

DoD Type I Data Package

Prepared for:

EA Engineering, Science & Tech

Suite 515
615 Piikoi Street
Honolulu HI 96814

Project: Moose Creek Drinking Water
Groundwater Samples
Collected on 12/28/16

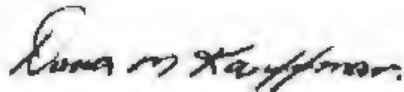
SDG# MCR17

GROUP	SAMPLE NUMBERS
1749375	8766901-8766906

A2LA (DoD) Cert. # 0001.01
PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

Through our technical processes and second person review of data, we have established that our data/deliverables are in compliance with the methods and project requirements unless otherwise noted or previously resolved with the client.

Authorized by:



Date: 01/26/2017

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Kay Hower at (717) 556-7364.

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**Sample Reference List for SDG Number MCR17
with a Data Package Type of I-DOD**

30098 - EA Engineering, Science & Tech

Project: Moose Creek Drinking Water

Lab Sample Number	Client Sample ID	Collection Date	Date Received
8766901	16MC-PW121-P5-1228	12/28/2016 11:14	12/30/2016 09:15
8766902	16MC-PW121-P4-1228	12/28/2016 11:15	12/30/2016 09:15
8766903	16MC-PW121-P1-1228	12/28/2016 11:16	12/30/2016 09:15
8766904	16MC-PW117-P3-1228	12/28/2016 12:20	12/30/2016 09:15
8766905	16MC-PW117-P2-1228	12/28/2016 12:21	12/30/2016 09:15
8766906	16MC-PW117-P1-1228	12/28/2016 12:23	12/30/2016 09:15

Sample pH Log

SDG: MCR17

<u>LLI Sample Number</u>	<u>Bottle Code</u>	<u>Actual pH</u>	<u>Exp. pH</u>	<u>pH Check Code</u>	<u>Adj. pH</u>	<u>Adjusted Date</u>	<u>Adjusted Time</u>	<u>Preservative Added</u>	<u>Preservative Lot #</u>	<u>LLI Supplied Bottle?</u>	<u>Sulfide Present?</u>	<u>Corrective Substance</u>	<u>CS Lot #</u>	<u>Res. Cl. Present?</u>	<u>Corrective Substance</u>	<u>CS Lot #</u>	<u>Record Date</u>	<u>Employee</u>
8766901	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/30/2016 2:27:35PM	0
8766902	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/30/2016 2:27:33PM	0
8766903	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/30/2016 2:27:33PM	0
8766904	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/30/2016 2:27:31PM	0
8766905	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/30/2016 2:27:32PM	0
8766906	201A		N/A	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	N	NA	NA	12/30/2016 2:27:30PM	0

Check Code Key

PK = Original container checked - pH is within the correct range. (No preservative was added)
PA = Original container checked - pH adjusted to correct range. (Preservative was added)
PV = Volatile container checked
PC = pH checked (unpreserved container)
SPK = Subsampled from an original container. Original container checked - pH is within correct range
SPA = Subsampled from an original container. Subsample container checked - pH adjusted to correct range.
SPC = Subsampled from an original container. pH checked (unpreserved container).
SUP = Subsampled from original container. Unable to be preserved due to the matrix of the sample.
UP = Unable to preserve due to matrix of the sample.
NA = Not applicable

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 · 717-656-2300 Fax: 717-656-2681 · www.lancasterlabs.com

14091 PFAA Water Prep**10954 PFAS in Water by LC/MS/MS**

A 100 ml sample of water is extracted using a solid phase extraction (SPE) cartridge. The resulting extract is analyzed by LC/MS/MS in negative electrospray ionization (ESI) mode.

Reference: Determination of Selected Perfluorinated Alkyl Acids in Drinking Water by Solid Phase Extraction and Liquid Chromatography/Tandem Mass Spectrometry (LCMSMS), Version 1.1, September 2009.

Analysis Reports / Field Chain of Custody

ANALYTICAL RESULTS

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

EA Engineering, Science & Tech
Suite 515
615 Piikoi Street
Honolulu HI 96814

Report Date: January 06, 2017

Project: Moose Creek Drinking Water

Submittal Date: 12/30/2016

Group Number: 1749375

SDG: MCR17

PO Number: 14218

State of Sample Origin: AK

Client Sample Description16MC-PW121-P5-1228 Grab Groundwater
16MC-PW121-P4-1228 Grab Groundwater
16MC-PW121-P1-1228 Grab Groundwater
16MC-PW117-P3-1228 Grab Groundwater
16MC-PW117-P2-1228 Grab Groundwater
16MC-PW117-P1-1228 Grab Groundwater

Lancaster Labs

(LL) #8766901
8766902
8766903
8766904
8766905
8766906

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Regulatory agencies do not accredit laboratories for all methods, analytes, and matrices. Our current scopes of accreditation can be viewed at <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. To request copies of prior scopes of accreditation, contact your project manager.

Electronic Copy To EA Engineering, Science & Tech
Electronic Copy To EA Engineering, Science & TechAttn: PacificChem Mailbox
Attn: Brenda Nuding

Respectfully Submitted,



Kay Hower

(510) 672-3979

Project Name: Moose Creek Drinking Water
LL Group #: 1749375

General Comments:

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.

See the Laboratory Sample Analysis Record section of the Analysis Report for the method references.

All QC met criteria unless otherwise noted in an Analysis Specific Comment below. Refer to the QC Summary for specific values and acceptance criteria.

Project specific QC samples are not included in this data set

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

Surrogate recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in an Analysis Specific Comment below.

The samples were received at the appropriate temperature and in accordance with the chain of custody unless otherwise noted.

Analysis Specific Comments:**EPA 537 Rev 1.1, Misc. Organics**

Sample #s: 8766901, 8766902, 8766903, 8766904, 8766905, 8766906

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Batch #: 17004003 (Sample number(s): 8766901-8766906 UNSPK: 8766906)

The recovery(ies) for the following analyte(s) in the MS was outside the acceptance window: Perfluoro-octanesulfonate

The recovery(ies) for one or more surrogates were outside of the QC window for sample(s) 8766901, 8766902, 8766903, 8766904, 8766905, Blank, LCS, MS

Sample Description: 16MC-PW121-P5-1228 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8766901
LL Group # 1749375
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 12/28/2016 11:14 by GM

EA Engineering, Science & Tech
Suite 515

Submitted: 12/30/2016 09:15

615 Piikoi Street

Reported: 01/06/2017 11:23

Honolulu HI 96814

CR171 SDG#: MCR17-01

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics		EPA 537 Rev 1.1	ng/l	ng/l	ng/l	ng/l	
10954	Perfluorooctanoic acid	335-67-1	1 J	0.7	3	3	1
10954	Perfluoro-octanesulfonate	1763-23-1	8 U	3	8	8	1
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.							

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/05/2017 15:49	Jason W Knight	1
14091	PFAA Water Prep	EPA 537 Rev 1.1	2	17004003	01/04/2017 15:35	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MC-PW121-P4-1228 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8766902
LL Group # 1749375
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 12/28/2016 11:15 by GM

EA Engineering, Science & Tech
Suite 515

Submitted: 12/30/2016 09:15

615 Piikoi Street

Reported: 01/06/2017 11:23

Honolulu HI 96814

CR172 SDG#: MCR17-02

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics		EPA 537 Rev 1.1	ng/l	ng/l	ng/l	ng/l	
10954	Perfluorooctanoic acid	335-67-1	2 U	0.5	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	6 U	2	6	6	1
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.							

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/05/2017 16:09	Jason W Knight	1
14091	PFAA Water Prep	EPA 537 Rev 1.1	2	17004003	01/04/2017 15:35	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MC-PW121-P1-1228 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8766903
LL Group # 1749375
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 12/28/2016 11:16 by GM

EA Engineering, Science & Tech
Suite 515

Submitted: 12/30/2016 09:15

615 Piikoi Street

Reported: 01/06/2017 11:23

Honolulu HI 96814

CR173 SDG#: MCR17-03

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics		EPA 537 Rev 1.1	ng/l	ng/l	ng/l	ng/l	
10954	Perfluorooctanoic acid	335-67-1	16	0.5	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	190	2	6	6	1
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.							

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/05/2017 16:30	Jason W Knight	1
14091	PFAA Water Prep	EPA 537 Rev 1.1	2	17004003	01/04/2017 15:35	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MC-PW117-P3-1228 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8766904
LL Group # 1749375
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 12/28/2016 12:20 by GM

EA Engineering, Science & Tech

Suite 515

Submitted: 12/30/2016 09:15

615 Piikoi Street

Reported: 01/06/2017 11:23

Honolulu HI 96814

CR174 SDG#: MCR17-04

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics		EPA 537 Rev 1.1	ng/l	ng/l	ng/l	ng/l	
10954	Perfluorooctanoic acid	335-67-1	1 J	0.5	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	7	2	6	6	1
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.							

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/05/2017 16:50	Jason W Knight	1
14091	PFAA Water Prep	EPA 537 Rev 1.1	2	17004003	01/04/2017 15:35	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MC-PW117-P2-1228 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8766905
LL Group # 1749375
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 12/28/2016 12:21 by GM

EA Engineering, Science & Tech
Suite 515

Submitted: 12/30/2016 09:15

615 Piikoi Street

Reported: 01/06/2017 11:23

Honolulu HI 96814

CR175 SDG#: MCR17-05

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics		EPA 537 Rev 1.1	ng/l	ng/l	ng/l	ng/l	
10954	Perfluorooctanoic acid	335-67-1	120	0.5	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	1,000	20	60	60	10
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.							

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/05/2017 17:11	Jason W Knight	1
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/06/2017 08:14	Jason W Knight	10
14091	PFAA Water Prep	EPA 537 Rev 1.1	2	17004003	01/04/2017 15:35	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

Sample Description: 16MC-PW117-P1-1228 Grab Groundwater
Moose Creek Drinking Water

LL Sample # PW 8766906
LL Group # 1749375
Account # 30098

Project Name: Moose Creek Drinking Water

Collected: 12/28/2016 12:23 by GM

EA Engineering, Science & Tech
Suite 515

Submitted: 12/30/2016 09:15

615 Piikoi Street

Reported: 01/06/2017 11:23

Honolulu HI 96814

CR176 SDG#: MCR17-06

CAT No.	Analysis Name	CAS Number	Result	Detection Limit*	Limit of Detection	Limit of Quantitation	DF
Misc. Organics		EPA 537 Rev 1.1	ng/l	ng/l	ng/l	ng/l	
10954	Perfluorooctanoic acid	335-67-1	200	0.5	2	2	1
10954	Perfluoro-octanesulfonate	1763-23-1	2,600	20	60	60	10
The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.							

Sample Comments

State of Alaska Lab Certification No. UST-061

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/05/2017 15:08	Jason W Knight	1
10954	PFOA/PFOS DoD	EPA 537 Rev 1.1	1	17004003	01/06/2017 07:54	Jason W Knight	10
14091	PFAA Water Prep	EPA 537 Rev 1.1	2	17004003	01/04/2017 15:35	Devon M Whooley	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 01/06/2017 11:23

Group Number: 1749375

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	DL**	LOD	LOQ
	ng/l	ng/l	ng/l	ng/l
Batch number: 17004003	Sample number(s): 8766901-8766906			
Perfluorooctanoic acid	2 U	0.5	2	2
Perfluoro-octanesulfonate	6 U	2	6	6

LCS/LCSD

Analysis Name	LCS Spike Added	LCS Conc	LCSD Spike Added	LCSD Conc	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
	ng/l	ng/l	ng/l	ng/l					
Batch number: 17004003	Sample number(s): 8766901-8766906								
Perfluorooctanoic acid	200	175.45	200	187.99	88	94	70-130	7	30
Perfluoro-octanesulfonate	191.2	212.51	191.2	205.07	111	107	70-130	4	30

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

Analysis Name	Unspiked Conc	MS Spike Added	MS Conc	MSD Spike Added	MSD Conc	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
	ng/l	ng/l	ng/l	ng/l	ng/l					
Batch number: 17004003	Sample number(s): 8766901-8766906 UNSPK: 8766906									
Perfluorooctanoic acid	195.59	300.21	480.06			95		70-130		
Perfluoro-octanesulfonate	2554.53	287	2653.71			35 (2)		70-130		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: EA Engineering, Science & Tech
Reported: 01/06/2017 11:23

Group Number: 1749375

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: PFOA/PFOS DoD

Batch number: 17004003

	13C8-PFOA			13C8-PFOS		
	%Rec	LOD		%Rec	LOD	
	(ng/l)			(ng/l)		
8766901	68*	30 (3)		66*	100 (3)	
8766902	58*	20 (3)		58*	100 (3)	
8766903	74	20 (3)		65*	100 (3)	
8766904	53*	20 (3)		58*	100 (3)	
8766905	52*	20 (3)		97	100 (3)	
8766906	71	20 (3)		86	1,000 (3)	
Blank	65*	20 (3)		79	100 (3)	
LCS	87	20 (3)		66*	100 (3)	
LCSD	77	20 (3)		74	100 (3)	
MS	47*	30 (3)		52*	200 (3)	
Limits:	70-130			70-130		

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

(3) The surrogate spike amount was less than the LOD.

P##### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Environmental Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 30098 Group # 1749375 Sample # 8766901-06 COC# 114 Pg 1 of 1

Client: EA Engineering, Inc., PBC.				Matrix ☐ Sediment ☒ Ground ☐ Surface ☐ Potable ☐ NPDES ☐ Other: Total # of Containers		Analyses Requested										For Lab Use Only	
Project Name/#: Moose Creek Drinking Water		Site ID #:				Preservation Codes										SF #: _____	
Project Manager: Mark Wilkinson/Brenda Nuding		P.O. #: 14218				P	None	N	O	None	H, As						
Sampler: G. Manning		PWSID #:				Total Organic Carbon (SM5310C)	Total Dissolved Solids (SM2540C)	Metals, Hardness (EPA 200.7/200.8/245.1, SM2340B)	PCs (EPA Method 537)	Total Suspended Solids (SM2540D)	VOCs (EPA 524.2)						
Phone #: 907-456-4751		Quote #:															
State where sample(s) were collected: Alaska																	
Sample Identification		Collection		☐ Soil	☐ Water	☐ Other:											
		Date	Time													Grab	Composite
16MC-PW121-P5-1228		12/28/16	1114	X				1					X			<u>RUSH</u>	
16MC-PW121-P4-1228		12/28/16	1115	X				1					X			<u>RUSH</u>	
16MC-PW121-P1-1228		12/28/16	1116	X				1					X			<u>RUSH</u>	
16MC-PW117-P3-1228		12/28/16	1220	X				1					X			<u>RUSH</u>	
16MC-PW117-P2-1228		12/28/16	1221	X				1					X			<u>RUSH</u>	
16MC-PW117-P1-1228		12/28/16	1223	X				1					X			<u>RUSH</u>	
Turnaround Time Requested (TAT) (please check): Standard ☐ Rush ☒ <u>Rush results requested</u>				Relinquished by:		Date: 12/29/16	Time: 0900	Received by: UPS		Date:	Time:						
Date results are needed:				Relinquished by:		Date:	Time:	Received by:		Date:	Time:						
Rush results requested by (please check): E-Mail ☒ Phone ☐ E-mail Address: <u>bnuding@eaest.com, pacificchem@eaest.com, gmanning@eaest.com</u> Phone: 808-589-1455 X 102				Relinquished by:		Date:	Time:	Received by:		Date:	Time:						
Data Package Options (please check if required) Type I (Validation/non-CLP) ☐ MA MCP ☐ Type III (Reduced non-CLP) ☐ CT RCP ☐ Type IV (CLP SOW) ☒ TX TRRP-13 ☐ Type VI (Raw Data Only) ☐				Relinquished by:		Date:	Time:	Received by:		Date:	Time:						
EDD Required? Yes ☒ No ☐ If yes, format: SEDD				Relinquished by Commercial Carrier:				Temperature upon receipt <u>2.4</u> °C									

Client: EA Eng.**Delivery and Receipt Information**

Delivery Method:	<u>UPS</u>	Arrival Timestamp:	<u>12/30/2016 9:15</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>1</u>
State/Province of Origin:	<u>AK</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace $\geq$ 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

*Unpacked by Timothy Cubberley (6520) at 09:27 on 12/30/2016***Samples Chilled Details**

Thermometer Types: DT = Digital (Temp. Bottle) , IR = Infrared (Surface Temp) All Temperatures in °C ,

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	2.4	DT	Wet	Y	Bagged	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mg	milligram(s)
C	degrees Celsius	mL	milliliter(s)
cfu	colony forming units	MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units	N.D.	none detected
F	degrees Fahrenheit	ng	nanogram(s)
g	gram(s)	NTU	nephelometric turbidity units
IU	International Units	pg/L	picogram/liter
kg	kilogram(s)	RL	Reporting Limit
L	liter(s)	TNTC	Too Numerous To Count
lb.	pound(s)	µg	microgram(s)
m3	cubic meter(s)	µL	microliter(s)
meq	milliequivalents	umhos/cm	micromhos/cm
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Laboratory Data Qualifiers:

- C - Result confirmed by reanalysis
- E - Concentration exceeds the calibration range
- J (or G, I, X) - estimated value $\geq$ the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
- P - Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
- U - Analyte was not detected at the value indicated
- V - Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference...
- W - The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

PFAS by LC/MS/MS Data

Case Narrative/Conformance Summary

PFAS by LC/MS/MS

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: MCR17

Specialty Services Group

Fraction: PFAS by LC/MS/MS

Sample #	Client ID	Matrix		DF	Comments
		Liquid	Solid		
8766901	16MC-PW121-P5-1228	X		1	
8766902	16MC-PW121-P4-1228	X		1	
8766903	16MC-PW121-P1-1228	X		1	
8766904	16MC-PW117-P3-1228	X		1	
8766905	16MC-PW117-P2-1228	X		1; 10	
8766906	16MC-PW117-P1-1228	X		1; 10	

All analyses have been performed in accordance with DOD QSM Version 5.0 unless otherwise noted below.
See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

MS/MSD

Please note that US EPA Methods for organic compounds do not require action by the laboratory based on out-of-specification MS/MSD results.

Batch#: 17004003 (Sample number(s): 8766901-8766906, UNSPK: 8766906)

The recovery(ies) for the following analyte(s) in the MS is outside the acceptance window: Perfluoro-octanesulfonate

Case Narrative/Conformance Summary

CLIENT: EA Engineering, Science & Tech
SDG: MCR17

Specialty Services Group

Fraction: PFAS by LC/MS/MS

Surrogate

Surrogate recoveries that are noncompliant are confirmed unless attributed to a dilution or otherwise noted.

(Sample number(s): 8766901-8766906: Analysis: 10954)

The stated QC limits are advisory only until sufficient data points can be obtained to calculate statistical limits.

Batch#: 17004003 (Sample number(s): 8766901-8766906, UNSPK: 8766906)

The recovery(ies) for the following surrogate(s) is below the acceptance window:
13C8-PFOA (8766901, 8766902, 8766904, 8766905, 8766906 MS, BLK004003B), 13C8-PFOS
(8766901, 8766902, 8766903, 8766904, 8766906 MS, LCS004003Q)

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

UNSPK = Unspiked (for MS/MSD)	LOQ = Limit of Quantitation
+MS = Matrix Spike	MDL = Method Detection Limit
MSD = Matrix Spike Duplicate	ND = Not Detected
BKG = Background (for Duplicate)	J = Estimated Value
D = Duplicate (DUP)	E= out of calibration range
LCS = Lab Control Sample	RE = Repreparation/Reanalysis
LCSD = Lab Control Sample Duplicate	* = Out of Specification

QC Summary

PFAS by LC/MS/MS

Quality Control Reference List
Specialty Services Group

CLIENT: EA Engineering, Science & Tech
SDG: MCR17

Fraction: PFAS by LC/MS/MS

Analysis	Batch Number	Sample Number	Analysis Date
PFOA/PFOS DoD	17004003	BLK004003	01/05/2017 14:06:00
		LCS004003	01/05/2017 14:27:00
		LCSDA	01/05/2017 14:47:00
		8766901	01/05/2017 15:49:00
		8766902	01/05/2017 16:09:00
		8766903	01/05/2017 16:30:00
		8766904	01/05/2017 16:50:00
		8766905	01/05/2017 17:11:00
		8766905	01/06/2017 08:14:00
		8766906 UNSPK	01/05/2017 15:08:00
		8766906 MS	01/05/2017 15:28:00
		8766906 UNSPK	01/06/2017 07:54:00

Fraction: PFAS by LC/MS/MS

17004003 / BLK004003 Analyte	Analysis Date	Blank Results	Units	DL	LOD	LOQ
Perfluorooctanoic acid	01/05/17	N.D.	ng/l	0.5	2	2
Perfluoro-octanesulfonate	01/05/17	N.D.	ng/l	2	6	6

Specialty Services Group
Fraction: PFAS by LC/MS/MS

UNSPK: 8766906 MS: 8766906	Batch: 17004003 (Sample number(s): 8766901-8766906)								
Analyte	Spike Added ng/l	Unspiked Conc ng/l	MS Conc ng/l	MSD Conc ng/l	MS %Rec	MSD %Rec	%Rec Limits	%RPD	%RPD Limits
Perfluorooctanoic acid	300.21	195.59	480.06	NA	95	NA	70-130	NA	NA
Perfluoro-octanesulfonate	287	2554.53	2653.71	NA	35 (2)	NA	70-130	NA	NA

Comments:

(2) The unspiked sample result is greater than four times the spike added.

* = Out of Specification

Results are being reported on an as received basis.

Specialty Services Group
Fraction: PFAS by LC/MS/MS

LCS: LCS004003 LCSD: LCSDA	Batch: 17004003 (Sample number(s): 8766901-8766906)							
Analyte	Spike Added ng/l	LCS Conc ng/l	LCSD Conc ng/l	LCS %Rec	LCSD %Rec	%Rec Limits	%RPD	%RPD Limits
Perfluorooctanoic acid	200	175.45	187.99	88	94	70-130	7	30
Perfluoro-octanesulfonate	191.2	212.51	205.07	111	107	70-130	4	30

SDG No.: MCR17
Matrix: WATER

17004003 LAB SAMPLE ID	13C8-PFOA	13C8-PFOS	Limits
	% Recovery	% Recovery	
BLK004003	65 *	79	70-130
LCS004003	87	66 *	70-130
LCSDA	77	74	70-130
8766906RE	71	86	70-130
8766906MS	47 *	52 *	70-130
8766901RE	68 *	66 *	70-130
8766902RE	58 *	58 *	70-130
8766903RE	74	65 *	70-130
8766904RE	53 *	58 *	70-130
8766905RE	52 *	97	70-130
8766906REDL	71	86	70-130
8766905REDL	52 *	97	70-130

* = Outside of the QC Limits.

SDG No.: MCR17

Instrument ID: 24960

Lab File ID: 16DEC11-35.WIFF

Date/Time Analyzed: 12/11/2016 19:30

Lab Sample ID: CCV1

Init. Calib. Date/Times: 12/11/2016 16:05

12/11/2016 18:08

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanoic Acid	2240877	181635	2.00	1.73	-13.30	±30
Perfluoropentanoic Acid	2557607	207024	2.00	1.70	-15.22	±30
Perfluorobutanesulfonate	566833	41350	1.77	1.54	-13.19	±40
Perfluorohexanoic acid	3088341	255871	2.00	1.71	-14.27	±30
Perfluorohexanesulfonate	1133025	82543	1.89	1.59	-15.86	±30
Perfluoroheptanoic acid	2753624	221685	2.00	1.64	-18.09	±30
6:2 fluorotelomersulfonate	122279	25792	1.90	2.21	16.50	±30
Perfluorooctanoic acid	2534573	207693	2.00	1.64	-17.77	±30
Perfluoro- octanesulfonate	1245270	98568	1.91	1.70	-10.83	±30
Perfluorononanoic acid	2686553	245201	2.00	1.69	-15.43	±30
PFOSA	2168453	200531	2.00	1.65	-17.51	±30
Perfluorodecanoic acid	3452249	332326	2.00	1.84	-8.01	±30
8:2 fluorotelomersulfonate	193711	41183	1.92	1.79	-6.60	±30
Perfluoroundecanoic acid	3686075	331120	2.00	1.80	-9.93	±30
Perfluorododecanoic acid	3741905	302334	2.00	1.72	-13.81	±30

* Outside QC Limits.

SDG No.: MCR17

Instrument ID: 24960

Lab File ID: 17JAN05-16.WIFF

Date/Time Analyzed: 01/05/2017 13:46

Lab Sample ID: CCV3

Init. Calib. Date/Times: 12/11/2016 16:05

12/11/2016 18:08

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanesulfonate	566833	27515	1.77	1.38	-22.15	±40
Perfluorohexanoic acid	3088341	167488	2.00	1.59	-20.43	±30
Perfluorohexanesulfonate	1133025	56055	1.89	1.59	-16.09	±30
Perfluoroheptanoic acid	2753624	143509	2.00	1.61	-19.74	±30
Perfluorooctanoic acid	2534573	139478	2.00	1.61	-19.33	±30
Perfluoro- octanesulfonate	1245270	59335	1.91	1.64	-13.91	±30
Perfluorononanoic acid	2686553	188247	2.00	2.14	6.79	±30
Perfluorodecanoic acid	3452249	217368	2.00	1.64	-17.93	±30
Perfluoroundecanoic acid	3686075	253016	2.00	1.85	-7.52	±30
Perfluorododecanoic acid	3741905	236427	2.00	1.73	-13.56	±30

* Outside QC Limits.

SDG No.: MCR17

Instrument ID: 24960

Lab File ID: 17JAN05-27.WIFF

Date/Time Analyzed: 01/05/2017 17:32

Lab Sample ID: CCV4

Init. Calib. Date/Times: 12/11/2016 16:05

12/11/2016 18:08

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanesulfonate	566833	25796	1.77	1.36	-23.42	±40
Perfluorohexanoic acid	3088341	162923	2.00	1.75	-12.44	±30
Perfluorohexanesulfonate	1133025	52644	1.89	1.51	-19.96	±30
Perfluoroheptanoic acid	2753624	143376	2.00	1.56	-21.89	±30
Perfluorooctanoic acid	2534573	141163	2.00	1.68	-16.14	±30
Perfluoro- octanesulfonate	1245270	65441	1.91	1.65	-13.35	±30
Perfluorononanoic acid	2686553	167159	2.00	1.68	-16.23	±30
Perfluorodecanoic acid	3452249	241487	2.00	1.81	-9.58	±30
Perfluoroundecanoic acid	3686075	239475	2.00	1.72	-14.25	±30
Perfluorododecanoic acid	3741905	230259	2.00	1.68	-16.09	±30

* Outside QC Limits.

SDG No.: MCR17

Instrument ID: 24960

Lab File ID: 17JAN06-04.WIFF

Date/Time Analyzed: 01/06/2017 07:33

Lab Sample ID: CCV3

Init. Calib. Date/Times: 12/11/2016 16:05

12/11/2016 18:08

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanesulfonate	566833	24333	1.77	1.42	-19.76	±40
Perfluorohexanoic acid	3088341	148714	2.00	1.57	-21.44	±30
Perfluorohexanesulfonate	1133025	52688	1.89	1.53	-18.96	±30
Perfluoroheptanoic acid	2753624	143008	2.00	1.79	-10.37	±30
Perfluorooctanoic acid	2534573	115834	2.00	1.55	-22.66	±30
Perfluoro- octanesulfonate	1245270	62296	1.91	1.77	-7.22	±30
Perfluorononanoic acid	2686553	135806	2.00	1.71	-14.66	±30
Perfluorodecanoic acid	3452249	226847	2.00	1.78	-10.87	±30
Perfluoroundecanoic acid	3686075	212922	2.00	1.63	-18.71	±30
Perfluorododecanoic acid	3741905	216234	2.00	1.71	-14.26	±30

* Outside QC Limits.

SDG No.: MCR17

Instrument ID: 24960

Lab File ID: 17JAN06-07.WIFF

Date/Time Analyzed: 01/06/2017 08:35

Lab Sample ID: CCV4

Init. Calib. Date/Times: 12/11/2016 16:05

12/11/2016 18:08

Analytes	Average ICAL Area	CCV Area	Specified Amount	Calculated Amount	% Difference	Limit
Perfluorobutanesulfonate	566833	25520	1.77	1.43	-19.27	±40
Perfluorohexanoic acid	3088341	139725	2.00	1.56	-21.84	±30
Perfluorohexanesulfonate	1133025	52408	1.89	1.73	-8.29	±30
Perfluoroheptanoic acid	2753624	137673	2.00	1.61	-19.43	±30
Perfluorooctanoic acid	2534573	127042	2.00	1.76	-12.23	±30
Perfluoro- octanesulfonate	1245270	63754	1.91	1.86	-2.74	±30
Perfluorononanoic acid	2686553	138990	2.00	1.76	-11.99	±30
Perfluorodecanoic acid	3452249	216123	2.00	1.70	-14.99	±30
Perfluoroundecanoic acid	3686075	221449	2.00	1.67	-16.42	±30
Perfluorododecanoic acid	3741905	222240	2.00	1.81	-9.65	±30

* Outside QC Limits.

SDG No.: MCR17
Matrix: WATER

17004003	13C2-PFOA	13C4-PFOS
	Area	Area
Average ICAL Response	479624	91278
UPPER LIMIT	719436	136917
LOWER LIMIT	239812	45639
LAB SAMPLE ID		
BLK004003	416038	64817
LCS004003	305978	62502
LCSDA	331581	63383
8766906RE	359454	47634
8766906MS	503290	82836
8766901RE	425513	70754
8766902RE	447620	76738
8766903RE	410449	71450
8766904RE	435797	71101
8766905RE	446054	73836
8766906REDL	353330	58035
8766905REDL	302636	57427

AREA: Upper limit: 150% of the internal standard area.
Lower Limit: 50% of the internal standard area.

* = Outside of the QC Limits.

Sample Data

PFAS by LC/MS/MS

Fraction: PFAS by LC/MS/MS

10954: PFOA/PFOS DoD Analyte Name	Default DL	Default LOD	Default LOQ	Units
Perfluorooctanoic acid	.5	2	2	ng/l
Perfluoro-octanesulfonate	2	6	6	ng/l

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766901RE			Data File:	17JAN05-22.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW121-P5-1228 Grab Groundwater			Acquis Date:	2017-01-05T15:49:23
Sample Type:	Unknown			Instrument:	LM24960
Vial Position:	96			Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:	16DEC11ICAL
Batch Number:	17004003			Operator:	Not calculated
Sample Wt.:	0.07239			Dilution Factor:	1.00
Sample Vol.:	1.000			Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	425512.6	479624.1	-11.3	50.0	
I13C4-PFOS	1.0	70753.7	91278.0	-22.5	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	367904.6	13C2-PFOA	425512.6	0.865	1.263	13.814	9.457	68.5	70.0-130.0	OOS
E13C8-PFOS	47428.6	13C4-PFOS	70753.7	0.670	1.011	13.814	9.161	66.3	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

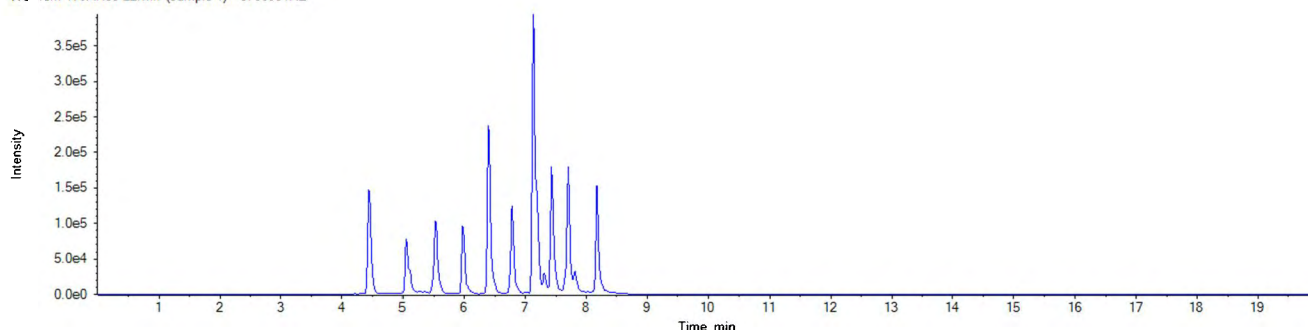
Analyte Quantitation Peak Table

Sample Name: 8766901RE			Instrument Name: LM24960			File Name: 17JAN05-22.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.07239		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.41	1.000	5125.2	A	13C8-PFOA	6.40	367904.6	0.014	0.954
PFOS	6.71	0.990	4987.9	A	13C8-PFOS	6.77	47428.6	0.105	2.329

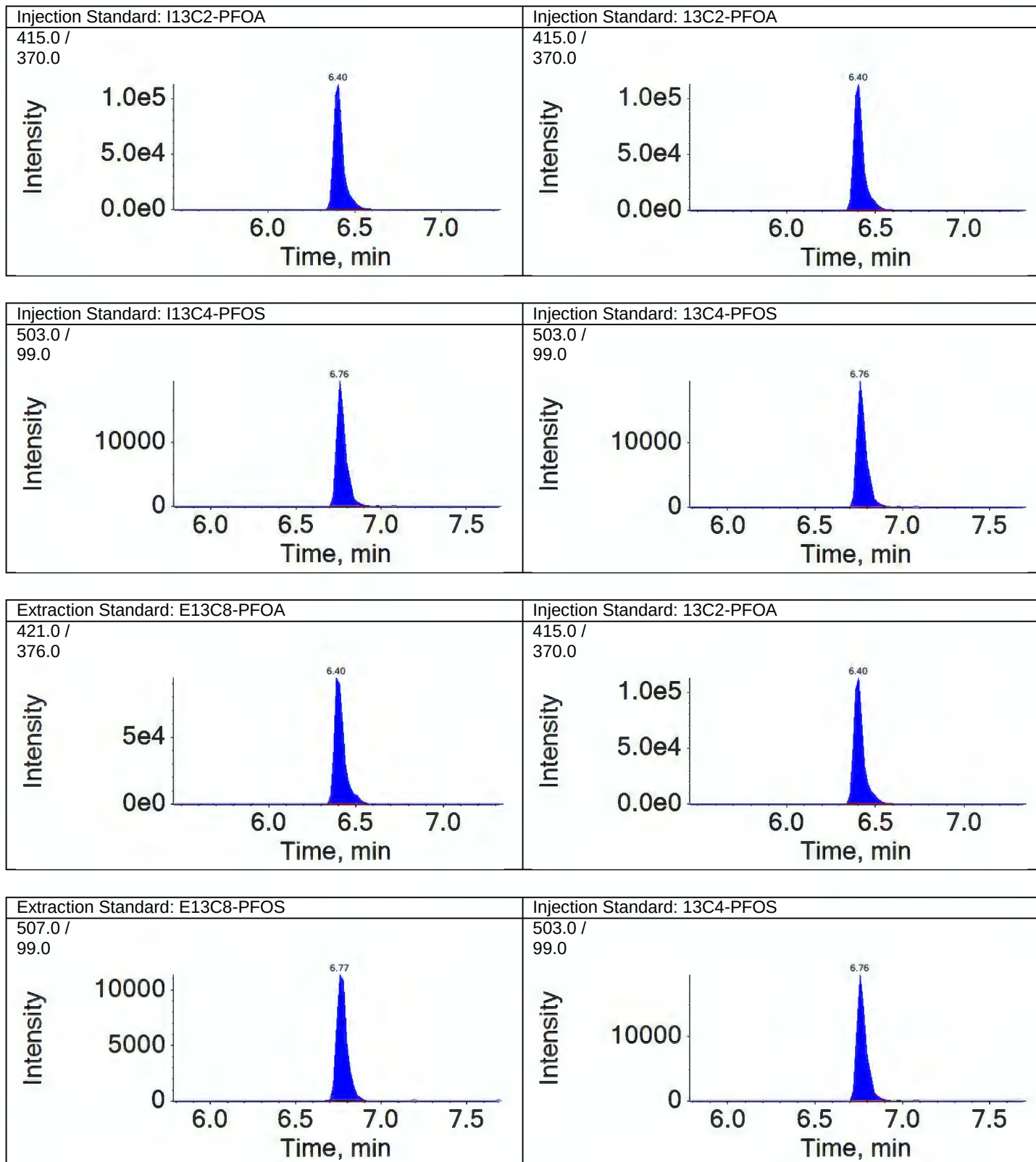
Total Ion Chromatogram

TIC from 17JAN05-22.wiff (sample 1) - 8766901RE



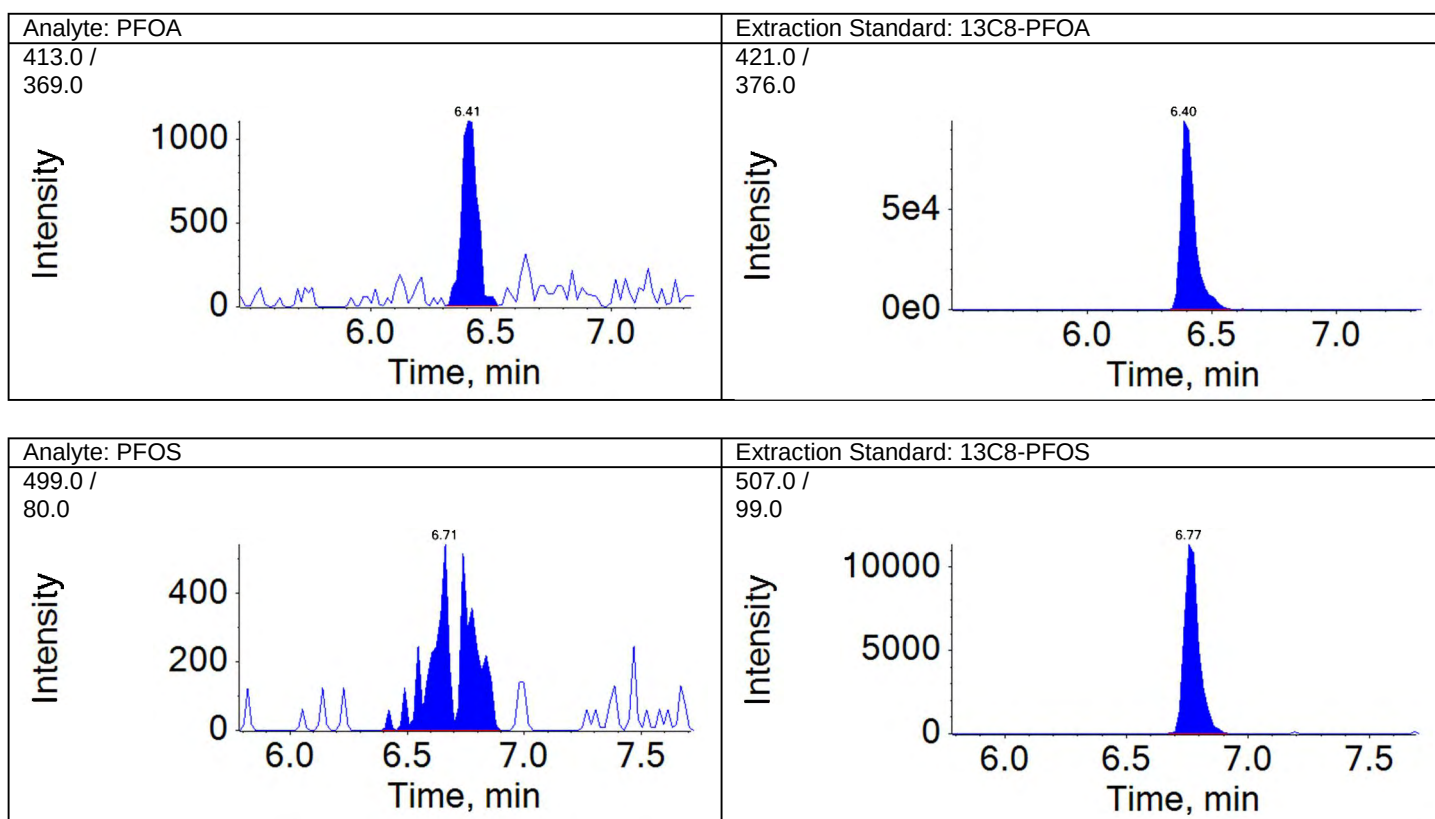
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766902RE			Data File:	17JAN05-23.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW121-P4-1228 Grab Groundwater			Acquis Date:	2017-01-05T16:09:53
Sample Type:	Unknown			Instrument:	LM24960
Vial Position:	97			Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:	16DEC11ICAL
Batch Number:	17004003			Operator:	Not calculated
Sample Wt.:	0.10019			Dilution Factor:	1.00
Sample Vol.:	1.000			Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	447620.0	479624.1	-6.7	50.0	
I13C4-PFOS	1.0	76737.9	91278.0	-15.9	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	330566.7	13C2-PFOA	447620.0	0.739	1.263	9.981	5.836	58.5	70.0-130.0	OOS
E13C8-PFOS	45105.6	13C4-PFOS	76737.9	0.588	1.011	9.981	5.804	58.1	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

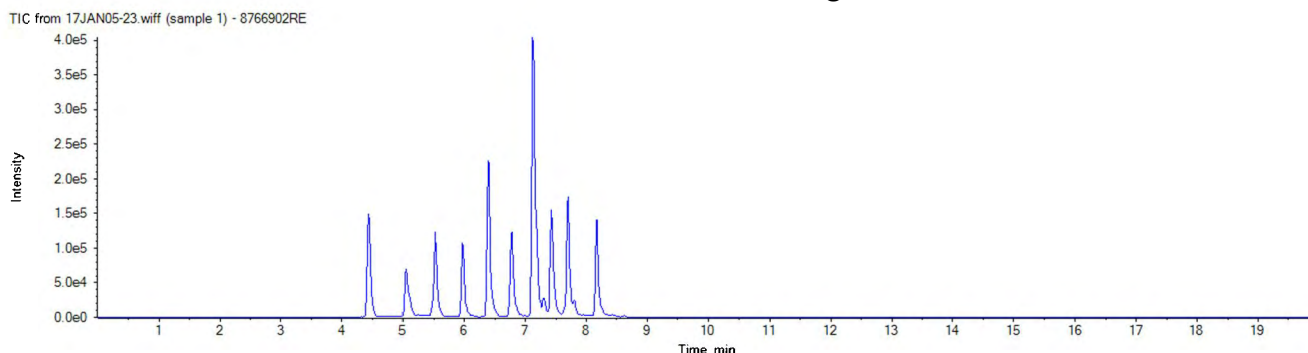
Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Analyte Quantitation Peak Table

Sample Name: 8766902RE			Instrument Name: LM24960			File Name: 17JAN05-23.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.10019		1.000		1.00			1.000		

