



**Groundwater Sample Results,
Level 2 Laboratory Report, Level 4 Laboratory Report,
Electronic Data Deliverable, and Data Validation Report,
SDG 1700280**

*Naval Air Station Whidbey Island
Oak Harbor, Washington*

June 2019

March 07, 2017

Vista Work Order No. 1700280

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 02, 2017. This sample set was analyzed on a rush turn-around time, under your Project Name 'Navy Clean CTO 8 OLF Coupeville'.

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. 1700280

Case Narrative

Sample Condition on Receipt:

Seven groundwater samples were received in good condition and within the method temperature requirements. The samples were received and stored securely in accordance with Vista standard operating procedures and EPA methodology. As requested by the client, the following samples were updated "WI-CV-EB06-022717" to "WI-CV-EB07-022717" and "WI-CV-EB07-022817" to "WI-CV-EB08-022817".

Analytical Notes:

Modified EPA Method 537

All samples contained particulate and 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 for all QC and field samples were within the acceptance criteria.

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
1700280-01	WI-CV-GW03M-0217	27-Feb-17 13:15	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-02	WI-CV-GW03D-0217	27-Feb-17 17:05	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-03	WI-CV-EB07-022717	27-Feb-17 17:10	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-04	WI-CV-GW04M-0217	28-Feb-17 10:00	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-05	WI-CV-GW01M-0217	28-Feb-17 11:00	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-06	WI-CV-EB08-022817	28-Feb-17 12:30	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-07	WI-CV-GW01D-0217	28-Feb-17 14:00	02-Mar-17 10:14	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: B7C0012 Date Extracted: 03-Mar-2017 8:25		Lab Sample: B7C0012-BLK1 Date Analyzed: 05-Mar-17 15:42 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	104	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	87.6	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	88.7	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: B7C0012 Date Extracted: 03-Mar-2017 8:25	Lab Sample: B7C0012-BS1 Date Analyzed: 05-Mar-17 15:04 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	89.8	80.0	112	60 - 130	IS 13C3-PFBS	105	60 - 150
PFOA	93.8	80.0	117	70 - 130	IS 13C2-PFOA	89.4	60 - 150
PFOS	81.1	80.0	101	70 - 130	IS 13C8-PFOS	92.3	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: WI-CV-GW03M-0217

Modified EPA Method 537

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-01	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.129 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	27-Feb-2017 13:15				Date Analyzed:	05-Mar-17 16:32 Column: BEH C18			
Location:	MW03M								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.74	3.88	7.76		IS 13C3-PFBS	92.1	60 - 150	
PFOA	ND	0.631	1.94	7.76		IS 13C2-PFOA	85.2	60 - 150	
PFOS	ND	0.782	0.872	7.76		IS 13C8-PFOS	95.0	60 - 150	

DL - Detection limit
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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: WI-CV-GW03D-0217**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-02	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.128 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	27-Feb-2017 17:05				Date Analyzed:	05-Mar-17 16:45 Column: BEH C18			
Location:	MW03D								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.75	3.91	7.81		IS 13C3-PFBS	86.7	60 - 150	
PFOA	ND	0.635	1.95	7.81		IS 13C2-PFOA	83.5	60 - 150	
PFOS	0.914	0.788	0.879	7.81	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: WI-CV-EB07-022717**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-03	Date Received:	02-Mar-2017 10:14		
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.115 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25		
Date Collected:	27-Feb-2017 17:10	Date Analyzed: 05-Mar-17 16:57 Column: BEH C18								
Location:	Eq. Blank									

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.95	4.35	8.69		IS 13C3-PFBS	88.9	60 - 150	
PFOA	ND	0.708	2.17	8.69		IS 13C2-PFOA	86.3	60 - 150	
PFOS	ND	0.877	0.978	8.69		IS 13C8-PFOS	88.0	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: WI-CV-GW04M-0217**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-04	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.124 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	28-Feb-2017 10:00				Date Analyzed:	05-Mar-17 17:10 Column: BEH C18			
Location:	MW04M								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.80	4.03	8.06		IS 13C3-PFBS	92.3	60 - 150	
PFOA	ND	0.656	2.02	8.06		IS 13C2-PFOA	95.1	60 - 150	
PFOS	ND	0.813	0.907	8.06		IS 13C8-PFOS	107	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: WI-CV-GW01M-0217**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-05	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.127 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	28-Feb-2017 11:00				Date Analyzed:	05-Mar-17 17:22 Column: BEH C18			
Location:	MW01M								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.76	3.94	7.88		IS 13C3-PFBS	90.0	60 - 150	
PFOA	ND	0.641	1.97	7.88		IS 13C2-PFOA	93.2	60 - 150	
PFOS	ND	0.795	0.886	7.88		IS 13C8-PFOS	110	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: WI-CV-EB08-022817**Modified EPA Method 537**

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-06	Date Received:	02-Mar-2017 10:14		
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.110 L	QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25		
Date Collected:	28-Feb-2017 12:30			Date Analyzed:	05-Mar-17 17:35	Column:	BEH C18		
Location:	Eq. Blank								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	2.04	4.55	9.12		IS 13C3-PFBS	103	60 - 150	
PFOA	ND	0.742	2.27	9.12		IS 13C2-PFOA	93.8	60 - 150	
PFOS	1.16	0.920	1.02	9.12	J	IS 13C8-PFOS	85.8	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: WI-CV-GW01D-0217**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700280-07	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville		Sample Size:	0.125 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	28-Feb-2017 14:00					Date Analyzed:	05-Mar-17 17:47 Column: BEH C18			
Location:	MW01D									

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	98.2	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	93.2	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	82.8	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.

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: 1700280 Temp: 0.4 °C
 Storage ID: WR-2 Storage Secured: Yes No

Project ID: Navy CLEAN CTU & OLE Coupeville P.O.#: 10006-7-10651 Sampler: E-Bilyeu, M. Witmer, B.
679580.09.FI.WS (name) Prentice

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

Invoice to: Name Katie Mppin Company CH2M Address _____ City _____ State _____ Ph# _____ Fax# _____

Relinquished by (printed name and signature) Brittany Prentice RP Date 3/1/2017 Time 11:00 Received by (printed name and signature) Beth Benedict B. Benedict Date 05/02/17 Time 1010

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

Add Analysis(es) Requested			Container(s)											Comments				
Quantity	Type	Matrix	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	2378-TCDD	2378-TCDD/TCDF	PCDD/PCDF	TOTALS	COPLANAR PCB'S		209 CONGENERS	PBDE	PAH	WHO-29

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	PCDD/PCDF	TOTALS	COPLANAR PCB'S	209 CONGENERS	PBDE	PAH	WHO-29	Mod. EPA 537	Comments	
WI-CV-GW034-0217	2/27/17	1315	MW03M	2	O	GW																X		
WI-CV-GW03D-0217	2/27/17	1705	MW03D	2	O	GW																X		
WI-CV-EB06-0227	2/27/17	1710	Eq. Blank	2	O	GW																X		
WI-CV-GW04M-0217	2/28/17	1000	MW04M	2	O	GW																X		
WI-CV-GW01M-0217	2/28/17	1100	MW01M	2	O	GW																X		
WI-CV-EB07-0228	2/28/17	1230	Eq. Blank	2	O	GW																X		
WI-CV-GW01D-0217	2/28/17	1400	MW01D	2	O	GW																X		

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:
 Name: Tiffany Hill
 Company: CH2M
 Address: 1100 NE Circle Blvd
 City: Corvallis State: OR Zip: 97330
 Phone: _____ Fax: _____
 Email: tiffany.hill@ch2m.com

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700280 TAT 7

Samples Arrival:	Date/Time <u>03/02/17 1014</u>	Initials: <u>UBSB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>NA</u>			
Logged In:	Date/Time <u>3/2/17 1049</u> <small>SR 3/2/17</small>	Initials: <u>SR</u>	Location: <u>WR-2</u> Shelf/Rack: <u>EA</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>0.7</u> (uncorrected)	Time: <u>1016</u>	Thermometer ID: IR-2				
Temp °C: <u>0.4</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill <u>1042</u>	Trk # <u>7785 4629 1697</u>	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?				✓
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓
Preservation Documented:	<input type="checkbox"/> Na ₂ S ₂ O ₃ <input type="checkbox"/> Trizma	Yes	<input checked="" type="radio"/> No	NA
Shipping Container	Vista <input checked="" type="radio"/> Client	Retain	<input checked="" type="radio"/> Return	Dispose

Comments:

March 07, 2017

Vista Work Order No. 1700280

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

Dear Ms. Hill,

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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



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Vista Work Order No. 1700280

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Sample Inventory Report

Vista Sample ID	Client Sample ID	Sampled	Received	Components/Containers
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1700280-02	WI-CV-GW03D-0217	27-Feb-17 17:05	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-03	WI-CV-EB07-022717	27-Feb-17 17:10	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-04	WI-CV-GW04M-0217	28-Feb-17 10:00	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-05	WI-CV-GW01M-0217	28-Feb-17 11:00	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-06	WI-CV-EB08-022817	28-Feb-17 12:30	02-Mar-17 10:14	HDPE Bottle, 125 mL HDPE Bottle, 125 mL
1700280-07	WI-CV-GW01D-0217	28-Feb-17 14:00	02-Mar-17 10:14	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: B7C0012 Date Extracted: 03-Mar-2017 8:25		Lab Sample: B7C0012-BLK1 Date Analyzed: 05-Mar-17 15:42 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	104	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	87.6	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	88.7	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: B7C0012 Date Extracted: 03-Mar-2017 8:25	Lab Sample: B7C0012-BS1 Date Analyzed: 05-Mar-17 15:04 Column: BEH C18					
Analyte	Amt Found (ng/L)	Spike Amt	%R	Limits	Labeled Standard	%R	LCL-UCL
PFBS	89.8	80.0	112	60 - 130	IS 13C3-PFBS	105	60 - 150
PFOA	93.8	80.0	117	70 - 130	IS 13C2-PFOA	89.4	60 - 150
PFOS	81.1	80.0	101	70 - 130	IS 13C8-PFOS	92.3	60 - 150

LCL-UCL - Lower control limit - upper control limit

Sample ID: WI-CV-GW03M-0217

Modified EPA Method 537

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-01	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.129 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	27-Feb-2017 13:15				Date Analyzed:	05-Mar-17 16:32 Column: BEH C18			
Location:	MW03M								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.74	3.88	7.76		IS 13C3-PFBS	92.1	60 - 150	
PFOA	ND	0.631	1.94	7.76		IS 13C2-PFOA	85.2	60 - 150	
PFOS	ND	0.782	0.872	7.76		IS 13C8-PFOS	95.0	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: WI-CV-GW03D-0217**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-02	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.128 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	27-Feb-2017 17:05				Date Analyzed:	05-Mar-17 16:45 Column: BEH C18			
Location:	MW03D								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.75	3.91	7.81		IS 13C3-PFBS	86.7	60 - 150	
PFOA	ND	0.635	1.95	7.81		IS 13C2-PFOA	83.5	60 - 150	
PFOS	0.914	0.788	0.879	7.81	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: WI-CV-EB07-022717**Modified EPA Method 537**

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-03	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.115 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	27-Feb-2017 17:10				Date Analyzed:	05-Mar-17 16:57 Column: BEH C18			
Location:	Eq. Blank								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.95	4.35	8.69		IS 13C3-PFBS	88.9	60 - 150	
PFOA	ND	0.708	2.17	8.69		IS 13C2-PFOA	86.3	60 - 150	
PFOS	ND	0.877	0.978	8.69		IS 13C8-PFOS	88.0	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: WI-CV-GW04M-0217

Modified EPA Method 537

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-04	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.124 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	28-Feb-2017 10:00				Date Analyzed:	05-Mar-17 17:10 Column: BEH C18			
Location:	MW04M								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.80	4.03	8.06		IS 13C3-PFBS	92.3	60 - 150	
PFOA	ND	0.656	2.02	8.06		IS 13C2-PFOA	95.1	60 - 150	
PFOS	ND	0.813	0.907	8.06		IS 13C8-PFOS	107	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: WI-CV-GW01M-0217**Modified EPA Method 537**

Client Data			Sample Data			Laboratory Data				
Name:	CH2M Hill		Matrix:	Groundwater		Lab Sample:	1700280-05	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville		Sample Size:	0.127 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	28-Feb-2017 11:00					Date Analyzed:	05-Mar-17 17:22		Column: BEH C18	
Location:	MW01M									

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.76	3.94	7.88		IS 13C3-PFBS	90.0	60 - 150	
PFOA	ND	0.641	1.97	7.88		IS 13C2-PFOA	93.2	60 - 150	
PFOS	ND	0.795	0.886	7.88		IS 13C8-PFOS	110	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: WI-CV-EB08-022817

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-06	Date Received:	02-Mar-2017 10:14		
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.110 L	QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25		
Date Collected:	28-Feb-2017 12:30			Date Analyzed:	05-Mar-17 17:35	Column:	BEH C18		
Location:	Eq. Blank								

Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	2.04	4.55	9.12		IS 13C3-PFBS	103	60 - 150	
PFOA	ND	0.742	2.27	9.12		IS 13C2-PFOA	93.8	60 - 150	
PFOS	1.16	0.920	1.02	9.12	J	IS 13C8-PFOS	85.8	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: WI-CV-GW01D-0217

Modified EPA Method 537

Client Data		Sample Data			Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater		Lab Sample:	1700280-07	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.125 L		QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	28-Feb-2017 14:00				Date Analyzed:	05-Mar-17 17:47 Column: BEH C18			
Location:	MW01D								

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	98.2	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	93.2	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	82.8	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.

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: 1700280 Temp: 0.4 °C
 Storage ID: WR-2 Storage Secured: Yes No

Project ID: Navy CLEAN CTU & OLF Coupeville P.O.#: 10006-7-10651 Sampler: E-Bilyeu, M. Witmer, B.
679580.09.FI.WS (name) Prentice

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

Invoice to: Name Katie Mppin Company CH2M Address _____ City _____ State _____ Ph# _____ Fax# _____

Relinquished by (printed name and signature) Brittany Prentice RP Date 3/1/2017 Time 11:00 Received by (printed name and signature) Beth Benedict B. Benedict Date 05/02/17 Time 1010

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

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	PCDD/PCDF	TOTALS	COPLANAR PCB'S	209 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	TOTALS	COPLANAR PCB'S	209 CONGENERS	PBDE	PAH	WHO-29	Mod. EPA 537	Comments
WI-CV-GW034-0217	2/27/17	1315	MW03M	2	O	GW													X	
WI-CV-GW03D-0217	2/27/17	1705	MW03D	2	O	GW													X	
WI-CV-EB06-0227	2/27/17	1710	Eq. Blank	2	O	GW													X	
WI-CV-GW04M-0217	2/28/17	1000	MW04M	2	O	GW													X	
WI-CV-GW01M-0217	2/28/17	1100	MW01M	2	O	GW													X	
WI-CV-EB07-0228	2/28/17	1230	Eq. Blank	2	O	GW													X	
WI-CV-GW01D-0217	2/28/17	1400	MW01D	2	O	GW													X	

Special Instructions/Comments: _____

SEND DOCUMENTATION AND RESULTS TO:
 Name: Tiffany Hill
 Company: CH2M
 Address: 1100 NE Circle Blvd
 City: Corvallis State: OR Zip: 97330
 Phone: _____ Fax: _____
 Email: tiffany.hill@ch2m.com

SAMPLE LOG-IN CHECKLIST



Vista Project #: 1700280 TAT 7

Samples Arrival:	Date/Time <u>03/02/17 1014</u>	Initials: <u>UBSB</u>	Location: <u>WR-2</u> Shelf/Rack: <u>NA</u>			
Logged In:	Date/Time <u>3/2/17 1049</u> <small>SR 3/2/17</small>	Initials: <u>SR</u>	Location: <u>WR-2</u> Shelf/Rack: <u>EA</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>0.7</u> (uncorrected)	Time: <u>1016</u>	Thermometer ID: IR-2				
Temp °C: <u>0.4</u> (corrected)	Probe used: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>					

		YES	NO	NA
Adequate Sample Volume Received?		✓		
Holding Time Acceptable?		✓		
Shipping Container(s) Intact?		✓		
Shipping Custody Seals Intact?		✓		
Shipping Documentation Present?		✓		
Airbill <u>1042</u>	Trk # <u>7785 4629 1697</u>	✓		
Sample Container Intact?		✓		
Sample Custody Seals Intact?				✓
Chain of Custody / Sample Documentation Present?		✓		
COC Anomaly/Sample Acceptance Form completed?			✓	
If Chlorinated or Drinking Water Samples, Acceptable Preservation?				✓
Preservation Documented:	<input type="checkbox"/> Na ₂ S ₂ O ₃ <input type="checkbox"/> Trizma	Yes	<input checked="" type="checkbox"/> No	NA
Shipping Container	Vista <input checked="" type="checkbox"/> Client	Retain	<input checked="" type="checkbox"/> Return	Dispose

Comments:

EXTRACTION INFORMATION

Process Sheet
 Workorder: **1700280**



Prep Expiration: 2017-Mar-13
 Client: CH2M Hill

Workorder Due: 09-Mar-17 00:00

TAT: 7

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

Prep Batch: 87C0012

Prep Data Entered: BP 3.6.17
Date and Initials

Version: PFOA, PFOS, PFBS

Initial Sequence: _____

LabSampleID	Recon	ClientSampleID	Date Received	Location	Comments
1700280-01	<input checked="" type="checkbox"/>	WI-CV-GW03M-0217	02-Mar-17 10:14	WR-2 E-4	
1700280-02	<input checked="" type="checkbox"/>	WI-CV-GW03D-0217	02-Mar-17 10:14	WR-2 E-4	
1700280-03	<input checked="" type="checkbox"/>	WI-CV-EB07-022717	02-Mar-17 10:14	WR-2 E-4	
1700280-04	<input checked="" type="checkbox"/>	WI-CV-GW04M-0217	02-Mar-17 10:14	WR-2 E-4	
1700280-05	<input checked="" type="checkbox"/>	WI-CV-GW01M-0217	02-Mar-17 10:14	WR-2 E-4	
1700280-06	<input type="checkbox"/>	WI-CV-EB08-022817 ^{BP 3.3.17} WI-CV-EB07-022817	02-Mar-17 10:14	WR-2 E-4	
1700280-07	<input checked="" type="checkbox"/>	WI-CV-GW01D-0217	02-Mar-17 10:14	WR-2 E-4	

centrifuge, use 125mLs

Vista PM: Martha Maier

Vial Box ID: The Duke

Sample Reconciled By: B. Parker 3/3/17

PREPARATION BENCH SHEET

Matrix: Aqueous

B7C0012

Chemist: G. Mendola

Method: 537 PFAS DOD (LOO as mRL)

Prep Date/Time: 03-Mar-17 08:25

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"/>	B7C0012-BLK1	NA	NA	(0.125)	on BP 3/3/17	BP 3 3 17	on BP 3/3/17
<input type="checkbox"/>	B7C0012-BS1	↓	↓	(0.125)			
<input type="checkbox"/>	1700268-02RE1 (A) (D)	92.03	26.57	0.06546	↓	↓	↓
<input type="checkbox"/>	1700268-04RE1 (D)	91.85	26.59	0.06526			
<input type="checkbox"/>	1700280-01 (B)	155.98	27.06	0.12892 ✓			
<input type="checkbox"/>	1700280-02 (C)	155.24	27.19	0.12805 ✓			
<input type="checkbox"/>	1700280-03 (C)	142.21	27.20	0.11501 ✓			
<input type="checkbox"/>	1700280-04 (D)	151.19	27.15	0.12404 ✓			
<input type="checkbox"/>	1700280-05 (B)	154.04	27.13	0.12691 ✓			
<input type="checkbox"/>	1700280-06 (B)	136.76	27.16	0.10960 ✓			
<input type="checkbox"/>	1700280-07 (B)	152.16	27.19	0.12498 ✓			

- (A) Centrifuged to remove gelatinous substance BP 3-3-17
- (B) Contained very little gel (<1g) BP 3-3-17
- (C) Contained medium amounts of gel (~1-2g) BP 3-3-17
- (D) Contained ~2g of gel BP 3-3-17

IS Name <u>1611920, 10uL</u>	NS Name <u>1612905, 10uL</u>	RS Name <u>17A1201, 10uL</u>	SPE Chem <u>Strata X-AW 33um 200mg/bml</u>	Check Out: Chemist/Date: <u>BP 3-3-17</u>
			Ele SOLV: <u>0.5% MeOH in MeOH/MeOH</u>	Check In: Chemist/Date: <u>BP 3-3-17</u>
			Final Volume(s) <u>1uL</u>	Balance ID: <u>HBMS-8</u>

Comments: Assume 1 g = 1 mL

SAMPLE DATA – MODIFIED EPA METHOD 537

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time

Printed: Monday, March 06, 2017 13:02:59 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		5.809e3		0.125			
2	4 PFOA	413 > 368.7	1.839e2	2.727e4		0.125	4.31		
3	6 PFOS	499 >79.9		6.667e3		0.125			
4	7 13C3-PFBS	302.0 > 98.8	5.809e3	1.363e4	0.410	0.125	3.03	104	104
5	10 13C2-PFOA	414.9 > 369.7	2.727e4	6.759e3	4.608	0.125	4.31	87.6	87.6
6	12 13C8-PFOS	507.0 > 79.9	6.667e3	7.841e3	0.958	0.125	4.69	88.7	88.7
7	14 13C3-PFHxS	401.9 > 79.9	1.363e4	1.363e4	1.000	0.125	4.03	100	100
8	15 13C8-PFOA	421.3 > 376	6.759e3	6.759e3	1.000	0.125	4.31	100	100
9	17 13C4-PFOS	503.0 > 79.9	7.841e3	7.841e3	1.000	0.125	4.70	100	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time

Printed: Monday, March 06, 2017 13:03:17 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.664e3		0.125			
2	19 Total PFHxS	398.9 > 79.6		5.664e3		0.125			
3	20 Total PFOA	413 > 368.7		2.727e4		0.125			
4	21 Total PFOS	499 > 79.9		6.667e3		0.125			

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

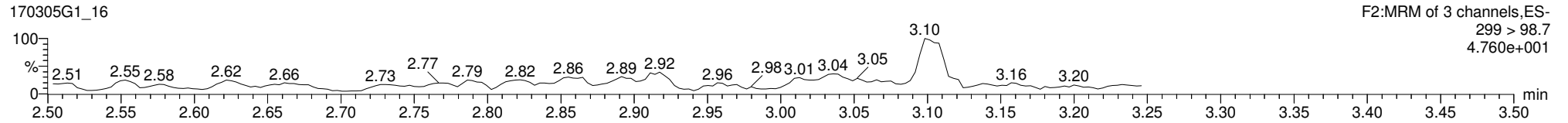
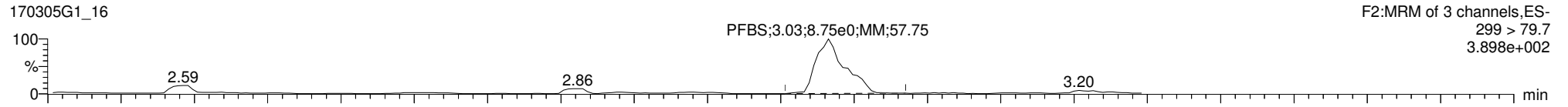
Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time

Printed: Monday, March 06, 2017 13:02:59 Pacific Standard Time

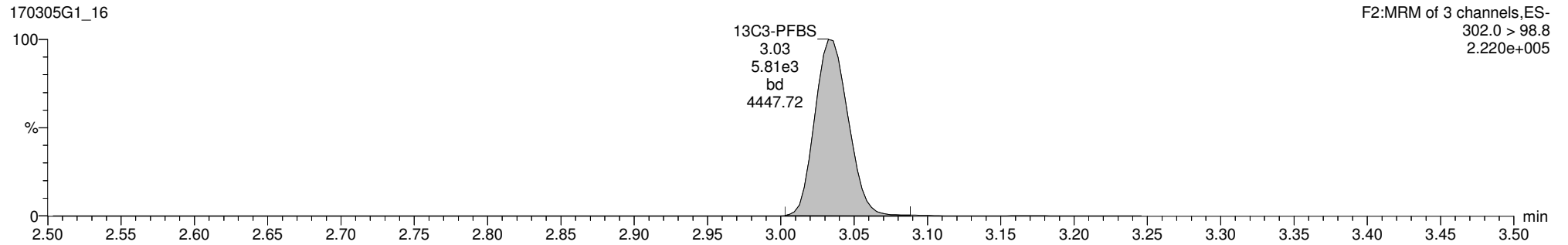
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23, Instrument: , Lab: , User:

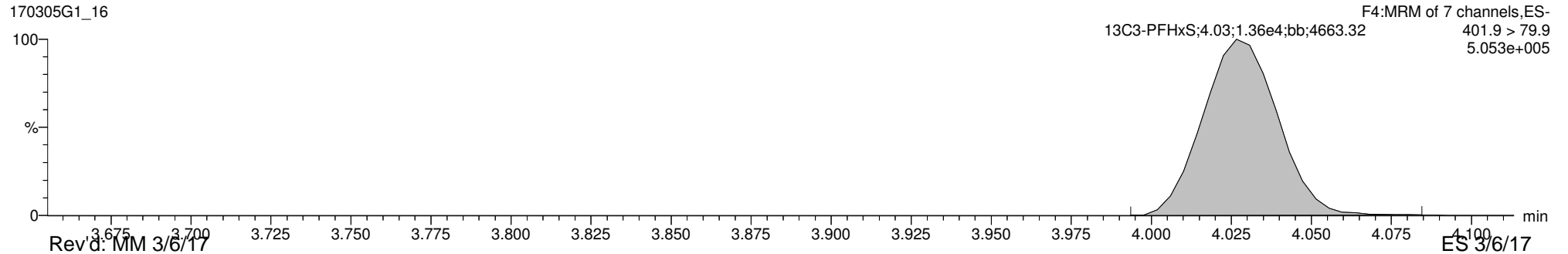
PFBS



13C3-PFBS



13C3-PFHxS



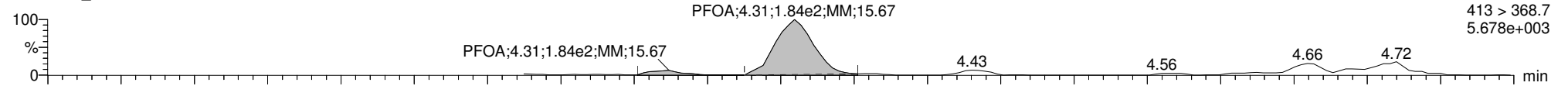
Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time
Printed: Monday, March 06, 2017 13:02:59 Pacific Standard Time

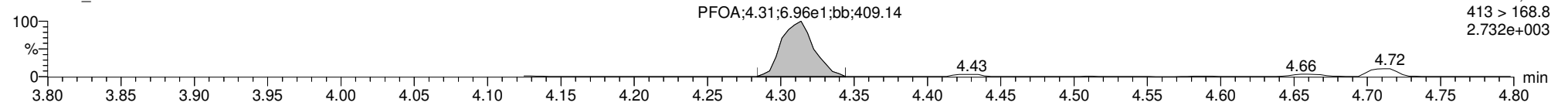
ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23, Instrument: , Lab: , User:

PFOA

170305G1_16

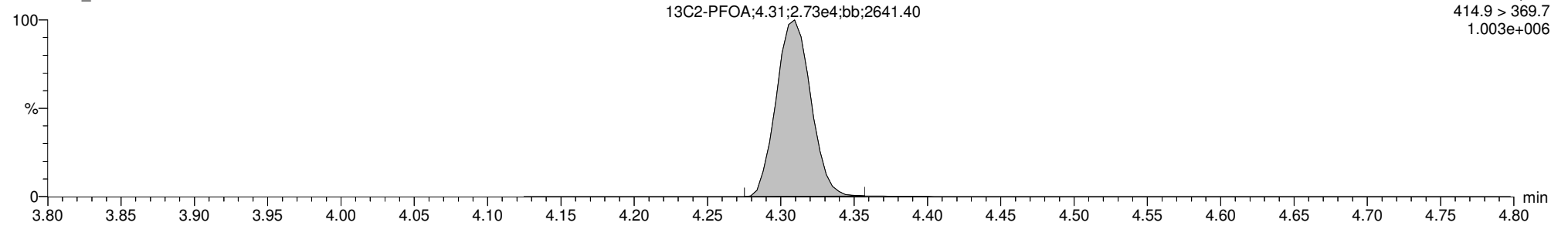


170305G1_16



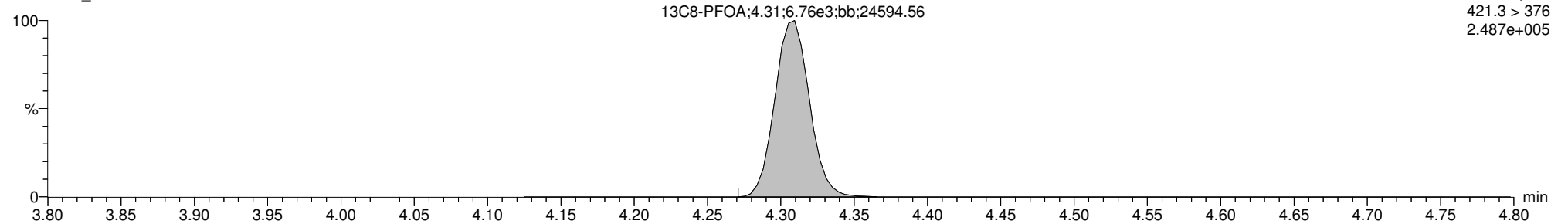
13C2-PFOA

170305G1_16



13C8-PFOA

170305G1_16



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-16.qld

Last Altered: Monday, March 06, 2017 10:32:37 Pacific Standard Time

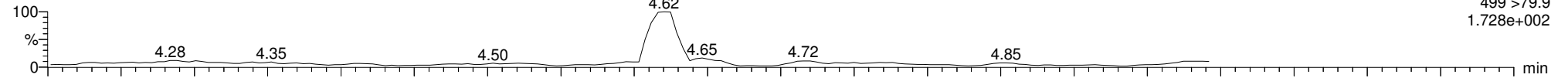
Printed: Monday, March 06, 2017 13:02:59 Pacific Standard Time

ID: B7C0012-BLK1 Method Blank 0.125, Description: Method Blank, Name: 170305G1_16, Date: 05-Mar-2017, Time: 15:42:23, Instrument: , Lab: , User:

PFOS

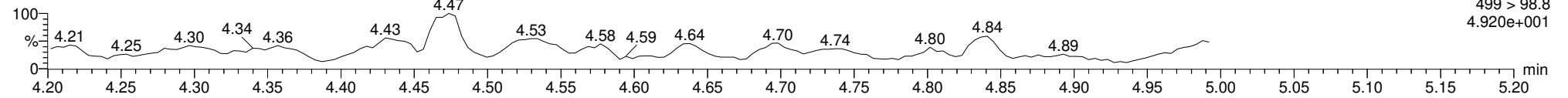
170305G1_16

F5:MRM of 12 channels,ES-
499 >79.9
1.728e+002



170305G1_16

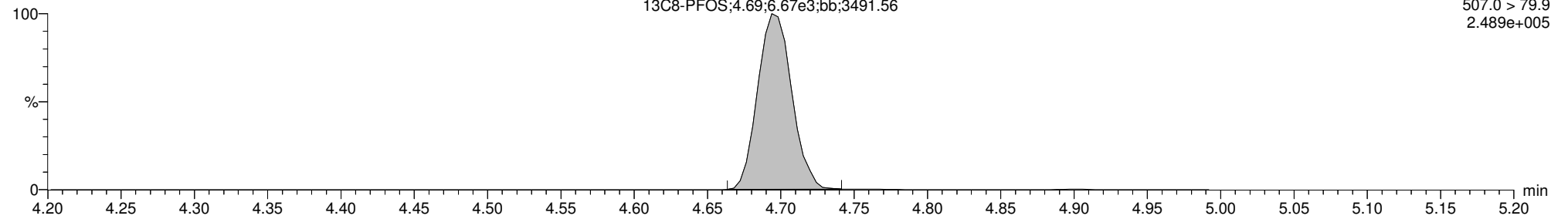
F5:MRM of 12 channels,ES-
499 > 98.8
4.920e+001



13C8-PFOS

170305G1_16

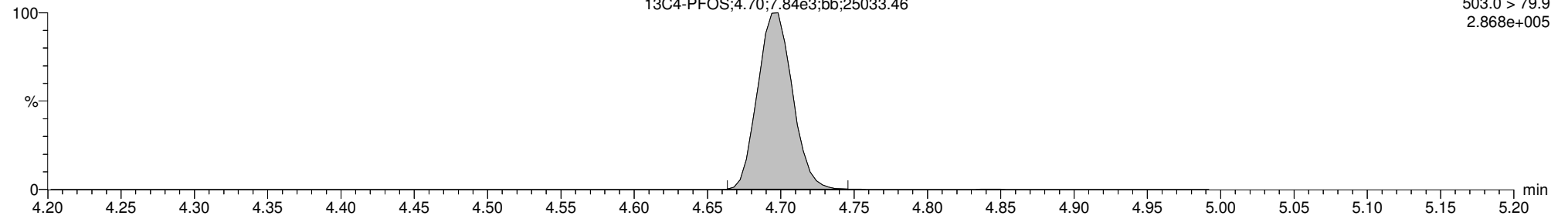
F5:MRM of 12 channels,ES-
507.0 > 79.9
2.489e+005



13C4-PFOS

170305G1_16

F5:MRM of 12 channels,ES-
503.0 > 79.9
2.868e+005



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time

Printed: Monday, March 06, 2017 13:07:56 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.163e4	5.427e3		0.125	3.04	89.8	112
2	4 PFOA	413 > 368.7	1.828e4	2.406e4		0.125	4.31	93.8	117
3	6 PFOS	499 >79.9	2.607e3	6.027e3		0.125	4.69	81.1	101
4	7 13C3-PFBS	302.0 > 98.8	5.427e3	1.265e4	0.410	0.125	3.03	105	105
5	10 13C2-PFOA	414.9 > 369.7	2.406e4	5.841e3	4.608	0.125	4.30	89.4	89.4
6	12 13C8-PFOS	507.0 > 79.9	6.027e3	6.816e3	0.958	0.125	4.69	92.3	92.3
7	14 13C3-PFHxS	401.9 > 79.9	1.265e4	1.265e4	1.000	0.125	4.03	100	100
8	15 13C8-PFOA	421.3 > 376	5.841e3	5.841e3	1.000	0.125	4.30	100	100
9	17 13C4-PFOS	503.0 > 79.9	6.816e3	6.816e3	1.000	0.125	4.69	100	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time

Printed: Monday, March 06, 2017 13:08:39 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.115e3		0.125		89.8	
2	20 Total PFOA	413 > 368.7		2.406e4		0.125		93.8	
3	21 Total PFOS	499 > 79.9		6.027e3		0.125		81.1	

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time

Printed: Monday, March 06, 2017 13:07:56 Pacific Standard Time

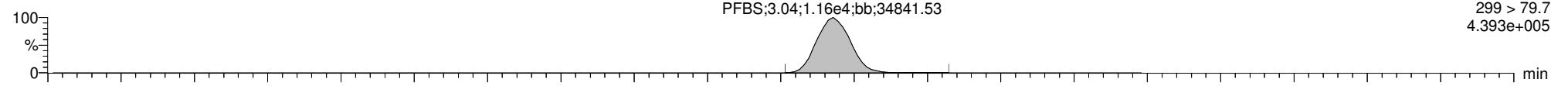
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

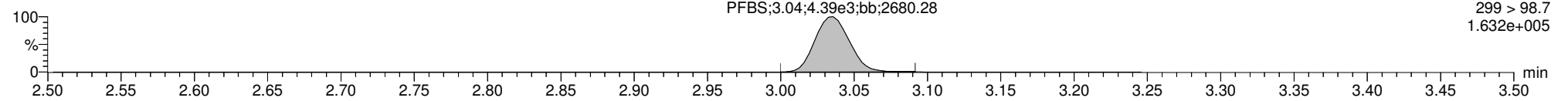
ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45, Instrument: , Lab: , User:

PFBS

170305G1_13

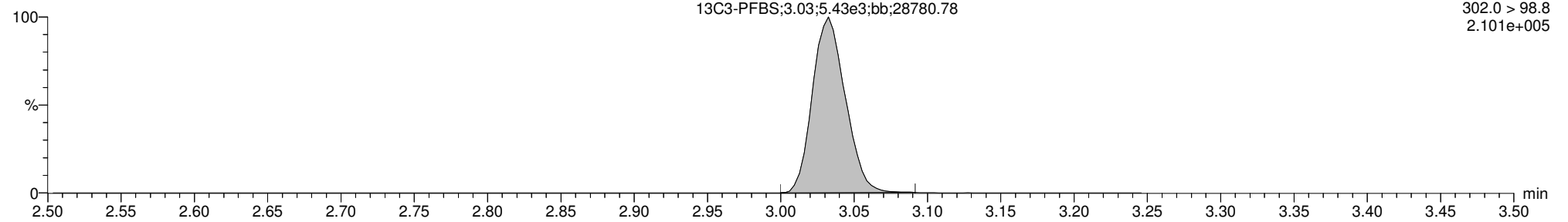


170305G1_13



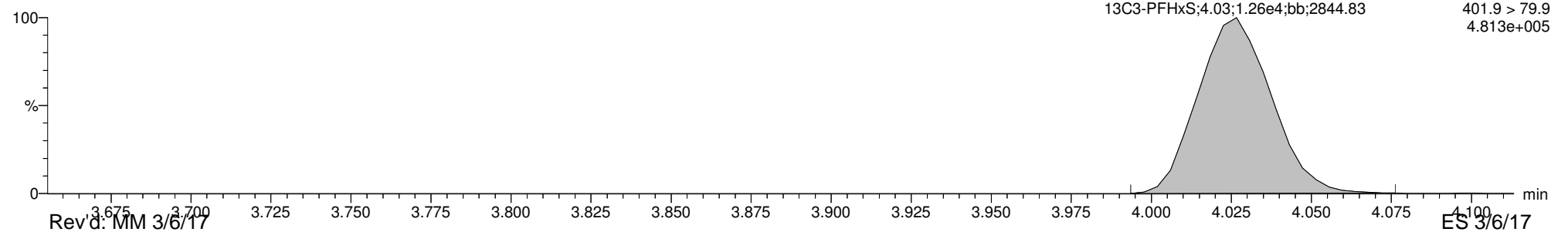
13C3-PFBS

170305G1_13



13C3-PFHxS

170305G1_13



Rev'd: MM 3/6/17

ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

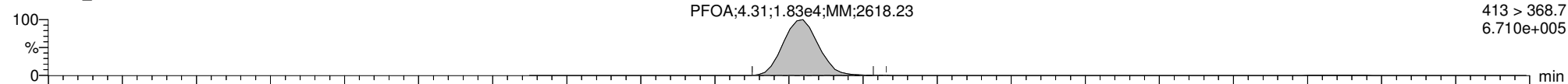
Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time

Printed: Monday, March 06, 2017 13:07:56 Pacific Standard Time

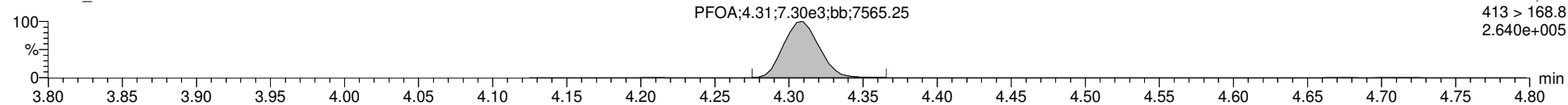
ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45, Instrument: , Lab: , User:

PFOA

170305G1_13

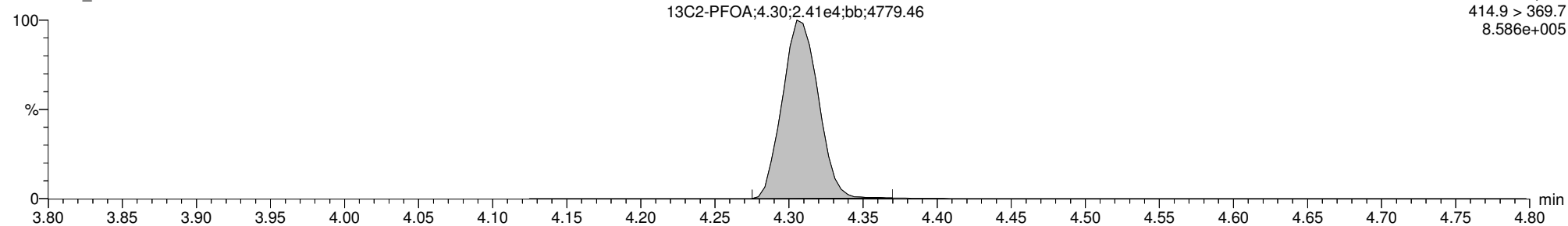


170305G1_13



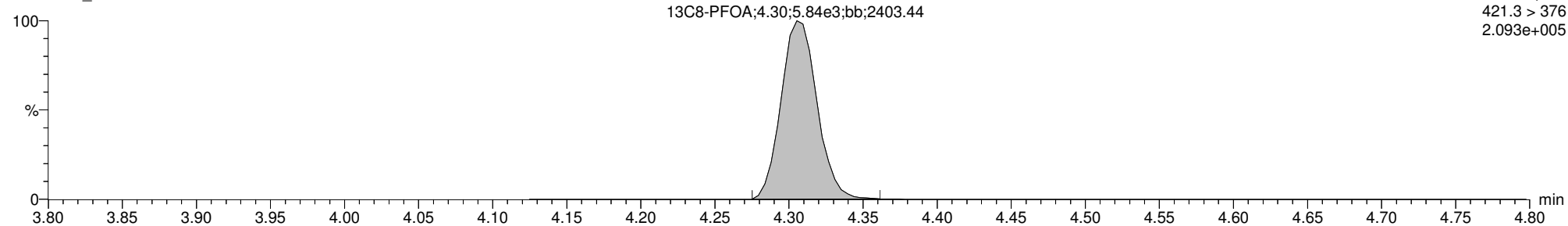
13C2-PFOA

170305G1_13



13C8-PFOA

170305G1_13



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-13.qld

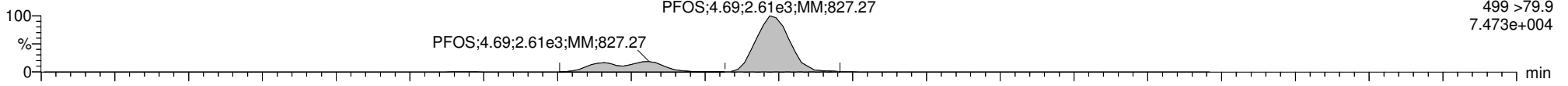
Last Altered: Monday, March 06, 2017 10:17:53 Pacific Standard Time

Printed: Monday, March 06, 2017 13:07:56 Pacific Standard Time

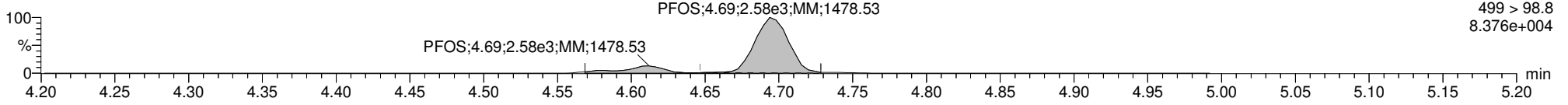
ID: B7C0012-BS1 OPR 0.125, Description: OPR, Name: 170305G1_13, Date: 05-Mar-2017, Time: 15:04:45, Instrument: , Lab: , User:

PFOS

170305G1_13

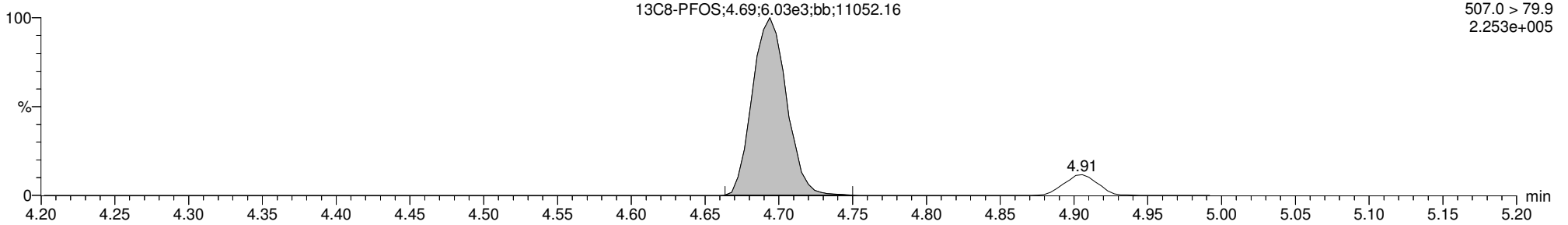


170305G1_13



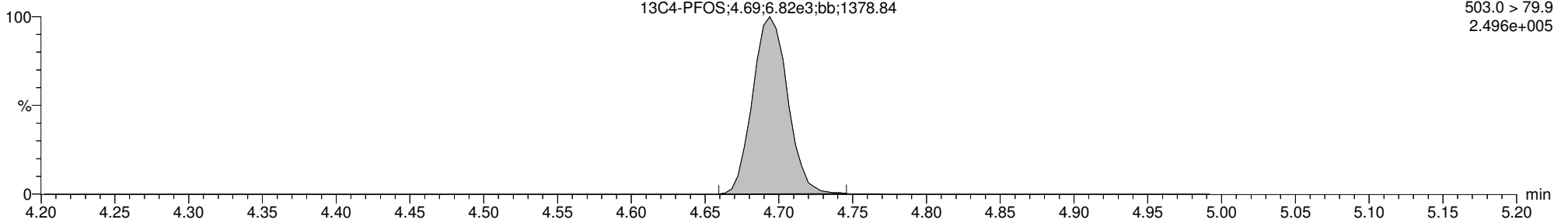
13C8-PFOS

170305G1_13



13C4-PFOS

170305G1_13



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-20.qld

Last Altered: Monday, March 06, 2017 12:35:21 Pacific Standard Time

Printed: Monday, March 06, 2017 12:59:16 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-01 WI-CV-GW03M-0217 0.125, Description: WI-CV-GW03M-0217, Name: 170305G1_20, Date: 05-Mar-2017, Time: 16:32:34

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	9.781e0	5.758e3		0.129	3.04		
2	4 PFOA	413 > 368.7	1.116e2	2.985e4		0.129	4.31		
3	6 PFOS	499 >79.9		7.724e3		0.129			
4	7 13C3-PFBS	302.0 > 98.8	5.758e3	1.526e4	0.410	0.129	3.04	89.3	92.1
5	10 13C2-PFOA	414.9 > 369.7	2.985e4	7.598e3	4.608	0.129	4.31	82.6	85.2
6	12 13C8-PFOS	507.0 > 79.9	7.724e3	8.488e3	0.958	0.129	4.70	92.1	95.0
7	14 13C3-PFHxS	401.9 > 79.9	1.526e4	1.526e4	1.000	0.129	4.03	97.0	100
8	15 13C8-PFOA	421.3 > 376	7.598e3	7.598e3	1.000	0.129	4.31	97.0	100
9	17 13C4-PFOS	503.0 > 79.9	8.488e3	8.488e3	1.000	0.129	4.70	97.0	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-20.qld

Last Altered: Monday, March 06, 2017 12:35:21 Pacific Standard Time

Printed: Monday, March 06, 2017 12:59:34 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-01 WI-CV-GW03M-0217 0.125, Description: WI-CV-GW03M-0217, Name: 170305G1_20, Date: 05-Mar-2017, Time: 16:32:34

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.759e3		0.129			
2	20 Total PFOA	413 > 368.7		2.985e4		0.129			
3	21 Total PFOS	499 > 79.9		7.724e3		0.129			

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-20.qld

Last Altered: Monday, March 06, 2017 12:35:21 Pacific Standard Time

Printed: Monday, March 06, 2017 12:59:16 Pacific Standard Time

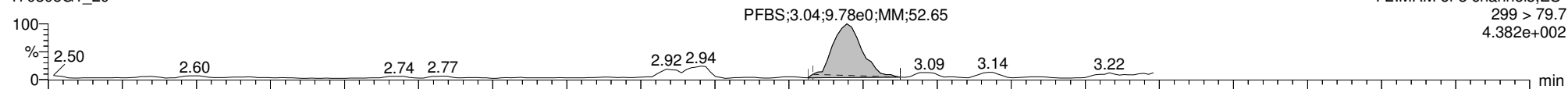
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

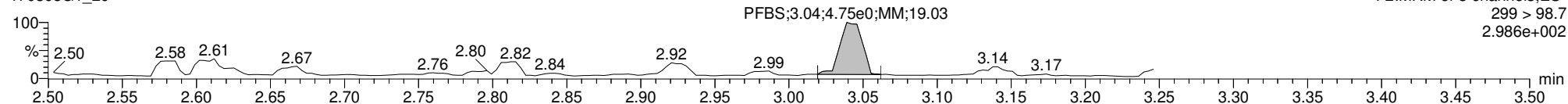
ID: 1700280-01 WI-CV-GW03M-0217 0.125, Description: WI-CV-GW03M-0217, Name: 170305G1_20, Date: 05-Mar-2017, Time: 16:32:34, Instrument: , Lab: , User:

PFBS

170305G1_20

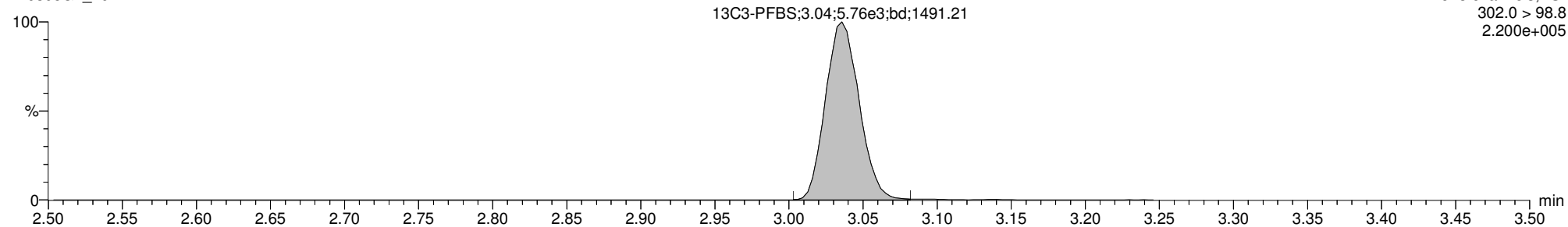


170305G1_20



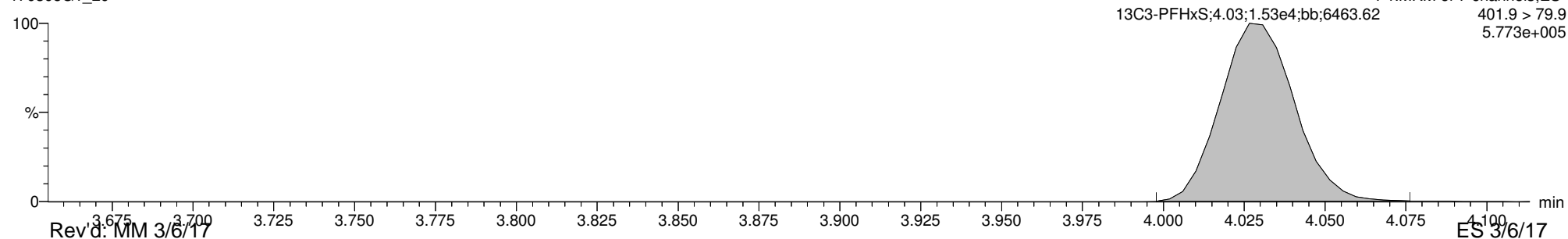
13C3-PFBS

170305G1_20



13C3-PFHxS

170305G1_20



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-20.qld

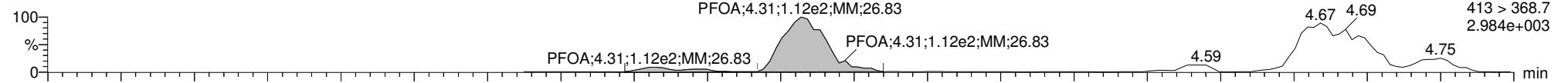
Last Altered: Monday, March 06, 2017 12:35:21 Pacific Standard Time

Printed: Monday, March 06, 2017 12:59:16 Pacific Standard Time

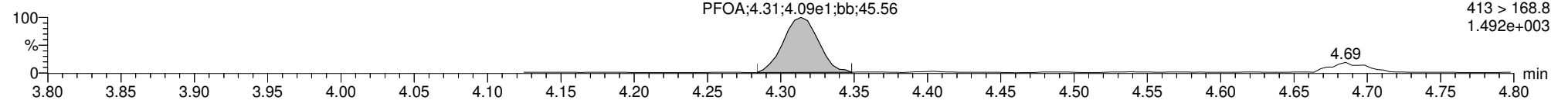
ID: 1700280-01 WI-CV-GW03M-0217 0.125, Description: WI-CV-GW03M-0217, Name: 170305G1_20, Date: 05-Mar-2017, Time: 16:32:34, Instrument: , Lab: , User:

PFOA

170305G1_20

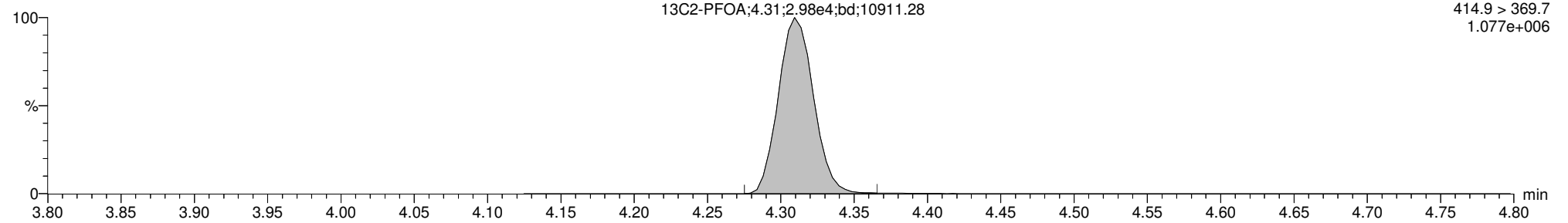


170305G1_20



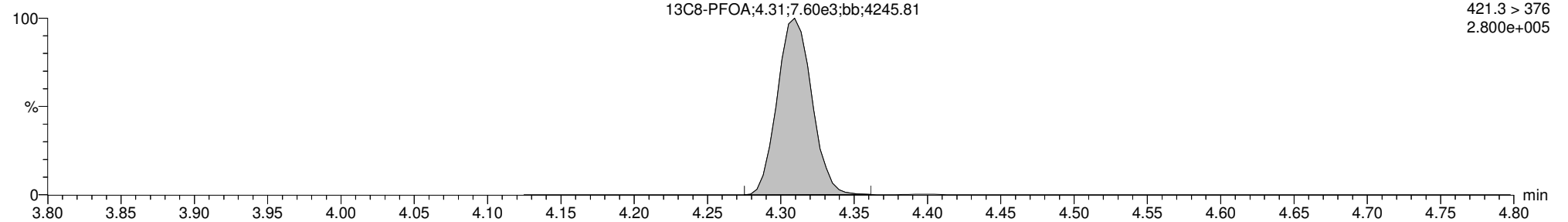
13C2-PFOA

170305G1_20



13C8-PFOA

170305G1_20

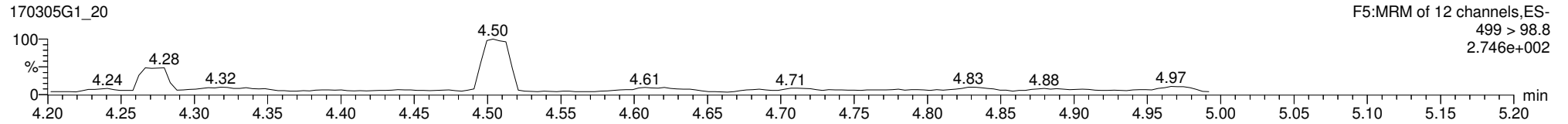
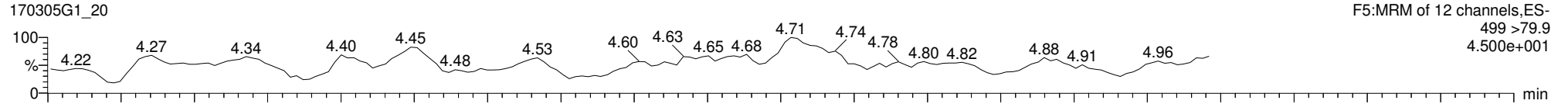


Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-20.qld

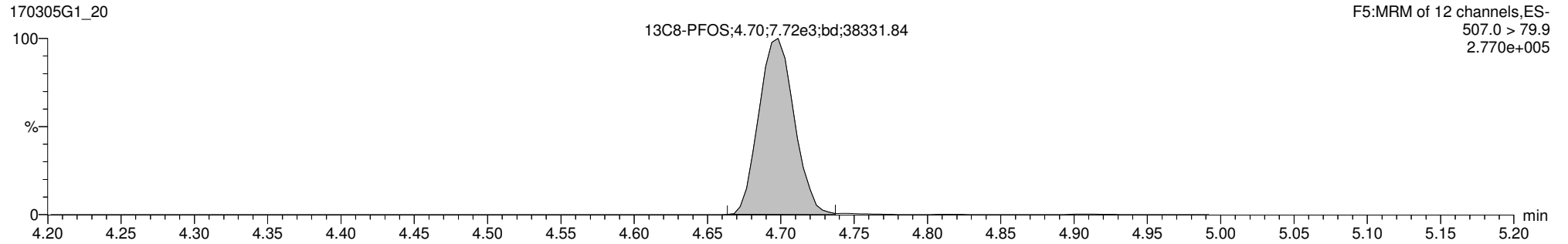
Last Altered: Monday, March 06, 2017 12:35:21 Pacific Standard Time
Printed: Monday, March 06, 2017 12:59:16 Pacific Standard Time

ID: 1700280-01 WI-CV-GW03M-0217 0.125, Description: WI-CV-GW03M-0217, Name: 170305G1_20, Date: 05-Mar-2017, Time: 16:32:34, Instrument: , Lab: , User:

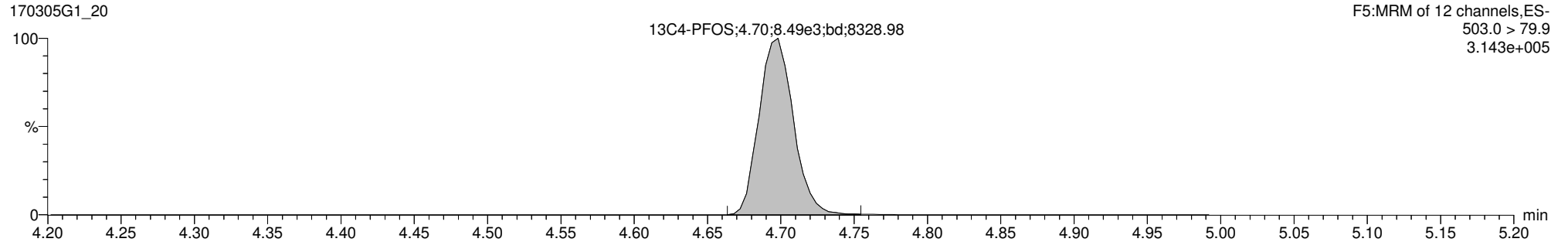
PFOS



13C8-PFOS



13C4-PFOS



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-21.qld

Last Altered: Monday, March 06, 2017 12:42:49 Pacific Standard Time

Printed: Monday, March 06, 2017 12:57:50 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-02 WI-CV-GW03D-0217 0.125, Description: WI-CV-GW03D-0217, Name: 170305G1_21, Date: 05-Mar-2017, Time: 16:45:07

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		5.993e3		0.128			
2	4 PFOA	413 > 368.7	2.133e2	3.539e4		0.128	4.31		
3	6 PFOS	499 >79.9	8.704e0	1.011e4		0.128	4.61	0.914	
4	7 13C3-PFBS	302.0 > 98.8	5.993e3	1.686e4	0.410	0.128	3.03	84.7	86.7
5	10 13C2-PFOA	414.9 > 369.7	3.539e4	9.199e3	4.608	0.128	4.31	81.5	83.5
6	12 13C8-PFOS	507.0 > 79.9	1.011e4	1.041e4	0.958	0.128	4.70	99.0	101
7	14 13C3-PFHxS	401.9 > 79.9	1.686e4	1.686e4	1.000	0.128	4.03	97.6	100
8	15 13C8-PFOA	421.3 > 376	9.199e3	9.199e3	1.000	0.128	4.31	97.6	100
9	17 13C4-PFOS	503.0 > 79.9	1.041e4	1.041e4	1.000	0.128	4.70	97.6	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-21.qld

Last Altered: Monday, March 06, 2017 12:42:49 Pacific Standard Time

Printed: Monday, March 06, 2017 12:58:09 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-02 WI-CV-GW03D-0217 0.125, Description: WI-CV-GW03D-0217, Name: 170305G1_21, Date: 05-Mar-2017, Time: 16:45:07

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.971e3		0.128			
2	20 Total PFOA	413 > 368.7		3.539e4		0.128			
3	21 Total PFOS	499 > 79.9		1.011e4		0.128		0.914	

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-21.qld

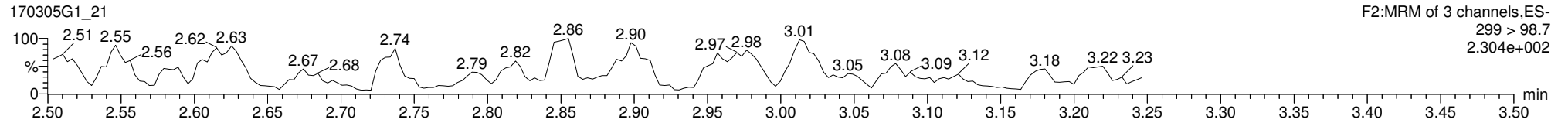
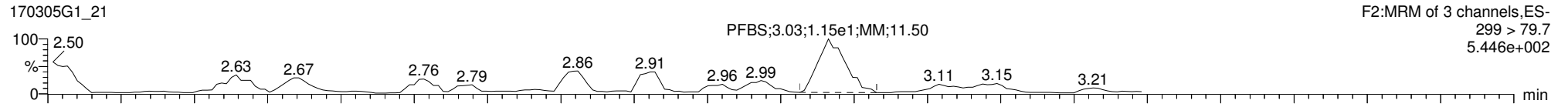
Last Altered: Monday, March 06, 2017 12:42:49 Pacific Standard Time

Printed: Monday, March 06, 2017 12:57:50 Pacific Standard Time

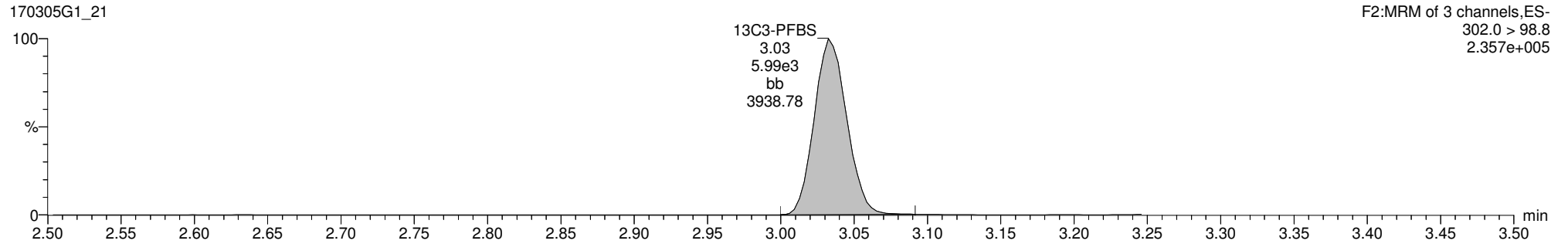
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-02 WI-CV-GW03D-0217 0.125, Description: WI-CV-GW03D-0217, Name: 170305G1_21, Date: 05-Mar-2017, Time: 16:45:07, Instrument: , Lab: , User:

