<input type="checkbox"/> Dispose	

Comments: Sample Label ID: CBD-SW03-MW01-0317 A/B
 Sample COC ID: CBD-S03-MW01-0317 ↓
 Sample Label collection time for "CBD-S03-MW02-0317": 1525

Chain of Custody Anomaly/Sample Acceptance Form



Client: CH2M Hill
 Contact: Tiffany Hill
 Email: tiffany.hill@ch2m.com
 Phone: (541) 768-3109

Workorder Number: 1700345
 Date Received: 18-Mar-17 09:13
 Documented by/date: B.Benedict 03/18/2017

Please review the following information and complete the Client Authorization section. To comply with NELAC regulations, we must receive authorization before proceeding with sample analysis.

Thank you,

Martha Maier
 mmaier@vista-analytical.com
 916-673-1520

The following information or item is needed to proceed with analysis:

- | | | |
|--|---|---|
| <input type="checkbox"/> Complete Chain-of-Custody | <input type="checkbox"/> Preservative | <input type="checkbox"/> Collector's Name |
| <input type="checkbox"/> Test Method Requested | <input type="checkbox"/> Sample Identification | <input type="checkbox"/> Sample Type |
| <input type="checkbox"/> Analyte List Requested | <input type="checkbox"/> Sample Collection Date and/or Time | <input type="checkbox"/> Sample Location |
| <input type="checkbox"/> Other: | | |

The following anomalies were noted. Authorization is needed to proceed with analysis.

- | | |
|---|---|
| <input type="checkbox"/> Temperature outside < 6°C Range
Temperature _____°C | Samples Affected: _____
Ice Present? Yes No Melted |
| <input checked="" type="checkbox"/> Sample ID Discrepancy: See Comments | <input type="checkbox"/> Insufficient Sample Size |
| <input type="checkbox"/> Sample Holding Time Missed | <input type="checkbox"/> Sample Container(s) Broken |
| <input type="checkbox"/> Custody Seals Broken | <input type="checkbox"/> Incorrect Container Type |

Comments:
 COC ID: CBD-SO3-MW01-0317
 Sample Label ID: CBD-SWO3-MW01-0317

Client Authorization	
Proceed with Analysis: <input checked="" type="radio"/> YES <input type="radio"/> NO	Signature and Date <u>Karen J. [Signature]</u> <u>3-20-17</u>
Client Comments/Instructions <u>Per client, sample IDs are correct. on the COC.</u>	

EXTRACTION INFORMATION

Process Sheet
Workorder: 1700345



Prep Expiration: 2017-Mar-31
Client: CH2M Hill

Workorder Due: 25-Mar-17 00:00
TAT: 7

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

Prep Batch: B7C0099

Prep Data Entered: BP 3.21.17
Date and Initials

Version: PFOA, PFOS, PFBS

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700345-01	<input checked="" type="checkbox"/>	CBD-AOA-MW05-0317	18-Mar-17 09:13	WR-2 E-4	
1700345-02	<input checked="" type="checkbox"/>	CBD-EB01-031717	18-Mar-17 09:13	WR-2 E-4	
1700345-03	<input checked="" type="checkbox"/>	CBD-AOA-MW06-0317	18-Mar-17 09:13	WR-2 E-4	
1700345-04	<input checked="" type="checkbox"/>	CBD-AOA-MW08-0317	18-Mar-17 09:13	WR-2 E-4	MS/MSD ✓
1700345-05	<input checked="" type="checkbox"/>	CBD-SO4-MW01-0317	18-Mar-17 09:13	WR-2 E-4	
1700345-06	<input checked="" type="checkbox"/>	CBD-FB01-031717	18-Mar-17 09:13	WR-2 E-4	
1700345-07	<input checked="" type="checkbox"/>	CBD-SO3-MW01-0317	18-Mar-17 09:13	WR-2 E-4	
1700345-08	<input checked="" type="checkbox"/>	CBD-SO3-MW02-0317	18-Mar-17 09:13	WR-2 E-4	

Vista PM:Martha Maier

Vial Box ID: _____

Sample Reconciled By: [Signature] 3 20 17

Percent Solids



Project: B7 C0099 Balance ID: N/A

Sample ID	Chemist: <u>N/A</u> Date: <u>↓</u> Time: <u>↓</u>		Chemist: <u>N/A</u> Date: <u>↓</u> Time: <u>↓</u>		Chemist/Date <u>JTC 3/20/17</u>	
	Boat Wt.	Sample + Boat Wt.	Residue + Boat Wt.	pH before	pH after	CF
1700345 - 01 ^(B)				6	2	0
-02 ^(A)				6 4.5	2	0
-03 ^(B)				6	2	0
-04 ^(C)				6	2	0
-04 MS				6	2	0
-04 MSO				6	2	0
-05 ^(B)				6	2	0
-06 ^(A)				6 4.5	2	0
-07 ^(B)				5	2	0
-08 ^(C)				6	2	0

Procedure:

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

Notes: ^(A) 2 drops HCl added to adjust pH to 2
^(B) 3 drops HCl added to adjust pH to 2
^(C) 4 drops HCl added to adjust pH to 2
JTC 3/20/17

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

PREPARATION BENCH SHEET

Matrix: Aqueous

Method: 537M PFAS DOD (LOO as mR)

B7C0099

Chemist: E. Schneider

Prep Date/Time: 20-Mar-17 08:36

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	RS CHEM/WIT DATE
<input type="checkbox"/>	B7C0099-BLK1	NA	NA	(0.125) ✓	SP HC 3/20/17	HC SP 3/20/17	OK HC 3/20/17
<input type="checkbox"/>	B7C0099-BSI	↓	↓	↓ ✓			
<input type="checkbox"/>	B7C0099-MS1 ^(A) 1700345-04	151.24	27.05	0.12419 ✓✓	↓	↓	↓
<input type="checkbox"/>	B7C0099-MSD1 ^(A) 1700345-04	152.03	27.05	0.12498 ✓✓			
<input type="checkbox"/>	1700345-01 ^(A)	150.31	26.93	0.12338 ✓			
<input type="checkbox"/>	1700345-02 ^(A)	146.65	27.06	0.11959 ✓			
<input type="checkbox"/>	1700345-03 ^(A)	154.37	26.91	0.12746 ✓			
<input type="checkbox"/>	1700345-04 ^(A)	153.12	27.10	0.12602 ✓✓			
<input type="checkbox"/>	1700345-05 ^(A)	153.68	27.09	0.12659 ✓			
<input type="checkbox"/>	1700345-06 ^(A)	150.70	27.04	0.12366 ✓			
<input type="checkbox"/>	1700345-07 ^(A)	149.27	27.10	0.12217 ✓✓			
<input type="checkbox"/>	1700345-08 ^(A)	149.36	27.04	0.12232 ✓			

^(A) samples centrifuged to get rid of particulate matter HC 3/20/17

IS Name 16L1920, 10µL <u>(V2)</u>	NS Name 17C1521, 10µL <u>(V3)</u>	RS Name 17A1201, 10µL <u>(V3)</u>	SPE Chem: Strata X-AW33 in 200µg/6mL Ele SOLV: 0.5% MeOH in MeOH/MeOH Final Volume(s) 1mL	Check Out: Chemist/Date: HC 3/20/17 Check In: Chemist/Date: MA Balance ID: HAMS-8
---	---	---	---	---

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-17.qld

Last Altered: Tuesday, March 21, 2017 11:40:00 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:05:53 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170320G5_17, Date: 21-Mar-2017, Time: 00:25:24

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	3.978e0	5.710e3		0.125	2.99	0.0951	
2	8 PFOA	413 > 368.7	1.203e2	1.731e4		0.125	4.25		
3	10 PFOS	499 >79.9	7.771e0	3.856e3		0.125	4.58	0.788	
4	16 13C3-PFBS	302.0 > 98.8	5.710e3	2.547e4	0.229	0.125	2.99	97.8	97.8
5	21 13C2-PFOA	414.9 > 369.7	1.731e4	7.214e3	2.829	0.125	4.25	84.8	84.8
6	22 13C8-PFOS	507.0 > 79.9	3.856e3	5.033e3	0.822	0.125	4.65	93.2	93.2
7	28 13C5-PFHxA	318.0 > 272.9	2.547e4	2.547e4	1.000	0.125	3.35	100	100
8	30 13C8-PFOA	421.3 > 376	7.214e3	7.214e3	1.000	0.125	4.25	100	100
9	31 13C4-PFOS	503.0 > 79.9	5.033e3	5.033e3	1.000	0.125	4.66	100	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-17.qld

Last Altered: Tuesday, March 21, 2017 11:40:00 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:05:53 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

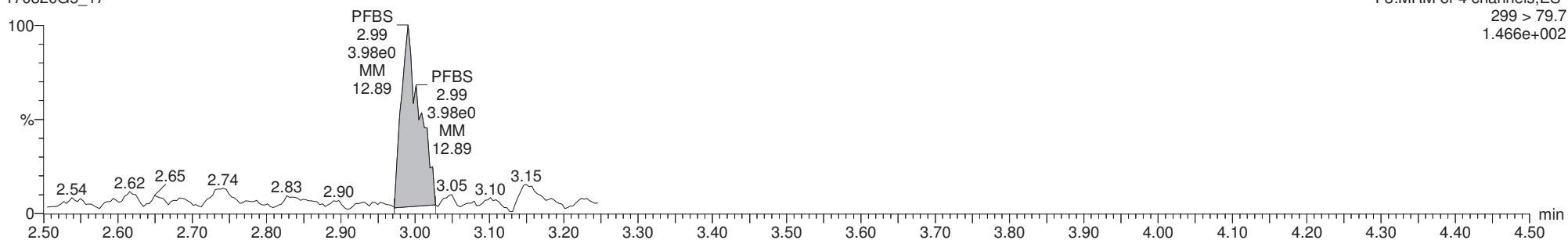
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170320G5_17, Date: 21-Mar-2017, Time: 00:25:24, Instrument: , Lab: , User:

Total PFBS

170320G5_17

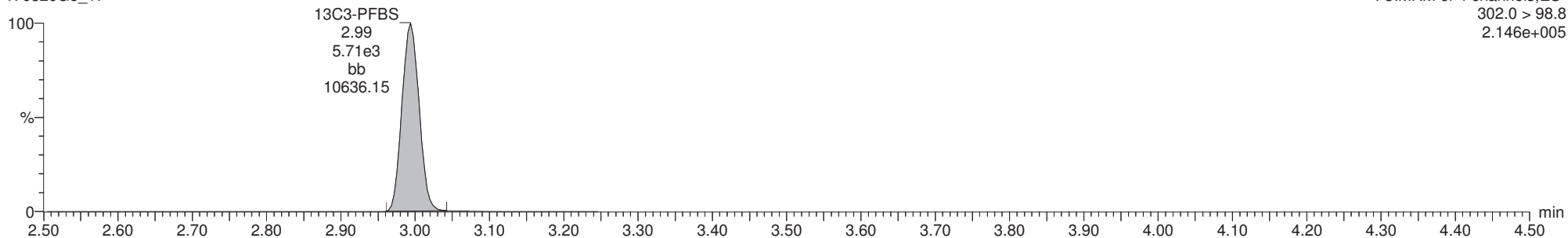
F3:MRM of 4 channels,ES-
299 > 79.7
1.466e+002



13C3-PFBS

170320G5_17

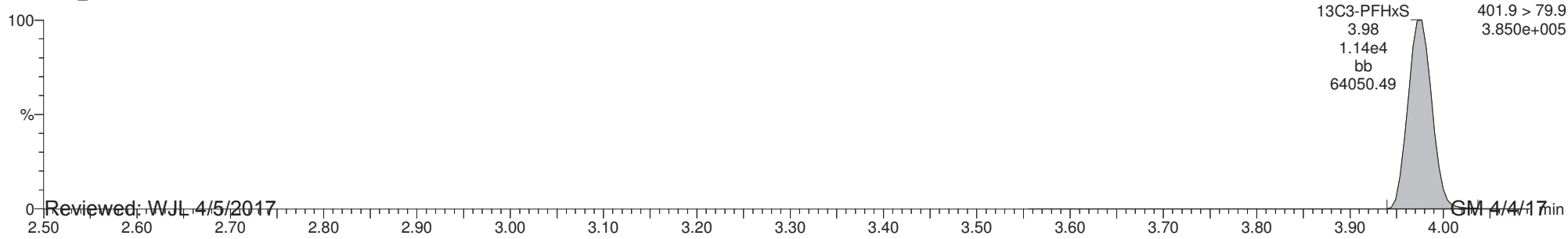
F3:MRM of 4 channels,ES-
302.0 > 98.8
2.146e+005



13C3-PFHxS

170320G5_17

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
3.850e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-17.qld

Last Altered: Tuesday, March 21, 2017 11:40:00 Pacific Daylight Time

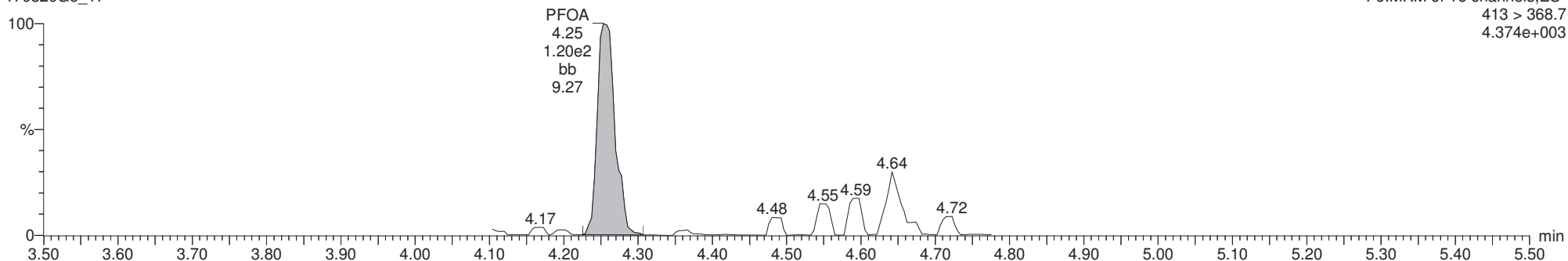
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Total PFOA

170320G5_17

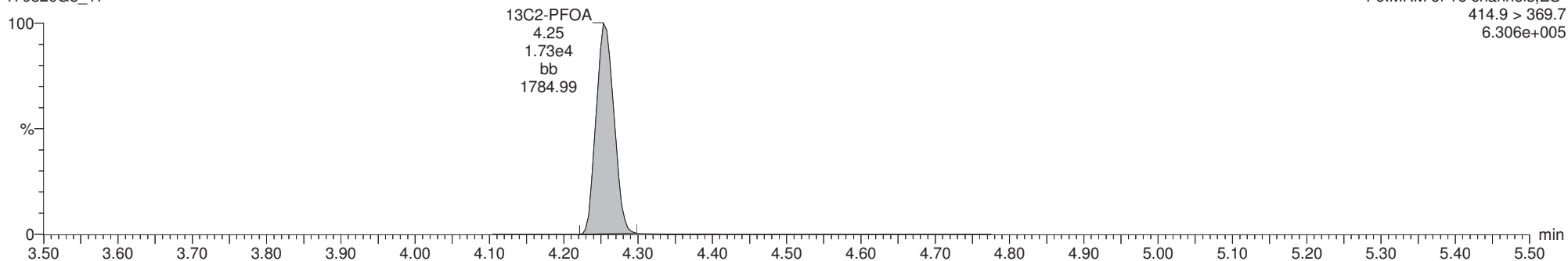
F6:MRM of 16 channels,ES-
413 > 368.7
4.374e+003



13C2-PFOA

170320G5_17

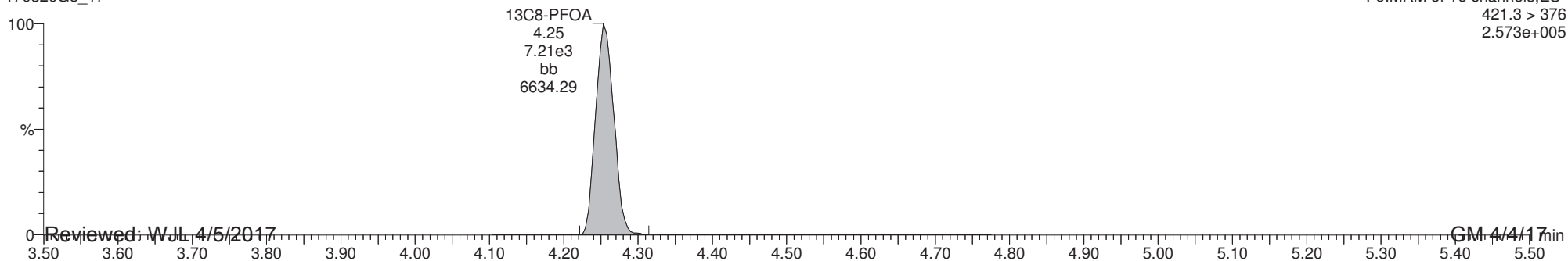
F6:MRM of 16 channels,ES-
414.9 > 369.7
6.306e+005



13C8-PFOA

170320G5_17

F6:MRM of 16 channels,ES-
421.3 > 376
2.573e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-17.qld

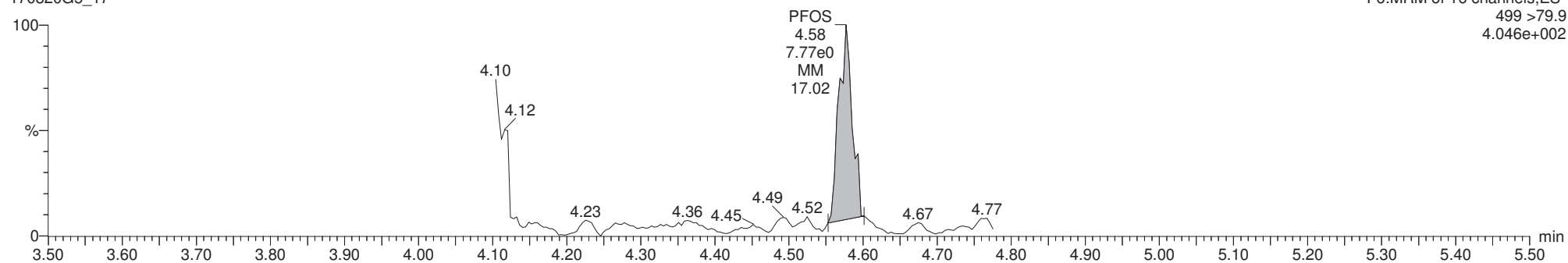
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Printed: Tuesday, April 04, 2017 16:05:53 Pacific Daylight Time

ID: B7C0099-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170320G5_17, Date: 21-Mar-2017, Time: 00:25:24, Instrument: , Lab: , User:

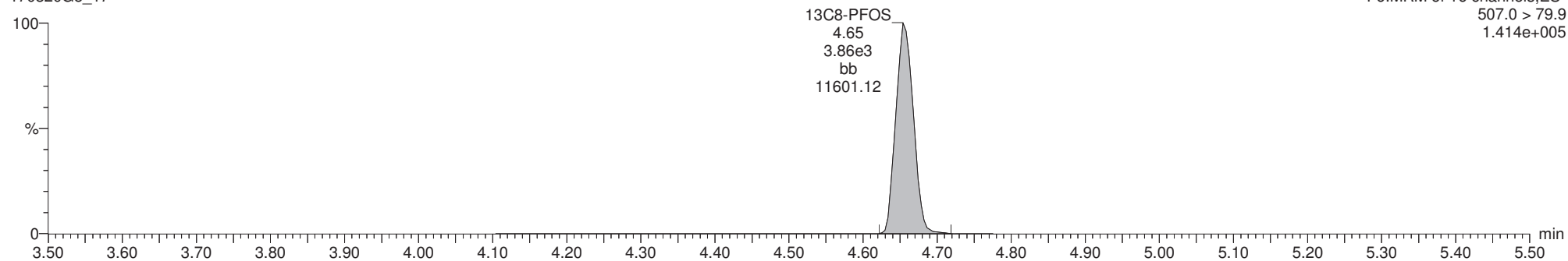
Total PFOS

170320G5_17



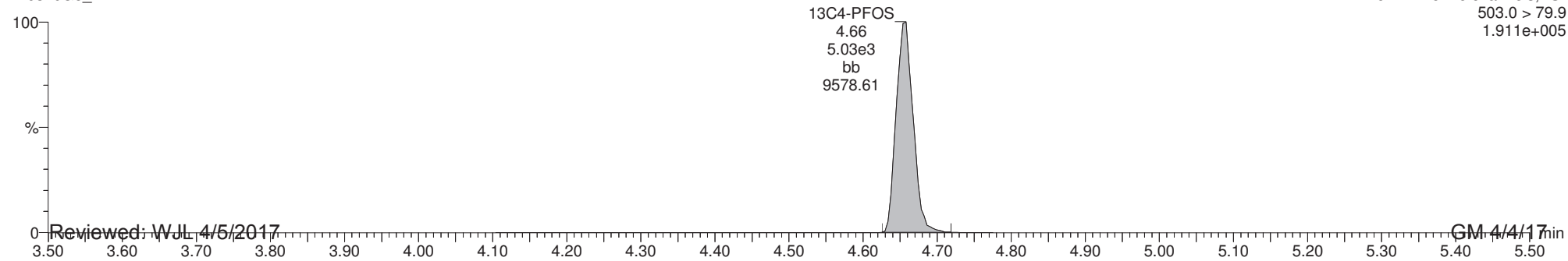
13C8-PFOS

170320G5_17



13C4-PFOS

170320G5_17



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-14.qld

Last Altered: Tuesday, March 21, 2017 11:35:56 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:07:26 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-BS1 OPR 0.125, Description: OPR, Name: 170320G5_14, Date: 20-Mar-2017, Time: 23:47:34

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	1.041e4	6.017e3		0.125	2.99	90.3	113
2	8 PFOA	413 > 368.7	1.576e4	2.054e4		0.125	4.25	91.8	115
3	10 PFOS	499 >79.9	4.037e3	4.512e3		0.125	4.66	86.3	108
4	16 13C3-PFBS	302.0 > 98.8	6.017e3	2.692e4	0.229	0.125	2.99	97.5	97.5
5	21 13C2-PFOA	414.9 > 369.7	2.054e4	7.823e3	2.829	0.125	4.25	92.8	92.8
6	22 13C8-PFOS	507.0 > 79.9	4.512e3	5.695e3	0.822	0.125	4.66	96.4	96.4
7	28 13C5-PFHxA	318.0 > 272.9	2.692e4	2.692e4	1.000	0.125	3.35	100	100
8	30 13C8-PFOA	421.3 > 376	7.823e3	7.823e3	1.000	0.125	4.25	100	100
9	31 13C4-PFOS	503.0 > 79.9	5.695e3	5.695e3	1.000	0.125	4.66	100	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-14.qld

Last Altered: Tuesday, March 21, 2017 11:35:56 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:07:26 Pacific Daylight Time

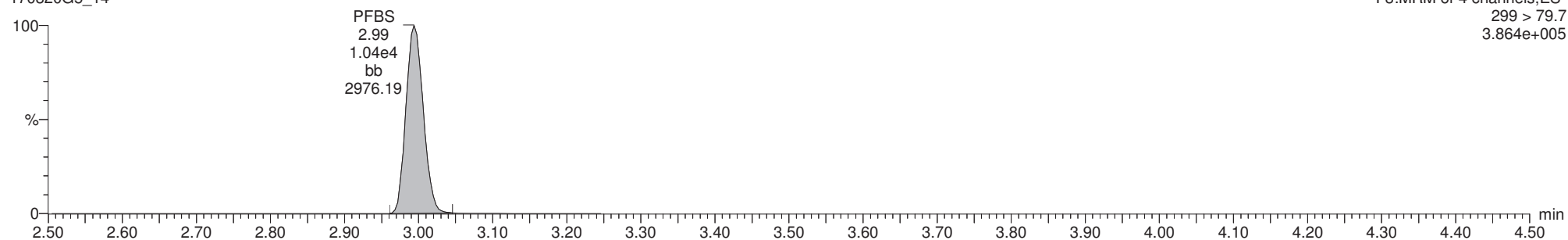
Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-BS1 OPR 0.125, Description: OPR, Name: 170320G5_14, Date: 20-Mar-2017, Time: 23:47:34, Instrument: , Lab: , User:

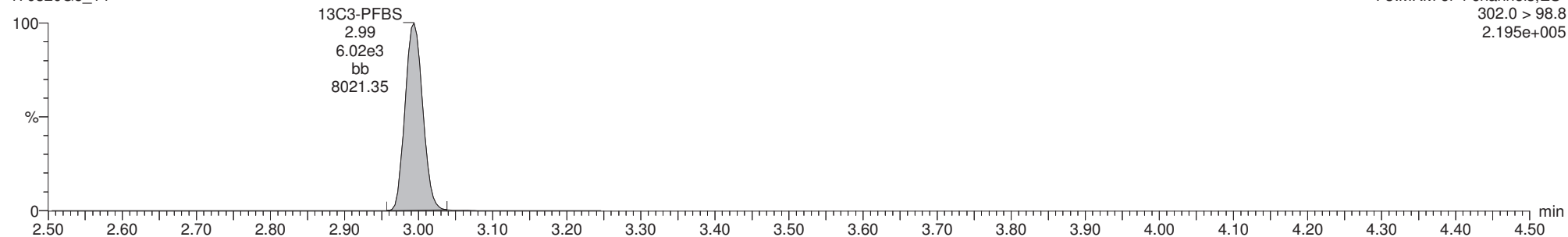
Total PFBS

170320G5_14



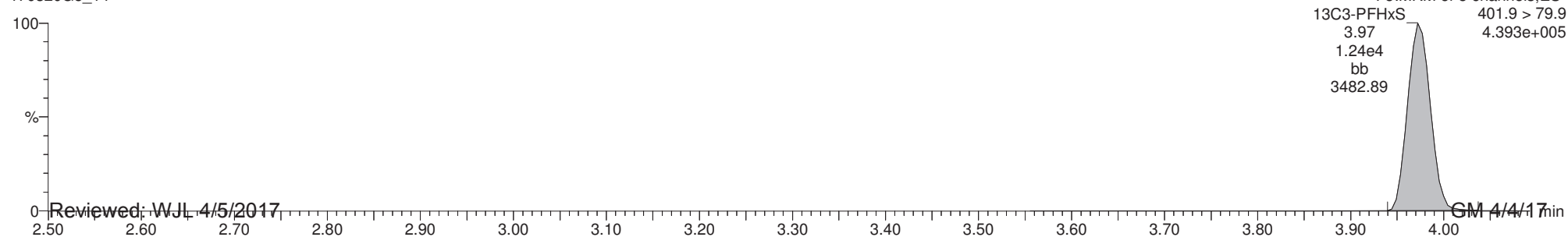
13C3-PFBS

170320G5_14



13C3-PFHxS

170320G5_14



Reviewed: WJL 4/5/2017

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-14.qld

Last Altered: Tuesday, March 21, 2017 11:35:56 Pacific Daylight Time

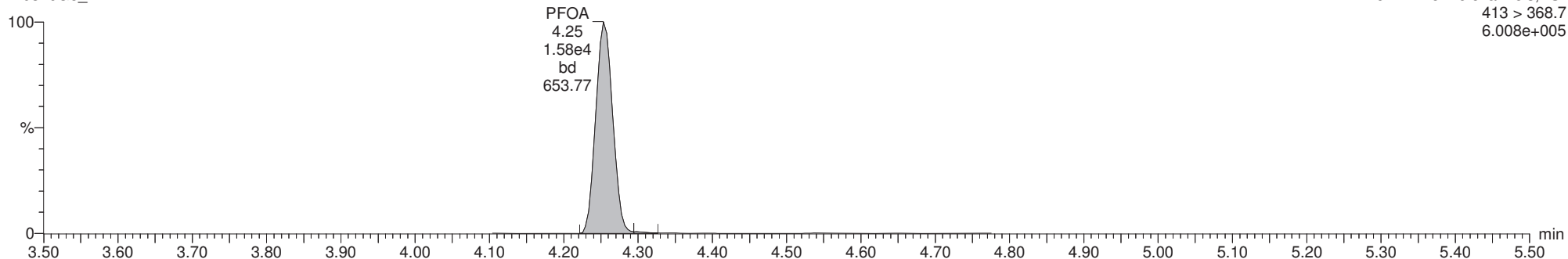
Printed: Tuesday, April 04, 2017 16:07:26 Pacific Daylight Time

ID: B7C0099-BS1 OPR 0.125, Description: OPR, Name: 170320G5_14, Date: 20-Mar-2017, Time: 23:47:34, Instrument: , Lab: , User:

Total PFOA

170320G5_14

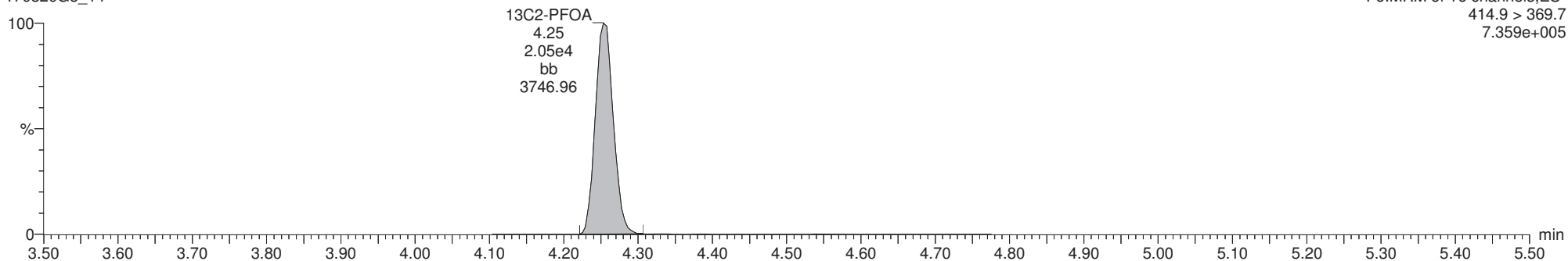
F6:MRM of 16 channels,ES-
413 > 368.7
6.008e+005



13C2-PFOA

170320G5_14

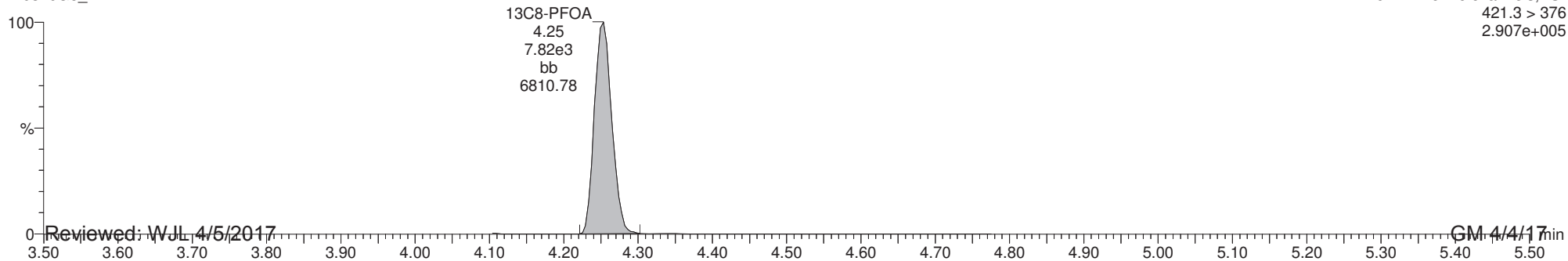
F6:MRM of 16 channels,ES-
414.9 > 369.7
7.359e+005



13C8-PFOA

170320G5_14

F6:MRM of 16 channels,ES-
421.3 > 376
2.907e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-14.qld

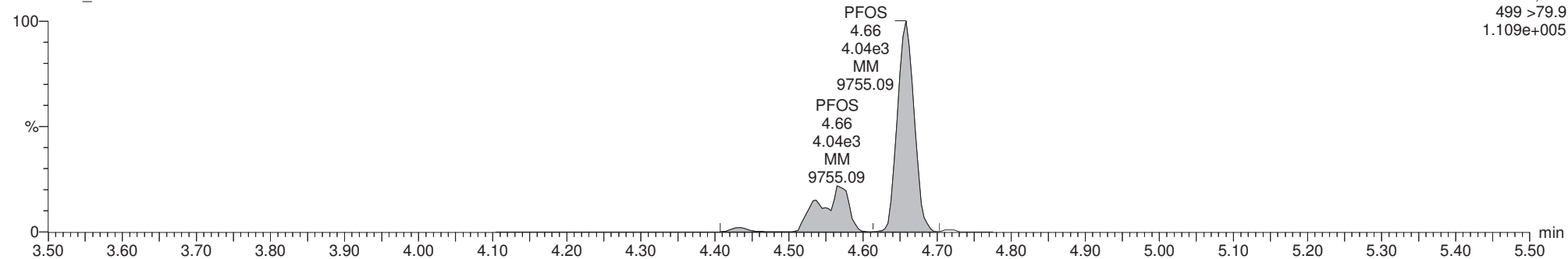
Last Altered: Tuesday, March 21, 2017 11:35:56 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:07:26 Pacific Daylight Time

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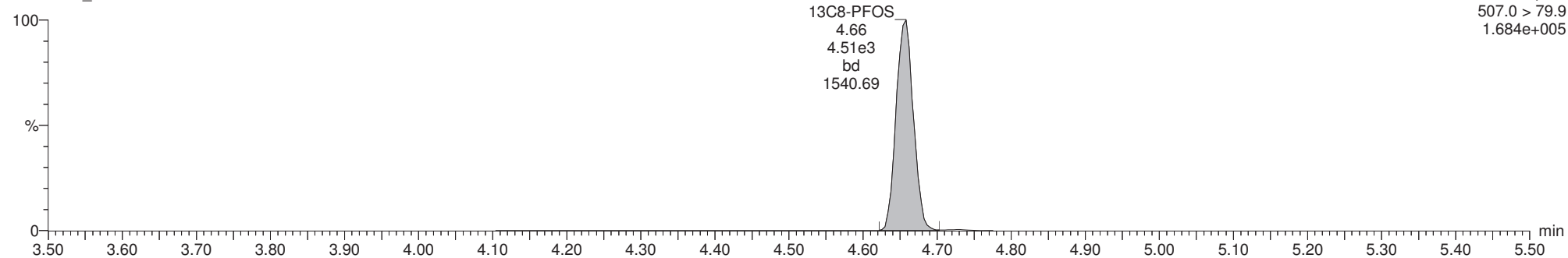
Total PFOS

170320G5_14



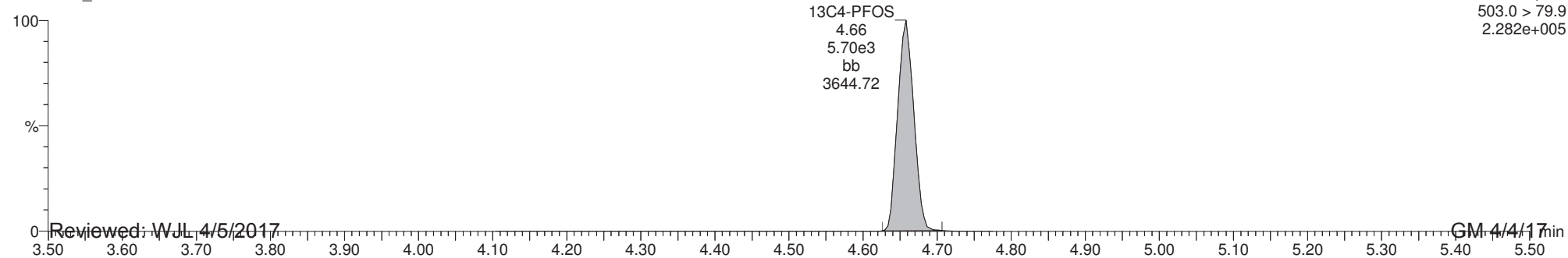
13C8-PFOS

170320G5_14



13C4-PFOS

170320G5_14



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-22.qld

Last Altered: Tuesday, March 21, 2017 11:42:59 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:08:23 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-01 CBD-AOA-MW05-0317 0.125, Description: CBD-AOA-MW05-0317, Name: 170320G5_22, Date: 21-Mar-2017, Time: 01:28:24

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	1.261e2	6.412e3		0.123	2.99	1.10	
2	8 PFOA	413 > 368.7	2.262e2	2.350e4		0.123	4.26		
3	10 PFOS	499 >79.9	3.119e1	7.363e3		0.123	4.57	1.01	
4	16 13C3-PFBS	302.0 > 98.8	6.412e3	2.619e4	0.229	0.123	2.99	108	107
5	21 13C2-PFOA	414.9 > 369.7	2.350e4	9.019e3	2.829	0.123	4.26	93.3	92.1
6	22 13C8-PFOS	507.0 > 79.9	7.363e3	8.937e3	0.822	0.123	4.65	102	100
7	28 13C5-PFHxA	318.0 > 272.9	2.619e4	2.619e4	1.000	0.123	3.36	101	100
8	30 13C8-PFOA	421.3 > 376	9.019e3	9.019e3	1.000	0.123	4.26	101	100
9	31 13C4-PFOS	503.0 > 79.9	8.937e3	8.937e3	1.000	0.123	4.66	101	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-22.qld

Last Altered: Tuesday, March 21, 2017 11:42:59 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:08:23 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

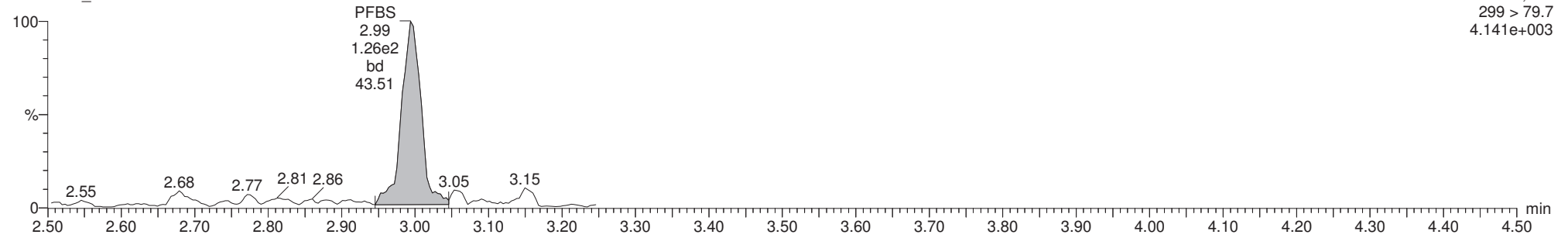
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-01 CBD-AOA-MW05-0317 0.125, Description: CBD-AOA-MW05-0317, Name: 170320G5_22, Date: 21-Mar-2017, Time: 01:28:24, Instrument: , Lab: , User:

Total PFBS

170320G5_22

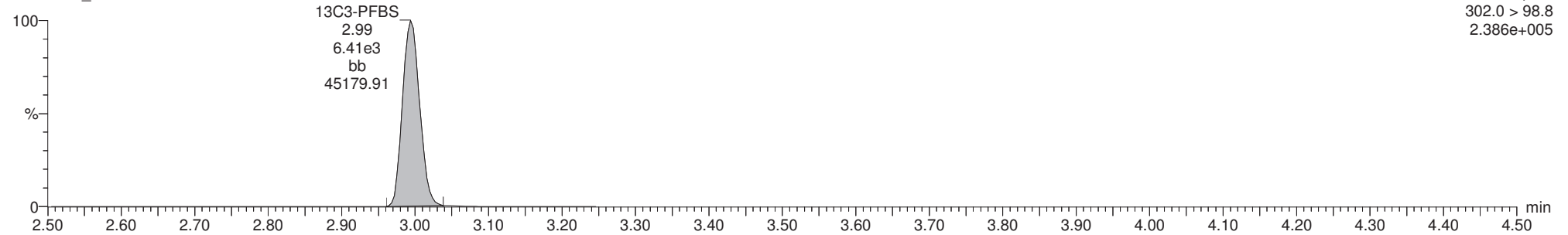
F3:MRM of 4 channels,ES-
299 > 79.7
4.141e+003



13C3-PFBS

170320G5_22

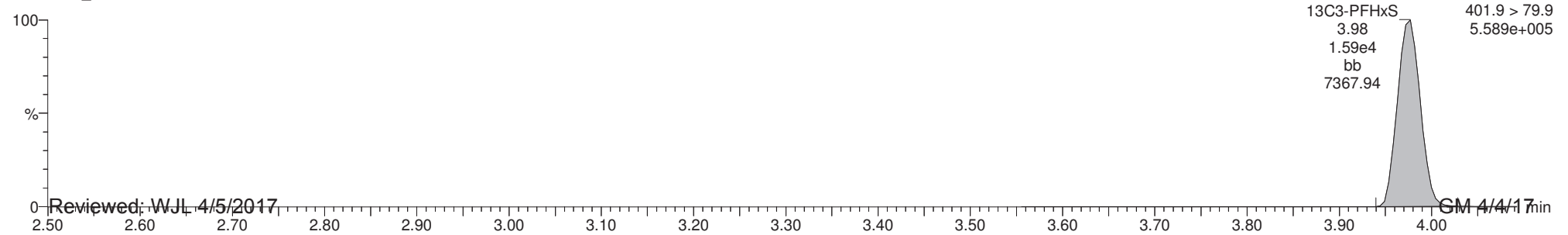
F3:MRM of 4 channels,ES-
302.0 > 98.8
2.386e+005



13C3-PFHxS

170320G5_22

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
5.589e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-22.qld

Last Altered: Tuesday, March 21, 2017 11:42:59 Pacific Daylight Time

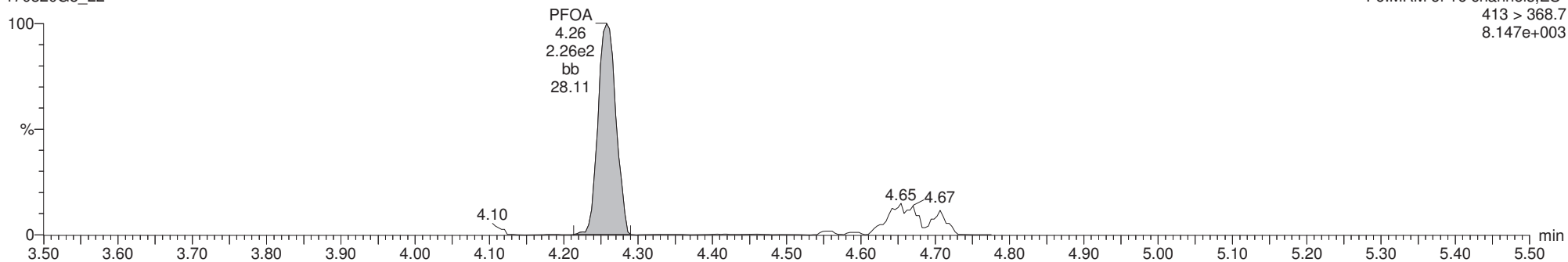
Printed: Tuesday, April 04, 2017 16:08:23 Pacific Daylight Time

ID: 1700345-01 CBD-AOA-MW05-0317 0.125, Description: CBD-AOA-MW05-0317, Name: 170320G5_22, Date: 21-Mar-2017, Time: 01:28:24, Instrument: , Lab: , User:

Total PFOA

170320G5_22

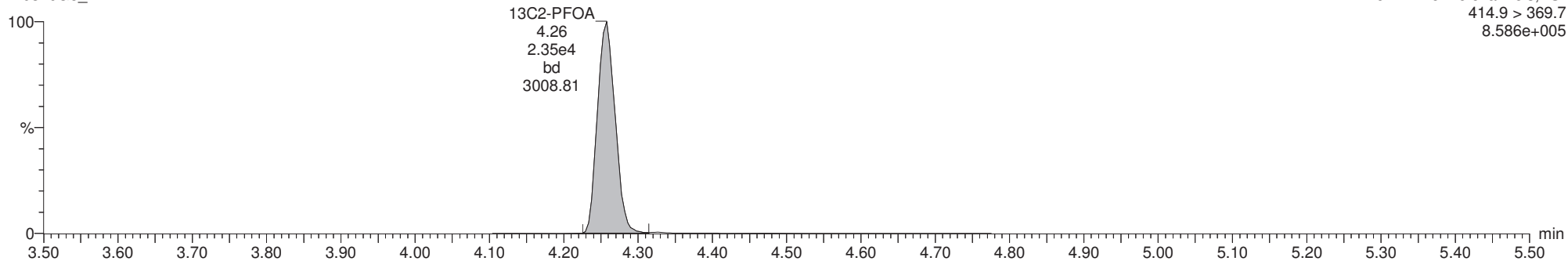
F6:MRM of 16 channels,ES-
413 > 368.7
8.147e+003



13C2-PFOA

170320G5_22

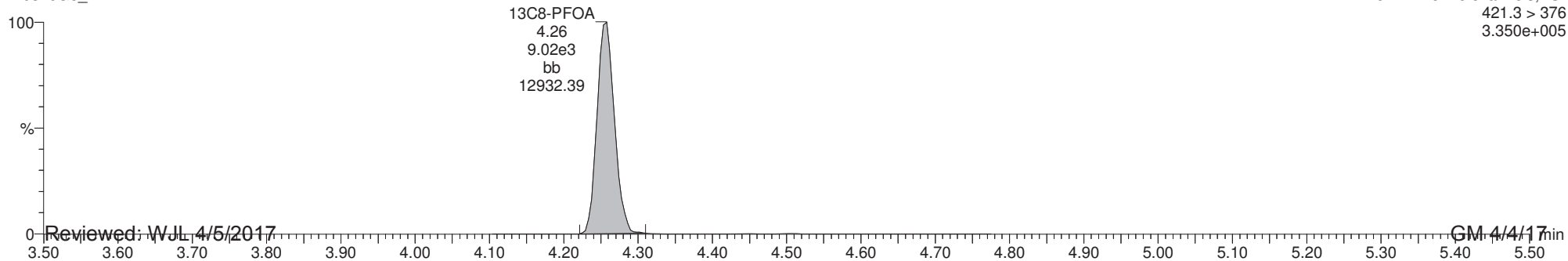
F6:MRM of 16 channels,ES-
414.9 > 369.7
8.586e+005



13C8-PFOA

170320G5_22

F6:MRM of 16 channels,ES-
421.3 > 376
3.350e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-22.qld

Last Altered: Tuesday, March 21, 2017 11:42:59 Pacific Daylight Time

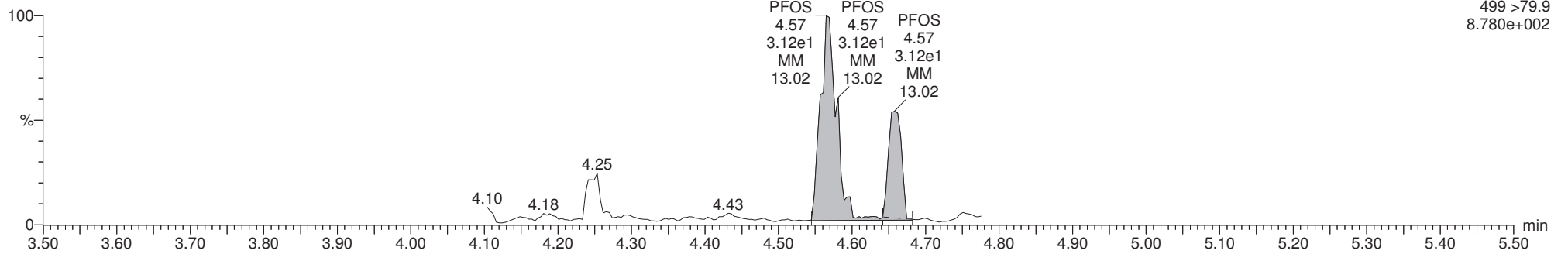
Printed: Tuesday, April 04, 2017 16:08:23 Pacific Daylight Time

ID: 1700345-01 CBD-AOA-MW05-0317 0.125, Description: CBD-AOA-MW05-0317, Name: 170320G5_22, Date: 21-Mar-2017, Time: 01:28:24, Instrument: , Lab: , User:

Total PFOS

170320G5_22

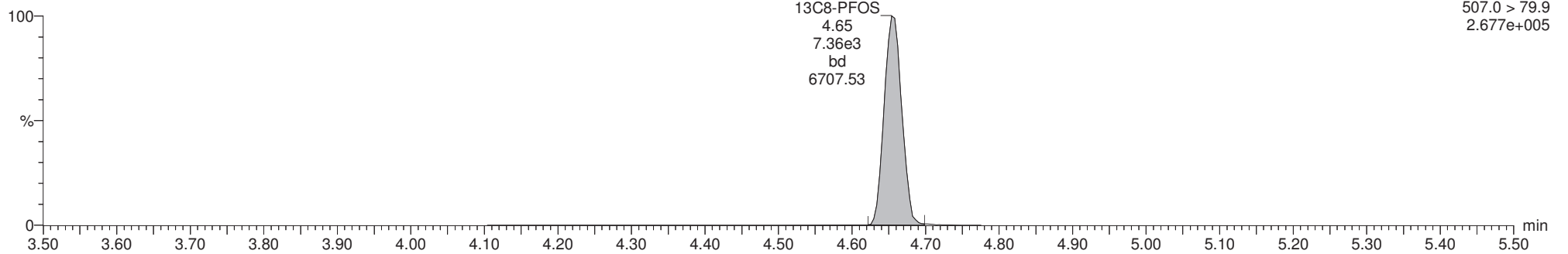
F6:MRM of 16 channels,ES-
499 >79.9
8.780e+002



13C8-PFOS

170320G5_22

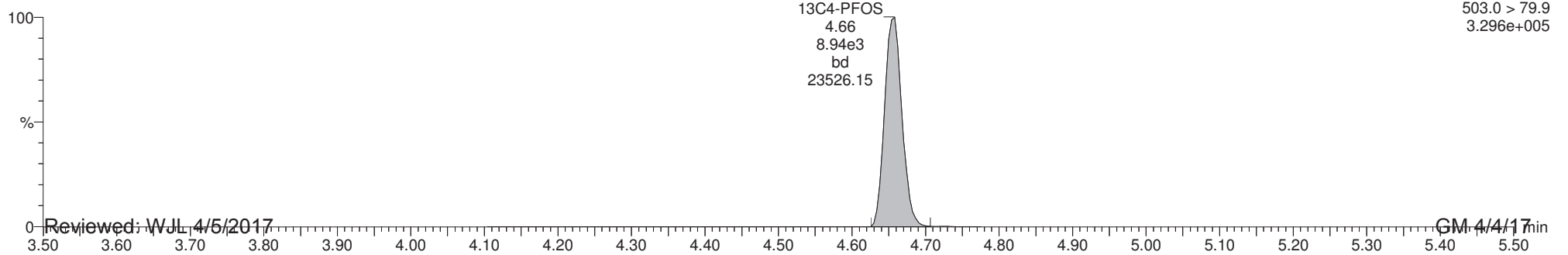
F6:MRM of 16 channels,ES-
507.0 > 79.9
2.677e+005



13C4-PFOS

170320G5_22

F6:MRM of 16 channels,ES-
503.0 > 79.9
3.296e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-23.qld

Last Altered: Tuesday, March 21, 2017 11:46:50 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:09:44 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-02 CBD-EB01-031717 0.125, Description: CBD-EB01-031717, Name: 170320G5_23, Date: 21-Mar-2017, Time: 01:41:02

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	3.241e0	5.924e3		0.120	2.99	0.0912	
2	8 PFOA	413 > 368.7	1.301e2	3.068e4		0.120	4.26		
3	10 PFOS	499 >79.9		9.522e3		0.120			
4	16 13C3-PFBS	302.0 > 98.8	5.924e3	2.681e4	0.229	0.120	3.00	101	96.4
5	21 13C2-PFOA	414.9 > 369.7	3.068e4	1.055e4	2.829	0.120	4.26	107	103
6	22 13C8-PFOS	507.0 > 79.9	9.522e3	1.185e4	0.822	0.120	4.65	102	97.8
7	28 13C5-PFHxA	318.0 > 272.9	2.681e4	2.681e4	1.000	0.120	3.36	105	100
8	30 13C8-PFOA	421.3 > 376	1.055e4	1.055e4	1.000	0.120	4.26	105	100
9	31 13C4-PFOS	503.0 > 79.9	1.185e4	1.185e4	1.000	0.120	4.65	105	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-23.qld

Last Altered: Tuesday, March 21, 2017 11:46:50 Pacific Daylight Time

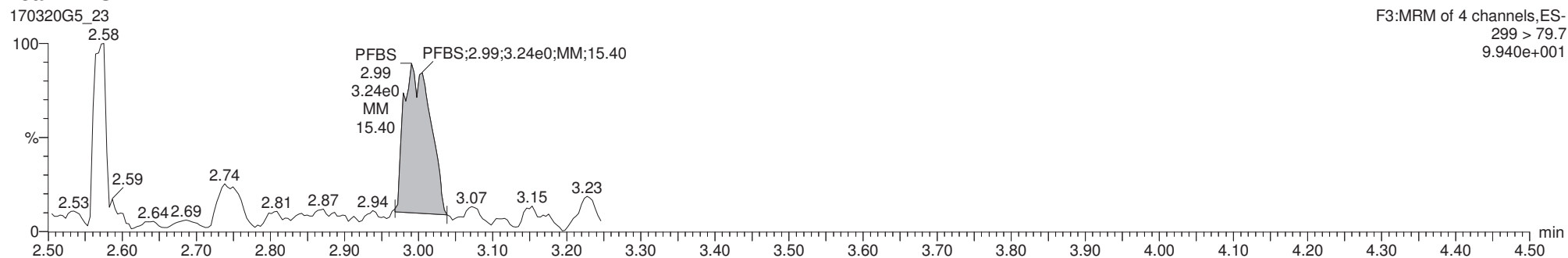
Printed: Tuesday, April 04, 2017 16:09:44 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

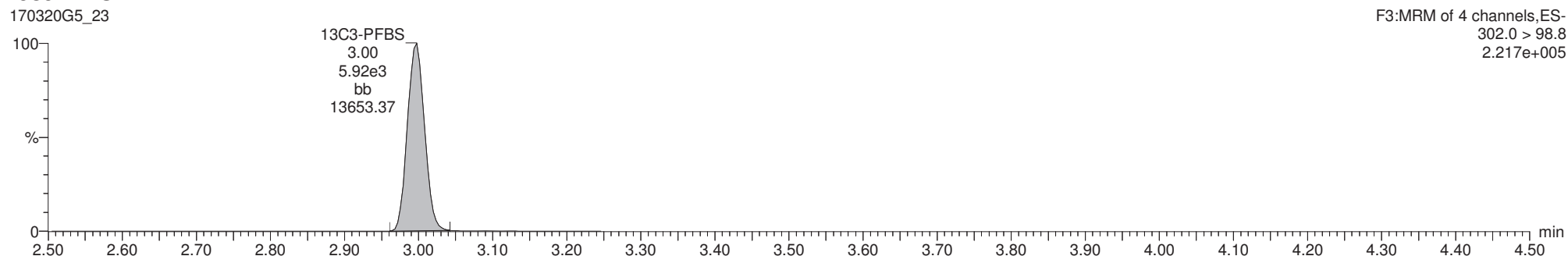
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-02 CBD-EB01-031717 0.125, Description: CBD-EB01-031717, Name: 170320G5_23, Date: 21-Mar-2017, Time: 01:41:02, Instrument: , Lab: , User:

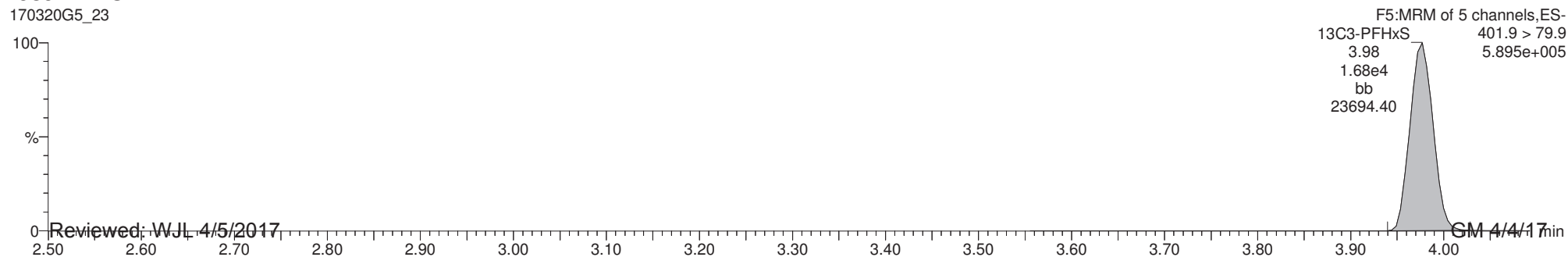
Total PFBS



13C3-PFBS



13C3-PFHxS



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-23.qld

Last Altered: Tuesday, March 21, 2017 11:46:50 Pacific Daylight Time

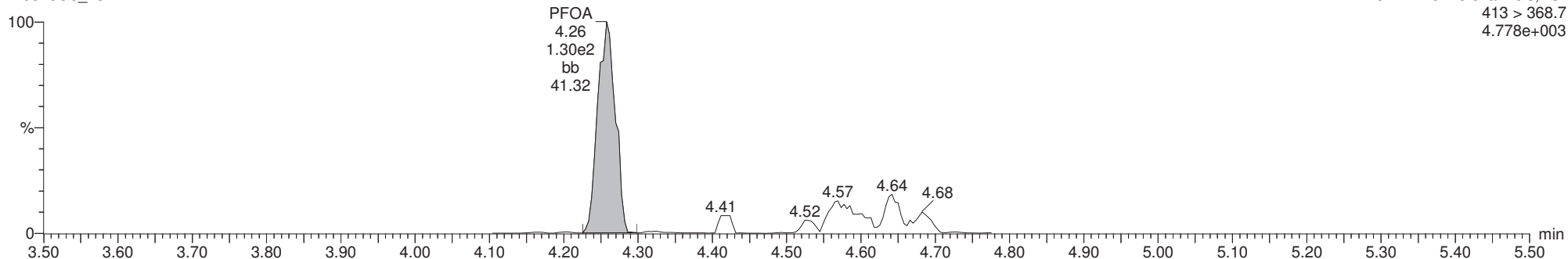
Printed: Tuesday, April 04, 2017 16:09:44 Pacific Daylight Time

ID: 1700345-02 CBD-EB01-031717 0.125, Description: CBD-EB01-031717, Name: 170320G5_23, Date: 21-Mar-2017, Time: 01:41:02, Instrument: , Lab: , User:

Total PFOA

170320G5_23

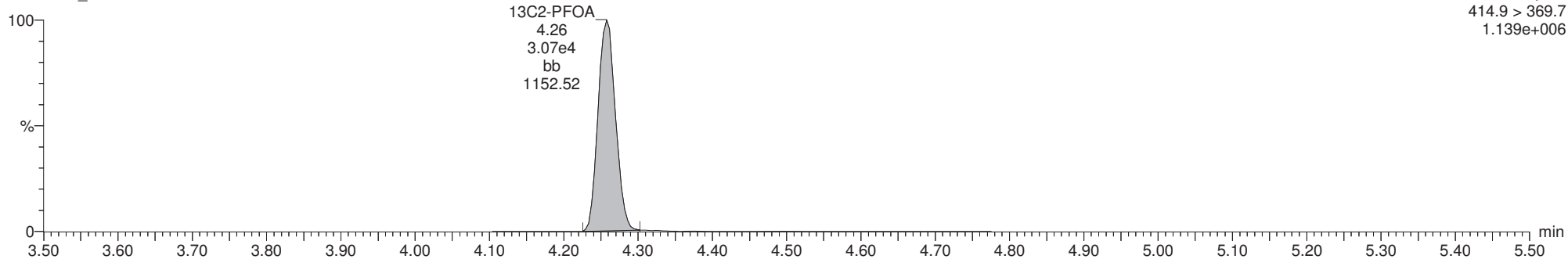
F6:MRM of 16 channels,ES-
413 > 368.7
4.778e+003



13C2-PFOA

170320G5_23

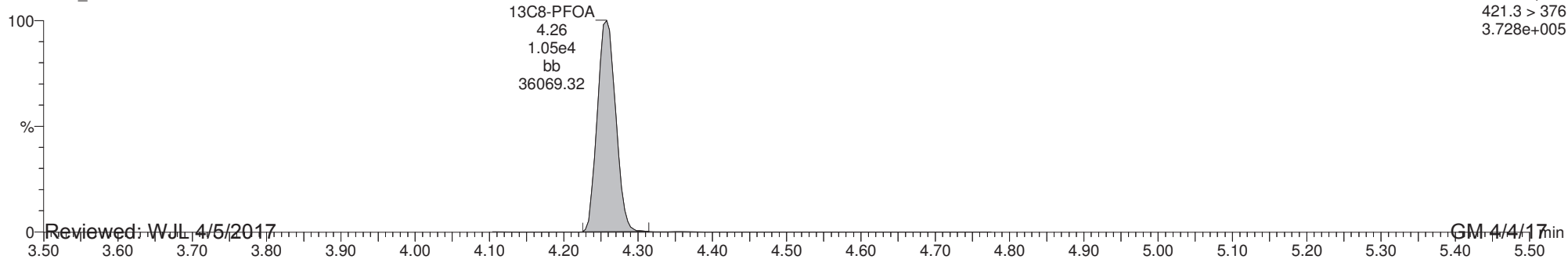
F6:MRM of 16 channels,ES-
414.9 > 369.7
1.139e+006



13C8-PFOA

170320G5_23

F6:MRM of 16 channels,ES-
421.3 > 376
3.728e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-23.qld

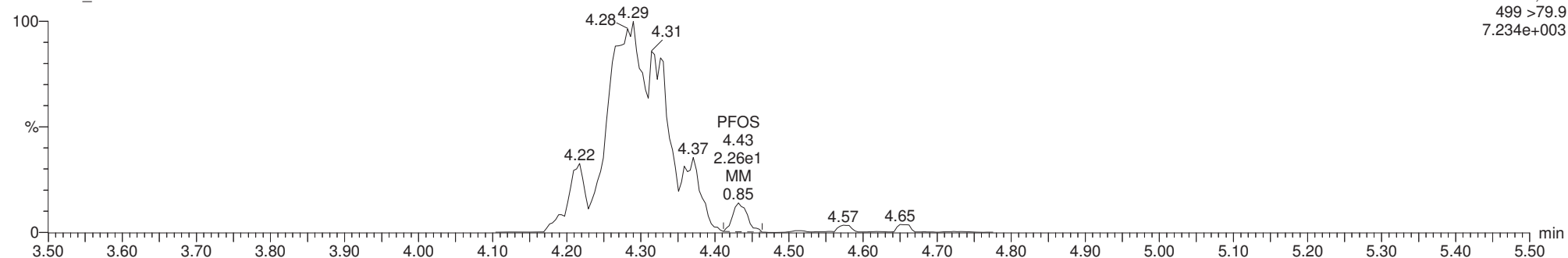
Last Altered: Tuesday, March 21, 2017 11:46:50 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:09:44 Pacific Daylight Time

ID: 1700345-02 CBD-EB01-031717 0.125, Description: CBD-EB01-031717, Name: 170320G5_23, Date: 21-Mar-2017, Time: 01:41:02, Instrument: , Lab: , User:

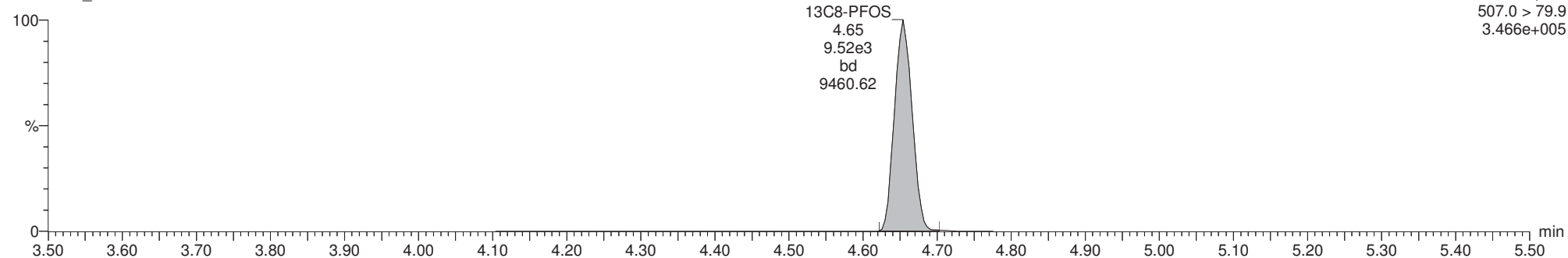
Total PFOS

170320G5_23



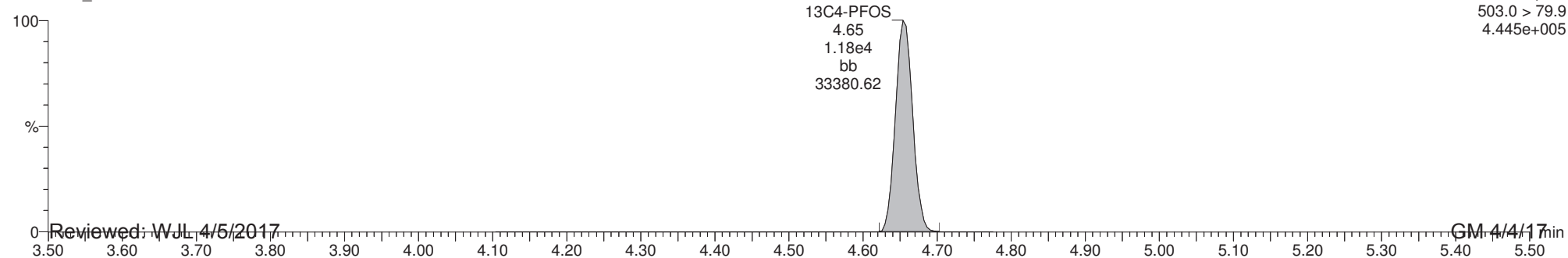
13C8-PFOS

170320G5_23



13C4-PFOS

170320G5_23



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-24.qld

Last Altered: Tuesday, March 21, 2017 11:49:19 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:10:34 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-03 CBD-AOA-MW06-0317 0.125, Description: CBD-AOA-MW06-0317, Name: 170320G5_24, Date: 21-Mar-2017, Time: 01:53:40

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	9.682e1	6.285e3		0.127	2.99	0.846	
2	8 PFOA	413 > 368.7	7.413e3	2.677e4		0.127	4.26	31.7	
3	10 PFOS	499 >79.9	1.668e2	7.364e3		0.127	4.66	2.71	
4	16 13C3-PFBS	302.0 > 98.8	6.285e3	2.512e4	0.229	0.127	2.99	107	109
5	21 13C2-PFOA	414.9 > 369.7	2.677e4	9.826e3	2.829	0.127	4.26	94.4	96.3
6	22 13C8-PFOS	507.0 > 79.9	7.364e3	8.838e3	0.822	0.127	4.65	99.4	101
7	28 13C5-PFHxA	318.0 > 272.9	2.512e4	2.512e4	1.000	0.127	3.36	98.1	100
8	30 13C8-PFOA	421.3 > 376	9.826e3	9.826e3	1.000	0.127	4.26	98.1	100
9	31 13C4-PFOS	503.0 > 79.9	8.838e3	8.838e3	1.000	0.127	4.65	98.1	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-24.qld

Last Altered: Tuesday, March 21, 2017 11:49:19 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:10:34 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

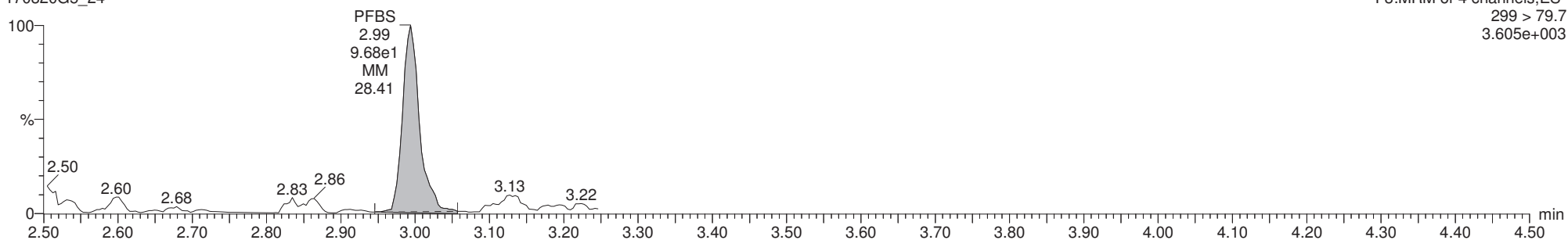
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-03 CBD-AOA-MW06-0317 0.125, Description: CBD-AOA-MW06-0317, Name: 170320G5_24, Date: 21-Mar-2017, Time: 01:53:40, Instrument: , Lab: , User:

Total PFBS

170320G5_24

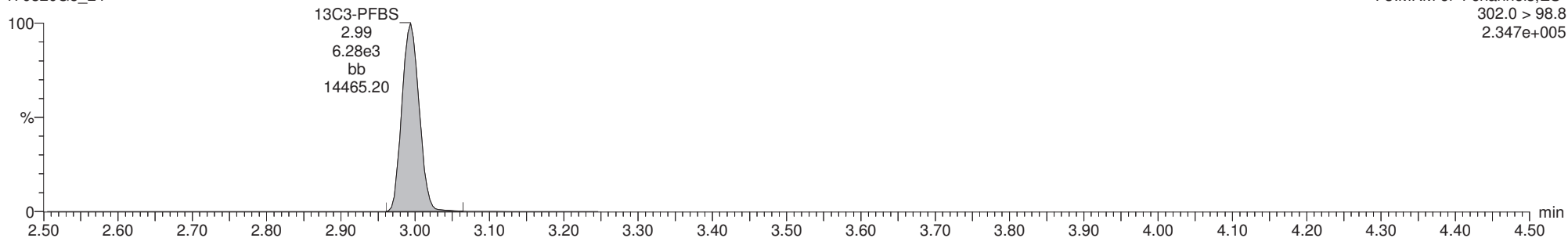
F3:MRM of 4 channels,ES-
299 > 79.7
3.605e+003



13C3-PFBS

170320G5_24

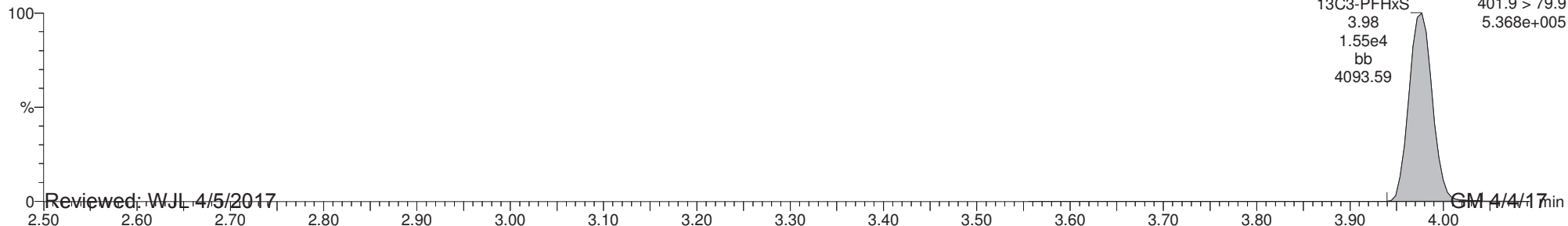
F3:MRM of 4 channels,ES-
302.0 > 98.8
2.347e+005



13C3-PFHxS

170320G5_24

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
3.98 5.368e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-24.qld

Last Altered: Tuesday, March 21, 2017 11:49:19 Pacific Daylight Time

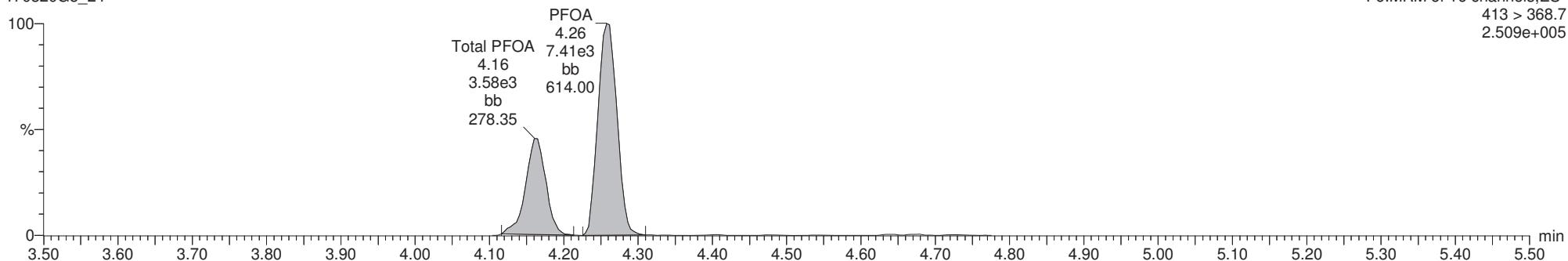
Printed: Tuesday, April 04, 2017 16:10:34 Pacific Daylight Time

ID: 1700345-03 CBD-AOA-MW06-0317 0.125, Description: CBD-AOA-MW06-0317, Name: 170320G5_24, Date: 21-Mar-2017, Time: 01:53:40, Instrument: , Lab: , User:

Total PFOA

170320G5_24

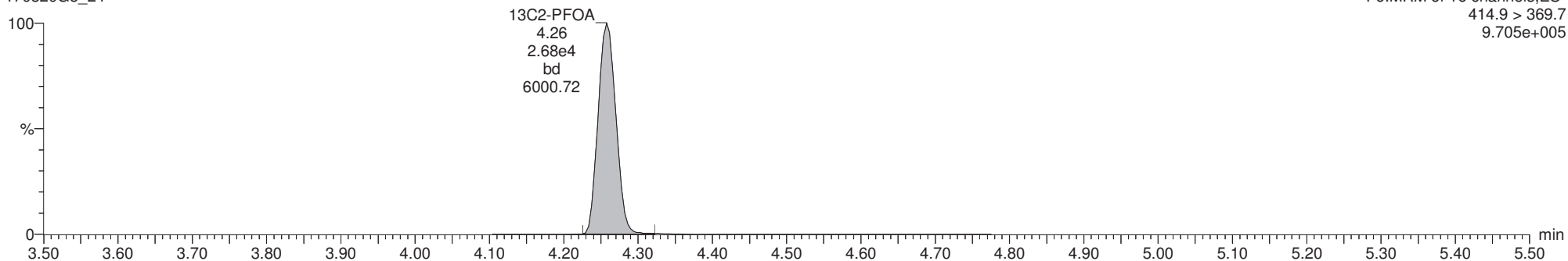
F6:MRM of 16 channels,ES-
413 > 368.7
2.509e+005



13C2-PFOA

170320G5_24

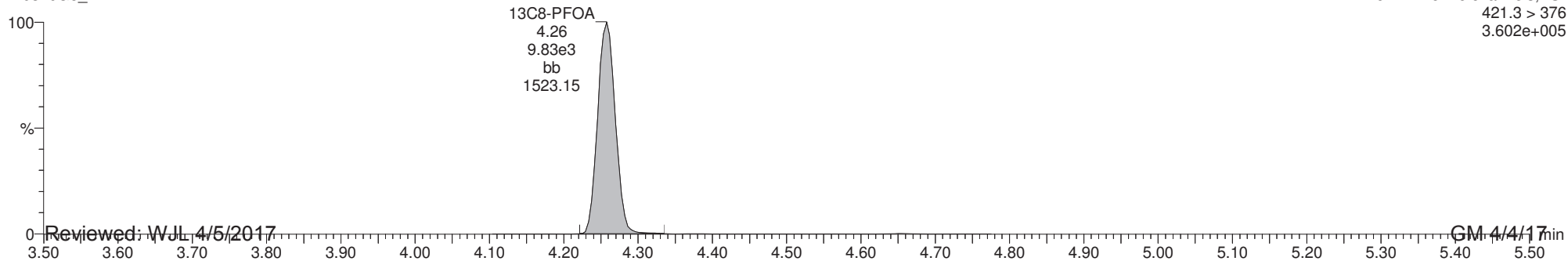
F6:MRM of 16 channels,ES-
414.9 > 369.7
9.705e+005



13C8-PFOA

170320G5_24

F6:MRM of 16 channels,ES-
421.3 > 376
3.602e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-24.qld

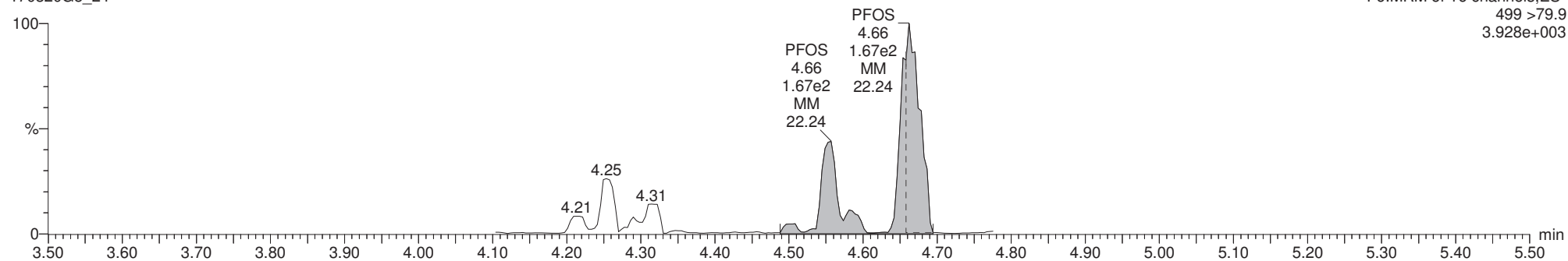
Last Altered: Tuesday, March 21, 2017 11:49:19 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:10:34 Pacific Daylight Time

ID: 1700345-03 CBD-AOA-MW06-0317 0.125, Description: CBD-AOA-MW06-0317, Name: 170320G5_24, Date: 21-Mar-2017, Time: 01:53:40, Instrument: , Lab: , User:

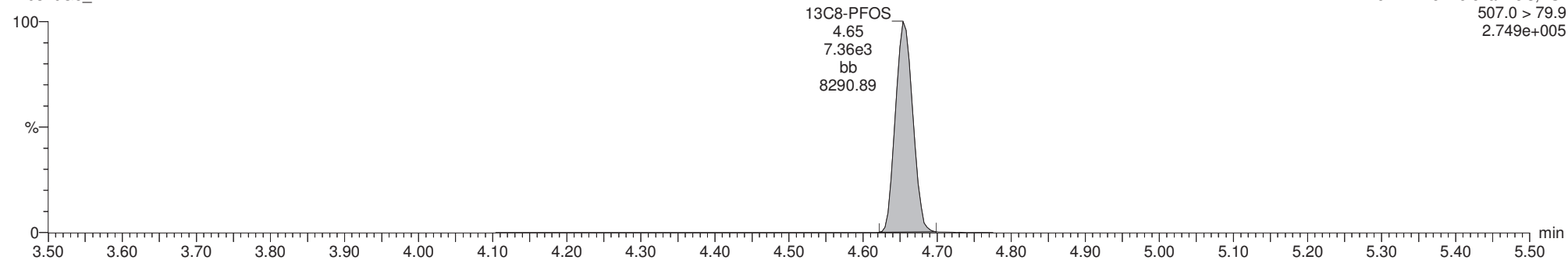
Total PFOS

170320G5_24



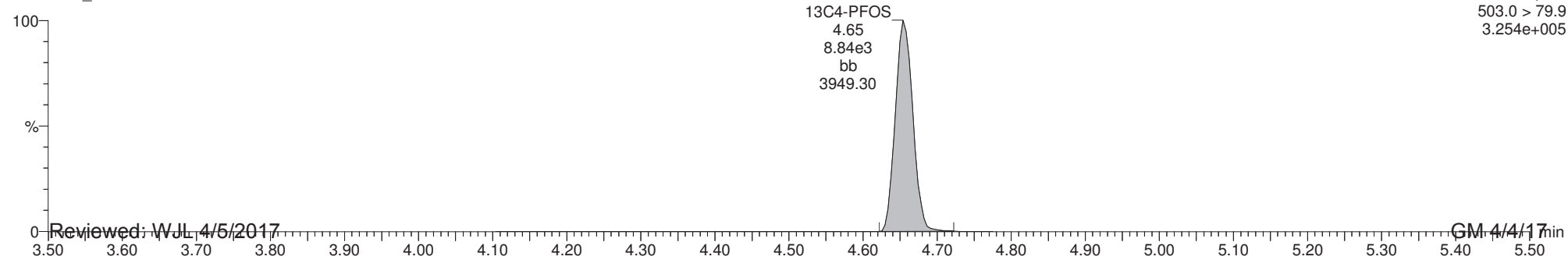
13C8-PFOS

170320G5_24



13C4-PFOS

170320G5_24



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-25.qld

Last Altered: Tuesday, March 21, 2017 11:52:29 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:11:24 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-04 CBD-AOA-MW08-0317 0.125, Description: CBD-AOA-MW08-0317, Name: 170320G5_25, Date: 21-Mar-2017, Time: 02:06:14

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	2.765e4	5.546e3		0.126	2.99	258	
2	8 PFOA	413 > 368.7	3.008e5	1.845e4		0.126	4.26	1960 E*	
3	10 PFOS	499 >79.9	1.018e5	6.594e3		0.126	4.66	1470 E*	
4	16 13C3-PFBS	302.0 > 98.8	5.546e3	2.155e4	0.229	0.126	2.99	111	112
5	21 13C2-PFOA	414.9 > 369.7	1.845e4	7.041e3	2.829	0.126	4.26	91.9	92.7
6	22 13C8-PFOS	507.0 > 79.9	6.594e3	8.543e3	0.822	0.126	4.65	93.1	93.9
7	28 13C5-PFHxA	318.0 > 272.9	2.155e4	2.155e4	1.000	0.126	3.35	99.2	100
8	30 13C8-PFOA	421.3 > 376	7.041e3	7.041e3	1.000	0.126	4.26	99.2	100
9	31 13C4-PFOS	503.0 > 79.9	8.543e3	8.543e3	1.000	0.126	4.65	99.2	100

* See dilution.

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-25.qld

Last Altered: Tuesday, March 21, 2017 11:52:29 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:11:24 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

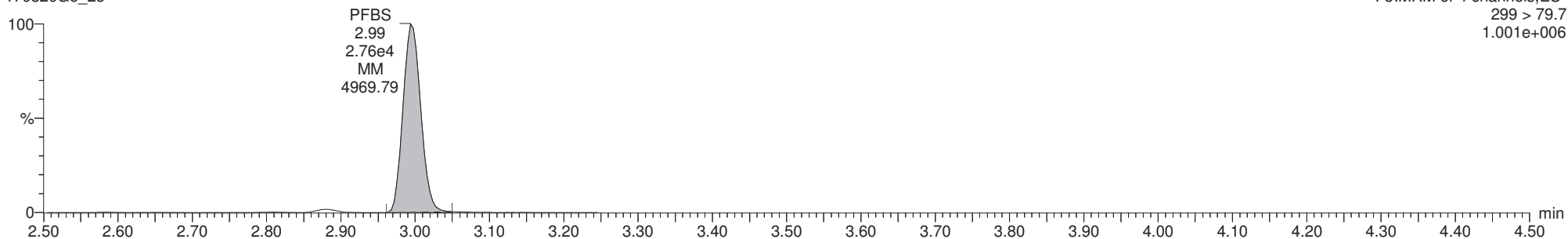
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-04 CBD-AOA-MW08-0317 0.125, Description: CBD-AOA-MW08-0317, Name: 170320G5_25, Date: 21-Mar-2017, Time: 02:06:14, Instrument: , Lab: , User:

Total PFBS

170320G5_25

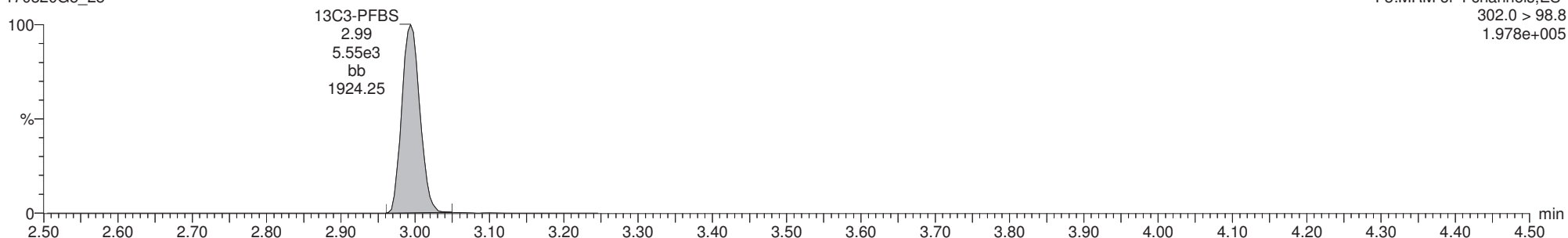
F3:MRM of 4 channels,ES-
299 > 79.7
1.001e+006



13C3-PFBS

170320G5_25

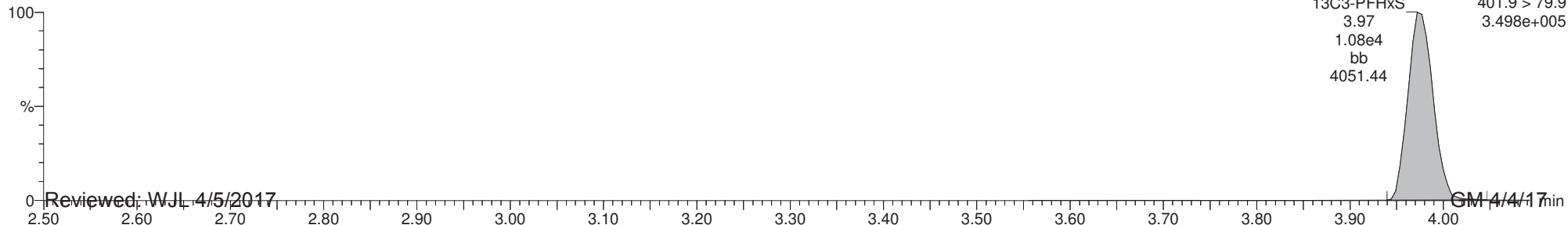
F3:MRM of 4 channels,ES-
302.0 > 98.8
1.978e+005



13C3-PFHxS

170320G5_25

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
3.97 3.498e+005
1.08e4
bb
4051.44



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-25.qld

Last Altered: Tuesday, March 21, 2017 11:52:29 Pacific Daylight Time

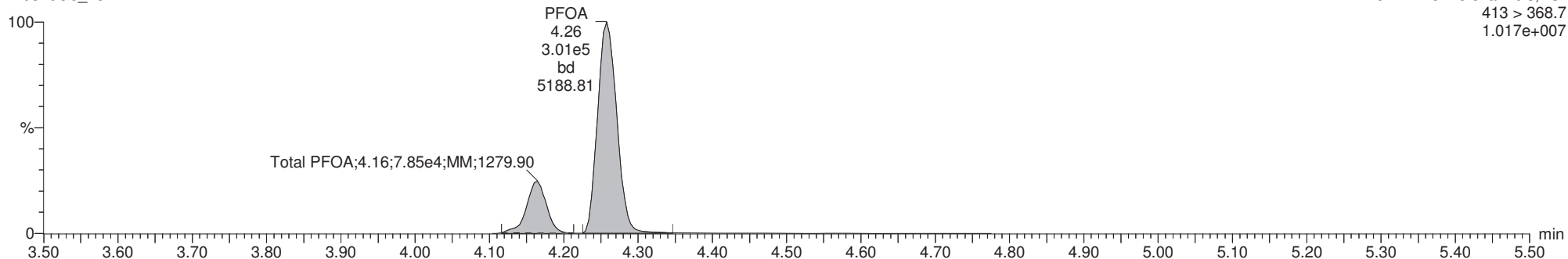
Printed: Tuesday, April 04, 2017 16:11:24 Pacific Daylight Time

ID: 1700345-04 CBD-AOA-MW08-0317 0.125, Description: CBD-AOA-MW08-0317, Name: 170320G5_25, Date: 21-Mar-2017, Time: 02:06:14, Instrument: , Lab: , User:

Total PFOA

170320G5_25

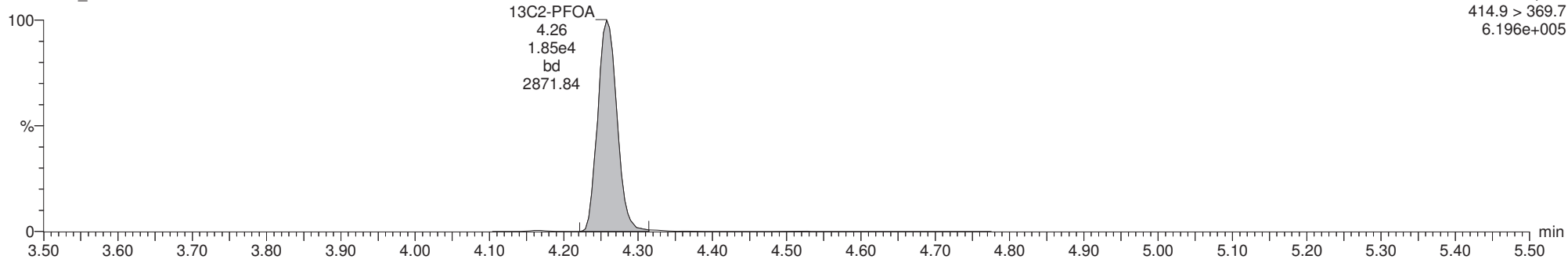
F6:MRM of 16 channels,ES-
413 > 368.7
1.017e+007



13C2-PFOA

170320G5_25

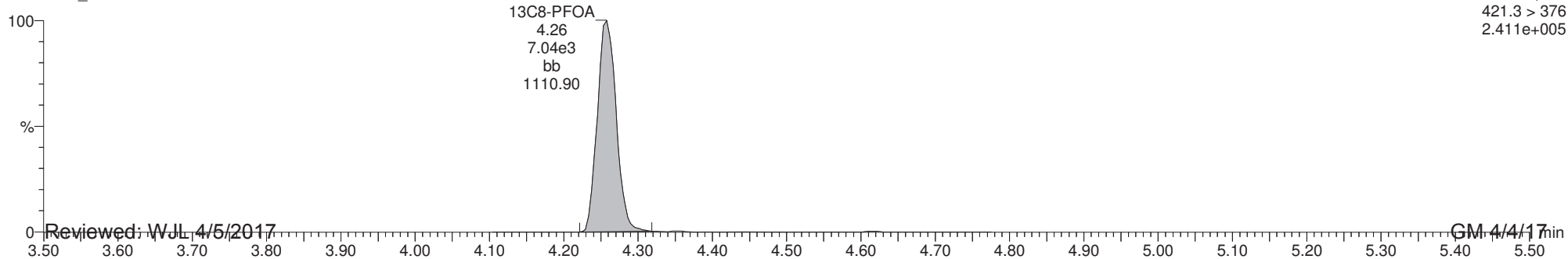
F6:MRM of 16 channels,ES-
414.9 > 369.7
6.196e+005



13C8-PFOA

170320G5_25

F6:MRM of 16 channels,ES-
421.3 > 376
2.411e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-25.qld

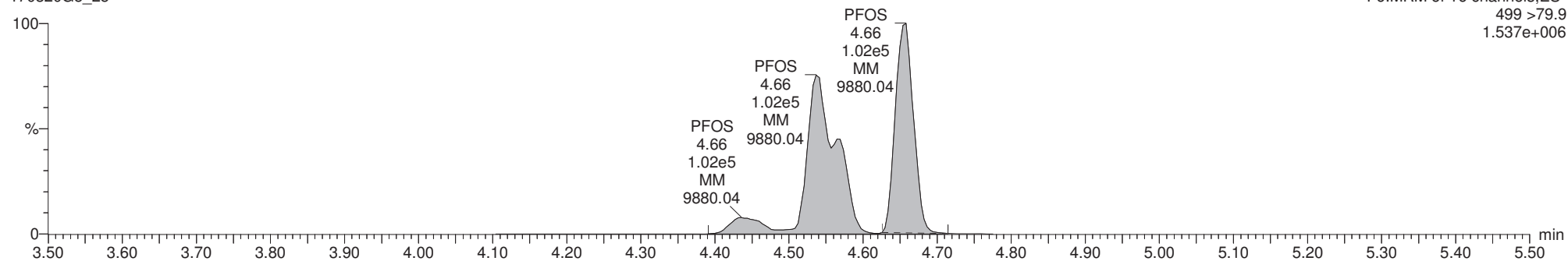
Last Altered: Tuesday, March 21, 2017 11:52:29 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:11:24 Pacific Daylight Time

ID: 1700345-04 CBD-AOA-MW08-0317 0.125, Description: CBD-AOA-MW08-0317, Name: 170320G5_25, Date: 21-Mar-2017, Time: 02:06:14, Instrument: , Lab: , User:

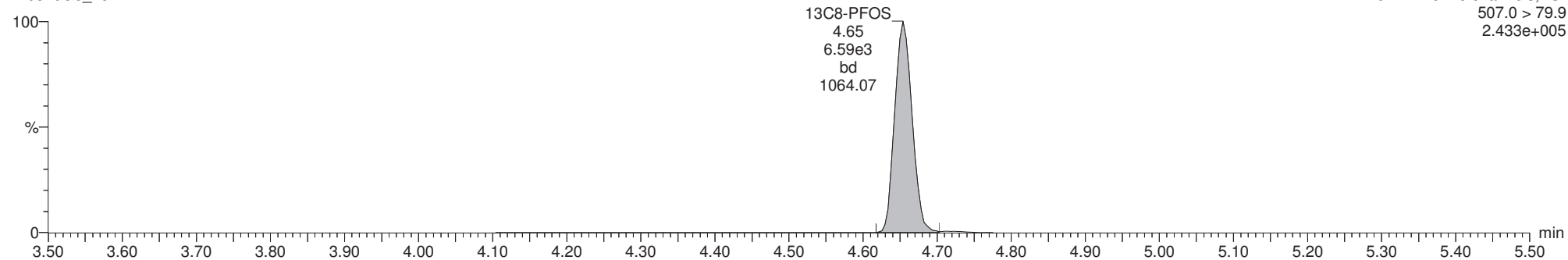
Total PFOS

170320G5_25



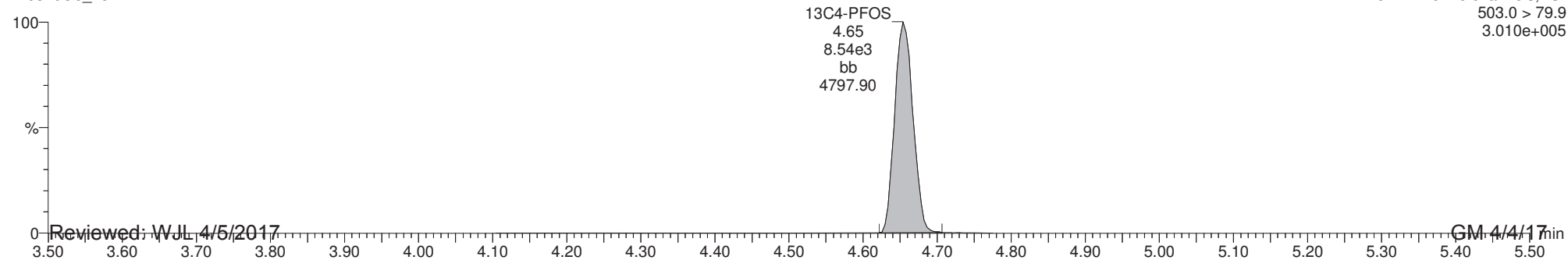
13C8-PFOS

170320G5_25



13C4-PFOS

170320G5_25



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-7.qld

Last Altered: Wednesday, March 22, 2017 14:23:43 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:20:55 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-04@10X CBD-AOA-MW08-0317 0.125, Description: CBD-AOA-MW08-0317, Name: 170322G1_7, Date: 22-Mar-2017, Time: 12:23:34

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	8 PFOA	413 > 368.7	3.322e4	2.503e3		0.126	4.23	1590	
2	10 PFOS	499 >79.9	6.325e3	4.524e2		0.126	4.63	1330	
3	21 13C2-PFOA	414.9 > 369.7	2.503e3	7.601e2	2.829	0.126	4.23	115	116
4	22 13C8-PFOS	507.0 > 79.9	4.524e2	4.698e2	0.822	0.126	4.63	116	117
5	30 13C8-PFOA	421.3 > 376	7.601e2	7.601e2	1.000	0.126	4.22	99.2	100
6	31 13C4-PFOS	503.0 > 79.9	4.698e2	4.698e2	1.000	0.126	4.63	99.2	100

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-7.qld

Last Altered: Wednesday, March 22, 2017 14:23:43 Pacific Daylight Time

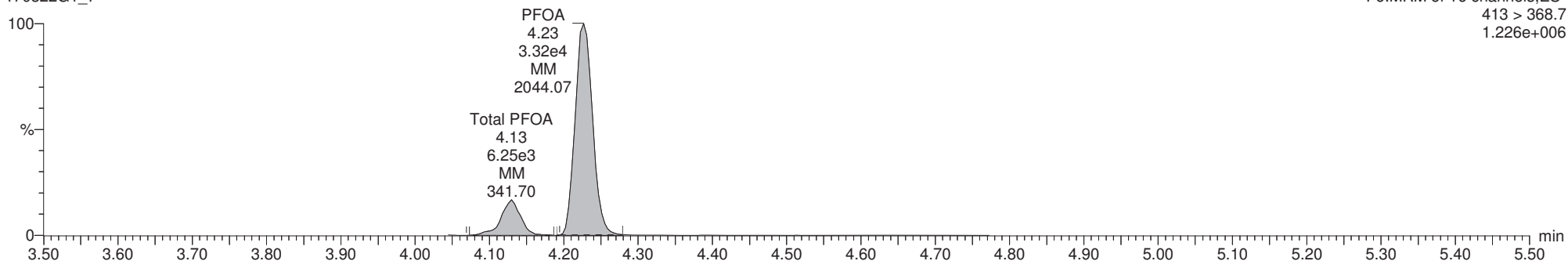
Printed: Tuesday, April 04, 2017 16:20:55 Pacific Daylight Time

ID: 1700345-04@10X CBD-AOA-MW08-0317 0.125, Description: CBD-AOA-MW08-0317, Name: 170322G1_7, Date: 22-Mar-2017, Time: 12:23:34, Instrument: , Lab: , User:

Total PFOA

170322G1_7

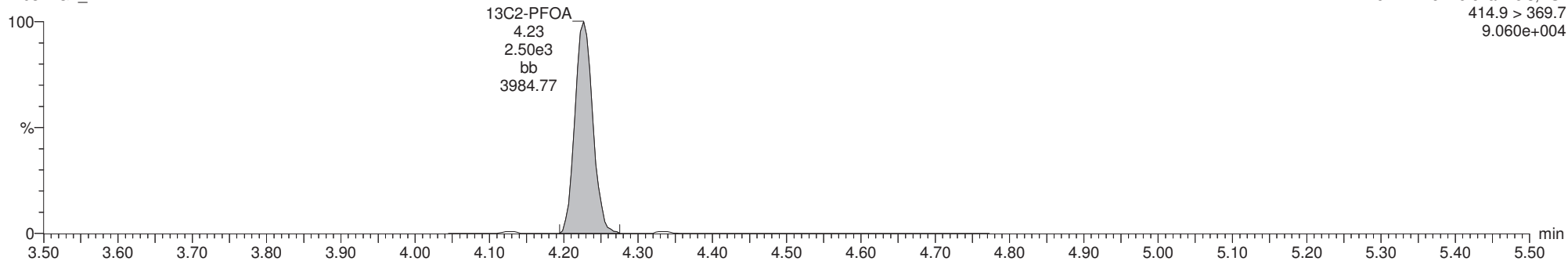
F6:MRM of 16 channels,ES-
413 > 368.7
1.226e+006



13C2-PFOA

170322G1_7

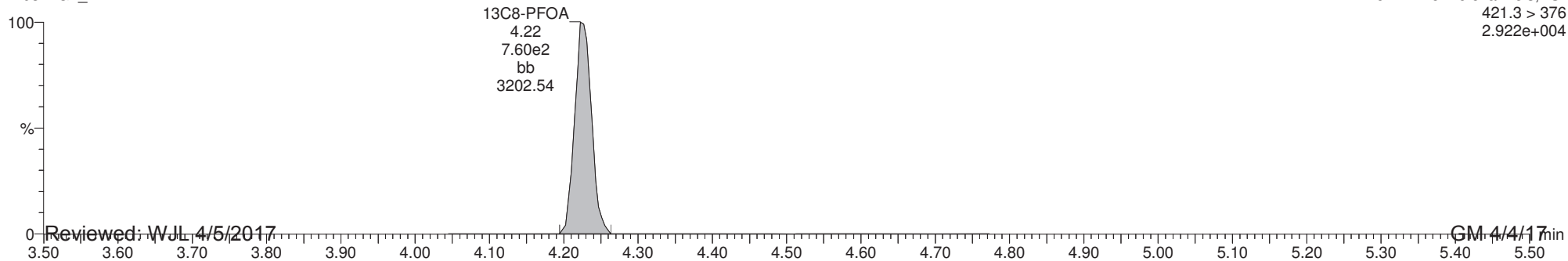
F6:MRM of 16 channels,ES-
414.9 > 369.7
9.060e+004



13C8-PFOA

170322G1_7

F6:MRM of 16 channels,ES-
421.3 > 376
2.922e+004



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-7.qld

Last Altered: Wednesday, March 22, 2017 14:23:43 Pacific Daylight Time

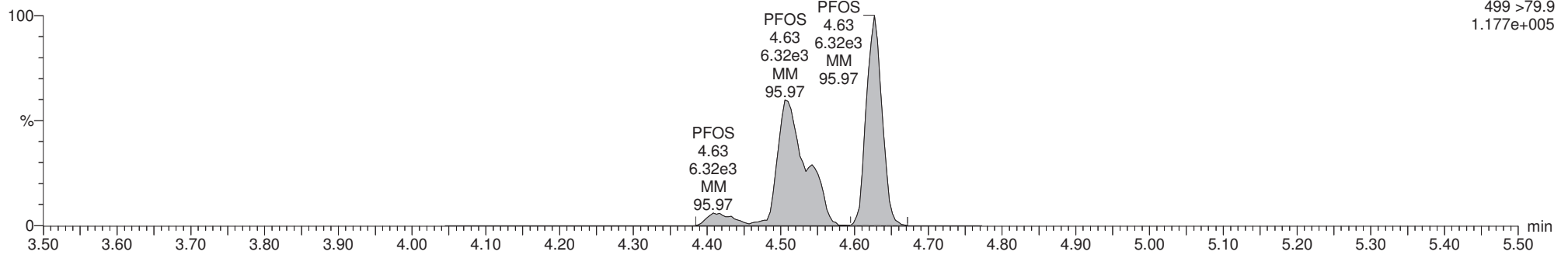
Printed: Tuesday, April 04, 2017 16:20:55 Pacific Daylight Time

ID: 1700345-04@10X CBD-AOA-MW08-0317 0.125, Description: CBD-AOA-MW08-0317, Name: 170322G1_7, Date: 22-Mar-2017, Time: 12:23:34, Instrument: , Lab: , User:

Total PFOS

170322G1_7

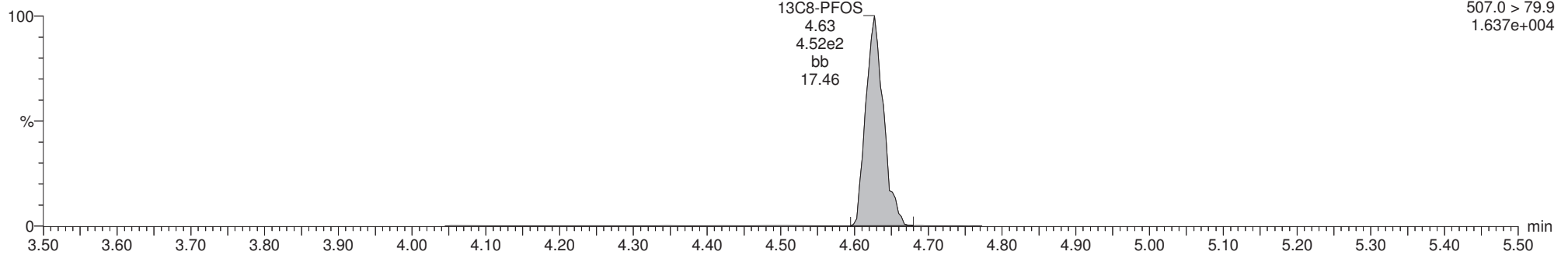
F6:MRM of 16 channels,ES-
499 >79.9
1.177e+005



13C8-PFOS

170322G1_7

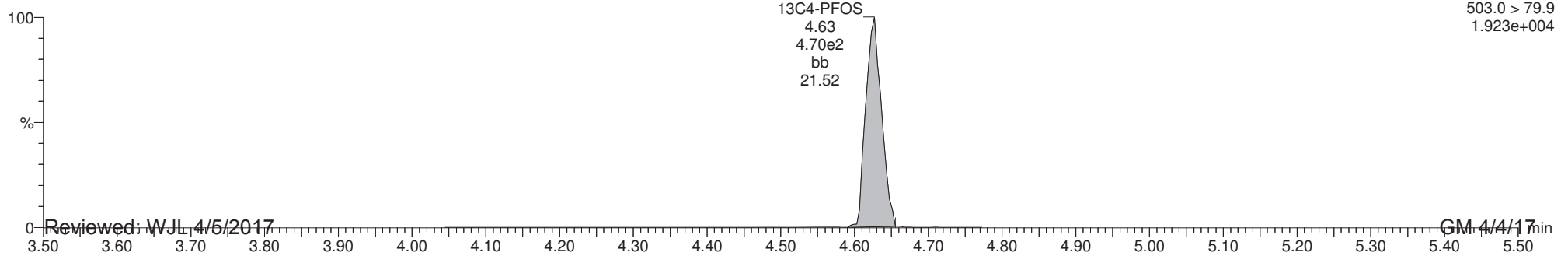
F6:MRM of 16 channels,ES-
507.0 > 79.9
1.637e+004



13C4-PFOS

170322G1_7

F6:MRM of 16 channels,ES-
503.0 > 79.9
1.923e+004



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-26.qld

Last Altered: Tuesday, March 21, 2017 11:30:06 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:12:54 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170320G5_26, Date: 21-Mar-2017, Time: 02:18:52

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	3.299e4	5.132e3		0.124	2.99	338	
2	8 PFOA	413 > 368.7	3.068e5	1.820e4		0.124	4.26	2060 E*	
3	10 PFOS	499 >79.9	1.023e5	6.695e3		0.124	4.65	1470 E*	
4	16 13C3-PFBS	302.0 > 98.8	5.132e3	2.049e4	0.229	0.124	2.99	110	109
5	21 13C2-PFOA	414.9 > 369.7	1.820e4	6.643e3	2.829	0.124	4.26	97.5	96.8
6	22 13C8-PFOS	507.0 > 79.9	6.695e3	8.684e3	0.822	0.124	4.65	94.4	93.8
7	28 13C5-PFHxA	318.0 > 272.9	2.049e4	2.049e4	1.000	0.124	3.35	101	100
8	30 13C8-PFOA	421.3 > 376	6.643e3	6.643e3	1.000	0.124	4.26	101	100
9	31 13C4-PFOS	503.0 > 79.9	8.684e3	8.684e3	1.000	0.124	4.65	101	100

* See dilution.