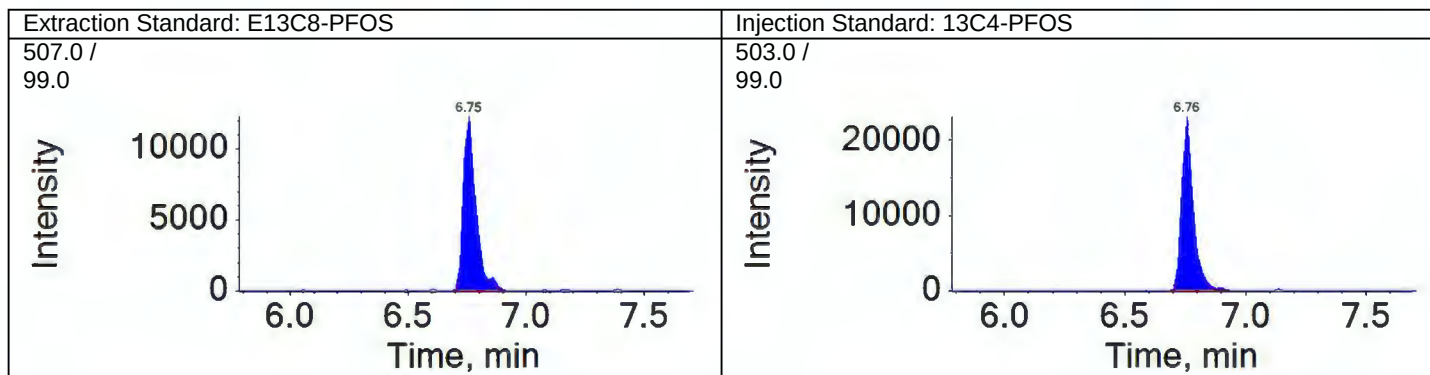
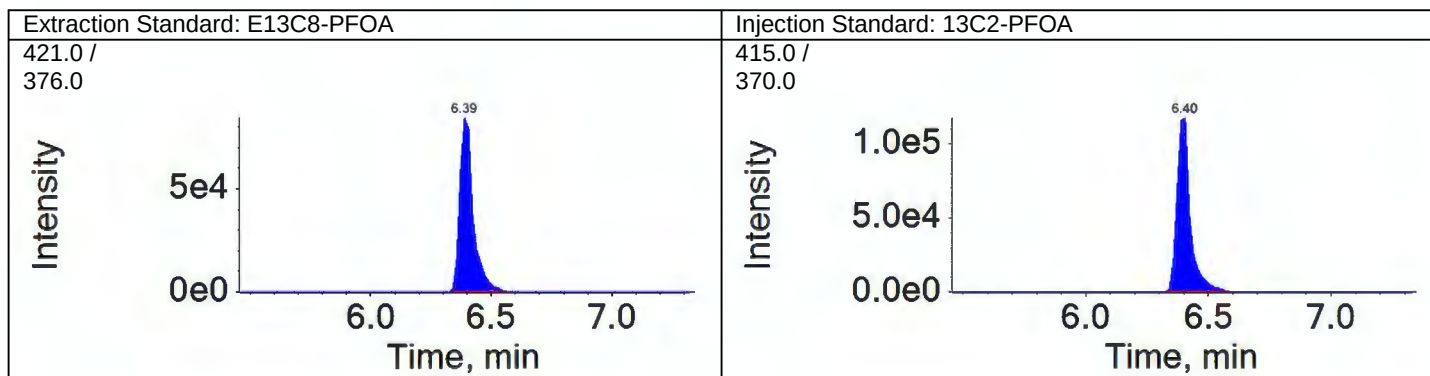
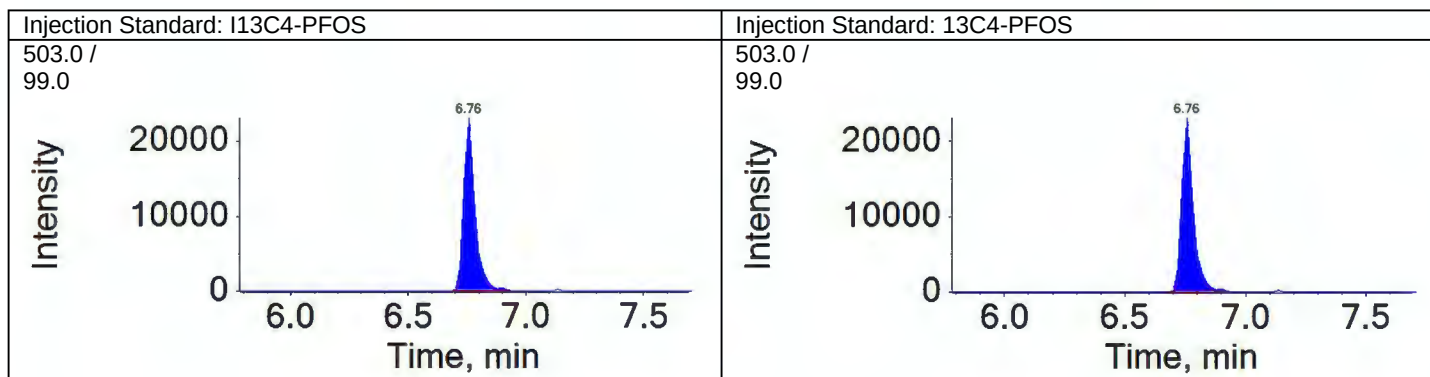
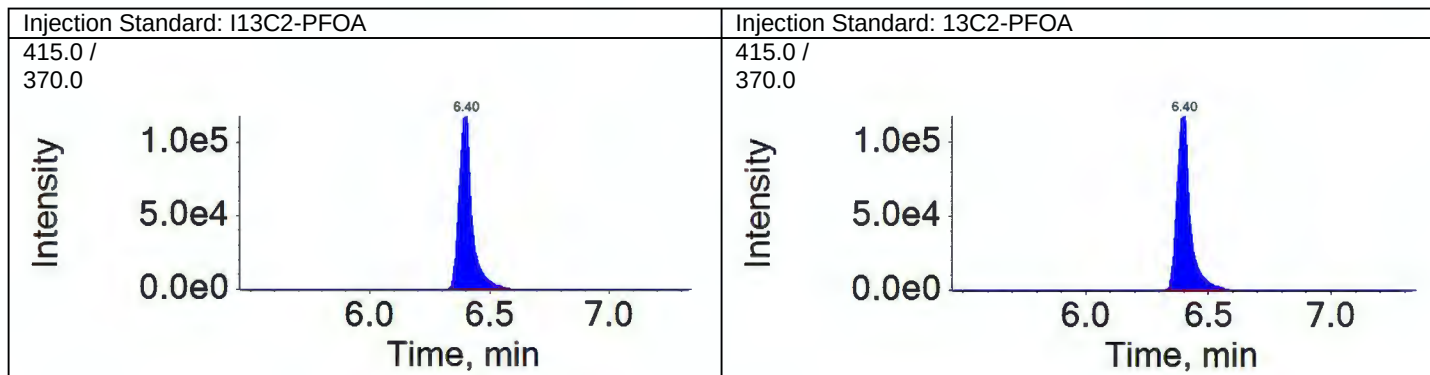
<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.39	1.000	2960.6	M	13C8-PFOA	6.39	330566.7	0.009	0.443
PFOS	N/A	N/A	N/A	A	13C8-PFOS	6.75	45105.6	N/A	

Total Ion Chromatogram



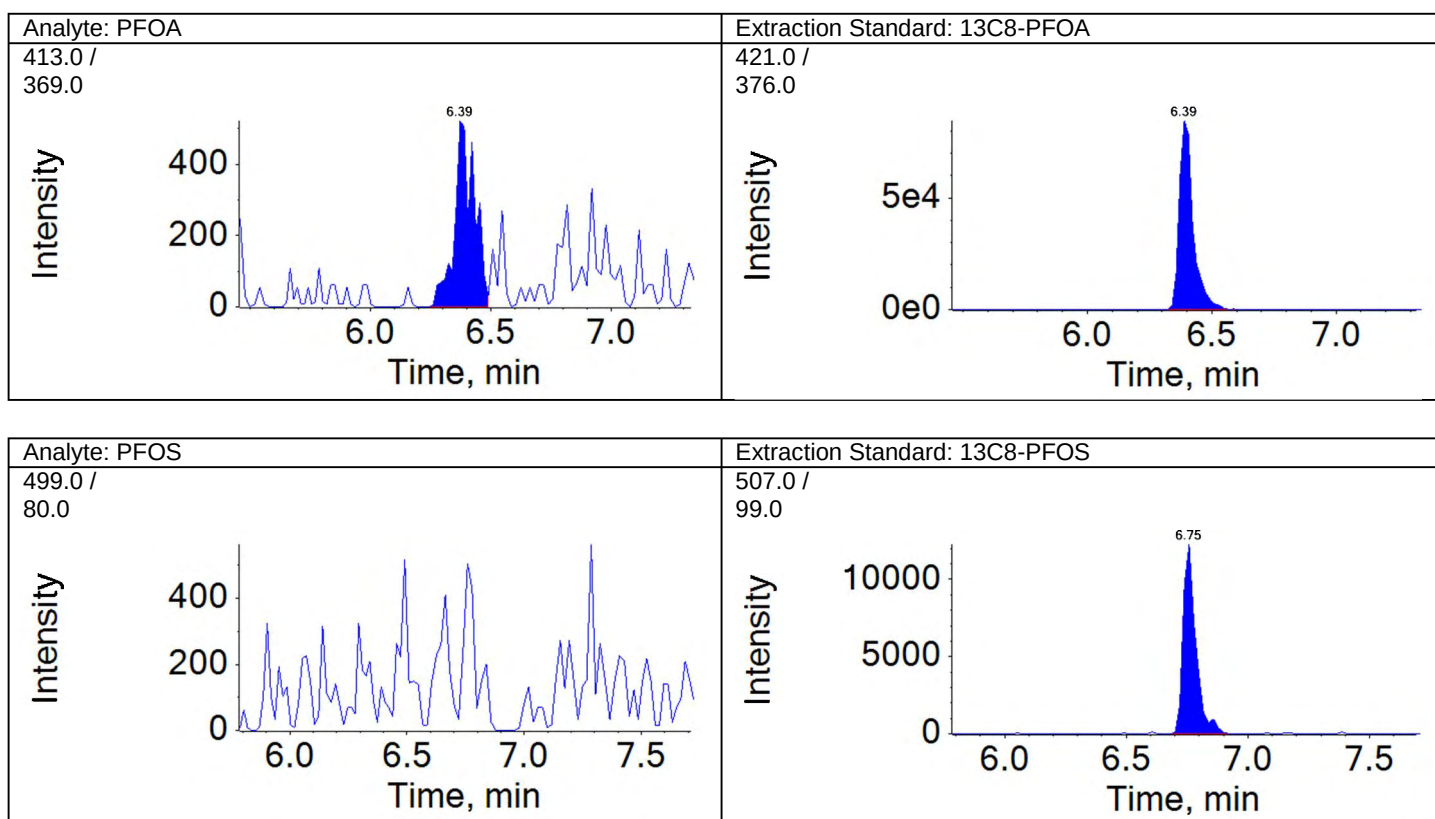
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

Component Name:

PFOA

RT (min.):

6.40

Peak Area:

3597.4

Mass Range:

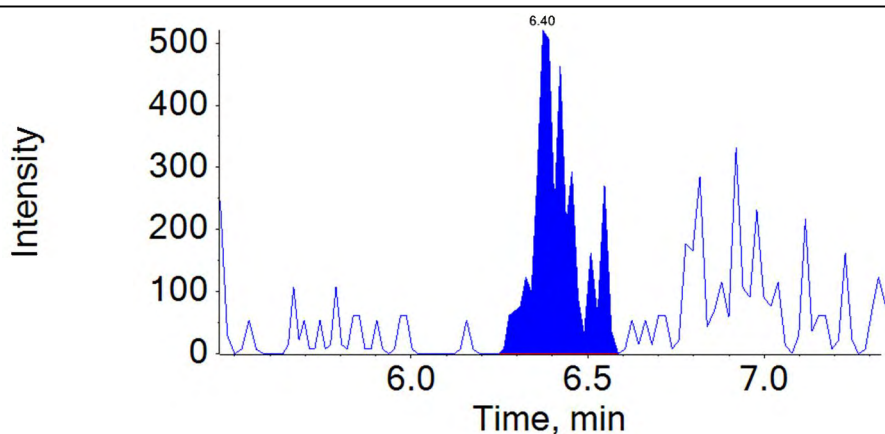
413.0 / 369.0

File Name:

17JAN05-23.wiff

Sample Name:

8766902RE



Integration Comment: incorrect integration

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766903RE			Data File:	17JAN05-24.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW121-P1-1228 Grab Groundwater			Acquis Date:	2017-01-05T16:30:24
Sample Type:	Unknown			Instrument:	LM24960
Vial Position:	98			Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:	16DEC11ICAL
Batch Number:	17004003			Operator:	Not calculated
Sample Wt.:	0.10029			Dilution Factor:	1.00
Sample Vol.:	1.000			Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	410449.1	479624.1	-14.4	50.0	
I13C4-PFOS	1.0	71450.4	91278.0	-21.7	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	382759.9	13C2-PFOA	410449.1	0.933	1.263	9.971	7.362	73.8	70.0-130.0	
E13C8-PFOS	47104.8	13C4-PFOS	71450.4	0.659	1.011	9.971	6.503	65.2	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

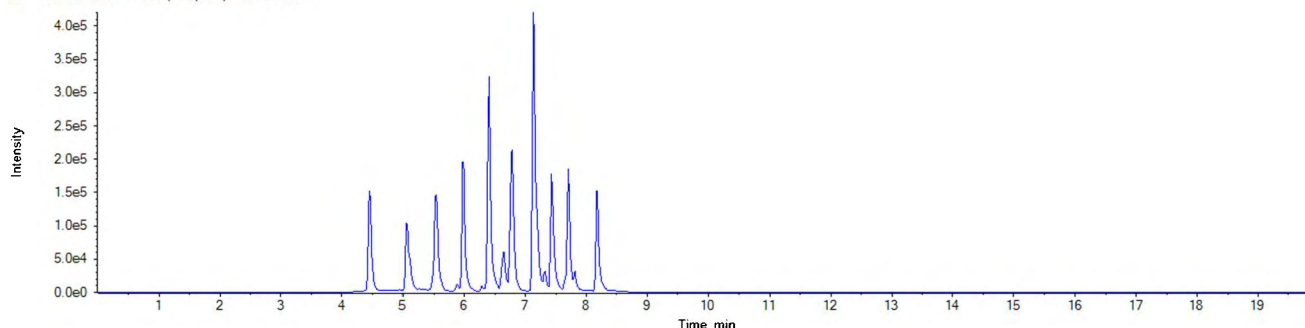
Analyte Quantitation Peak Table

Sample Name: 8766903RE			Instrument Name: LM24960			File Name: 17JAN05-24.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.10029		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.41	1.000	122058.4	M	13C8-PFOA	6.40	382759.9	0.319	15.758
PFOS	6.74	1.000	553114.8	M	13C8-PFOS	6.76	47104.8	11.742	187.706

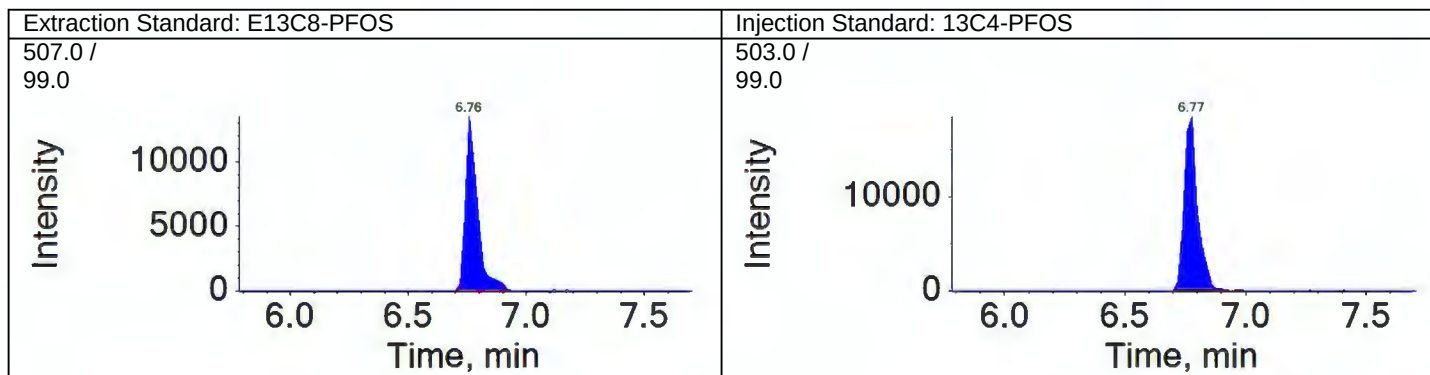
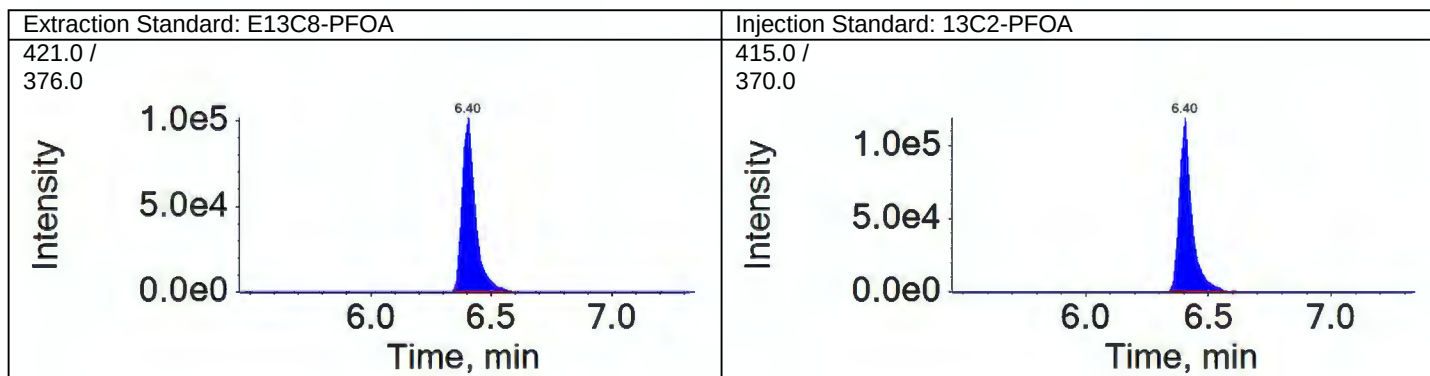
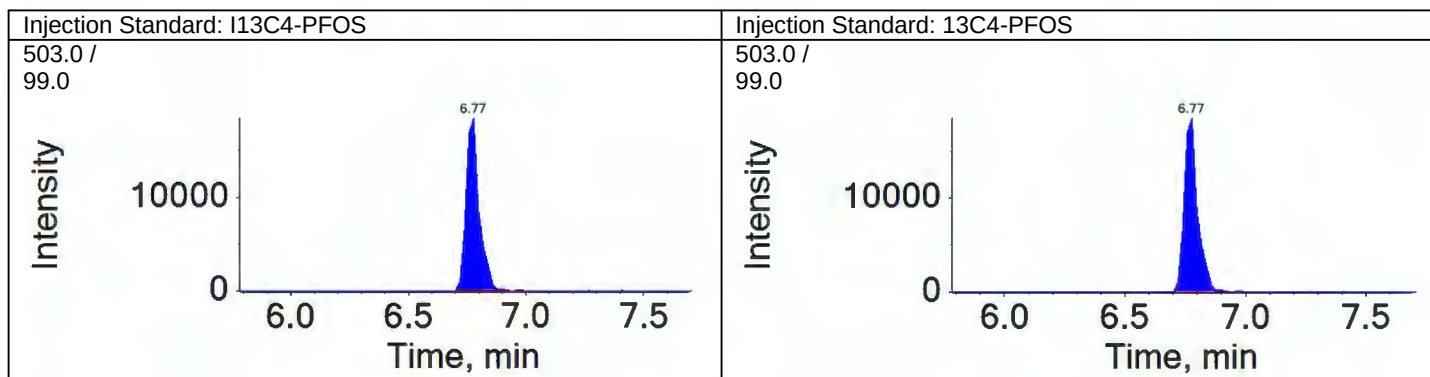
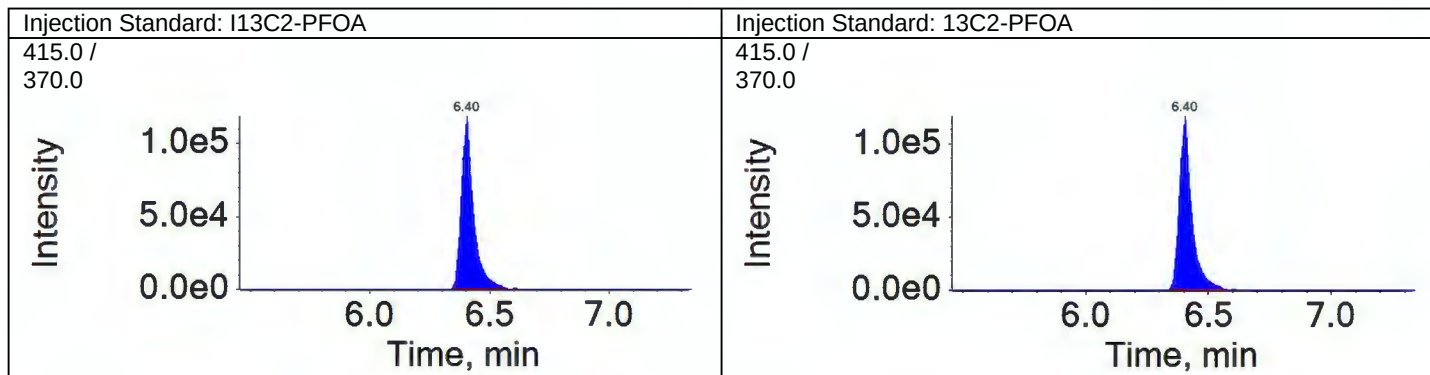
Total Ion Chromatogram

TIC from 17JAN05-24.wiff (sample 1) - 8766903RE



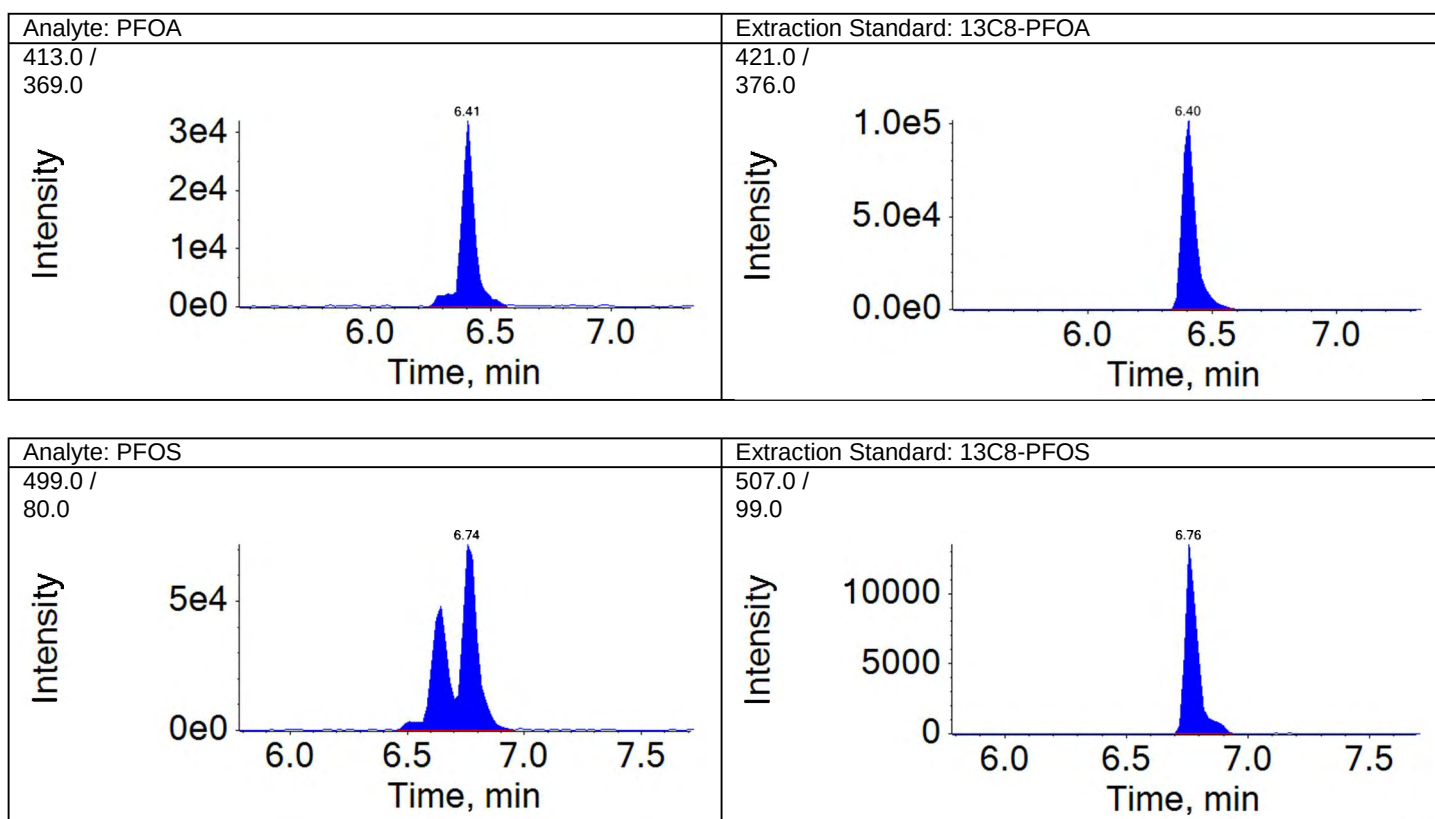
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



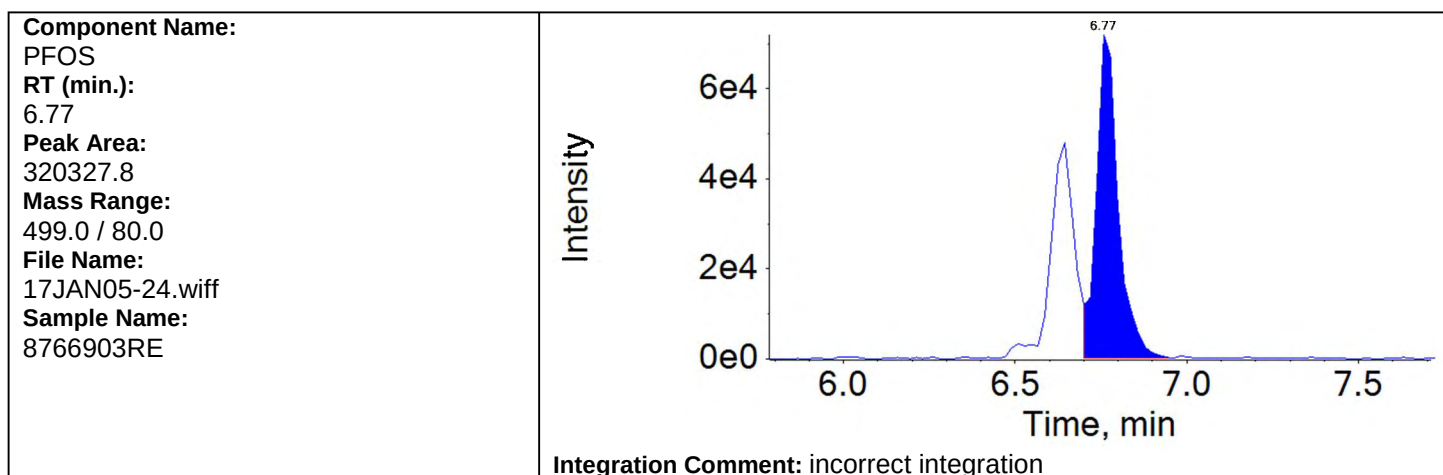
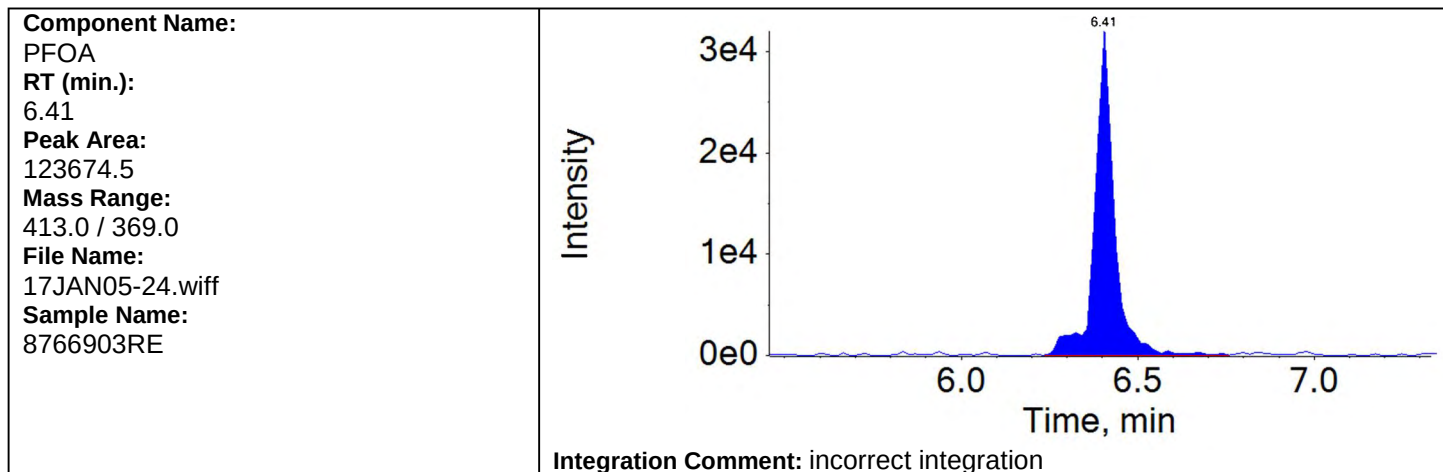
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766904RE			Data File:	17JAN05-25.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW117-P3-1228 Grab Groundwater			Acquis Date:	2017-01-05T16:50:57
Sample Type:	Unknown			Instrument:	LM24960
Vial Position:	99			Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:	16DEC11ICAL
Batch Number:	17004003			Operator:	Not calculated
Sample Wt.:	0.10034			Dilution Factor:	1.00
Sample Vol.:	1.000			Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	435796.9	479624.1	-9.1	50.0	
I13C4-PFOS	1.0	71100.6	91278.0	-22.1	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	292257.7	13C2-PFOA	435796.9	0.671	1.263	9.966	5.292	53.1	70.0-130.0	OOS
E13C8-PFOS	41514.4	13C4-PFOS	71100.6	0.584	1.011	9.966	5.757	57.8	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

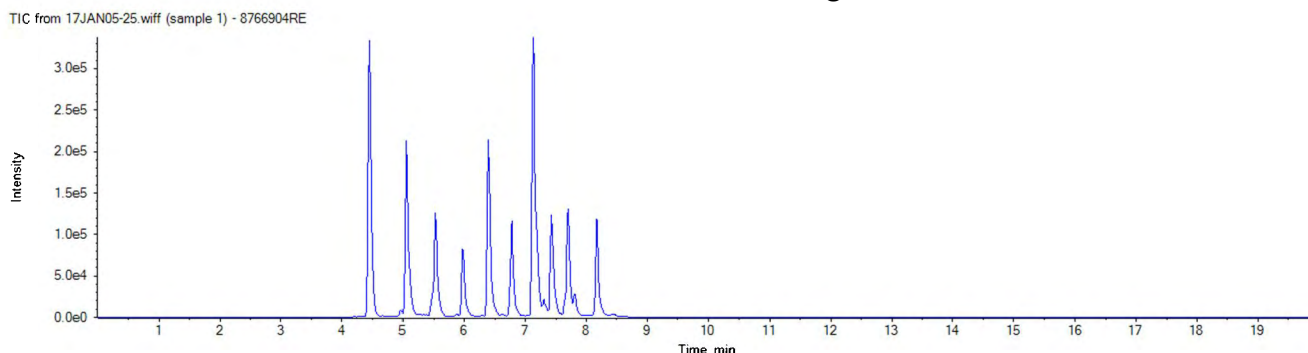
Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Analyte Quantitation Peak Table

Sample Name: 8766904RE			Instrument Name: LM24960			File Name: 17JAN05-25.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
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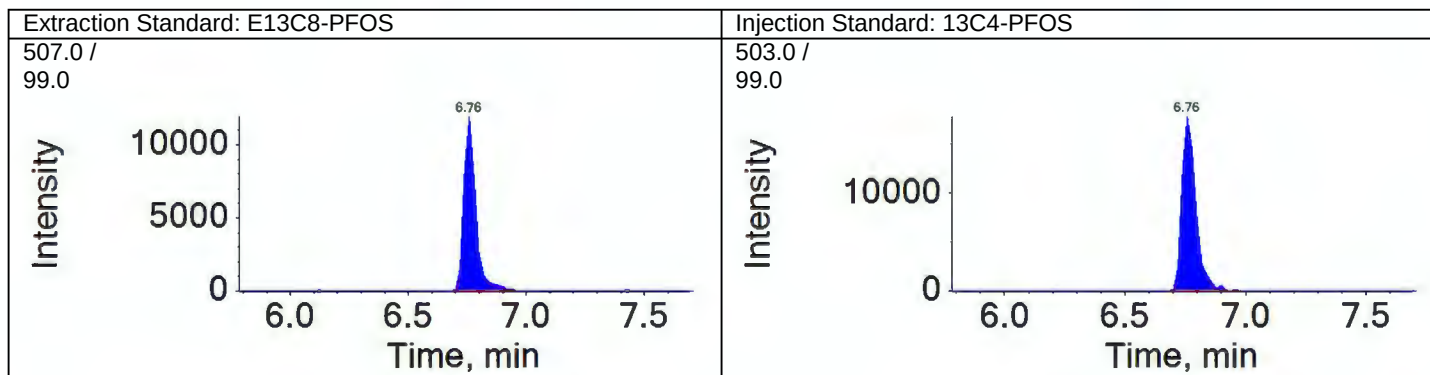
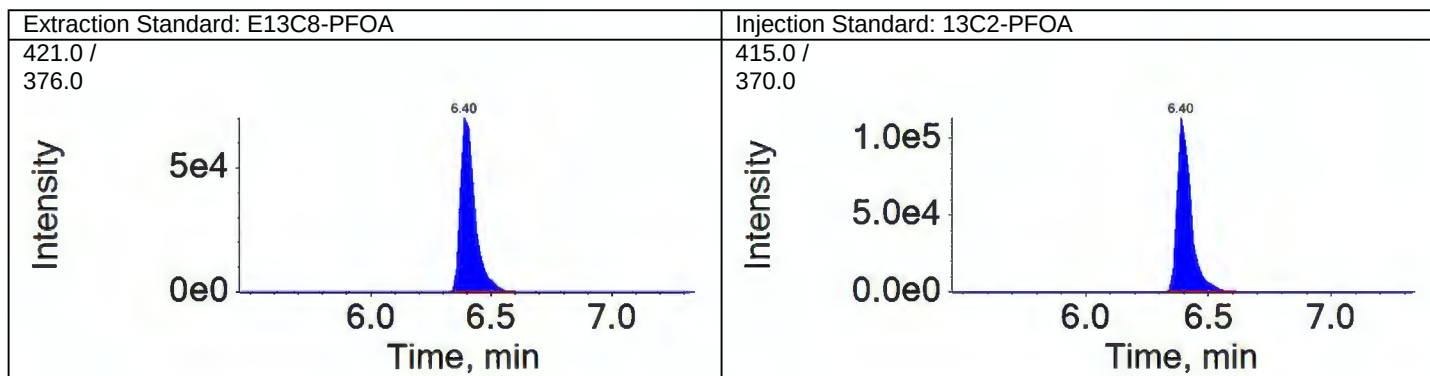
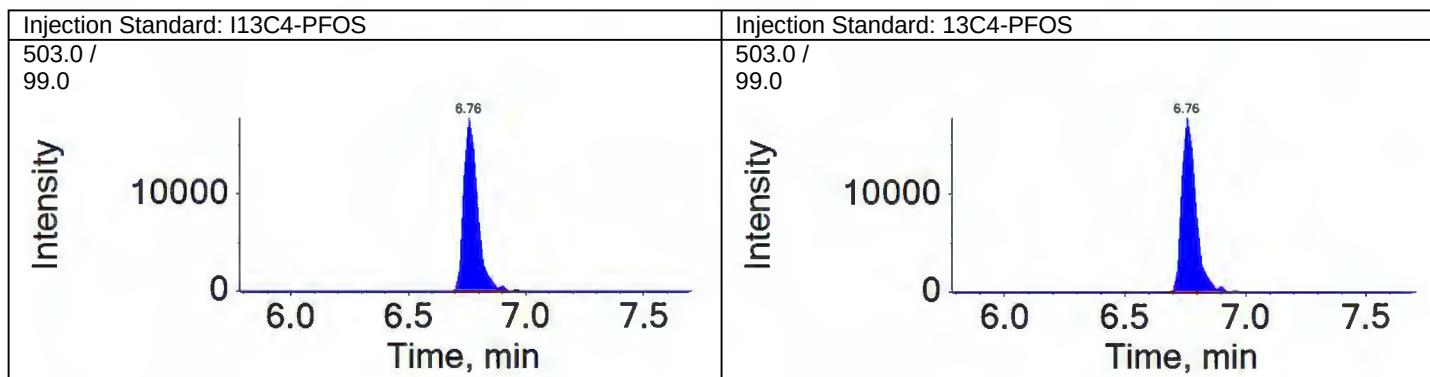
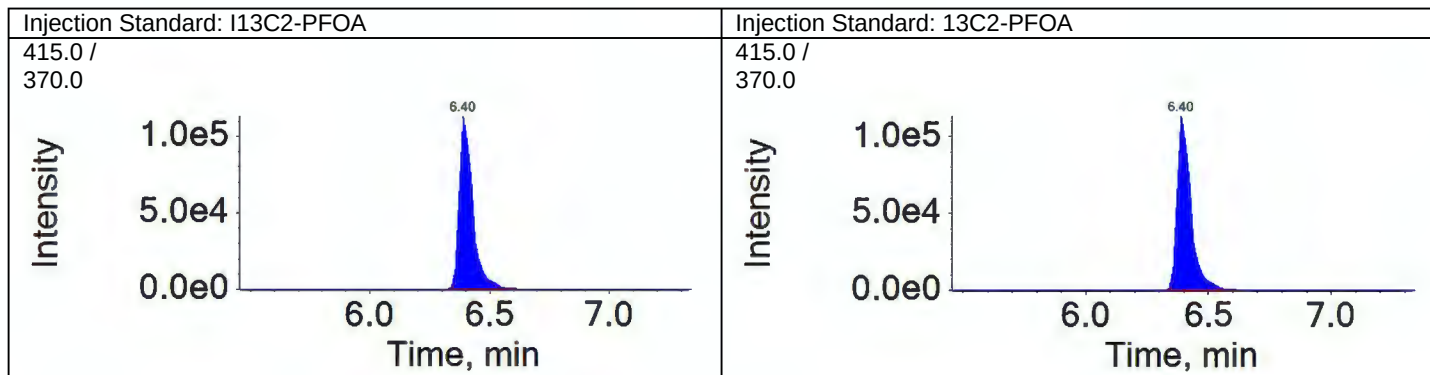
<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.40	1.000	8421.8	M	13C8-PFOA	6.40	292257.7	0.029	1.423
PFOS	6.63	0.980	17732.9	M	13C8-PFOS	6.76	41514.4	0.427	6.825

Total Ion Chromatogram



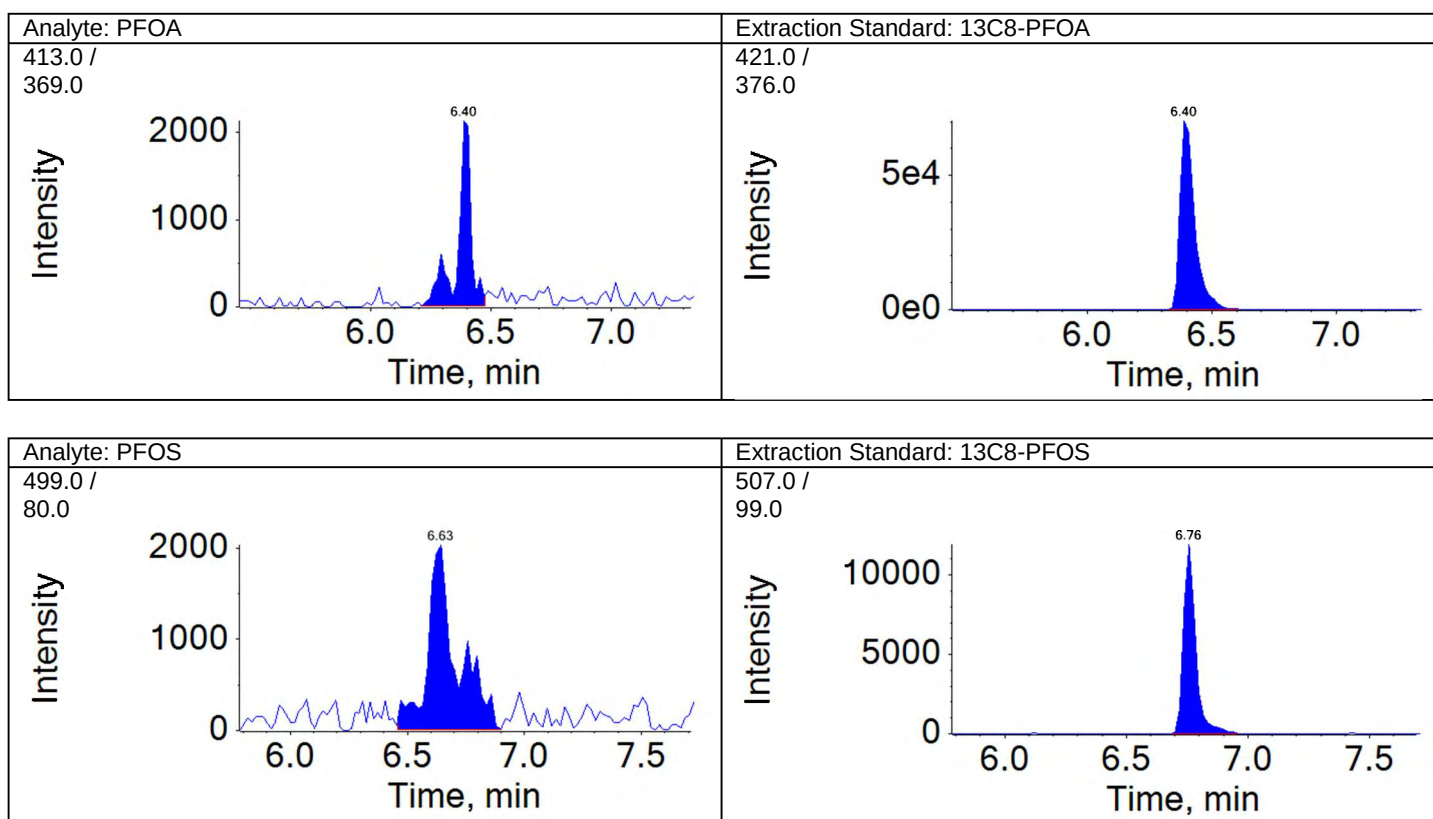
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