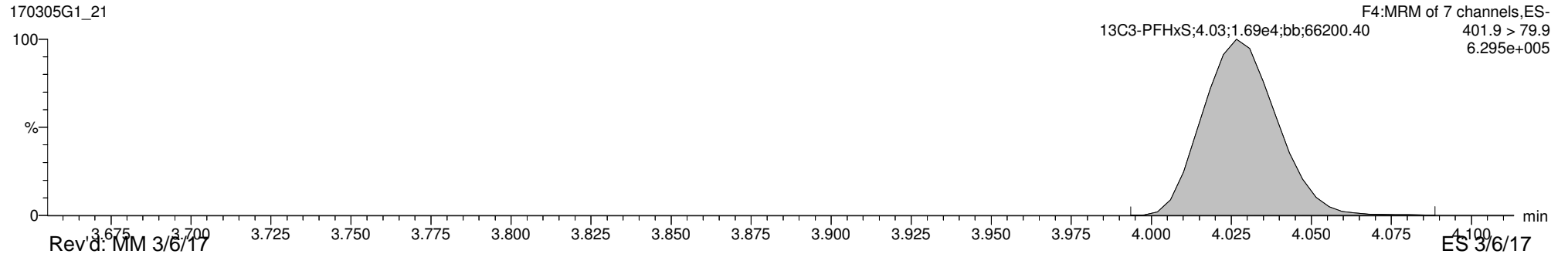
PFBS



13C3-PFBS



13C3-PFHxS



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-21.qld

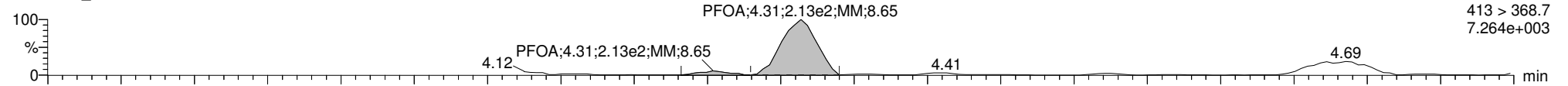
Last Altered: Monday, March 06, 2017 12:42:49 Pacific Standard Time

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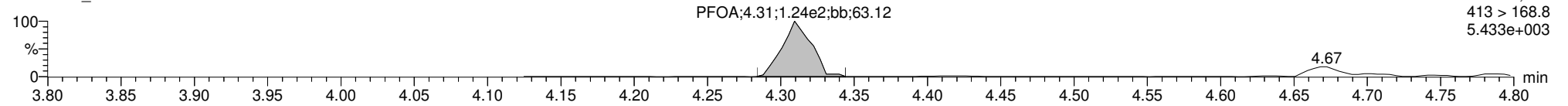
ID: 1700280-02 WI-CV-GW03D-0217 0.125, Description: WI-CV-GW03D-0217, Name: 170305G1_21, Date: 05-Mar-2017, Time: 16:45:07, Instrument: , Lab: , User:

PFOA

170305G1_21

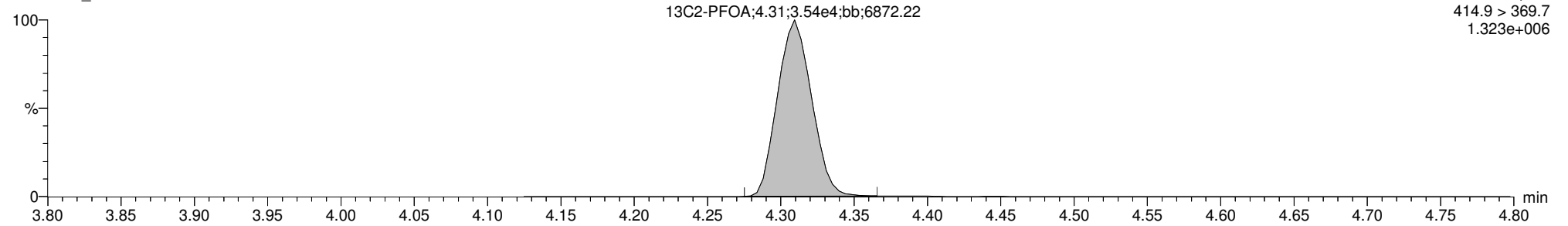


170305G1_21



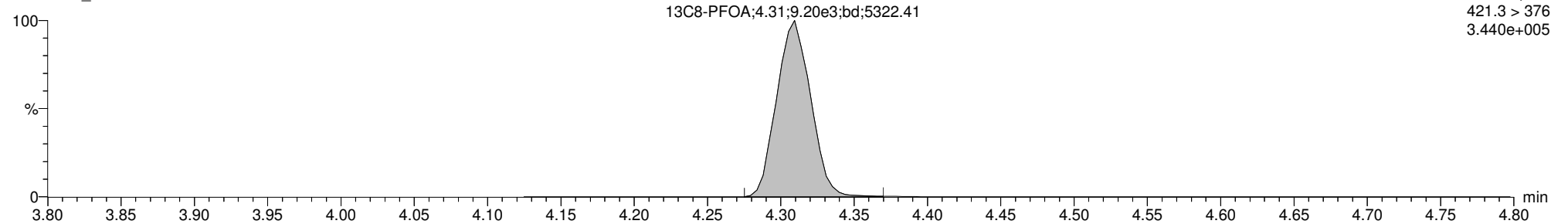
13C2-PFOA

170305G1_21



13C8-PFOA

170305G1_21



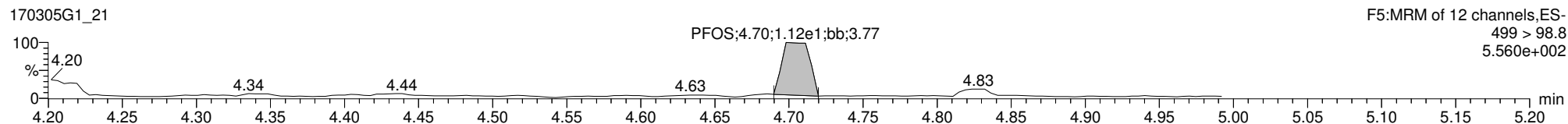
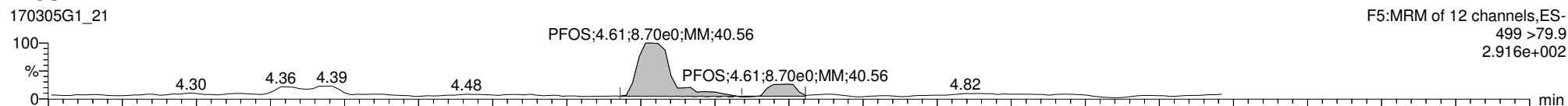
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Last Altered: Monday, March 06, 2017 12:42:49 Pacific Standard Time

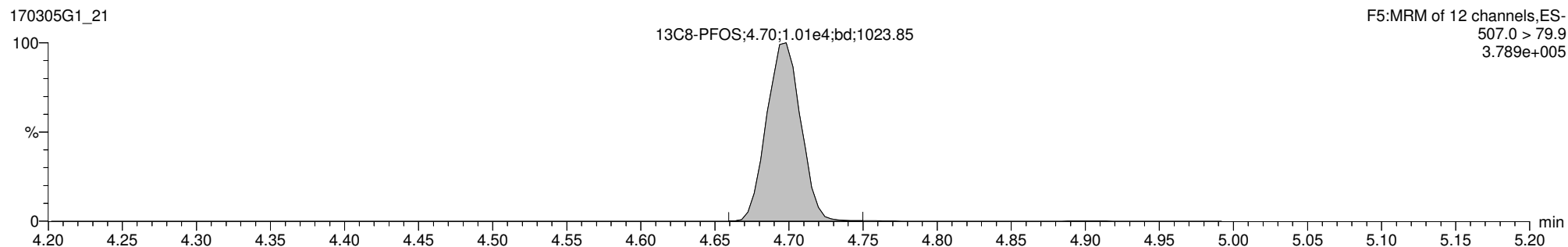
Printed: Monday, March 06, 2017 12:57:50 Pacific Standard Time

ID: 1700280-02 WI-CV-GW03D-0217 0.125, Description: WI-CV-GW03D-0217, Name: 170305G1_21, Date: 05-Mar-2017, Time: 16:45:07, Instrument: , Lab: , User:

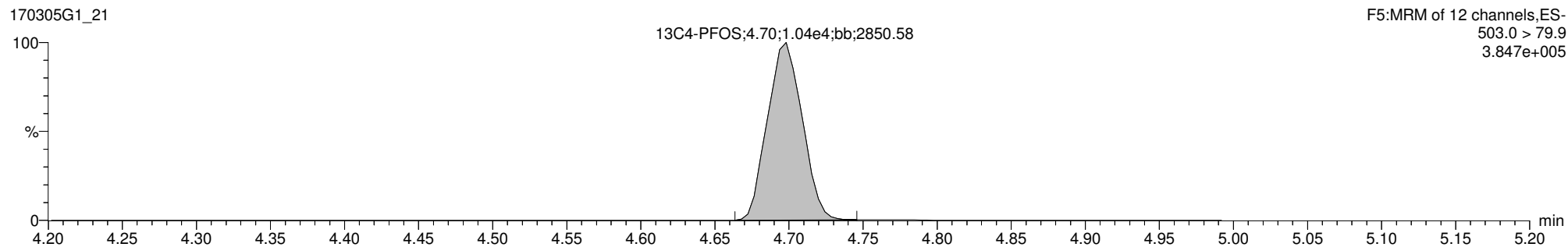
PFOS



13C8-PFOS



13C4-PFOS



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-22.qld

Last Altered: Monday, March 06, 2017 12:46:19 Pacific Standard Time

Printed: Monday, March 06, 2017 12:56:11 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-03 WI-CV-EB07-022717 0.125, Description: WI-CV-EB07-022717, Name: 170305G1_22, Date: 05-Mar-2017, Time: 16:57:36

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.236e3		0.115			
2	4 PFOA	413 > 368.7	2.659e2	3.912e4		0.115	4.31		
3	6 PFOS	499 >79.9		1.197e4		0.115			
4	7 13C3-PFBS	302.0 > 98.8	6.236e3	1.711e4	0.410	0.115	3.04	96.6	88.9
5	10 13C2-PFOA	414.9 > 369.7	3.912e4	9.833e3	4.608	0.115	4.31	93.8	86.3
6	12 13C8-PFOS	507.0 > 79.9	1.197e4	1.419e4	0.958	0.115	4.69	95.7	88.0
7	14 13C3-PFHxS	401.9 > 79.9	1.711e4	1.711e4	1.000	0.115	4.03	109	100
8	15 13C8-PFOA	421.3 > 376	9.833e3	9.833e3	1.000	0.115	4.31	109	100
9	17 13C4-PFOS	503.0 > 79.9	1.419e4	1.419e4	1.000	0.115	4.70	109	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-22.qld

Last Altered: Monday, March 06, 2017 12:46:19 Pacific Standard Time

Printed: Monday, March 06, 2017 12:56:49 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-03 WI-CV-EB07-022717 0.125, Description: WI-CV-EB07-022717, Name: 170305G1_22, Date: 05-Mar-2017, Time: 16:57:36

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		7.048e3		0.115			
2	20 Total PFOA	413 > 368.7		3.912e4		0.115			
3	21 Total PFOS	499 > 79.9		1.197e4		0.115			

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-22.qld

Last Altered: Monday, March 06, 2017 12:46:19 Pacific Standard Time

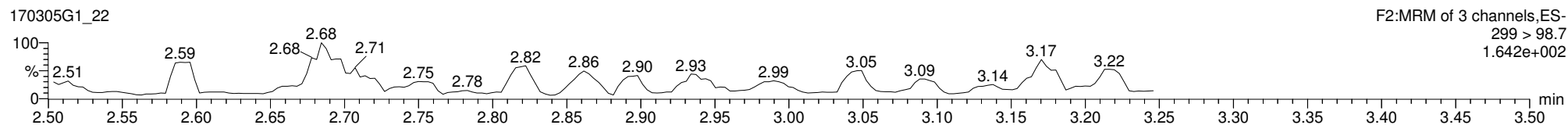
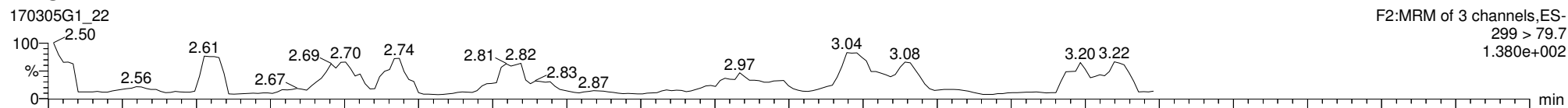
Printed: Monday, March 06, 2017 12:56:11 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

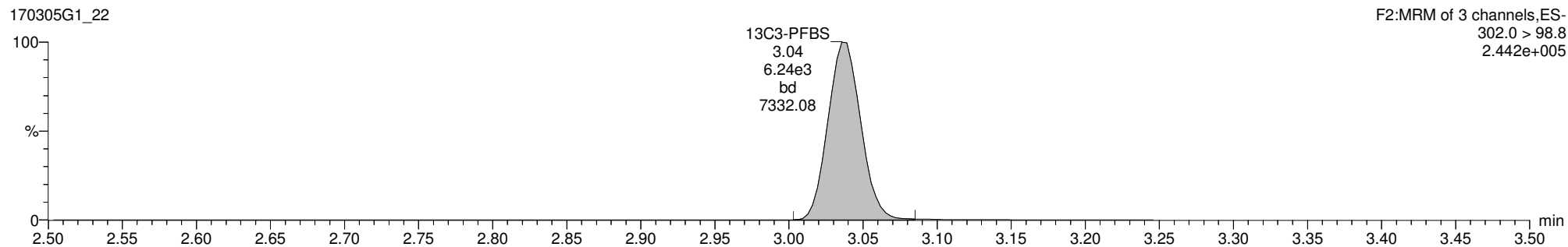
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-03 WI-CV-EB07-022717 0.125, Description: WI-CV-EB07-022717, Name: 170305G1_22, Date: 05-Mar-2017, Time: 16:57:36, Instrument: , Lab: , User:

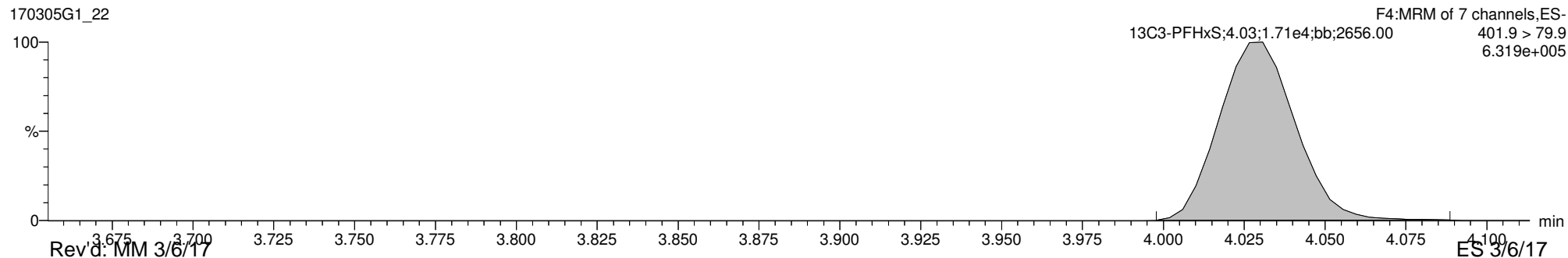
PFBS



13C3-PFBS



13C3-PFHxS



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-22.qld

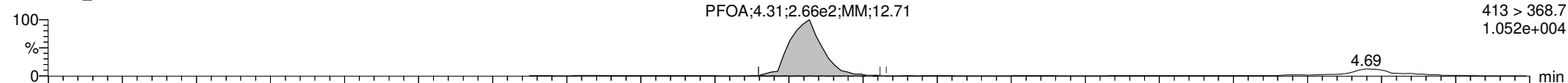
Last Altered: Monday, March 06, 2017 12:46:19 Pacific Standard Time

Printed: Monday, March 06, 2017 12:56:11 Pacific Standard Time

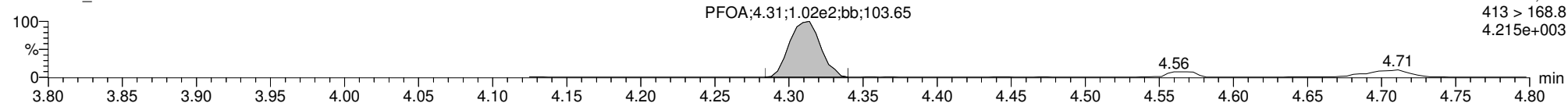
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PFOA

170305G1_22

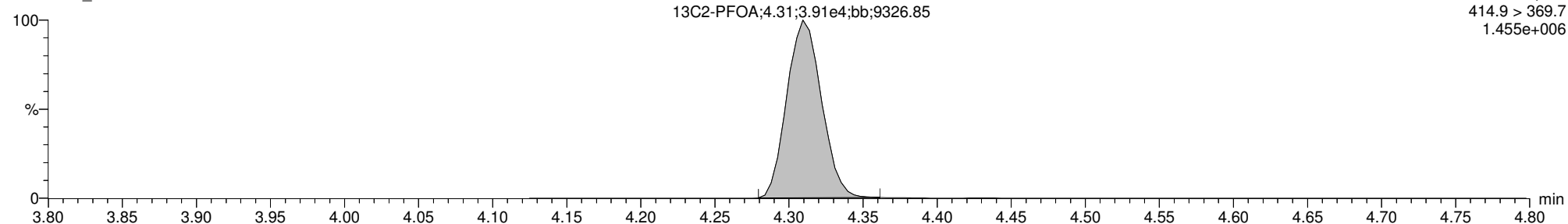


170305G1_22



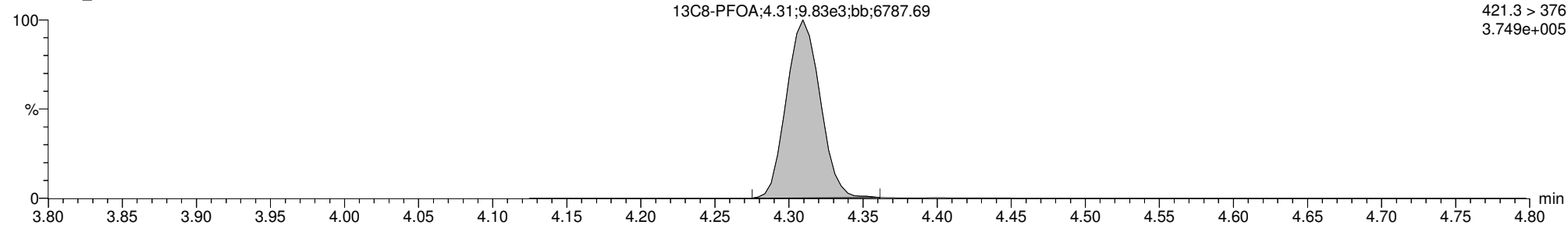
13C2-PFOA

170305G1_22



13C8-PFOA

170305G1_22



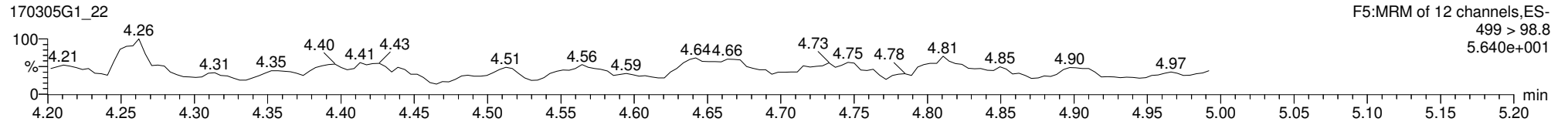
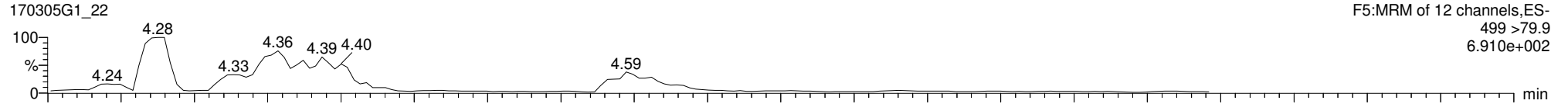
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Last Altered: Monday, March 06, 2017 12:46:19 Pacific Standard Time

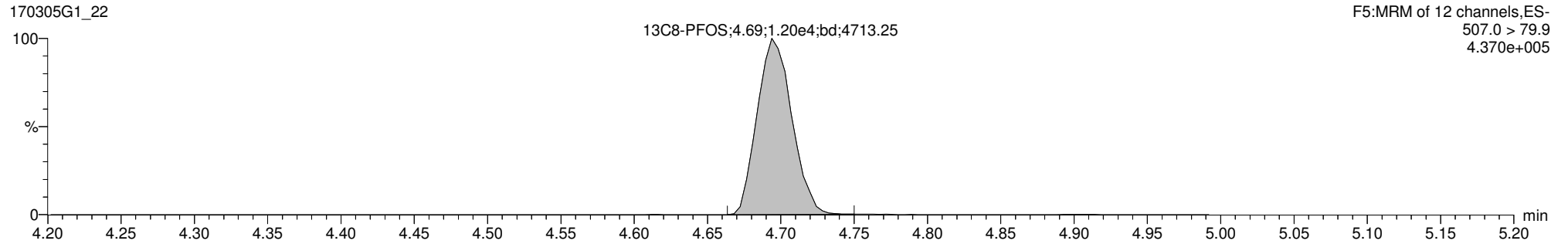
Printed: Monday, March 06, 2017 12:56:11 Pacific Standard Time

ID: 1700280-03 WI-CV-EB07-022717 0.125, Description: WI-CV-EB07-022717, Name: 170305G1_22, Date: 05-Mar-2017, Time: 16:57:36, Instrument: , Lab: , User:

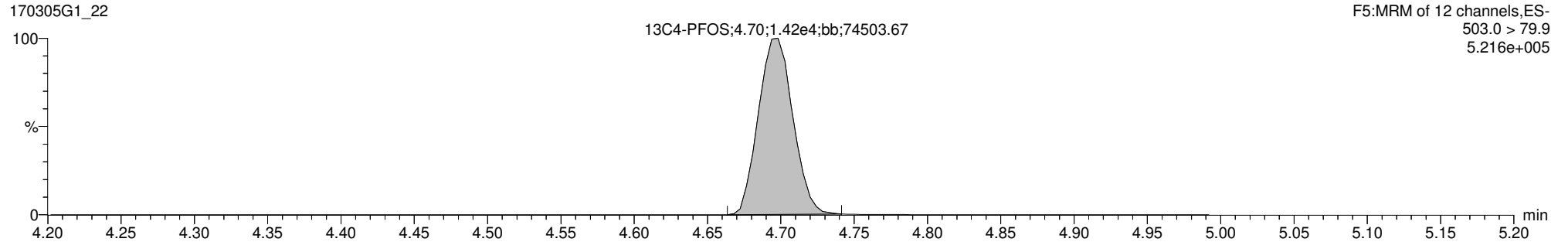
PFOS



13C8-PFOS



13C4-PFOS



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-23.qld

Last Altered: Monday, March 06, 2017 12:51:52 Pacific Standard Time

Printed: Monday, March 06, 2017 12:54:52 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-04 WI-CV-GW04M-0217 0.125, Description: WI-CV-GW04M-0217, Name: 170305G1_23, Date: 05-Mar-2017, Time: 17:10:09

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		6.553e3		0.124			
2	4 PFOA	413 > 368.7	6.077e2	3.687e4		0.124	4.31	0.273	
3	6 PFOS	499 >79.9		1.123e4		0.124			
4	7 13C3-PFBS	302.0 > 98.8	6.553e3	1.732e4	0.410	0.124	3.04	93.0	92.3
5	10 13C2-PFOA	414.9 > 369.7	3.687e4	8.417e3	4.608	0.124	4.31	95.8	95.1
6	12 13C8-PFOS	507.0 > 79.9	1.123e4	1.099e4	0.958	0.124	4.69	107	107
7	14 13C3-PFHxS	401.9 > 79.9	1.732e4	1.732e4	1.000	0.124	4.03	101	100
8	15 13C8-PFOA	421.3 > 376	8.417e3	8.417e3	1.000	0.124	4.31	101	100
9	17 13C4-PFOS	503.0 > 79.9	1.099e4	1.099e4	1.000	0.124	4.70	101	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-23.qld

Last Altered: Monday, March 06, 2017 12:51:52 Pacific Standard Time

Printed: Monday, March 06, 2017 12:55:13 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-04 WI-CV-GW04M-0217 0.125, Description: WI-CV-GW04M-0217, Name: 170305G1_23, Date: 05-Mar-2017, Time: 17:10:09

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		7.449e3		0.124			
2	20 Total PFOA	413 > 368.7		3.687e4		0.124		0.273	
3	21 Total PFOS	499 > 79.9		1.123e4		0.124			

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-23.qld

Last Altered: Monday, March 06, 2017 12:51:52 Pacific Standard Time

Printed: Monday, March 06, 2017 12:54:52 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

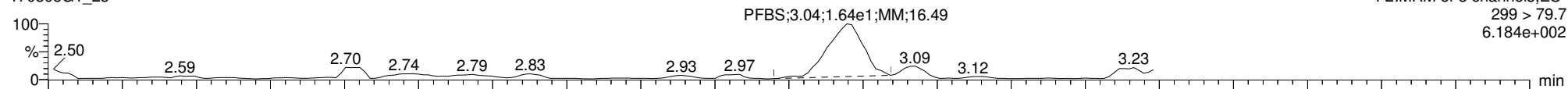
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ID: 1700280-04 WI-CV-GW04M-0217 0.125, Description: WI-CV-GW04M-0217, Name: 170305G1_23, Date: 05-Mar-2017, Time: 17:10:09, Instrument: , Lab: , User:

PFBS

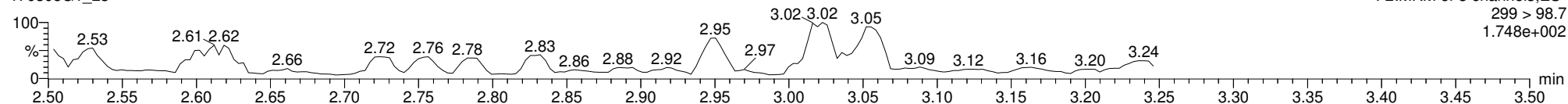
170305G1_23

F2:MRM of 3 channels,ES-
299 > 79.7
6.184e+002



170305G1_23

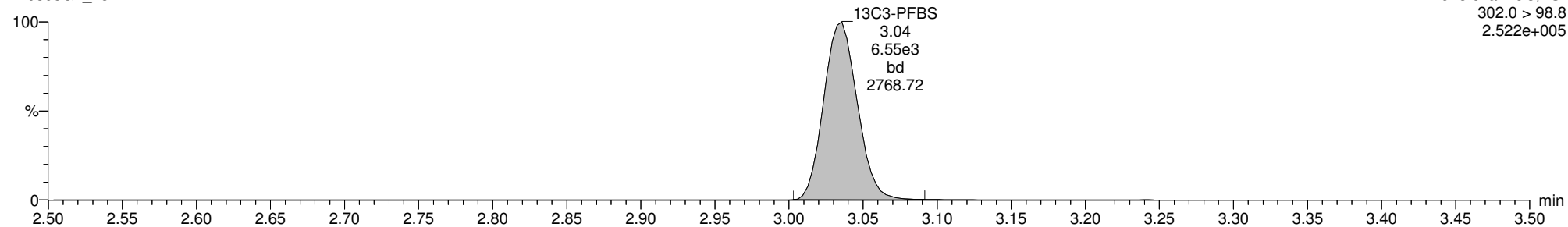
F2:MRM of 3 channels,ES-
299 > 98.7
1.748e+002



13C3-PFBS

170305G1_23

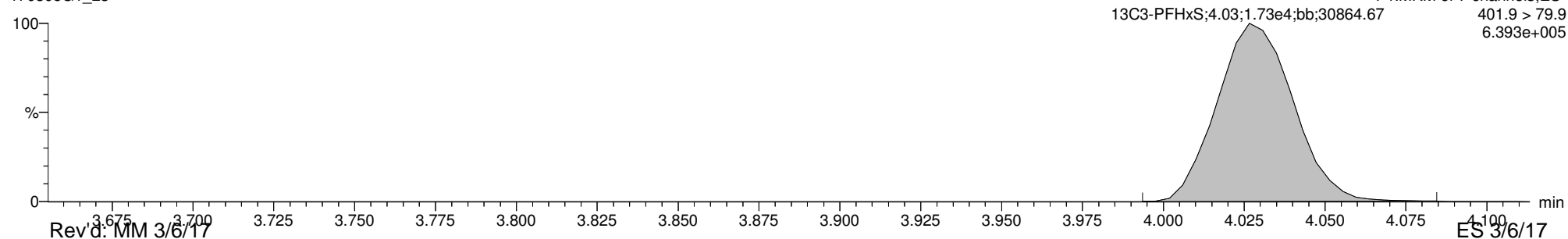
F2:MRM of 3 channels,ES-
302.0 > 98.8
2.522e+005



13C3-PFHxS

170305G1_23

F4:MRM of 7 channels,ES-
401.9 > 79.9
6.393e+005



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-23.qld

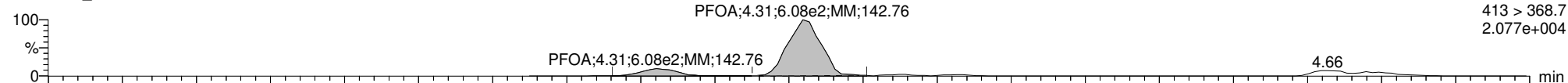
Last Altered: Monday, March 06, 2017 12:51:52 Pacific Standard Time

Printed: Monday, March 06, 2017 12:54:52 Pacific Standard Time

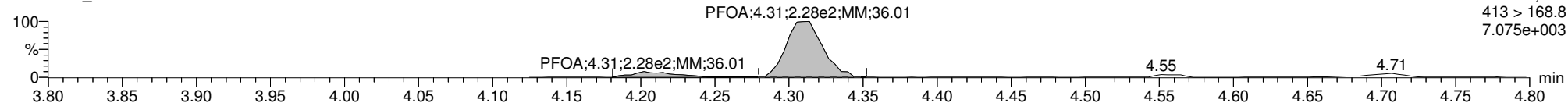
ID: 1700280-04 WI-CV-GW04M-0217 0.125, Description: WI-CV-GW04M-0217, Name: 170305G1_23, Date: 05-Mar-2017, Time: 17:10:09, Instrument: , Lab: , User:

PFOA

170305G1_23

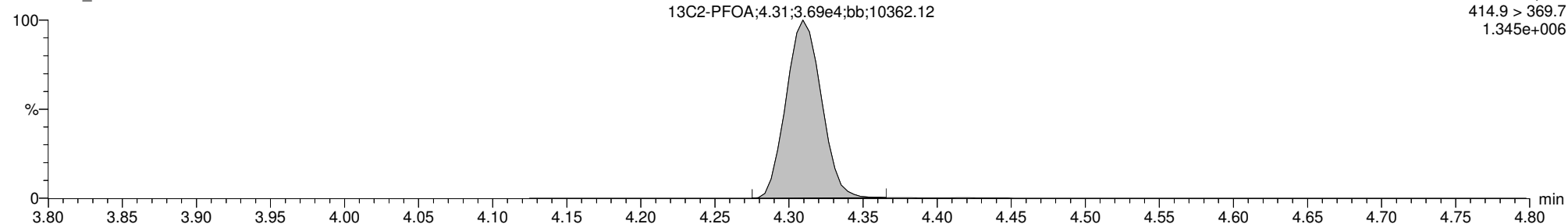


170305G1_23



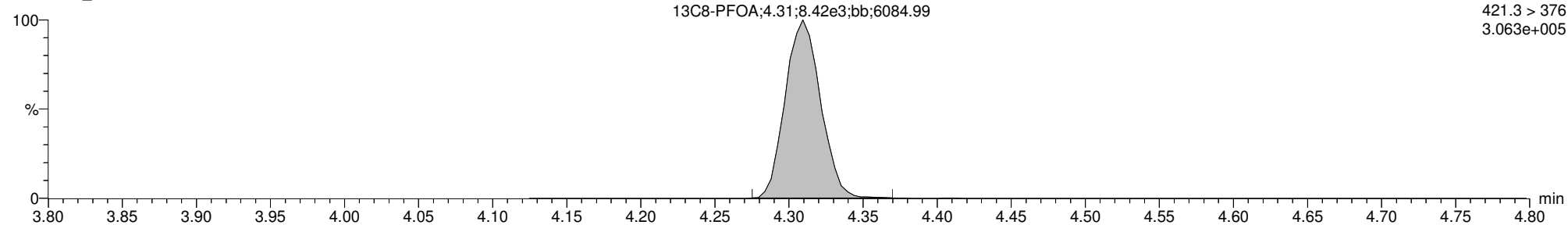
13C2-PFOA

170305G1_23



13C8-PFOA

170305G1_23



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-23.qld

Last Altered: Monday, March 06, 2017 12:51:52 Pacific Standard Time

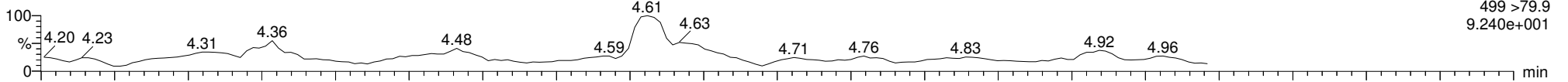
Printed: Monday, March 06, 2017 12:54:52 Pacific Standard Time

ID: 1700280-04 WI-CV-GW04M-0217 0.125, Description: WI-CV-GW04M-0217, Name: 170305G1_23, Date: 05-Mar-2017, Time: 17:10:09, Instrument: , Lab: , User:

PFOS

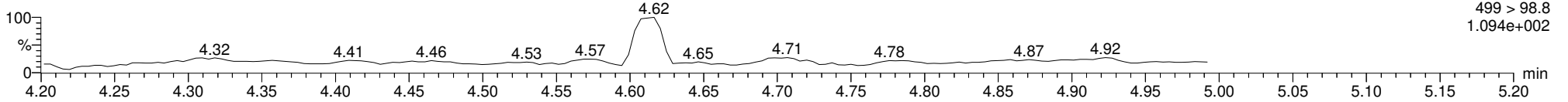
170305G1_23

F5:MRM of 12 channels,ES-
499 >79.9
9.240e+001



170305G1_23

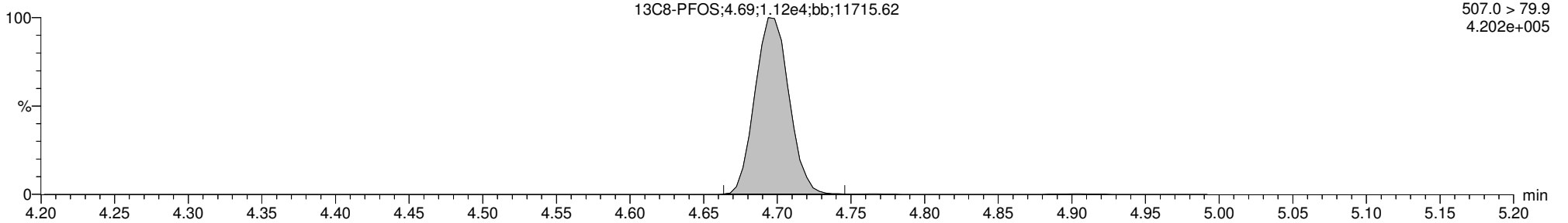
F5:MRM of 12 channels,ES-
499 > 98.8
1.094e+002



13C8-PFOS

170305G1_23

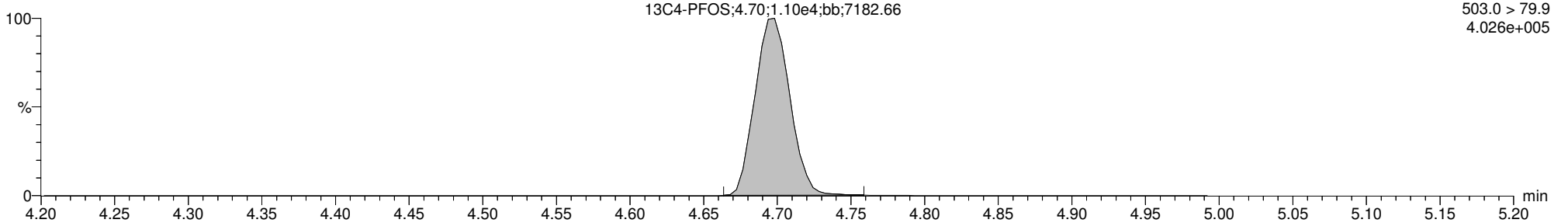
F5:MRM of 12 channels,ES-
507.0 > 79.9
4.202e+005



13C4-PFOS

170305G1_23

F5:MRM of 12 channels,ES-
503.0 > 79.9
4.026e+005



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-24.qld

Last Altered: Monday, March 06, 2017 13:25:56 Pacific Standard Time

Printed: Monday, March 06, 2017 13:29:27 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-05 WI-CV-GW01M-0217 0.125, Description: WI-CV-GW01M-0217, Name: 170305G1_24, Date: 05-Mar-2017, Time: 17:22:42

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	5.916e0	6.033e3		0.127	3.04		
2	4 PFOA	413 > 368.7	1.819e2	3.055e4		0.127	4.31		
3	6 PFOS	499 >79.9		8.359e3		0.127			
4	7 13C3-PFBS	302.0 > 98.8	6.033e3	1.635e4	0.410	0.127	3.04	88.6	90.0
5	10 13C2-PFOA	414.9 > 369.7	3.055e4	7.115e3	4.608	0.127	4.31	91.8	93.2
6	12 13C8-PFOS	507.0 > 79.9	8.359e3	7.910e3	0.958	0.127	4.70	109	110
7	14 13C3-PFHxS	401.9 > 79.9	1.635e4	1.635e4	1.000	0.127	4.03	98.5	100
8	15 13C8-PFOA	421.3 > 376	7.115e3	7.115e3	1.000	0.127	4.31	98.5	100
9	17 13C4-PFOS	503.0 > 79.9	7.910e3	7.910e3	1.000	0.127	4.70	98.5	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-24.qld

Last Altered: Monday, March 06, 2017 13:25:56 Pacific Standard Time

Printed: Monday, March 06, 2017 13:29:50 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-05 WI-CV-GW01M-0217 0.125, Description: WI-CV-GW01M-0217, Name: 170305G1_24, Date: 05-Mar-2017, Time: 17:22:42

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.285e3		0.127			
2	20 Total PFOA	413 > 368.7		3.055e4		0.127			
3	21 Total PFOS	499 > 79.9		8.359e3		0.127			

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-24.qld

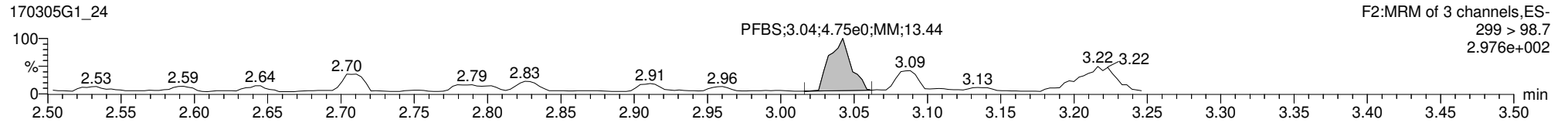
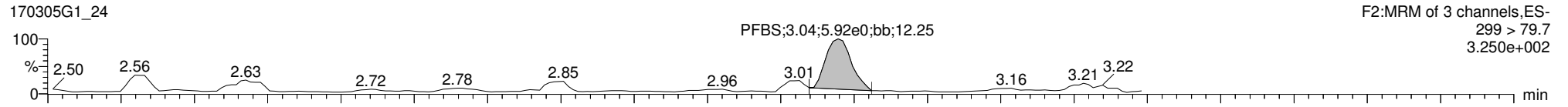
Last Altered: Monday, March 06, 2017 13:25:56 Pacific Standard Time

Printed: Monday, March 06, 2017 13:29:27 Pacific Standard Time

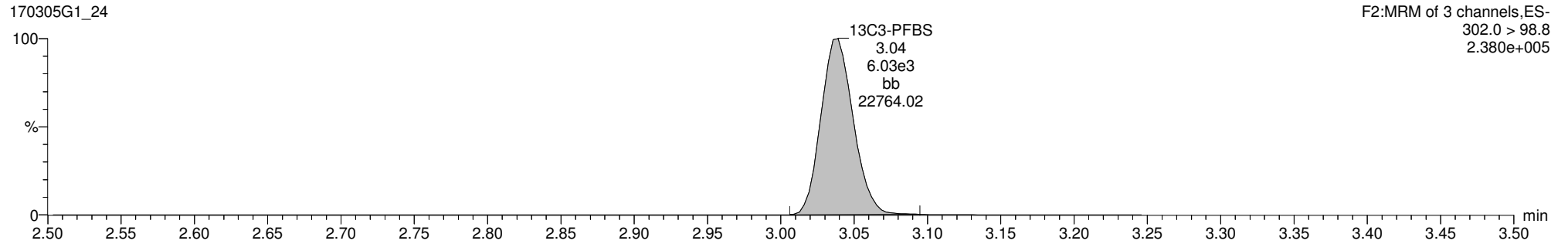
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-05 WI-CV-GW01M-0217 0.125, Description: WI-CV-GW01M-0217, Name: 170305G1_24, Date: 05-Mar-2017, Time: 17:22:42, Instrument: , Lab: , User:

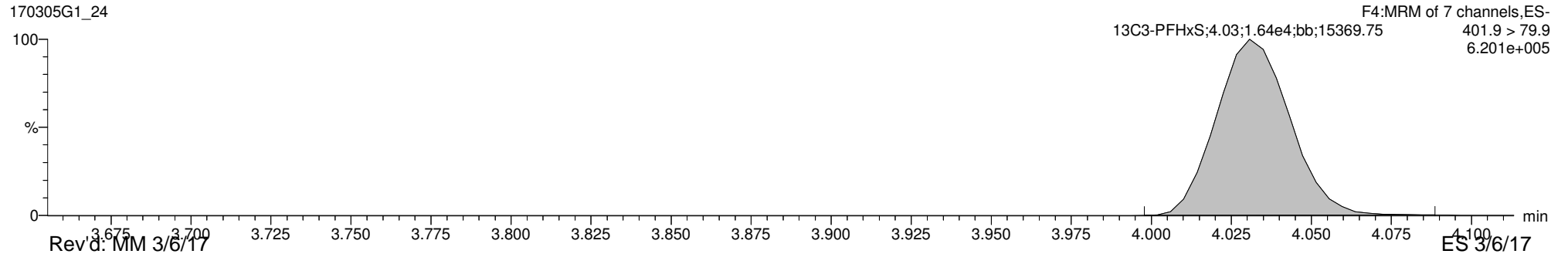
PFBS



13C3-PFBS



13C3-PFHxS



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-24.qld

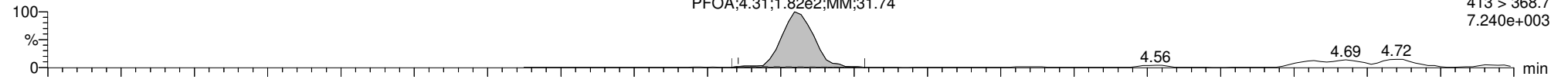
Last Altered: Monday, March 06, 2017 13:25:56 Pacific Standard Time

Printed: Monday, March 06, 2017 13:29:27 Pacific Standard Time

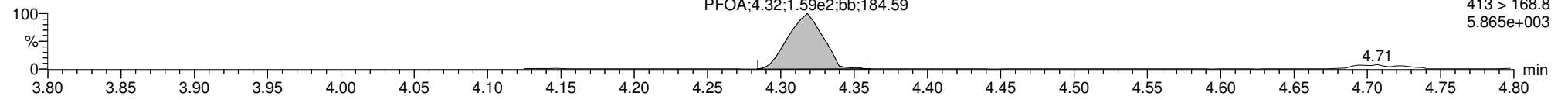
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PFOA

170305G1_24

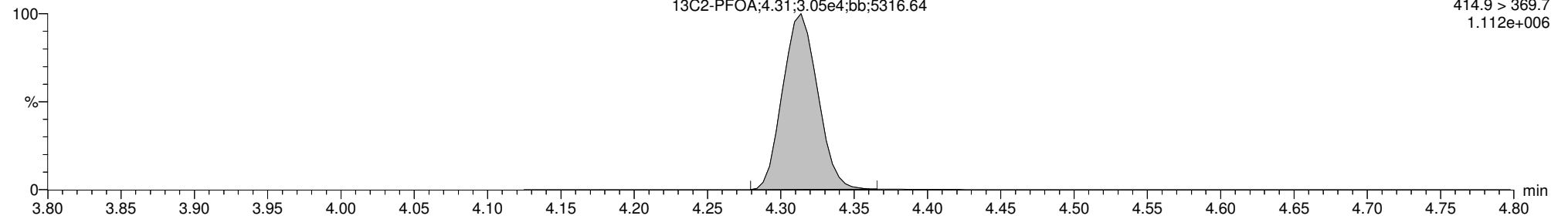


170305G1_24



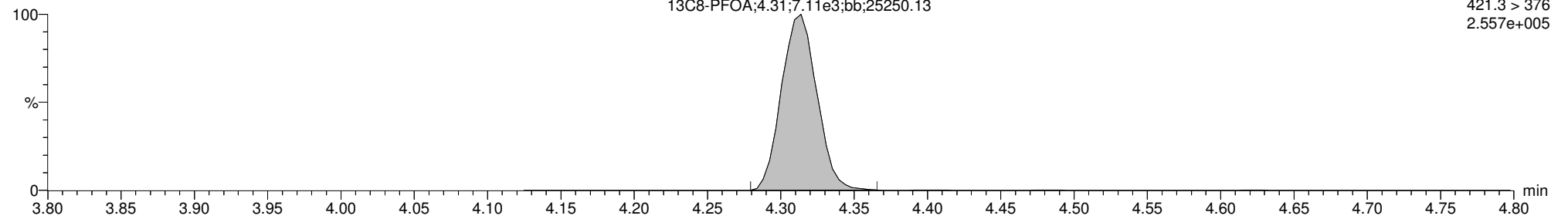
13C2-PFOA

170305G1_24



13C8-PFOA

170305G1_24



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-24.qld

Last Altered: Monday, March 06, 2017 13:25:56 Pacific Standard Time

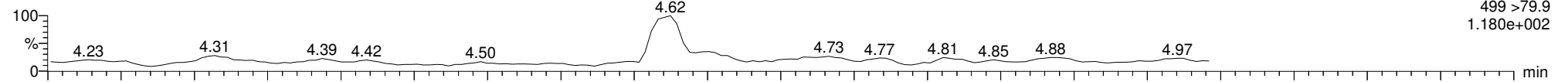
Printed: Monday, March 06, 2017 13:29:27 Pacific Standard Time

ID: 1700280-05 WI-CV-GW01M-0217 0.125, Description: WI-CV-GW01M-0217, Name: 170305G1_24, Date: 05-Mar-2017, Time: 17:22:42, Instrument: , Lab: , User:

PFOS

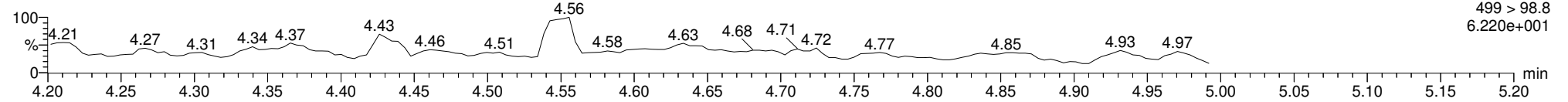
170305G1_24

F5:MRM of 12 channels,ES-
499 >79.9
1.180e+002



170305G1_24

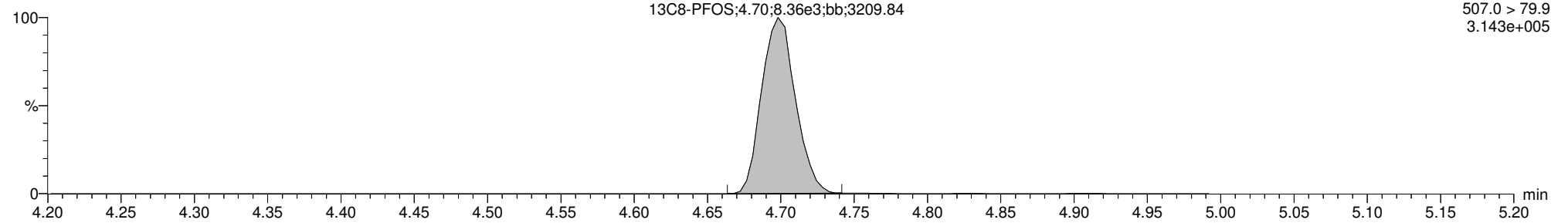
F5:MRM of 12 channels,ES-
499 > 98.8
6.220e+001



13C8-PFOS

170305G1_24

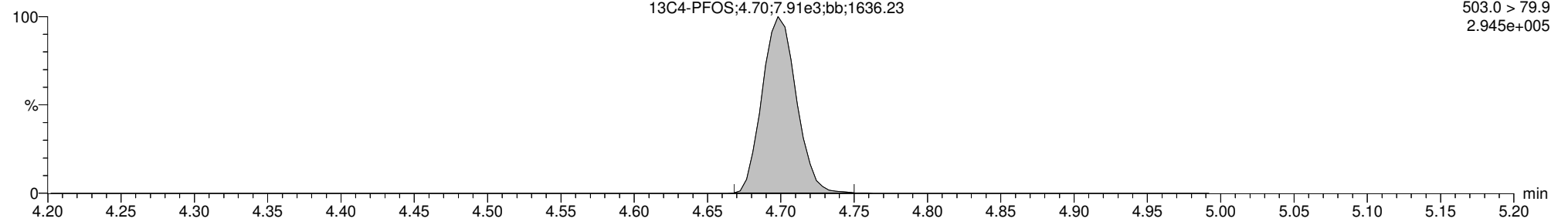
F5:MRM of 12 channels,ES-
507.0 > 79.9
3.143e+005



13C4-PFOS

170305G1_24

F5:MRM of 12 channels,ES-
503.0 > 79.9
2.945e+005



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-25.qld

Last Altered: Monday, March 06, 2017 13:32:07 Pacific Standard Time

Printed: Monday, March 06, 2017 13:34:38 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-06 WI-CV-EB08-022817 0.125, Description: WI-CV-EB08-022817, Name: 170305G1_25, Date: 05-Mar-2017, Time: 17:35:16

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		5.668e3		0.110			
2	4 PFOA	413 > 368.7	1.252e2	2.524e4		0.110	4.31		
3	6 PFOS	499 >79.9	7.567e0	5.751e3		0.110	4.62	1.16	
4	7 13C3-PFBS	302.0 > 98.8	5.668e3	1.344e4	0.410	0.110	3.04	117	103
5	10 13C2-PFOA	414.9 > 369.7	2.524e4	5.842e3	4.608	0.110	4.31	107	93.8
6	12 13C8-PFOS	507.0 > 79.9	5.751e3	6.996e3	0.958	0.110	4.70	97.8	85.8
7	14 13C3-PFHxS	401.9 > 79.9	1.344e4	1.344e4	1.000	0.110	4.03	114	100
8	15 13C8-PFOA	421.3 > 376	5.842e3	5.842e3	1.000	0.110	4.31	114	100
9	17 13C4-PFOS	503.0 > 79.9	6.996e3	6.996e3	1.000	0.110	4.70	114	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-25.qld

Last Altered: Monday, March 06, 2017 13:32:07 Pacific Standard Time

Printed: Monday, March 06, 2017 13:34:51 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-06 WI-CV-EB08-022817 0.125, Description: WI-CV-EB08-022817, Name: 170305G1_25, Date: 05-Mar-2017, Time: 17:35:16

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		5.004e3		0.110			
2	20 Total PFOA	413 > 368.7		2.524e4		0.110			
3	21 Total PFOS	499 > 79.9		5.751e3		0.110		1.16	

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-25.qld

Last Altered: Monday, March 06, 2017 13:32:07 Pacific Standard Time

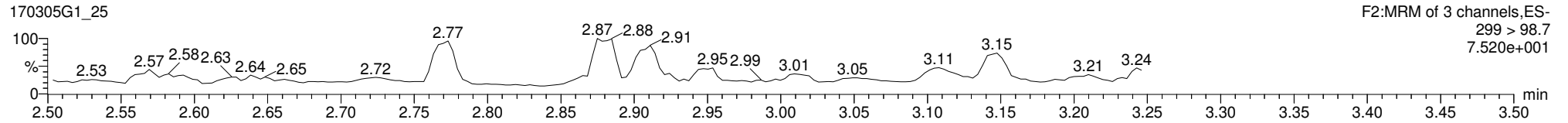
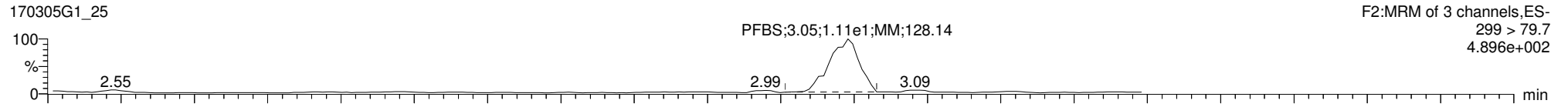
Printed: Monday, March 06, 2017 13:34:38 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

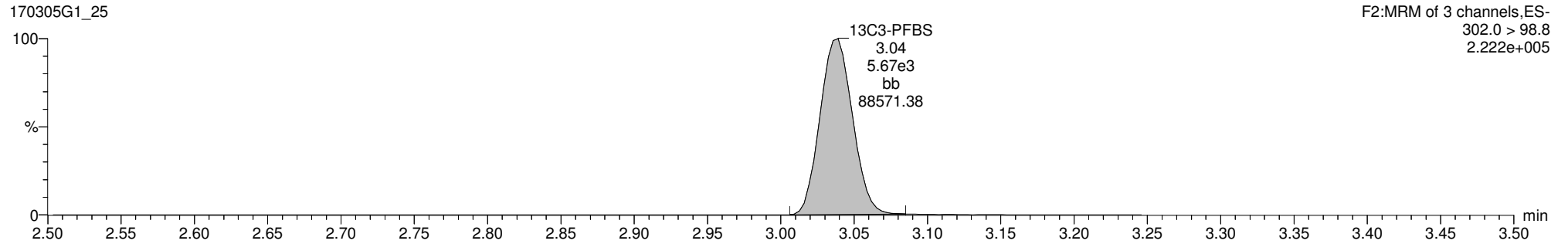
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-06 WI-CV-EB08-022817 0.125, Description: WI-CV-EB08-022817, Name: 170305G1_25, Date: 05-Mar-2017, Time: 17:35:16, Instrument: , Lab: , User:

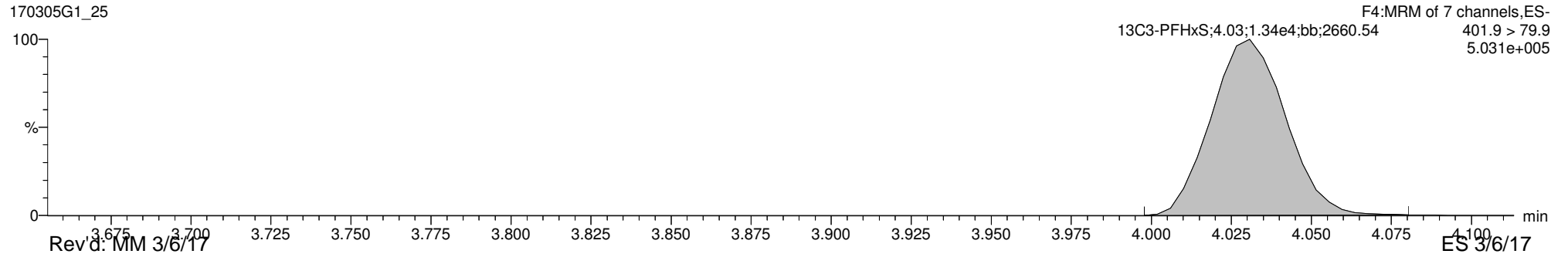
PFBS



13C3-PFBS



13C3-PFHxS



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-25.qld

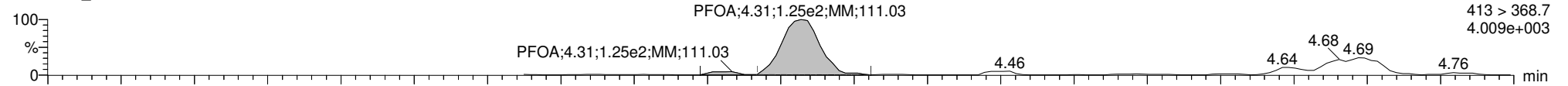
Last Altered: Monday, March 06, 2017 13:32:07 Pacific Standard Time

Printed: Monday, March 06, 2017 13:34:38 Pacific Standard Time

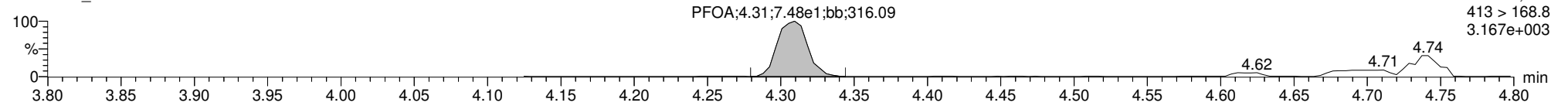
ID: 1700280-06 WI-CV-EB08-022817 0.125, Description: WI-CV-EB08-022817, Name: 170305G1_25, Date: 05-Mar-2017, Time: 17:35:16, Instrument: , Lab: , User:

PFOA

170305G1_25

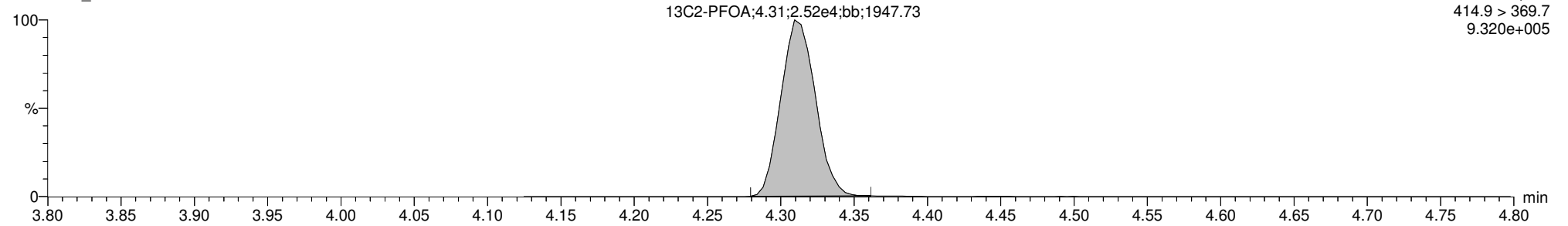


170305G1_25



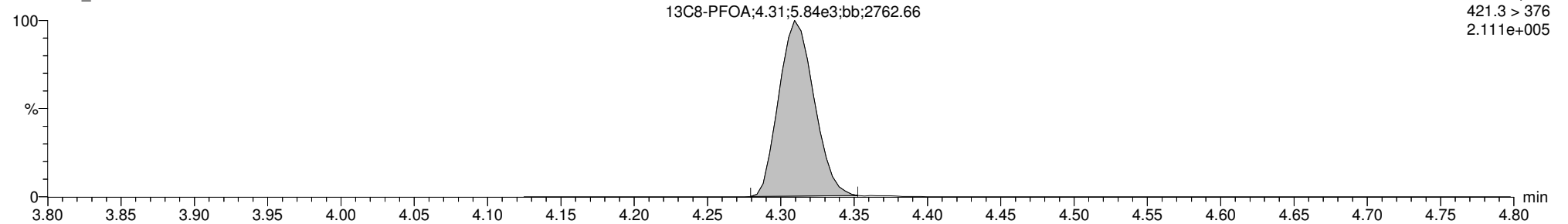
13C2-PFOA

170305G1_25



13C8-PFOA

170305G1_25



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-25.qld

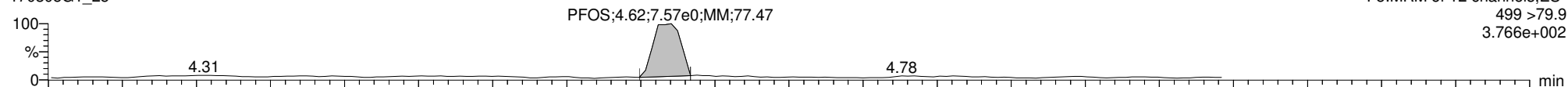
Last Altered: Monday, March 06, 2017 13:32:07 Pacific Standard Time

Printed: Monday, March 06, 2017 13:34:38 Pacific Standard Time

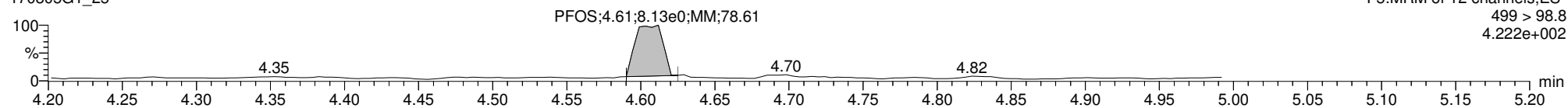
ID: 1700280-06 WI-CV-EB08-022817 0.125, Description: WI-CV-EB08-022817, Name: 170305G1_25, Date: 05-Mar-2017, Time: 17:35:16, Instrument: , Lab: , User:

PFOS

170305G1_25

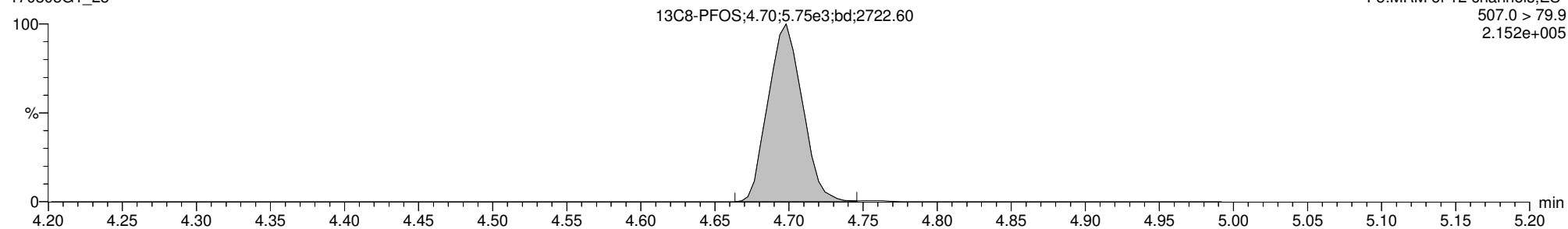


170305G1_25



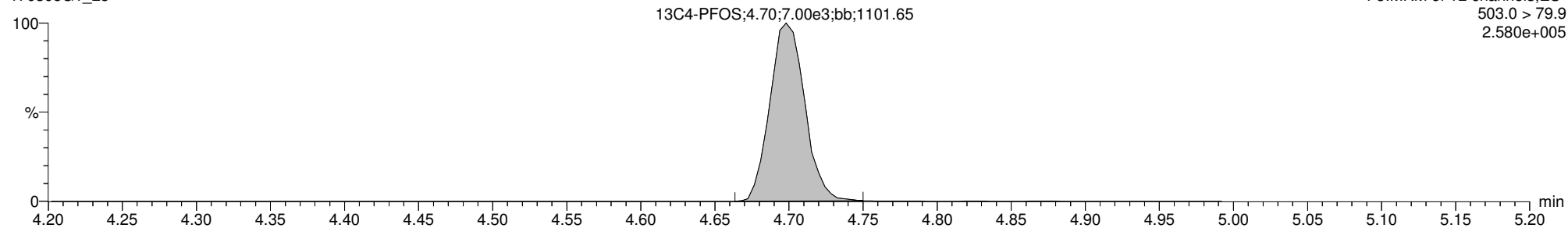
13C8-PFOS

170305G1_25



13C4-PFOS

170305G1_25



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-26.qld

Last Altered: Monday, March 06, 2017 13:38:02 Pacific Standard Time

Printed: Monday, March 06, 2017 13:38:36 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-07 WI-CV-GW01D-0217 0.125, Description: WI-CV-GW01D-0217, Name: 170305G1_26, Date: 05-Mar-2017, Time: 17:47:49