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-26.qld

Last Altered: Tuesday, March 21, 2017 11:30:06 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:12:54 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

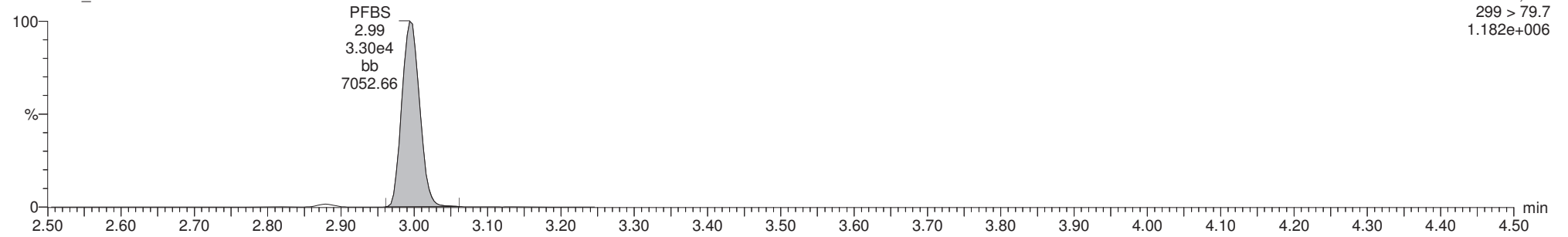
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170320G5_26, Date: 21-Mar-2017, Time: 02:18:52, Instrument: , Lab: , User:

Total PFBS

170320G5_26

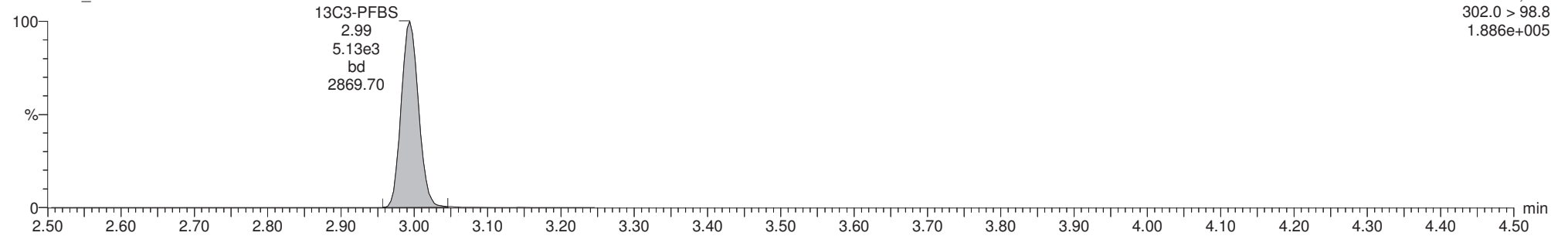
F3:MRM of 4 channels,ES-
299 > 79.7
1.182e+006



13C3-PFBS

170320G5_26

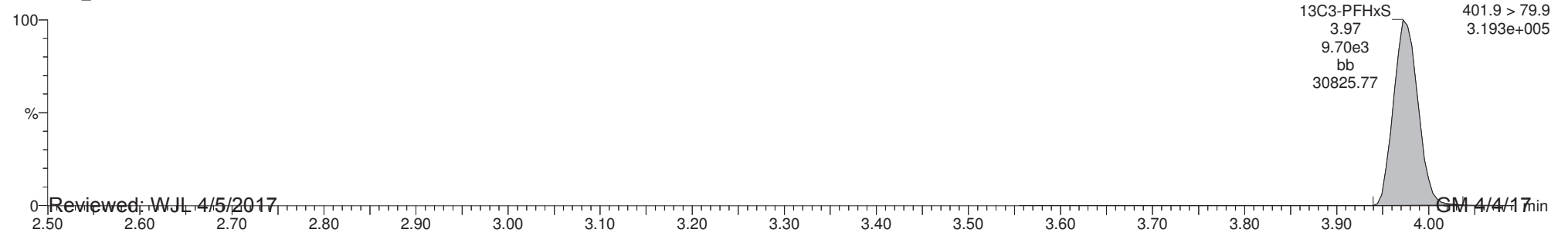
F3:MRM of 4 channels,ES-
302.0 > 98.8
1.886e+005



13C3-PFHxS

170320G5_26

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
3.193e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-26.qld

Last Altered: Tuesday, March 21, 2017 11:30:06 Pacific Daylight Time

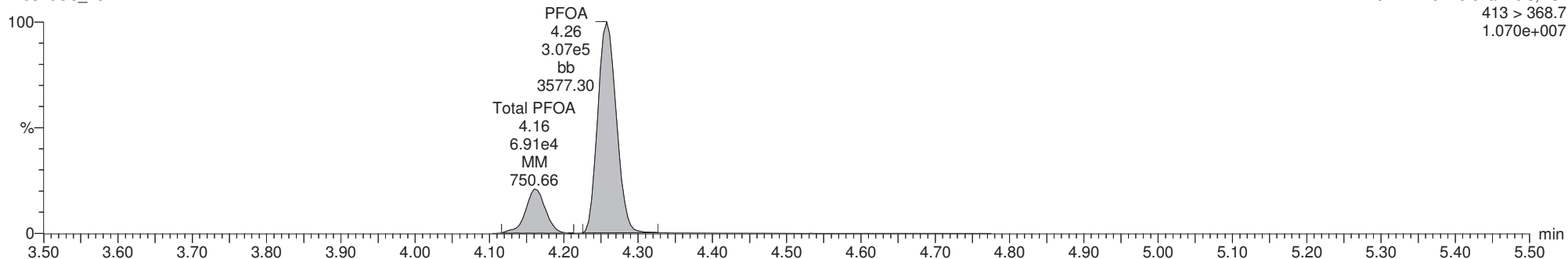
Printed: Tuesday, April 04, 2017 16:12:54 Pacific Daylight Time

ID: B7C0099-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170320G5_26, Date: 21-Mar-2017, Time: 02:18:52, Instrument: , Lab: , User:

Total PFOA

170320G5_26

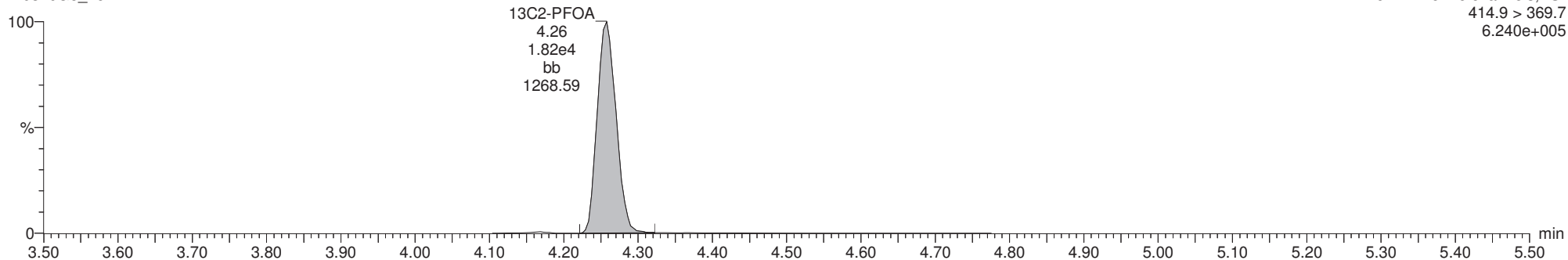
F6:MRM of 16 channels,ES-
413 > 368.7
1.070e+007



13C2-PFOA

170320G5_26

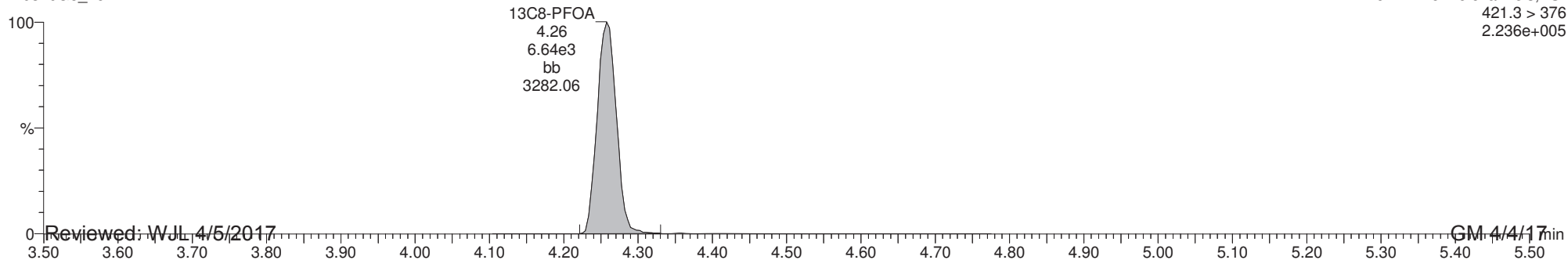
F6:MRM of 16 channels,ES-
414.9 > 369.7
6.240e+005



13C8-PFOA

170320G5_26

F6:MRM of 16 channels,ES-
421.3 > 376
2.236e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-26.qld

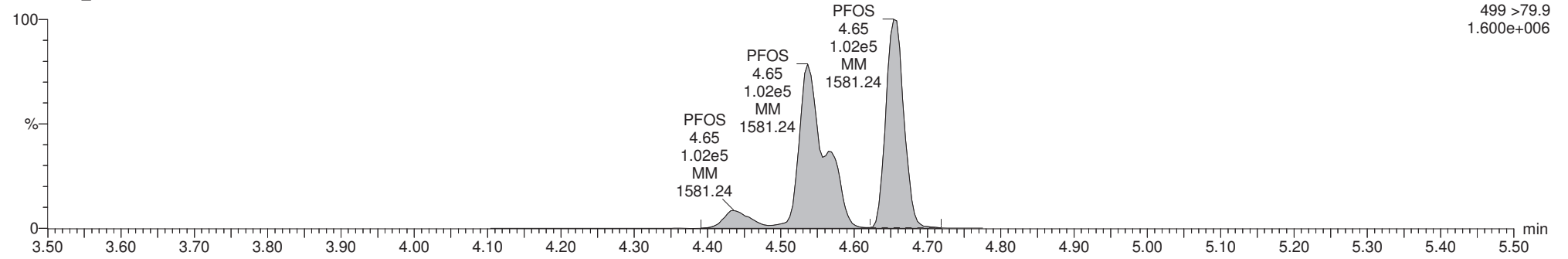
Last Altered: Tuesday, March 21, 2017 11:30:06 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:12:54 Pacific Daylight Time

ID: B7C0099-MS1 Matrix Spike 0.125, Description: Matrix Spike, Name: 170320G5_26, Date: 21-Mar-2017, Time: 02:18:52, Instrument: , Lab: , User:

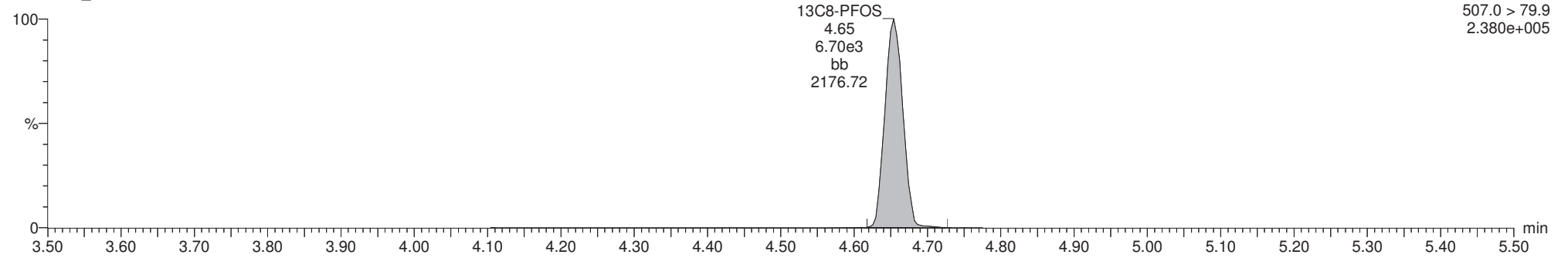
Total PFOS

170320G5_26



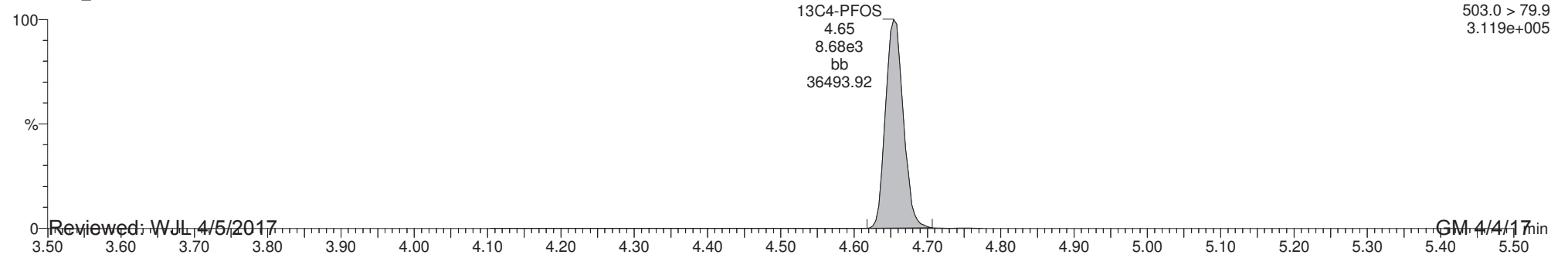
13C8-PFOS

170320G5_26



13C4-PFOS

170320G5_26



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-8.qld

Last Altered: Wednesday, March 22, 2017 14:31:40 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:22:33 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-MS1@10X Matrix Spike 0.125, Description: Matrix Spike, Name: 170322G1_8, Date: 22-Mar-2017, Time: 12:36:12

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	8 PFOA	413 > 368.7	3.553e4	2.103e3		0.124	4.23	2060	
2	10 PFOS	499 >79.9	6.653e3	4.706e2		0.124	4.62	1370	
3	21 13C2-PFOA	414.9 > 369.7	2.103e3	8.255e2	2.829	0.124	4.23	90.8	90.1
4	22 13C8-PFOS	507.0 > 79.9	4.706e2	6.146e2	0.822	0.124	4.62	93.9	93.1
5	30 13C8-PFOA	421.3 > 376	8.255e2	8.255e2	1.000	0.124	4.23	101	100
6	31 13C4-PFOS	503.0 > 79.9	6.146e2	6.146e2	1.000	0.124	4.62	101	100

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-8.qld

Last Altered: Wednesday, March 22, 2017 14:31:40 Pacific Daylight Time

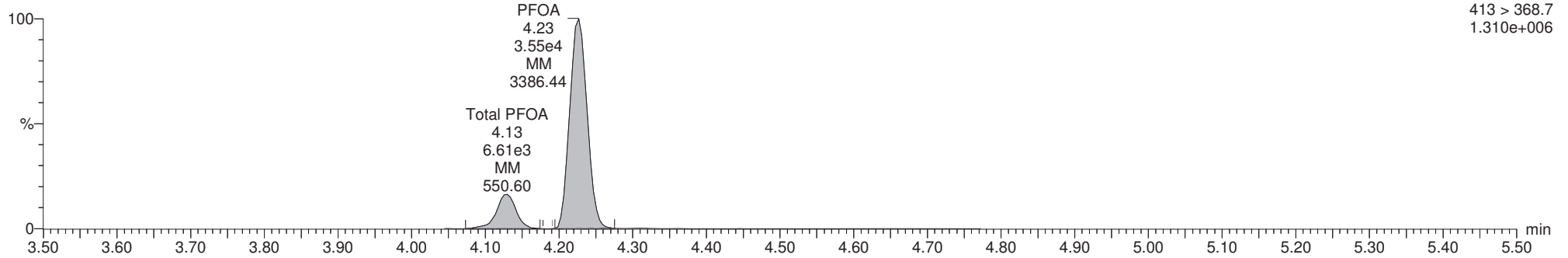
Printed: Tuesday, April 04, 2017 16:22:33 Pacific Daylight Time

ID: B7C0099-MS1@10X Matrix Spike 0.125, Description: Matrix Spike, Name: 170322G1_8, Date: 22-Mar-2017, Time: 12:36:12, Instrument: , Lab: , User:

Total PFOA

170322G1_8

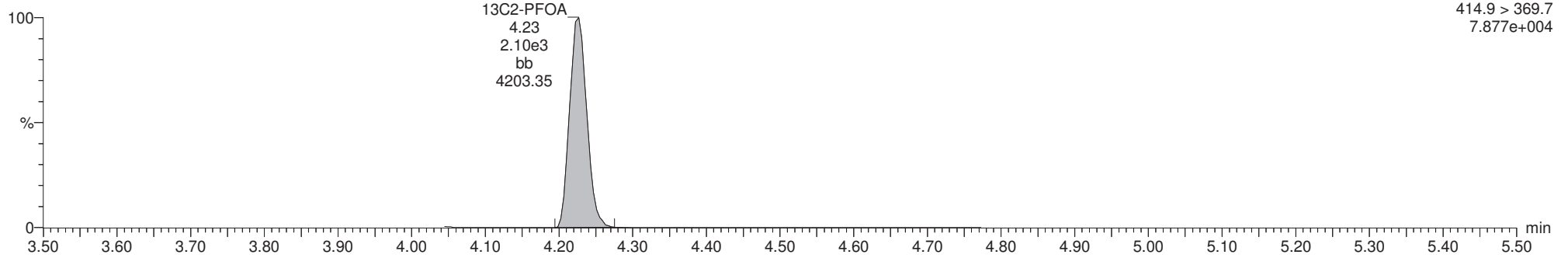
F6:MRM of 16 channels,ES-
413 > 368.7
1.310e+006



13C2-PFOA

170322G1_8

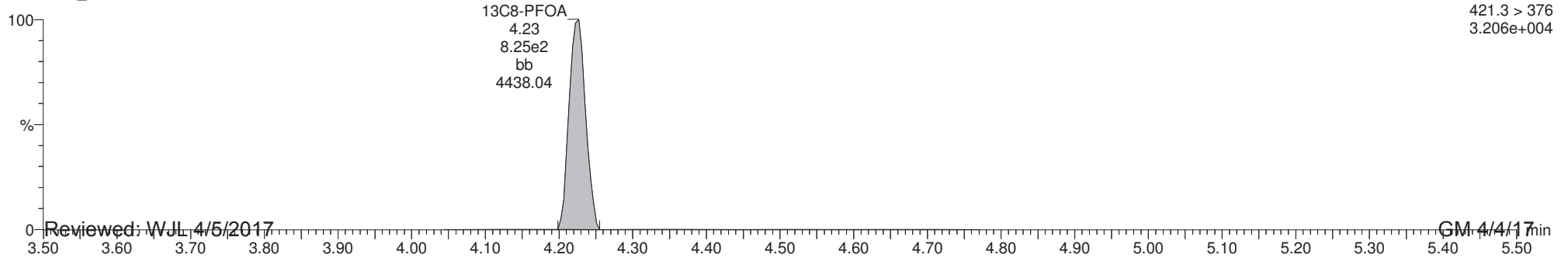
F6:MRM of 16 channels,ES-
414.9 > 369.7
7.877e+004



13C8-PFOA

170322G1_8

F6:MRM of 16 channels,ES-
421.3 > 376
3.206e+004



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-8.qld

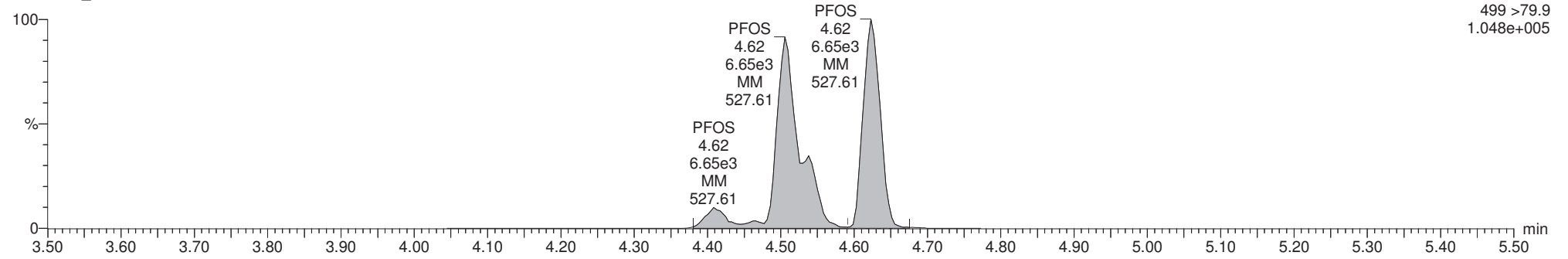
Last Altered: Wednesday, March 22, 2017 14:31:40 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:22:33 Pacific Daylight Time

ID: B7C0099-MS1@10X Matrix Spike 0.125, Description: Matrix Spike, Name: 170322G1_8, Date: 22-Mar-2017, Time: 12:36:12, Instrument: , Lab: , User:

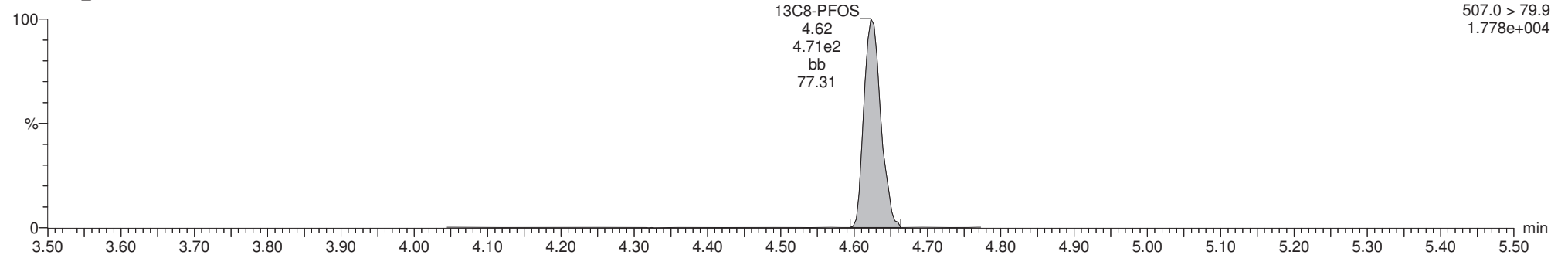
Total PFOS

170322G1_8



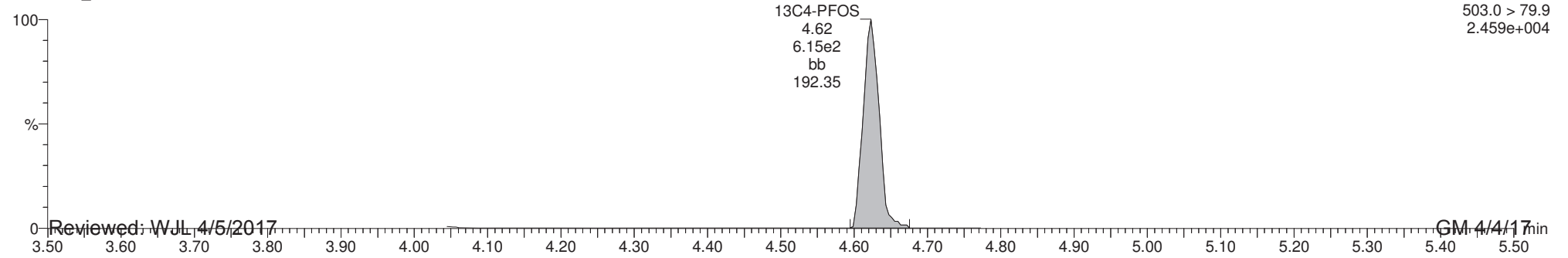
13C8-PFOS

170322G1_8



13C4-PFOS

170322G1_8



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-27.qld

Last Altered: Tuesday, March 21, 2017 11:55:27 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:13:58 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170320G5_27, Date: 21-Mar-2017, Time: 02:31:27

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	3.527e4	5.282e3		0.125	2.99	349	
2	8 PFOA	413 > 368.7	2.894e5	1.851e4		0.125	4.26	1890 ^{E*}	
3	10 PFOS	499 >79.9	1.013e5	5.940e3		0.125	4.65	1640 ^{E*}	
4	16 13C3-PFBS	302.0 > 98.8	5.282e3	2.093e4	0.229	0.125	2.99	110	110
5	21 13C2-PFOA	414.9 > 369.7	1.851e4	6.670e3	2.829	0.125	4.26	98.1	98.1
6	22 13C8-PFOS	507.0 > 79.9	5.940e3	7.231e3	0.822	0.125	4.65	99.9	99.9
7	28 13C5-PFHxA	318.0 > 272.9	2.093e4	2.093e4	1.000	0.125	3.35	100	100
8	30 13C8-PFOA	421.3 > 376	6.670e3	6.670e3	1.000	0.125	4.26	100	100
9	31 13C4-PFOS	503.0 > 79.9	7.231e3	7.231e3	1.000	0.125	4.65	100	100

*See dilution.

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-27.qld

Last Altered: Tuesday, March 21, 2017 11:55:27 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:13:58 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

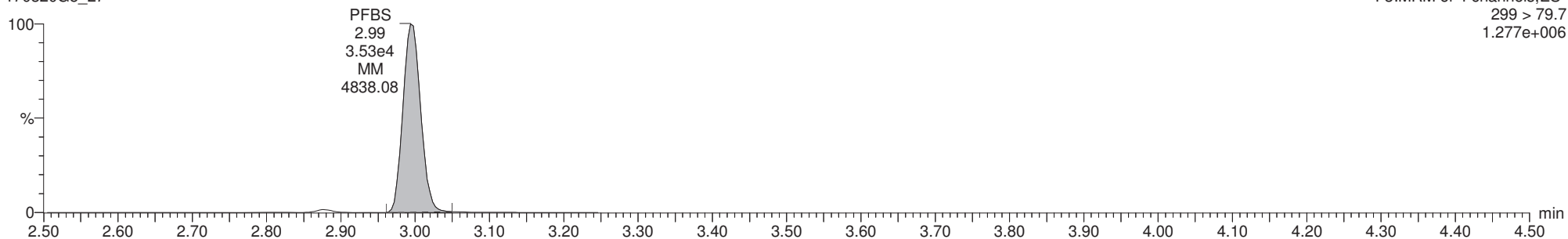
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170320G5_27, Date: 21-Mar-2017, Time: 02:31:27, Instrument: , Lab: , User:

Total PFBS

170320G5_27

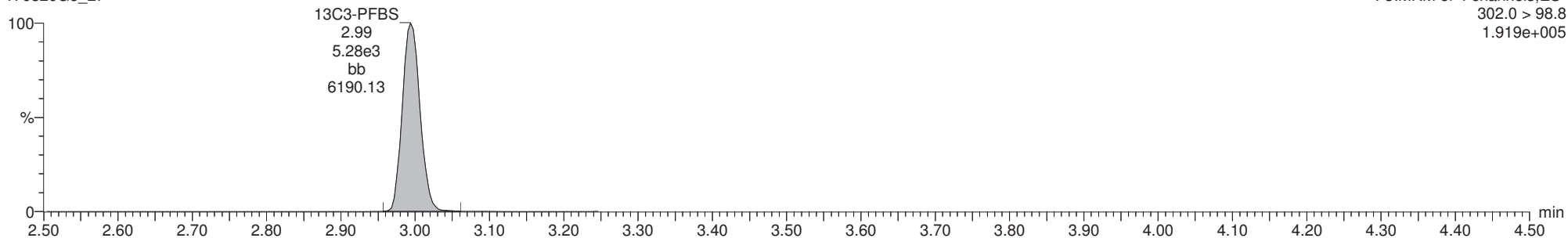
F3:MRM of 4 channels,ES-
299 > 79.7
1.277e+006



13C3-PFBS

170320G5_27

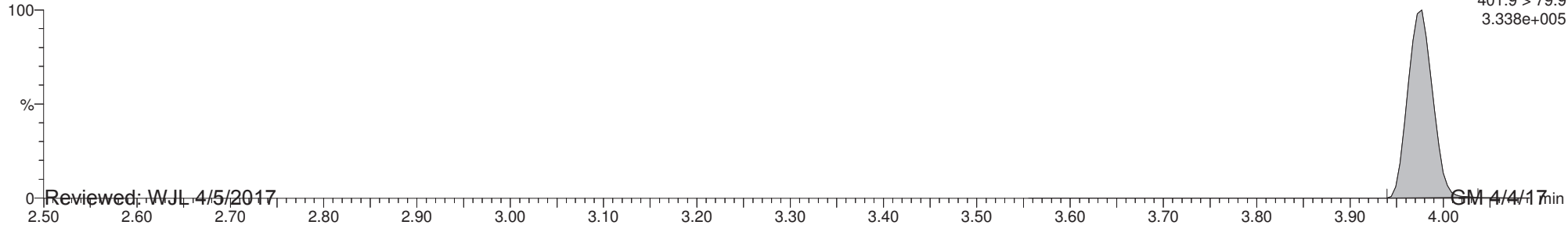
F3:MRM of 4 channels,ES-
302.0 > 98.8
1.919e+005



13C3-PFHxS

170320G5_27

F5:MRM of 5 channels,ES-
401.9 > 79.9
3.338e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-27.qld

Last Altered: Tuesday, March 21, 2017 11:55:27 Pacific Daylight Time

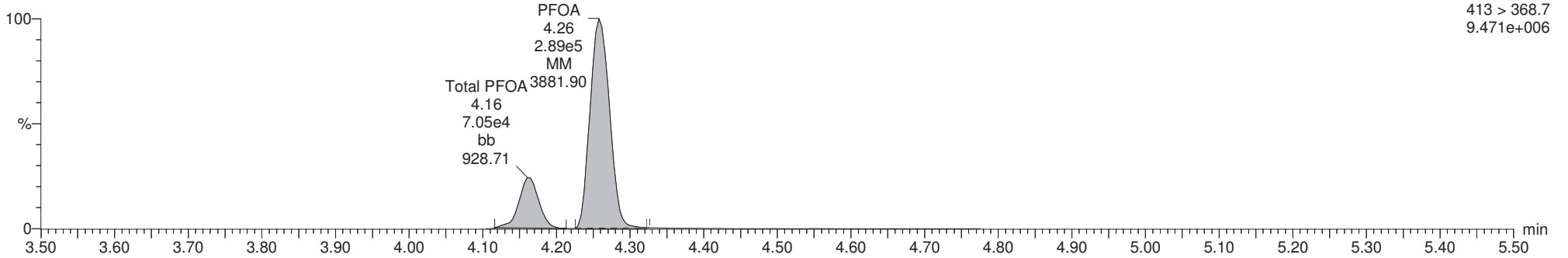
Printed: Tuesday, April 04, 2017 16:13:58 Pacific Daylight Time

ID: B7C0099-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170320G5_27, Date: 21-Mar-2017, Time: 02:31:27, Instrument: , Lab: , User:

Total PFOA

170320G5_27

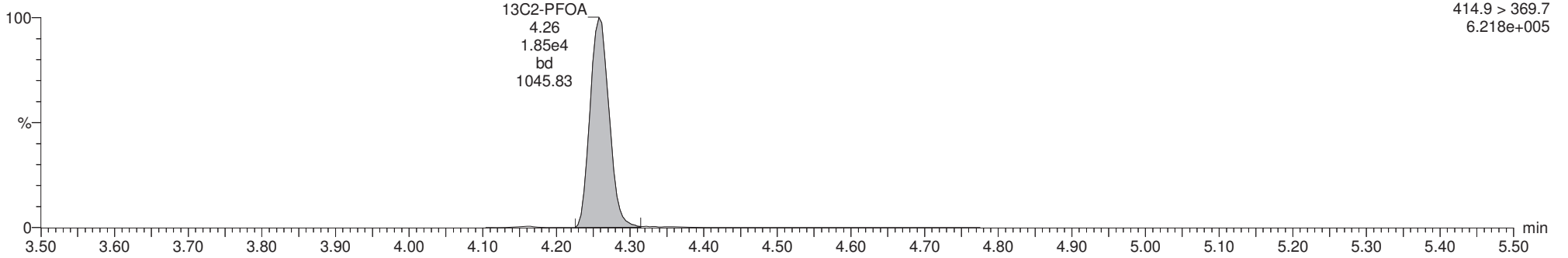
F6:MRM of 16 channels,ES-
413 > 368.7
9.471e+006



13C2-PFOA

170320G5_27

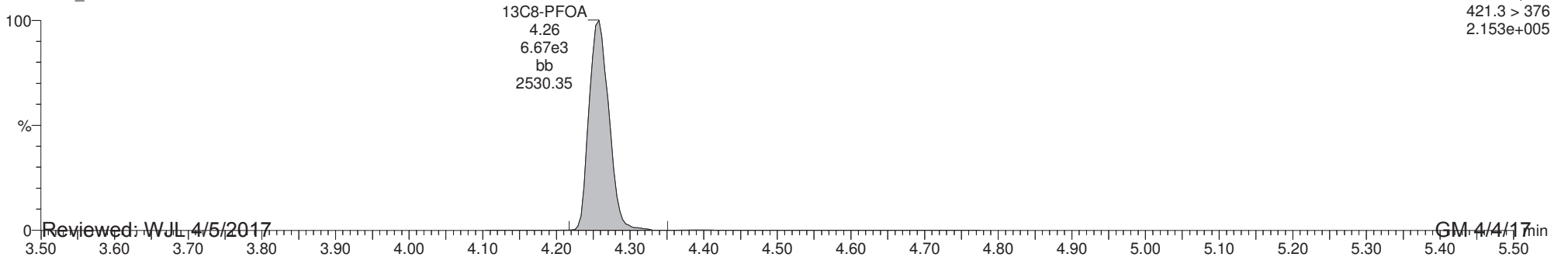
F6:MRM of 16 channels,ES-
414.9 > 369.7
6.218e+005



13C8-PFOA

170320G5_27

F6:MRM of 16 channels,ES-
421.3 > 376
2.153e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-27.qld

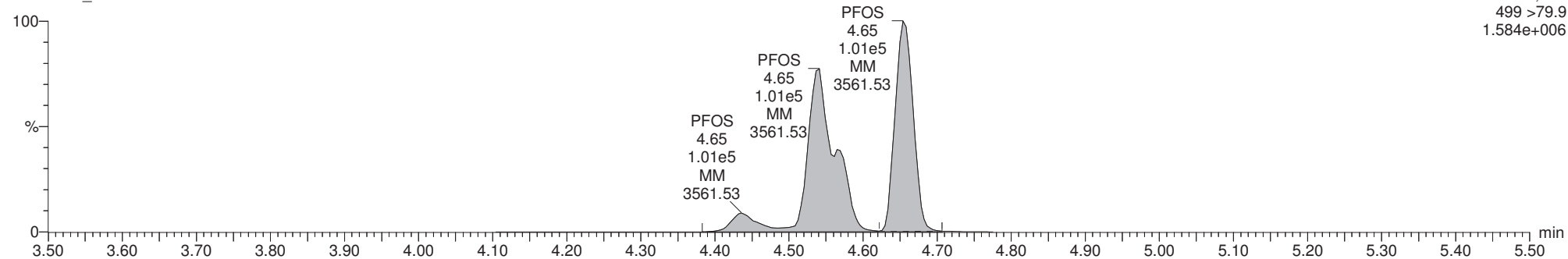
Last Altered: Tuesday, March 21, 2017 11:55:27 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:13:58 Pacific Daylight Time

ID: B7C0099-MSD1 Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170320G5_27, Date: 21-Mar-2017, Time: 02:31:27, Instrument: , Lab: , User:

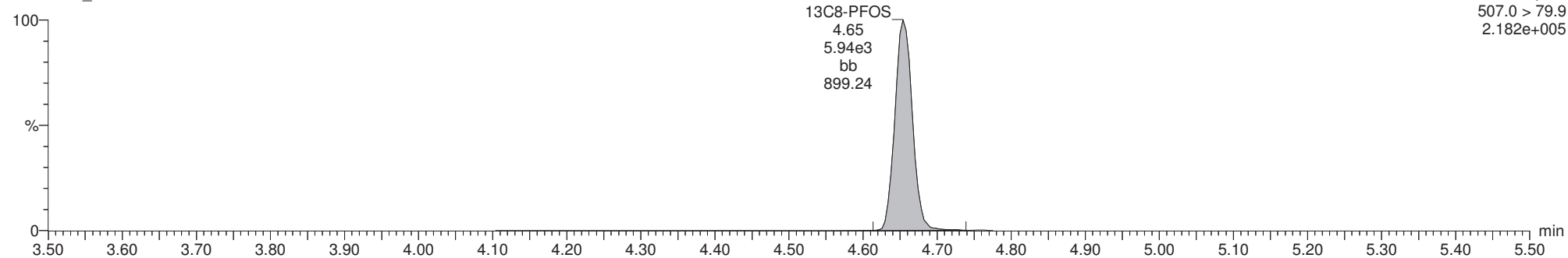
Total PFOS

170320G5_27



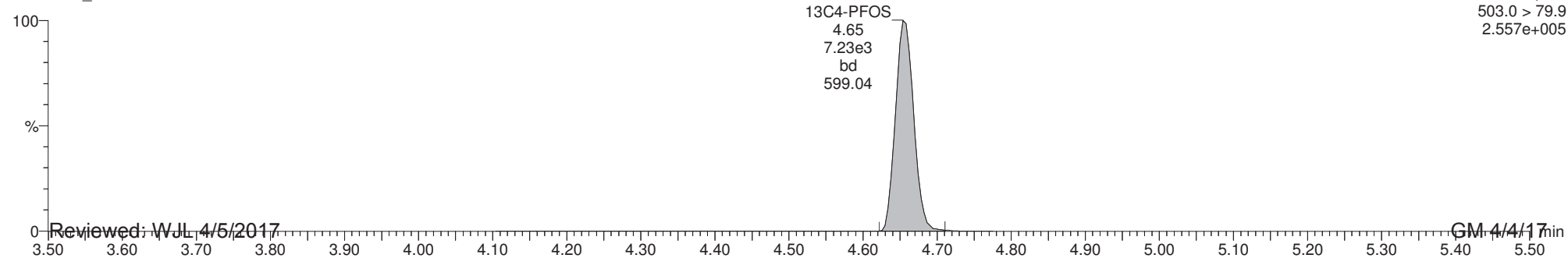
13C8-PFOS

170320G5_27



13C4-PFOS

170320G5_27



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-9.qld

Last Altered: Wednesday, March 22, 2017 14:34:59 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:23:38 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: B7C0099-MSD1@10X Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170322G1_9, Date: 22-Mar-2017, Time: 12:48:49

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	8 PFOA	413 > 368.7	3.047e4	1.860e3		0.125	4.23	1980	
2	10 PFOS	499 >79.9	4.871e3	3.486e2		0.125	4.63	1340	
3	21 13C2-PFOA	414.9 > 369.7	1.860e3	6.946e2	2.829	0.125	4.23	94.7	94.7
4	22 13C8-PFOS	507.0 > 79.9	3.486e2	4.143e2	0.822	0.125	4.63	102	102
5	30 13C8-PFOA	421.3 > 376	6.946e2	6.946e2	1.000	0.125	4.23	100	100
6	31 13C4-PFOS	503.0 > 79.9	4.143e2	4.143e2	1.000	0.125	4.62	100	100

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-9.qld

Last Altered: Wednesday, March 22, 2017 14:34:59 Pacific Daylight Time

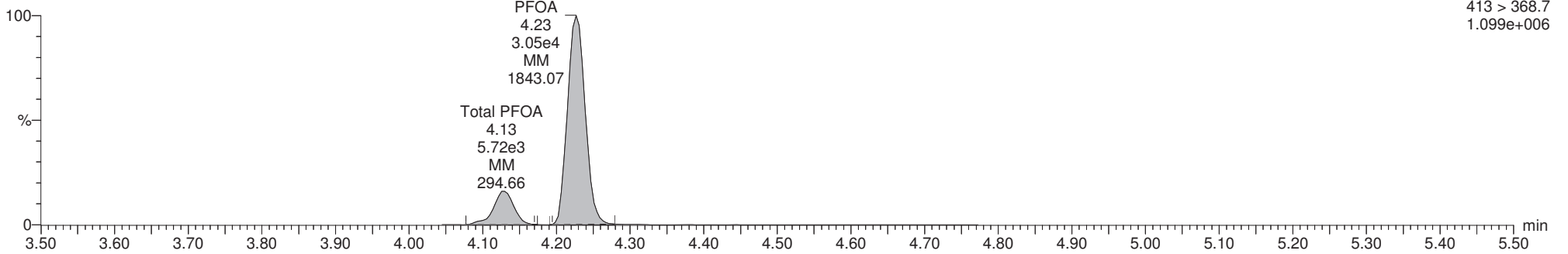
Printed: Tuesday, April 04, 2017 16:23:38 Pacific Daylight Time

ID: B7C0099-MSD1@10X Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170322G1_9, Date: 22-Mar-2017, Time: 12:48:49, Instrument: , Lab: , User:

Total PFOA

170322G1_9

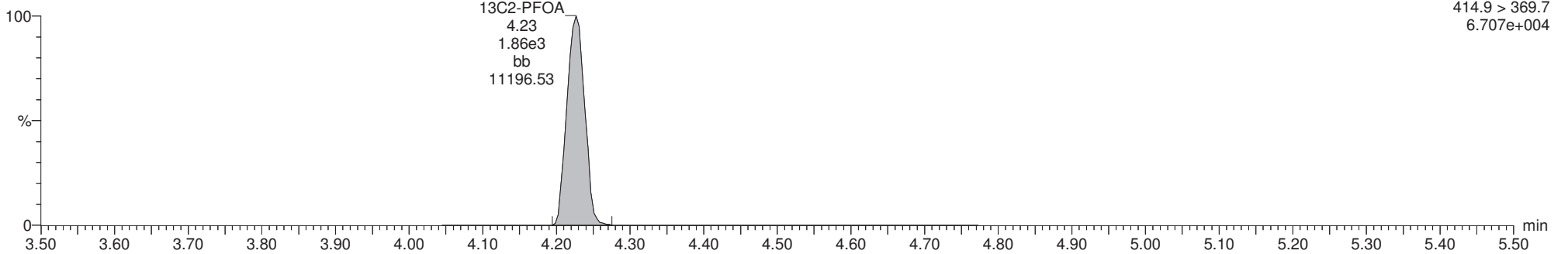
F6:MRM of 16 channels,ES-
413 > 368.7
1.099e+006



13C2-PFOA

170322G1_9

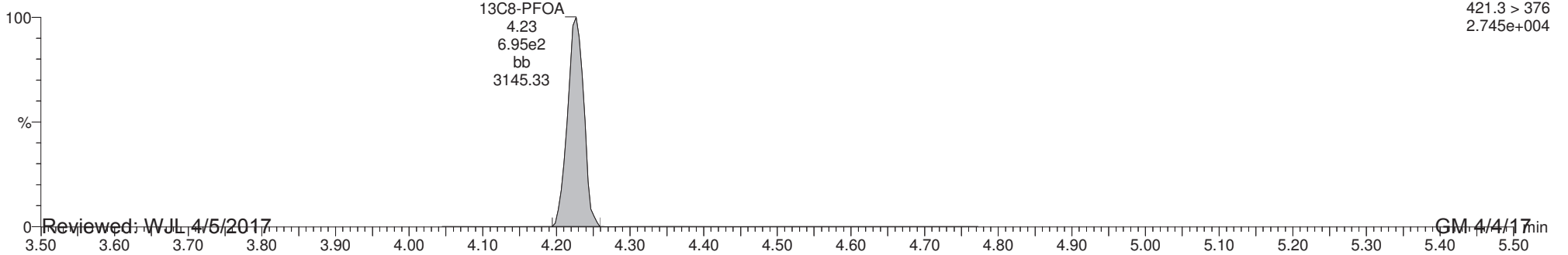
F6:MRM of 16 channels,ES-
414.9 > 369.7
6.707e+004



13C8-PFOA

170322G1_9

F6:MRM of 16 channels,ES-
421.3 > 376
2.745e+004



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-9.qld

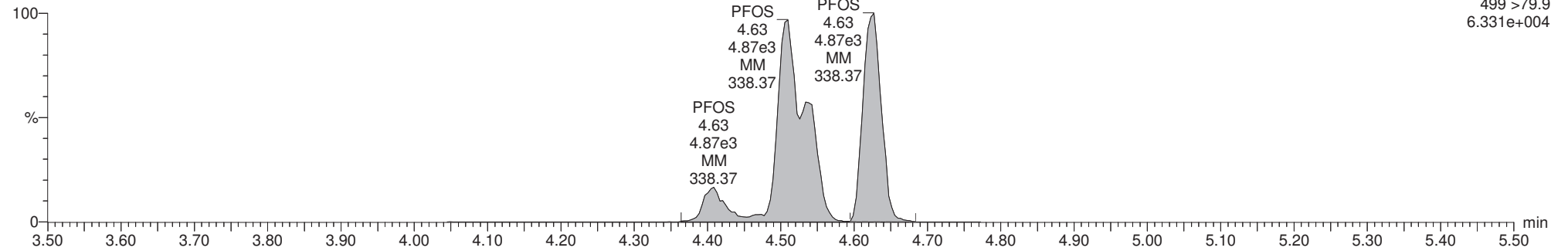
Last Altered: Wednesday, March 22, 2017 14:34:59 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:23:38 Pacific Daylight Time

ID: B7C0099-MSD1@10X Matrix Spike Dup 0.125, Description: Matrix Spike Dup, Name: 170322G1_9, Date: 22-Mar-2017, Time: 12:48:49, Instrument: , Lab: , User:

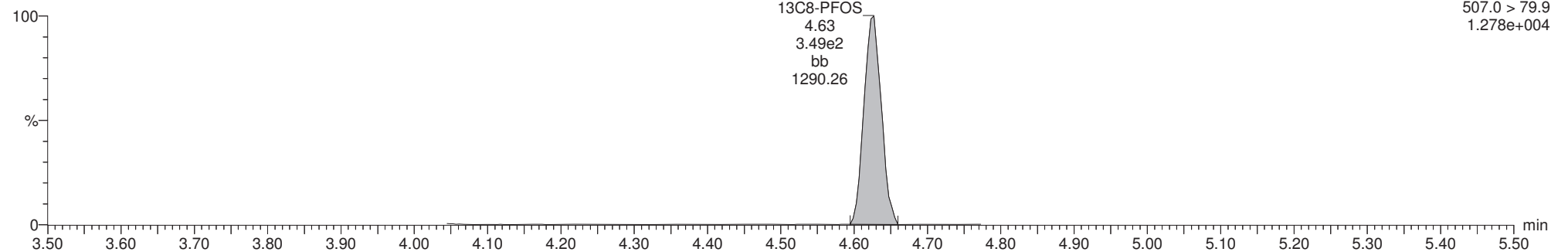
Total PFOS

170322G1_9



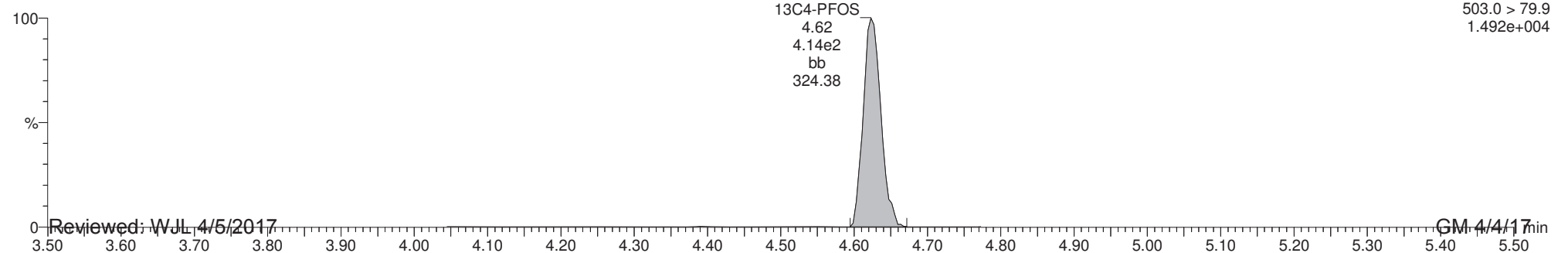
13C8-PFOS

170322G1_9



13C4-PFOS

170322G1_9



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-28.qld

Last Altered: Tuesday, March 21, 2017 11:58:57 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:15:43 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-05 CBD-SO4-MW01-0317 0.125, Description: CBD-SO4-MW01-0317, Name: 170320G5_28, Date: 21-Mar-2017, Time: 02:44:03

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	9.589e2	5.897e3		0.127	3.00	8.44	
2	8 PFOA	413 > 368.7	3.805e3	2.154e4		0.127	4.26	19.9	
3	10 PFOS	499 >79.9	1.515e4	5.400e3		0.127	4.66	266	
4	16 13C3-PFBS	302.0 > 98.8	5.897e3	2.587e4	0.229	0.127	2.99	98.2	99.4
5	21 13C2-PFOA	414.9 > 369.7	2.154e4	7.873e3	2.829	0.127	4.26	95.5	96.7
6	22 13C8-PFOS	507.0 > 79.9	5.400e3	7.353e3	0.822	0.127	4.65	88.2	89.3
7	28 13C5-PFHxA	318.0 > 272.9	2.587e4	2.587e4	1.000	0.127	3.36	98.7	100
8	30 13C8-PFOA	421.3 > 376	7.873e3	7.873e3	1.000	0.127	4.26	98.7	100
9	31 13C4-PFOS	503.0 > 79.9	7.353e3	7.353e3	1.000	0.127	4.65	98.7	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-28.qld

Last Altered: Tuesday, March 21, 2017 11:58:57 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:15:43 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

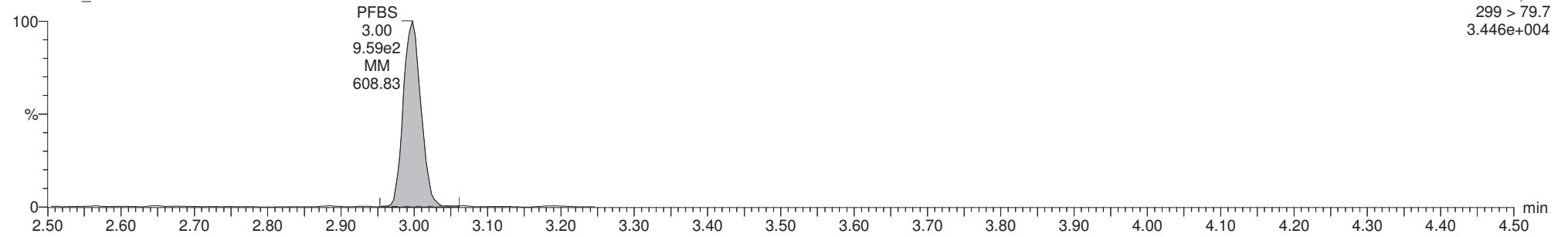
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-05 CBD-SO4-MW01-0317 0.125, Description: CBD-SO4-MW01-0317, Name: 170320G5_28, Date: 21-Mar-2017, Time: 02:44:03, Instrument: , Lab: , User:

Total PFBS

170320G5_28

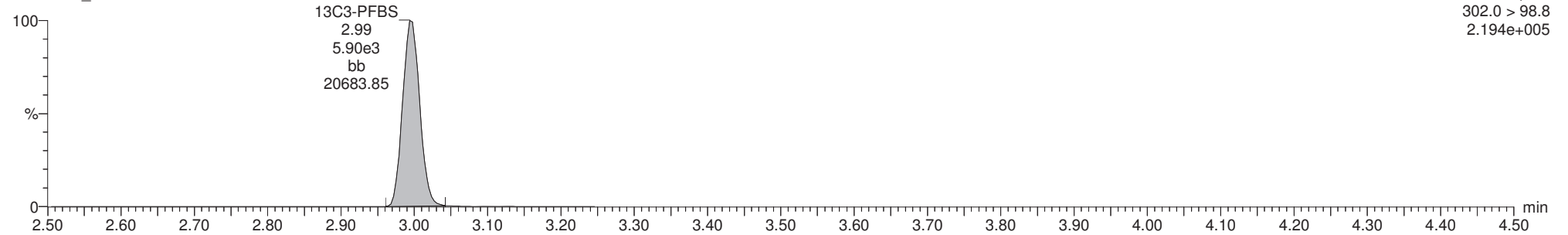
F3:MRM of 4 channels,ES-
299 > 79.7
3.446e+004



13C3-PFBS

170320G5_28

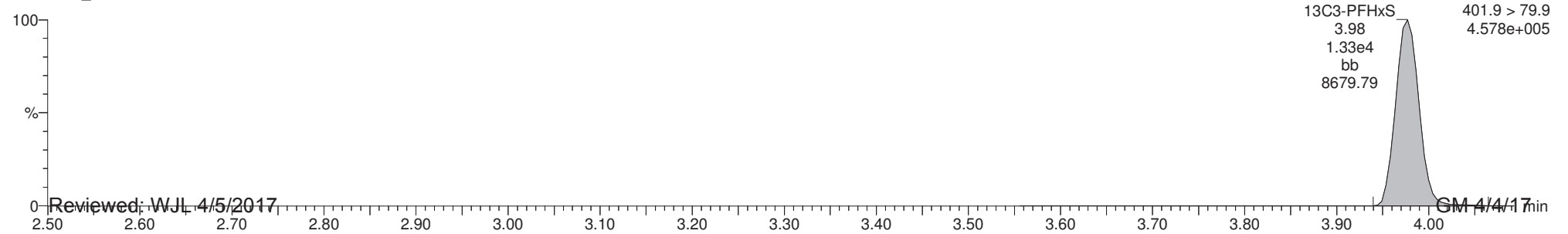
F3:MRM of 4 channels,ES-
302.0 > 98.8
2.194e+005



13C3-PFHxS

170320G5_28

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
3.98 4.578e+005
1.33e4
bb
8679.79



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-28.qld

Last Altered: Tuesday, March 21, 2017 11:58:57 Pacific Daylight Time

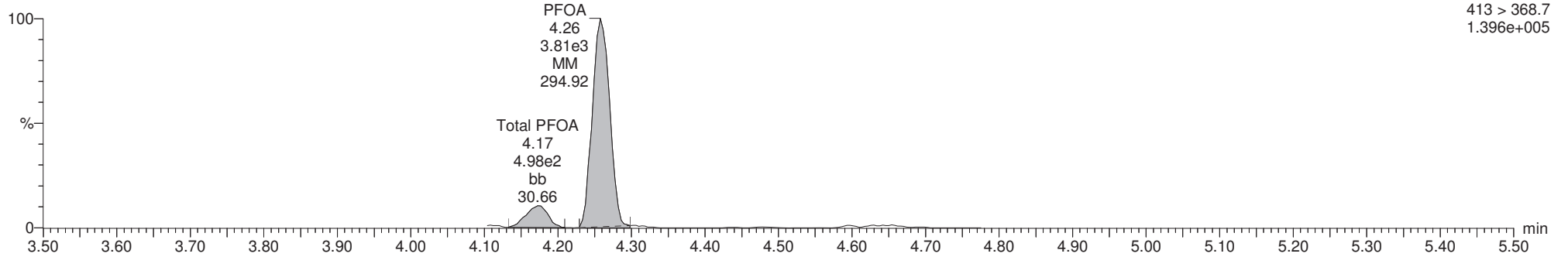
Printed: Tuesday, April 04, 2017 16:15:43 Pacific Daylight Time

ID: 1700345-05 CBD-SO4-MW01-0317 0.125, Description: CBD-SO4-MW01-0317, Name: 170320G5_28, Date: 21-Mar-2017, Time: 02:44:03, Instrument: , Lab: , User:

Total PFOA

170320G5_28

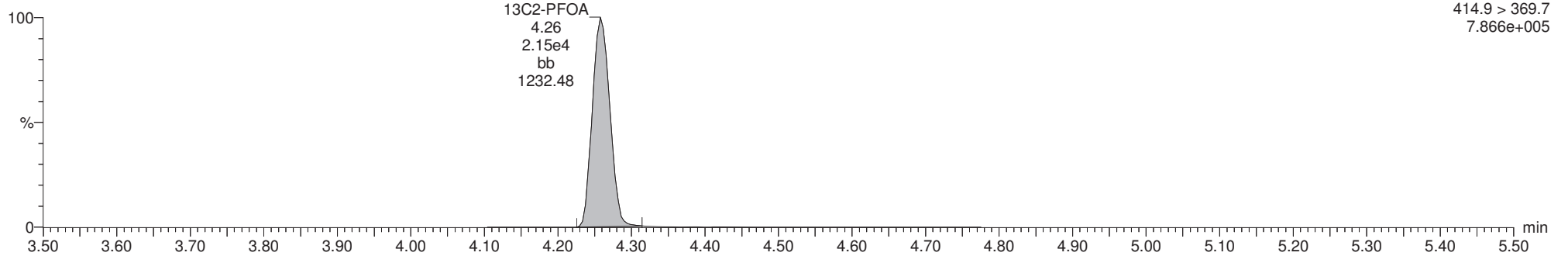
F6:MRM of 16 channels,ES-
413 > 368.7
1.396e+005



13C2-PFOA

170320G5_28

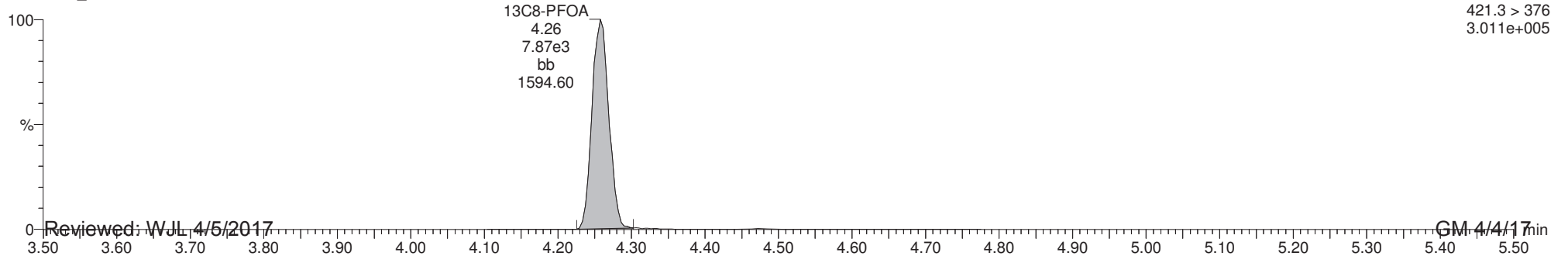
F6:MRM of 16 channels,ES-
414.9 > 369.7
7.866e+005



13C8-PFOA

170320G5_28

F6:MRM of 16 channels,ES-
421.3 > 376
3.011e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-28.qld

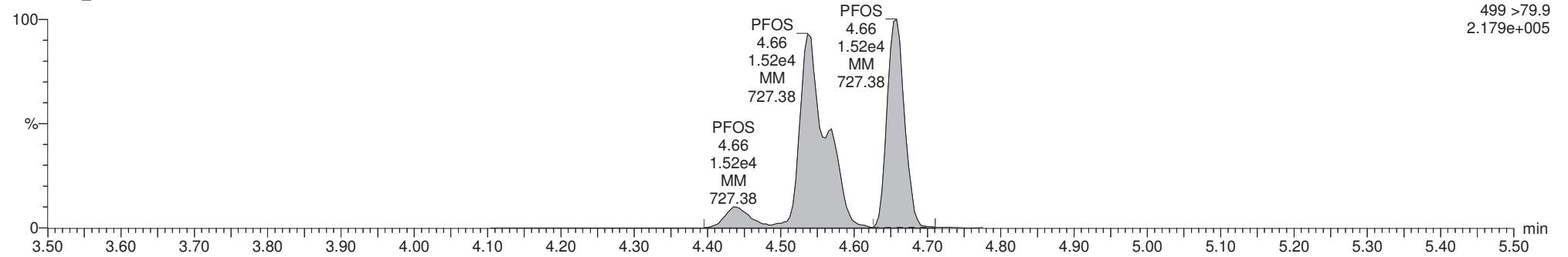
Last Altered: Tuesday, March 21, 2017 11:58:57 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:15:43 Pacific Daylight Time

ID: 1700345-05 CBD-SO4-MW01-0317 0.125, Description: CBD-SO4-MW01-0317, Name: 170320G5_28, Date: 21-Mar-2017, Time: 02:44:03, Instrument: , Lab: , User:

Total PFOS

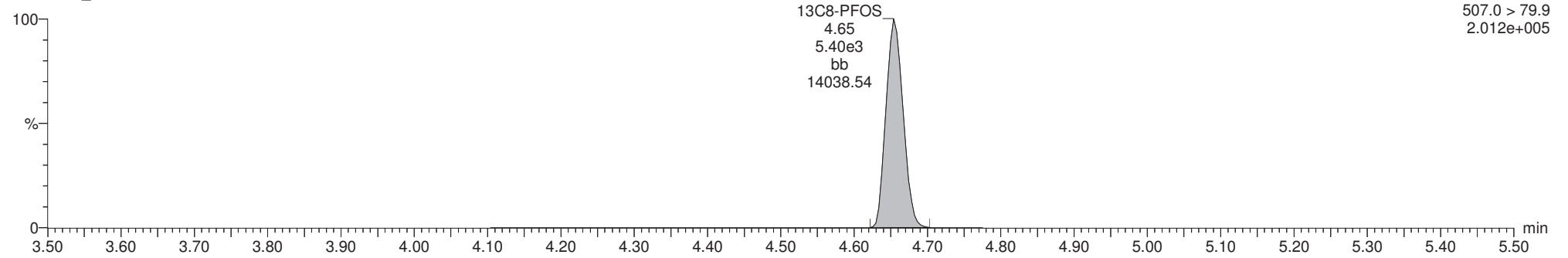
170320G5_28



F6:MRM of 16 channels,ES-
499 >79.9
2.179e+005

13C8-PFOS

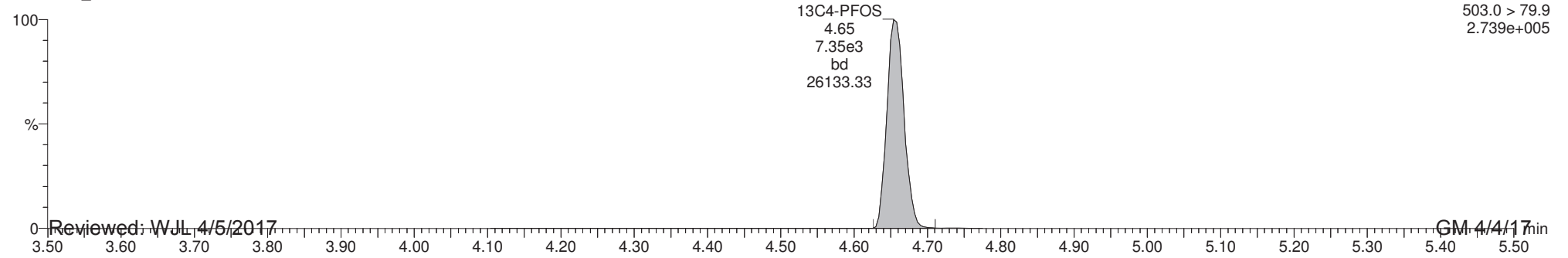
170320G5_28



F6:MRM of 16 channels,ES-
507.0 > 79.9
2.012e+005

13C4-PFOS

170320G5_28



F6:MRM of 16 channels,ES-
503.0 > 79.9
2.739e+005

Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-29.qld

Last Altered: Tuesday, March 21, 2017 12:03:20 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:16:33 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-06 CBD-FB01-031717 0.125, Description: CBD-FB01-031717, Name: 170320G5_29, Date: 21-Mar-2017, Time: 02:56:40

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	5.070e0	6.002e3		0.124	3.01	0.104	
2	8 PFOA	413 > 368.7	1.928e2	2.466e4		0.124	4.26		
3	10 PFOS	499 >79.9		6.691e3		0.124			
4	16 13C3-PFBS	302.0 > 98.8	6.002e3	2.526e4	0.229	0.124	3.00	105	104
5	21 13C2-PFOA	414.9 > 369.7	2.466e4	8.937e3	2.829	0.124	4.26	98.6	97.5
6	22 13C8-PFOS	507.0 > 79.9	6.691e3	8.252e3	0.822	0.124	4.66	99.7	98.6
7	28 13C5-PFHxA	318.0 > 272.9	2.526e4	2.526e4	1.000	0.124	3.36	101	100
8	30 13C8-PFOA	421.3 > 376	8.937e3	8.937e3	1.000	0.124	4.26	101	100
9	31 13C4-PFOS	503.0 > 79.9	8.252e3	8.252e3	1.000	0.124	4.66	101	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-29.qld

Last Altered: Tuesday, March 21, 2017 12:03:20 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:16:33 Pacific Daylight Time

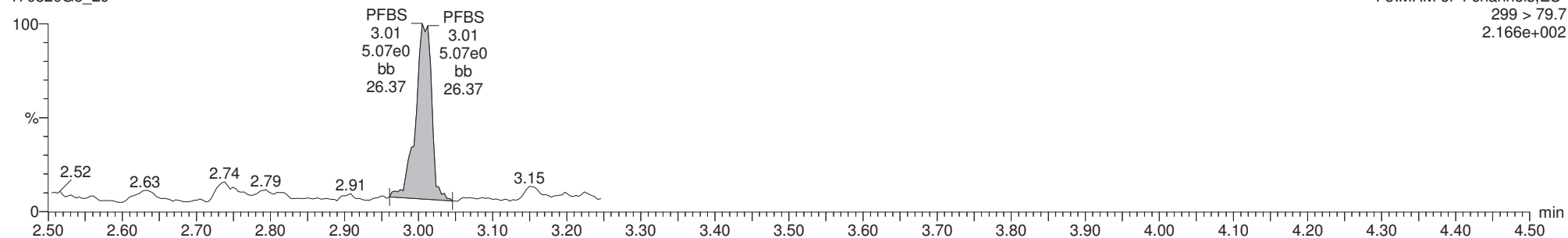
Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-06 CBD-FB01-031717 0.125, Description: CBD-FB01-031717, Name: 170320G5_29, Date: 21-Mar-2017, Time: 02:56:40, Instrument: , Lab: , User:

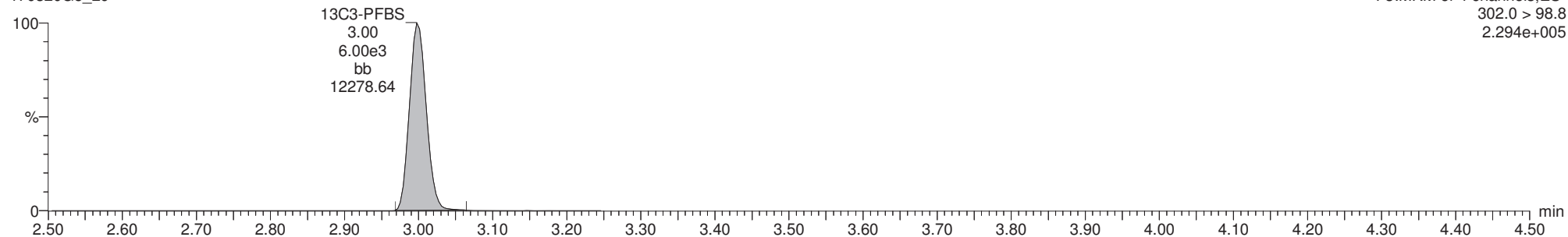
Total PFBS

170320G5_29



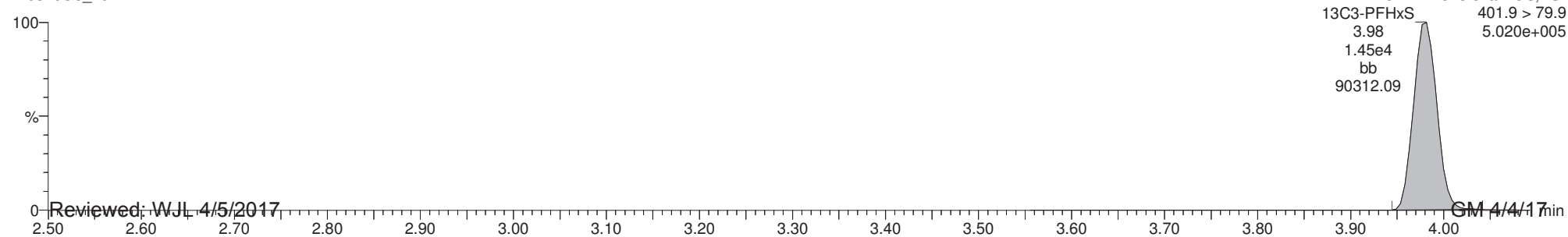
13C3-PFBS

170320G5_29



13C3-PFHxS

170320G5_29



Reviewed: WJL 4/5/2017

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-29.qld

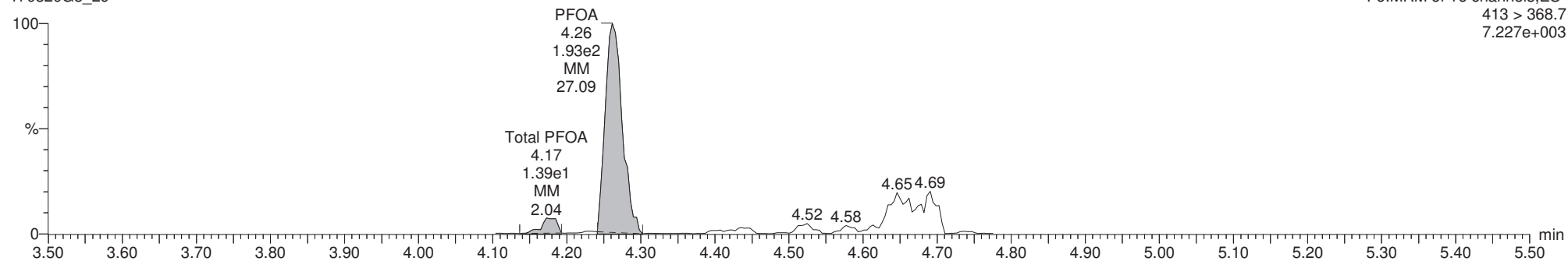
Last Altered: Tuesday, March 21, 2017 12:03:20 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:16:33 Pacific Daylight Time

ID: 1700345-06 CBD-FB01-031717 0.125, Description: CBD-FB01-031717, Name: 170320G5_29, Date: 21-Mar-2017, Time: 02:56:40, Instrument: , Lab: , User:

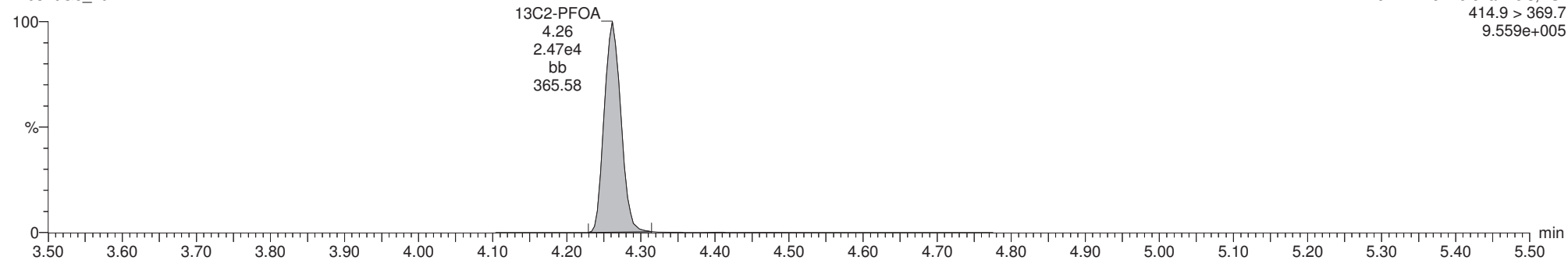
Total PFOA

170320G5_29



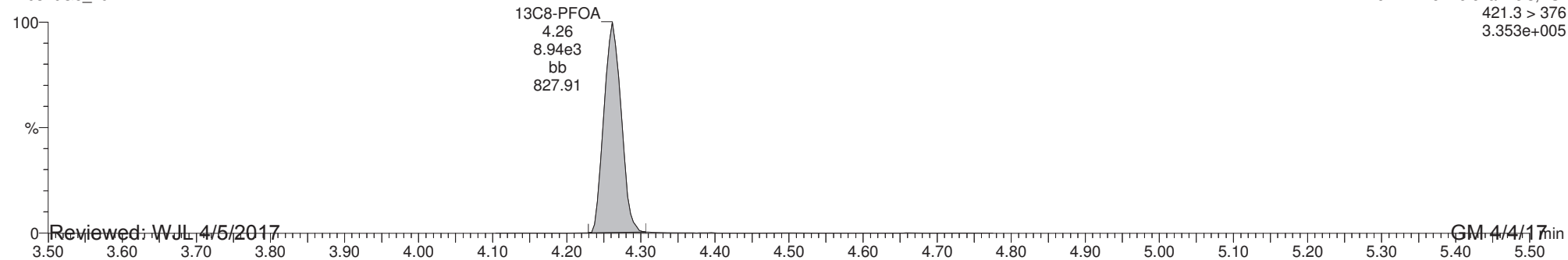
13C2-PFOA

170320G5_29



13C8-PFOA

170320G5_29



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-29.qld

Last Altered: Tuesday, March 21, 2017 12:03:20 Pacific Daylight Time

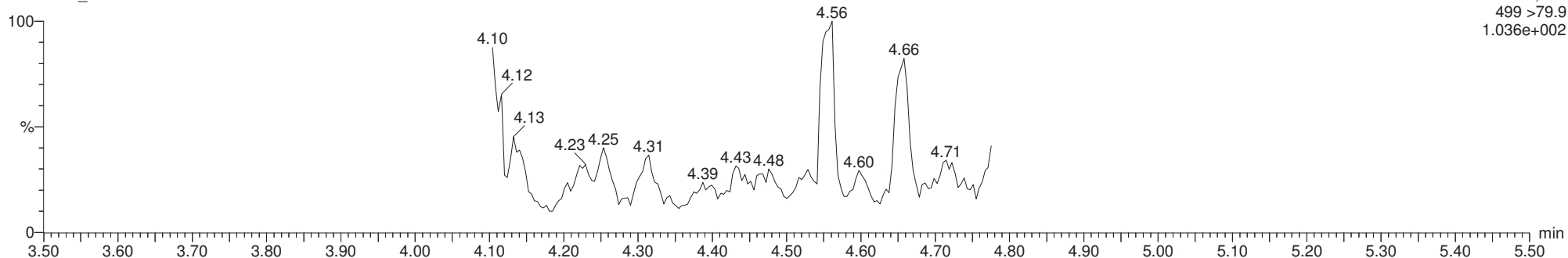
Printed: Tuesday, April 04, 2017 16:16:33 Pacific Daylight Time

ID: 1700345-06 CBD-FB01-031717 0.125, Description: CBD-FB01-031717, Name: 170320G5_29, Date: 21-Mar-2017, Time: 02:56:40, Instrument: , Lab: , User:

Total PFOS

170320G5_29

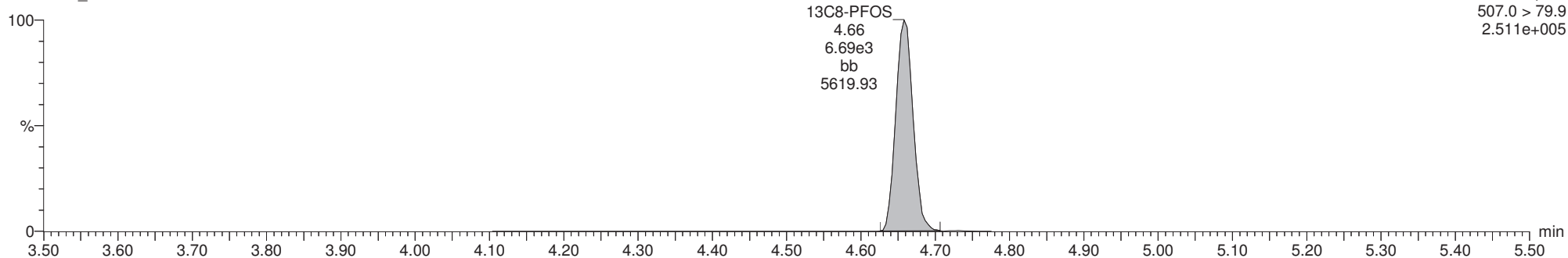
F6:MRM of 16 channels,ES-
499 >79.9
1.036e+002



13C8-PFOS

170320G5_29

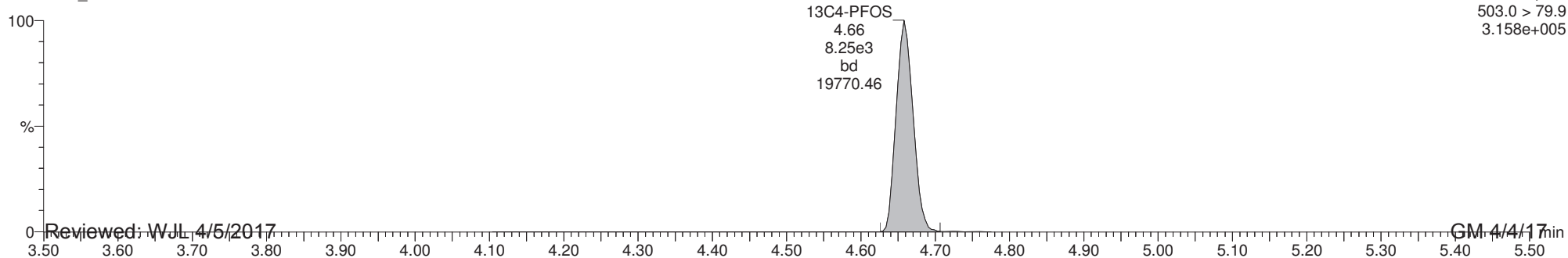
F6:MRM of 16 channels,ES-
507.0 > 79.9
2.511e+005



13C4-PFOS

170320G5_29

F6:MRM of 16 channels,ES-
503.0 > 79.9
3.158e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-30.qld

Last Altered: Tuesday, March 21, 2017 12:06:59 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:17:18 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-07 CBD-SO3-MW01-0317 0.125, Description: CBD-SO3-MW01-0317, Name: 170320G5_30, Date: 21-Mar-2017, Time: 03:09:17

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	8.084e2	6.136e3		0.122	3.00	7.09	
2	8 PFOA	413 > 368.7	2.031e4	2.261e4		0.122	4.26	110	
3	10 PFOS	499 >79.9	5.359e4	4.660e3		0.122	4.66	1130 E*	
4	16 13C3-PFBS	302.0 > 98.8	6.136e3	2.425e4	0.229	0.122	3.00	113	110
5	21 13C2-PFOA	414.9 > 369.7	2.261e4	7.780e3	2.829	0.122	4.26	105	103
6	22 13C8-PFOS	507.0 > 79.9	4.660e3	6.521e3	0.822	0.122	4.65	88.9	86.9
7	28 13C5-PFHxA	318.0 > 272.9	2.425e4	2.425e4	1.000	0.122	3.36	102	100
8	30 13C8-PFOA	421.3 > 376	7.780e3	7.780e3	1.000	0.122	4.26	102	100
9	31 13C4-PFOS	503.0 > 79.9	6.521e3	6.521e3	1.000	0.122	4.66	102	100

*See dilution.