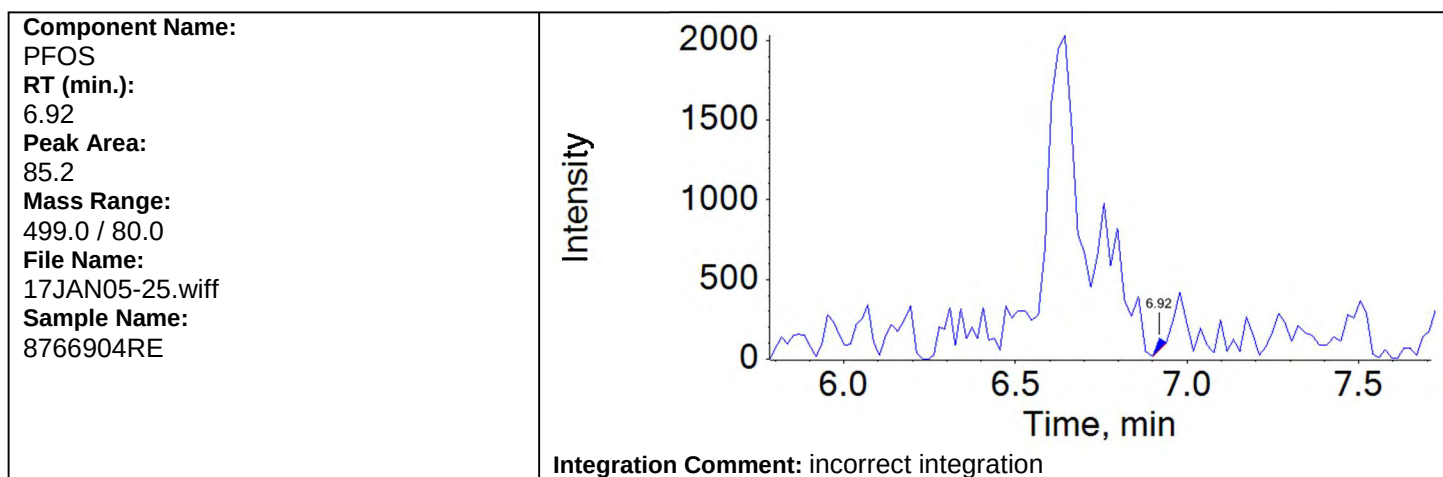
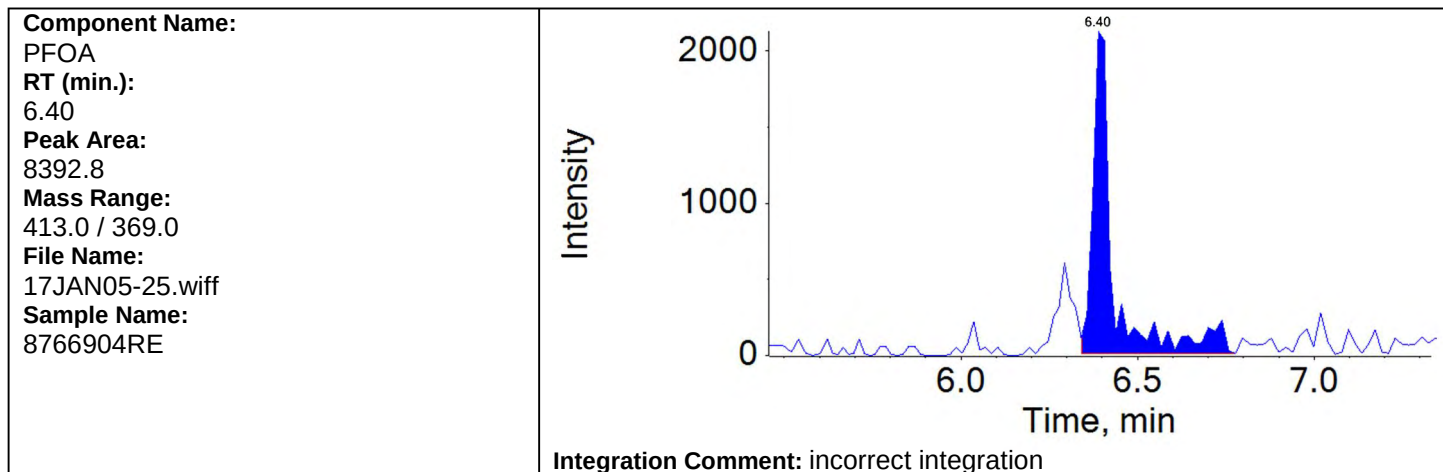
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766905RE		Data File:	17JAN05-26.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW117-P2-1228 Grab Groundwater		Acquis Date:	2017-01-05T17:11:29
Sample Type:	Unknown		Instrument:	LM24960
Vial Position:	100		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	17004003		Operator:	Not calculated
Sample Wt.:	0.10002		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	446053.7	479624.1	-7.0	50.0	
I13C4-PFOS	1.0	73835.6	91278.0	-19.1	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	291894.6	13C2-PFOA	446053.7	0.654	1.263	9.998	5.180	51.8	70.0-130.0	OOS
E13C8-PFOS	35502.6	13C4-PFOS	73835.6	0.481	1.011	9.998	4.756	47.6	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

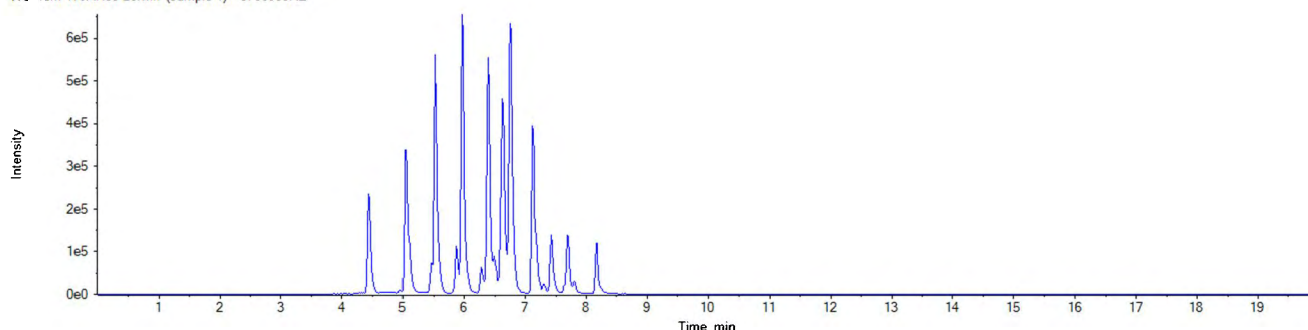
Analyte Quantitation Peak Table

Sample Name: 8766905RE			Instrument Name: LM24960			File Name: 17JAN05-26.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.10002		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.39	1.000	691587.4	M	13C8-PFOA	6.39	291894.6	2.369	117.394
PFOS	6.69	0.990	3513945.0	M	13C8-PFOS	6.76	35502.6	98.977	1586.474

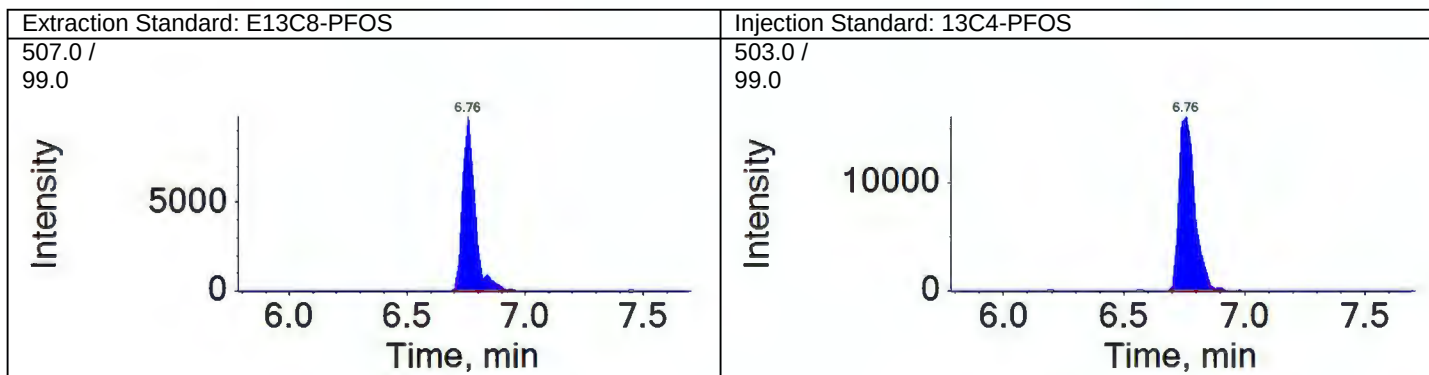
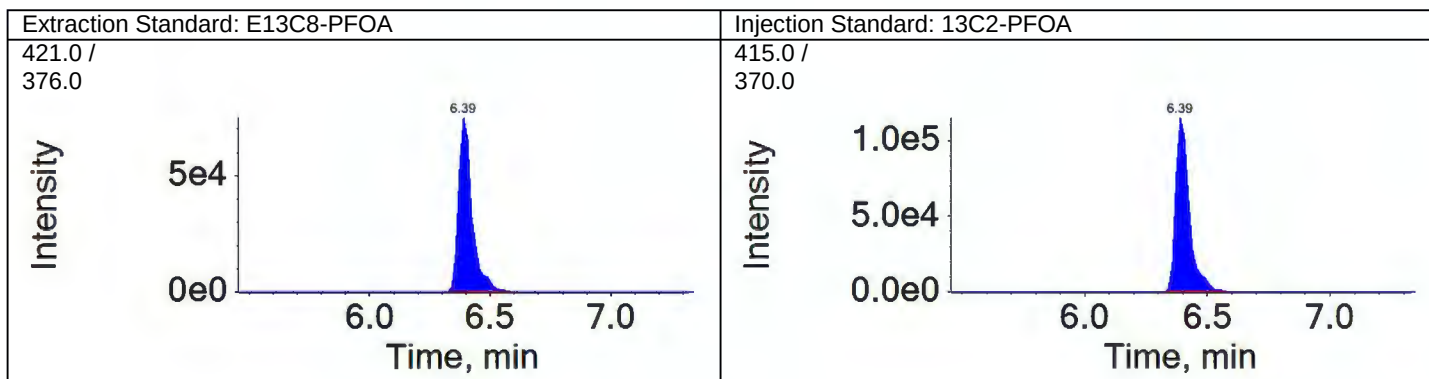
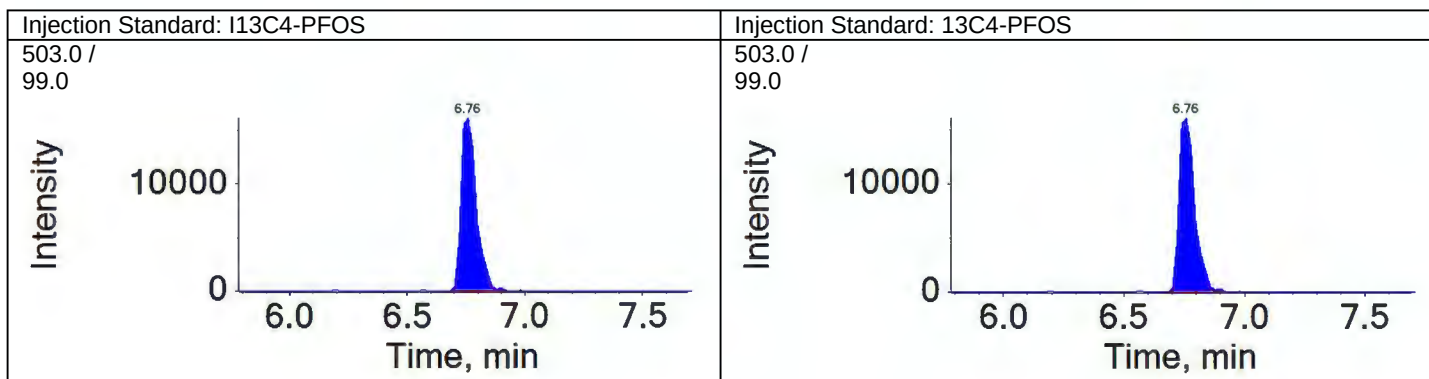
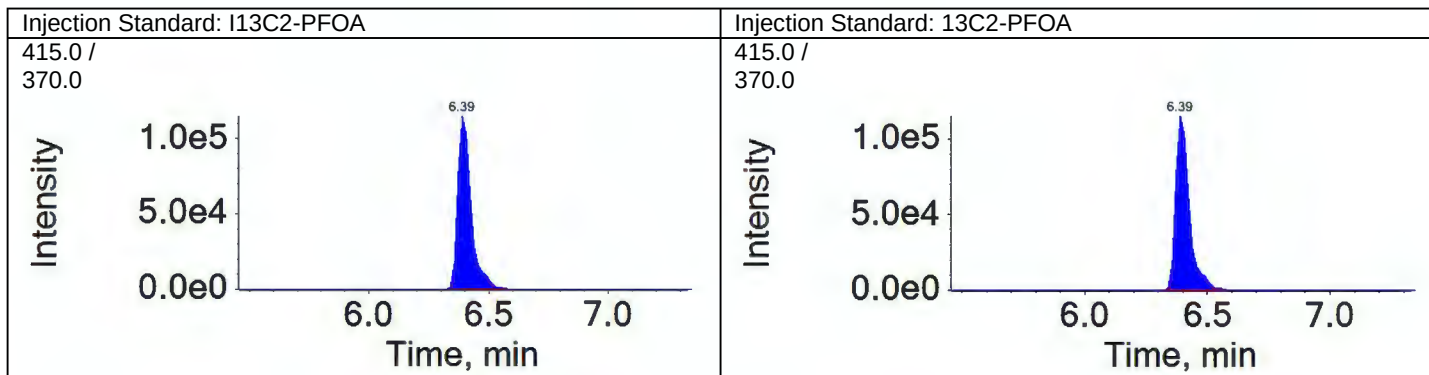
Total Ion Chromatogram

TIC from 17JAN05-26.wiff (sample 1) - 8766905RE



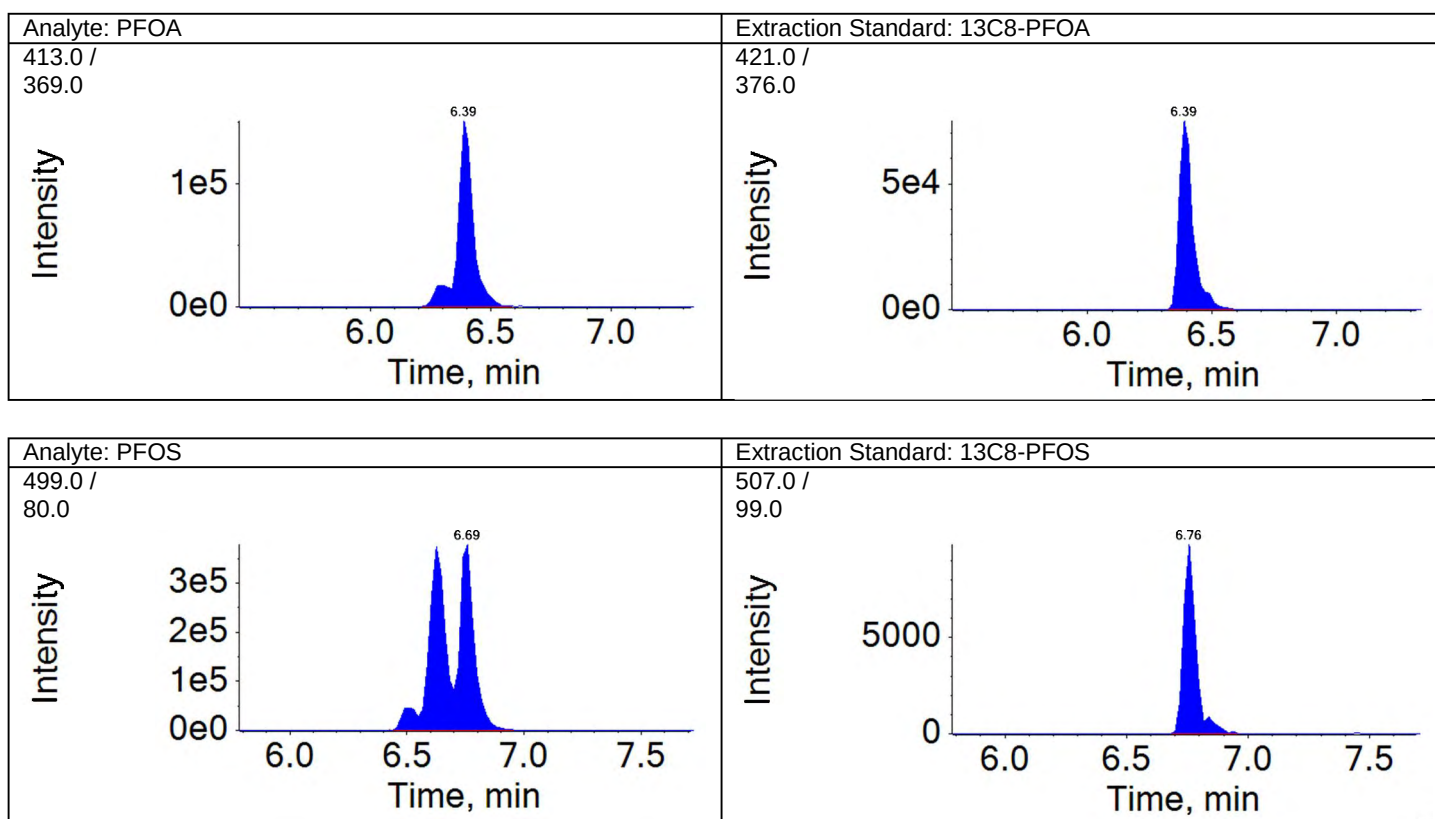
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



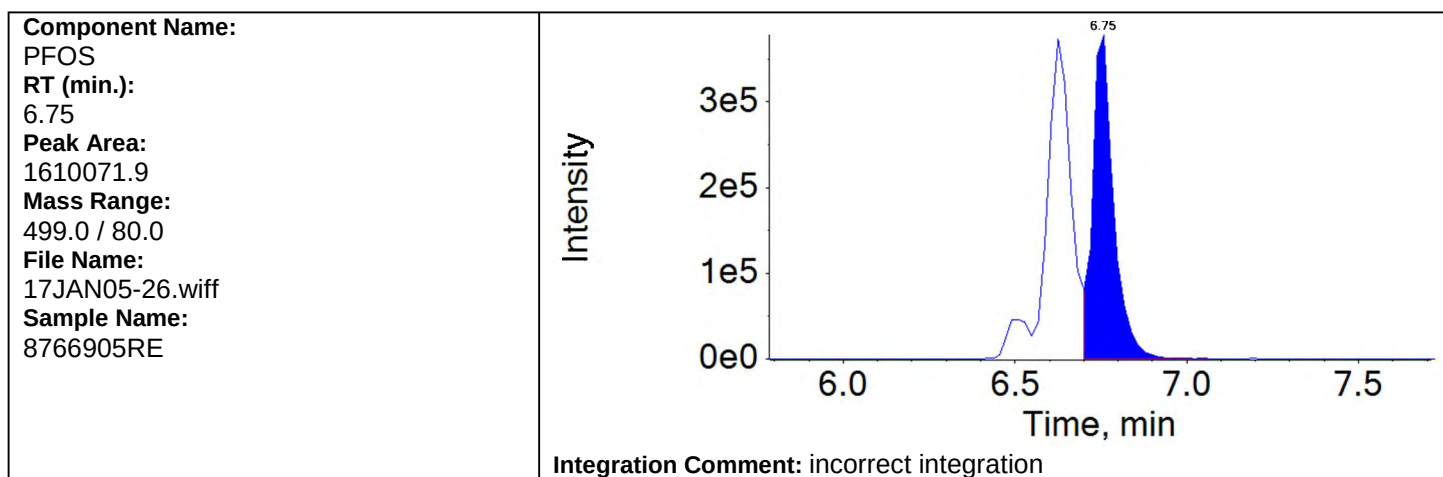
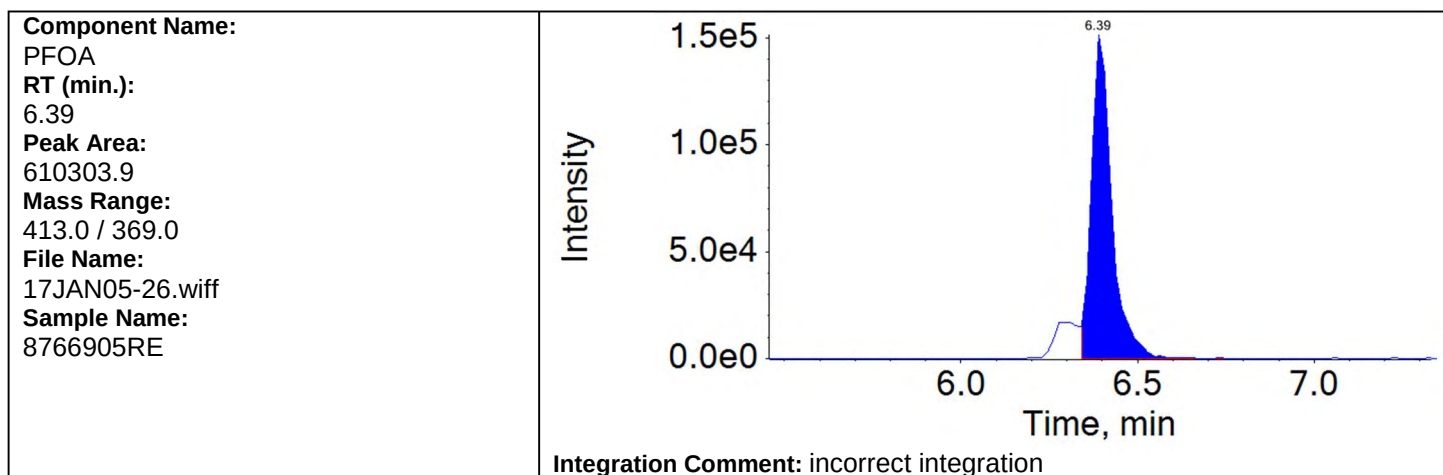
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766905REDL			Data File:	17JAN06-06.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW117-P2-1228 Grab Groundwater			Acquis Date:	2017-01-06T08:14:43
Sample Type:	Unknown			Instrument:	LM24960
Vial Position:	100			Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:	MQ 17004003DL
QMethod File:	PFC-32-16DEC13			ICAL Name:	16DEC11ICAL
Batch Number:	17004003			Operator:	Not calculated
Sample Wt.:	0.10002			Dilution Factor:	10.00
Sample Vol.:	1.000			Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	302635.9	479624.1	-36.9	50.0	
I13C4-PFOS	1.0	57427.4	91278.0	-37.1	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	423773.2	13C2-PFOA	302635.9	1.400	1.263	99.980	110.845	110.9	70.0-130.0	
E13C8-PFOS	56416.7	13C4-PFOS	57427.4	0.982	1.011	99.980	97.167	97.2	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam

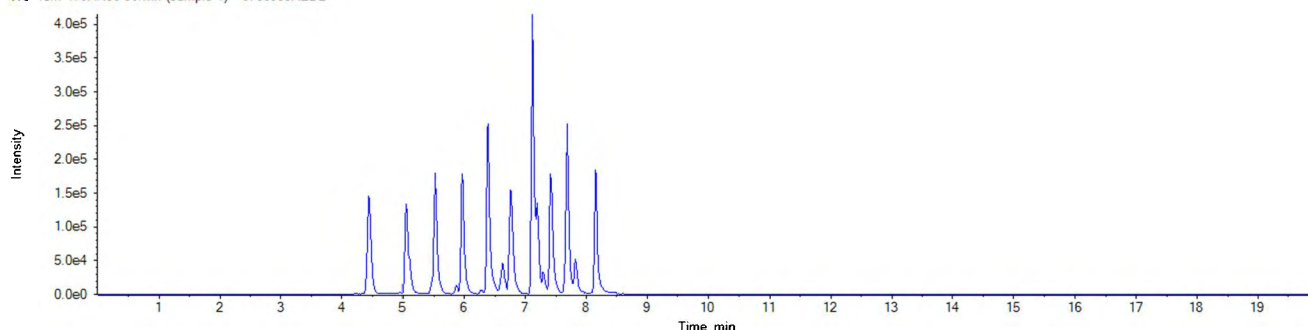
Analyte Quantitation Peak Table

Sample Name: 8766905REDL			Instrument Name: LM24960			File Name: 17JAN06-06.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.10002		1.000		10.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.38	1.000	73764.1	M	13C8-PFOA	6.38	423773.2	0.174	86.246
PFOS	6.69	0.990	353558.7	M	13C8-PFOS	6.75	56416.7	6.267	1004.506

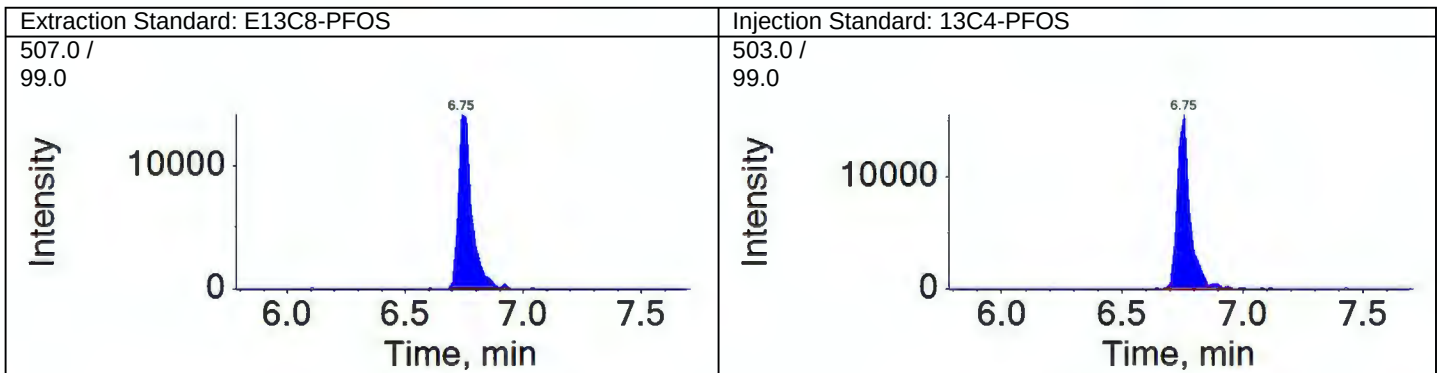
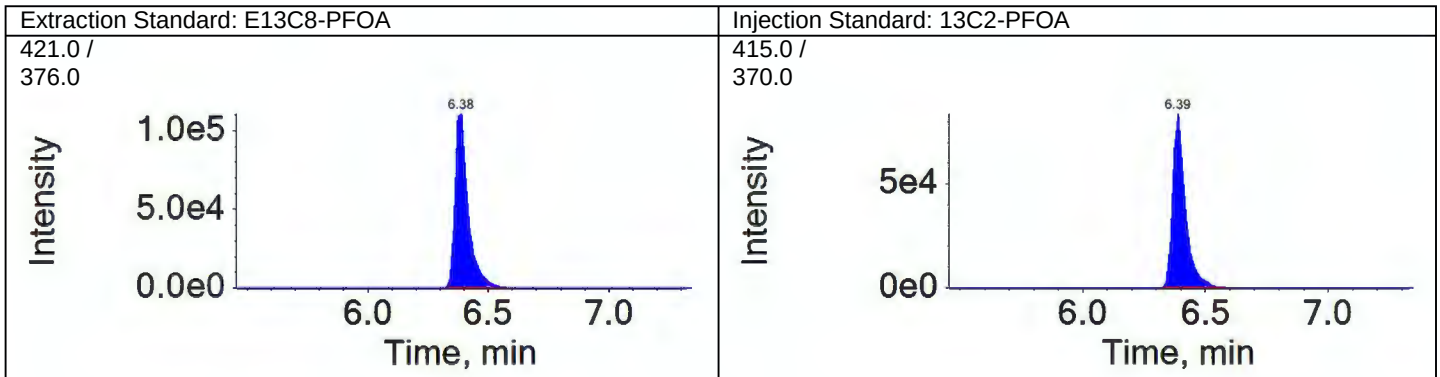
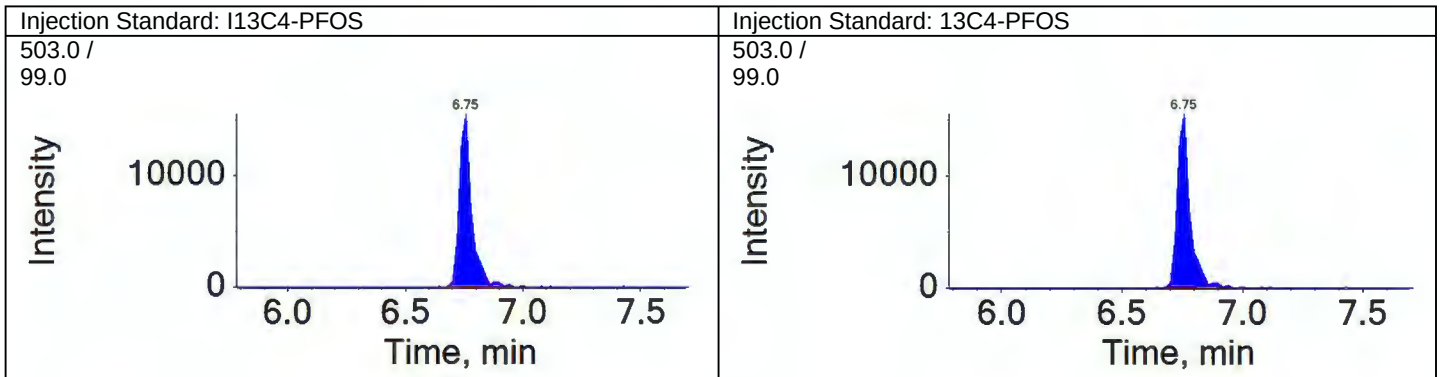
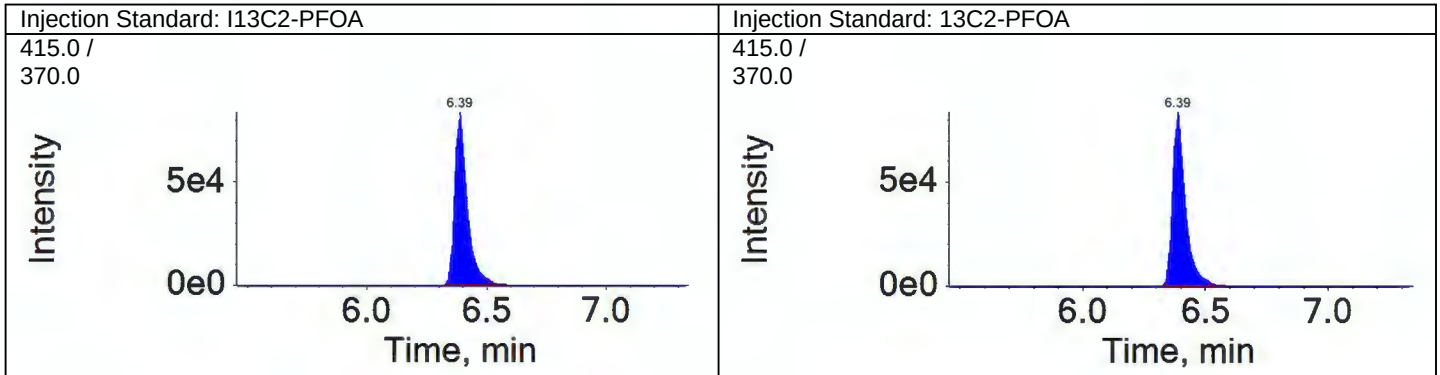
Total Ion Chromatogram

TIC from 17JAN06-06.wiff (sample 1) - 8766905REDL



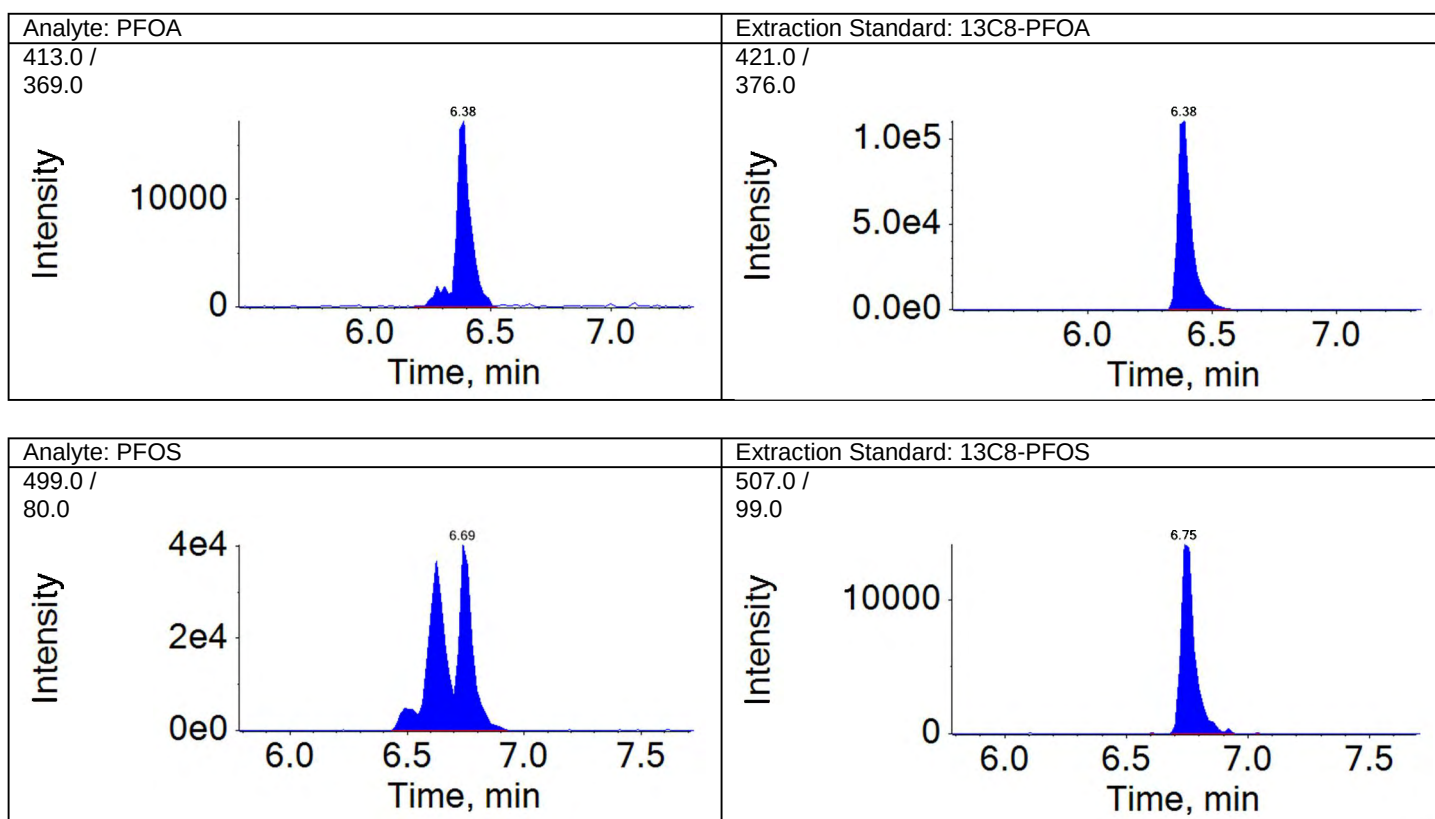
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766906REBKG			Data File:	17JAN05-20.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW117-P1-1228 Grab Groundwater			Acquis Date:	2017-01-05T15:08:20
Sample Type:	Unknown			Instrument:	LM24960
Vial Position:	94			Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:	16DEC11ICAL
Batch Number:	17004003			Operator:	Not calculated
Sample Wt.:	0.09984			Dilution Factor:	1.00
Sample Vol.:	1.000			Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	359454.4	479624.1	-25.1	50.0	
I13C4-PFOS	1.0	47634.0	91278.0	-47.8	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	323505.9	13C2-PFOA	359454.4	0.900	1.263	10.016	7.137	71.3	70.0-130.0	
E13C8-PFOS	35043.4	13C4-PFOS	47634.0	0.736	1.011	10.016	7.290	72.8	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

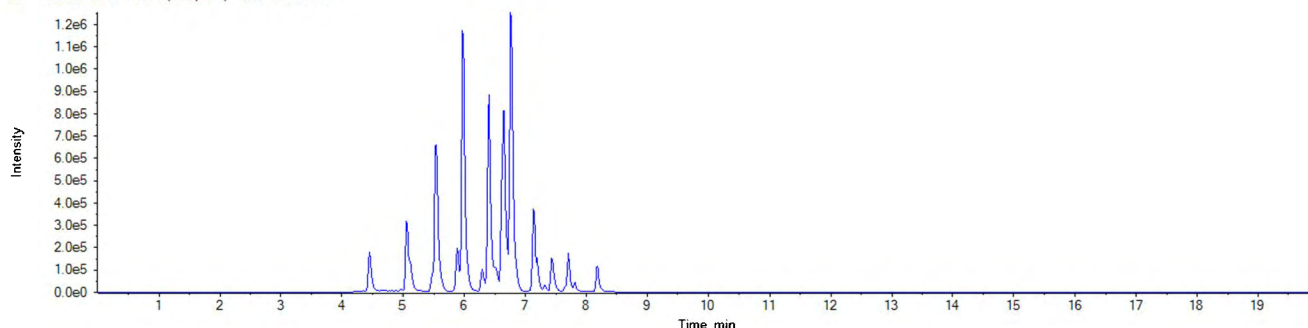
Analyte Quantitation Peak Table

Sample Name: 8766906REBKG			Instrument Name: LM24960			File Name: 17JAN05-20.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.09984		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.40	1.000	1274760.2	M	13C8-PFOA	6.40	323505.9	3.941	195.593
PFOS	6.71	0.990	6718016.1	A	13C8-PFOS	6.77	35043.4	191.706	3078.333

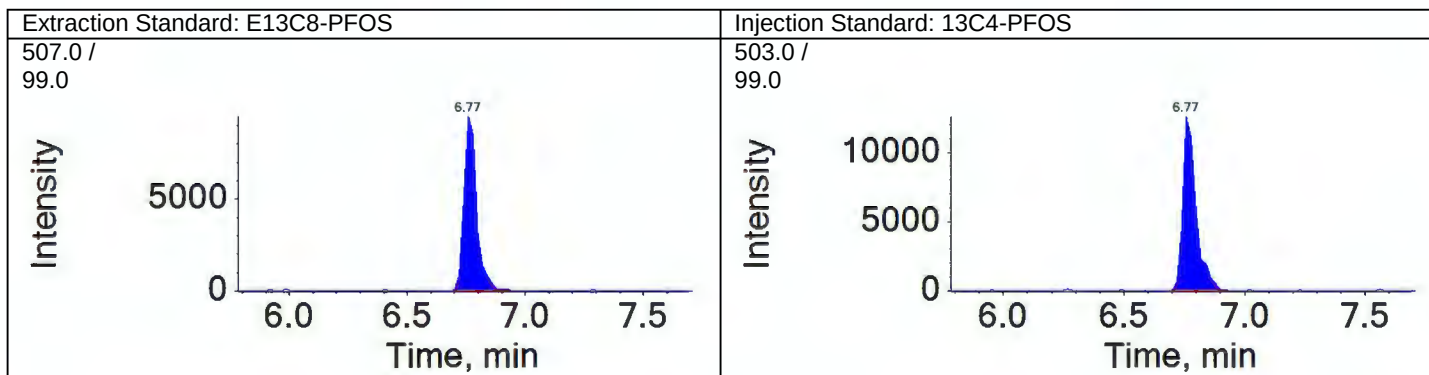
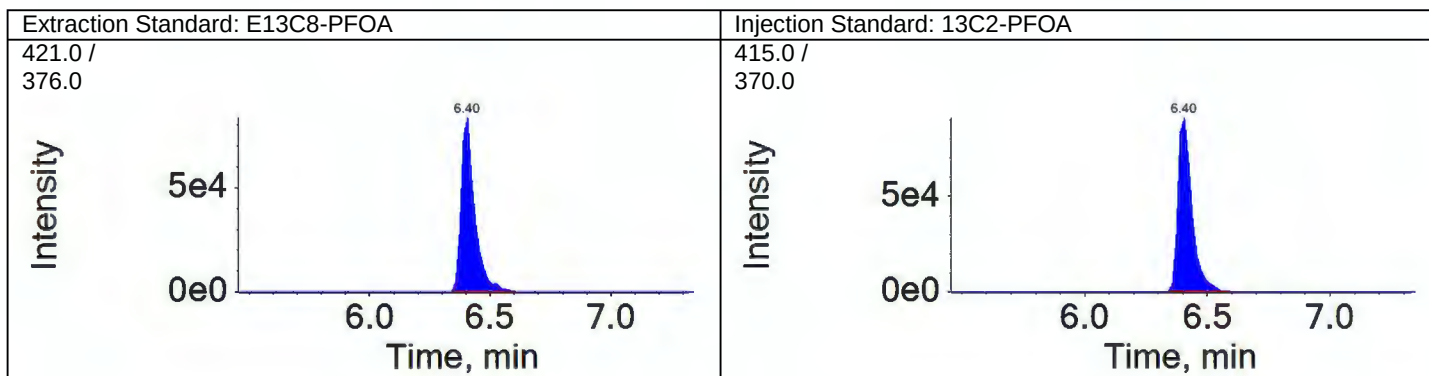
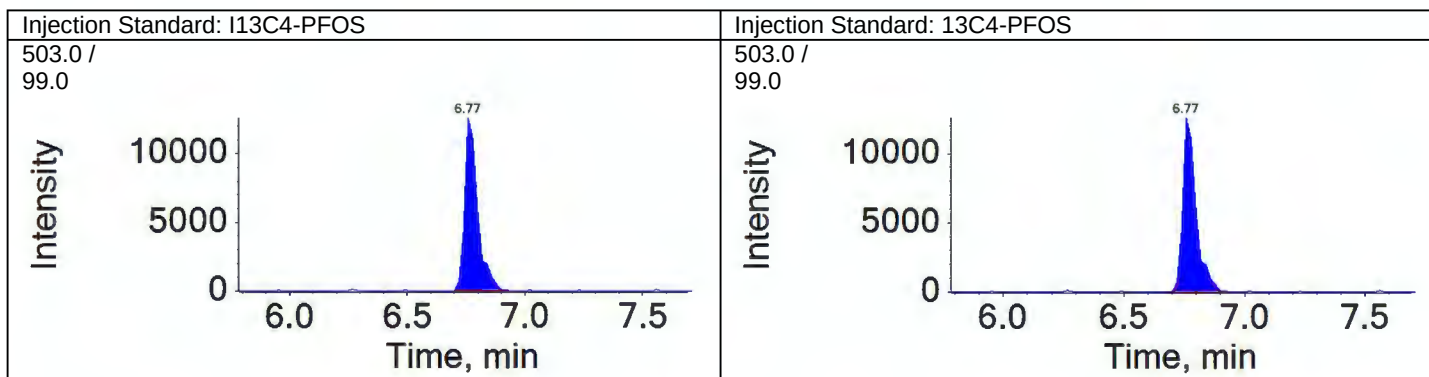
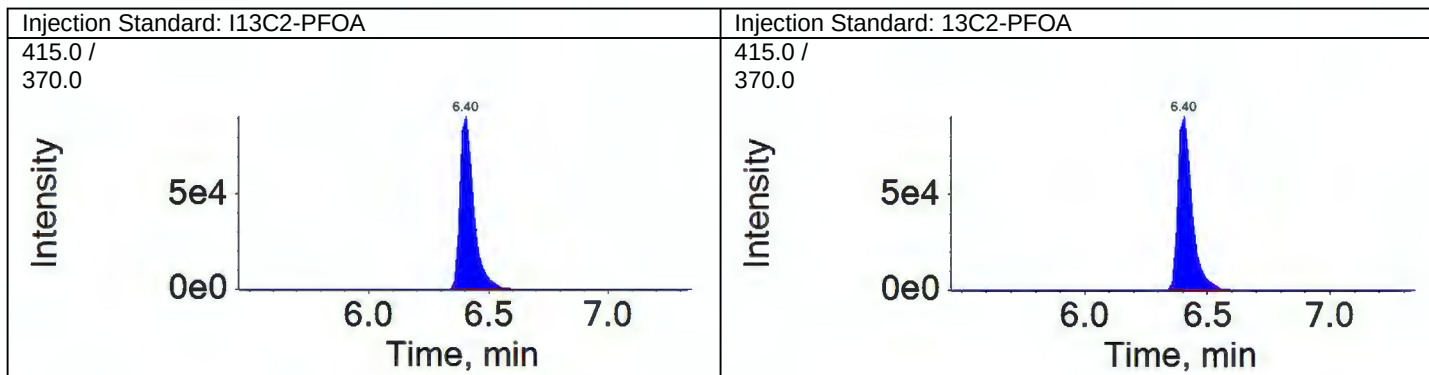
Total Ion Chromatogram