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7		5.976e3		0.125			
2	4 PFOA	413 > 368.7	1.213e2	2.933e4		0.125	4.31		
3	6 PFOS	499 >79.9		6.195e3		0.125			
4	7 13C3-PFBS	302.0 > 98.8	5.976e3	1.485e4	0.410	0.125	3.04	98.2	98.2
5	10 13C2-PFOA	414.9 > 369.7	2.933e4	6.831e3	4.608	0.125	4.31	93.2	93.2
6	12 13C8-PFOS	507.0 > 79.9	6.195e3	7.811e3	0.958	0.125	4.70	82.8	82.8
7	14 13C3-PFHxS	401.9 > 79.9	1.485e4	1.485e4	1.000	0.125	4.03	100	100
8	15 13C8-PFOA	421.3 > 376	6.831e3	6.831e3	1.000	0.125	4.31	100	100
9	17 13C4-PFOS	503.0 > 79.9	7.811e3	7.811e3	1.000	0.125	4.70	100	100

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-26.qld

Last Altered: Monday, March 06, 2017 13:38:02 Pacific Standard Time

Printed: Monday, March 06, 2017 13:39:37 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-07 WI-CV-GW01D-0217 0.125, Description: WI-CV-GW01D-0217, Name: 170305G1_26, Date: 05-Mar-2017, Time: 17:47:49

	# Name	Trace	Peak Area	IS Resp	RRF Mean	wt/vol	RT	Conc.	%Rec
1	18 Total PFBS	299 > 79.7		6.766e3		0.125			
2	20 Total PFOA	413 > 368.7		2.933e4		0.125			
3	21 Total PFOS	499 > 79.9		6.195e3		0.125			

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-26.qld

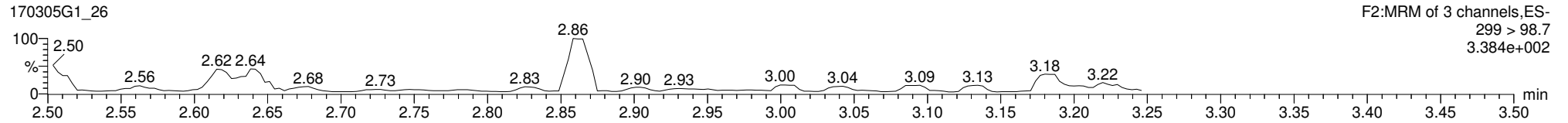
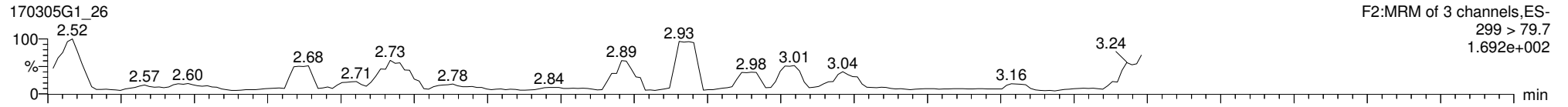
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Printed: Monday, March 06, 2017 13:38:36 Pacific Standard Time

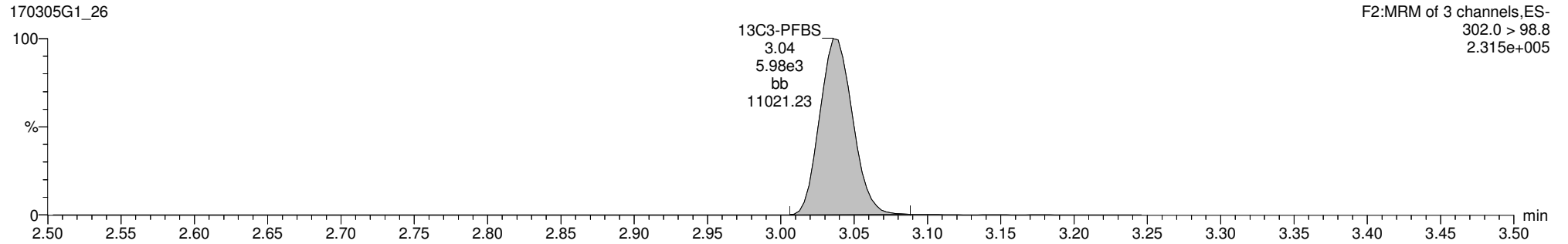
Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

ID: 1700280-07 WI-CV-GW01D-0217 0.125, Description: WI-CV-GW01D-0217, Name: 170305G1_26, Date: 05-Mar-2017, Time: 17:47:49, Instrument: , Lab: , User:

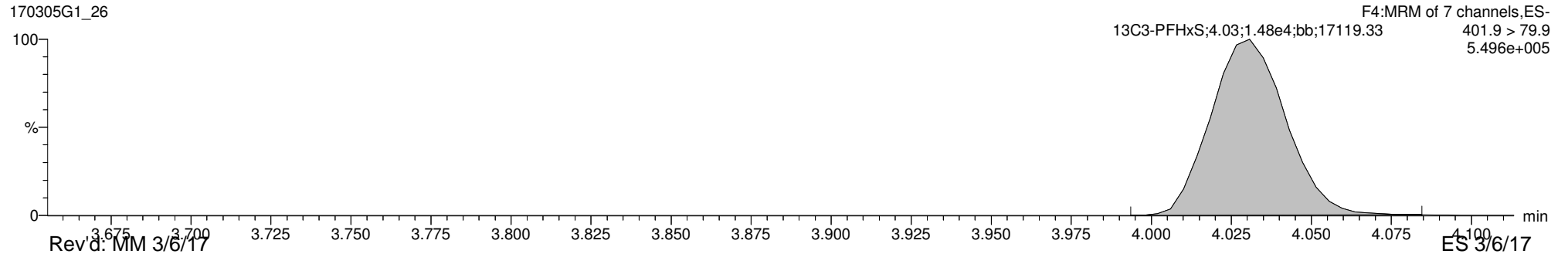
PFBS



13C3-PFBS



13C3-PFHxS



Rev d: MM 3/6/17

ES 3/6/17

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-26.qld

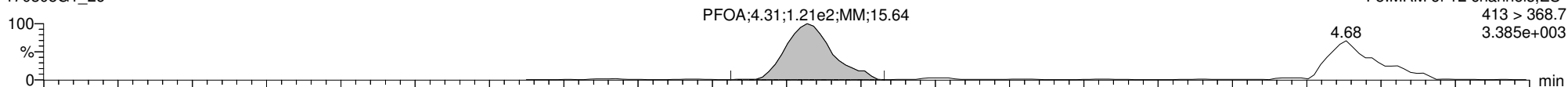
Last Altered: Monday, March 06, 2017 13:38:02 Pacific Standard Time

Printed: Monday, March 06, 2017 13:38:36 Pacific Standard Time

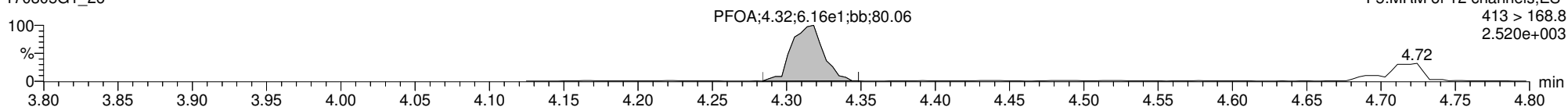
ID: 1700280-07 WI-CV-GW01D-0217 0.125, Description: WI-CV-GW01D-0217, Name: 170305G1_26, Date: 05-Mar-2017, Time: 17:47:49, Instrument: , Lab: , User:

PFOA

170305G1_26

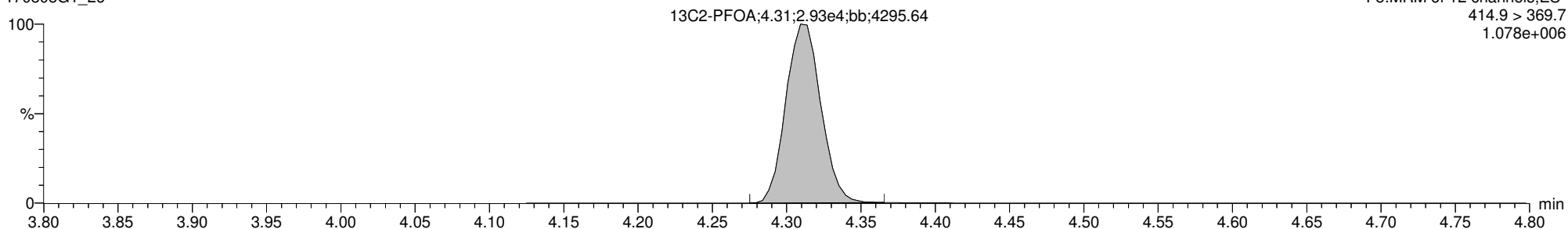


170305G1_26



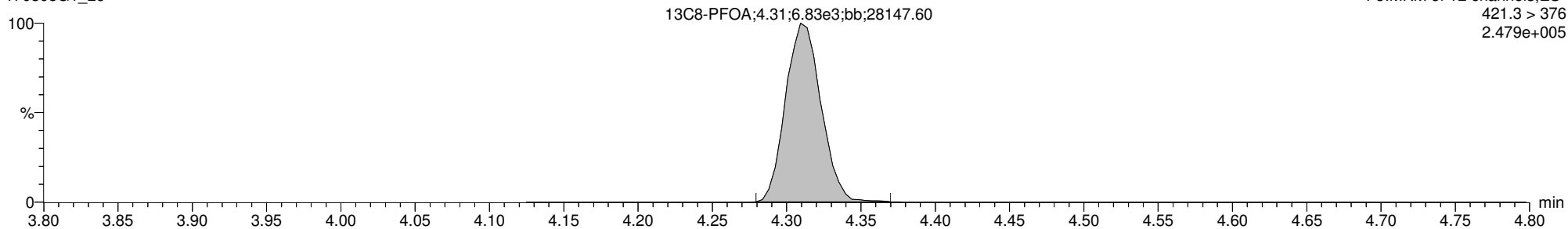
13C2-PFOA

170305G1_26



13C8-PFOA

170305G1_26



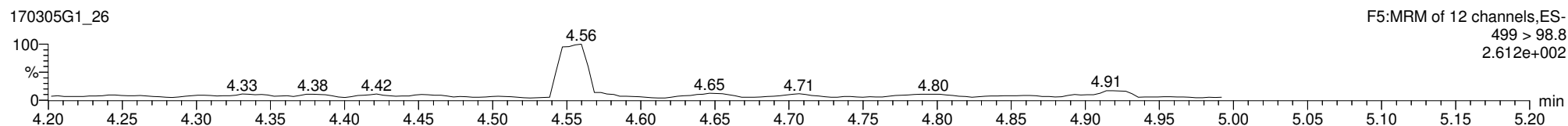
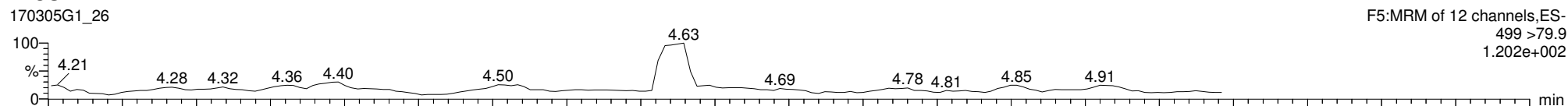
Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-26.qld

Last Altered: Monday, March 06, 2017 13:38:02 Pacific Standard Time

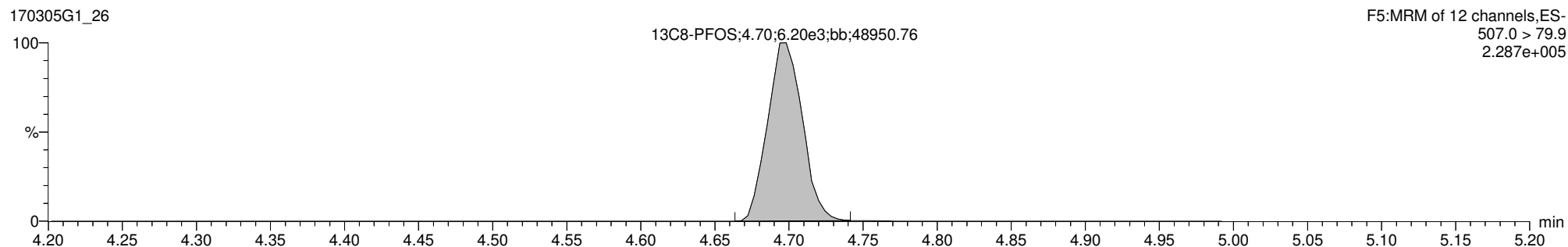
Printed: Monday, March 06, 2017 13:38:36 Pacific Standard Time

ID: 1700280-07 WI-CV-GW01D-0217 0.125, Description: WI-CV-GW01D-0217, Name: 170305G1_26, Date: 05-Mar-2017, Time: 17:47:49, Instrument: , Lab: , User:

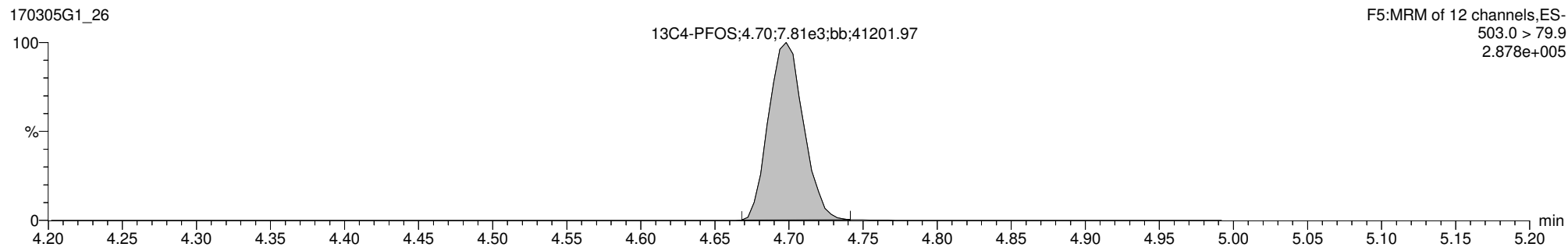
PFOS



13C8-PFOS



13C4-PFOS



CONTINUING CALIBRATION

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-29.qld

Last Altered: Monday, March 06, 2017 09:19:31 Pacific Standard Time

Printed: Monday, March 06, 2017 09:21:39 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170305G1_29, Date: 05-Mar-2017, Time: 18:25:28, ID: ST170305G1-9 PFC CS3 17C0506, Description: PFC CS3 17C0506 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.28e4	6.48e3		1.000	3.04	10.3	103.5
2	2 PFHpA	363 > 318.9	2.87e4	1.84e4		1.000	3.92	10.8	107.8
3	3 PFHxS	398.9 > 79.6	1.13e4	6.93e3		1.000	4.03	11.2	111.7
4	4 PFOA	413 > 368.7	2.58e4	3.78e4		1.000	4.31	10.5	105.0
5	5 PFNA	463 > 418.8	1.43e4	5.76e3		1.000	4.64	11.3	112.9
6	6 PFOS	499 > 79.9	1.66e3	3.19e3		1.000	4.70	12.2	121.5
7	7 13C3-PFBS	302.0 > 98.8	6.48e3	1.60e4	0.410	1.000	3.04	12.3	98.6
8	8 13C4-PFHpA	367.2 > 321.8	1.84e4	1.60e4	1.098	1.000	3.92	13.0	104.4
9	9 18O2-PFHxS	403 > 102.6	6.93e3	1.60e4	0.434	1.000	4.03	12.4	99.5
10	10 13C2-PFOA	414.9 > 369.7	3.78e4	8.73e3	4.608	1.000	4.31	11.7	94.0
11	11 13C5-PFNA	468.2 > 422.9	5.76e3	6.97e3	0.867	1.000	4.64	11.9	95.3
12	12 13C8-PFOS	507.0 > 79.9	3.19e3	3.51e3	0.958	1.000	4.70	11.9	94.8
13	13 13C5-PFHxA	318 > 272.9	2.93e4	2.93e4	1.000	1.000	3.41	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.60e4	1.60e4	1.000	1.000	4.03	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	8.73e3	8.73e3	1.000	1.000	4.31	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	6.97e3	6.97e3	1.000	1.000	4.64	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	3.51e3	3.51e3	1.000	1.000	4.70	12.5	100.0

75-125
↓
60-150
↓
50-150
60-150

ES 3/6/17
✓ AC 3/6/17

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:13:54 Pacific Standard Time

Printed: Monday, March 06, 2017 09:14:12 Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

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1	170305G1_1	IPA	05-Mar-17	12:34:35
2	170305G1_2	ST170305G1-1 PFC CS-2 17C0501	05-Mar-17	12:46:48
3	170305G1_3	ST170305G1-2 PFC CS-1 17C0502	05-Mar-17	12:59:15
4	170305G1_4	ST170305G1-3 PFC CS0 17C0503	05-Mar-17	13:11:49
5	170305G1_5	ST170305G1-4 PFC CS1 17C0504	05-Mar-17	13:24:21
6	170305G1_6	ST170305G1-5 PFC CS2 17C0505	05-Mar-17	13:36:55
7	170305G1_7	ST170305G1-6 PFC CS3 17C0506	05-Mar-17	13:49:29
8	170305G1_8	ST170305G1-7 PFC CS4 17C0507	05-Mar-17	14:02:00
9	170305G1_9	ST170305G1-8 PFC CS5 17C0508	05-Mar-17	14:14:34
10	170305G1_10	IPA	05-Mar-17	14:27:08
11	170305G1_11	SS170305G1-1 PFC SSS 17C0509	05-Mar-17	14:39:40
12	170305G1_12	IPA	05-Mar-17	14:52:09
13	170305G1_13	B7C0012-BS1 OPR 0.125	05-Mar-17	15:04:45
14	170305G1_14	B7C0010-BS1 OPR 0.125	05-Mar-17	15:17:15
15	170305G1_15	IPA	05-Mar-17	15:29:48
16	170305G1_16	B7C0012-BLK1 Method Blank 0.125	05-Mar-17	15:42:23
17	170305G1_17	B7C0010-BLK1 Method Blank 0.125	05-Mar-17	15:54:54
18	170305G1_18	1700268-02RE1 WI-CV-GW05M-0217 0.125	05-Mar-17	16:07:28
19	170305G1_19	1700268-04RE1 WI-CV-GW11M-0217 0.125	05-Mar-17	16:20:00
20	170305G1_20	1700280-01 WI-CV-GW03M-0217 0.125	05-Mar-17	16:32:34
21	170305G1_21	1700280-02 WI-CV-GW03D-0217 0.125	05-Mar-17	16:45:07
22	170305G1_22	1700280-03 WI-CV-EB07-022717 0.125	05-Mar-17	16:57:36
23	170305G1_23	1700280-04 WI-CV-GW04M-0217 0.125	05-Mar-17	17:10:09
24	170305G1_24	1700280-05 WI-CV-GW01M-0217 0.125	05-Mar-17	17:22:42
25	170305G1_25	1700280-06 WI-CV-EB08-022817 0.125	05-Mar-17	17:35:16
26	170305G1_26	1700280-07 WI-CV-GW01D-0217 0.125	05-Mar-17	17:47:49
27	170305G1_27	1700277-01 MILK-022717 0.005	05-Mar-17	18:00:22
28	170305G1_28	IPA	05-Mar-17	18:12:56
29	170305G1_29	ST170305G1-9 PFC CS3 17C0506	05-Mar-17	18:25:28
30	170305G1_30	IPA	05-Mar-17	18:38:01

LC Calibration Standards Review Checklist

Q1

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~~MA~~

Full Mass Cal. Date: 12/6/17

Run Log Present:

of Samples per Sequence Checked:

Reviewed By: AC 3/6/17
Initials/Date

Comments:
L6, 2-Trans

Dataset: Untitled

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Printed: Monday, March 06, 2017 09:18:07 Pacific Standard Time

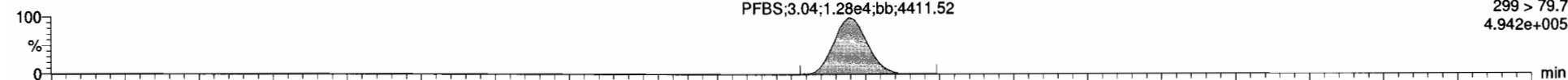
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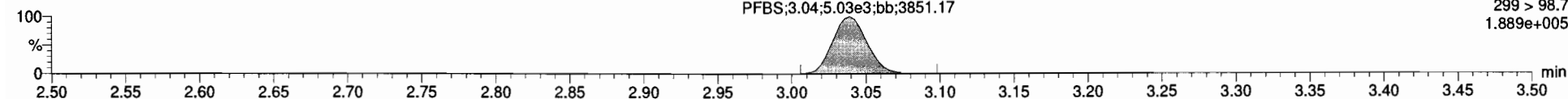
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PFBS

170305G1_29

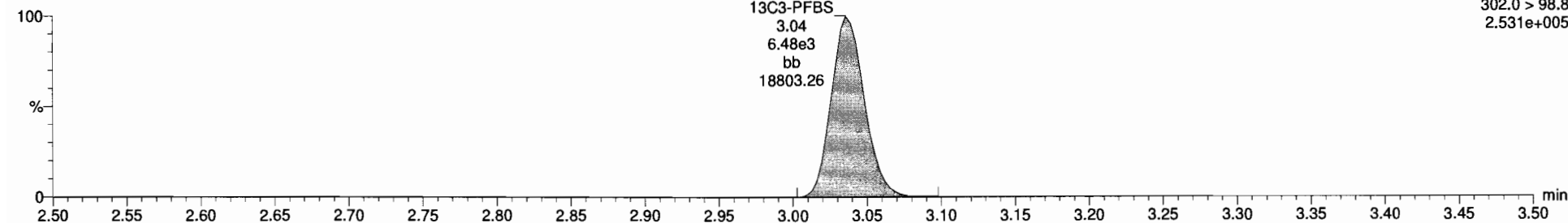


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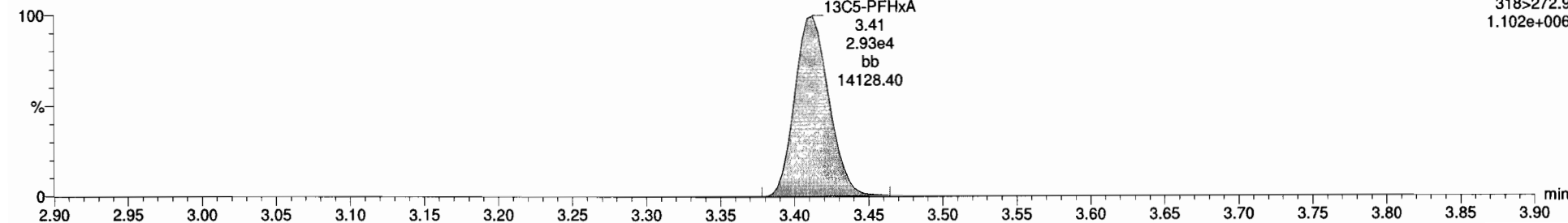
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13C5-PFHxA

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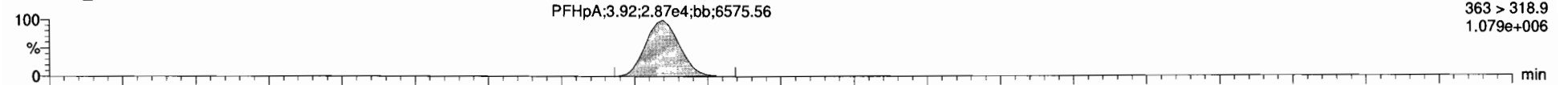
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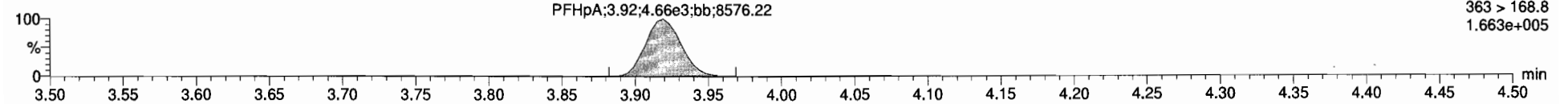
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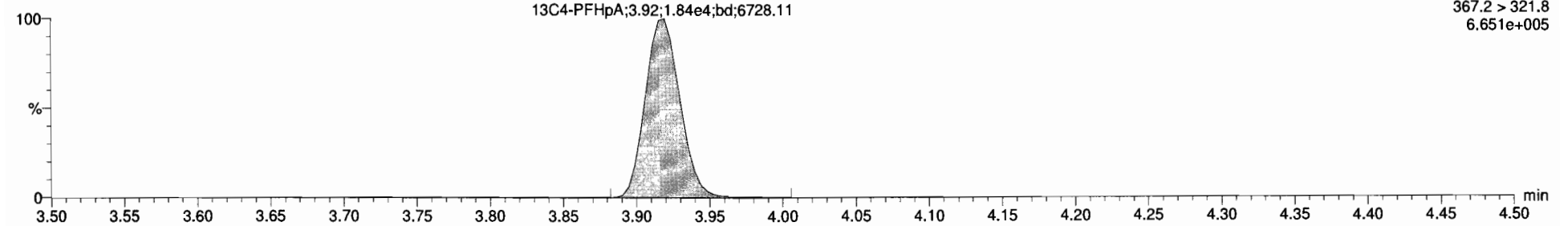


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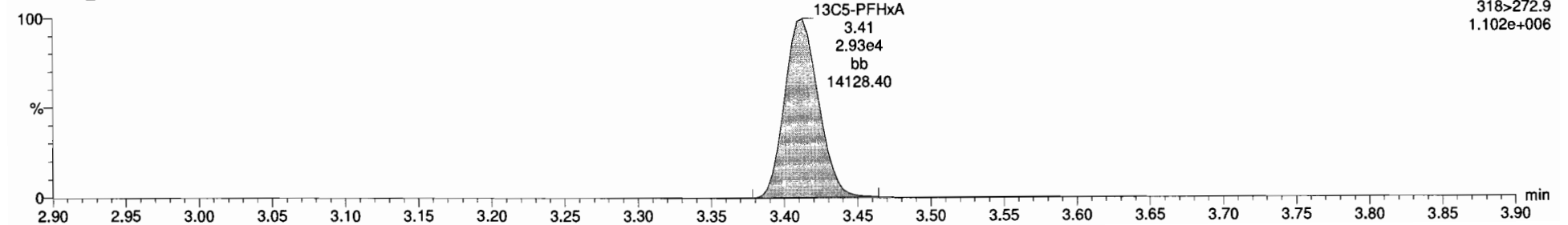
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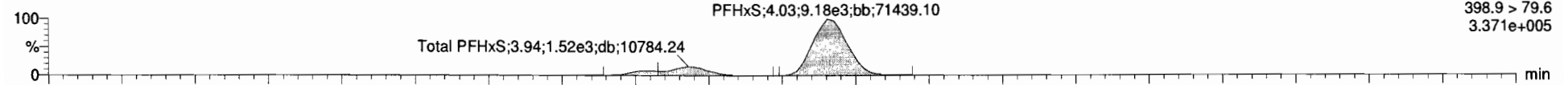
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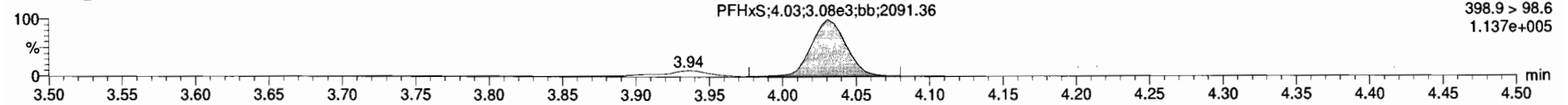
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Total PFHxS

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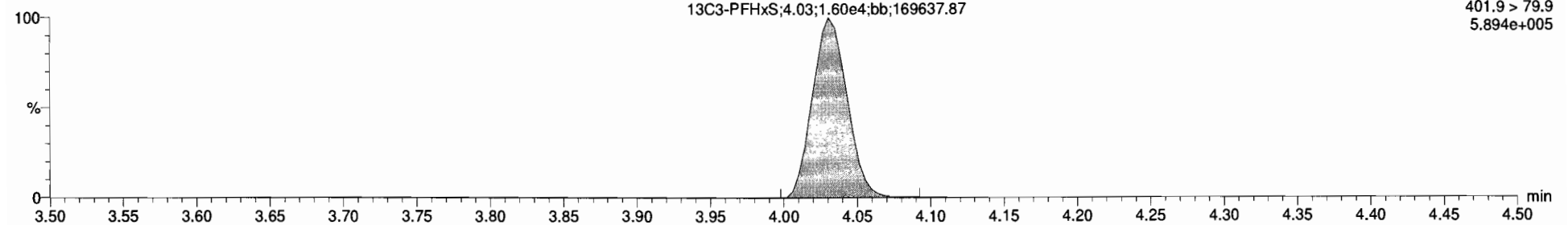


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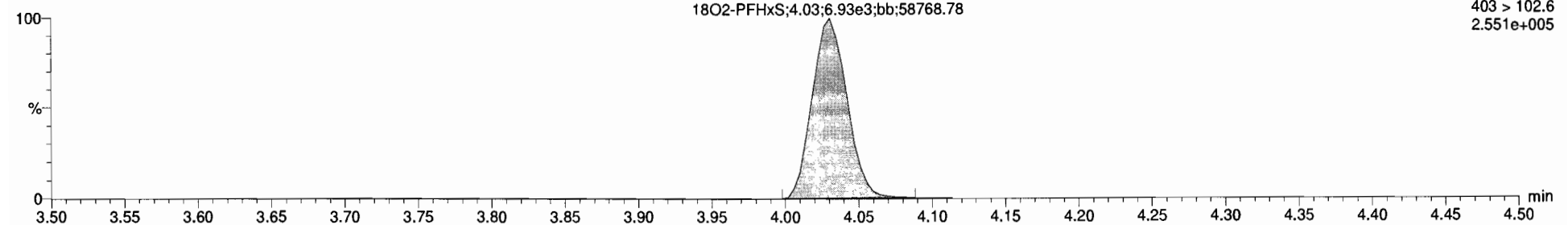
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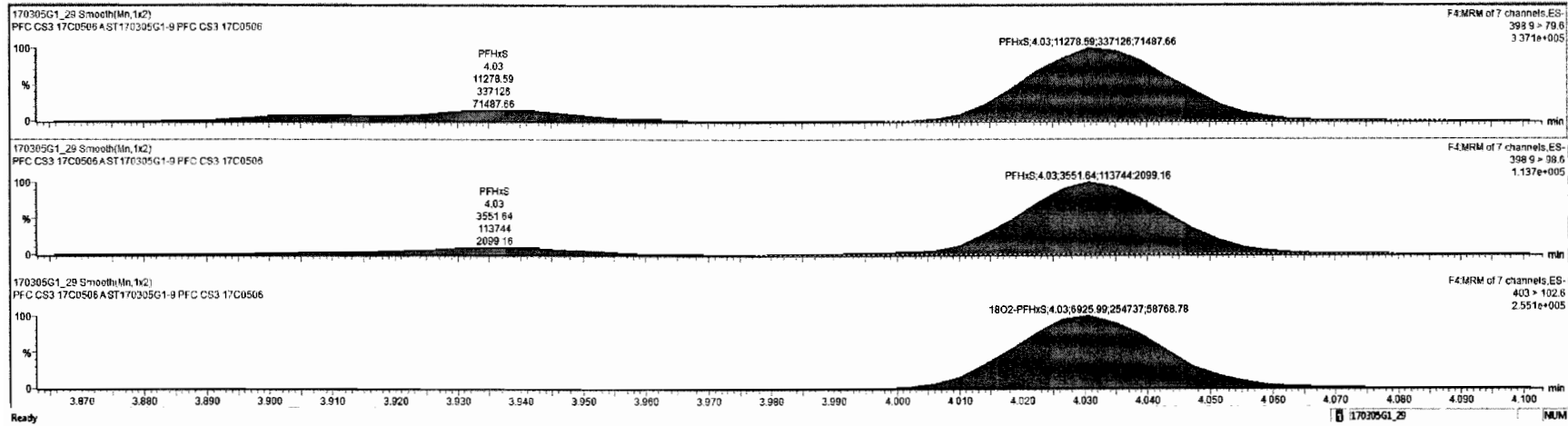


18O2-PFHxS

170305G1_29



Name	Conc.	DL	%Recd	EMPC	Abs Reso	RNF	RT	#	IS#	RA	Y/N	RRT	Acq Date	Acq Time	# Chk Noise	Sample Text	Factor1	SWI	Cal File	>MDL
1 PFBS	10.348230	0.0000	103.5		1.281e4	3.04	1	7	0.392	YES	1.001	05-Mar-17	18:25:28	48.991	ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	YES	
2 PFHpA	10.782461	0.0000	107.8		2.679e4	3.92	2	8			1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	YES	
3 PFBS	11.188540	0.0000	111.7		5.128e4	4.83	3	9			1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	YES	
4 PFOA	10.498092	0.0000	105.0		2.577e4	4.31	4	10			1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	YES	
5 PFNA	11.294648	0.0000	112.9		1.428e4	4.64	5	11			1.001	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	YES	
6 PFOS	12.150367	0.222	121.5		1.657e3	4.70	6	12			1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	YES	
7 13C3-PFBS	12.329618	0.00174	98.6		6.482e3	0.410	3.04	7	14		0.690	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
8 13C4-PFHpA	13.048990	0.00478	104.4		1.837e4	1.098	3.92	5	14		0.972	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
9 18O2-PFHxS	12.436325	0.000530	99.5		6.926e3	0.434	4.03	9	14		1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
10 13C2-PFOA	11.747804	0.00615	94.0		3.782e4	4.608	4.31	10	15		1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
11 13C3-PFNA	11.907111	0.0304	95.3		5.757e3	0.867	4.64	11	16		1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
12 13C8-PFOS	11.855054	0.0144	94.6		3.194e3	0.958	4.70	12	17		1.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
13 13C5-PFHxA	12.500000	0.00221	100.0		2.929e4	1.000	3.41	13	13		0.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
14 13C3-PFHxS	12.500000	0.009184	100.0		1.603e4	1.000	4.03	14	14		0.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
15 13C8-PFOA	12.500000	0.00540	100.0		8.732e3	1.000	4.31	15	15		0.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
16 13C3-PFNA	12.500000	0.0206	100.0		6.979e3	1.000	4.64	16	16		0.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
17 13C4-PFOS	12.500000	0.00162	100.0		3.514e3	1.000	4.70	17	17		0.000	05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
18 Total PFBS	10.348230							18				05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
19 Total PFHxS	13.113795							19				05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
20 Total PFOA	10.498092							20				05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	
21 Total PFOS	18.866247	0.222						21				05-Mar-17	18:25:28		ST170305G PFC CS3 17C0506	1.0	1.00	C18_V	NO	



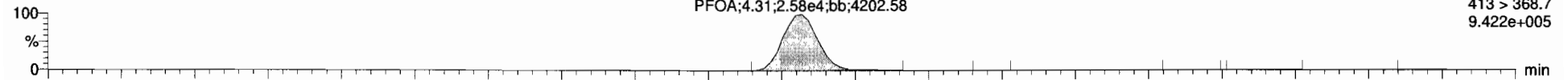
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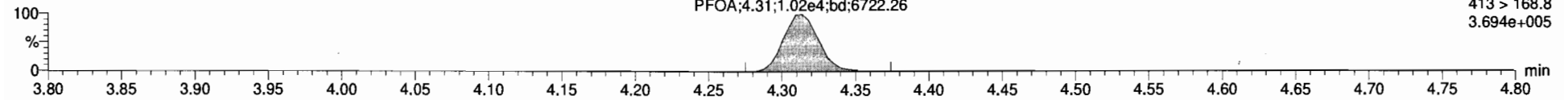
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Total PFOA

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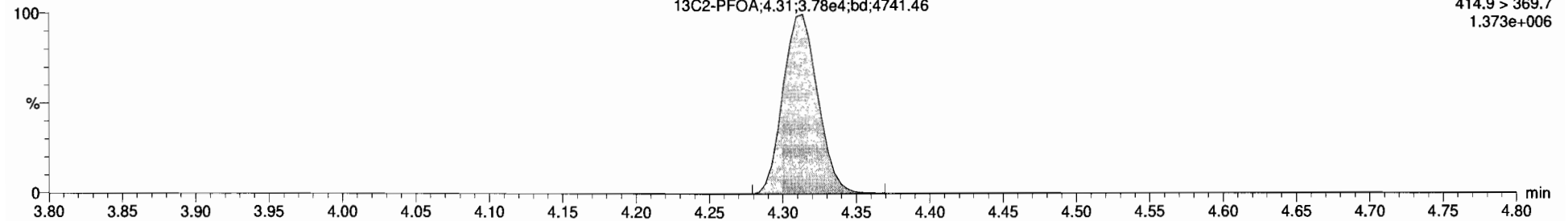


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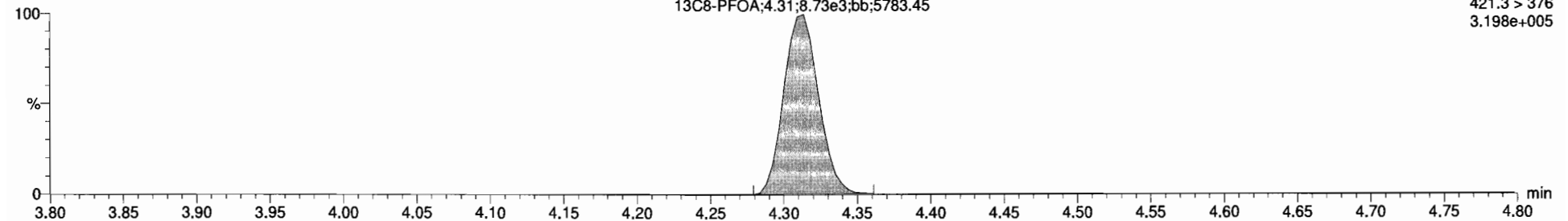
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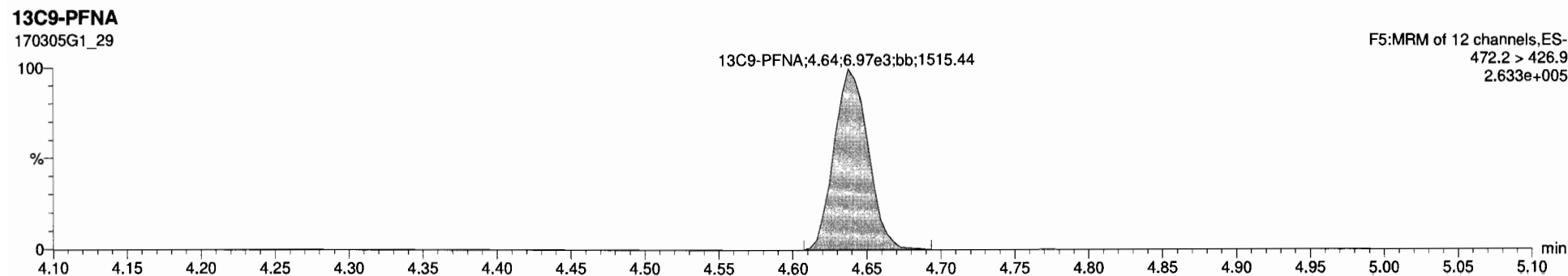
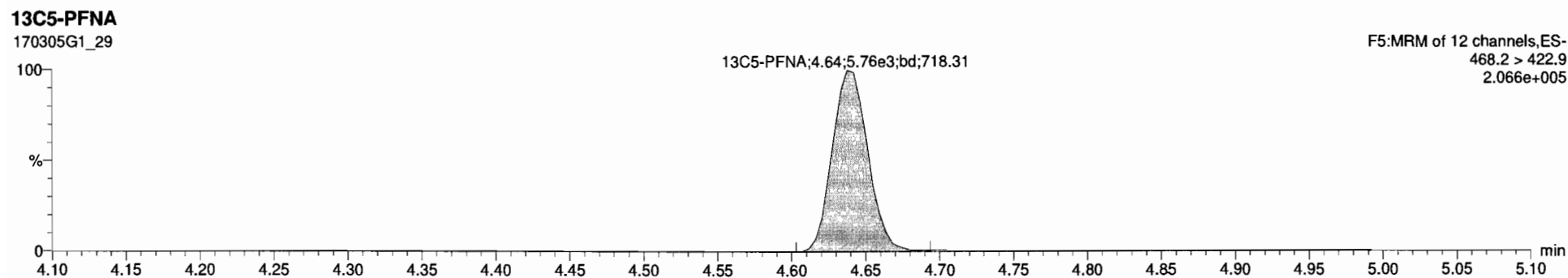
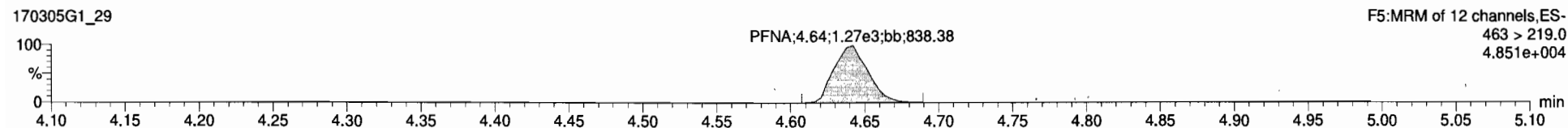
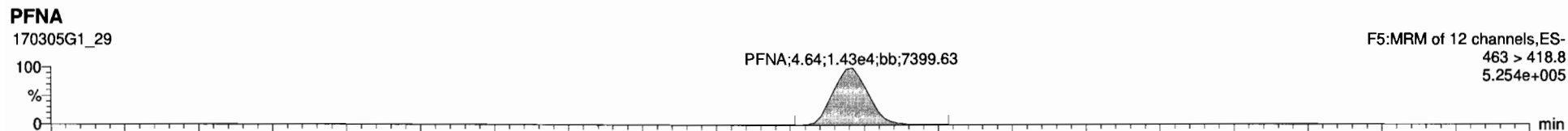
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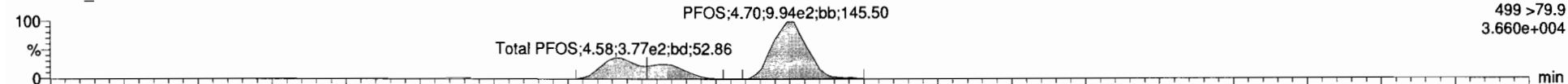
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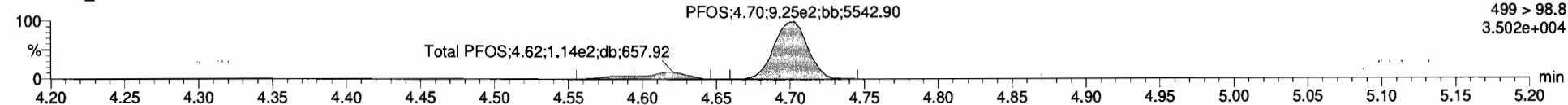
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Total PFOS

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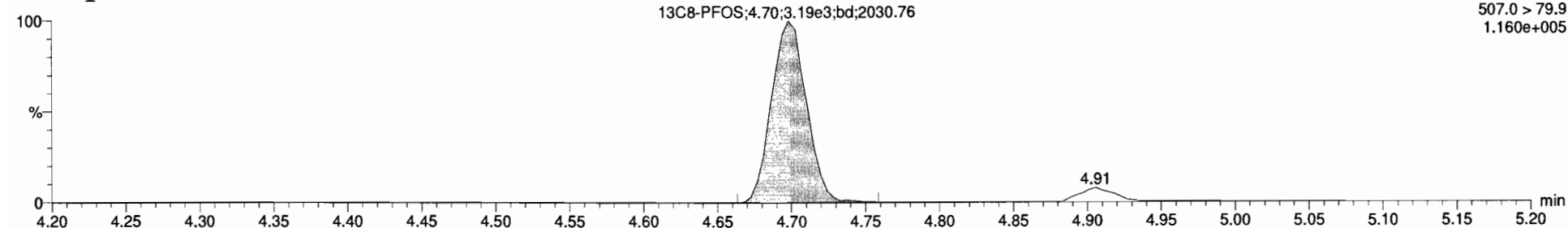


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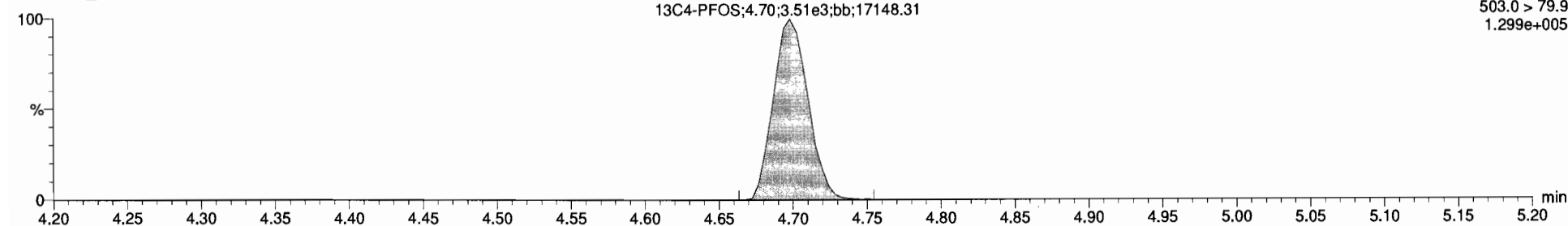
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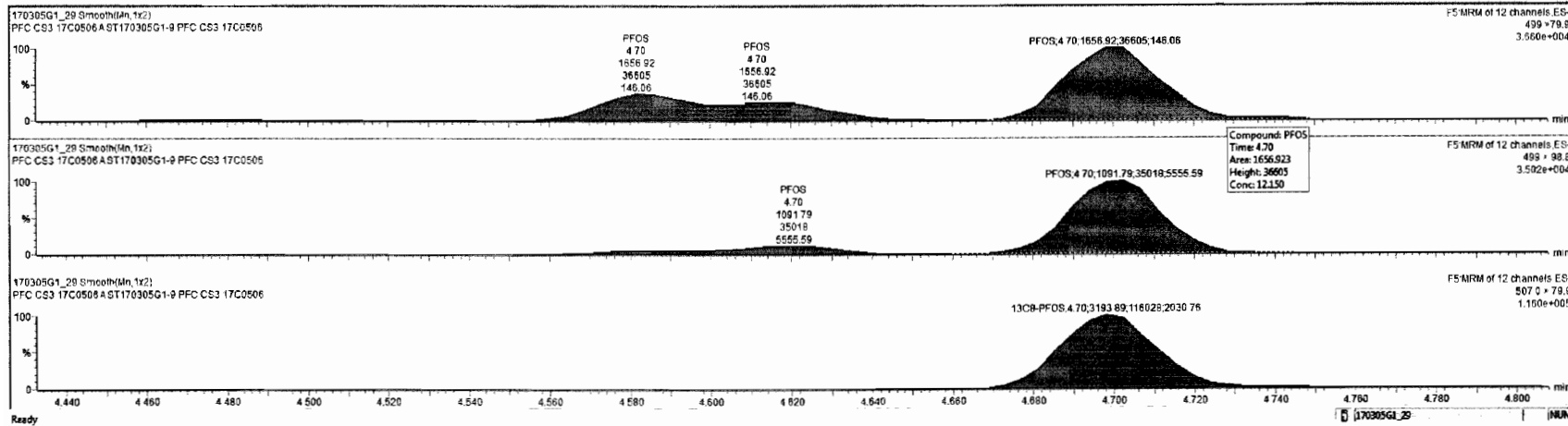
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170305G1_29 ST170305G1 9 PFC CS3 17C0506 PFC CS3 17C0506 A

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1	PFBS	10.348230	0.0000	103.5		1.28144		3.04	1	7	0.292	YES	1.001	05-Mar-17	18:25:28	48.991	ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	YES	
2	PFHpA	10.782461	0.0000	107.0		2.87044		3.92	2	8			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	YES	
3	PFHxS	9.8775267	0.0000	99.8		9.17643		4.63	3	9			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	YES	
4	PFOA	10.498092	0.0000	105.0		2.57744		4.31	4	10			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	YES	
5	PFNA	11.294848	0.0000	112.9		1.42644		4.64	5	11			1.001	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	YES	
6	PFOS	12.180581	0.222	121.5		1.88744		4.70	6	12			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	YES	
7	13C3-PFBS	12.329618	0.00174	98.6		8.48243	0.410	3.04	7	14			0.890	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
8	13C4-PFHpA	13.048990	0.00478	104.4		1.83744	1.096	3.92	8	14			0.972	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
9	1802-PFHxS	12.438328	0.000530	99.5		6.92643	0.434	4.63	9	14			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
10	13C2-PFOA	11.747804	0.00151	94.0		3.78244	4.608	4.31	10	15			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
11	13C5-PFNA	11.907111	0.0394	95.3		5.75743	0.867	4.64	11	16			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
12	13C8-PFOS	11.855654	0.0144	94.8		3.19443	0.958	4.70	12	17			1.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
13	13C5-PFHxS	12.500000	0.00221	100.0		2.92944	1.000	3.41	13	13			0.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
14	13C3-PFHxS	12.500000	0.000184	100.0		1.60344	1.000	4.63	14	14			0.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
15	13C8-PFOA	12.500000	0.00540	100.0		6.73243	1.000	4.31	15	15			0.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
16	13C8-PFNA	12.500000	0.0206	100.0		6.87643	1.000	4.64	16	16			0.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
17	13C4-PFOS	12.500000	0.00182	100.0		3.51443	1.000	4.70	17	17			0.000	05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
18	Total PFBS	10.348230							18					05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
19	Total PFHxS	11.022729							19					05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
20	Total PFOA	10.498092							20					05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	
21	Total PFOS	16.888247	0.222						21					05-Mar-17	18:25:28		ST170305G	PFC CS3 17C05	1.0	1.00	C18_V	NO	



INITIAL CALIBRATION

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

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Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:19:21

Compound name: PFBS

Correlation coefficient: $r = 0.999596$, $r^2 = 0.999192$

Calibration curve: $2.38097 * x + 0.0682571$

Response type: Internal Std (Ref 7), 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 170305G1_2	0.250	3.05	3.44e2	6.21e3	0.263	5.1	2.77
2	2 170305G1_3	0.500	3.05	6.19e2	6.45e3	0.475	-5.0	2.40
3	3 170305G1_4	1.00	3.04	1.07e3	5.41e3	1.01	1.1	2.47
4	4 170305G1_5	2.00	3.03	2.78e3	7.24e3	1.99	-0.7	2.40
5	5 170305G1_6	5.00	3.03	5.91e3	6.73e3	4.58	-8.4	2.20
6	6 170305G1_7	10.0	3.03	1.12e4	5.49e3	10.7	7.2	2.56
7	7 170305G1_8	50.0	3.03	5.43e4	5.58e3	51.1	2.1	2.43
8	8 170305G1_9	100	3.03	9.61e4	5.11e3	98.6	-1.4	2.35

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Compound name: PFHpA

Correlation coefficient: $r = 0.999429$, $r^2 = 0.998857$

Calibration curve: $1.79957 * x + 0.123896$

Response type: Internal Std (Ref 8), 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 170305G1_2	0.250	3.93	7.46e2	1.70e4	0.235	-5.8	2.19
2	2 170305G1_3	0.500	3.92	1.43e3	1.69e4	0.518	3.7	2.11
3	3 170305G1_4	1.00	3.91	2.27e3	1.52e4	0.964	-3.6	1.86
4	4 170305G1_5	2.00	3.91	5.65e3	1.86e4	2.05	2.3	1.90
5	5 170305G1_6	5.00	3.91	1.36e4	1.95e4	4.78	-4.4	1.74
6	6 170305G1_7	10.0	3.91	1.98e4	1.29e4	10.6	6.4	1.93
7	7 170305G1_8	50.0	3.91	1.16e5	1.55e4	51.9	3.8	1.87
8	8 170305G1_9	100	3.91	1.99e5	1.42e4	97.6	-2.4	1.76

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Compound name: PFHxS

Correlation coefficient: $r = 0.999200$, $r^2 = 0.998401$

Calibration curve: $1.81334 * x + 0.103191$

Response type: Internal Std (Ref 9), Area * (IS Conc. / IS Area)

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

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	0.250	4.04	3.26e2	7.11e3	0.259	3.8	2.29
2	2 170305G1_3	0.500	4.03	5.47e2	6.83e3	0.496	-0.9	2.00
3	3 170305G1_4	1.00	4.03	8.97e2	5.85e3	1.00	0.1	1.92
4	4 170305G1_5	2.00	4.03	2.23e3	7.43e3	2.01	0.5	1.87
5	5 170305G1_6	5.00	4.03	5.17e3	7.64e3	4.60	-8.0	1.69
6	6 170305G1_7	10.0	4.03	6.69e3	4.52e3	10.1	1.5	1.85
7	7 170305G1_8	50.0	4.03	4.78e4	6.24e3	52.8	5.6	1.92
8	8 170305G1_9	100	4.03	8.33e4	5.89e3	97.4	-2.6	1.77

Compound name: PFOA

Correlation coefficient: $r = 0.998804$, $r^2 = 0.997609$

Calibration curve: $0.794457 * x + 0.179058$

Response type: Internal Std (Ref 10), 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 170305G1_2	0.250	4.32	1.04e3	3.51e4	0.241	-3.7	1.48
2	2 170305G1_3	0.500	4.31	1.52e3	3.53e4	0.452	-9.6	1.08
3	3 170305G1_4	1.00	4.30	2.09e3	2.91e4	0.908	-9.2	0.901
4	4 170305G1_5	2.00	4.30	5.39e3	3.70e4	2.06	3.1	0.909
5	5 170305G1_6	5.00	4.30	1.24e4	3.46e4	5.43	8.5	0.898
6	6 170305G1_7	10.0	4.30	1.56e4	2.18e4	11.0	9.8	0.890
7	7 170305G1_8	50.0	4.30	1.10e5	3.30e4	52.3	4.6	0.835
8	8 170305G1_9	100	4.30	1.98e5	3.22e4	96.4	-3.6	0.767

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Compound name: PFNA

Correlation coefficient: $r = 0.999011$, $r^2 = 0.998022$

Calibration curve: $2.73664 * x + 0.0966541$

Response type: Internal Std (Ref 11), 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 170305G1_2	0.250	4.65	5.06e2	8.36e3	0.241	-3.5	3.03
2	2 170305G1_3	0.500	4.64	8.81e2	7.67e3	0.489	-2.1	2.87
3	3 170305G1_4	1.00	4.63	1.26e3	5.74e3	0.968	-3.2	2.75
4	4 170305G1_5	2.00	4.63	3.17e3	6.97e3	2.04	2.0	2.84
5	5 170305G1_6	5.00	4.63	7.77e3	7.48e3	4.71	-5.8	2.60
6	6 170305G1_7	10.0	4.63	7.05e3	2.88e3	11.1	11.4	3.06
7	7 170305G1_8	50.0	4.63	7.41e4	6.50e3	52.1	4.1	2.85
8	8 170305G1_9	100	4.63	1.56e5	7.35e3	97.1	-2.9	2.66

Compound name: PFOS

Coefficient of Determination: $R^2 = 0.997963$

Calibration curve: $-0.000185224 * x^2 + 0.54028 * x + -0.0525057$

Response type: Internal Std (Ref 12), 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 170305G1_2	0.250	4.62	3.72e1	6.28e3	0.234	-6.3	0.296
2	2 170305G1_3	0.500	4.71	7.39e1	6.57e3	0.358	-28.5	0.281
3	3 170305G1_4	1.00	4.69	1.82e2	4.73e3	0.989	-1.1	0.482
4	4 170305G1_5	2.00	4.69	5.28e2	5.18e3	2.46	23.0	0.638
5	5 170305G1_6	5.00	4.69	1.23e3	5.64e3	5.14	2.8	0.544
6	6 170305G1_7	10.0	4.69	8.60e2	1.88e3	10.7	7.1	0.571
7	7 170305G1_8	50.0	4.69	1.04e4	5.14e3	47.8	-4.4	0.507
8	8 170305G1_9	100	4.69	2.64e4	6.26e3	101	1.1	0.527

Ⓐ Point excluded.
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Compound name: 13C3-PFBS

Response Factor: 0.40994

RRF SD: 0.0411734, Relative SD: 10.0438

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	3.05	6.21e3	1.48e4	12.8	2.4	0.420
2	2 170305G1_3	12.5	3.05	6.45e3	1.61e4	12.2	-2.5	0.400
3	3 170305G1_4	12.5	3.03	5.41e3	1.44e4	11.5	-8.1	0.377
4	4 170305G1_5	12.5	3.03	7.24e3	1.74e4	12.7	1.2	0.415
5	5 170305G1_6	12.5	3.03	6.73e3	1.72e4	11.9	-4.7	0.391
6	6 170305G1_7	12.5	3.03	5.49e3	1.09e4	15.4	23.0	0.504
7	7 170305G1_8	12.5	3.03	5.58e3	1.48e4	11.5	-7.9	0.378
8	8 170305G1_9	12.5	3.03	5.11e3	1.29e4	12.1	-3.5	0.396

Compound name: 13C4-PFHpA

Response Factor: 1.09794

RRF SD: 0.0510391, Relative SD: 4.64862

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	3.92	1.70e4	1.48e4	13.1	5.0	1.15
2	2 170305G1_3	12.5	3.92	1.69e4	1.61e4	11.9	-4.5	1.05
3	3 170305G1_4	12.5	3.91	1.52e4	1.44e4	12.1	-3.4	1.06
4	4 170305G1_5	12.5	3.91	1.86e4	1.74e4	12.1	-3.1	1.06
5	5 170305G1_6	12.5	3.91	1.95e4	1.72e4	12.9	3.0	1.13
6	6 170305G1_7	12.5	3.91	1.29e4	1.09e4	13.4	7.6	1.18
7	7 170305G1_8	12.5	3.91	1.55e4	1.48e4	11.9	-4.4	1.05
8	8 170305G1_9	12.5	3.91	1.42e4	1.29e4	12.5	-0.2	1.10

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Compound name: 18O2-PFHxS

Response Factor: 0.434252

RRF SD: 0.0243573, Relative SD: 5.60903

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.04	7.11e3	1.48e4	13.8	10.7	0.481
2	2 170305G1_3	12.5	4.03	6.83e3	1.61e4	12.2	-2.6	0.423
3	3 170305G1_4	12.5	4.03	5.85e3	1.44e4	11.7	-6.2	0.407
4	4 170305G1_5	12.5	4.02	7.43e3	1.74e4	12.3	-1.8	0.426
5	5 170305G1_6	12.5	4.02	7.64e3	1.72e4	12.8	2.2	0.444
6	6 170305G1_7	12.5	4.02	4.52e3	1.09e4	12.0	-4.4	0.415
7	7 170305G1_8	12.5	4.02	6.24e3	1.48e4	12.1	-2.8	0.422
8	8 170305G1_9	12.5	4.02	5.89e3	1.29e4	13.1	5.0	0.456

Compound name: 13C2-PFOA

Response Factor: 4.60838

RRF SD: 0.269705, Relative SD: 5.85249

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.32	3.51e4	7.77e3	12.2	-2.0	4.51
2	2 170305G1_3	12.5	4.31	3.53e4	8.14e3	11.8	-5.8	4.34
3	3 170305G1_4	12.5	4.31	2.91e4	6.38e3	12.4	-1.0	4.56
4	4 170305G1_5	12.5	4.30	3.70e4	8.23e3	12.2	-2.4	4.50
5	5 170305G1_6	12.5	4.30	3.46e4	7.88e3	11.9	-4.6	4.40
6	6 170305G1_7	12.5	4.30	2.18e4	4.25e3	13.9	11.6	5.14
7	7 170305G1_8	12.5	4.30	3.30e4	7.29e3	12.3	-1.8	4.53
8	8 170305G1_9	12.5	4.30	3.22e4	6.59e3	13.3	6.0	4.89

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Compound name: 13C5-PFNA

Response Factor: 0.867114

RRF SD: 0.0501317, Relative SD: 5.78144

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.64	8.36e3	8.87e3	13.6	8.7	0.943
2	2 170305G1_3	12.5	4.64	7.67e3	8.20e3	13.5	7.9	0.936
3	3 170305G1_4	12.5	4.63	5.74e3	7.15e3	11.6	-7.4	0.803
4	4 170305G1_5	12.5	4.63	6.97e3	8.16e3	12.3	-1.4	0.855
5	5 170305G1_6	12.5	4.63	7.48e3	8.62e3	12.5	0.0	0.867
6	6 170305G1_7	12.5	4.63	2.88e3	3.54e3	11.7	-6.0	0.815
7	7 170305G1_8	12.5	4.63	6.50e3	7.60e3	12.3	-1.3	0.856
8	8 170305G1_9	12.5	4.63	7.35e3	8.52e3	12.4	-0.5	0.863

Compound name: 13C8-PFOS

Response Factor: 0.95832

RRF SD: 0.0597595, Relative SD: 6.23587

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.70	6.28e3	6.73e3	12.2	-2.5	0.934
2	2 170305G1_3	12.5	4.70	6.57e3	7.11e3	12.1	-3.6	0.924
3	3 170305G1_4	12.5	4.69	4.73e3	5.19e3	11.9	-4.7	0.913
4	4 170305G1_5	12.5	4.69	5.18e3	5.45e3	12.4	-0.9	0.950
5	5 170305G1_6	12.5	4.69	5.64e3	6.31e3	11.7	-6.8	0.894
6	6 170305G1_7	12.5	4.69	1.88e3	1.74e3	14.1	12.8	1.08
7	7 170305G1_8	12.5	4.69	5.14e3	5.13e3	13.1	4.4	1.00
8	8 170305G1_9	12.5	4.69	6.26e3	6.45e3	12.7	1.3	0.971

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Compound name: 13C5-PFHxA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	3.43	2.72e4	2.72e4	12.5	0.0	1.00
2	2 170305G1_3	12.5	3.43	2.95e4	2.95e4	12.5	0.0	1.00
3	3 170305G1_4	12.5	3.41	2.60e4	2.60e4	12.5	0.0	1.00
4	4 170305G1_5	12.5	3.41	3.17e4	3.17e4	12.5	0.0	1.00
5	5 170305G1_6	12.5	3.41	3.10e4	3.10e4	12.5	0.0	1.00
6	6 170305G1_7	12.5	3.41	2.37e4	2.37e4	12.5	0.0	1.00
7	7 170305G1_8	12.5	3.41	2.69e4	2.69e4	12.5	0.0	1.00
8	8 170305G1_9	12.5	3.41	2.39e4	2.39e4	12.5	0.0	1.00

Compound name: 13C3-PFHxS

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

	# Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.04	1.48e4	1.48e4	12.5	0.0	1.00
2	2 170305G1_3	12.5	4.03	1.61e4	1.61e4	12.5	0.0	1.00
3	3 170305G1_4	12.5	4.03	1.44e4	1.44e4	12.5	0.0	1.00
4	4 170305G1_5	12.5	4.02	1.74e4	1.74e4	12.5	0.0	1.00
5	5 170305G1_6	12.5	4.02	1.72e4	1.72e4	12.5	0.0	1.00
6	6 170305G1_7	12.5	4.03	1.09e4	1.09e4	12.5	0.0	1.00
7	7 170305G1_8	12.5	4.02	1.48e4	1.48e4	12.5	0.0	1.00
8	8 170305G1_9	12.5	4.02	1.29e4	1.29e4	12.5	0.0	1.00

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time

Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 13C8-PFOA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.32	7.77e3	7.77e3	12.5	0.0	1.00
2	2 170305G1_3	12.5	4.31	8.14e3	8.14e3	12.5	0.0	1.00
3	3 170305G1_4	12.5	4.30	6.38e3	6.38e3	12.5	0.0	1.00
4	4 170305G1_5	12.5	4.30	8.23e3	8.23e3	12.5	0.0	1.00
5	5 170305G1_6	12.5	4.30	7.88e3	7.88e3	12.5	0.0	1.00
6	6 170305G1_7	12.5	4.30	4.25e3	4.25e3	12.5	0.0	1.00
7	7 170305G1_8	12.5	4.30	7.29e3	7.29e3	12.5	0.0	1.00
8	8 170305G1_9	12.5	4.30	6.59e3	6.59e3	12.5	0.0	1.00