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-30.qld

Last Altered: Tuesday, March 21, 2017 12:06:59 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:17:18 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

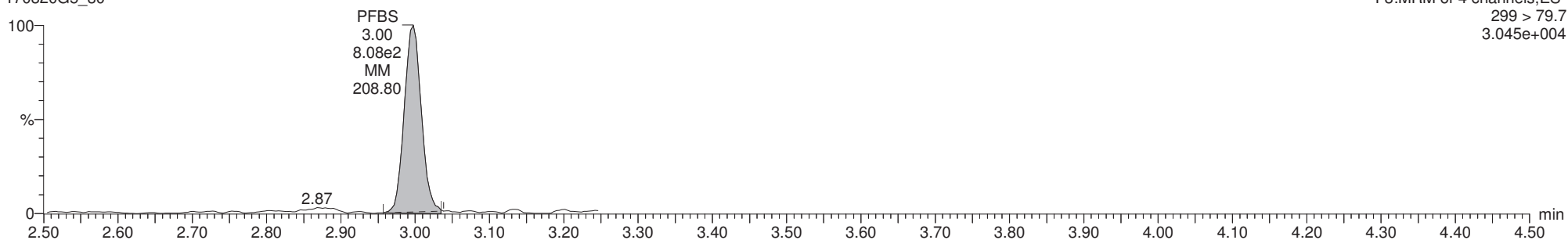
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-07 CBD-SO3-MW01-0317 0.125, Description: CBD-SO3-MW01-0317, Name: 170320G5_30, Date: 21-Mar-2017, Time: 03:09:17, Instrument: , Lab: , User:

Total PFBS

170320G5_30

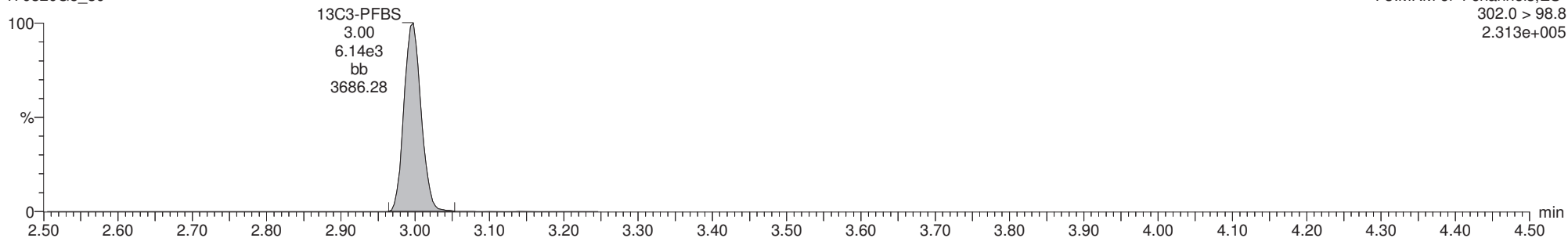
F3:MRM of 4 channels,ES-
299 > 79.7
3.045e+004



13C3-PFBS

170320G5_30

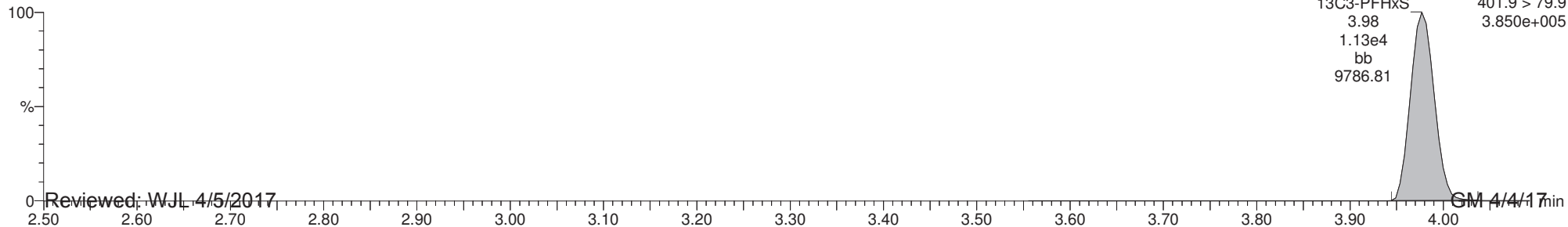
F3:MRM of 4 channels,ES-
302.0 > 98.8
2.313e+005



13C3-PFHxS

170320G5_30

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
3.850e+005



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-30.qld

Last Altered: Tuesday, March 21, 2017 12:06:59 Pacific Daylight Time

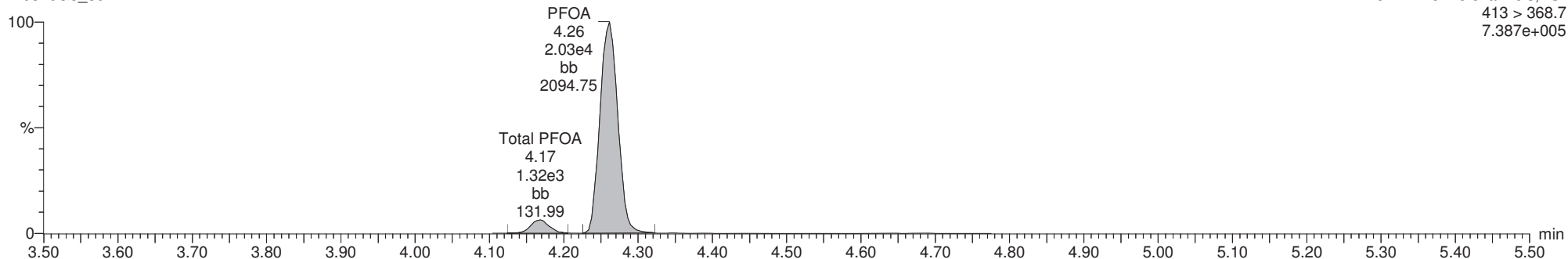
Printed: Tuesday, April 04, 2017 16:17:18 Pacific Daylight Time

ID: 1700345-07 CBD-SO3-MW01-0317 0.125, Description: CBD-SO3-MW01-0317, Name: 170320G5_30, Date: 21-Mar-2017, Time: 03:09:17, Instrument: , Lab: , User:

Total PFOA

170320G5_30

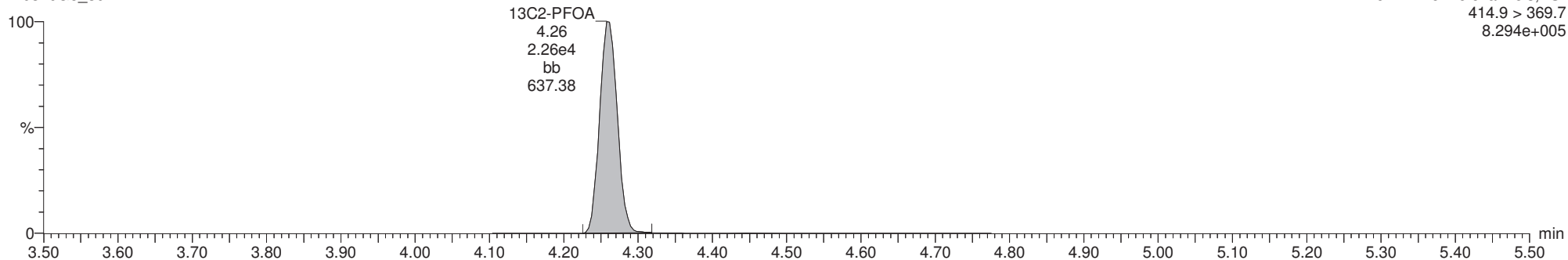
F6:MRM of 16 channels,ES-
413 > 368.7
7.387e+005



13C2-PFOA

170320G5_30

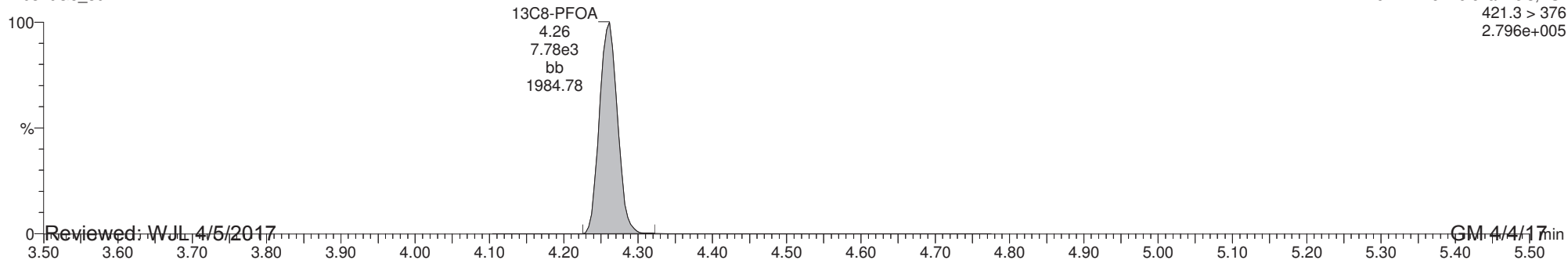
F6:MRM of 16 channels,ES-
414.9 > 369.7
8.294e+005



13C8-PFOA

170320G5_30

F6:MRM of 16 channels,ES-
421.3 > 376
2.796e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-30.qld

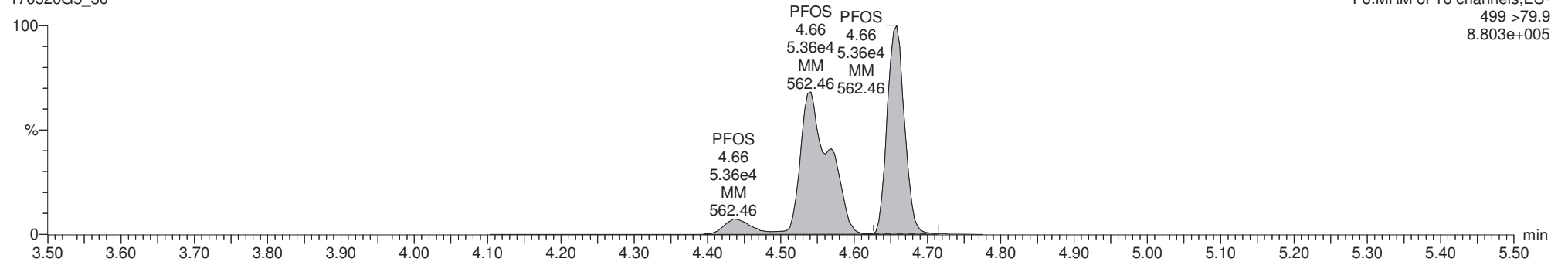
Last Altered: Tuesday, March 21, 2017 12:06:59 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:17:18 Pacific Daylight Time

ID: 1700345-07 CBD-SO3-MW01-0317 0.125, Description: CBD-SO3-MW01-0317, Name: 170320G5_30, Date: 21-Mar-2017, Time: 03:09:17, Instrument: , Lab: , User:

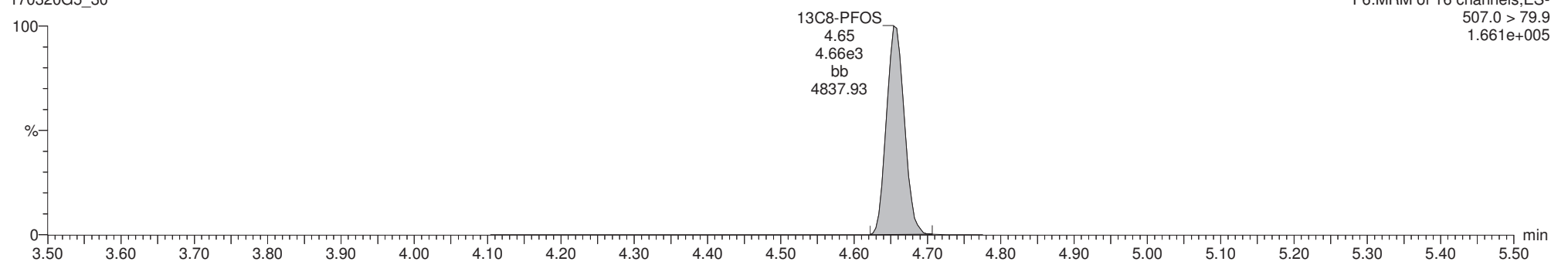
Total PFOS

170320G5_30



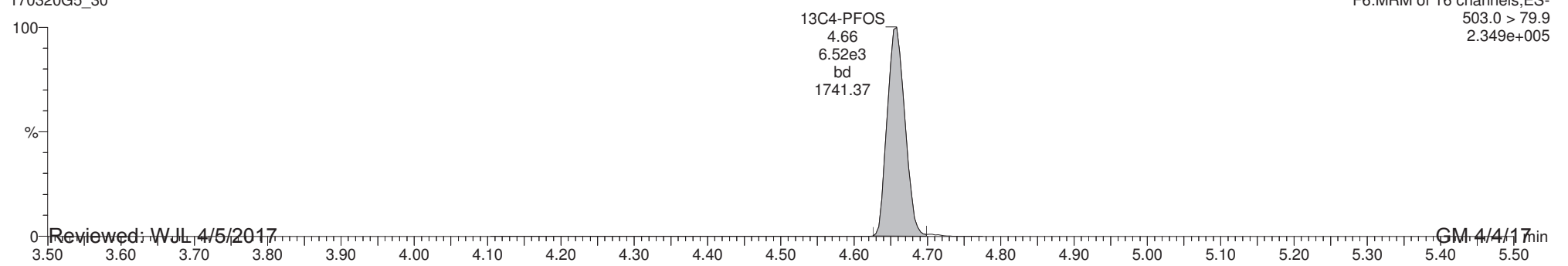
13C8-PFOS

170320G5_30



13C4-PFOS

170320G5_30



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-10.qld

Last Altered: Wednesday, March 22, 2017 14:37:17 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:24:55 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-07@10X CBD-SO3-MW01-0317 0.125, Description: CBD-SO3-MW01-0317, Name: 170322G1_10, Date: 22-Mar-2017, Time: 13:01:26

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	10 PFOS	499 >79.9	3.235e3	2.646e2		0.122	4.63	1200	
2	22 13C8-PFOS	507.0 > 79.9	2.646e2	2.663e2	0.822	0.122	4.62	124	121
3	31 13C4-PFOS	503.0 > 79.9	2.663e2	2.663e2	1.000	0.122	4.62	102	100

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-10.qld

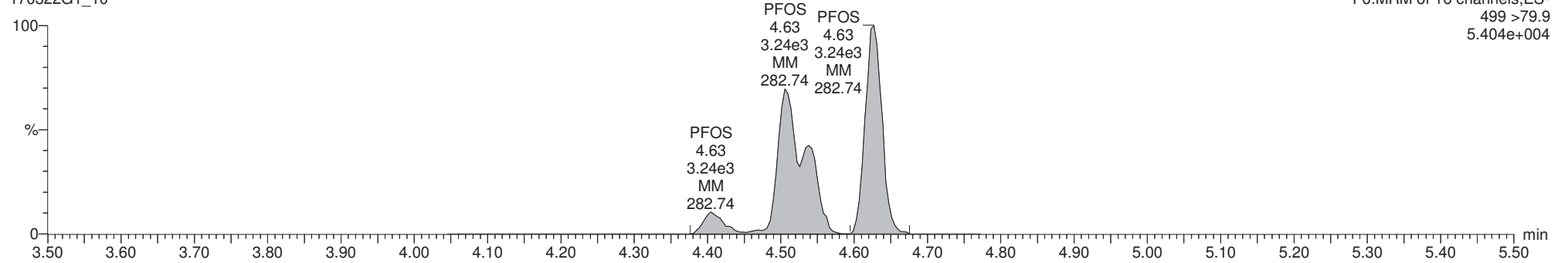
Last Altered: Wednesday, March 22, 2017 14:37:17 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:24:55 Pacific Daylight Time

ID: 1700345-07@10X CBD-SO3-MW01-0317 0.125, Description: CBD-SO3-MW01-0317, Name: 170322G1_10, Date: 22-Mar-2017, Time: 13:01:26, Instrument: , Lab: , User:

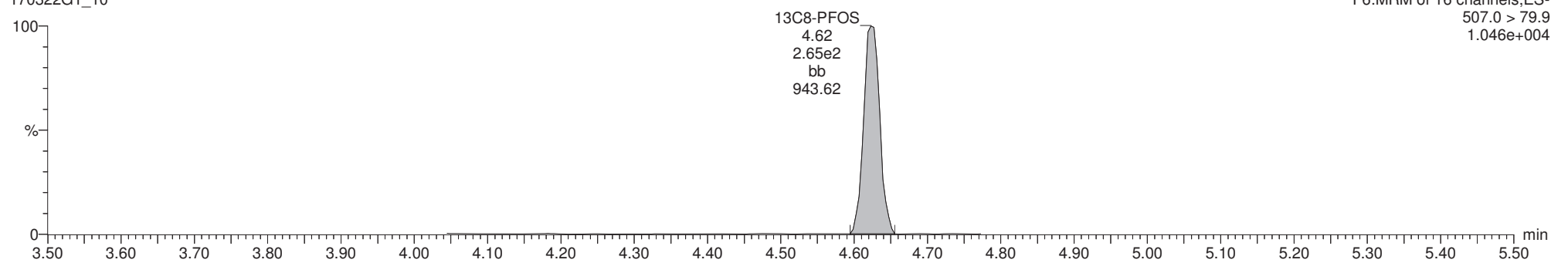
Total PFOS

170322G1_10



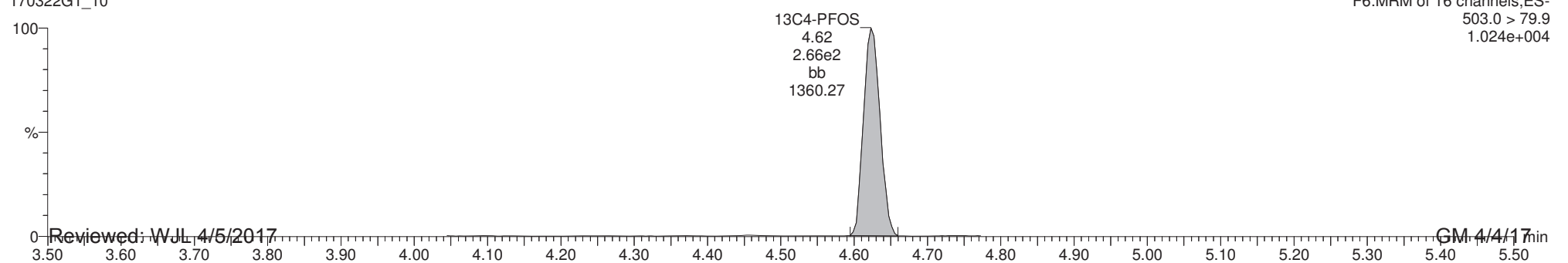
13C8-PFOS

170322G1_10



13C4-PFOS

170322G1_10



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-31.qld

Last Altered: Tuesday, March 21, 2017 12:10:50 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:18:18 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-08 CBD-SO3-MW02-0317 0.125, Description: CBD-SO3-MW02-0317, Name: 170320G5_31, Date: 21-Mar-2017, Time: 03:21:53

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	1.826e3	5.586e3		0.122	3.00	17.5	
2	8 PFOA	413 > 368.7	1.371e4	2.111e4		0.122	4.26	79.1	
3	10 PFOS	499 >79.9	5.622e3	5.263e3		0.122	4.54	105	
4	16 13C3-PFBS	302.0 > 98.8	5.586e3	2.485e4	0.229	0.122	2.99	100	98.0
5	21 13C2-PFOA	414.9 > 369.7	2.111e4	8.129e3	2.829	0.122	4.26	93.8	91.8
6	22 13C8-PFOS	507.0 > 79.9	5.263e3	6.123e3	0.822	0.122	4.65	107	105
7	28 13C5-PFHxA	318.0 > 272.9	2.485e4	2.485e4	1.000	0.122	3.36	102	100
8	30 13C8-PFOA	421.3 > 376	8.129e3	8.129e3	1.000	0.122	4.26	102	100
9	31 13C4-PFOS	503.0 > 79.9	6.123e3	6.123e3	1.000	0.122	4.65	102	100

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-31.qld

Last Altered: Tuesday, March 21, 2017 12:10:50 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:18:18 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

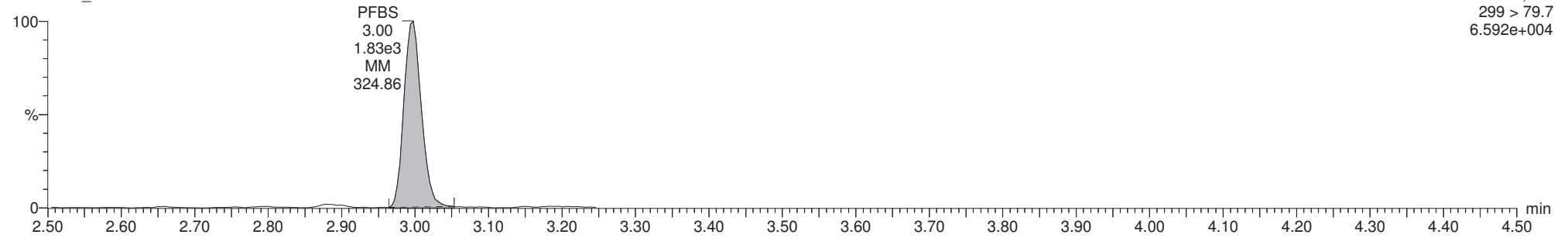
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: 1700345-08 CBD-SO3-MW02-0317 0.125, Description: CBD-SO3-MW02-0317, Name: 170320G5_31, Date: 21-Mar-2017, Time: 03:21:53, Instrument: , Lab: , User:

Total PFBS

170320G5_31

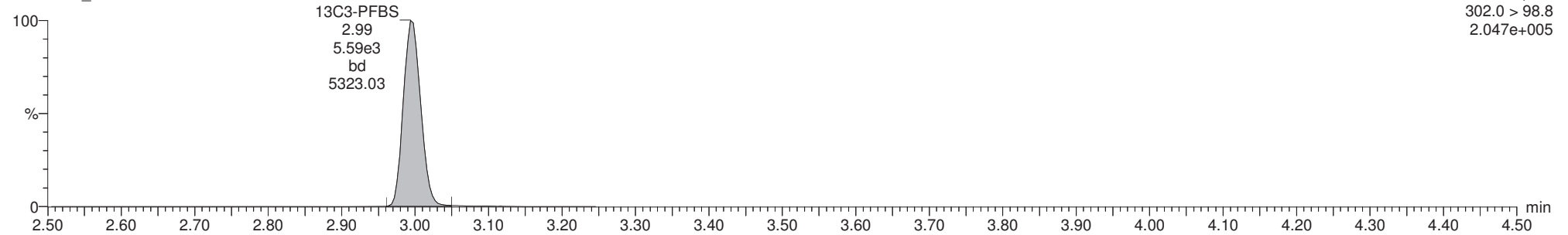
F3:MRM of 4 channels,ES-
299 > 79.7
6.592e+004



13C3-PFBS

170320G5_31

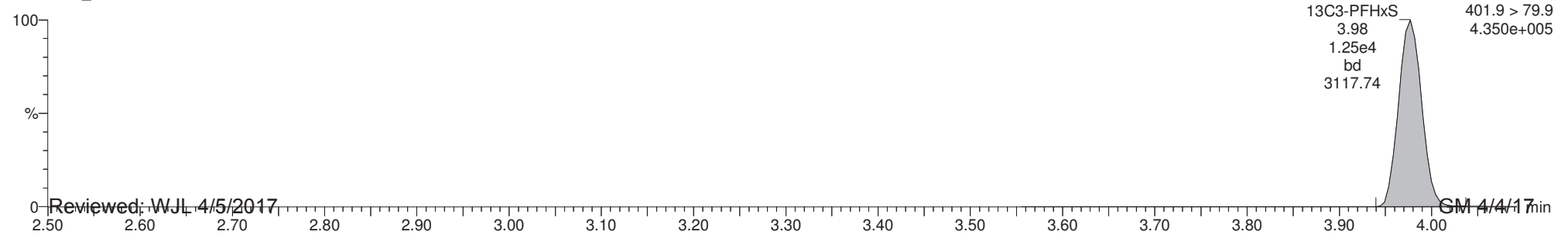
F3:MRM of 4 channels,ES-
302.0 > 98.8
2.047e+005



13C3-PFHxS

170320G5_31

F5:MRM of 5 channels,ES-
13C3-PFHxS 401.9 > 79.9
4.350e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-31.qld

Last Altered: Tuesday, March 21, 2017 12:10:50 Pacific Daylight Time

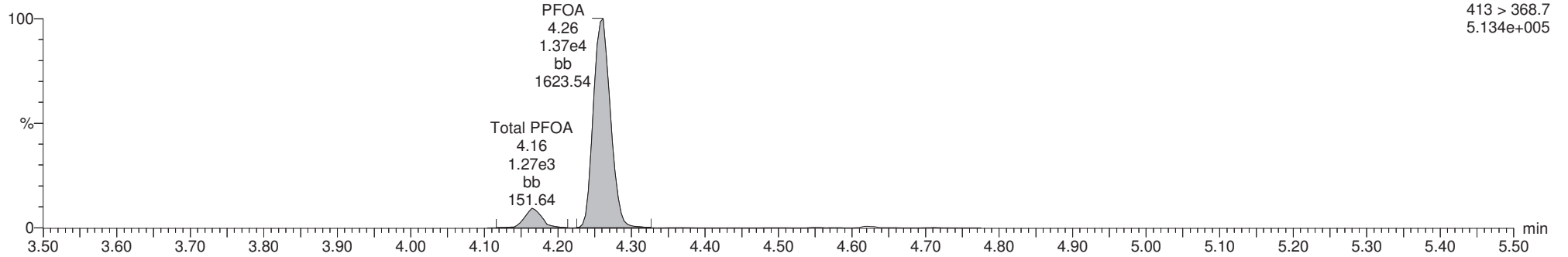
Printed: Tuesday, April 04, 2017 16:18:18 Pacific Daylight Time

ID: 1700345-08 CBD-SO3-MW02-0317 0.125, Description: CBD-SO3-MW02-0317, Name: 170320G5_31, Date: 21-Mar-2017, Time: 03:21:53, Instrument: , Lab: , User:

Total PFOA

170320G5_31

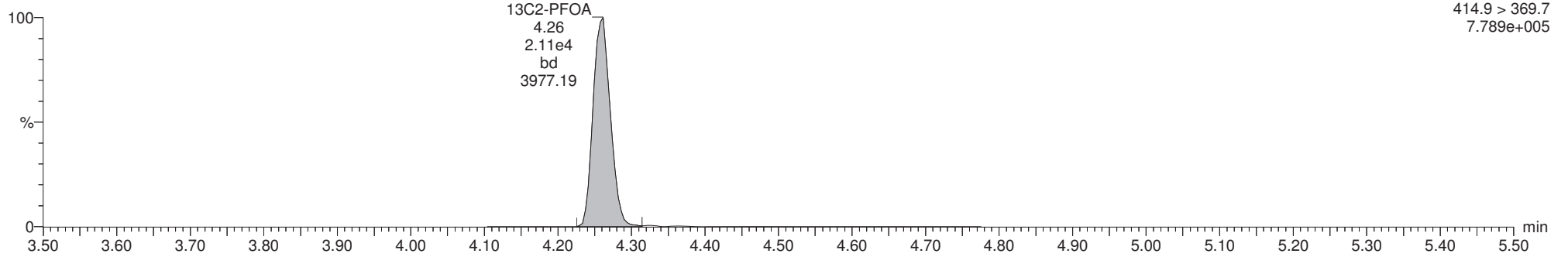
F6:MRM of 16 channels,ES-
413 > 368.7
5.134e+005



13C2-PFOA

170320G5_31

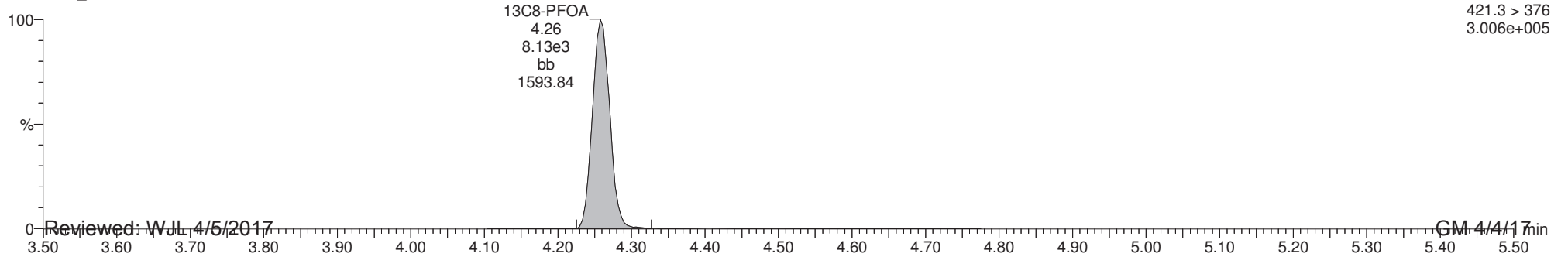
F6:MRM of 16 channels,ES-
414.9 > 369.7
7.789e+005



13C8-PFOA

170320G5_31

F6:MRM of 16 channels,ES-
421.3 > 376
3.006e+005



Reviewed: WJL 4/5/2017

GM 4/4/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-31.qld

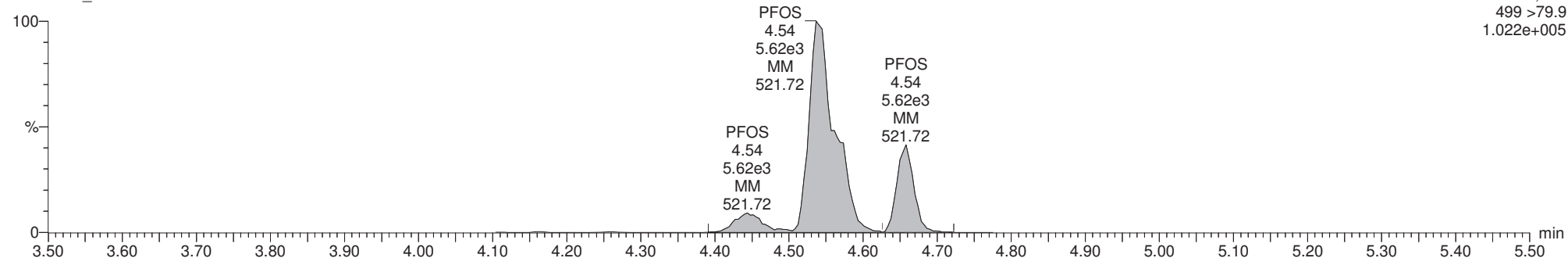
Last Altered: Tuesday, March 21, 2017 12:10:50 Pacific Daylight Time

Printed: Tuesday, April 04, 2017 16:18:18 Pacific Daylight Time

ID: 1700345-08 CBD-SO3-MW02-0317 0.125, Description: CBD-SO3-MW02-0317, Name: 170320G5_31, Date: 21-Mar-2017, Time: 03:21:53, Instrument: , Lab: , User:

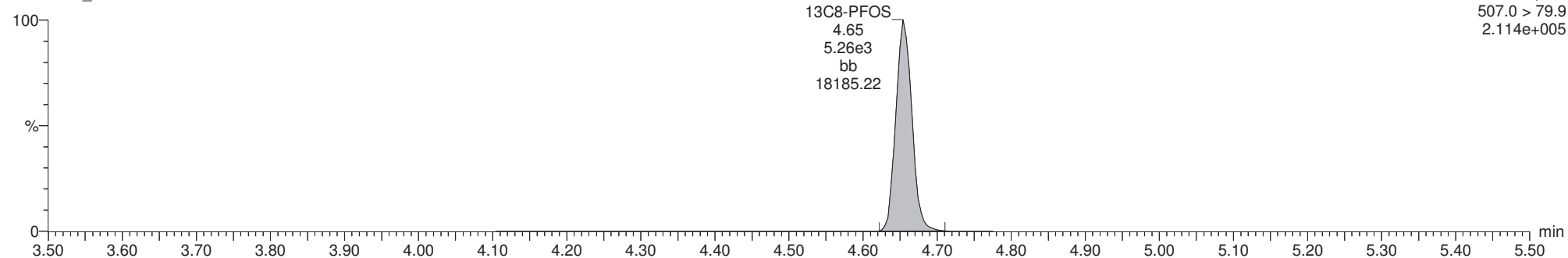
Total PFOS

170320G5_31



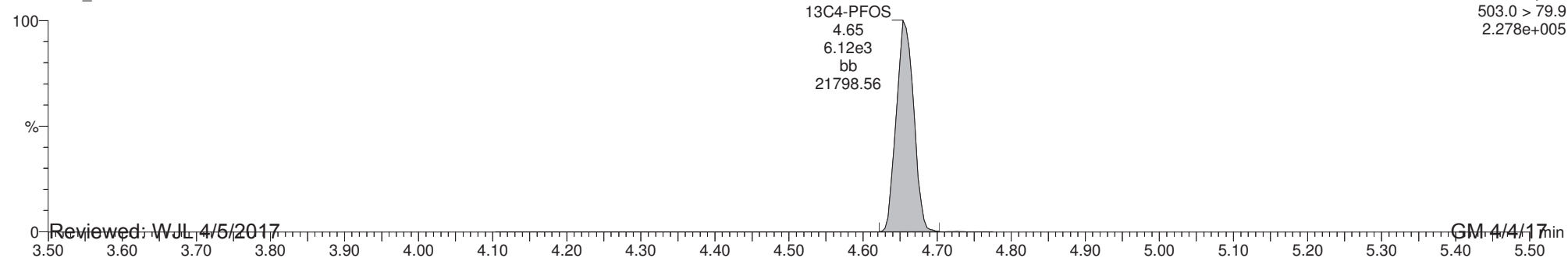
13C8-PFOS

170320G5_31



13C4-PFOS

170320G5_31



Reviewed: WJL 4/5/2017

GM 4/4/17

CONTINUING CALIBRATION

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-33.qld

Last Altered: Friday, March 24, 2017 09:49:11 Pacific Daylight Time

Printed: Friday, March 24, 2017 09:51:16 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS_A_Full_Lin0317.mdb 17 Mar 2017 13:44:41

Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170320G5_33, Date: 21-Mar-2017, Time: 03:47:05, ID: ST170320G5-9 PFC CS3 17C2007, Description: PFC CS3 17C2007 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	3 PFBS	299 > 79.7	1.18e4	6.80e3		1.000	2.99	11.3	113.0
2	4 PFHxA	313.2 > 268.9	7.70e3	6.43e3		1.000	3.36	10.6	106.2
3	5 PFHpA	363 > 318.9	2.36e4	1.69e4		1.000	3.86	10.8	107.8
4	6 PFHxS	398.9 > 79.6	1.18e4	7.12e3		1.000	3.98	11.3	112.9
5	8 PFOA	413 > 368.7	2.53e4	3.35e4		1.000	4.26	11.3	113.1
6	10 PFOS	499 > 79.9	8.62e3	8.45e3		1.000	4.66	12.3	122.9
7	11 PFNA	463 > 418.8	1.64e4	9.46e3		1.000	4.59	10.9	109.1
8	12 PFDA	513 > 468.8	8.13e3	1.01e4		1.000	4.90	11.6	116.5
9	16 13C3-PFBS	302.0 > 98.8	6.80e3	3.01e4	0.229	1.000	2.99	12.3	98.7
10	17 13C2-PFHxA	315 > 269.8	6.43e3	3.01e4	0.527	1.000	3.36	5.08	101.7
11	18 13C4-PFHpA	367.2 > 321.8	1.69e4	1.78e4	0.914	1.000	3.86	13.0	103.8
12	19 18O2-PFHxS	403 > 102.6	7.12e3	1.78e4	0.382	1.000	3.98	13.1	104.7
13	20 13C2-6:2 FTS	429.1 > 408.9	5.01e3	1.07e4		1.000	4.21		*
14	21 13C2-PFOA	414.9 > 369.7	3.35e4	1.07e4	2.829	1.000	4.26	13.9	110.9
15	22 13C8-PFOS	507.0 > 79.9	8.45e3	1.15e4	0.822	1.000	4.65	11.2	89.4
16	23 13C5-PFNA	468.2 > 422.9	9.46e3	1.30e4	0.788	1.000	4.59	11.6	92.4
17	24 13C2-PFDA	515.1 > 469.9	1.01e4	9.01e3	0.999	1.000	4.90	14.1	112.7
18	25 13C2-8:2 FTS	529.1 > 508.7	2.44e3	9.01e3		1.000	4.88		*
19	26 13C4-PFBA	217 > 171.8	2.58e4	2.58e4	1.000	1.000	1.80	12.5	100.0
20	27 13C2-4:2 FTS	329.2 > 308.9				1.000			*
21	28 13C5-PFHxA	318.0 > 272.9	3.01e4	3.01e4	1.000	1.000	3.36	12.5	100.0
22	29 13C3-PFHxS	401.9 > 79.9	1.78e4	1.78e4	1.000	1.000	3.98	12.5	100.0
23	30 13C8-PFOA	421.3 > 376	1.07e4	1.07e4	1.000	1.000	4.26	12.5	100.0
24	31 13C4-PFOS	503.0 > 79.9	1.15e4	1.15e4	1.000	1.000	4.66	12.5	100.0
25	32 13C9-PFNA	472.2 > 426.9	1.30e4	1.30e4	1.000	1.000	4.59	12.5	100.0
26	33 13C6-PFDA	519.1 > 473.7	9.01e3	9.01e3	1.000	1.000	4.90	12.5	100.0

75-125

60-150

60-150

50-150

60-150

ED 3/24/17

* Not used.

Dataset: Untitled

Last Altered: Friday, March 24, 2017 09:52:12 Pacific Daylight Time

Printed: Friday, March 24, 2017 09:52:29 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin0317.mdb 17 Mar 2017 13:44:41
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170320G5_1	IPA	20-Mar-17	21:03:39
2	170320G5_2	ST170320G5-1 PFC CS-2 17C2002	20-Mar-17	21:16:17
3	170320G5_3	ST170320G5-2 PFC CS-1 17C2003	20-Mar-17	21:28:54
4	170320G5_4	ST170320G5-3 PFC CS0 17C2004	20-Mar-17	21:41:31
5	170320G5_5	ST170320G5-4 PFC CS1 17C2005	20-Mar-17	21:54:10
6	170320G5_6	ST170320G5-5 PFC CS2 17C2006	20-Mar-17	22:06:44
7	170320G5_7	ST170320G5-6 PFC CS3 17C2007	20-Mar-17	22:19:18
8	170320G5_8	ST170320G5-7 PFC CS4 17C2008	20-Mar-17	22:31:53
9	170320G5_9	ST170320G5-8 PFC CS5 17C2009	20-Mar-17	22:44:29
10	170320G5_10	IPA	20-Mar-17	22:57:05
11	170320G5_11	SS170320G5-1 PFC SSS 17C2010	20-Mar-17	23:09:43
12	170320G5_12	IPA	20-Mar-17	23:22:19
13	170320G5_13	B7C0093-BS1 OPR 0.25	20-Mar-17	23:34:57
14	170320G5_14	B7C0099-BS1 OPR 0.125	20-Mar-17	23:47:34
15	170320G5_15	IPA	21-Mar-17	00:00:11
16	170320G5_16	B7C0093-BLK1 Method Blank 0.25	21-Mar-17	00:12:50
17	170320G5_17	B7C0099-BLK1 Method Blank 0.125	21-Mar-17	00:25:24
18	170320G5_18	1700286-01RE2 Raw (420-117550-1) 0.26617	21-Mar-17	00:37:59
19	170320G5_19	1700287-01RE2 Raw, Well #4 (420-117557-1)...	21-Mar-17	00:50:35
20	170320G5_20	1700288-01RE2 Raw (420-117558-1) 0.26284	21-Mar-17	01:03:11
21	170320G5_21	1700289-01RE2 Raw, Well #53 (420-117559-1)...	21-Mar-17	01:15:47
22	170320G5_22	1700345-01 CBD-AOA-MW05-0317 0.125	21-Mar-17	01:28:24
23	170320G5_23	1700345-02 CBD-EB01-031717 0.125	21-Mar-17	01:41:02
24	170320G5_24	1700345-03 CBD-AOA-MW06-0317 0.125	21-Mar-17	01:53:40
25	170320G5_25	1700345-04 CBD-AOA-MW08-0317 0.125	21-Mar-17	02:06:14
26	170320G5_26	B7C0099-MS1 Matrix Spike 0.125	21-Mar-17	02:18:52
27	170320G5_27	B7C0099-MSD1 Matrix Spike Dup 0.125	21-Mar-17	02:31:27
28	170320G5_28	1700345-05 CBD-SO4-MW01-0317 0.125	21-Mar-17	02:44:03
29	170320G5_29	1700345-06 CBD-FB01-031717 0.125	21-Mar-17	02:56:40
30	170320G5_30	1700345-07 CBD-SO3-MW01-0317 0.125	21-Mar-17	03:09:17
31	170320G5_31	1700345-08 CBD-SO3-MW02-0317 0.125	21-Mar-17	03:21:53

Dataset: Untitled

Last Altered: Friday, March 24, 2017 09:52:12 Pacific Daylight Time

Printed: Friday, March 24, 2017 09:52:29 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	170320G5_32	IPA	21-Mar-17	03:34:28
33	170320G5_33	ST170320G5-9 PFC CS3 17C2007	21-Mar-17	03:47:05
34	170320G5_34	IPA	21-Mar-17	03:59:41

LC Calibration Standards Review Checklist

Q1

		ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	
Calibration ID: <u>ST17082065-9</u>	L M H	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<u>MA</u> <input checked="" type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Calibration ID: _____	L M H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Full Mass Cal. Date: 12/7/16

Run Log Present:

of Samples per Sequence Checked:

Reviewed By: em 3/24/17
Initials/Date

Comments: List 14A

Dataset: Untitled

Last Altered: Friday, March 24, 2017 09:52:40 Pacific Daylight Time
Printed: Friday, March 24, 2017 09:53:05 Pacific Daylight Time

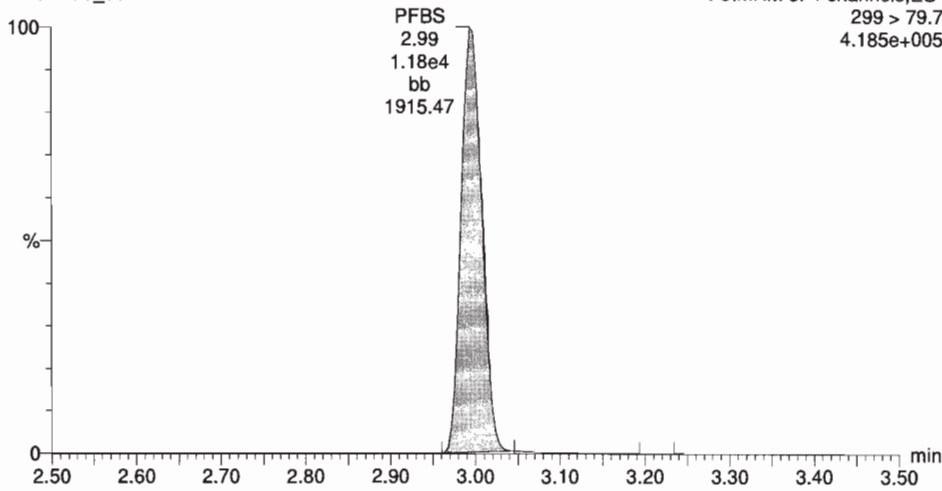
Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin0317.mdb 17 Mar 2017 13:44:41

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: ST170320G5-9 PFC CS3 17C2007, Description: PFC CS3 17C2007 A, Name: 170320G5_33, Date: 21-Mar-2017, Time: 03:47:05, Instrument: , Lab: , User:

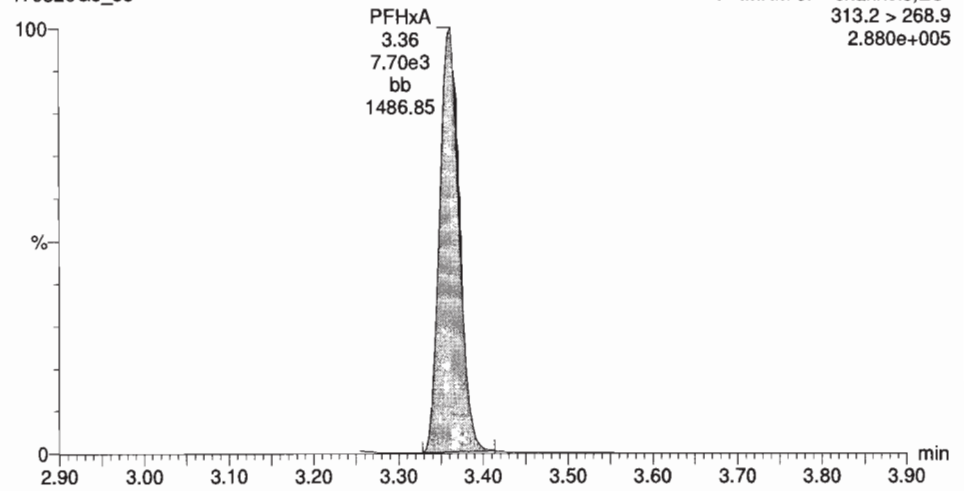
Total PFBS

170320G5_33



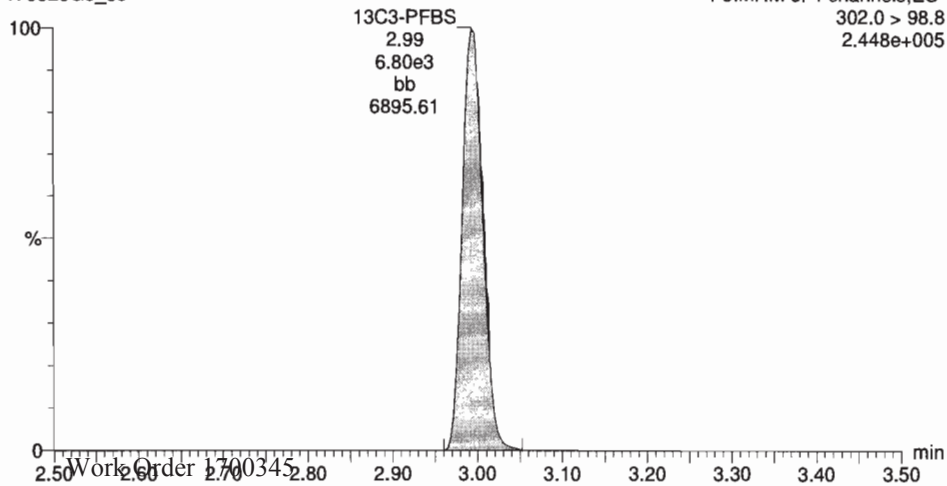
PFHxA

170320G5_33



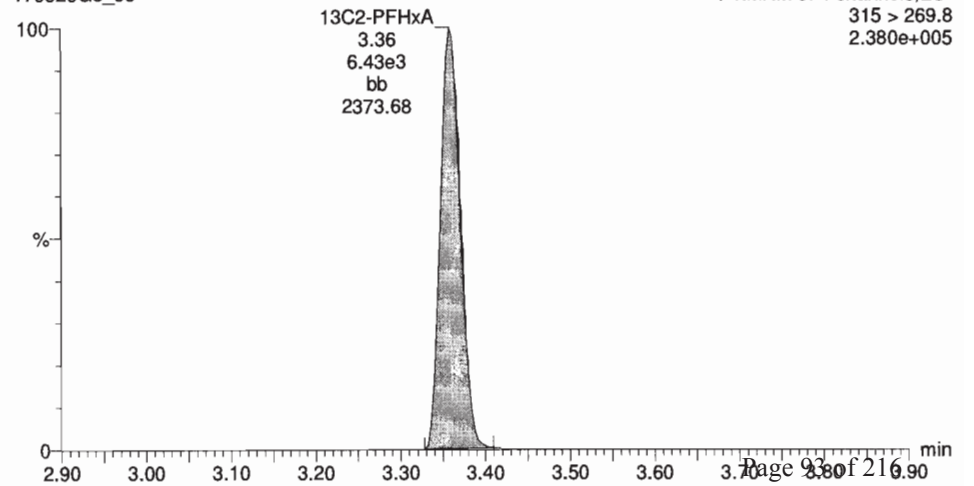
13C3-PFBS

170320G5_33



13C2-PFHxA

170320G5_33



Dataset: Untitled

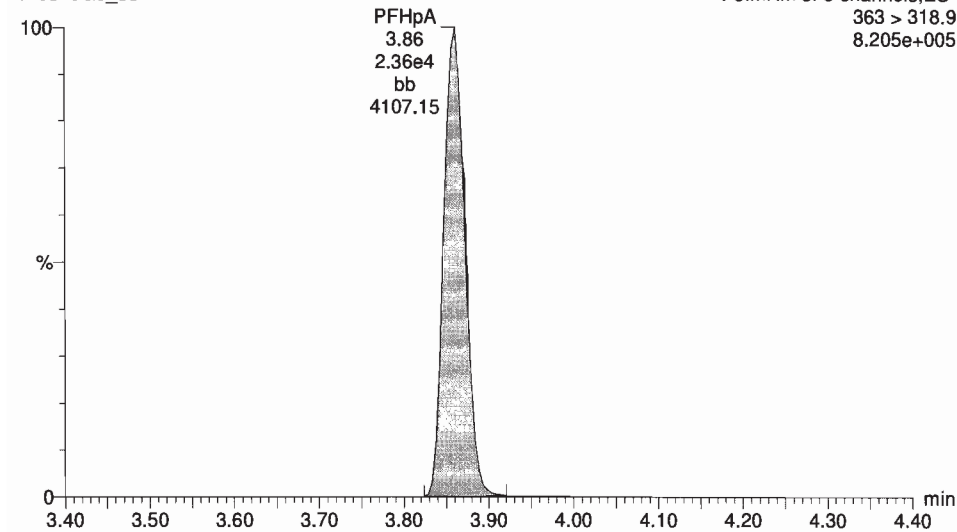
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Printed: Friday, March 24, 2017 09:53:05 Pacific Daylight Time

ID: ST170320G5-9 PFC CS3 17C2007, Description: PFC CS3 17C2007 A, Name: 170320G5_33, Date: 21-Mar-2017, Time: 03:47:05, Instrument: , Lab: , User:

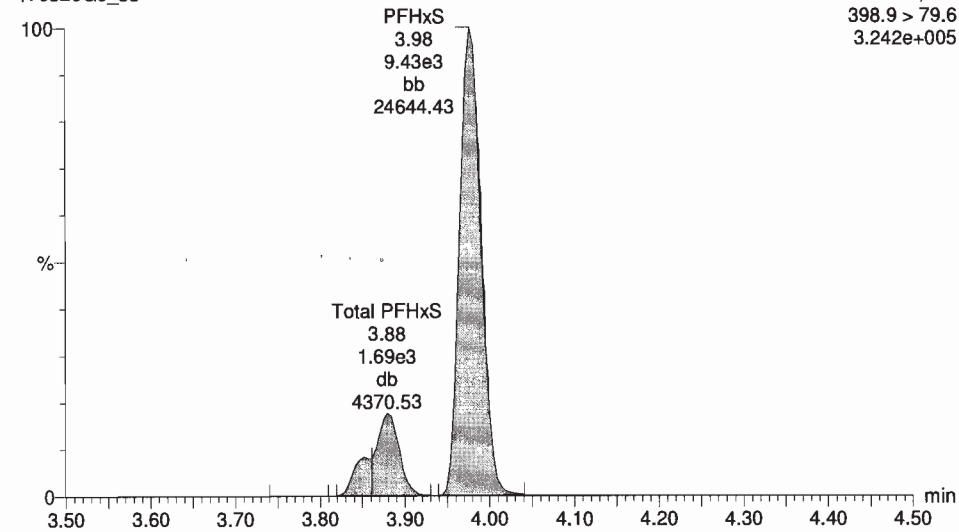
PFHpA

170320G5_33



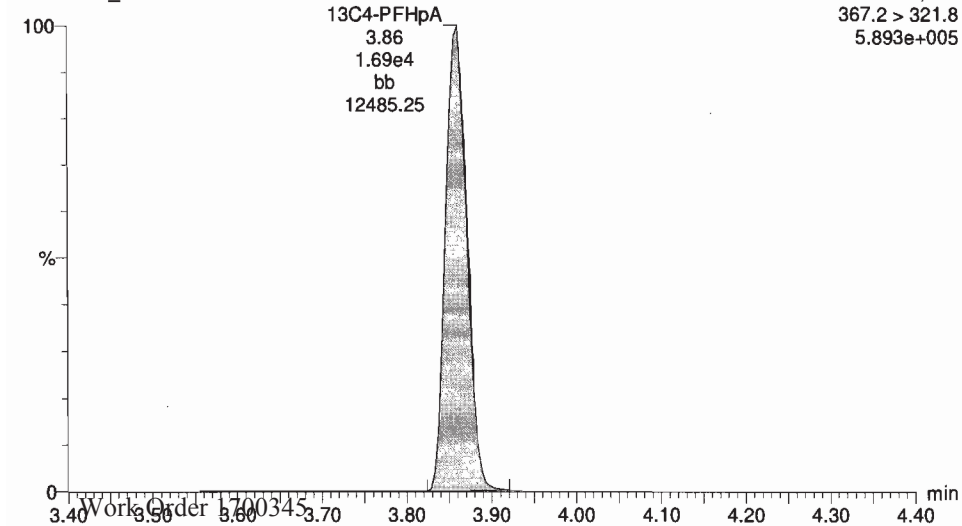
Total PFHxS

170320G5_33



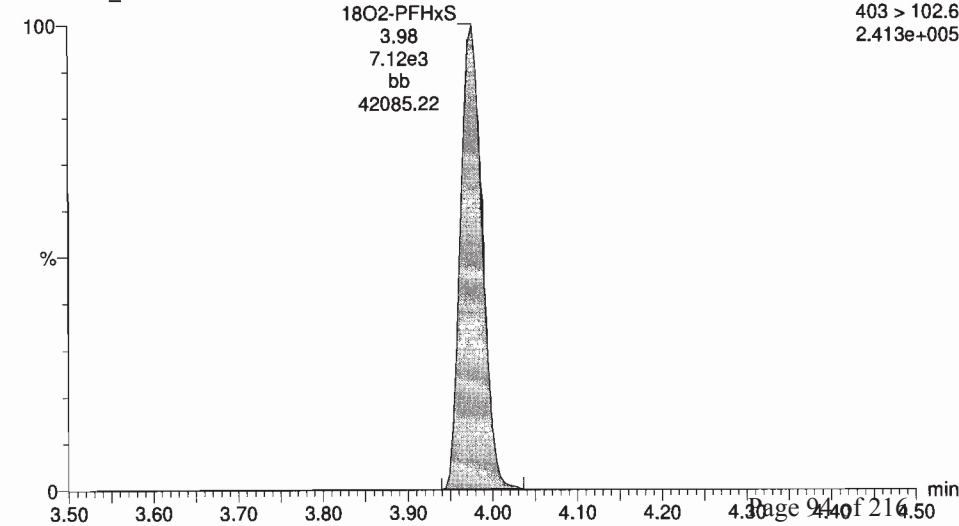
13C4-PFHpA

170320G5_33

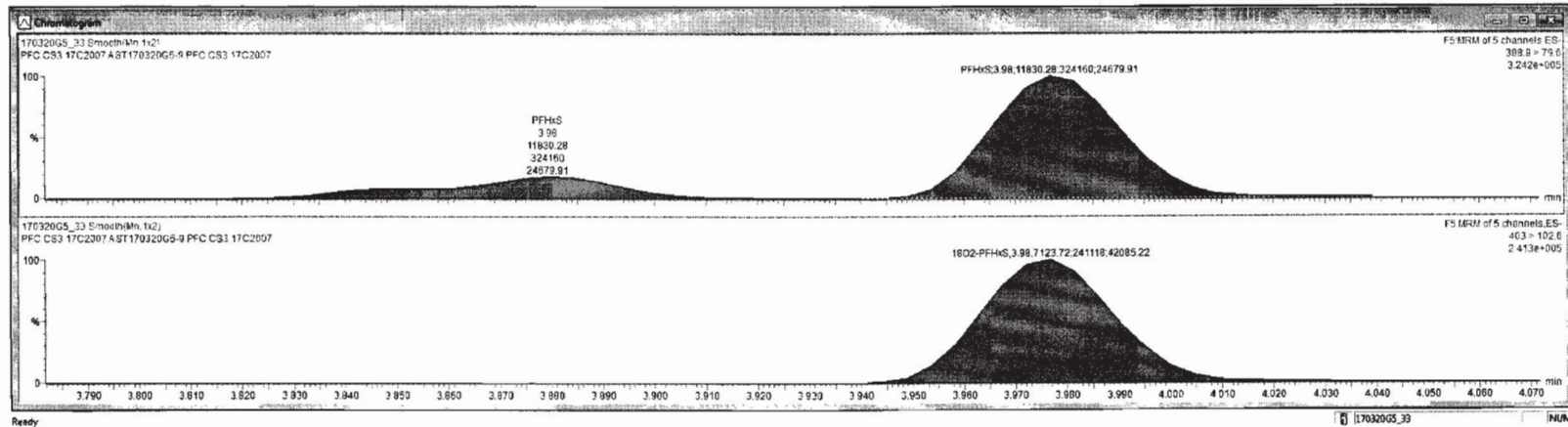


18O2-PFHxS

170320G5_33



Peak	Name	Trace	Area	RRF	WVVol	Pred RT	RT	Conc.	>MOL	%Rec	EL
1	PFBA	213.1 x 168.8	1.16e4		1.000	1.90	1.90	11.7	YES	116.5	0.0003000
2	PFPeA	263.1 x 218.9	8.60e3		1.000	2.73	2.73	11.3	YES	112.5	0.0005000
3	PFBS	298 x 79.7	1.16e4		1.000	2.99	2.99	11.3	YES	113.9	0.0218610
4	PFNA	313.2 x 266.9	7.78e3		1.000	3.36	3.36	10.8	YES	106.2	0.0002000
5	PFHpA	363 x 318.9	2.36e4		1.000	3.86	3.86	10.8	YES	107.8	0.0054751
6	PFHxS	388.8 x 328.8	1.16e4		1.000	3.88	3.88	11.3	YES	112.9	0.0002000
7	6:2 FTS	427.1 x 407	1.84e3		1.000	4.21	4.21	57.9	YES	578.7	0.2694121
8	PFOA	413 x 368.7	2.63e4		1.000	4.26	4.26	11.3	YES	113.1	0.0005000
9	PFHpS	448 x 88.7	1.70e3		1.000	4.26	4.34	9.27	YES	92.7	0.0709906
10	PFOS	498 x 79.9	8.62e3		1.000	4.66	4.66	12.3	YES	122.9	0.0642233
11	PFNA	463 x 418.8	1.64e4		1.000	4.59	4.59	10.5	YES	109.1	0.0090196
12	PFOA	513 x 488.6	8.13e3		1.000	4.90	4.90	11.6	NO	118.5	0.0005000
13	6:2 FTS	527 x 506.9	2.29e3		1.000	4.88	4.88	47.7	YES	477.4	0.2094617
14	13C3-PFBA	216.1 x 171.8	2.96e4	1.14	1.000	1.90	1.90	12.6	NO	109.8	0.0093593
15	13C3-PFPeA	269 x 221.8	1.19e4	0.402	1.000	2.74	2.73	12.3	NO	98.6	0.0079309
16	13C3-PFBS	302.0 x 96.8	6.80e3	0.229	1.000	2.99	2.99	12.3	NO	98.7	0.0643637
17	13C2-PFNA	315 x 269.8	6.43e3	0.527	1.000	3.36	3.36	5.08	NO	101.7	0.0053676
18	13C4-PFHpA	367.2 x 321.8	1.69e4	0.914	1.000	3.86	3.86	13.0	NO	103.8	0.0025963
19	18O2-PFHS	403 x 102.6	7.12e3	0.382	1.000	3.88	3.90	13.1	NO	104.7	0.0007547
20	13C2-6:2 FTS	428.1 x 406.9	5.81e3		1.000	4.18	4.21		NO		
21	13C2-PFOA	414.9 x 389.7	3.35e4	2.83	1.000	4.26	4.26	13.9	NO	110.9	0.0003581
22	13C3-PFOS	507.0 x 79.9	8.45e3	0.822	1.000	4.66	4.65	11.2	NO	89.4	0.0049374
23	13C5-PFNA	468.2 x 422.5	9.46e3	0.788	1.000	4.59	4.59	11.6	NO	92.4	0.0121161
24	13C2-PFOA	515.1 x 485.9	1.01e4	0.999	1.000	4.90	4.90	14.1	NO	112.7	0.0016382



Dataset: Untitled

Last Altered: Friday, March 24, 2017 09:52:40 Pacific Daylight Time

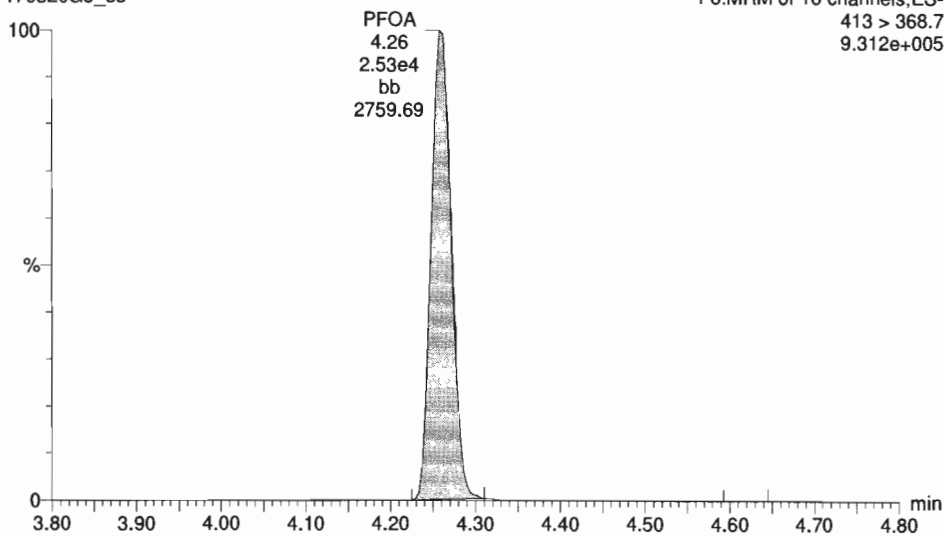
Printed: Friday, March 24, 2017 09:53:05 Pacific Daylight Time

ID: ST170320G5-9 PFC CS3 17C2007, Description: PFC CS3 17C2007 A, Name: 170320G5_33, Date: 21-Mar-2017, Time: 03:47:05, Instrument: , Lab: , User:

Total PFOA

170320G5_33

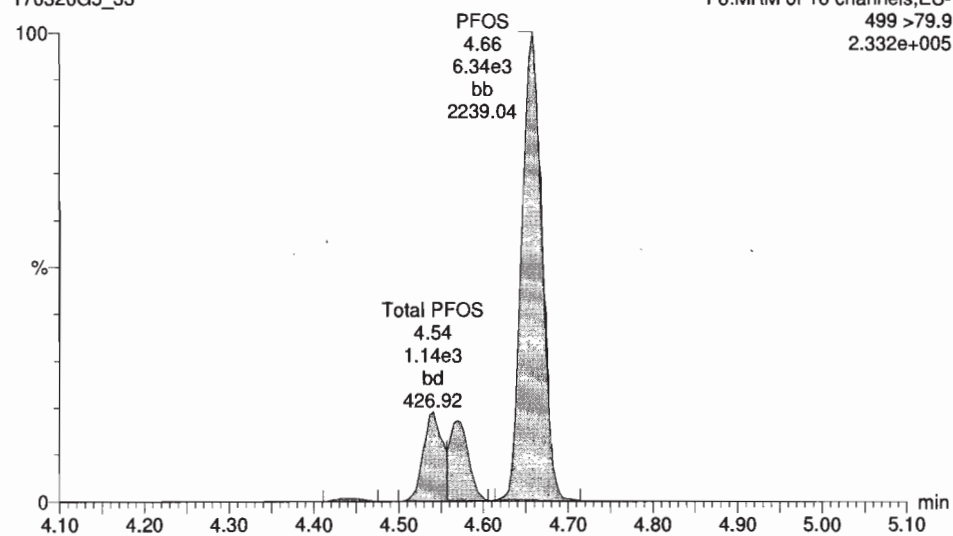
F6:MRM of 16 channels,ES-
413 > 368.7
9.312e+005



Total PFOS

170320G5_33

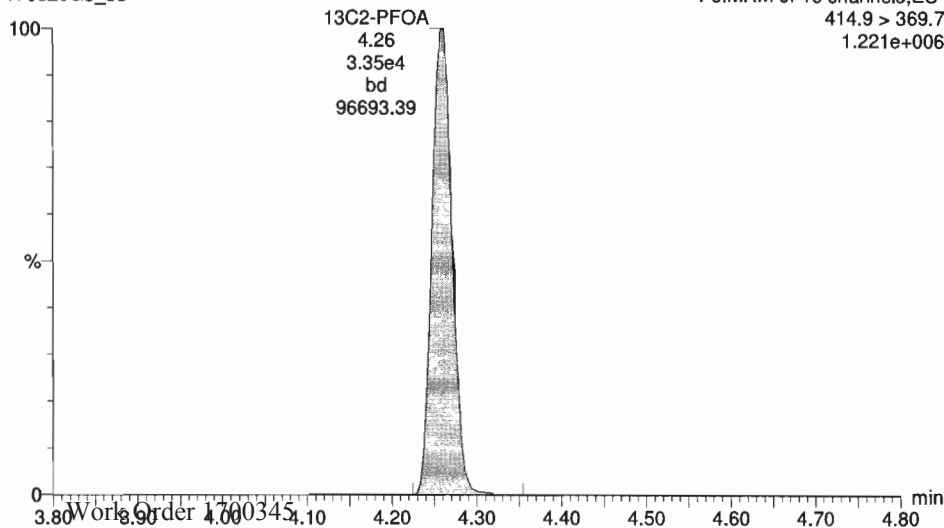
F6:MRM of 16 channels,ES-
499 > 79.9
2.332e+005



13C2-PFOA

170320G5_33

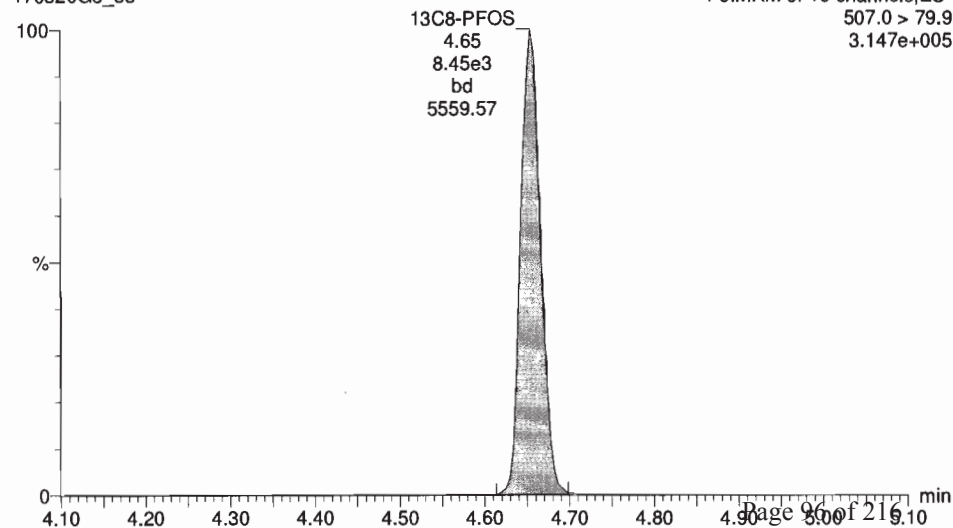
F6:MRM of 16 channels,ES-
414.9 > 369.7
1.221e+006



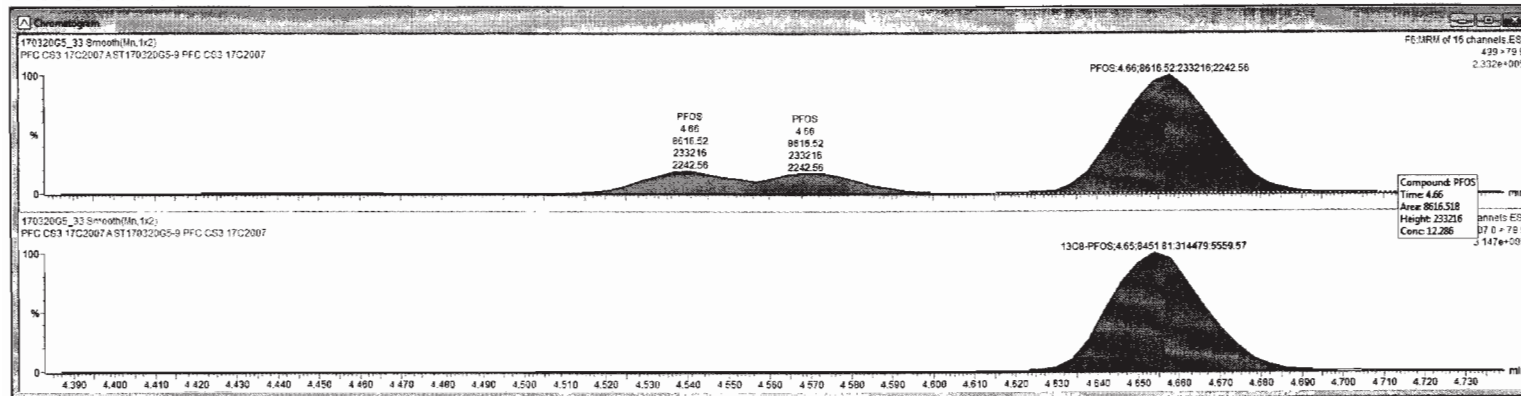
13C8-PFOS

170320G5_33

F6:MRM of 16 channels,ES-
507.0 > 79.9
3.147e+005



Name	Trace	Area	RRF	WYVAL	ProdRT	RT	Conc	MOL	%Rec	DL	
1	PFBA	213.1 x 168.8	1.65e4	1.000	1.80	1.80	11.7	YES	116.1	0.0000000	
2	PFNA	253.1 x 218.9	8.65e3	1.000	2.73	2.73	11.3	YES	113.8	0.0000000	
3	PFBs	289 x 72.7	1.18e4	1.000	2.99	2.99	11.3	YES	113.9	0.0010210	
4	PFHxA	315.2 x 268.9	7.75e3	1.000	3.35	3.36	10.6	YES	106.2	0.0000000	
5	PFHpA	363 x 318.8	2.36e4	1.000	3.86	3.86	10.6	YES	107.8	0.0054781	
6	PFHxS	388.9 x 79.8	1.18e4	1.000	3.88	3.95	11.3	YES	112.8	0.0000000	
7	6:2 FTIS	427.1 x 407	1.94e3	1.000	4.21	4.21	57.9	YES	578.7	0.2694121	
8	PFDA	413 x 363.7	2.53e4	1.000	4.26	4.26	11.3	YES	113.1	0.0000000	
9	PFHbS	449 x 98.7	1.70e3	1.000	4.26	4.34	9.27	YES	92.7	0.0799996	
10	PFOS	466 x 78.9	8.82e3	1.000	4.66	4.66	12.3	YES	122.8	0.0642235	
11	PFNA	453 x 418.8	1.64e4	1.000	4.59	4.53	10.9	YES	109.1	0.0090196	
12	PFDA	515 x 468.8	8.15e3	1.000	4.60	4.60	11.6	NO	116.5	0.0000000	
13	6:2 FTIS	527 x 508.9	2.28e3	1.000	4.88	4.85	47.7	YES	477.4	0.2094917	
14	13C3-PFBA	216.1 x 171.8	2.98e4	1.14	1.80	1.88	12.6	NO	100.5	0.0093593	
15	13C3-PFNa	266 x 221.8	1.19e4	0.402	1.80	2.73	12.3	NO	95.6	0.0079300	
16	13C3-PFBs	302.0 x 98.8	8.86e3	0.229	1.80	2.99	12.3	NO	98.7	0.0043587	
17	13C2-PFNa	315 x 269.8	8.43e3	0.527	1.80	3.36	5.68	NO	101.7	0.0053875	
18	13C2-PFHpA	387.2 x 321.8	1.89e4	0.914	1.80	3.86	13.8	NO	103.5	0.0025963	
19	13C2-PFHS	403 x 192.8	7.12e3	0.382	1.80	3.88	13.1	NO	104.7	0.0007547	
20	13C2-6:2 FTIS	429.1 x 408.9	5.91e3	1.000	4.18	4.21		NO			
21	13C2-PFDA	414.9 x 369.7	3.35e4	2.83	1.000	4.26	4.26	13.9	NO	116.9	0.0051591
22	13C8-PFOS	507.0 x 79.9	8.45e3	0.822	1.000	4.66	4.65	11.2	NO	89.4	0.0049374
23	13C3-PFNA	486.2 x 422.9	9.48e3	0.788	1.000	4.59	4.59	11.6	NO	92.4	0.0121181
24	13C2-PFDA	515.1 x 469.9	1.01e4	0.999	1.000	4.60	4.60	14.1	NO	112.7	0.0016382



Dataset: Untitled

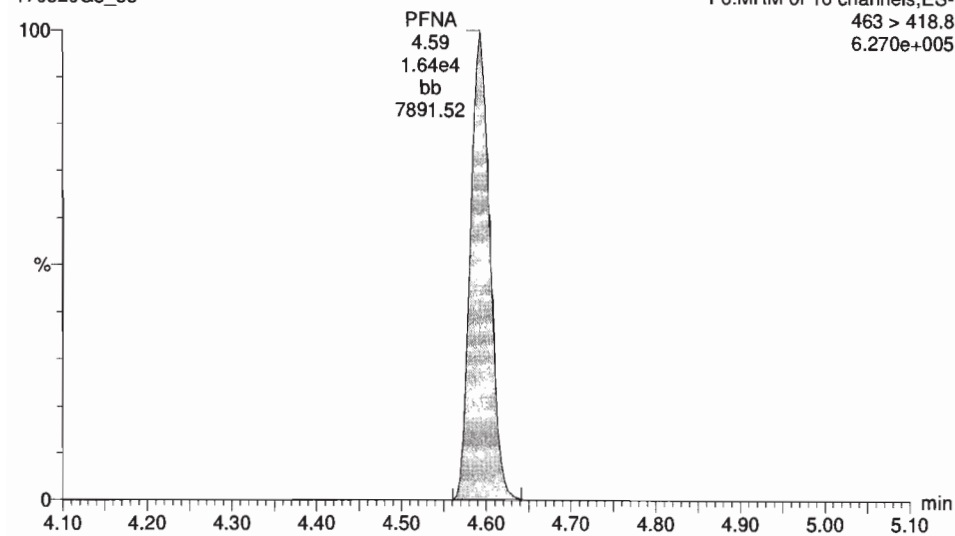
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Printed: Friday, March 24, 2017 09:53:05 Pacific Daylight Time

ID: ST170320G5-9 PFC CS3 17C2007, Description: PFC CS3 17C2007 A, Name: 170320G5_33, Date: 21-Mar-2017, Time: 03:47:05, Instrument: , Lab: , User:

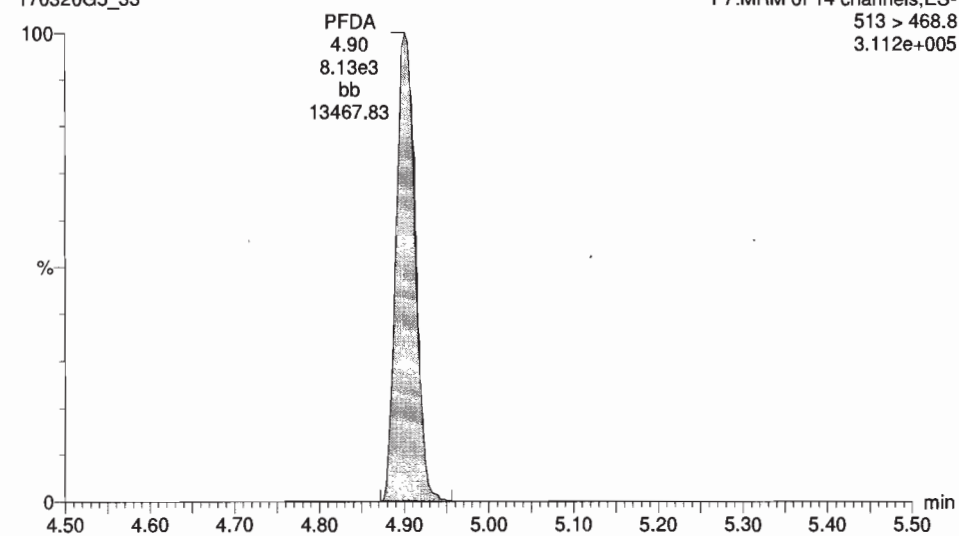
PFNA

170320G5_33



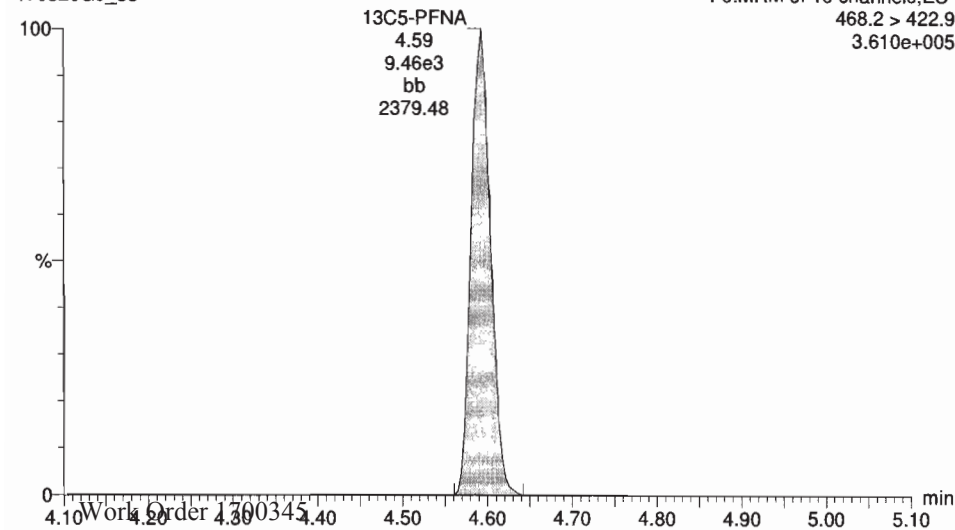
PFDA

170320G5_33



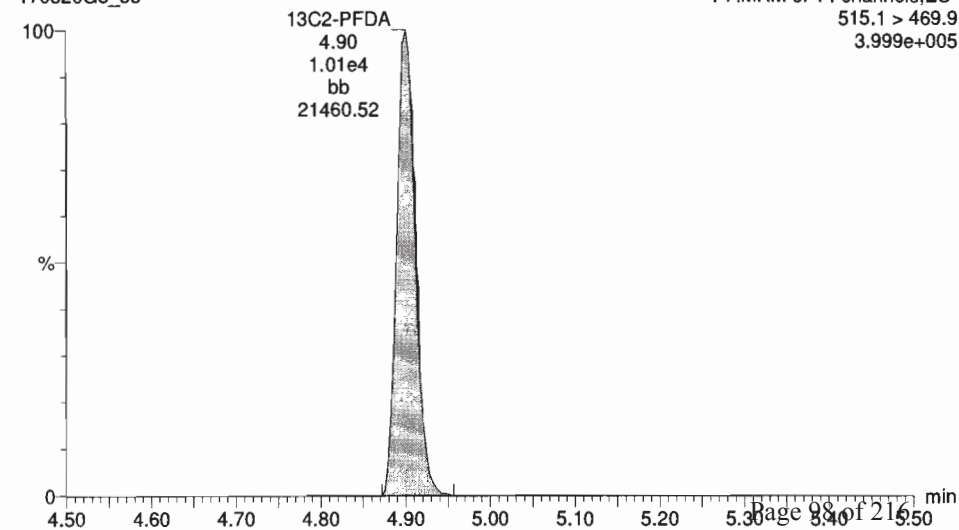
13C5-PFNA

170320G5_33



13C2-PFDA

170320G5_33



Dataset: Untitled

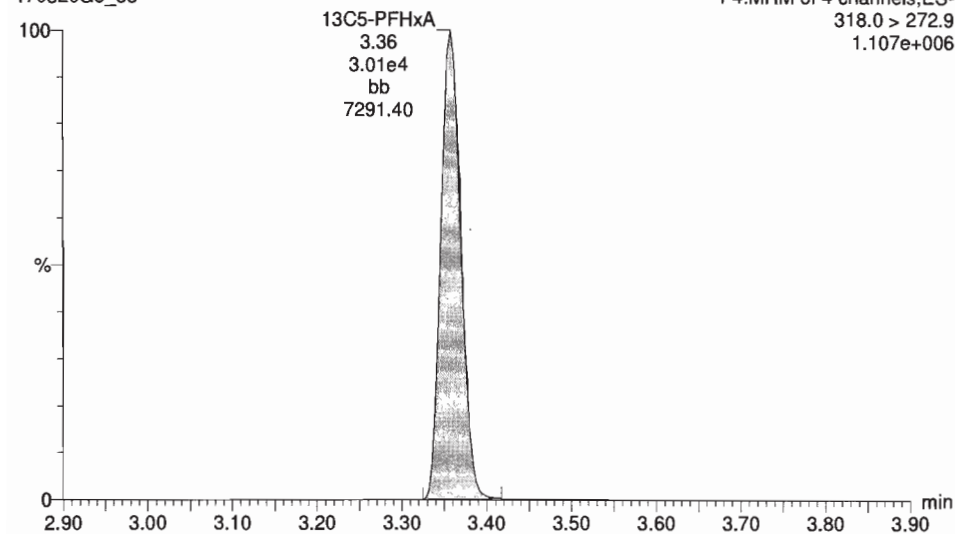
Last Altered: Friday, March 24, 2017 09:52:40 Pacific Daylight Time

Printed: Friday, March 24, 2017 09:53:05 Pacific Daylight Time

ID: ST170320G5-9 PFC CS3 17C2007, Description: PFC CS3 17C2007 A, Name: 170320G5_33, Date: 21-Mar-2017, Time: 03:47:05, Instrument: , Lab: , User:

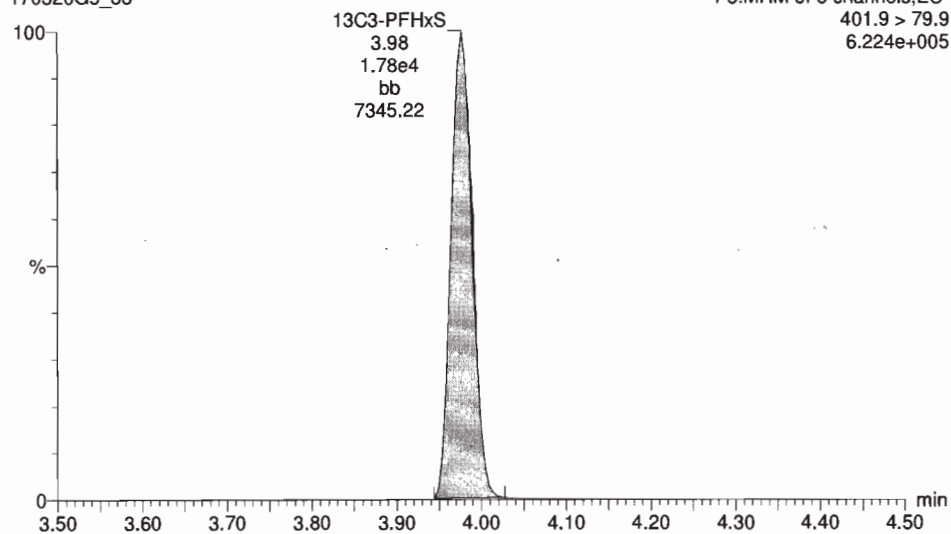
13C5-PFHxA

170320G5_33



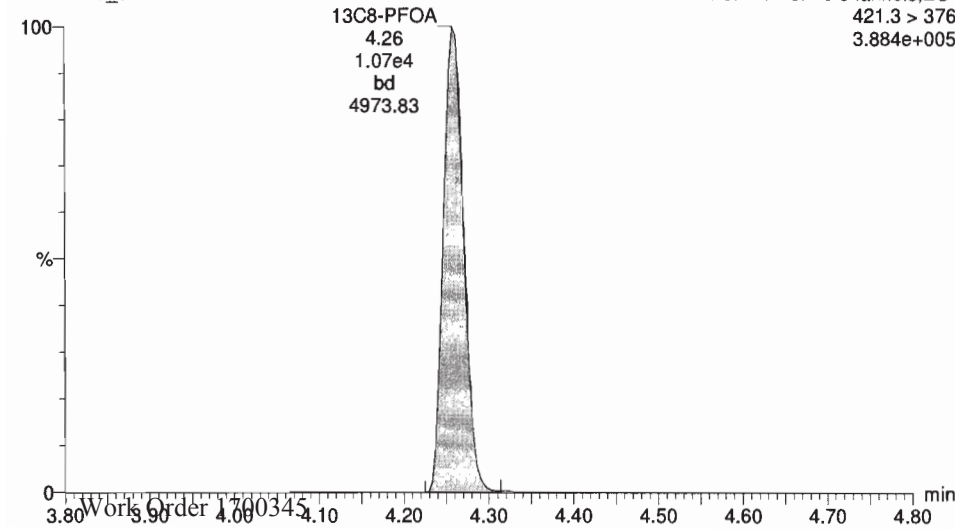
13C3-PFHxS

170320G5_33



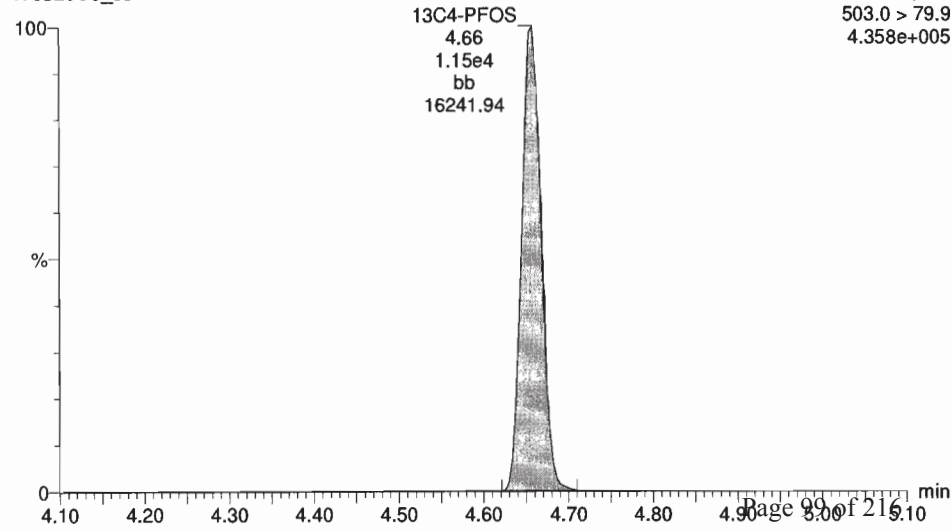
13C8-PFOA

170320G5_33



13C4-PFOS

170320G5_33



Dataset: Untitled

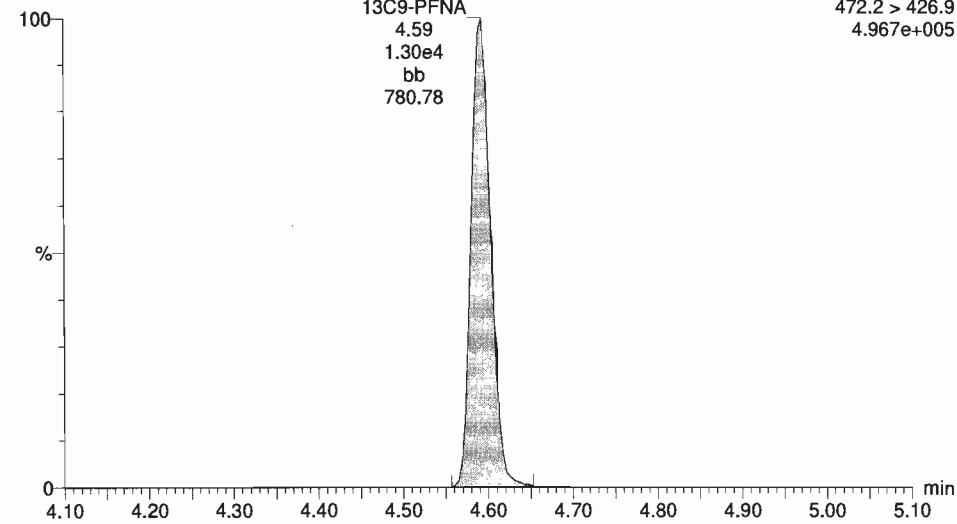
Last Altered: Friday, March 24, 2017 09:52:40 Pacific Daylight Time

Printed: Friday, March 24, 2017 09:53:05 Pacific Daylight Time

ID: ST170320G5-9 PFC CS3 17C2007, Description: PFC CS3 17C2007 A, Name: 170320G5_33, Date: 21-Mar-2017, Time: 03:47:05, Instrument: , Lab: , User:

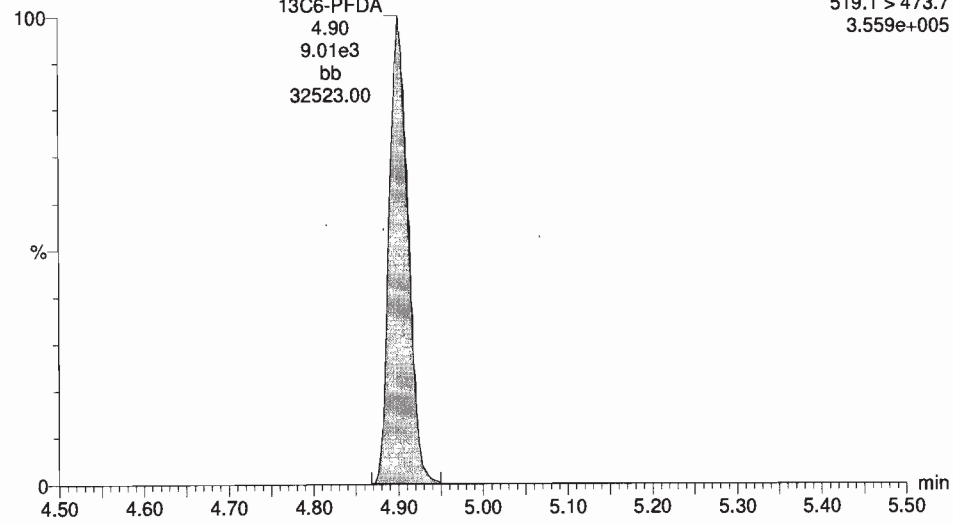
13C9-PFNA

170320G5_33



13C6-PFDA

170320G5_33



Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-2.qld

Last Altered: Wednesday, March 22, 2017 12:18:06 PM Pacific Daylight Time

Printed: Wednesday, March 22, 2017 12:22:54 PM Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170322G1_2, Date: 22-Mar-2017, Time: 11:20:28, ID: ST170322G1-1 PFC CS3 17C2201, Description: PFC CS3 17C2201 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	213.1 > 168.8	1.19e4	2.70e4		1.000	1.71	13.3	132.6
2	2 PFPeA	263.1 > 218.9	8.86e3	1.20e4		1.000	2.67	11.6	115.8
3	3 PFBS	299 > 79.7	1.13e4	7.07e3		1.000	2.94	10.4	104.5
4	4 PFHxA	313.2 > 268.9	8.41e3	6.27e3		1.000	3.31	11.9	119.3
5	5 PFHpA	363 > 318.9	2.22e4	1.56e4		1.000	3.81	11.0	109.9
6	6 PFHxS	398.9 > 79.6	1.07e4	6.96e3		1.000	3.93	10.4	104.0
7	7 6:2 FTS	427.1 > 407	2.53e3	3.04e4		1.000	4.17	12.3	122.7
8	8 PFOA	413 > 368.7	2.26e4	3.04e4		1.000	4.22	11.1	111.2
9	9 PFHpS	449 > 98.7	1.92e3	3.04e4		1.000	4.31	11.5	114.9
10	10 PFOS	499 > 79.9	7.04e3	8.90e3		1.000	4.62	9.55	95.5
11	11 PFNA	463 > 418.8	1.63e4	9.84e3		1.000	4.55	10.4	104.4
12	12 PFDA	513 > 468.8	7.28e3	9.85e3		1.000	4.86	10.7	107.3
13	13 8:2 FTS	527 > 506.9	1.96e3	9.85e3		1.000	4.83	9.56	95.6
14	14 13C3-PFBA	216.1 > 171.8	2.70e4	2.25e4	1.145	1.000	1.71	13.1	104.9
15	15 13C3-PFPeA	266 > 221.8	1.20e4	2.37e4	0.402	1.000	2.66	15.7	125.5
16	16 13C3-PFBS	302.0 > 98.8	7.07e3	2.37e4	0.229	1.000	2.94	16.3	130.0
17	17 13C2-PFHxA	315 > 269.8	6.27e3	2.37e4	0.527	1.000	3.31	6.27	125.5
18	18 13C4-PFHpA	367.2 > 321.8	1.56e4	1.43e4	0.914	1.000	3.81	14.9	119.5
19	19 18O2-PFHxS	403 > 102.6	6.96e3	1.43e4	0.382	1.000	3.93	15.9	127.3
20	20 13C2-6:2 FTS	429.1 > 408.9	7.15e3			1.000	4.17		
21	21 13C2-PFOA	414.9 > 369.7	3.04e4	9.02e3	2.829	1.000	4.22	14.9	119.1
22	22 13C8-PFOS	507.0 > 79.9	8.90e3	7.75e3	0.822	1.000	4.62	17.5	139.7
23	23 13C5-PFNA	468.2 > 422.9	9.84e3	9.89e3	0.788	1.000	4.55	15.8	126.3
24	24 13C2-PFDA	515.1 > 469.9	9.85e3	6.13e3	0.999	1.000	4.86	20.1	160.8
25	25 13C2-8:2 FTS	529.1 > 508.7				1.000			
26	26 13C4-PFBA	217 > 171.8	2.25e4	2.25e4	1.000	1.000	1.71	12.5	100.0
27	27 13C2-4:2 FTS	329.2 > 308.9				1.000			
28	28 13C5-PFHxA	318.0 > 272.9	2.37e4	2.37e4	1.000	1.000	3.31	12.5	100.0
29	29 13C3-PFHxS	401.9 > 79.9	1.43e4	1.43e4	1.000	1.000	3.93	12.5	100.0
30	30 13C8-PFOA	421.3 > 376	9.02e3	9.02e3	1.000	1.000	4.22	12.5	100.0
31	31 13C4-PFOS	503.0 > 79.9	7.75e3	7.75e3	1.000	1.000	4.62	12.5	100.0

75-125 (P) Not used.