TIC from 17JAN05-20.wiff (sample 1) - 8766906REBKG



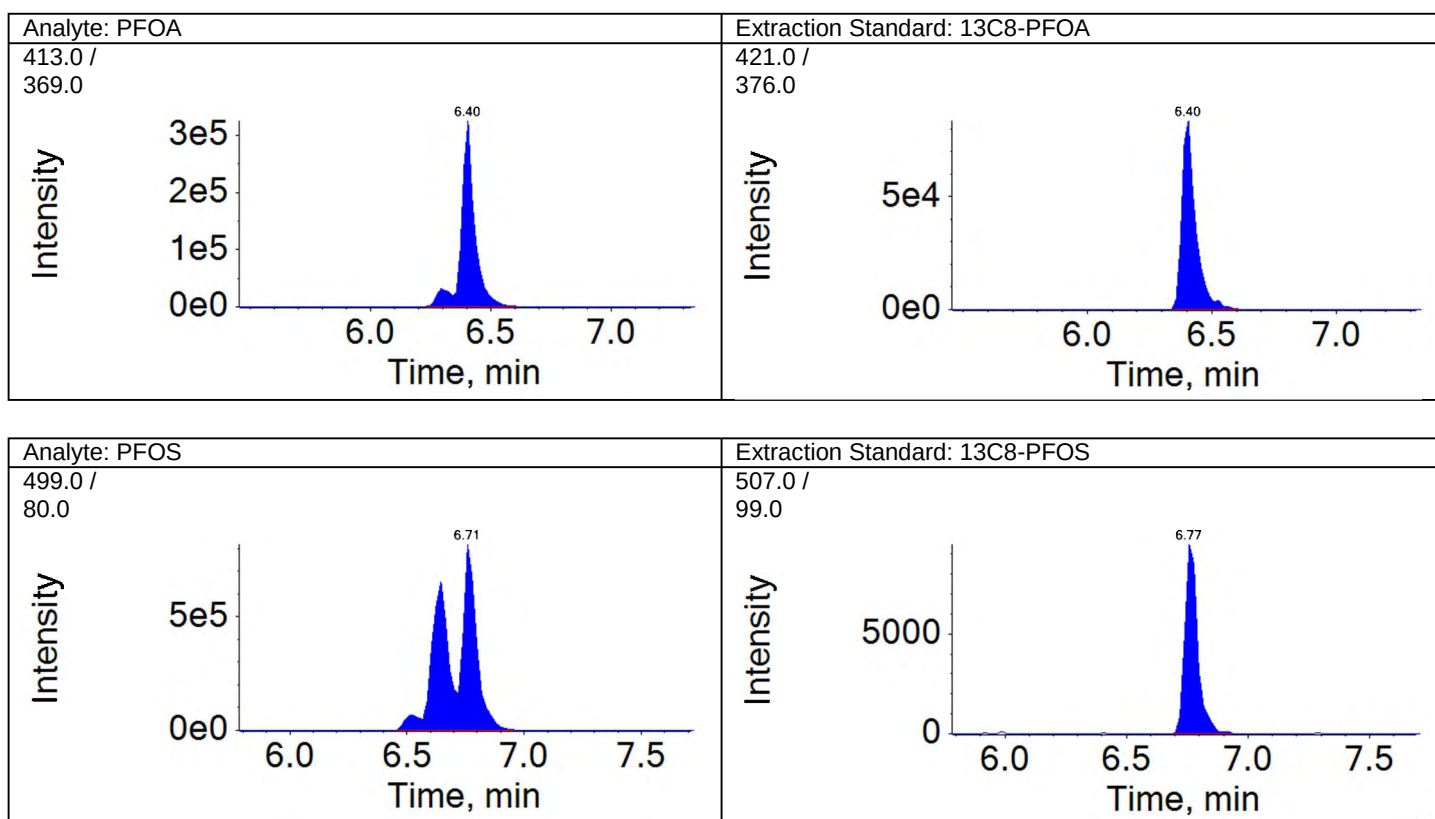
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

Component Name:

PFOA

RT (min.):

6.40

Peak Area:

1153084.2

Mass Range:

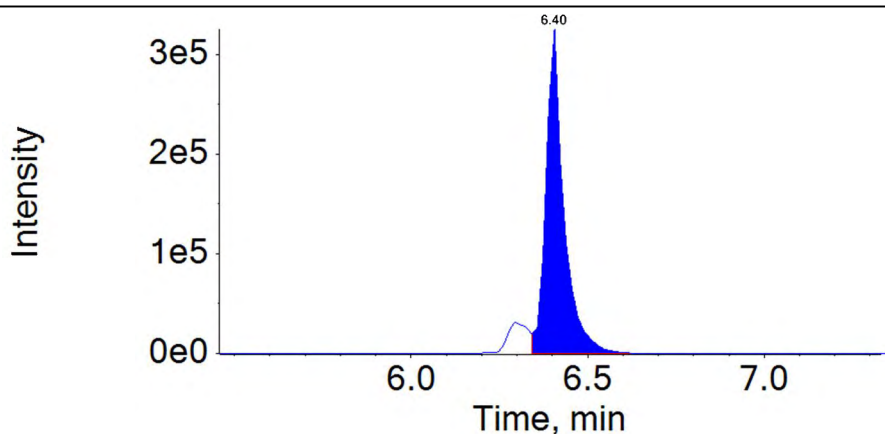
413.0 / 369.0

File Name:

17JAN05-20.wiff

Sample Name:

8766906REBK



Integration Comment: incorrect integration

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766906REBKGD		Data File:	17JAN06-05.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW117-P1-1228 Grab Groundwater		Acquis Date:	2017-01-06T07:54:13
Sample Type:	Unknown		Instrument:	LM24960
Vial Position:	94		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003DL
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	17004003		Operator:	Not calculated
Sample Wt.:	0.09984		Dilution Factor:	10.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	353330.2	479624.1	-26.3	50.0	
I13C4-PFOS	1.0	58035.5	91278.0	-36.4	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	372449.9	13C2-PFOA	353330.2	1.054	1.263	100.160	83.594	83.5	70.0-130.0	
E13C8-PFOS	50190.8	13C4-PFOS	58035.5	0.865	1.011	100.160	85.693	85.6	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam

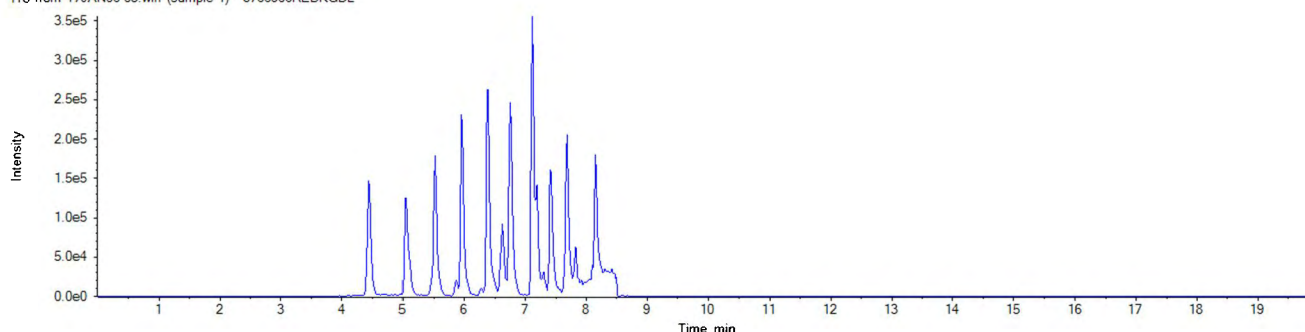
Analyte Quantitation Peak Table

Sample Name: 8766906REBKGD		Instrument Name: LM24960		File Name: 17JAN06-05.wiff	
Sample Wt		Sample Vol		Dilution Factor	
0.09984		1.000		10.00	
PrepFactor				1.000	

Analyte Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/L)
PFOA	6.38	1.000	138921.5	A	13C8-PFOA	6.38	372449.9	0.373	185.144
PFOS	6.72	1.000	798462.9	M	13C8-PFOS	6.74	50190.8	15.909	2554.530

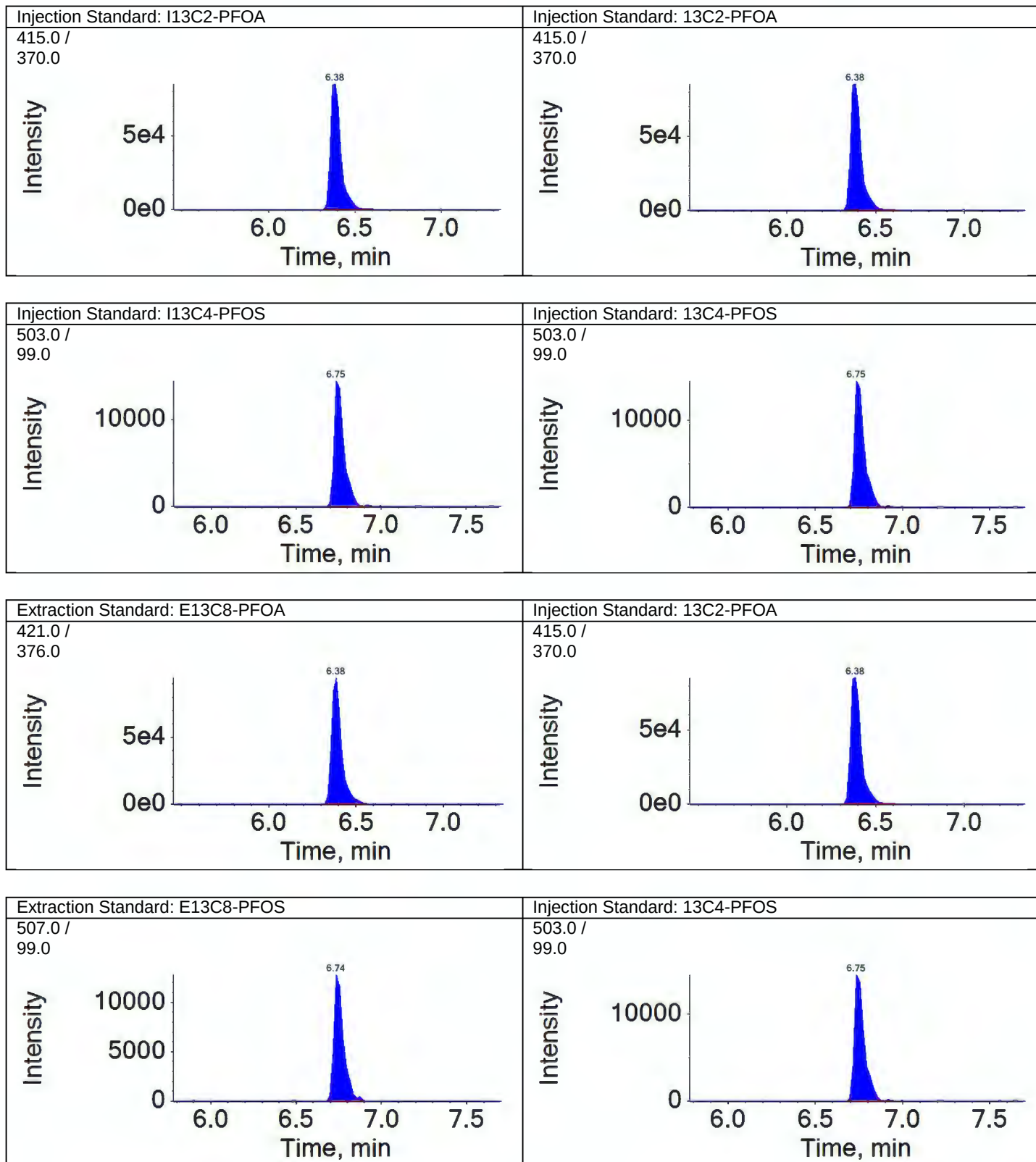
Total Ion Chromatogram

TIC from 17JAN06-05.wiff (sample 1) - 8766906REBKGD



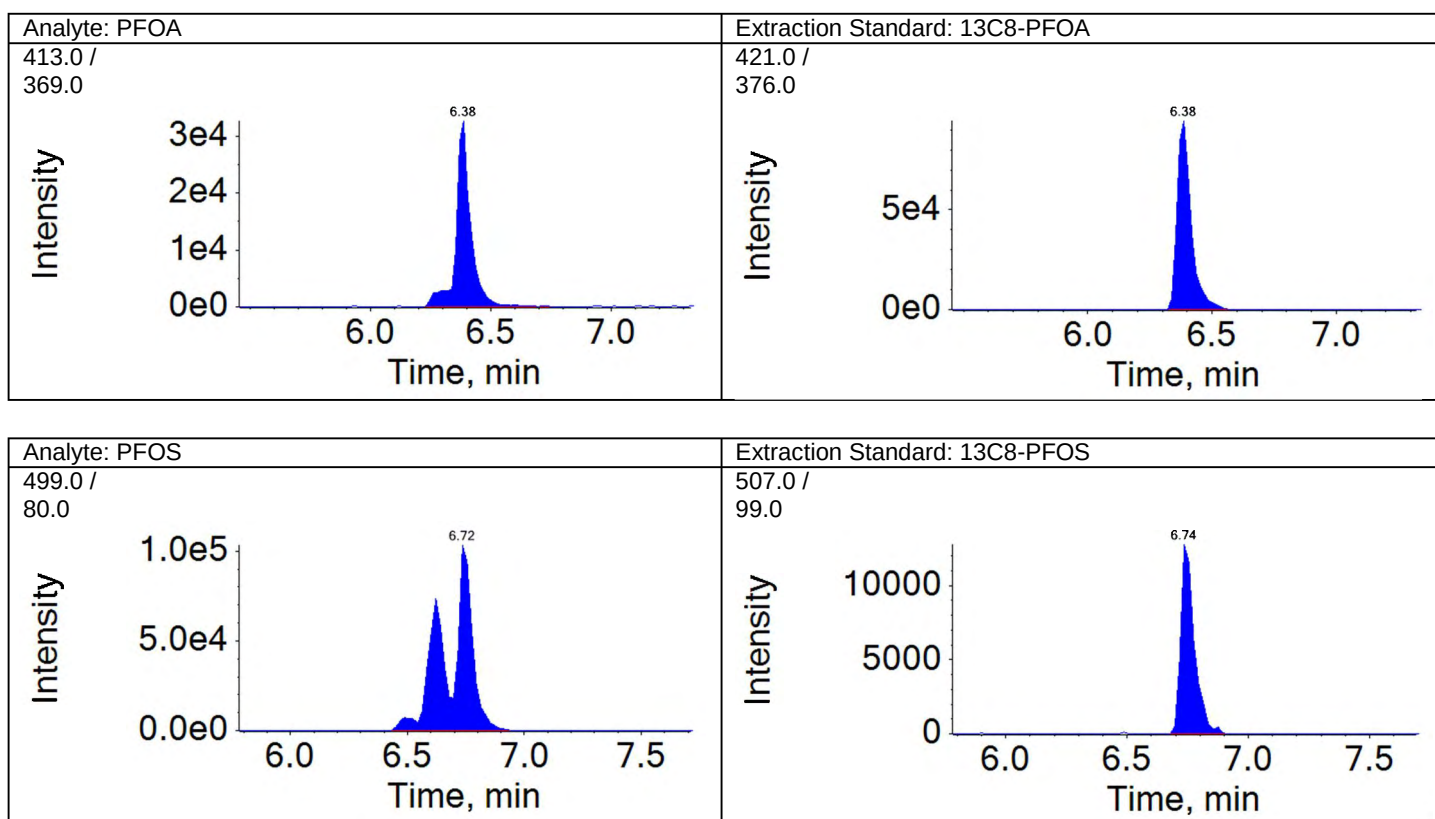
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003DL 1/6/2017 9:19:30 AM
Acquisition Method: PFC-32-16NOV02.dam



Standards Data

PFAS by LC/MS/MS

Instrument	Acquisition Date	File Name	Sample ID	Vial Position	Samp Wt	Samp Vol	DF
Triple Quad 4500, 0, LM24960	12/11/2016 3:44:57 PM	16DEC11-24.wiff	MDL0.5	11	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 4:05:29 PM	16DEC11-25.wiff	CAL1	2	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 4:26:02 PM	16DEC11-26.wiff	CAL2	3	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 4:46:32 PM	16DEC11-27.wiff	CAL3	4	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 5:07:02 PM	16DEC11-28.wiff	CAL4	5	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 5:27:35 PM	16DEC11-29.wiff	CAL5	6	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 5:48:05 PM	16DEC11-30.wiff	CAL6	7	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 6:08:38 PM	16DEC11-31.wiff	CAL7	8	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 6:49:45 PM	16DEC11-33.wiff	L/B Check	10	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 7:10:18 PM	16DEC11-34.wiff	ICV	9	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	12/11/2016 7:30:48 PM	16DEC11-35.wiff	CCV1	4	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 1:46:12 PM	17JAN05-16.wiff	CCV3	4	1.00	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 2:06:44 PM	17JAN05-17.wiff	BLK004003	91	0.10	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 2:27:17 PM	17JAN05-18.wiff	LCS004003	92	0.10	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 2:47:50 PM	17JAN05-19.wiff	LCSDA	93	0.10	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 3:08:20 PM	17JAN05-20.wiff	8766906REBKG	94	0.10	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 3:28:53 PM	17JAN05-21.wiff	8766906MS	95	0.07	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 3:49:23 PM	17JAN05-22.wiff	8766901RE	96	0.07	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 4:09:53 PM	17JAN05-23.wiff	8766902RE	97	0.10	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 4:30:24 PM	17JAN05-24.wiff	8766903RE	98	0.10	1.00	1.00

LM24960							
Triple Quad 4500, 0, LM24960	1/5/2017 4:50:57 PM	17JAN05-25.wiff	8766904RE	99	0.10	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 5:11:29 PM	17JAN05-26.wiff	8766905RE	100	0.10	1.00	1.00
Triple Quad 4500, 0, LM24960	1/5/2017 5:32:02 PM	17JAN05-27.wiff	CCV4	4	1.00	1.00	1.00

Results Table Name: MQ 17004003 1/6/2017 7:37:31 AM

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 9:33 am, 1/6/17

Result Table Name: MQ 17004003DL 1/6/2017 9:19:30 AM

Instrument	Acquisition Date	File Name	Sample Name	DF	Status
Triple Quad 4500, 0, LM24960	12/11/2016 3:44:57 PM	16DEC11-24.wiff	NA-MDL0.5	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 4:05:29 PM	16DEC11-25.wiff	NA-CAL1	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 4:26:02 PM	16DEC11-26.wiff	NA-CAL2	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 4:46:32 PM	16DEC11-27.wiff	NA-CAL3	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 5:07:02 PM	16DEC11-28.wiff	NA-CAL4	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 5:27:35 PM	16DEC11-29.wiff	NA-CAL5	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 5:48:05 PM	16DEC11-30.wiff	NA-CAL6	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 6:08:38 PM	16DEC11-31.wiff	NA-CAL7	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 6:49:45 PM	16DEC11-33.wiff	NA-L/B Check	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 7:10:18 PM	16DEC11-34.wiff	NA-ICV	1.00	
Triple Quad 4500, 0, LM24960	12/11/2016 7:30:48 PM	16DEC11-35.wiff	NA-CCV1	1.00	
Triple Quad 4500, 0, LM24960	1/6/2017 7:33:40 AM	17JAN06-04.wiff	N/A-CCV3	1.00	
Triple Quad 4500, 0, LM24960	1/6/2017 7:54:13 AM	17JAN06-05.wiff	17004003-8766906REBKGD	10.00	
Triple Quad 4500, 0, LM24960	1/6/2017 8:14:43 AM	17JAN06-06.wiff	17004003-8766905REDL	10.00	
Triple Quad 4500, 0, LM24960	1/6/2017 8:35:13 AM	17JAN06-07.wiff	N/A-CCV4	1.00	

Initial Calibration Verification

Instrument ID: LM24960

ICAL Name: 16DEC11ICAL

QMethod Name: PFC-32-16DEC13

Result Table: MQ 170040031/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam

Sample File Name	Acquisition Date	Sample ID	Sample Name
16DEC11-25.wiff	12/11/2016 4:05:29 PM	CALPFC11637F	CAL1
16DEC11-26.wiff	12/11/2016 4:26:02 PM	CALPFC21637F	CAL2
16DEC11-27.wiff	12/11/2016 4:46:32 PM	CALPFC31637F	CAL3
16DEC11-28.wiff	12/11/2016 5:07:02 PM	CALPFC41637F	CAL4
16DEC11-29.wiff	12/11/2016 5:27:35 PM	CALPFC51637F	CAL5
16DEC11-30.wiff	12/11/2016 5:48:05 PM	CALPFC61637G	CAL6
16DEC11-31.wiff	12/11/2016 6:08:38 PM	CALPFC71637A	CAL7

Injection Standard Averages

Sample Name	Injection Std Name	Use	Injection Std Area	AVG Area
CAL1	I13C2-PFOA	True	523950.7	479624.1
CAL2	I13C2-PFOA	True	541538.6	479624.1
CAL3	I13C2-PFOA	True	528166.9	479624.1
CAL4	I13C2-PFOA	True	489612.1	479624.1
CAL5	I13C2-PFOA	True	456462.5	479624.1
CAL6	I13C2-PFOA	True	448381.2	479624.1
CAL7	I13C2-PFOA	True	369256.4	479624.1
CAL1	I13C4-PFOS	True	104889.0	91278.0
CAL2	I13C4-PFOS	True	106035.9	91278.0
CAL3	I13C4-PFOS	True	93393.0	91278.0
CAL4	I13C4-PFOS	True	87777.9	91278.0
CAL5	I13C4-PFOS	True	90396.6	91278.0
CAL6	I13C4-PFOS	True	81956.2	91278.0
CAL7	I13C4-PFOS	True	74497.3	91278.0

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 9:33 am, 1/6/17

Initial Calibration Verification

Instrument ID: LM24960

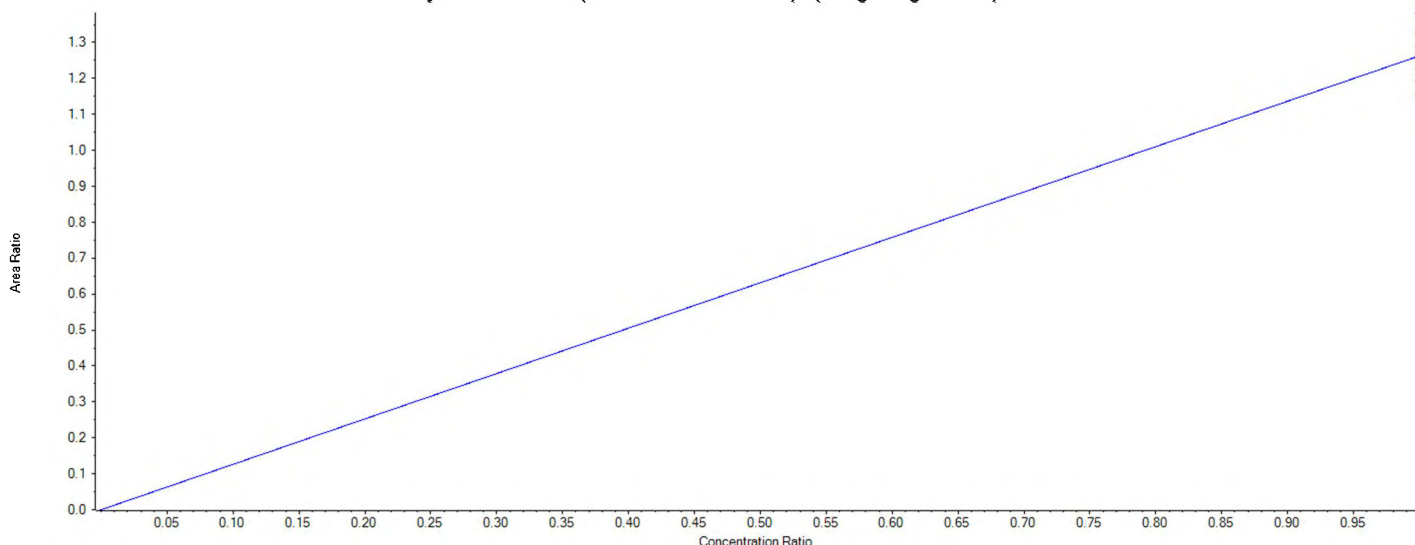
ICAL Name: 16DEC11ICAL

QMethod Name: PFC-32-16DEC13

Result Table: MQ 170040031/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam

E13C8-PFOA

 $y = 1.26302 \times (\text{std. dev.} = 0.07801)$ (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C8-PFOA Area	13C2-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	693807.3	523950.7	True	1.00	1.324	6.56	1.000	1.000	1.048	4.8	50.0	
CAL2	748483.3	541538.6	True	1.00	1.382	6.55	1.000	1.000	1.094	9.4	30.0	
CAL3	648179.8	528166.9	True	1.00	1.227	6.56	1.000	1.000	0.972	-2.8	30.0	
CAL4	630967.0	489612.1	True	1.00	1.289	6.54	1.000	1.000	1.020	2.0	30.0	
CAL5	580269.9	456462.5	True	1.00	1.271	6.55	1.000	1.000	1.007	0.7	30.0	
CAL6	518168.3	448381.2	True	1.00	1.156	6.54	1.000	1.000	0.915	-8.5	30.0	
CAL7	440154.0	369256.4	True	1.00	1.192	6.56	1.000	1.000	0.944	-5.6	30.0	

Initial Calibration Verification

Instrument ID: LM24960

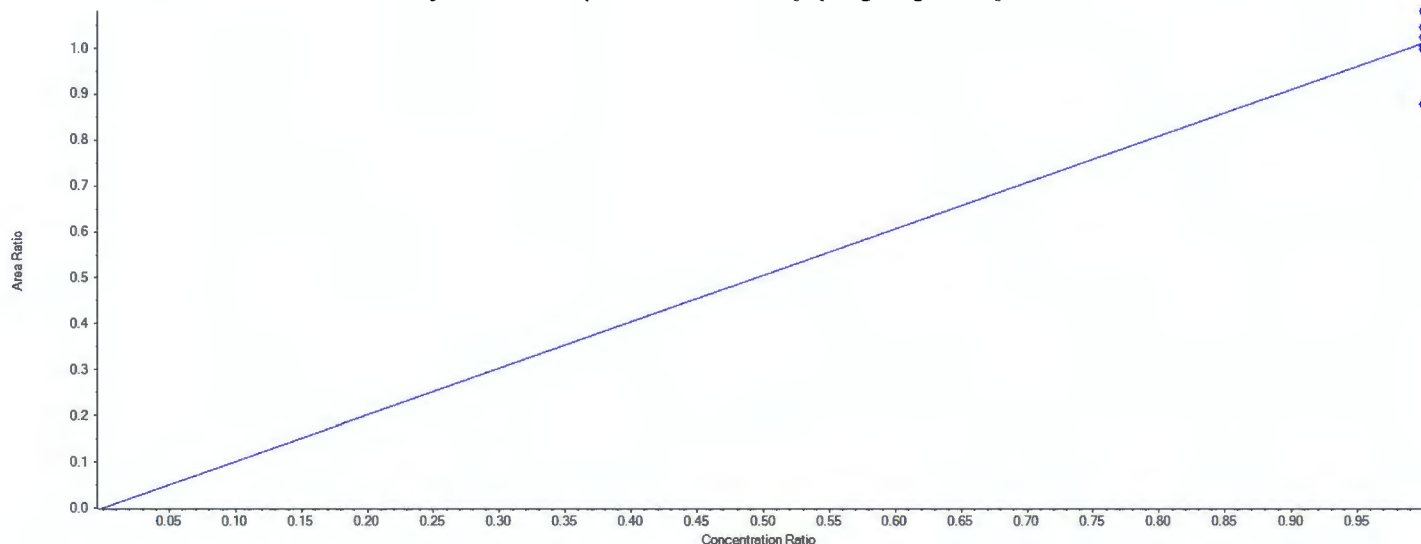
ICAL Name: 16DEC11ICAL

QMethod Name: PFC-32-16DEC13

Result Table: MQ 170040031/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam

E13C8-PFOS

 $y = 1.01084 x$ (std. dev. = 0.06494) (weighting: None)

Extraction Standard Calibration Verification

Sample Name	E13C8-PFOS Area	13C4-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	92138.1	104889.0	True	1.00	0.878	6.92	1.000	1.000	0.869	-13.1	50.0	
CAL2	106407.5	106035.9	True	1.00	1.004	6.91	1.000	1.000	0.993	-0.7	30.0	
CAL3	97719.1	93393.0	True	1.00	1.046	6.92	1.000	1.000	1.035	3.5	30.0	
CAL4	89877.7	87777.9	True	1.00	1.024	6.91	1.000	1.000	1.013	1.3	30.0	
CAL5	97666.4	90396.6	True	1.00	1.080	6.91	1.000	1.000	1.069	6.9	30.0	
CAL6	85745.5	81956.2	True	1.00	1.046	6.90	1.000	1.000	1.035	3.5	30.0	
CAL7	74275.9	74497.3	True	1.00	0.997	6.92	1.000	1.000	0.986	-1.4	30.0	

Initial Calibration Verification

Instrument ID: LM24960

ICAL Name: 16DEC11ICAL

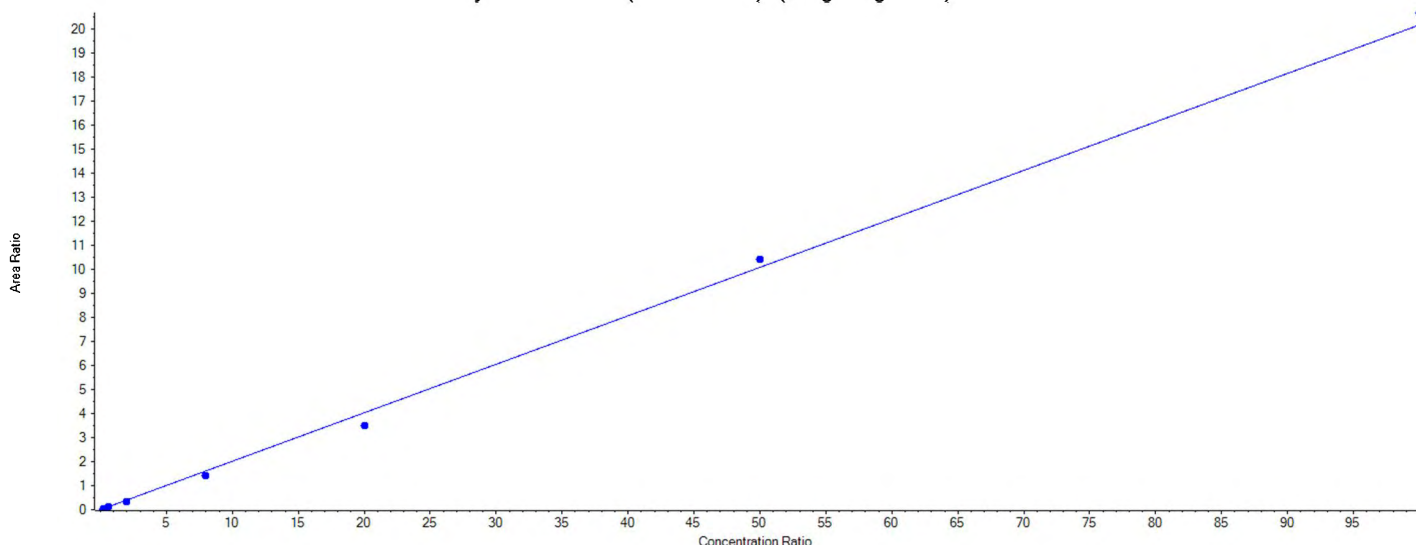
QMethod Name: PFC-32-16DEC13

Result Table: MQ 170040031/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam

PFOA

$$y = 0.20178x \text{ (} r = 0.99824 \text{) (weighting: } 1/x \text{)}$$



Component Calibration Verification

Sample Name	PFOA Area	13C8-PFOA Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	26099.0	693807.3	True	1.00	0.038	6.56	1.000	0.200	0.186	-6.8	50.0	
CAL2	82371.4	748483.3	True	1.00	0.110	6.55	1.000	0.600	0.545	-9.1	30.0	
CAL3	209193.7	648179.8	True	1.00	0.323	6.56	1.000	2.000	1.599	-20.0	30.0	
CAL4	886066.0	630967.0	True	1.00	1.404	6.54	1.000	8.000	6.959	-13.0	30.0	
CAL5	2041728.3	580269.9	True	1.00	3.519	6.55	1.000	20.000	17.437	-12.8	30.0	
CAL6	5396312.3	518168.3	True	1.00	10.414	6.54	1.000	50.000	51.611	3.2	30.0	
CAL7	9100238.3	440154.0	True	1.00	20.675	6.56	1.000	100.000	102.461	2.5	30.0	

Initial Calibration Verification

Instrument ID: LM24960

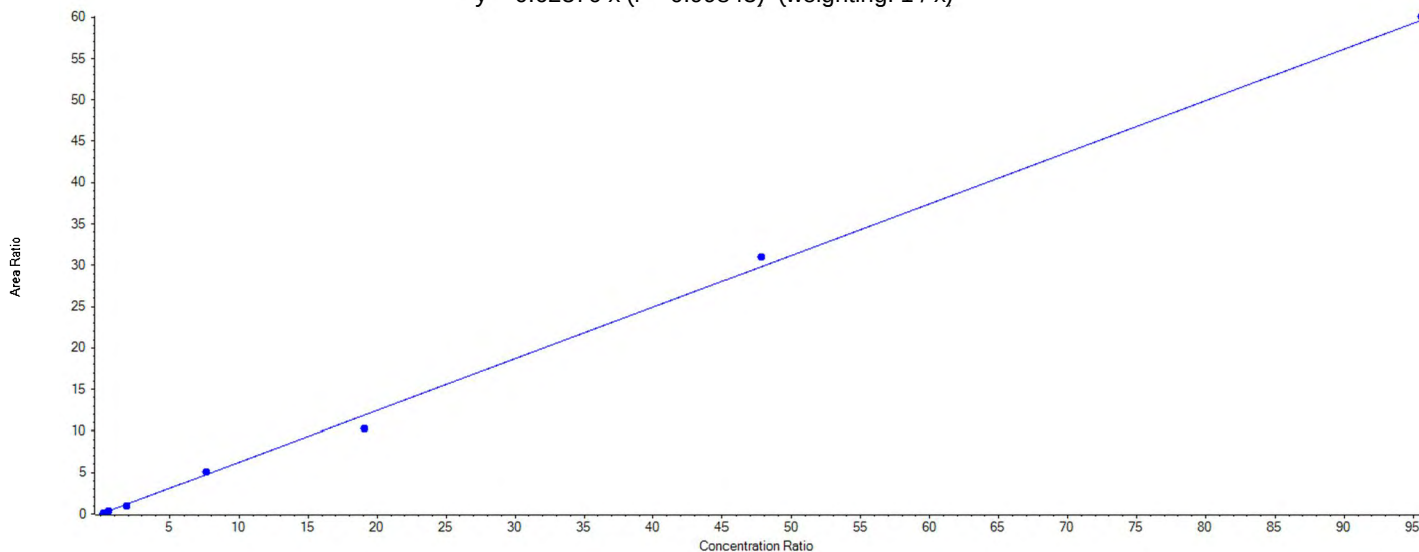
ICAL Name: 16DEC11ICAL

QMethod Name: PFC-32-16DEC13

Result Table: MQ 170040031/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam

PFOS

 $y = 0.62376 \times (r = 0.99843)$ (weighting: 1 / x)

Component Calibration Verification

Sample Name	PFOS Area	13C8-PFOS Area	Used	ES Conc	Area Ratio	RT (min)	RRT	Spec Amount	Calc Amount	%Diff	%D Limit	%D OOS
CAL1	11132.8	92138.1	True	1.00	0.121	6.93	1.000	0.191	0.194	1.4	50.0	
CAL2	33762.9	106407.5	True	1.00	0.317	6.91	1.000	0.574	0.509	-11.4	30.0	
CAL3	95246.8	97719.1	True	1.00	0.975	6.92	1.000	1.910	1.563	-18.2	30.0	
CAL4	457330.4	89877.7	True	1.00	5.088	6.91	1.000	7.650	8.158	6.6	30.0	
CAL5	1003660.1	97666.4	True	1.00	10.276	6.91	1.000	19.100	16.475	-13.7	30.0	
CAL6	2653543.4	85745.5	True	1.00	30.947	6.90	1.000	47.800	49.614	3.8	30.0	
CAL7	4462217.5	74275.9	True	1.00	60.076	6.91	1.000	95.600	96.314	0.7	30.0	

Initial Calibration Verification

Instrument ID: LM24960

ICAL Name: 16DEC11ICAL

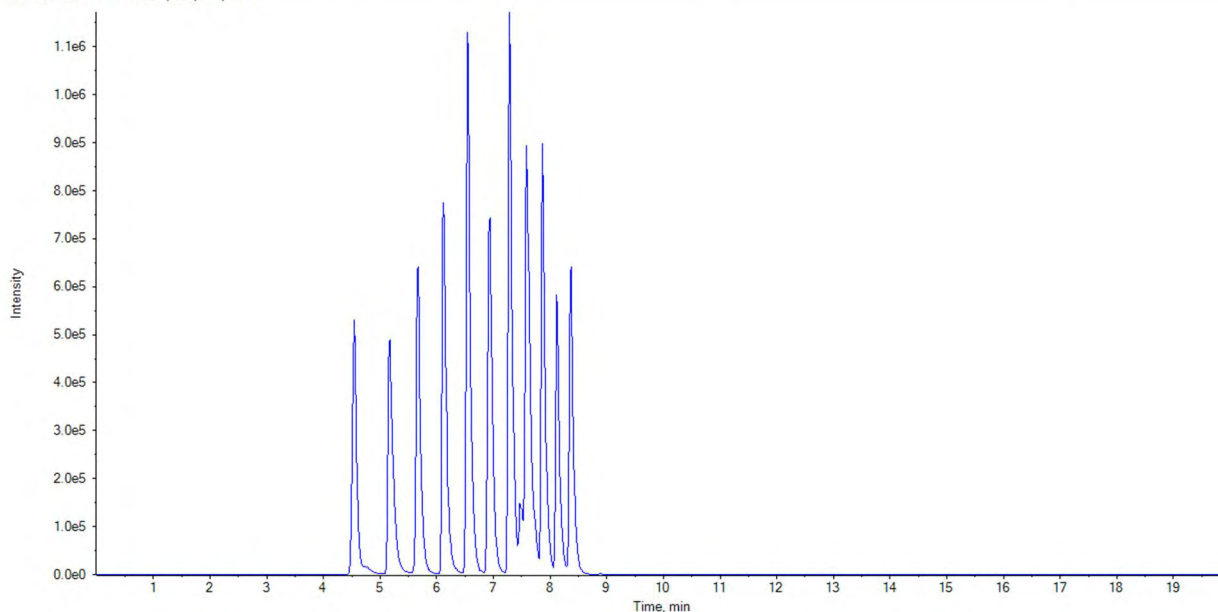
QMethod Name: PFC-32-16DEC13

Result Table: MQ 170040031/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICV	16DEC11-34.wiff	12/11/2016 7:10:18 PM

TIC from 16DEC11-34.wiff (sample 1) - ICV



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.00	530878.3	479624.1	10.7	50.0	
I13C4-PFOS	1.00	117742.1	91278.0	29.0	50.0	

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 9:33 am, 1/6/17

Initial Calibration Verification

Instrument ID: LM24960

ICAL Name: 16DEC11ICAL

QMethod Name: PFC-32-16DEC13

Result Table: MQ 170040031/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam

Sample Name	Sample ID:	Sample File:	Acquisition Date:
ICV	ICV	16DEC11-34.wiff	12/11/2016 7:10:18 PM

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFOA	2171012.7	13C8-PFOA	481210.7	1.00	4.512	6.55	1.00	20.000	22.358	11.8	30.0	
PFOS	991951.2	13C8-PFOS	77793.3	1.00	12.75 1	6.91	1.00	19.120	20.443	6.9	30.0	

APPROVED

By JWK at 8:10 am, 1/6/17

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REVIEWED

By uild at 9:33 am, 1/6/17

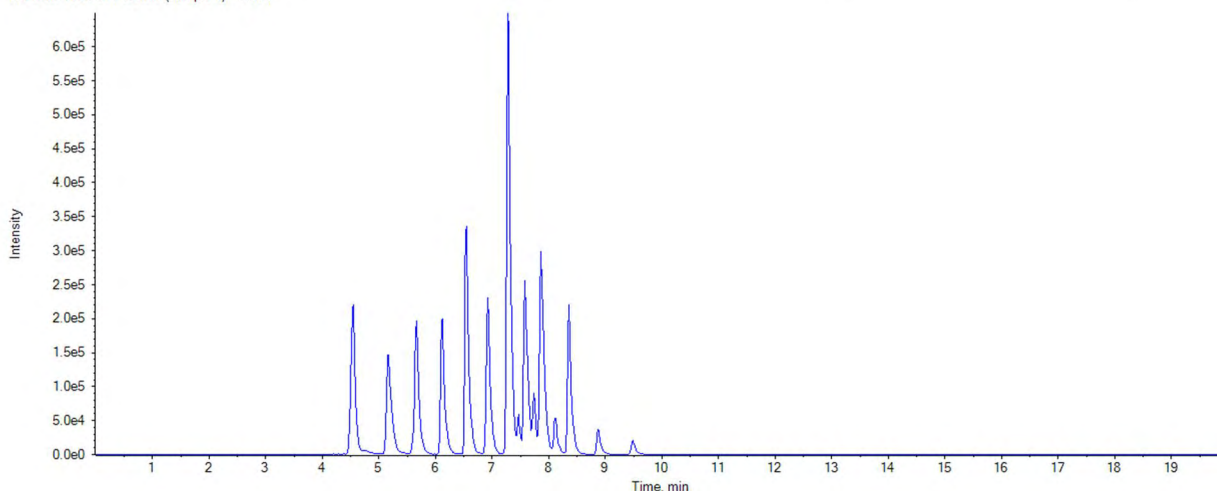
Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV1	CALPFC31637F	16DEC11-35.wiff	2016-12-11T19:30:48

TIC from 16DEC11-35.wiff (sample 1) - CCV1



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	475102.4	475795.800	-0.1	50.0	
I13C2-PFOA	1.00	477519.5	479624.059	-0.4	50.0	
I13C4-PFOS	1.00	92474.5	91277.996	1.3	50.0	
I13C2-PFDA	1.00	687228.6	675082.306	1.8	50.0	

Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV1	CALPFC31637F	16DEC11-35.wiff	2016-12-11T19:30:48

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBS	41349.9	13C3-PFBS	117718.1	1.0	0.351	5.22	1.000	1.770	1.537	-13.2	30.0	
PFHxA	255870.9	13C5-PFHxA	670180.1	1.0	0.382	5.66	1.000	2.000	1.715	-14.3	30.0	
PFHxS	82543.3	13C3-PFHxS	84004.4	1.0	0.983	6.11	1.000	1.890	1.590	-15.9	30.0	
PFHpA	221684.5	13C4-PFHpA	577258.7	1.0	0.384	6.12	1.000	2.000	1.638	-18.1	30.0	
PFOA	207692.8	13C8-PFOA	625879.8	1.0	0.332	6.55	1.000	2.000	1.645	-17.8	30.0	
PFOS	98567.8	13C8-PFOS	92778.2	1.0	1.062	6.91	1.000	1.910	1.703	-10.8	30.0	
PFNA	245201.2	13C9-PFNA	569722.9	1.0	0.430	6.93	1.000	2.000	1.691	-15.4	30.0	
PFDA	332325.7	13C6-PFDA	969534.1	1.0	0.343	7.28	1.000	2.000	1.840	-8.0	30.0	
NMeFOSAA	57702.4	d3-NMeFOSAA	165067.1	1.0	0.350	7.47	1.000	2.000	1.643	-17.8	30.0	
PFDS	30536.6	13C8-PFOS	92778.2	1.0	0.329	7.55	1.090	1.930	1.611	-16.5	40.0	
PFUnDA	331120.2	13C7-PFUnDA	749700.9	1.0	0.442	7.58	1.000	2.000	1.801	-9.9	30.0	
NEtFOSAA	50693.7	d5-NEtFOSAA	143032.4	1.0	0.354	7.64	1.000	2.000	1.705	-14.7	30.0	
PFDODA	302333.8	13C2-PFDODA	877038.6	1.0	0.345	7.86	1.000	2.000	1.724	-13.8	30.0	
PFTDA	240738.0	13C2-PFDODA	877038.6	1.0	0.274	8.12	1.030	2.000	1.768	-11.6	40.0	
PFTeDA	233844.5	13C2-PFTeDA	742159.3	1.0	0.315	8.36	1.000	2.000	1.729	-13.5	30.0	

APPROVED

By JWK at 9:26 am, 1/6/17

REVIEWED

By uild at 10:25 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Continuing Calibration Verification