Compound name: 13C9-PFNA

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.64	8.87e3	8.87e3	12.5	0.0	1.00
2	2 170305G1_3	12.5	4.64	8.20e3	8.20e3	12.5	0.0	1.00
3	3 170305G1_4	12.5	4.63	7.15e3	7.15e3	12.5	0.0	1.00
4	4 170305G1_5	12.5	4.63	8.16e3	8.16e3	12.5	0.0	1.00
5	5 170305G1_6	12.5	4.63	8.62e3	8.62e3	12.5	0.0	1.00
6	6 170305G1_7	12.5	4.63	3.54e3	3.54e3	12.5	0.0	1.00
7	7 170305G1_8	12.5	4.63	7.60e3	7.60e3	12.5	0.0	1.00
8	8 170305G1_9	12.5	4.63	8.52e3	8.52e3	12.5	0.0	1.00

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time

Printed: Monday, March 06, 2017 08:29:13 Pacific Standard Time

Compound name: 13C4-PFOS

Response Factor: 1

RRF SD: 0, Relative SD: 0

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

Curve type: RF

#	Name	Std. Conc	RT	Resp	IS Resp	Conc.	%Dev	RRF
1	1 170305G1_2	12.5	4.70	6.73e3	6.73e3	12.5	0.0	1.00
2	2 170305G1_3	12.5	4.70	7.11e3	7.11e3	12.5	0.0	1.00
3	3 170305G1_4	12.5	4.69	5.19e3	5.19e3	12.5	0.0	1.00
4	4 170305G1_5	12.5	4.69	5.45e3	5.45e3	12.5	0.0	1.00
5	5 170305G1_6	12.5	4.69	6.31e3	6.31e3	12.5	0.0	1.00
6	6 170305G1_7	12.5	4.69	1.74e3	1.74e3	12.5	0.0	1.00
7	7 170305G1_8	12.5	4.69	5.13e3	5.13e3	12.5	0.0	1.00
8	8 170305G1_9	12.5	4.69	6.45e3	6.45e3	12.5	0.0	1.00

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:13:54 Pacific Standard Time

Printed: Monday, March 06, 2017 09:14:12 Pacific Standard Time

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Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Compound name: PFBS

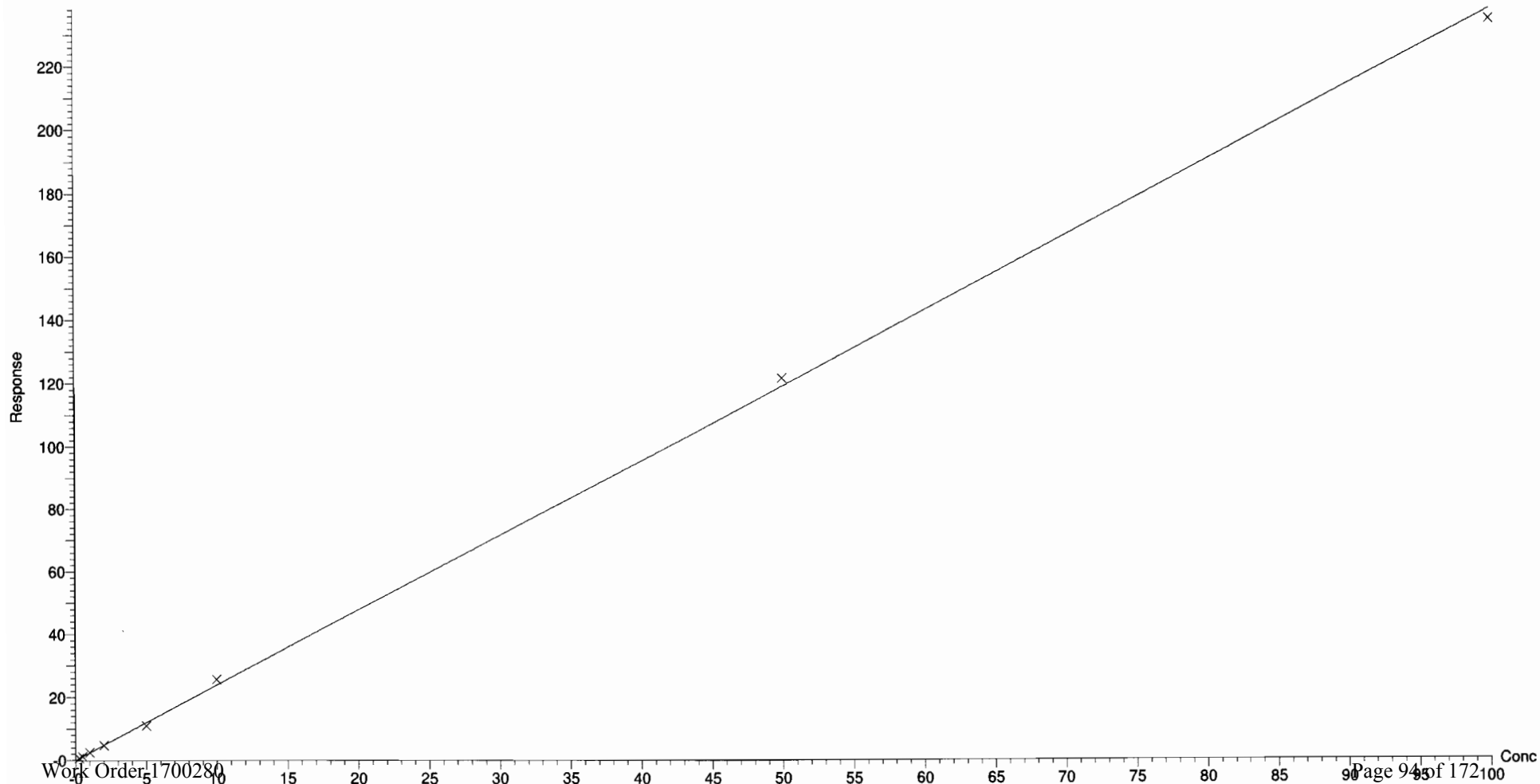
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2	170305G1_2	ST170305G1-1 PFC CS-2 17C0501	05-Mar-17	12:46:48
3	170305G1_3	ST170305G1-2 PFC CS-1 17C0502	05-Mar-17	12:59:15
4	170305G1_4	ST170305G1-3 PFC CS0 17C0503	05-Mar-17	13:11:49
5	170305G1_5	ST170305G1-4 PFC CS1 17C0504	05-Mar-17	13:24:21
6	170305G1_6	ST170305G1-5 PFC CS2 17C0505	05-Mar-17	13:36:55
7	170305G1_7	ST170305G1-6 PFC CS3 17C0506	05-Mar-17	13:49:29
8	170305G1_8	ST170305G1-7 PFC CS4 17C0507	05-Mar-17	14:02:00
9	170305G1_9	ST170305G1-8 PFC CS5 17C0508	05-Mar-17	14:14:34
10	170305G1_10	IPA	05-Mar-17	14:27:08
11	170305G1_11	SS170305G1-1 PFC SSS 17C0509	05-Mar-17	14:39:40
12	170305G1_12	IPA	05-Mar-17	14:52:09
13	170305G1_13	B7C0012-BS1 OPR 0.125	05-Mar-17	15:04:45
14	170305G1_14	B7C0010-BS1 OPR 0.125	05-Mar-17	15:17:15
15	170305G1_15	IPA	05-Mar-17	15:29:48
16	170305G1_16	B7C0012-BLK1 Method Blank 0.125	05-Mar-17	15:42:23
17	170305G1_17	B7C0010-BLK1 Method Blank 0.125	05-Mar-17	15:54:54
18	170305G1_18	1700268-02RE1 WI-CV-GW05M-0217 0.125	05-Mar-17	16:07:28
19	170305G1_19	1700268-04RE1 WI-CV-GW11M-0217 0.125	05-Mar-17	16:20:00
20	170305G1_20	1700280-01 WI-CV-GW03M-0217 0.125	05-Mar-17	16:32:34
21	170305G1_21	1700280-02 WI-CV-GW03D-0217 0.125	05-Mar-17	16:45:07
22	170305G1_22	1700280-03 WI-CV-EB07-022717 0.125	05-Mar-17	16:57:36
23	170305G1_23	1700280-04 WI-CV-GW04M-0217 0.125	05-Mar-17	17:10:09
24	170305G1_24	1700280-05 WI-CV-GW01M-0217 0.125	05-Mar-17	17:22:42
25	170305G1_25	1700280-06 WI-CV-EB08-022817 0.125	05-Mar-17	17:35:16
26	170305G1_26	1700280-07 WI-CV-GW01D-0217 0.125	05-Mar-17	17:47:49
27	170305G1_27	1700277-01 MILK-022717 0.005	05-Mar-17	18:00:22
28	170305G1_28	IPA	05-Mar-17	18:12:56
29	170305G1_29	ST170305G1-9 PFC CS3 17C0506	05-Mar-17	18:25:28
30	170305G1_30	IPA	05-Mar-17	18:38:01

Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53
Calibration: U:\G1.PRO\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:19:21

Compound name: PFBS
Correlation coefficient: $r = 0.999596$, $r^2 = 0.999192$
Calibration curve: $2.38097 * x + 0.0682571$
Response type: Internal Std (Ref 7), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time

Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

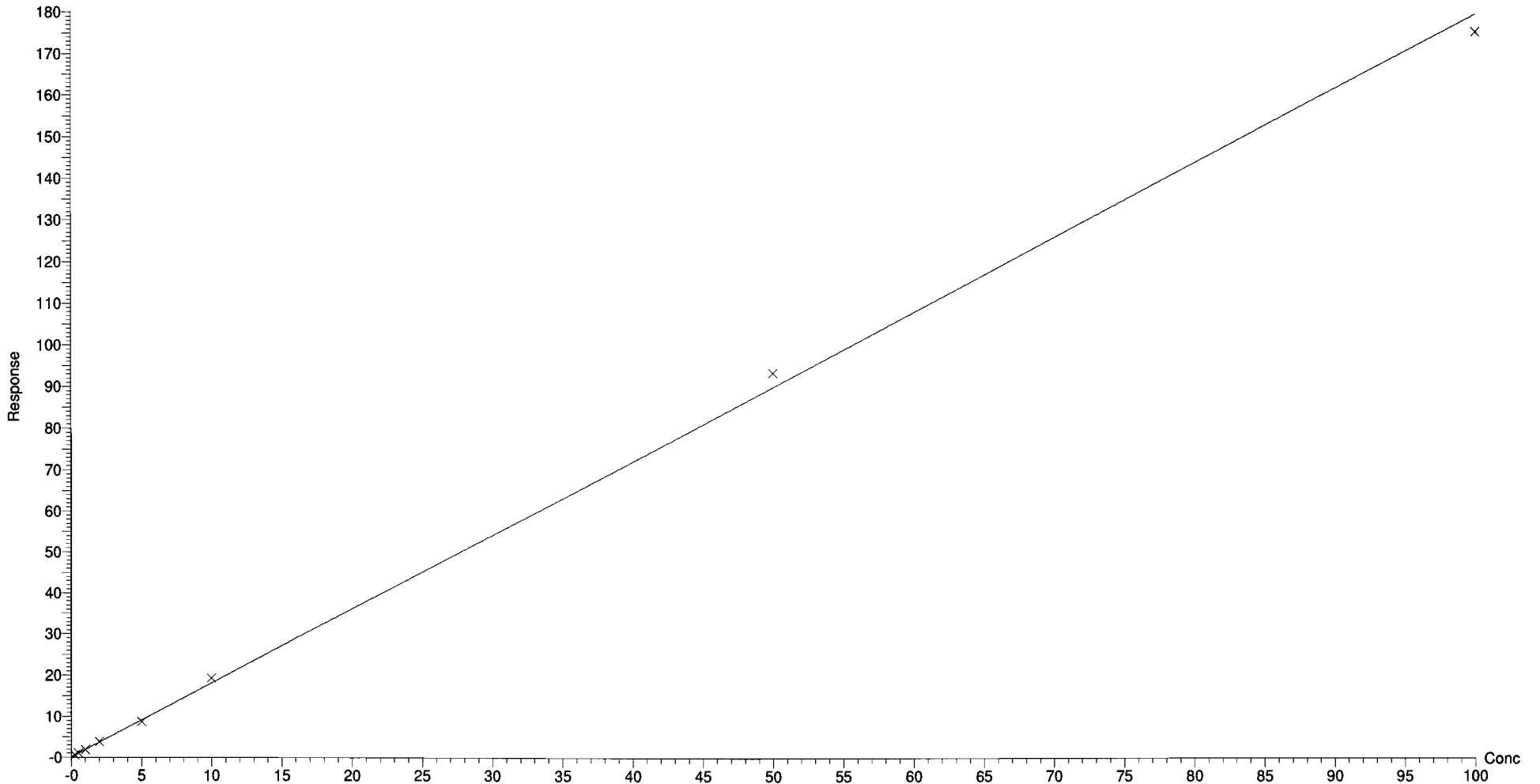
Compound name: PFHpA

Correlation coefficient: $r = 0.999429$, $r^2 = 0.998857$

Calibration curve: $1.79957 * x + 0.123896$

Response type: Internal Std (Ref 8), Area * (IS Conc. / IS Area)

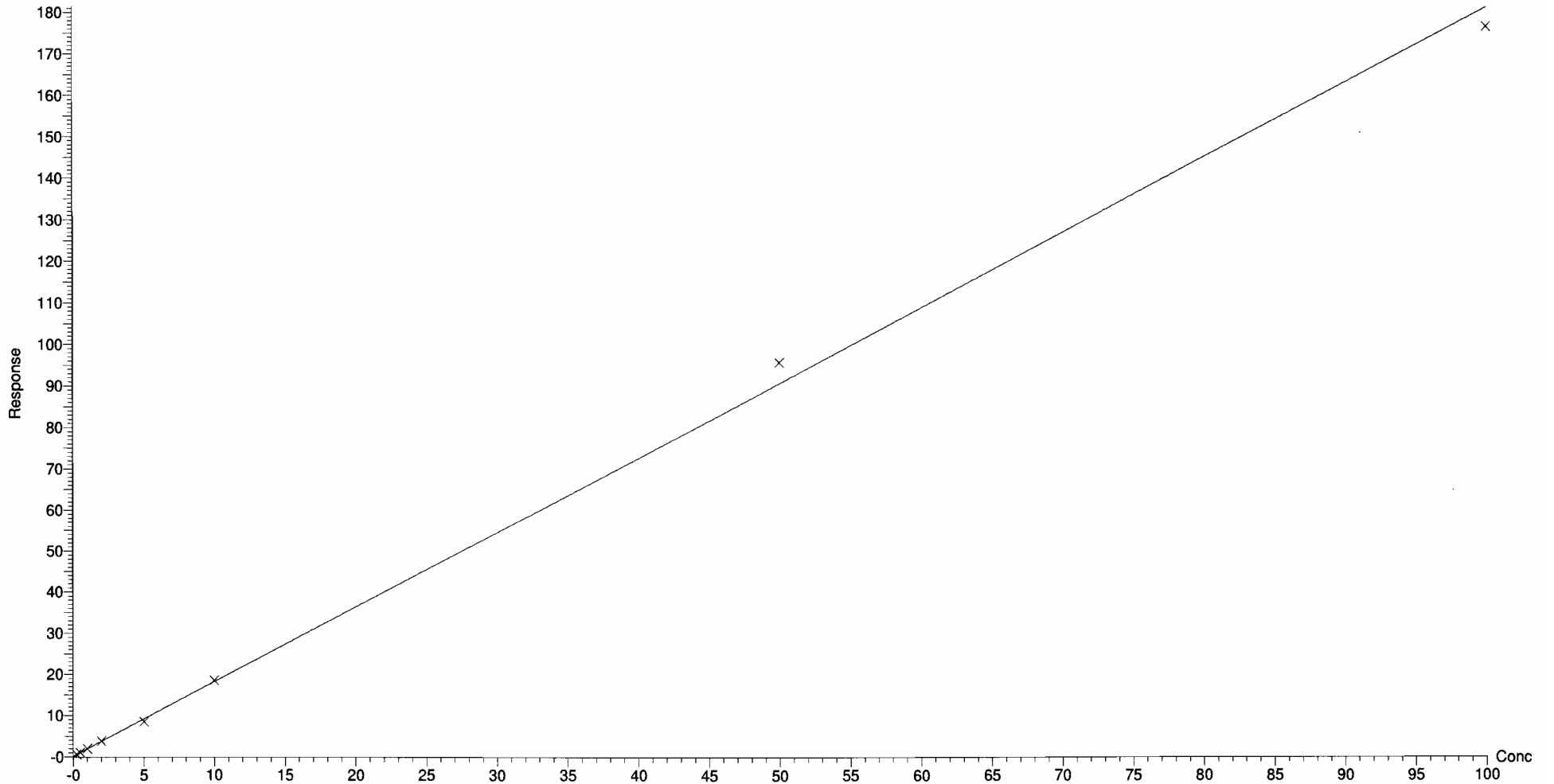
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time
Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

Compound name: PFHxS
Correlation coefficient: $r = 0.999200$, $r^2 = 0.998401$
Calibration curve: $1.81334 * x + 0.103191$
Response type: Internal Std (Ref 9), Area * (IS Conc. / IS Area)
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time

Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

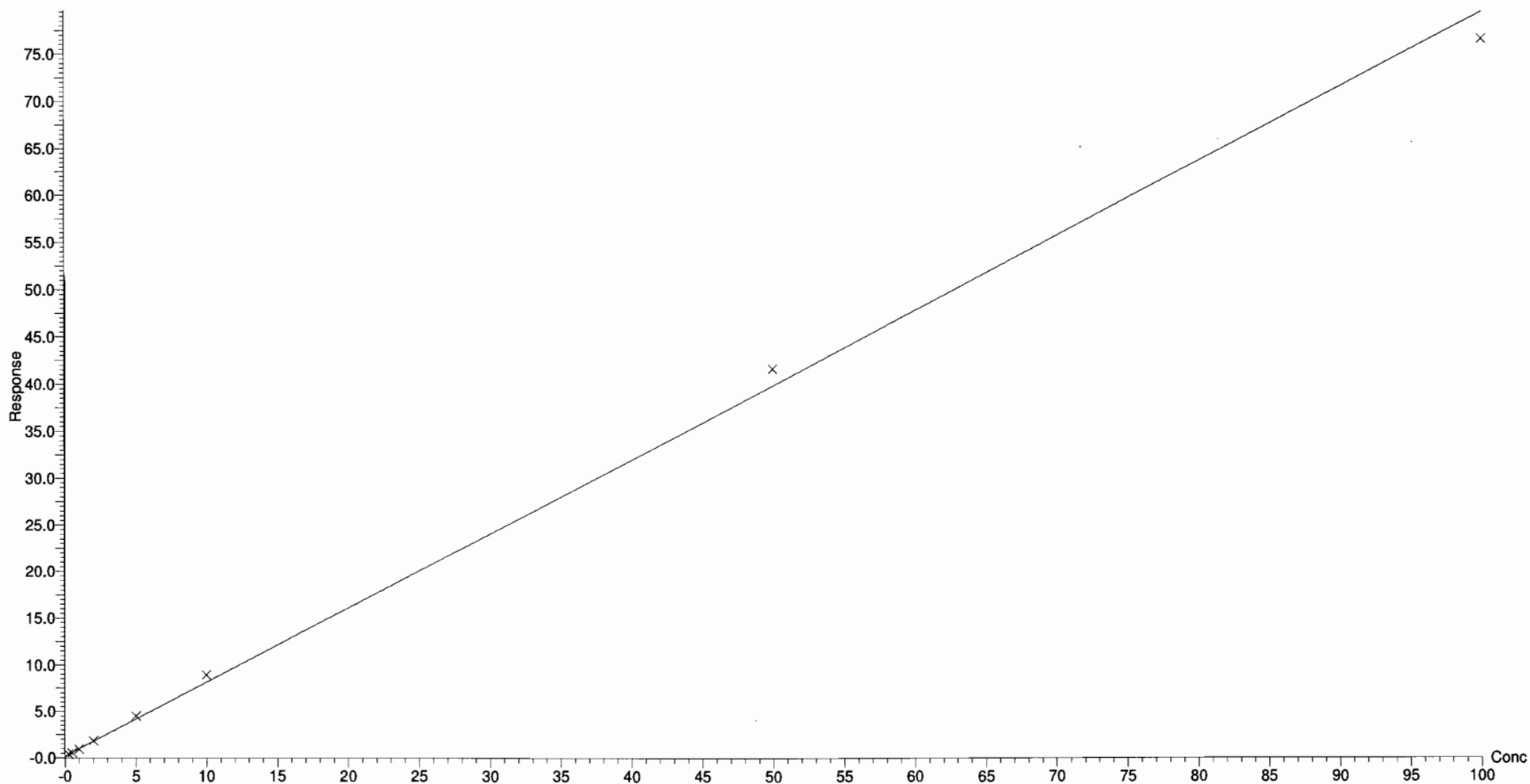
Compound name: PFOA

Correlation coefficient: $r = 0.998804$, $r^2 = 0.997609$

Calibration curve: $0.794457 * x + 0.179058$

Response type: Internal Std (Ref 10), Area * (IS Conc. / IS Area)

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



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time

Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

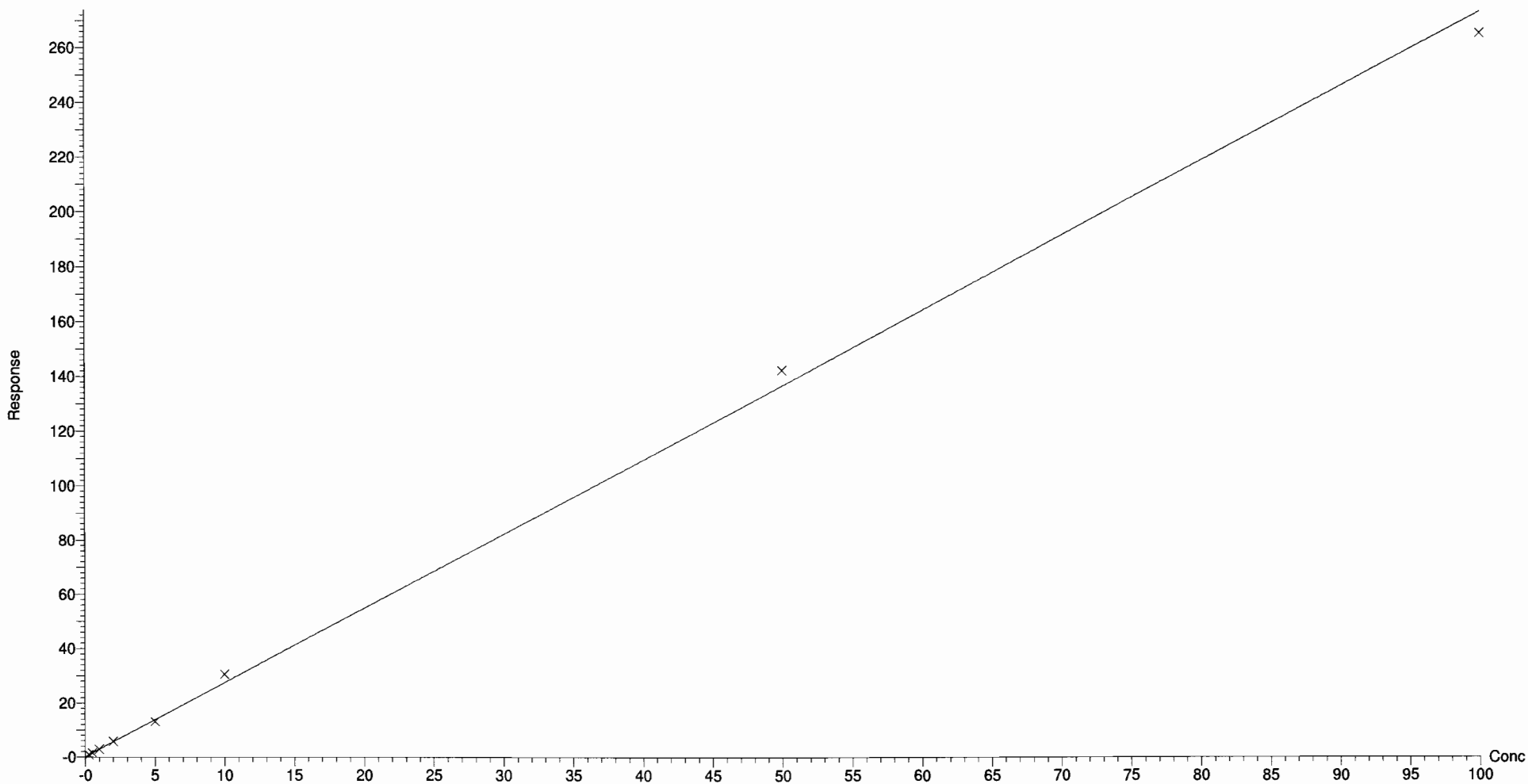
Compound name: PFNA

Correlation coefficient: $r = 0.999011$, $r^2 = 0.998022$

Calibration curve: $2.73664 * x + 0.0966541$

Response type: Internal Std (Ref 11), Area * (IS Conc. / IS Area)

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



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-CRV.qld

Last Altered: Monday, March 06, 2017 08:19:21 Pacific Standard Time

Printed: Monday, March 06, 2017 08:27:41 Pacific Standard Time

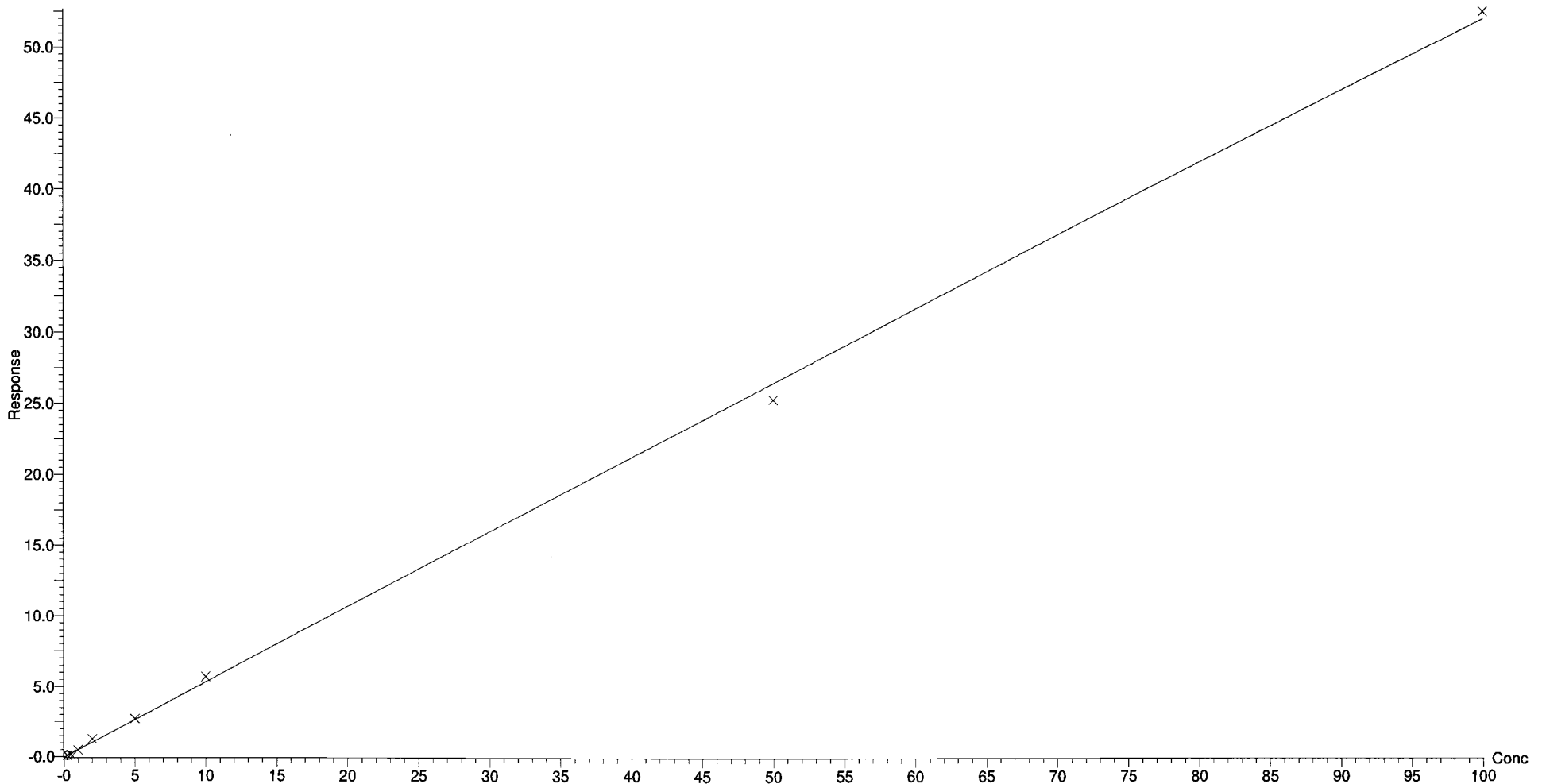
Compound name: PFOS

Coefficient of Determination: $R^2 = 0.997963$

Calibration curve: $-0.000185224 * x^2 + 0.54028 * x + -0.0525057$

Response type: Internal Std (Ref 12), Area * (IS Conc. / IS Area)

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



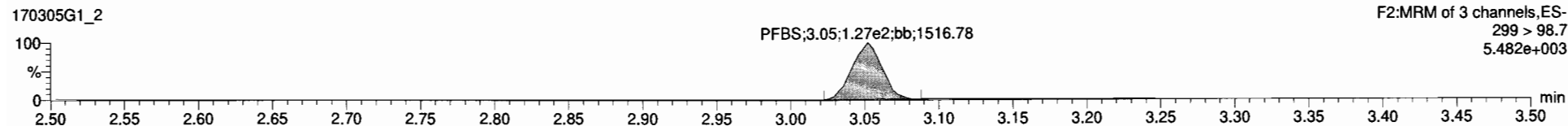
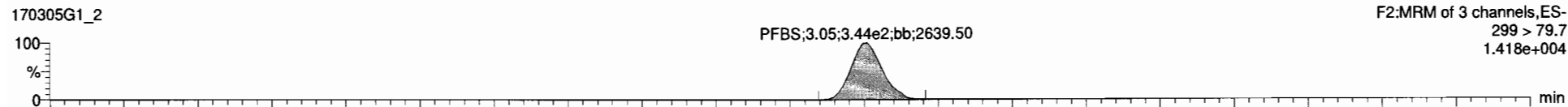
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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

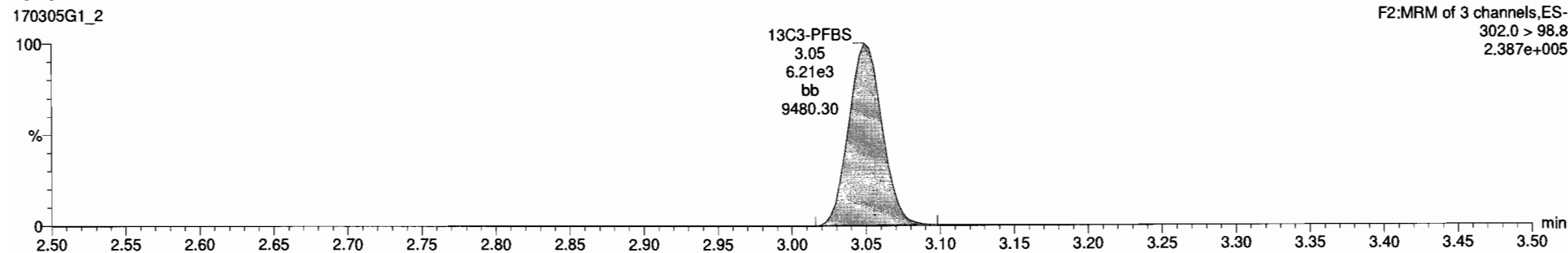
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Calibration: 06 Mar 2017 08:36:20

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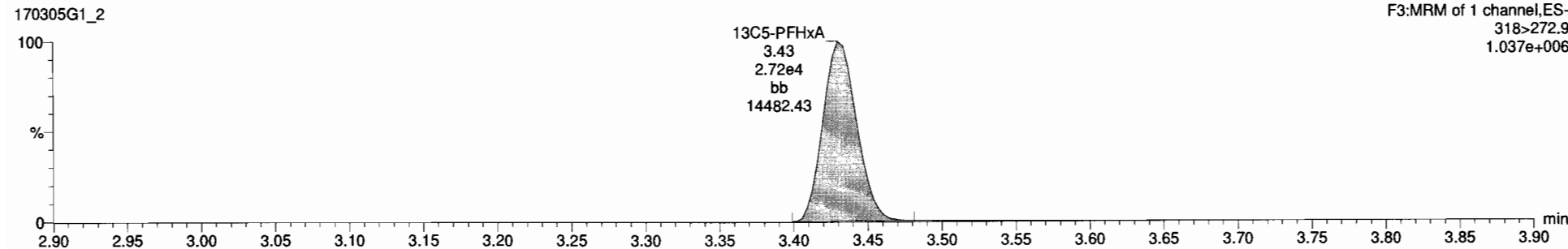
PFBS



13C3-PFBS



13C5-PFHxA



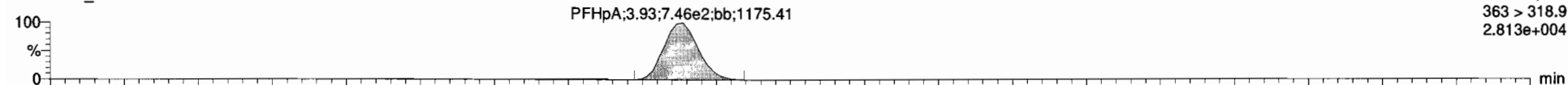
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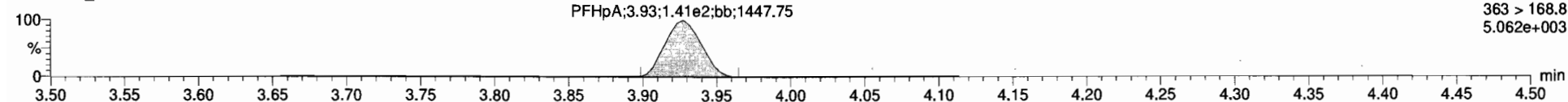
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PFHpA

170305G1_2

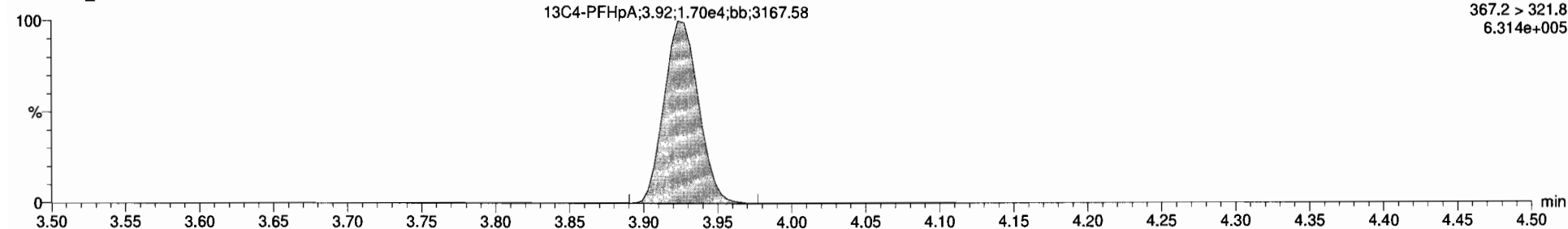


170305G1_2



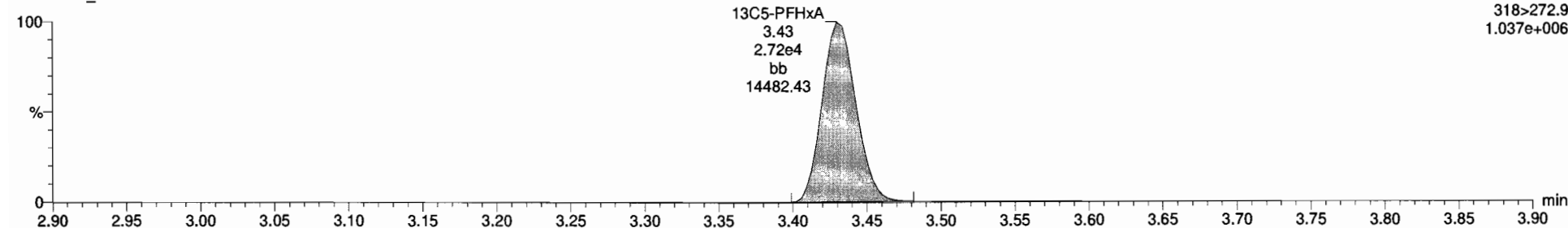
13C4-PFHpA

170305G1_2



13C5-PFHxA

170305G1_2



Dataset: Untitled

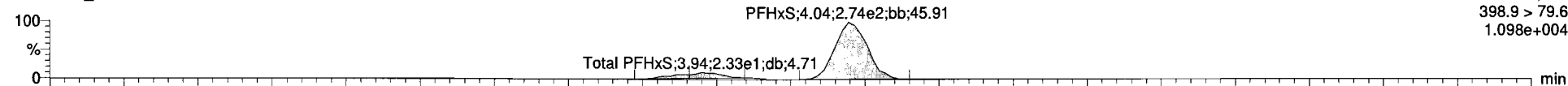
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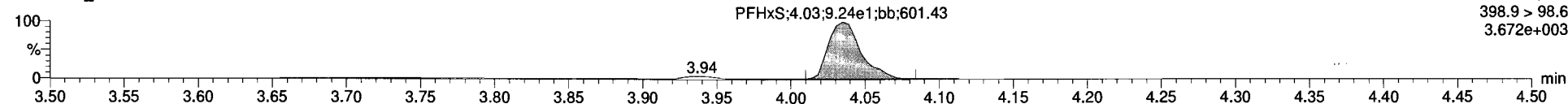
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Total PFHxS

170305G1_2

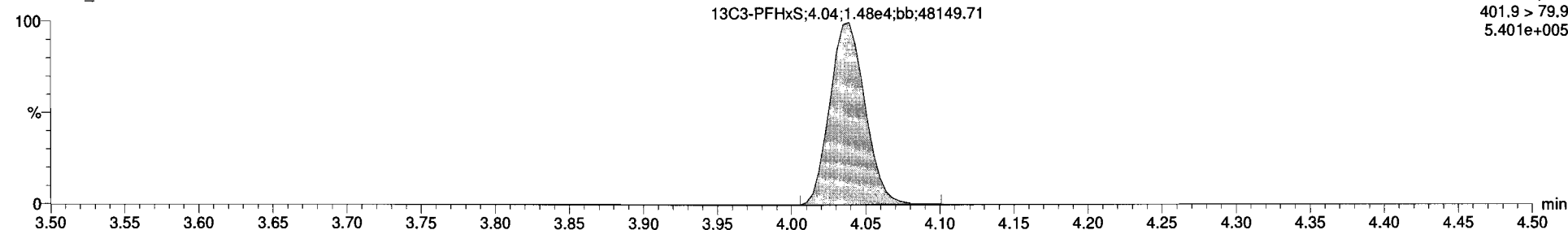


170305G1_2



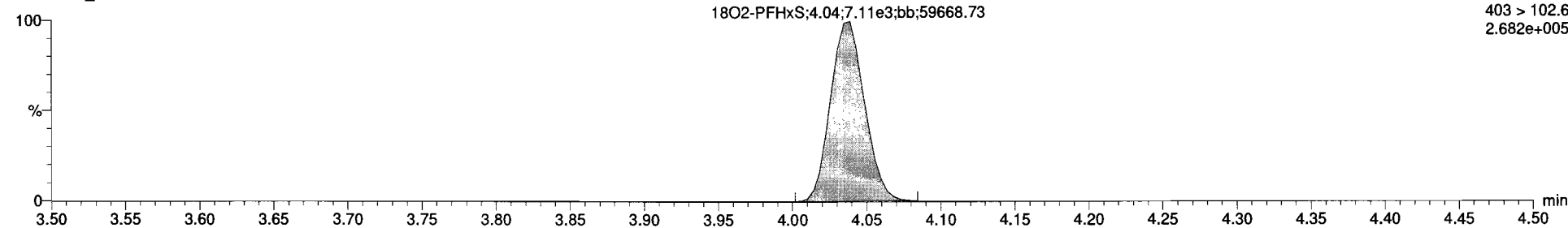
13C3-PFHxS

170305G1_2

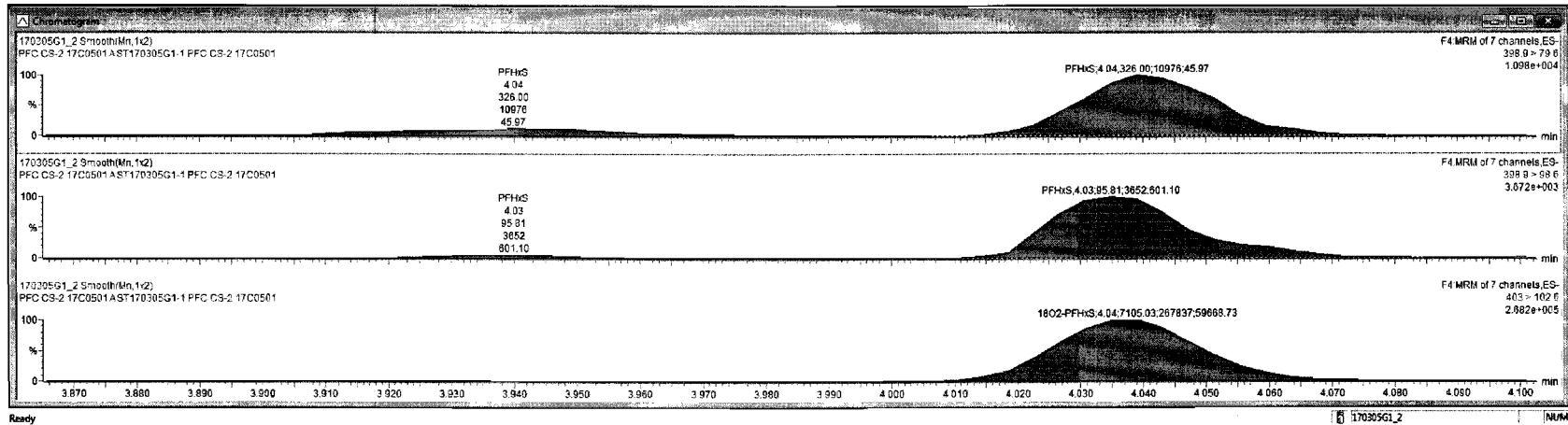


18O2-PFHxS

170305G1_2



#	Name	Trace	Area	RRP	Wt%	Pred RT	RT	Conc.	SUOL	%Rec	DL
1	PFBS	299 > 79.7	3.44e2		1.000	3.05	3.05	0.283	NO	105.1	
2	PFHpA	363 > 318.8	7.46e2		1.000	3.92	3.93	0.235	NO	94.2	
3	PFHxS	398.9 > 79.8	3.29e2		1.000	4.04	4.04	0.259	NO	103.8	
4	PFOA	413 > 368.7	1.04e3		1.000	4.32	4.32	0.241	NO	96.3	
5	PFNA	463 > 418.8	3.06e2		1.000	4.64	4.65	0.241	NO	96.5	
6	PFOS	499 > 79.9	3.72e1		1.000	4.71	4.62	0.234	NO	93.7	0.1069576
7	13C3-PFBS	302.0 > 98.8	6.21e3	0.410	1.000	3.04	3.05	12.8	NO	102.4	0.0035537
8	13C4-PFHpA	367.2 > 321.8	1.70e4	1.10	1.000	3.82	3.92	13.1	NO	105.0	0.0105143
9	18O2-PFHxS	403 > 102.6	7.11e3	0.434	1.000	4.04	4.04	13.8	NO	110.7	0.0005992
10	13C2-PFOA	414.9 > 368.7	3.51e4	4.61	1.000	4.32	4.32	12.2	NO	98.0	0.0040166
11	13C5-PFNA	468.2 > 422.9	8.36e3	0.867	1.000	4.64	4.64	13.6	NO	103.7	0.0016950
12	13C8-PFOS	507.0 > 79.9	6.28e3	0.958	1.000	4.70	4.70	12.2	NO	97.5	0.0431338
13	13C5-PFHpA	318 > 272.9	2.72e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0021576
14	13C3-PFHxS	401.8 > 79.9	1.48e4	1.00	1.000	3.94	4.04	12.5	NO	100.0	0.0036490
15	13C3-PFOA	421.3 > 376	7.77e3	1.00	1.000	4.22	4.32	12.5	NO	100.0	0.002119
16	13C5-PFNA	472.2 > 428.9	8.87e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0028988
17	13C4-PFOS	503.0 > 79.9	6.73e3	1.60	1.000	4.67	4.70	12.5	NO	100.0	0.0015837
18	Total PFBS	299 > 79.7	3.44e2		1.000	3.11		0.283	NO		
19	Total PFHxS	398.9 > 79.6	3.63e2		1.000	4.09		0.259	NO		
20	Total PFOA	413 > 368.7	1.10e3		1.000	4.39		0.241	NO		
21	Total PFOS	499 > 79.9	3.72e1		1.000	4.67		0.234	NO		0.1069576



Dataset: Untitled

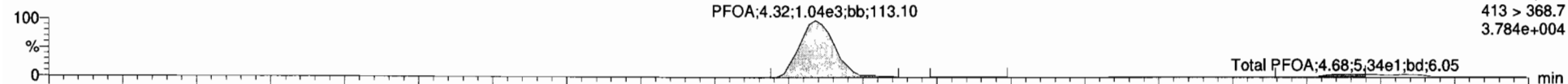
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

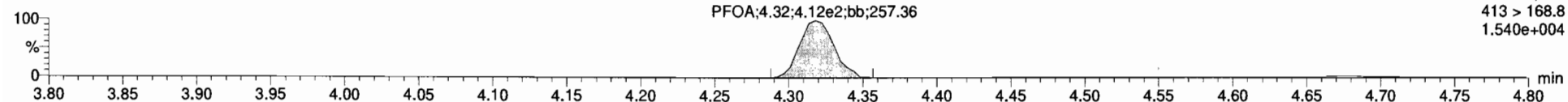
ID: ST170305G1-1 PFC CS-2 17C0501, Description: PFC CS-2 17C0501 A, Name: 170305G1_2, Date: 05-Mar-2017, Time: 12:46:48, Instrument: , Lab: , User:

Total PFOA

170305G1_2

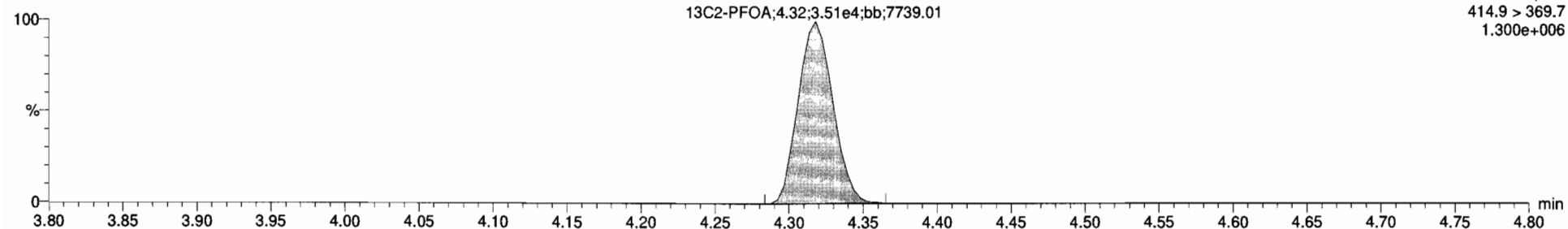


170305G1_2



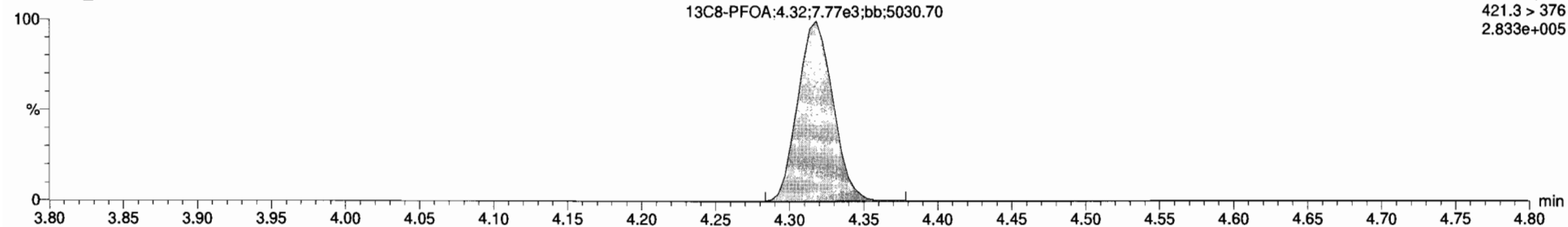
13C2-PFOA

170305G1_2



13C8-PFOA

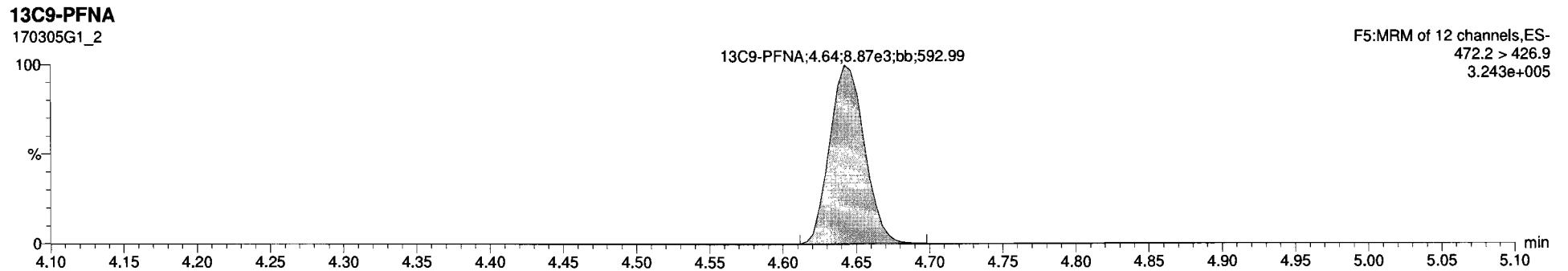
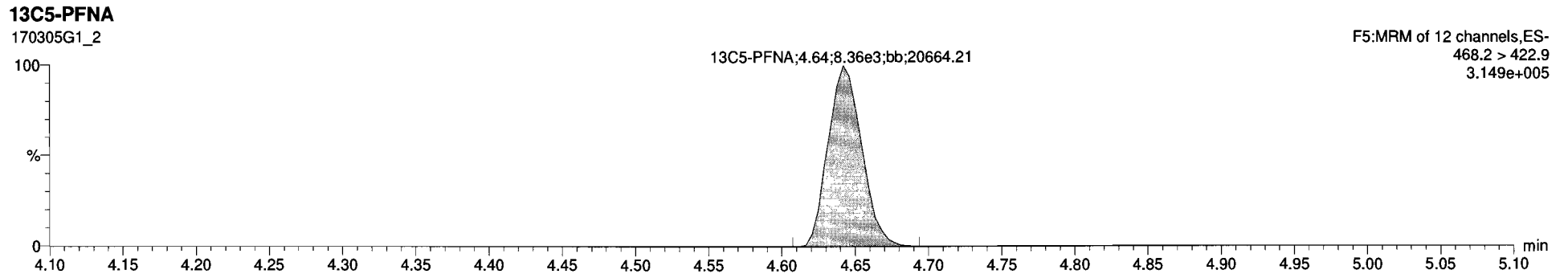
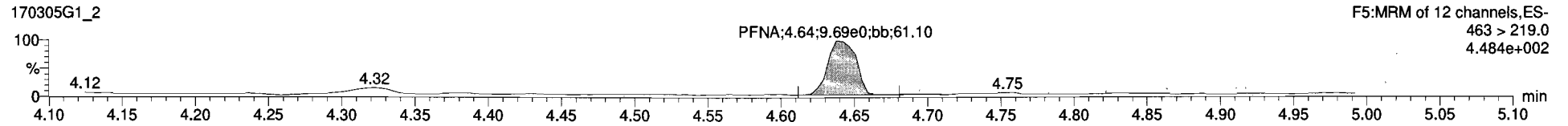
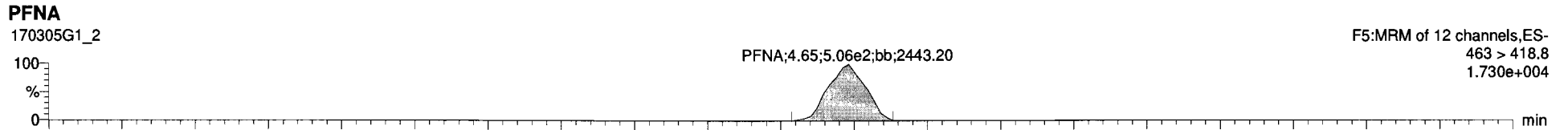
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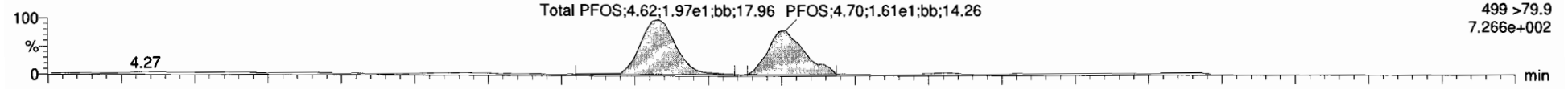
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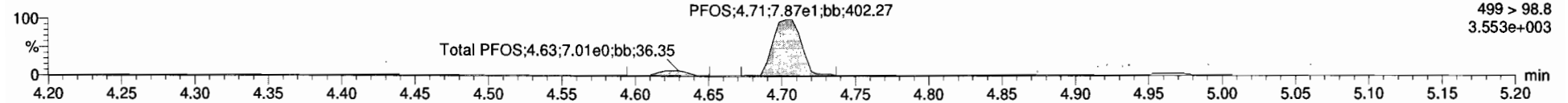
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Total PFOS

170305G1_2

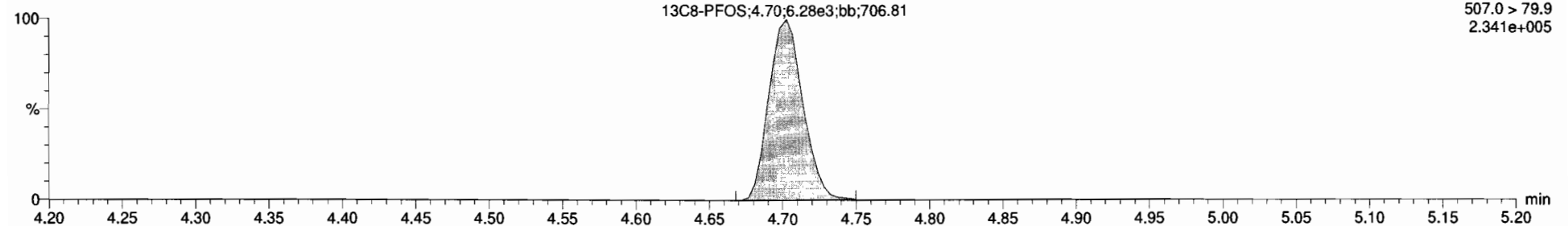


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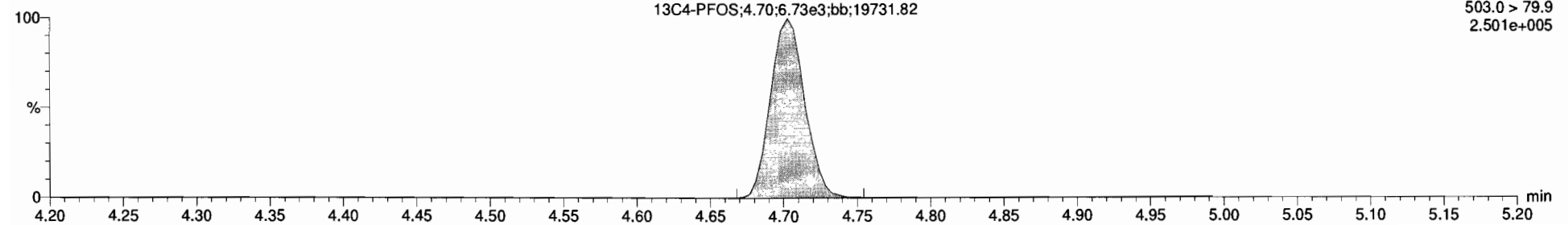
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170305G1_2



13C4-PFOS

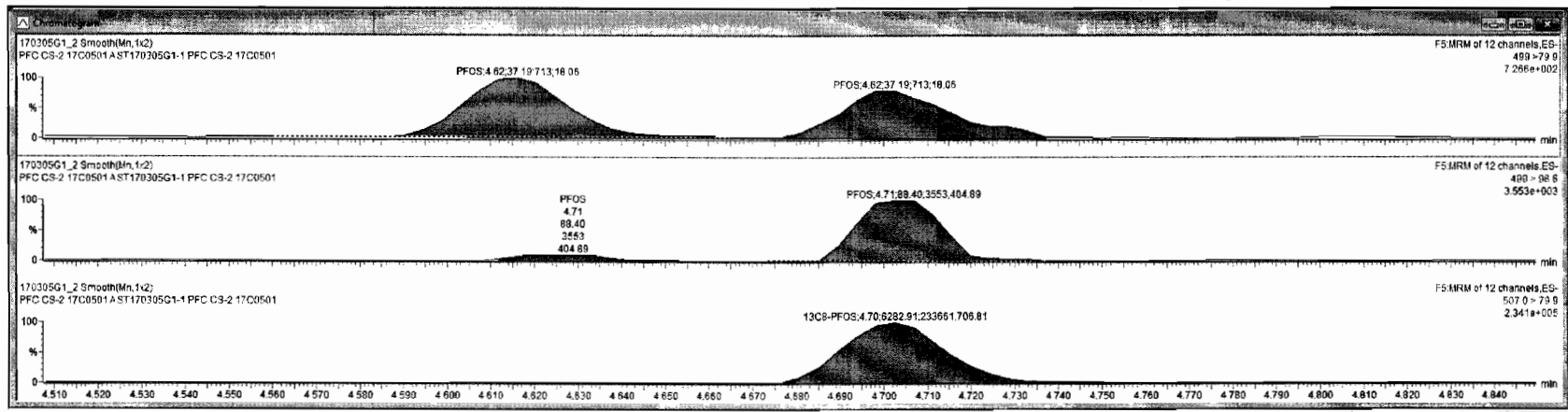
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170305G1_2 - ST170305G1-1-PFC CS-2 17C0501 - PFC CS-2 17C0501A

#	Name	Area	Area	RRF	Yield	Prod.RT	RT	Conc.	>MOL	%Rec	DL
1	PFBS	299 > 79.7	3.44e2		1.000	3.95	3.95	0.263	NO	165.1	
2	PFHpA	363 > 318.9	7.45e2		1.000	3.92	3.93	0.235	NO	94.2	
3	PFHxS	398.9 > 79.6	3.26e2		1.000	4.04	4.04	0.259	NO	103.8	
4	PFOA	413 > 368.7	1.04e3		1.000	4.32	4.32	0.241	NO	95.3	
5	PFNA	463 > 418.8	5.06e2		1.000	4.64	4.65	0.241	NO	96.5	
6	PFOS	499 > 79.9	3.72e1		1.000	4.71	4.62	0.234	NO	93.7	0.1069576
7	13C3-PFBS	302.0 > 98.8	6.21e3	0.410	1.000	3.94	3.95	12.8	NO	102.4	0.0035537
8	13C4-PFHpA	367.2 > 321.8	1.70e4	1.10	1.000	3.92	3.92	13.1	NO	105.0	0.0105143
9	18O2-PFHxS	403 > 102.6	7.11e3	0.434	1.000	4.04	4.04	13.8	NO	110.7	0.0025922
10	13C2-PFOA	414.9 > 369.7	3.51e4	4.61	1.000	4.32	4.32	12.2	NO	99.0	0.0040166
11	13C5-PFNA	468.2 > 422.9	8.36e3	0.867	1.000	4.64	4.64	13.6	NO	109.7	0.0016950
12	13C8-PFOS	507.0 > 79.9	6.28e3	0.958	1.000	4.70	4.70	12.2	NO	97.5	0.0431338
13	13C3-PFHxS	316 > 272.9	2.72e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0021578
14	13C3-PFHxS	401.9 > 79.9	1.48e4	1.00	1.000	3.94	4.04	12.5	NO	100.0	0.0006490
15	13C3-PFOA	421.3 > 376	7.77e3	1.00	1.000	4.22	4.32	12.5	NO	100.0	0.0052119
16	13C3-PFNA	472.2 > 426.5	8.87e3	1.00	1.000	4.58	4.64	12.5	NO	100.0	0.0526988
17	13C4-PFOS	503.0 > 79.9	6.73e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0015837
18	Total PFBS	299 > 79.7	3.44e2		1.000	3.11		0.263	NO		
19	Total PFHxS	398.9 > 79.6	3.63e2		1.000	4.09		0.259	NO		
20	Total PFOA	413 > 368.7	1.10e3		1.000	4.39		0.241	NO		
21	Total PFOS	499 > 79.9	3.72e1		1.000	4.67		0.234	NO		0.1069576



Ready

170305G1_2

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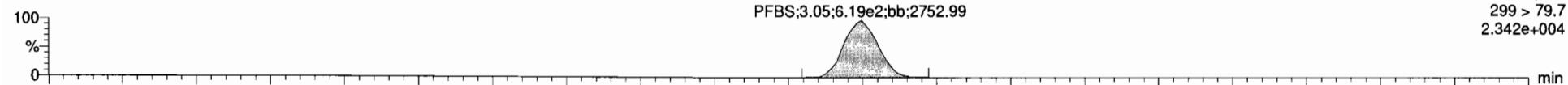
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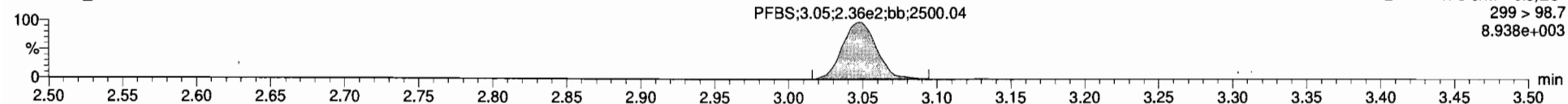
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PFBS

170305G1_3

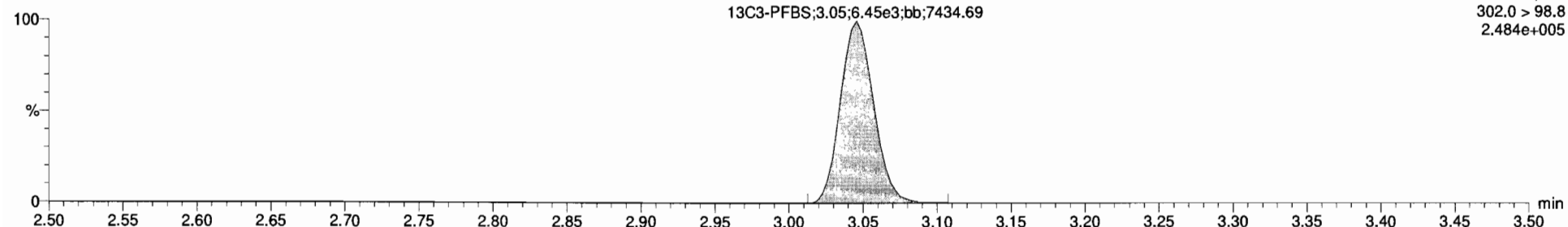


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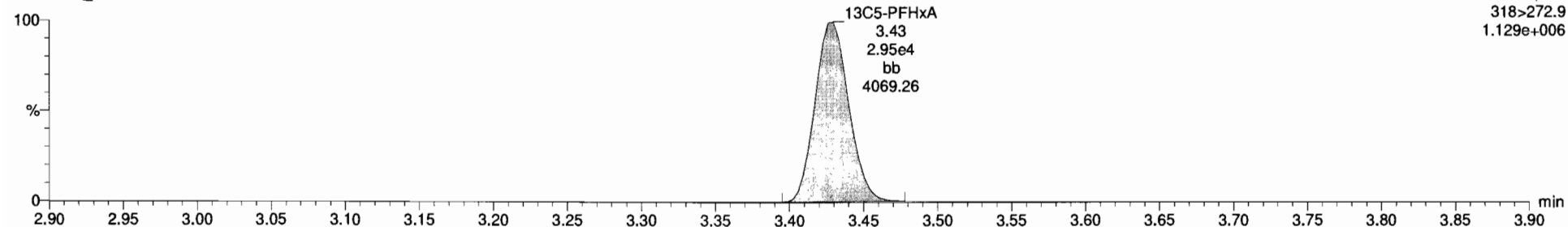
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170305G1_3