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3/22/17

✓ 11/22/17

40-150

40-150

50-150

40-150

40-150

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-2.qld

Last Altered: Wednesday, March 22, 2017 12:18:06 PM Pacific Daylight Time

Printed: Wednesday, March 22, 2017 12:22:54 PM Pacific Daylight Time

Name: 170322G1_2, Date: 22-Mar-2017, Time: 11:20:28, ID: ST170322G1-1 PFC CS3 17C2201, Description: PFC CS3 17C2201 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
32	13C9-PFNA	472.2 > 426.9	9.89e3	9.89e3	1.000	1.000	4.55	12.5	100.0
33	13C6-PFDA	519.1 > 473.7	6.13e3	6.13e3	1.000	1.000	4.86	12.5	100.0

Quantify Totals Report MassLynx 4.1 SCN815

Vista Analytical Laboratory Q1

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-2.qld

Last Altered: Wednesday, March 22, 2017 12:18:06 PM Pacific Daylight Time

Printed: Wednesday, March 22, 2017 12:22:54 PM Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170322G1_2, Date: 22-Mar-2017, Time: 11:20:28, ID: ST170322G1-1 PFC CS3 17C2201, Description: PFC CS3 17C2201 A

Total PFBS

#	Name	Trace	RT	Area	IS Area	Conc.
1	3 PFBS	299 > 79.7	2.94	1.13e4	7.07e3	10.4

Total PFHxS

#	Name	Trace	RT	Area	IS Area	Conc.
1	6 PFHxS	398.9 > 79.6	3.93	1.07e4	6.96e3	10.4
2	35 Total PFHxS	398.9 > 79.6	3.84	1.61e3	6.96e3	1.52
3	35 Total PFHxS	398.9 > 79.6	3.81	5.39e2	6.96e3	0.467

Total PFOA

#	Name	Trace	RT	Area	IS Area	Conc.
1	36 Total PFOA	413 > 368.7	4.66	2.22e1	3.04e4	
2	36 Total PFOA	413 > 368.7	4.63	1.09e1	3.04e4	
3	36 Total PFOA	413 > 368.7	4.60	4.64e1	3.04e4	
4	36 Total PFOA	413 > 368.7	4.58	1.40e1	3.04e4	
5	36 Total PFOA	413 > 368.7	4.39	5.64e0	3.04e4	
6	36 Total PFOA	413 > 368.7	4.34	1.50e1	3.04e4	
7	36 Total PFOA	413 > 368.7	4.33	3.70e1	3.04e4	
8	36 Total PFOA	413 > 368.7	4.28	3.99e1	3.04e4	
9	8 PFOA	413 > 368.7	4.22	2.26e4	3.04e4	11.1

Total PFOS

#	Name	Trace	RT	Area	IS Area	Conc.
1	10 PFOS	499 > 79.9	4.62	7.04e3	8.90e3	9.55
2	37 Total PFOS	499 > 79.9	4.53	7.65e2	8.90e3	1.10
3	37 Total PFOS	499 > 79.9	4.50	9.67e2	8.90e3	1.38

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Last Altered: Wednesday, March 22, 2017 15:16:09 Pacific Daylight Time

Printed: Wednesday, March 22, 2017 15:17:03 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170322G1_1	IPA	22-Mar-17	11:07:51
2	170322G1_2	ST170322G1-1 PFC CS3 17C2201	22-Mar-17	11:20:28
3	170322G1_3	IPA	22-Mar-17	11:33:02
4	170322G1_4	B7C0100-BS1 OPR 0.125	22-Mar-17	11:45:40
5	170322G1_5	IPA	22-Mar-17	11:58:15
6	170322G1_6	B7C0100-BLK1 Method Blank 0.125	22-Mar-17	12:10:54
7	170322G1_7	1700345-04@10X CBD-AOA-MW08-0317 0.125	22-Mar-17	12:23:34
8	170322G1_8	B7C0099-MS1@10X Matrix Spike 0.125	22-Mar-17	12:36:12
9	170322G1_9	B7C0099-MSD1@10X Matrix Spike Dup 0.125	22-Mar-17	12:48:49
10	170322G1_10	1700345-07@10X CBD-SO3-MW01-0317 0.125	22-Mar-17	13:01:26
11	170322G1_11	1700304-02RE2@40X B-104 -Trailer (420-117...	22-Mar-17	13:14:05
12	170322G1_12	IPA	22-Mar-17	13:26:44
13	170322G1_13	ST170322G1-2 PFC CS3 17C2201	22-Mar-17	13:39:21
14	170322G1_14	IPA	22-Mar-17	13:51:56

LC Calibration Standards Review Checklist

Q1

Calibration ID:	L M H	ION Ratio	Concentration	C-Cals Name	Sign Date	Correct I-Cal	Manual Integrations	MA
<u>ST17032261-1</u>	<u>LMH</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (B) 2/3/2017
<u>↓ -2</u>	<u>LMH</u>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (A) 3/22/17
_____	LMH	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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Full Mass Cal. Date: 12/3/16

Run Log Present:

of Samples per Sequence Checked:

Reviewed By: (A) am 3/22/17
Initials/Date

Comments:
 List A
 NO PPBA

Dataset: Untitled

Last Altered: Wednesday, March 22, 2017 12:13:12 PM Pacific Daylight Time

Printed: Wednesday, March 22, 2017 12:16:24 PM Pacific Daylight Time

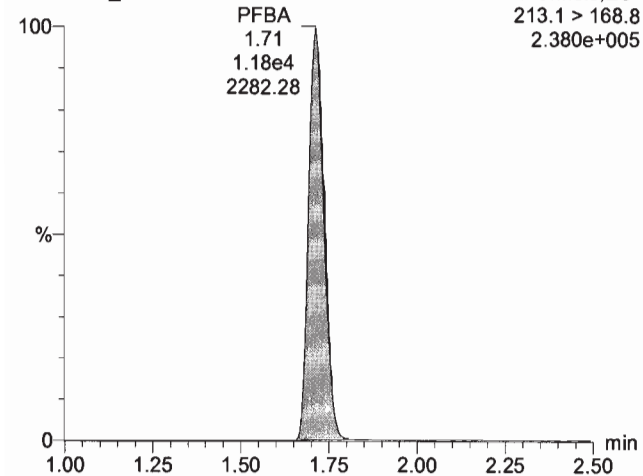
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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170322G1_2, Date: 22-Mar-2017, Time: 11:20:28, ID: ST170322G1-1 PFC CS3 17C2201, Description: PFC CS3 17C2201 A

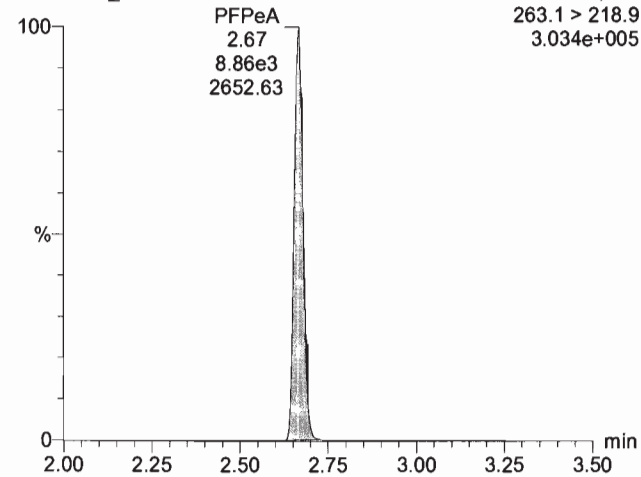
PFBA

170322G1_2



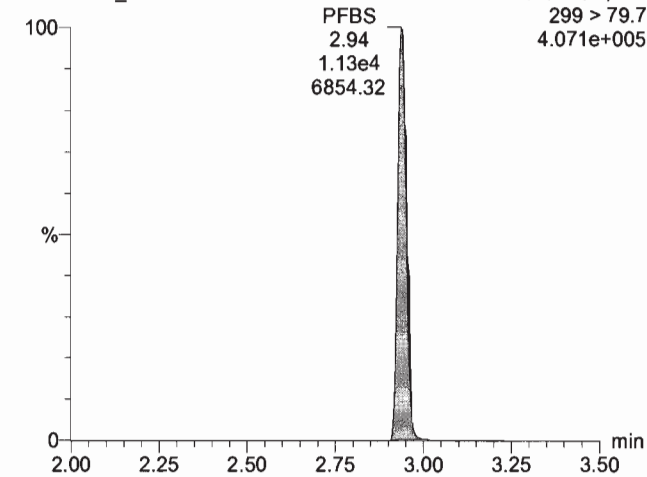
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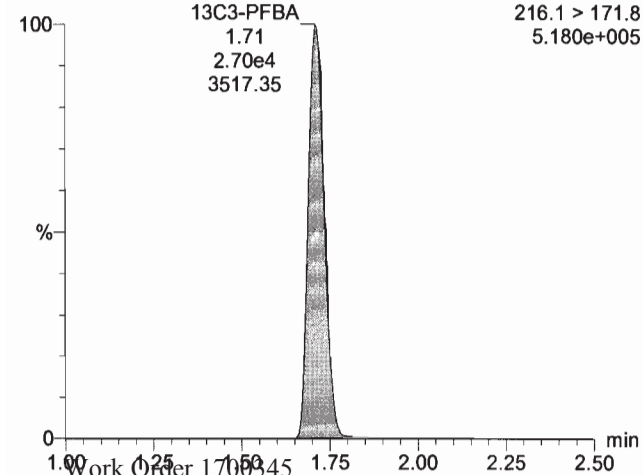
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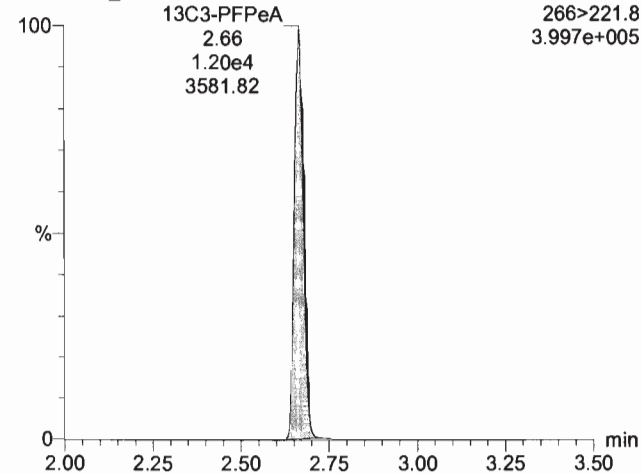
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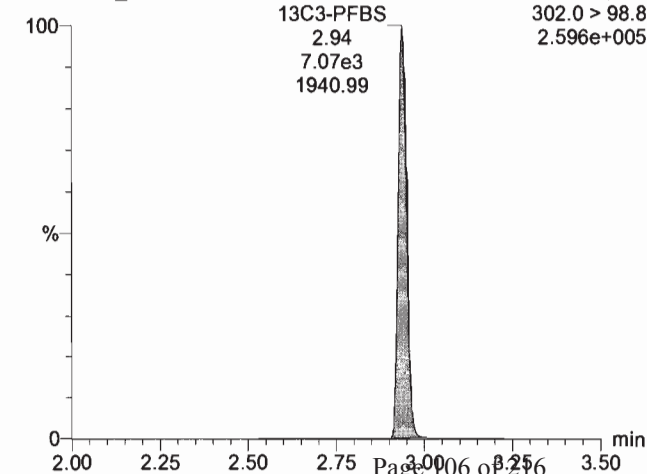
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170322G1_2



13C3-PFBS

170322G1_2

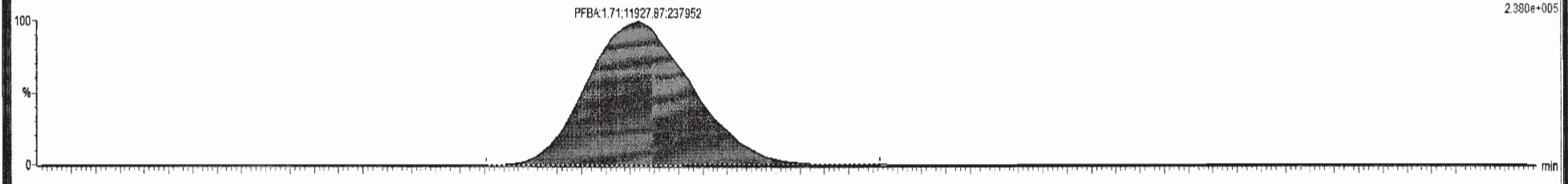


170322G1_2 - ST170322G1-1 PFC CS3 17C2201 - PFC CS3 17C2201 A

Name	Trace	Area	Response	RRF	WVVol	RT	Conc.	%Rec	DL	%RSD	Coeff. OF D...
1	PFBA	213.1 > 168.8	1.19e4	5.527	0.553	1.000	1.71	13.3	132.6	0.0000000	0.9978
2	PFPeA	263.1 > 218.9	8.86e3	9.257	0.926	1.000	2.67	11.6	115.8	0.0000000	0.9972
3	PFBS	299 > 79.7	1.13e4	20.005	2.000	1.000	2.94	10.4	104.5	0.0110668	0.9982
4	PFHxA	313.2 > 268.9	8.41e3	6.711	0.671	1.000	3.31	11.9	119.3	0.0000000	0.9965
5	PFHpA	363 > 318.9	2.22e4	17.791	1.779	1.000	3.81	11.0	109.9	0.0037583	0.9986
6	PFHxS	398.9 > 79.6	1.07e4	19.129	1.913	1.000	3.93	10.4	104.0	0.0000000	0.9975
7	6.2 FTS	427.1 > 407	2.53e3	1.041	0.104	1.000	4.17	12.3	122.7	0.2433495	0.9980
8	PFOA	413 > 368.7	2.26e4	9.301	0.930	1.000	4.22	11.1	111.2	0.0000000	0.9994
9	PFHpS	449 > 98.7	1.92e3	0.789	0.079	1.000	4.31	11.5	114.9	0.0586927	0.9988
10	PFOS	499 > 79.9	7.04e3	9.888	0.989	1.000	4.62	9.55	95.5	0.4843283	0.9982
11	PFNA	463 > 418.8	1.63e4	20.762	2.076	1.000	4.55	10.4	104.4	0.0224470	0.9967
12	PFDA	513 > 468.8	7.28e3	9.245	0.924	1.000	4.86	10.7	107.3	0.0000000	0.9939
13	8.2 FTS	527 > 506.9	1.96e3	2.483	0.248	1.000	4.83	9.56	95.6	0.1833284	0.9955
14	13C-PFBA	216.1 > 171.8	2.70e4	15.005	1.200	1.000	1.71	13.1	104.9	0.0089052	3.68
15	13C-PFPeA	266 > 221.8	1.20e4	6.305	0.504	1.000	2.66	15.7	125.5	0.0096841	3.45
16	13C-PFBS	302.0 > 98.8	7.07e3	3.726	0.298	1.000	2.94	16.3	130.0	0.0203104	3.08
17	13C-PFHxA	315 > 269.8	6.27e3	3.303	0.661	1.000	3.31	6.27	125.5	0.0202547	3.98
18	13C-PFHpA	367.2 > 321.8	1.56e4	13.647	1.092	1.000	3.81	14.9	119.5	0.0037580	3.60
19	18O2-PFHxS	403 > 102.6	6.96e3	6.083	0.487	1.000	3.93	15.9	127.3	0.0028570	2.38
20	13C2-8.2 FTS	429.1 > 408.9	7.15e3		0.000	1.000	4.17				
21	13C-PFOA	414.9 > 369.7	3.04e4	42.116	3.369	1.000	4.22	14.9	119.1	0.0069890	6.57
22	13C2-PFOS	507.0 > 79.9	8.90e3	14.358	1.149	1.000	4.62	17.5	139.7	0.0013907	6.43
23	13C5-PFNA	468.2 > 422.9	9.84e3	12.437	0.995	1.000	4.55	15.8	126.3	0.0073023	5.75
24	13C2-PFDA	515.1 > 469.9	9.85e3	20.093	1.607	1.000	4.86	20.1	160.8	0.0033103	7.43
25	13C2-8.2 FTS	529.1 > 508.7				1.000					
26	13C-PFBA	217 > 171.8	2.70e4	15.005	1.200	1.000	1.71	12.5	100.0	0.0038109	0.000

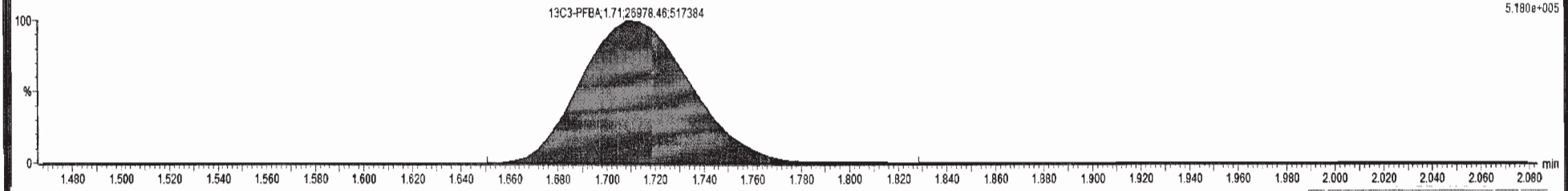
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 PFC CS3 17C2201 AST170322G1-1 PFC CS3 17C2201

F2:MRM of 4 channels ES-
 215.1 > 171.8
 2.380e+005



170322G1_2 Smooth(Mn,1x2)
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F2:MRM of 4 channels ES-
 215.1 > 171.8
 5.180e+005

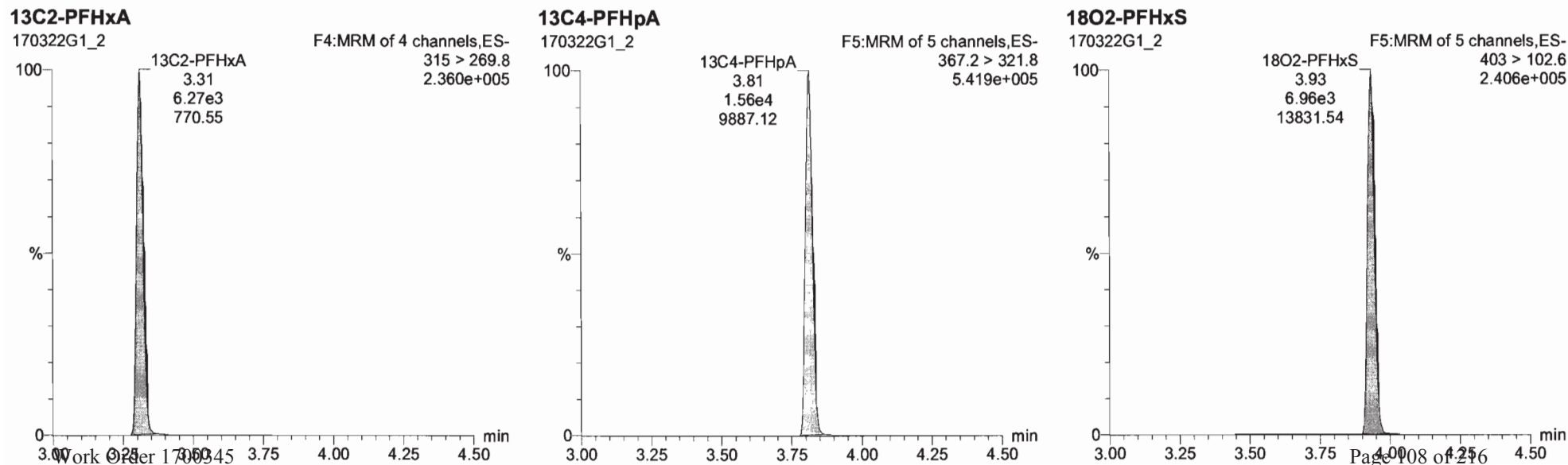
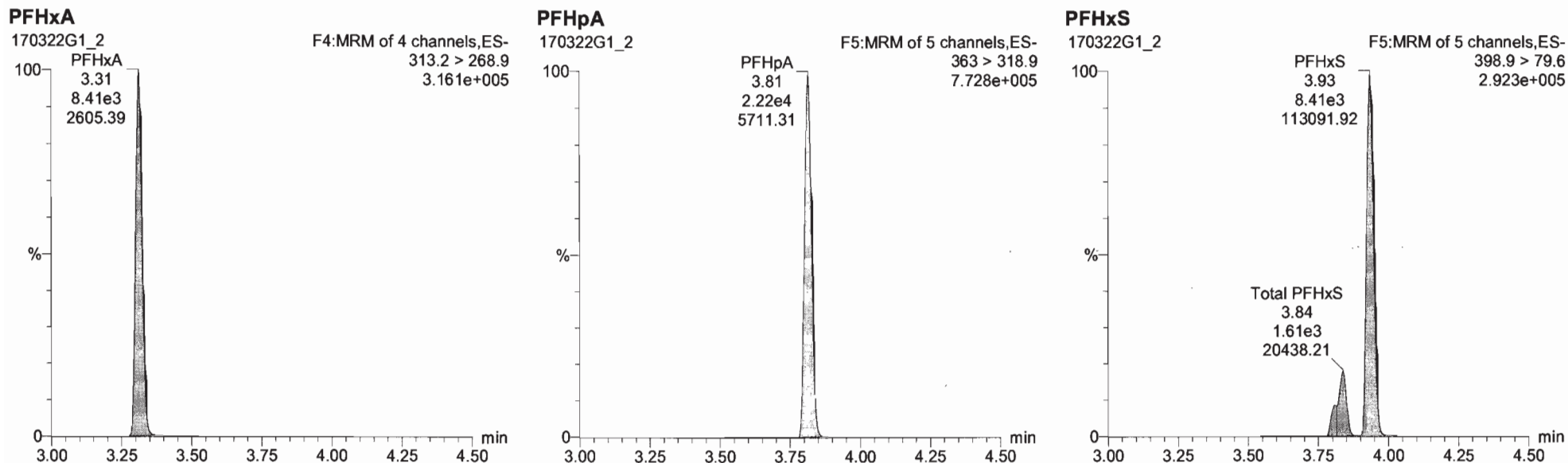


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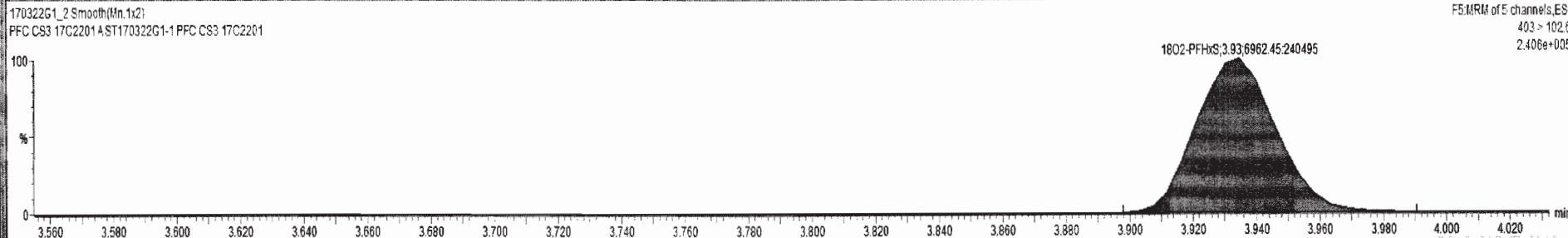
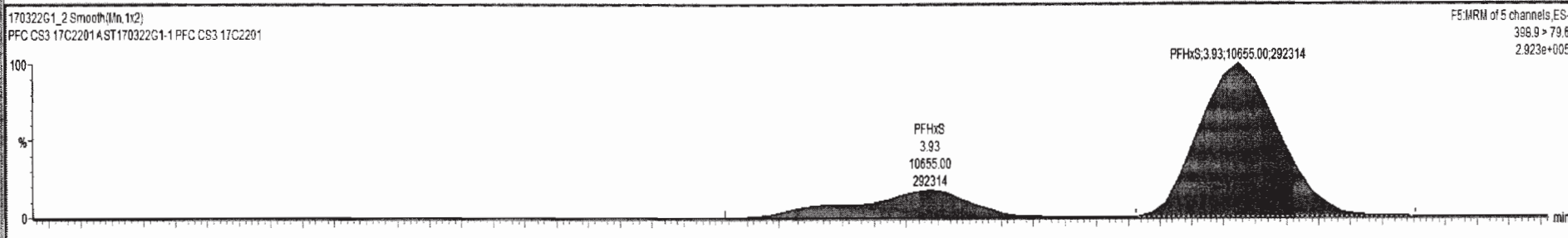
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170322G1_2 - ST170322G1-1 PFC CS3 17C2201 - PFC CS3 17C2201A

Name	Trace	Area	Response	RRF	Wt%	RT	Conc.	%Rec	DL	%RSD	Coeff. Of...
1	PFBA	213.1 > 168.8	1.19e4	5.527	0.553	1.000	1.71	13.3	132.6	0.0000000	0.9978
2	PFPeA	263.1 > 216.9	8.86e3	9.257	0.926	1.000	2.67	11.6	115.8	0.0000000	0.9972
3	PFBS	299 > 79.7	1.13e4	20.005	2.000	1.000	2.94	10.4	104.5	0.0110668	0.9982
4	PFHxA	313.2 > 266.9	8.41e3	6.711	0.671	1.000	3.31	11.9	119.3	0.0000000	0.9965
5	PFHpA	363 > 318.9	2.22e4	17.791	1.779	1.000	3.81	11.0	109.9	0.0037583	0.9986
6	PFHxS	388.9 > 79.6	1.07e4	19.129	1.913	1.000	3.93	10.4	104.0	0.0000000	0.9975
7	6:2 FTS	427.1 > 407	2.53e3	1.041	0.104	1.000	4.17	12.3	122.7	0.2433495	0.9980
8	PFOA	413 > 368.7	2.26e4	9.301	0.930	1.000	4.22	11.1	111.2	0.0000000	0.9994
9	PFHpS	449 > 98.7	1.92e3	0.789	0.079	1.000	4.31	11.5	114.9	0.0586927	0.9988
10	PFOS	499 > 79.9	7.04e3	9.888	0.989	1.000	4.62	9.55	95.5	0.4843283	0.9962
11	PFNA	463 > 418.8	1.63e4	20.762	2.076	1.000	4.55	10.4	104.4	0.0224470	0.9967
12	PFDA	513 > 468.8	7.28e3	9.245	0.924	1.000	4.86	10.7	107.3	0.0000000	0.9939
13	8:2 FTS	527 > 506.9	1.96e3	2.483	0.248	1.000	4.83	9.56	95.6	0.1833284	0.9955
14	13C3-PFBA	216.1 > 171.8	2.70e4	15.005	1.200	1.000	1.71	13.1	104.9	0.0089052	3.68
15	13C3-PFPeA	266 > 221.8	1.20e4	6.305	0.504	1.000	2.66	15.7	125.5	0.0096541	3.45
16	13C3-PFBS	302.0 > 98.8	7.07e3	3.726	0.298	1.000	2.94	16.3	130.0	0.0203104	3.08
17	13C2-PFHxA	315 > 269.8	6.27e3	3.303	0.661	1.000	3.31	6.27	125.5	0.0202547	3.98
18	13C4-PFHpA	367.2 > 321.8	1.56e4	13.647	1.092	1.000	3.81	14.9	119.5	0.0037580	3.60
19	18O2-PFHxS	403 > 102.6	6.96e3	6.083	0.487	1.000	3.93	15.9	127.3	0.0028570	2.38
20	13C2-6:2 FTS	429.1 > 408.9	7.15e3		0.000	1.000	4.17				
21	13C2-PFOA	414.9 > 369.7	3.04e4	42.116	3.369	1.000	4.22	14.9	119.1	0.0069890	6.57
22	13C8-PFOS	507.0 > 79.9	8.90e3	14.358	1.149	1.000	4.62	17.5	139.7	0.0013907	6.43
23	13C5-PFNA	468.2 > 422.9	9.84e3	12.437	0.995	1.000	4.55	15.6	126.3	0.0073023	5.75
24	13C2-PFDA	515.1 > 469.9	9.85e3	20.093	1.607	1.000	4.86	20.1	160.8	0.0033103	7.43
25	13C2-8:2 FTS	529.1 > 508.7				1.000					
26	13C4-PFHpA	367.2 > 321.8	1.56e4	13.647	1.092	1.000	3.81	14.9	119.5	0.0037580	3.60



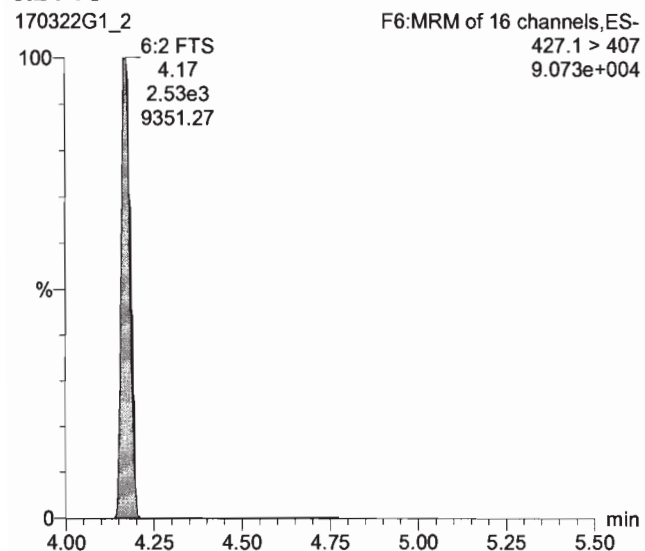
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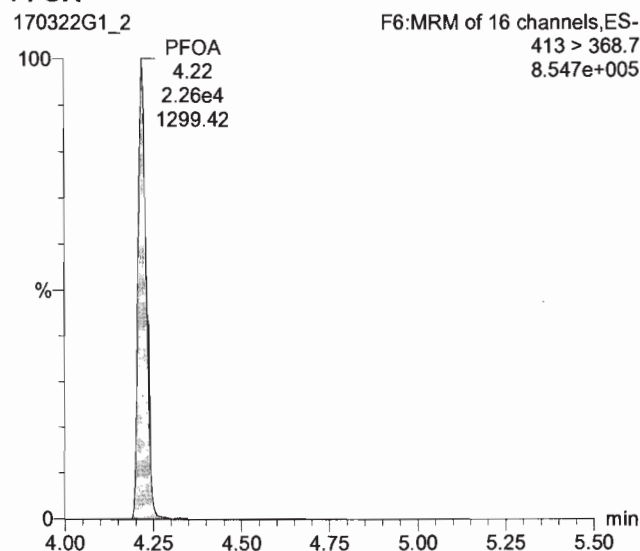
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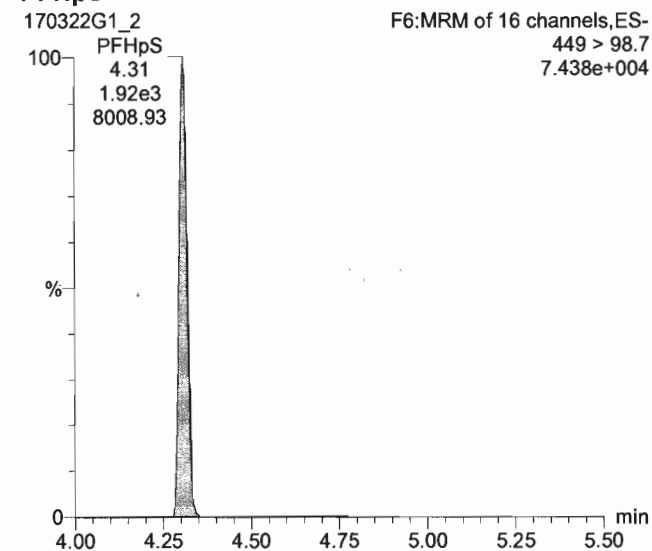
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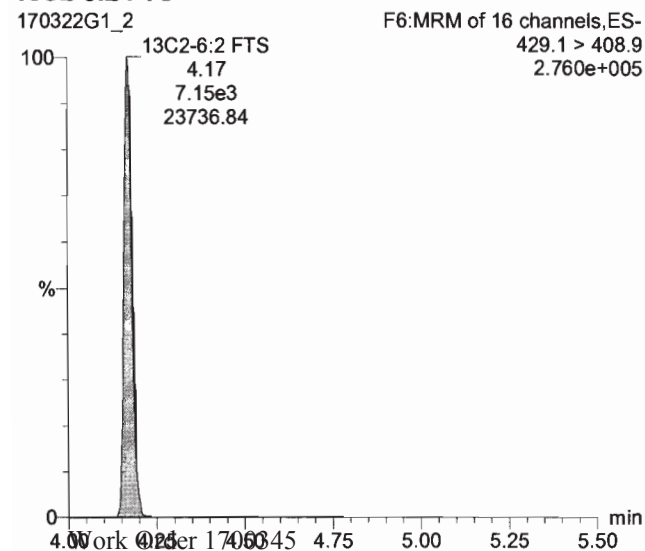
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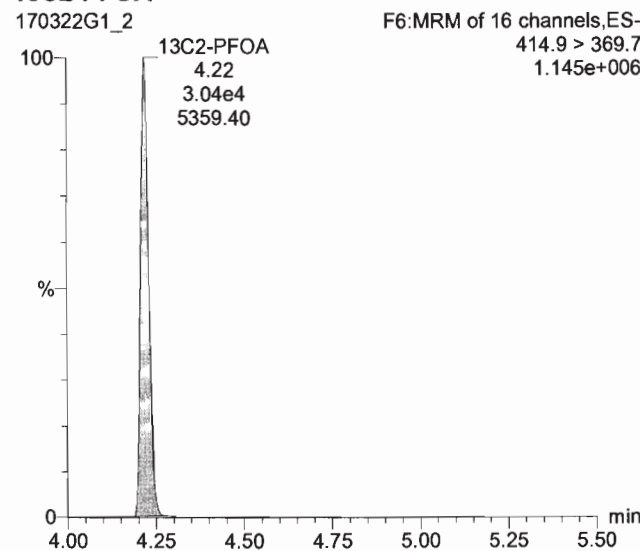
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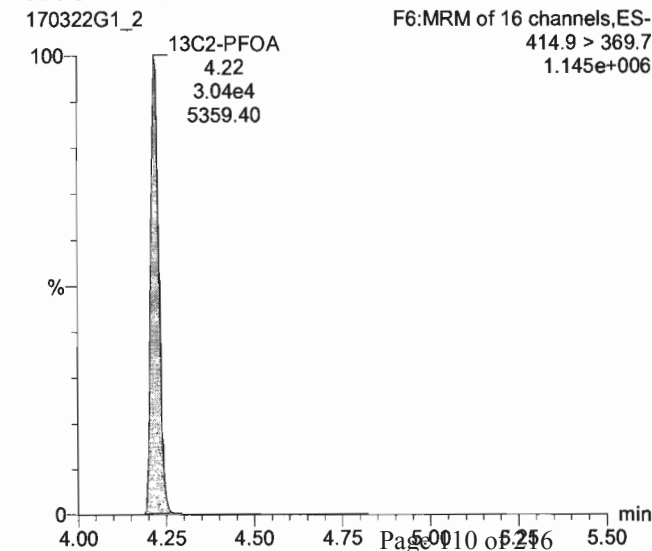
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13C2-PFOA



13C2-PFOA



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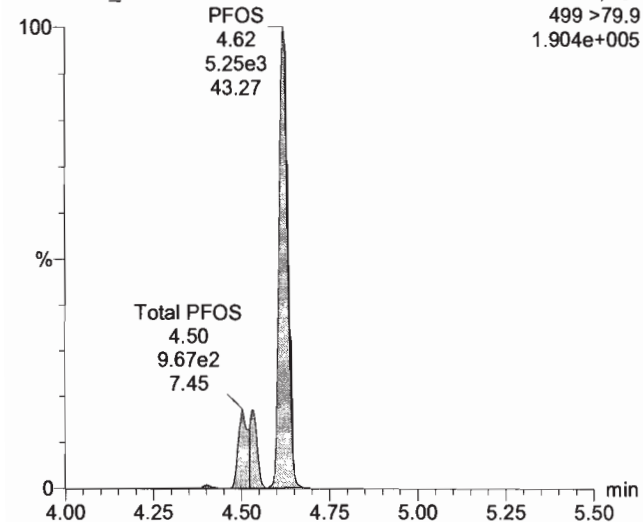
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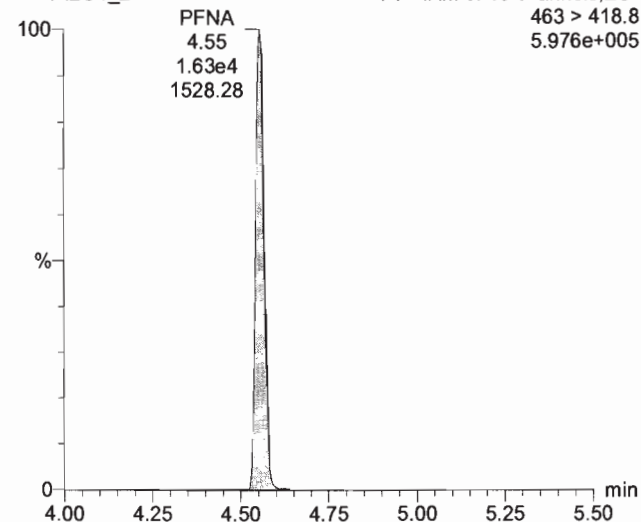
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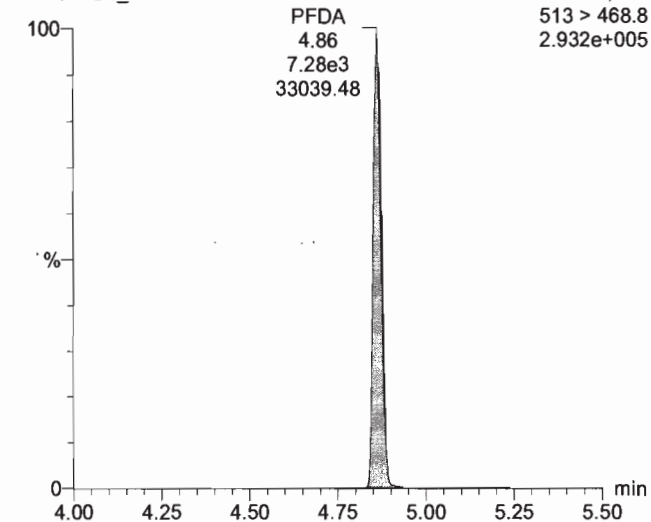
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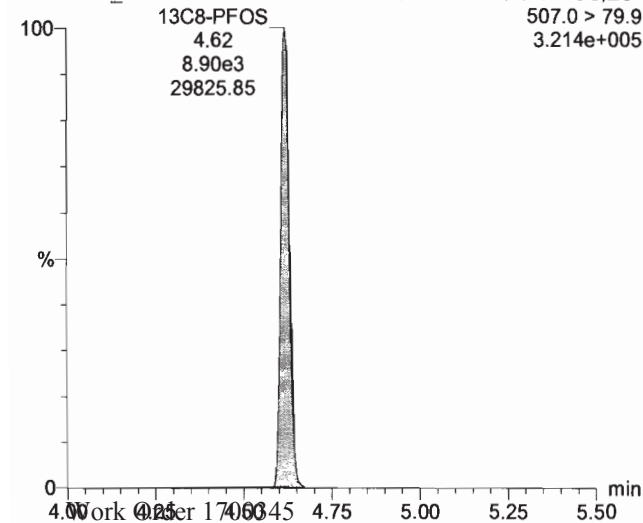
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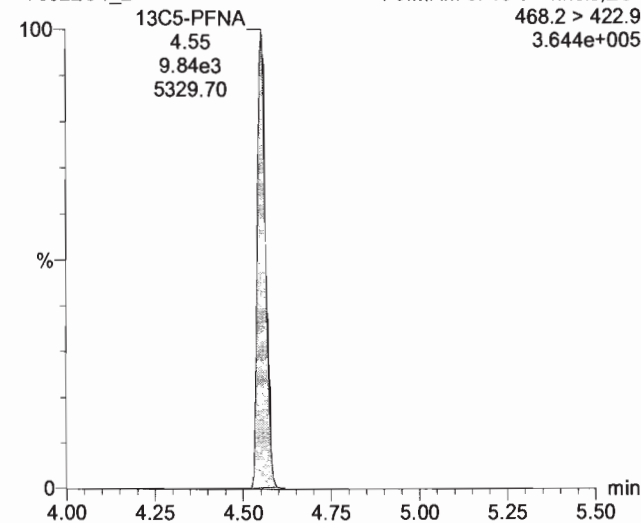
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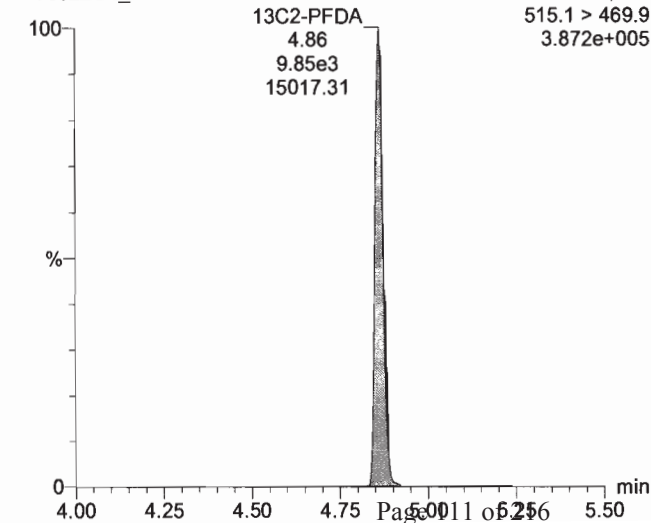
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170322G1_2



13C2-PFDA

170322G1_2



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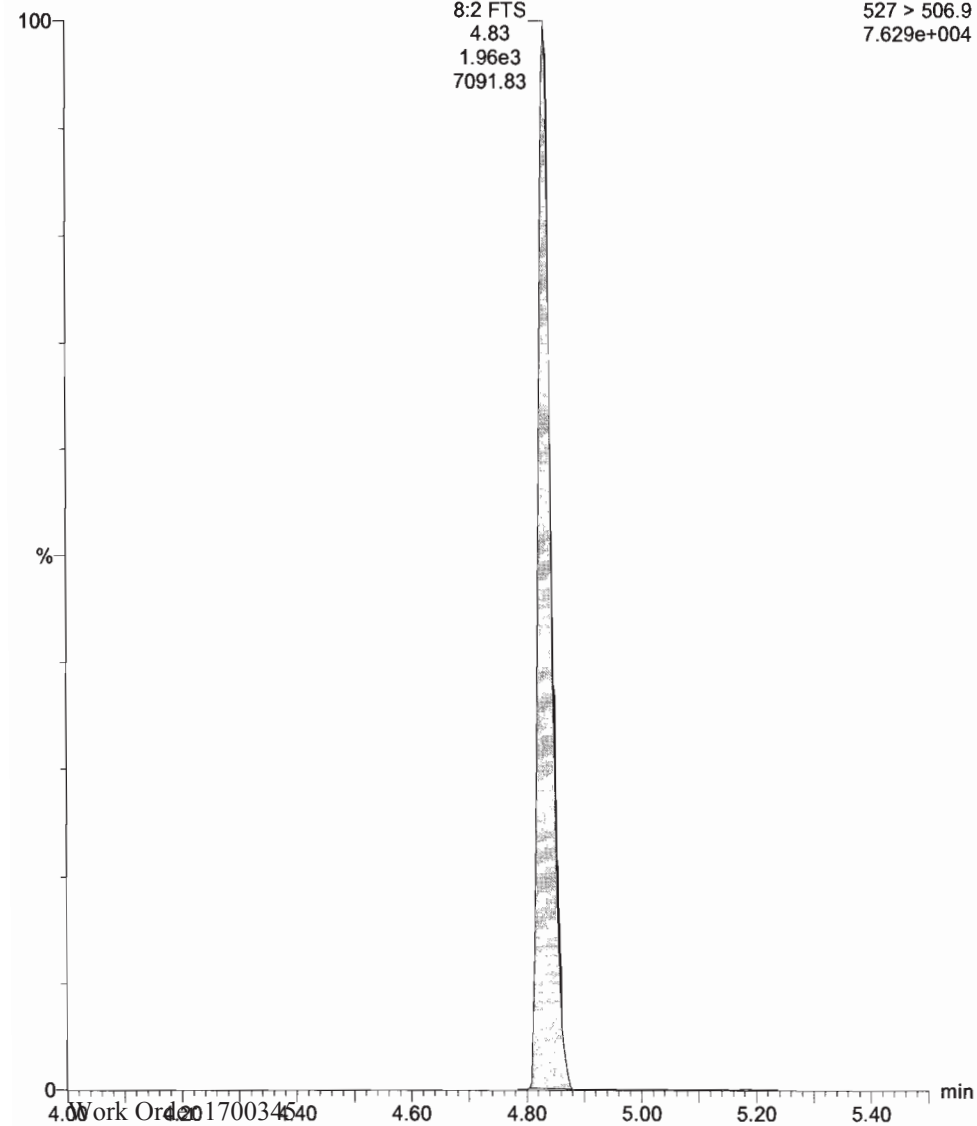
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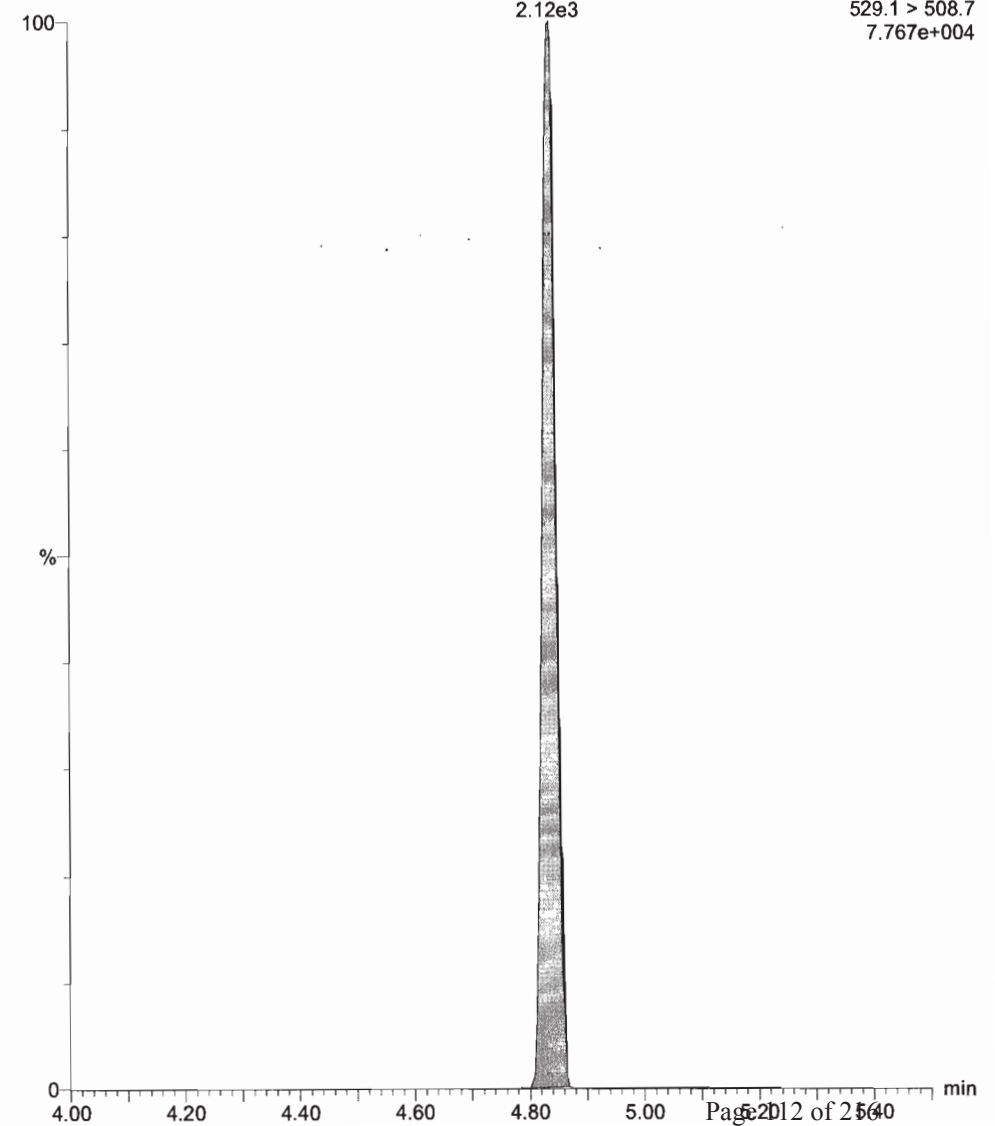
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170322G1_2



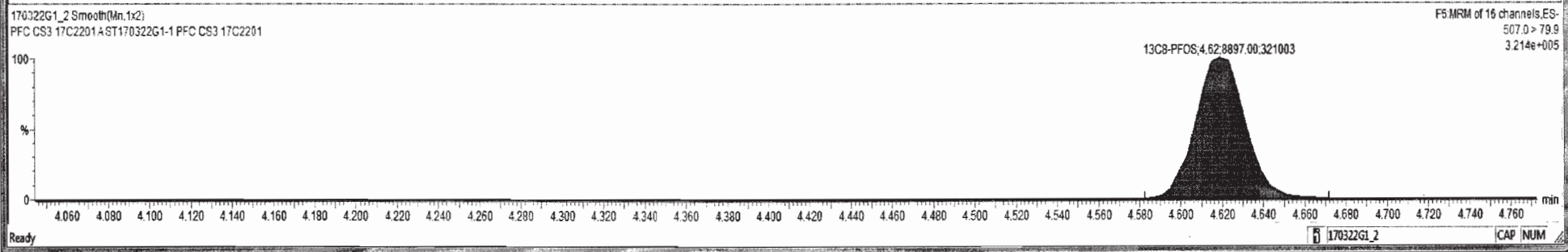
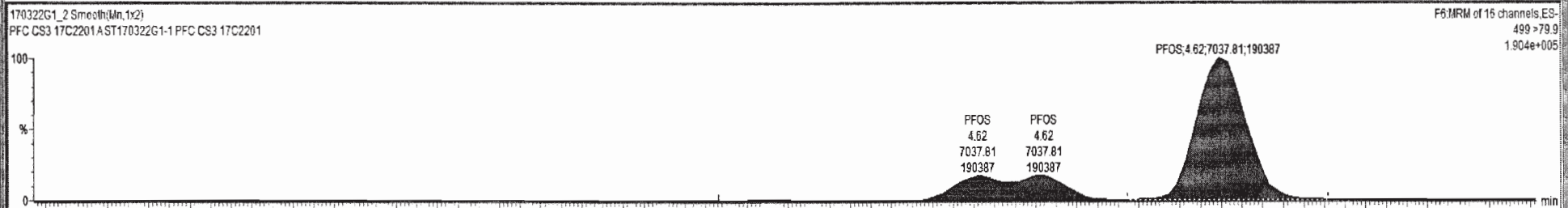
13C2-8:2 FTS

170322G1_2



170322G1_2 - ST170322G1-1 PFC CS3 17C2201 - PFC CS3 17C2201 A

Name	Trace	Area	Response	RRF	WVVol	RT	Conc.	%Rec	DL	%RSD	Coeff. Of D...
1	PFBA	213.1 > 168.8	1.19e4	5.527	0.553	1.000	1.71	13.3	132.6	0.0000000	0.9978
2	PFPeA	263.1 > 218.9	8.86e3	9.257	0.926	1.000	2.67	11.6	115.8	0.0000000	0.9972
3	PFBS	299 > 79.7	1.13e4	20.005	2.000	1.000	2.94	10.4	104.5	0.0110668	0.9982
4	PFHxA	313.2 > 268.9	8.41e3	6.711	0.671	1.000	3.31	11.9	119.3	0.0000000	0.9965
5	PFHpA	363 > 318.9	2.22e4	17.791	1.779	1.000	3.81	11.0	109.9	0.0037583	0.9986
6	PFHxS	398.9 > 79.6	1.07e4	19.129	1.913	1.000	3.93	10.4	104.0	0.0000000	0.9975
7	6-2 FTS	427.1 > 407	2.53e3	1.041	0.104	1.000	4.17	12.3	122.7	0.2433495	0.9980
8	PFOA	413 > 368.7	2.26e4	9.301	0.930	1.000	4.22	11.1	111.2	0.0000000	0.9994
9	PFHpS	449 > 98.7	1.92e3	0.789	0.079	1.000	4.31	11.5	114.9	0.0506927	0.9968
10	PFOS	499 > 79.9	7.04e3	9.888	0.989	1.000	4.62	9.55	95.5	0.4843283	0.9982
11	PFNA	463 > 418.8	1.63e4	20.762	2.076	1.000	4.55	10.4	104.4	0.0224470	0.9967
12	PFDA	513 > 468.8	7.28e3	9.245	0.924	1.000	4.86	10.7	107.3	0.0000000	0.9939
13	8-2 FTS	527 > 506.9	1.96e3	2.463	0.246	1.000	4.83	9.56	95.6	0.1833284	0.9955
14	13C3-PFBA	216.1 > 171.8	2.70e4	15.005	1.200	1.000	1.71	13.1	104.9	0.0089052	3.68
15	13C3-PFPeA	266 > 221.8	1.20e4	6.305	0.504	1.000	2.66	15.7	125.5	0.0096641	3.45
16	13C3-PFBS	302.0 > 98.6	7.07e3	3.726	0.298	1.000	2.94	16.3	130.0	0.0203104	3.08
17	13C2-PFHxA	315 > 269.8	6.27e3	3.303	0.661	1.000	3.31	6.27	125.5	0.0202547	3.98
18	13C4-PFHpA	367.2 > 321.8	1.56e4	13.647	1.092	1.000	3.81	14.9	119.5	0.0037580	3.60
19	18O2-PFHxS	403 > 102.6	6.96e3	6.083	0.487	1.000	3.93	15.9	127.3	0.0028570	2.38
20	13C2-6-2 FTS	429.1 > 408.9	7.15e3		0.000	1.000	4.17				
21	13C2-PFOA	414.9 > 369.7	3.04e4	42.116	3.369	1.000	4.22	14.9	119.1	0.0069690	6.57
22	13C8-PFOS	507.0 > 79.9	8.90e3	14.358	1.149	1.000	4.62	17.5	139.7	0.0013907	6.43
23	13C5-PFNA	468.2 > 422.9	9.84e3	12.437	0.995	1.000	4.55	15.8	126.3	0.0073023	5.75
24	13C2-PFDA	515.1 > 469.9	9.85e3	20.093	1.607	1.000	4.86	20.1	160.8	0.0033103	7.43
25	13C2-8-2 FTS	529.1 > 508.7				1.000					
26	13C4-PFBA	217 > 171.8	2.75e4	12.500	1.000	1.000	1.71	12.5	100.0	0.0030100	0.000

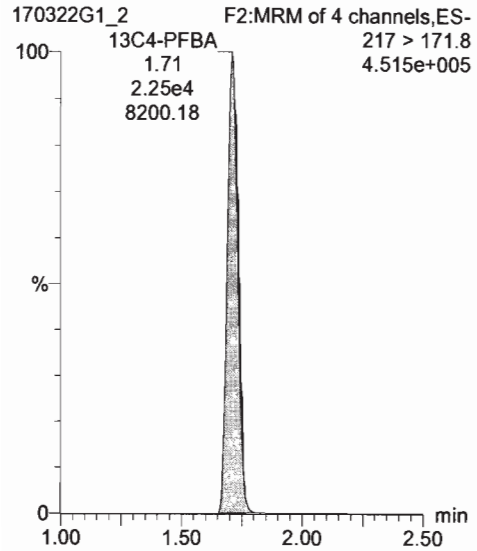


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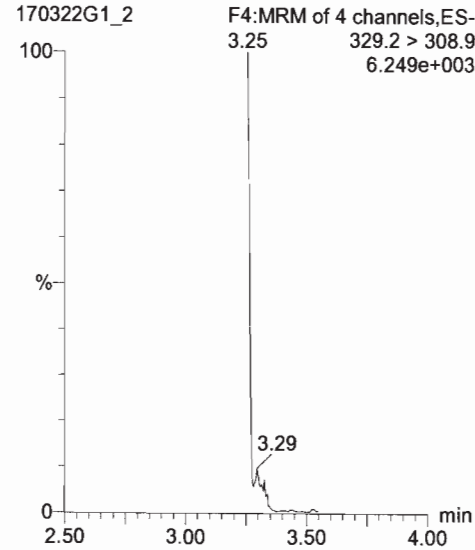
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Printed: Wednesday, March 22, 2017 12:16:24 PM Pacific Daylight Time

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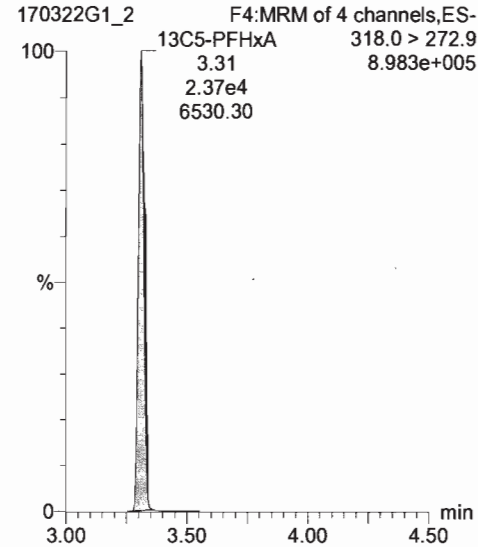
13C4-PFBA



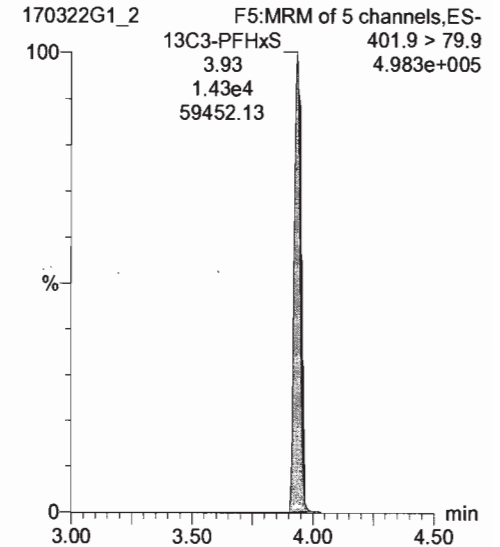
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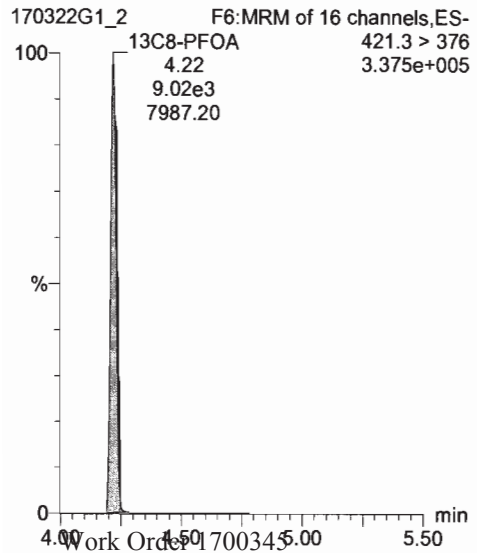
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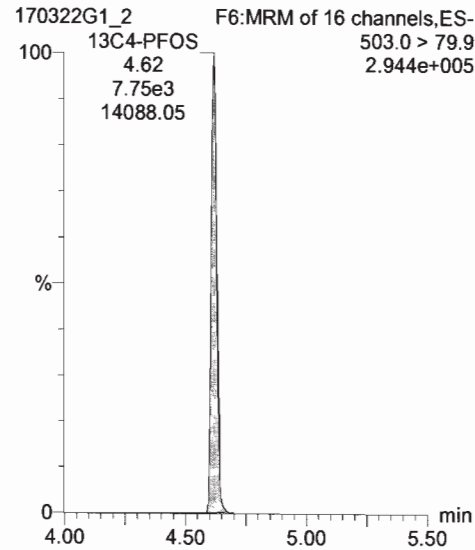
13C3-PFHxS



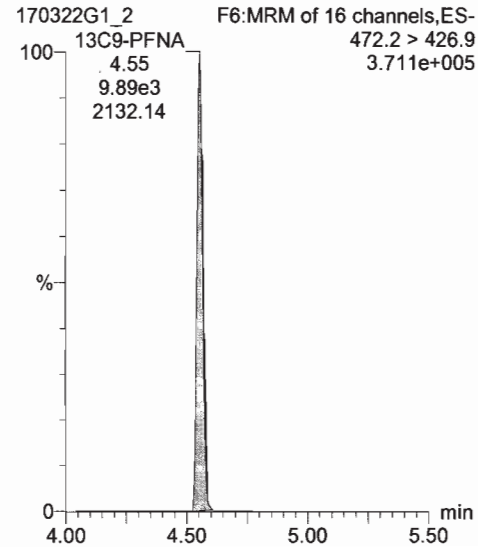
13C8-PFOA



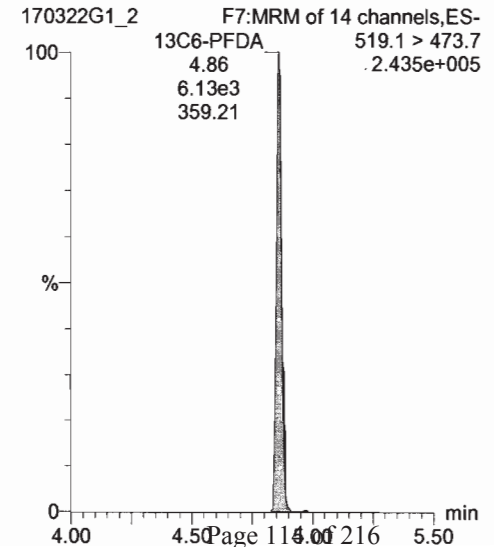
13C4-PFOS



13C9-PFNA



13C6-PFDA



Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-13.qld

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Printed: Wednesday, March 22, 2017 15:08:55 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170322G1_13, Date: 22-Mar-2017, Time: 13:39:21, ID: ST170322G1-2 PFC CS3 17C2201, Description: PFC CS3 17C2201 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA (A)	213.1 > 168.8	1.27e4	3.00e4		1.000	1.72	12.7	127.4
2	2 PFPeA	263.1 > 218.9	9.48e3	1.35e4		1.000	2.68	10.9	109.5
3	3 PFBS	299 > 79.7	1.23e4	7.67e3		1.000	2.95	10.4	104.4
4	4 PFHxA	313.2 > 268.9	8.79e3	7.02e3		1.000	3.32	11.1	111.1
5	5 PFHpA	363 > 318.9	2.46e4	1.86e4		1.000	3.82	10.2	102.4
6	6 PFHxS	398.9 > 79.6	1.20e4	7.72e3		1.000	3.94	10.6	105.9
7	7 6:2 FTS	427.1 > 407	2.78e3	3.38e4		1.000	4.17	12.1	121.1
8	8 PFOA	413 > 368.7	2.38e4	3.38e4		1.000	4.23	10.5	105.1
9	9 PFHpS	449 > 98.7	2.01e3	3.38e4		1.000	4.31	10.9	108.6
10	10 PFOS	499 > 79.9	9.67e3	9.77e3		1.000	4.62	11.9	119.4
11	11 PFNA	463 > 418.8	1.88e4	1.16e4		1.000	4.56	10.2	102.0
12	12 PFDA	513 > 468.8	9.00e3	1.09e4		1.000	4.87	12.0	120.5
13	13 8:2 FTS	527 > 506.9	2.65e3	1.09e4		1.000	4.84	11.7	117.4
14	14 13C3-PFBA	216.1 > 171.8	3.00e4	2.38e4	1.145	1.000	1.72	13.8	110.1
15	15 13C3-PFPeA	266 > 221.8	1.35e4	2.61e4	0.402	1.000	2.67	16.1	128.8
16	16 13C3-PFBS	302.0 > 98.8	7.67e3	2.61e4	0.229	1.000	2.95	16.0	127.9
17	17 13C2-PFHxA	315 > 269.8	7.02e3	2.61e4	0.527	1.000	3.32	6.38	127.6
18	18 13C4-PFHpA	367.2 > 321.8	1.86e4	1.58e4	0.914	1.000	3.82	16.0	128.2
19	19 18O2-PFHxS	403 > 102.6	7.72e3	1.58e4	0.382	1.000	3.94	15.9	127.6
20	20 13C2-6:2 FTS (A)	429.1 > 408.9	6.78e3			1.000	4.17		
21	21 13C2-PFOA	414.9 > 369.7	3.38e4	1.00e4	2.829	1.000	4.23	14.9	119.6
22	22 13C8-PFOS	507.0 > 79.9	9.77e3	9.67e3	0.822	1.000	4.62	15.3	122.8
23	23 13C5-PFNA	468.2 > 422.9	1.16e4	1.19e4	0.788	1.000	4.56	15.5	123.7
24	24 13C2-PFDA	515.1 > 469.9	1.09e4	8.48e3	0.999	1.000	4.87	16.0	128.1
25	25 13C2-8:2 FTS (A)	529.1 > 508.7				1.000			
26	26 13C4-PFBA	217 > 171.8	2.38e4	2.38e4	1.000	1.000	1.72	12.5	100.0
27	27 13C2-4:2 FTS (A)	329.2 > 308.9				1.000			
28	28 13C5-PFHxA	318.0 > 272.9	2.61e4	2.61e4	1.000	1.000	3.32	12.5	100.0
29	29 13C3-PFHxS	401.9 > 79.9	1.58e4	1.58e4	1.000	1.000	3.94	12.5	100.0
30	30 13C8-PFOA	421.3 > 376	1.00e4	1.00e4	1.000	1.000	4.22	12.5	100.0
31	31 13C4-PFOS	503.0 > 79.9	9.67e3	9.67e3	1.000	1.000	4.62	12.5	100.0
32	32 13C9-PFNA	472.2 > 426.9	1.19e4	1.19e4	1.000	1.000	4.56	12.5	100.0

75-125
60-150
60-150
60-150

(A) Analyte not used

gm 3/22/17

es 3/22/17

Dataset: U:\G1.PRO\Results\2017\170322G1\170322G1-13.qld

Last Altered: Wednesday, March 22, 2017 15:07:37 Pacific Daylight Time

Printed: Wednesday, March 22, 2017 15:08:55 Pacific Daylight Time

Name: 170322G1_13, Date: 22-Mar-2017, Time: 13:39:21, ID: ST170322G1-2 PFC CS3 17C2201, Description: PFC CS3 17C2201 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
33	33 13C6-PFDA	519.1 > 473.7	8.48e3	8.48e3	1.000	1.000	4.87	12.5	100.0

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Compound name: PFBA

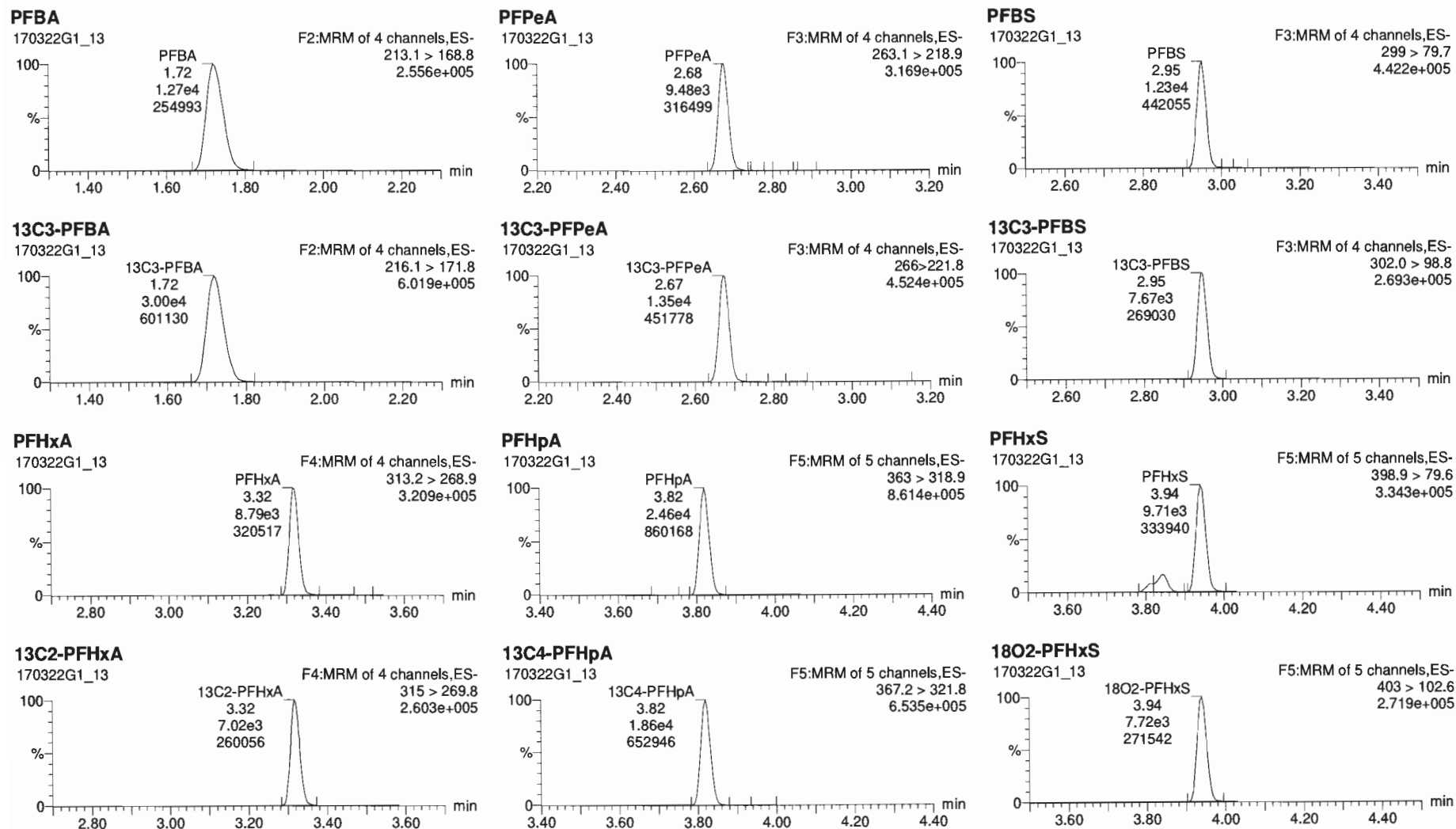
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2	170322G1_2	ST170322G1-1 PFC CS3 17C2201	22-Mar-17	11:20:28
3	170322G1_3	IPA	22-Mar-17	11:33:02
4	170322G1_4	B7C0100-BS1 OPR 0.125	22-Mar-17	11:45:40
5	170322G1_5	IPA	22-Mar-17	11:58:15
6	170322G1_6	B7C0100-BLK1 Method Blank 0.125	22-Mar-17	12:10:54
7	170322G1_7	1700345-04@10X CBD-AOA-MW08-0317 0.125	22-Mar-17	12:23:34
8	170322G1_8	B7C0099-MS1@10X Matrix Spike 0.125	22-Mar-17	12:36:12
9	170322G1_9	B7C0099-MSD1@10X Matrix Spike Dup 0.125	22-Mar-17	12:48:49
10	170322G1_10	1700345-07@10X CBD-SO3-MW01-0317 0.125	22-Mar-17	13:01:26
11	170322G1_11	1700304-02RE2@40X B-104 -Trailer (420-117...	22-Mar-17	13:14:05
12	170322G1_12	IPA	22-Mar-17	13:26:44
13	170322G1_13	ST170322G1-2 PFC CS3 17C2201	22-Mar-17	13:39:21
14	170322G1_14	IPA	22-Mar-17	13:51:56

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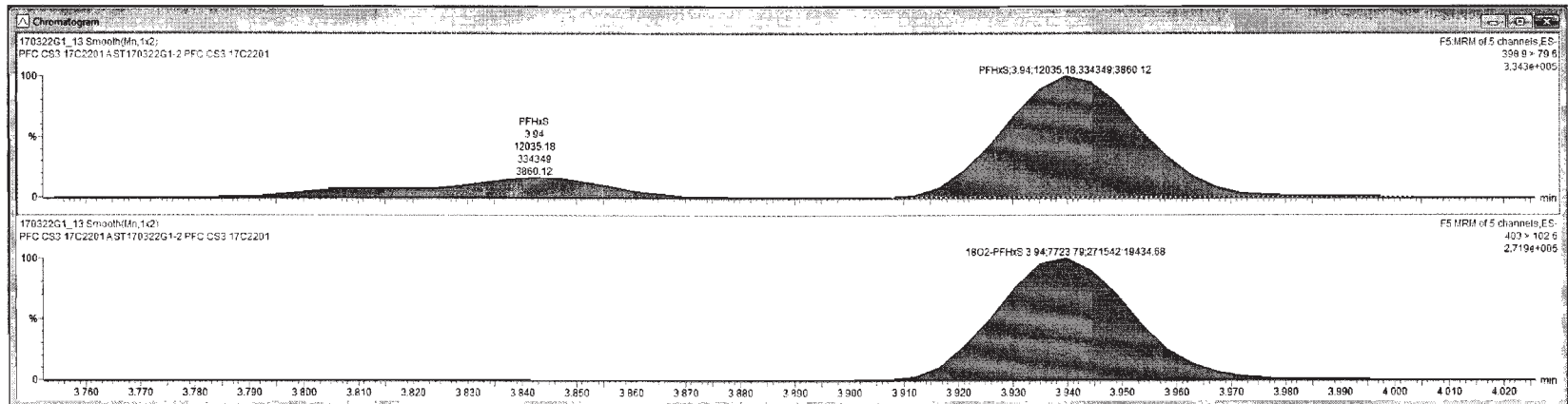
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Name: 170322G1_13, Date: 22-Mar-2017, Time: 13:39:21, ID: ST170322G1-2 PFC CS3 17C2201, Description: PFC CS3 17C2201 A



170322G1_13 - ST170322G1-2 PFC CS3 17C2201 - PFC CS3 17C2201 A

Name	Resp	RRF	w%val	RT	RA	nhv	Conc	%Rec	DL	EMPC
1 PFBA	1.27e4	1.000	1.72	12.7	127					
2 PFPnA	9.48e3	1.000	2.67	10.9	109					
3 PFBS	1.23e4	1.000	2.95	10.4	104			0.0135		
4 PPHxA	8.79e3	1.000	3.32	11.1	111					
5 PPHpA	2.45e4	1.000	3.82	10.2	102			0.00020		
6 PPHsS	1.20e4	1.000	3.94	10.8	108					
7 6-2 FTS	2.78e3	1.000	4.17	12.1	121			0.243		
8 PFOA	2.38e4	1.000	4.23	10.5	105					
9 PPHsS	2.01e3	1.000	4.31	10.9	109			0.0587		
10 PFDS	9.67e3	1.000	4.62	11.9	119			0.0914		
11 PFNA	1.80e4	1.000	4.56	10.2	102			0.0156		
12 PFDA	9.00e3	1.000	4.87	12.0	120					
13 8-2 FTS	2.85e3	1.000	4.64	11.7	117			0.153		
14 13C3-PFBA	3.07e4	1.14	1.000	1.72	13.8	110		0.00552		
15 13C3-PFPnA	1.35e4	0.40	1.000	2.67	16.1	129		0.2229		
16 13C3-PFBS	7.67e3	0.23	1.000	2.95	16.0	128		0.0587		
17 13C2-PFHxA	7.02e3	0.53	1.000	3.32	6.38	128		0.06926		
18 13C4-PFHpA	1.96e4	0.91	1.000	3.82	16.0	128		0.03743		
19 18O2-PFHsS	7.72e3	0.38	1.000	3.94	15.9	128		0.02206		
20 13C2-6-2 FTS	5.78e3	1.000	4.17							
21 13C2-PFOA	3.38e4	2.83	1.000	4.23	14.9	120		0.0152		
22 13C8-PFDS	9.77e3	0.82	1.000	4.62	15.3	123		0.00182		
23 13C5-PFNA	1.18e4	0.79	1.000	4.56	15.5	124		0.0541		
24 13C2-PFDA	1.09e4	1.00	1.000	4.86	16.0	128		0.0144		

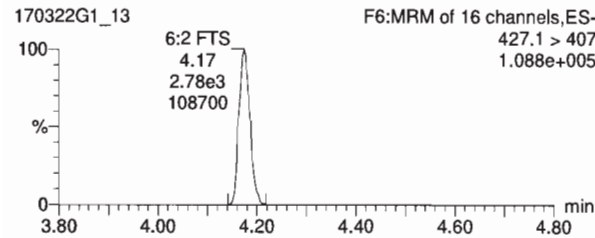


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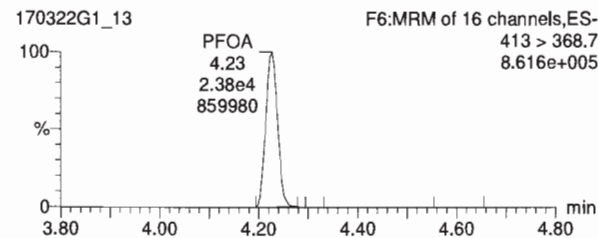
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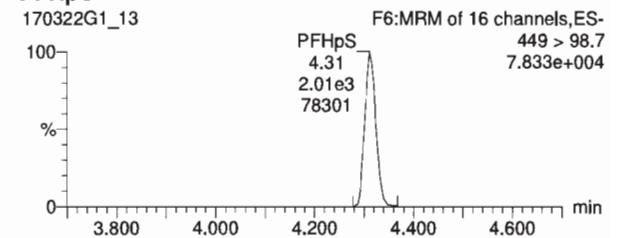
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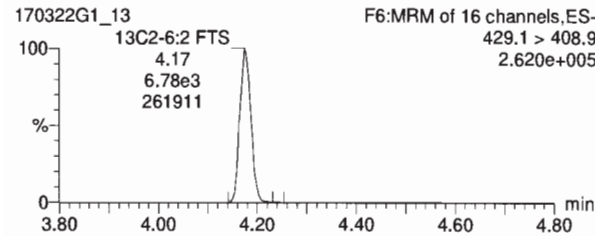
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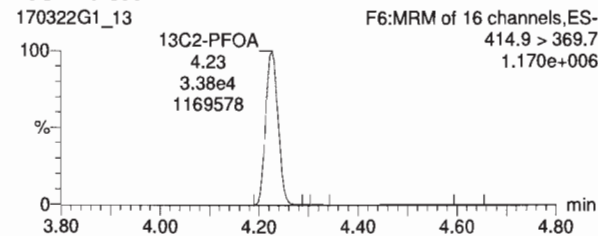
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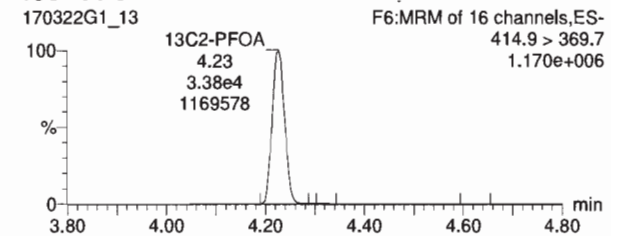
13C2-6:2 FTS



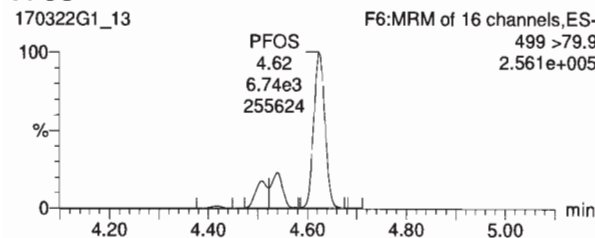
13C2-PFOA



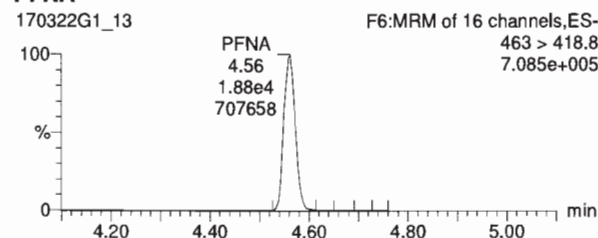
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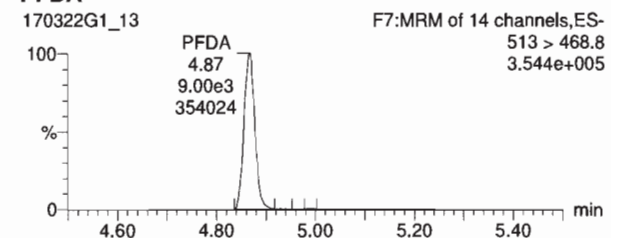
PFOS



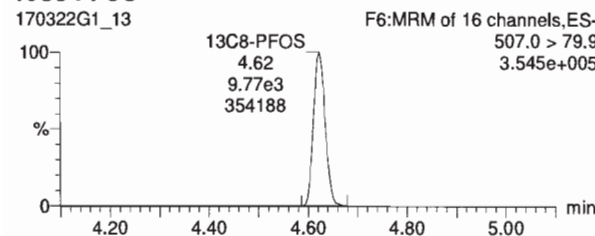
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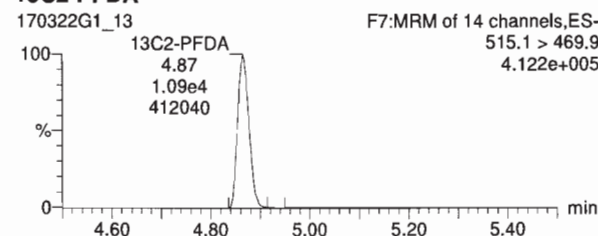
PFDA



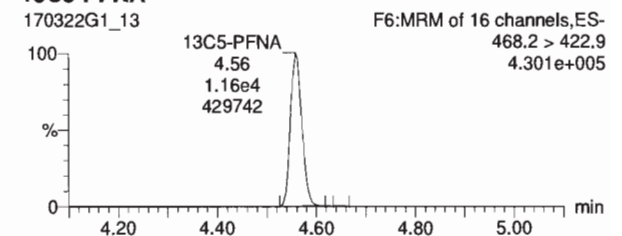
13C8-PFOS



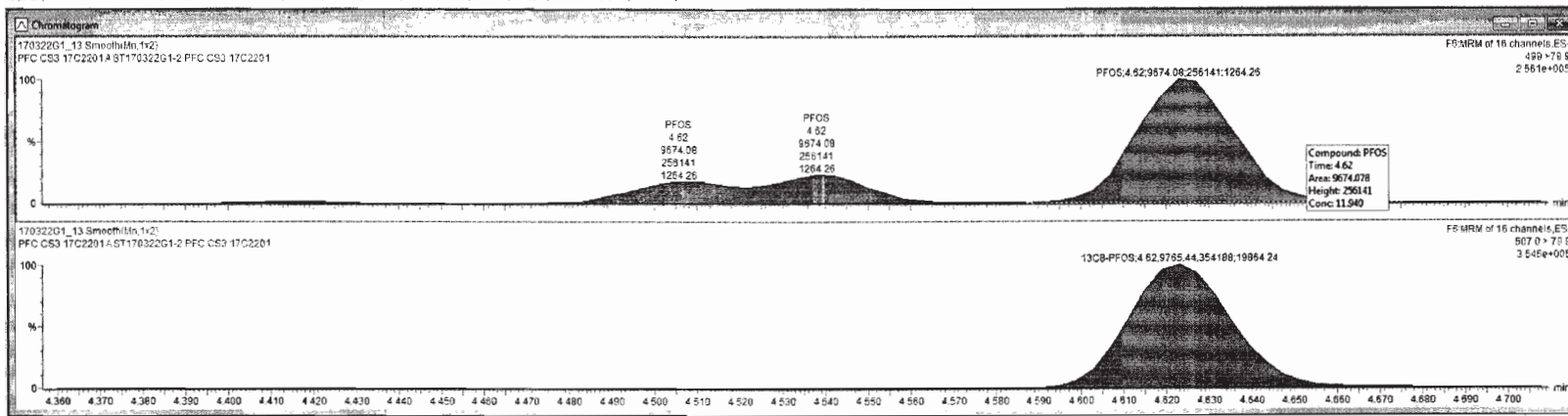
13C2-PFDA



13C5-PFNA



Name	Resp	RRF	wVal	RT	RA	nly	Conc	%Rec	DL	EMPC
1 PFBA	1.27e4	1.000	1.72				12.7	127		
2 PFPaA	9.48e3	1.000	2.67				10.9	109		
3 PFBS	1.23e4	1.000	2.95				10.4	104	0.0135	
4 PFPaA	8.79e3	1.000	3.32				11.1	111		
5 PFPaA	2.46e4	1.000	3.32				10.2	102	0.009200	
6 PFPaS	1.20e4	1.000	3.34				10.6	106		
7 2-2-FTS	2.76e3	1.000	4.17				12.1	121	0.243	
8 PFDA	2.38e4	1.000	4.23				10.5	105		
9 PFPaS	2.01e3	1.000	4.31				10.9	109	0.0567	
10 PFOS	9.87e3	1.000	4.62				81.9	819	0.0914	
11 PFNA	1.08e4	1.000	4.56				10.2	102	0.0156	
12 PFDA	9.00e3	1.000	4.87				12.0	120		
13 2-2-FTS	2.65e3	1.000	4.84				11.7	117	0.163	
14 13C3-PFBA	3.00e4	1.14	1.000	1.72			13.6	110	0.00552	
15 13C3-PFPaA	1.35e4	0.40	1.000	2.67			16.1	125	0.0229	
16 13C3-PFBS	7.57e3	0.23	1.000	2.95			16.0	126	0.00587	
17 13C3-PFPaA	7.02e3	0.53	1.000	3.32			6.38	123	0.0926	
18 13C4-PFPaA	1.86e4	0.91	1.000	3.32			16.6	128	0.00743	
19 13C2-PFPaS	7.72e3	0.38	1.000	3.34			15.9	126	0.00205	
20 13C2-2-FTS	6.75e3	1.000	4.17							
21 13C2-PFDA	3.38e4	2.83	1.000	4.23			14.9	120	0.0152	
22 13C5-PFOS	9.77e3	0.82	1.000	4.62			15.3	123	0.00182	
23 13C5-PFNA	1.16e4	0.79	1.000	4.56			15.5	124	0.0541	
24 13C2-PFDA	1.05e4	1.00	1.000	4.86			16.0	128	0.0144	

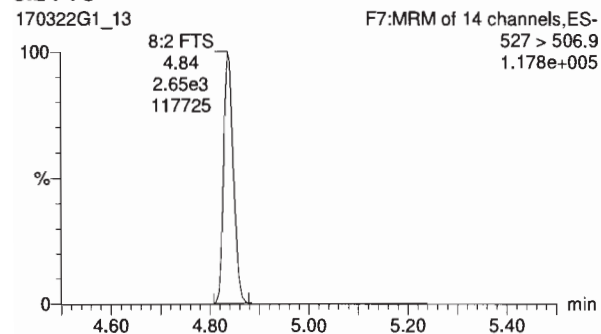


Dataset: Untitled

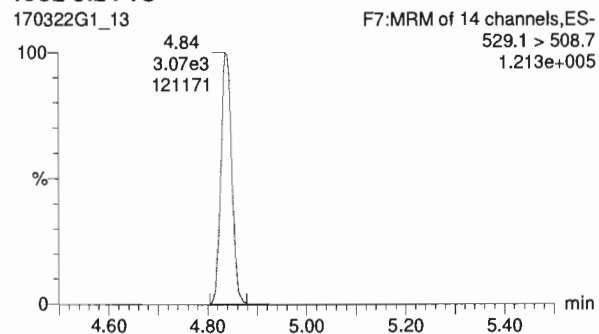
Last Altered: Wednesday, March 22, 2017 15:09:45 Pacific Daylight Time
Printed: Wednesday, March 22, 2017 15:11:20 Pacific Daylight Time

Name: 170322G1_13, Date: 22-Mar-2017, Time: 13:39:21, ID: ST170322G1-2 PFC CS3 17C2201, Description: PFC CS3 17C2201 A

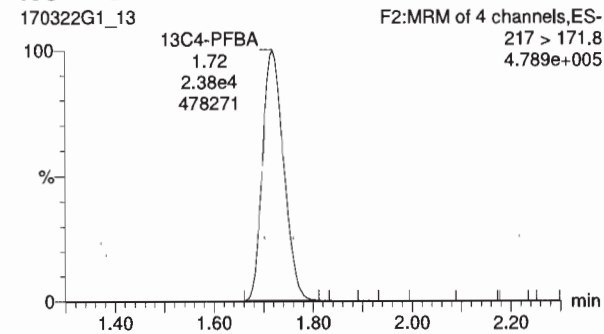
8:2 FTS



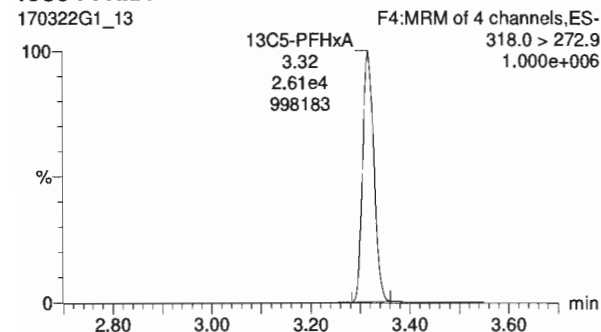
13C2-8:2 FTS



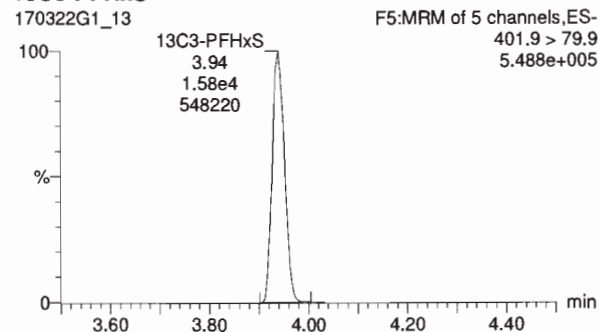
13C4-PFBA



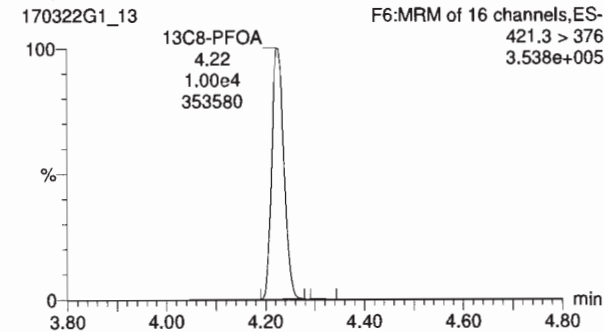
13C5-PFHxA



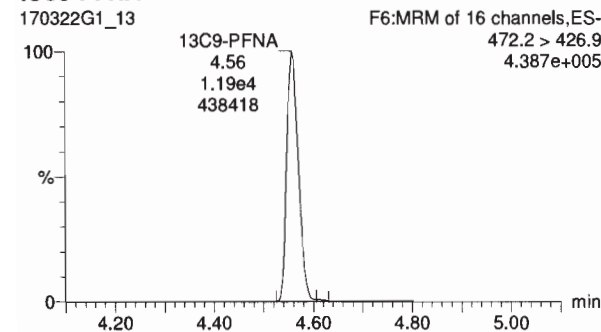
13C3-PFHxS



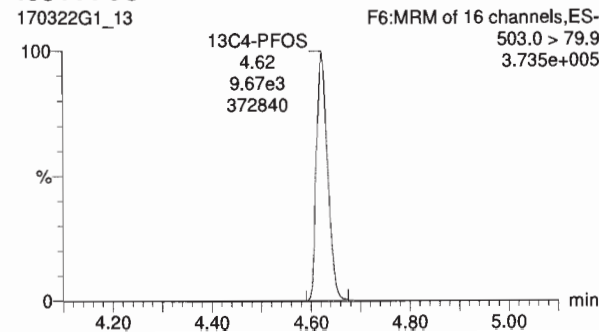
13C8-PFOA



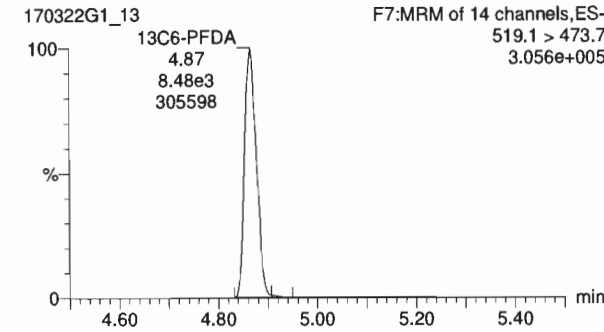
13C9-PFNA



13C4-PFOS



13C6-PFDA



INITIAL CALIBRATION

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld
Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

SCANNED
KC 3-22-17

Method: Untitled 21 Mar 2017 08:55:09
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-21-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Compound name: PFBA

Correlation coefficient: $r = 0.998923$, $r^2 = 0.997847$

Calibration curve: $0.41514 * x + 0.0217093$

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

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

20
3/22/17

am 3/21/17

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	1.79	3.22e2	2.96e4	0.276	10.3	0.545
2	2 170320G5_3	0.500	1.79	5.61e2	3.18e4	0.479	-4.3	0.441
3	3 170320G5_4	1.00	1.79	1.09e3	3.16e4	0.988	-1.2	0.432
4	4 170320G5_5	2.00	1.79	2.02e3	3.19e4	1.86	-7.1	0.396
5	5 170320G5_6	5.00	1.79	4.82e3	3.20e4	4.48	-10.4	0.376
6	6 170320G5_7	10.0	1.79	1.09e4	2.84e4	11.5	15.0	0.480
7	7 170320G5_8	50.0	1.79	4.95e4	3.07e4	48.5	-3.1	0.403
8	8 170320G5_9	100	1.79	9.56e4	2.86e4	101	0.7	0.418

3/21/17

Compound name: PFPeA

Correlation coefficient: $r = 0.998592$, $r^2 = 0.997187$

Calibration curve: $0.795855 * x + 0.0442515$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	2.73	2.59e2	1.20e4	0.283	13.3	1.08
2	2 170320G5_3	0.500	2.73	4.18e2	1.26e4	0.464	-7.3	0.827
3	3 170320G5_4	1.00	2.73	8.69e2	1.27e4	1.02	2.2	0.857
4	4 170320G5_5	2.00	2.73	1.52e3	1.25e4	1.86	-7.2	0.761
5	5 170320G5_6	5.00	2.73	3.47e3	1.29e4	4.18	-16.4	0.675
6	6 170320G5_7	10.0	2.73	8.38e3	1.12e4	11.7	16.9	0.935
7	7 170320G5_8	50.0	2.73	3.66e4	1.17e4	49.1	-1.7	0.783
8	8 170320G5_9	100	2.73	6.53e4	1.02e4	100	0.1	0.797

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: PFBS

Correlation coefficient: $r = 0.999090$, $r^2 = 0.998181$

Calibration curve: $1.91626 * x + -0.0140607$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	2.99	2.61e2	6.87e3	0.255	2.0	1.90
2	2 170320G5_3	0.500	2.99	5.74e2	7.21e3	0.527	5.4	1.99
3	3 170320G5_4	1.00	2.99	1.15e3	7.58e3	0.993	-0.7	1.89
4	4 170320G5_5	2.00	2.99	2.09e3	7.42e3	1.85	-7.5	1.76
5	5 170320G5_6	5.00	2.99	5.05e3	7.38e3	4.48	-10.5	1.71
6	6 170320G5_7	10.0	2.99	1.11e4	6.38e3	11.3	13.5	2.17
7	7 170320G5_8	50.0	2.99	4.80e4	6.44e3	48.6	-2.8	1.86
8	8 170320G5_9	100	2.99	8.49e4	5.50e3	101	0.7	1.93

Compound name: PFHxA

Correlation coefficient: $r = 0.998257$, $r^2 = 0.996517$

Calibration curve: $0.55679 * x + 0.0695624$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	3.35	2.66e2	6.26e3	0.257	2.7	0.850
2	2 170320G5_3	0.500	3.35	4.53e2	6.59e3	0.493	-1.4	0.688
3	3 170320G5_4	1.00	3.35	7.86e2	6.47e3	0.965	-3.5	0.607
4	4 170320G5_5	2.00	3.35	1.48e3	6.89e3	1.80	-9.8	0.537
5	5 170320G5_6	5.00	3.35	3.52e3	6.71e3	4.59	-8.2	0.525
6	6 170320G5_7	10.0	3.35	7.85e3	5.80e3	12.0	20.3	0.677
7	7 170320G5_8	50.0	3.35	3.44e4	6.02e3	51.2	2.4	0.571
8	8 170320G5_9	100	3.35	5.91e4	5.44e3	97.4	-2.6	0.543

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: PFHpA

Correlation coefficient: $r = 0.999324$, $r^2 = 0.998648$

Calibration curve: $1.61844 * x + 0.00173057$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	3.86	6.35e2	1.70e4	0.288	15.2	1.87
2	2 170320G5_3	0.500	3.85	1.07e3	1.75e4	0.473	-5.4	1.53
3	3 170320G5_4	1.00	3.85	2.30e3	1.80e4	0.988	-1.2	1.60
4	4 170320G5_5	2.00	3.86	4.33e3	1.71e4	1.95	-2.6	1.58
5	5 170320G5_6	5.00	3.85	1.01e4	1.82e4	4.26	-14.7	1.38
6	6 170320G5_7	10.0	3.86	2.25e4	1.59e4	10.9	9.5	1.77
7	7 170320G5_8	50.0	3.86	1.01e5	1.59e4	49.4	-1.3	1.60
8	8 170320G5_9	100	3.85	1.77e5	1.36e4	100	0.5	1.63

Compound name: PFHxS

Correlation coefficient: $r = 0.998767$, $r^2 = 0.997535$

Calibration curve: $1.82908 * x + 0.112561$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	3.97	3.45e2	6.87e3	0.282	12.6	2.51
2	2 170320G5_3	0.500	3.97	5.21e2	7.05e3	0.444	-11.3	1.85
3	3 170320G5_4	1.00	3.97	1.15e3	7.29e3	1.01	1.2	1.96
4	4 170320G5_5	2.00	3.97	2.15e3	7.63e3	1.86	-6.8	1.76
5	5 170320G5_6	5.00	3.97	4.92e3	7.53e3	4.41	-11.9	1.63
6	6 170320G5_7	10.0	3.97	1.13e4	6.55e3	11.7	17.3	2.16
7	7 170320G5_8	50.0	3.97	4.88e4	6.69e3	49.8	-0.4	1.82
8	8 170320G5_9	100	3.97	8.76e4	6.03e3	99.2	-0.8	1.82

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time
 Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: 6:2 FTS

Coefficient of Determination: $R^2 = 0.997961$

Calibration curve: $-5.2241e-005 * x^2 + 0.0871772 * x + -0.0209463$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	4.21	3.12e1	2.90e4	0.394	57.8	0.0537
2	2 170320G5_3	0.500	4.20	4.97e1	3.19e4	0.464	-7.2	0.0389
3	3 170320G5_4	1.00	4.20	1.98e2	3.04e4	1.18	17.7	0.0816
4	4 170320G5_5	2.00	4.20	4.45e2	3.40e4	2.12	5.9	0.0818
5	5 170320G5_6	5.00	4.20	1.01e3	3.43e4	4.49	-10.1	0.0739
6	6 170320G5_7	10.0	4.20	1.89e3	3.10e4	9.03	-9.7	0.0762
7	7 170320G5_8	50.0	4.20	1.09e4	3.11e4	52.3	4.6	0.0879
8	8 170320G5_9	100	4.20	1.87e4	2.89e4	98.9	-1.1	0.0809

Ⓐ

Point excluded. 28 3/21/17

Compound name: PFOA

Correlation coefficient: $r = 0.999702$, $r^2 = 0.999404$

Calibration curve: $0.824918 * x + 0.12827$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	4.25	7.69e2	2.90e4	0.246	-1.5	1.33
2	2 170320G5_3	0.500	4.25	1.36e3	3.19e4	0.490	-1.9	1.07
3	3 170320G5_4	1.00	4.25	2.53e3	3.04e4	1.10	10.5	1.04
4	4 170320G5_5	2.00	4.25	4.56e3	3.40e4	1.88	-6.2	0.838
5	5 170320G5_6	5.00	4.25	1.08e4	3.43e4	4.62	-7.5	0.788
6	6 170320G5_7	10.0	4.25	2.22e4	3.10e4	10.7	6.8	0.894
7	7 170320G5_8	50.0	4.25	1.03e5	3.11e4	50.1	0.2	0.829
8	8 170320G5_9	100	4.25	1.90e5	2.89e4	99.6	-0.4	0.823

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time
 Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: PFHpS

Correlation coefficient: $r = 0.999391$, $r^2 = 0.998782$

Calibration curve: $0.068966 * x + -0.00379395$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	4.34	1.84e1	2.90e4	0.170	-31.9	0.0318
2	2 170320G5_3	0.500	4.34	1.05e2	3.19e4	0.648	29.7	0.0819
3	3 170320G5_4	1.00	4.34	1.32e2	3.04e4	0.842	-15.8	0.0543
4	4 170320G5_5	2.00	4.34	3.73e2	3.40e4	2.04	2.1	0.0685
5	5 170320G5_6	5.00	4.34	8.40e2	3.43e4	4.50	-10.0	0.0613
6	6 170320G5_7	10.0	4.34	1.57e3	3.10e4	9.23	-7.7	0.0633
7	7 170320G5_8	50.0	4.34	8.66e3	3.11e4	50.5	1.0	0.0696
8	8 170320G5_9	100	4.34	1.61e4	2.89e4	101	0.7	0.0694

Ⓐ Point excluded. @ 3/21/17

Compound name: PFOS

Correlation coefficient: $r = 0.999076$, $r^2 = 0.998153$

Calibration curve: $1.04359 * x + -0.0775607$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	4.67	1.32e2	7.18e3	0.295	18.1	0.922
2	2 170320G5_3	0.500	4.66	3.09e2	7.87e3	0.544	8.8	0.980
3	3 170320G5_4	1.00	4.66	6.01e2	7.94e3	0.980	-2.0	0.945
4	4 170320G5_5	2.00	4.66	1.24e3	9.07e3	1.71	-14.4	0.855
5	5 170320G5_6	5.00	4.66	3.19e3	9.53e3	4.08	-18.3	0.837
6	6 170320G5_7	10.0	4.66	7.02e3	7.99e3	10.6	6.0	1.10
7	7 170320G5_8	50.0	4.66	3.98e4	9.30e3	51.3	2.6	1.07
8	8 170320G5_9	100	4.65	7.06e4	8.53e3	99.2	-0.8	1.03

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time
 Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: PFNA

Correlation coefficient: $r = 0.998351$, $r^2 = 0.996704$

Calibration curve: $1.98964 * x + -0.0110682$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	4.59	4.30e2	8.79e3	0.313	25.1	2.45
2	2 170320G5_3	0.500	4.59	8.73e2	1.05e4	0.526	5.2	2.07
3	3 170320G5_4	1.00	4.59	1.28e3	9.03e3	0.895	-10.5	1.77
4	4 170320G5_5	2.00	4.59	2.89e3	1.03e4	1.77	-11.6	1.75
5	5 170320G5_6	5.00	4.59	7.20e3	1.10e4	4.13	-17.3	1.64
6	6 170320G5_7	10.0	4.59	1.62e4	9.09e3	11.2	11.7	2.22
7	7 170320G5_8	50.0	4.59	8.04e4	1.06e4	47.5	-5.1	1.89
8	8 170320G5_9	100	4.59	1.52e5	9.33e3	102	2.5	2.04

Compound name: PFDA

Correlation coefficient: $r = 0.996939$, $r^2 = 0.993887$

Calibration curve: $0.844087 * x + 0.185194$

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

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

Ⓐ Point excluded as 3/21/17

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	4.91	1.58e2	7.13e3	0.109	-56.6	1.11 Ⓐ
2	2 170320G5_3	0.500	4.90	4.31e2	8.35e3	0.545	9.0	1.29
3	3 170320G5_4	1.00	4.90	5.46e2	8.04e3	0.786	-21.4	0.849
4	4 170320G5_5	2.00	4.90	1.24e3	7.95e3	2.09	4.7	0.977
5	5 170320G5_6	5.00	4.90	2.76e3	9.41e3	4.12	-17.5	0.733
6	6 170320G5_7	10.0	4.90	7.27e3	8.35e3	12.7	26.6	1.09
7	7 170320G5_8	50.0	4.90	3.61e4	1.06e4	50.3	0.5	0.852
8	8 170320G5_9	100	4.90	6.95e4	1.05e4	98.0	-2.0	0.829

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time
 Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: 8:2 FTS

Coefficient of Determination: R² = 0.995503
 Calibration curve: -0.000453468 * x² + 0.26903 * x + -0.0484379
 Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
 Curve type: 2nd Order, Origin: Exclude, Weighting: 1/x, Axis trans: None

Ⓐ Point excluded. EP 3/21/17

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250	4.88	7.09e1	7.13e3	0.643	157.1	0.497 Ⓐ
2	2 170320G5_3	0.500	4.88	4.93e1	8.35e3	0.455	-9.1	0.148
3	3 170320G5_4	1.00	4.88	1.37e2	8.04e3	0.975	-2.5	0.213
4	4 170320G5_5	2.00	4.88	3.69e2	7.95e3	2.35	17.4	0.290
5	5 170320G5_6	5.00	4.88	7.78e2	9.41e3	4.05	-19.0	0.207
6	6 170320G5_7	10.0	4.88	2.01e3	8.35e3	11.6	16.0	0.301
7	7 170320G5_8	50.0	4.88	1.01e4	1.06e4	48.2	-3.7	0.237
8	8 170320G5_9	100	4.88	1.89e4	1.05e4	101	1.0	0.225

Compound name: 13C3-PFBA

Response Factor: 1.14471
 RRF SD: 0.0421067, Relative SD: 3.67838
 Response type: Internal Std (Ref 26), Area * (IS Conc. / IS Area)
 Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	1.79	2.96e4	2.80e4	11.5	-7.8	1.06
2	2 170320G5_3	12.5	1.79	3.18e4	2.75e4	12.6	1.2	1.16
3	3 170320G5_4	12.5	1.79	3.16e4	2.83e4	12.2	-2.6	1.11
4	4 170320G5_5	12.5	1.79	3.19e4	2.72e4	12.8	2.3	1.17
5	5 170320G5_6	12.5	1.79	3.20e4	2.77e4	12.6	1.0	1.16
6	6 170320G5_7	12.5	1.79	2.84e4	2.41e4	12.8	2.8	1.18
7	7 170320G5_8	12.5	1.79	3.07e4	2.69e4	12.5	-0.2	1.14
8	8 170320G5_9	12.5	1.79	2.86e4	2.41e4	12.9	3.4	1.18

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

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Compound name: 13C3-PFPeA

Response Factor: 0.401885

RRF SD: 0.013884, Relative SD: 3.45471

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	2.73	1.20e4	3.16e4	11.8	-5.6	0.380
2	2 170320G5_3	12.5	2.73	1.26e4	3.18e4	12.3	-1.2	0.397
3	3 170320G5_4	12.5	2.73	1.27e4	3.16e4	12.5	-0.2	0.401
4	4 170320G5_5	12.5	2.73	1.25e4	3.17e4	12.2	-2.1	0.393
5	5 170320G5_6	12.5	2.73	1.29e4	3.14e4	12.7	2.0	0.410
6	6 170320G5_7	12.5	2.73	1.12e4	2.84e4	12.3	-1.7	0.395
7	7 170320G5_8	12.5	2.73	1.17e4	2.80e4	13.0	3.9	0.418
8	8 170320G5_9	12.5	2.73	1.02e4	2.43e4	13.1	4.9	0.422

Compound name: 13C3-PFBS

Response Factor: 0.229298

RRF SD: 0.00705933, Relative SD: 3.07867

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	2.99	6.87e3	3.16e4	11.9	-5.2	0.217
2	2 170320G5_3	12.5	2.99	7.21e3	3.18e4	12.3	-1.2	0.226
3	3 170320G5_4	12.5	2.99	7.58e3	3.16e4	13.1	4.7	0.240
4	4 170320G5_5	12.5	2.99	7.42e3	3.17e4	12.8	2.1	0.234
5	5 170320G5_6	12.5	2.99	7.38e3	3.14e4	12.8	2.5	0.235
6	6 170320G5_7	12.5	2.99	6.38e3	2.84e4	12.3	-1.9	0.225
7	7 170320G5_8	12.5	2.99	6.44e3	2.80e4	12.5	0.2	0.230
8	8 170320G5_9	12.5	2.99	5.50e3	2.43e4	12.4	-1.2	0.227

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Compound name: 13C2-PFHxA

Response Factor: 0.526514

RRF SD: 0.0209756, Relative SD: 3.98387

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	5.00	3.35	6.26e3	3.16e4	4.71	-5.9	0.496
2	2 170320G5_3	5.00	3.35	6.59e3	3.18e4	4.92	-1.7	0.518
3	3 170320G5_4	5.00	3.35	6.47e3	3.16e4	4.87	-2.7	0.513
4	4 170320G5_5	5.00	3.35	6.89e3	3.17e4	5.16	3.3	0.544
5	5 170320G5_6	5.00	3.35	6.71e3	3.14e4	5.07	1.4	0.534
6	6 170320G5_7	5.00	3.35	5.80e3	2.84e4	4.85	-2.9	0.511
7	7 170320G5_8	5.00	3.35	6.02e3	2.80e4	5.10	2.0	0.537
8	8 170320G5_9	5.00	3.35	5.44e3	2.43e4	5.32	6.4	0.560

Compound name: 13C4-PFHpA

Response Factor: 0.913537

RRF SD: 0.0328682, Relative SD: 3.59791

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	3.86	1.70e4	1.84e4	12.6	1.2	0.924
2	2 170320G5_3	12.5	3.85	1.75e4	1.86e4	12.8	2.8	0.939
3	3 170320G5_4	12.5	3.85	1.80e4	1.93e4	12.7	1.9	0.931
4	4 170320G5_5	12.5	3.85	1.71e4	1.92e4	12.2	-2.2	0.893
5	5 170320G5_6	12.5	3.85	1.82e4	1.92e4	13.0	3.8	0.948
6	6 170320G5_7	12.5	3.85	1.59e4	1.70e4	12.8	2.5	0.937
7	7 170320G5_8	12.5	3.85	1.59e4	1.80e4	12.0	-3.7	0.880
8	8 170320G5_9	12.5	3.85	1.36e4	1.59e4	11.7	-6.2	0.857

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Compound name: 18O2-PFHxS

Response Factor: 0.382111

RRF SD: 0.00910351, Relative SD: 2.38243

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc	%Dev	RRF
1	1 170320G5_2	12.5	3.97	6.87e3	1.84e4	12.2	-2.1	0.374
2	2 170320G5_3	12.5	3.97	7.05e3	1.86e4	12.4	-0.8	0.379
3	3 170320G5_4	12.5	3.97	7.29e3	1.93e4	12.3	-1.3	0.377
4	4 170320G5_5	12.5	3.97	7.63e3	1.92e4	13.0	4.1	0.398
5	5 170320G5_6	12.5	3.97	7.53e3	1.92e4	12.8	2.4	0.391
6	6 170320G5_7	12.5	3.97	6.55e3	1.70e4	12.6	1.0	0.386
7	7 170320G5_8	12.5	3.97	6.69e3	1.80e4	12.1	-3.0	0.371
8	8 170320G5_9	12.5	3.97	6.03e3	1.59e4	12.4	-0.4	0.380

Compound name: 13C2-PFOA

Response Factor: 2.82873

RRF SD: 0.18587, Relative SD: 6.57078

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc	%Dev	RRF
1	1 170320G5_2	12.5	4.25	2.90e4	1.13e4	11.3	-9.3	2.57
2	2 170320G5_3	12.5	4.25	3.19e4	1.13e4	12.5	-0.2	2.82
3	3 170320G5_4	12.5	4.25	3.04e4	1.20e4	11.2	-10.5	2.53
4	4 170320G5_5	12.5	4.25	3.40e4	1.18e4	12.7	1.8	2.88
5	5 170320G5_6	12.5	4.25	3.43e4	1.15e4	13.1	5.1	2.97
6	6 170320G5_7	12.5	4.25	3.10e4	1.04e4	13.2	5.5	2.99
7	7 170320G5_8	12.5	4.25	3.11e4	1.09e4	12.6	0.9	2.85
8	8 170320G5_9	12.5	4.25	2.89e4	9.58e3	13.3	6.7	3.02