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED

By JWK at 9:26 am, 1/6/17

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REVIEWED

By uild at 10:25 am, 1/6/17

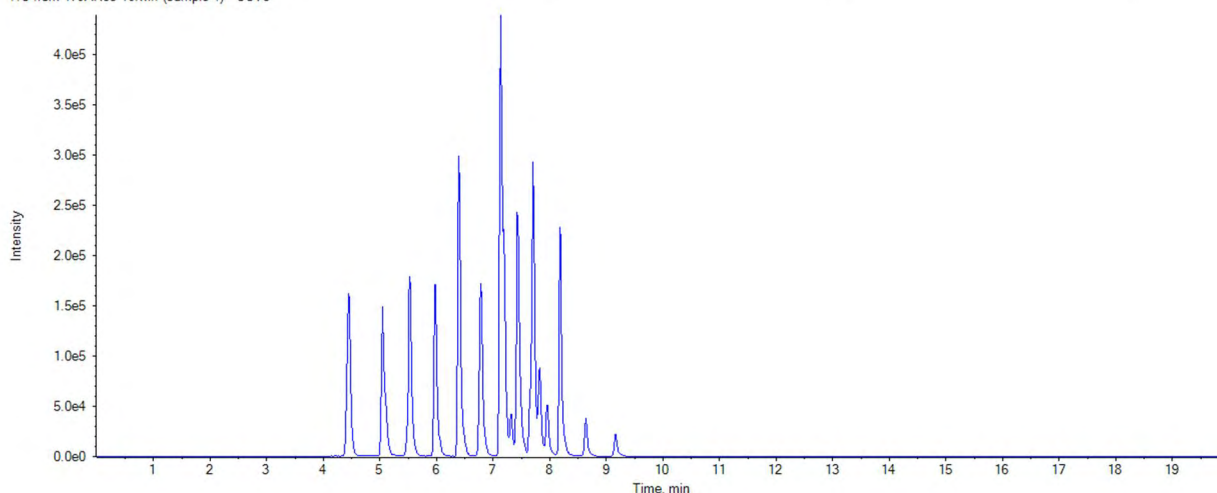
Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV1-9 1/6/2017 6:37:37 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV3	CALPFC31637F	17JAN05-16.wiff	2017-01-05T13:46:12

TIC from 17JAN05-16.wiff (sample 1) - CCV3



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	292532.3	475795.800	-38.5	50.0	
I13C2-PFOA	1.00	347584.4	479624.059	-27.5	50.0	
I13C4-PFOS	1.00	57178.6	91277.996	-37.4	50.0	
I13C2-PFDA	1.00	492072.3	675082.306	-27.1	50.0	

Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV1-9 1/6/2017 6:37:37 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV3	CALPFC31637F	17JAN05-16.wiff	2017-01-05T13:46:12

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBS	27515.2	13C3-PFBS	87354.8	1.0	0.315	5.11	1.000	1.770	1.380	-22.2	30.0	
PFHxA	167488.2	13C5-PFHxA	472663.2	1.0	0.354	5.53	1.000	2.000	1.590	-20.4	30.0	
PFHxS	56054.8	13C3-PFHxS	57207.3	1.0	0.980	5.97	1.000	1.890	1.590	-16.1	30.0	
PFHpA	143509.2	13C4-PFHpA	381384.4	1.0	0.376	5.98	1.000	2.000	1.610	-19.7	30.0	
PFOA	139478.3	13C8-PFOA	428423.6	1.0	0.326	6.40	1.000	2.000	1.610	-19.3	30.0	
PFOS	59335.1	13C8-PFOS	57848.6	1.0	1.026	6.76	1.000	1.910	1.640	-13.9	30.0	
PFNA	188247.2	13C9-PFNA	346370.5	1.0	0.543	6.78	1.000	2.000	2.140	6.8	30.0	
PFDA	217367.7	13C6-PFDA	710793.5	1.0	0.306	7.13	1.000	2.000	1.640	-17.9	30.0	
NMeFOSAA	42562.7	d3-NMeFOSAA	108440.7	1.0	0.392	7.33	1.000	2.000	1.840	-7.8	30.0	
PFUnDA	253015.8	13C7-PFUnDA	557916.4	1.0	0.454	7.43	1.000	2.000	1.850	-7.5	30.0	
NEtFOSAA	34085.7	d5-NEtFOSAA	107144.6	1.0	0.318	7.48	1.000	2.000	1.530	-23.5	30.0	
PFDODA	236426.7	13C2-PFDODA	683844.2	1.0	0.346	7.71	1.000	2.000	1.730	-13.6	30.0	
PFTDA	184017.8	13C2-PFDODA	683844.2	1.0	0.269	7.96	1.030	2.000	1.730	-13.3	40.0	
PFTeDA	182379.1	13C2-PFTeDA	563096.8	1.0	0.324	8.18	1.000	2.000	1.780	-11.1	30.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Continuing Calibration Verification

Result Table: MQ CCV1-9 1/6/2017 6:37:37 AM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED

By JWK at 10:22 am, 1/10/17

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REVIEWED

By uild at 10:40 am, 1/10/17

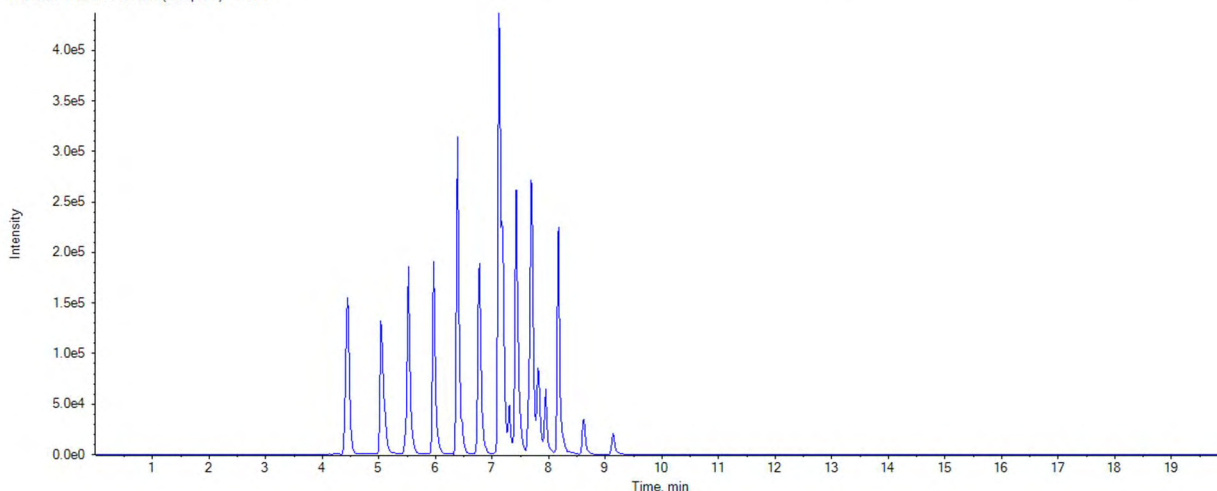
Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV1-9 1/6/2017 6:37:37 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV4	CALPFC31637F	17JAN05-27.wiff	2017-01-05T17:32:02

TIC from 17JAN05-27.wiff (sample 1) - CCV4



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	283958.8	475795.800	-40.3	50.0	
I13C2-PFOA	1.00	309349.3	479624.059	-35.5	50.0	
I13C4-PFOS	1.00	59470.4	91277.996	-34.8	50.0	
I13C2-PFDA	1.00	514257.9	675082.306	-23.8	50.0	

Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV1-9 1/6/2017 6:37:37 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV4	CALPFC31637F	17JAN05-27.wiff	2017-01-05T17:32:02

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBS	25795.9	13C3-PFBS	83246.2	1.0	0.310	5.10	1.000	1.770	1.360	-23.4	30.0	
PFHxA	162922.5	13C5-PFHxA	417820.2	1.0	0.390	5.53	1.000	2.000	1.750	-12.4	30.0	
PFHxS	52643.5	13C3-PFHxS	56323.4	1.0	0.935	5.96	1.000	1.890	1.510	-20.0	30.0	
PFHpA	143376.2	13C4-PFHpA	391473.1	1.0	0.366	5.97	1.000	2.000	1.560	-21.9	30.0	
PFOA	141163.4	13C8-PFOA	417098.5	1.0	0.338	6.39	1.000	2.000	1.680	-16.1	30.0	
PFOS	65441.3	13C8-PFOS	63392.8	1.0	1.032	6.75	1.000	1.910	1.650	-13.4	30.0	
PFNA	167159.4	13C9-PFNA	392106.1	1.0	0.426	6.78	1.000	2.000	1.680	-16.2	30.0	
PFDA	241486.5	13C6-PFDA	716735.8	1.0	0.337	7.13	1.000	2.000	1.810	-9.6	30.0	
NMeFOSAA	40175.5	d3-NMeFOSAA	106452.9	1.0	0.377	7.31	1.000	2.000	1.770	-11.3	30.0	
PFUnDA	239474.6	13C7-PFUnDA	569509.7	1.0	0.420	7.42	1.000	2.000	1.720	-14.2	30.0	
NEtFOSAA	43361.7	d5-NEtFOSAA	113138.5	1.0	0.383	7.46	1.000	2.000	1.840	-7.8	30.0	
PFDODA	230259.2	13C2-PFDODA	686087.0	1.0	0.336	7.70	1.000	2.000	1.680	-16.1	30.0	
PFTDA	192420.3	13C2-PFDODA	686087.0	1.0	0.280	7.95	1.030	2.000	1.810	-9.7	40.0	
PFTeDA	175430.7	13C2-PFTeDA	547056.6	1.0	0.321	8.17	1.000	2.000	1.760	-12.0	30.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Continuing Calibration Verification

Result Table: MQ CCV1-9 1/6/2017 6:37:37 AM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED

By JWK at 10:22 am, 1/10/17

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REVIEWED

By uild at 10:40 am, 1/10/17

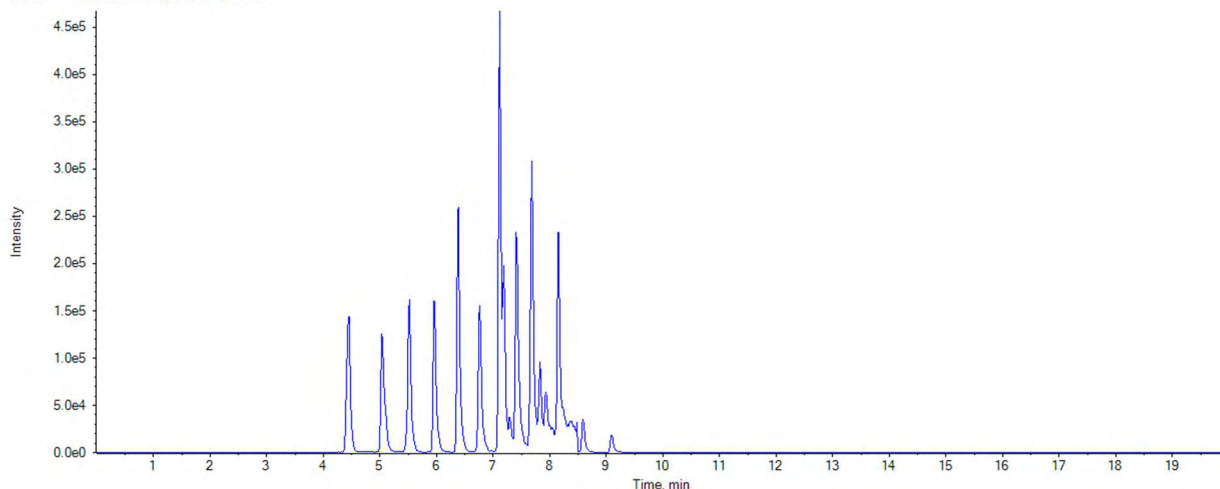
Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV3	CALPFC31637F	17JAN06-04.wiff	2017-01-06T07:33:40

TIC from 17JAN06-04.wiff (sample 1) - CCV3



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	265689.2	475795.800	-44.2	50.0	
I13C2-PFOA	1.00	276937.7	479624.059	-42.3	50.0	
I13C4-PFOS	1.00	57081.2	91277.996	-37.5	50.0	
I13C2-PFDA	1.00	495221.0	675082.306	-26.6	50.0	

Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV3	CALPFC31637F	17JAN06-04.wiff	2017-01-06T07:33:40

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBS	24332.9	13C3-PFBS	74946.3	1.0	0.325	5.10	1.000	1.770	1.420	-19.8	30.0	
PFHxA	148714.2	13C5-PFHxA	425093.3	1.0	0.350	5.52	1.000	2.000	1.571	-21.4	30.0	
PFHxS	52688.3	13C3-PFHxS	55670.4	1.0	0.946	5.96	1.000	1.890	1.532	-19.0	30.0	
PFHpA	143007.9	13C4-PFHpA	340309.9	1.0	0.420	5.96	1.000	2.000	1.793	-10.4	30.0	
PFOA	115834.1	13C8-PFOA	371137.5	1.0	0.312	6.39	1.000	2.000	1.547	-22.7	30.0	
PFOS	62296.2	13C8-PFOS	56360.8	1.0	1.105	6.75	1.000	1.910	1.772	-7.2	30.0	
PFNA	135806.1	13C9-PFNA	312702.4	1.0	0.434	6.77	1.000	2.000	1.707	-14.7	30.0	
PFDA	226847.4	13C6-PFDA	683058.9	1.0	0.332	7.12	1.000	2.000	1.783	-10.9	30.0	
NMeFOSAA	29462.4	d3-NMeFOSAA	99029.5	1.0	0.298	7.30	1.000	2.000	1.398	-30.1	30.0	OOS
PFDS	16432.3	13C8-PFOS	56360.8	1.0	0.292	7.38	1.090	1.930	1.427	-26.1	40.0	
PFUnDA	212922.0	13C7-PFUnDA	534176.4	1.0	0.399	7.42	1.000	2.000	1.626	-18.7	30.0	
NEtFOSAA	32800.6	d5-NEtFOSAA	106072.3	1.0	0.309	7.46	1.000	2.000	1.488	-25.6	30.0	
PFDODA	216233.6	13C2-PFDODA	630559.7	1.0	0.343	7.69	1.000	2.000	1.715	-14.3	30.0	
PFTDA	174692.2	13C2-PFDODA	630559.7	1.0	0.277	7.93	1.030	2.000	1.784	-10.8	40.0	
PFTeDA	157452.2	13C2-PFTeDA	524413.1	1.0	0.300	8.15	1.000	2.000	1.648	-17.6	30.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Continuing Calibration Verification

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED

By JWK at 9:26 am, 1/6/17

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REVIEWED

By uild at 10:25 am, 1/6/17

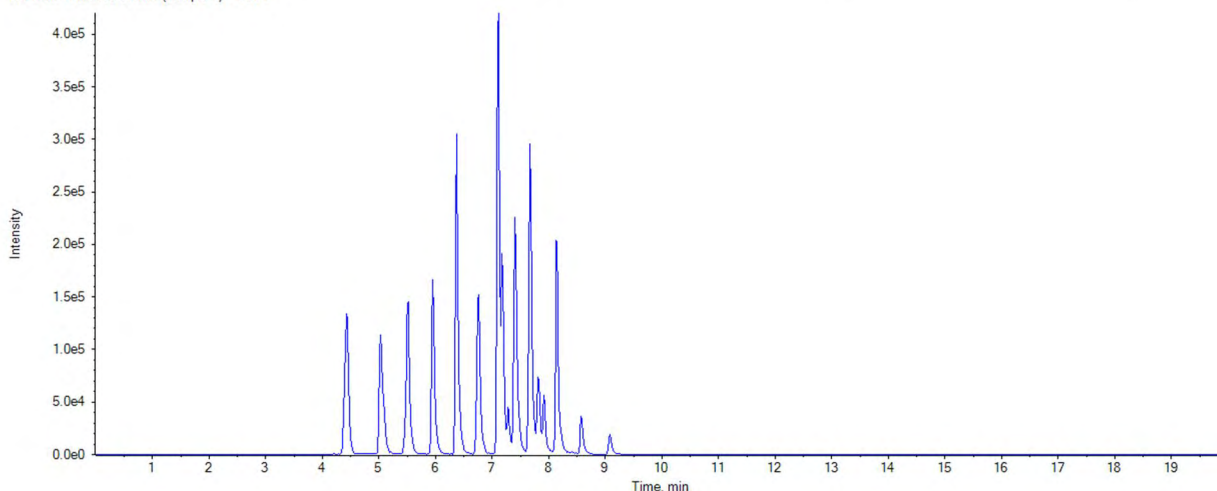
Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV4	CALPFC31637F	17JAN06-07.wiff	2017-01-06T08:35:13

TIC from 17JAN06-07.wiff (sample 1) - CCV4



Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.00	261671.2	475795.800	-45.0	50.0	
I13C2-PFOA	1.00	320103.5	479624.059	-33.3	50.0	
I13C4-PFOS	1.00	57551.1	91277.996	-37.0	50.0	
I13C2-PFDA	1.00	481598.0	675082.306	-28.7	50.0	

Continuing Calibration Verification

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Instrument Name:	Sample Name:	Sample ID:	Sample File:	Acquisition Date:
LM24960	CCV4	CALPFC31637F	17JAN06-07.wiff	2017-01-06T08:35:13

Analyte Name	Analyte Area	Ext Std Name	Ext Std Area	Ext Std Con	Area Ratio	RT (min)	RRT	Spec Amt	Calc Amt	% Diff	% Diff Lim	% Diff OOS
PFBS	25519.7	13C3-PFBS	78123.7	1.0	0.327	5.09	1.000	1.770	1.429	-19.3	30.0	
PFHxA	139725.1	13C5-PFHxA	401436.3	1.0	0.348	5.51	1.000	2.000	1.563	-21.8	30.0	
PFHxS	52407.6	13C3-PFHxS	48935.1	1.0	1.071	5.95	1.000	1.890	1.733	-8.3	30.0	
PFHpA	137672.8	13C4-PFHpA	364439.8	1.0	0.378	5.95	1.000	2.000	1.611	-19.4	30.0	
PFOA	127041.6	13C8-PFOA	358648.4	1.0	0.354	6.37	1.000	2.000	1.755	-12.2	30.0	
PFOS	63753.8	13C8-PFOS	55017.9	1.0	1.159	6.74	1.000	1.910	1.858	-2.7	30.0	
PFNA	138990.3	13C9-PFNA	310307.6	1.0	0.448	6.77	1.000	2.000	1.760	-12.0	30.0	
PFDA	216122.7	13C6-PFDA	682286.0	1.0	0.317	7.11	1.000	2.000	1.700	-15.0	30.0	
NMeFOSAA	36173.0	d3-NMeFOSAA	97345.5	1.0	0.372	7.29	1.000	2.000	1.747	-12.7	30.0	
PFDS	17001.8	13C8-PFOS	55017.9	1.0	0.309	7.37	1.090	1.930	1.512	-21.6	40.0	
PFUnDA	221448.9	13C7-PFUnDA	540311.9	1.0	0.410	7.41	1.000	2.000	1.672	-16.4	30.0	
NEtFOSAA	32543.8	d5-NEtFOSAA	94527.8	1.0	0.344	7.44	1.000	2.000	1.656	-17.2	30.0	
PFDODA	222239.9	13C2-PFDODA	614987.0	1.0	0.361	7.67	1.000	2.000	1.807	-9.7	30.0	
PFTDA	173369.7	13C2-PFDODA	614987.0	1.0	0.282	7.92	1.030	2.000	1.816	-9.2	40.0	
PFTeDA	163550.0	13C2-PFTeDA	517486.6	1.0	0.316	8.14	1.000	2.000	1.735	-13.3	30.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Continuing Calibration Verification

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

APPROVED

By JWK at 9:26 am, 1/6/17

MCR17 Page 106 of 207

REVIEWED

By uild at 10:25 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	MDL0.5		Data File:	16DEC11-24.wiff
Sample ID:	MDL0.5		Acquis Date:	2016-12-11T15:44:57
Sample Type:	Unknown		Instrument:	LM24960
Vial Position:	11		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	NA		Operator:	Not calculated
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	447687.6	479624.1	-6.7	50.0	
I13C4-PFOS	1.0	80303.4	91278.0	-12.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	603451.5	13C2-PFOA	447687.6	1.348	1.263	1.000	1.067	106.7	70.0-130.0	
E13C8-PFOS	96621.5	13C4-PFOS	80303.4	1.203	1.011	1.000	1.190	119.0	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

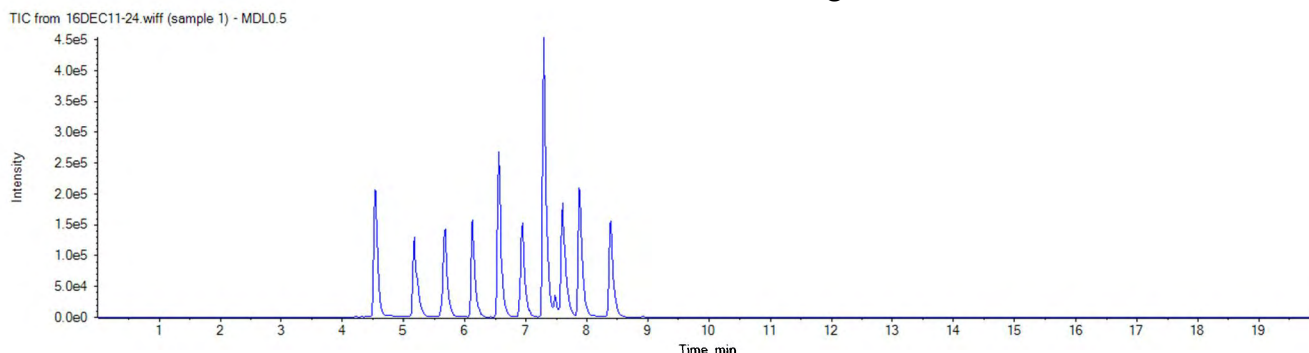
Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Analyte Quantitation Peak Table

Sample Name: MDL0.5			Instrument Name: LM24960			File Name: 16DEC11-24.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
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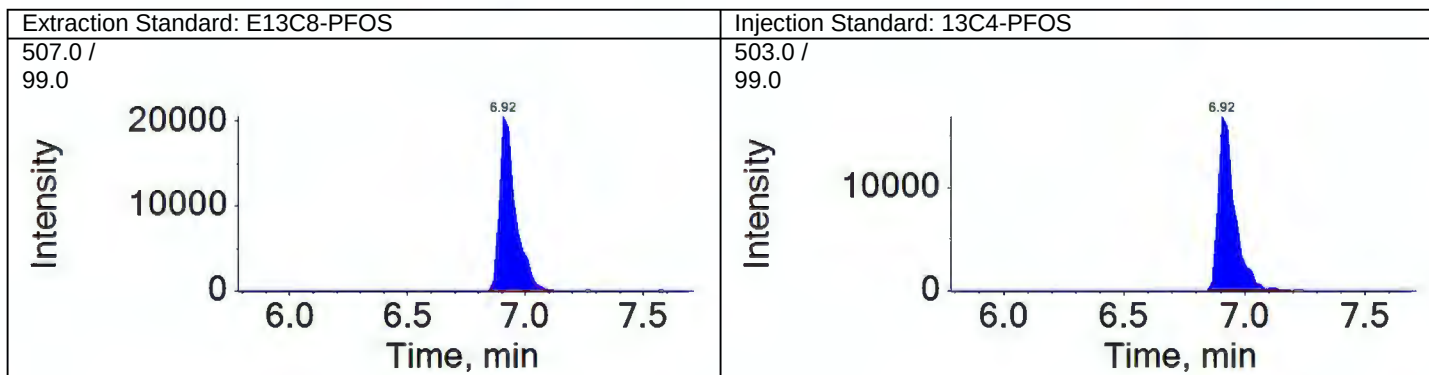
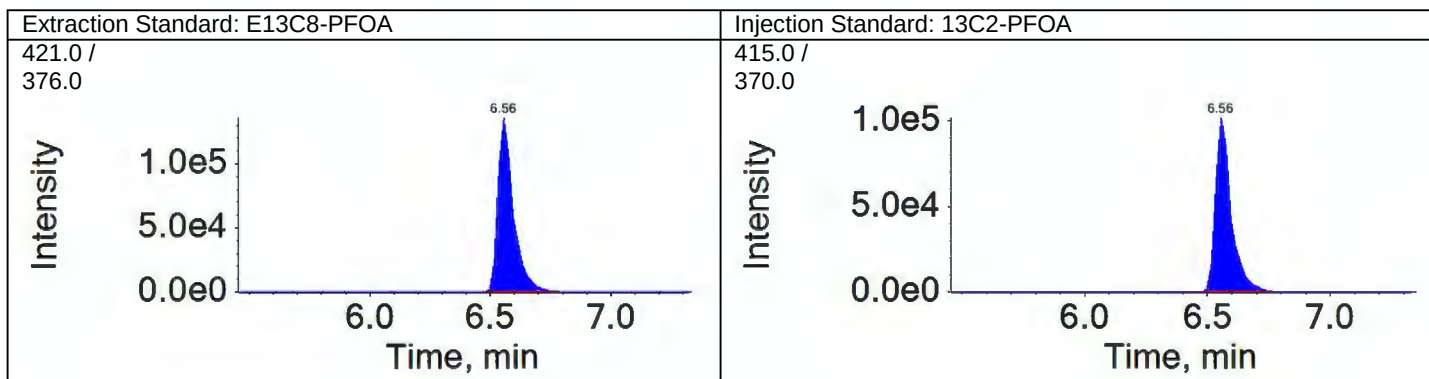
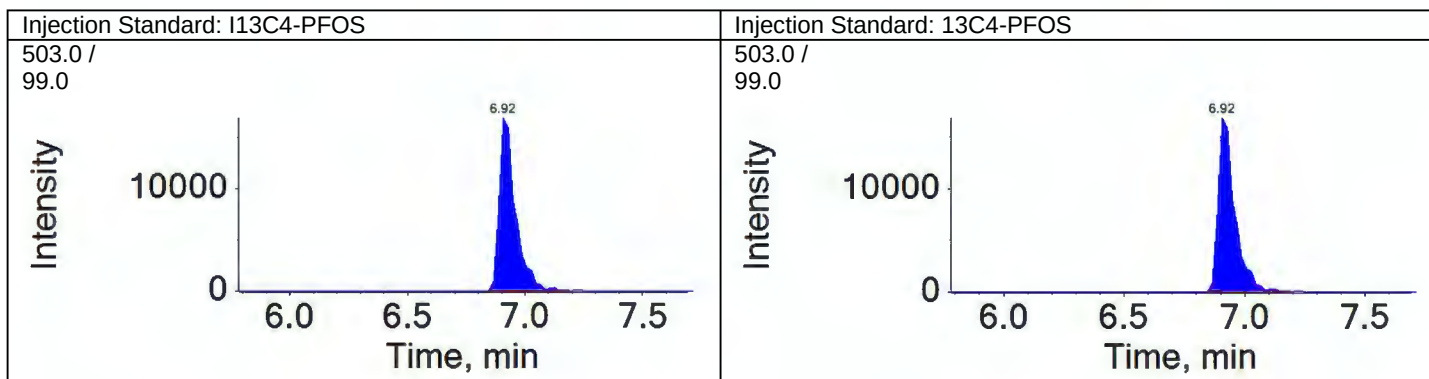
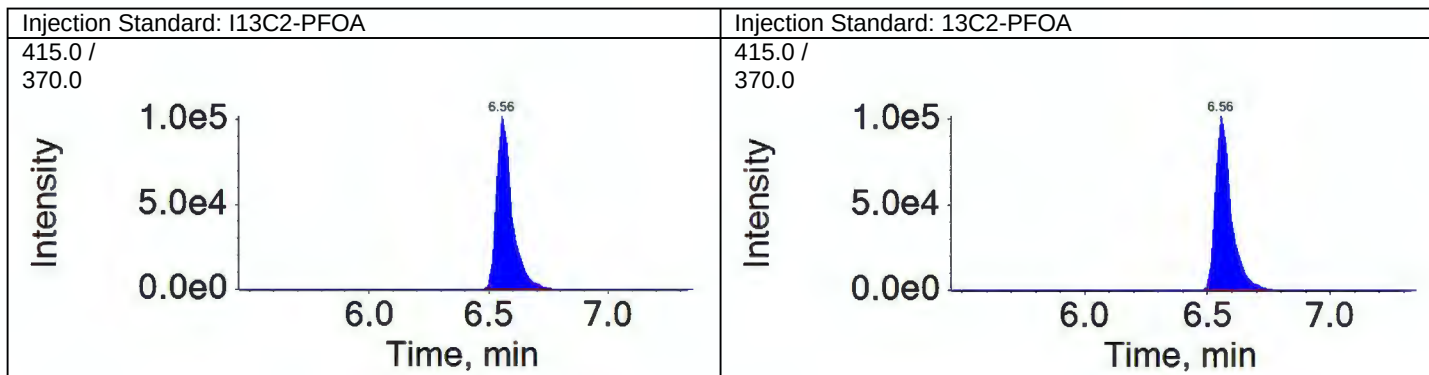
<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.56	1.000	6321.5	M	13C8-PFOA	6.56	603451.5	0.011	0.052
PFOS	6.92	1.000	2278.2	A	13C8-PFOS	6.92	96621.5	0.024	0.038

Total Ion Chromatogram



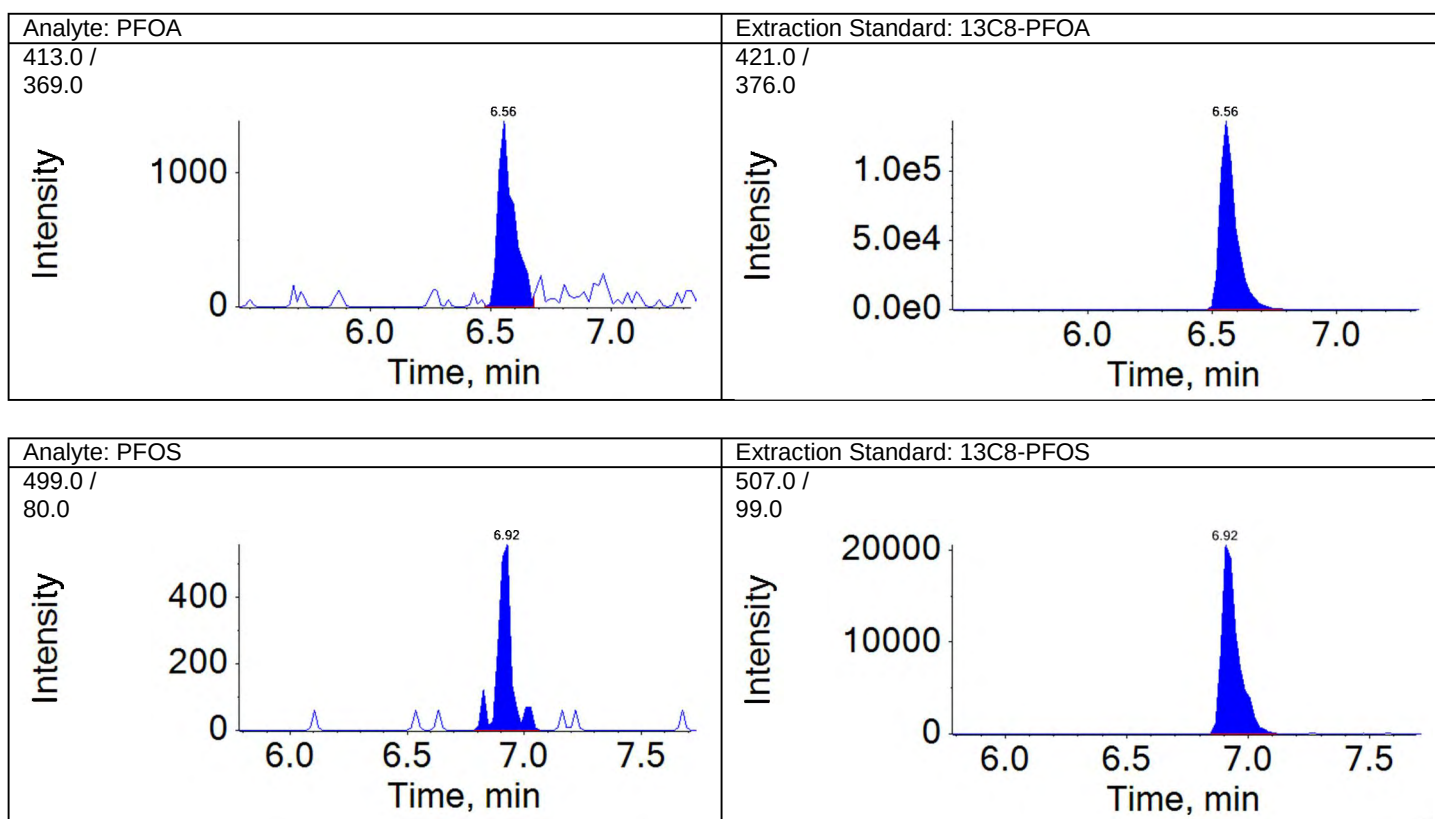
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

Component Name:

PFOA

RT (min.):

6.56

Peak Area:

9188.1

Mass Range:

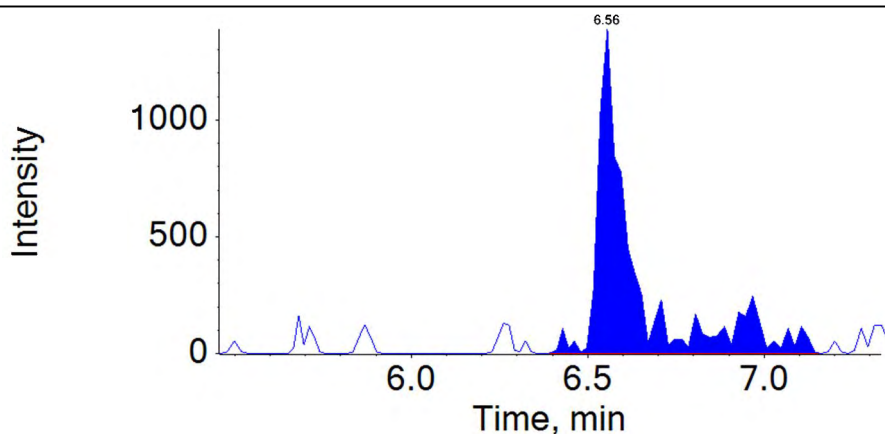
413.0 / 369.0

File Name:

16DEC11-24.wiff

Sample Name:

MDL0.5



Integration Comment: incorrect integration

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL1			Data File:		16DEC11-25.wiff
Sample ID:	CALPFC11637F			Acquis Date:		2016-12-11T16:05:29
Sample Type:	Standard			Instrument:		LM24960
Vial Position:	2			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	523950.7	479624.1	9.2	50.0	
I13C4-PFOS	1.0	104889.0	91278.0	14.9	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	693807.3	13C2-PFOA	523950.7	1.324	1.263	1.000	1.048		-	
E13C8-PFOS	92138.1	13C4-PFOS	104889.0	0.878	1.011	1.000	0.869		-	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

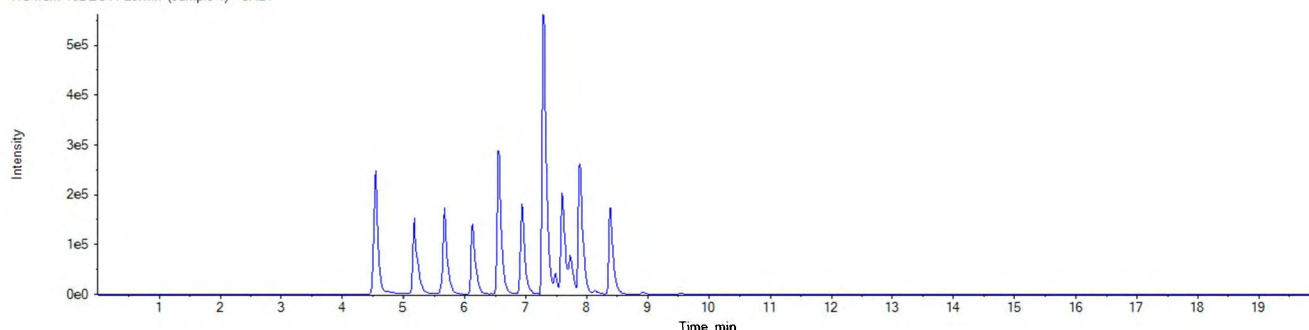
Analyte Quantitation Peak Table

Sample Name: CAL1			Instrument Name: LM24960			File Name: 16DEC11-25.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.56	1.000	26099.0	A	13C8-PFOA	6.56	693807.3	0.038	0.186
PFOS	6.93	1.000	11132.8	A	13C8-PFOS	6.92	92138.1	0.121	0.194

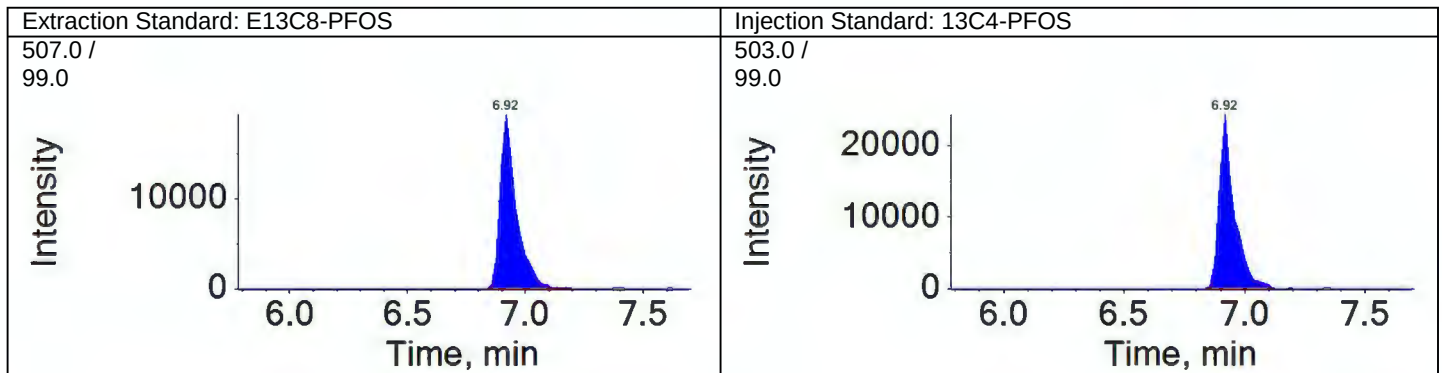
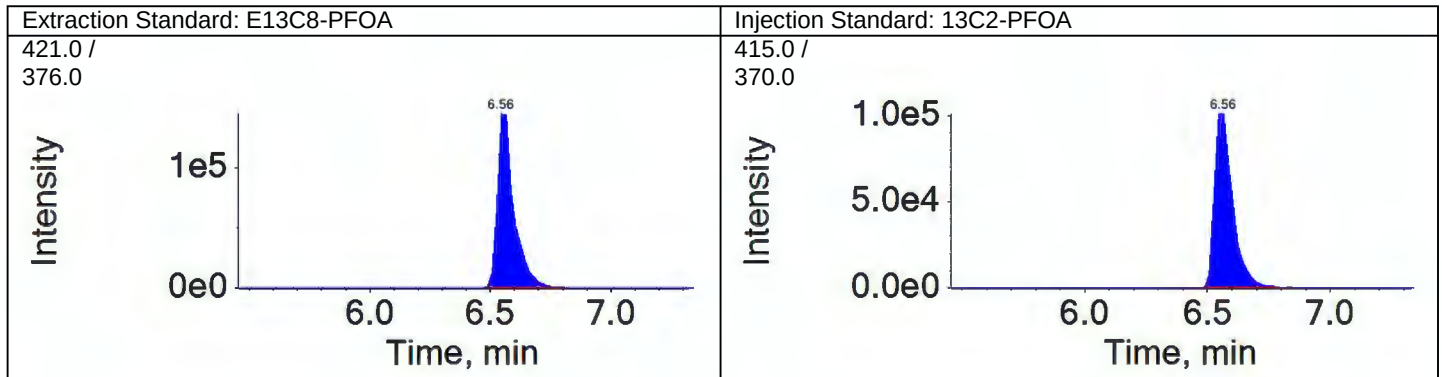
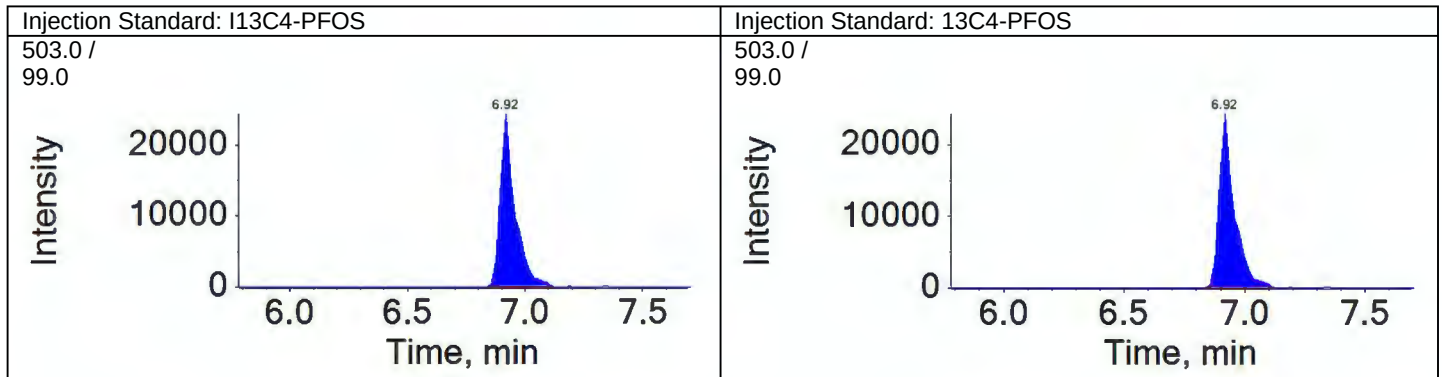
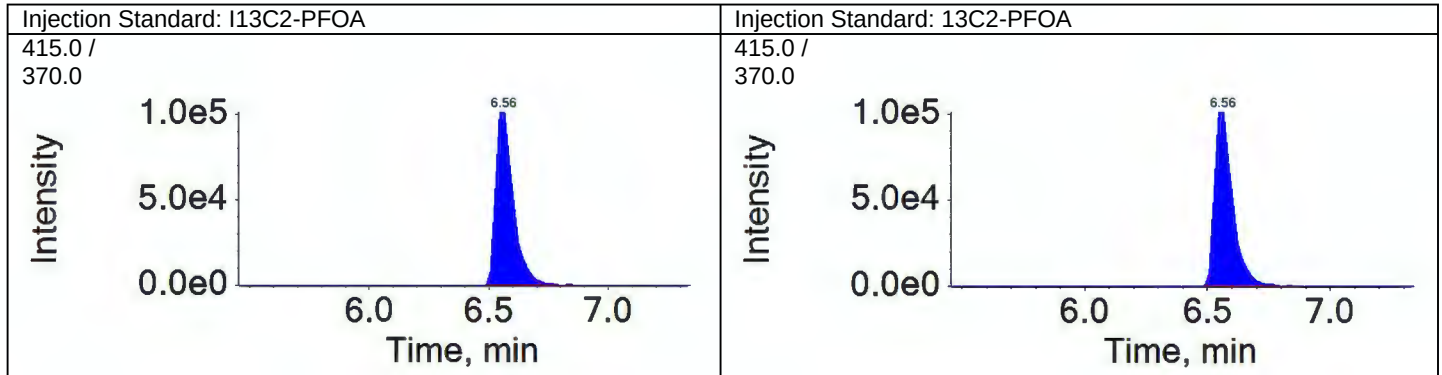
Total Ion Chromatogram