13C5-PFHxA

170305G1_3



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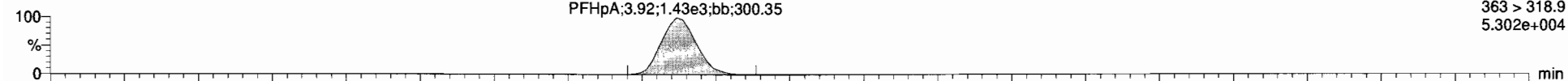
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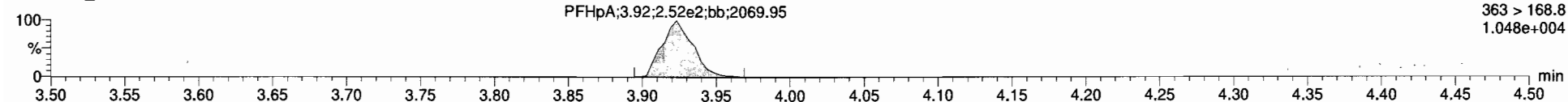
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PFHpA

170305G1_3

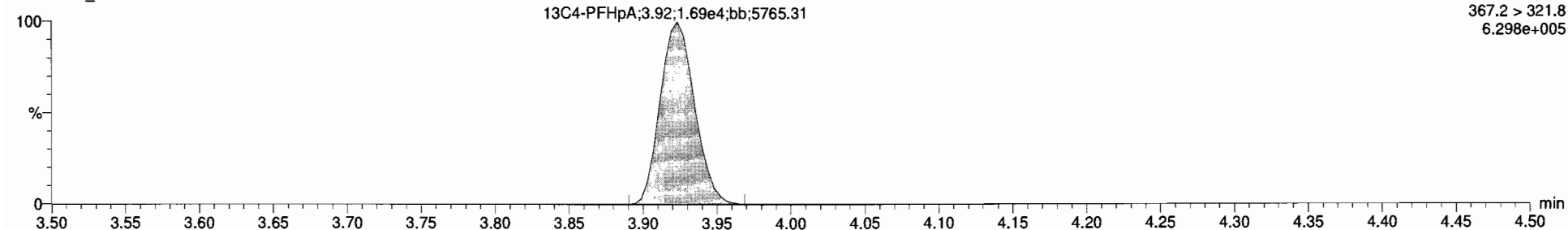


170305G1_3



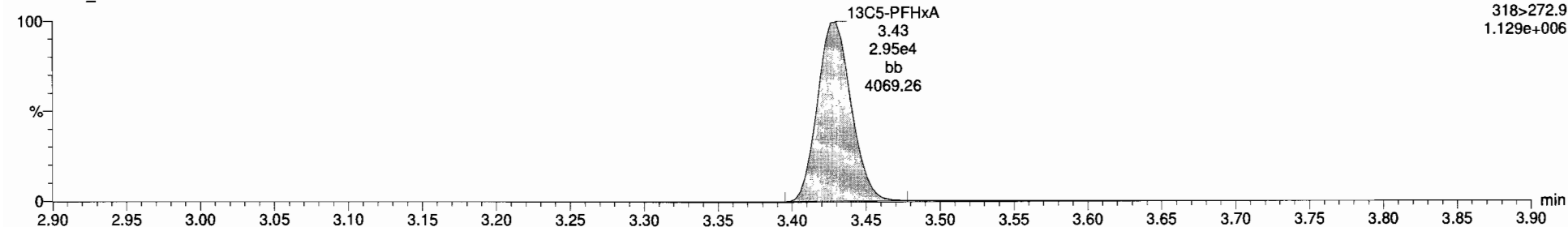
13C4-PFHpA

170305G1_3



13C5-PFHxA

170305G1_3



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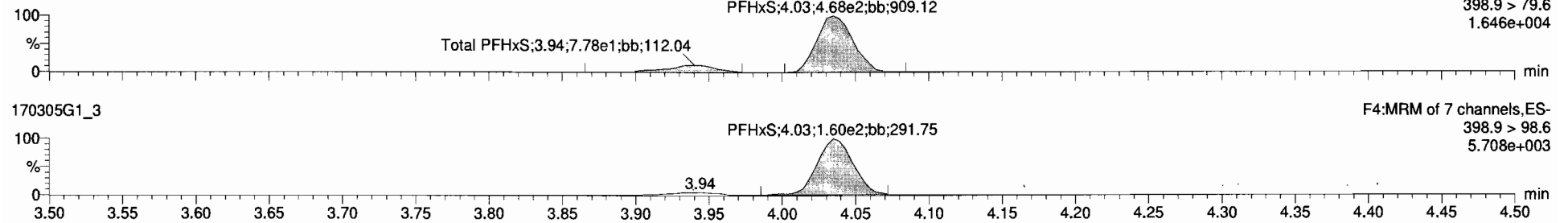
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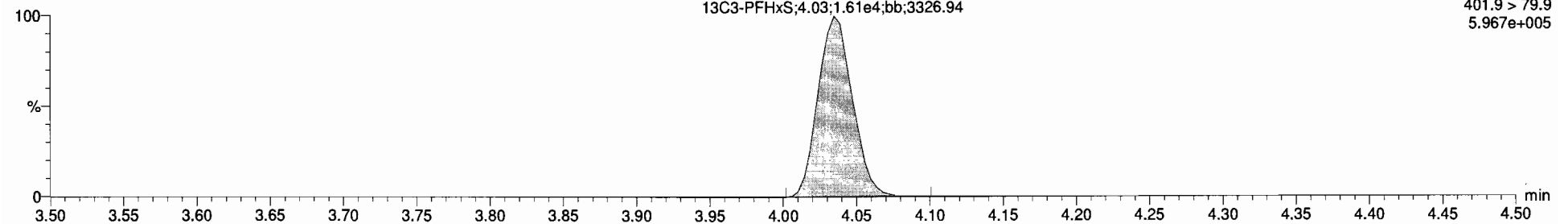
Total PFHxS

170305G1_3



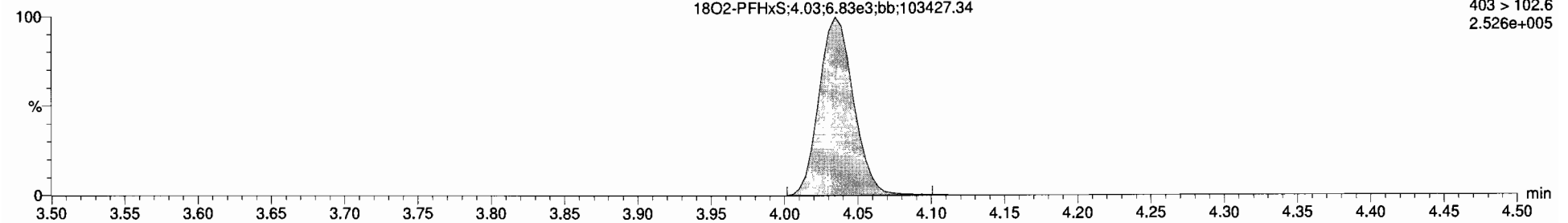
13C3-PFHxS

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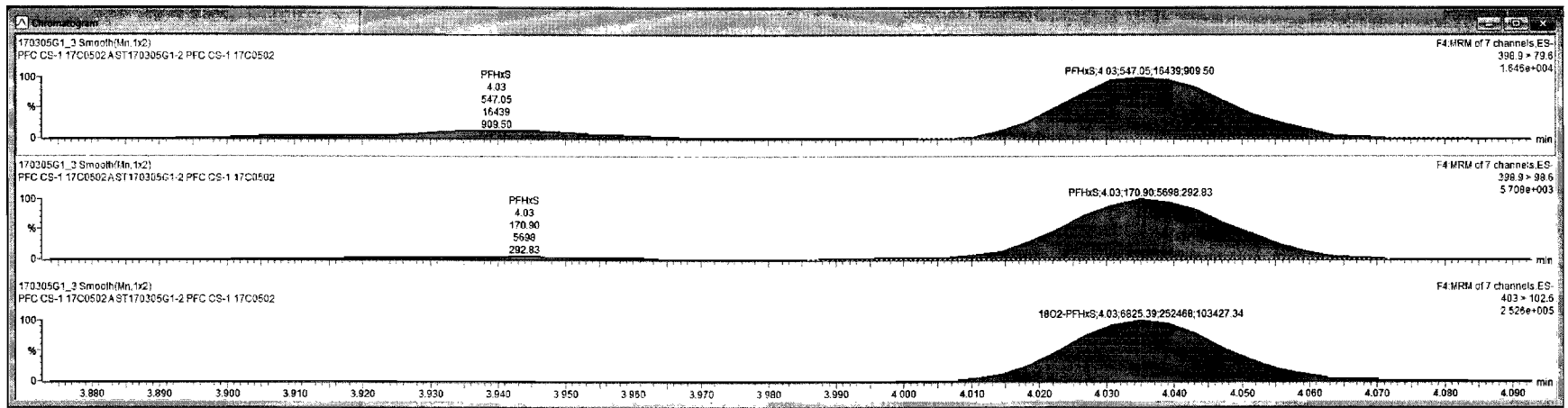


18O2-PFHxS

170305G1_3



Name	Trace	Area	RRF	Wt%	Pred.RT	RT	Conc.	>NDL	%Rec	DL	
1	PFBS	299 > 79.7	6.19e2	1.000	3.05	3.05	0.475	NO	95.0		
2	PFHpA	363 > 318.9	1.43e3	1.000	3.92	3.92	0.518	NO	103.7		
3	PFHxS	398.9 > 79.8	5.47e2	1.000	4.03	4.03	0.496	NO	99.1		
4	PFOA	413 > 368.7	1.52e3	1.000	4.31	4.31	0.452	NO	90.4		
5	PFNA	463 > 418.8	8.81e2	1.000	4.64	4.64	0.489	NO	97.9		
6	PFOS	499 > 79.9	7.39e1	1.000	4.71	4.71	0.358	NO	71.5	0.1053526	
7	13C3-PFBS	302.0 > 98.8	6.45e3	0.410	1.000	3.04	3.95	12.2	NO	97.5	0.0042668
8	13C4-PFHpA	367.2 > 321.8	1.89e4	1.10	1.000	3.91	3.92	11.9	NO	95.5	0.0052041
9	18O2-PFHxS	403 > 102.6	6.83e3	0.434	1.000	4.03	4.03	12.2	NO	97.4	0.0002946
10	13C2-PFOA	414.9 > 369.7	3.53e4	4.61	1.000	4.31	4.31	11.8	NO	94.2	0.0083474
11	13C3-PFNA	468.2 > 422.9	7.87e3	0.867	1.000	4.64	4.64	13.5	NO	107.9	0.0073319
12	13C8-PFOS	507.0 > 79.9	6.57e3	0.958	1.000	4.70	4.70	12.1	NO	96.4	0.0047793
13	13C5-PFHxA	318 > 272.9	2.95e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0076795
14	13C3-PFHxS	401.9 > 79.9	1.61e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0083970
15	13C8-PFOA	421.3 > 376	8.14e3	1.00	1.000	4.22	4.31	12.5	NO	100.0	0.0096315
16	13C9-PFNA	472.2 > 426.8	8.20e3	1.00	1.000	4.56	4.64	12.5	NO	100.0	0.0015263
17	13C4-PFOS	503.0 > 79.9	7.11e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0052005
18	Total PFBS	299 > 79.7	6.19e2	1.000	3.11		0.475	NO			
19	Total PFHxS	398.9 > 79.8	6.25e2	1.000	4.09		0.517	NO			
20	Total PFOA	413 > 368.7	1.56e3	1.000	4.39		0.452	NO			
21	Total PFOS	499 > 79.9	9.52e1	1.000	4.67		0.530	NO		0.1053528	



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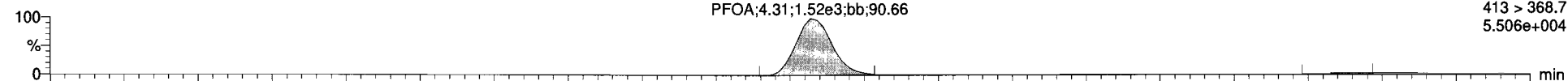
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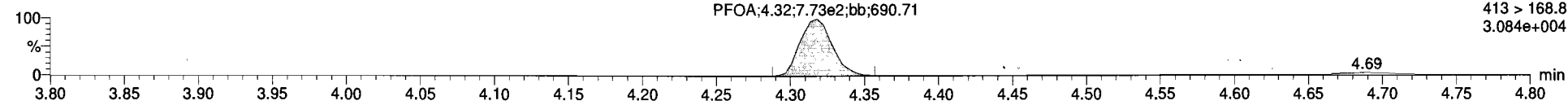
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Total PFOA

170305G1_3

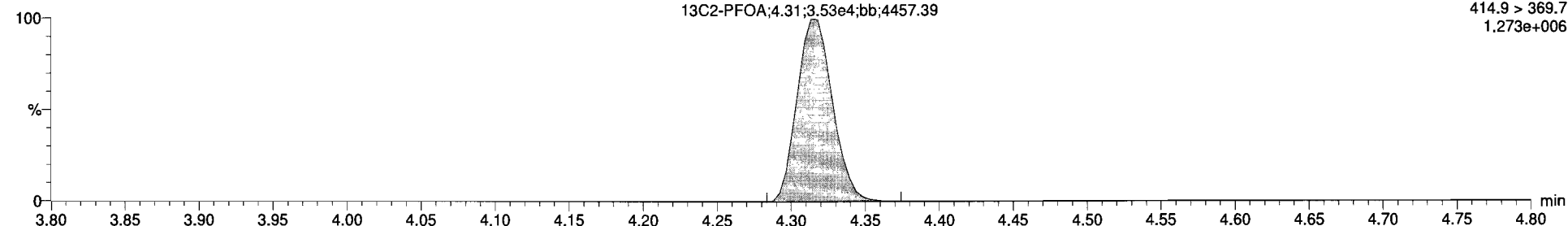


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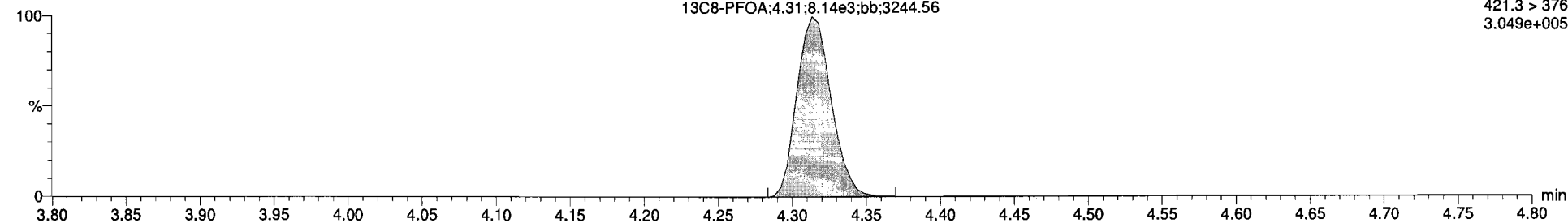
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170305G1_3



13C8-PFOA

170305G1_3



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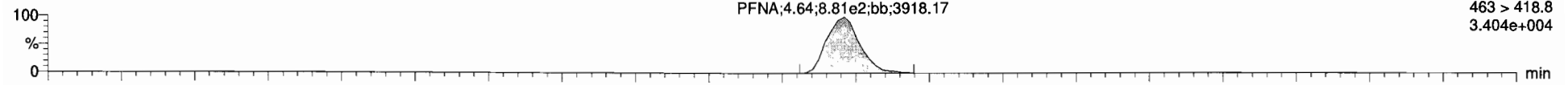
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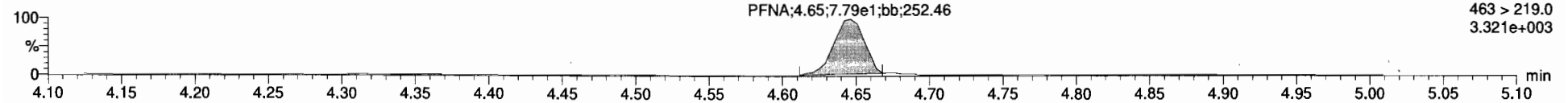
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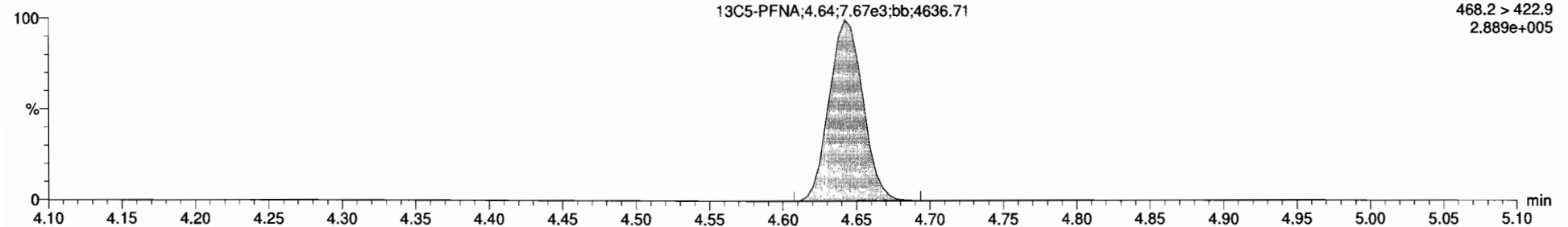


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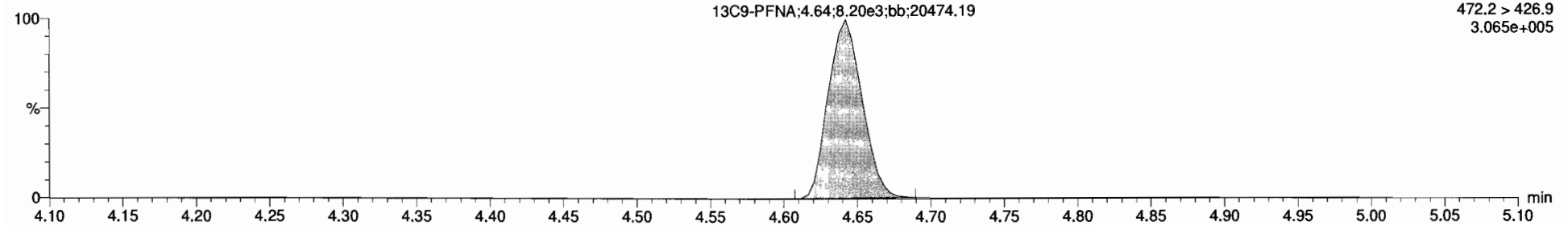
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13C9-PFNA

170305G1_3



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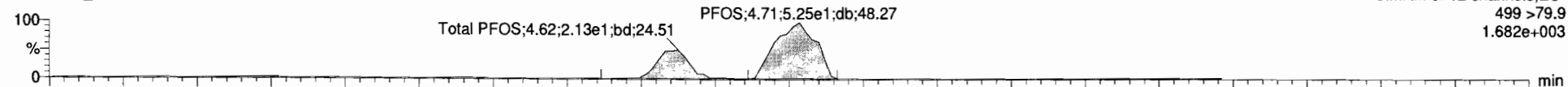
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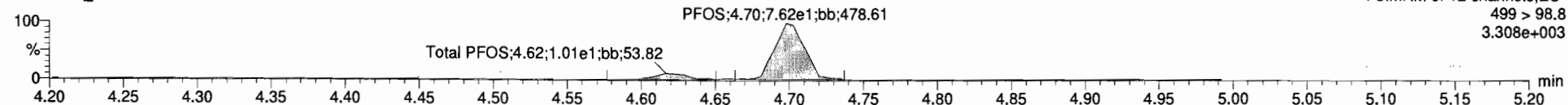
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Total PFOS

170305G1_3

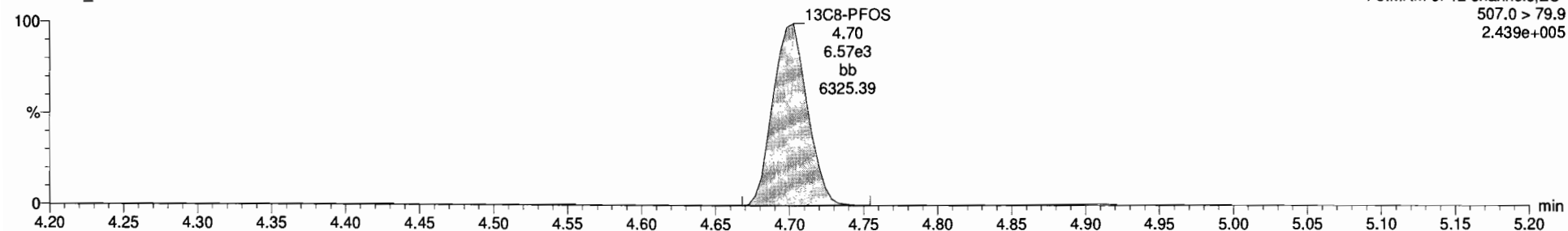


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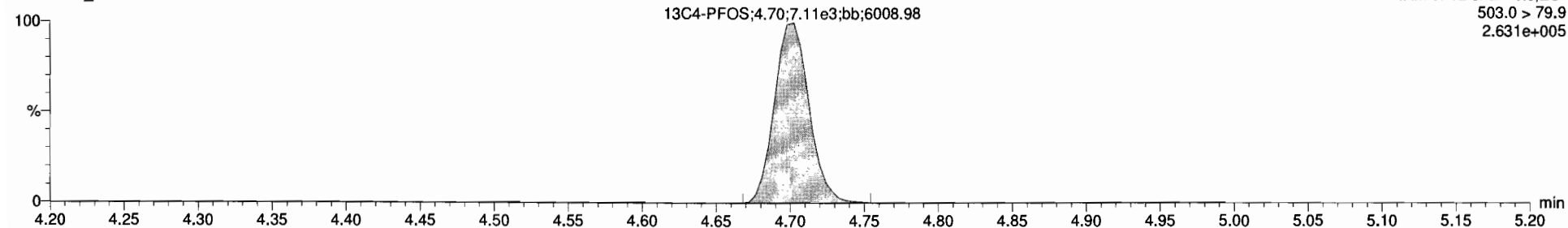
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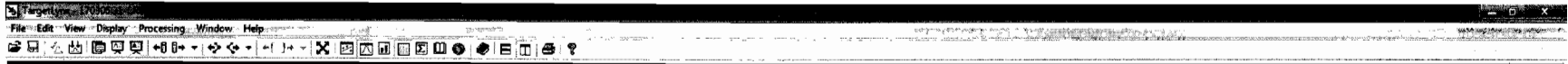
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13C4-PFOS

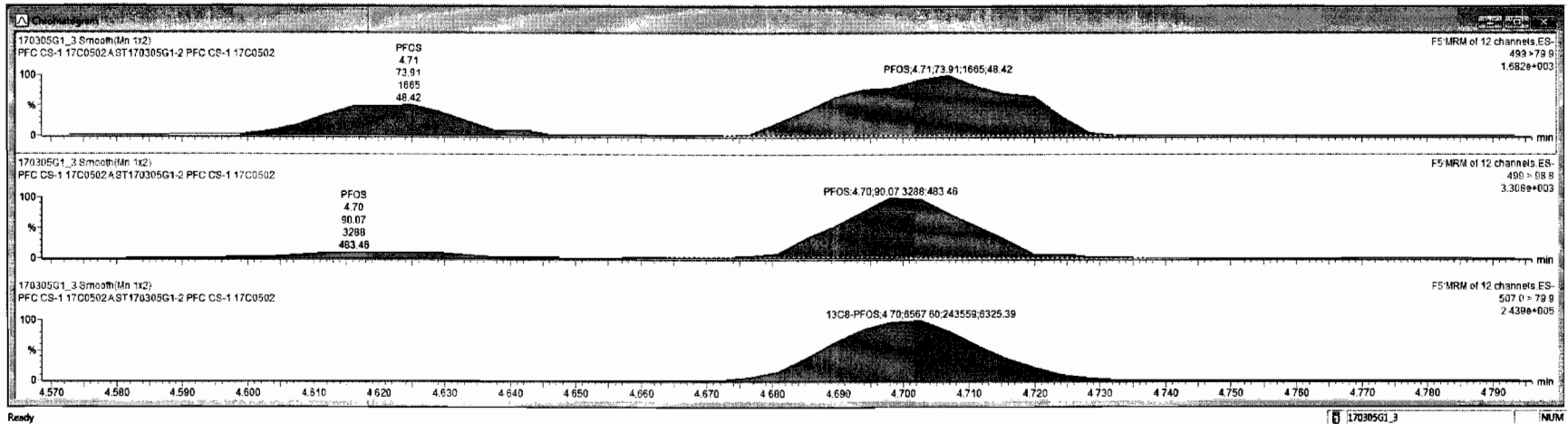
170305G1_3





170305G1_3 ST170305G1.2 PFC CS-1 17C0502 PFC CS-1 17C0502 A

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PFBS	299 > 79.7	6.19e2		1.000	3.05	3.65	0.475	NO	95.0	
PFHpA	362 > 318.9	1.43e3		1.000	3.92	3.92	0.518	NO	103.7	
PFHxS	398.9 > 79.6	6.47e2		1.000	4.03	4.03	0.490	NO	99.1	
PFOA	413 > 368.7	1.52e3		1.000	4.31	4.31	0.452	NO	90.4	
PFNA	463 > 418.8	8.81e2		1.000	4.64	4.64	0.489	NO	97.8	
PFOS	499 > 79.9	7.39e1		1.000	4.71	4.71	0.358	NO	71.5	0.1053526
13C3-PFBS	392.0 > 98.8	6.45e3	0.410	1.000	3.04	3.05	12.2	NO	97.5	0.0042968
13C4-PFHpA	367.2 > 321.8	1.69e4	1.10	1.000	3.91	3.92	11.9	NO	95.5	0.0052041
18O2-PFHxS	403 > 102.6	6.83e3	0.434	1.000	4.03	4.03	12.2	NO	97.4	0.0002948
13C2-PFOA	414.9 > 369.7	3.53e4	4.61	1.000	4.31	4.31	11.8	NO	94.2	0.0063474
13C5-PFNA	468.2 > 422.9	7.67e3	0.867	1.000	4.64	4.64	13.5	NO	107.9	0.0073319
13C8-PFOS	507.0 > 79.9	6.57e3	0.958	1.000	4.70	4.70	12.1	NO	96.4	0.0047793
13C5-PFHxA	318 > 272.9	2.95e4	1.00	1.000	3.29	3.43	12.5	NO	100.0	0.0076795
13C3-PFHxS	401.9 > 79.9	1.61e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0093930
13C8-PFOA	421.3 > 376	8.14e3	1.00	1.000	4.22	4.31	12.5	NO	100.0	0.006315
13C9-PFNA	472.2 > 426.9	8.20e3	1.00	1.000	4.55	4.64	12.5	NO	100.0	0.0015263
13C4-PFOS	503.0 > 79.9	7.11e3	1.00	1.000	4.67	4.70	12.5	NO	100.0	0.0052005
Total PFBS	299 > 79.7	6.19e2		1.000	3.11		0.475	NO		
Total PFHxS	398.9 > 79.6	6.25e2		1.000	4.09		0.517	NO		
Total PFOA	413 > 368.7	1.56e3		1.000	4.39		0.452	NO		
Total PFOS	499 > 79.9	9.52e1		1.000	4.67		0.530	NO		0.1053526



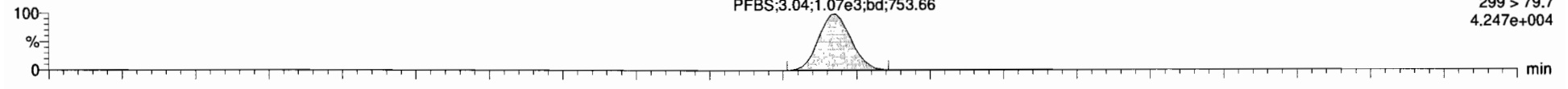
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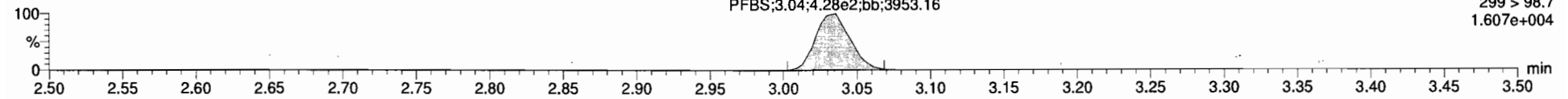
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PFBS

170305G1_4

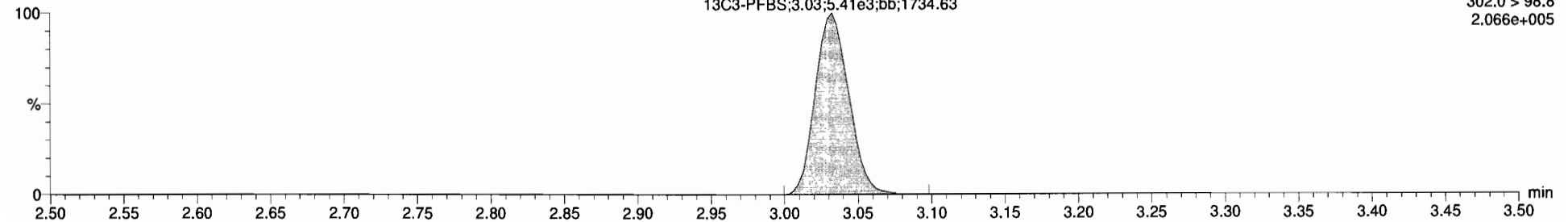


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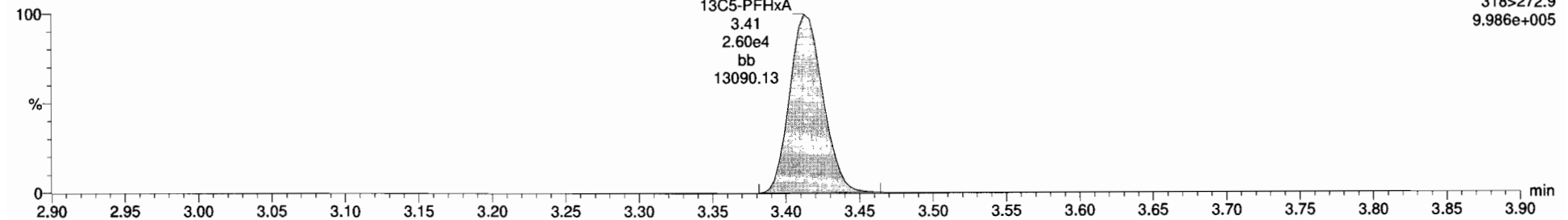
13C3-PFBS

170305G1_4



13C5-PFHxA

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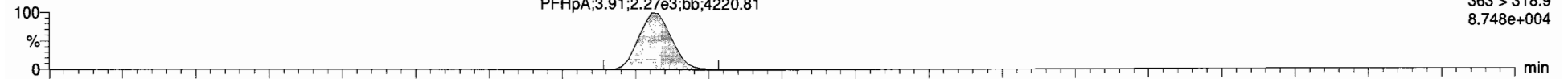
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

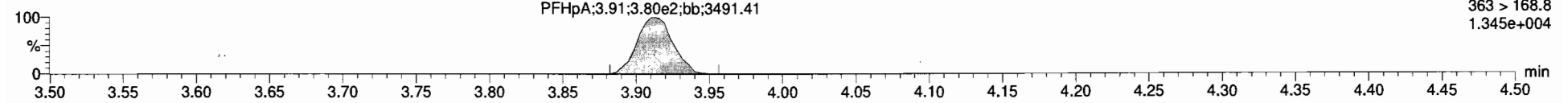
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PFHpA

170305G1_4

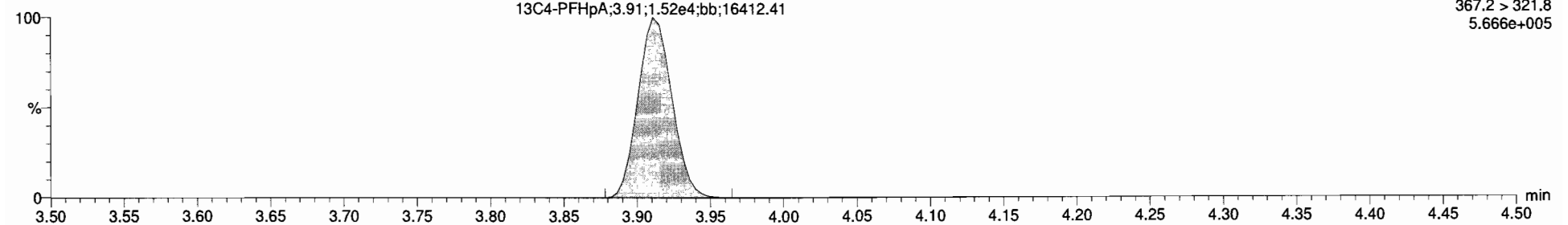


170305G1_4



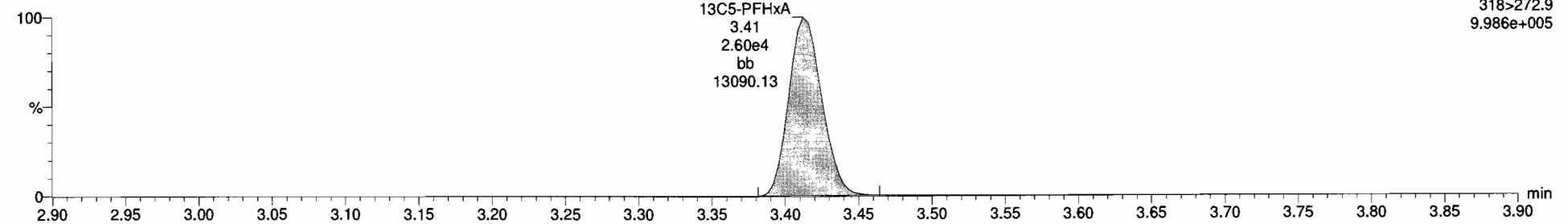
13C4-PFHpA

170305G1_4



13C5-PFHxA

170305G1_4



Dataset: Untitled

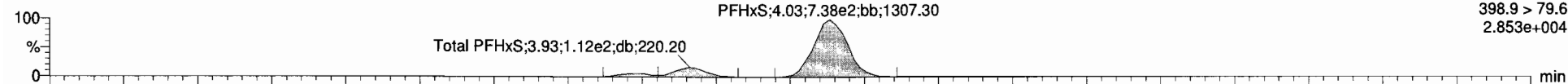
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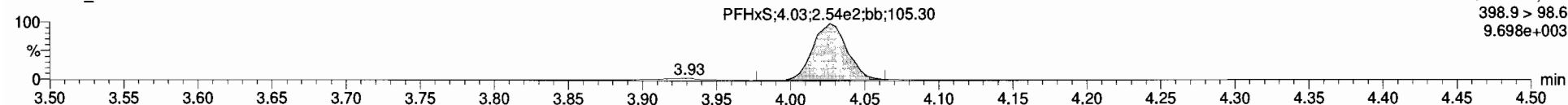
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Total PFHxS

170305G1_4

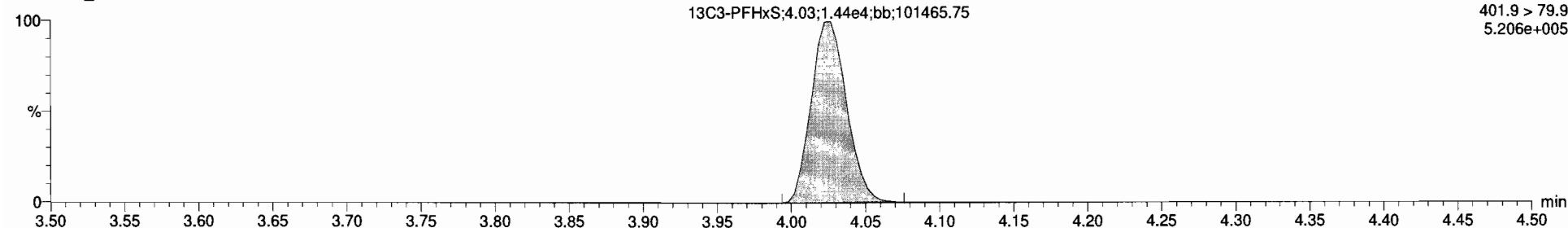


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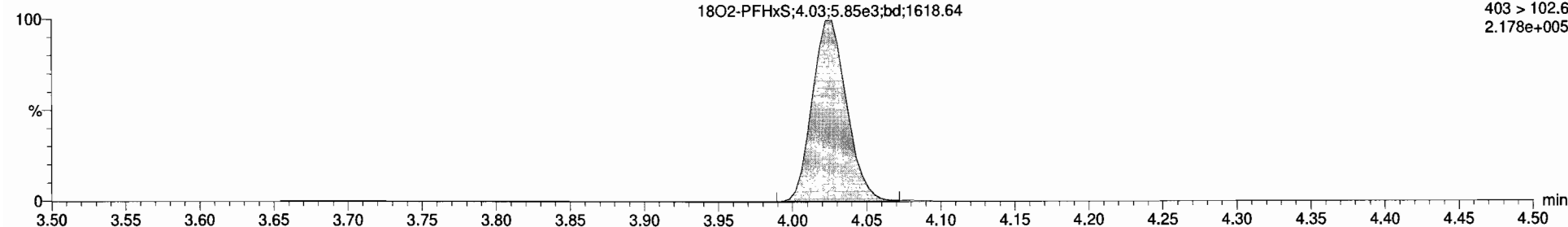
13C3-PFHxS

170305G1_4

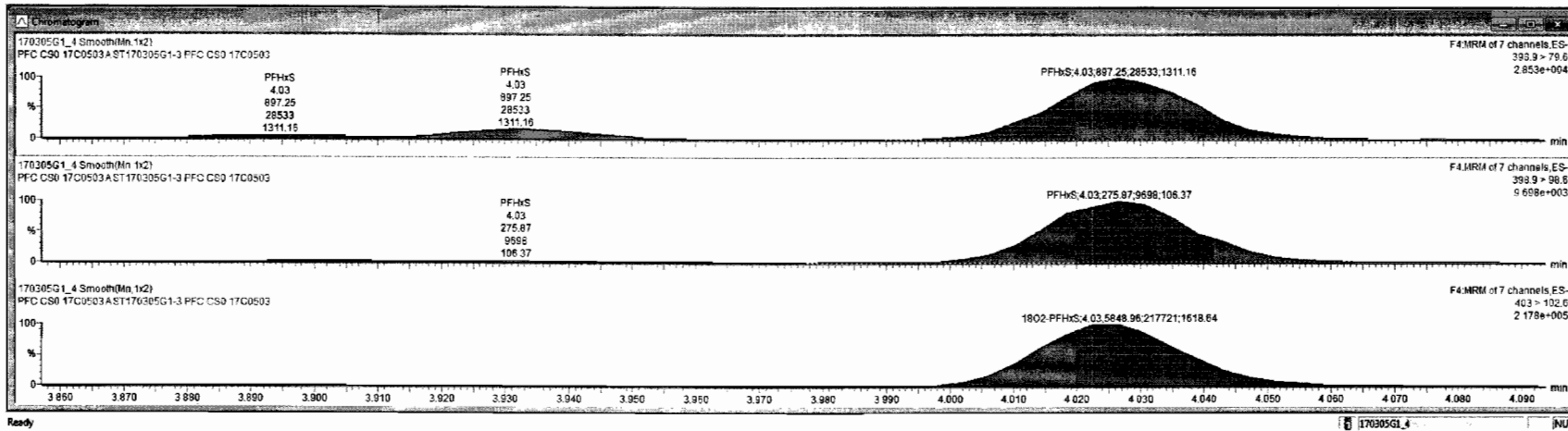


18O2-PFHxS

170305G1_4



Name	Trace	Area	RFI	Wt/Mol	Pred RT	RT	Conc	MOL	%Rec	DL
1	PFBS	299 > 79.7	1.07e3	1.000	3.03	3.04	1.91	NO	101.1	
2	PFHpA	363 > 318.9	2.27e3	1.000	3.91	3.91	0.964	NO	96.4	
3	PFHxS	398.9 > 79.6	2.67e3	1.000	4.03	4.03	1.00	NO	100.0	
4	PFOA	413 > 368.7	2.09e3	1.000	4.31	4.30	0.908	NO	90.8	
5	PFNA	463 > 419.6	1.26e3	1.000	4.63	4.63	0.958	NO	95.8	
6	PFOS	499 > 79.9	1.82e2	1.000	4.70	4.69	0.589	NO	58.9	0.1002511
7	13C3-PFBS	302.0 > 98.8	5.41e3	0.410	1.000	3.03	3.03	11.5	91.5	0.0174615
8	13C4-PFHpA	367.2 > 321.5	1.52e4	1.10	1.000	3.90	3.91	12.1	96.6	0.0018598
9	18O2-PFHxS	403 > 102.6	5.85e3	0.434	1.000	4.03	4.03	11.7	93.8	0.0186300
10	13C2-PFOA	414.9 > 369.7	2.91e4	4.61	1.000	4.30	4.31	12.4	99.0	0.0006311
11	13C5-PFNA	468.2 > 422.9	5.74e3	0.867	1.000	4.63	4.63	11.6	92.6	0.0007193
12	13C8-PFOS	507.0 > 79.9	4.73e3	0.958	1.000	4.69	4.69	11.9	95.3	0.0110670
13	13C5-PFNaA	318 > 272.9	2.60e4	1.00	1.000	3.29	3.41	12.5	NO	100.0
14	13C3-PFHxS	401.9 > 79.9	1.44e4	1.00	1.000	3.94	4.03	12.5	NO	100.0
15	13C8-PFOA	421.3 > 376	6.38e3	1.00	1.000	4.22	4.30	12.5	NO	100.0
16	13C9-PFNA	472.2 > 428.9	7.15e3	1.00	1.000	4.56	4.63	12.5	NO	100.0
17	13C4-PFOS	503.0 > 79.9	5.15e3	1.00	1.000	4.67	4.69	12.5	NO	100.0
18	Total PFBS	299 > 79.7	1.08e3		1.000	3.11				
19	Total PFHxS	398.9 > 79.6	1.05e3		1.000	4.09				
20	Total PFOA	413 > 368.7	2.16e3		1.000	4.39				
21	Total PFOS	499 > 79.9	2.19e2		1.000	4.67				



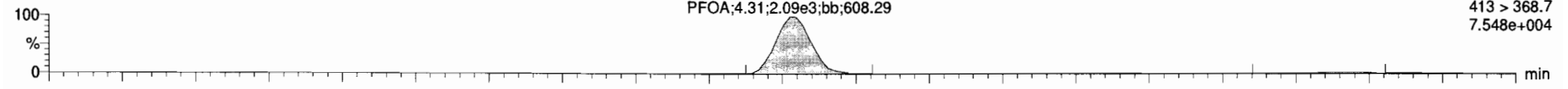
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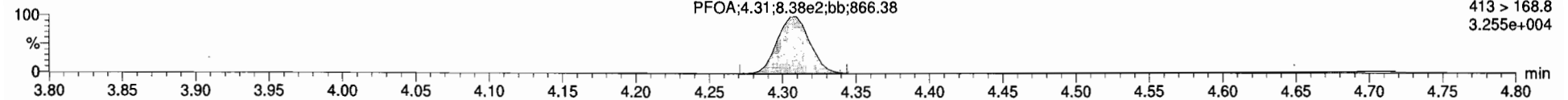
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Total PFOA

170305G1_4

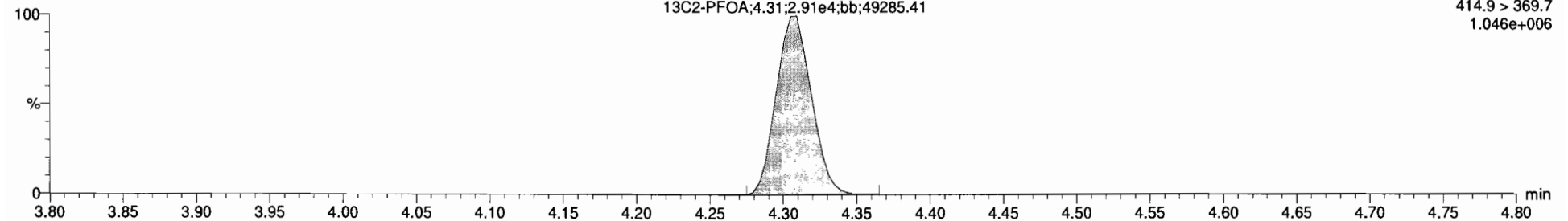


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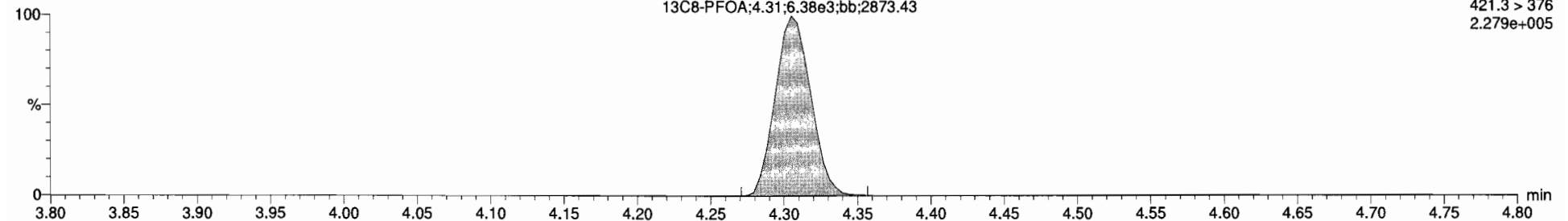
13C2-PFOA

170305G1_4



13C8-PFOA

170305G1_4



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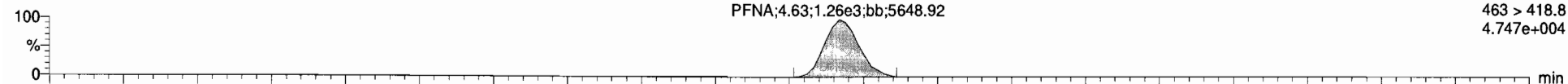
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PFNA

170305G1_4

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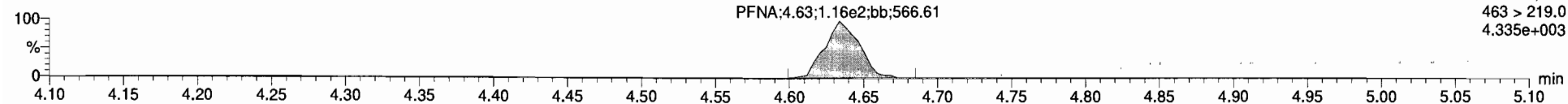
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463 > 418.8
4.747e+004



170305G1_4

PFNA;4.63;1.16e2;bb;566.61

F5:MRM of 12 channels,ES-
463 > 219.0
4.335e+003

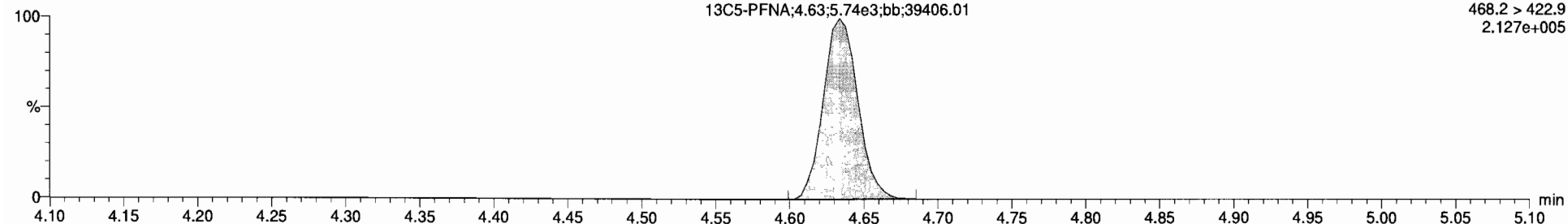


13C5-PFNA

170305G1_4

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F5:MRM of 12 channels,ES-
468.2 > 422.9
2.127e+005

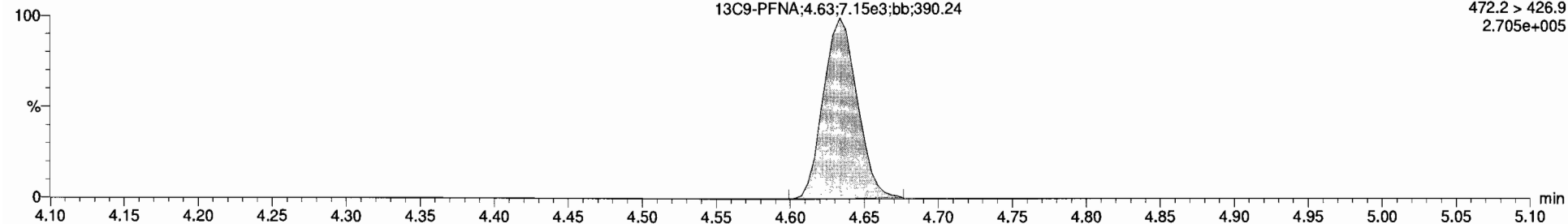


13C9-PFNA

170305G1_4

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F5:MRM of 12 channels,ES-
472.2 > 426.9
2.705e+005



Dataset: Untitled

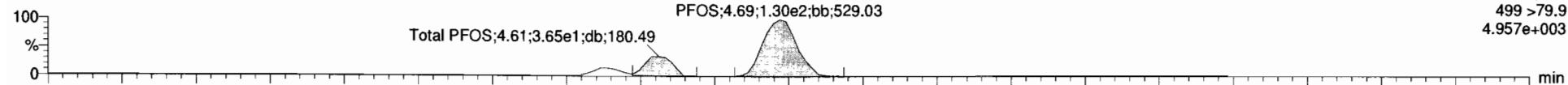
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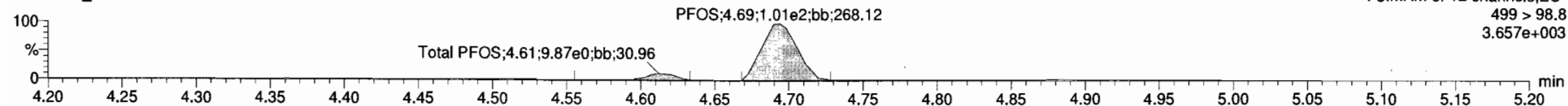
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Total PFOS

170305G1_4

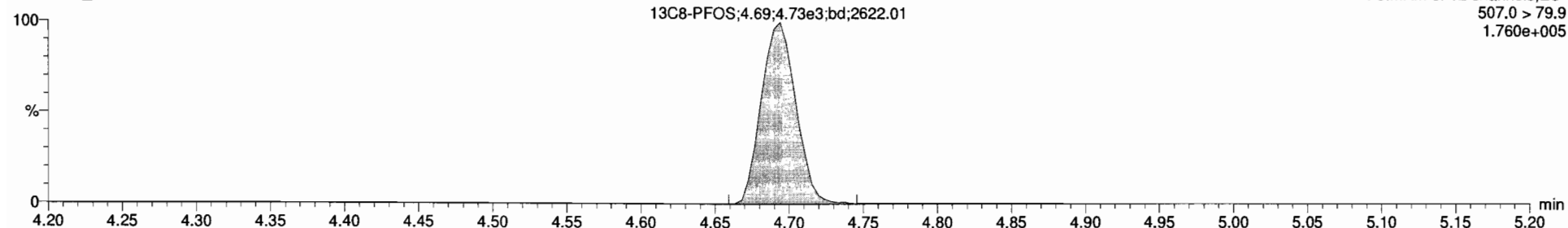


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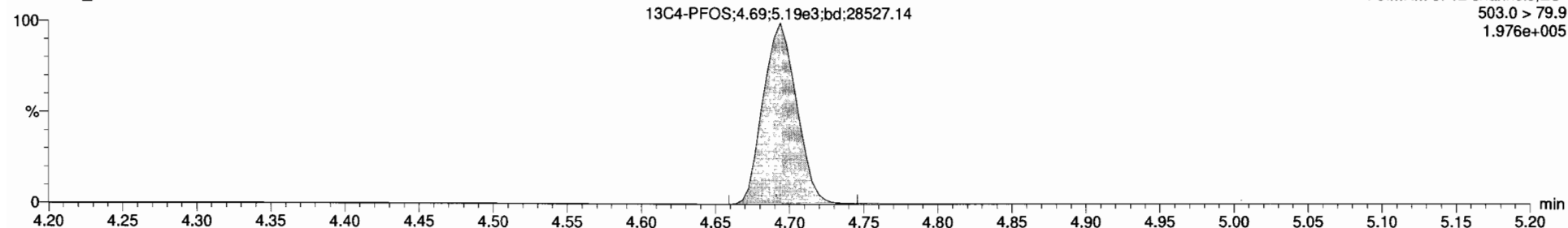
13C8-PFOS

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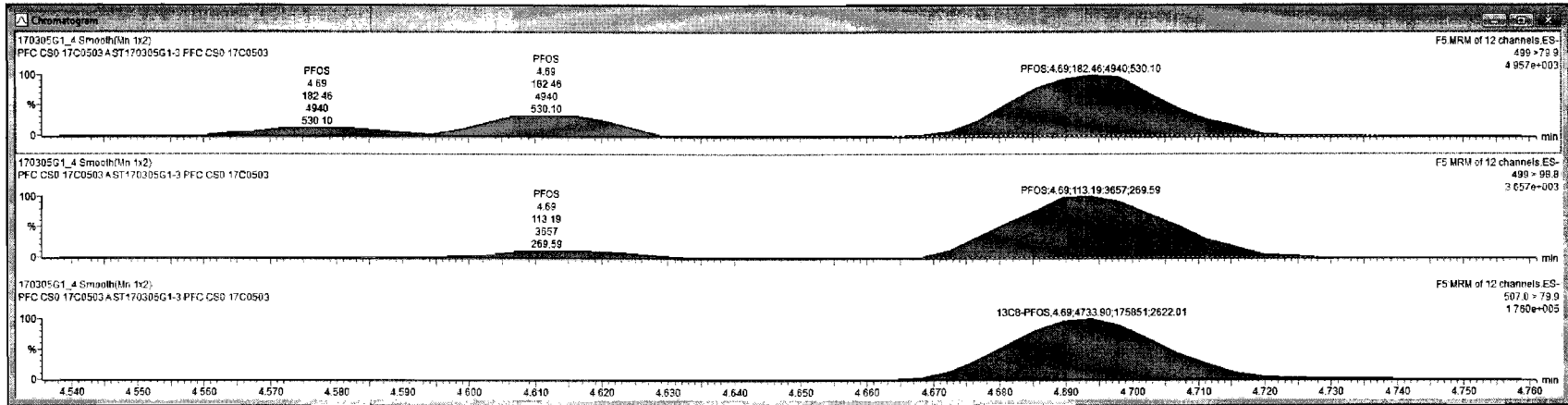
13C4-PFOS

170305G1_4



Targetlynx
 File Edit View Display Processing Window Help
 170305G1_4 ST170305G1-3 PFC CS0 17C0503 PFC CS0 17C0503A

#	Name	Trace	Area	RRF	WtVol	Pred.RT	RT	Conc	>NDC	%Rec	Dt
1	PFBS	299 > 79.7	1.07e3		1.000	3.03	3.04	1.01	NO	181.1	
2	PFHpA	363 > 316.9	2.27e3		1.000	3.91	3.91	0.964	NO	96.4	
3	PFHxS	398.9 > 79.6	8.97e2		1.000	4.03	4.03	1.00	NO	100.1	
4	PFOA	413 > 368.7	2.19e3		1.000	4.31	4.30	0.908	NO	90.8	
5	PFNA	463 > 416.8	1.26e3		1.000	4.63	4.63	0.968	NO	96.8	
6	PFOS	499 > 79.9	1.82e2		1.000	4.70	4.69	0.989	NO	98.9	0.1002511
7	13C3-PFBS	302.0 > 98.8	5.41e3	0.410	1.000	3.03	3.03	11.5	NO	91.9	0.0174615
8	13C4-PFHpA	367.2 > 321.8	1.52e4	1.10	1.000	3.90	3.91	12.1	NO	96.6	0.0018598
9	18O2-PFHxS	403 > 102.8	5.85e3	0.434	1.000	4.03	4.03	11.7	NO	93.8	0.0186308
10	13C2-PFOA	414.9 > 369.7	2.91e4	4.61	1.000	4.20	4.31	12.4	NO	99.0	0.0009311
11	13C5-PFNA	468.2 > 422.9	5.74e3	0.867	1.000	4.63	4.63	11.6	NO	92.6	0.0007193
12	13C8-PFOS	507.0 > 79.9	4.73e3	0.958	1.000	4.69	4.69	11.9	NO	95.3	0.0110670
13	13C3-PFHxA	318 > 272.9	2.60e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0023873
14	13C1-PFHxS	401.9 > 79.9	1.44e4	1.00	1.000	3.94	4.03	12.5	NO	100.0	0.0003080
15	13C8-PFOA	421.3 > 376	6.38e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0108755
16	13C8-PFNA	472.2 > 426.9	7.15e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0808798
17	13C4-PFOS	503.0 > 79.9	5.19e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0019954
18	Total PFBS	299 > 79.7	1.08e3		1.000	3.11		1.01	NO		
19	Total PFHxS	398.9 > 79.6	1.05e3		1.000	4.09		1.08	NO		
20	Total PFOA	413 > 368.7	2.19e3		1.000	4.39		6.908	NO		
21	Total PFOS	499 > 79.9	2.19e2		1.000	4.67		1.26	NO		0.1002511



Ready

170305G1_4

NUM

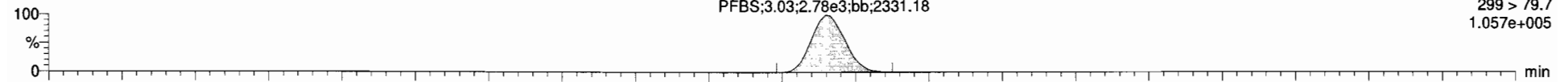
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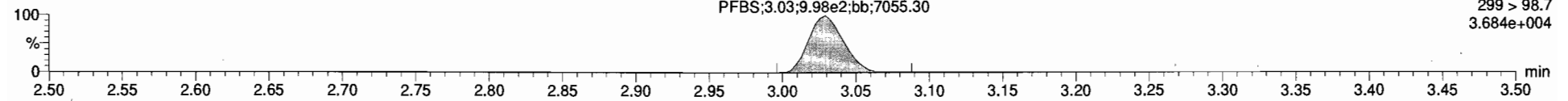
PFBS

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F2:MRM of 3 channels,ES-
299 > 79.7
1.057e+005

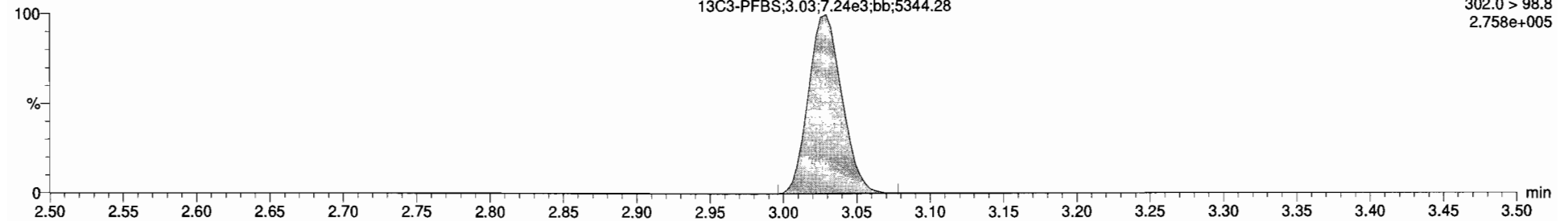
170305G1_5



F2:MRM of 3 channels,ES-
299 > 98.7
3.684e+004

13C3-PFBS

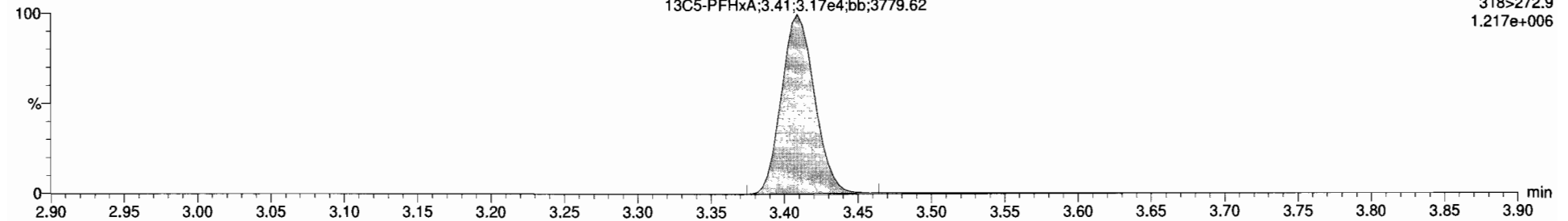
170305G1_5



F2:MRM of 3 channels,ES-
302.0 > 98.8
2.758e+005

13C5-PFHxA

170305G1_5



F3:MRM of 1 channel,ES-
318>272.9
1.217e+006

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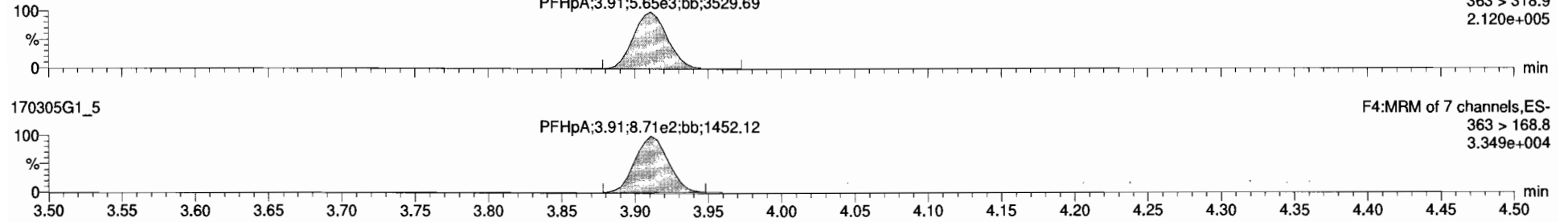
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PFHpA

170305G1_5

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F4:MRM of 7 channels,ES-
363 > 318.9
2.120e+005