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Compound name: 13C8-PFOS

Response Factor: 0.822149

RRF SD: 0.0528502, Relative SD: 6.42829

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	4.66	7.18e3	8.75e3	12.5	-0.2	0.821
2	2 170320G5_3	12.5	4.66	7.87e3	1.09e4	11.0	-12.3	0.721
3	3 170320G5_4	12.5	4.66	7.94e3	1.03e4	11.7	-6.5	0.769
4	4 170320G5_5	12.5	4.66	9.07e3	1.03e4	13.4	6.9	0.879
5	5 170320G5_6	12.5	4.66	9.53e3	1.12e4	12.9	3.3	0.849
6	6 170320G5_7	12.5	4.66	7.99e3	9.29e3	13.1	4.6	0.860
7	7 170320G5_8	12.5	4.65	9.30e3	1.09e4	13.0	3.9	0.855
8	8 170320G5_9	12.5	4.65	8.53e3	1.04e4	12.5	0.2	0.824

Compound name: 13C5-PFNA

Response Factor: 0.787794

RRF SD: 0.045279, Relative SD: 5.74756

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	4.59	8.79e3	1.18e4	11.9	-5.2	0.747
2	2 170320G5_3	12.5	4.59	1.05e4	1.29e4	13.0	3.6	0.816
3	3 170320G5_4	12.5	4.59	9.03e3	1.25e4	11.4	-8.6	0.720
4	4 170320G5_5	12.5	4.59	1.03e4	1.24e4	13.2	5.3	0.829
5	5 170320G5_6	12.5	4.59	1.10e4	1.31e4	13.3	6.0	0.835
6	6 170320G5_7	12.5	4.59	9.09e3	1.22e4	11.8	-5.6	0.744
7	7 170320G5_8	12.5	4.59	1.06e4	1.35e4	12.5	-0.2	0.786
8	8 170320G5_9	12.5	4.59	9.33e3	1.13e4	13.1	4.7	0.825

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

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Compound name: 13C2-PFDA

Response Factor: 0.999417

RRF SD: 0.074267, Relative SD: 7.43103

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	4.90	7.13e3	7.69e3	11.6	-7.3	0.926
2	2 170320G5_3	12.5	4.90	8.35e3	9.01e3	11.6	-7.3	0.927
3	3 170320G5_4	12.5	4.90	8.04e3	7.46e3	13.5	7.8	1.08
4	4 170320G5_5	12.5	4.90	7.95e3	8.08e3	12.3	-1.5	0.984
5	5 170320G5_6	12.5	4.90	9.41e3	1.03e4	11.4	-8.8	0.911
6	6 170320G5_7	12.5	4.90	8.35e3	8.12e3	12.9	2.9	1.03
7	7 170320G5_8	12.5	4.90	1.06e4	1.03e4	12.9	3.3	1.03
8	8 170320G5_9	12.5	4.90	1.05e4	9.45e3	13.9	10.9	1.11

Compound name: 13C4-PFBA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	1.79	2.80e4	2.80e4	12.5	0.0	1.00
2	2 170320G5_3	12.5	1.79	2.75e4	2.75e4	12.5	0.0	1.00
3	3 170320G5_4	12.5	1.79	2.83e4	2.83e4	12.5	0.0	1.00
4	4 170320G5_5	12.5	1.79	2.72e4	2.72e4	12.5	0.0	1.00
5	5 170320G5_6	12.5	1.79	2.77e4	2.77e4	12.5	0.0	1.00
6	6 170320G5_7	12.5	1.79	2.41e4	2.41e4	12.5	0.0	1.00
7	7 170320G5_8	12.5	1.79	2.69e4	2.69e4	12.5	0.0	1.00
8	8 170320G5_9	12.5	1.79	2.41e4	2.41e4	12.5	0.0	1.00

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Compound name: 13C5-PFHxA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	3.35	3.16e4	3.16e4	12.5	0.0	1.00
2	2 170320G5_3	12.5	3.35	3.18e4	3.18e4	12.5	0.0	1.00
3	3 170320G5_4	12.5	3.35	3.16e4	3.16e4	12.5	0.0	1.00
4	4 170320G5_5	12.5	3.35	3.17e4	3.17e4	12.5	0.0	1.00
5	5 170320G5_6	12.5	3.35	3.14e4	3.14e4	12.5	0.0	1.00
6	6 170320G5_7	12.5	3.35	2.84e4	2.84e4	12.5	0.0	1.00
7	7 170320G5_8	12.5	3.35	2.80e4	2.80e4	12.5	0.0	1.00
8	8 170320G5_9	12.5	3.35	2.43e4	2.43e4	12.5	0.0	1.00

Compound name: 13C3-PFHxS

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	3.97	1.84e4	1.84e4	12.5	0.0	1.00
2	2 170320G5_3	12.5	3.97	1.86e4	1.86e4	12.5	0.0	1.00
3	3 170320G5_4	12.5	3.97	1.93e4	1.93e4	12.5	0.0	1.00
4	4 170320G5_5	12.5	3.97	1.92e4	1.92e4	12.5	0.0	1.00
5	5 170320G5_6	12.5	3.97	1.92e4	1.92e4	12.5	0.0	1.00
6	6 170320G5_7	12.5	3.97	1.70e4	1.70e4	12.5	0.0	1.00
7	7 170320G5_8	12.5	3.97	1.80e4	1.80e4	12.5	0.0	1.00
8	8 170320G5_9	12.5	3.97	1.59e4	1.59e4	12.5	0.0	1.00

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Compound name: 13C8-PFOA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	4.25	1.13e4	1.13e4	12.5	0.0	1.00
2	2 170320G5_3	12.5	4.25	1.13e4	1.13e4	12.5	0.0	1.00
3	3 170320G5_4	12.5	4.25	1.20e4	1.20e4	12.5	0.0	1.00
4	4 170320G5_5	12.5	4.25	1.18e4	1.18e4	12.5	0.0	1.00
5	5 170320G5_6	12.5	4.25	1.15e4	1.15e4	12.5	0.0	1.00
6	6 170320G5_7	12.5	4.25	1.04e4	1.04e4	12.5	0.0	1.00
7	7 170320G5_8	12.5	4.25	1.09e4	1.09e4	12.5	0.0	1.00
8	8 170320G5_9	12.5	4.25	9.58e3	9.58e3	12.5	0.0	1.00

Compound name: 13C4-PFOS

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	4.66	8.75e3	8.75e3	12.5	0.0	1.00
2	2 170320G5_3	12.5	4.66	1.09e4	1.09e4	12.5	0.0	1.00
3	3 170320G5_4	12.5	4.66	1.03e4	1.03e4	12.5	0.0	1.00
4	4 170320G5_5	12.5	4.66	1.03e4	1.03e4	12.5	0.0	1.00
5	5 170320G5_6	12.5	4.66	1.12e4	1.12e4	12.5	0.0	1.00
6	6 170320G5_7	12.5	4.65	9.29e3	9.29e3	12.5	0.0	1.00
7	7 170320G5_8	12.5	4.66	1.09e4	1.09e4	12.5	0.0	1.00
8	8 170320G5_9	12.5	4.65	1.04e4	1.04e4	12.5	0.0	1.00

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Compound name: 13C9-PFNA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	4.59	1.18e4	1.18e4	12.5	0.0	1.00
2	2 170320G5_3	12.5	4.59	1.29e4	1.29e4	12.5	0.0	1.00
3	3 170320G5_4	12.5	4.59	1.25e4	1.25e4	12.5	0.0	1.00
4	4 170320G5_5	12.5	4.59	1.24e4	1.24e4	12.5	0.0	1.00
5	5 170320G5_6	12.5	4.59	1.31e4	1.31e4	12.5	0.0	1.00
6	6 170320G5_7	12.5	4.59	1.22e4	1.22e4	12.5	0.0	1.00
7	7 170320G5_8	12.5	4.59	1.35e4	1.35e4	12.5	0.0	1.00
8	8 170320G5_9	12.5	4.59	1.13e4	1.13e4	12.5	0.0	1.00

Compound name: 13C6-PFDA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	12.5	4.90	7.69e3	7.69e3	12.5	0.0	1.00
2	2 170320G5_3	12.5	4.90	9.01e3	9.01e3	12.5	0.0	1.00
3	3 170320G5_4	12.5	4.90	7.46e3	7.46e3	12.5	0.0	1.00
4	4 170320G5_5	12.5	4.90	8.08e3	8.08e3	12.5	0.0	1.00
5	5 170320G5_6	12.5	4.90	1.03e4	1.03e4	12.5	0.0	1.00
6	6 170320G5_7	12.5	4.90	8.12e3	8.12e3	12.5	0.0	1.00
7	7 170320G5_8	12.5	4.90	1.03e4	1.03e4	12.5	0.0	1.00
8	8 170320G5_9	12.5	4.90	9.45e3	9.45e3	12.5	0.0	1.00

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: Total PFBS

Correlation coefficient: $r = 0.999090$, $r^2 = 0.998181$

Calibration curve: $1.91626 * x + -0.0140607$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250			6.87e3	0.255		
2	2 170320G5_3	0.500			7.05e3	0.527		
3	3 170320G5_4	1.00			7.29e3	0.993		
4	4 170320G5_5	2.00			7.63e3	1.86		
5	5 170320G5_6	5.00			7.53e3	4.48		
6	6 170320G5_7	10.0			6.55e3	11.3		
7	7 170320G5_8	50.0			6.69e3	48.6		
8	8 170320G5_9	100			6.03e3	101		

Compound name: Total PFHxS

Correlation coefficient: $r = 0.998767$, $r^2 = 0.997535$

Calibration curve: $1.82908 * x + 0.112561$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250			6.87e3	0.282		
2	2 170320G5_3	0.500			7.05e3	0.444		
3	3 170320G5_4	1.00			7.29e3	1.15		
4	4 170320G5_5	2.00			7.63e3	2.12		
5	5 170320G5_6	5.00			7.53e3	5.17		
6	6 170320G5_7	10.0			6.55e3	13.8		
7	7 170320G5_8	50.0			6.69e3	59.9		
8	8 170320G5_9	100			6.03e3	121		

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:47:41 Pacific Daylight Time

Compound name: Total PFOA

Correlation coefficient: $r = 0.999702$, $r^2 = 0.999404$

Calibration curve: $0.824918 * x + 0.12827$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250			2.90e4	0.246		
2	2 170320G5_3	0.500			3.19e4	0.490		
3	3 170320G5_4	1.00			3.04e4	1.10		
4	4 170320G5_5	2.00			3.40e4	1.88		
5	5 170320G5_6	5.00			3.43e4	4.62		
6	6 170320G5_7	10.0			3.10e4	10.7		
7	7 170320G5_8	50.0			3.11e4	50.1		
8	8 170320G5_9	100			2.89e4	99.6		

Compound name: Total PFOS

Correlation coefficient: $r = 0.999076$, $r^2 = 0.998153$

Calibration curve: $1.04359 * x + -0.0775607$

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

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170320G5_2	0.250			7.18e3	0.581		
2	2 170320G5_3	0.500			7.87e3	0.762		
3	3 170320G5_4	1.00			7.94e3	1.41		
4	4 170320G5_5	2.00			9.07e3	2.45		
5	5 170320G5_6	5.00			9.53e3	5.39		
6	6 170320G5_7	10.0			7.99e3	14.0		
7	7 170320G5_8	50.0			9.30e3	67.6		
8	8 170320G5_9	100			8.53e3	130		

Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:56:45 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:57:14 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-21-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
1	170320G5_1	IPA	20-Mar-17	21:03:39
2	170320G5_2	ST170320G5-1 PFC CS-2 17C2002	20-Mar-17	21:16:17
3	170320G5_3	ST170320G5-2 PFC CS-1 17C2003	20-Mar-17	21:28:54
4	170320G5_4	ST170320G5-3 PFC CS0 17C2004	20-Mar-17	21:41:31
5	170320G5_5	ST170320G5-4 PFC CS1 17C2005	20-Mar-17	21:54:10
6	170320G5_6	ST170320G5-5 PFC CS2 17C2006	20-Mar-17	22:06:44
7	170320G5_7	ST170320G5-6 PFC CS3 17C2007	20-Mar-17	22:19:18
8	170320G5_8	ST170320G5-7 PFC CS4 17C2008	20-Mar-17	22:31:53
9	170320G5_9	ST170320G5-8 PFC CS5 17C2009	20-Mar-17	22:44:29
10	170320G5_10	IPA	20-Mar-17	22:57:05
11	170320G5_11	SS170320G5-1 PFC SSS 17C2010	20-Mar-17	23:09:43
12	170320G5_12	IPA	20-Mar-17	23:22:19
13	170320G5_13	B7C0093-BS1 OPR 0.25	20-Mar-17	23:34:57
14	170320G5_14	B7C0099-BS1 OPR 0.125	20-Mar-17	23:47:34
15	170320G5_15	IPA	21-Mar-17	00:00:11
16	170320G5_16	B7C0093-BLK1 Method Blank 0.25	21-Mar-17	00:12:50
17	170320G5_17	B7C0099-BLK1 Method Blank 0.125	21-Mar-17	00:25:24
18	170320G5_18	1700286-01RE2 Raw (420-117550-1) 0.26617	21-Mar-17	00:37:59
19	170320G5_19	1700287-01RE2 Raw, Well #4 (420-117557-1)...	21-Mar-17	00:50:35
20	170320G5_20	1700288-01RE2 Raw (420-117558-1) 0.26284	21-Mar-17	01:03:11
21	170320G5_21	1700289-01RE2 Raw, Well #53 (420-117559-1)...	21-Mar-17	01:15:47
22	170320G5_22	1700345-01 CBD-AOA-MW05-0317 0.125	21-Mar-17	01:28:24
23	170320G5_23	1700345-02 CBD-EB01-031717 0.125	21-Mar-17	01:41:02
24	170320G5_24	1700345-03 CBD-AOA-MW06-0317 0.125	21-Mar-17	01:53:40
25	170320G5_25	1700345-04 CBD-AOA-MW08-0317 0.125	21-Mar-17	02:06:14
26	170320G5_26	B7C0099-MS1 Matrix Spike 0.125	21-Mar-17	02:18:52
27	170320G5_27	B7C0099-MSD1 Matrix Spike Dup 0.125	21-Mar-17	02:31:27
28	170320G5_28	1700345-05 CBD-SO4-MW01-0317 0.125	21-Mar-17	02:44:03
29	170320G5_29	1700345-06 CBD-FB01-031717 0.125	21-Mar-17	02:56:40
30	170320G5_30	1700345-07 CBD-SO3-MW01-0317 0.125	21-Mar-17	03:09:17
31	170320G5_31	1700345-08 CBD-SO3-MW02-0317 0.125	21-Mar-17	03:21:53

Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:56:45 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:57:14 Pacific Daylight Time

Compound name: PFBA

	Name	ID	Acq.Date	Acq.Time
32	170320G5_32	IPA	21-Mar-17	03:34:28
33	170320G5_33	ST170320G5-9 PFC CS3 17C2007	21-Mar-17	03:47:05
34	170320G5_34	IPA	21-Mar-17	03:59:41

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

Method: Untitled 21 Mar 2017 08:55:09

Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-21-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

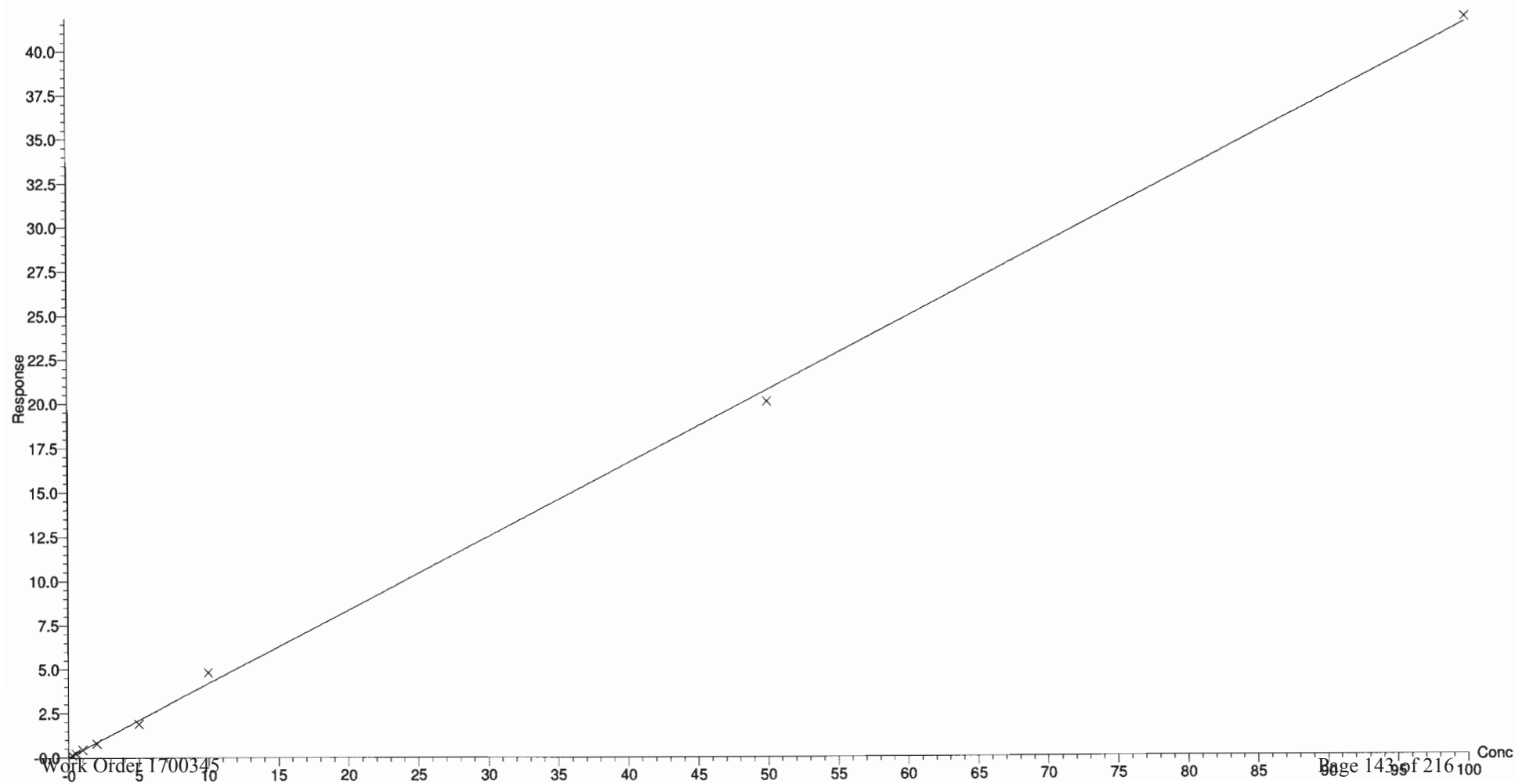
Compound name: PFBA

Correlation coefficient: $r = 0.998923$, $r^2 = 0.997847$

Calibration curve: $0.41514 * x + 0.0217093$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

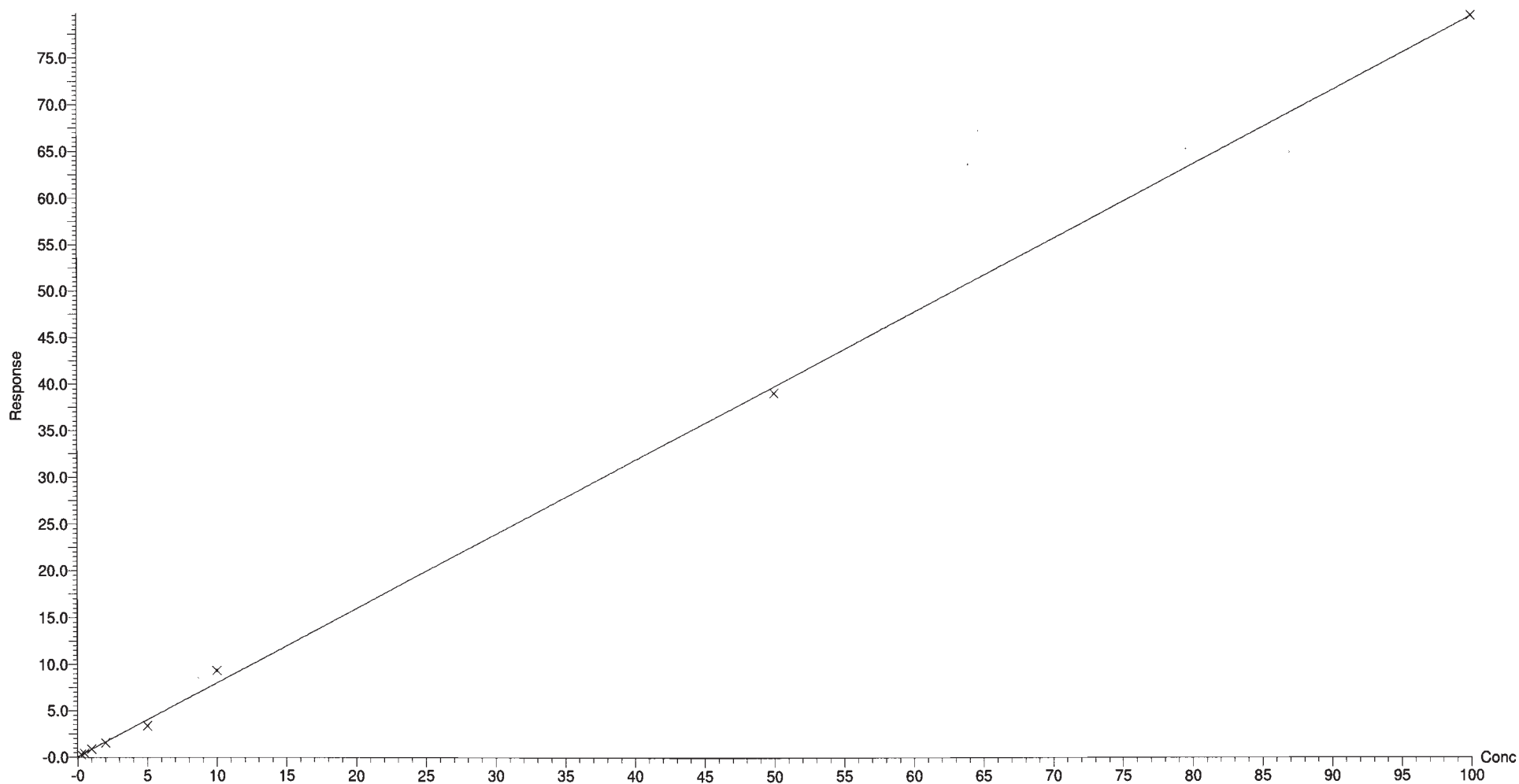
Compound name: PFPeA

Correlation coefficient: $r = 0.998592$, $r^2 = 0.997187$

Calibration curve: $0.795855 * x + 0.0442515$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

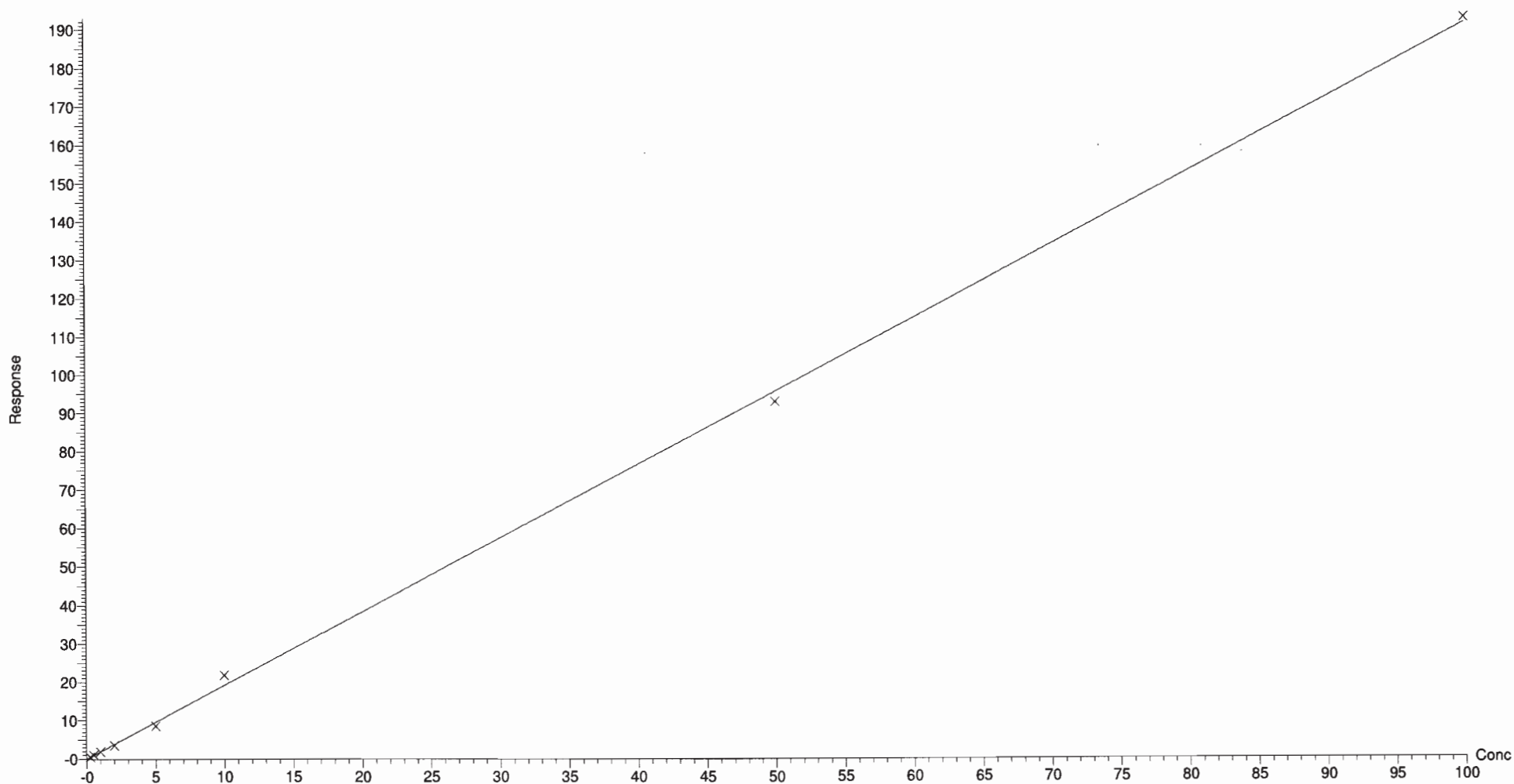
Compound name: PFBS

Correlation coefficient: $r = 0.999090$, $r^2 = 0.998181$

Calibration curve: $1.91626 * x + -0.0140607$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

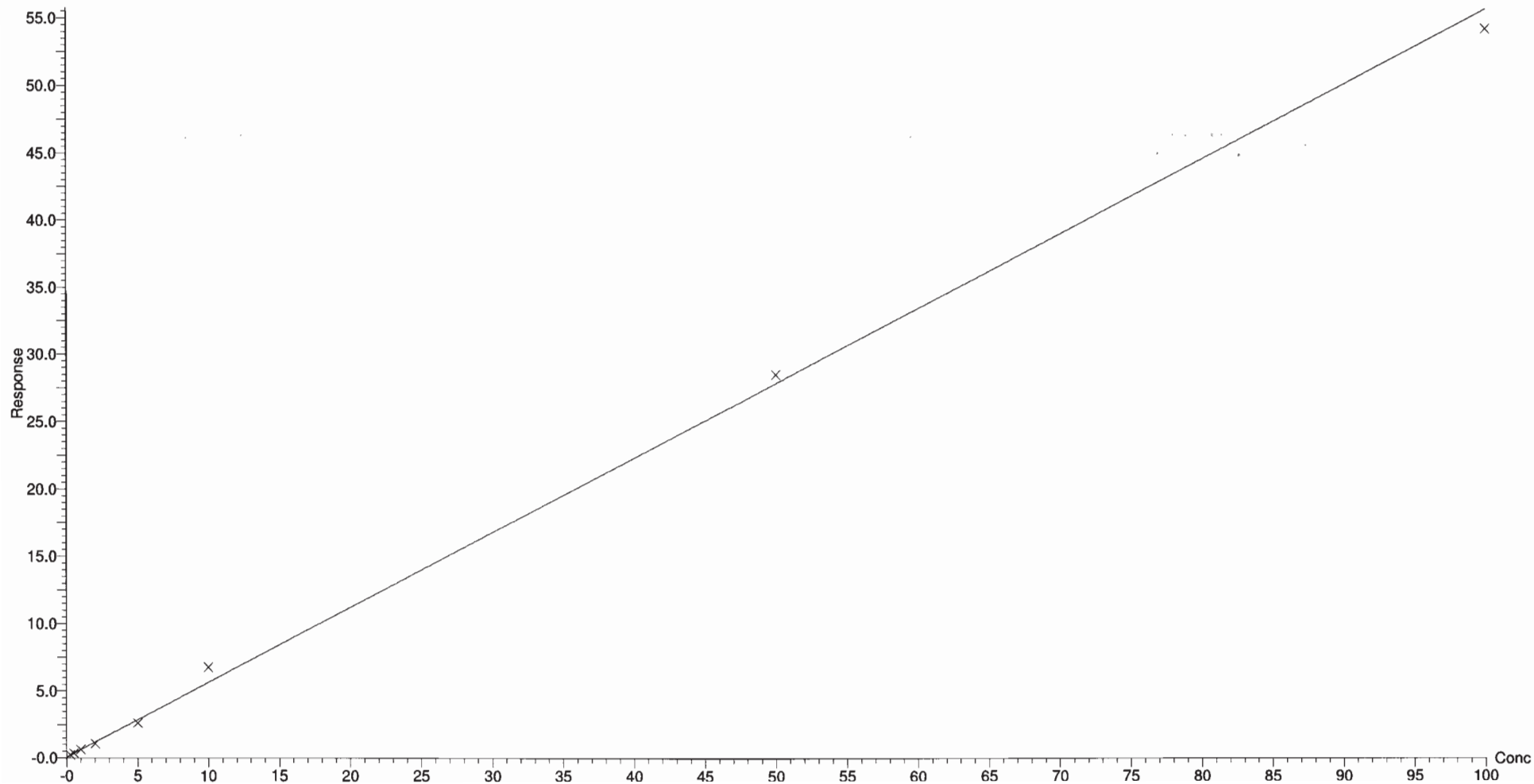
Compound name: PFHxA

Correlation coefficient: $r = 0.998257$, $r^2 = 0.996517$

Calibration curve: $0.55679 * x + 0.0695624$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

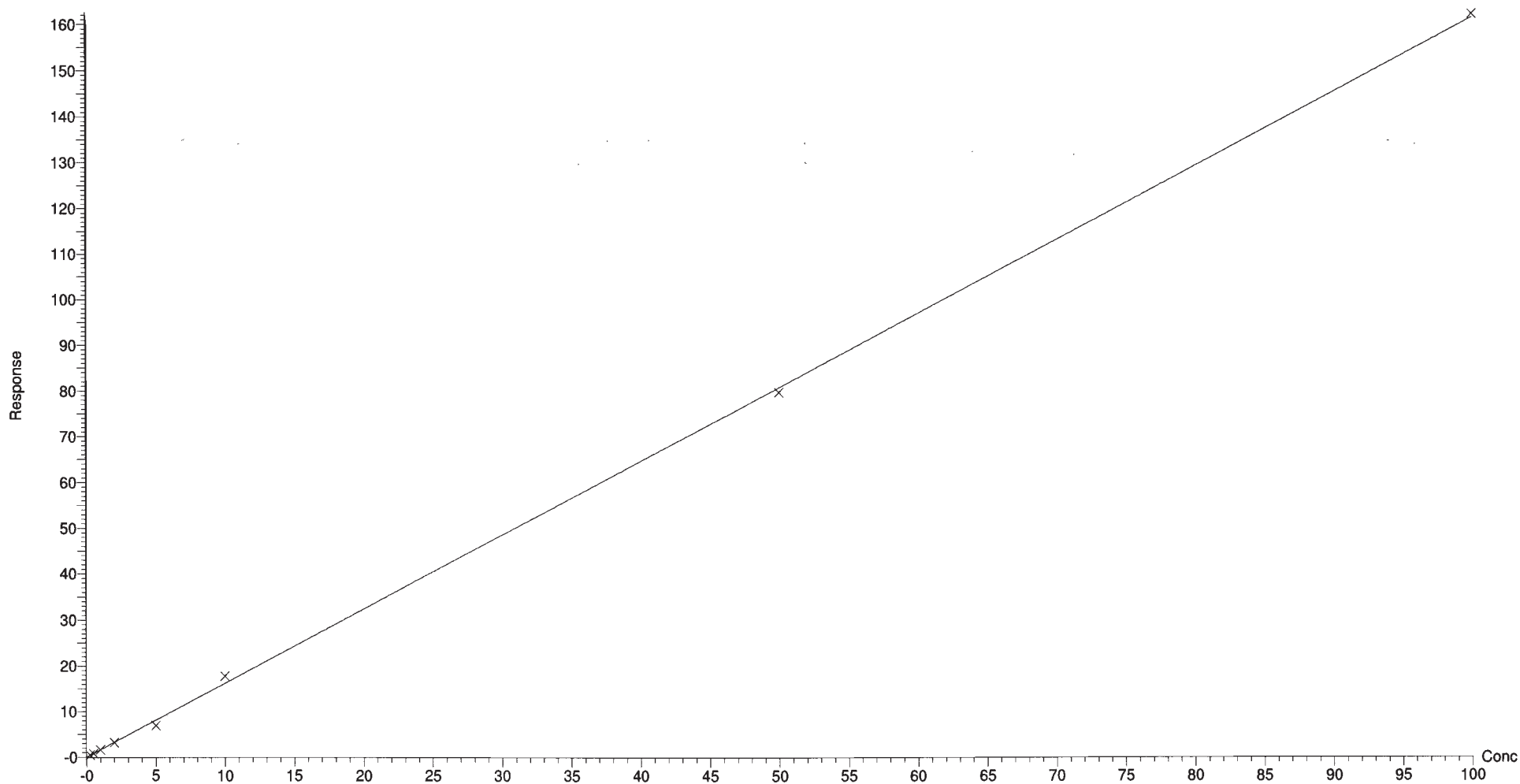
Compound name: PFHpA

Correlation coefficient: $r = 0.999324$, $r^2 = 0.998648$

Calibration curve: $1.61844 * x + 0.00173057$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

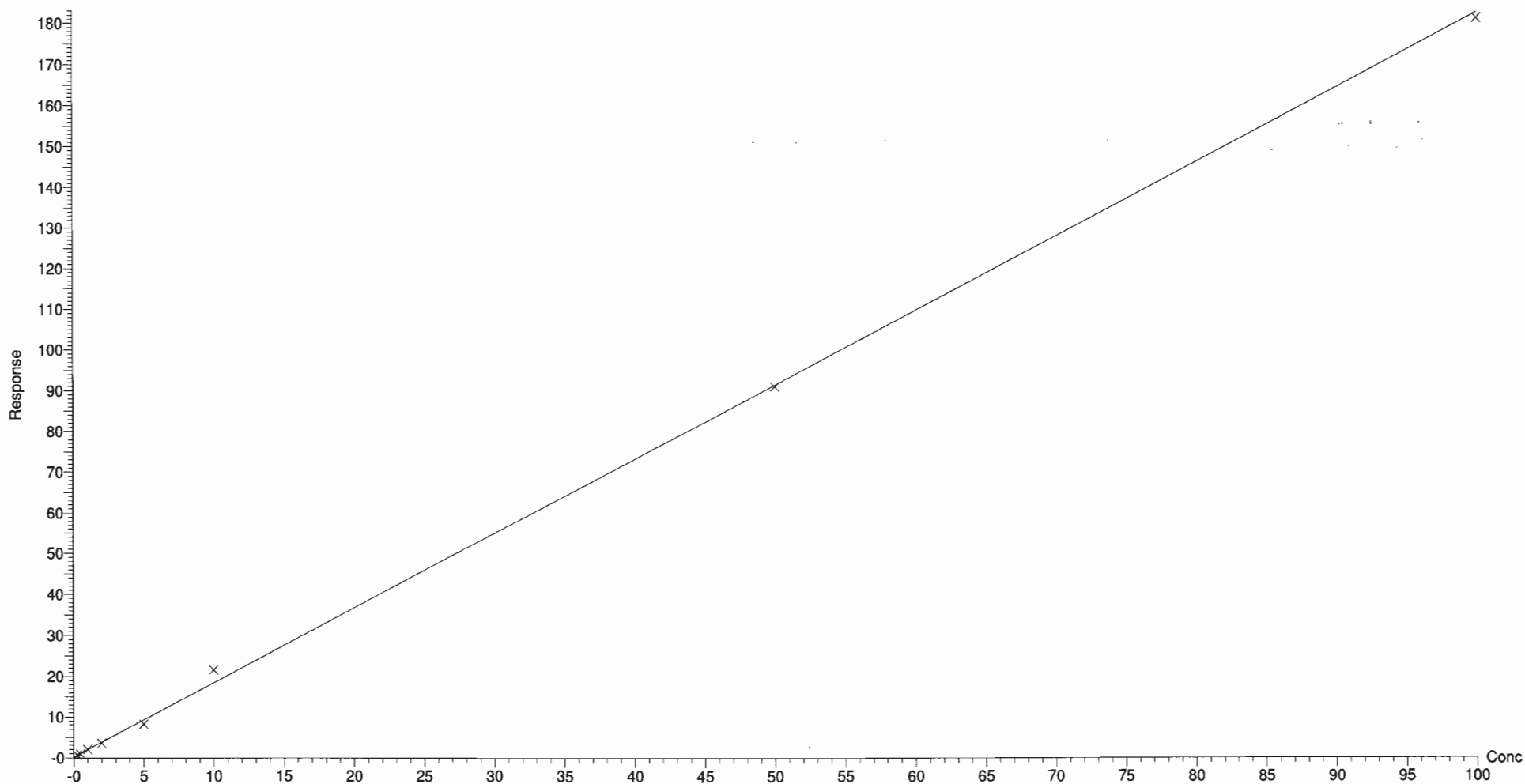
Compound name: PFHxS

Correlation coefficient: $r = 0.998767$, $r^2 = 0.997535$

Calibration curve: $1.82908 * x + 0.112561$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

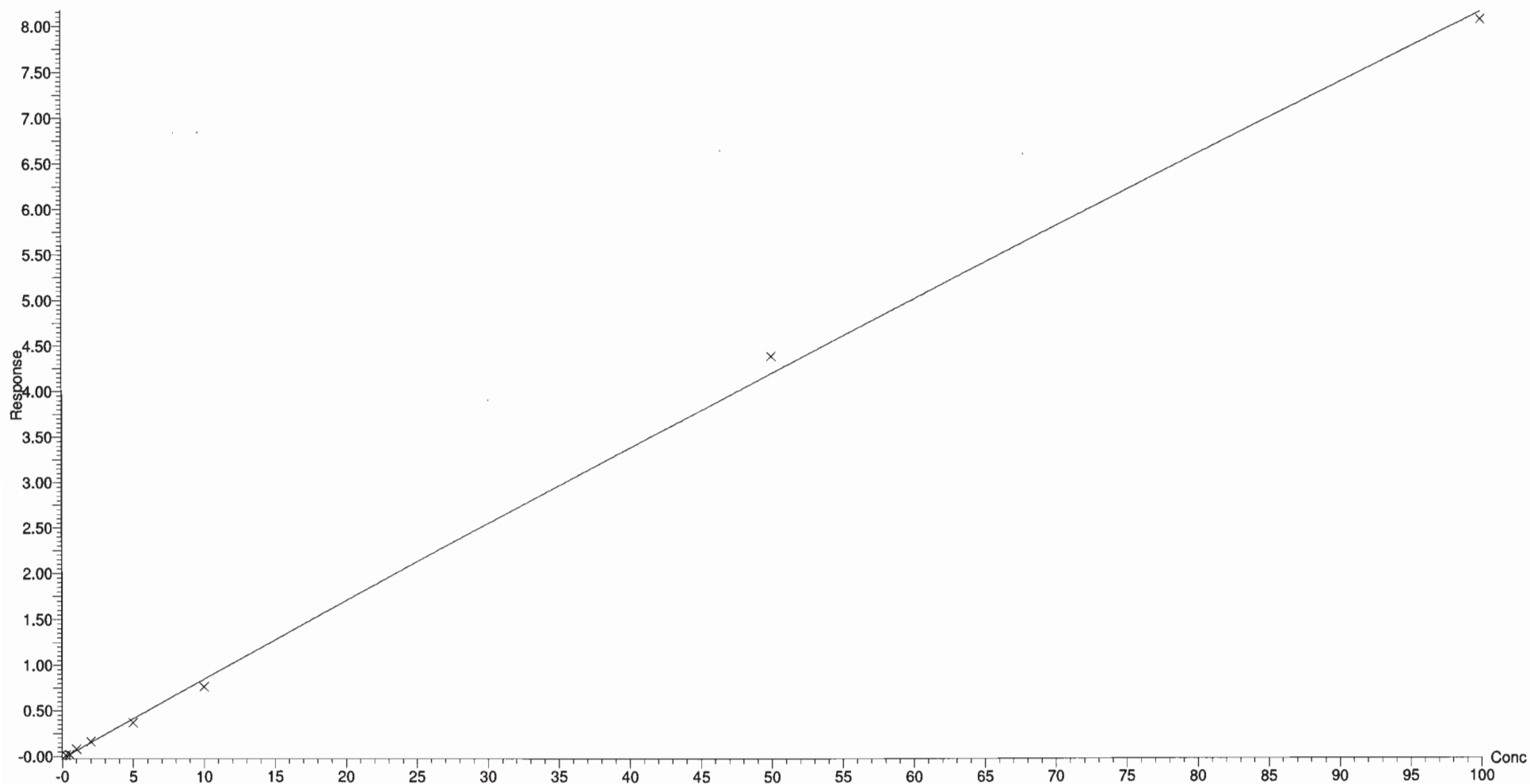
Compound name: 6:2 FTS

Coefficient of Determination: $R^2 = 0.997961$

Calibration curve: $-5.2241e-005 * x^2 + 0.0871772 * x + -0.0209463$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

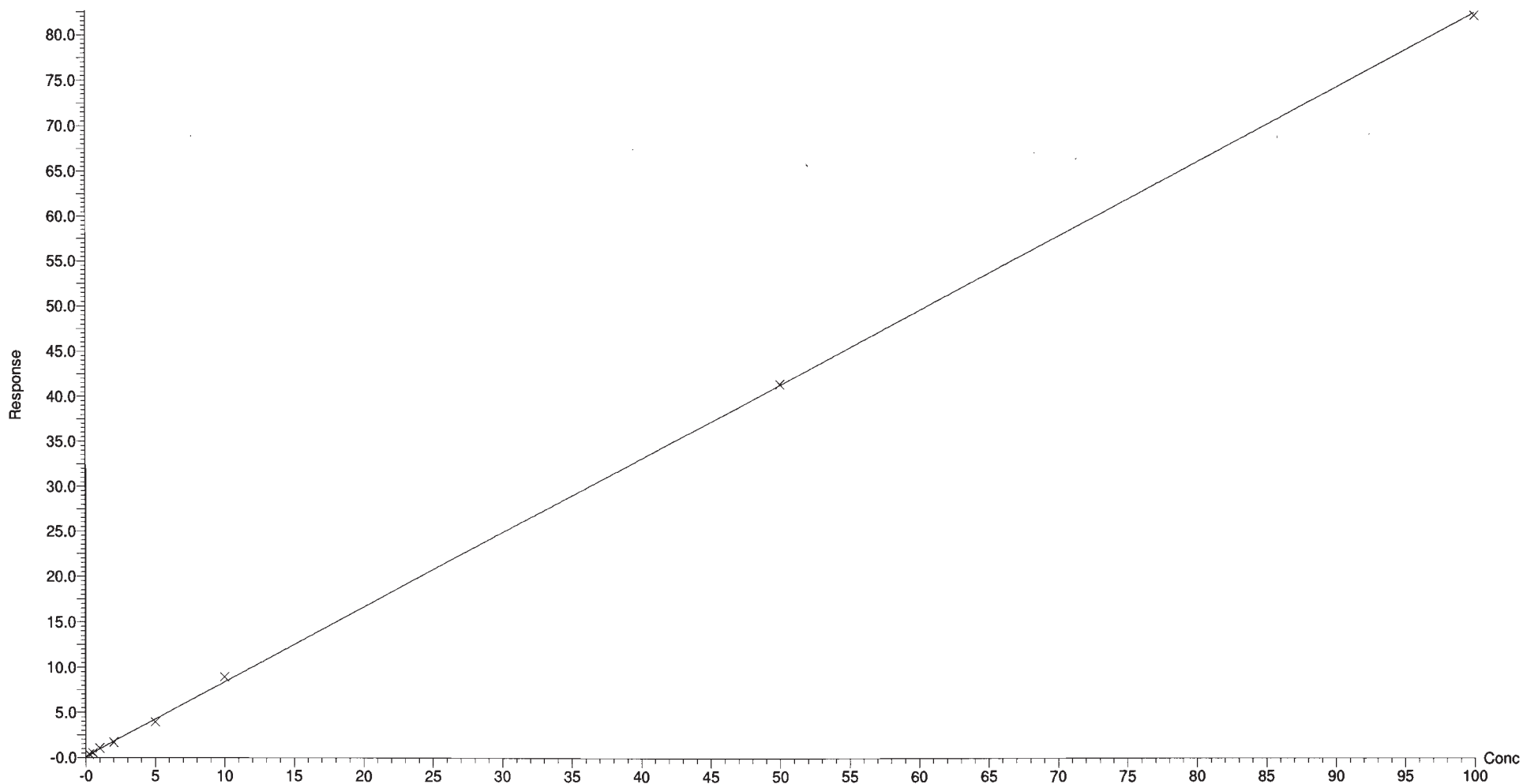
Compound name: PFOA

Correlation coefficient: $r = 0.999702$, $r^2 = 0.999404$

Calibration curve: $0.824918 * x + 0.12827$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

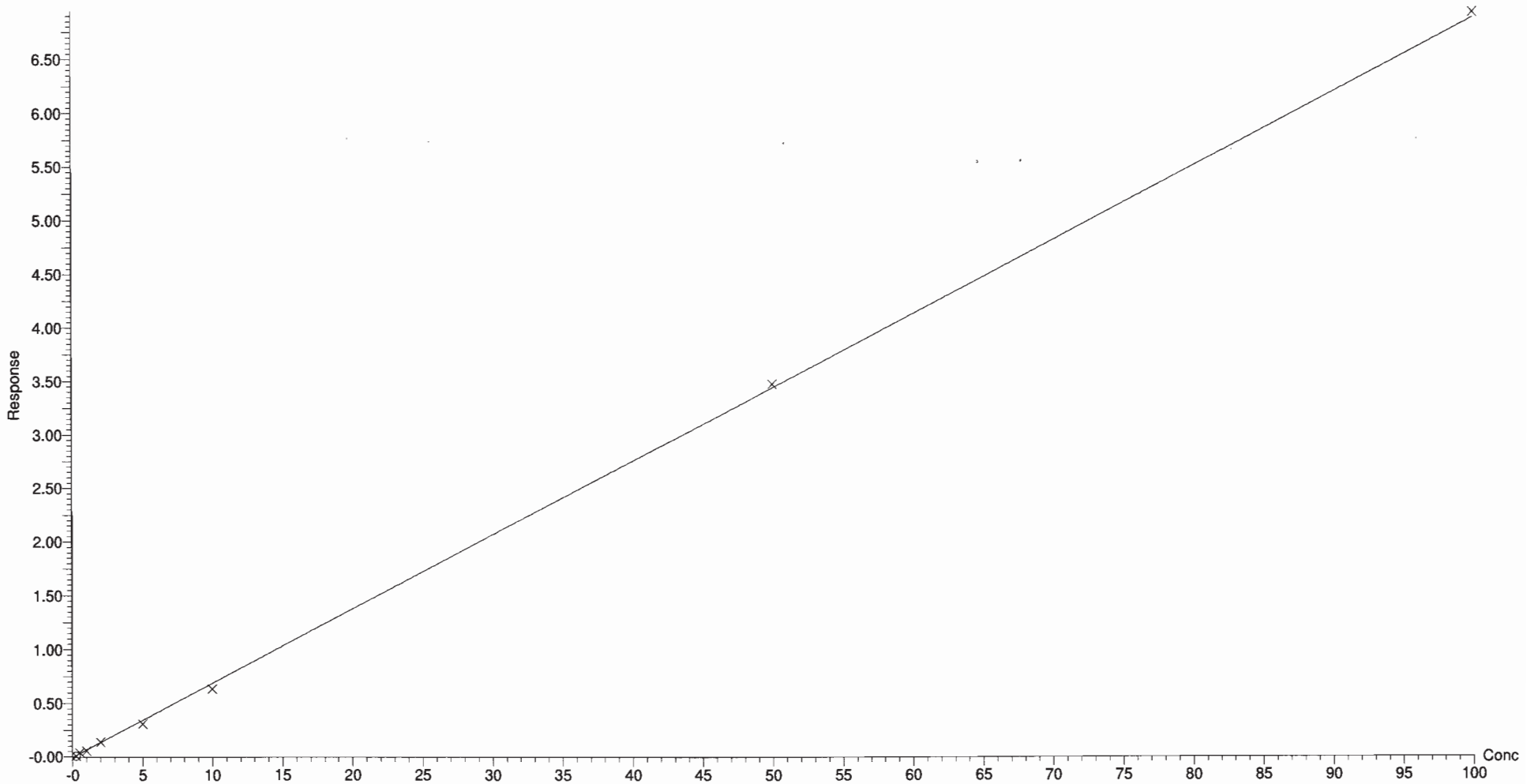
Compound name: PFHpS

Correlation coefficient: $r = 0.999391$, $r^2 = 0.998782$

Calibration curve: $0.068966 * x + -0.00379395$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

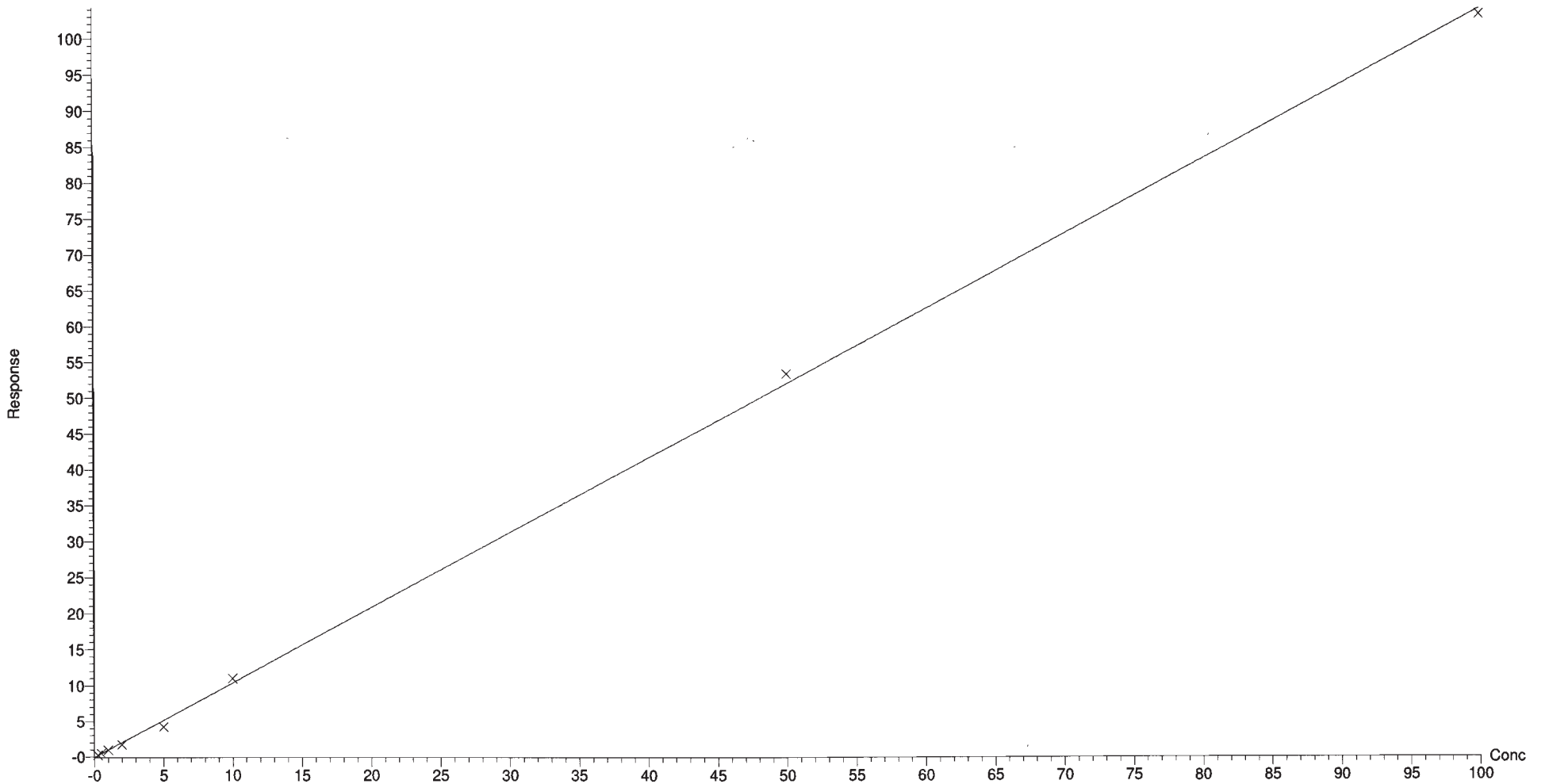
Compound name: PFOS

Correlation coefficient: $r = 0.999076$, $r^2 = 0.998153$

Calibration curve: $1.04359 * x + -0.0775607$

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

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



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

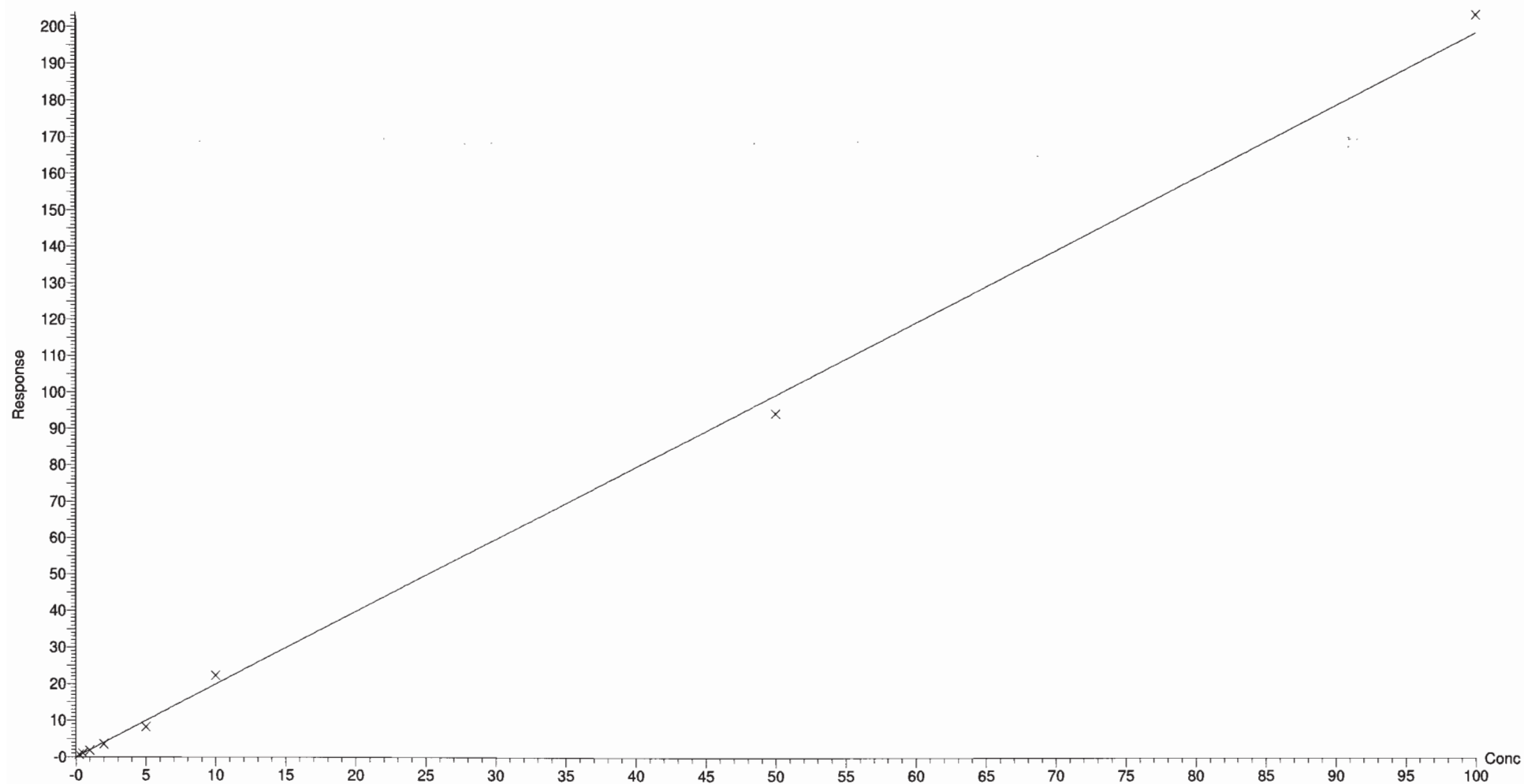
Compound name: PFNA

Correlation coefficient: $r = 0.998351$, $r^2 = 0.996704$

Calibration curve: $1.98964 * x + -0.0110682$

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

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

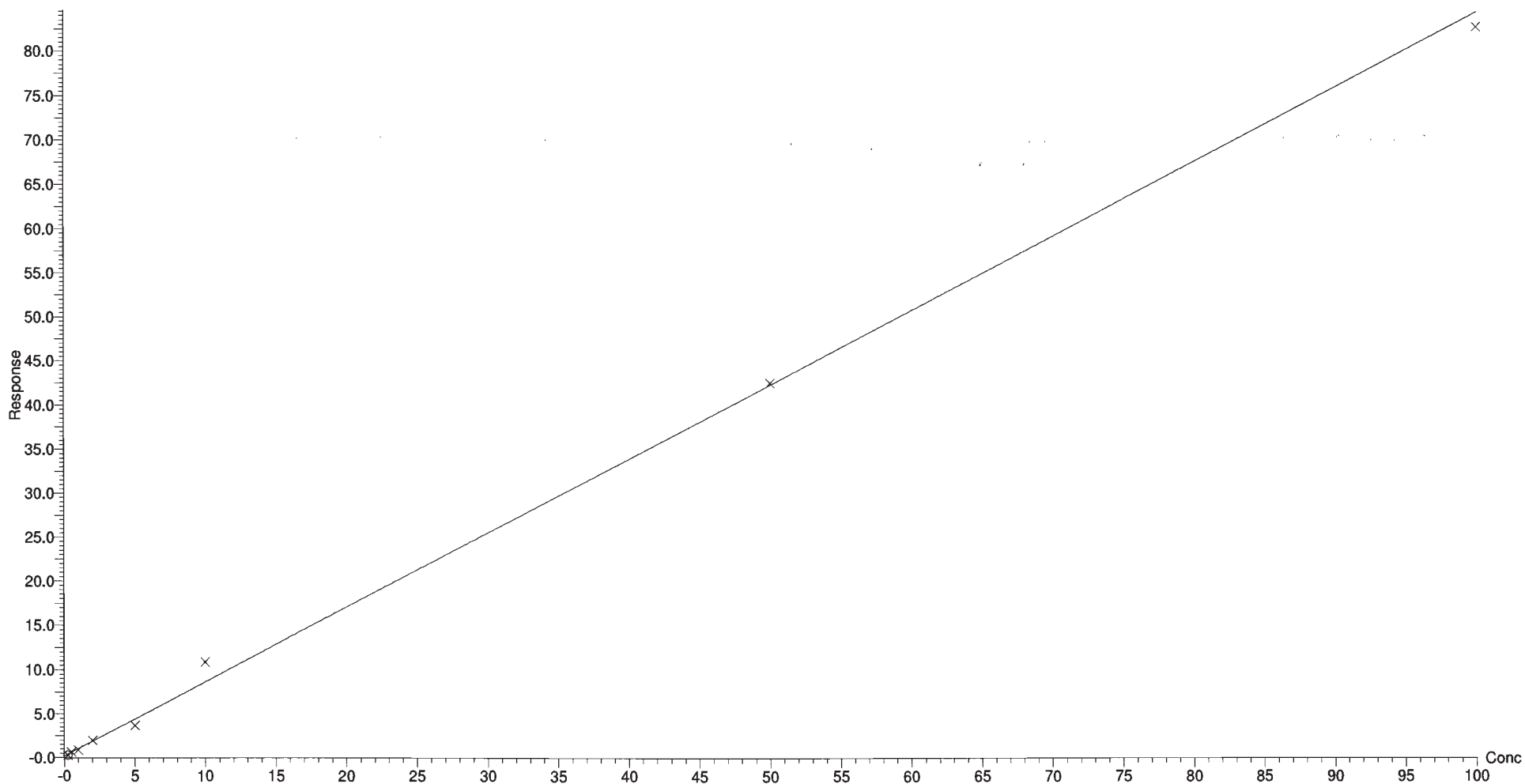


Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

Compound name: PFDA
Correlation coefficient: $r = 0.996939$, $r^2 = 0.993887$
Calibration curve: $0.844087 * x + 0.185194$
Response type: Internal Std (Ref 24), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-CRV.qld

Last Altered: Tuesday, March 21, 2017 09:27:21 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 09:44:51 Pacific Daylight Time

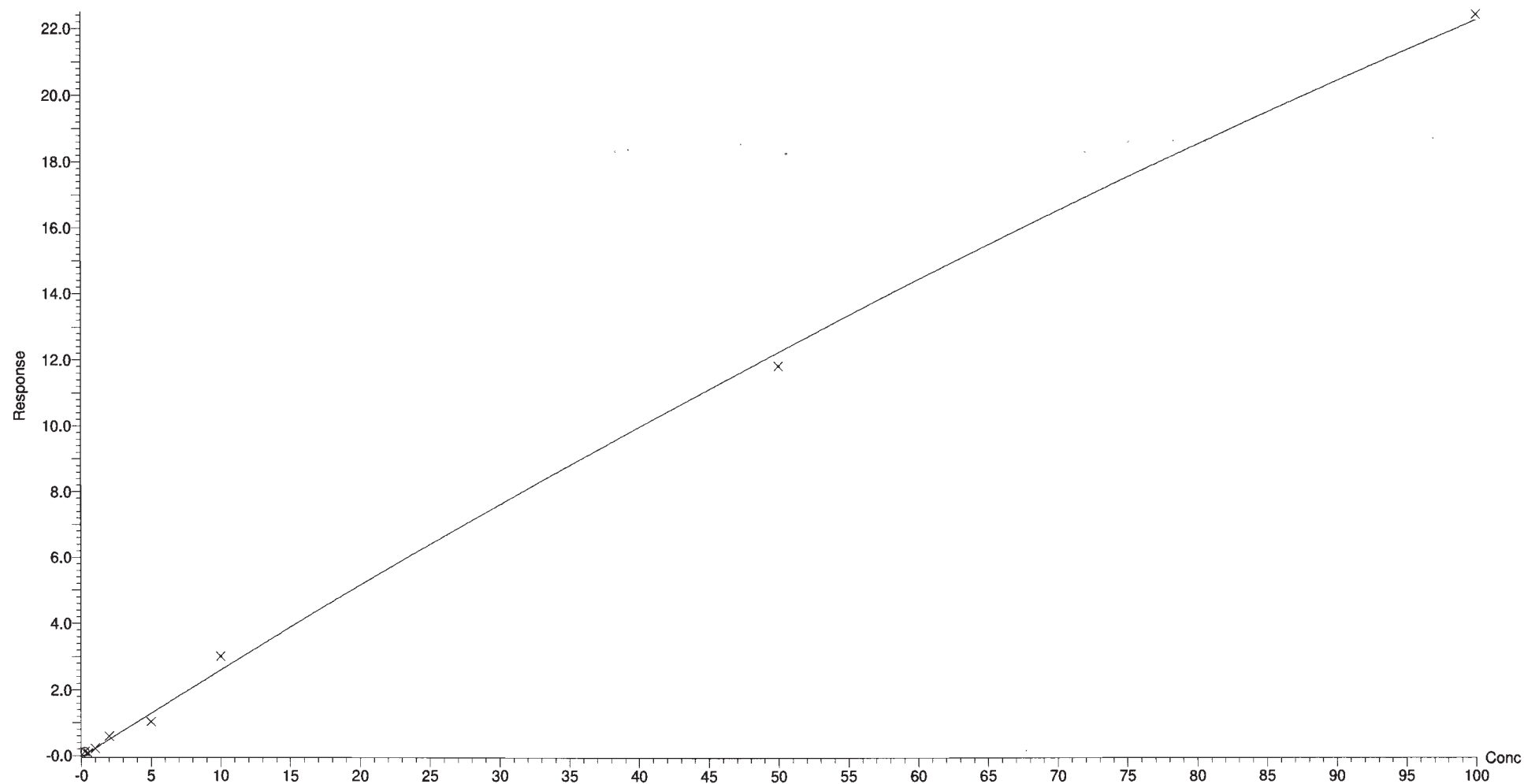
Compound name: 8:2 FTS

Coefficient of Determination: $R^2 = 0.995503$

Calibration curve: $-0.000453468 * x^2 + 0.26903 * x + -0.0484379$

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

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



Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time

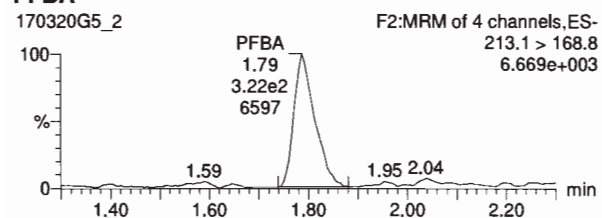
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

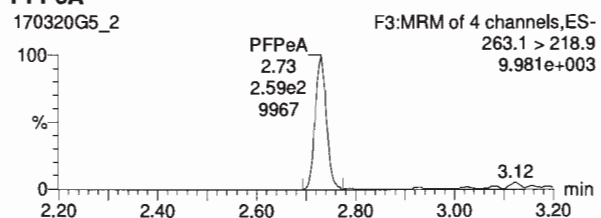
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Name: 170320G5_2, Date: 20-Mar-2017, Time: 21:16:17, ID: ST170320G5-1 PFC CS-2 17C2002, Description: PFC CS-2 17C2002 A

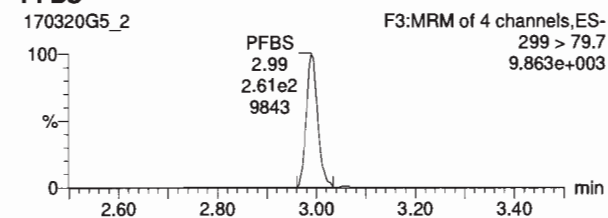
PFBA



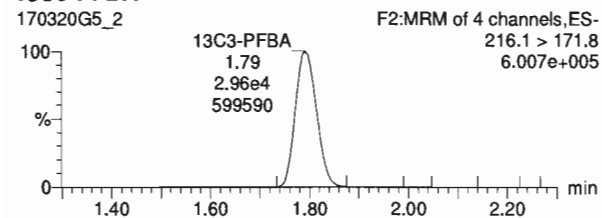
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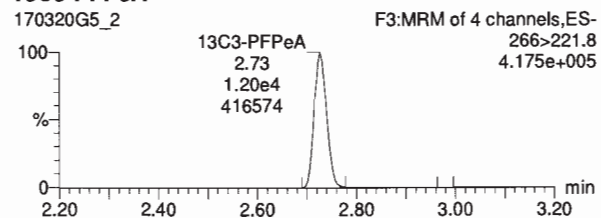
PFBS



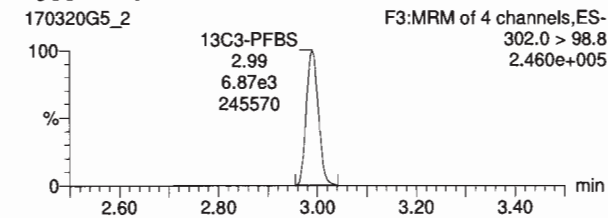
13C3-PFBA



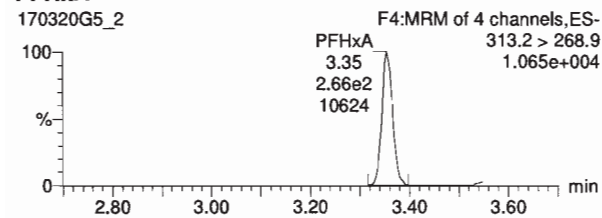
13C3-PFPeA



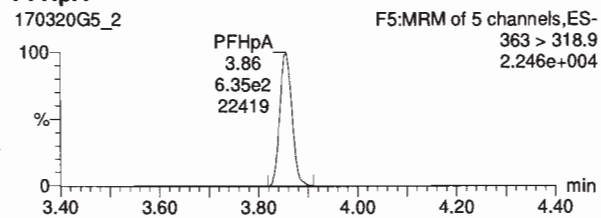
13C3-PFBS



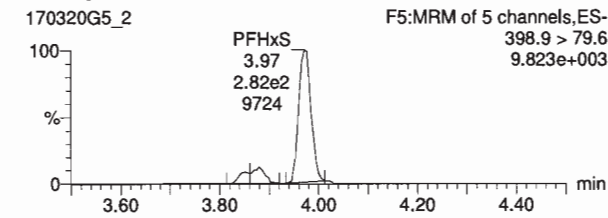
PFHxA



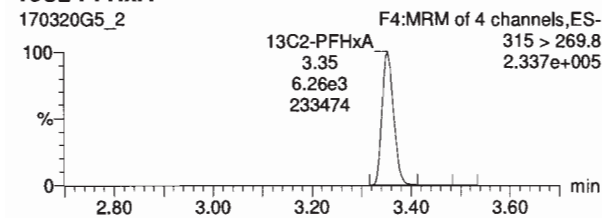
PFHpA



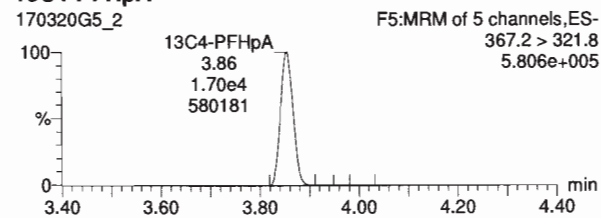
PFHxS



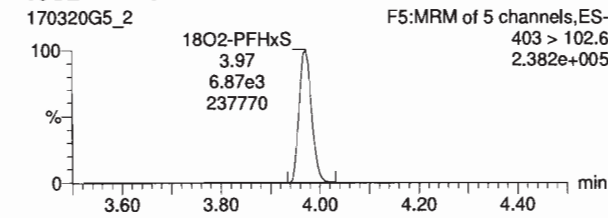
13C2-PFHxA



13C4-PFHpA

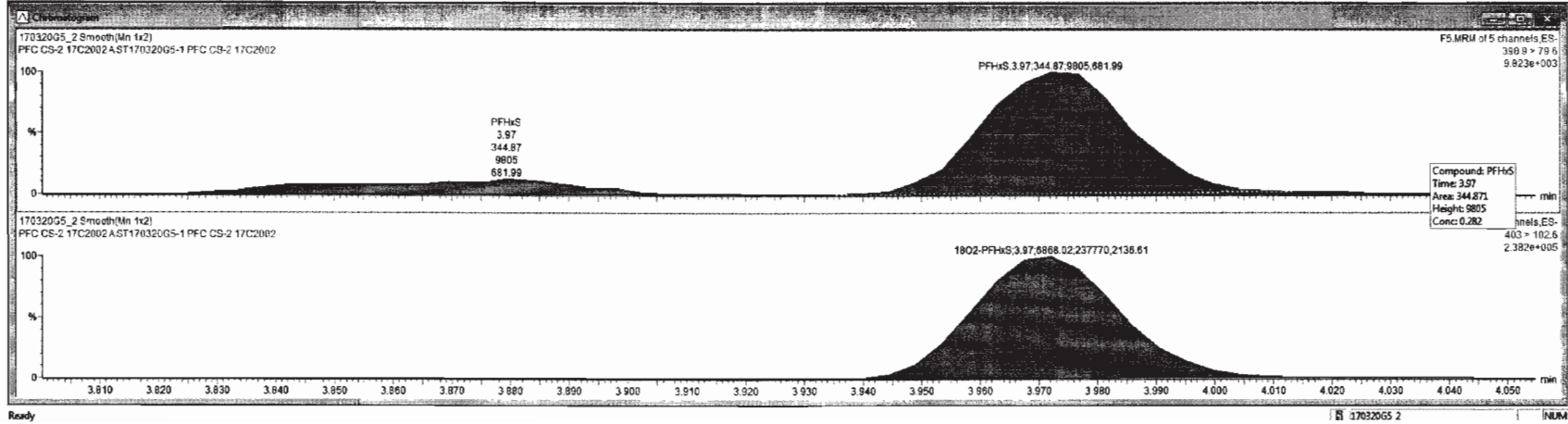


18O2-PFHxS



170320G5_2 ST170320G5-1 PFC CS-2 17C2002 PFC CS-2 17C2002 A

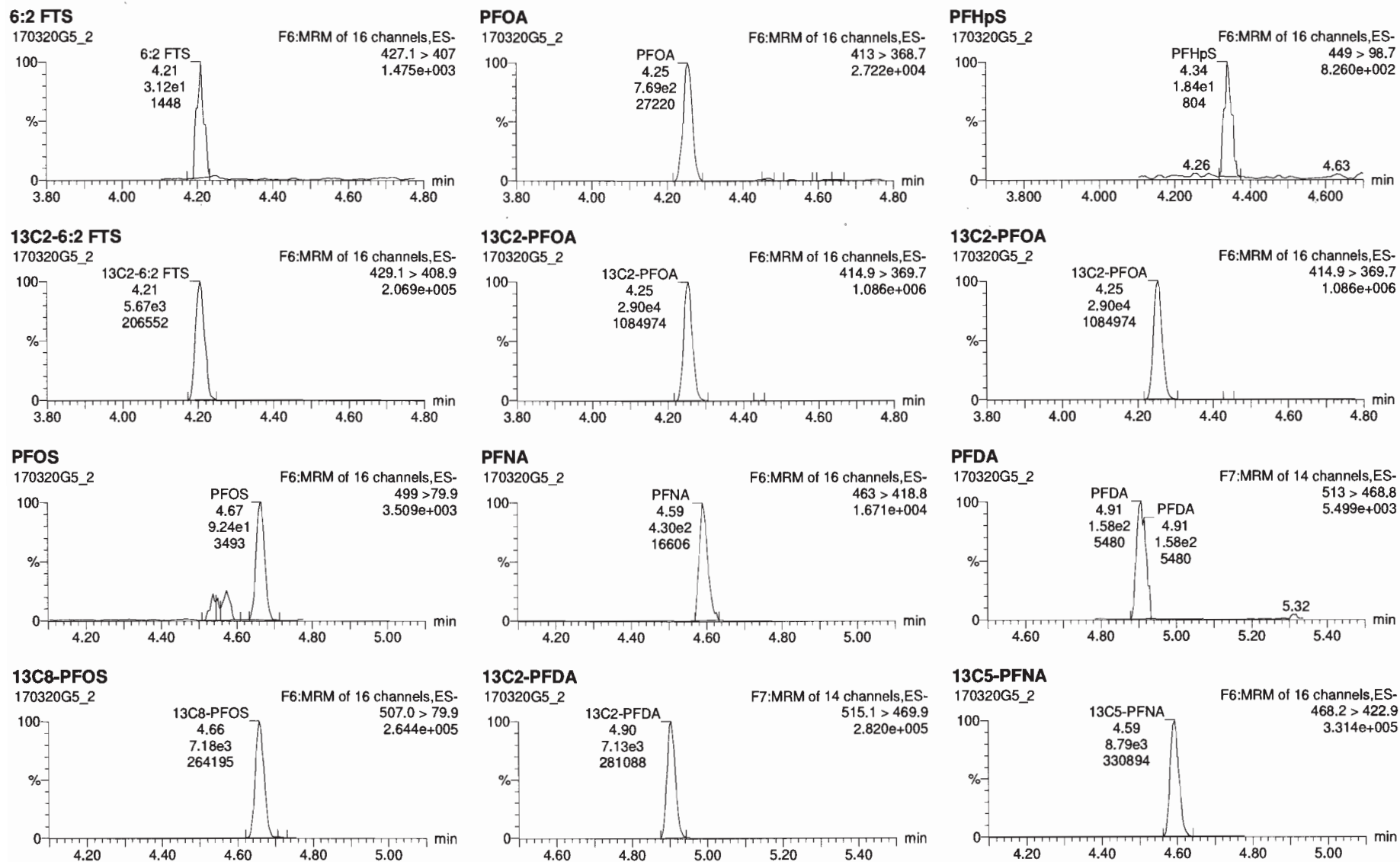
#	Name	RT	Rsp	5.00sp	Conc	%Dev	RPF %RSD	RPF Mean	RPF SD
1	PFBA	1.79	3.22e2	2.96e4	0.275	10.3			
2	PFPeA	2.73	2.59e2	1.20e4	0.283	13.3			
3	PFBS	2.99	2.61e2	6.87e3	0.255	2.0			
4	PFHxA	3.35	2.66e2	6.25e3	0.297	2.7			
5	PFHpA	3.66	6.35e2	1.70e4	0.288	15.2			
6	PFHxA	3.97	3.44e2	6.87e3	0.282	12.6			
7	6:2 FTS	4.21	3.12e1	2.90e4	0.394	57.8			
8	PFOA	4.25	7.68e2	2.90e4	0.246	-1.5			
9	PFHxS	4.34	1.64e1	2.90e4	0.170	-31.9			
10	PFOS	4.67	1.33e2	7.18e3	0.295	18.1			
11	PFNA	4.59	4.30e2	8.79e3	0.313	26.1			
12	PFDA	4.91	1.50e2	7.13e3	0.109	-56.6			
13	8:2 FTS	4.88	7.09e1	7.13e3	0.643	157.1			
14	13C3-PFBA	1.79	2.96e4	2.60e4	11.5	-7.8	3.678	1.145	0.042
15	13C3-PFPeA	2.73	1.28e4	3.16e4	11.8	-5.6	3.455	0.402	0.014
16	13C3-PFBS	2.99	6.87e3	3.16e4	11.9	-5.2	3.079	0.229	0.007
17	13C3-PFHxA	3.35	6.28e3	3.16e4	4.71	-6.9	3.984	0.527	0.021
18	13C4-PFHxA	3.66	1.70e4	1.64e4	12.6	1.2	3.596	0.914	0.033
19	18O2-PFHxS	3.97	6.87e3	1.64e4	12.2	-2.1	2.382	0.382	0.009
20	13C2-6:2 FTS	4.22	5.61e3						
21	13C2-PFOA	4.25	2.90e4	1.13e4	11.3	-9.3	6.571	2.829	0.196
22	13C2-PFOS	4.66	7.18e3	8.75e3	12.5	-0.2	6.426	0.822	0.053
23	13C2-PFNA	4.59	8.79e3	1.18e4	11.9	-5.2	5.748	0.768	0.045
24	13C2-PFDA	4.90	7.13e3	7.69e3	11.6	-7.3	7.431	0.999	0.074



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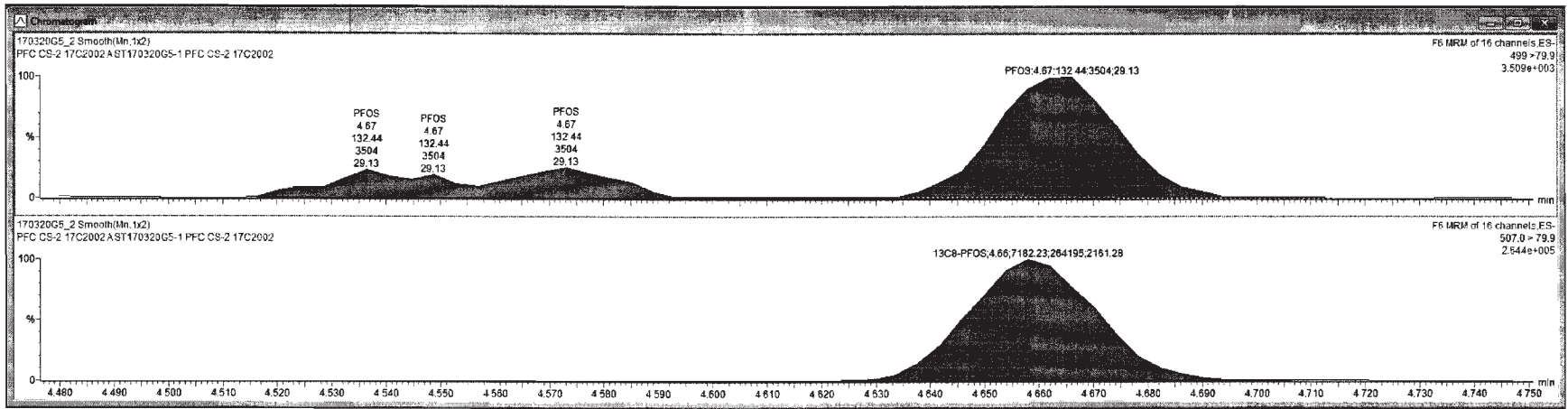
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170320G5_2 ST170320G5-1 PFC CS-2 17C2002 PFC CS-2 17C2002 A

SI	Name	RT	Resp	IS Resp	Conc	%Dev	RRF	RRF SD	RRF Mean	RRF SD
1	PFBA	1.79	3.22e2	2.96e4	0.276	10.3				
2	PFPeA	2.73	2.59e2	1.20e4	0.263	13.3				
3	PFBS	2.99	2.61e2	6.67e3	0.255	2.0				
4	PFHxA	3.35	2.66e2	6.26e3	0.257	2.7				
5	PFHxA	3.86	6.35e2	1.70e4	0.268	15.2				
6	PFHxS	3.97	3.45e2	6.87e3	0.262	12.6				
7	6:2 FTS	4.21	3.12e1	2.90e4	0.394	57.8				
8	PFOA	4.25	7.69e2	2.90e4	0.248	-1.5				
9	PFHpS	4.34	1.84e1	2.90e4	0.170	-31.9				
10	PFOS	4.67	1.32e2	7.18e3	0.265	16.1				
11	PFNA	4.59	4.30e2	8.78e3	0.313	25.1				
12	PFDA	4.91	1.58e2	7.13e3	0.109	-56.6				
13	8:2 FTS	4.88	7.99e1	7.13e3	0.643	157.1				
14	13C3-PFBA	1.79	2.96e4	2.80e4	11.5	-7.8	3.678	1.145	0.042	
15	13C3-PFPeA	2.73	1.29e4	3.16e4	11.8	-5.6	3.455	0.402	0.014	
16	13C3-PFBS	2.99	6.87e3	3.16e4	11.9	-5.2	3.079	0.228	0.007	
17	13C2-PFHxA	3.35	6.26e3	3.16e4	4.71	-5.9	3.984	0.527	0.021	
18	13C4-PFHxA	3.86	1.70e4	1.84e4	12.5	1.2	3.598	0.914	0.033	
19	18O2-PFHxS	3.97	6.87e3	1.84e4	12.2	-2.1	2.382	0.382	0.009	
20	13C2-8:2 FTS	4.29	5.67e3							
21	13C2-PFOA	4.25	2.90e4	1.13e4	11.3	-9.3	6.571	2.829	0.186	
22	13C8-PFOS	4.66	7.18e3	8.75e3	12.5	-0.2	6.428	0.822	0.053	
23	13C3-PFNA	4.59	6.79e3	1.18e4	11.9	-5.2	5.748	0.788	0.045	
24	13C2-PFDA	4.90	7.13e3	7.89e3	11.6	-7.3	7.431	0.999	0.074	



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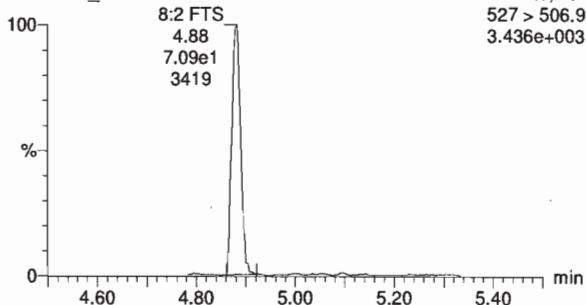
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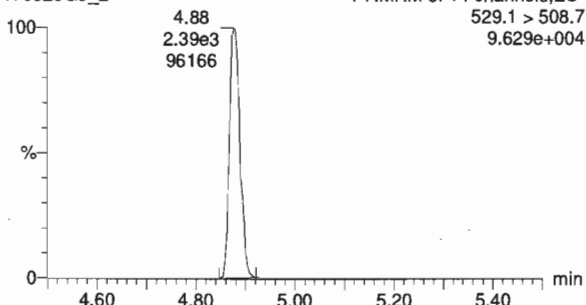
8:2 FTS

170320G5_2



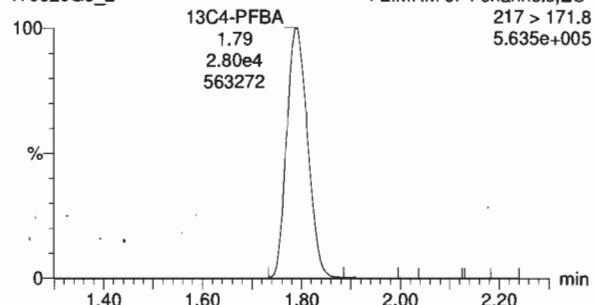
13C2-8:2 FTS

170320G5_2



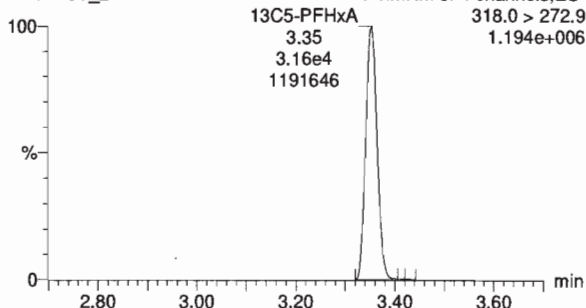
13C4-PFBA

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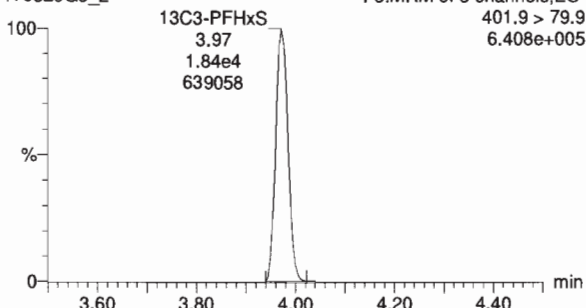
13C5-PFHxA

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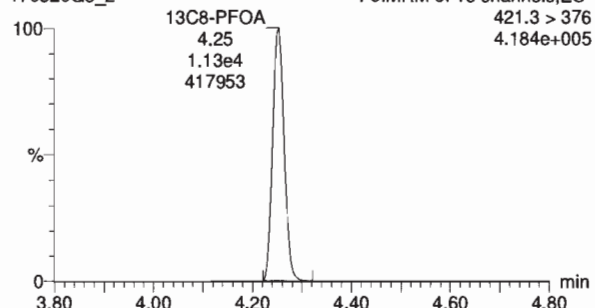
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170320G5_2



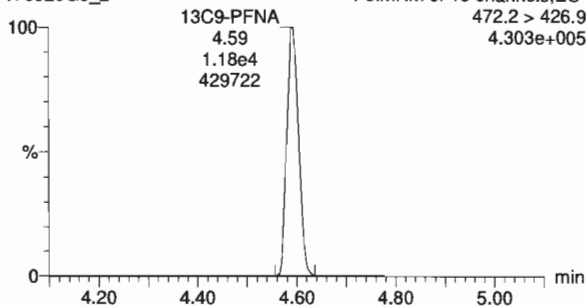
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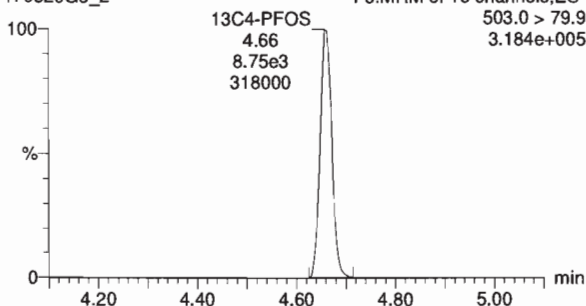
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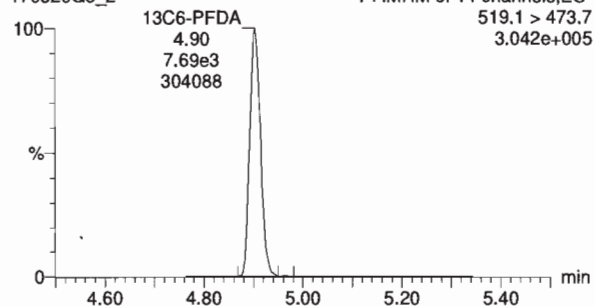
13C4-PFOS

170320G5_2



13C6-PFDA

170320G5_2



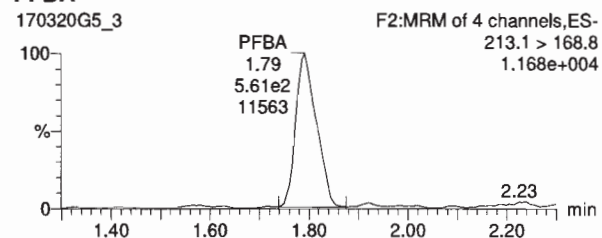
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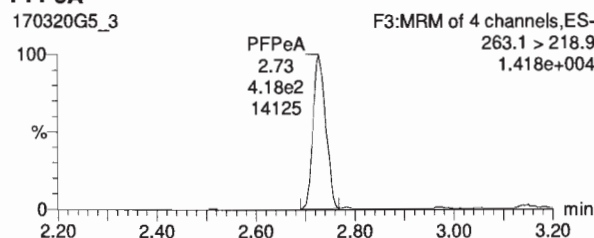
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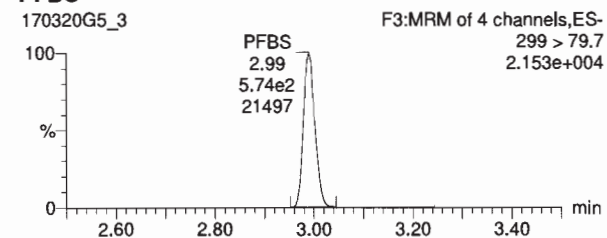
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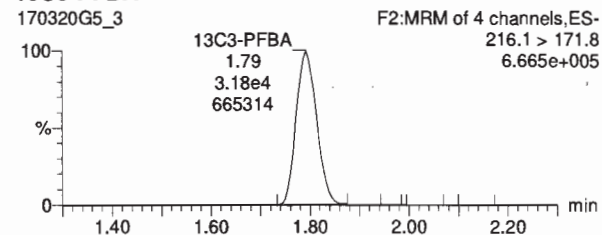
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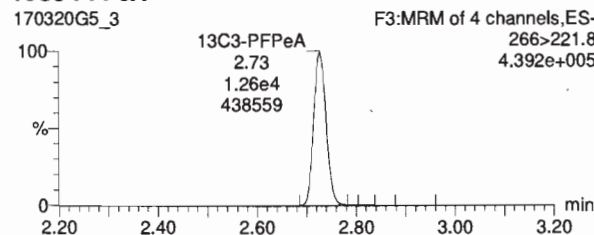
PFBS



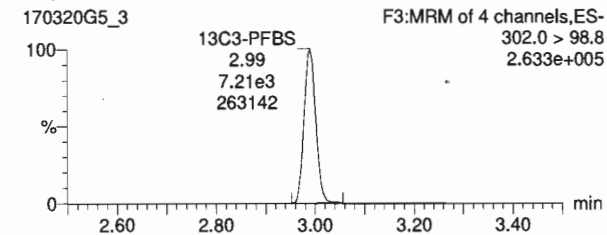
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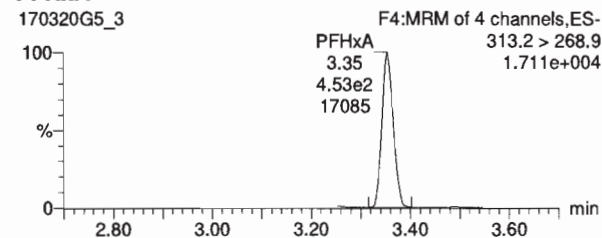
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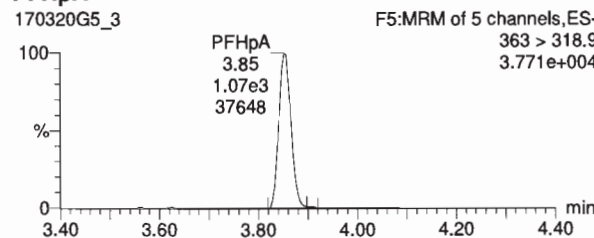
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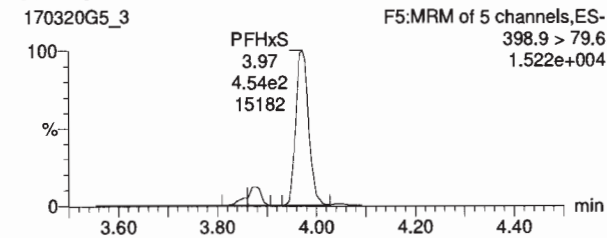
PFHxA



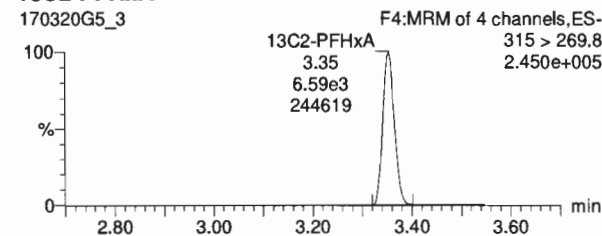
PFHpA



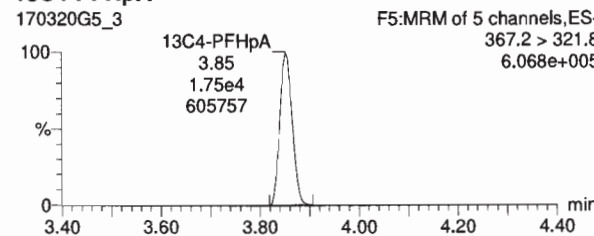
PFHxS



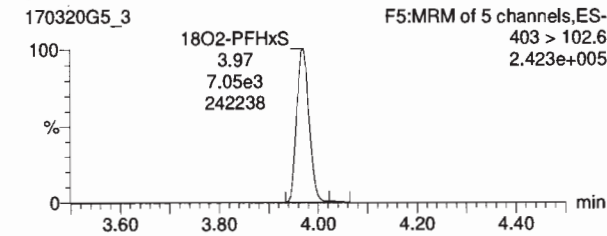
13C2-PFHxA



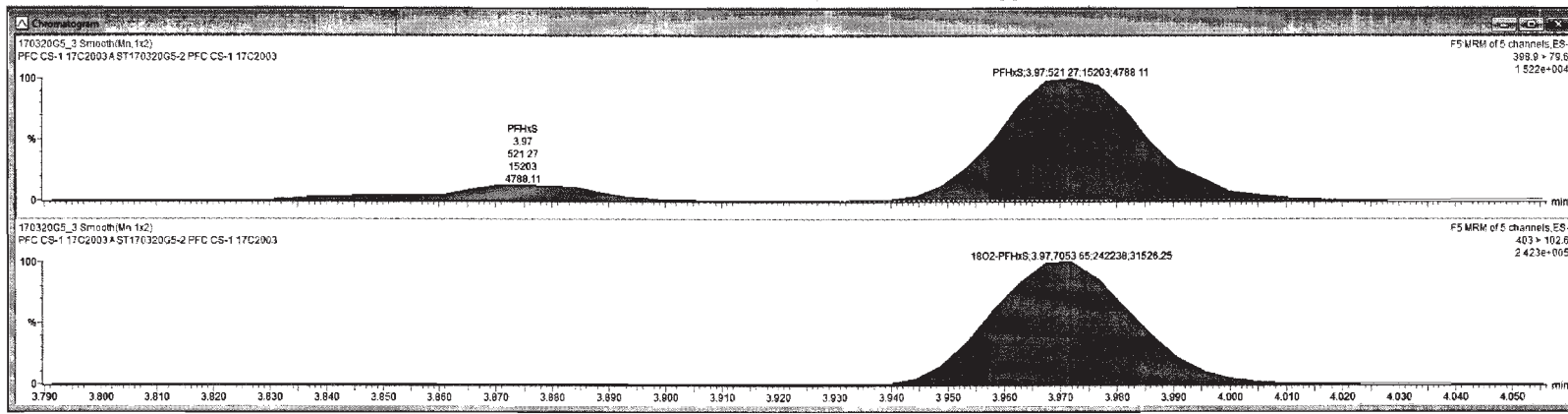
13C4-PFHpA



18O2-PFHxS



Peak	Name	RT	Resp	IS Resp	Conv	%Dev	RRF	RRF SD	RRF Mean	RRF SD
1	PFBA	1.79	5.81e2	3.18e4	0.479	-4.3				
2	PFNA	2.73	4.19e2	1.26e4	0.464	-7.3				
3	PFBs	2.99	5.74e2	7.21e3	0.527	5.4				
4	PFHxA	3.35	4.53e2	6.59e3	0.493	-1.4				
5	PFHpA	3.85	1.07e3	1.75e4	0.473	-5.4				
6	PFHxS	3.97	5.21e2	7.05e3	0.444	-11.3				
7	6.2 FTS	4.20	4.97e1	3.19e4	0.464	-7.2				
8	PFDA	4.25	1.36e3	3.19e4	0.490	-1.9				
9	PFHpS	4.34	1.05e2	3.19e4	0.648	29.7				
10	PFOS	4.68	3.09e2	7.87e3	0.544	8.8				
11	PFNA	4.99	8.79e2	1.05e4	0.526	5.2				
12	PFDA	4.99	4.31e2	8.35e3	0.545	9.0				
13	6.2 FTS	4.99	4.93e1	8.35e3	0.455	-9.1				
14	13C3-PFBA	1.79	3.16e4	2.75e4	12.8	1.2	3.670	1.145	0.842	
15	13C3-PFNA	2.73	1.26e4	3.18e4	12.3	-1.2	3.455	4.482	0.914	
16	13C3-PFBs	2.99	7.21e3	3.18e4	12.3	-1.2	3.070	6.229	0.807	
17	13C3-PFHxA	3.35	6.59e3	3.18e4	4.92	-1.7	3.964	5.527	0.821	
18	13C4-PFHxA	3.85	1.75e4	1.89e4	12.8	2.6	3.990	6.814	0.933	
19	18O2-PFHxS	3.97	7.05e3	1.89e4	12.4	-8.8	2.382	6.382	0.809	
20	13C2-6.2 FTS	4.20	6.99e3							
21	13C2-PFDA	4.25	3.19e4	1.13e4	12.5	-8.2	6.571	2.829	0.186	
22	13C8-PFOS	4.68	7.87e3	1.09e4	11.0	-12.3	6.428	6.822	0.853	
23	13C5-PFNA	4.99	1.05e4	1.29e4	13.0	3.6	5.748	6.788	0.845	
24	13C2-PFDA	4.99	8.35e3	9.01e3	11.8	-7.3	7.431	6.999	0.874	