TIC from 16DEC11-25.wiff (sample 1) - CAL1



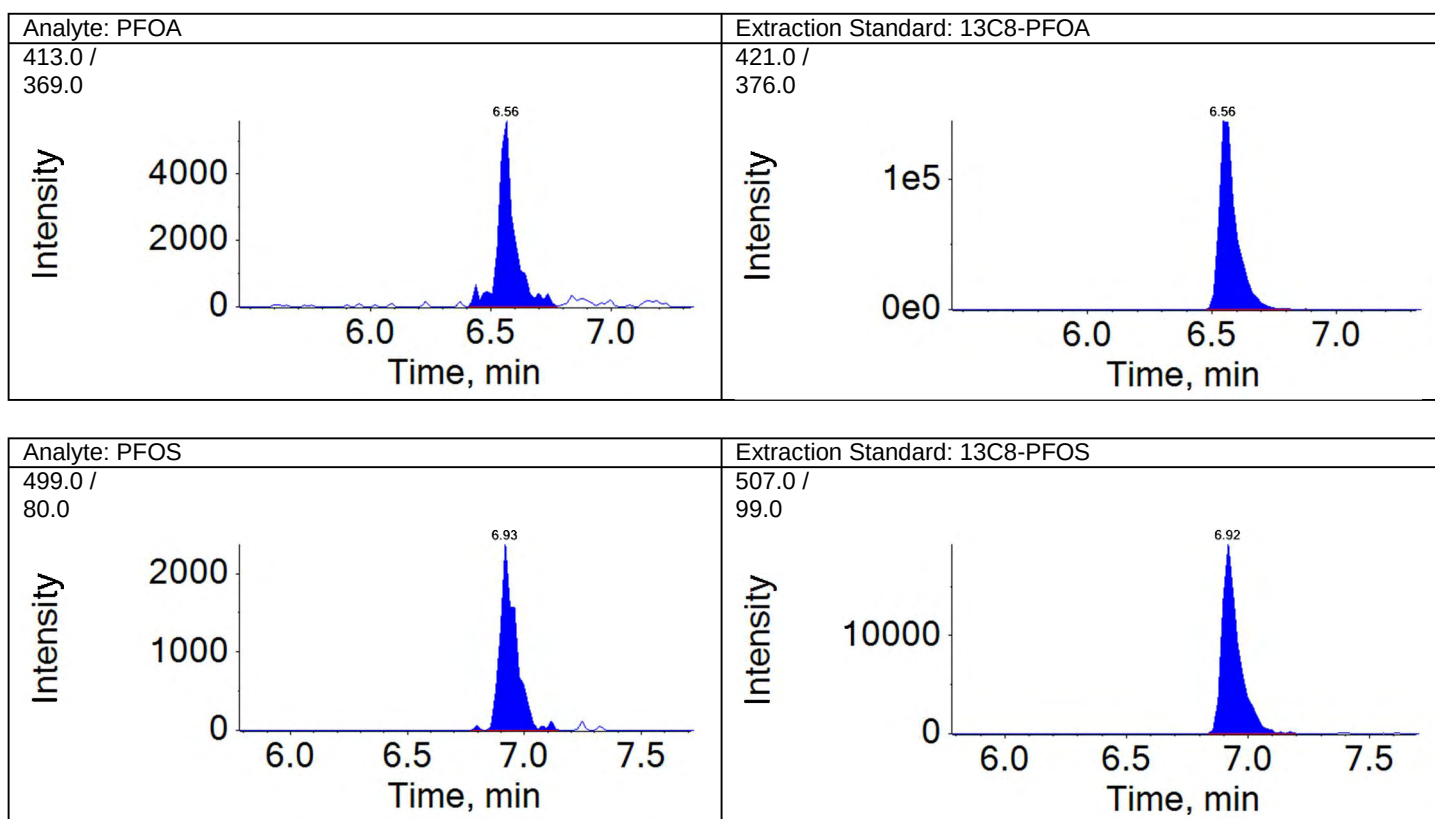
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL2			Data File:		16DEC11-26.wiff
Sample ID:	CALPFC21637F			Acquis Date:		2016-12-11T16:26:02
Sample Type:	Standard			Instrument:		LM24960
Vial Position:	3			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	541538.6	479624.1	12.9	50.0	
I13C4-PFOS	1.0	106035.9	91278.0	16.2	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	748483.3	13C2-PFOA	541538.6	1.382	1.263	1.000	1.094		-	
E13C8-PFOS	106407.5	13C4-PFOS	106035.9	1.004	1.011	1.000	0.993		-	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

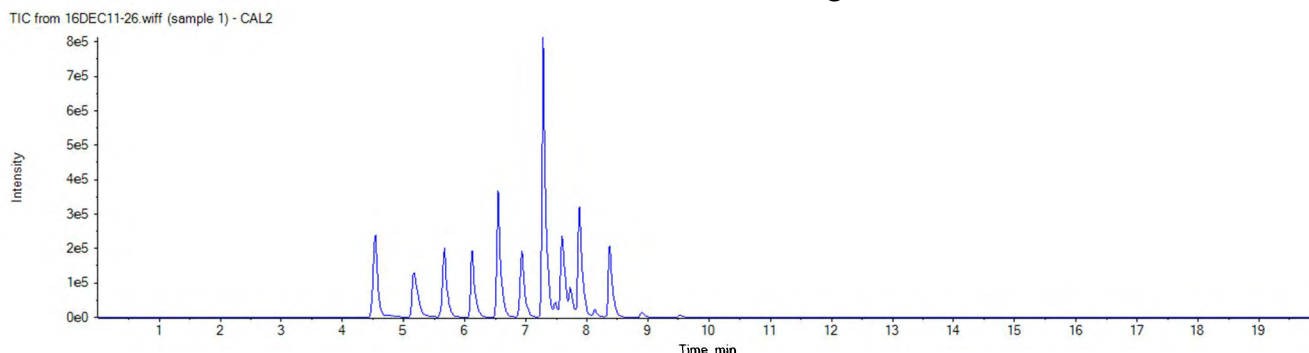
Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Analyte Quantitation Peak Table

Sample Name: CAL2			Instrument Name: LM24960			File Name: 16DEC11-26.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
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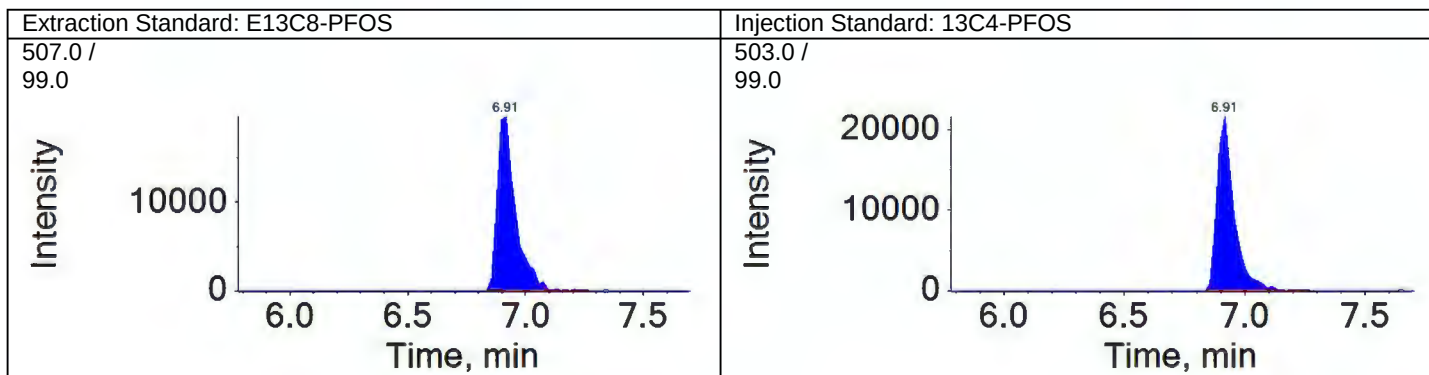
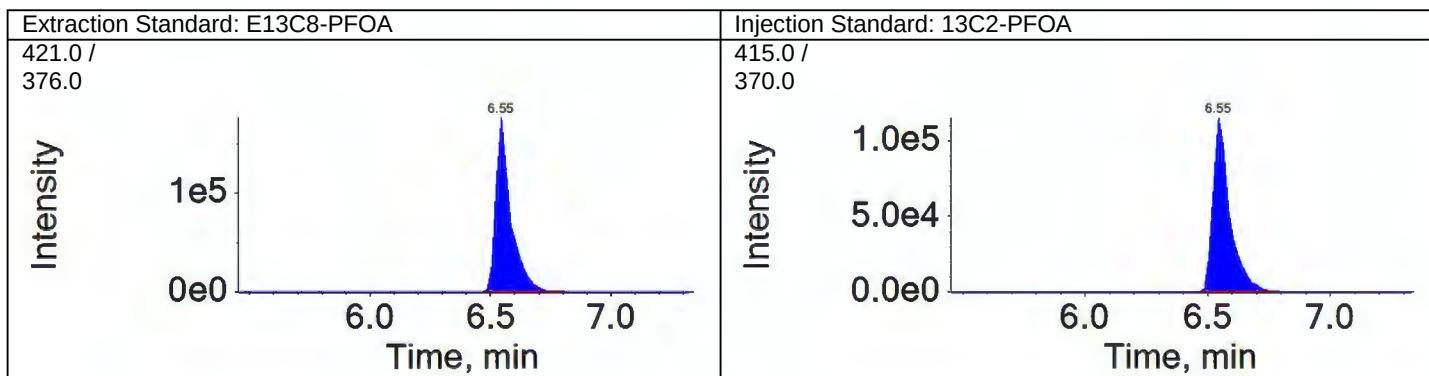
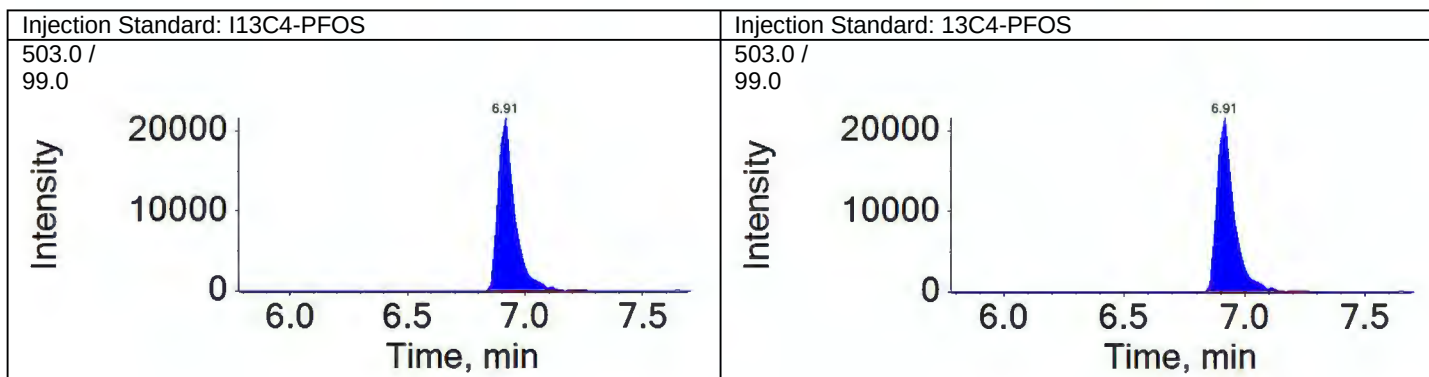
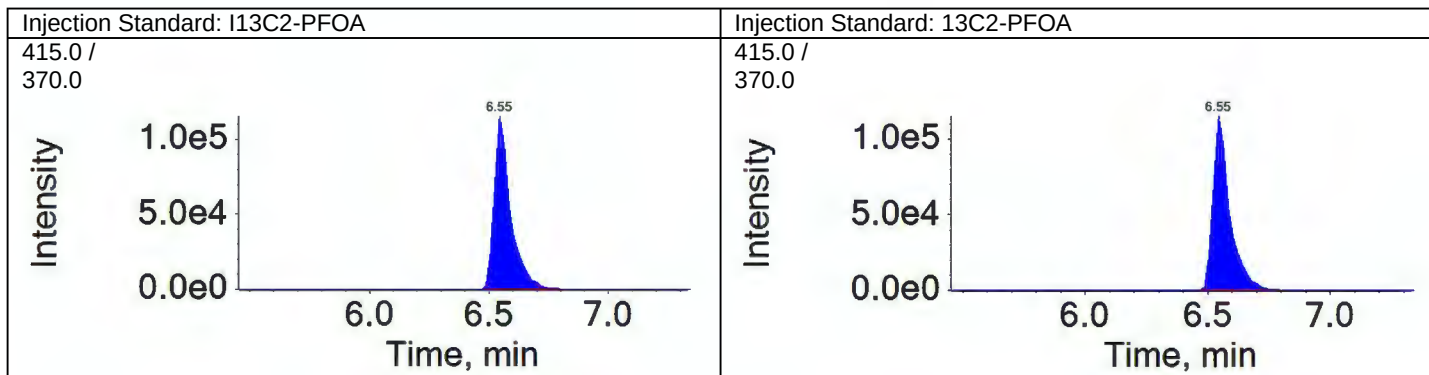
<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.55	1.000	82371.4	A	13C8-PFOA	6.55	748483.3	0.110	0.545
PFOS	6.91	1.000	33762.9	A	13C8-PFOS	6.91	106407.5	0.317	0.509

Total Ion Chromatogram



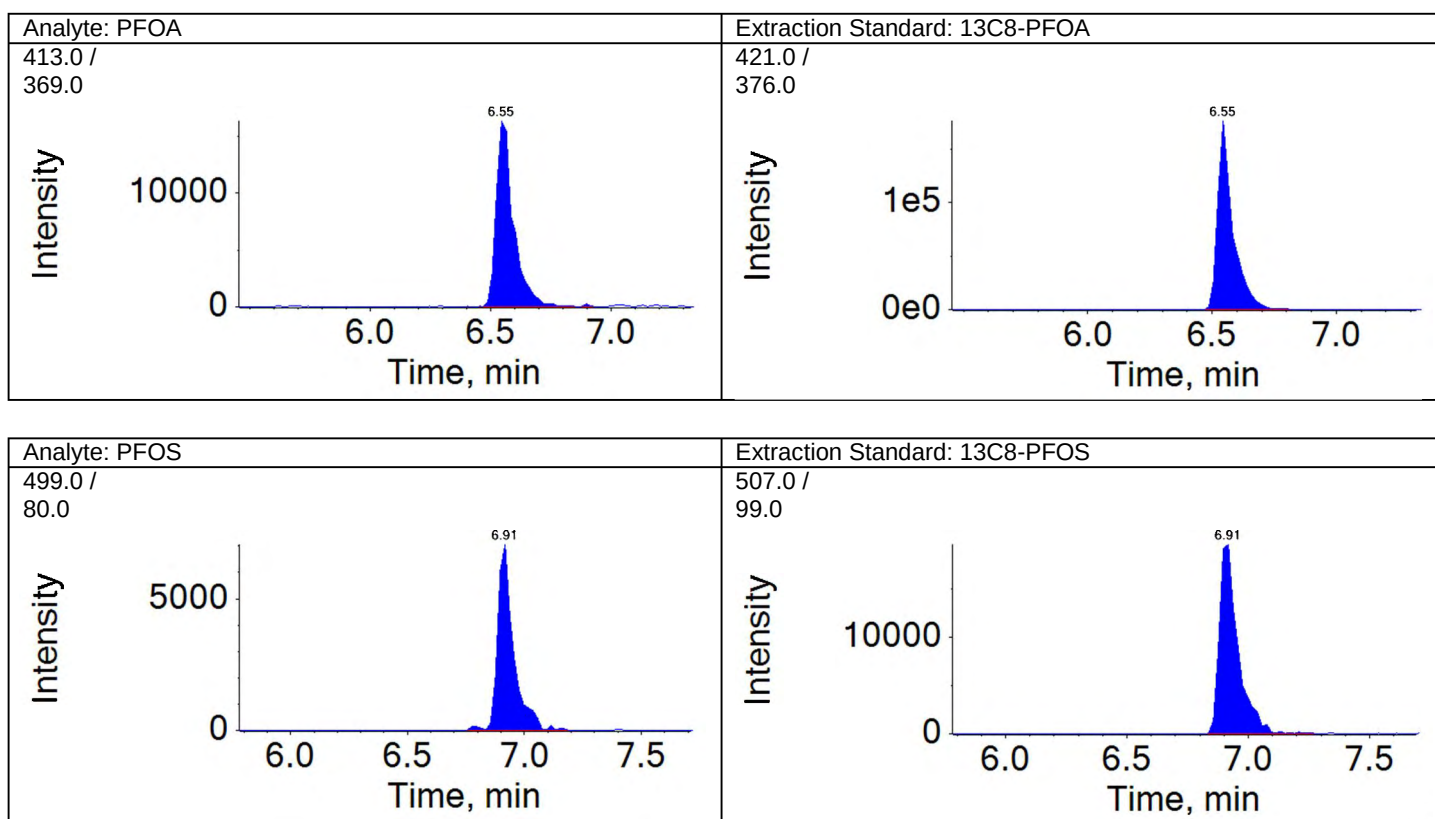
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL3			Data File:		16DEC11-27.wiff
Sample ID:	CALPFC31637F			Acquis Date:		2016-12-11T16:46:32
Sample Type:	Standard			Instrument:		LM24960
Vial Position:	4			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	528166.9	479624.1	10.1	50.0	
I13C4-PFOS	1.0	93393.0	91278.0	2.3	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	648179.8	13C2-PFOA	528166.9	1.227	1.263	1.000	0.972		-	
E13C8-PFOS	97719.1	13C4-PFOS	93393.0	1.046	1.011	1.000	1.035		-	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

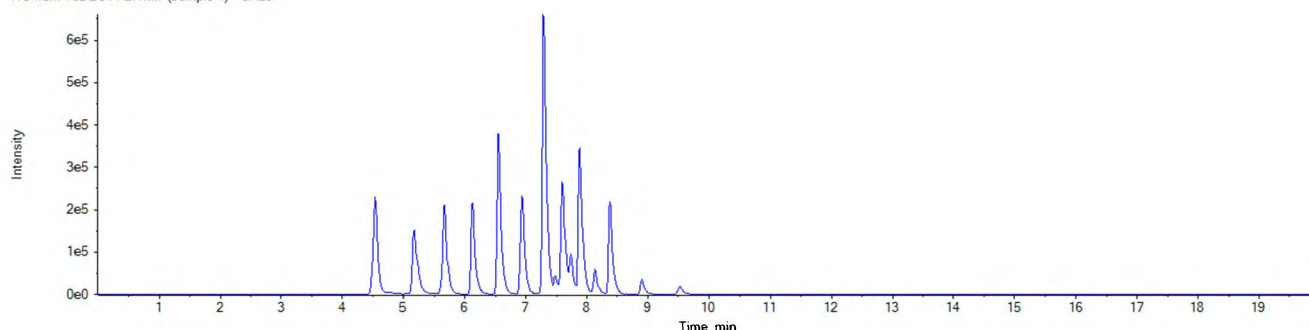
Analyte Quantitation Peak Table

Sample Name: CAL3			Instrument Name: LM24960			File Name: 16DEC11-27.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.56	1.000	209193.7	A	13C8-PFOA	6.56	648179.8	0.323	1.599
PFOS	6.92	1.000	95246.8	A	13C8-PFOS	6.92	97719.1	0.975	1.563

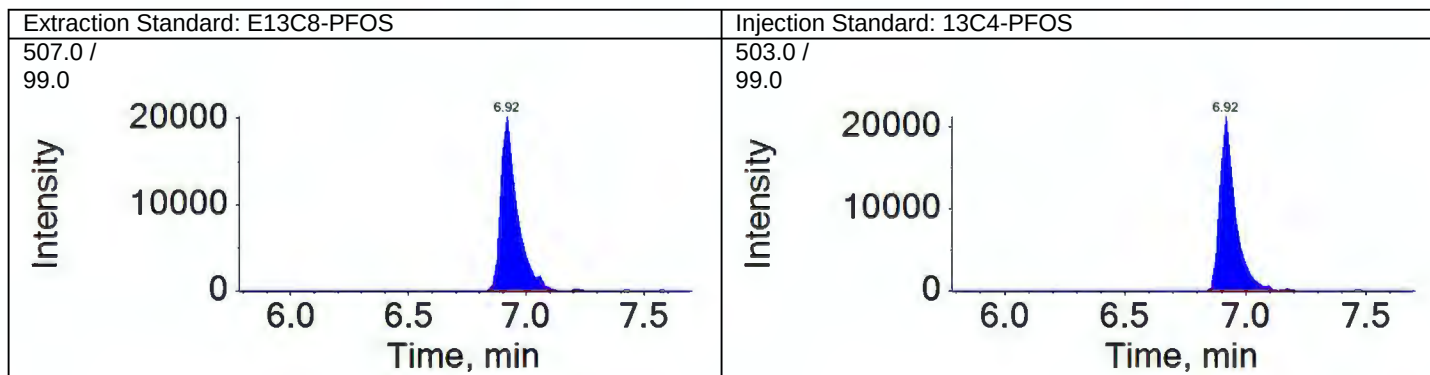
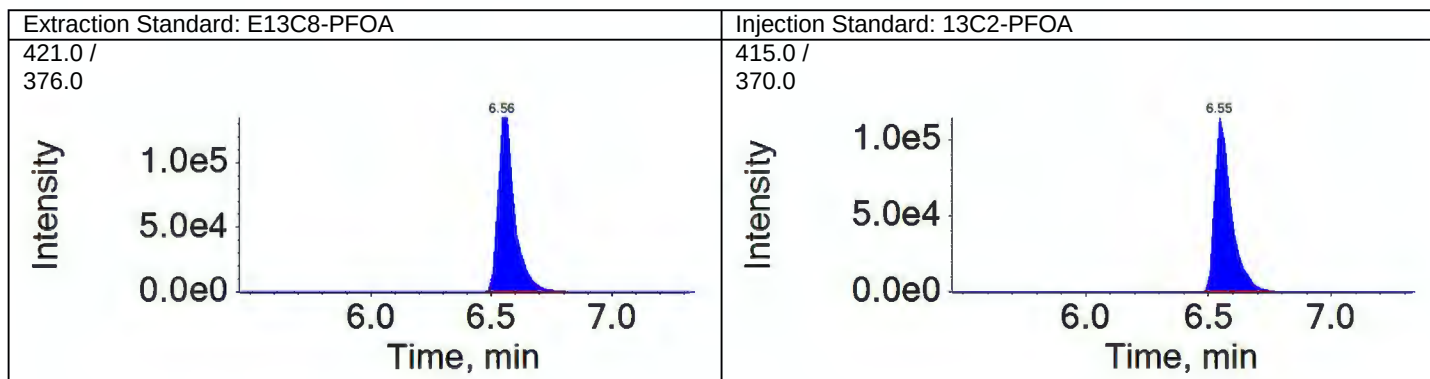
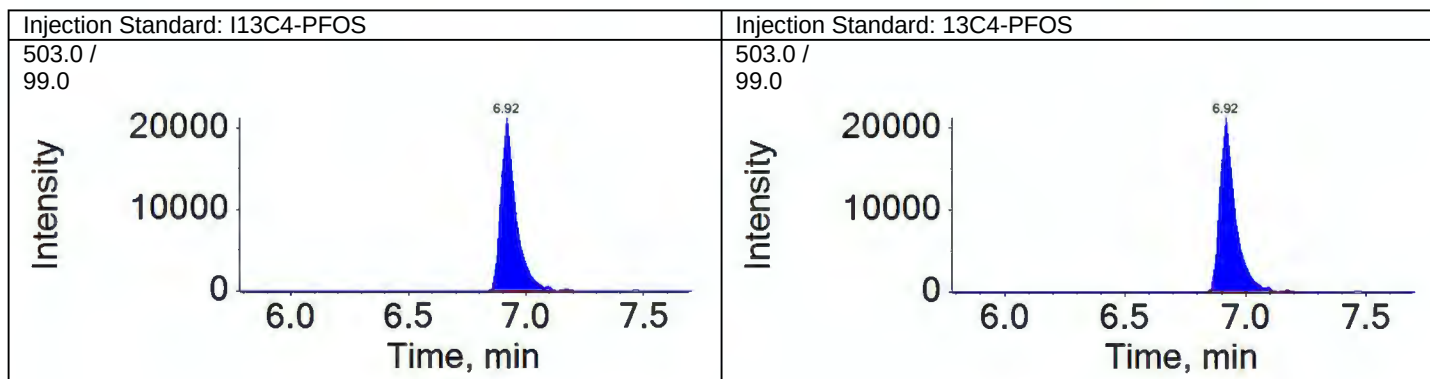
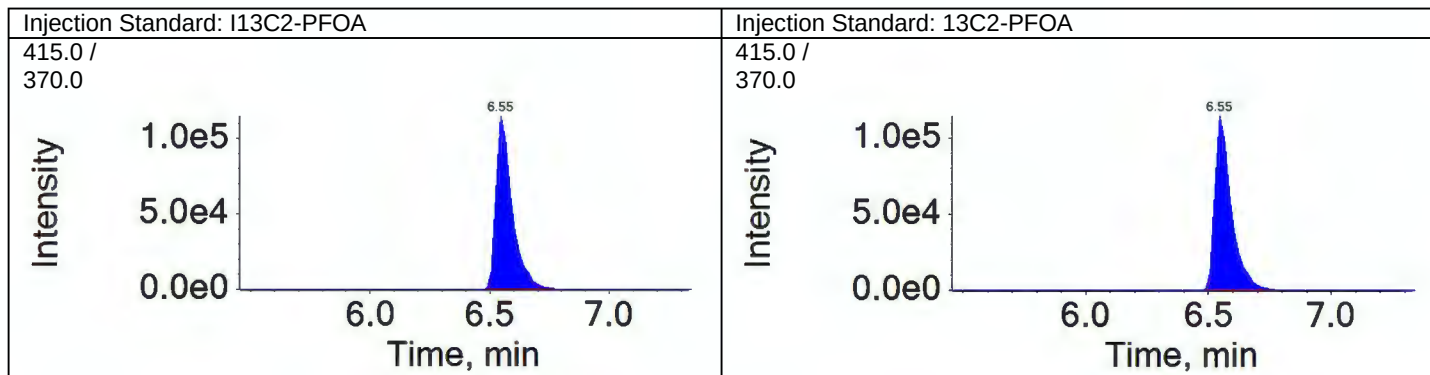
Total Ion Chromatogram

TIC from 16DEC11-27.wiff (sample 1) - CAL3



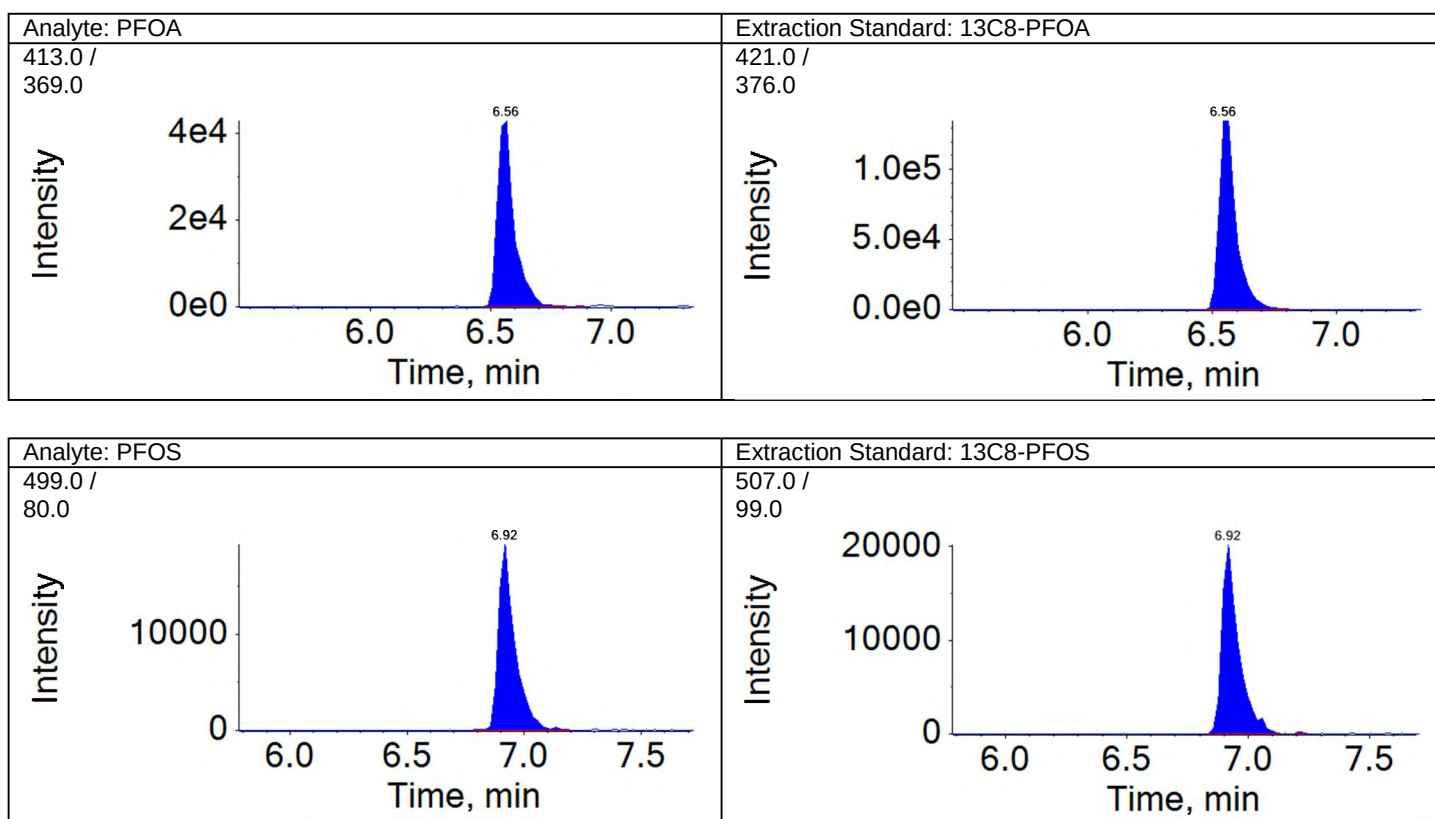
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL4			Data File:		16DEC11-28.wiff
Sample ID:	CALPFC41637F			Acquis Date:		2016-12-11T17:07:02
Sample Type:	Standard			Instrument:		LM24960
Vial Position:	5			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	489612.1	479624.1	2.1	50.0	
I13C4-PFOS	1.0	87777.9	91278.0	-3.8	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	630967.0	13C2-PFOA	489612.1	1.289	1.263	1.000	1.020		-	
E13C8-PFOS	89877.7	13C4-PFOS	87777.9	1.024	1.011	1.000	1.013		-	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

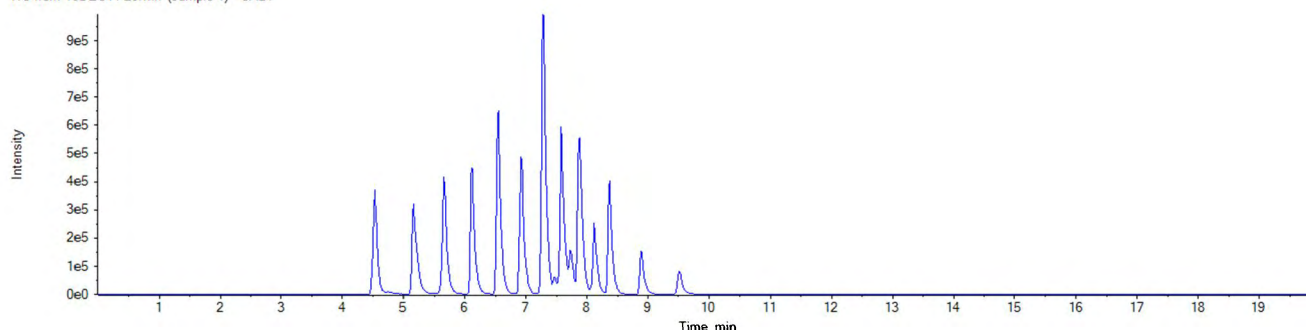
Analyte Quantitation Peak Table

Sample Name: CAL4			Instrument Name: LM24960			File Name: 16DEC11-28.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.54	1.000	886066.0	A	13C8-PFOA	6.54	630967.0	1.404	6.959
PFOS	6.91	1.000	457330.4	A	13C8-PFOS	6.91	89877.7	5.088	8.158

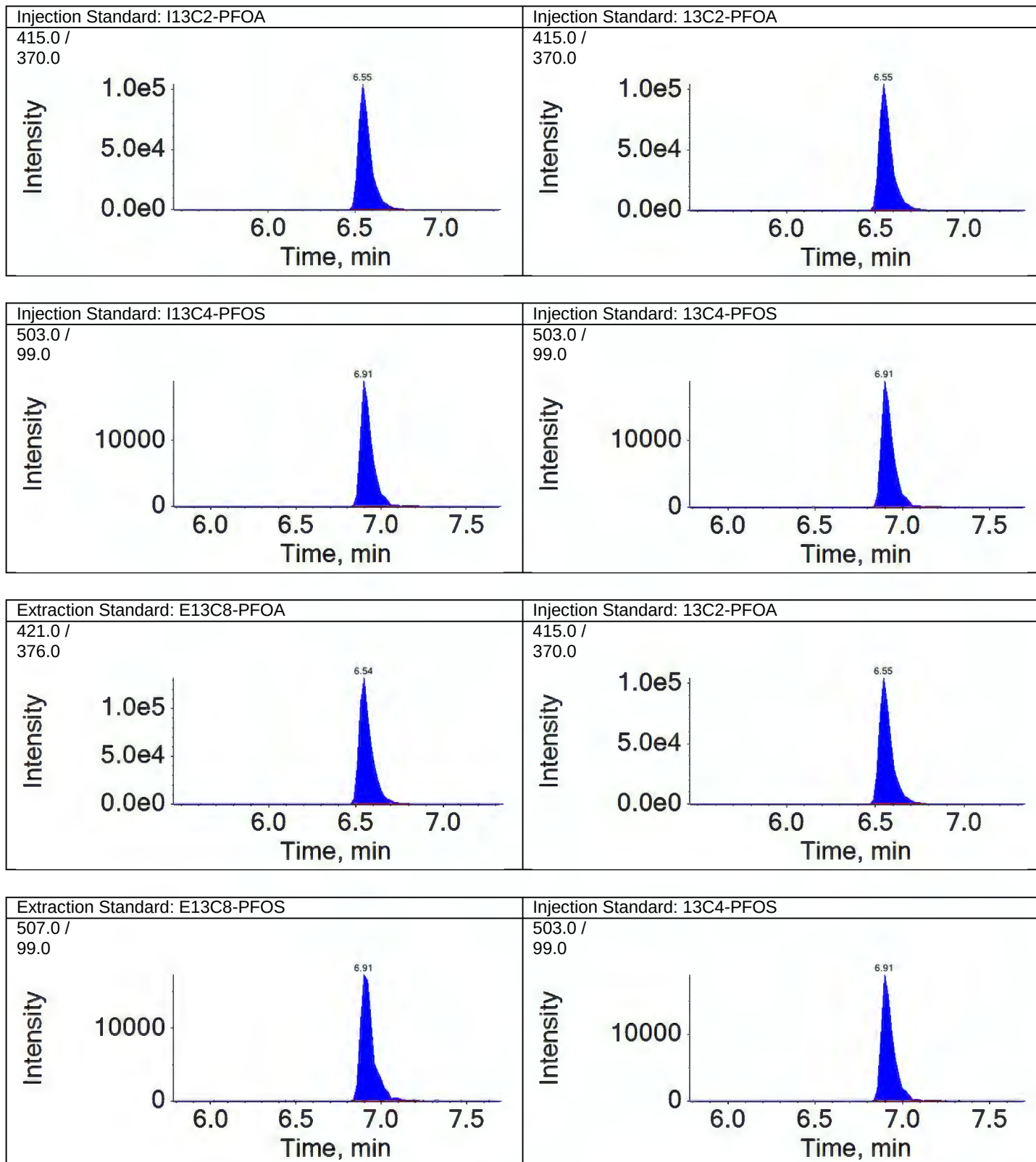
Total Ion Chromatogram

TIC from 16DEC11-28.wiff (sample 1) - CAL4



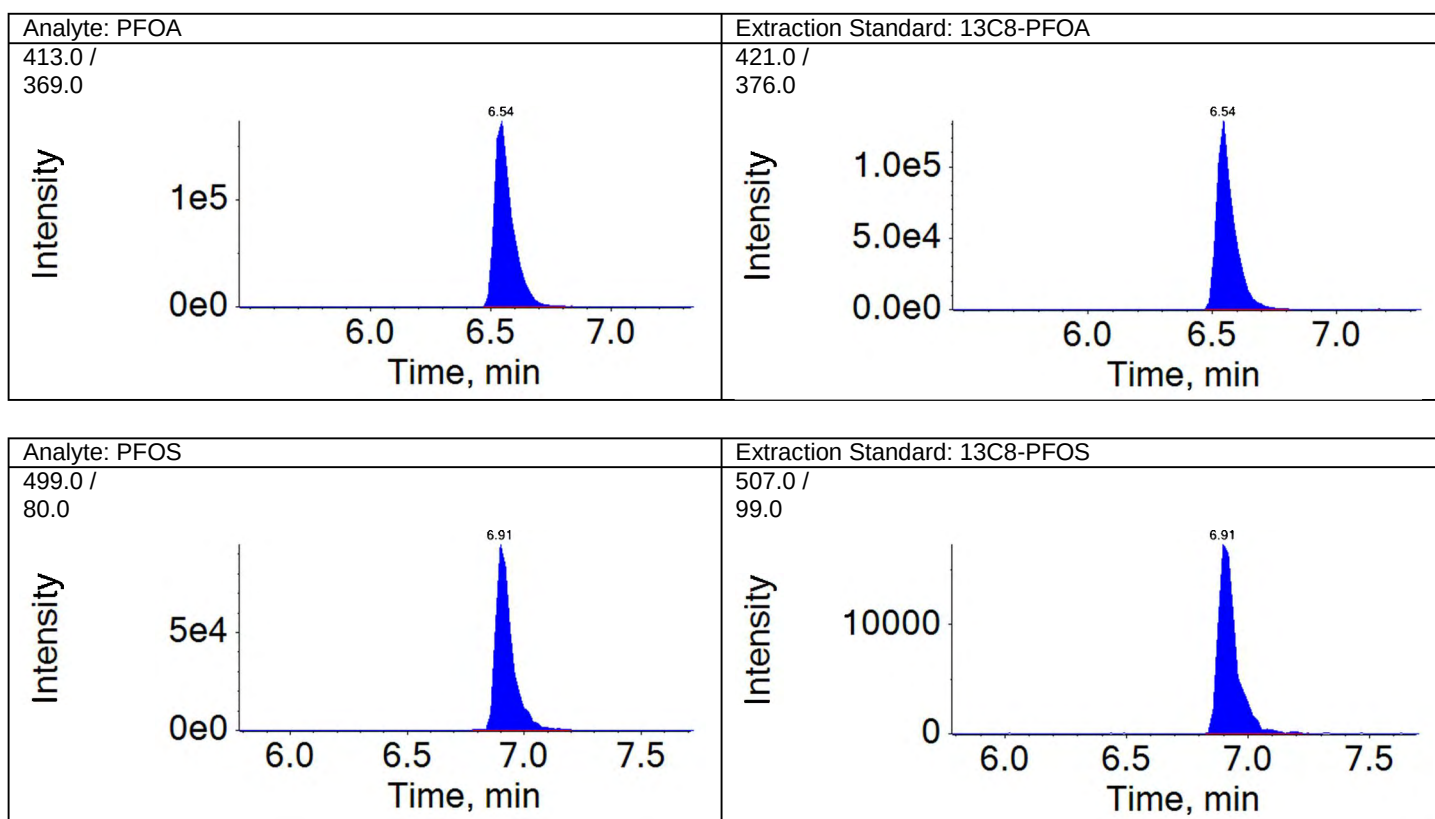
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL5			Data File:		16DEC11-29.wiff
Sample ID:	CALPFC51637F			Acquis Date:		2016-12-11T17:27:35
Sample Type:	Standard			Instrument:		LM24960
Vial Position:	6			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	456462.5	479624.1	-4.8	50.0	
I13C4-PFOS	1.0	90396.6	91278.0	-1.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	580269.9	13C2-PFOA	456462.5	1.271	1.263	1.000	1.007		-	
E13C8-PFOS	97666.4	13C4-PFOS	90396.6	1.080	1.011	1.000	1.069		-	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

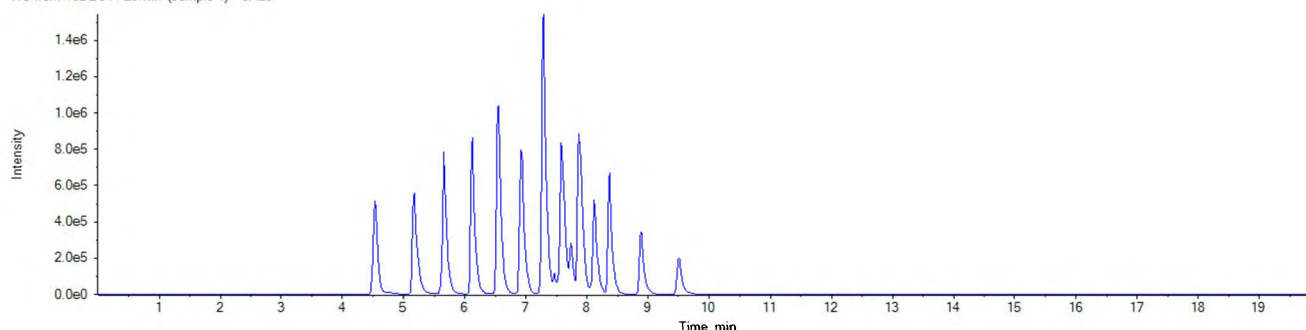
Analyte Quantitation Peak Table

Sample Name: CAL5			Instrument Name: LM24960			File Name: 16DEC11-29.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.55	1.000	2041728.3	A	13C8-PFOA	6.55	580269.9	3.519	17.437
PFOS	6.91	1.000	1003660.1	A	13C8-PFOS	6.91	97666.4	10.276	16.475