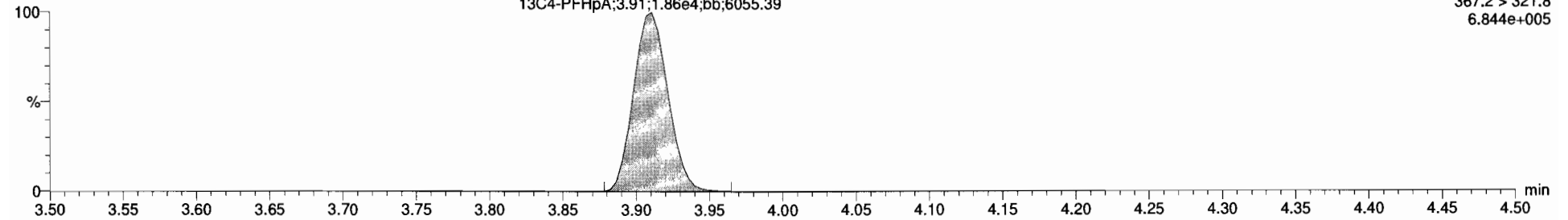


13C4-PFHpA

170305G1_5

13C4-PFHpA;3.91;1.86e4;bb;6055.39

F4:MRM of 7 channels,ES-
367.2 > 321.8
6.844e+005

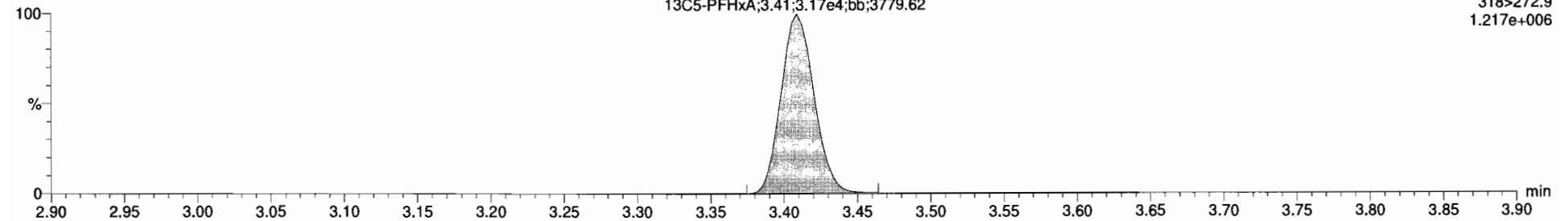


13C5-PFHxA

170305G1_5

13C5-PFHxA;3.41;3.17e4;bb;3779.62

F3:MRM of 1 channel,ES-
318>272.9
1.217e+006



Dataset: Untitled

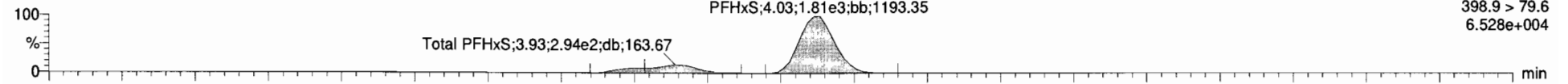
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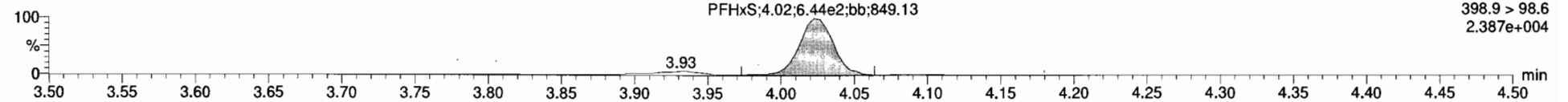
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Total PFHxS

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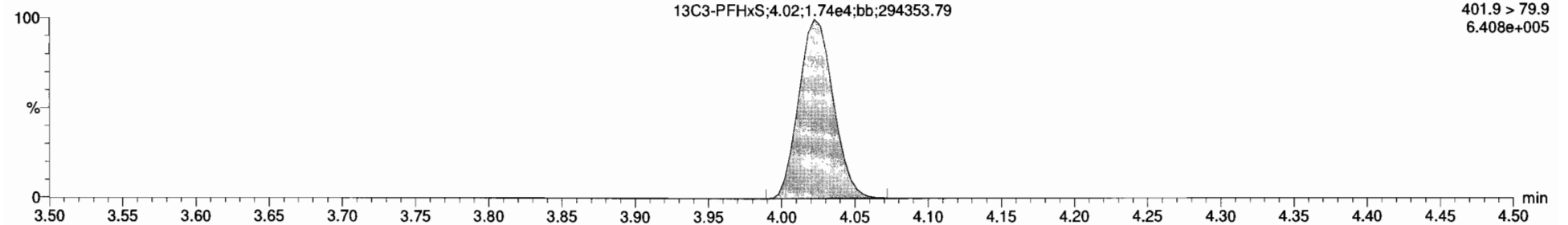


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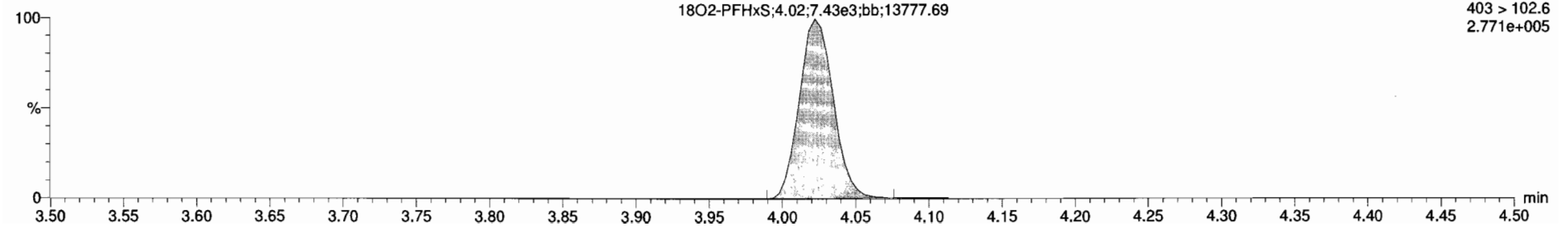
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170305G1_5



18O2-PFHxS

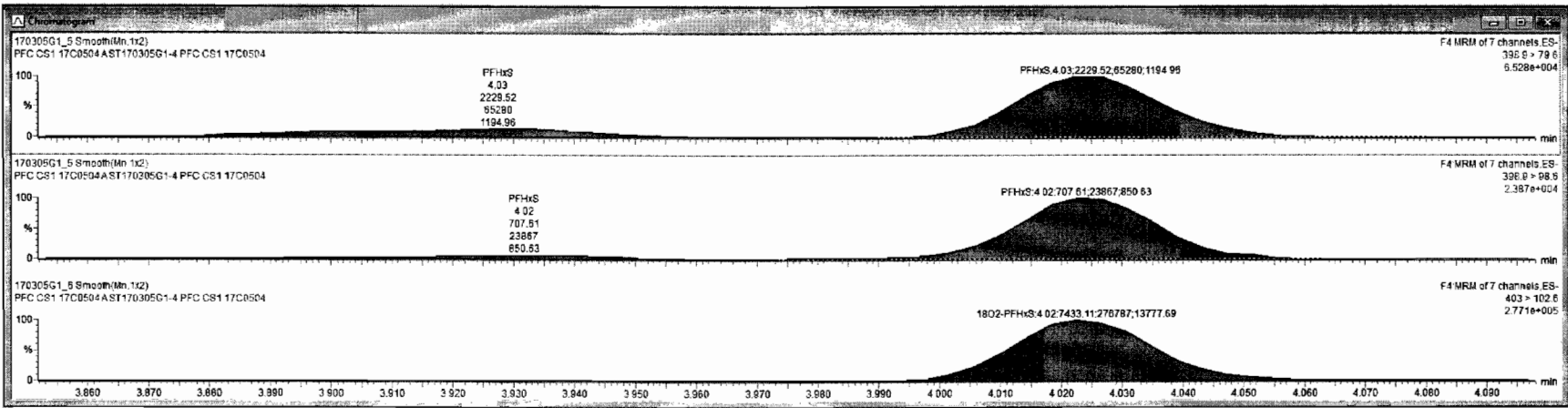
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170305G1_5 ST:170305G1 4 PFC CS1 17C0504 PFC CS1 17C0504A

Name	Trace	Area	RRF	Wt%	Pres RT	RT	Conc	>MOL	%Rec	DL
1	PFBS	299 > 79.7	2.7843		1.000	3.93	3.93	1.99	NO	99.3
2	PFHpA	383 > 318.9	5.6543		1.000	3.91	3.91	2.05	NO	102.2
3	PFHxS	388.9 > 79.6	2.2343		1.000	4.82	4.82	2.81	NO	100.5
4	PFOA	413 > 368.7	5.3843		1.000	4.30	4.30	2.06	NO	103.1
5	PFNA	483 > 418.8	3.1743		1.000	4.63	4.63	2.84	NO	102.0
6	PFOS	499 > 79.9	5.2842		1.000	4.69	4.69	2.46	YES	123.0 0.1190520
7	13C3-PFBS	302.0 > 98.6	7.2443	0.410	1.000	3.83	3.83	12.7	NO	101.2 0.0061404
8	13C4-PFHpA	367.2 > 321.8	1.8644	1.10	1.000	3.90	3.91	12.1	NO	96.9 0.0059106
9	18O2-PFHxS	403 > 102.6	7.4343	0.434	1.000	4.02	4.02	12.3	NO	96.2 0.0022555
10	13C2-PFOA	414.9 > 369.7	3.7044	4.61	1.000	4.30	4.30	12.2	NO	97.6 0.0185493
11	13C5-PFNA	468.2 > 422.9	6.9743	0.867	1.000	4.63	4.63	12.3	NO	96.8 0.0011307
12	13C8-PFOS	507.0 > 79.9	5.1843	0.958	1.000	4.69	4.69	12.4	NO	99.1 0.0187137
13	13C5-PFHxS	318-272.9	3.1744	1.00	1.000	3.29	3.41	12.5	NO	100.0 0.0082680
14	13C3-PFHxS	401.8 > 79.9	1.7444	1.00	1.000	3.94	4.02	12.5	NO	100.0 0.0001062
15	13C8-PFOA	421.3 > 376	8.2343	1.00	1.000	4.22	4.30	12.5	NO	100.0 0.0221408
16	13C9-PFNA	472.2 > 426.9	8.1643	1.00	1.000	4.56	4.63	12.5	NO	100.0 0.0009300
17	13C4-PFOS	503.0 > 79.9	5.4543	1.00	1.000	4.67	4.69	12.5	NO	100.0 0.0016094
18	Total PFBS	299 > 79.7	2.7843		1.000	3.11		1.99	NO	
19	Total PFHxS	388.9 > 79.6	2.6343		1.000	4.09		2.27	NO	
20	Total PFOA	413 > 368.7	5.4843		1.000	4.39		2.06	NO	
21	Total PFOS	499 > 79.9	6.8842		1.000	4.67		3.37	NO	0.1190520



Ready

170305G1_5

INUM

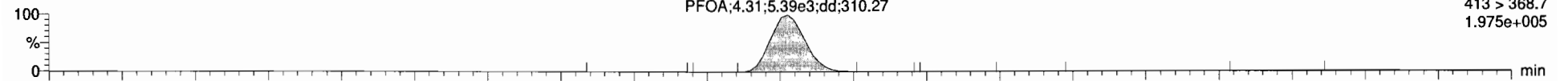
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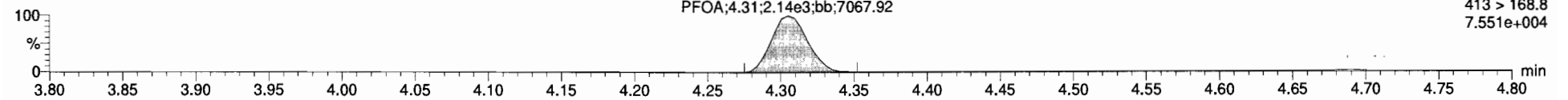
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Total PFOA

170305G1_5

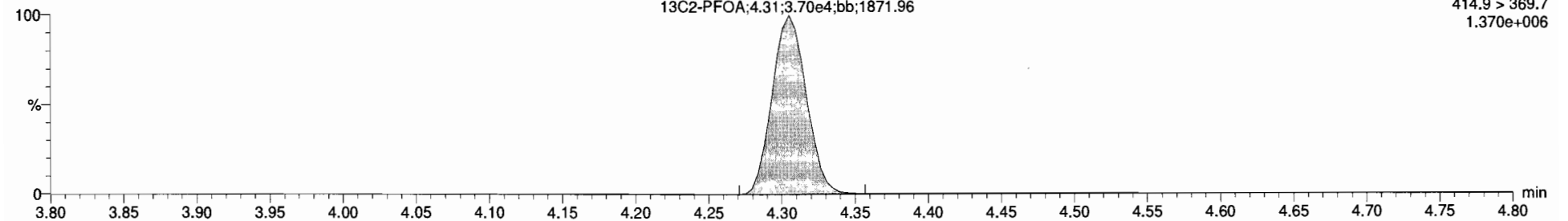


170305G1_5



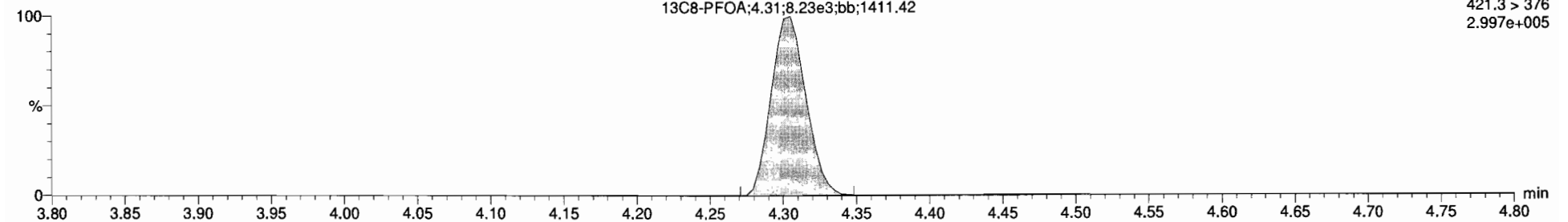
13C2-PFOA

170305G1_5



13C8-PFOA

170305G1_5



Dataset: Untitled

Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time

Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

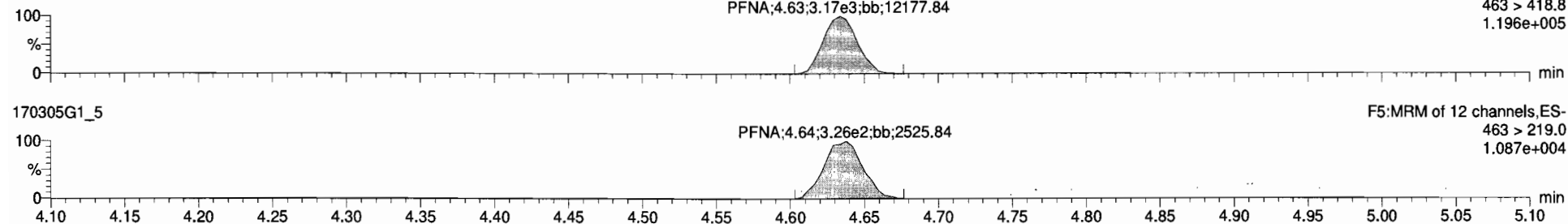
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PFNA

170305G1_5

PFNA;4.63;3.17e3;bb;12177.84

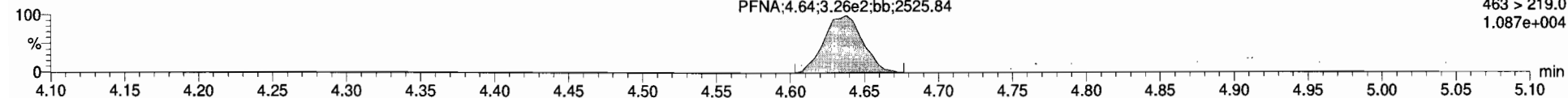
F5:MRM of 12 channels,ES-
463 > 418.8
1.196e+005



170305G1_5

PFNA;4.64;3.26e2;bb;2525.84

F5:MRM of 12 channels,ES-
463 > 219.0
1.087e+004

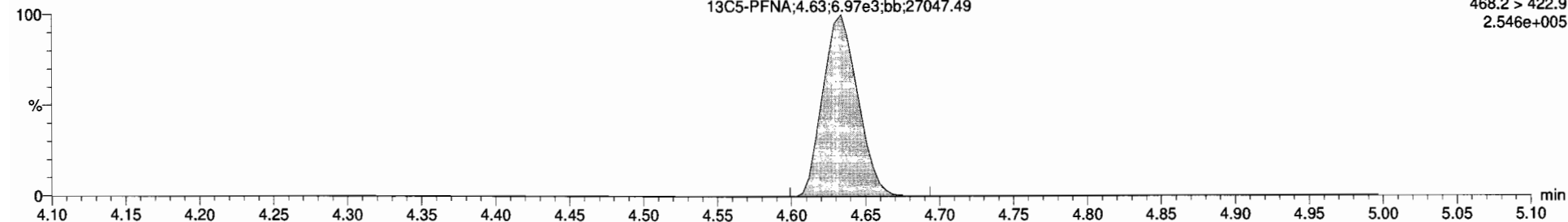


13C5-PFNA

170305G1_5

13C5-PFNA;4.63;6.97e3;bb;27047.49

F5:MRM of 12 channels,ES-
468.2 > 422.9
2.546e+005

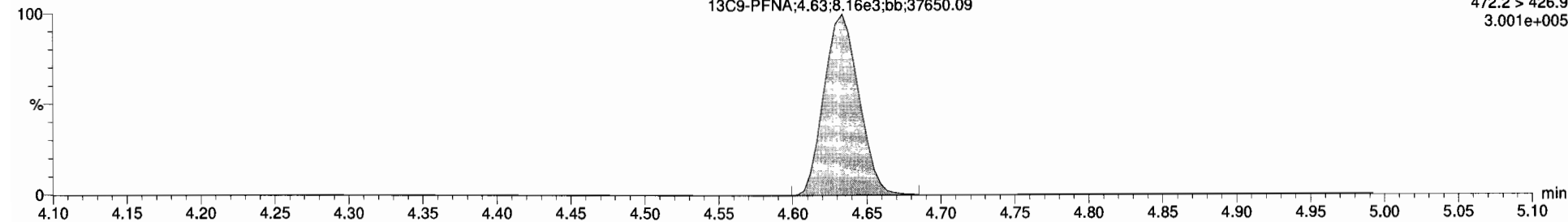


13C9-PFNA

170305G1_5

13C9-PFNA;4.63;8.16e3;bb;37650.09

F5:MRM of 12 channels,ES-
472.2 > 426.9
3.001e+005



Dataset: Untitled

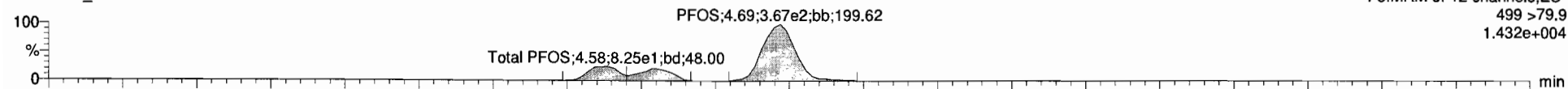
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time

Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

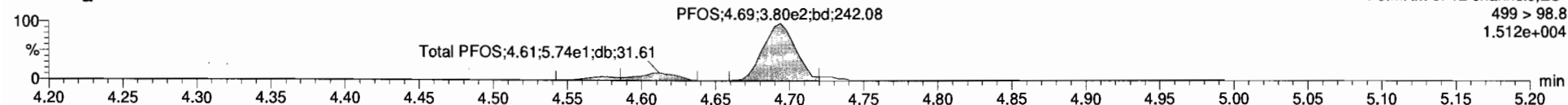
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Total PFOS

170305G1_5

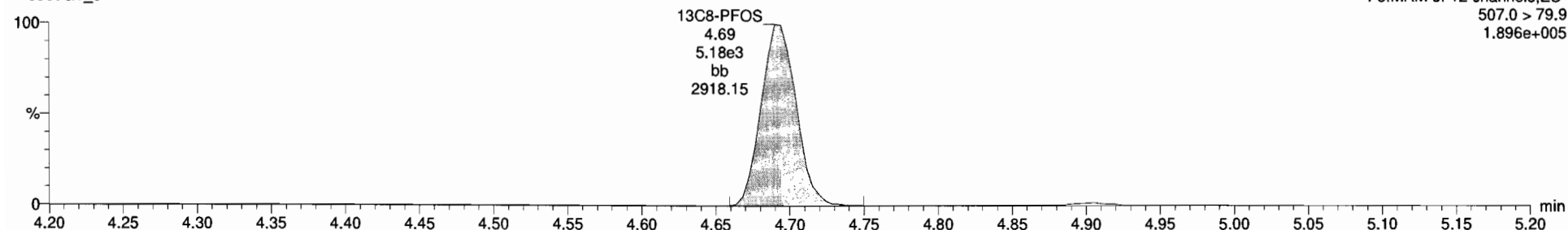


170305G1_5



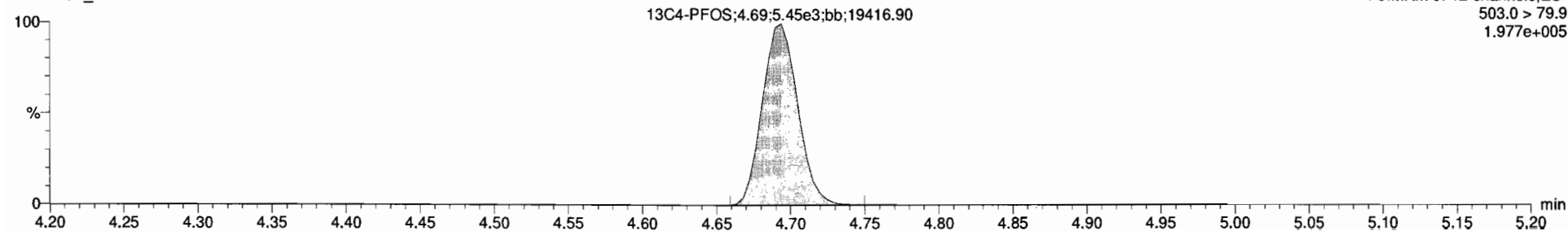
13C8-PFOS

170305G1_5

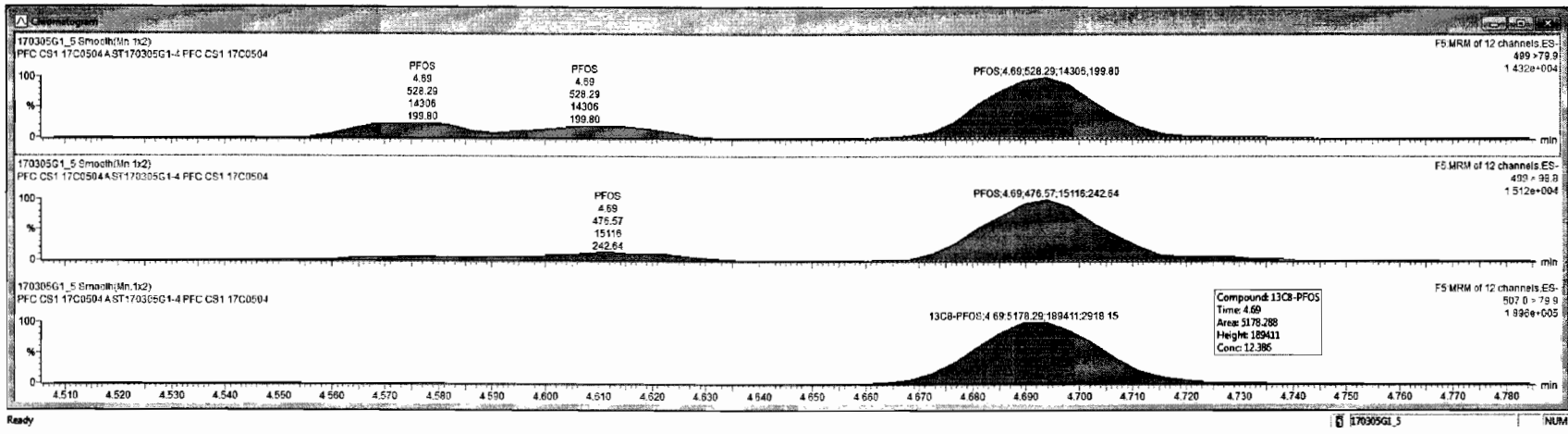


13C4-PFOS

170305G1_5



Name	TrAc	Area	RFI	WtVol	Prod.RT	RT	Conc	>MDL	%Rec	DL
1 PFBS	299 > 79.7	2.78e3		1.000	3.03	3.03	1.99	NO	99.3	
2 PFHpA	383 > 79.6	5.85e3		1.000	3.91	3.91	2.05	NO	162.3	
3 PFHxS	398.9 > 79.6	2.23e3		1.000	4.02	4.02	2.01	NO	190.5	
4 PFOA	413 > 368.7	5.38e3		1.000	4.38	4.38	2.56	NO	193.1	
5 PFNA	463 > 418.8	3.17e3		1.000	4.63	4.63	2.04	NO	192.0	
6 PFOS	499 > 79.9	6.88e2		1.000	4.69	4.69	2.46	YES	122.0	0.1190520
7 13C3-PFBS	302.0 > 98.8	7.24e3	0.410	1.000	3.03	3.03	12.7	NO	101.2	0.0061404
8 13C4-PFHpA	367.2 > 321.8	1.86e4	1.10	1.000	3.90	3.91	12.1	NO	96.9	0.0050186
9 18O2-PFHxS	403 > 102.6	7.43e3	0.434	1.000	4.02	4.02	13.3	NO	98.2	0.0022595
10 13C2-PFOA	414.9 > 369.7	3.70e4	4.61	1.000	4.38	4.38	12.2	NO	97.6	0.0165493
11 13C5-PFNA	466.2 > 422.9	6.97e3	0.667	1.000	4.63	4.63	12.3	NO	98.6	0.0011387
12 13C6-PFOS	507.0 > 79.9	5.18e3	0.958	1.000	4.69	4.69	12.4	NO	99.1	0.0107137
13 13C5-PFHxA	310 > 272.9	3.17e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0062680
14 13C3-PFHxS	401.9 > 79.9	1.74e4	1.00	1.000	3.54	4.02	12.5	NO	100.0	0.0001082
15 13C8-PFOA	421.3 > 378	8.23e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0221406
16 13C8-PFNA	472.2 > 426.9	8.18e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0005300
17 13C4-PFOS	503.0 > 79.9	5.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016094
18 Total PFBS	299 > 79.7	2.78e3		1.000	3.11		1.99	NO		
19 Total PFHxS	398.9 > 79.6	2.63e3		1.000	4.09		2.27	NO		
20 Total PFOA	413 > 368.7	5.48e3		1.000	4.39		2.06	NO		
21 Total PFOS	499 > 79.9	6.88e2		1.000	4.67		3.37	NO		0.1190520



Dataset: Untitled

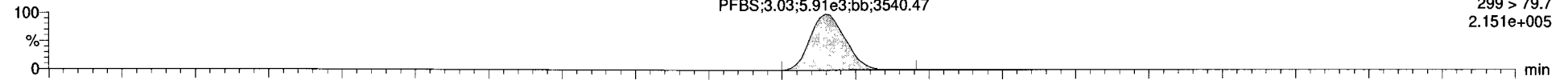
Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time

Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-5 PFC CS2 17C0505, Description: PFC CS2 17C0505 A, Name: 170305G1_6, Date: 05-Mar-2017, Time: 13:36:55, Instrument: , Lab: , User:

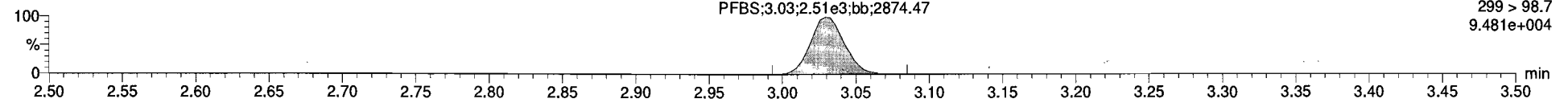
PFBS

170305G1_6



F2:MRM of 3 channels,ES-
299 > 79.7
2.151e+005

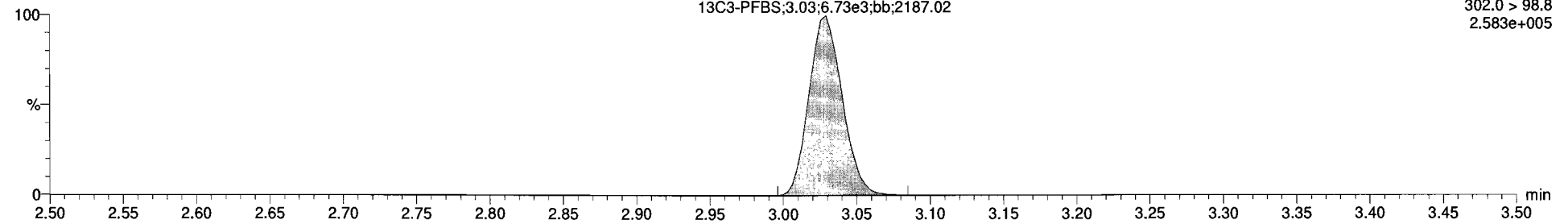
170305G1_6



F2:MRM of 3 channels,ES-
299 > 98.7
9.481e+004

13C3-PFBS

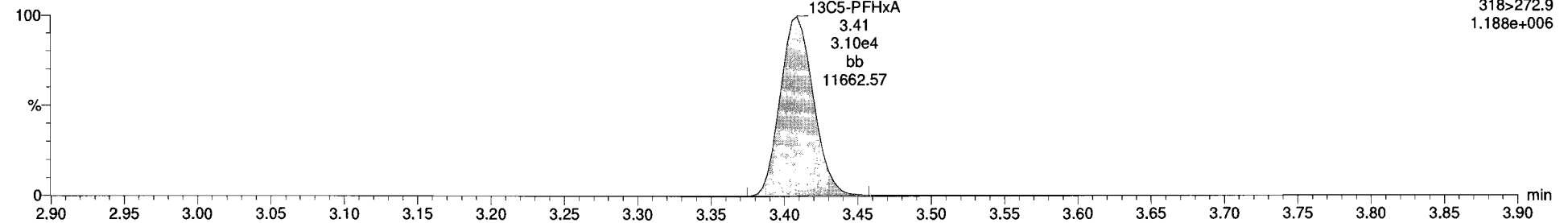
170305G1_6



F2:MRM of 3 channels,ES-
302.0 > 98.8
2.583e+005

13C5-PFHxA

170305G1_6



F3:MRM of 1 channel,ES-
318>272.9
1.188e+006

Dataset: Untitled

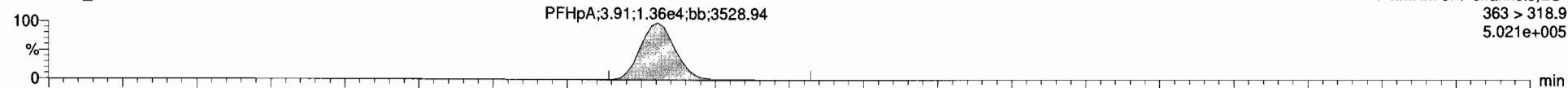
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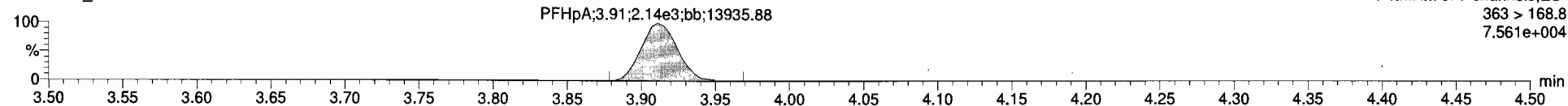
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PFHpA

170305G1_6

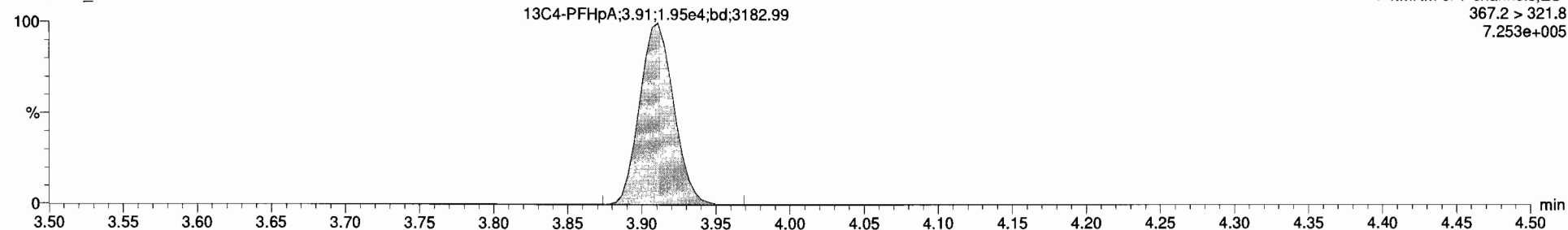


170305G1_6



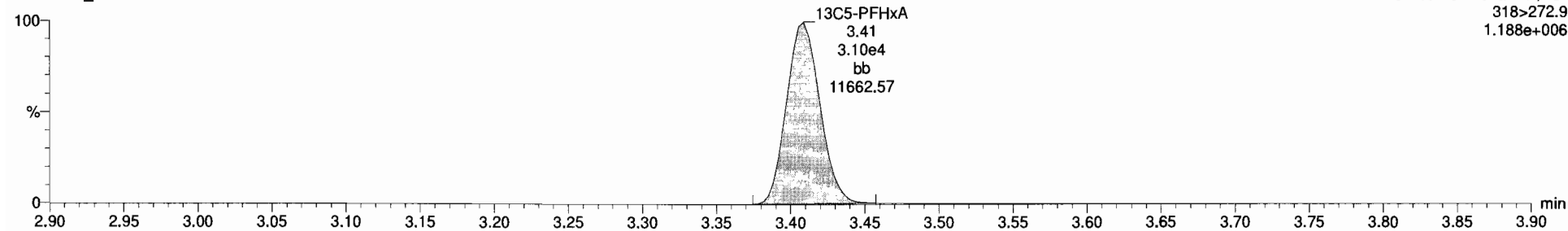
13C4-PFHxA

170305G1_6



13C5-PFHxA

170305G1_6



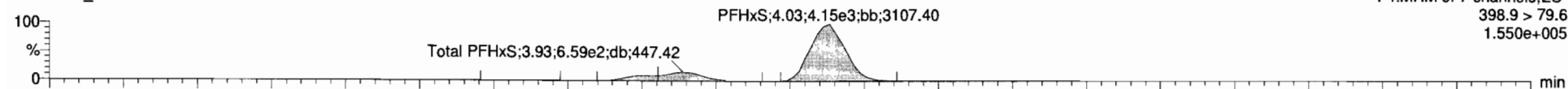
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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

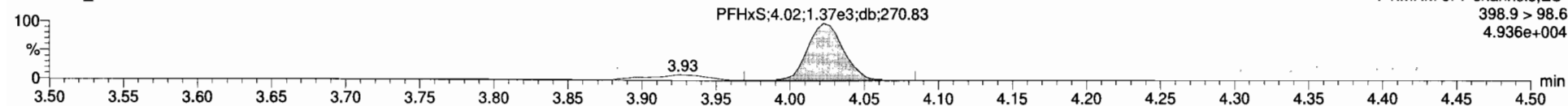
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Total PFHxS

170305G1_6

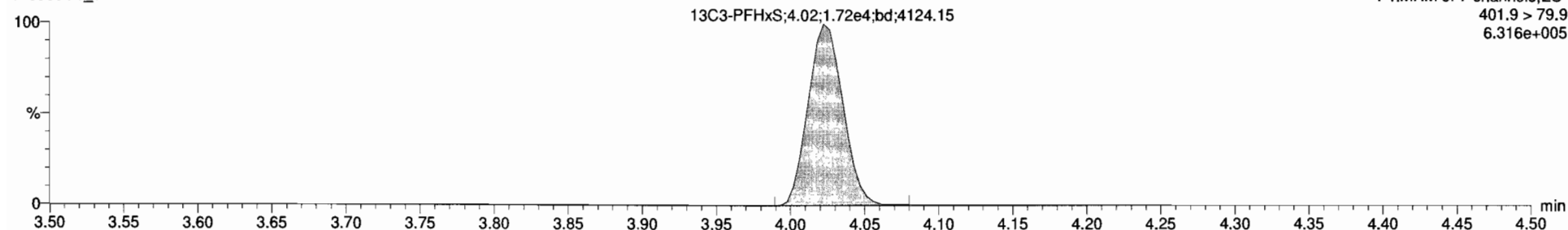


170305G1_6



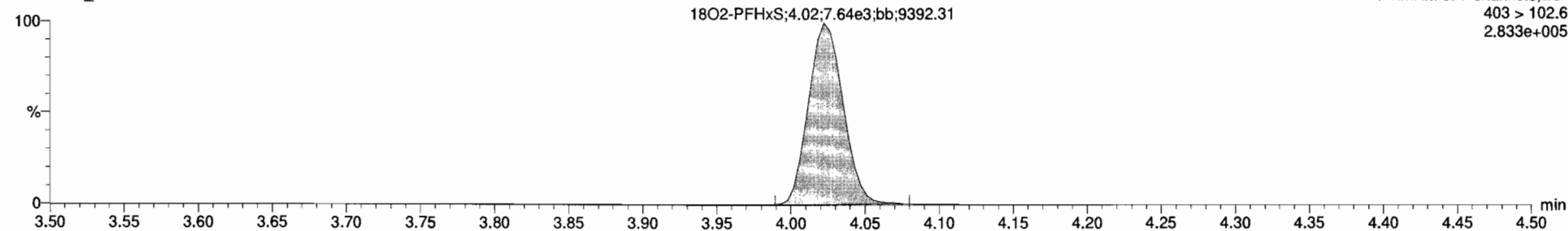
13C3-PFHxS

170305G1_6



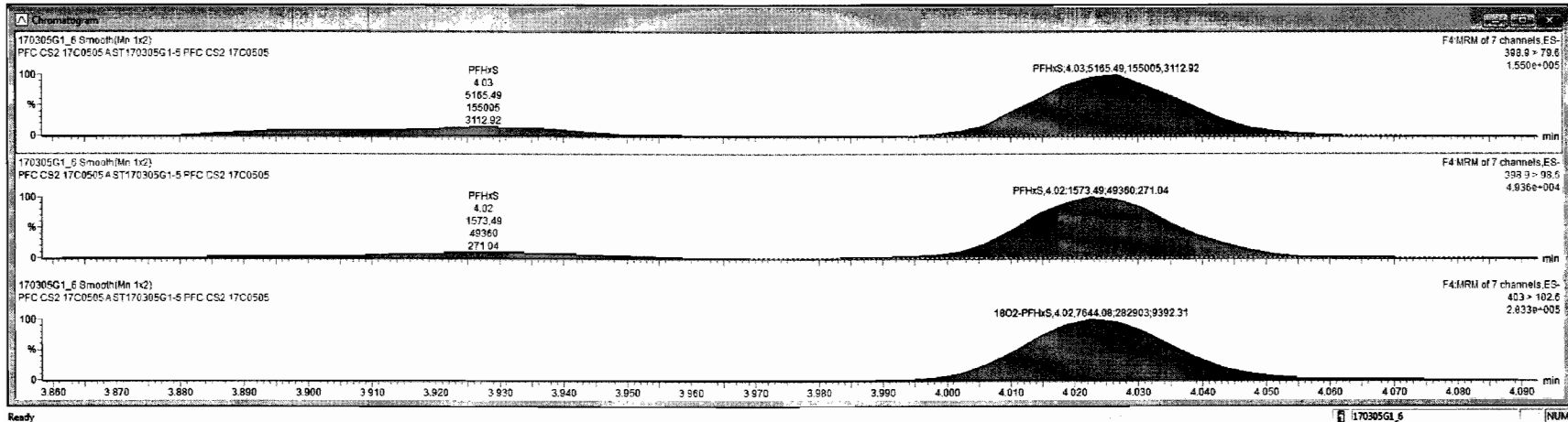
18O2-PFHxS

170305G1_6



170305G1_6 - ST170305G1-5-PFC CS2 17C0505 - PFC CS2 17C0505 A

#	Name	Trace	Area	RRF	WtV%	Pred RT	RT	Conc	>NDL	%Rec	DL
1	PFBS	299 > 79.7	5.91e3		1.000	3.03	3.03	4.58	NO	91.6	
2	PFHpA	363 > 318.9	1.36e4		1.000	3.91	3.91	4.78	NO	95.6	
3	PFHxS	398.8 > 79.8	5.17e3		1.000	4.02	4.03	4.80	YES	92.0	
4	PFOA	413 > 368.7	1.24e4		1.000	4.30	4.30	5.43	YES	108.5	
5	PFNA	463 > 418.8	7.77e3		1.000	4.63	4.63	4.71	YES	94.2	
6	PFDS	499 > 79.9	1.22e3		1.000	4.70	4.69	5.14	YES	102.8	0.0999192
7	13C3-PFBS	302.0 > 98.8	6.72e3	0.410	1.000	3.03	3.03	11.9	NO	95.3	0.0142443
8	13C4-PFHpA	367.2 > 321.9	1.95e4	1.10	1.000	3.90	3.91	12.9	NO	103.0	0.0102764
9	18O2-PFHxS	403 > 102.6	7.64e3	0.424	1.000	4.02	4.02	12.8	NO	102.2	0.0034349
10	13C2-PFOA	414.9 > 369.7	3.46e4	4.61	1.000	4.30	4.30	11.9	NO	95.4	0.0046755
11	13C3-PFNA	468.2 > 422.9	7.48e3	0.867	1.000	4.63	4.63	12.5	NO	100.0	0.0007409
12	13C4-PFDS	507.0 > 79.9	5.64e3	0.958	1.000	4.69	4.69	11.7	NO	93.2	0.0435914
13	13C3-PFHxS	318 > 272.9	3.10e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0026795
14	13C3-PFHxS	401.9 > 79.9	1.72e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0075773
15	13C3-PFOA	421.3 > 376	7.89e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0007868
16	13C3-PFNA	472.2 > 426.9	8.62e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0006215
17	13C4-PFDS	503.0 > 79.9	8.31e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0165574
18	Total PFBS	299 > 79.7	5.91e3		1.000	3.11		4.58	NO		
19	Total PFHxS	398.8 > 79.8	6.15e3		1.000	4.09		5.37	NO		
20	Total PFOA	413 > 368.7	1.25e4		1.000	4.39		5.43	NO		
21	Total PFDS	499 > 79.9	1.67e3		1.000	4.67		7.17	NO		0.0999192



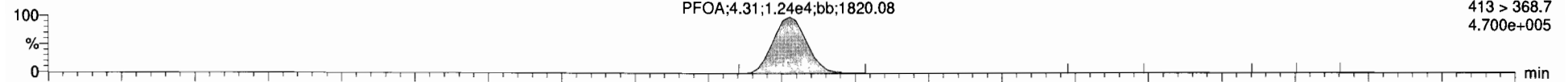
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Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time
Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

ID: ST170305G1-5 PFC CS2 17C0505, Description: PFC CS2 17C0505 A, Name: 170305G1_6, Date: 05-Mar-2017, Time: 13:36:55, Instrument: , Lab: , User:

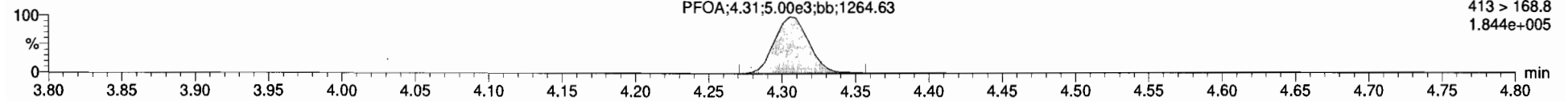
Total PFOA

170305G1_6



F5:MRM of 12 channels,ES-
413 > 368.7
4.700e+005

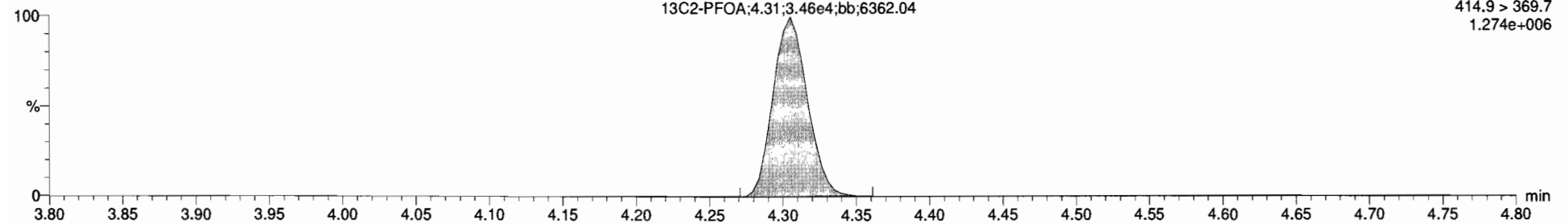
170305G1_6



F5:MRM of 12 channels,ES-
413 > 168.8
1.844e+005

13C2-PFOA

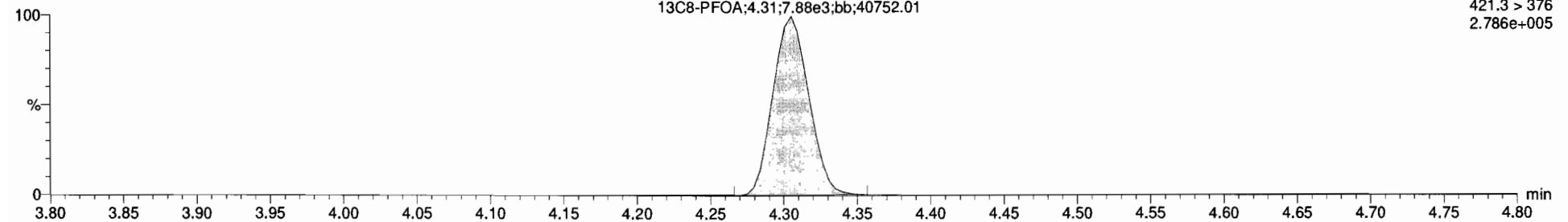
170305G1_6



F5:MRM of 12 channels,ES-
414.9 > 369.7
1.274e+006

13C8-PFOA

170305G1_6



F5:MRM of 12 channels,ES-
421.3 > 376
2.786e+005

Dataset: Untitled

Last Altered: Monday, March 06, 2017 08:36:20 Pacific Standard Time

Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

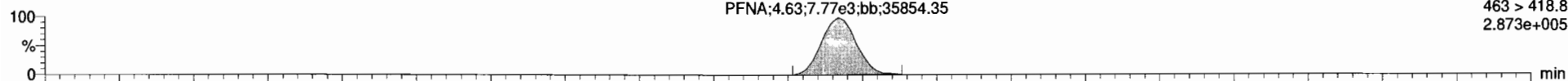
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PFNA

170305G1_6

PFNA;4.63;7.77e3;bb;35854.35

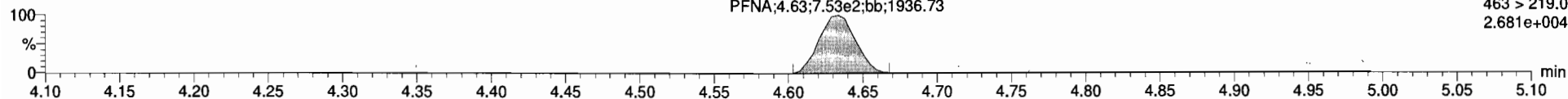
F5:MRM of 12 channels,ES-
463 > 418.8
2.873e+005



170305G1_6

PFNA;4.63;7.53e2;bb;1936.73

F5:MRM of 12 channels,ES-
463 > 219.0
2.681e+004

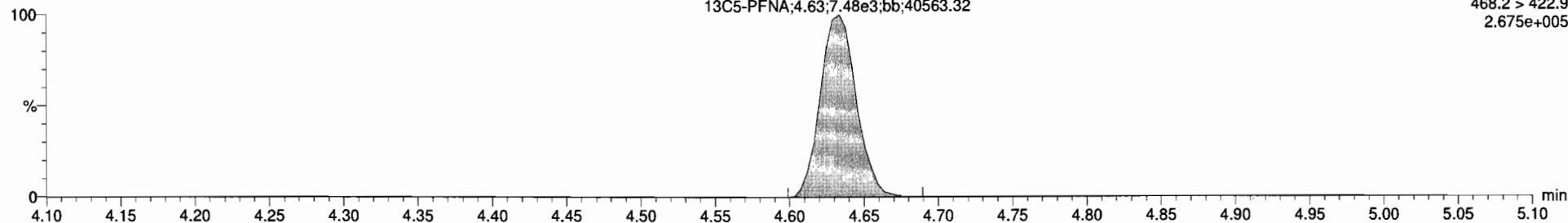


13C5-PFNA

170305G1_6

13C5-PFNA;4.63;7.48e3;bb;40563.32

F5:MRM of 12 channels,ES-
468.2 > 422.9
2.675e+005

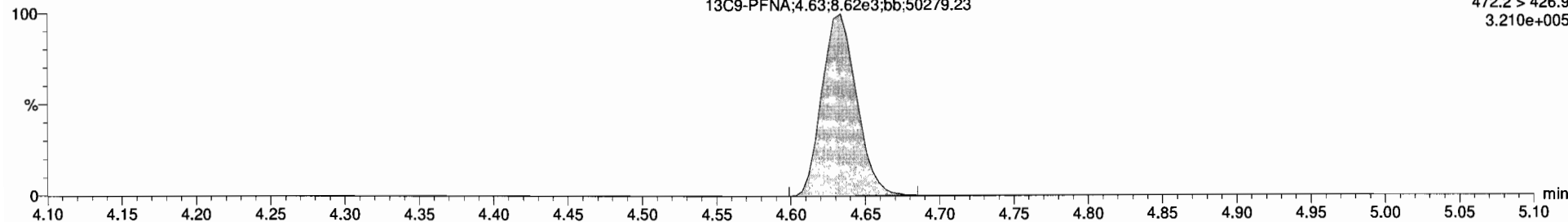


13C9-PFNA

170305G1_6

13C9-PFNA;4.63;8.62e3;bb;50279.23

F5:MRM of 12 channels,ES-
472.2 > 426.9
3.210e+005



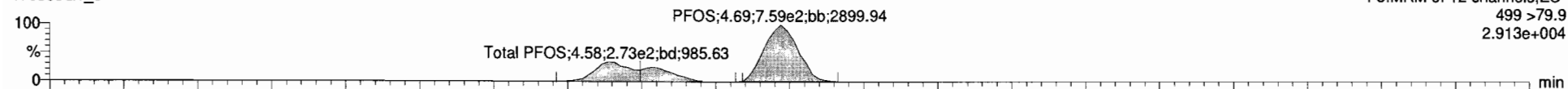
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Printed: Monday, March 06, 2017 08:37:19 Pacific Standard Time

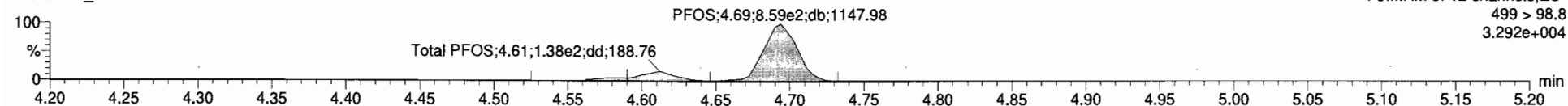
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Total PFOS

170305G1_6

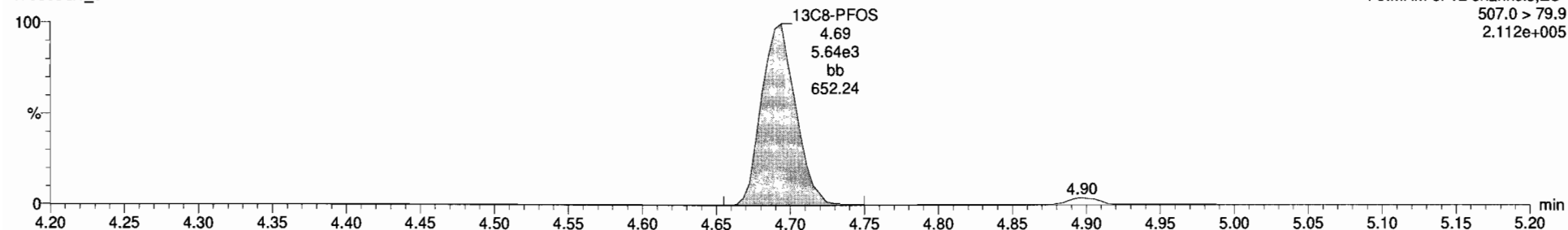


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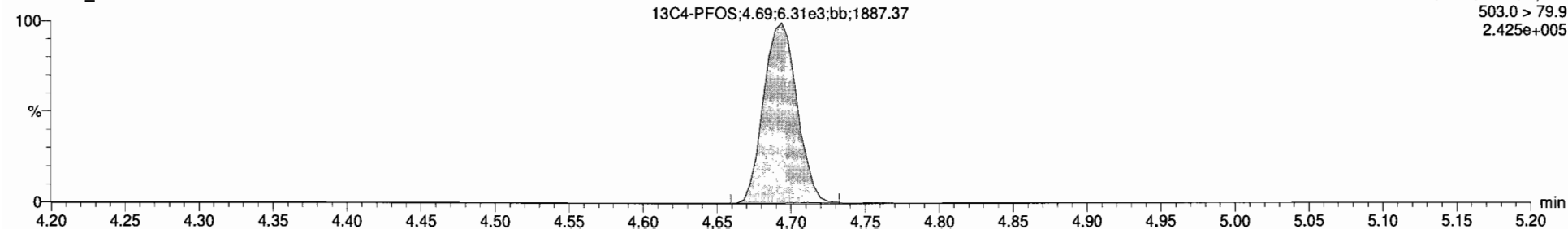
13C8-PFOS

170305G1_6



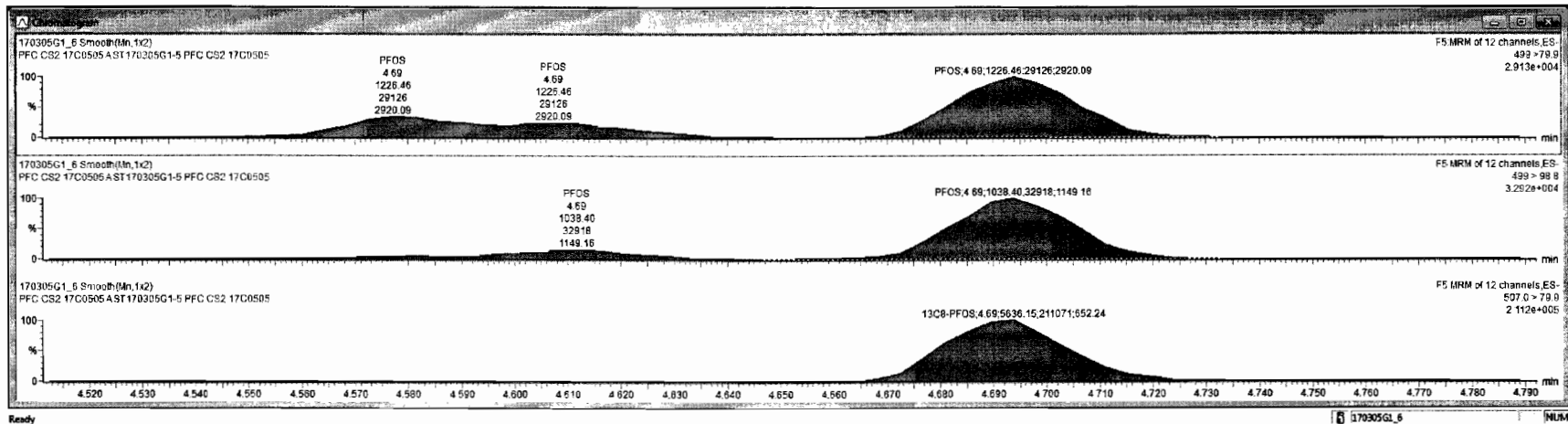
13C4-PFOS

170305G1_6



170305G1_6 ST170305G1-5 PFC CS2 17C0505 PFC CS2 17C0505A

Name	Trace	Area	RRF	WAVL	Pred RT	RT	Cone	SMDL	%Rel	DL	
1	PFBS	299 > 79.7	5.91e3	1.000	3.83	3.03	4.58	NO	91.6		
2	PFHpA	363 > 318.9	1.36e4	1.000	3.91	3.91	4.78	NO	95.6		
3	PFHxS	398.9 > 79.8	5.17e3	1.000	4.62	4.03	4.60	YES	92.0		
4	PFOA	413 > 368.7	1.24e4	1.000	4.30	4.30	5.43	YES	108.5		
5	PFNA	463 > 418.8	7.77e3	1.000	4.63	4.63	4.71	YES	94.2		
6	PFOS	499 > 79.9	1.23e3	1.000	4.79	4.69	5.14	YES	102.8	0.0999192	
7	13C3-PFBS	302.0 > 98.8	6.73e3	0.410	1.000	3.83	3.03	11.9	NO	95.3	0.0142443
8	13C4-PFHpA	367.2 > 321.8	1.95e4	1.10	1.000	3.90	3.91	12.9	NO	103.0	0.0102764
9	16O2-PFHxS	403 > 102.6	7.64e3	0.434	1.000	4.62	4.02	12.8	NO	102.2	0.0034349
10	13C2-PFOA	414.9 > 369.7	3.46e4	4.61	1.000	4.30	4.30	11.9	NO	95.4	0.0048755
11	13C5-PFNA	468.2 > 422.9	7.48e3	0.867	1.000	4.63	4.63	12.5	NO	100.0	0.0007409
12	13C8-PFOS	507.0 > 79.9	5.64e3	0.958	1.000	4.69	4.69	11.7	NO	93.2	0.0435914
13	13C5-PFHxS	318 > 272.9	3.10e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0026795
14	13C3-PFHxS	401.9 > 79.9	1.72e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0075773
15	13C8-PFOA	421.3 > 376	7.88e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0007688
16	13C9-PFNA	472.2 > 426.9	8.62e3	1.00	1.000	4.58	4.63	12.5	NO	100.0	0.0008215
17	13C4-PFOS	503.0 > 79.9	6.31e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0165574
18	Total PFBS	299 > 79.7	5.91e3		1.000	3.11		4.58	NO		
19	Total PFHxS	398.9 > 79.8	6.15e3		1.000	4.69		5.37	NO		
20	Total PFOA	413 > 368.7	1.25e4		1.000	4.39		5.43	NO		
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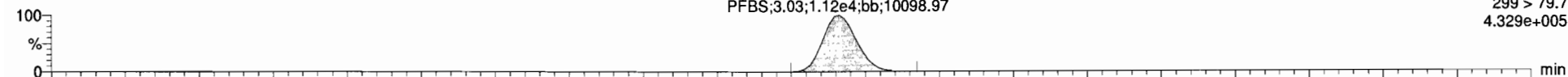
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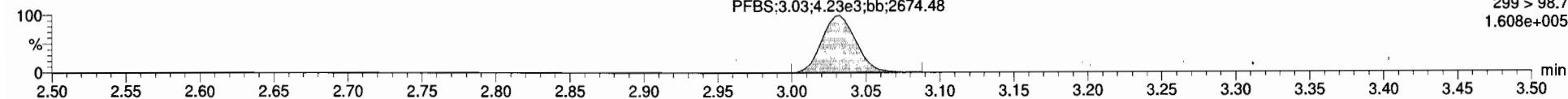
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PFBS

170305G1_7

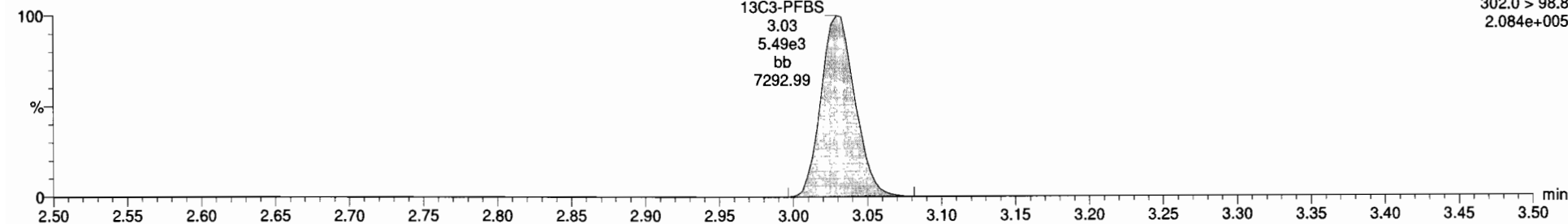


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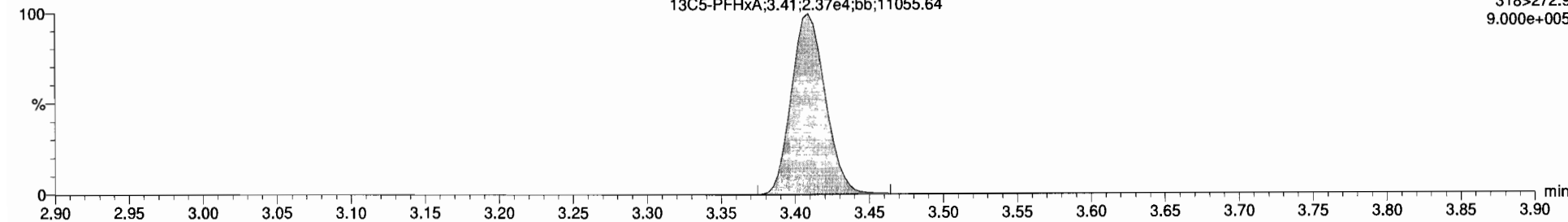
13C3-PFBS

170305G1_7



13C5-PFHxA

170305G1_7

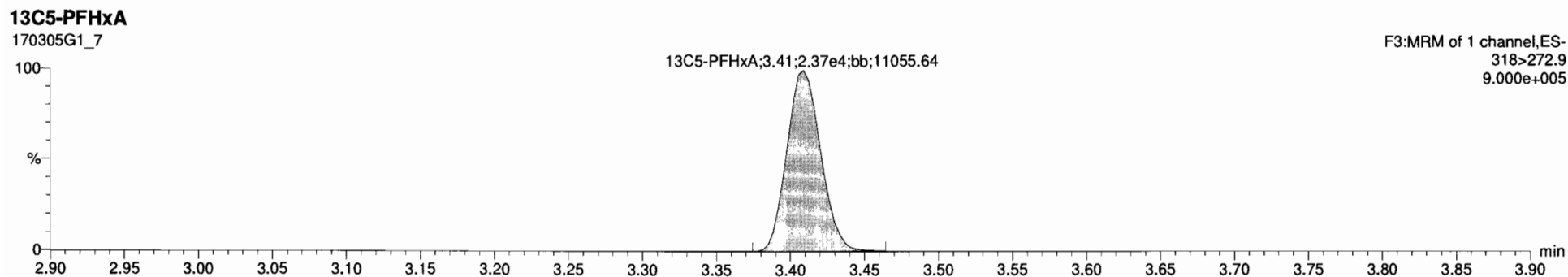
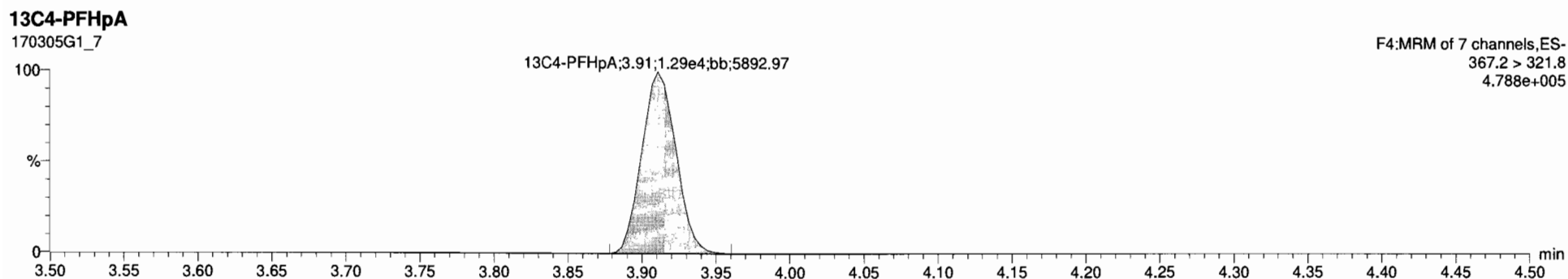
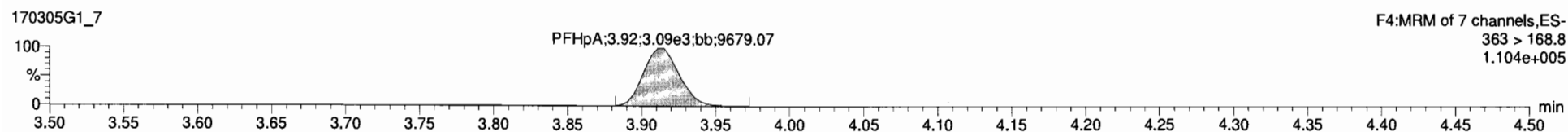
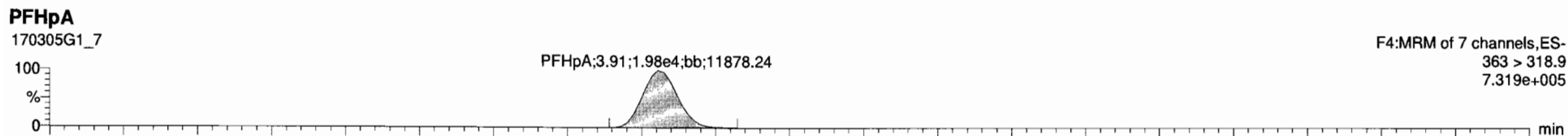