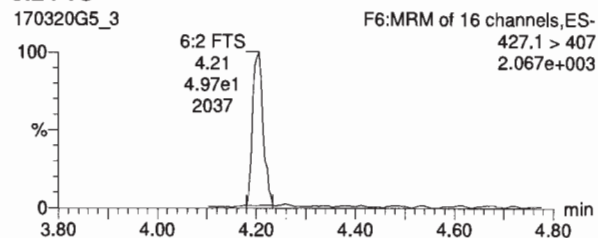
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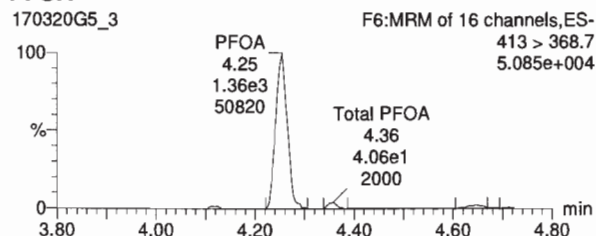
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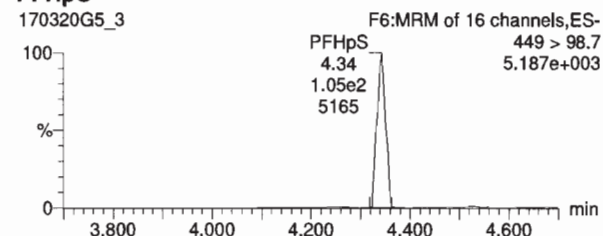
6:2 FTS



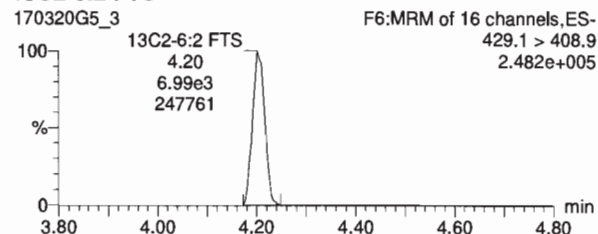
PFOA



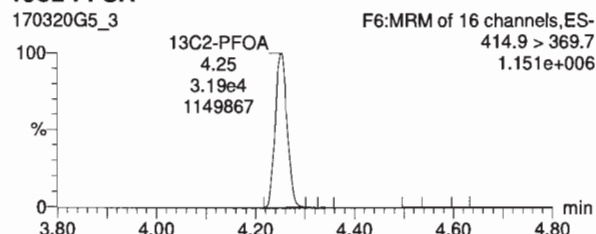
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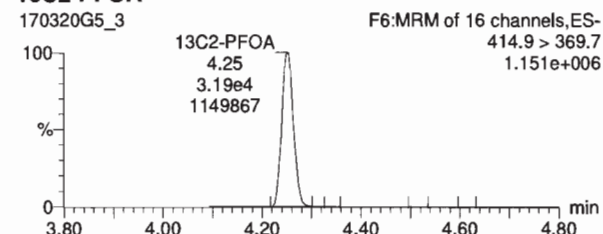
13C2-6:2 FTS



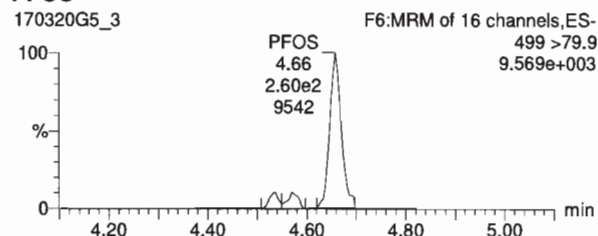
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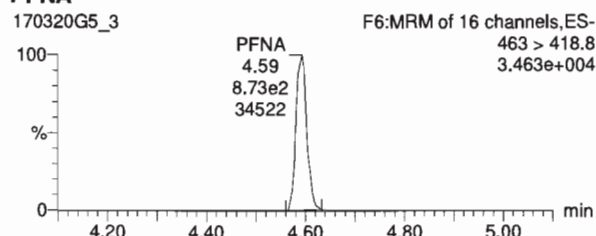
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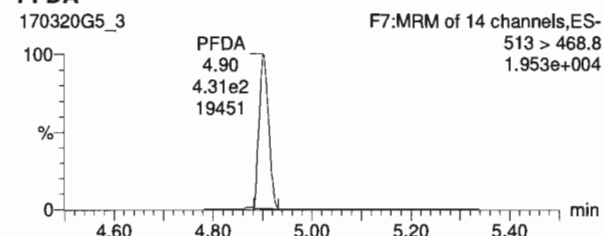
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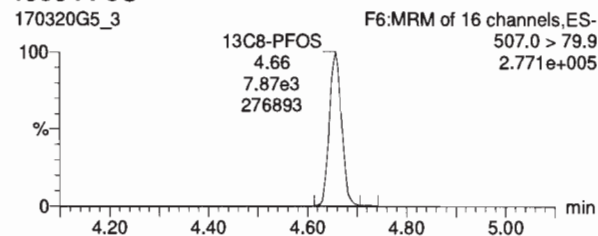
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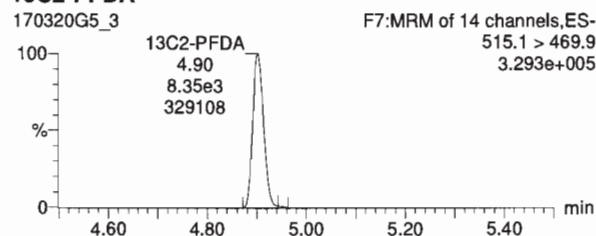
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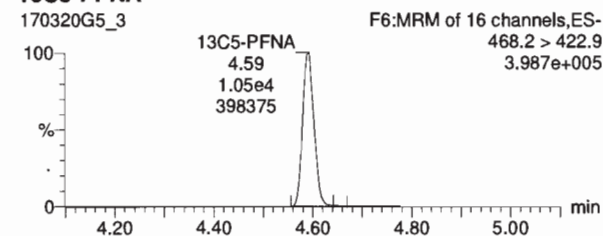
13C8-PFOS



13C2-PFDA

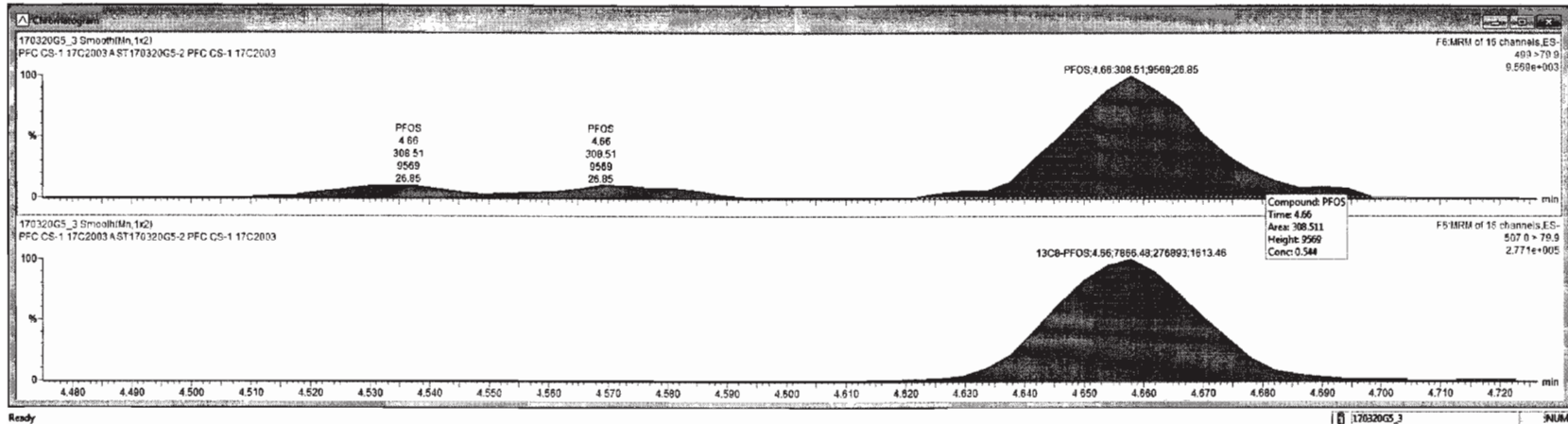


13C5-PFNA





#	Name	RT	Resp	S. Resp	Conc.	%Dev	RPY MRSD	RPY Mean	RPY SD
1	PFBA	1.79	5.81e2	3.18e4	0.479	-4.3			
2	PFPeA	2.73	4.18e2	1.26e4	0.464	-7.0			
3	PFBS	2.99	5.74e2	7.21e3	0.527	5.4			
4	PFHxA	3.35	4.53e2	6.59e3	0.493	-1.4			
5	PFHxA	3.85	1.07e3	1.75e4	0.473	-5.4			
6	PFHxS	3.97	5.21e2	7.05e3	0.444	-11.3			
7	6-2 FTS	4.20	4.97e1	3.19e4	0.464	-7.2			
8	PFOA	4.25	1.38e3	3.19e4	0.490	-1.9			
9	PFOS	4.34	1.05e2	3.19e4	0.646	29.7			
10	PFOS	4.66	3.30e2	7.97e3	0.544	8.8			
11	PFNA	4.59	8.73e2	1.05e4	0.526	5.2			
12	PFDA	4.90	4.31e2	8.35e3	0.545	9.9			
13	6-2 FTS	4.86	4.83e1	8.35e3	0.455	-9.1			
14	13C3-PFBA	1.79	3.18e4	2.75e4	12.8	1.2	3.878	1.145	0.042
15	13C3-PFPeA	2.73	1.26e4	3.18e4	12.3	-1.2	3.455	0.402	0.014
16	13C3-PFBS	2.99	7.21e3	3.18e4	12.3	-1.2	3.079	0.229	0.007
17	13C3-PFHxA	3.35	6.59e3	3.18e4	4.82	-1.7	3.994	0.527	0.021
18	13C4-PFHxA	3.85	1.75e4	1.86e4	12.8	2.8	3.598	0.914	0.033
19	18O2-PFHxS	3.97	7.05e3	1.86e4	12.4	-0.6	2.382	0.382	0.009
20	13C2-6-2 FTS	4.20	6.99e3						
21	13C2-PFOA	4.25	3.19e4	1.13e4	12.5	-0.2	6.571	2.829	0.186
22	13C8-PFOS	4.66	7.87e3	1.09e4	11.0	-12.3	6.428	0.822	0.053
23	13C5-PFNA	4.59	1.05e4	1.29e4	13.0	3.6	5.748	0.788	0.045
24	13C2-PFDA	4.90	8.35e3	8.01e3	11.8	-7.3	7.431	0.999	0.074



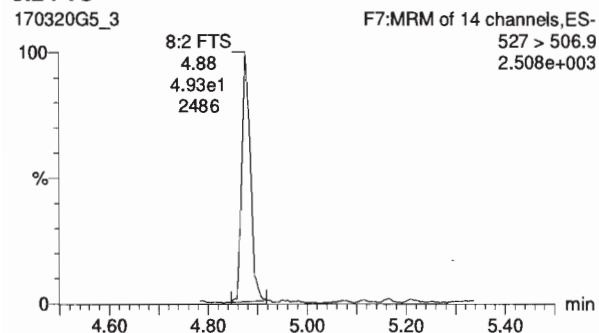
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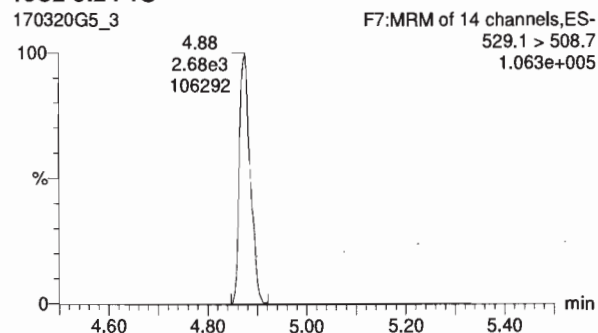
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Name: 170320G5_3, Date: 20-Mar-2017, Time: 21:28:54, ID: ST170320G5-2 PFC CS-1 17C2003, Description: PFC CS-1 17C2003 A

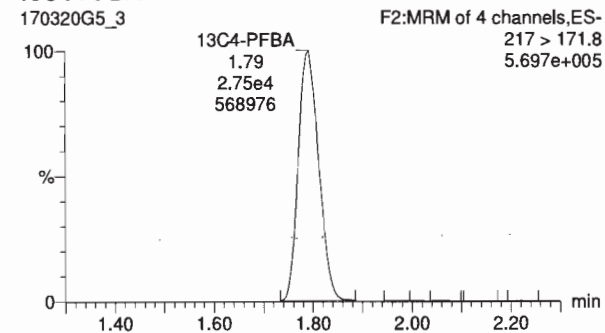
8:2 FTS



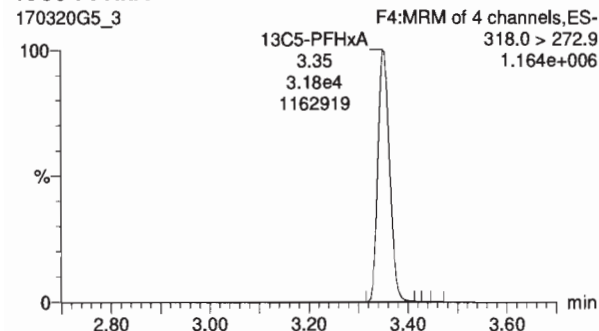
13C2-8:2 FTS



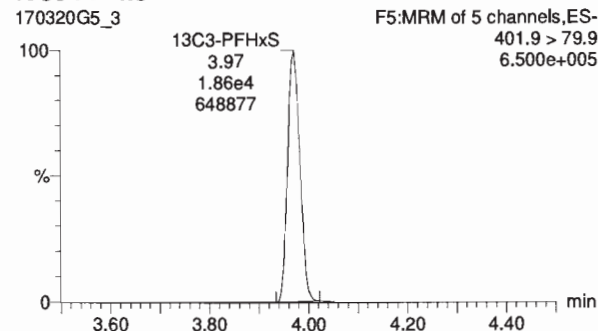
13C4-PFBA



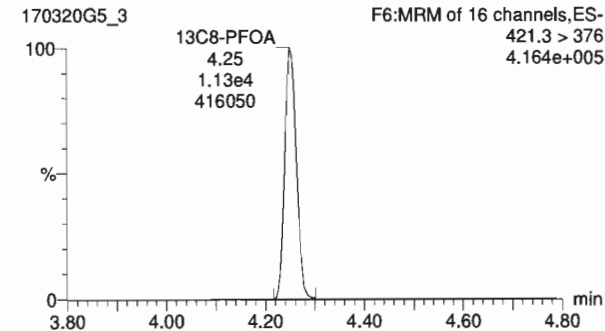
13C5-PFHxA



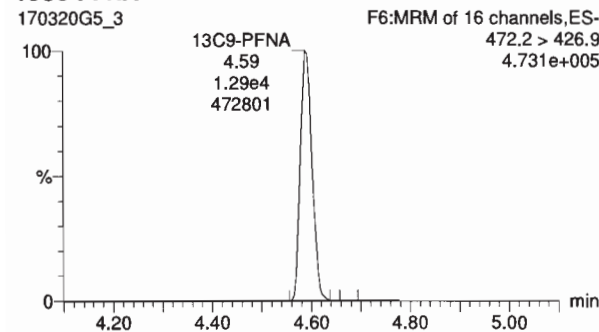
13C3-PFHxS



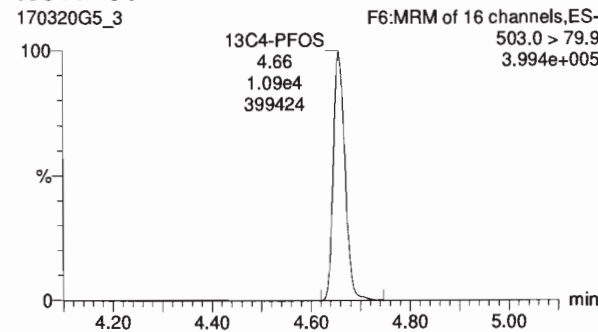
13C8-PFOA



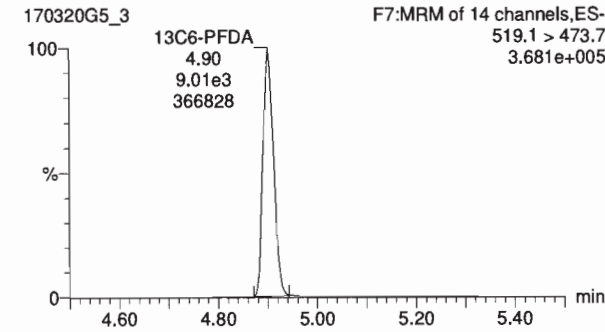
13C9-PFNA



13C4-PFOS



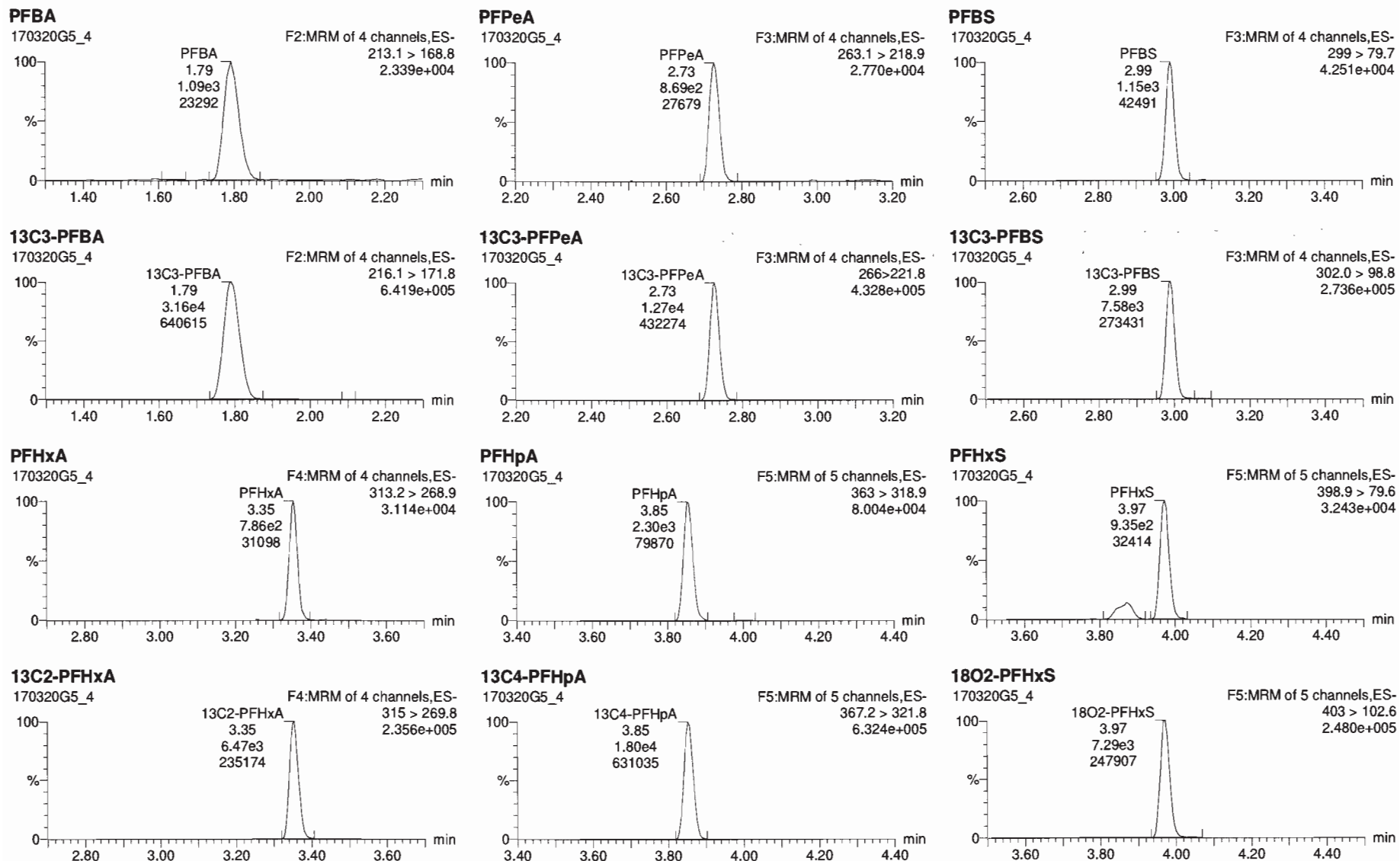
13C6-PFDA



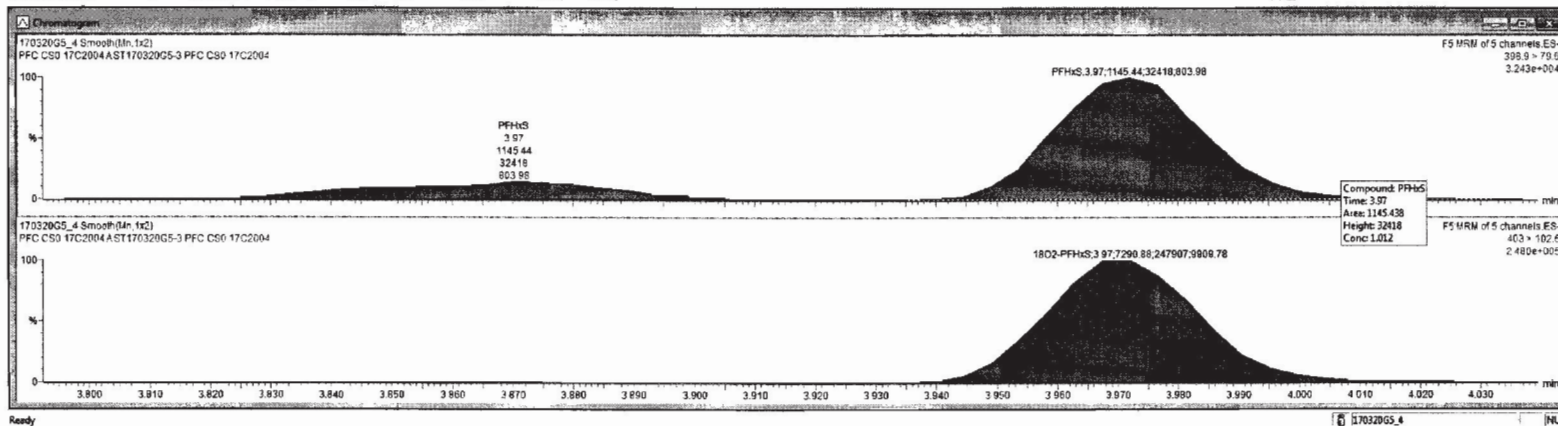
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Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_4, Date: 20-Mar-2017, Time: 21:41:31, ID: ST170320G5-3 PFC CS0 17C2004, Description: PFC CS0 17C2004 A



Name	RT	Resp	IS Resp	Conc	%Dev	RPF %RSD	RPF Mean	RPF SD
1 PFBA	1.79	1.09e3	3.18e4	0.960	-1.2			
2 PFPA	2.73	8.69e2	1.27e4	1.02	2.2			
3 PFBS	2.99	1.15e3	7.58e3	0.993	-0.7			
4 PFNA	3.35	7.86e2	6.47e3	0.965	-3.5			
5 PFPA	3.85	2.29e3	1.59e4	0.960	-1.2			
6 PFHxS	3.97	1.14e3	7.29e3	1.81	3.2			
7 6-2 FTS	4.20	1.86e2	3.64e4	1.18	17.7			
8 PFDA	4.25	2.53e3	3.64e4	1.10	10.5			
9 PFHpS	4.34	1.32e2	3.64e4	0.842	-15.8			
10 PFOS	4.66	6.01e2	7.94e3	0.960	-2.0			
11 PFNA	4.59	1.29e3	9.63e3	0.895	-10.5			
12 PFDA	4.90	5.49e2	8.64e3	0.786	-21.4			
13 6-2 FTS	4.96	1.37e2	8.64e3	0.975	-2.5			
14 13C3-PFBA	1.79	3.16e4	2.83e4	12.2	-2.0	3.678	1.145	0.043
15 13C3-PFPA	2.73	1.27e4	3.18e4	12.5	-0.2	3.455	0.432	0.014
16 13C3-PFBS	2.99	7.58e3	3.16e4	13.1	4.7	3.978	0.229	0.007
17 13C3-PFNA	3.35	6.47e3	3.16e4	4.67	-2.7	3.984	0.527	0.021
18 13C3-PFPA	3.85	1.80e4	1.95e4	12.7	1.9	3.596	0.914	0.033
19 18O2-PFHxS	3.97	7.29e3	1.83e4	12.3	-1.3	2.382	0.382	0.008
20 13C2-6-2 FTS	4.20	6.20e3						
21 13C2-PFDA	4.25	3.64e4	1.20e4	11.2	-10.5	6.571	2.829	0.188
22 13C2-PFOS	4.66	7.94e3	1.95e4	11.7	-6.5	6.426	0.822	0.053
23 13C2-PFNA	4.59	9.63e3	1.25e4	11.4	-8.8	5.748	0.720	0.345
24 13C2-PFDA	4.90	8.64e3	7.46e3	13.5	7.8	7.431	0.999	0.074

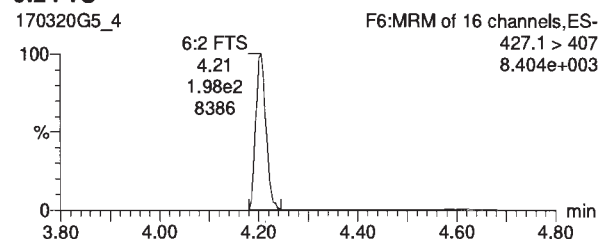


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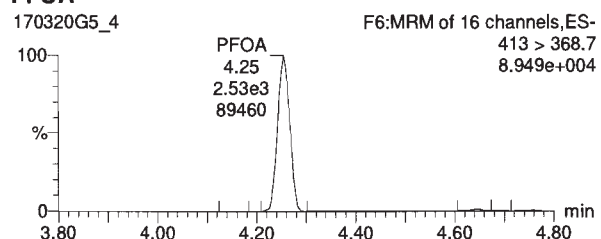
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Name: 170320G5_4, Date: 20-Mar-2017, Time: 21:41:31, ID: ST170320G5-3 PFC CS0 17C2004, Description: PFC CS0 17C2004 A

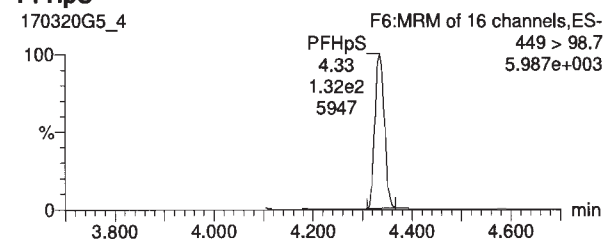
6:2 FTS



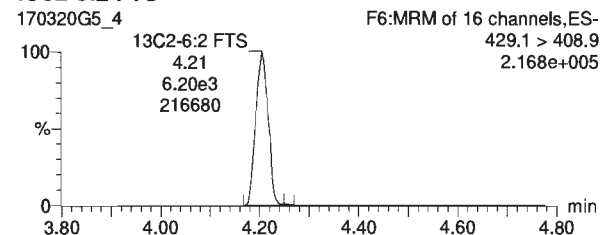
PFOA



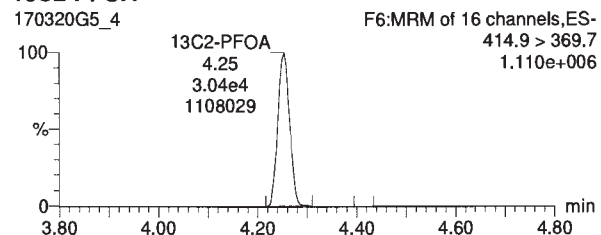
PFHpS



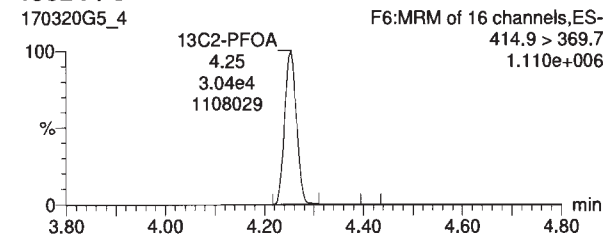
13C2-6:2 FTS



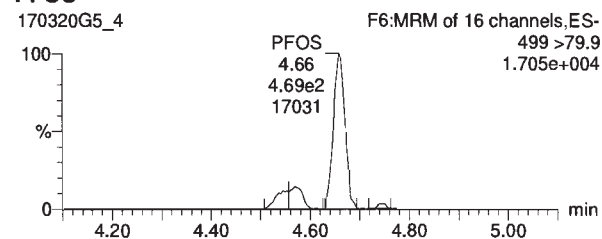
13C2-PFOA



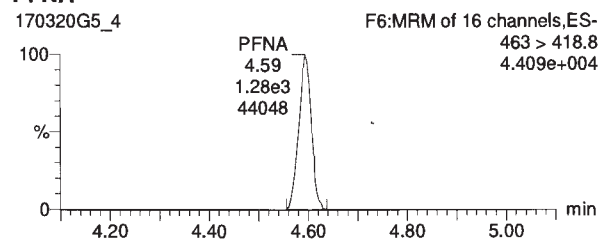
13C2-PFOA



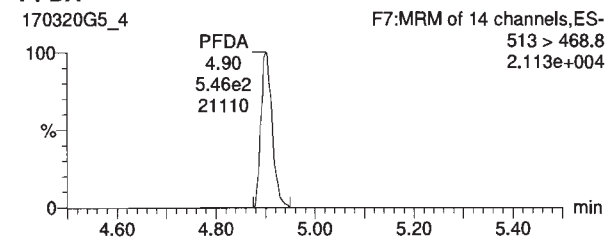
PFOS



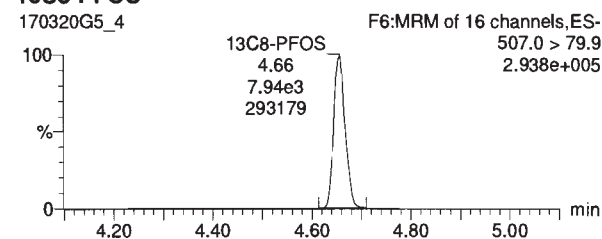
PFNA



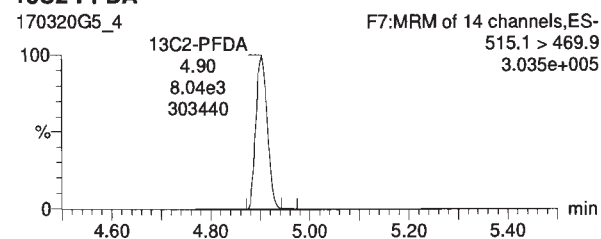
PFDA



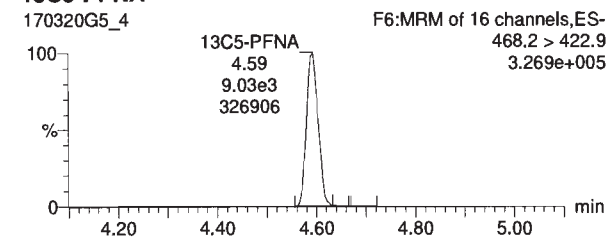
13C8-PFOS



13C2-PFDA

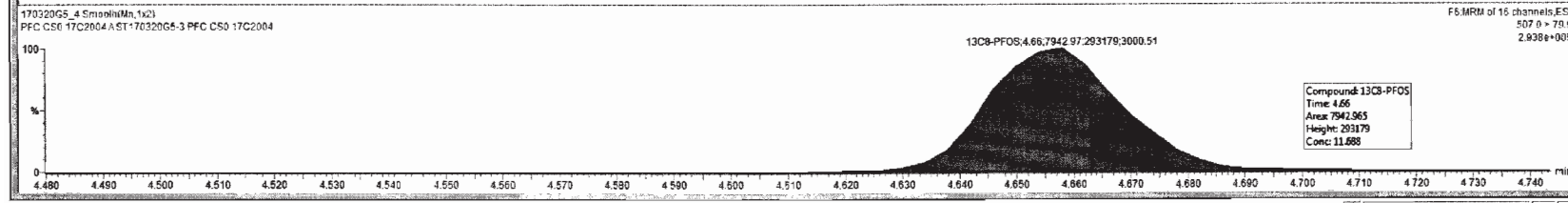
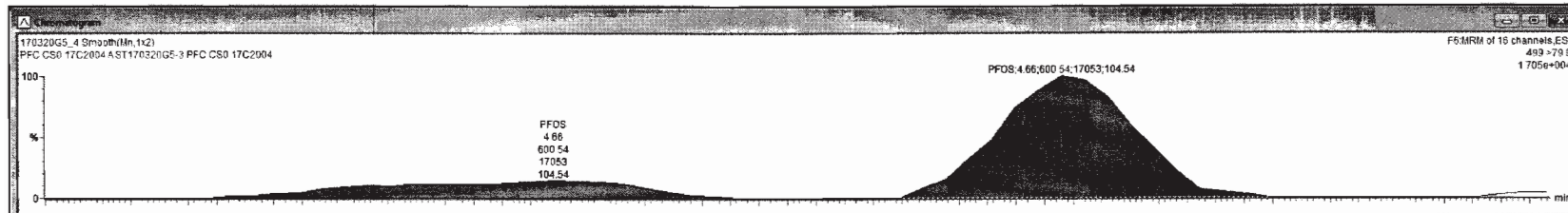


13C5-PFNA



170320G5_4 ST:170320G5-3 PFC CS0 17C2004 PFC CS0 17C2004 A

Name	RT	Resp	IS Resp	Conc	%Dev	RPF %RSD	RPF Mean	RPF SD
1 PFBA	1.79	1.09e3	3.16e4	0.988	-1.2			
2 PFPeA	2.73	8.69e2	1.27e4	1.02	2.2			
3 PFBS	2.99	1.15e3	7.58e3	0.993	-0.7			
4 PPHxA	3.35	7.86e2	5.47e3	0.965	-3.5			
5 PPHpA	3.85	2.30e3	1.80e4	0.988	-1.2			
6 PPHxS	3.97	1.15e3	7.29e3	1.01	1.2			
7 6.2 FTS	4.20	1.98e2	3.04e4	1.18	17.7			
8 PFDA	4.25	2.53e3	3.04e4	1.10	10.5			
9 PPHpS	4.34	1.32e2	3.04e4	0.842	-15.8			
10 PFOS	4.66	8.01e2	7.04e3	0.809	-2.0			
11 PFNA	4.59	1.28e3	8.03e3	0.895	-10.5			
12 PFDA	4.90	5.46e2	8.04e3	0.798	-21.4			
13 8.2 FTS	4.88	1.37e2	8.04e3	0.875	-2.5			
14 13C3-PFBA	1.79	3.16e4	2.83e4	12.2	-2.8	3.878	1.145	0.942
15 13C3-PFPeA	2.73	1.27e4	3.16e4	12.5	-0.2	3.455	0.402	0.514
16 13C3-PFBS	2.99	7.58e3	3.16e4	13.1	4.7	3.079	0.229	0.907
17 13C2-PPHxA	3.35	6.47e3	3.16e4	4.87	-2.7	3.984	0.527	0.021
18 13C4-PPHpA	3.85	1.80e4	1.93e4	12.7	1.9	3.598	0.914	0.933
19 18O2-PPHxS	3.97	7.29e3	1.93e4	12.3	-1.3	2.382	0.382	0.009
20 13C2-6.2 FTS	4.20	6.20e3						
21 13C2-PFDA	4.25	3.04e4	1.20e4	11.2	-10.5	6.571	2.829	0.186
22 13C8-PFOS	4.66	7.94e3	1.03e4	11.7	-6.5	6.428	0.822	0.053
23 13C5-PFNA	4.59	9.03e3	1.25e4	11.4	-8.8	5.748	0.788	0.045
24 13C2-PFDA	4.90	8.04e3	7.46e3	13.5	7.8	7.431	0.999	0.074



Compound: 13C8-PFOS
Time: 4.66
Area: 7942.965
Height: 293179
Conc: 11.688

Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time

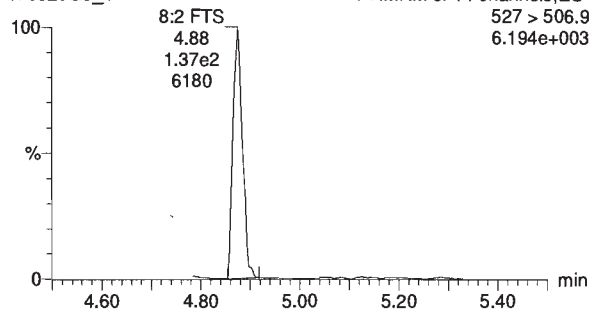
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_4, Date: 20-Mar-2017, Time: 21:41:31, ID: ST170320G5-3 PFC CS0 17C2004, Description: PFC CS0 17C2004 A

8:2 FTS

170320G5_4

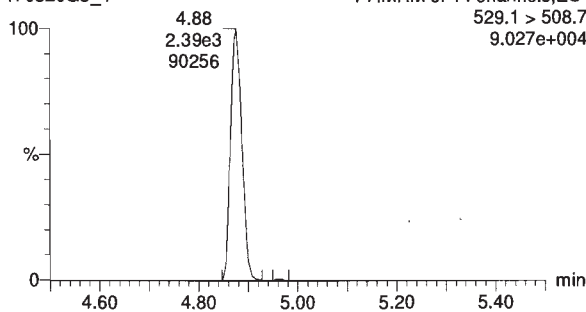
F7:MRM of 14 channels,ES-
527 > 506.9
6.194e+003



13C2-8:2 FTS

170320G5_4

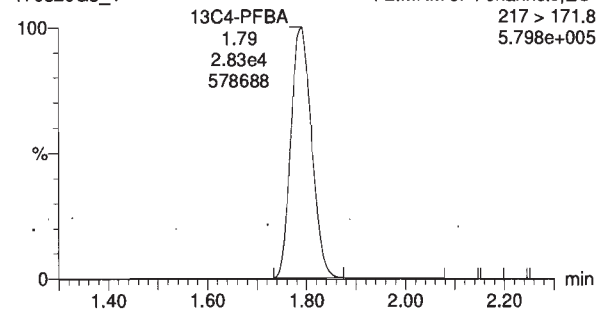
F7:MRM of 14 channels,ES-
529.1 > 508.7
9.027e+004



13C4-PFBA

170320G5_4

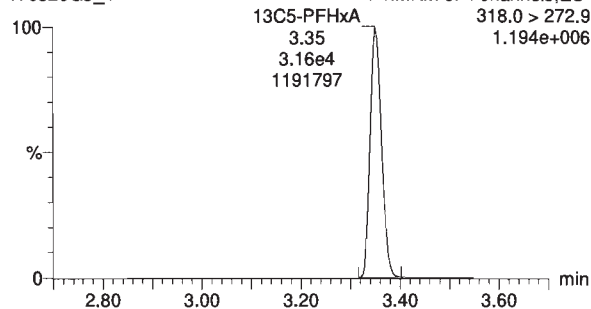
F2:MRM of 4 channels,ES-
217 > 171.8
5.798e+005



13C5-PFHxA

170320G5_4

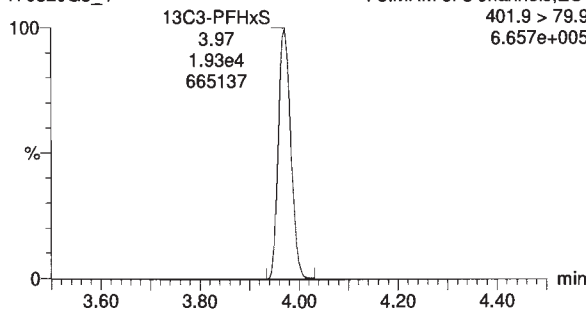
F4:MRM of 4 channels,ES-
318.0 > 272.9
1.194e+006



13C3-PFHxS

170320G5_4

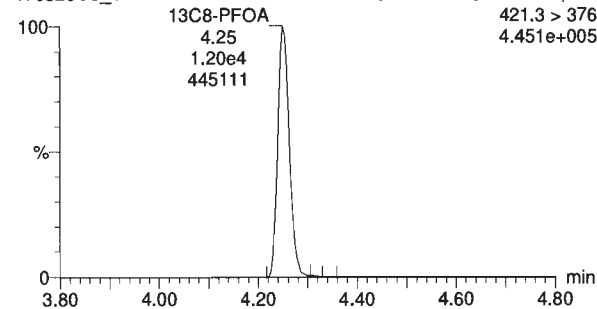
F5:MRM of 5 channels,ES-
401.9 > 79.9
6.657e+005



13C8-PFOA

170320G5_4

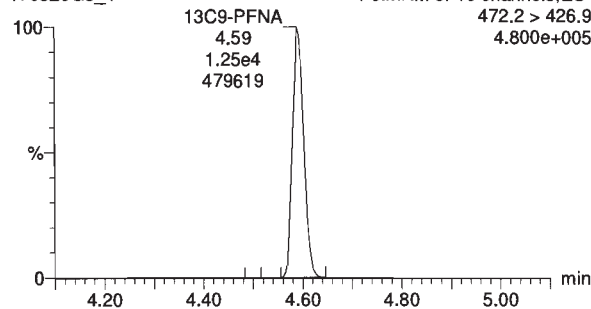
F6:MRM of 16 channels,ES-
421.3 > 376
4.451e+005



13C9-PFNA

170320G5_4

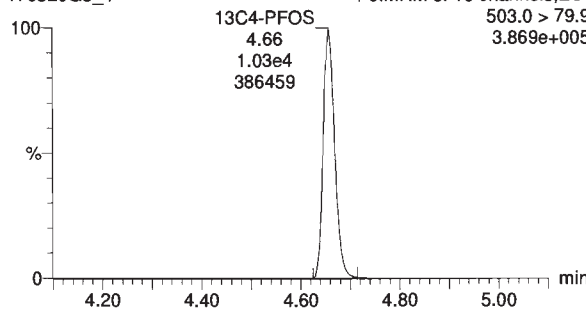
F6:MRM of 16 channels,ES-
472.2 > 426.9
4.800e+005



13C4-PFOS

170320G5_4

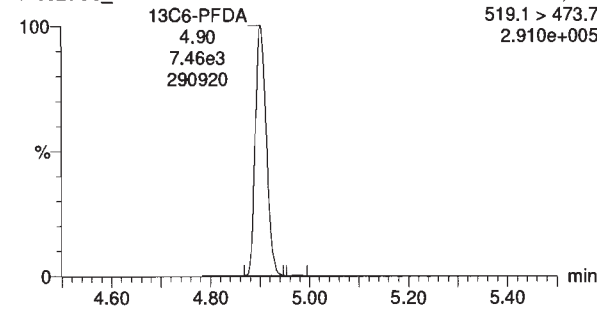
F6:MRM of 16 channels,ES-
503.0 > 79.9
3.869e+005



13C6-PFDA

170320G5_4

F7:MRM of 14 channels,ES-
519.1 > 473.7
2.910e+005

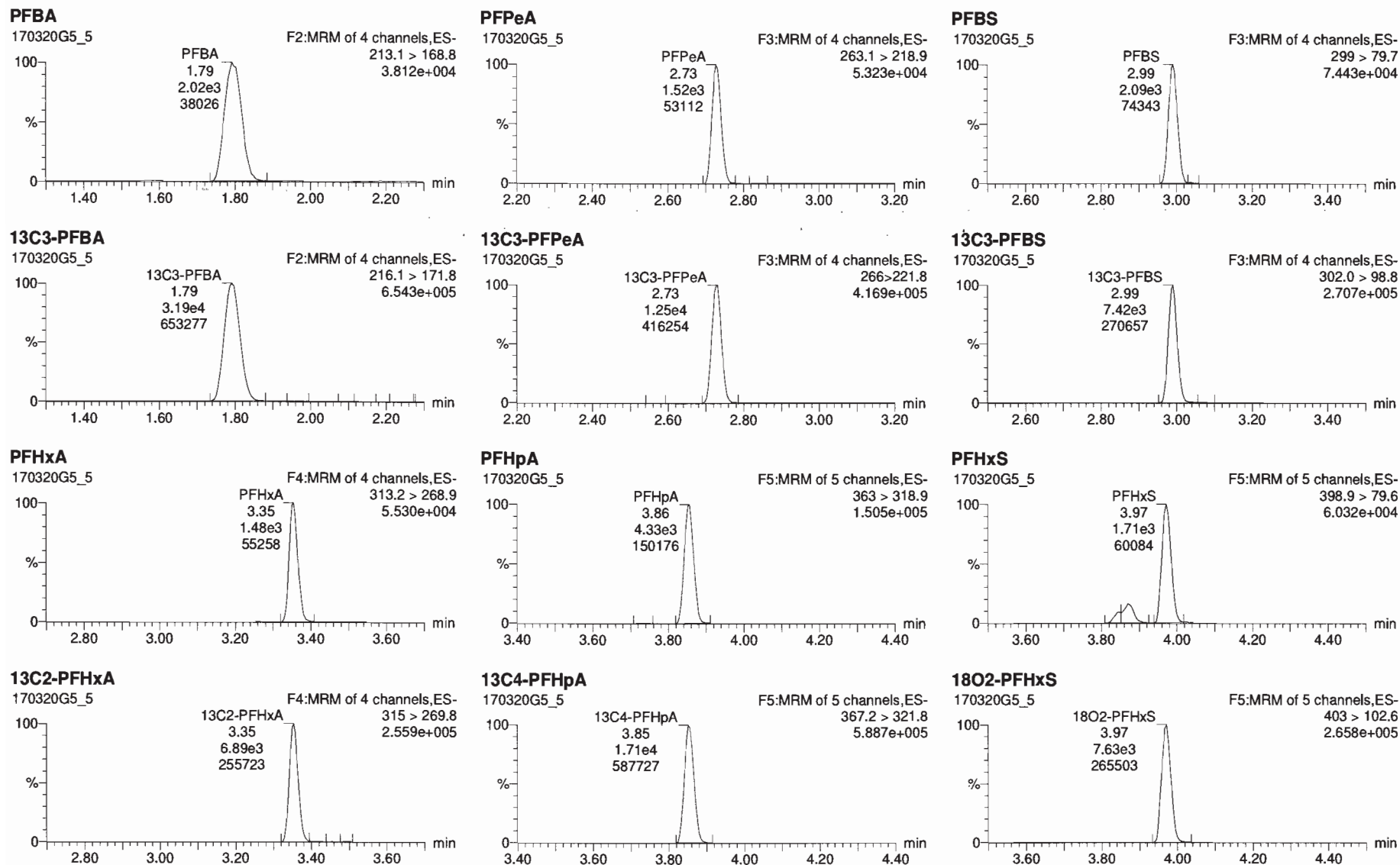


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Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time

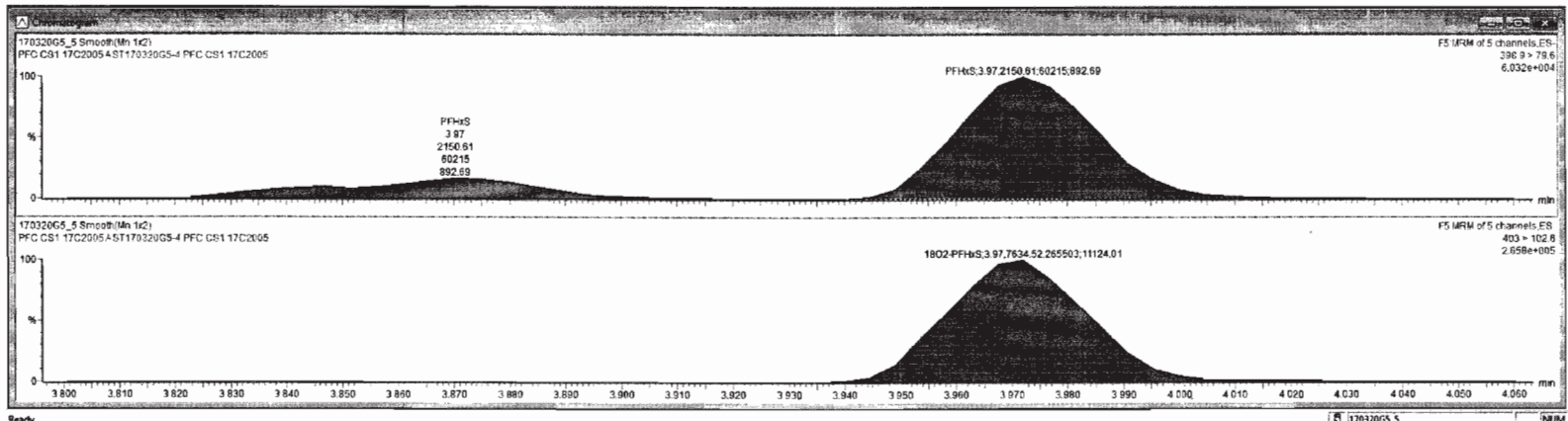
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_5, Date: 20-Mar-2017, Time: 21:54:10, ID: ST170320G5-4 PFC CS1 17C2005, Description: PFC CS1 17C2005 A



TargetLink - D:\2005\17032005_5 - ST17032005-4 PFC CS1 17C2005 - PFC CS1 17C2005 A

ID	Name	RT	Resp	IS Resp	Conc	%Dev	RRF NUSO	RRF Meas	RRF SD
1	PFBA	1.79	2.02e3	3.19e4	1.86	-7.1			
2	PFPhA	2.73	1.52e3	1.26e4	1.86	-7.2			
3	PFBS	2.99	2.09e3	2.42e5	1.85	-7.5			
4	PFPhA	3.35	1.45e3	6.89e3	1.80	-9.8			
5	PFPhA	3.86	4.33e3	1.71e4	1.95	-2.6			
6	PFHxS	3.97	2.15e3	7.83e3	1.68	-8.6			
7	6:2 FTS	4.20	4.45e2	3.40e4	2.12	5.9			
8	PFOA	4.25	4.56e3	3.40e4	1.88	-6.2			
9	PFHxS	4.34	3.73e2	3.40e4	2.04	2.1			
10	PPOS	4.86	1.24e3	9.07e3	1.71	-14.4			
11	PFNA	4.59	2.89e3	1.83e4	1.77	-11.8			
12	PFOA	4.90	1.24e3	7.95e3	2.69	4.7			
13	6:2 FTS	4.88	3.69e2	7.95e3	2.35	17.4			
14	13C3-PFBA	1.79	3.19e4	2.72e4	12.8	2.3	3.678	1.145	0.842
15	13C3-PFPhA	2.73	1.28e4	3.17e4	12.2	-2.1	3.456	0.462	0.814
16	13C3-PFBS	2.99	7.42e3	3.17e4	12.8	2.1	3.078	0.229	0.907
17	13C2-PFPhA	3.35	6.88e3	3.17e4	5.18	3.3	3.864	0.527	0.821
18	13C4-PFPhA	3.85	1.71e4	1.82e4	12.2	-2.2	3.588	0.914	0.833
19	18O2-PFHxS	3.97	7.63e3	1.92e4	19.0	4.1	2.382	0.382	0.609
20	13C2-6:2 FTS	4.20	5.97e3						
21	13C2-PFOA	4.25	3.49e4	1.13e4	12.7	1.8	6.571	2.829	0.186
22	13C2-PPOS	4.86	9.07e3	1.03e4	13.4	8.9	6.428	0.822	0.853
23	13C5-PFNA	4.59	1.03e4	1.24e4	13.2	5.2	5.740	0.730	0.840
24	13C2-PFOA	4.90	7.95e3	8.06e3	12.3	-1.5	7.431	0.989	0.874



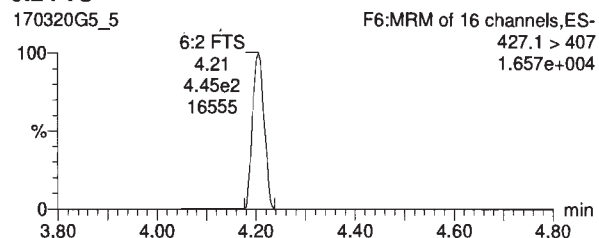
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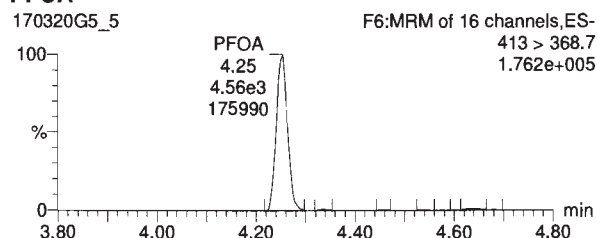
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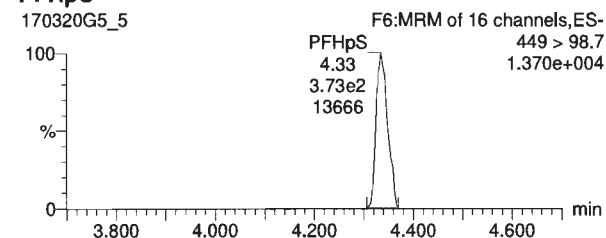
6:2 FTS



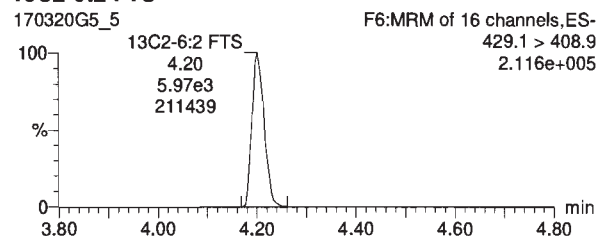
PFOA



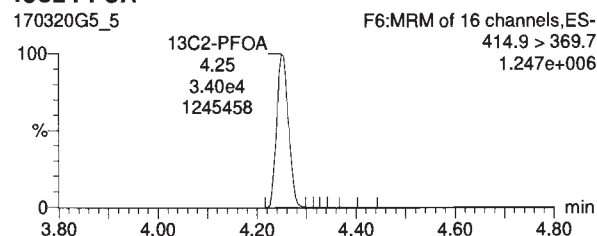
PFHpS



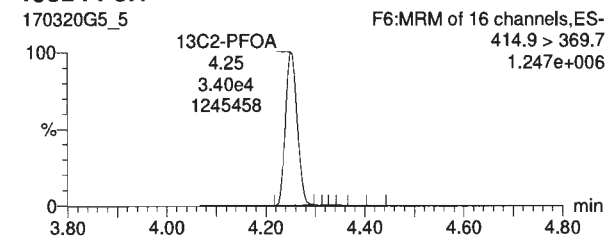
13C2-6:2 FTS



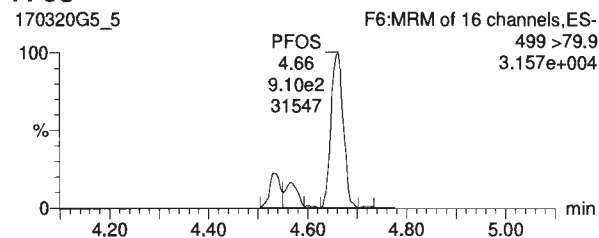
13C2-PFOA



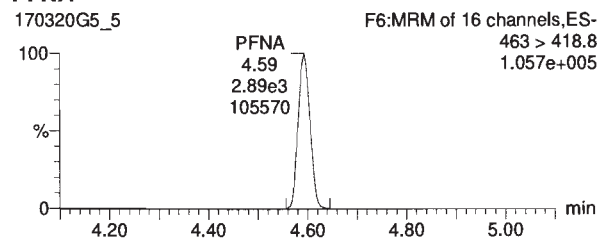
13C2-PFOA



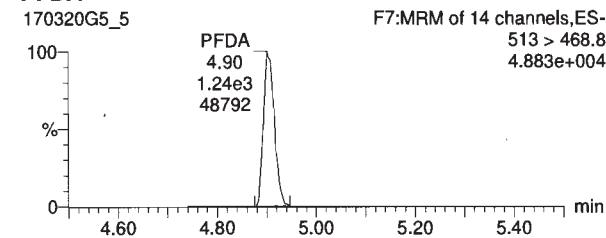
PFOS



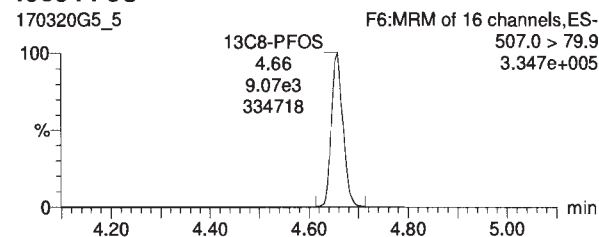
PFNA



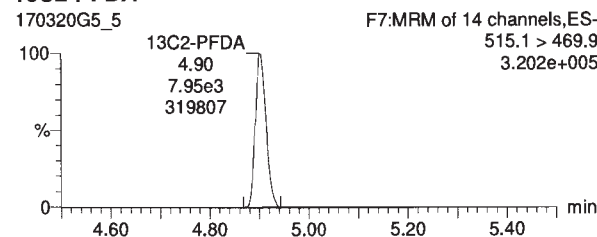
PFDA



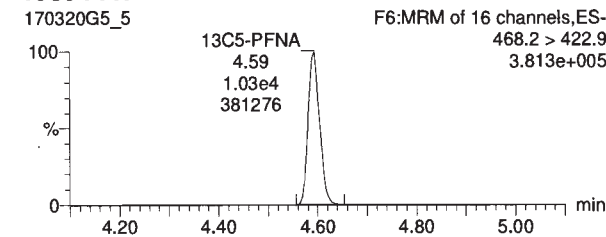
13C8-PFOS



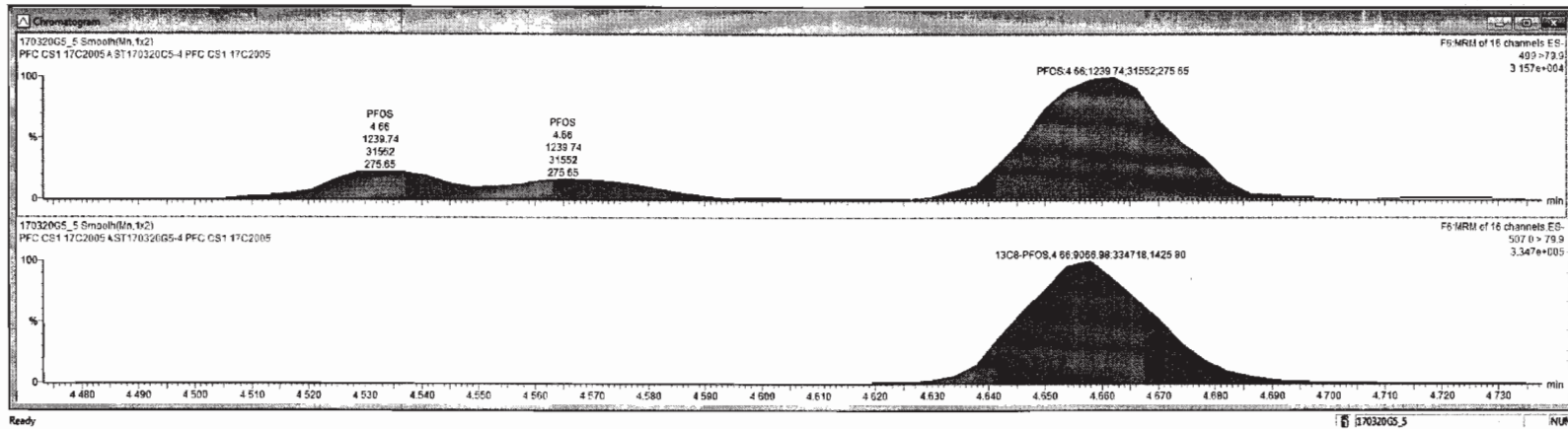
13C2-PFDA



13C5-PFNA



Name	RT	Height	Area	Area%	Height%	Area%	Area%	Area%
1 PFBA	1.79	2.02e3	3.19e4	1.86	-7.1			
2 PFPeA	2.73	1.52e3	1.25e4	1.86	-7.2			
3 PFBS	2.99	2.09e3	7.42e3	1.85	-7.5			
4 PFPeA	3.35	1.46e3	6.89e3	1.80	-8.8			
5 PFHpA	3.86	4.33e3	1.71e4	1.95	-2.8			
6 PFHxS	3.97	2.15e3	7.63e3	1.86	-6.8			
7 6:2 FTS	4.20	4.45e2	3.40e4	2.12	5.9			
8 PFDA	4.25	4.56e3	3.40e4	1.86	-6.2			
9 PFHpS	4.34	3.73e2	3.40e4	2.94	2.1			
10 PFOS	4.66	1.24e3	3.07e3	1.71	-14.4			
11 PFNA	4.59	2.85e3	1.03e4	1.77	-11.8			
12 PFDA	4.90	1.24e3	7.95e3	2.09	4.7			
13 6:2 FTS	4.88	3.69e2	7.95e3	2.35	17.4			
14 13C3-PFBA	1.79	3.19e4	2.72e4	12.0	2.3	3.678	1.145	0.042
15 13C3-PFPeA	2.73	1.25e4	3.17e4	12.2	-2.1	3.455	0.402	0.014
16 13C3-PFBS	2.99	7.42e3	3.17e4	12.8	2.1	3.979	0.229	0.007
17 13C3-PFPeA	3.35	6.89e3	3.17e4	5.18	3.5	3.964	0.527	0.021
18 13C4-PFPeA	3.85	1.71e4	1.55e4	12.2	-2.2	3.588	0.914	0.035
19 13C2-PFPeA	3.97	7.63e3	1.92e4	13.6	4.1	2.342	0.352	0.009
20 13C2-6:2 FTS	4.20	5.87e3						
21 13C2-PFDA	4.25	3.40e4	1.18e4	12.7	1.8	6.571	2.828	0.158
22 13C6-PFOS	4.66	9.07e3	1.03e4	13.4	8.9	6.428	0.822	0.053
23 13C5-PFNA	4.59	1.03e4	1.24e4	13.2	5.3	5.748	0.758	0.045
24 13C2-PFDA	4.90	7.95e3	8.08e3	12.3	-1.5	7.431	0.999	0.074



Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time

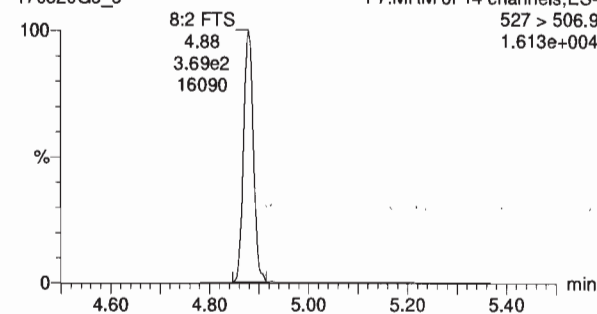
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_5, Date: 20-Mar-2017, Time: 21:54:10, ID: ST170320G5-4 PFC CS1 17C2005, Description: PFC CS1 17C2005 A

8:2 FTS

170320G5_5

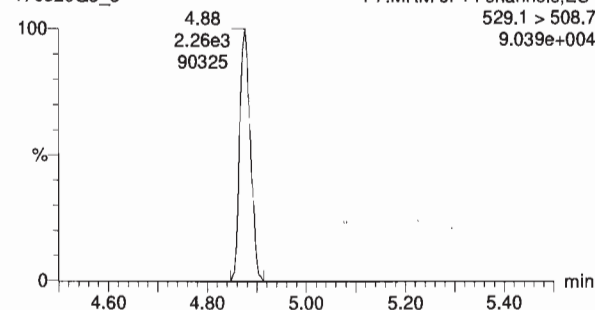
F7:MRM of 14 channels,ES-
527 > 506.9
1.613e+004



13C2-8:2 FTS

170320G5_5

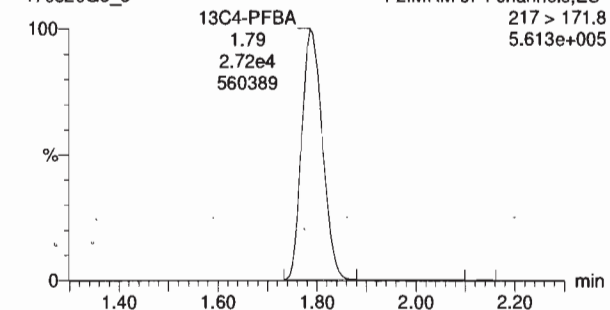
F7:MRM of 14 channels,ES-
529.1 > 508.7
9.039e+004



13C4-PFBA

170320G5_5

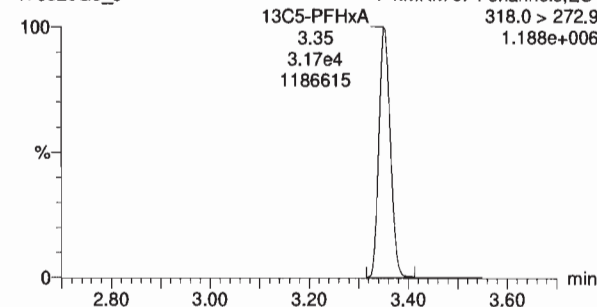
F2:MRM of 4 channels,ES-
217 > 171.8
5.613e+005



13C5-PFHxA

170320G5_5

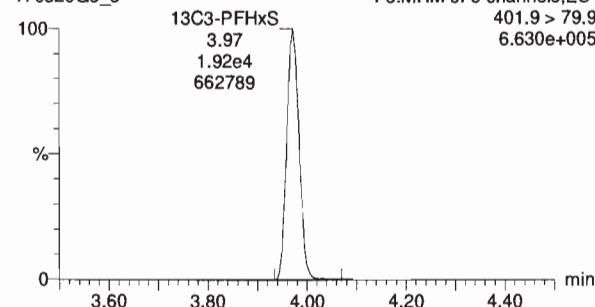
F4:MRM of 4 channels,ES-
318.0 > 272.9
1.188e+006



13C3-PFHxS

170320G5_5

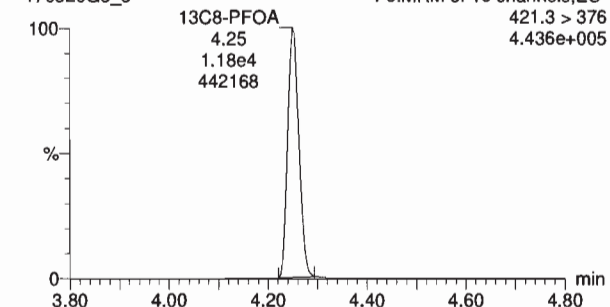
F5:MRM of 5 channels,ES-
401.9 > 79.9
6.630e+005



13C8-PFOA

170320G5_5

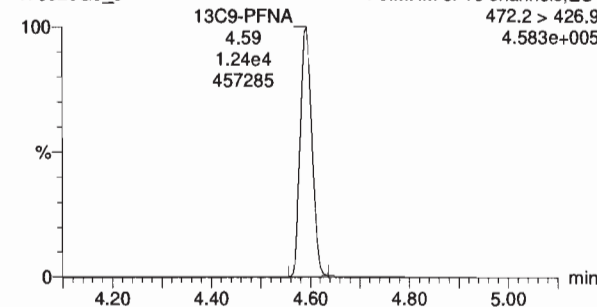
F6:MRM of 16 channels,ES-
421.3 > 376
4.436e+005



13C9-PFNA

170320G5_5

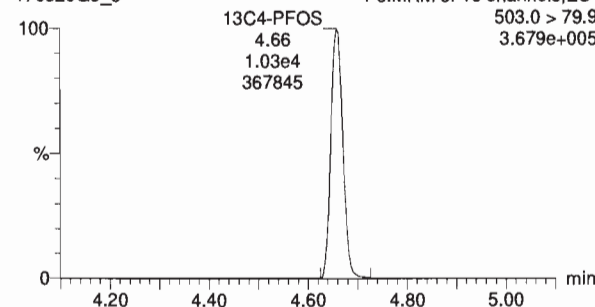
F6:MRM of 16 channels,ES-
472.2 > 426.9
4.583e+005



13C4-PFOS

170320G5_5

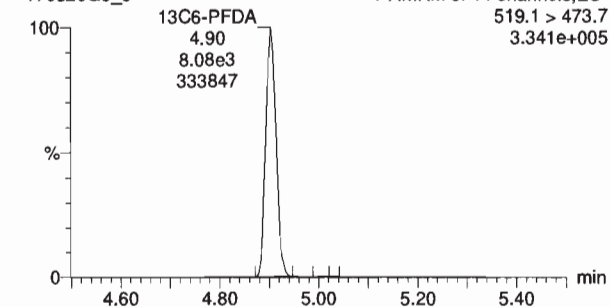
F6:MRM of 16 channels,ES-
503.0 > 79.9
3.679e+005



13C6-PFDA

170320G5_5

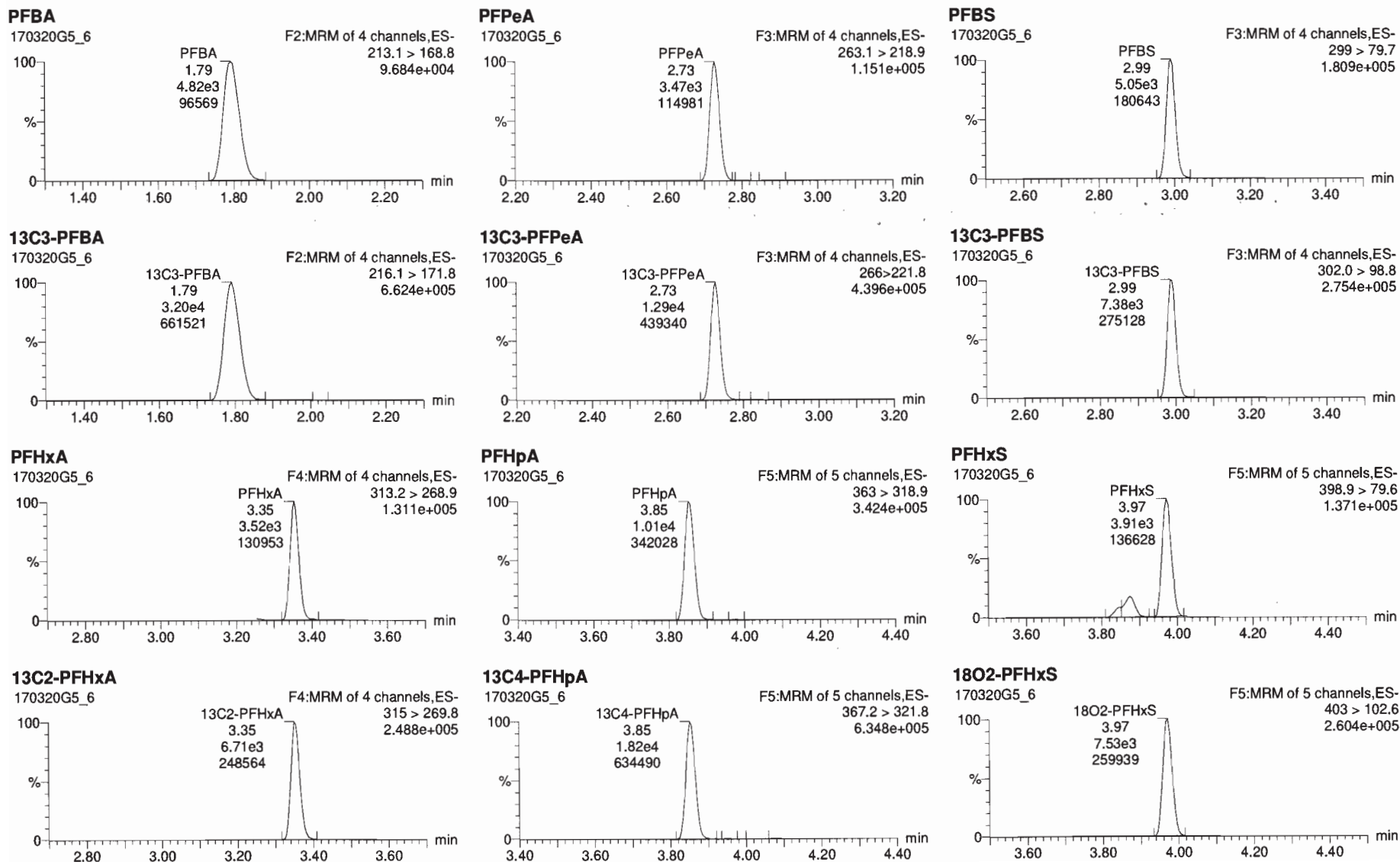
F7:MRM of 14 channels,ES-
519.1 > 473.7
3.341e+005



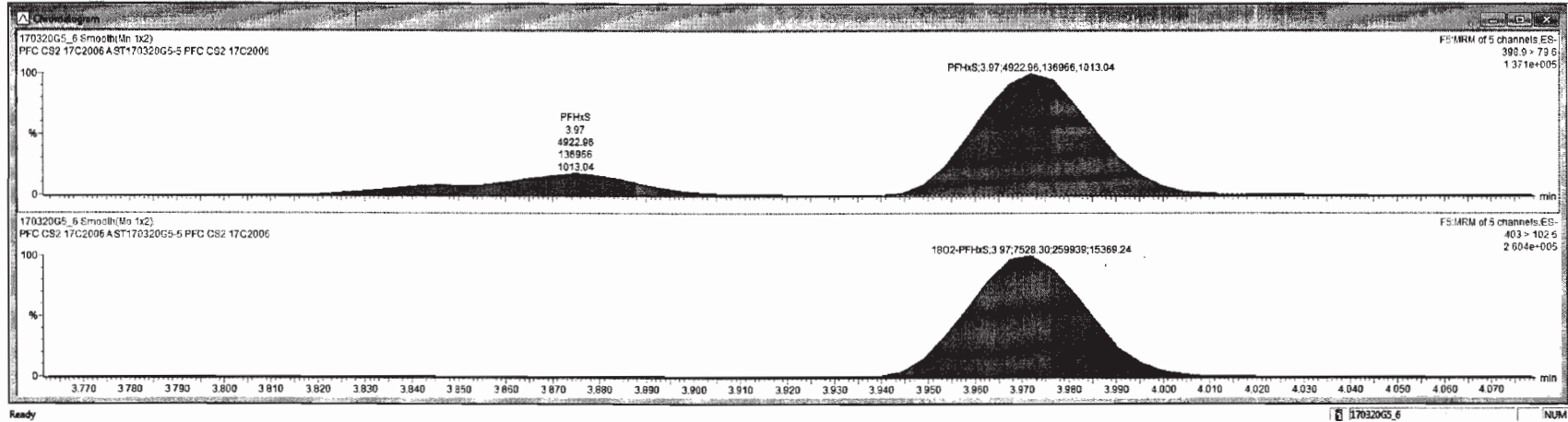
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Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_6, Date: 20-Mar-2017, Time: 22:06:44, ID: ST170320G5-5 PFC CS2 17C2006, Description: PFC CS2 17C2006 A



#	Name	RT	Resp	IS Resp	Conc	%Dev	RDF %RSD	RDF Mean	RDF SD
1	PFBA	1.79	4.82e3	3.28e4	4.48	-10.4			
2	PFPeA	2.73	3.47e3	1.29e4	4.18	-16.4			
3	PFBS	2.99	5.05e3	7.38e3	4.48	-10.5			
4	PFHxA	3.35	3.52e3	6.71e3	4.58	-8.2			
5	PFHpA	3.85	1.01e4	1.82e4	4.26	-14.7			
6	PFHxS	3.97	4.92e3	7.85e3	4.91	-11.9			
7	6,2 FTS	4.20	1.01e3	3.43e4	4.48	-10.1			
8	PFOA	4.25	1.08e4	3.43e4	4.62	-7.5			
9	PFHbS	4.34	8.40e2	3.43e4	4.50	-10.0			
10	PFOS	4.66	3.19e3	9.53e3	4.08	-18.3			
11	PFNA	4.58	7.20e3	1.18e4	4.13	-17.3			
12	PFDA	4.90	2.76e3	9.41e3	4.12	-17.5			
13	6,2 FTS	4.88	7.78e2	9.41e3	4.85	-19.0			
14	13C3-PFBA	1.79	3.29e4	2.77e4	12.6	1.0	3.678	1.145	0.042
15	13C3-PFPeA	2.73	1.29e4	3.14e4	12.7	2.0	3.455	0.492	0.014
16	13C3-PFBS	2.99	7.38e3	3.14e4	12.8	2.5	3.079	0.229	0.007
17	13C2-PFHxA	3.35	6.71e3	3.14e4	5.97	1.4	3.984	0.527	0.021
18	13C4-PFHpA	3.85	1.82e4	1.92e4	13.0	3.8	3.598	0.914	0.033
19	18O2-PFHxS	3.97	7.53e3	1.92e4	12.8	2.4	2.382	0.382	0.009
20	13C2-6,2 FTS	4.20	5.95e3						
21	13C3-PFOA	4.25	3.43e4	1.15e4	13.1	5.1	6.671	2.829	0.108
22	13C3-PFOS	4.66	9.53e3	1.17e4	12.9	3.3	6.428	0.822	0.053
23	13C3-PFNA	4.58	1.18e4	1.31e4	13.3	8.0	5.748	0.788	0.045
24	13C2-PFDA	4.90	9.41e3	1.03e4	11.4	-8.6	7.431	0.999	0.074

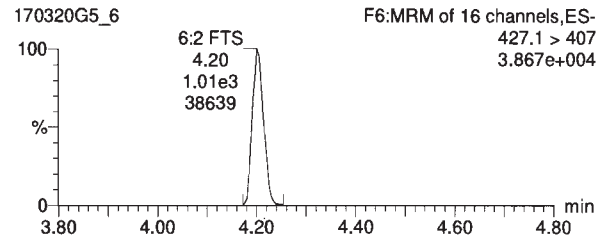


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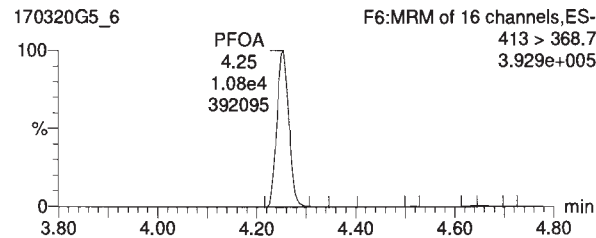
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Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_6, Date: 20-Mar-2017, Time: 22:06:44, ID: ST170320G5-5 PFC CS2 17C2006, Description: PFC CS2 17C2006 A

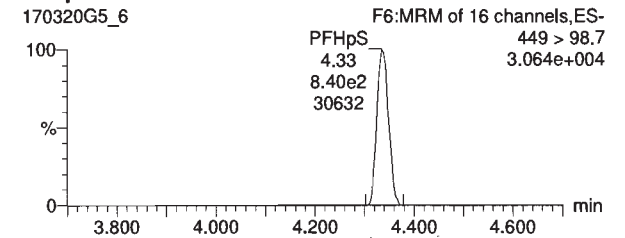
6:2 FTS



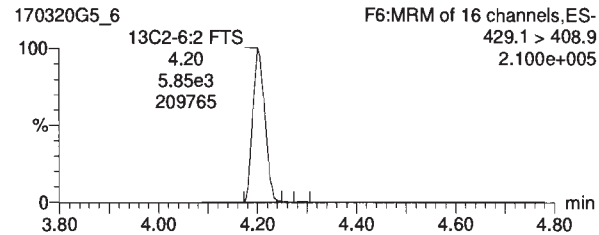
PFOA



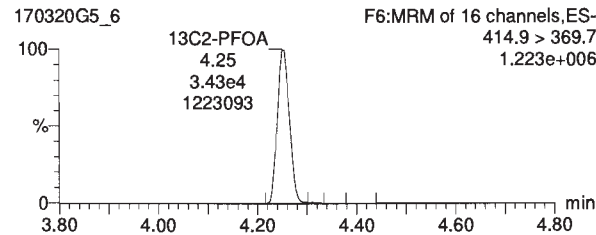
PFHpS



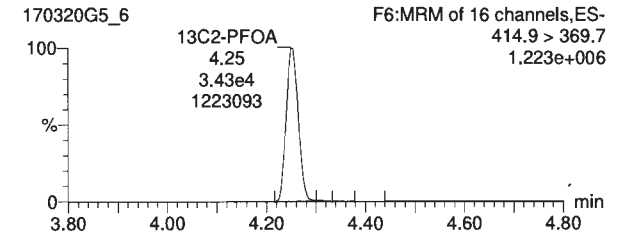
13C2-6:2 FTS



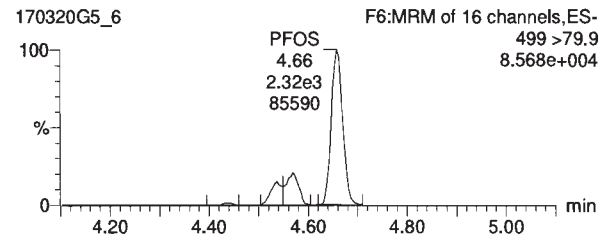
13C2-PFOA



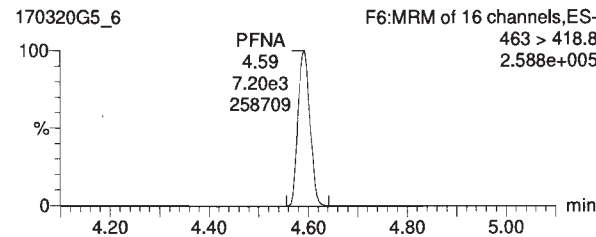
13C2-PFOA



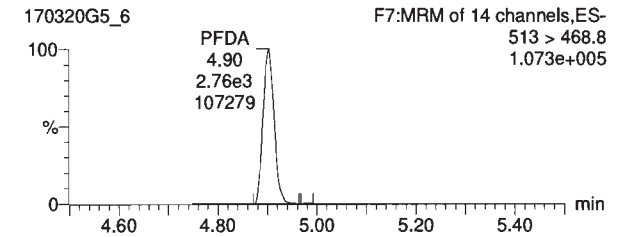
PFOS



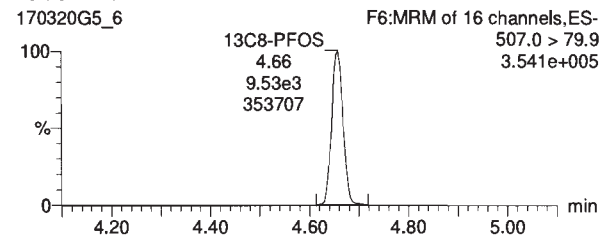
PFNA



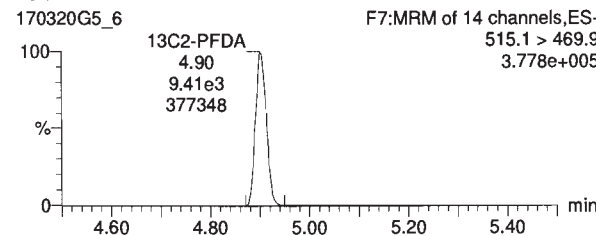
PFDA



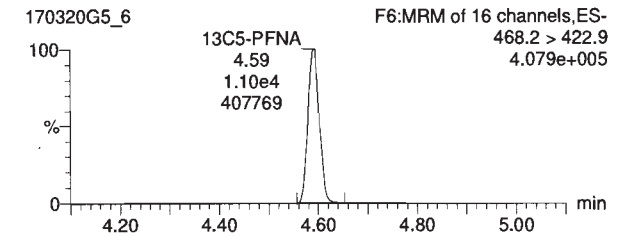
13C8-PFOS



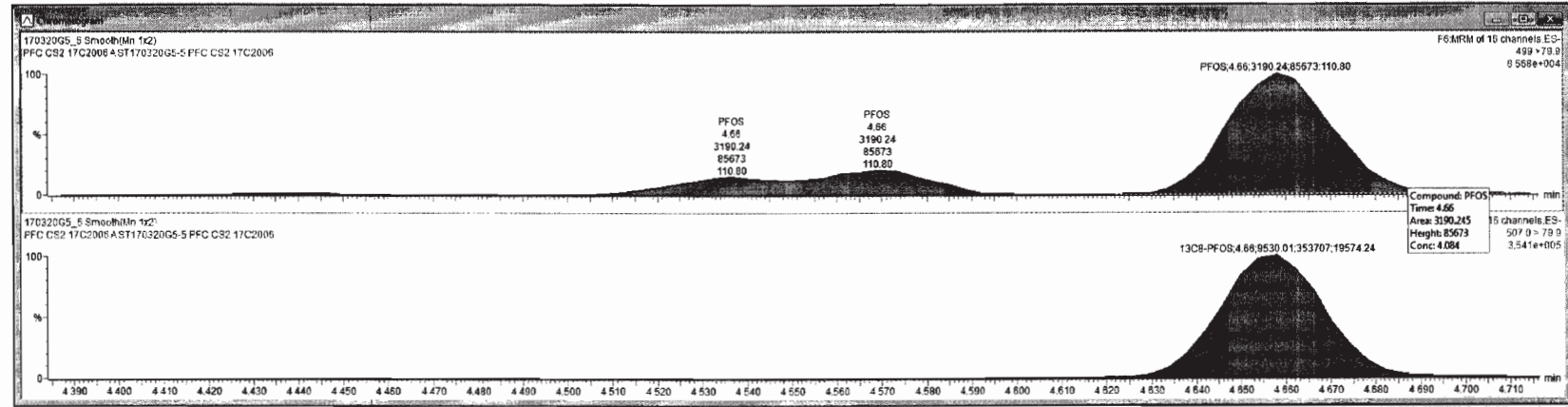
13C2-PFDA



13C5-PFNA



Name	RT	Resp	IS Resp	Conc.	%Dev	RRF NRSD	RRF Mean	RRF SD
1 PFBA	1.79	4.82e3	3.20e4	4.48	-10.4			
2 PPFBA	2.73	3.47e3	1.29e4	4.18	-16.4			
3 PFBS	2.99	5.05e3	7.30e3	4.48	-10.5			
4 PPFBA	3.35	3.52e3	6.71e3	4.59	-8.2			
5 PPFBA	3.85	1.01e4	1.82e4	4.26	-14.7			
6 PPFBA	3.97	4.92e3	7.83e3	4.41	-11.9			
7 8.2 FTS	4.20	1.01e3	3.43e4	4.49	-10.1			
8 PFDA	4.25	1.08e4	3.43e4	4.62	-7.5			
9 PPFBA	4.34	8.40e2	3.43e4	4.50	-10.0			
10 PFOS	4.66	3.19e3	8.59e3	4.68	-13.3			
11 PFNA	4.59	7.26e3	1.10e4	4.13	-17.3			
12 PFDA	4.90	2.76e3	9.41e3	4.12	-17.5			
13 8.2 FTS	4.88	7.76e3	9.41e3	4.05	-19.0			
14 13C3-PFBA	1.79	3.26e4	2.77e4	12.8	1.0	3.878	1.145	0.942
15 13C3-PPFBA	2.73	1.29e4	3.14e4	12.7	2.0	3.455	0.402	0.014
16 13C3-PFBS	2.99	7.38e3	3.14e4	12.8	2.5	3.079	0.229	0.007
17 13C2-PPFBA	3.35	6.71e3	3.14e4	5.07	1.4	3.984	0.527	0.021
18 13C4-PPFBA	3.85	1.82e4	1.82e4	13.0	3.8	3.598	0.914	0.033
19 18O2-PFOS	3.97	7.53e3	1.92e4	12.8	2.4	2.382	0.382	0.009
20 13C2-8.2 FTS	4.20	5.85e3						
21 13C2-PFDA	4.25	3.43e4	1.15e4	13.1	5.1	6.571	2.829	0.186
22 13C8-PFOS	4.66	9.52e3	1.12e4	12.9	3.3	6.428	0.822	0.053
23 13C5-PFNA	4.59	1.16e4	1.31e4	13.3	6.0	5.745	0.788	0.045
24 13C2-PFDA	4.90	9.41e3	1.83e4	11.4	-8.8	7.431	0.999	0.074

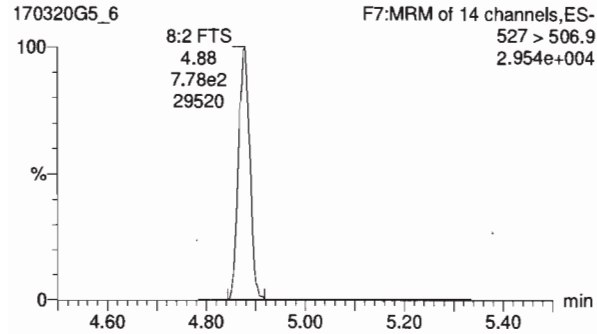


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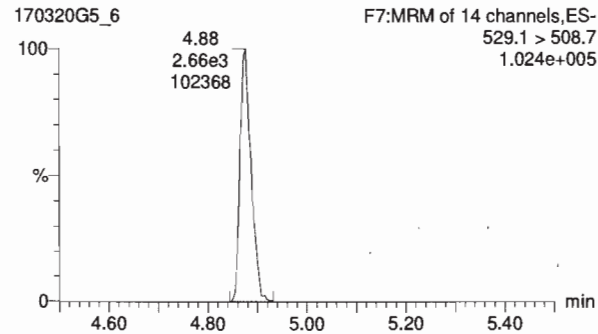
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Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_6, Date: 20-Mar-2017, Time: 22:06:44, ID: ST170320G5-5 PFC CS2 17C2006, Description: PFC CS2 17C2006 A

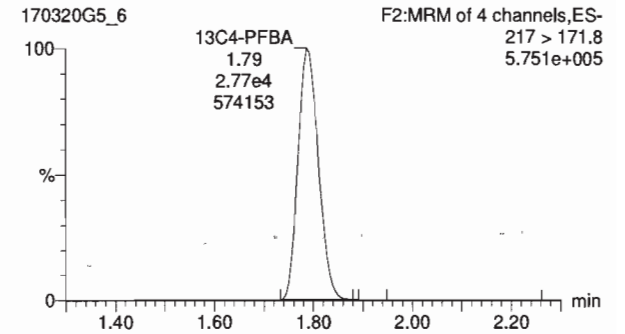
8:2 FTS



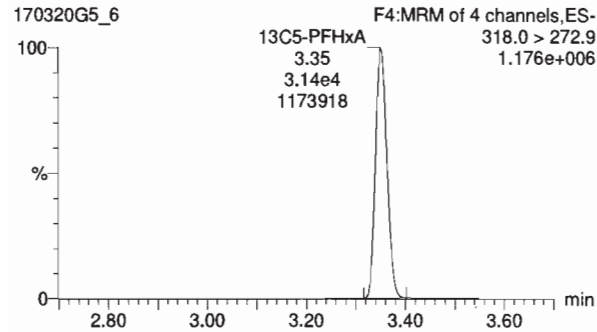
13C2-8:2 FTS



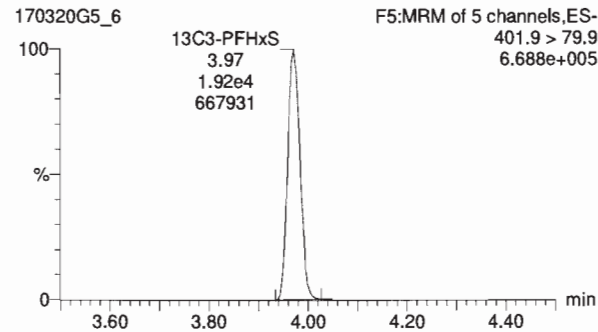
13C4-PFBA



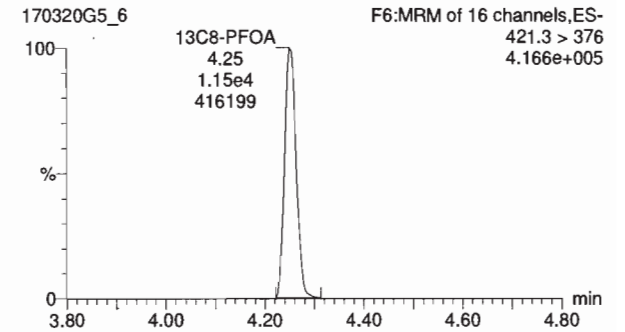
13C5-PFHxA



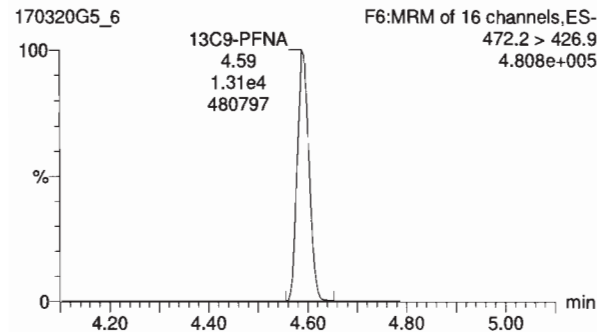
13C3-PFHxS



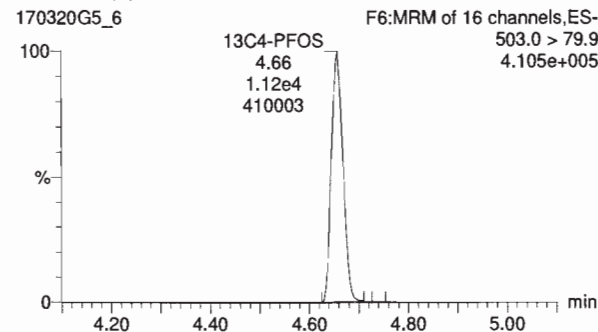
13C8-PFOA



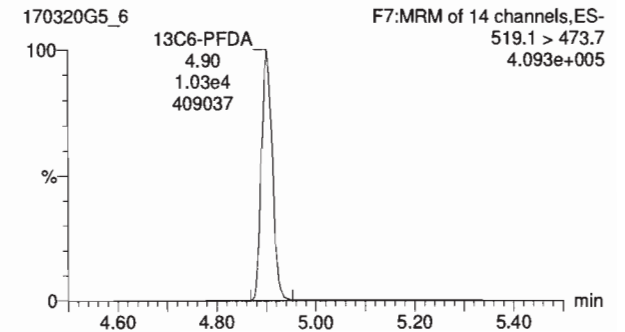
13C9-PFNA



13C4-PFOS



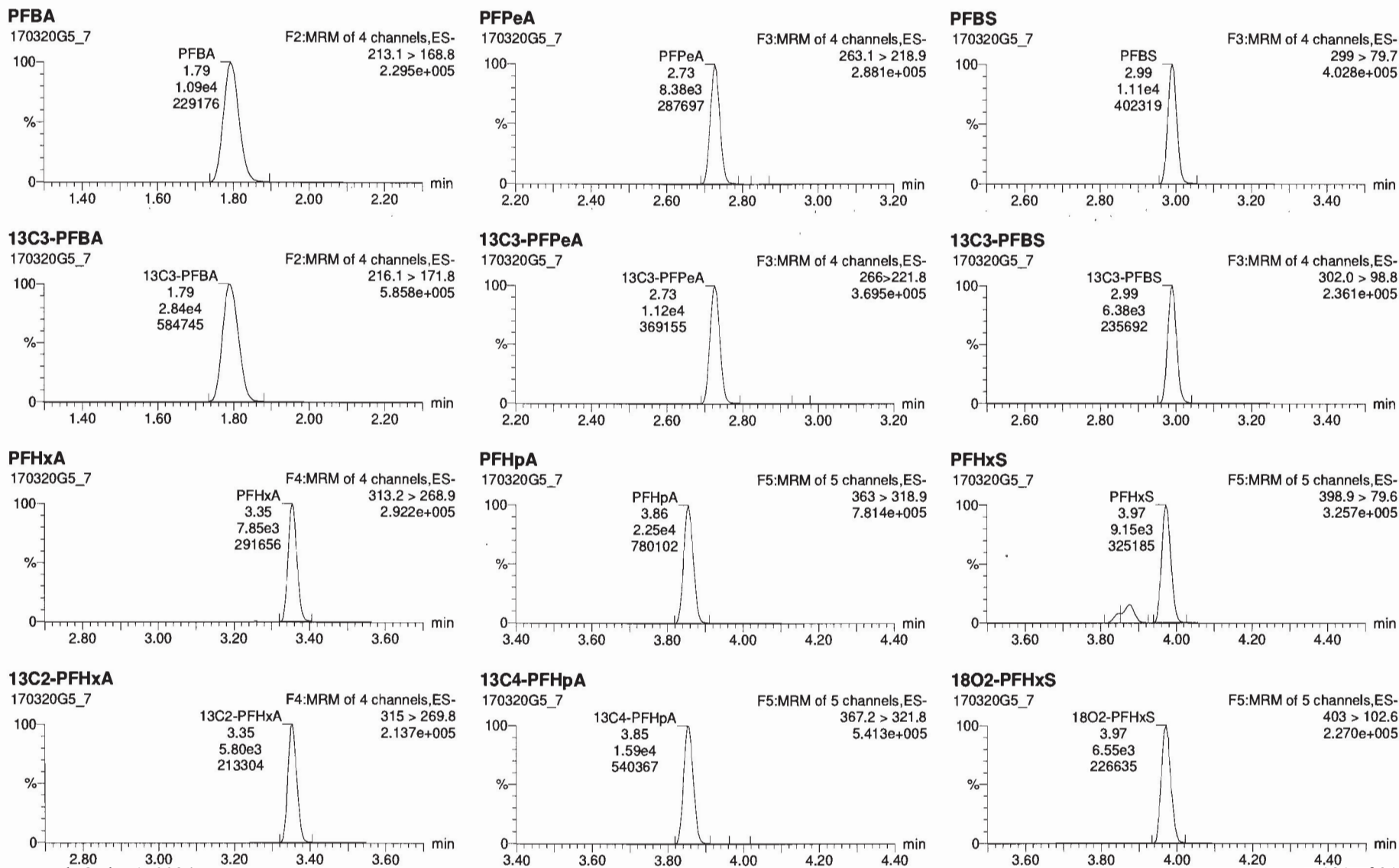
13C6-PFDA



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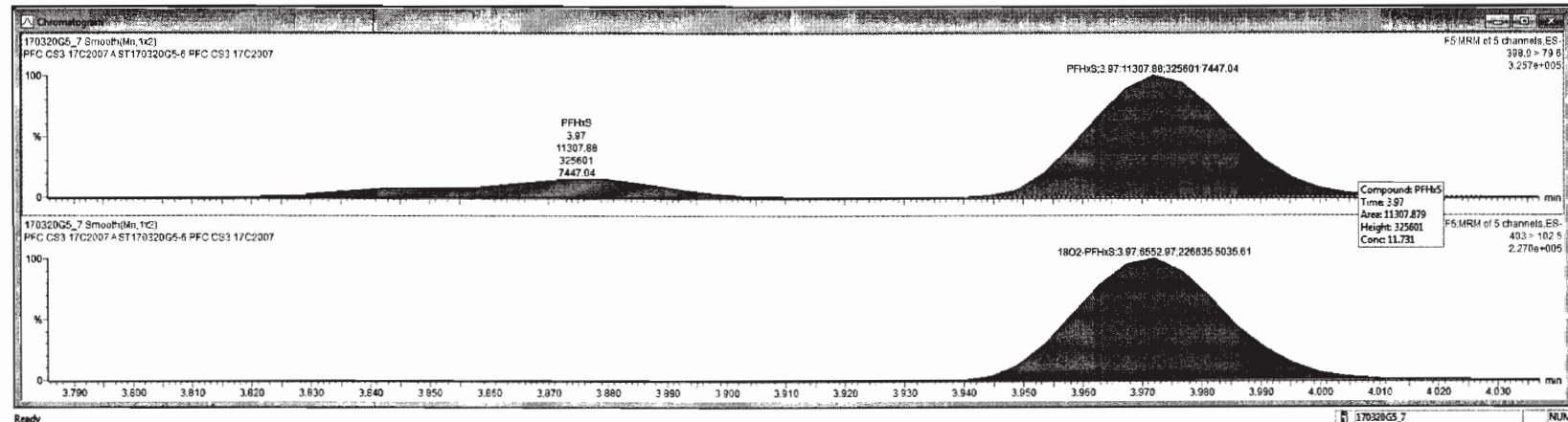
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Name: 170320G5_7, Date: 20-Mar-2017, Time: 22:19:18, ID: ST170320G5-6 PFC CS3 17C2007, Description: PFC CS3 17C2007 A