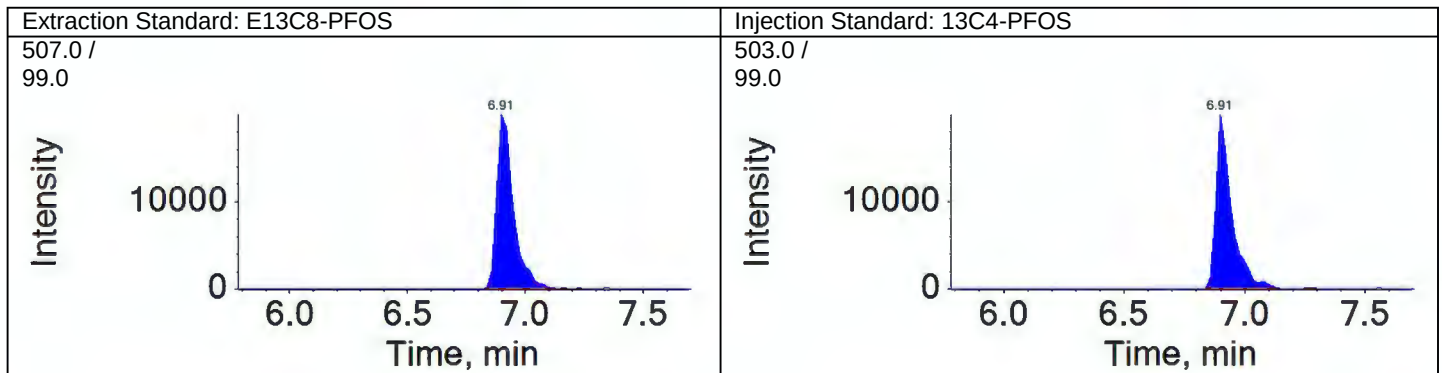
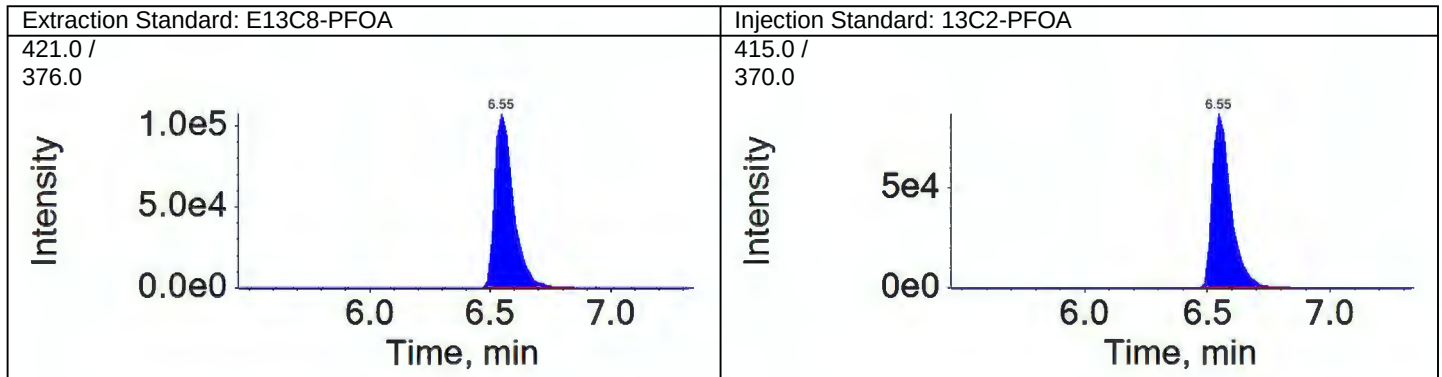
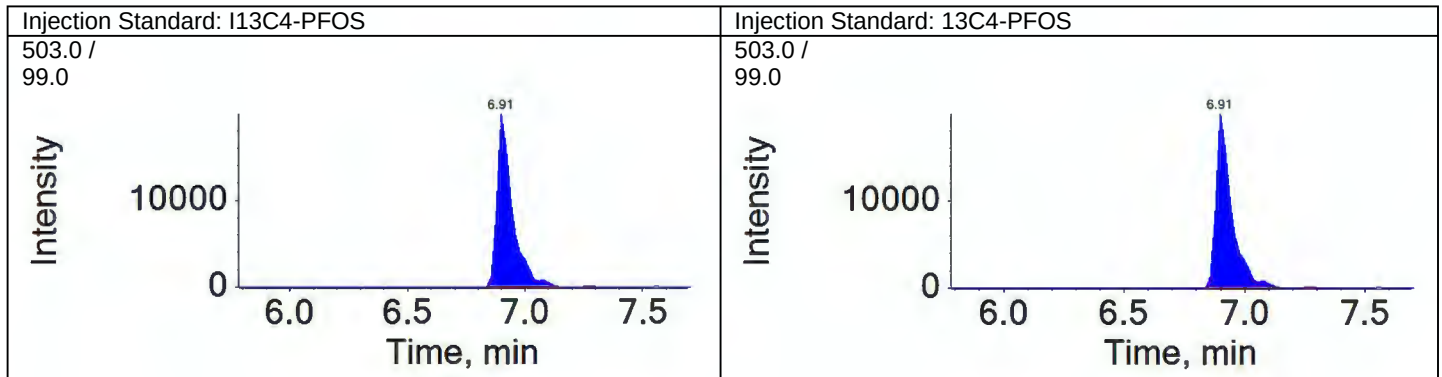
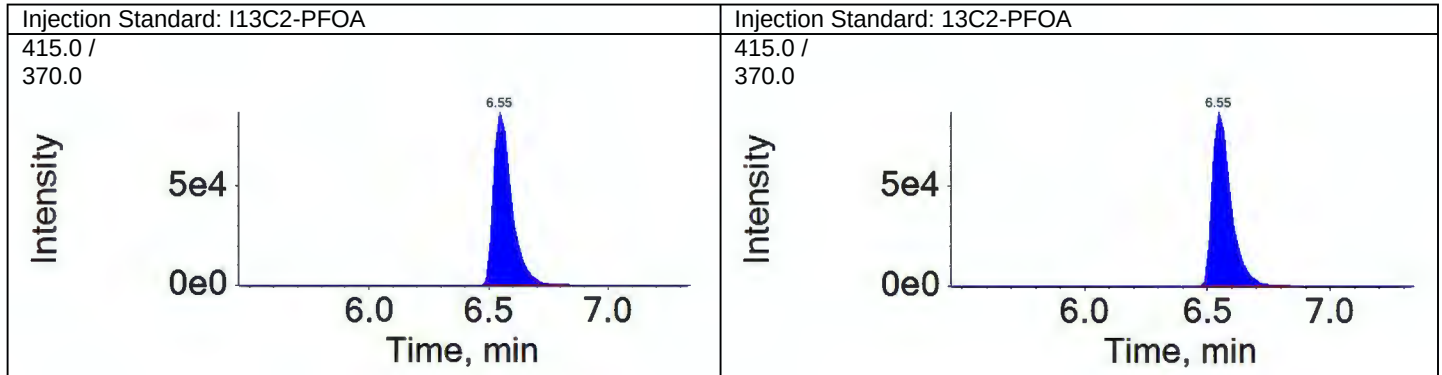
Total Ion Chromatogram

TIC from 16DEC11-29.wiff (sample 1) - CAL5



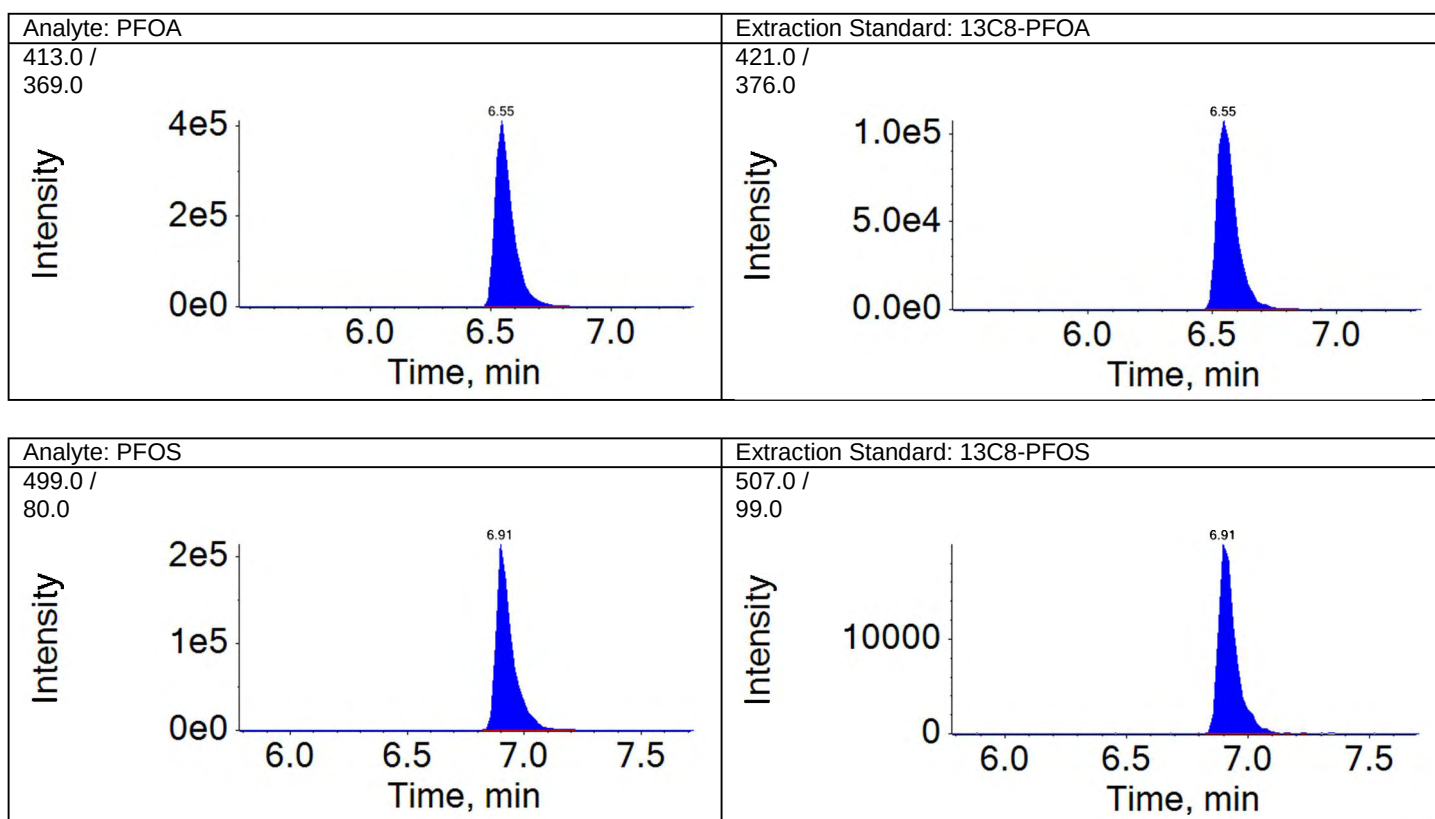
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL6			Data File:		16DEC11-30.wiff
Sample ID:	CALPFC61637G			Acquis Date:		2016-12-11T17:48:05
Sample Type:	Standard			Instrument:		LM24960
Vial Position:	7			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	448381.2	479624.1	-6.5	50.0	
I13C4-PFOS	1.0	81956.2	91278.0	-10.2	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	518168.3	13C2-PFOA	448381.2	1.156	1.263	1.000	0.915		-	
E13C8-PFOS	85745.5	13C4-PFOS	81956.2	1.046	1.011	1.000	1.035		-	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

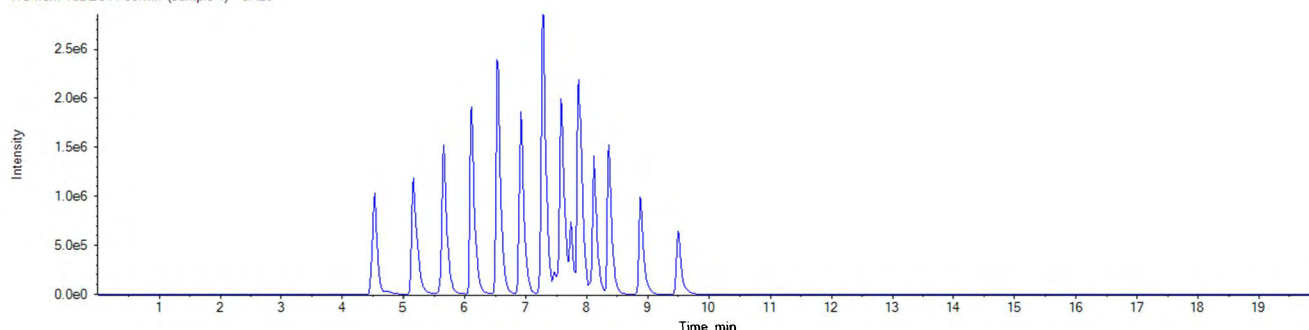
Analyte Quantitation Peak Table

Sample Name: CAL6			Instrument Name: LM24960			File Name: 16DEC11-30.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.54	1.000	5396312.3	A	13C8-PFOA	6.54	518168.3	10.414	51.611
PFOS	6.90	1.000	2653543.4	A	13C8-PFOS	6.90	85745.5	30.947	49.614

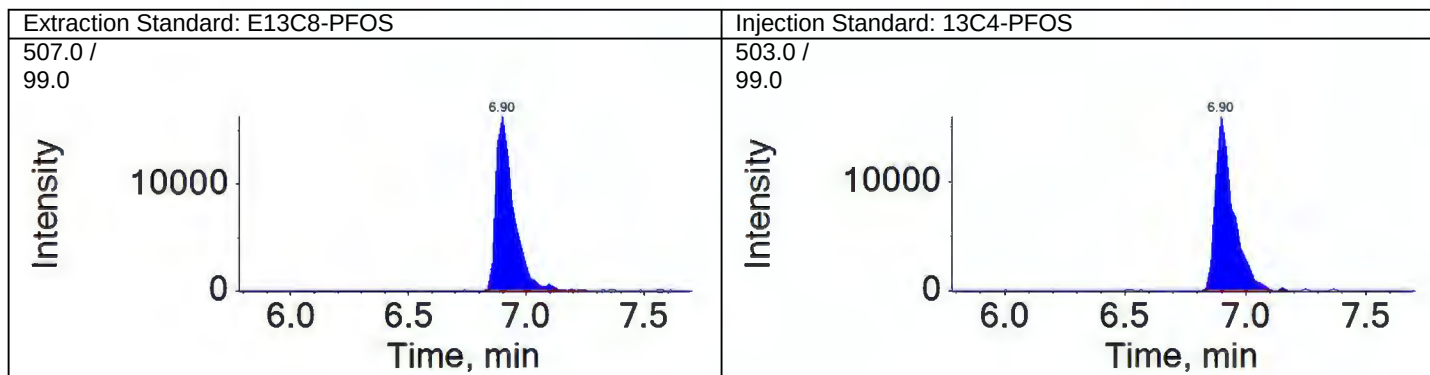
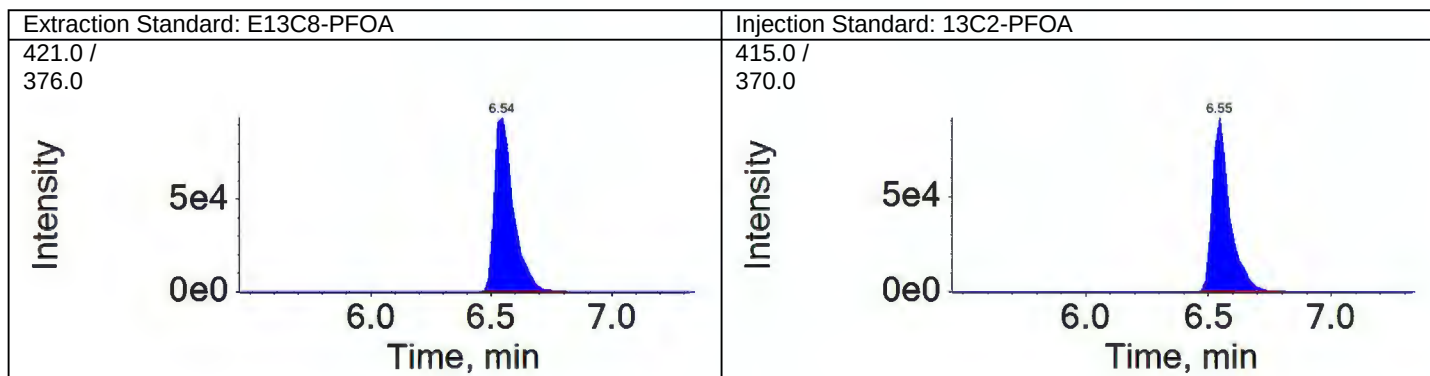
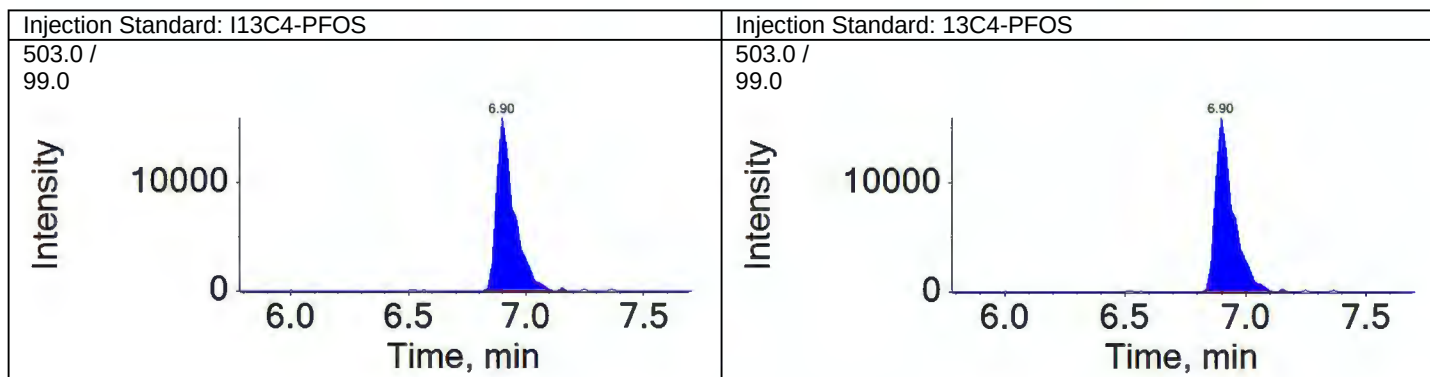
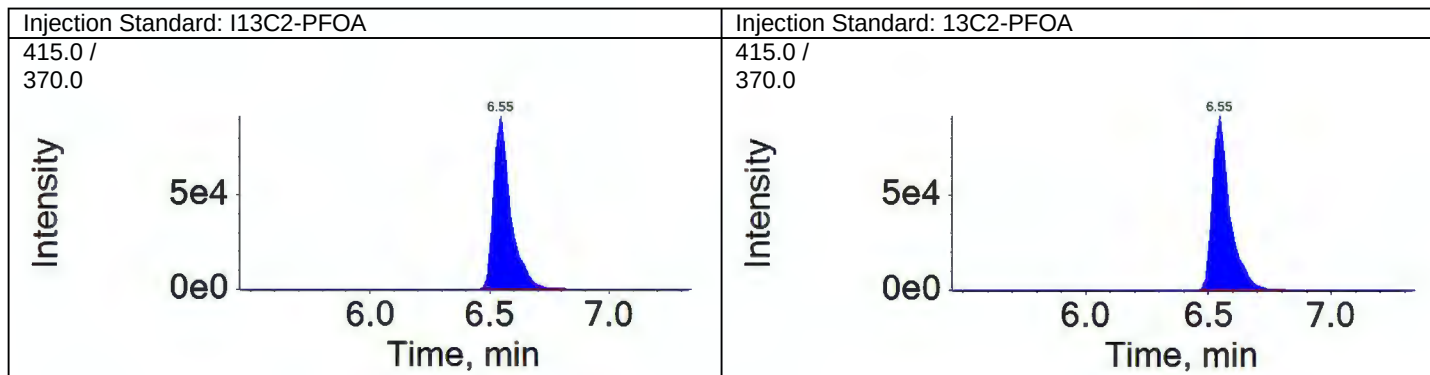
Total Ion Chromatogram

TIC from 16DEC11-30.wiff (sample 1) - CAL6



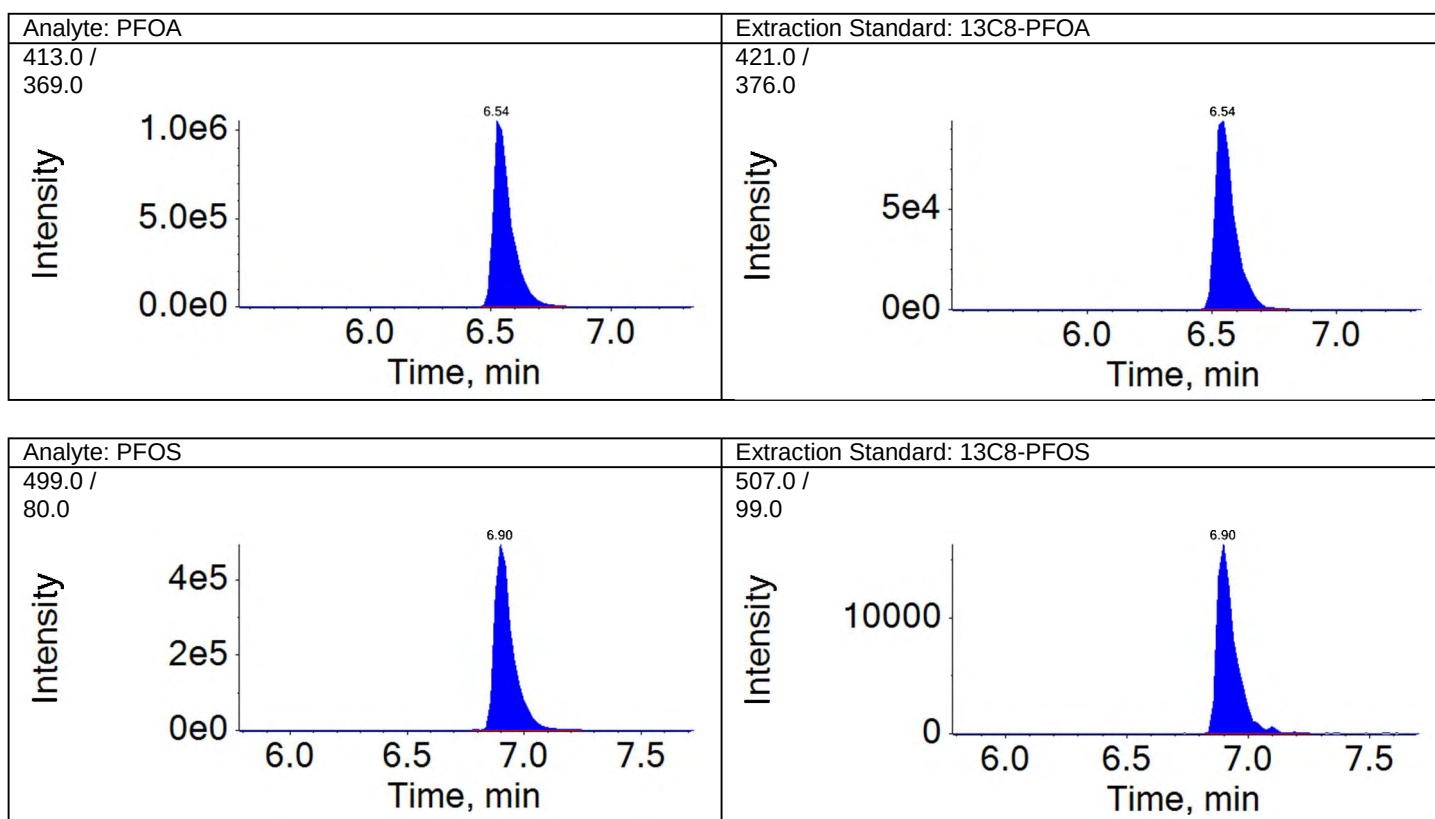
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CAL7			Data File:		16DEC11-31.wiff
Sample ID:	CALPFC71637A			Acquis Date:		2016-12-11T18:08:38
Sample Type:	Standard			Instrument:		LM24960
Vial Position:	8			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	369256.4	479624.1	-23.0	50.0	
I13C4-PFOS	1.0	74497.3	91278.0	-18.4	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	440154.0	13C2-PFOA	369256.4	1.192	1.263	1.000	0.944		-	
E13C8-PFOS	74275.9	13C4-PFOS	74497.3	0.997	1.011	1.000	0.986		-	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

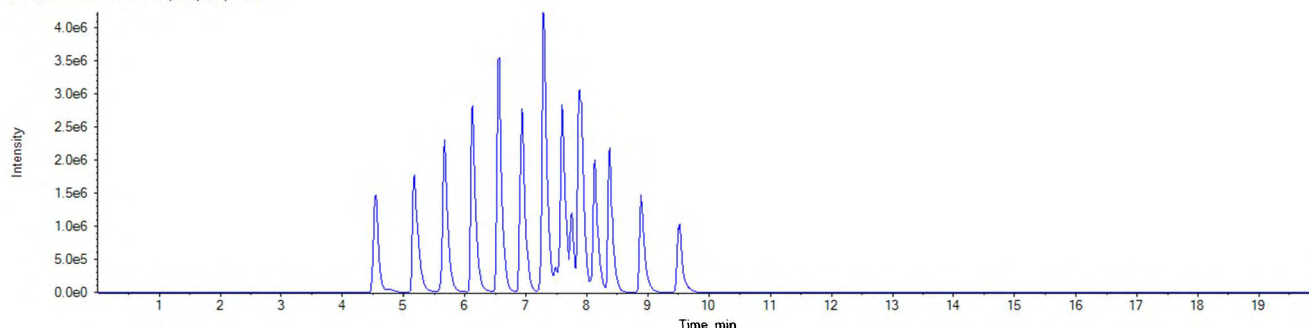
Analyte Quantitation Peak Table

Sample Name: CAL7			Instrument Name: LM24960			File Name: 16DEC11-31.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.56	1.000	9100238.3	A	13C8-PFOA	6.56	440154.0	20.675	102.461
PFOS	6.91	1.000	4462217.5	A	13C8-PFOS	6.92	74275.9	60.076	96.314

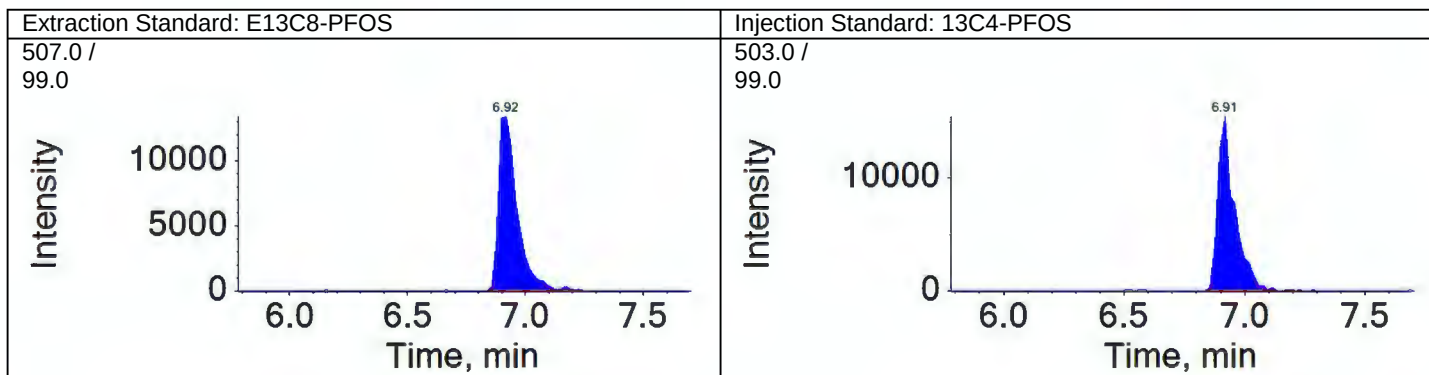
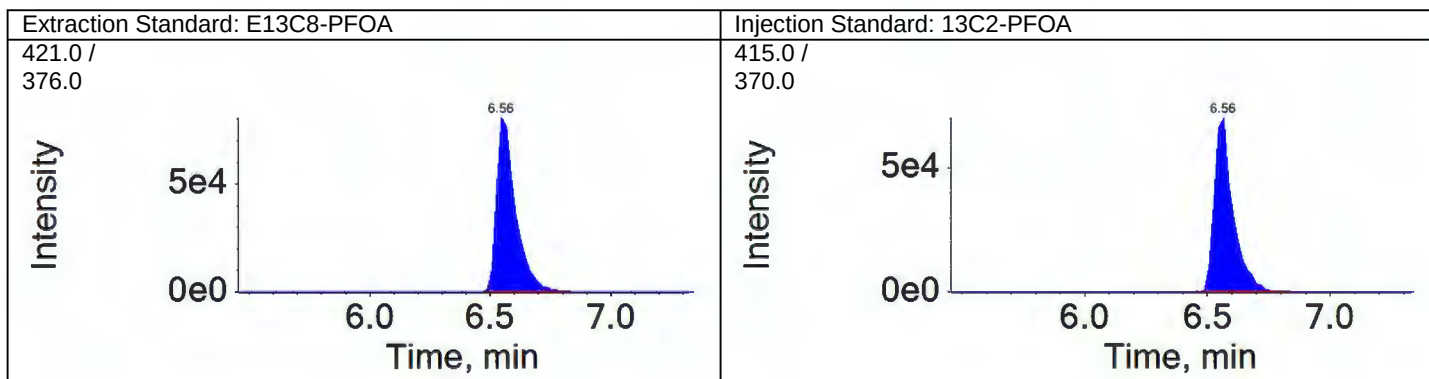
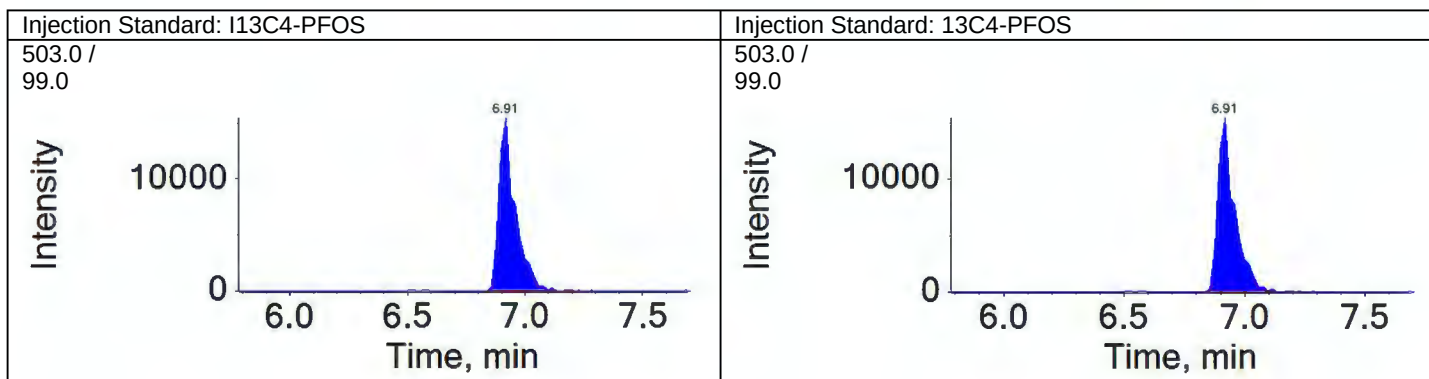
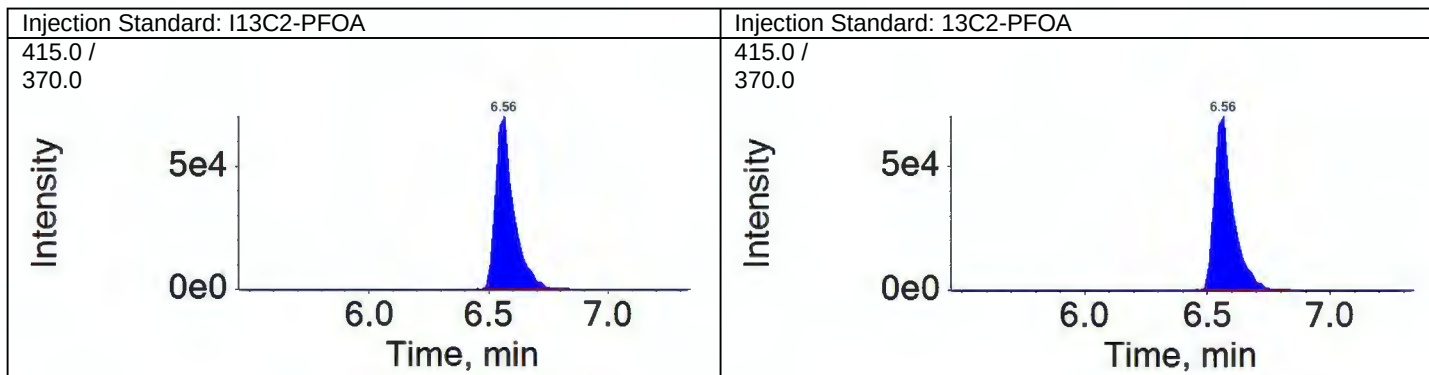
Total Ion Chromatogram

TIC from 16DEC11-31.wiff (sample 1) - CAL7



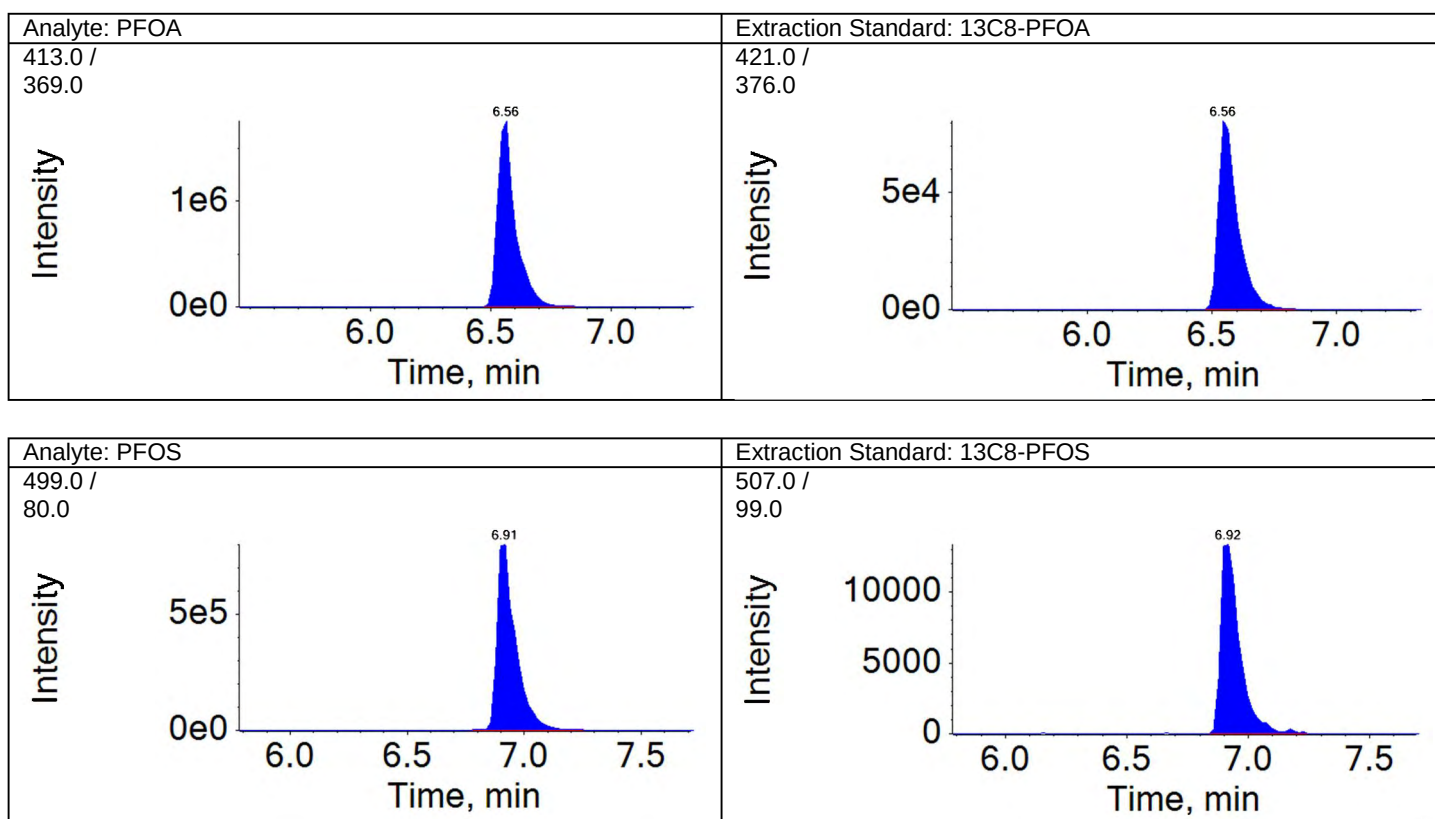
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	L/B Check		Data File:	16DEC11-33.wiff
Sample ID:	L/B Check		Acquis Date:	2016-12-11T18:49:45
Sample Type:	Unknown		Instrument:	LM24960
Vial Position:	10		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	NA		Operator:	Not calculated
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	489935.0	479624.1	2.2	50.0	
I13C4-PFOS	1.0	83092.4	91278.0	-9.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	N/A	13C2-PFOA	489935.0	N/A	1.263	1.000			70.0-130.0	OOS
E13C8-PFOS	N/A	13C4-PFOS	83092.4	N/A	1.011	1.000			70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

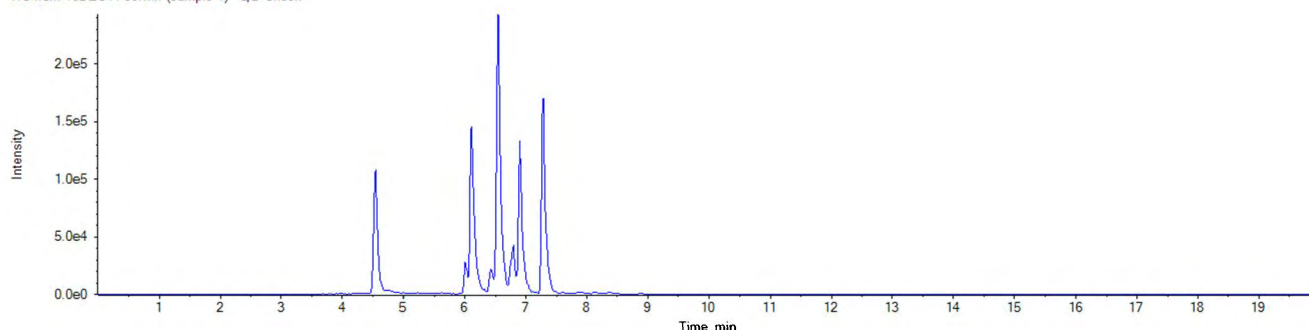
Analyte Quantitation Peak Table

Sample Name: L/B Check			Instrument Name: LM24960			File Name: 16DEC11-33.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	ES RT	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.55	N/A	362667.9	A	13C8-PFOA	N/A	N/A	N/A	
PFOS	6.90	N/A	564989.7	A	13C8-PFOS	N/A	N/A	N/A	

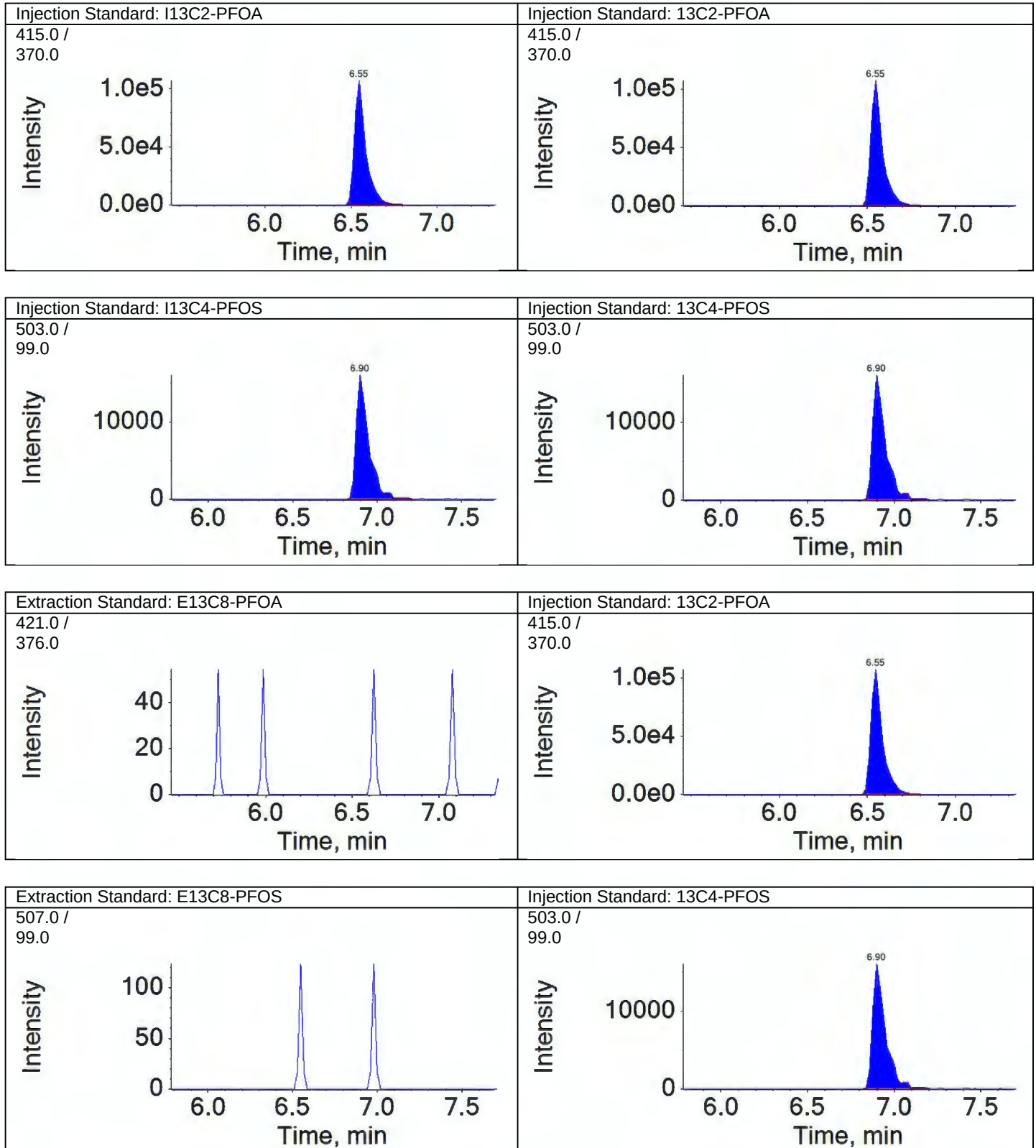
Total Ion Chromatogram

TIC from 16DEC11-33.wiff (sample 1) - L/B Check



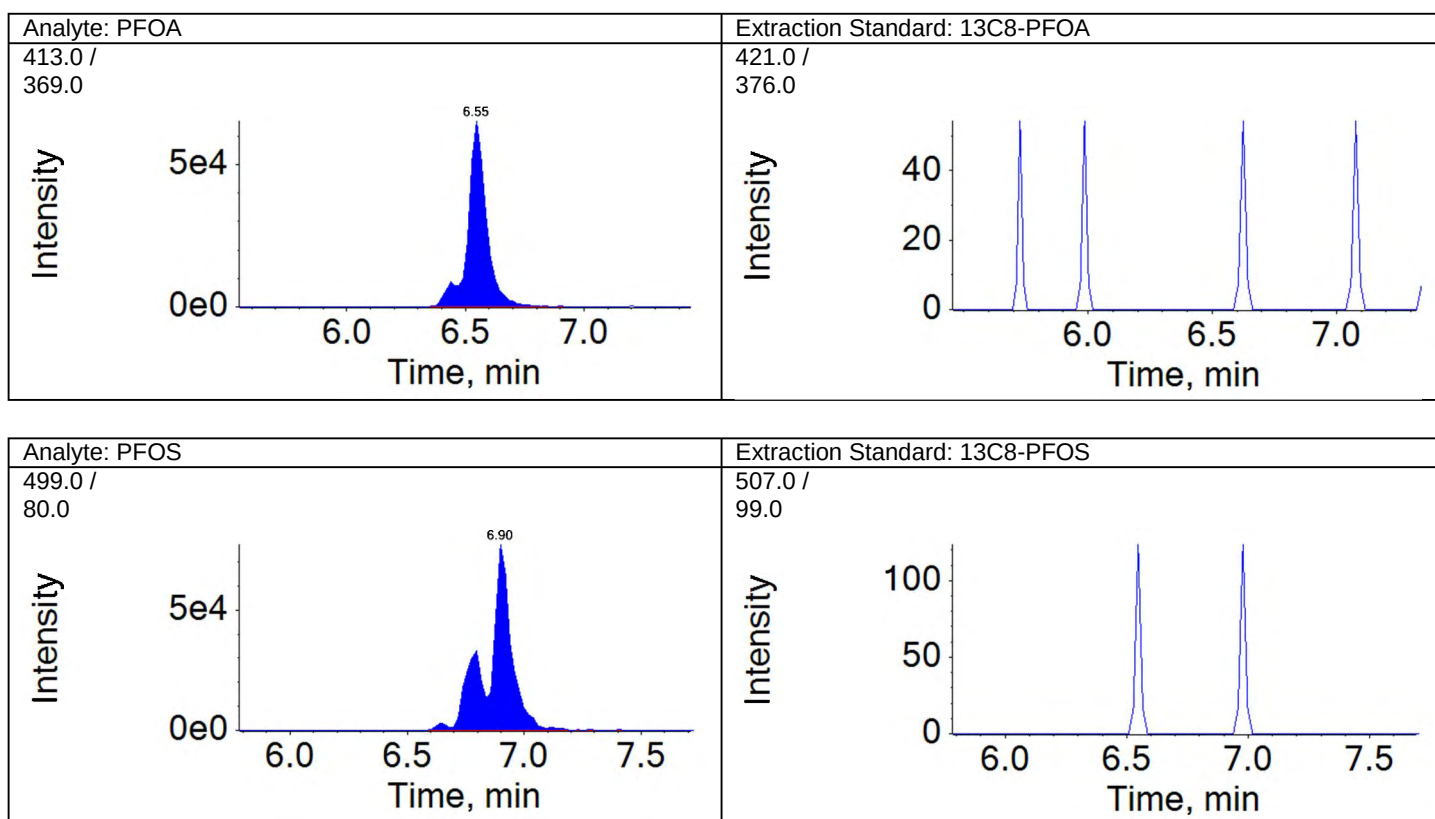
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	ICV			Data File:		16DEC11-34.wiff
Sample ID:	ICV			Acquis Date:		2016-12-11T19:10:18
Sample Type:	Quality Control			Instrument:		LM24960
Vial Position:	9			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	NA			Operator:		Not calculated
Sample Wt.:	1.00000			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	530878.3	479624.1	10.7	50.0	
I13C4-PFOS	1.0	117742.1	91278.0	29.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	481210.7	13C2-PFOA	530878.3	0.906	1.263	1.000	0.718	71.8	70.0-130.0	
E13C8-PFOS	77793.3	13C4-PFOS	117742.1	0.661	1.011	1.000	0.654	65.4	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