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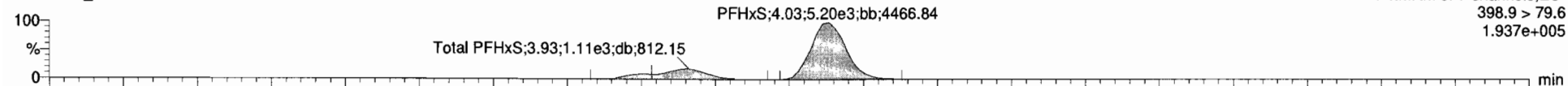
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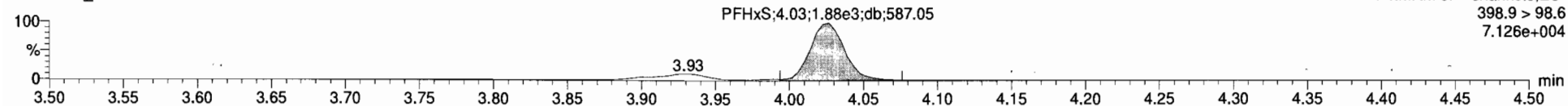
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Total PFHxS

170305G1_7

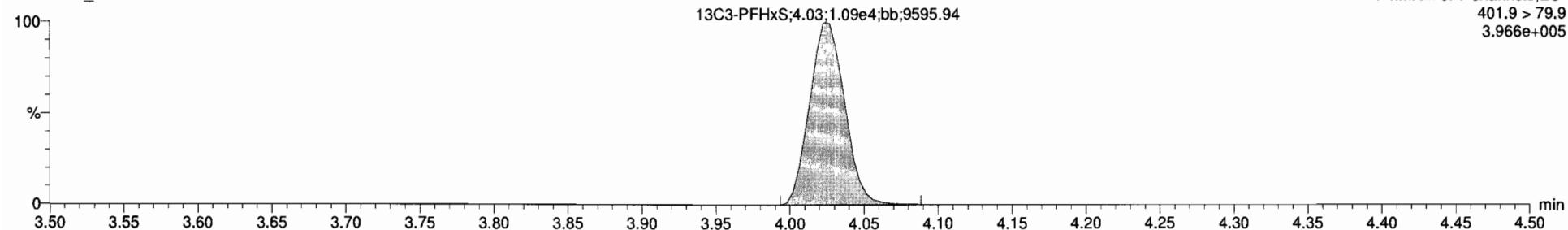


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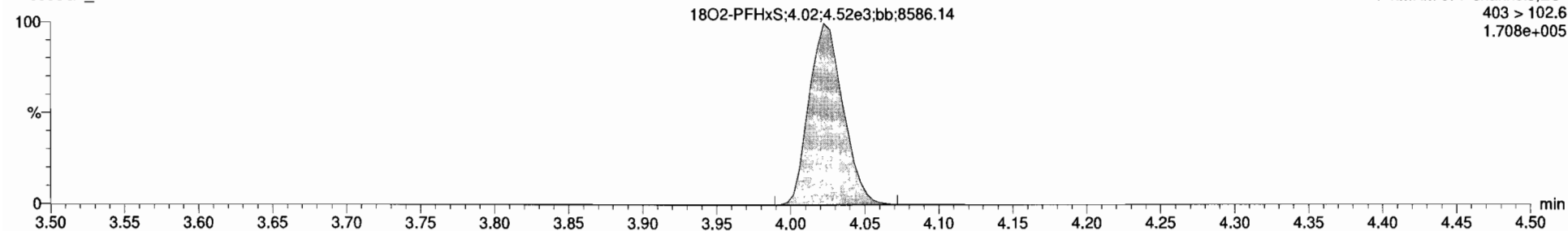
13C3-PFHxS

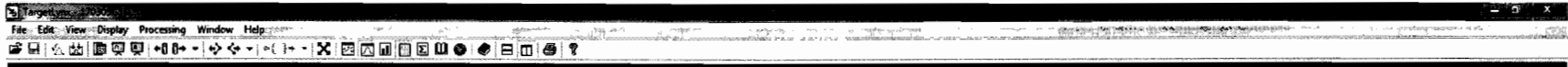
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18O2-PFHxS

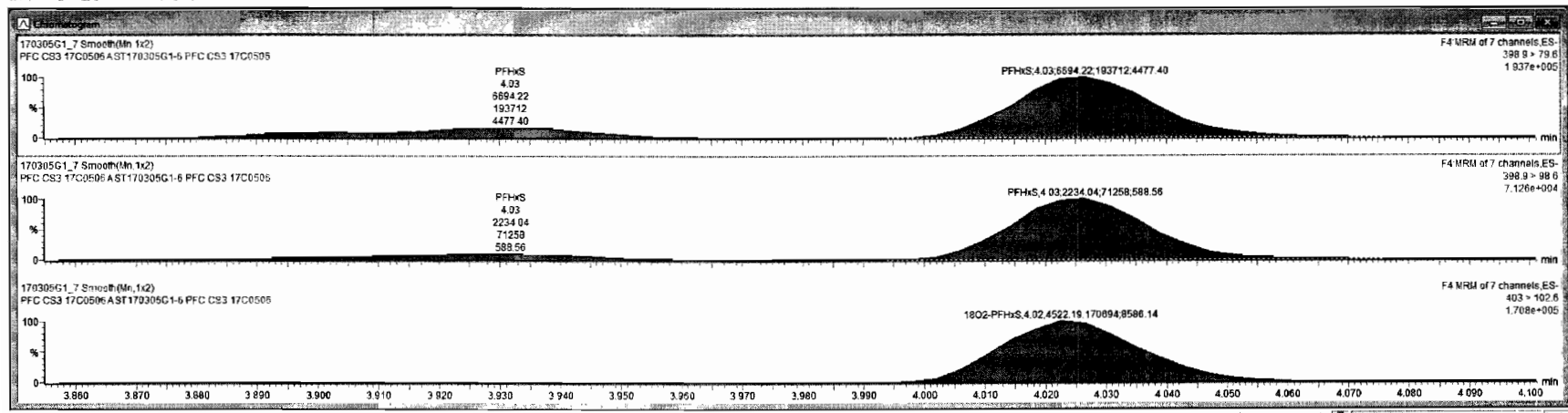
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170305G1_7 ST170305G1-6 PFC CS3 17C0506 PFC CS3 17C0506 A

Name	Trace	Area	RPV	Wt%	Pred RT	RT	Case	>MUL	%Rec	DL
1	PFBS	299 > 79.7	1.12e4		1.000	3.03	3.03	10.7	YES	107.2
2	PFHpA	363 > 316.9	1.96e4		1.000	3.91	3.91	10.6	YES	106.4
3	PFHxS	388 > 79.6	6.69e3		1.000	4.02	4.03	10.1	YES	101.5
4	PFOA	413 > 368.7	1.56e4		1.000	4.30	4.30	11.0	YES	109.8
5	PFNA	463 > 418.8	7.05e3		1.000	4.63	4.63	11.1	YES	111.4
6	PFOS	499 > 79.9	6.60e2		1.000	4.70	4.69	10.7	YES	107.1
7	13C3-PFBS	302.0 > 98.8	5.48e3	0.410	1.000	3.03	3.03	15.4	NO	123.0
8	13C3-PFHpA	367.2 > 321.8	1.29e4	1.10	1.000	3.90	3.91	13.4	NO	107.6
9	18O2-PFHxS	403 > 102.6	4.52e3	0.434	1.000	4.03	4.02	12.0	NO	95.6
10	13C3-PFOA	414.9 > 369.7	2.16e4	4.61	1.000	4.30	4.30	13.9	NO	111.6
11	13C3-PFNA	468.2 > 422.9	2.86e3	0.967	1.000	4.63	4.63	11.7	NO	94.0
12	13C3-PFOS	507.0 > 79.9	1.66e3	0.958	1.000	4.69	4.69	14.1	NO	112.8
13	13C3-PFHxA	318 > 272.9	2.37e4	1.00	1.000	3.29	3.41	12.5	NO	100.0
14	13C3-PFHxS	401.9 > 79.3	1.09e4	1.00	1.000	3.94	4.03	12.5	NO	100.0
15	13C3-PFOA	421.3 > 376	4.25e3	1.00	1.000	4.22	4.30	12.5	NO	100.0
16	13C3-PFNA	472.2 > 426.9	3.54e3	1.00	1.000	4.56	4.63	12.5	NO	100.0
17	13C3-PFOS	503.0 > 79.9	1.74e3	1.00	1.000	4.67	4.69	12.5	NO	100.0
18	Total PFBS	299 > 79.7	1.12e4		1.000	3.11		10.7	NO	
19	Total PFHxS	388 > 79.6	8.14e3		1.000	4.09		12.2	NO	
20	Total PFOA	413 > 368.7	1.57e4		1.000	4.39		11.0	NO	
21	Total PFOS	499 > 79.9	1.01e3		1.000	4.67		12.8	NO	0.1341527



Ready NUM

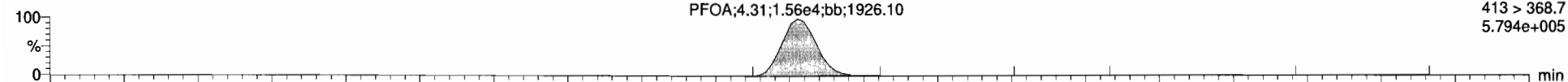
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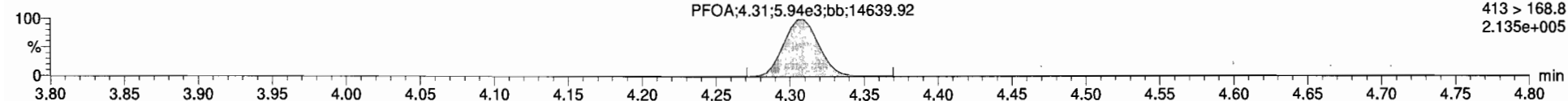
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Total PFOA

170305G1_7

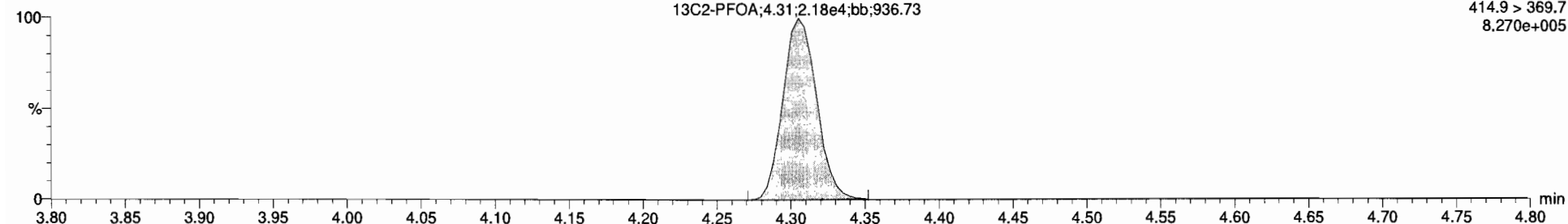


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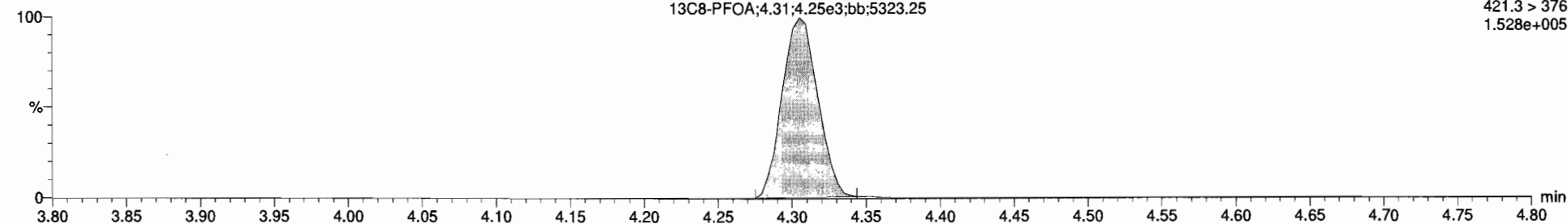
13C2-PFOA

170305G1_7



13C8-PFOA

170305G1_7



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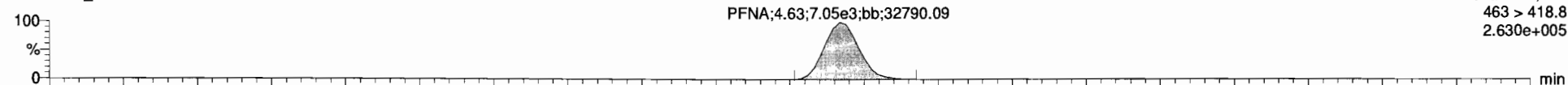
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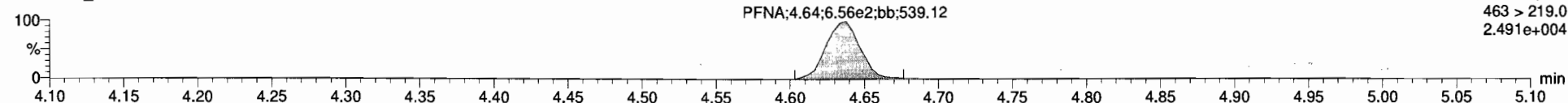
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PFNA

170305G1_7

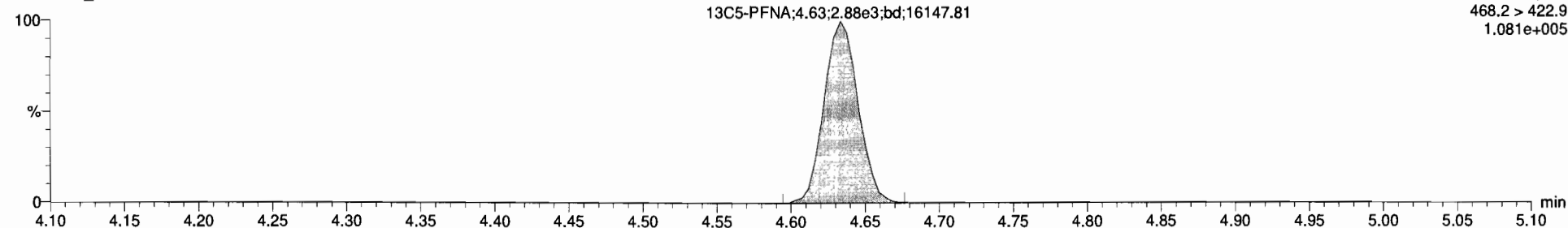


170305G1_7



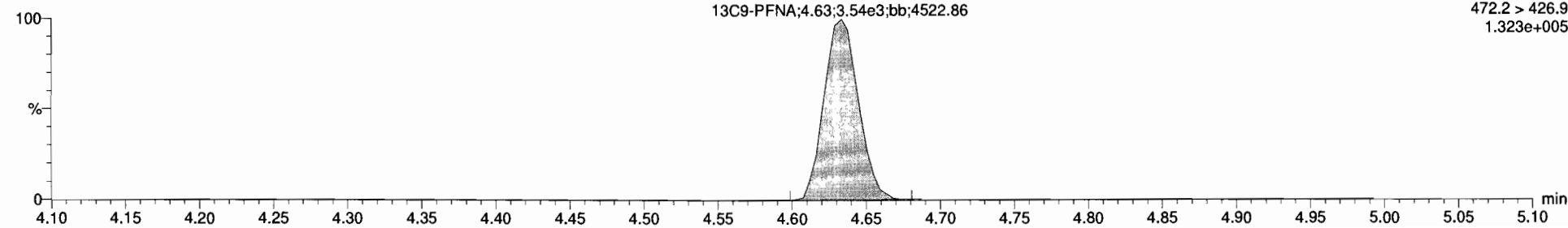
13C5-PFNA

170305G1_7



13C9-PFNA

170305G1_7



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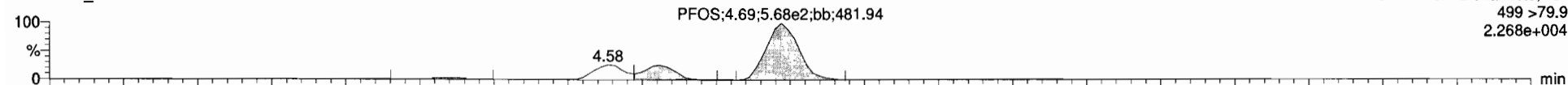
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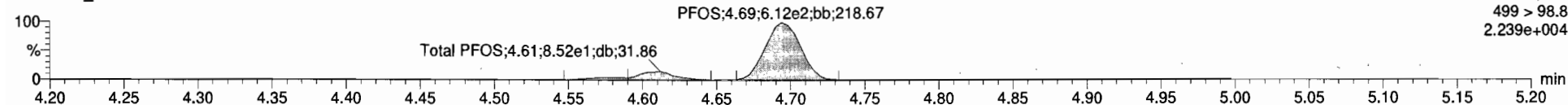
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Total PFOS

170305G1_7

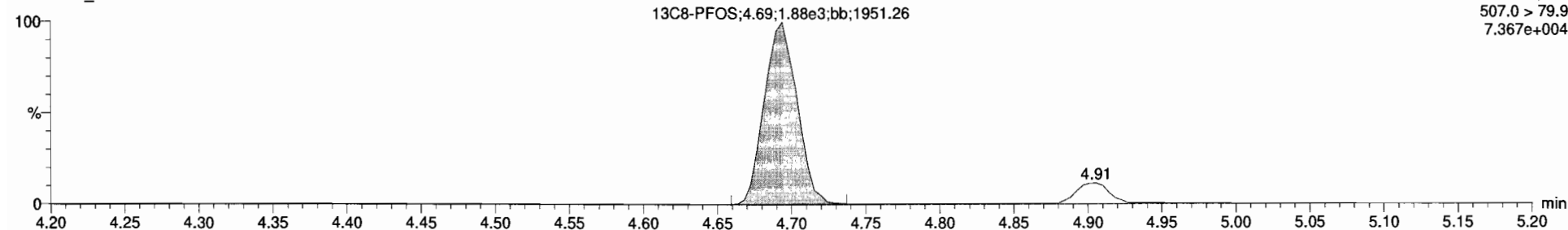


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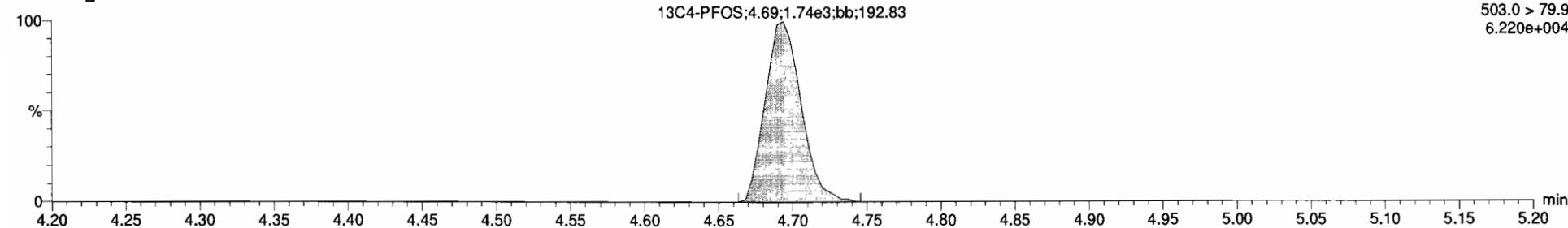
13C8-PFOS

170305G1_7



13C4-PFOS

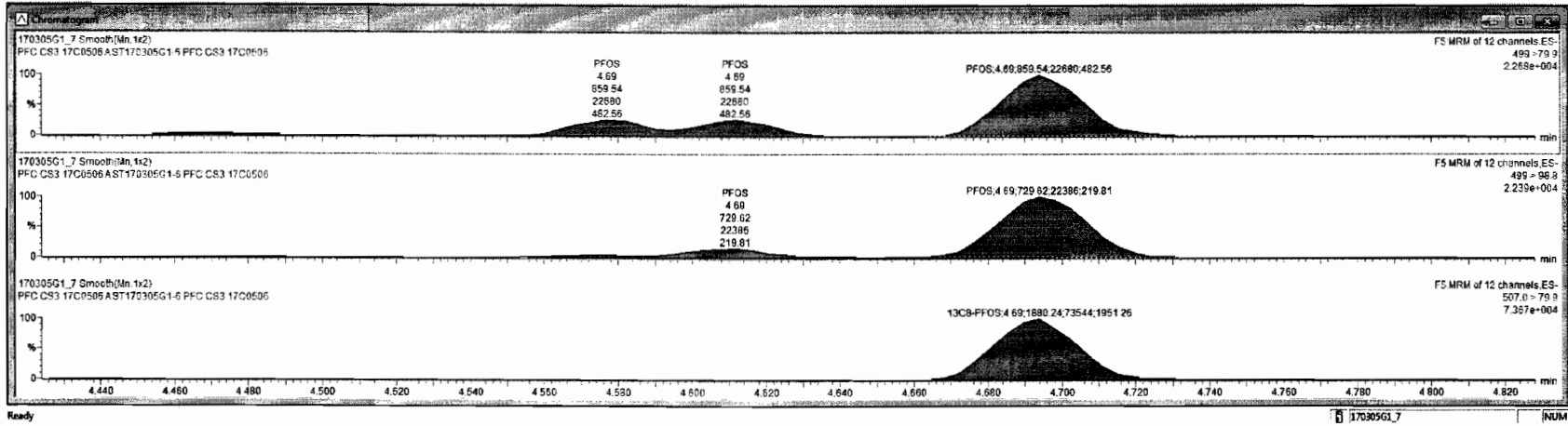
170305G1_7





170305G1_7 - ST170305G1-6 PFC CS3 17C0506 - PFC CS3 17C0506 A

Name	Trace	Area	RRF	WtVal	Prod RT	RT	Conc.	MDL	%Rec	DL
1	PFBS	299 > 79.7	1.12e4	1.000	3.03	3.03	10.7	YES	107.2	0.0000000
2	PFHpA	363 > 318.9	1.96e4	1.000	3.91	3.91	10.6	YES	106.4	0.0000000
3	PFHxS	398.9 > 79.6	6.69e3	1.000	4.02	4.03	10.1	YES	101.5	0.0000000
4	PFOA	413 > 368.7	1.56e4	1.000	4.30	4.30	11.0	YES	109.8	0.0000000
5	PFNA	463 > 418.8	7.05e3	1.000	4.63	4.63	11.1	YES	111.4	0.0000000
6	PFOS	499 > 79.9	8.60e3	1.000	4.69	4.69	10.9	YES	108.8	0.1024216
7	13C3-PFBS	302.0 > 98.8	5.49e3	0.410	1.000	3.03	3.03	NO	123.0	0.0054942
8	13C4-PFHpA	367.2 > 321.8	1.29e4	1.10	1.000	3.90	3.91	NO	107.8	0.0058321
9	18O2-PFHxS	403 > 102.6	4.52e3	0.434	1.000	4.03	4.02	NO	95.5	0.0036126
10	13C2-PFOA	414.8 > 369.7	2.18e4	4.61	1.000	4.30	4.30	NO	111.6	0.032472
11	13C3-PFNA	468.2 > 422.9	2.86e3	0.867	1.000	4.63	4.63	NO	94.0	0.0018267
12	13C8-PFOS	507.0 > 79.9	1.86e3	0.958	1.000	4.69	4.69	NO	112.8	0.0197667
13	13C3-PFHxS	318 > 272.9	2.37e4	1.00	1.000	3.29	3.41	NO	100.0	0.0028266
14	13C3-PFHxS	461.9 > 79.9	1.09e4	1.00	1.000	3.84	4.03	NO	100.0	0.0032568
15	13C8-PFOA	421.3 > 376	4.25e3	1.00	1.000	4.22	4.30	NO	100.0	0.0058706
16	13C9-PFNA	472.2 > 426.9	3.54e3	1.00	1.000	4.56	4.63	NO	100.0	0.0059093
17	13C4-PFOS	503.0 > 79.9	1.74e3	1.00	1.000	4.67	4.69	NO	100.0	0.0020576
18	Total PFBS	299 > 79.7	1.12e4		1.000	3.11		NO		
19	Total PFHxS	398.9 > 79.6	8.14e3		1.000	4.09		NO		
20	Total PFOA	413 > 368.7	1.57e4		1.000	4.39		NO		
21	Total PFOS	499 > 79.9	1.01e3		1.000	4.67		NO		0.1024216



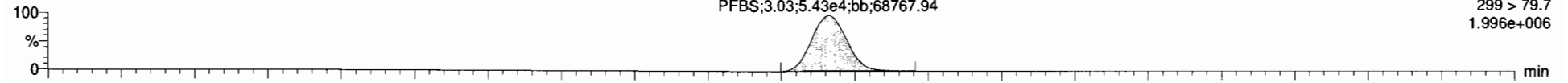
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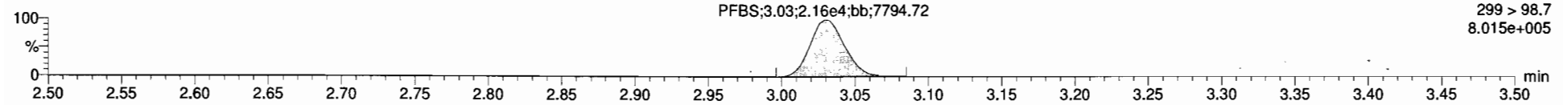
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PFBS

170305G1_8

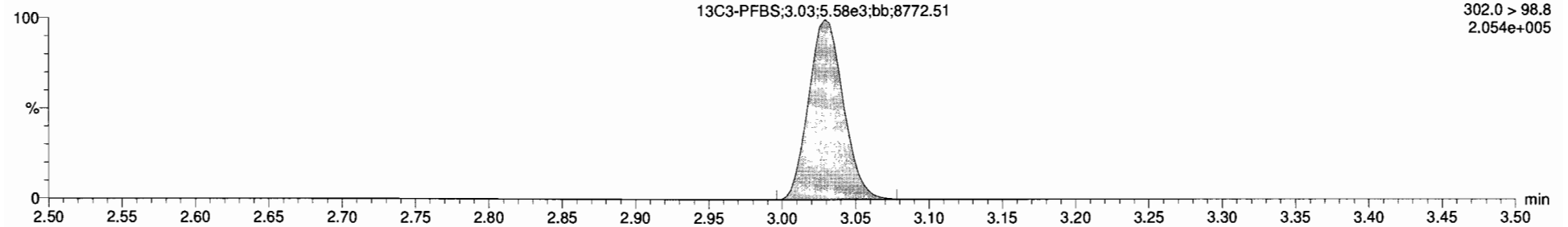


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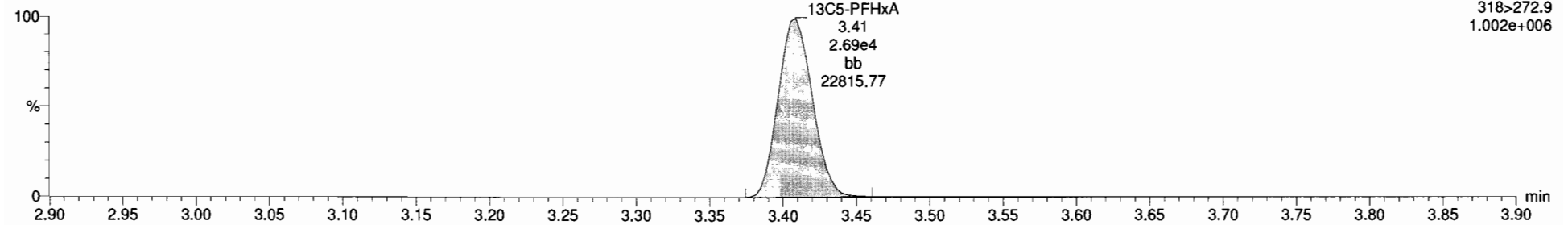
13C3-PFBS

170305G1_8



13C5-PFHxA

170305G1_8



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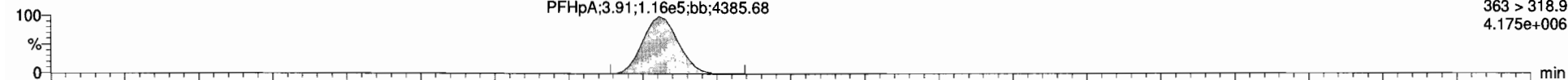
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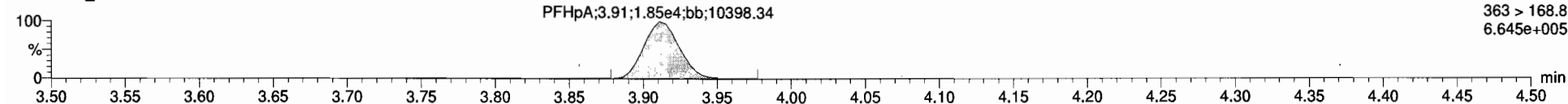
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PFHpA

170305G1_8

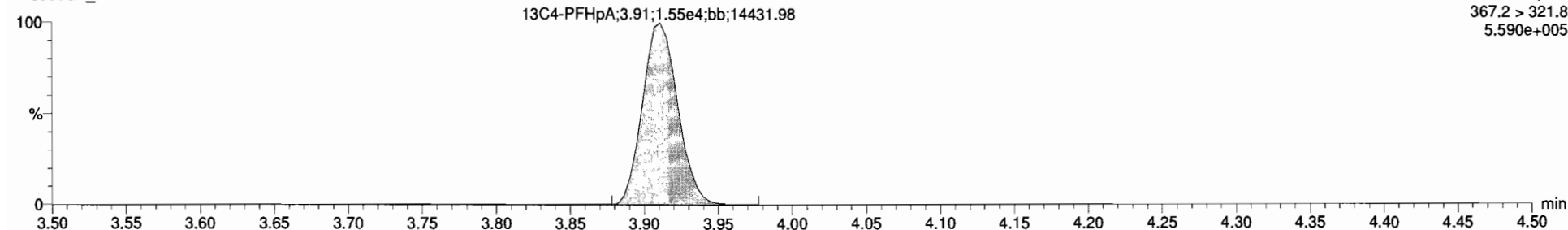


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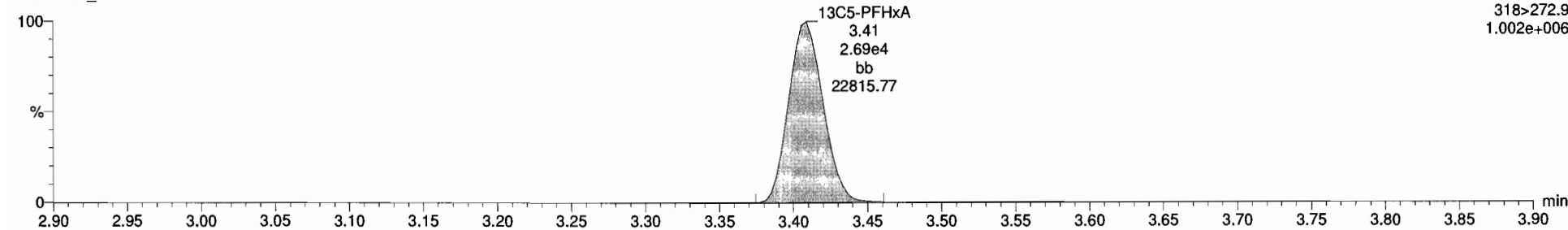
13C4-PFHpA

170305G1_8



13C5-PFHxA

170305G1_8



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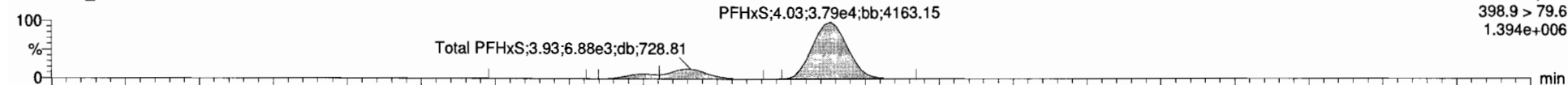
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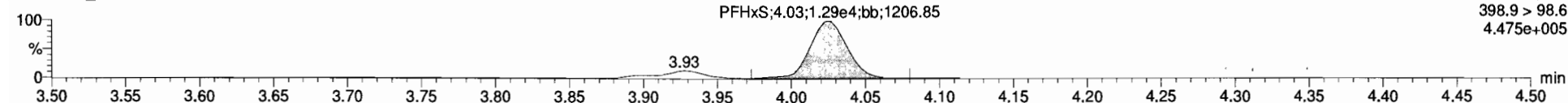
Total PFHxS

170305G1_8



F4:MRM of 7 channels,ES-
398.9 > 79.6
1.394e+006

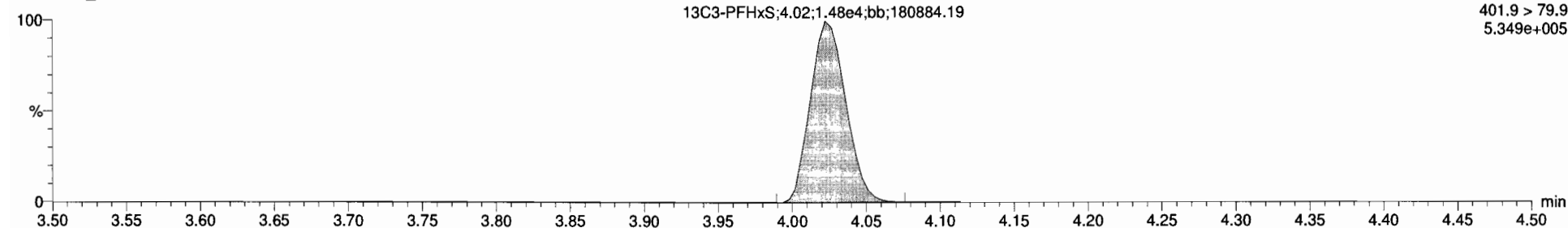
170305G1_8



F4:MRM of 7 channels,ES-
398.9 > 98.6
4.475e+005

13C3-PFHxS

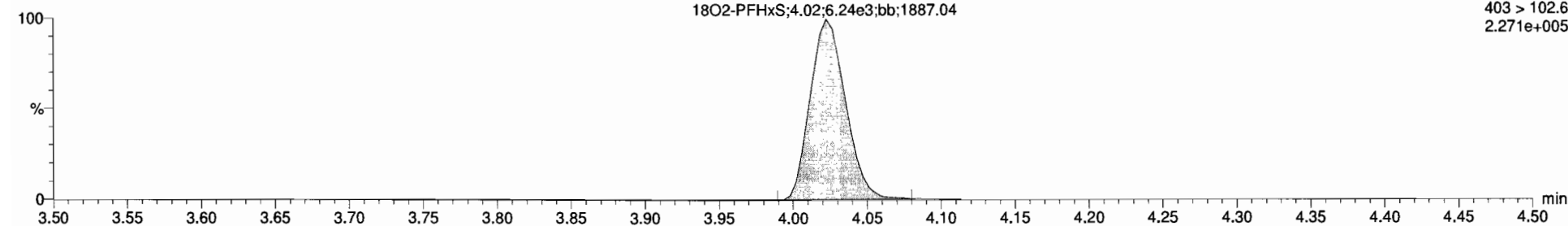
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F4:MRM of 7 channels,ES-
401.9 > 79.9
5.349e+005

18O2-PFHxS

170305G1_8

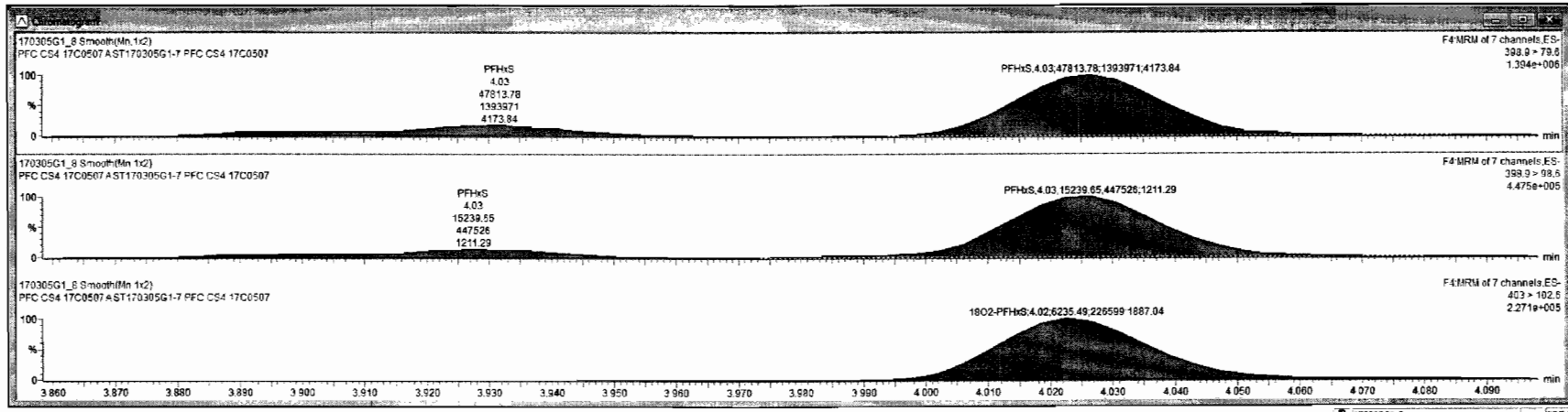


F4:MRM of 7 channels,ES-
403 > 102.6
2.271e+005



170305G1_8 - ST170305G1-7 PFC CS4 17C0507 - PFC CS4 17C0507A

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PFBS	299 > 79.7	5.43e4		1.000	3.03	3.03	51.1	YES	102.1	0.0000000
PFHpA	363 > 318.9	1.16e5		1.000	3.91	3.91	51.9	YES	103.8	0.0000000
PFHxS	398.9 > 79.6	4.79e4		1.000	4.03	4.03	52.8	YES	105.8	0.0000000
PFDA	413 > 368.7	1.10e5		1.000	4.30	4.30	52.3	YES	104.6	0.0000000
PFNA	453 > 418.8	7.41e4		1.000	4.63	4.63	52.1	YES	104.1	0.0000000
PFOS	499 > 79.9	1.04e4		1.000	4.69	4.69	48.3	YES	96.6	0.1281301
13C1-PFBS	302.0 > 98.8	5.58e3	0.410	1.000	3.03	3.03	11.5	NO	82.1	0.0033337
13C1-PFHpA	367.2 > 321.8	1.55e4	1.10	1.000	3.90	3.91	11.9	NO	85.6	0.0020622
1602-PFHxS	403 > 102.6	6.24e3	0.434	1.000	4.02	4.02	12.1	NO	97.2	0.0161792
13C2-PFOA	414.9 > 369.7	3.30e4	4.61	1.000	4.30	4.30	12.3	NO	98.2	0.0024226
13C2-PFNA	458.2 > 422.9	6.50e3	0.667	1.000	4.63	4.63	12.3	NO	98.7	0.0031015
13C2-PFOS	507.0 > 79.9	5.14e3	0.958	1.000	4.69	4.69	13.1	NO	104.4	0.0094134
13C3-PFHxS	316.272.9	2.89e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0013897
13C3-PFHxS	401.9 > 79.9	1.48e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0001728
13C3-PFOA	421.2 > 376	7.29e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0034967
13C3-PFNA	472.2 > 426.9	7.60e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0166538
13C3-PFOS	503.0 > 79.9	5.13e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0018396
Total PFBS	299 > 79.7	5.43e4		1.000	3.11		51.1	NO		
Total PFHxS	398.9 > 79.6	5.73e4		1.000	4.09		63.2	NO		
Total PFDA	413 > 368.7	1.10e5		1.000	4.39		52.3	NO		
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Ready 170305G1_8 NUM

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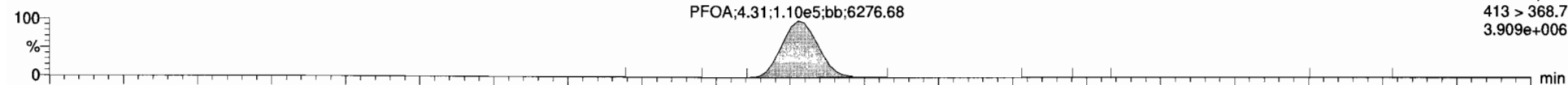
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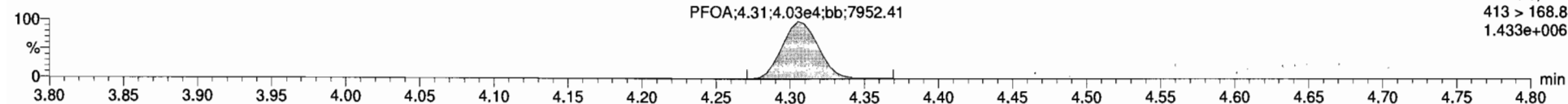
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Total PFOA

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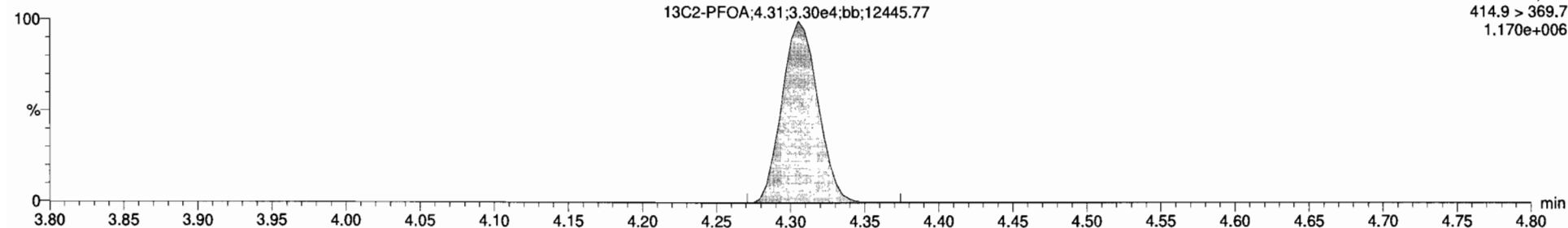


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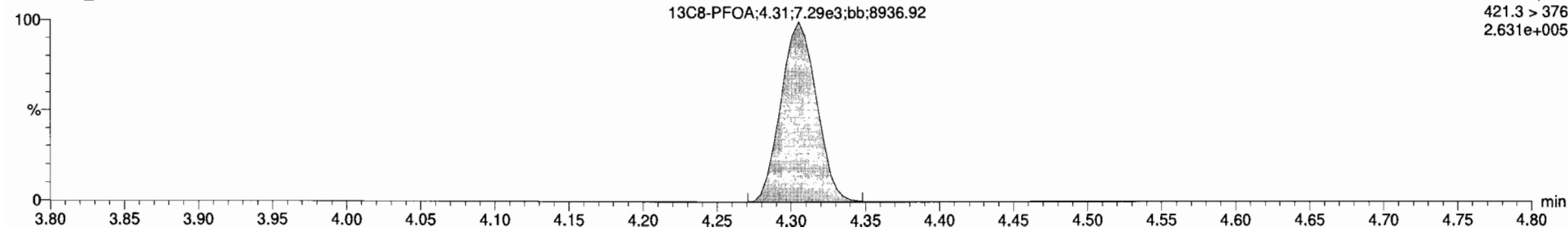
13C2-PFOA

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13C8-PFOA

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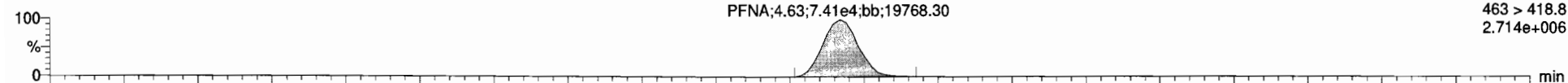
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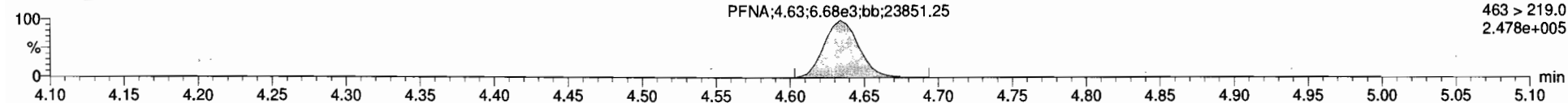
PFNA

170305G1_8



F5:MRM of 12 channels,ES-
463 > 418.8
2.714e+006

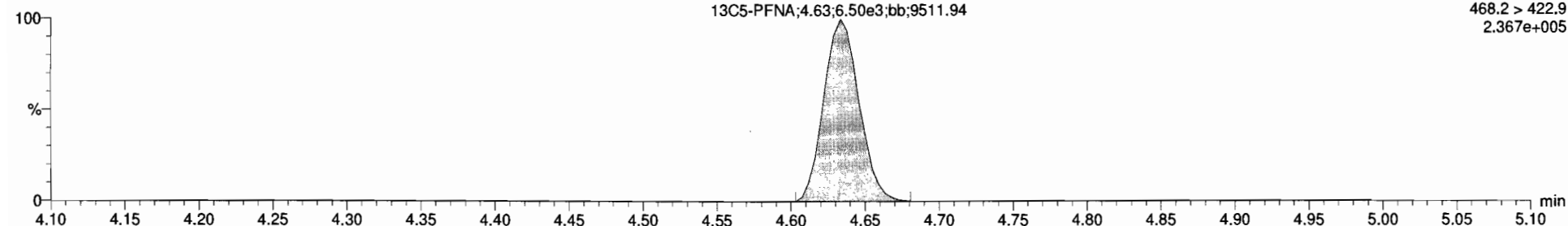
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463 > 219.0
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13C5-PFNA

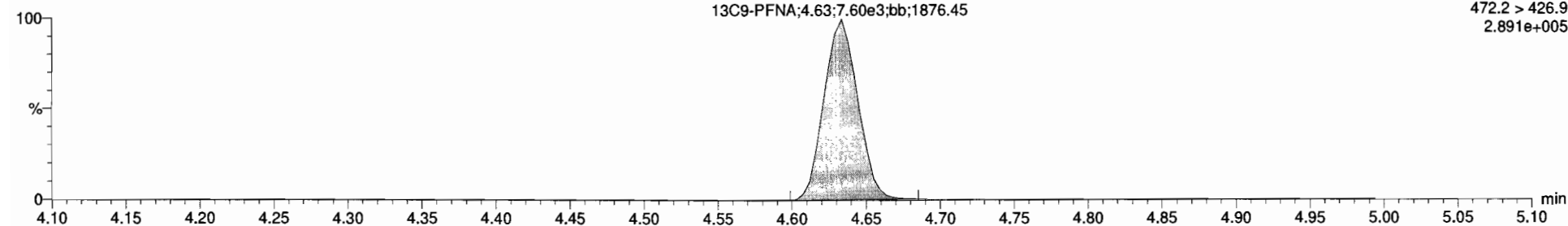
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F5:MRM of 12 channels,ES-
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13C9-PFNA

170305G1_8



F5:MRM of 12 channels,ES-
472.2 > 426.9
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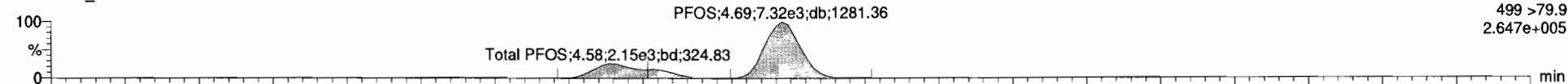
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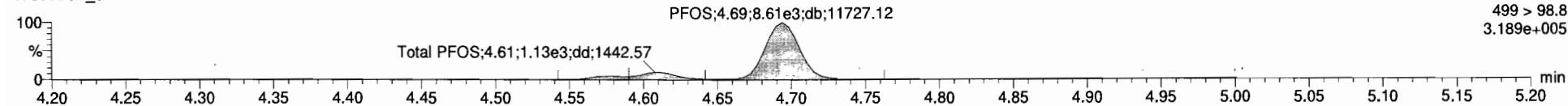
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Total PFOS

170305G1_8

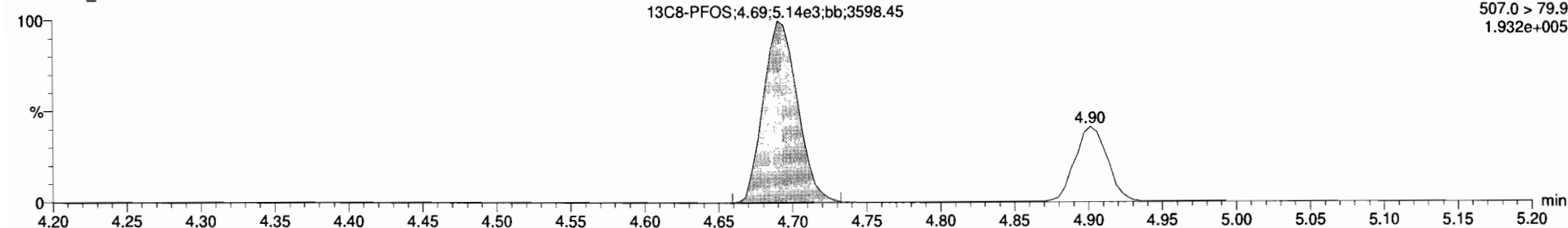


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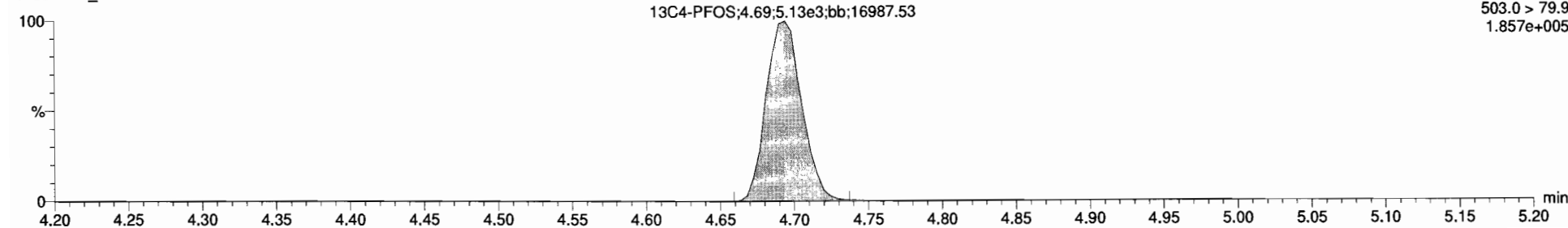
13C8-PFOS

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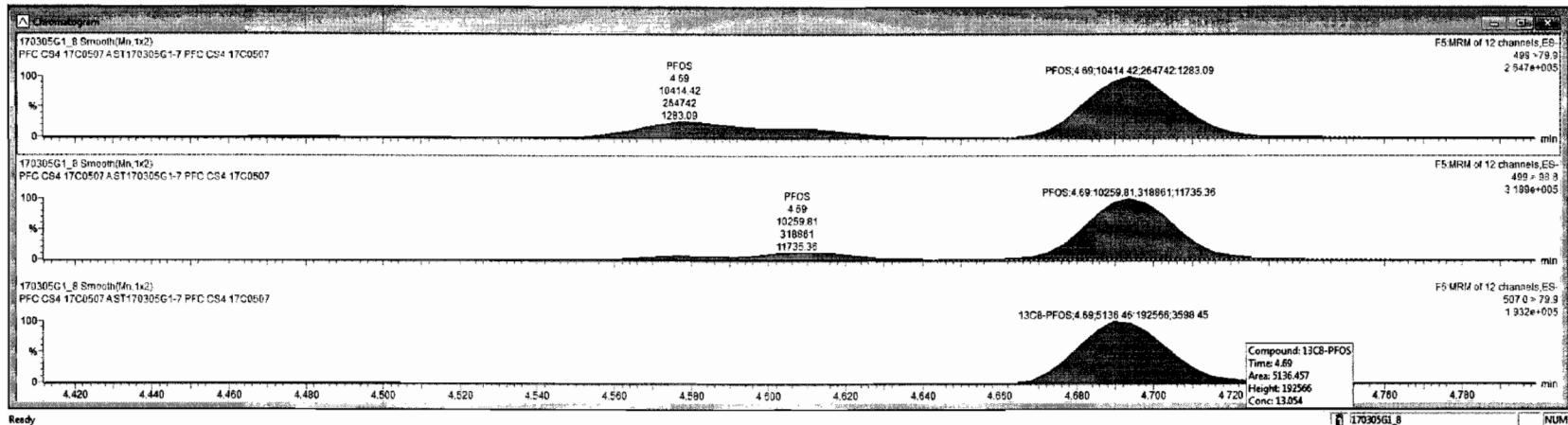


13C4-PFOS

170305G1_8



Name	Trace	Area	W/F	W/Ht	Pre-RT	RT	Conc.	MSL	WRet	DL	
1	PFBS	290 > 79.7	5.43e4		1.000	3.03	3.03	51.1	YES	102.1	0.0000000
2	PFHPA	362 > 318.9	1.16e5		1.000	3.91	3.91	51.9	YES	103.3	0.0000000
3	PFHxS	398.9 > 79.6	4.78e4		1.000	4.02	4.03	52.8	YES	105.6	0.0000000
4	PFOA	413 > 368.7	1.10e5		1.000	4.30	4.30	52.3	YES	104.6	0.0000000
5	PFNA	463 > 418.6	7.41e4		1.000	4.63	4.63	52.1	YES	104.1	0.0000000
6	PFOS	499 > 79.9	1.04e4		1.000	4.69	4.69	48.3	YES	96.8	0.1281301
7	13C3-PFBS	302.0 > 96.6	5.58e3	0.410	1.000	3.03	3.03	11.5	NO	92.1	0.0033337
8	13C4-PFHPA	367.2 > 321.8	1.55e4	1.10	1.000	3.90	3.91	11.9	NO	95.6	0.0020622
9	18O2-PFHxS	403 > 102.6	6.24e3	0.434	1.000	4.02	4.02	12.1	NO	97.2	0.0161792
10	13C2-PFOA	414.9 > 369.7	3.30e4	4.61	1.000	4.30	4.30	12.3	NO	98.2	0.0024228
11	13C5-PFNA	468.2 > 422.9	6.50e3	0.867	1.000	4.63	4.63	12.3	NO	95.7	0.0031015
12	13C8-PFOS	507.0 > 79.9	5.14e3	0.936	1.000	4.69	4.69	13.1	NO	104.4	0.0094134
13	13C5-PFHPA	319 > 272.9	2.99e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0019697
14	13C3-PFHxS	401.9 > 79.9	1.40e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0034967
15	13C8-PFOA	421.3 > 378	7.29e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0034967
16	13C9-PFNA	472.2 > 426.9	7.60e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0166632
17	13C4-PFOS	503.0 > 79.9	5.13e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016396
18	Total PFBS	290 > 79.7	5.43e4		1.000	3.11		51.1	NO		
19	Total PFHxS	398.9 > 79.6	5.73e4		1.000	4.09		63.2	NO		
20	Total PFOA	413 > 368.7	1.10e5		1.000	4.39		52.3	NO		
21	Total PFOS	499 > 79.9	1.33e4		1.000	4.67		62.0	NO		0.1281301



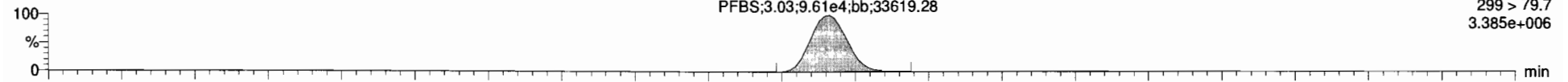
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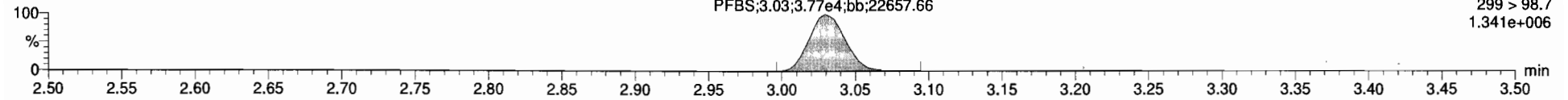
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PFBS

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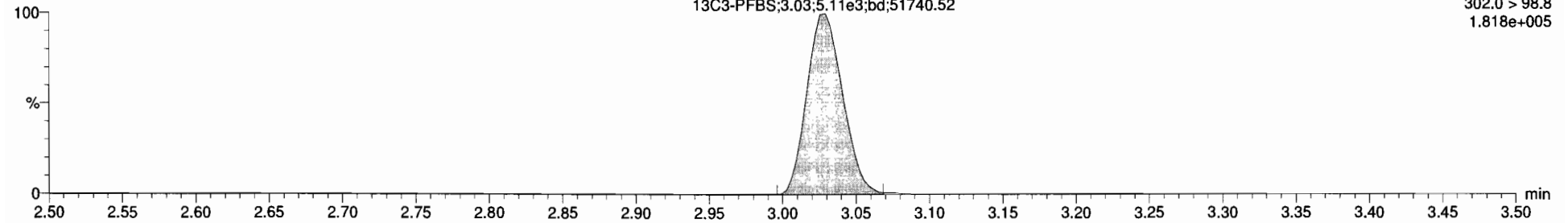


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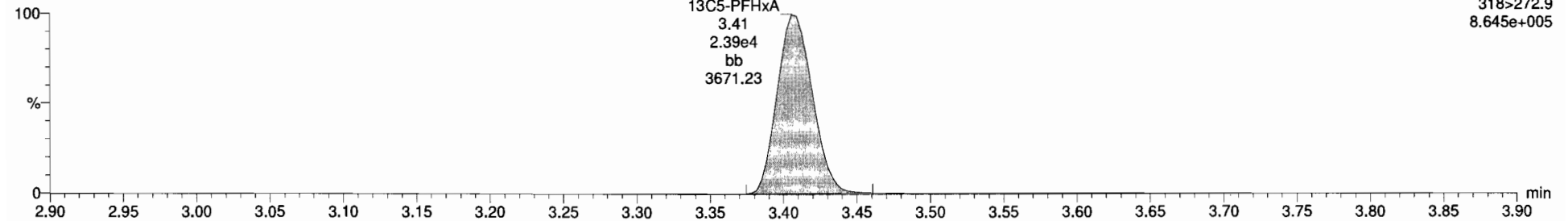
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13C5-PFHxA

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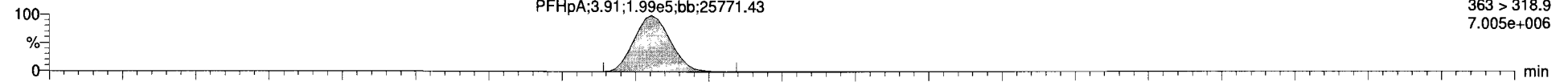
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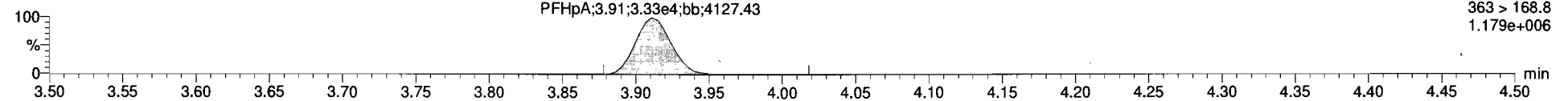
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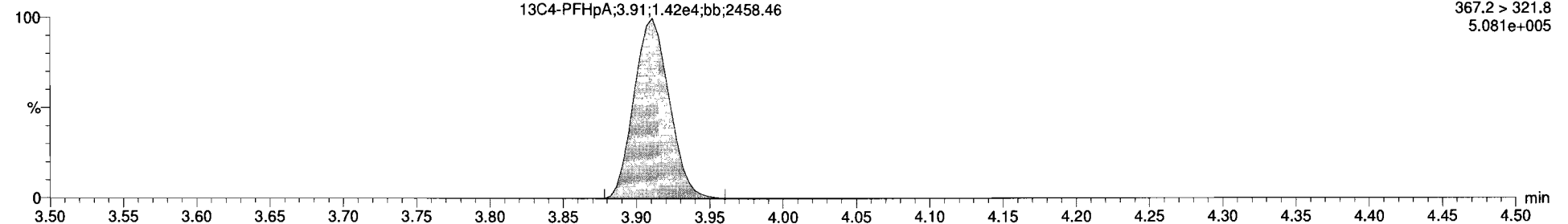


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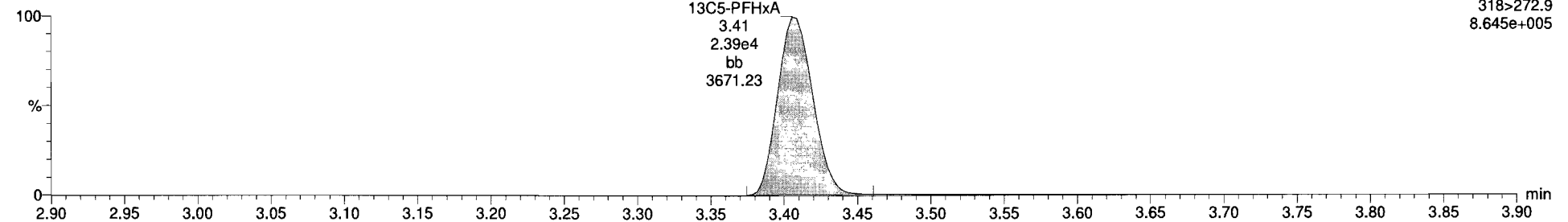
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13C5-PFHxA

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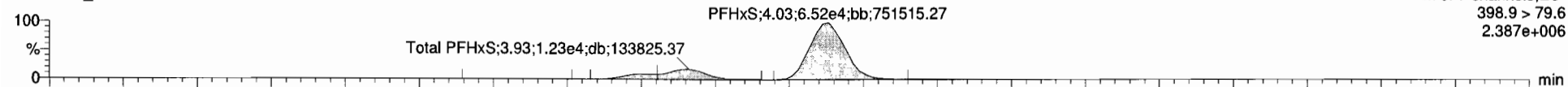
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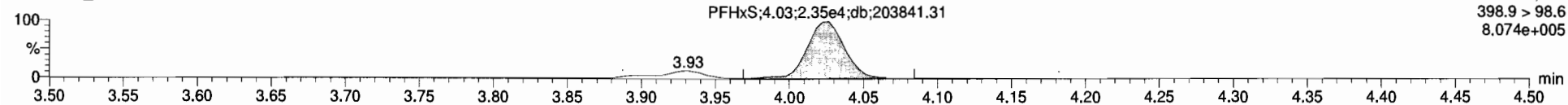
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Total PFHxS