170320G5-7-ST170320G5-6 PFC CS3 17C2007 - PFC CS3 17C2007 A

#	Name	RT	Resp	IS Resp	Conc	%Dev	RRF	RRF SD	RRF Mean	RRF SD
1	PFBA	1.79	1.05e4	2.84e4	11.5	15.0				
2	PFPeA	2.73	8.35e3	1.12e4	11.7	16.9				
3	PFBS	2.98	1.11e4	6.35e3	11.3	13.5				
4	PFHxA	3.35	7.85e3	5.80e3	12.0	20.3				
5	PFHpA	3.86	2.25e4	1.59e4	10.9	9.5				
6	PFHxS	3.97	1.13e4	6.55e3	11.7	17.3				
7	6:2 FTS	4.20	1.89e3	3.10e4	9.93	-9.7				
8	PFDA	4.25	2.22e4	3.10e4	10.7	6.8				
9	PFHxS	4.34	1.51e3	3.10e4	9.23	-7.7				
10	PFOS	4.66	7.07e3	7.99e3	10.6	6.0				
11	PFNA	4.59	1.82e4	9.09e3	11.2	11.7				
12	PFDA	4.90	7.27e3	8.35e3	12.7	26.6				
13	6:2 FTS	4.88	2.01e3	8.35e3	11.6	16.0				
14	13C3-PFBA	1.79	2.84e4	2.41e4	12.9	2.8	3.678		1.145	0.042
15	13C3-PFPeA	2.73	1.12e4	2.84e4	12.3	-1.7	3.455		0.482	0.014
16	13C3-PFBS	2.98	6.35e3	2.84e4	12.3	-1.9	3.079		0.229	0.007
17	13C3-PFHxA	3.35	5.80e3	2.84e4	4.85	-2.9	3.984		0.527	0.021
18	13C4-PFHpA	3.85	1.59e4	1.70e4	12.8	2.5	3.592		0.914	0.033
19	18O2-PFHxS	3.97	6.55e3	1.70e4	12.6	1.0	2.382		0.382	0.009
20	13C2-6:2 FTS	4.20	5.43e3							
21	13C2-PFDA	4.25	3.19e4	1.04e4	13.2	3.5	6.571		2.829	0.186
22	13C2-PFOS	4.66	7.99e3	9.29e3	13.1	4.6	6.428		0.822	0.053
23	13C2-PFNA	4.59	9.09e3	1.22e4	11.8	-5.6	5.740		0.752	0.045
24	13C2-PFDA	4.90	8.35e3	8.12e3	12.9	2.8	7.431		0.999	0.074

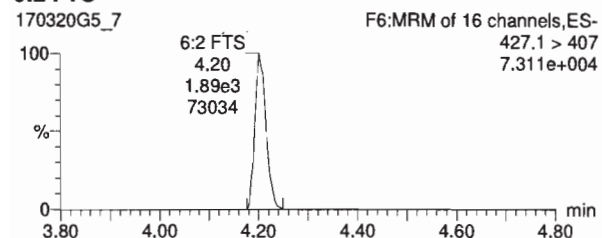


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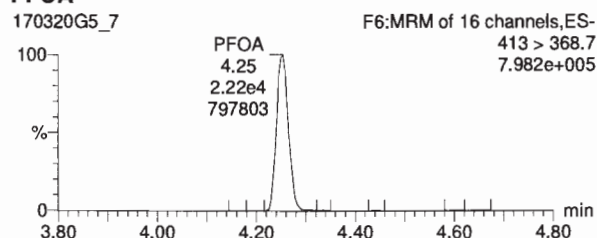
Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_7, Date: 20-Mar-2017, Time: 22:19:18, ID: ST170320G5-6 PFC CS3 17C2007, Description: PFC CS3 17C2007 A

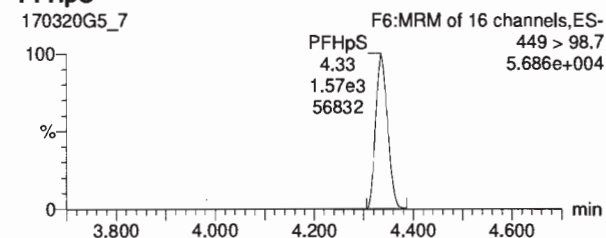
6:2 FTS



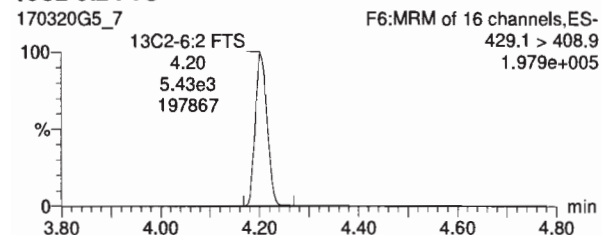
PFOA



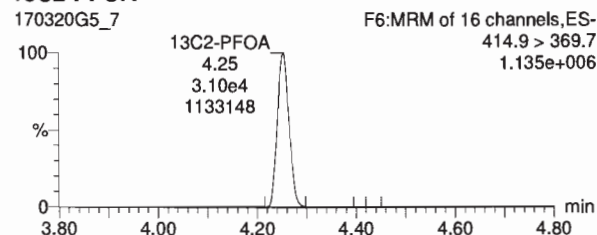
PFHpS



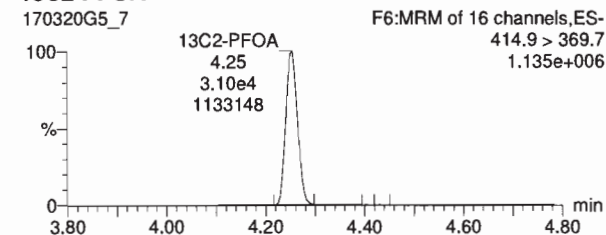
13C2-6:2 FTS



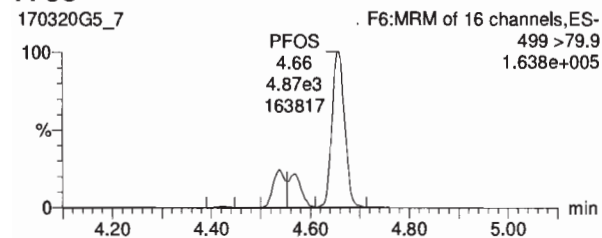
13C2-PFOA



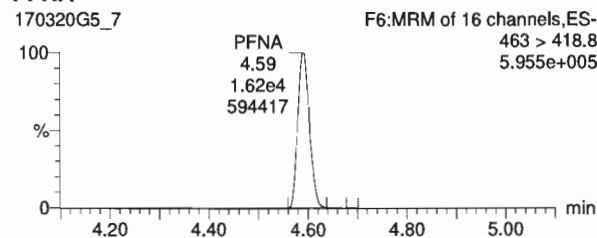
13C2-PFOA



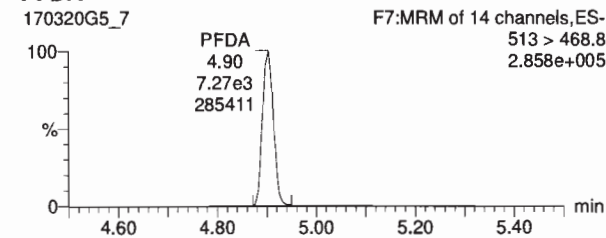
PFOS



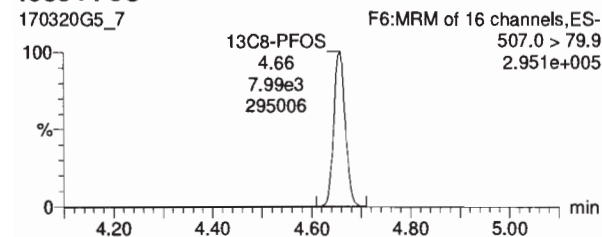
PFNA



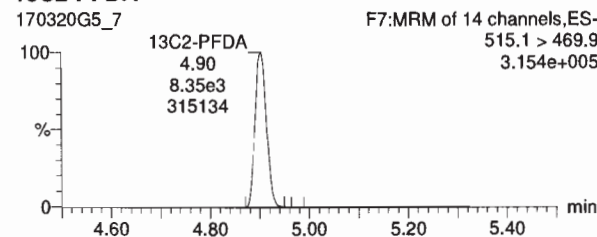
PFDA



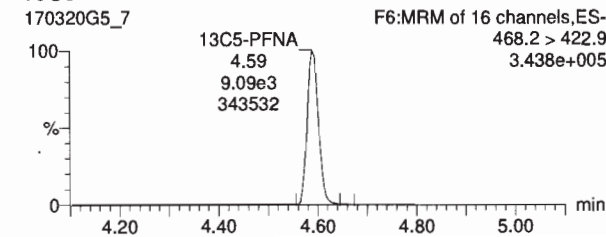
13C8-PFOS



13C2-PFDA



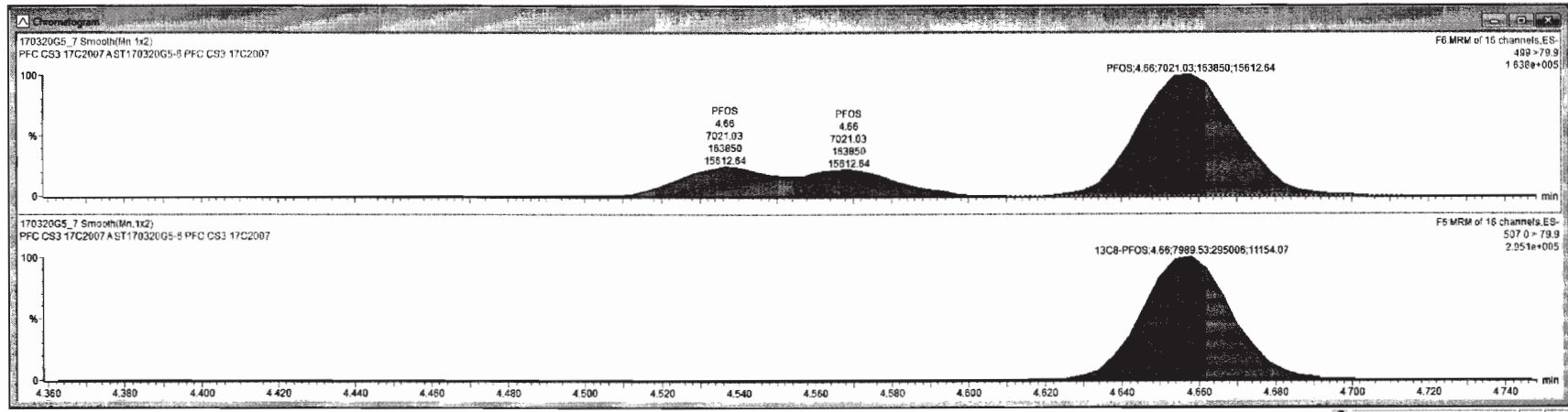
13C5-PFNA





170320G5_7 - ST170320G5-8 PFC CS3 17C2007 - PFC CS3 17C2007 A

Name	RT	Area	IS Resp	Conc.	%Dev	RRF %RSD	RRF Mean	RRF SD
1 PFBA	1.79	1.09e4	2.84e4	11.5	15.0			
2 PFPeA	2.73	8.38e3	1.12e4	11.7	16.9			
3 PFBS	2.99	1.11e4	6.38e3	11.3	13.5			
4 PFHxA	3.35	7.85e3	5.80e3	12.0	20.3			
5 PFHpA	3.86	2.25e4	1.59e4	10.9	9.5			
6 PFHxS	3.97	1.15e4	6.56e3	11.7	17.3			
7 6.2 FTS	4.20	1.09e3	3.10e4	9.03	-9.7			
8 PFDA	4.25	2.22e4	3.10e4	10.7	6.8			
9 PFHpS	4.34	1.57e3	3.10e4	9.23	-7.7			
10 PFOS	4.66	7.02e3	7.99e3	10.8	6.8			
11 PFNA	4.59	1.62e4	9.09e3	11.2	11.7			
12 PFDA	4.90	7.27e3	8.35e3	12.7	26.6			
13 8.2 FTS	4.88	2.01e3	8.35e3	11.6	16.0			
14 13C3-PFBA	1.79	2.84e4	2.41e4	12.8	2.8	3.678	1.145	0.042
15 13C3-PFPeA	2.73	1.12e4	2.84e4	12.3	-1.7	3.455	0.402	0.014
16 13C3-PFBS	2.99	6.35e3	2.84e4	12.3	-1.9	3.079	0.229	0.007
17 13C2-PFHxA	3.35	5.80e3	2.84e4	4.85	-2.9	3.964	0.527	0.021
18 13C4-PFHxA	3.85	1.55e4	1.70e4	12.8	2.5	3.598	0.914	0.033
19 18O2-PFHxS	3.97	6.55e3	1.70e4	12.6	1.0	2.382	0.382	0.009
20 13C2-6.2 FTS	4.20	5.43e3						
21 13C2-PFDA	4.25	3.10e4	1.84e4	13.2	5.5	6.571	2.829	0.188
22 13C8-PFOS	4.66	7.99e3	9.29e3	13.1	4.6	6.428	0.822	0.053
23 13C5-PFNA	4.59	9.09e3	1.22e4	11.8	-5.6	5.748	0.788	0.045
24 13C2-PFDA	4.90	8.35e3	8.12e3	12.9	2.9	7.451	0.999	0.074



Ready 170320G5_7 NUM

Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time

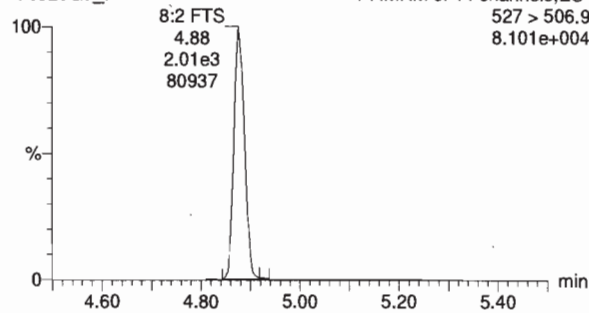
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_7, Date: 20-Mar-2017, Time: 22:19:18, ID: ST170320G5-6 PFC CS3 17C2007, Description: PFC CS3 17C2007 A

8:2 FTS

170320G5_7

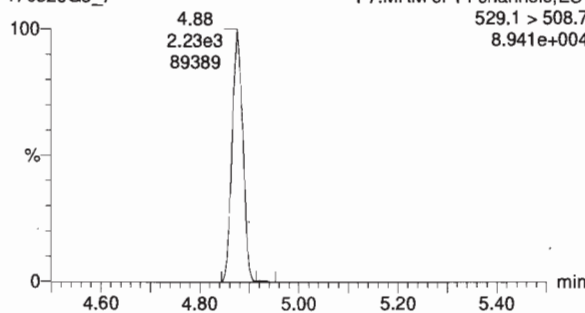
F7:MRM of 14 channels,ES-
527 > 506.9
8.101e+004



13C2-8:2 FTS

170320G5_7

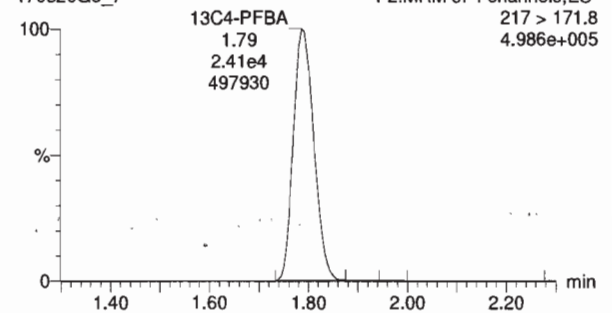
F7:MRM of 14 channels,ES-
529.1 > 508.7
8.941e+004



13C4-PFBA

170320G5_7

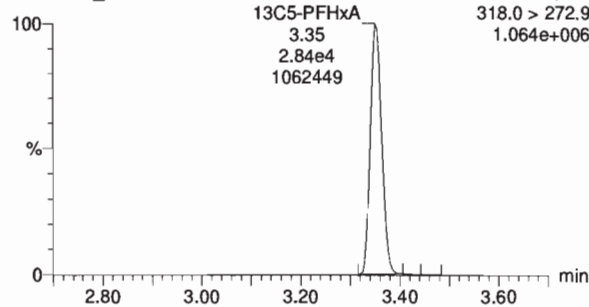
F2:MRM of 4 channels,ES-
217 > 171.8
4.986e+005



13C5-PFHxA

170320G5_7

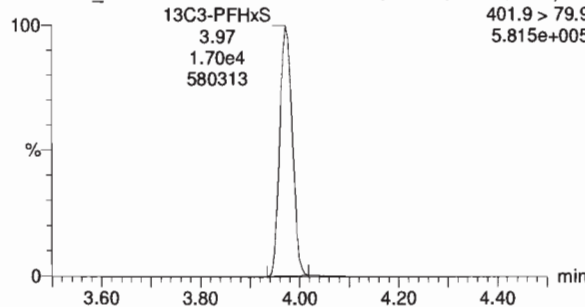
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318.0 > 272.9
1.064e+006



13C3-PFHxS

170320G5_7

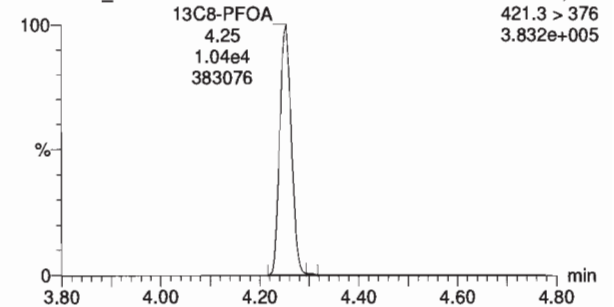
F5:MRM of 5 channels,ES-
401.9 > 79.9
5.815e+005



13C8-PFOA

170320G5_7

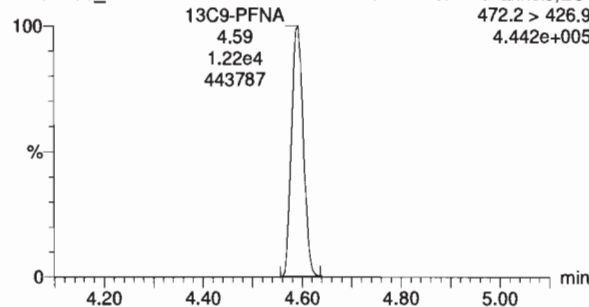
F6:MRM of 16 channels,ES-
421.3 > 376
3.832e+005



13C9-PFNA

170320G5_7

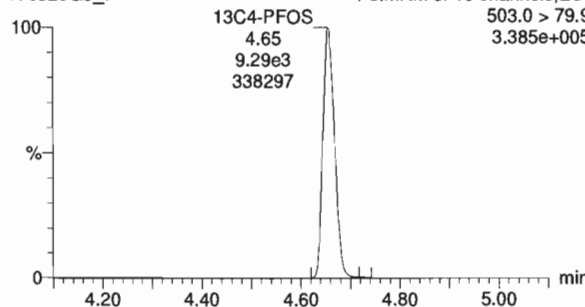
F6:MRM of 16 channels,ES-
472.2 > 426.9
4.442e+005



13C4-PFOS

170320G5_7

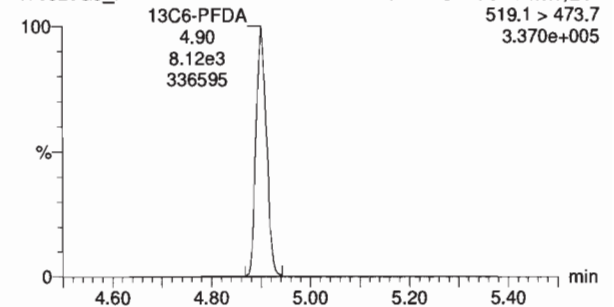
F6:MRM of 16 channels,ES-
503.0 > 79.9
3.385e+005



13C6-PFDA

170320G5_7

F7:MRM of 14 channels,ES-
519.1 > 473.7
3.370e+005

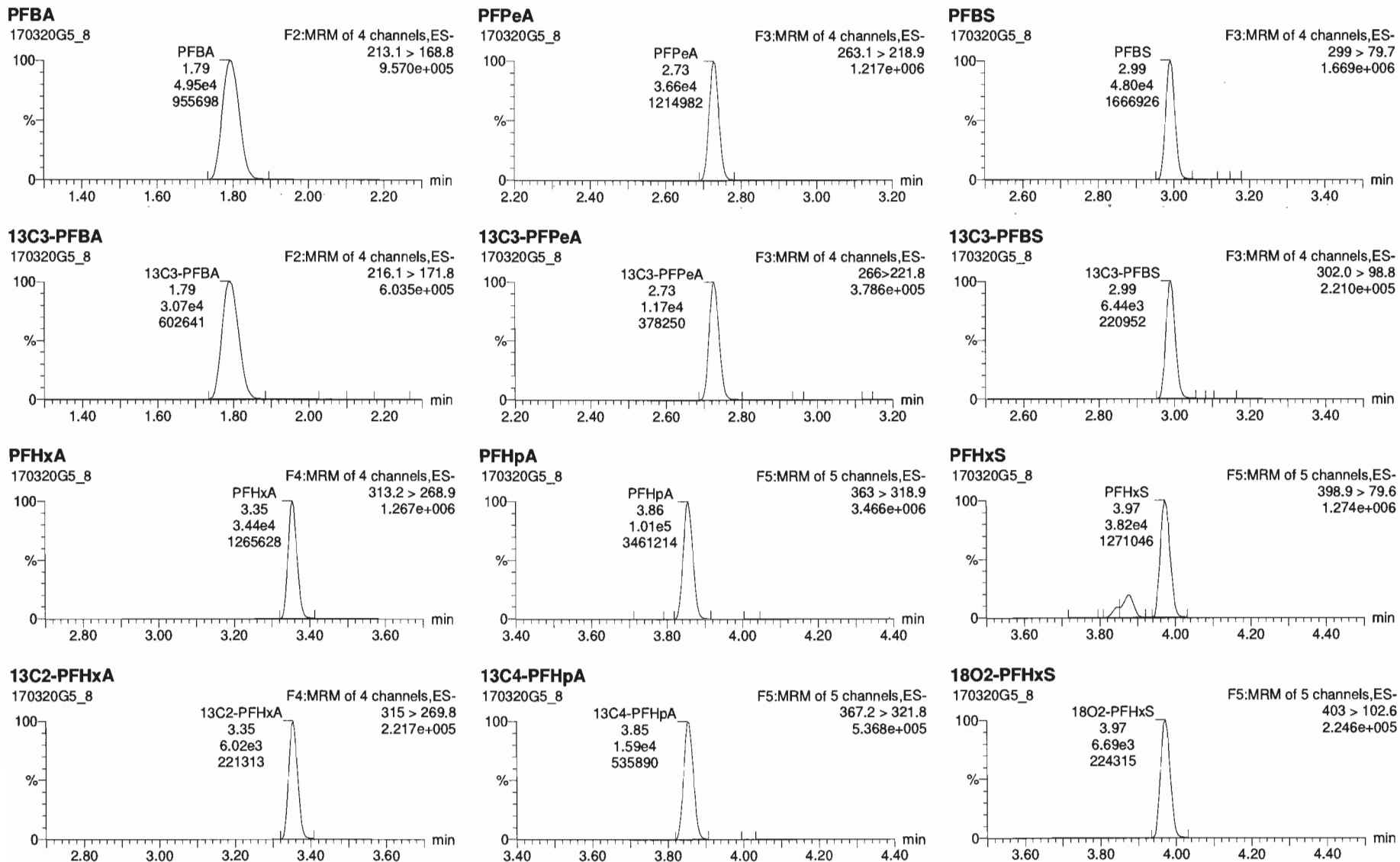


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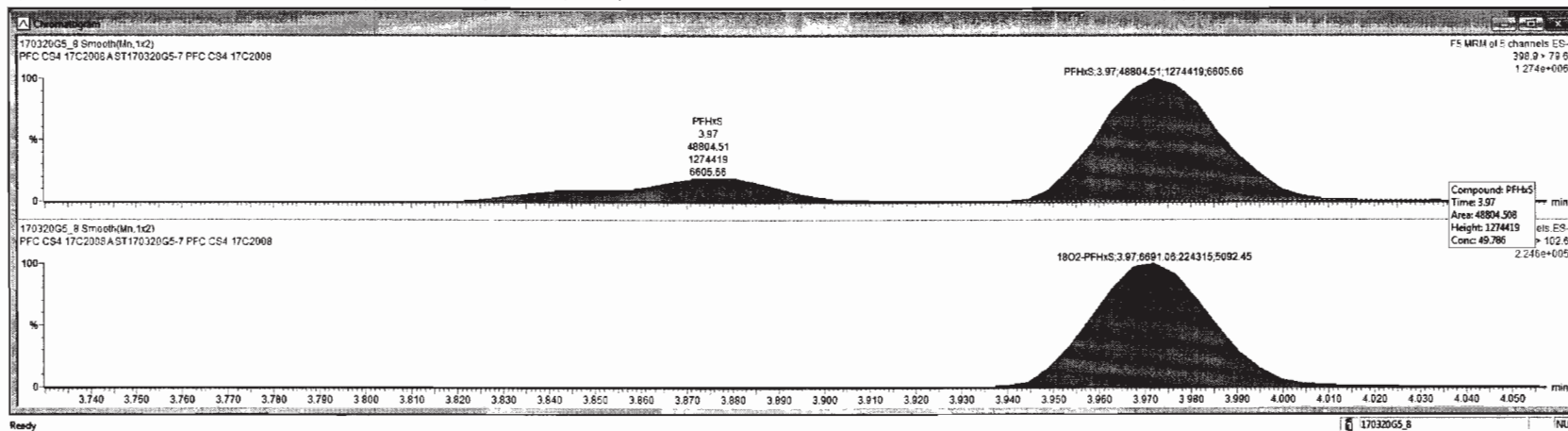
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Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_8, Date: 20-Mar-2017, Time: 22:31:53, ID: ST170320G5-7 PFC CS4 17C2008, Description: PFC CS4 17C2008 A



Name	RT	Resp	IS Resp	Conc.	%Dev	RRF %RSD	RRF Mean	RRF SD
1 PFBA	1.79	4.95e4	3.07e4	48.5	-3.1			
2 PFPeA	2.73	3.06e4	1.17e4	49.1	-1.7			
3 PFBS	2.99	4.80e4	6.44e3	48.6	-2.6			
4 PFHxA	3.35	3.44e4	6.02e3	51.2	2.4			
5 PFHpA	3.86	1.01e5	1.59e4	49.4	-1.3			
6 PFHxS	3.97	4.89e4	8.80e3	49.3	-4.4			
7 6:2 FTS	4.20	1.09e4	3.11e4	52.3	4.6			
8 PFOA	4.25	1.03e5	3.11e4	50.1	0.2			
9 PFHpS	4.34	8.89e3	3.11e4	50.5	1.0			
10 PFOS	4.65	3.95e4	9.30e3	51.3	2.6			
11 PFNA	4.59	8.04e4	1.86e4	47.5	-5.1			
12 PFDA	4.90	3.61e4	1.05e4	53.3	0.3			
13 6:2 FTS	4.88	1.01e4	1.05e4	48.2	-3.7			
14 13C3-PFBA	1.79	3.07e4	2.89e4	12.5	-0.2	3.676	1.148	0.042
15 13C3-PFPeA	2.73	1.17e4	2.80e4	13.0	3.9	3.455	0.402	0.014
16 13C3-PFBS	2.99	6.44e3	2.80e4	12.5	0.2	3.079	0.229	0.007
17 13C2-PFHxA	3.35	6.02e3	2.80e4	5.19	2.0	3.984	0.527	0.021
18 13C4-PFHxA	3.85	1.59e4	1.80e4	12.0	-3.7	3.599	0.914	0.033
19 18O2-PFHxS	3.97	6.89e3	1.80e4	12.1	-3.0	2.382	0.362	0.009
20 13C2-6:2 FTS	4.21	6.79e3						
21 13C2-PFOA	4.25	3.11e4	1.09e4	12.6	0.9	6.571	2.829	0.106
22 13C2-PFOS	4.65	9.30e3	1.09e4	13.0	3.9	6.428	0.822	0.063
23 13C3-PFNA	4.59	1.06e4	1.35e4	12.5	-0.2	5.748	0.788	0.045
24 13C2-PFDA	4.90	1.06e4	1.03e4	12.9	3.3	7.431	0.999	0.074

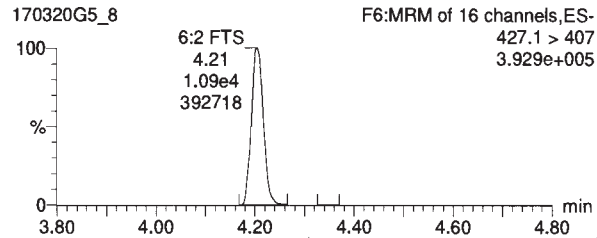


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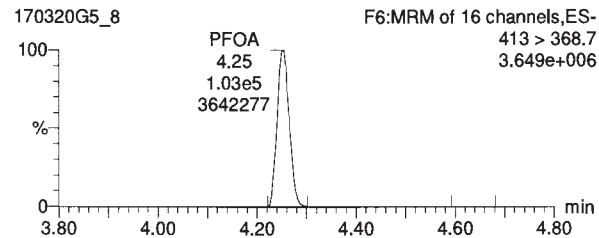
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Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_8, Date: 20-Mar-2017, Time: 22:31:53, ID: ST170320G5-7 PFC CS4 17C2008, Description: PFC CS4 17C2008 A

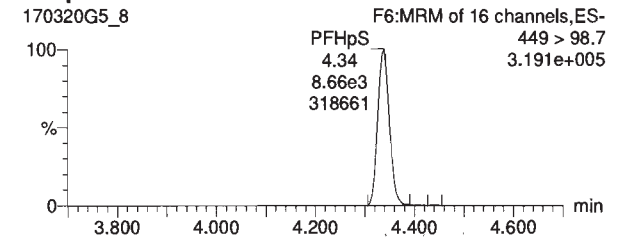
6:2 FTS



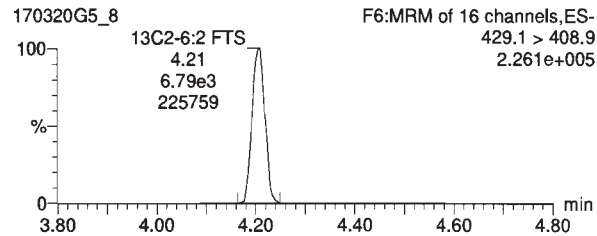
PFOA



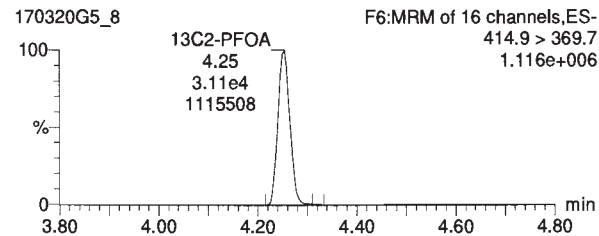
PFHpS



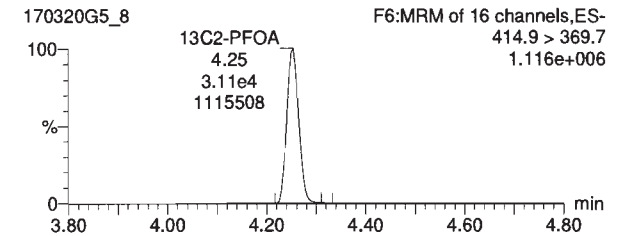
13C2-6:2 FTS



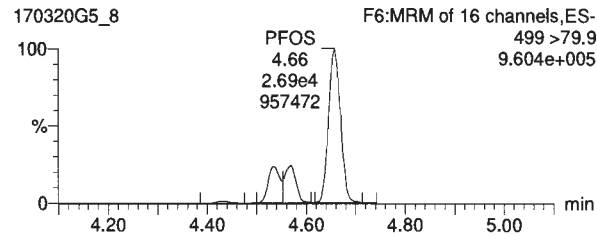
13C2-PFOA



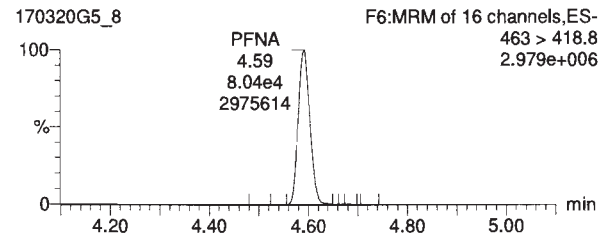
13C2-PFOA



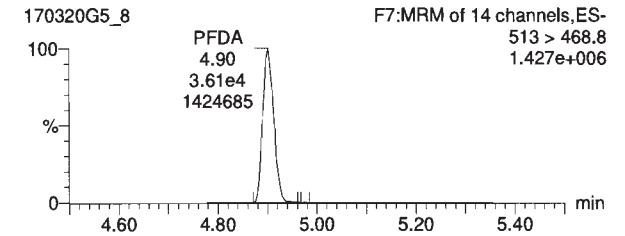
PFOS



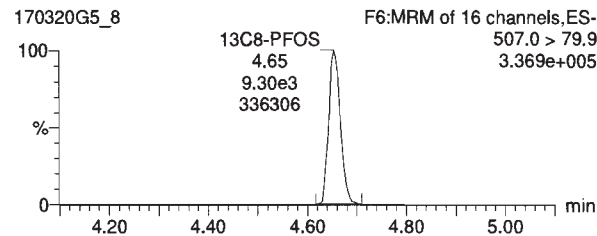
PFNA



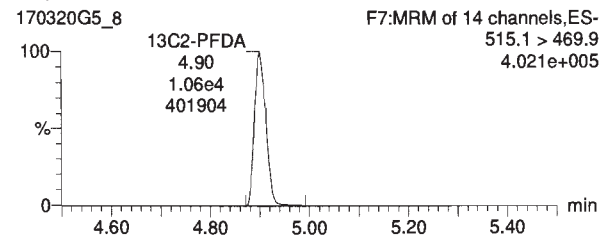
PFDA



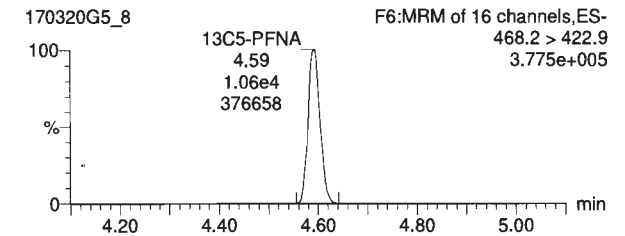
13C8-PFOS



13C2-PFDA



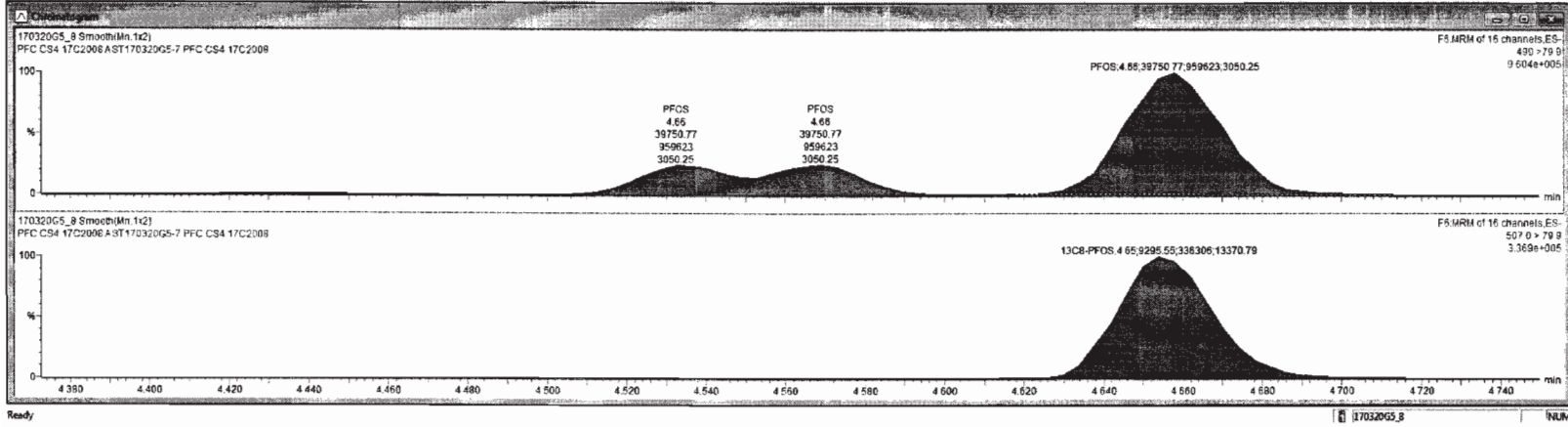
13C5-PFNA





170320G5_8_ST170320G5_7_PFC-CS4-17C2008_PFC-CS4-17C2008.A

Name	RT	Resp	IS Resp	Comp	%Dev	RRF %RSD	RRF Mean	RRF SD
1 PFSA	1.79	4.95e4	3.07e4	46.9	-3.1			
2 PFPA	2.73	3.66e4	1.17e4	49.1	-1.7			
3 PFBS	2.99	4.82e4	8.44e3	48.6	-2.8			
4 PFHxA	3.35	3.44e4	6.82e3	51.2	2.4			
5 PFHpA	3.88	1.01e5	1.55e4	49.4	-1.3			
6 PFHxS	3.97	4.85e4	8.69e3	49.8	-0.4			
7 8.2 FTS	4.28	1.05e4	3.11e4	52.3	4.6			
8 PFDA	4.28	1.03e5	3.11e4	50.1	0.2			
9 PFHpS	4.34	8.66e3	3.11e4	50.5	1.0			
10 PFOS	4.66	3.90e4	9.30e3	51.3	2.6			
11 PFNA	4.99	8.04e4	1.06e4	47.6	-5.1			
12 PFDA	4.99	3.81e4	1.06e4	56.3	0.8			
13 8.2 FTS	4.99	1.01e4	1.96e4	48.2	-3.7			
14 13C3-PFBA	1.79	3.07e4	2.69e4	12.5	-2.2	3.878	1.145	0.040
15 13C3-PFPA	2.73	1.17e4	2.80e4	13.0	3.9	3.455	0.402	0.014
16 13C3-PFBS	2.99	5.44e3	2.80e4	12.5	0.2	3.879	0.229	0.007
17 13C3-PFHxA	3.35	6.02e3	2.80e4	5.10	2.0	3.984	0.527	0.021
18 13C4-PFHxA	3.85	1.59e4	1.80e4	12.0	-3.7	3.598	0.914	0.033
19 1802-PFHxS	3.97	5.69e3	1.80e4	12.1	-3.0	2.382	0.382	0.009
20 13C2-8.2 FTS	4.21	8.79e3						
21 13C2-PFDA	4.25	3.11e4	1.09e4	12.6	0.9	6.571	2.623	0.186
22 13C8-PFOS	4.66	9.30e3	1.09e4	13.0	3.9	6.428	0.822	0.053
23 13C8-PFNA	4.59	1.06e4	1.35e4	12.5	-2.2	5.748	0.788	0.045
24 13C2-PFDA	4.99	1.06e4	1.83e4	12.9	3.3	7.431	0.999	0.074



Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time

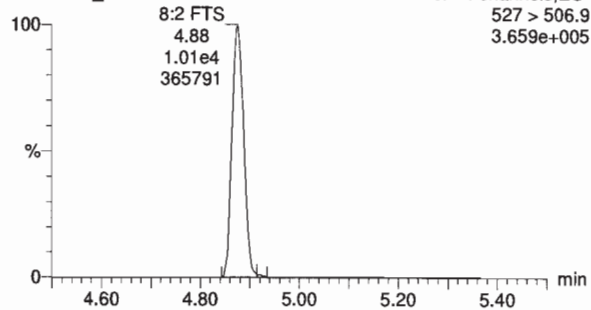
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_8, Date: 20-Mar-2017, Time: 22:31:53, ID: ST170320G5-7 PFC CS4 17C2008, Description: PFC CS4 17C2008 A

8:2 FTS

170320G5_8

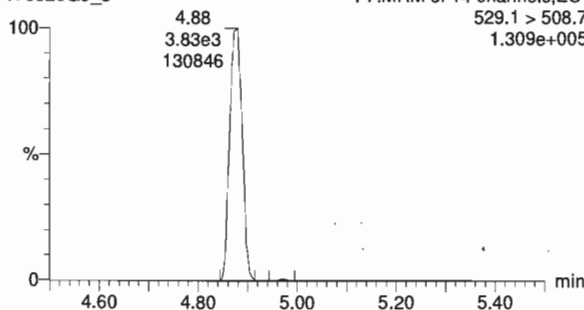
F7:MRM of 14 channels,ES-
527 > 506.9
3.659e+005



13C2-8:2 FTS

170320G5_8

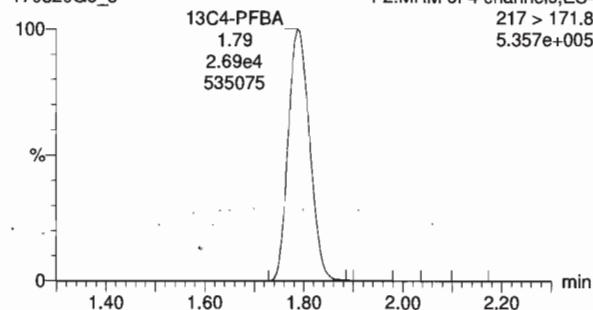
F7:MRM of 14 channels,ES-
529.1 > 508.7
1.309e+005



13C4-PFBA

170320G5_8

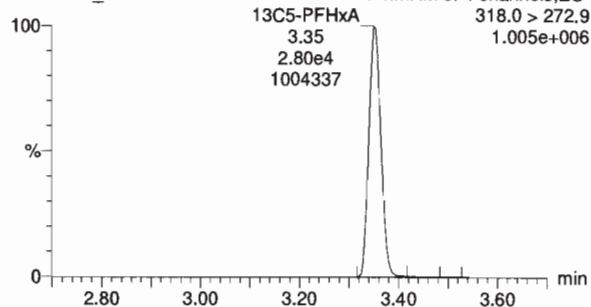
F2:MRM of 4 channels,ES-
217 > 171.8
5.357e+005



13C5-PFHxA

170320G5_8

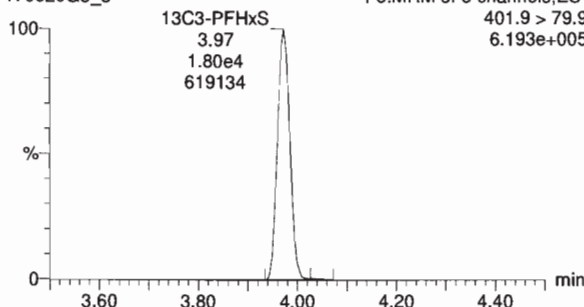
F4:MRM of 4 channels,ES-
318.0 > 272.9
1.005e+006



13C3-PFHxS

170320G5_8

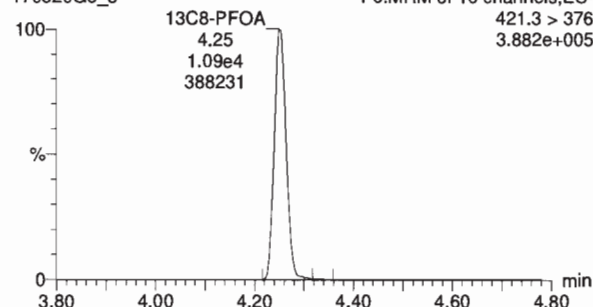
F5:MRM of 5 channels,ES-
401.9 > 79.9
6.193e+005



13C8-PFOA

170320G5_8

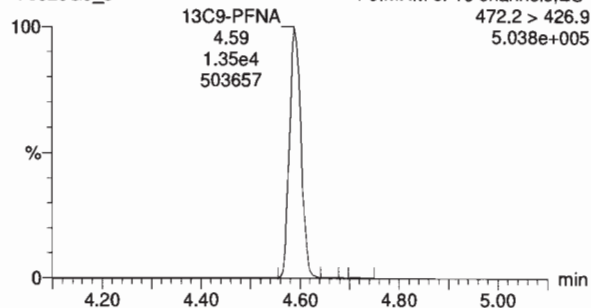
F6:MRM of 16 channels,ES-
421.3 > 376
3.882e+005



13C9-PFNA

170320G5_8

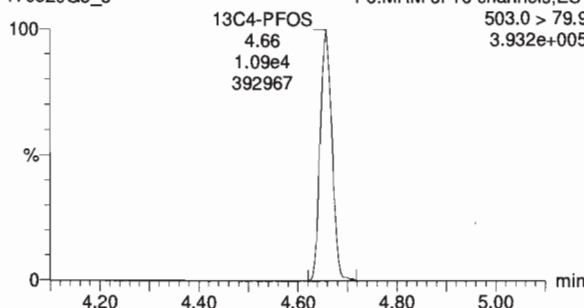
F6:MRM of 16 channels,ES-
472.2 > 426.9
5.038e+005



13C4-PFOS

170320G5_8

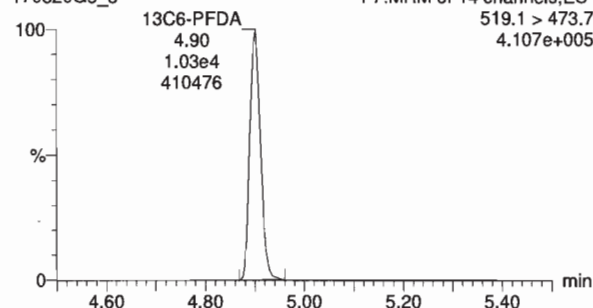
F6:MRM of 16 channels,ES-
503.0 > 79.9
3.932e+005



13C6-PFDA

170320G5_8

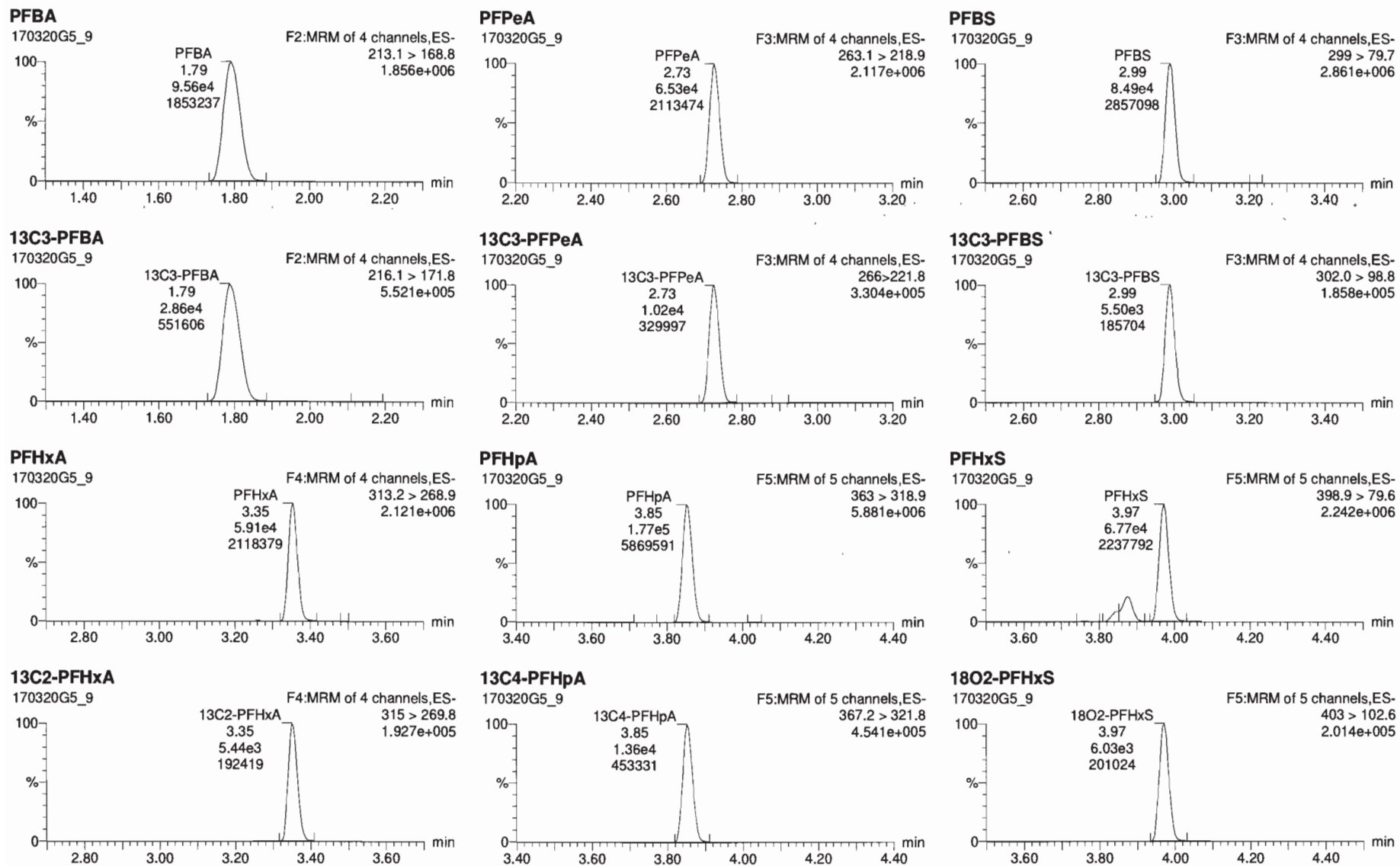
F7:MRM of 14 channels,ES-
519.1 > 473.7
4.107e+005



Dataset: Untitled

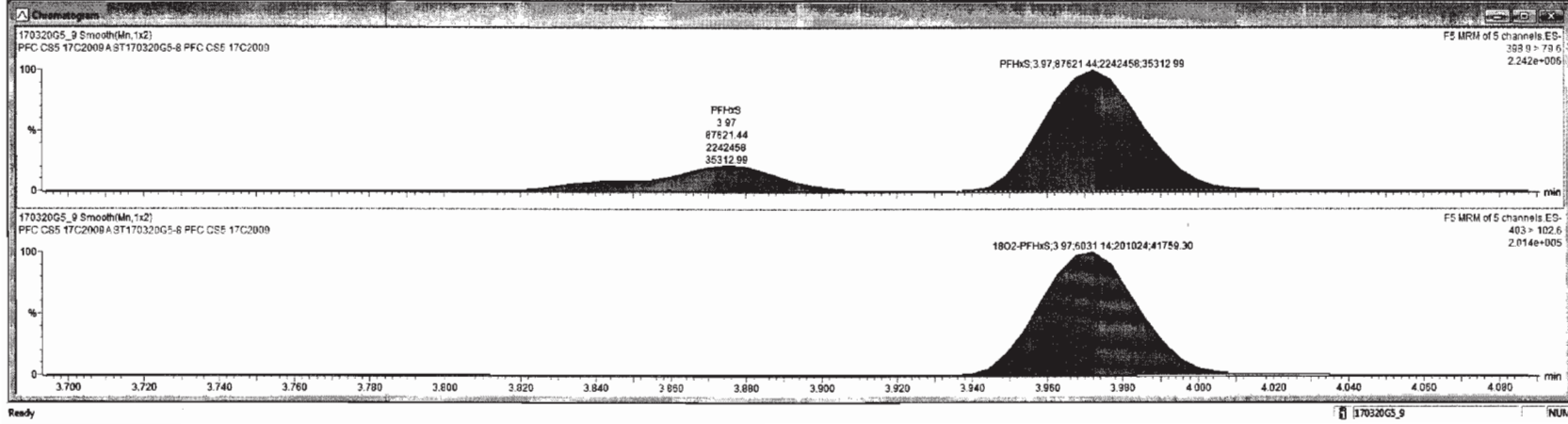
Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_9, Date: 20-Mar-2017, Time: 22:44:29, ID: ST170320G5-8 PFC CS5 17C2009, Description: PFC CS5 17C2009 A



170320G5_9 ST170320G5-8 PFC CS5 17C2009 PFC CS5 17C2009A

Name	RT	Relo	IS Relo	Conc	%Dev	RRF %RSD	RRF Mean	RRF SD
1 PFBA	1.79	9.56e4	2.06e4	101	0.7			
2 PFPeA	2.73	6.53e4	1.02e4	100	0.1			
3 PFBS	2.99	8.49e4	5.50e3	101	0.7			
4 PFHxA	3.35	5.81e4	5.44e3	97.4	-2.6			
5 PFHxA	3.85	1.77e5	1.36e4	100	0.5			
6 PFHxS	3.97	8.78e4	6.03e3	99.2	-0.8			
7 S-2 FTS	4.20	1.87e4	2.89e4	98.9	-1.1			
8 PFOA	4.25	1.90e5	2.89e4	99.6	-0.4			
9 PFHpS	4.34	1.81e4	2.89e4	101	0.7			
10 PFOS	4.65	7.06e4	8.53e3	99.2	-0.8			
11 PFNA	4.59	1.52e5	9.33e3	102	2.8			
12 PFDA	4.99	8.95e4	1.05e4	98.9	-2.0			
13 S-2 FTS	4.65	1.89e4	1.05e4	101	1.0			
14 13C3-PFBA	1.79	2.96e4	2.41e4	12.9	3.4	3.878	1.145	0.842
15 13C3-PFPeA	2.73	1.02e4	2.43e4	13.1	4.9	3.455	0.402	0.814
16 13C3-PFBS	2.99	5.50e3	2.43e4	12.4	-1.2	3.079	0.229	0.007
17 13C3-PFHxA	3.35	5.44e3	2.43e4	5.32	6.4	3.984	0.527	0.021
18 13C4-PFHxA	3.85	1.36e4	1.59e4	11.7	-6.2	3.598	0.814	0.033
19 18O2-PFHxS	3.97	6.03e3	1.59e4	12.4	-0.4	2.382	0.332	0.009
20 13C2-8-2 FTS	4.20	8.38e3						
21 13C2-PFOA	4.25	2.89e4	9.58e3	13.3	6.7	6.571	2.829	0.186
22 13C8-PFOS	4.65	8.53e3	1.04e4	12.5	0.2	6.428	0.822	0.053
23 13C5-PFNA	4.59	8.33e3	1.13e4	13.1	4.7	5.748	0.758	0.045
24 13C2-PFDA	4.90	1.05e4	9.45e3	13.9	10.9	7.431	0.999	0.074

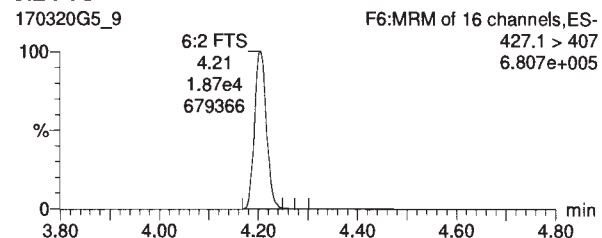


Dataset: Untitled

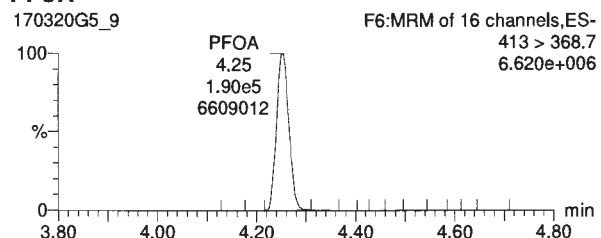
Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_9, Date: 20-Mar-2017, Time: 22:44:29, ID: ST170320G5-8 PFC CS5 17C2009, Description: PFC CS5 17C2009 A

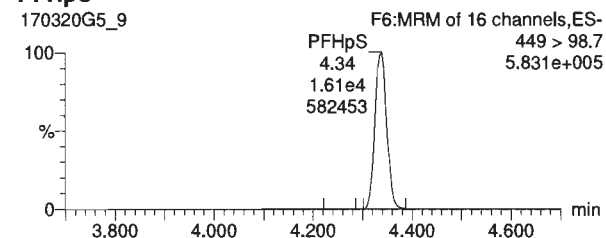
6:2 FTS



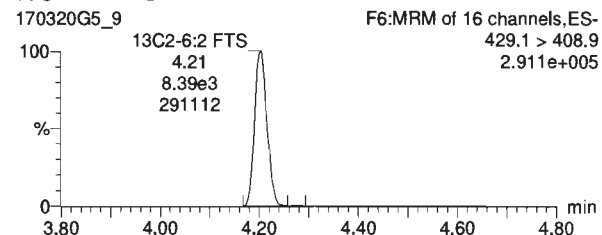
PFOA



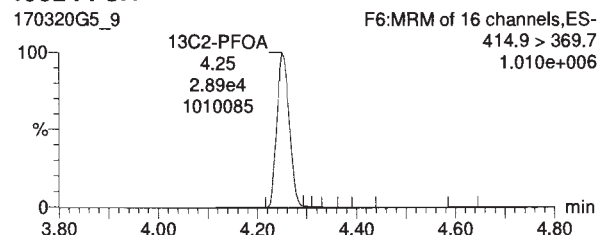
PFHpS



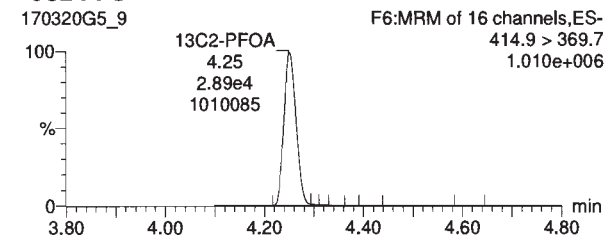
13C2-6:2 FTS



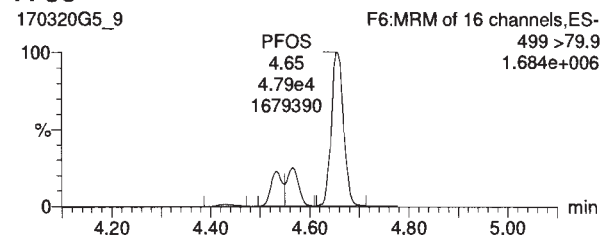
13C2-PFOA



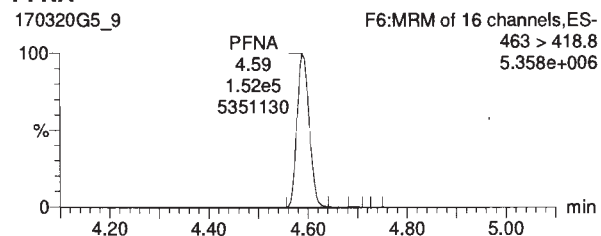
13C2-PFOA



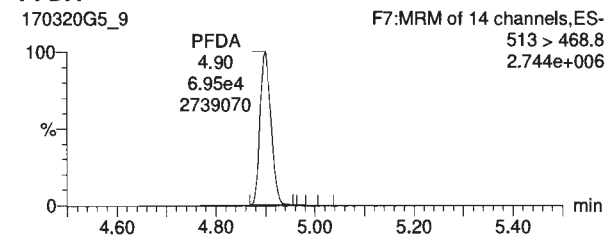
PFOS



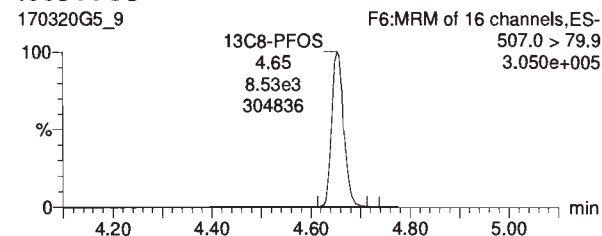
PFNA



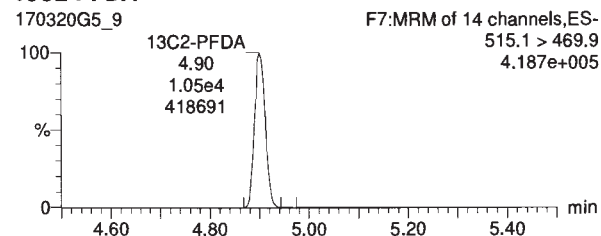
PFDA



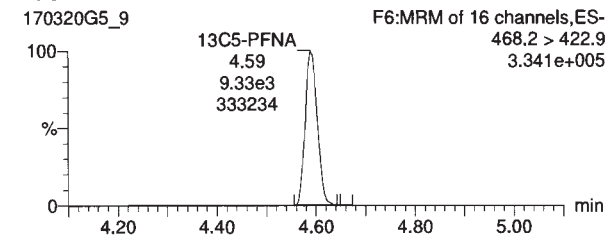
13C8-PFOS



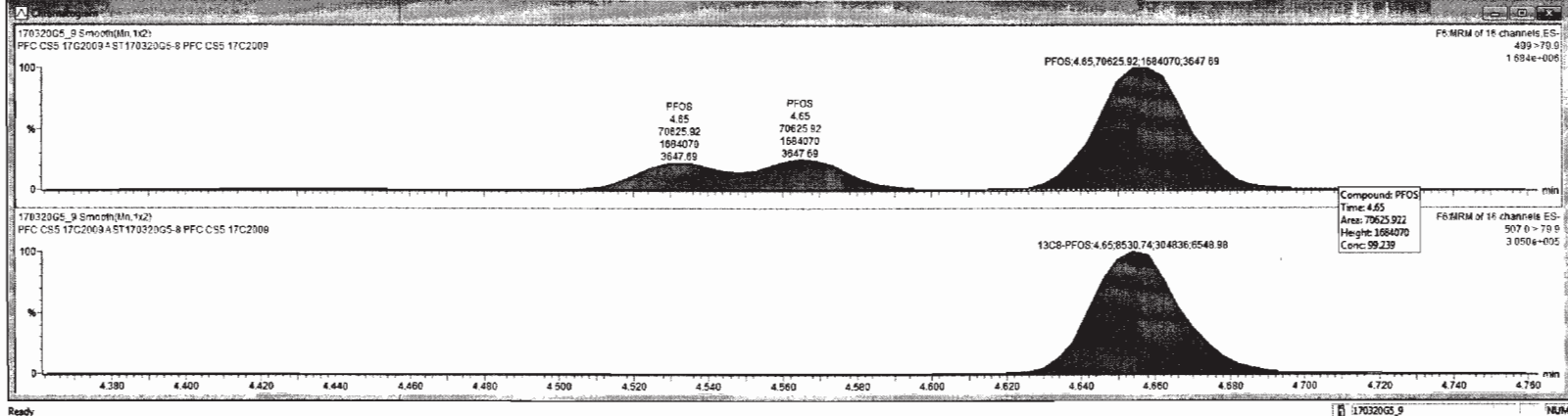
13C2-PFDA



13C5-PFNA



RT	Resp	IS Resp	Conc	%DVI	RRF %RSD	RRF Mean	RRF SD
1	1.79	9.56e4	2.86e4	101	0.7		
2	2.73	6.53e4	1.02e4	100	0.1		
3	2.99	8.49e4	5.50e3	101	0.7		
4	3.35	5.91e4	6.44e3	97.4	-2.6		
5	3.85	1.77e5	1.36e4	100	0.5		
6	3.97	8.76e4	6.03e3	99.2	-0.8		
7	4.20	1.87e4	2.89e4	98.9	-1.1		
8	4.25	1.90e5	2.89e4	99.8	-0.4		
9	4.34	1.61e4	2.89e4	101	0.7		
10	4.65	7.06e4	6.53e3	100.2	-0.8		
11	4.59	1.52e5	9.33e3	102	2.6		
12	4.90	6.95e4	1.05e4	96.0	-2.0		
13	4.88	1.89e4	1.95e4	101	1.0		
14	1.79	2.86e4	2.41e4	12.9	3.4	3.678	1.145
15	2.73	1.02e4	2.43e4	13.1	4.9	3.455	0.402
16	2.99	5.50e3	2.43e4	12.4	-1.2	3.079	0.299
17	3.35	5.44e3	2.43e4	5.32	6.4	3.964	0.527
18	3.85	1.36e4	1.59e4	11.7	-8.2	3.596	0.914
19	3.97	6.03e3	1.59e4	12.4	-0.4	2.382	0.382
20	4.20	8.39e3					
21	4.25	2.89e4	9.58e3	13.3	6.7	6.571	2.826
22	4.65	8.53e3	1.04e4	12.5	0.2	6.426	0.622
23	4.59	9.33e3	1.13e4	13.1	4.7	5.746	0.786
24	4.90	1.05e4	9.45e3	13.9	10.9	7.431	0.999



Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 09:53:06 Pacific Daylight Time

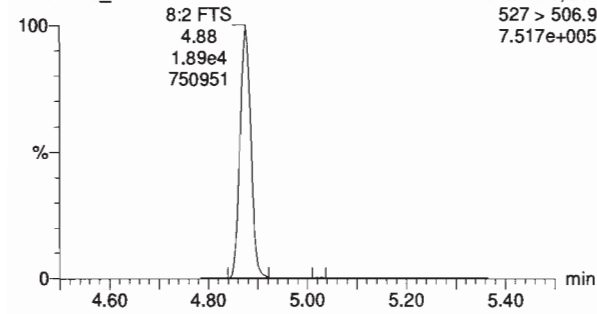
Printed: Tuesday, March 21, 2017 09:54:47 Pacific Daylight Time

Name: 170320G5_9, Date: 20-Mar-2017, Time: 22:44:29, ID: ST170320G5-8 PFC CS5 17C2009, Description: PFC CS5 17C2009 A

8:2 FTS

170320G5_9

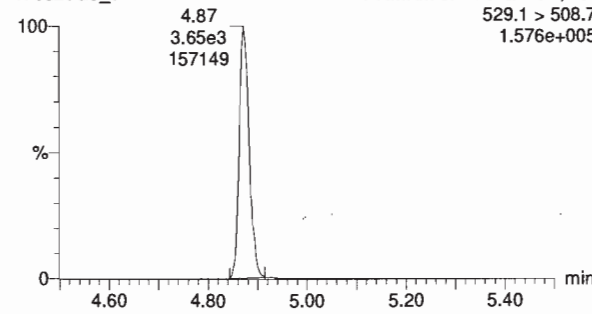
F7:MRM of 14 channels,ES-
527 > 506.9
7.517e+005



13C2-8:2 FTS

170320G5_9

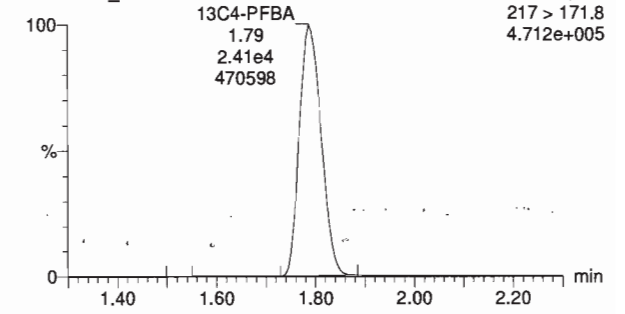
F7:MRM of 14 channels,ES-
529.1 > 508.7
1.576e+005



13C4-PFBA

170320G5_9

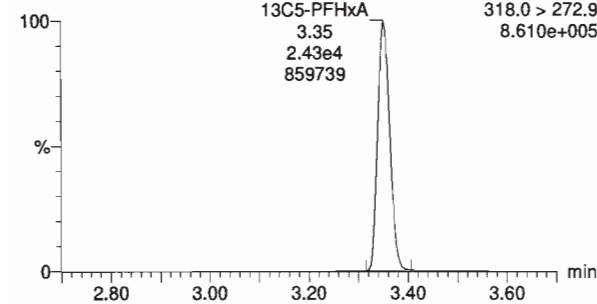
F2:MRM of 4 channels,ES-
217 > 171.8
4.712e+005



13C5-PFHxA

170320G5_9

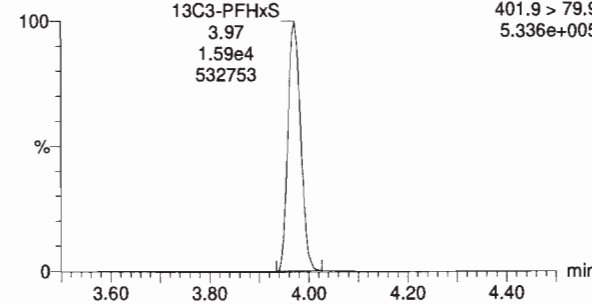
F4:MRM of 4 channels,ES-
318.0 > 272.9
8.610e+005



13C3-PFHxS

170320G5_9

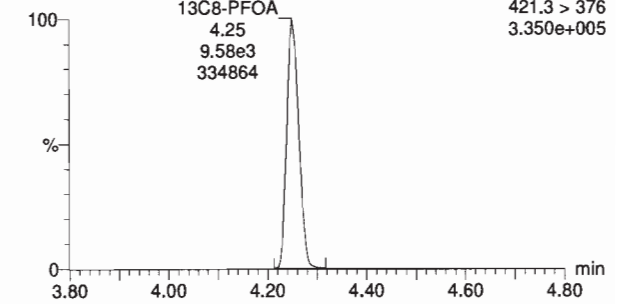
F5:MRM of 5 channels,ES-
401.9 > 79.9
5.336e+005



13C8-PFOA

170320G5_9

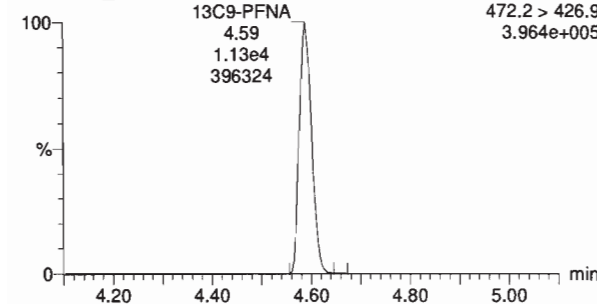
F6:MRM of 16 channels,ES-
421.3 > 376
3.350e+005



13C9-PFNA

170320G5_9

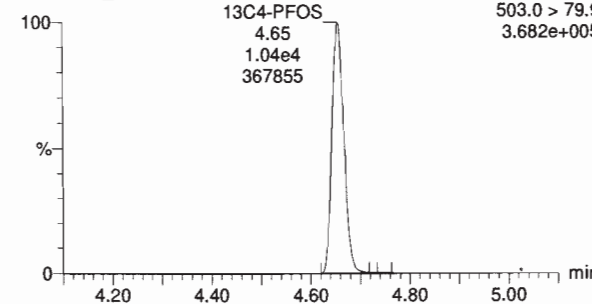
F6:MRM of 16 channels,ES-
472.2 > 426.9
3.964e+005



13C4-PFOS

170320G5_9

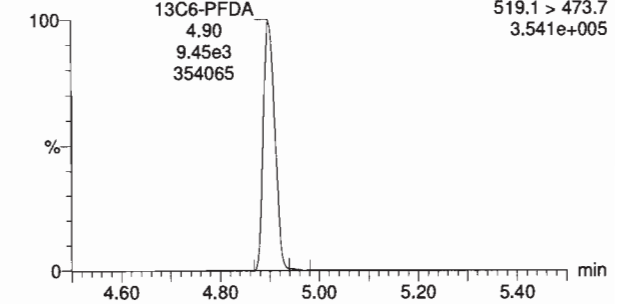
F6:MRM of 16 channels,ES-
503.0 > 79.9
3.682e+005



13C6-PFDA

170320G5_9

F7:MRM of 14 channels,ES-
519.1 > 473.7
3.541e+005



Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-11.qld

Last Altered: Tuesday, March 21, 2017 12:29:32 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 12:30:56 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170320G5_11, Date: 20-Mar-2017, Time: 23:09:43, ID: SS170320G5-1 PFC SSS 17C2010, Description: PFC SSS 17C2010 A

#	Name	Trace	Response	IS:Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	213.1 > 168.8	9.04e3	3.20e4		1.000	1.80	8.44	84.4
2	2 PFPeA	263.1 > 218.9	7.05e3	1.31e4		1.000	2.73	8.43	84.3
3	3 PFBS	299 > 79.7	8.36e3	7.31e3		1.000	2.99	7.46	74.6
4	4 PFHxA	313.2 > 268.9	6.78e3	6.64e3		1.000	3.35	9.04	90.4
5	5 PFHpA	363 > 318.9	1.94e4	1.82e4		1.000	3.86	8.20	82.0
6	6 PFHxS	398.9 > 79.6	8.47e3	7.29e3		1.000	3.97	7.88	78.8
7	7 6:2 FTS	427.1 > 407	1.18e3	3.40e4		1.000	4.21	5.26	52.6*
8	8 PFOA	413 > 368.7	2.00e4	3.40e4		1.000	4.25	8.78	87.8
9	9 PFHpS	449 > 98.7	1.43e3	3.40e4		1.000	4.34	7.70	77.0
10	10 PFOS	499 > 79.9	5.21e3	8.68e3		1.000	4.66	7.27	72.7
11	11 PFNA	463 > 418.8	1.34e4	9.46e3		1.000	4.59	8.92	89.2
12	12 PFDA	513 > 468.8	5.82e3	9.27e3		1.000	4.90	9.08	90.8
13	13 8:2 FTS	527 > 506.9	1.59e3	9.27e3		1.000	4.88	8.25	82.5
14	14 13C3-PFBA	216.1 > 171.8	3.20e4	2.76e4	1.145	1.000	1.79	12.7	101.3
15	15 13C3-PFPeA	266 > 221.8	1.31e4	2.99e4	0.402	1.000	2.73	13.6	108.5
16	16 13C3-PFBS	302.0 > 98.8	7.31e3	2.99e4	0.229	1.000	2.99	13.3	106.5
17	17 13C2-PFHxA	315 > 269.8	6.64e3	2.99e4	0.527	1.000	3.35	5.26	105.3
18	18 13C4-PFHpA	367.2 > 321.8	1.82e4	1.92e4	0.914	1.000	3.85	13.0	104.1
19	19 18O2-PFHxS	403 > 102.6	7.29e3	1.92e4	0.382	1.000	3.97	12.4	99.5
20	20 13C2-6:2 FTS	429.1 > 408.9	6.38e3			1.000	4.21		
21	21 13C2-PFOA	414.9 > 369.7	3.40e4	1.25e4	2.829	1.000	4.25	12.0	96.1
22	22 13C8-PFOS	507.0 > 79.9	8.68e3	1.09e4	0.822	1.000	4.66	12.2	97.2
23	23 13C5-PFNA	468.2 > 422.9	9.46e3	1.36e4	0.788	1.000	4.59	11.0	88.1
24	24 13C2-PFDA	515.1 > 469.9	9.27e3	8.96e3	0.999	1.000	4.90	12.9	103.6
25	25 13C2-8:2 FTS	529.1 > 508.7				1.000			
26	26 13C4-PFBA	217 > 171.8	2.76e4	2.76e4	1.000	1.000	1.79	12.5	100.0
27	27 13C2-4:2 FTS	329.2 > 308.9				1.000			
28	28 13C5-PFHxA	318.0 > 272.9	2.99e4	2.99e4	1.000	1.000	3.35	12.5	100.0
29	29 13C3-PFHxS	401.9 > 79.9	1.92e4	1.92e4	1.000	1.000	3.97	12.5	100.0
30	30 13C8-PFOA	421.3 > 376	1.25e4	1.25e4	1.000	1.000	4.25	12.5	100.0
31	31 13C4-PFOS	503.0 > 79.9	1.09e4	1.09e4	1.000	1.000	4.66	12.5	100.0
32	32 13C9-PFNA	472.2 > 426.9	1.36e4	1.36e4	1.000	1.000	4.59	12.5	100.0

75-125
↓

84.3 (A)
76.4 (A)
80.9 (A)
72.7
85.9 (A)

List 14
*6:2 FTS Not Used

es 3/21/17

(A) Concentration < 10 ng/L in SS native mix. es 3/21/17
(B) Not used. es 3/21/17

Dataset: U:\G1.PRO\Results\2017\170320G5\170320G5-11.qld

Last Altered: Tuesday, March 21, 2017 12:29:32 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 12:33:05 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170320G5_11, Date: 20-Mar-2017, Time: 23:09:43, ID: SS170320G5-1 PFC SSS 17C2010, Description: PFC SSS 17C2010 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	33 13C6-PFDA	519.1 > 473.7	8.96e3	8.96e3	1.000	1.000	4.90	12.5	100.0

Dataset: Untitled

Last Altered: Tuesday, March 21, 2017 12:27:08 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 12:27:32 Pacific Daylight Time

Method: U:\G1.PRO\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

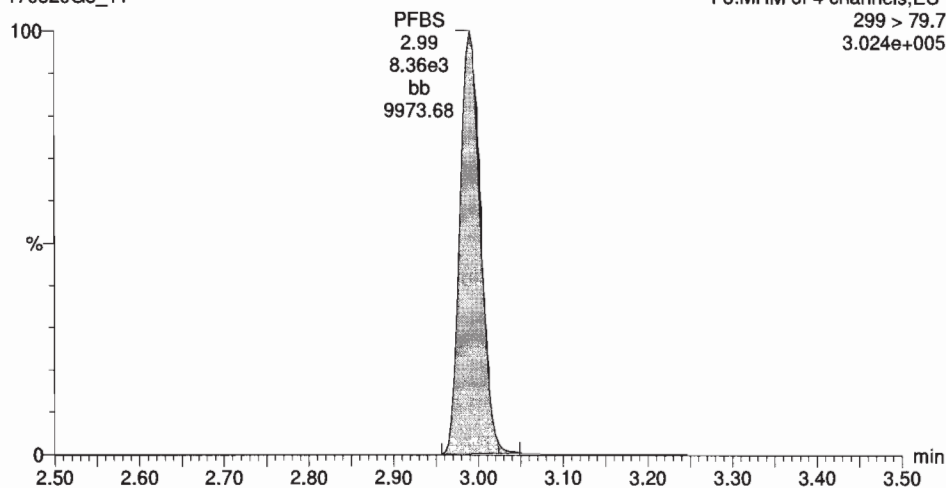
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

ID: SS170320G5-1 PFC SSS 17C2010, Description: PFC SSS 17C2010 A, Name: 170320G5_11, Date: 20-Mar-2017, Time: 23:09:43, Instrument: , Lab: , User:

Total PFBS

170320G5_11

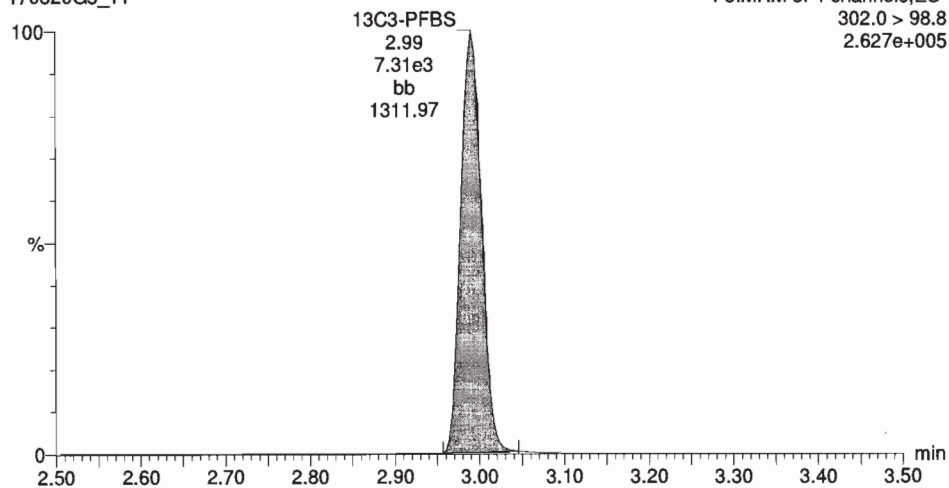
F3:MRM of 4 channels,ES-
299 > 79.7
3.024e+005



13C3-PFBS

170320G5_11

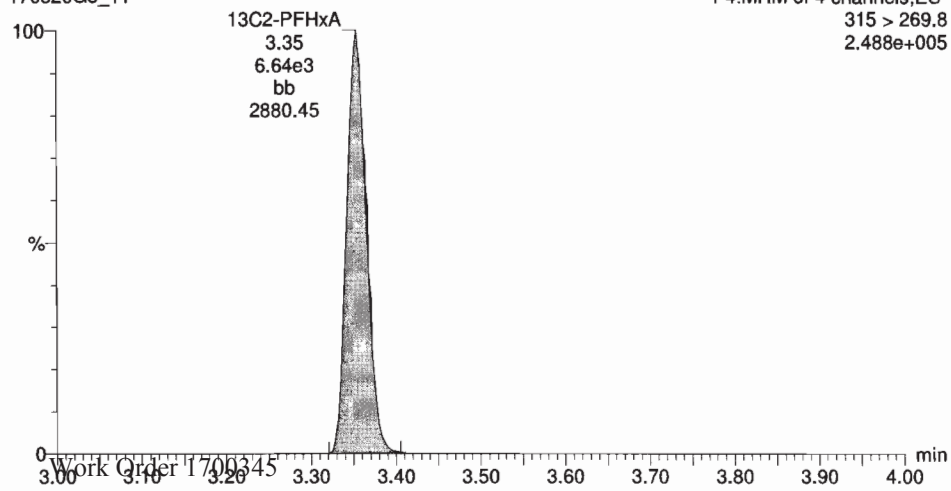
F3:MRM of 4 channels,ES-
302.0 > 98.8
2.627e+005



13C2-PFHxA

170320G5_11

F4:MRM of 4 channels,ES-
315 > 269.8
2.488e+005



Dataset: Untitled

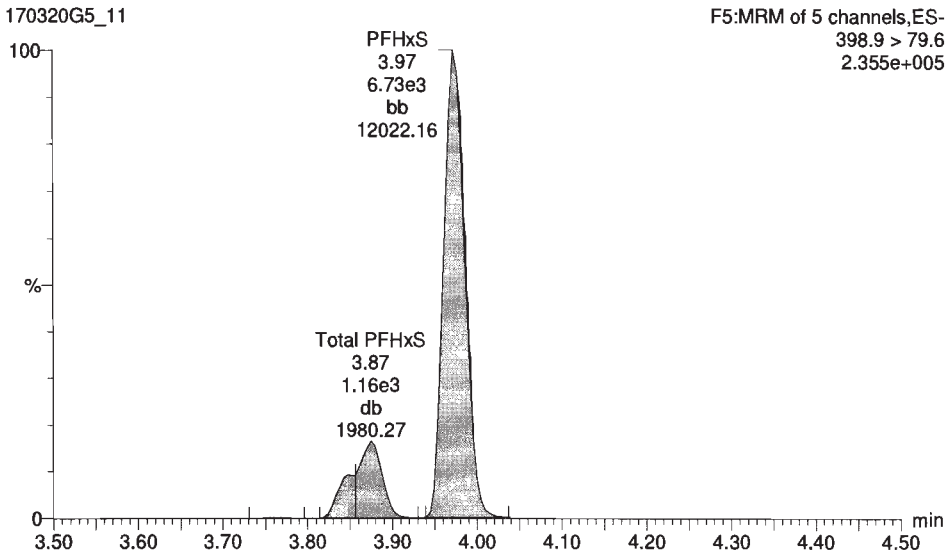
Last Altered: Tuesday, March 21, 2017 12:27:08 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 12:27:32 Pacific Daylight Time

ID: SS170320G5-1 PFC SSS 17C2010, Description: PFC SSS 17C2010 A, Name: 170320G5_11, Date: 20-Mar-2017, Time: 23:09:43, Instrument: , Lab: , User:

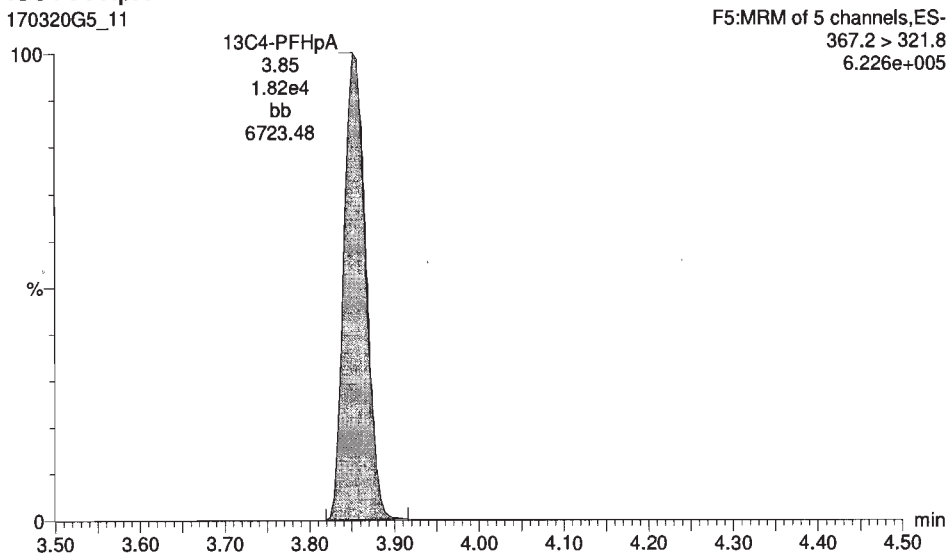
Total PFHxS

170320G5_11



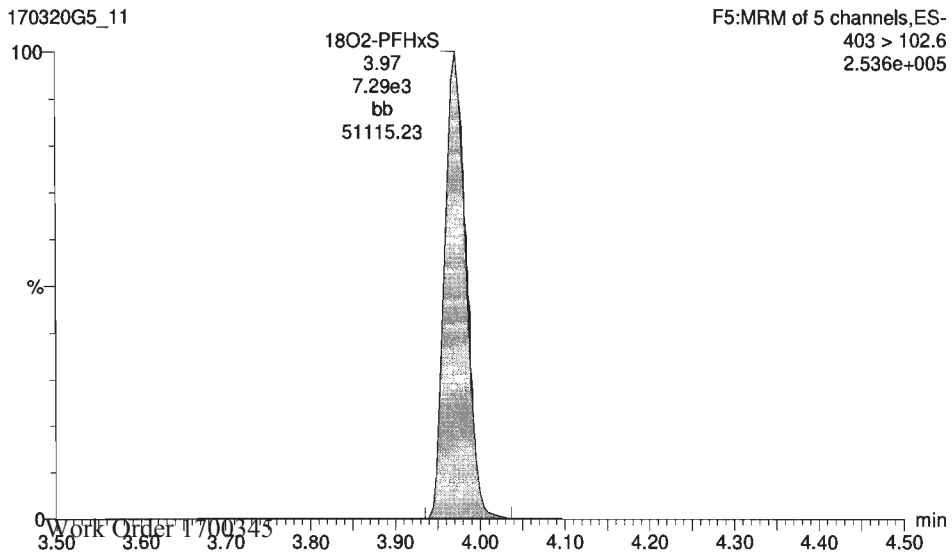
13C4-PFHpA

170320G5_11



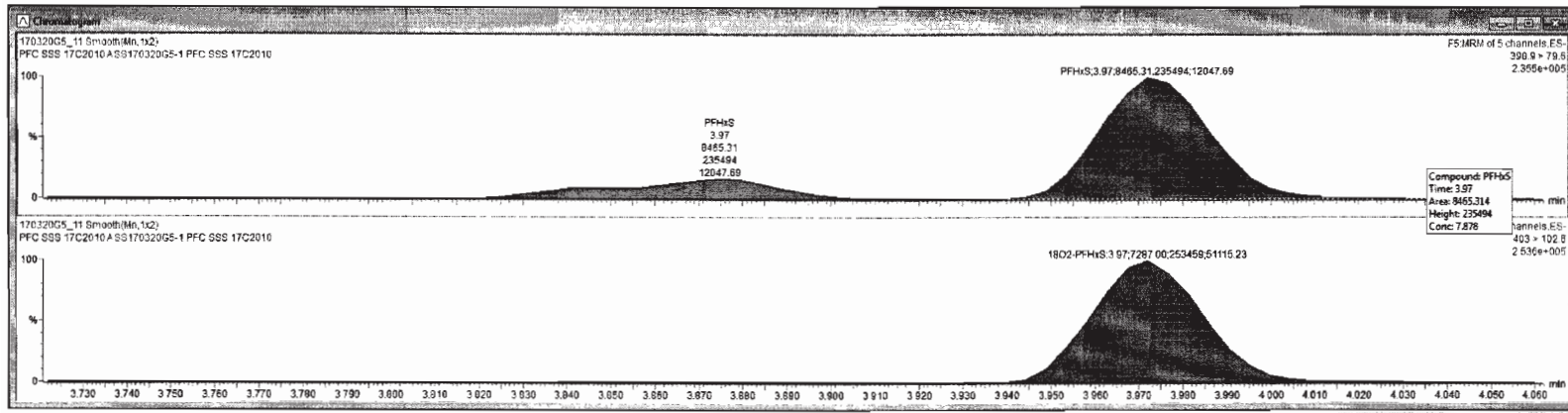
18O2-PFHxS

170320G5_11



170320G5_11 - SS170320G5-1 PFC SSS 17C2010 - PFC SSS 17C2010A

#	Name	Trace	Area	RPY	WVAL	Prod RT	RT	Conc.	MDL	NRec	DL
1	PFBA	213.1 > 168.8	9.04e3		1.000	1.79	1.90	8.44	YES	84.4	0.0006000
2	PFPA	263.1 > 218.9	7.05e3		1.000	2.73	2.73	8.43	NO	84.3	0.0006000
3	PFBS	289 > 79.7	8.35e3		1.000	2.99	2.99	7.46	NO	74.6	0.0002209
4	PFHA	313.2 > 260.9	6.75e3		1.000	3.35	3.35	9.64	YES	90.4	0.0006000
5	PFHxA	383 > 318.9	1.94e4		1.000	3.85	3.85	8.20	YES	82.0	0.0057175
6	PFHxS	388.8 > 79.8	8.27e3		1.000	3.97	3.97	7.89	YES	78.9	0.0006000
7	PFOS	427.1 > 407	1.18e3		1.000	4.25	4.24	5.26	YES	52.6	0.2433110
8	PFOA	413 > 368.7	2.00e4		1.000	4.25	4.25	8.70	YES	87.0	0.0000000
9	PFHpS	449 > 98.7	1.43e3		1.000	4.25	4.34	7.70	YES	77.0	0.0006412
10	PFOs	499 > 79.9	5.21e3		1.000	4.66	4.66	7.27	YES	72.7	0.0876302
11	PFHA	483 > 418.8	1.34e4		1.000	4.99	4.99	8.92	YES	89.2	0.0064914
12	PFOA	513 > 468.8	5.82e3		1.000	4.90	4.90	9.68	NO	90.8	0.0006000
13	PFOS	527 > 506.8	1.59e3		1.000	4.90	4.88	8.25	YES	82.5	0.1864540
14	13C3-PFBA	218.1 > 171.8	3.20e4	1.14	1.000	1.79	1.79	12.7	NO	101.3	0.0052567
15	13C3-PFPA	266 > 221.8	1.31e4	0.402	1.000	2.74	2.73	13.6	NO	108.6	0.0034246
16	13C3-PFBS	302.8 > 98.8	7.31e3	0.229	1.000	2.99	2.99	15.3	NO	106.6	0.0244323
17	13C3-PFHA	315 > 260.9	6.54e3	0.527	1.000	3.35	3.35	5.26	NO	195.3	0.0045932
18	13C3-PFHxA	387.2 > 321.8	1.82e4	0.914	1.000	3.85	3.85	13.0	NO	184.1	0.0047734
19	18O2-PFHxS	403 > 192.8	7.29e3	0.302	1.000	3.97	3.97	12.4	NO	99.6	0.0006129
20	13C2-8.2 FTS	429.1 > 408.9	6.38e3		1.000	4.33	4.21		NO		
21	13C2-PFOA	414.8 > 368.7	3.40e4	2.83	1.000	4.25	4.25	12.0	NO	96.1	0.0027538
22	13C2-PFOS	507.8 > 79.9	8.68e3	0.822	1.000	4.66	4.66	12.2	NO	97.2	0.0018758
23	13C2-PFHA	468.2 > 422.9	9.46e3	0.788	1.000	4.99	4.99	11.0	NO	86.1	0.0294407
24	13C2-PFOA	515.1 > 468.9	9.27e3	0.999	1.000	4.90	4.90	12.9	NO	103.6	0.0062717



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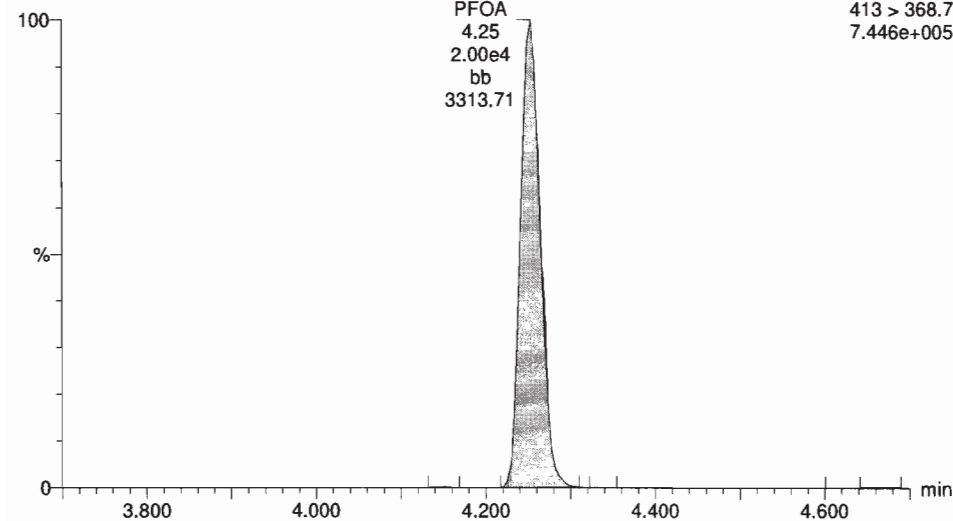
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Printed: Tuesday, March 21, 2017 12:27:32 Pacific Daylight Time

ID: SS170320G5-1 PFC SSS 17C2010, Description: PFC SSS 17C2010 A, Name: 170320G5_11, Date: 20-Mar-2017, Time: 23:09:43, Instrument: , Lab: , User:

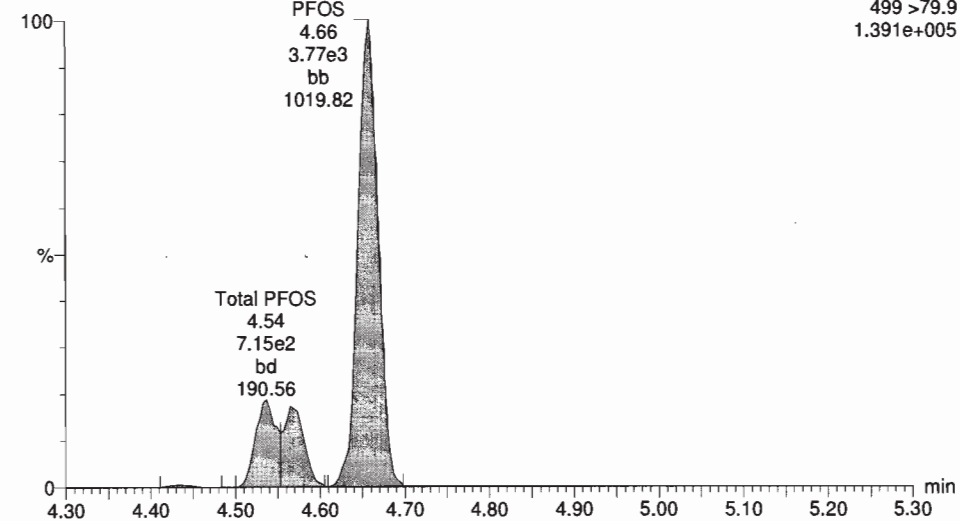
Total PFOA

170320G5_11



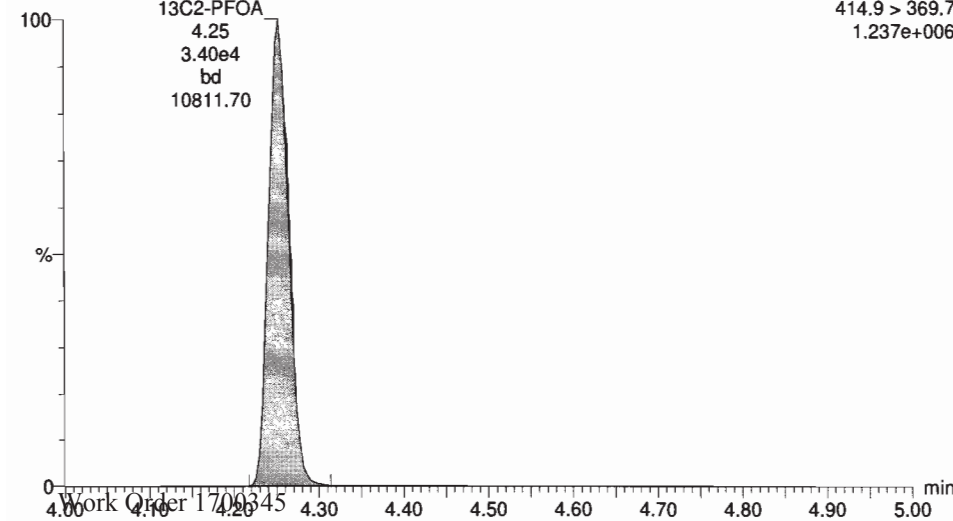
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170320G5_11



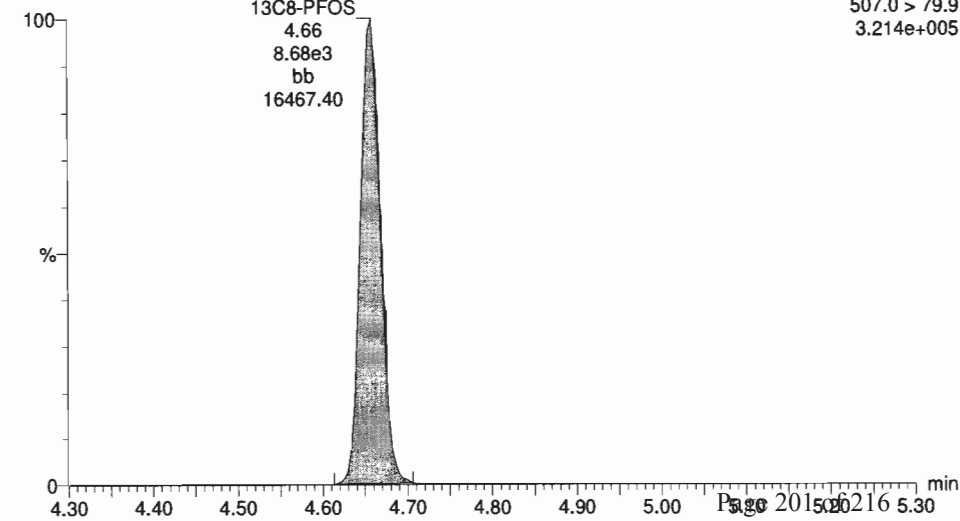
13C2-PFOA

170320G5_11

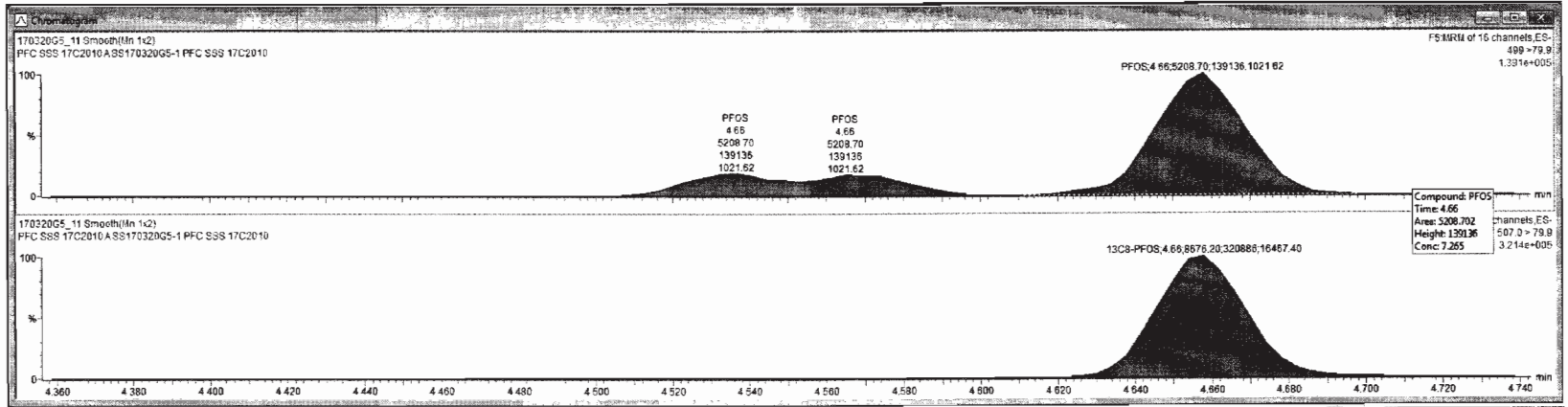


13C8-PFOS

170320G5_11



#	Name	Trace	Area	RFI	Wt/Vol	Prod/RT	RT	Conc.	>MDL	%Rec	DL
1	PFBA	213.1 > 160.8	9.04e3		1.000	1.79	1.80	8.44	YES	84.4	0.0009000
2	PFPA	263.1 > 218.9	7.05e3		1.000	2.73	2.73	8.43	NO	84.3	0.0009000
3	PFBS	298 > 79.7	8.36e3		1.000	2.99	2.99	7.46	NO	74.6	0.0092209
4	PFHA	313.2 > 288.9	6.78e3		1.000	3.35	3.35	9.04	YES	90.4	0.0009000
5	PFHpA	363 > 318.9	1.94e4		1.000	3.85	3.86	8.20	YES	82.0	0.0057175
6	PFHxS	386.9 > 79.8	8.47e3		1.000	3.97	3.97	7.88	YES	78.8	0.0009000
7	8.2 FTS	427.1 > 407	1.18e3		1.000	4.25	4.21	5.28	YES	52.8	0.2453110
8	PFDA	413 > 382.7	2.00e4		1.000	4.25	4.25	8.78	YES	87.8	0.0009000
9	PFHpS	449 > 98.7	1.43e3		1.000	4.25	4.34	7.70	YES	77.0	0.0068412
10	PFOS	488 > 79.9	5.31e3		1.000	4.66	4.66	7.27	YES	72.7	0.0070302
11	PFNA	463 > 418.8	1.34e4		1.000	4.59	4.59	8.92	YES	89.2	0.0064614
12	PFDA	513 > 468.8	5.82e3		1.000	4.90	4.90	9.08	NO	90.8	0.0009000
13	8.2 FTS	527 > 506.9	1.59e3		1.000	4.90	4.99	8.25	YES	82.5	0.1064540
14	13C3-PFBA	216.1 > 171.8	3.20e4	1.14	1.000	1.79	1.79	12.7	NO	101.3	0.0052507
15	13C3-PFPA	266 > 221.8	1.31e4	0.402	1.000	2.74	2.73	13.6	NO	108.5	0.0034246
16	13C3-PFBS	302.0 > 95.8	7.31e3	0.229	1.000	2.99	2.99	13.3	NO	106.5	0.0244323
17	13C3-PFHA	315 > 289.8	6.64e3	0.527	1.000	3.35	3.35	8.26	NO	105.3	0.0045902
18	13C3-PFHpA	367.2 > 321.8	1.82e4	0.914	1.000	3.85	3.85	13.0	NO	104.1	0.0047734
19	13C3-PFHxS	463 > 102.6	7.29e3	0.382	1.000	3.97	3.97	12.4	NO	99.5	0.0066120
20	13C3-8.2 FTS	429.1 > 408.9	6.38e3		1.000	4.33	4.21		NO		
21	13C3-PFDA	414.9 > 385.7	3.40e4	2.83	1.000	4.25	4.25	12.0	NO	96.1	0.0027530
22	13C3-PFOS	507.0 > 79.9	8.66e3	0.822	1.000	4.66	4.66	12.2	NO	97.2	0.0187558
23	13C3-PFNA	488.2 > 422.9	9.46e3	0.788	1.000	4.59	4.59	11.0	NO	88.1	0.0294407
24	13C3-PFDA	515.1 > 469.9	9.27e3	0.999	1.000	4.90	4.90	12.9	NO	103.9	0.0062717



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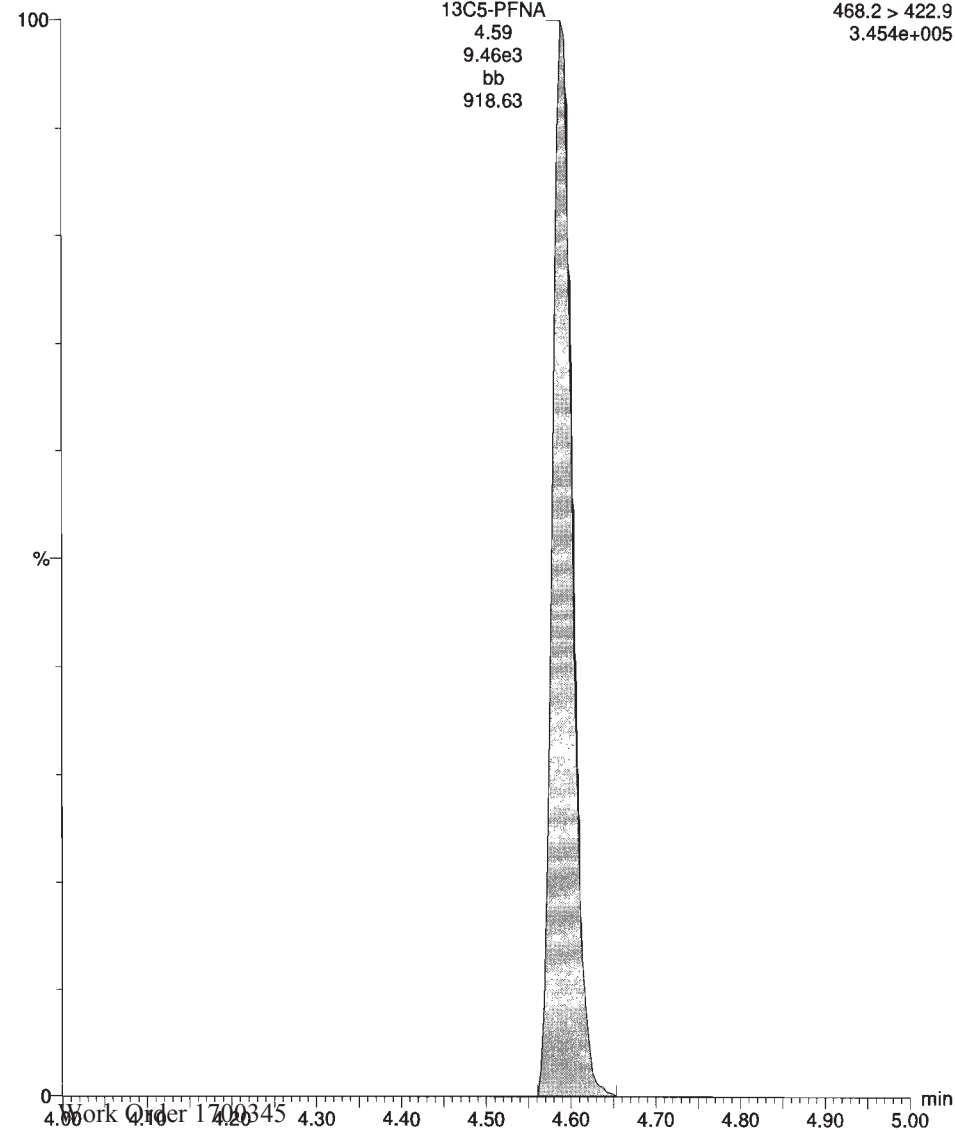
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Printed: Tuesday, March 21, 2017 12:27:32 Pacific Daylight Time

ID: SS170320G5-1 PFC SSS 17C2010, Description: PFC SSS 17C2010 A, Name: 170320G5_11, Date: 20-Mar-2017, Time: 23:09:43, Instrument: , Lab: , User:

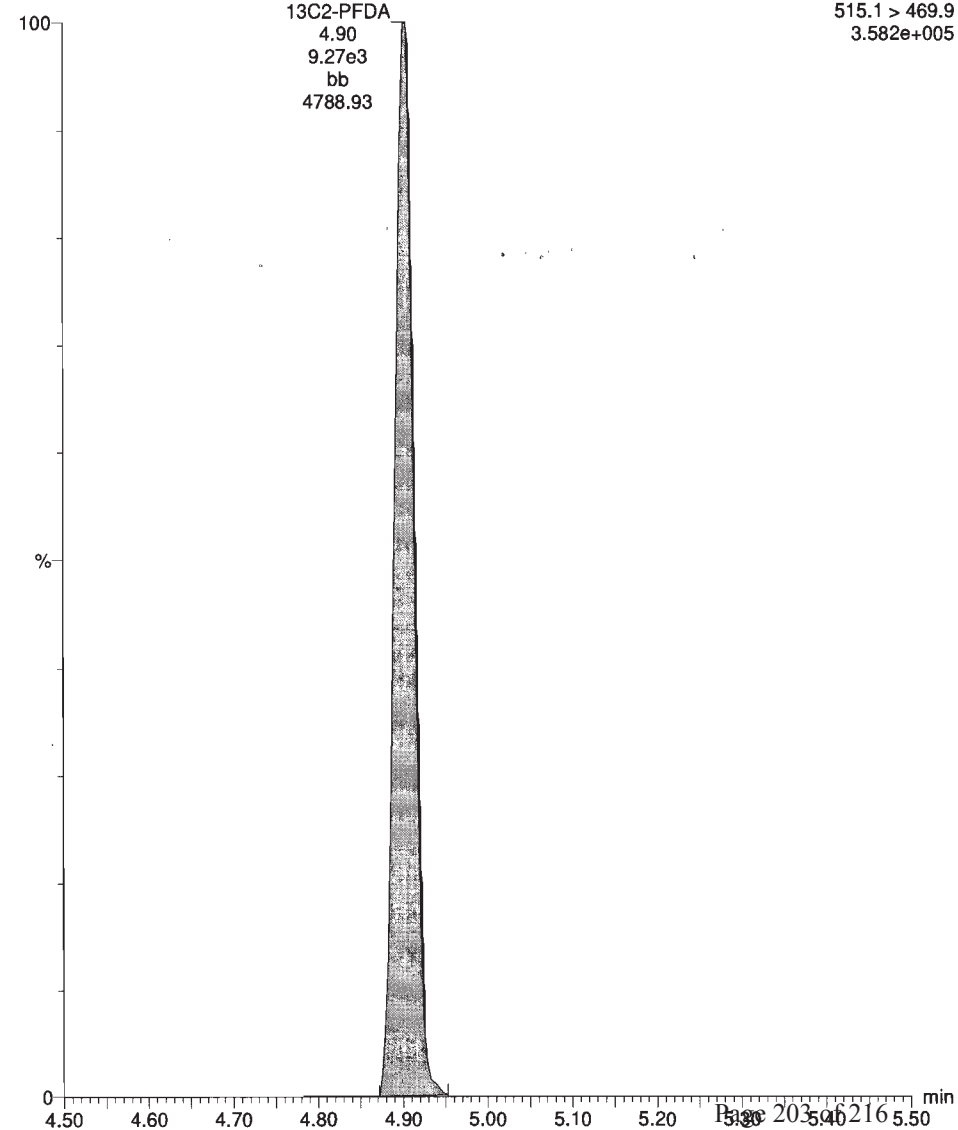
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170320G5_11



13C2-PFDA

170320G5_11



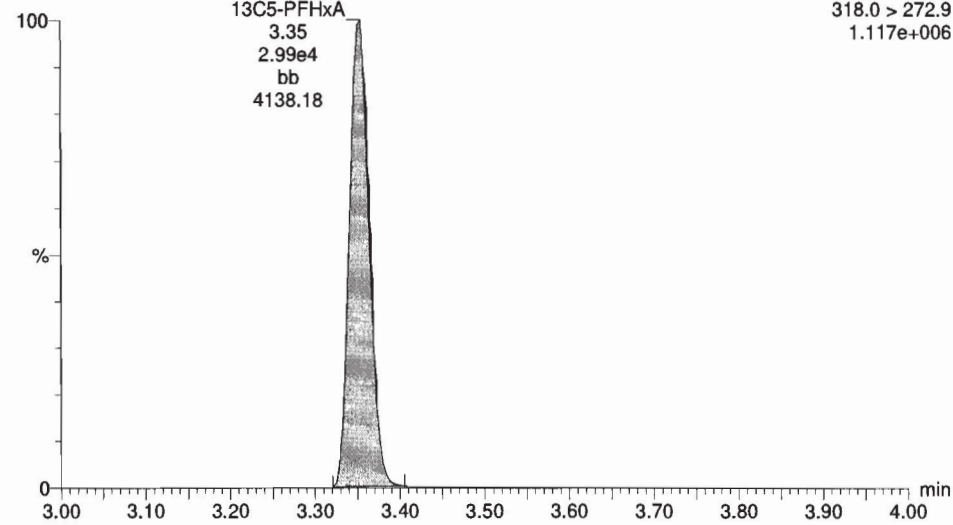
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Printed: Tuesday, March 21, 2017 12:27:32 Pacific Daylight Time

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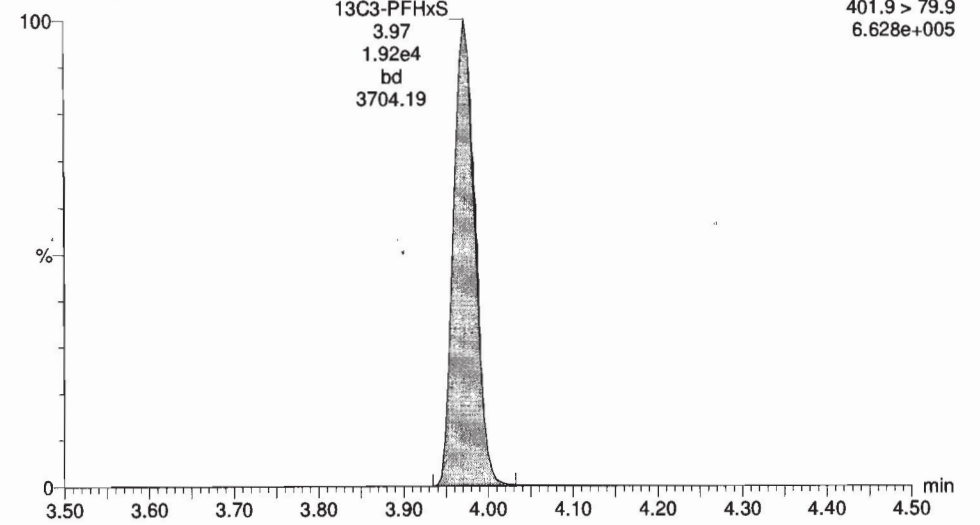
13C5-PFHxA

170320G5_11



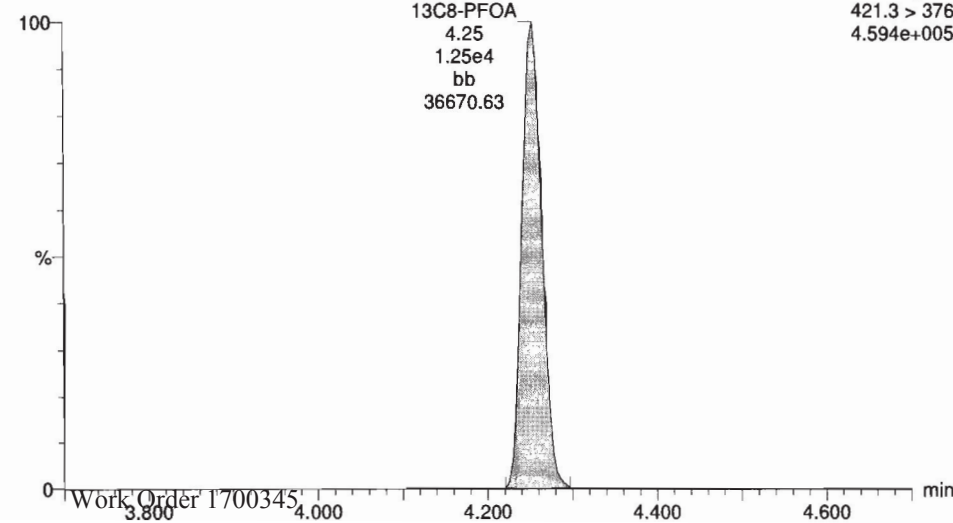
13C3-PFHxS

170320G5_11



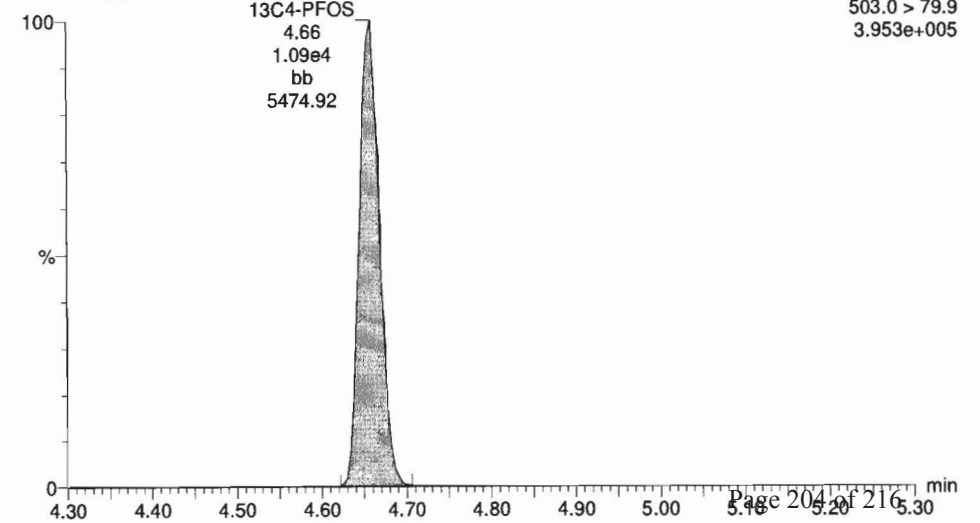
13C8-PFOA

170320G5_11



13C4-PFOS

170320G5_11



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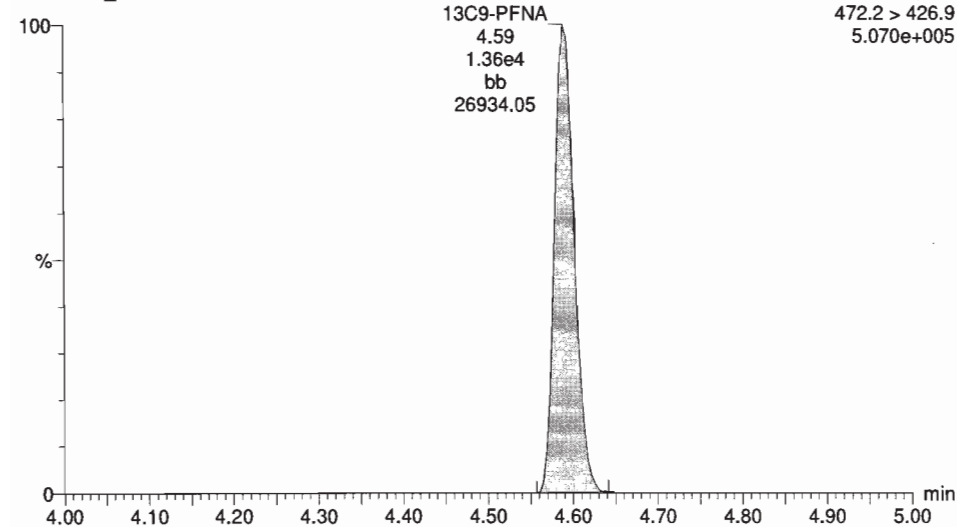
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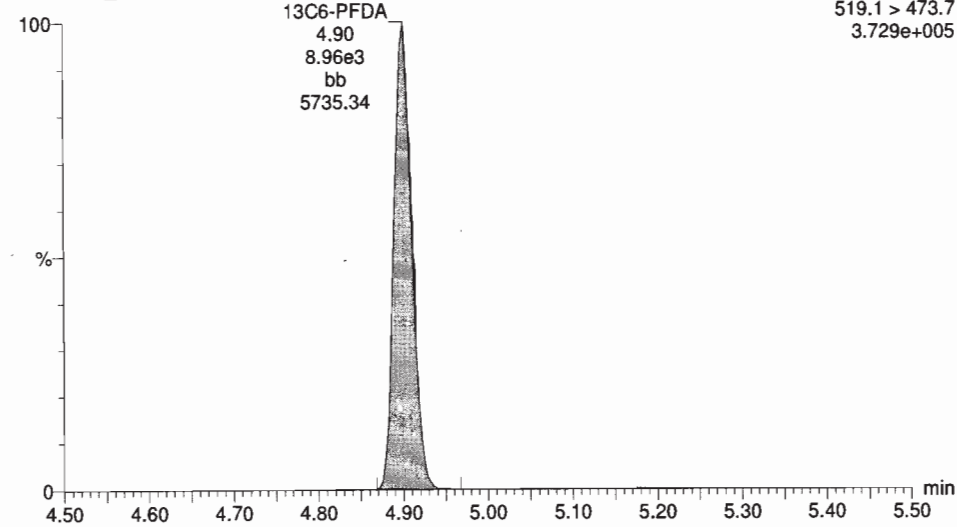
13C9-PFNA

170320G5_11



13C6-PFDA

170320G5_11



Dataset: U:\G1.PRO\Results\2017\170321G1\170321G1-4.qld

Last Altered: Tuesday, March 21, 2017 14:49:43 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 14:54:19 Pacific Daylight Time

Method: U:\G1.pro\MethDB\PFAS_A_Full_Lin170321.mdb 21 Mar 2017 09:29:10

Calibration: U:\G1.pro\CurveDB\IC18_VAL-PFC_Q1_03-20-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Name: 170321G1_4, Date: 21-Mar-2017, Time: 12:54:21, ID: SS170321G1-1 PFC SSS 17C2124, Description: PFC SSS 17C22124 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBA	213.1 > 168.8	1.07e4	2.81e4		1.000	1.69	11.4	113.9
2	2 PFPeA	263.1 > 218.9	7.96e3	1.29e4		1.000	2.65	9.63	96.3
3	3 PFBS	299 > 79.7	9.04e3	7.51e3		1.000	2.92	7.86	78.6
4	4 PFHxA	313.2 > 268.9	7.55e3	6.33e3		1.000	3.30	10.6	105.8
5	5 PFHpA	363 > 318.9	1.91e4	1.74e4		1.000	3.80	8.48	84.8
6	6 PFHxS	398.9 > 79.6	9.70e3	6.96e3		1.000	3.93	9.46	94.6
7	7 6:2 FTS	427.1 > 407	1.96e3	3.00e4		1.000	4.16	9.63	96.3
8	8 PFOA	413 > 368.7	1.92e4	3.00e4		1.000	4.21	9.55	95.5
9	9 PFHpS	449 > 98.7	1.72e3	3.00e4		1.000	4.30	10.4	104.1
10	10 PFOS	499 > 79.9	6.64e3	1.01e4		1.000	4.61	7.99	79.9
11	11 PFNA	463 > 418.8	1.58e4	1.08e4		1.000	4.54	9.20	92.0
12	12 PFDA	513 > 468.8	7.37e3	1.02e4		1.000	4.85	10.4	104.4
13	13 8:2 FTS	527 > 506.9	1.81e3	1.02e4		1.000	4.83	8.51	85.1
14	14 13C3-PFBA	216.1 > 171.8	2.81e4	2.28e4	1.145	1.000	1.69	13.4	107.4
15	15 13C3-PFPeA	266 > 221.8	1.29e4	2.45e4	0.402	1.000	2.65	16.4	131.1
16	16 13C3-PFBS	302.0 > 98.8	7.51e3	2.45e4	0.229	1.000	2.92	16.7	133.5
17	17 13C2-PFHxA	315 > 269.8	6.33e3	2.45e4	0.527	1.000	3.29	6.13	122.6
18	18 13C4-PFHpA	367.2 > 321.8	1.74e4	1.51e4	0.914	1.000	3.80	15.7	125.9
19	19 18O2-PFHxS	403 > 102.6	6.96e3	1.51e4	0.382	1.000	3.92	15.1	120.4
20	20 13C2-6:2 FTS	429.1 > 408.9	7.11e3			1.000	4.16		
21	21 13C2-PFOA	414.9 > 369.7	3.00e4	9.61e3	2.829	1.000	4.21	13.8	110.4
22	22 13C8-PFOS	507.0 > 79.9	1.01e4	9.34e3	0.822	1.000	4.61	16.4	130.9
23	23 13C5-PFNA	468.2 > 422.9	1.08e4	1.14e4	0.788	1.000	4.54	15.0	119.8
24	24 13C2-PFDA	515.1 > 469.9	1.02e4	7.81e3	0.999	1.000	4.85	16.4	131.2
25	25 13C2-8:2 FTS	529.1 > 508.7				1.000			
26	26 13C4-PFBA	217 > 171.8	2.28e4	2.28e4	1.000	1.000	1.68	12.5	100.0
27	27 13C2-4:2 FTS	329.2 > 308.9				1.000			
28	28 13C5-PFHxA	318.0 > 272.9	2.45e4	2.45e4	1.000	1.000	3.29	12.5	100.0
29	29 13C3-PFHxS	401.9 > 79.9	1.51e4	1.51e4	1.000	1.000	3.92	12.5	100.0
30	30 13C8-PFOA	421.3 > 376	9.61e3	9.61e3	1.000	1.000	4.21	12.5	100.0
31	Work Order 170321G1-4	503.0 > 79.9	9.34e3	9.34e3	1.000	1.000	4.61	12.5	100.0

75-125
 88.8 (A)
 103.7 (A)
 101.1
 109.3 (A)
 86.1
 88.1 (A)
 (A) Concentration < 10ng/L in SI native mix.
 3/21/17

PFAS Full A

Dataset: U:\G1.PRO\Results\2017\170321G1\170321G1-4.qld

Last Altered: Tuesday, March 21, 2017 14:49:43 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 14:54:19 Pacific Daylight Time

Name: 170321G1_4, Date: 21-Mar-2017, Time: 12:54:21, ID: SS170321G1-1 PFC SSS 17C2124, Description: PFC SSS 17C22124 A

	# Name	Trace	Response	IS Resp	RRE	Wt/Vol	RT	Conc	%Rec
32	32 13C9-PFNA	472.2 > 426.9	1.14e4	1.14e4	1.000	1.000	4.54	12.5	100.0
33	33 13C6-PFDA	519.1 > 473.7	7.81e3	7.81e3	1.000	1.000	4.85	12.5	100.0

Dataset: Untitled

Last Altered: Wednesday, March 22, 2017 10:28:18 Pacific Daylight Time

Printed: Wednesday, March 22, 2017 10:28:37 Pacific Daylight Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_03-21-17_Full_A_Lin.cdb 21 Mar 2017 09:27:19

Compound name: PFBA

	Name	ID	Acq Date	Acq Time
1	170321G1_1	IPA	21-Mar-17	12:16:30
2	170321G1_2	ST170321G1-1 PFC CS3 17C2007	21-Mar-17	12:29:08
3	170321G1_3	IPA	21-Mar-17	12:41:43
4	170321G1_4	SS170321G1-1 PFC SSS 17C2124	21-Mar-17	12:54:21
5	170321G1_5	IPA	21-Mar-17	13:06:56
6	170321G1_6	B7C0082-BS1 OPR 0.125	21-Mar-17	13:20:24
7	170321G1_7	B7C0100-BS1 OPR 0.125	21-Mar-17	13:32:59
8	170321G1_8	IPA	21-Mar-17	13:45:36
9	170321G1_9	B7C0082-BLK1 Method Blank 0.125	21-Mar-17	13:58:13
10	170321G1_10	B7C0100-BLK1 Method Blank 0.125	21-Mar-17	14:10:58
11	170321G1_11	1700345-04@10X CBD-AOA-MW08-0317 0.125	21-Mar-17	14:23:37
12	170321G1_12	B7C0099-MS1@10X Matrix Spike 0.125	21-Mar-17	14:36:13
13	170321G1_13	B7C0099-MSD1@10X Matrix Spike Dup 0.125	21-Mar-17	14:48:49
14	170321G1_14	1700305-01RE1 FT02-SEEP-CM-P1 0.21925	21-Mar-17	15:01:25
15	170321G1_15	1700305-02RE1 CM-P1-E.-MID 0.2524	21-Mar-17	15:14:04
16	170321G1_16	1700305-03RE1 CM-P1 to P2 DAM 0.26777	21-Mar-17	15:26:42
17	170321G1_17	1700305-04RE1 PC B2 33-35FT 0.26283	21-Mar-17	15:39:17
18	170321G1_18	1700305-05RE1 PC B2 20-22FT 0.24741	21-Mar-17	15:51:57
19	170321G1_19	1700305-06RE1 PC B2 8-10FT 0.26876	21-Mar-17	16:04:32
20	170321G1_20	1700305-07RE1 PC B3 28-30FT 0.25903	21-Mar-17	16:23:00
21	170321G1_21	1700305-08RE1 PC B3 20-22FT 0.26196	21-Mar-17	16:35:36
22	170321G1_22	1700305-09RE1 PC B3 7-9FT 0.25612	21-Mar-17	16:48:13
23	170321G1_23	IPA	21-Mar-17	17:00:51
24	170321G1_24	ST170321G1-2 PFC CS3 17C2007	21-Mar-17	17:13:29
25	170321G1_25	IPA	21-Mar-17	17:26:06
26	170321G1_26	1700305-10RE1 Drill Water Comp 022817 0.2...	21-Mar-17	17:38:59
27	170321G1_27	1700305-11RE1 FB1-030317-JB 0.26726	21-Mar-17	17:51:38
28	170321G1_28	1700304-02RE2@40X B-104 -Trailer (420-117...	21-Mar-17	18:04:12
29	170321G1_29	1700345-07@10X CBD-SO3-MW01-0317 0.125	21-Mar-17	18:16:47
30	170321G1_30	IPA	21-Mar-17	18:29:24
31	170321G1_31	ST170321G1-3 PFC CS3 17C2007	21-Mar-17	18:42:02
32	170321G1_32	IPA	21-Mar-17	18:54:36

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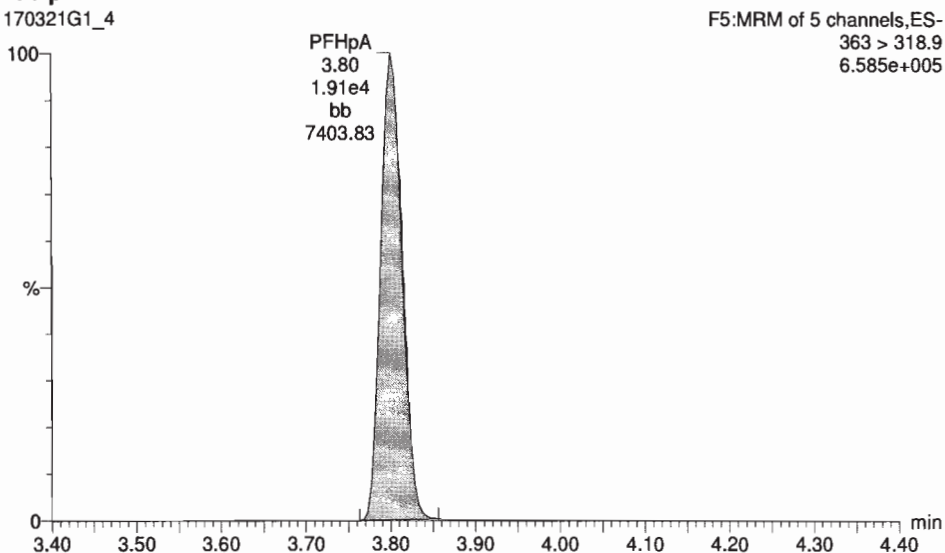
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ID: SS170321G1-1 PFC SSS 17C2124, Description: PFC SSS 17C22124 A, Name: 170321G1_4, Date: 21-Mar-2017, Time: 12:54:21, Instrument: , Lab: , User:

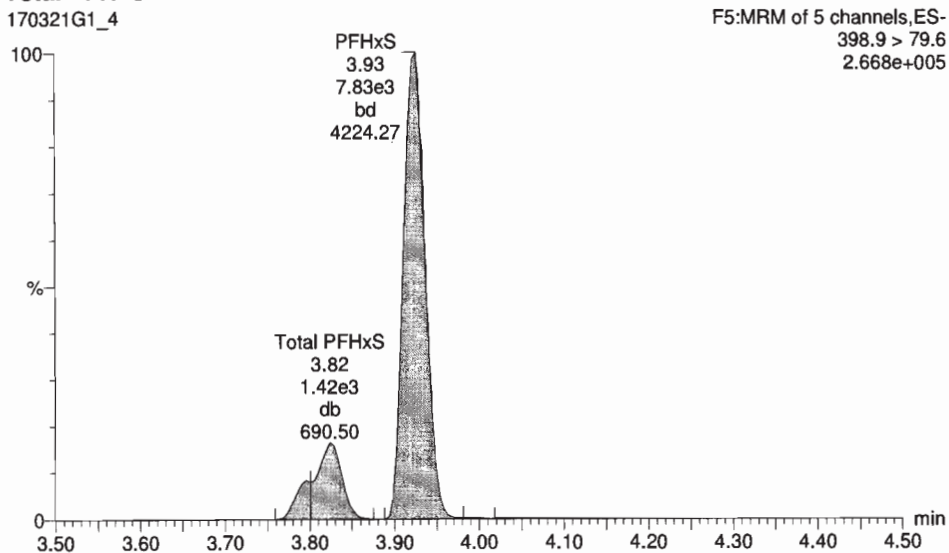
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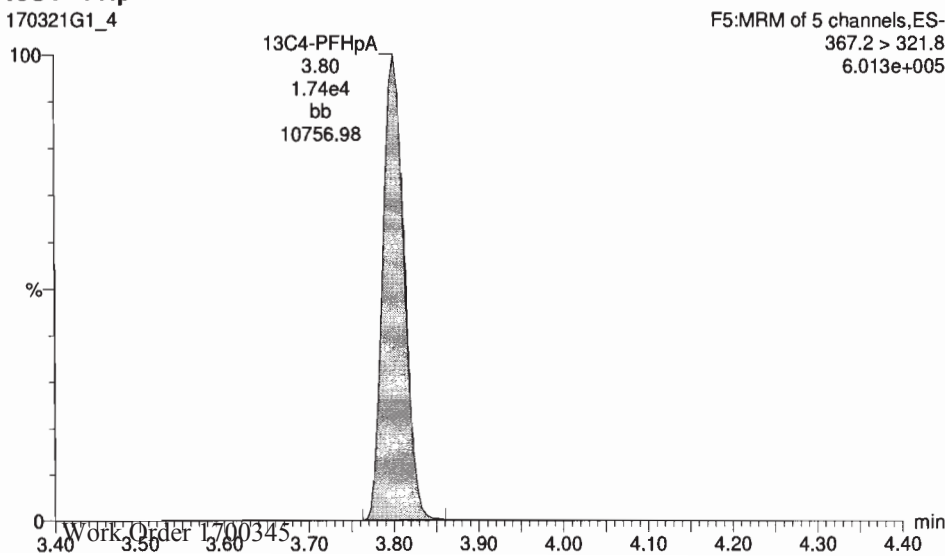
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170321G1_4



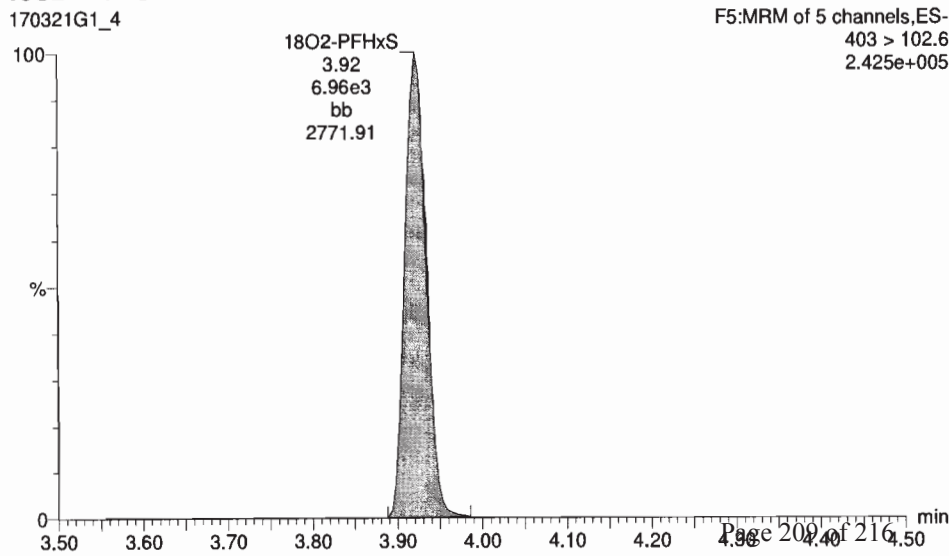
13C4-PFHpA

170321G1_4



18O2-PFHxS

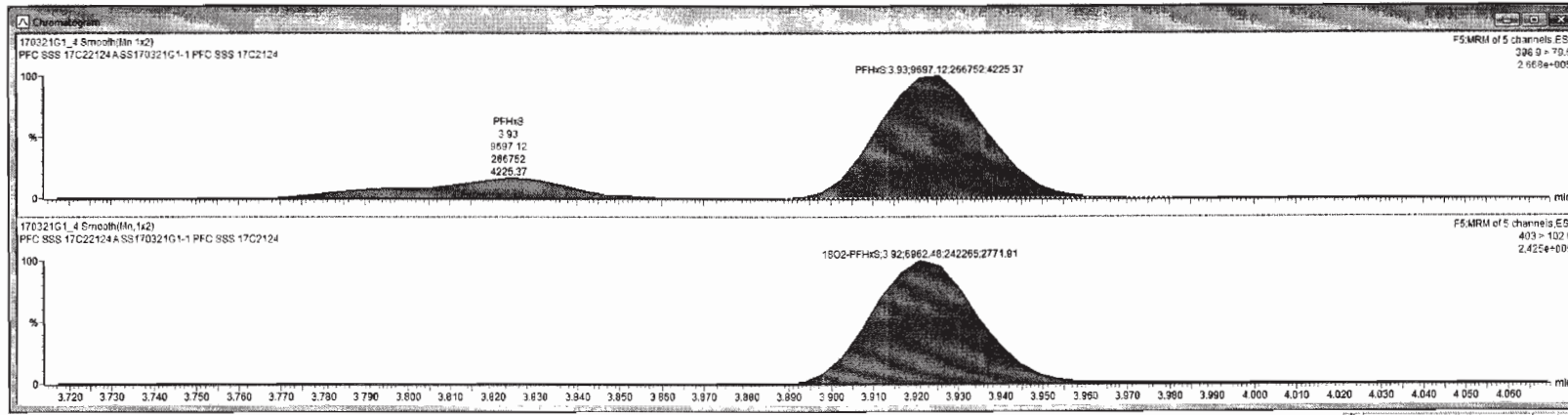
170321G1_4





170321G1_4 - SS170321G1-1 PFC SSS 17C2124 - PFC SSS 17C22124 A

Name	Conc.	DL	%Rec	EMPC	Abs.Recp	RFI	RT	S	SA	RA	V/N	RRT	Acq Date	Acq Time	* Che No	D	Sample Text	Factor1	DW	Chi Plr	MDL
1	PFBA	11.387829	0.0000	113.9	1.06744	1.65	11	14				1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
2	PFPA	9.6254285	0.0000	96.3	7.96163	2.65	2	15				1.001	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
3	PFBS	7.9636182	0.0135	78.6	9.04463	2.92	3	16				1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
4	PFHA	10.581961	0.0000	105.8	7.54963	3.30	4	17				1.001	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
5	PFHx	8.4787434	0.00178	84.8	1.91084	3.60	5	18				1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
6	PFHx	8.4308867	0.0000	84.8	9.88763	3.89	6	19				1.001	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
7	6:2 FTS	9.6345309	0.242	96.3	1.95663	4.16	7	21				0.988	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
8	PFDA	9.5512020	0.0000	95.5	1.92464	4.21	8	21				1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
9	PFHxS	10.495753	0.6592	104.1	1.71563	4.36	9	21				1.021	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
10	PFOS	7.8099827	0.133	79.9	8.84463	4.61	10	22				1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
11	PFNA	9.2940879	0.00728	92.0	1.52164	4.54	11	23				1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
12	PFDA	10.435791	0.0000	104.4	7.36763	4.85	12	24				1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
13	8:2 FTS	8.5141714	0.190	85.1	1.81063	4.83	13	24				0.995	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	YES	
14	13C3-PFBA	13.418798	0.00876	107.4	2.80764	1.145	1.69	14	26			1.003	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
15	13C3-PFPA	16.381378	0.0119	131.1	1.29264	0.402	2.65	15	28			0.803	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
16	13C3-PFBS	16.682179	0.00564	133.5	7.50963	0.229	2.82	16	28			0.887	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
17	13C3-PFHA	8.1299444	0.00358	122.8	6.33263	0.577	3.26	17	28			1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
18	13C4-PFPA	15.733910	0.00358	125.9	1.74064	0.914	3.80	18	29			0.969	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
19	18O2-PFHxS	15.054873	0.8134	120.4	6.96263	0.385	3.92	19	29			1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
20	13C2-8:2 FTS				7.10663	4.16	20	27				0.900	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
21	13C3-PFDA	13.803355	0.00704	110.4	3.80364	2.859	4.21	21	30			1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
22	13C4-PFOS	18.367896	0.00682	130.9	1.80564	0.222	4.81	22	31			1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
23	13C5-PFNA	14.979893	0.0224	119.8	1.80564	0.768	4.54	23	32			1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	
24	13C2-PFDA	16.401839	0.00975	131.2	1.02464	0.999	4.85	24	33			1.000	21-Mar-17	12:54:21	SS170321G	PFC SSS 17C22	1.0	1.00	C18_V	NO	



Ready 170321G1_4 NUM

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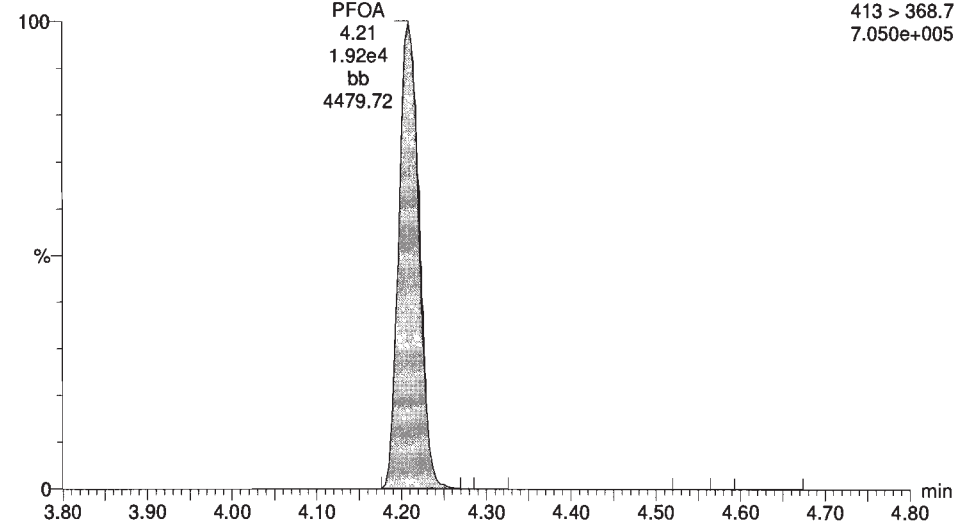
Last Altered: Tuesday, March 21, 2017 14:54:37 Pacific Daylight Time

Printed: Tuesday, March 21, 2017 14:56:06 Pacific Daylight Time

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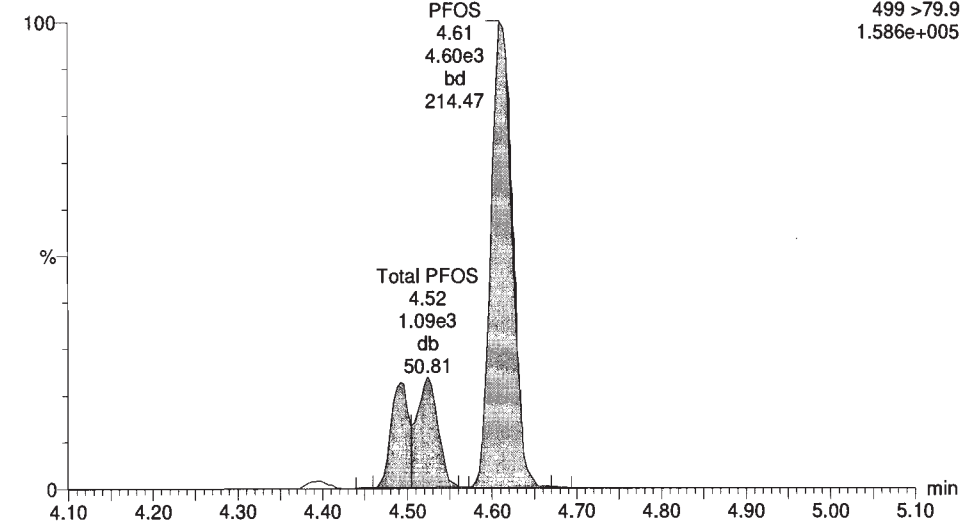
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170321G1_4



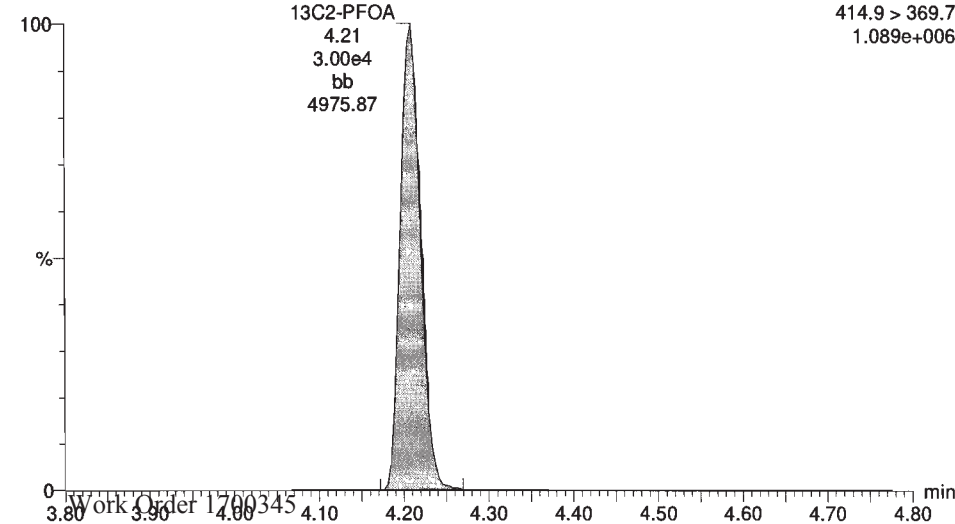
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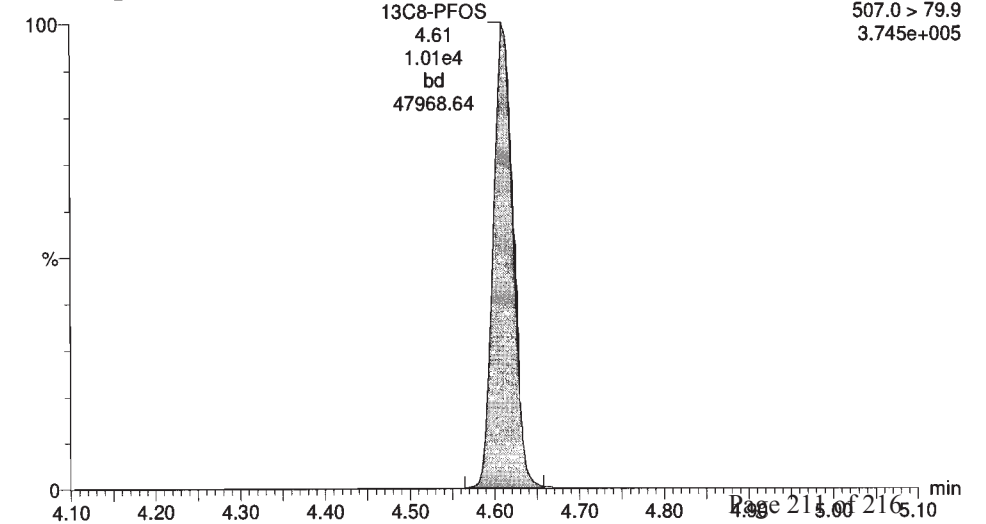
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170321G1_4

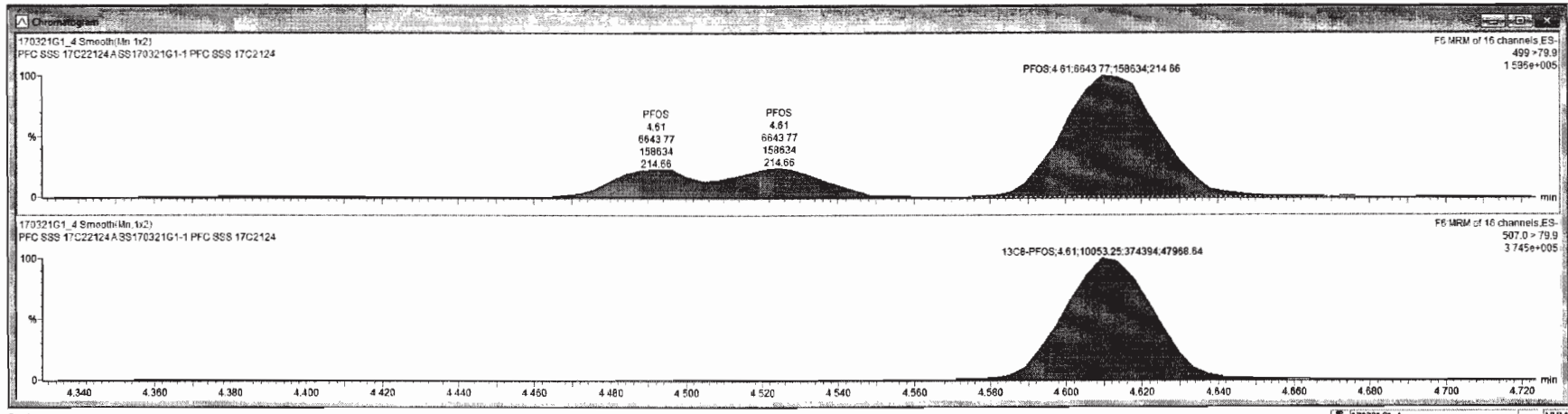


13C8-PFOS

170321G1_4



Name	Conc.	DL	%Rec	EMPC	Abs Resp	RRF	RT	#	IS4	RA:	Y/N	RRT	Acc.Date	Acc.Time	1 st Chr Noise	D	Sample Text	Factor1	SW	Cal File	MDL
1 PFBA	11.387829	0.0000	113.9		1.067e4	1.69	1	14				1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
2 PFPeA	9.8254285	0.0000	96.3		7.961e3	2.65	2	15				1.001	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
3 PFBS	7.8638182	0.0135	78.6		9.044e3	2.92	3	16				1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
4 PFHxA	10.581901	0.0000	105.8		7.549e3	3.30	4	17				1.001	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
5 PFHpA	8.4797434	0.00178	84.8		1.910e4	3.86	5	18				1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
6 PFHxS	9.4568090	0.0000	94.6		9.897e3	3.93	6	19				1.001	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
7 8:2 FTS	9.8245309	0.242	96.3		1.959e3	4.16	7	21				0.998	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
8 PFDA	9.5613020	0.0000	95.5		1.924e4	4.21	8	21				1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
9 PFHxS	10.405753	0.0692	104.1		1.715e3	4.30	9	21				1.021	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
10 PFOS	7.8692227	0.133	78.9		6.844e3	4.61	10	22				1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
11 PFNA	9.2948970	0.20728	92.0		1.581e4	4.54	11	23				1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
12 PFDA	10.435791	0.0000	104.4		7.367e3	4.85	12	24				1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
13 8:2 FTS	8.5141714	0.190	85.1		1.810e3	4.83	13	24				0.985	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	YES
14 13C3-PFBA	13.418796	0.00876	107.4		2.807e4	1.145	1.65	14	26			1.003	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
15 13C3-PFPeA	16.381379	0.0119	131.1		1.292e4	0.482	2.65	15	26			0.803	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
16 13C3-PFBS	16.692179	0.09564	133.5		7.509e3	0.229	2.92	16	28			0.887	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
17 13C3-PFHxA	6.1298444	0.03356	122.6		6.332e3	0.527	3.29	17	28			1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
18 13C3-PFHxS	15.733910	0.20358	125.9		1.740e4	0.914	3.00	18	29			0.969	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
19 18O2-PFHxS	15.054873	0.0134	120.4		6.962e3	0.382	3.92	19	29			1.020	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
20 13C2-8:2 FTS					7.106e3		4.16	20	27			0.800	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
21 13C2-PFDA	13.803355	0.00704	110.4		3.003e4	2.829	4.21	21	30			1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
22 13C3-PFDA	16.367690	0.00682	130.9		1.005e4	0.822	4.61	22	31			1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
23 13C5-PFNA	14.979653	0.0224	119.8		1.080e4	0.788	4.54	23	32			1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO
24 13C2-PFDA	16.401839	0.006975	131.2		1.024e4	0.999	4.85	24	33			1.000	21-Mar-17	12:54:21		SS170321G...	PFC SSS 17C22...	1.0	1.00	C18_V	NO



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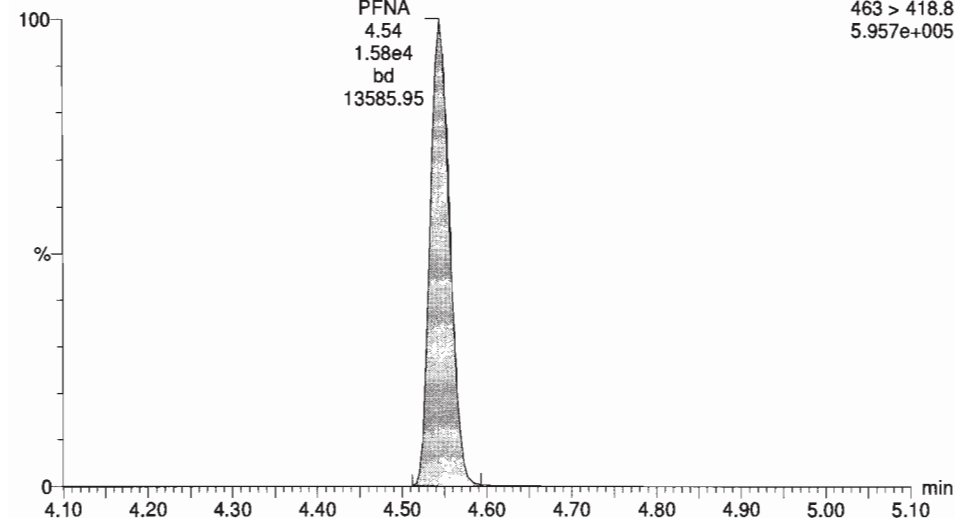
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Printed: Tuesday, March 21, 2017 14:56:06 Pacific Daylight Time

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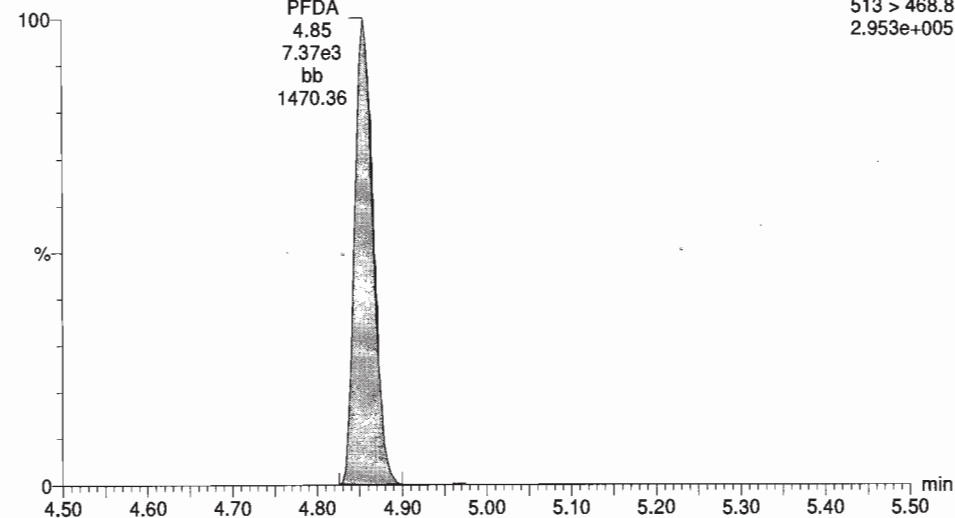
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170321G1_4



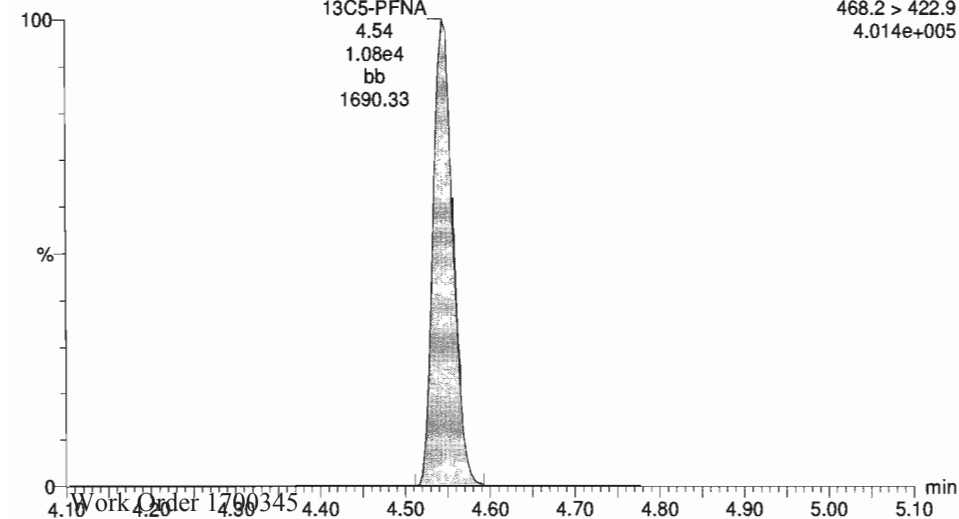
PFDA

170321G1_4



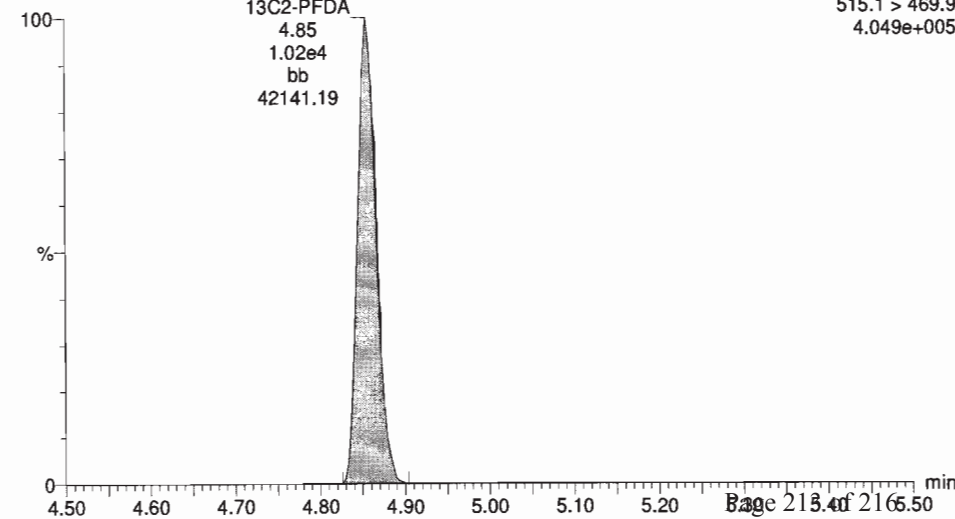
13C5-PFNA

170321G1_4



13C2-PFDA

170321G1_4



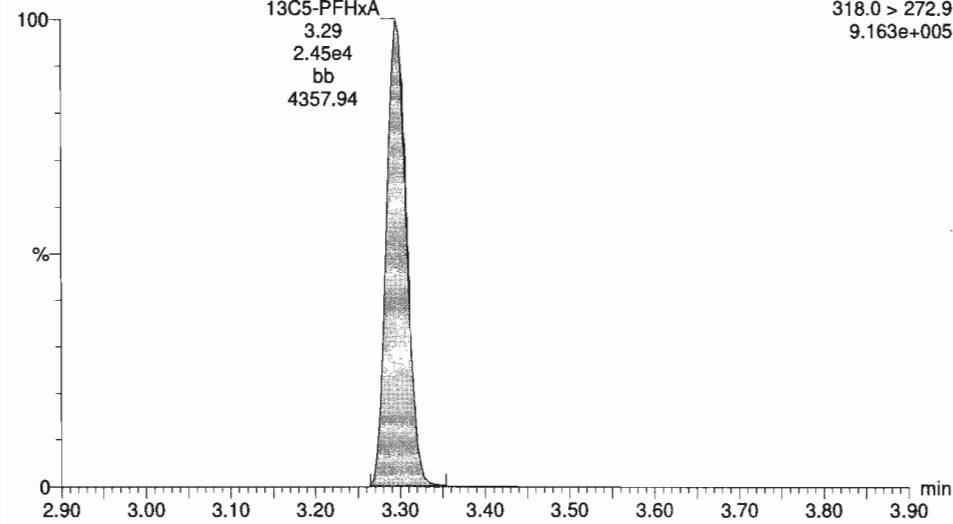
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Printed: Tuesday, March 21, 2017 14:56:06 Pacific Daylight Time

ID: SS170321G1-1 PFC SSS 17C2124, Description: PFC SSS 17C22124 A, Name: 170321G1_4, Date: 21-Mar-2017, Time: 12:54:21, Instrument: , Lab: , User:

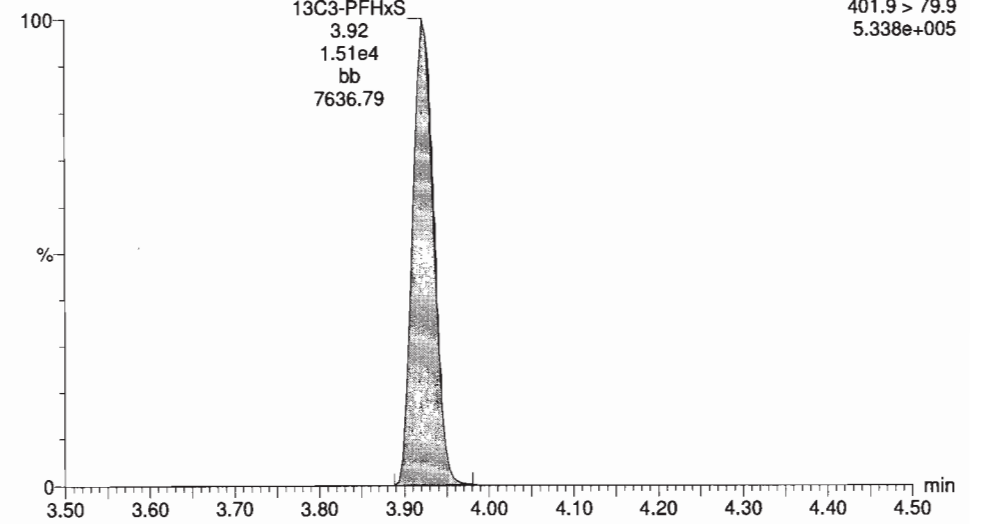
13C5-PFHxA

170321G1_4



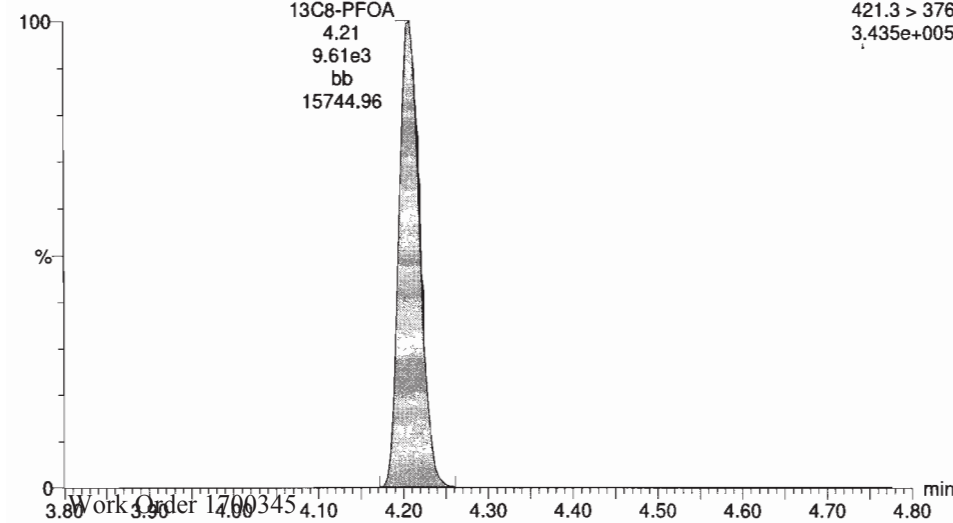
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170321G1_4



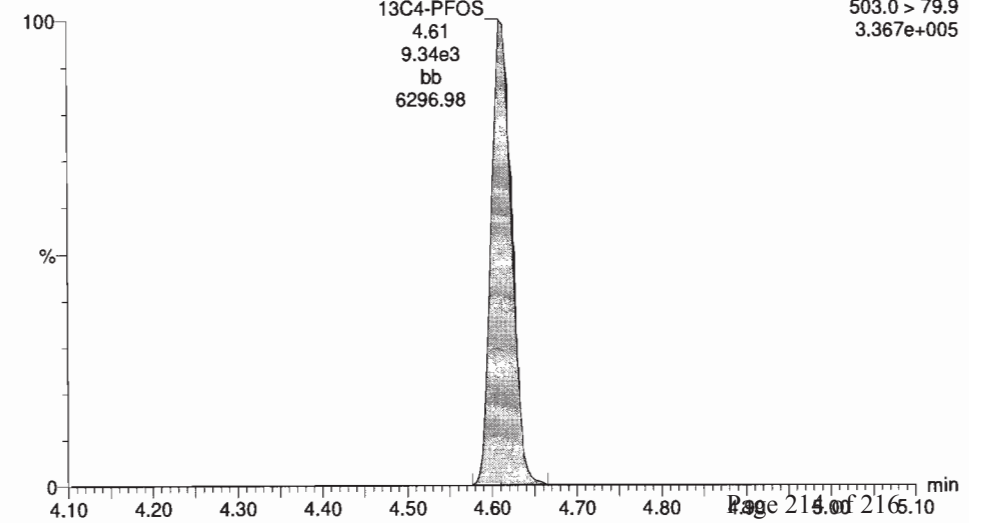
13C8-PFOA

170321G1_4



13C4-PFOS

170321G1_4



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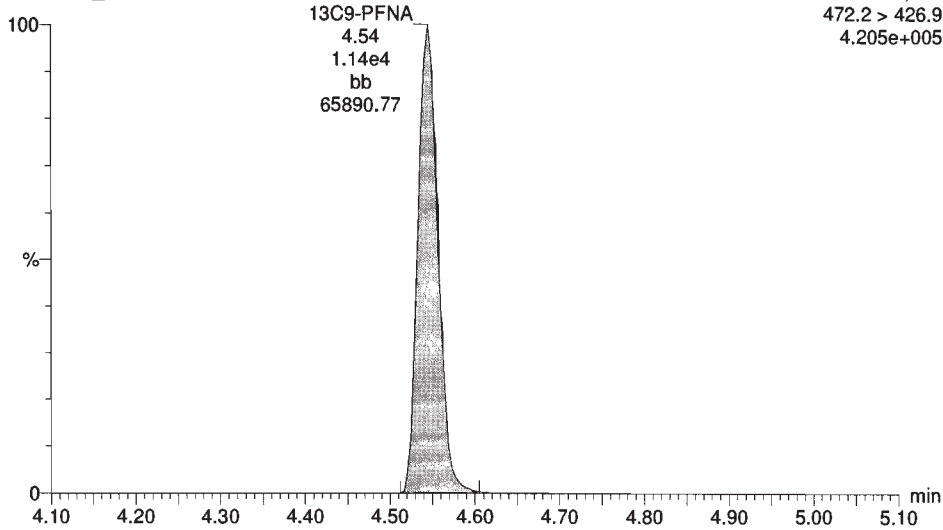
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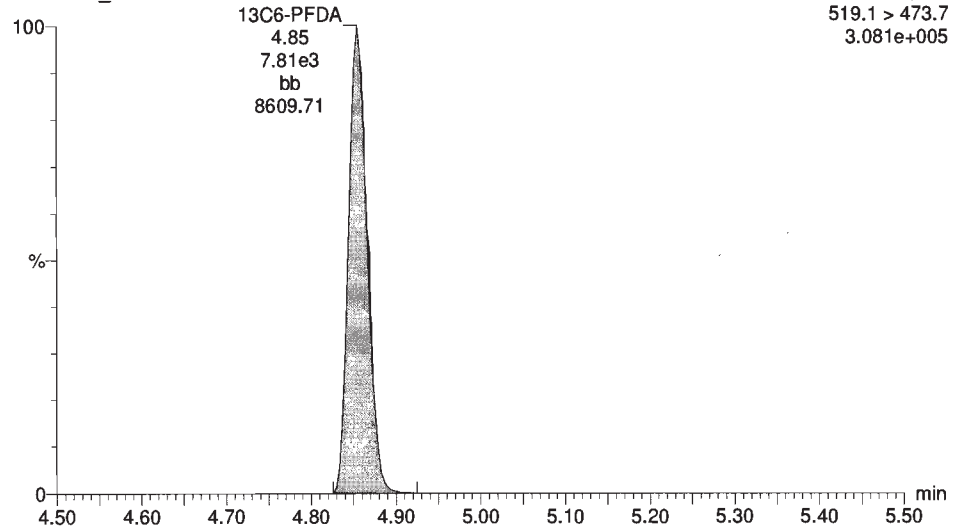
13C9-PFNA

170321G1_4



13C6-PFDA

170321G1_4



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Last Altered: Tuesday, March 21, 2017 11:26:27 Pacific Daylight Time
Printed: Tuesday, March 21, 2017 11:31:34 Pacific Daylight Time

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Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_03-20-17_Full_B_Lin.cdb 21 Mar 2017 10:12:49

ID: B7C0093-BS1 OPR 0.25, Description: OPR, Name: 170320G4_13, Date: 20-Mar-2017, Time: 18:57:32

Total PFOSA

#	Name	Trace	RT	Area	IS Area	Conc.
1						

Total N-MeFOSAA

#	Name	Trace	RT	Area	IS Area	Conc.
1	2 N-MeFOSAA	570.1 > 419.0	5.03	4872.080	3120.226	39.2

Total N-EtFOSAA

#	Name	Trace	RT	Area	IS Area	Conc.
1	29 Total N-EtFOSAA	584.2 > 419.0	5.22	10.260	4060.799	
2	29 Total N-EtFOSAA	584.2 > 419.0	5.16	3270.095	4060.799	40.9
3	5 N-EtFOSAA	584.2 > 419.0	5.16	3270.095	4060.799	41.3

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	Extraction_Date	Extraction_Time	Analysis_Date	Analysis_Time	Lab_Sample_ID	Dilution	Run_Number	Percent_Moisture	Percent_Ipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Analyte_Value	Result_Units	Lab_Qualifier	Validator_Qualifier
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:28:00	1700345-01	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.07	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:28:00	1700345-01	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	2.03	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:28:00	1700345-01	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1.01	NG	L	J	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:28:00	1700345-01	1	999			13C3-PFBS	13C3-PFBS	107	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:28:00	1700345-01	1	999			13C2-PFOA	13C2-PFOA	92.1	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:28:00	1700345-01	1	999			13C8-PFOS	13C8-PFOS	100	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-EB01-031717	20170320	08:36:00	20170321	01:41:00	1700345-02	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	42.17	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-EB01-031717	20170320	08:36:00	20170321	01:41:00	1700345-02	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	2.08	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-EB01-031717	20170320	08:36:00	20170321	01:41:00	1700345-02	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.938	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-EB01-031717	20170320	08:36:00	20170321	01:41:00	1700345-02	1	999			13C3-PFBS	13C3-PFBS	96.4	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-EB01-031717	20170320	08:36:00	20170321	01:41:00	1700345-02	1	999			13C2-PFOA	13C2-PFOA	103	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-EB01-031717	20170320	08:36:00	20170321	01:41:00	1700345-02	1	999			13C8-PFOS	13C8-PFOS	97.8	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:53:00	1700345-03	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	3.94	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW05-0317	20170320	08:36:00	20170321	01:53:00	1700345-03	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	86.4	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW06-0317	20170320	08:36:00	20170321	01:53:00	1700345-03	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	2.71	NG	L	J	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW06-0317	20170320	08:36:00	20170321	01:53:00	1700345-03	1	999			13C3-PFBS	13C3-PFBS	109	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW06-0317	20170320	08:36:00	20170321	01:53:00	1700345-03	1	999			13C2-PFOA	13C2-PFOA	96.3	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW06-0317	20170320	08:36:00	20170321	01:53:00	1700345-03	1	999			13C8-PFOS	13C8-PFOS	101	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW08-0317	20170320	08:36:00	20170321	02:06:00	1700345-04	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	258	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW08-0317	20170320	08:36:00	20170321	12:23:00	1700345-04	10	999			Perfluorooctanoic acid (PFDA)	335-67-1	1890	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW08-0317	20170320	08:36:00	20170321	12:23:00	1700345-04	10	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1330	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW08-0317	20170320	08:36:00	20170321	02:06:00	1700345-04	1	999			13C3-PFBS	13C3-PFBS	112	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW08-0317	20170320	08:36:00	20170321	12:23:00	1700345-04	10	999			13C2-PFOA	13C2-PFOA	116	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-ADA-MW08-0317	20170320	08:36:00	20170321	12:23:00	1700345-04	10	999			13C8-PFOS	13C8-PFOS	117	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S04-MW01-0317	20170320	08:36:00	20170321	02:44:00	1700345-05	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	8.44	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S04-MW01-0317	20170320	08:36:00	20170321	02:44:00	1700345-05	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	21.5	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S04-MW01-0317	20170320	08:36:00	20170321	02:44:00	1700345-05	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	266	NG	L	J	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S04-MW01-0317	20170320	08:36:00	20170321	02:44:00	1700345-05	1	999			13C3-PFBS	13C3-PFBS	99.4	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S04-MW01-0317	20170320	08:36:00	20170321	02:44:00	1700345-05	1	999			13C2-PFOA	13C2-PFOA	96.7	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S04-MW01-0317	20170320	08:36:00	20170321	02:44:00	1700345-05	1	999			13C8-PFOS	13C8-PFOS	89.3	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-FB01-031717	20170320	08:36:00	20170321	02:56:00	1700345-06	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.03	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-FB01-031717	20170320	08:36:00	20170321	02:56:00	1700345-06	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	2.02	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-FB01-031717	20170320	08:36:00	20170321	02:56:00	1700345-06	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.907	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-FB01-031717	20170320	08:36:00	20170321	02:56:00	1700345-06	1	999			13C3-PFBS	13C3-PFBS	104	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-FB01-031717	20170320	08:36:00	20170321	02:56:00	1700345-06	1	999			13C2-PFOA	13C2-PFOA	97.5	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-FB01-031717	20170320	08:36:00	20170321	02:56:00	1700345-06	1	999			13C8-PFOS	13C8-PFOS	98.6	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW01-0317	20170320	08:36:00	20170321	03:09:00	1700345-07	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	7.09	NG	L	J	
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW01-0317	20170320	08:36:00	20170321	03:09:00	1700345-07	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	116	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW01-0317	20170320	08:36:00	20170321	13:01:00	1700345-07	10	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	1200	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW01-0317	20170320	08:36:00	20170321	03:09:00	1700345-07	1	999			13C3-PFBS	13C3-PFBS	110	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW01-0317	20170320	08:36:00	20170321	03:09:00	1700345-07	10	999			13C2-PFOA	13C2-PFOA	103	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW01-0317	20170320	08:36:00	20170321	13:01:00	1700345-07	10	999			13C8-PFOS	13C8-PFOS	121	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW02-0317	20170320	08:36:00	20170321	03:21:00	1700345-08	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	17.5	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW02-0317	20170320	08:36:00	20170321	03:21:00	1700345-08	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	85.3	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW02-0317	20170320	08:36:00	20170321	03:21:00	1700345-08	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	105	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW02-0317	20170320	08:36:00	20170321	03:21:00	1700345-08	1	999			13C3-PFBS	13C3-PFBS	98.0	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW02-0317	20170320	08:36:00	20170321	03:21:00	1700345-08	1	999			13C2-PFOA	13C2-PFOA	91.8	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	CBD-S03-MW02-0317	20170320	08:36:00	20170321	03:21:00	1700345-08	1	999			13C8-PFOS	13C8-PFOS	105	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	Blank	20170320	08:36:00	20170321	00:25:00	B7C0099-BLK1	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	4.00	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	Blank	20170320	08:36:00	20170321	00:25:00	B7C0099-BLK1	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	2.00	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	Blank	20170320	08:36:00	20170321	00:25:00	B7C0099-BLK1	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	0.900	NG	L	U	
N624701609000	0008		CHESAPEAKE BEACH_NRL	Blank	20170320	08:36:00	20170321	00:25:00	B7C0099-BLK1	1	999			13C3-PFBS	13C3-PFBS	97.8	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	Blank	20170320	08:36:00	20170321	00:25:00	B7C0099-BLK1	1	999			13C2-PFOA	13C2-PFOA	84.8	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	Blank	20170320	08:36:00	20170321	00:25:00	B7C0099-BLK1	1	999			13C8-PFOS	13C8-PFOS	93.2	PCT	REC		
N624701609000	0008		CHESAPEAKE BEACH_NRL	LCS	20170320	08:36:00	20170320	23:47:00	B7C0099-BS1	1	999			Perfluorobutanesulfonic acid (PFBS)	375-73-5	90.3	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	LCS	20170320	08:36:00	20170320	23:47:00	B7C0099-BS1	1	999			Perfluorooctanoic acid (PFDA)	335-67-1	91.8	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	LCS	20170320	08:36:00	20170320	23:47:00	B7C0099-BS1	1	999			Perfluorooctane Sulfonate (PFOS)	1763-23-1	86.3	NG	L		
N624701609000	0008		CHESAPEAKE BEACH_NRL	LCS	20170320	08:36:00	20170320	23:47:00	B7C0099-BS1	1	999			13C3-PFBS	13C3-PFBS	97.5	PCT	REC		
N624701609000	000																			

**DATA VALIDATION SUMMARY REPORT
NRL-CBD, MARYLAND**

Client: CH2M HILL, Inc., Corvallis, Oregon
 SDG: 1700345
 Laboratory: Vista Analytical Laboratory, El Dorado Hills, California
 Site: NRL-CBD, CTO-0008, Maryland
 Date: April 18, 2017

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	CBD-AOA-MW05-0317	1700345-01	Water
2	CBD-EB01-031717	1700345-02	Water
3	CBD-AOA-MW06-0317	1700345-03	Water
4	CBD-AOA-MW08-0317	1700345-04	Water
4MS	CBD-AOA-MW08-0317MS	1700345-04MS	Water
4MSD	CBD-AOA-MW08-0317MSD	1700345-04MSD	Water
5	CBD-SO4-MW01-0317	1700345-05	Water
6	CBD-FB01-031717	1700345-06	Water
7	CBD-SO3-MW01-0317	1700345-07	Water
8	CBD-SO3-MW02-0317	1700345-08	Water

A full data validation was performed on the analytical data for six water samples, one aqueous equipment blank sample and one aqueous field blank sample collected on March 17, 2017 by CH2M HILL at the NRL-CBD site in Maryland. The samples were analyzed under the EPA Method “Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LC/MS/MS)”.

Specific method references are as follows:

Analysis
PFCs

Method References
USEPA Method 537 Modified

The data have been validated according to the protocols and quality control (QC) requirements of the analytical method, and the U.S. Department of Defense (DoD) Quality Systems Manual (QSM), Version 5.0 (July 2013) and the USEPA National Functional Guidelines for Organic Data Review as follows:

- The USEPA “Contract Laboratories Program National Functional Guidelines for Superfund Organic Methods Data Review,” August 2014;
- and the reviewer's professional judgment.

The following data quality indicators were reviewed for this report:

Organics

- Date Completeness, Case Narrative & Custody Documentation
- Holding times
- Initial and continuing calibration summaries
- Method blank and field QC blank contamination
- Surrogate recovery (%R)
- Matrix Spike/Matrix Spike Duplicate (MS/MSD) recoveries
- Ongoing Precision and Recovery (OPR)
- Target Compound Identification
- Compound Quantitation
- Field Duplicate sample precision

A full (Level IV) data validation was performed with this review including a recalculation of 10% of the detected results in the samples.

Data Usability Assessment

There were no rejections of data.

Overall the data is acceptable for the intended purposes. There were no qualifications.

Perfluorinated Compounds (PFCs)

Data Completeness, Case Narrative & Custody Documentation

- The case narrative and chain-of-custody documentation were included in the data package as required. All criteria were met.

Holding Times

- All samples were extracted within 14 days for water samples and analyzed within 28 days.

Initial Calibration

- All percent difference (%D) and/or correlation coefficients criteria were met.

Continuing Calibration

- All percent difference (%D) and RRF criteria were met.

Method Blank

- The method blanks were free of contamination.

Field QC Blank

- The field blank samples were free of contamination.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
CBD-EB01-031717	None - ND	-	-	-
CBD-FB01-031717	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- The MS/MSD samples exhibited acceptable %R and RPD values except for the following.

MS/MSD ID	Surrogate	MS %R/MSD %R/RPD	Qualifier
4	PFOA	687%/577%/OK	None - 4X Rule Applies
	PFOS	45.8%/12.6%/114	

Ongoing Precision and Recovery (OPR)

- The OPR samples exhibited acceptable percent recoveries (%R) values.

Target Compound Identification

- All mass spectra and quantitation criteria were met.

Compound Quantitation

- EDS Sample ID #4 was analyzed at a dilution due to high concentrations of PFOA and PFOS. The reporting limits were adjusted accordingly. No action was required.
- EDS Sample ID #7 was analyzed at a dilution due to a high concentration of PFOS. The reporting limits were adjusted accordingly. No action was required.

Field Duplicate Sample Precision

- Field duplicate samples were not collected.

Please contact the undersigned at (757) 564-0090 if you have any questions or need further information.

Signed:

Nancy Weaver
Nancy Weaver
Senior Chemist

Dated:

4/19/17

Data Qualifier	Definition
U	The analyte was analyzed for, but was not detected above the level of the reported sample quantitation limit.
J	The analyte is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample.
NJ	The analysis has been "tentatively identified" or "presumptively" as present and the associated numerical value is the estimated concentration in the samples.
UJ	The analyte was analyzed for but was not detected. The reported quantitation limit is approximate and may be inaccurate or imprecise.
R	The data are unusable. The sample results are rejected due to serious deficiencies in meeting QC criteria. The analyte may or may not be present in the samples.

Sample ID: CBD-AOA-MW05-0317**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-01	Date Received:	18-Mar-2017 9:13		
Project:	NRL-CBD PFAS	Sample Size:	0.123 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36		
Date Collected:	17-Mar-2017 7:40			Date Analyzed:	21-Mar-17 01:28	Column:	BEH C18		
Location:	AOA-MW05								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.81	4.07	8.11		IS 13C3-PFBS	107	60 - 150	
PFOA	ND	0.660	2.03	8.11		IS 13C2-PFOA	92.1	60 - 150	
PFOS	1.01	0.818	0.915	8.11	J	IS 13C8-PFOS	100	60 - 150	

DL - Detection limit

RL - Reporting limit

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.

NW 4/18/17

2

Sample ID: CBD-EB01-031717					Modified EPA Method 537				
Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Water		Lab Sample:	1700345-02	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.120 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 7:55	Date Analyzed: 21-Mar-17 01:41 Column: BEH C18							
Location:	EQUIP BLANK								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.87	4.17	8.36		IS 13C3-PFBS	96.4	60 - 150	
PFOA	ND	0.680	2.08	8.36		IS 13C2-PFOA	103	60 - 150	
PFOS	ND	0.844	0.938	8.36		IS 13C8-PFOS	97.8	60 - 150	

DL - Detection limit
 RL - Reporting limit

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.

rw 4/18/17

3

Sample ID: CBD-AOA-MW06-0317						Modified EPA Method 537			
Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700345-03	Date Received:	18-Mar-2017 9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.127 L		QC Batch:	B7C0099	Date Extracted:	20-Mar-2017 8:36	
Date Collected:	17-Mar-2017 8:40				Date Analyzed:	21-Mar-17 01:53 Column: BEH C18			
Location:	AOA-MW06								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.76	3.94	7.85		IS 13C3-PFBS	109	60 - 150	
PFOA	46.4	0.638	1.97	7.85		IS 13C2-PFOA	96.3	60 - 150	
PFOS	2.71	0.791	0.886	7.85	J	IS 13C8-PFOS	101	60 - 150	

DL - Detection limit
 RL - Reporting limit

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.

new 41,81.7

4

Sample ID: CBD-AOA-MW08-0317						Modified EPA Method 537				
Client Data		Sample Data		Laboratory Data						
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-04	Date Received:	18-Mar-2017	9:13		
Project:	NRL-CBD PFAS	Sample Size:	0.126 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017	8:36		
Date Collected:	17-Mar-2017 10:10			Date Analyzed:	21-Mar-17 02:06	Column:	BEH C18			
Location:	AOA-MW08				22-Mar-17 12:23	Column:	BEH C18			
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers	
PFBS	258	1.78	3.97	7.94		IS 13C3-PFBS	112	60 - 150		
PFOA	1890	6.46	19.8	79.4	D	IS 13C2-PFOA	116	60 - 150	D	
PFOS	1330	8.00	8.93	79.4	D	IS 13C8-PFOS	117	60 - 150	D	

DL - Detection limit
 RL - Reporting limit

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.

new 4118117

5

Sample ID: CBD-SO4-MW01-0317						Modified EPA Method 537			
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-05	Date Received:	18-Mar-2017	9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.127 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017	8:36	
Date Collected:	17-Mar-2017 12:15			Date Analyzed:	21-Mar-17 02:44	Column:	BEH C18		
Location:	SO4-MW01								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	8.44	1.77	3.94	7.90		IS 13C3-PFBS	99.4	60 - 150	
PFOA	21.5	0.643	1.97	7.90		IS 13C2-PFOA	96.7	60 - 150	
PFOS	266	0.797	0.886	7.90		IS 13C8-PFOS	89.3	60 - 150	

DL - Detection limit

RL - Reporting limit

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.

17041817

6

Sample ID: CBD-FB01-031717						Modified EPA Method 537			
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Water	Lab Sample:	1700345-06	Date Received:	18-Mar-2017	9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.124 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017	8:36	
Date Collected:	17-Mar-2017 9:40			Date Analyzed:	21-Mar-17 02:56	Column:	BEH C18		
Location:	FIELD BLANK								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.81	4.03	8.09		IS 13C3-PFBS	104	60 - 150	
PFOA	ND	0.658	2.02	8.09		IS 13C2-PFOA	97.5	60 - 150	
PFOS	ND	0.816	0.907	8.09		IS 13C8-PFOS	98.6	60 - 150	

DL - Detection limit

RL - Reporting limit

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.

17041817

7

Sample ID: CBD-SO3-MW01-0317						Modified EPA Method 537			
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-07	Date Received:	18-Mar-2017	9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.122 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017	8:36	
Date Collected:	17-Mar-2017 14:05			Date Analyzed:	21-Mar-17 03:09	Column:	BEH C18		
Location:	SO3-MW01				22-Mar-17 13:01	Column:	BEH C18		
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	7.09	1.83	4.10	8.19	J	IS 13C3-PFBS	110	60 - 150	
PFOA	116	0.666	2.05	8.19		IS 13C2-PFOA	103	60 - 150	
PFOS	1200	8.26	9.22	81.9	⊘	IS 13C8-PFOS	121	60 - 150	⊘

DL - Detection limit
 RL - Reporting limit

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.

MW418117

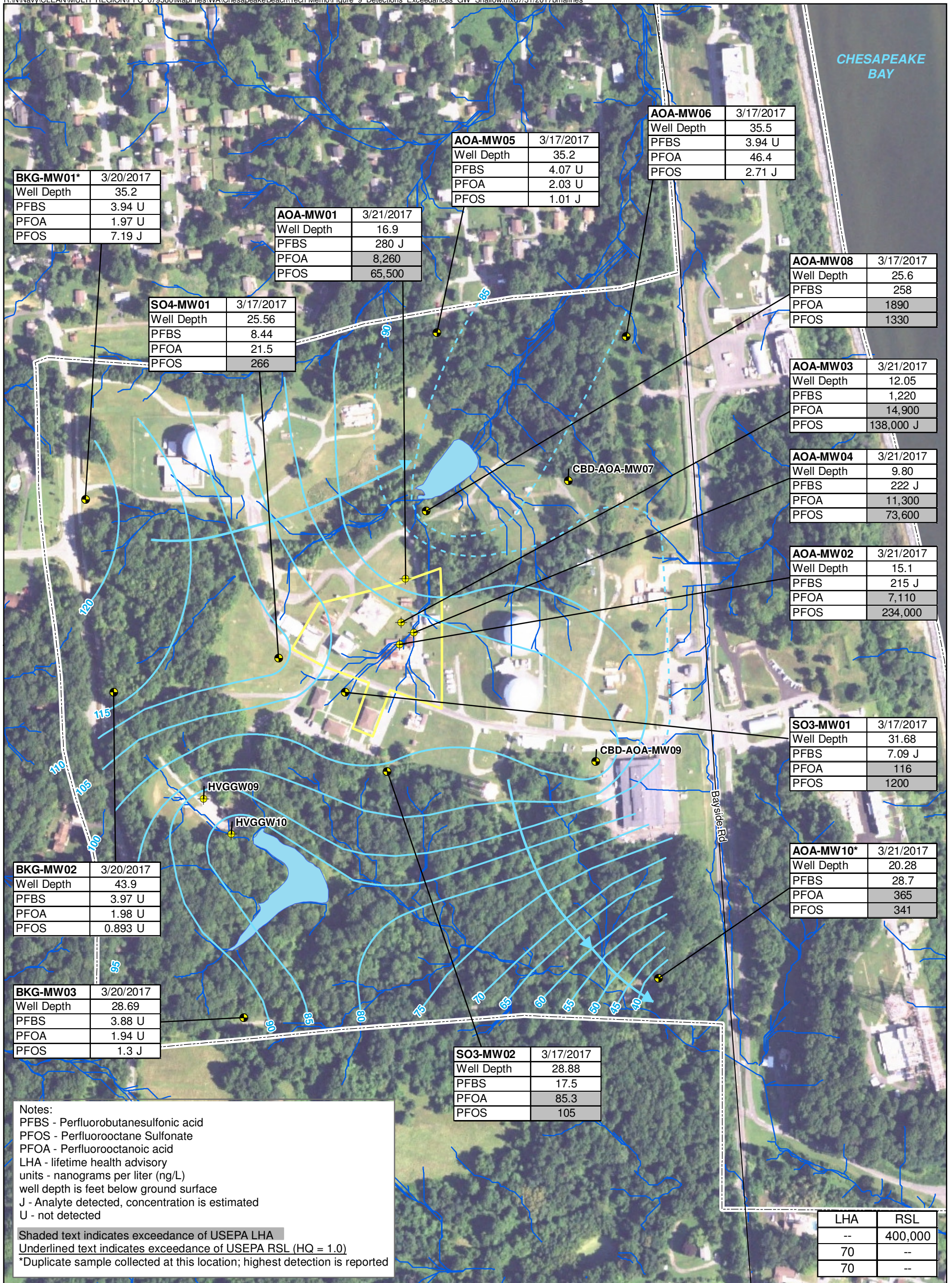
8

Sample ID: CBD-SO3-MW02-0317					Modified EPA Method 537				
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700345-08	Date Received:	18-Mar-2017	9:13	
Project:	NRL-CBD PFAS	Sample Size:	0.122 L	QC Batch:	B7C0099	Date Extracted:	20-Mar-2017	8:36	
Date Collected:	17-Mar-2017 15:25			Date Analyzed:	21-Mar-17 03:21	Column:	BEH C18		
Location:	SO3-MW02								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	17.5	1.83	4.10	8.18		IS 13C3-PFBS	98.0	60 - 150	
PFOA	85.3	0.665	2.05	8.18		IS 13C2-PFOA	91.8	60 - 150	
PFOS	105	0.825	0.922	8.18		IS 13C8-PFOS	105	60 - 150	

DL - Detection limit
 RL - Reporting limit

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.

mw 41181.7



- Legend**
- Newly Installed Shallow Monitoring Well Location
 - ⊕ Shallow Monitoring Well Location
 - - - 5-foot Contour Interval (dashed where inferred)
 - Direction of Shallow Groundwater Flow
 - Surface Water Centerline
 - ▭ Site Boundary (suspected source)
 - - - Base Boundary
 - Surface Water

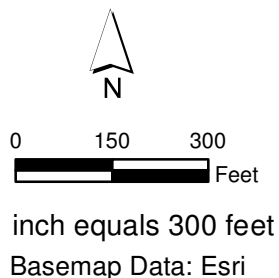


Figure 8
 Detections and Exceedances of PFAS in the Surficial Aquifer (shallow)
 Naval Research Laboratory - Chesapeake Bay Detachment
 Chesapeake Beach, Maryland