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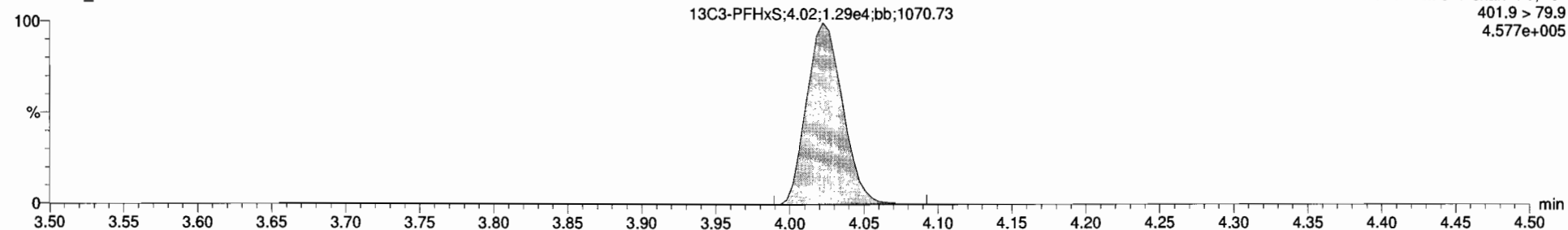


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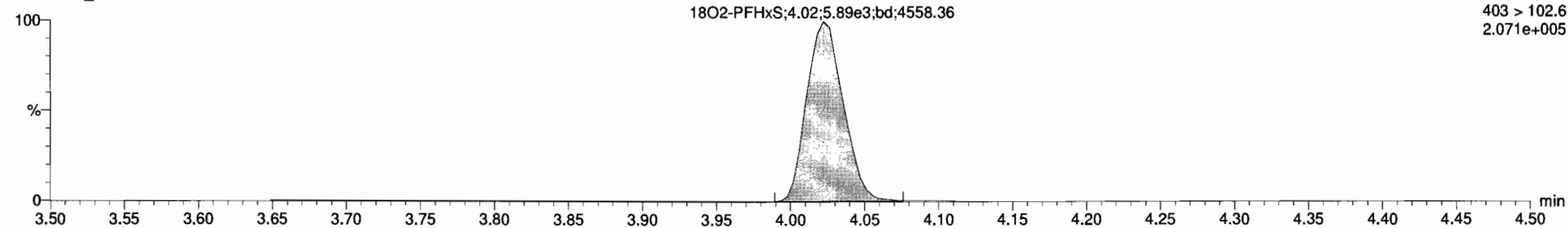
13C3-PFHxS

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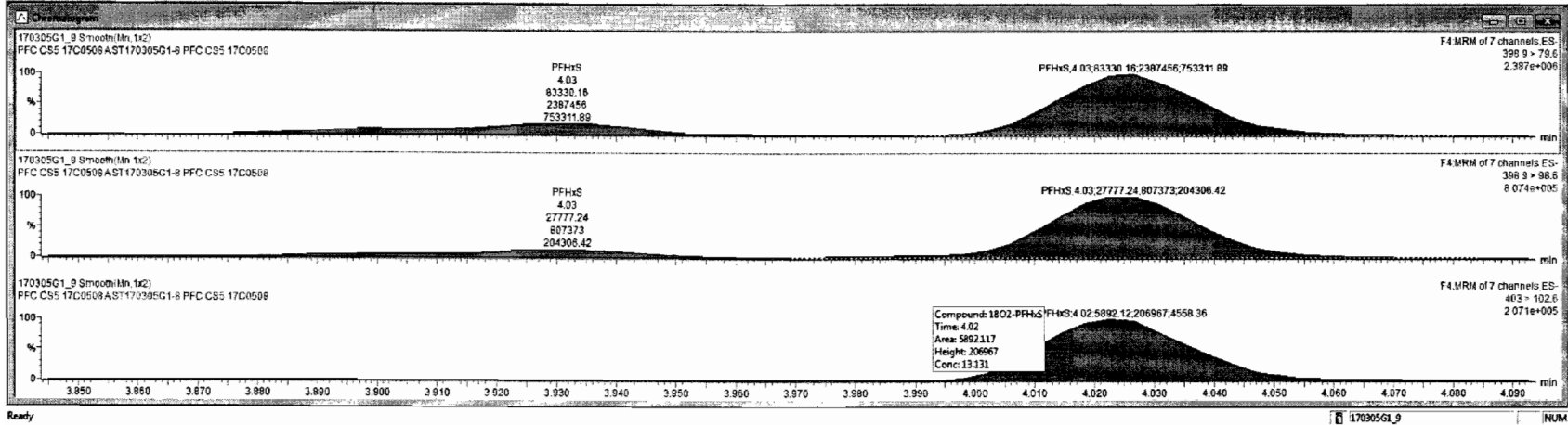


18O2-PFHxS

170305G1_9



Sl	Name	Trace	Area	RRP	WtVal	Prod RT	RT	Conc	UIOL	NRAC	DL
1	PFBS	299 > 79.7	9.81e4		1.000	3.03	3.03	98.6	YES	98.6	0.0000000
2	PFHpA	363 > 318.9	1.99e5		1.000	3.91	3.91	97.6	YES	97.6	0.0000000
3	PFHxS	358.9 > 79.6	8.33e4		1.000	4.02	4.03	97.4	YES	97.4	0.0000000
4	PFDA	413 > 368.7	1.98e5		1.000	4.30	4.30	96.4	YES	96.4	0.0000000
5	PFNA	463 > 418.8	1.56e5		1.000	4.63	4.63	97.1	YES	97.1	0.0000000
6	PFOS	499 > 79.9	2.64e4		1.000	4.78	4.69	100	YES	100.2	0.0966952
7	13C1-PFBS	302.0 > 98.8	5.11e3	0.410	1.000	3.02	3.03	12.1	NO	96.5	0.007023
8	13C4-PFHpA	367.2 > 321.8	1.42e4	1.10	1.000	3.90	3.91	12.5	NO	99.8	0.0154075
9	18O2-PFHxS	403 > 102.6	5.89e3	0.434	1.000	4.02	4.02	13.1	NO	105.0	0.0085761
10	13C2-PFOA	414.9 > 369.7	3.22e4	4.81	1.000	4.30	4.30	13.3	NO	105.0	0.0220827
11	13C5-PFNA	462.2 > 422.9	7.35e3	0.867	1.000	4.63	4.63	12.4	NO	99.5	0.0013263
12	13C6-PFOS	507.8 > 79.9	6.36e3	0.958	1.000	4.69	4.69	12.7	NO	101.3	0.0096289
13	13C8-PFNA	318 > 272.9	2.39e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0102146
14	13C1-PFHxS	401.9 > 79.9	1.29e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0350229
15	13C4-PFOA	421.3 > 378	6.59e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0104096
16	13C5-PFNA	472.2 > 426.9	8.52e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0039269
17	13C6-PFOS	503.0 > 79.9	6.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0016940
18	Total PFBS	299 > 79.7	9.81e4		1.000	3.11		98.6	NO		0.0000000
19	Total PFHxS	358.9 > 79.6	1.01e5		1.000	4.09		118	NO		0.0000000
20	Total PFOA	413 > 368.7	1.98e5		1.000	4.39		96.4	NO		0.0000000
21	Total PFOS	499 > 79.9	3.65e4		1.000	4.67		135	NO		0.0966952



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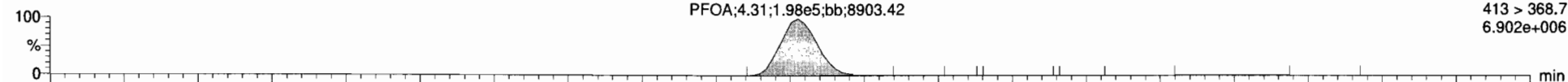
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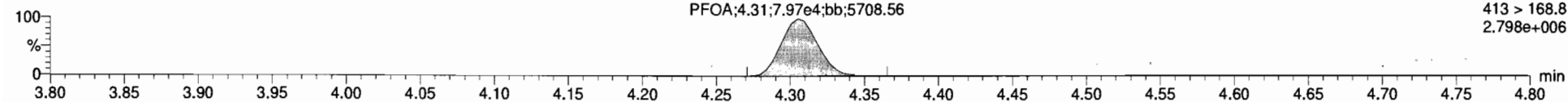
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Total PFOA

170305G1_9

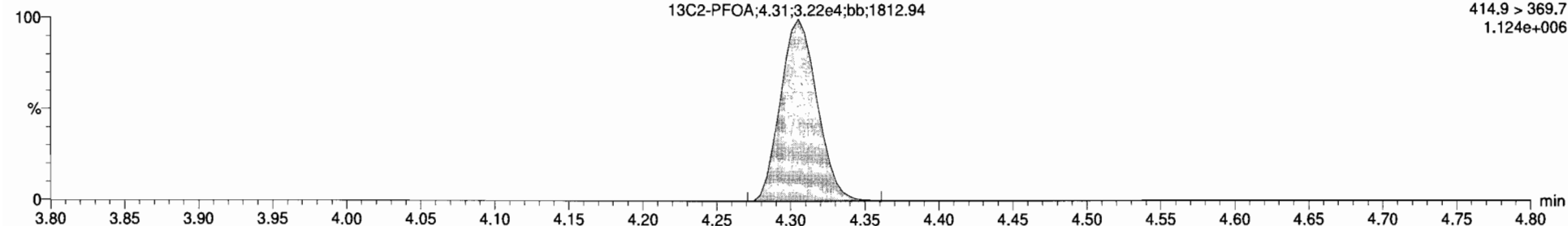


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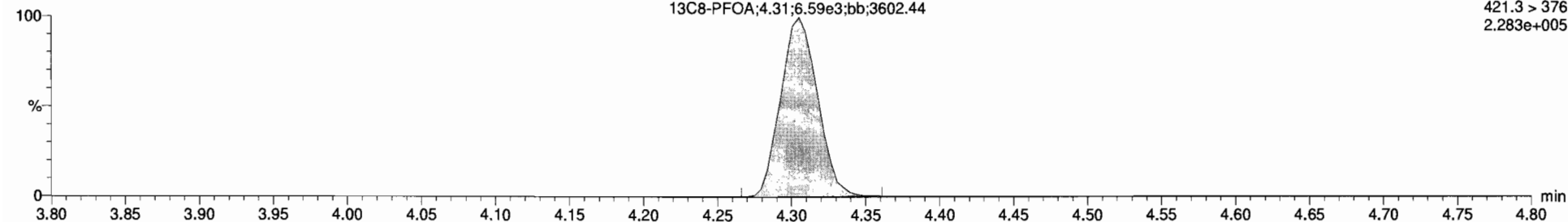
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13C8-PFOA

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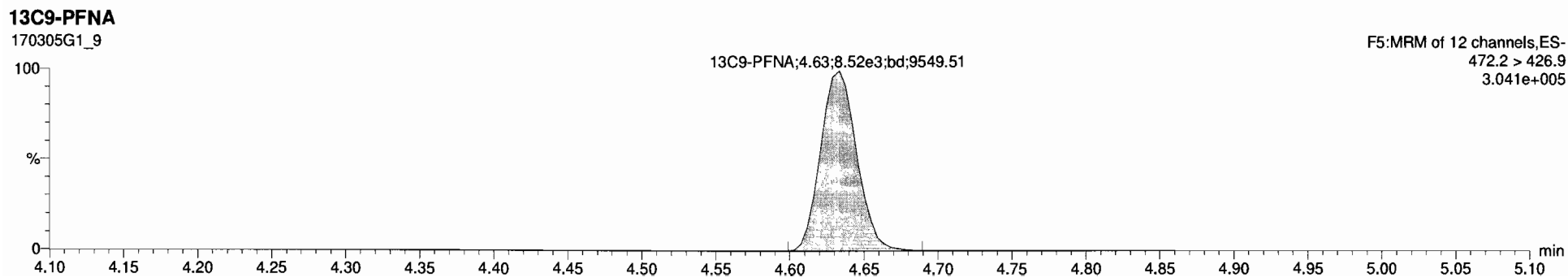
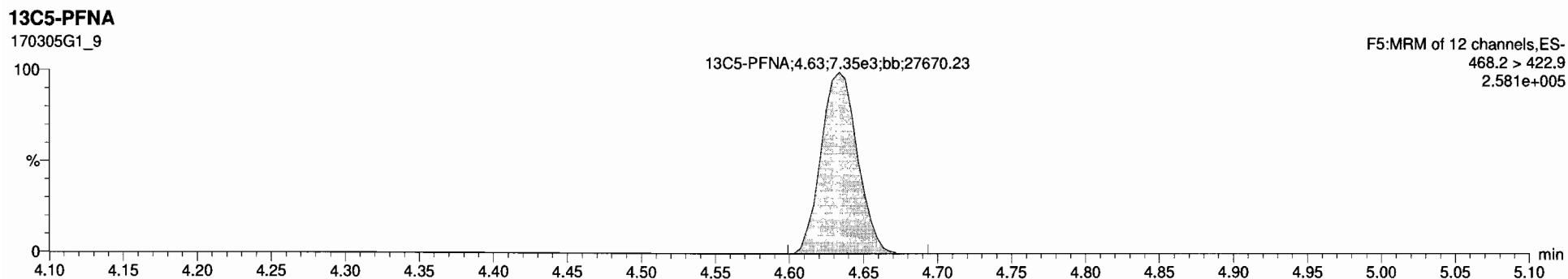
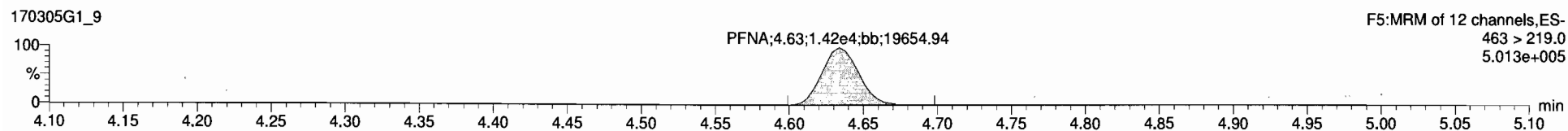
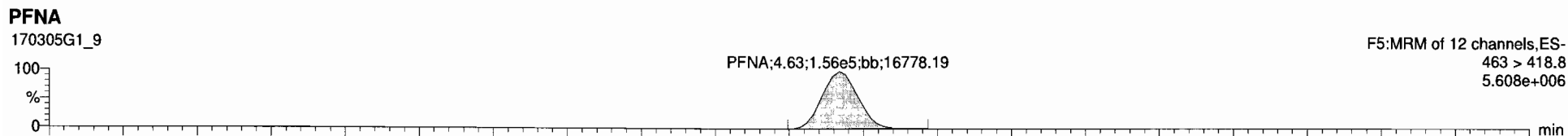


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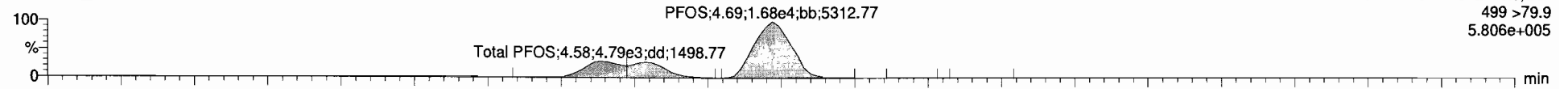
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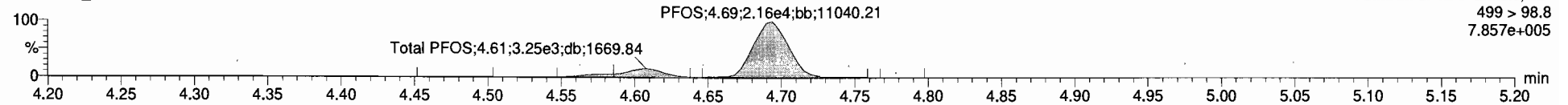
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Total PFOS

170305G1_9

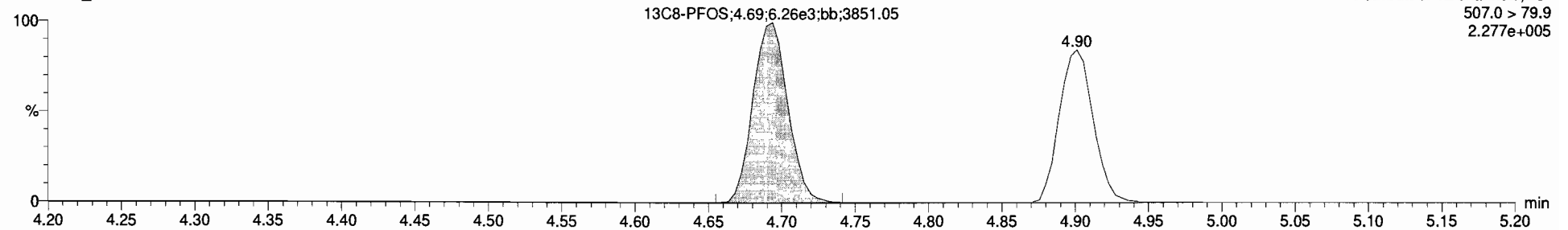


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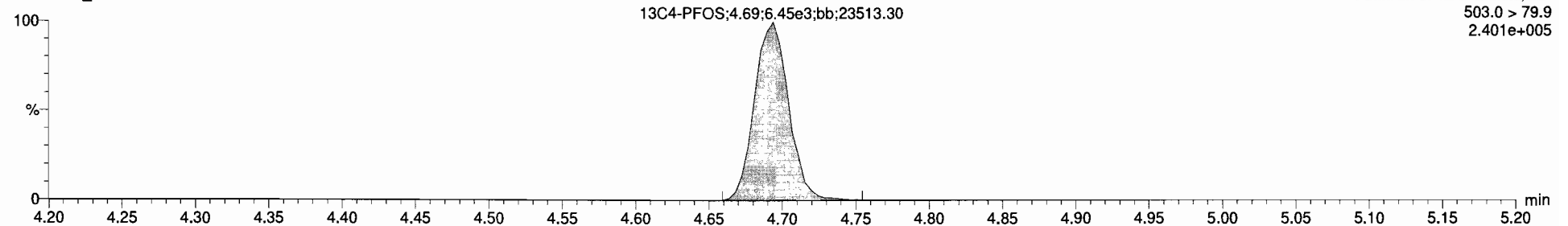
13C8-PFOS

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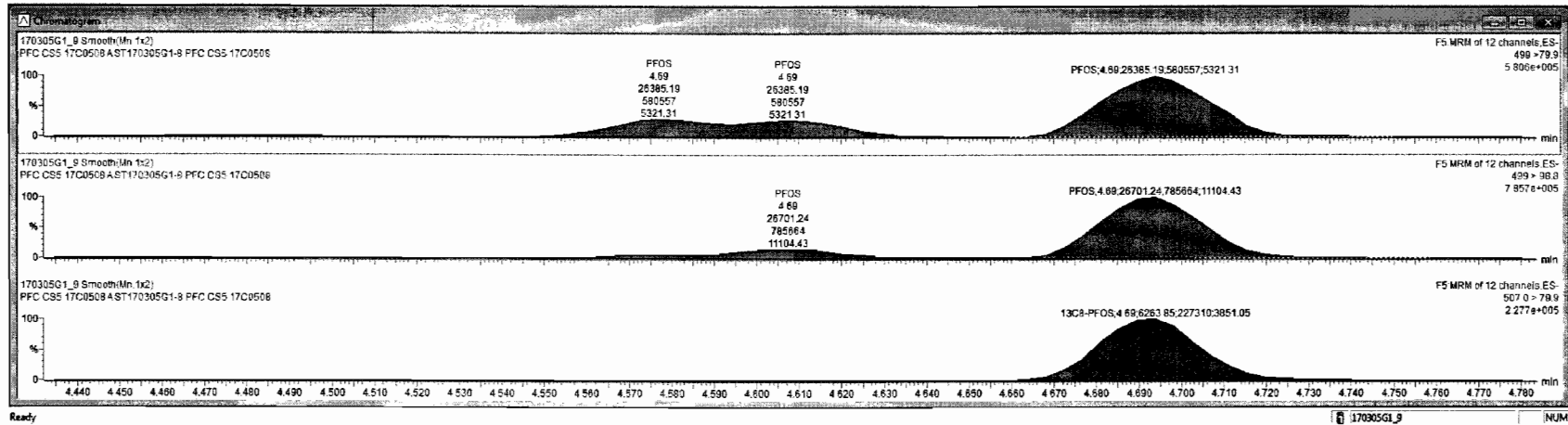


13C4-PFOS

170305G1_9



#	Name	Traps	Area	RRF	Wt%	Prod RT	RT	Conc.	>IDL	%Rec	DL
1	PFBS	299 > 79.7	9.61e4		1.000	3.03	3.03	98.8	YES	98.8	0.000000
2	PFNA	363 > 318.9	1.99e5		1.000	3.91	3.91	97.6	YES	97.6	0.000000
3	PFHxS	392.9 > 79.6	8.33e4		1.000	4.02	4.02	97.4	YES	97.4	0.000000
4	PFDA	413 > 368.7	1.98e5		1.000	4.30	4.30	96.4	YES	96.4	0.000000
5	PFNA	463 > 418.8	1.56e5		1.000	4.63	4.63	97.1	YES	97.1	0.000000
6	PFOS	499 > 79.9	3.55e4		1.000	4.70	4.69	100	YES	100.2	0.0686992
7	13C3-PFBS	302.0 > 98.8	5.11e3	0.410	1.000	3.02	3.03	12.1	NO	96.5	0.007023
8	13C4-PFHxA	367.2 > 321.8	1.42e4	1.10	1.000	3.90	3.91	12.5	NO	99.8	0.0154075
9	18O2-PFHxS	403 > 102.6	5.89e3	0.434	1.000	4.02	4.02	13.1	NO	105.0	0.0085761
10	13C2-PFOA	414.9 > 369.7	3.22e4	4.61	1.000	4.30	4.30	13.3	NO	105.0	0.0220827
11	13C3-PFNA	468.2 > 422.9	7.35e3	0.867	1.000	4.63	4.63	12.4	NO	99.5	0.0013253
12	13C8-PFOS	507.0 > 79.9	6.29e3	0.958	1.000	4.69	4.69	12.7	NO	101.3	0.0096289
13	13C3-PFHxA	318-272.9	2.39e4	1.00	1.000	3.29	3.41	12.5	NO	100.0	0.0102146
14	13C3-PFHxS	401.9 > 79.9	1.29e4	1.00	1.000	3.94	4.02	12.5	NO	100.0	0.0350220
15	13C6-PFOA	421.3 > 378	6.59e3	1.00	1.000	4.22	4.30	12.5	NO	100.0	0.0104096
16	13C9-PFNA	472.2 > 426.9	8.53e3	1.00	1.000	4.56	4.63	12.5	NO	100.0	0.0039259
17	13C4-PFOS	503.0 > 79.9	8.45e3	1.00	1.000	4.67	4.69	12.5	NO	100.0	0.0015848
18	Total PFBS	299 > 79.7	9.61e4		1.000	3.11		98.6	NO		0.000000
19	Total PFHxS	392.9 > 79.6	1.01e5		1.000	4.00		100	NO		0.000000
20	Total PFDA	413 > 368.7	1.98e5		1.000	4.39		96.4	NO		0.000000
21	Total PFOS	499 > 79.9	3.55e4		1.000	4.67		135	NO		0.0686992



Dataset: U:\G1.PRO\Results\2017\170305G1\170305G1-11.qld

Last Altered: Monday, March 06, 2017 09:12:14 Pacific Standard Time

Printed: Monday, March 06, 2017 09:13:06 Pacific Standard Time

Method: U:\G1.pro\MethDB\PFAS_6_2trans_LINEAR.mdb 02 Mar 2017 11:26:53

Calibration: U:\G1.pro\CurveDB\C18_VAL-PFC_Q1_3-05-17_L6_2Trans.cdb 06 Mar 2017 08:35:26

Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A

#	Name	Trace	Response	IS Resp	RRF	Wt/Vol	RT	Conc.	%Rec
1	1 PFBS	299 > 79.7	1.09e4	6.54e3		1.000	3.03	8.70	87.0
2	2 PFHpA	363 > 318.9	2.52e4	1.73e4		1.000	3.91	10.0	100.4
3	3 PFHxS	398.9 > 79.6	8.94e3	6.56e3		1.000	4.03	9.33	93.3
4	4 PFOA	413 > 368.7	2.26e4	3.20e4		1.000	4.31	10.9	108.7
5	5 PFNA	463 > 418.8	1.28e4	5.80e3		1.000	4.63	10.0	100.4
6	6 PFOS	499 > 79.9	2.01e3	4.01e3		1.000	4.69	11.7	117.2
7	7 13C3-PFBS	302.0 > 98.8	6.54e3	1.49e4	0.410	1.000	3.03	13.4	106.8
8	8 13C4-PFHpA	367.2 > 321.8	1.73e4	1.49e4	1.098	1.000	3.91	13.2	105.7
9	9 18O2-PFHxS	403 > 102.6	6.56e3	1.49e4	0.434	1.000	4.02	12.6	101.2
10	10 13C2-PFOA	414.9 > 369.7	3.20e4	7.38e3	4.608	1.000	4.31	11.8	94.1
11	11 13C5-PFNA	468.2 > 422.9	5.80e3	6.69e3	0.867	1.000	4.63	12.5	99.9
12	12 13C8-PFOS	507.0 > 79.9	4.01e3	4.48e3	0.958	1.000	4.69	11.7	93.4
13	13 13C5-PFHxA	318 > 272.9	2.89e4	2.89e4	1.000	1.000	3.41	12.5	100.0
14	14 13C3-PFHxS	401.9 > 79.9	1.49e4	1.49e4	1.000	1.000	4.03	12.5	100.0
15	15 13C8-PFOA	421.3 > 376	7.38e3	7.38e3	1.000	1.000	4.31	12.5	100.0
16	16 13C9-PFNA	472.2 > 426.9	6.69e3	6.69e3	1.000	1.000	4.63	12.5	100.0
17	17 13C4-PFOS	503.0 > 79.9	4.48e3	4.48e3	1.000	1.000	4.69	12.5	100.0

75-125
↓

ES
3/6/17

✓ AC
3/6/17

Dataset: Untitled

Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time

Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

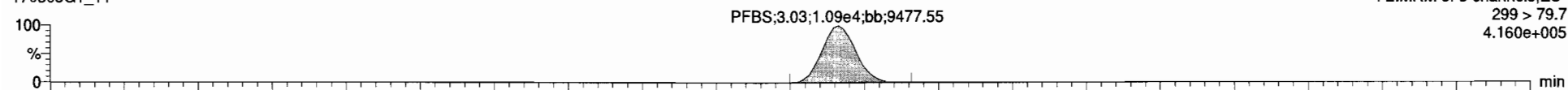
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ID: SS170305G1-1 PFC SSS 17C0509, Description: PFC SSS 17C0509 A, Name: 170305G1_11, Date: 05-Mar-2017, Time: 14:39:40, Instrument: , Lab: , User:

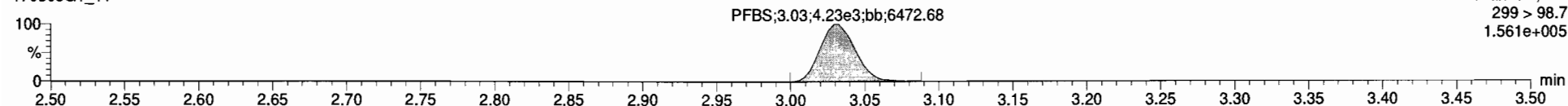
PFBS

170305G1_11



F2:MRM of 3 channels,ES-
299 > 79.7
4.160e+005

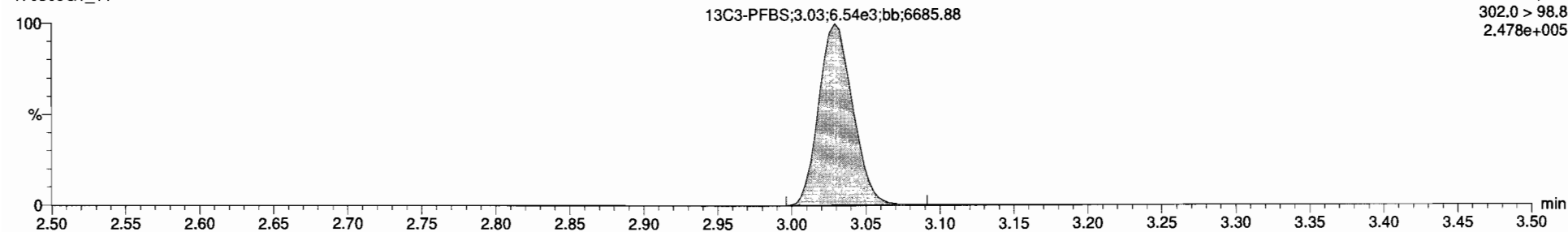
170305G1_11



F2:MRM of 3 channels,ES-
299 > 98.7
1.561e+005

13C3-PFBS

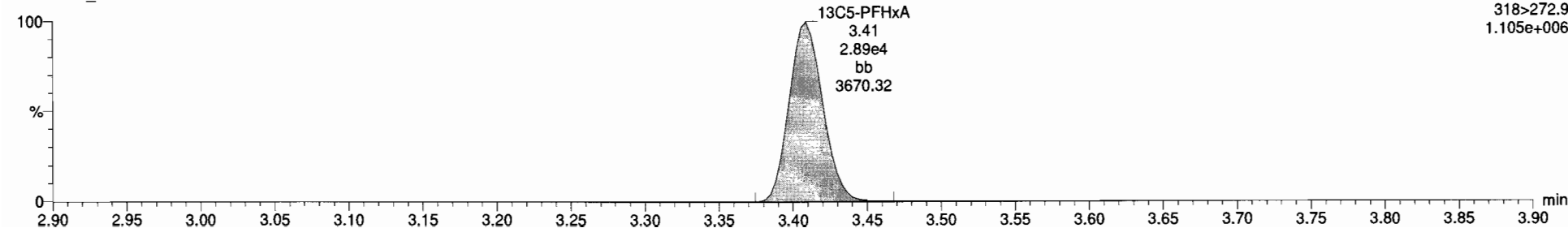
170305G1_11



F2:MRM of 3 channels,ES-
302.0 > 98.8
2.478e+005

13C5-PFHxA

170305G1_11



F3:MRM of 1 channel,ES-
318>272.9
1.105e+006

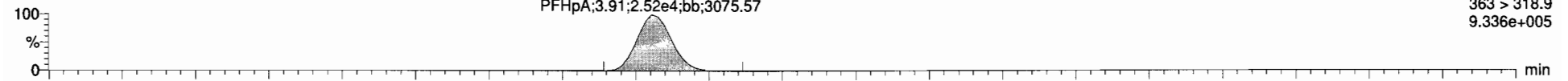
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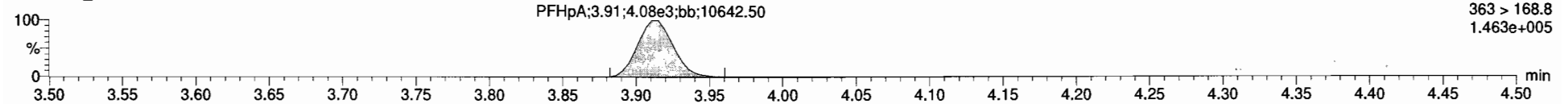
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PFHpA

170305G1_11

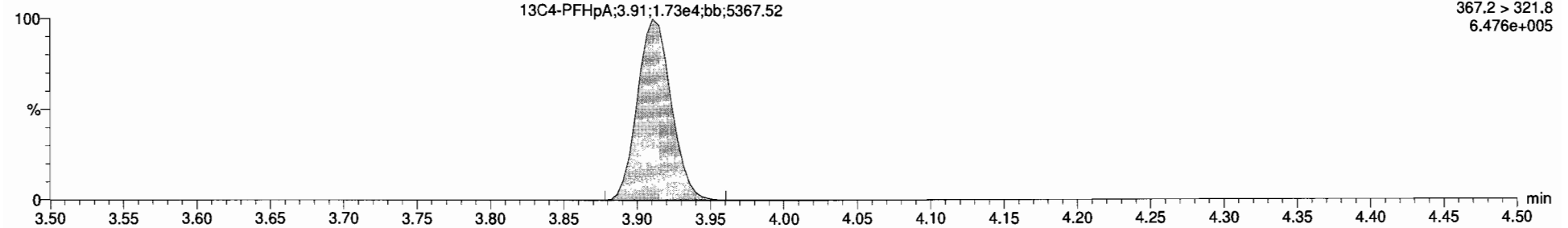


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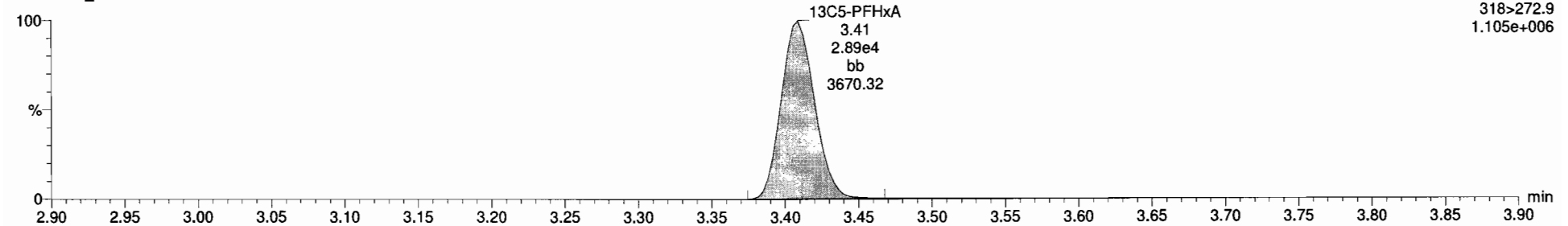
13C4-PFHpA

170305G1_11



13C5-PFHxA

170305G1_11



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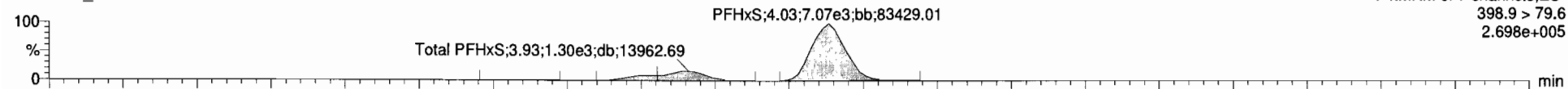
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Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

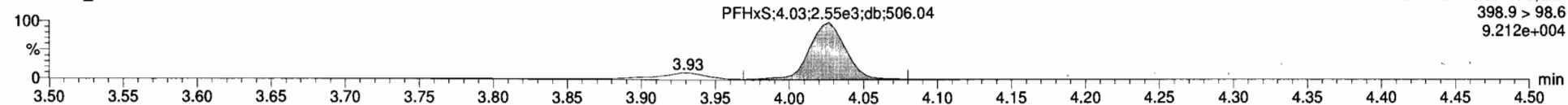
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Total PFHxS

170305G1_11

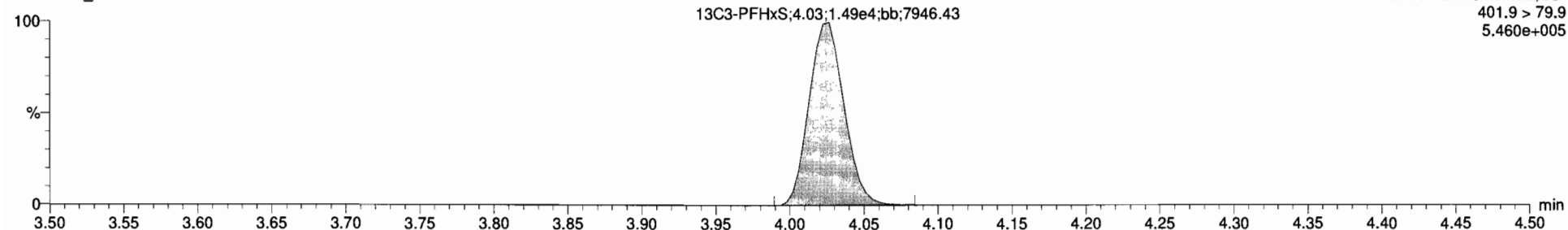


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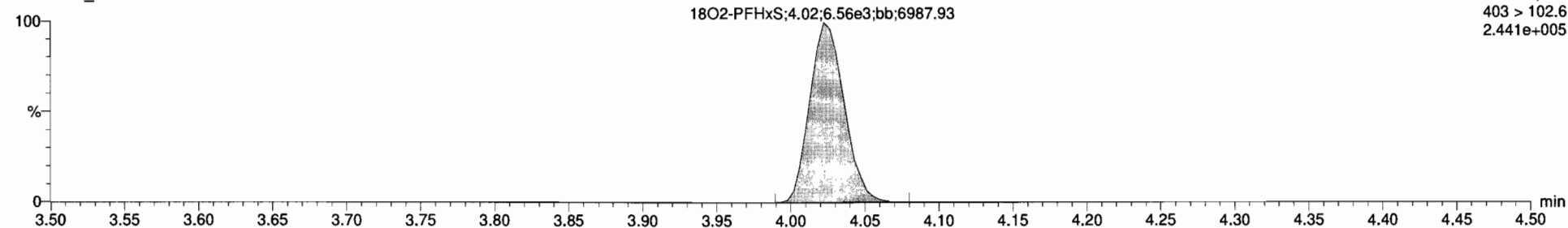
13C3-PFHxS

170305G1_11



18O2-PFHxS

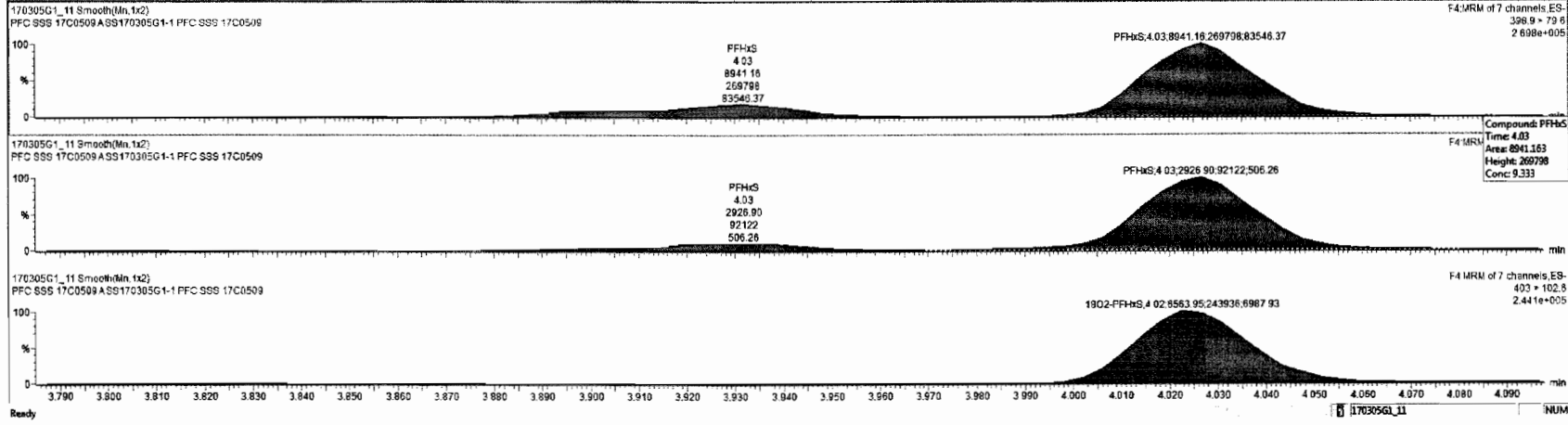
170305G1_11





170305G1_11_SS170305G1-1-PFC-SSS-17C0509_PFC-SSS-17C0509A

#	Name	Conc.	DL	%Rec	EMPC	Abs Resp	RRP	RT	#	ISA	RA	Y/N	RRT	Acq Date	Acq Time	#F Div Noise	ID	Sample Text	Factor1	SW	Cal File	MOL
1	PFBS	8.699458	0.0000	87.0		1.097e4	3.03	1	7	0.389	YES	1.001	05-Mar-17	14:39:43	24	078	SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
2	PFHpA	10.037598	0.0000	100.4		2.523e4	3.91	2	8			1.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
3	PFHxA	9.3329736	0.0000	83.3		8.841e3	4.63	3	9			1.001	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
4	PFOA	10.865712	0.0000	108.7		2.256e4	4.31	4	10			1.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
5	PFNA	10.042823	0.0000	100.4		1.279e4	4.63	5	11			1.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
6	PFOS	7.5852330	0.122	75.9		1.296e3	4.69	6	12			1.000	05-Mar-17	14:39:43			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
7	13C3-PFBS	13.351268	0.00517	106.8		6.541e3	0.410	3.03	7	14		0.889	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
8	13C4-PFHpA	13.214482	0.00629	105.7		1.734e4	1.938	3.91	8	14		0.971	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
9	18O2-PFHxA	12.948532	0.00481	101.2		6.564e3	0.434	4.02	9	14		0.999	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
10	13C2-PFOA	11.761296	0.00247	94.1		3.201e4	4.698	4.31	10	15		1.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
11	13C5-PFNA	12.488185	0.00143	99.0		5.797e3	0.287	4.63	11	16		1.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
12	13C6-PFOS	11.580781	0.00302	93.4		4.014e3	0.958	4.69	12	17		1.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
13	13C5-PFHxA	12.500000	0.00051	100.0		2.890e4	1.000	3.41	13	13		0.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
14	13C3-PFHS	12.500000	0.00393	100.0		1.494e4	1.000	4.03	14	14		0.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
15	13C4-PFOA	12.500000	0.00378	100.0		7.382e3	1.000	4.31	15	15		0.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
16	13C8-PFNA	12.500000	0.00140	100.0		6.692e3	1.000	4.63	16	16		0.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
17	13C4-PFOS	12.500000	0.00137	100.0		4.482e3	1.000	4.69	17	17		0.000	05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
18	Total PFBS	8.699458							18				05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
19	Total PFHxA	11.119463							19				05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
20	Total PFOA	10.865712							20				05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
21	Total PFOS	11.670726	0.122						21				05-Mar-17	14:39:40			SS170305G...	PFC SSS 17C05...	1.0	1.00	C18_V...	NO



Dataset: Untitled

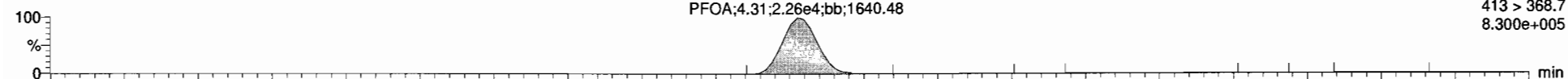
Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time

Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

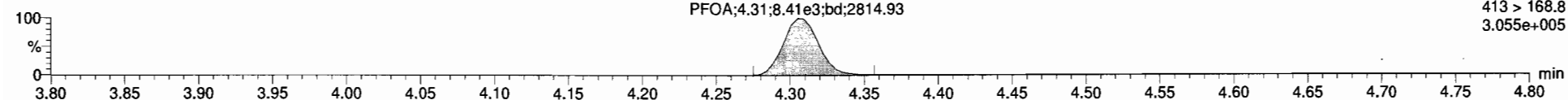
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Total PFOA

170305G1_11

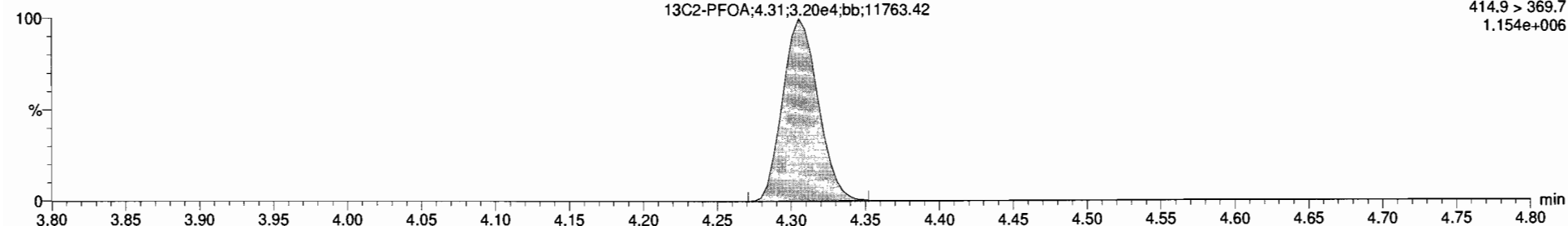


170305G1_11



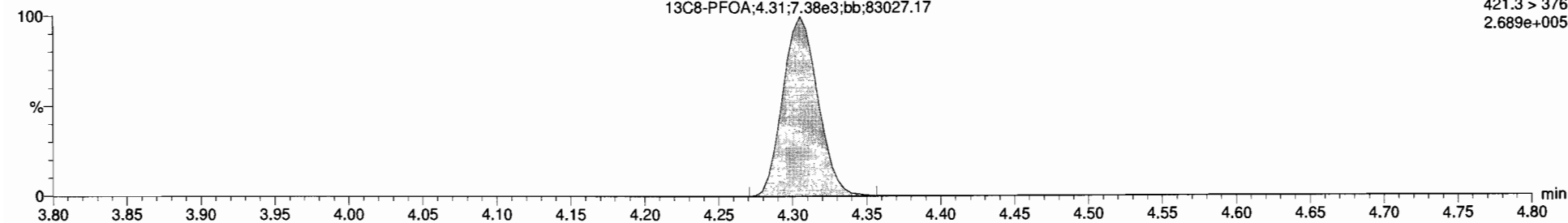
13C2-PFOA

170305G1_11



13C8-PFOA

170305G1_11



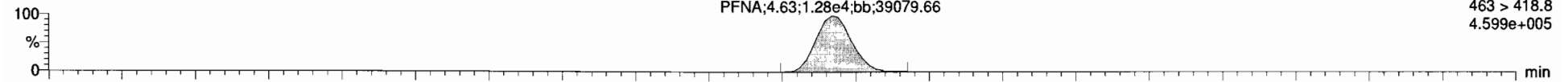
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Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

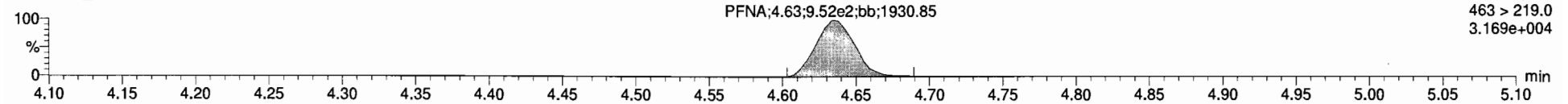
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PFNA

170305G1_11

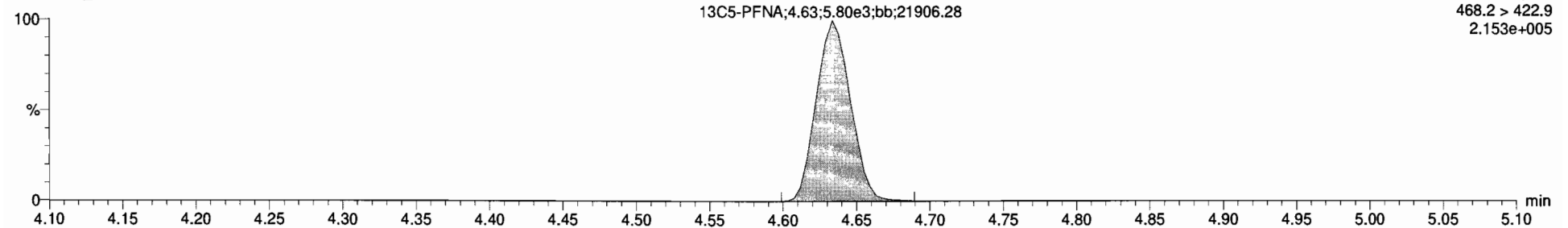


170305G1_11



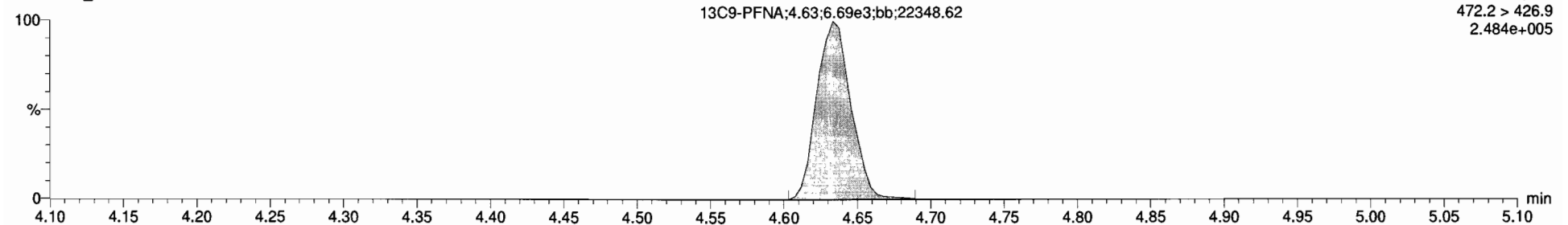
13C5-PFNA

170305G1_11



13C9-PFNA

170305G1_11



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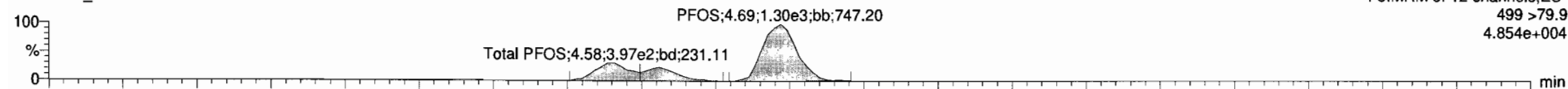
Last Altered: Monday, March 06, 2017 09:10:12 Pacific Standard Time

Printed: Monday, March 06, 2017 09:10:17 Pacific Standard Time

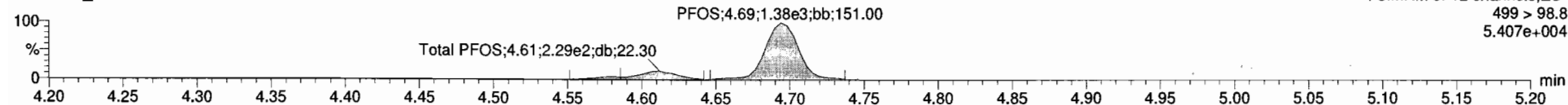
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Total PFOS

170305G1_11

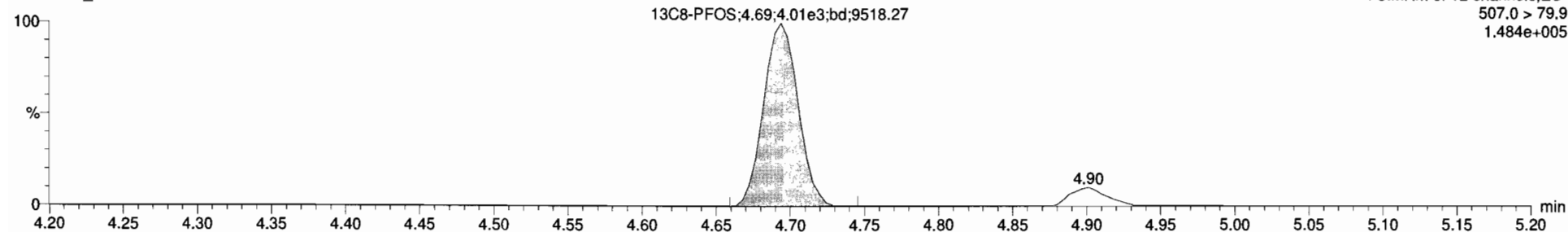


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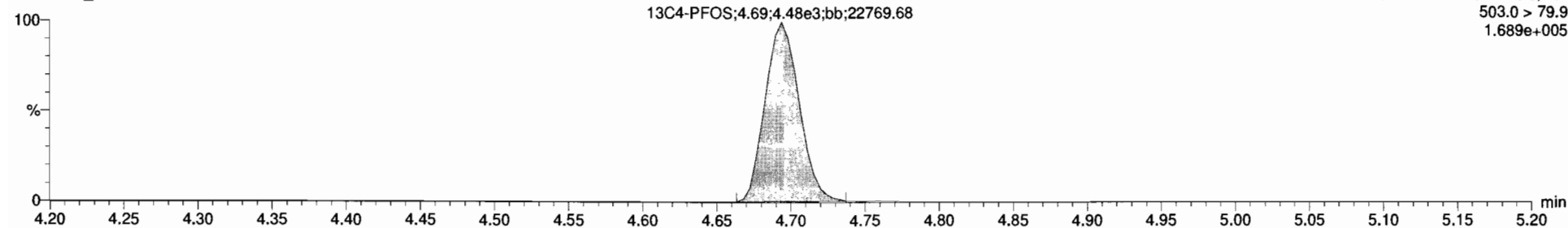
13C8-PFOS

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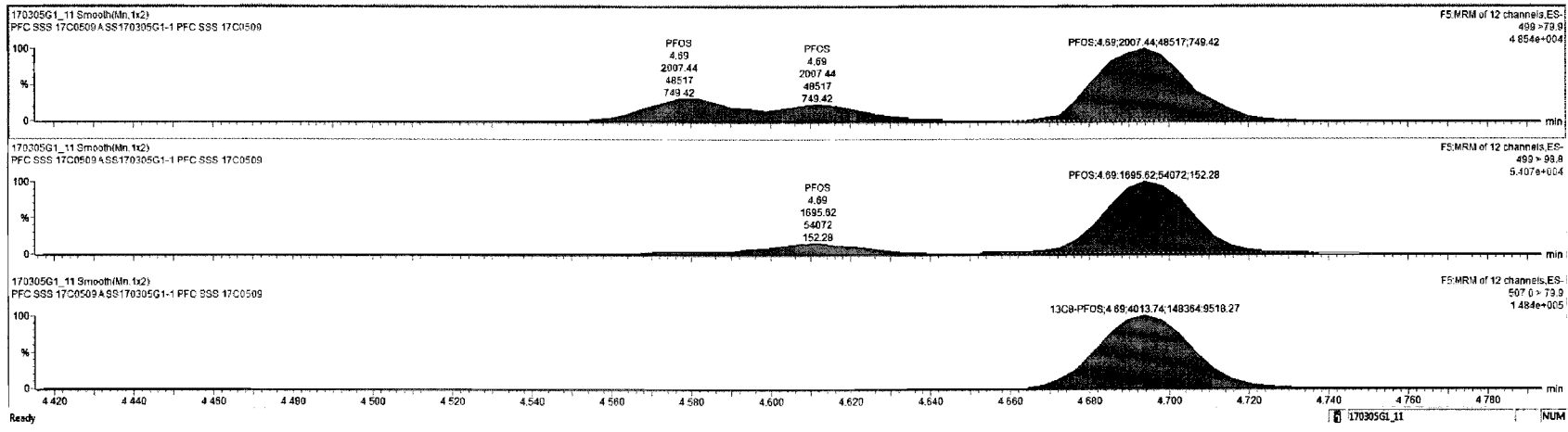
13C4-PFOS

170305G1_11





Name	Conc.	DL	%Rec	EMPC	Abn Resp	RRR	QRT	#	SI	RA	YN	RRP	Acq Date	Acq Time	1* Chr/Node	ID	Sample Text	Factor1	SW	Cal File	MOD
1 PFBS	8.6989458	0.0000	87.0		1.087e4		3.03	1	7	0.388	YES	1.001	05-Mar-17	14:39:40	24.076	SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
2 PFHxA	10.037596	0.0000	100.4		2.523e4		3.91	2	0			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
3 PFHxS	9.3329736	0.0000	83.3		9.941e3		4.05	3	3			1.001	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
4 PFDA	10.865712	0.0000	108.7		2.256e4		4.31	4	10			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
5 PFNA	10.942823	0.0000	100.4		1.279e4		4.63	5	11			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
6 PFOS	11.719585	0.122	117.2		2.807e3		4.69	6	12			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	YES
7 13C3-PFBS	13.351258	0.00517	106.8		6.541e3	0.410	3.03	7	14			0.889	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
8 13C4-PFHxA	13.214482	0.00629	105.7		1.734e4	1.095	3.91	8	14			0.971	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
9 16O2-PFHxS	12.648532	0.00461	101.2		6.564e3	0.434	4.02	9	14			0.999	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
10 13C2-PFDA	11.781296	0.00247	94.1		3.201e4	4.608	4.31	10	15			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
11 13C5-PFNA	12.468185	0.00143	99.9		5.797e3	0.867	4.63	11	16			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
12 13C4-PFOS	11.600781	0.00302	85.4		4.014e3	0.358	4.69	12	17			1.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
13 13C5-PFHxA	12.509000	0.00851	100.0		2.890e4	1.000	3.41	13	13			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
14 13C3-PFHxS	12.509000	0.00393	100.0		1.494e4	1.000	4.03	14	14			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
15 13C8-PFDA	12.509000	0.000376	100.0		7.382e3	1.000	4.31	15	15			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
16 13C9-PFNA	12.509000	0.00140	100.0		6.692e3	1.000	4.63	16	16			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
17 13C4-PFOS	12.509000	0.00137	100.0		4.482e3	1.000	4.69	17	17			0.000	05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
18 Total PFBS	8.6989458							18					05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
19 Total PFHxS	11.119483							19					05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
20 Total PFDA	10.865712							20					05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO
21 Total PFOS	15.801081	0.122						21					05-Mar-17	14:39:40		SS170305G	PFC SSS 17C05...	1.0	1.00	C18_V...	NO



**DATA VALIDATION SUMMARY REPORT
COUPEVILLE, WASHINGTON**

Client: CH2M HILL, Inc., Corvallis, Oregon
 SDG: 1700280
 Laboratory: Vista Analytical Laboratory, El Dorado Hills, California
 Site: Coupeville, CTO-0008, Washington
 Date: March 24, 2017

PFCs			
EDS ID	Client Sample ID	Laboratory Sample ID	Matrix
1	WI-CV-GW03M-0217	1700280-01	Water
2	WI-CV-GW03D-0217	1700280-02	Water
3	WI-CV-EB07-022717	1700280-03	Water
4	WI-CV-GW04M-0217	1700280-04	Water
5	WI-CV-GW01M-0217	1700280-05	Water
6	WI-CV-EB08-022817	1700280-06	Water
7	WI-CV-GW01D-0217	1700280-07	Water

A full data validation was performed on the analytical data for five water samples and two aqueous equipment blank samples collected on February 27-28, 2017 by CH2M HILL at the Coupeville site in Washington. 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 except for the following.

Blank ID	Compound	Conc. ng/L	Qualifier	Affected Samples
WI-CV-EB07-022717	None - ND	-	-	-
WI-CV-EB08-022817	Perfluorooctanesulfonate	1.16	-	None - All Associated ND
WI-CV-FB01-031217 (SDG 1700293)	None - ND	-	-	-

Surrogate Spike Recoveries

- All samples exhibited acceptable surrogate %R values.

Matrix Spike/Matrix Spike Duplicate (MS/MSD) Recoveries

- A MS/MSD sample was not collected.

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

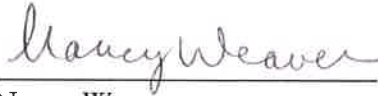
- All criteria were met.

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
Senior Chemist

Dated: 3/24/17

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: WI-CV-GW03M-0217

Modified EPA Method 537

Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-01	Date Received:	02-Mar-2017 10:14		
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.129 L	QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25		
Date Collected:	27-Feb-2017 13:15			Date Analyzed:	05-Mar-17 16:32	Column:	BEH C18		
Location:	MW03M								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.74	3.88	7.76		IS 13C3-PFBS	92.1	60 - 150	
PFOA	ND	0.631	1.94	7.76		IS 13C2-PFOA	85.2	60 - 150	
PFOS	ND	0.782	0.872	7.76		IS 13C8-PFOS	95.0	60 - 150	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

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

Only the linear isomer is reported for all other analytes

DL - Detection limit

RL - Reporting limit

NW 3/24/17

2

Sample ID: WI-CV-GW03D-0217		Modified EPA Method 537			
Client Data		Sample Data		Laboratory Data	
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-02
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.128 L	QC Batch:	B7C0012
Date Collected:	27-Feb-2017 17:05	DL		Date Analyzed:	05-Mar-17 16:45
Location:	MW03D	Conc. (ng/L)		Column:	BEH C18
Analyte				Labeled Standard	%R
PFBS	ND	1.75	3.91	IS 13C3-PFBS	86.7
PFOA	ND	0.635	1.95	IS 13C2-PFOA	83.5
PFOS	0.914	0.788	0.879	IS 13C8-PFOS	101
					LCL-UCL
					60 - 150
					60 - 150
					60 - 150

LCL-UCL - Lower control limit - upper control limit

Results reported to DL

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

Only the linear isomer is reported for all other analytes

DL - Detection limit

RL - Reporting limit

AW 3/24/17

3

Sample ID: WI-CV-EB07-022717				Modified EPA Method 537					
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-03	Date Received:	02-Mar-2017 10:14		
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.115 L	QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25		
Date Collected:	27-Feb-2017 17:10			Date Analyzed:	05-Mar-17 16:57	Column:	BEH C18		
Location:	Eq. Blank								
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.95	4.35	8.69		IS 13C3-PFBS	88.9	60 - 150	
PFOA	ND	0.708	2.17	8.69		IS 13C2-PFOA	86.3	60 - 150	
PFOS	ND	0.877	0.978	8.69		IS 13C8-PFOS	88.0	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

AW 3/24/17

4

Sample ID: WI-CV-GW04M-0217		Modified EPA Method 537							
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-04				
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.124 L	QC Batch:	B7C0012				
Date Collected:	28-Feb-2017 10:00			Date Analyzed:	05-Mar-17 17:10				
Location:	MW04M			Column:	BEH C18				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.80	4.03	8.06		IS 13C3-PFBS	92.3	60 - 150	
PFOA	ND	0.656	2.02	8.06		IS 13C2-PFOA	95.1	60 - 150	
PFOS	ND	0.813	0.907	8.06		IS 13C8-PFOS	107	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 3/24/17

5

Sample ID: WI-CV-GW01M-0217				Modified EPA Method 537				
Client Data		Sample Data		Laboratory Data				
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-05	Date Received:	02-Mar-2017 10:14	
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.127 L	QC Batch:	B7C0012	Date Extracted:	03-Mar-2017 8:25	
Date Collected:	28-Feb-2017 11:00			Date Analyzed:	05-Mar-17 17:22	Column:	BEH C18	
Location:	MW01M							
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	1.76	3.94	7.88	IS 13C3-PFBS	90.0	60 - 150	
PFOA	ND	0.641	1.97	7.88	IS 13C2-PFOA	93.2	60 - 150	
PFOS	ND	0.795	0.886	7.88	IS 13C8-PFOS	110	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

aw 3/24/17

6

Sample ID: WI-CV-EB08-022817		Modified EPA Method 537							
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-06				
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.110 L	QC Batch:	B7C0012				
Date Collected:	28-Feb-2017 12:30			Date Analyzed:	05-Mar-17 17:35				
Location:	Eq. Blank			Column:	BEH C18				
				Date Received:	02-Mar-2017 10:14				
				Date Extracted:	03-Mar-2017 8:25				
Analyte	Conc. (ng/L)	DL	LOD	LOQ	Qualifiers	Labeled Standard	%R	LCL-UCL	Qualifiers
PFBS	ND	2.04	4.55	9.12		IS 13C3-PFBS	103	60 - 150	
PFOA	ND	0.742	2.27	9.12		IS 13C2-PFOA	93.8	60 - 150	
PFOS	1.16	0.920	1.02	9.12	J	IS 13C8-PFOS	85.8	60 - 150	

DL - Detection 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

RL - Reporting limit

NW 3/24/17

Sample ID: WI-CV-GW01D-0217		Modified EPA Method 537							
Client Data		Sample Data		Laboratory Data					
Name:	CH2M Hill	Matrix:	Groundwater	Lab Sample:	1700280-07				
Project:	Navy Clean CTO 8 OLF Coupeville	Sample Size:	0.125 L	QC Batch:	B7C0012				
Date Collected:	28-Feb-2017 14:00			Date Analyzed:	05-Mar-17 17:47				
Location:	MW01D			Column:	BEH C18				
				Date Received:	02-Mar-2017 10:14				
				Date Extracted:	03-Mar-2017 8:25				
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	98.2	60 - 150	
PFOA	ND	0.651	2.00	8.00		IS 13C2-PFOA	93.2	60 - 150	
PFOS	ND	0.807	0.900	8.00		IS 13C8-PFOS	82.8	60 - 150	

LCL-UCL - Lower control limit - upper control limit

Results reported to DL.

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

Only the linear isomer is reported for all other analytes

DL - Detection limit

RL - Reporting limit

MW 3/24/17