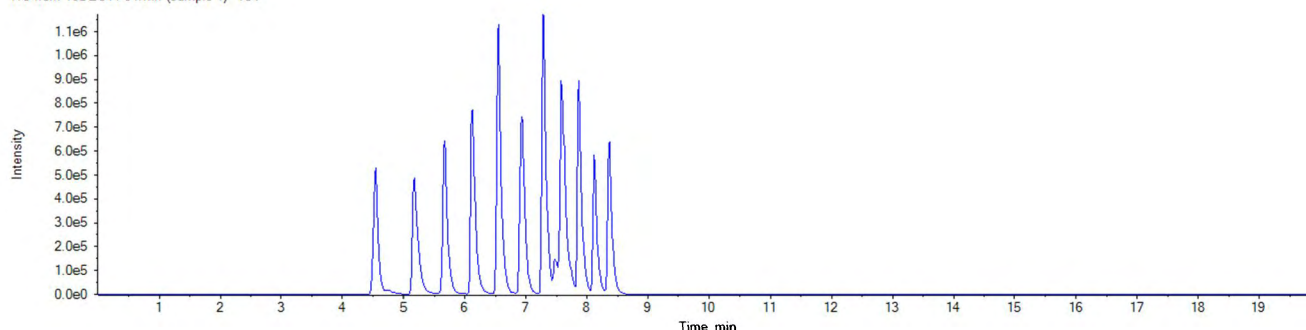
Analyte Quantitation Peak Table

Sample Name: ICV			Instrument Name: LM24960			File Name: 16DEC11-34.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.55	1.000	2171012.7	A	13C8-PFOA	6.55	481210.7	4.512	22.358
PFOS	6.91	1.000	991951.2	A	13C8-PFOS	6.92	77793.3	12.751	20.442

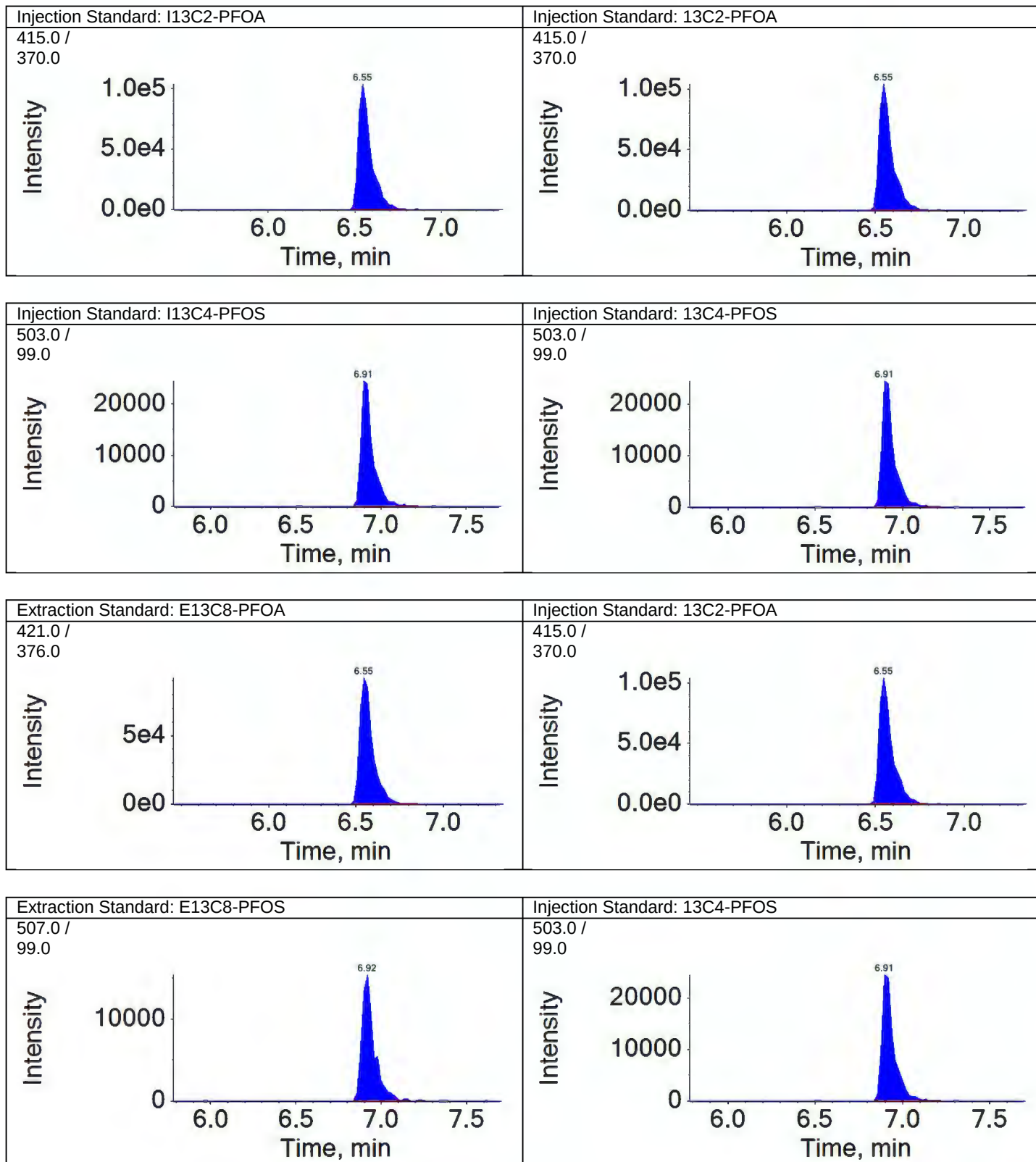
Total Ion Chromatogram

TIC from 16DEC11-34.wiff (sample 1) - ICV



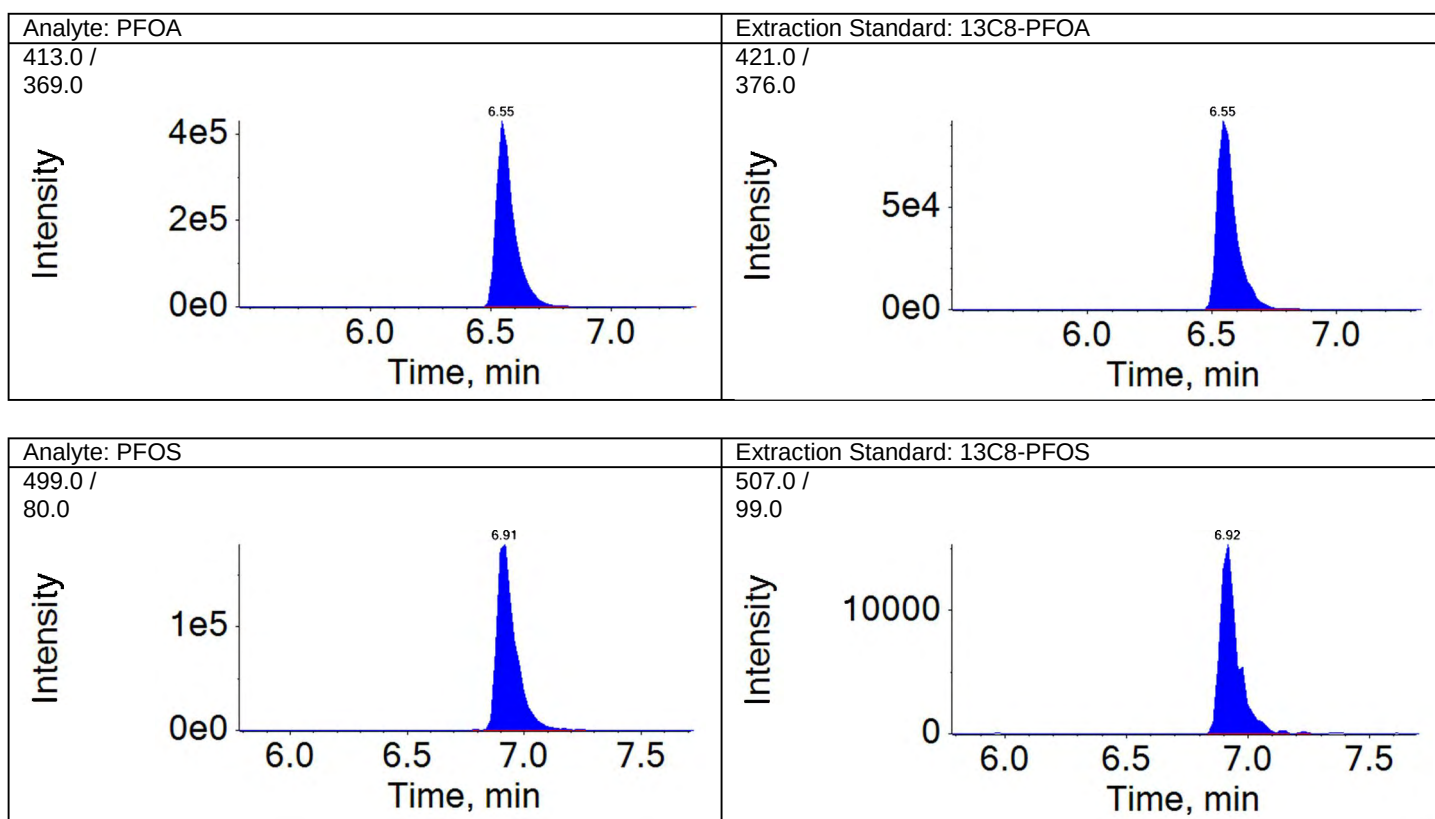
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV1		Data File:	16DEC11-35.wiff
Sample ID:	CALPFC31637F		Acquis Date:	2016-12-11T19:30:48
Sample Type:	Quality Control		Instrument:	LM24960
Vial Position:	4		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	NA		Operator:	Not calculated
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	477519.5	479624.1	-0.4	50.0	
I13C4-PFOS	1.0	92474.5	91278.0	1.3	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	625879.8	13C2-PFOA	477519.5	1.311	1.263	1.000	1.038	103.8	70.0-130.0	
E13C8-PFOS	92778.2	13C4-PFOS	92474.5	1.003	1.011	1.000	0.993	99.3	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

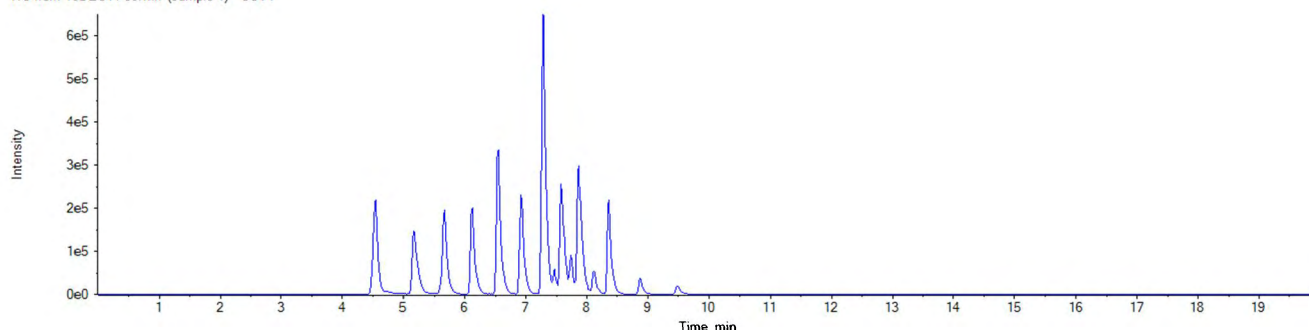
Analyte Quantitation Peak Table

Sample Name: CCV1			Instrument Name: LM24960			File Name: 16DEC11-35.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.55	1.000	207692.8	A	13C8-PFOA	6.55	625879.8	0.332	1.645
PFOS	6.91	1.000	98567.8	A	13C8-PFOS	6.91	92778.2	1.062	1.703

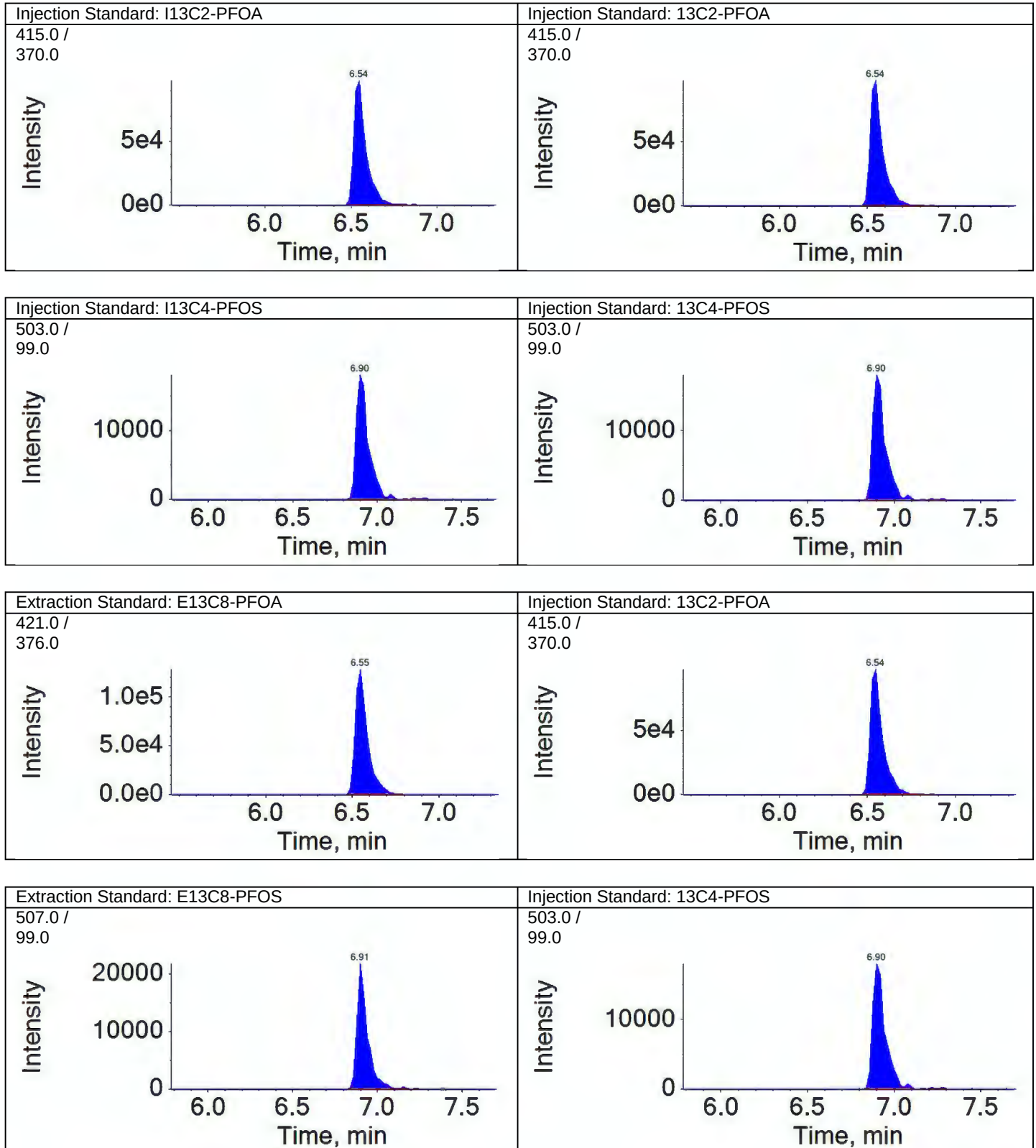
Total Ion Chromatogram

TIC from 16DEC11-35.wiff (sample 1) - CCV1



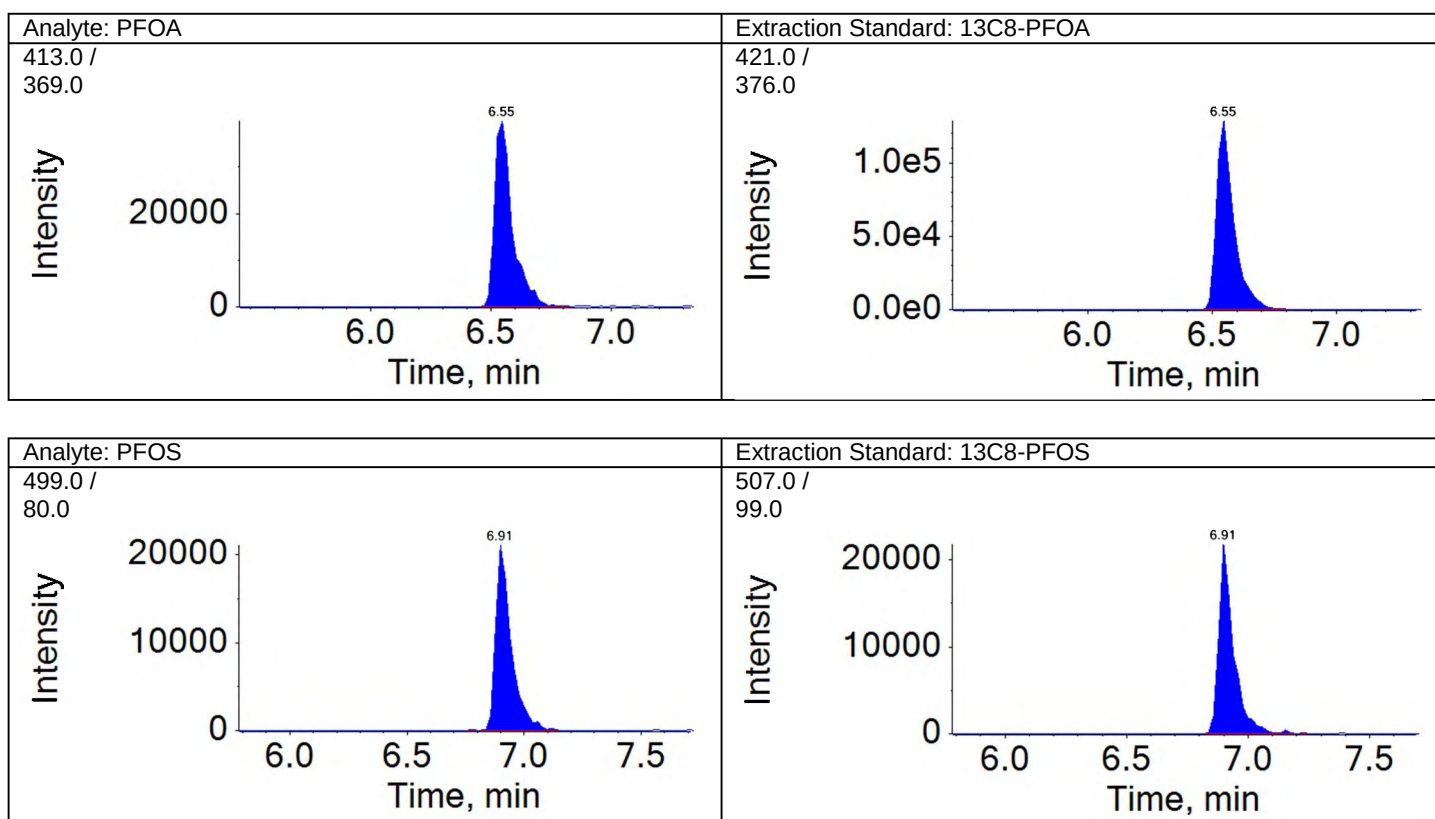
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV3		Data File:	17JAN05-16.wiff
Sample ID:	CALPFC31637F		Acquis Date:	2017-01-05T13:46:12
Sample Type:	Quality Control		Instrument:	LM24960
Vial Position:	4		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	N/A		Operator:	Not calculated
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	347584.4	479624.1	-27.5	50.0	
I13C4-PFOS	1.0	57178.6	91278.0	-37.4	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	428423.6	13C2-PFOA	347584.4	1.233	1.263	1.000	0.976	97.6	70.0-130.0	
E13C8-PFOS	57848.6	13C4-PFOS	57178.6	1.012	1.011	1.000	1.001	100.1	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

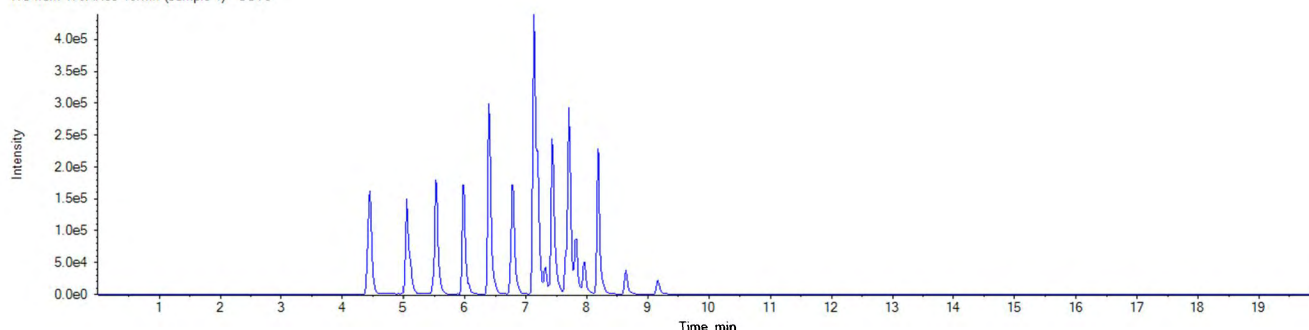
Analyte Quantitation Peak Table

Sample Name: CCV3			Instrument Name: LM24960			File Name: 17JAN05-16.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.40	1.000	139478.3	A	13C8-PFOA	6.40	428423.6	0.326	1.613
PFOS	6.76	1.000	59335.1	A	13C8-PFOS	6.76	57848.6	1.026	1.644

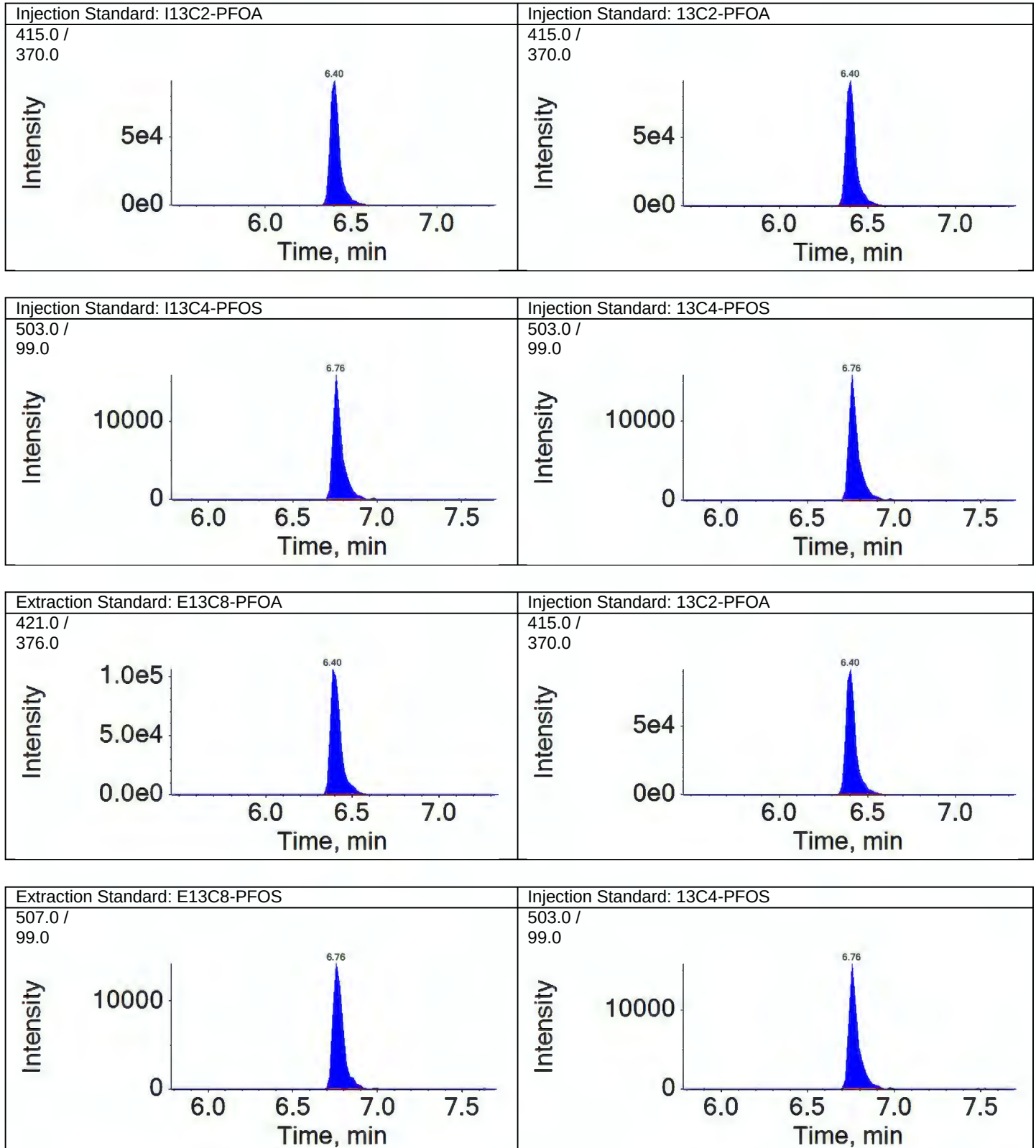
Total Ion Chromatogram

TIC from 17JAN05-16.wiff (sample 1) - CCV3



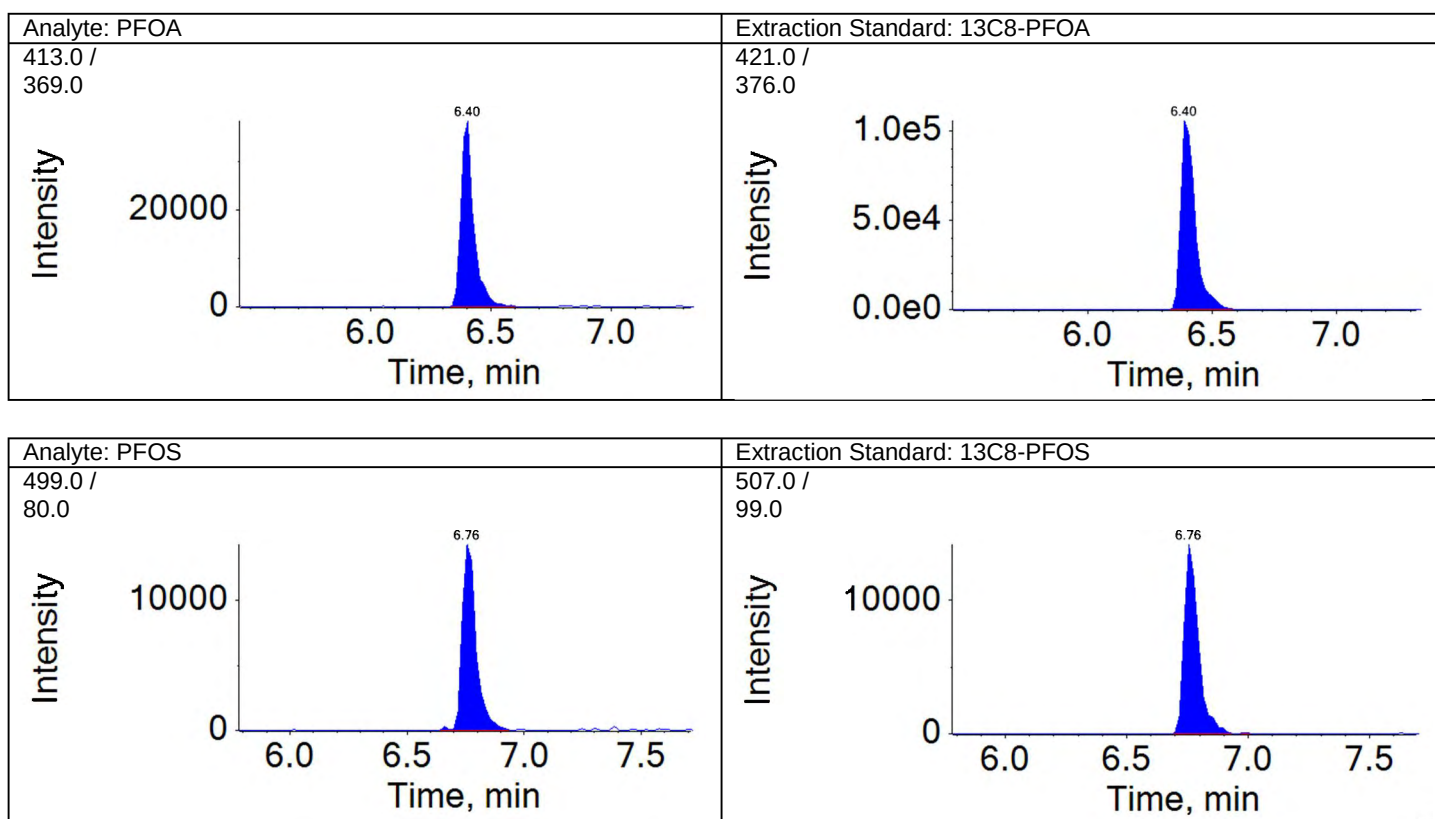
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV4		Data File:	17JAN05-27.wiff
Sample ID:	CALPFC31637F		Acquis Date:	2017-01-05T17:32:02
Sample Type:	Quality Control		Instrument:	LM24960
Vial Position:	4		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	N/A		Operator:	Not calculated
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	309349.3	479624.1	-35.5	50.0	
I13C4-PFOS	1.0	59470.4	91278.0	-34.8	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	417098.5	13C2-PFOA	309349.3	1.348	1.263	1.000	1.068	106.8	70.0-130.0	
E13C8-PFOS	63392.8	13C4-PFOS	59470.4	1.066	1.011	1.000	1.055	105.5	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

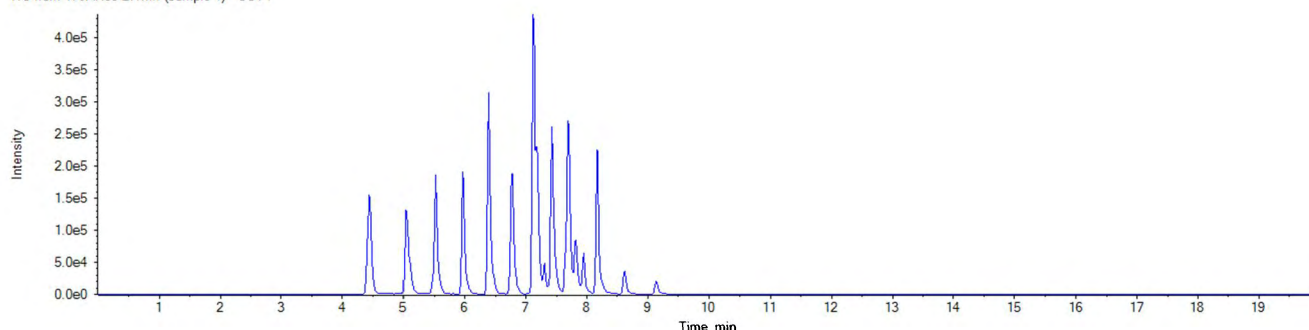
Analyte Quantitation Peak Table

Sample Name: CCV4			Instrument Name: LM24960			File Name: 17JAN05-27.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
1.00000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.39	1.000	141163.4	A	13C8-PFOA	6.39	417098.5	0.338	1.677
PFOS	6.75	1.000	65441.3	A	13C8-PFOS	6.75	63392.8	1.032	1.655

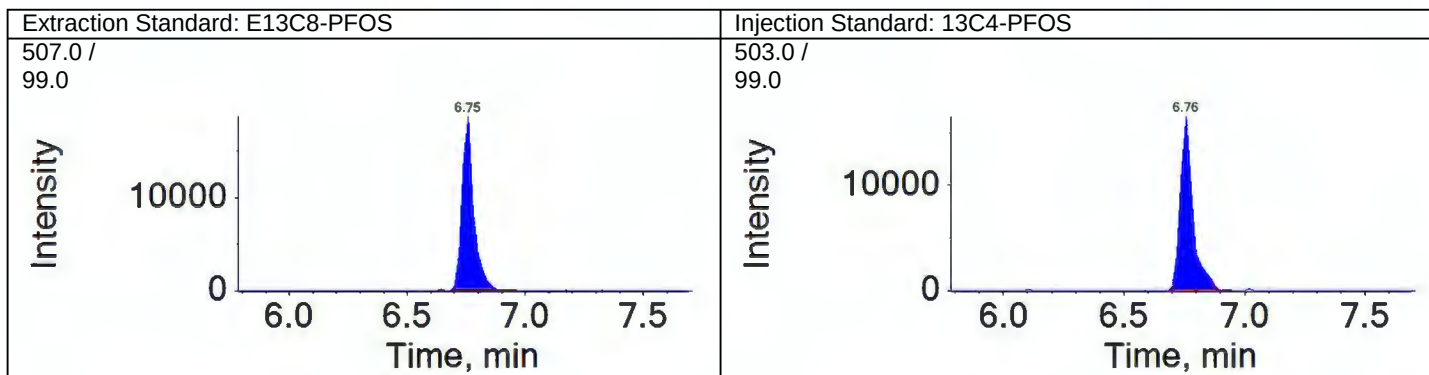
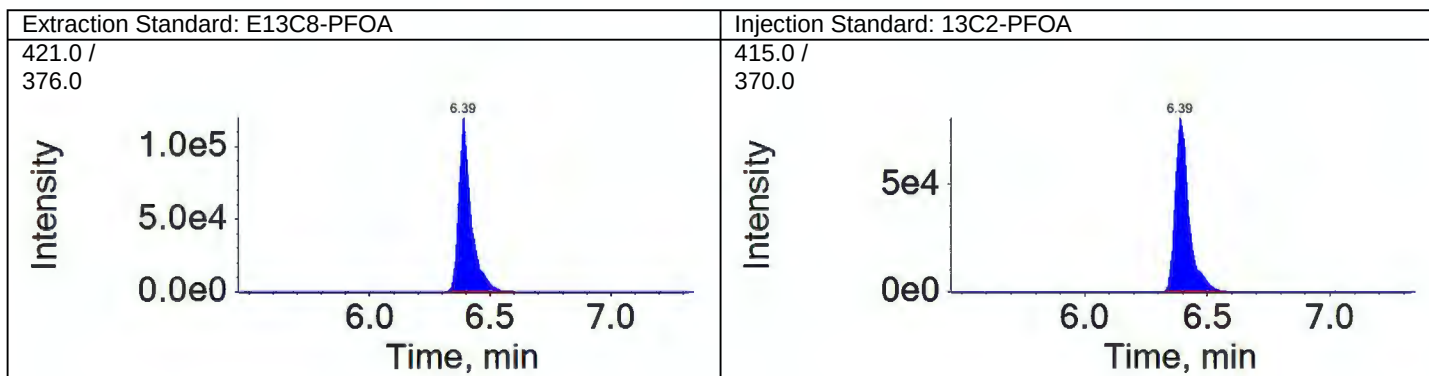
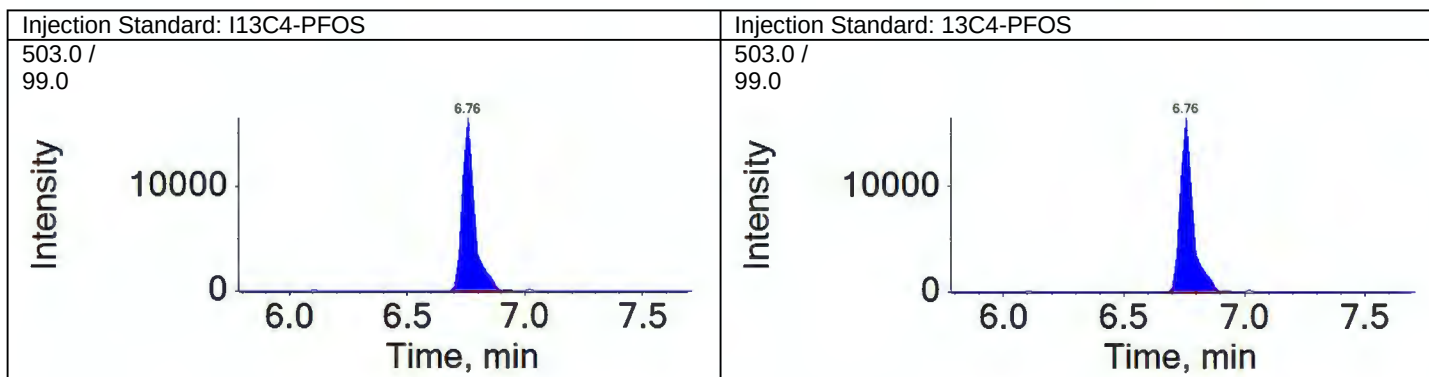
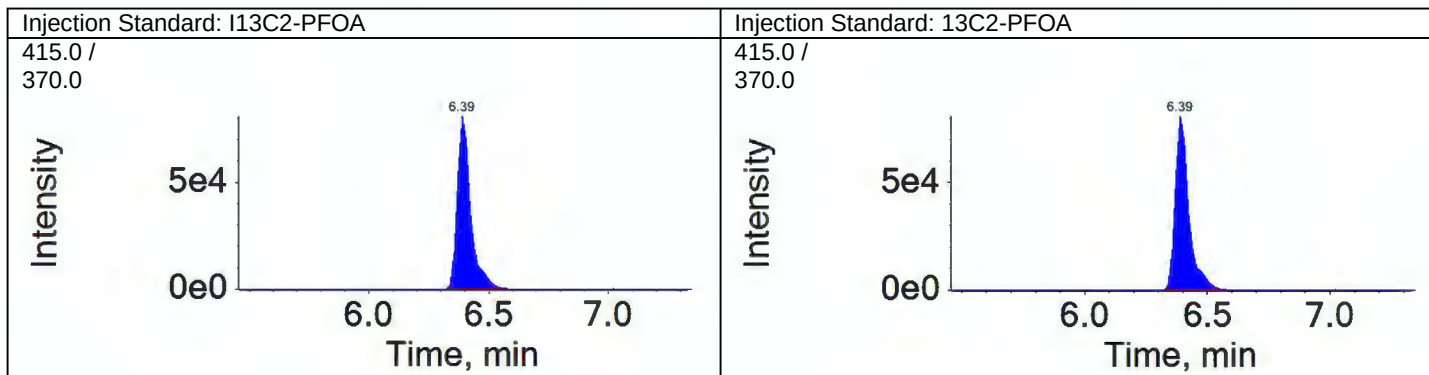
Total Ion Chromatogram

TIC from 17JAN05-27.wiff (sample 1) - CCV4



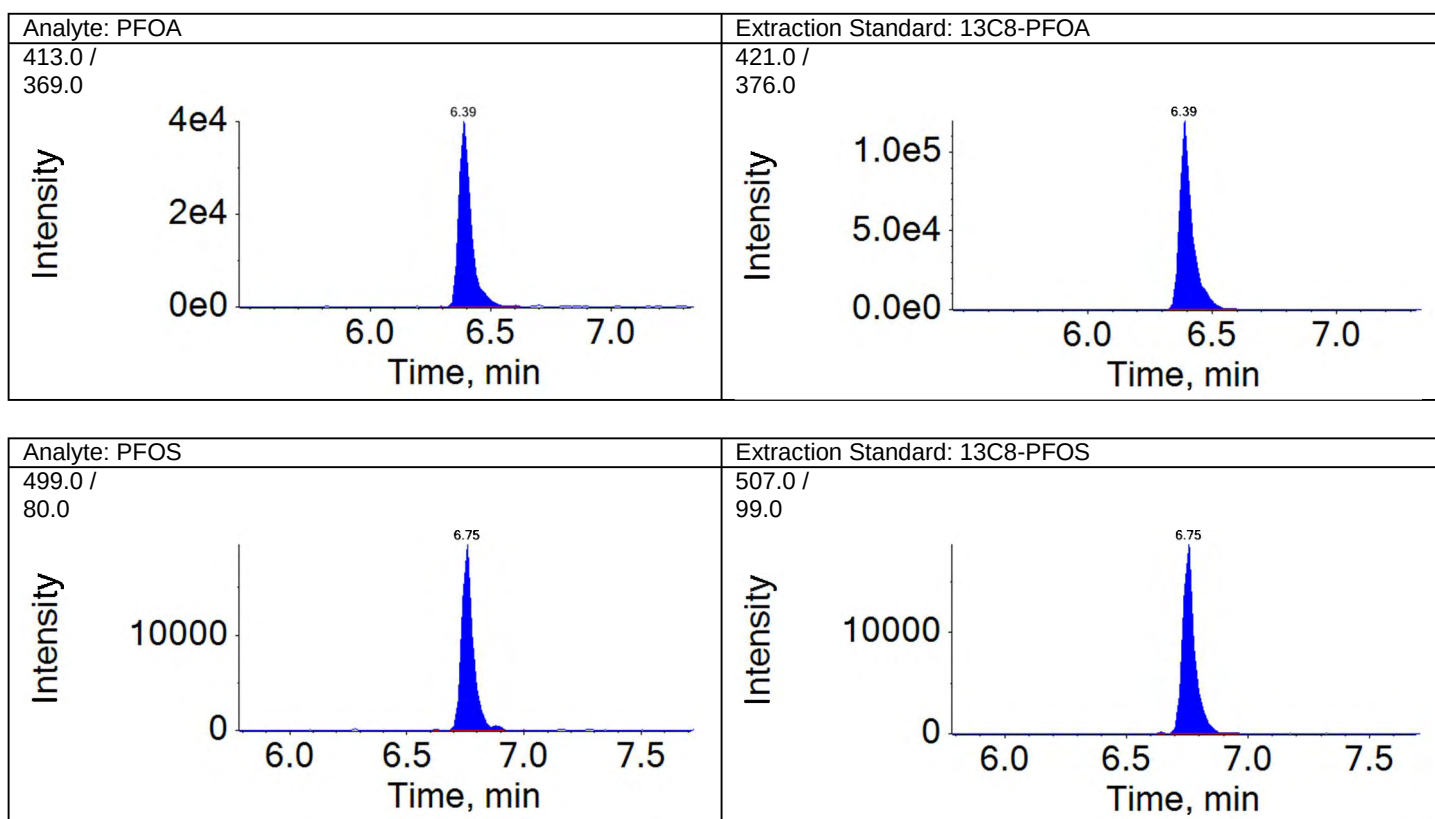
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV3		Data File:	17JAN06-04.wiff
Sample ID:	CALPFC31637F		Acquis Date:	2017-01-06T07:33:40
Sample Type:	Quality Control		Instrument:	LM24960
Vial Position:	4		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ CCV3-4
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	N/A		Operator:	Not calculated
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	265689.2	475795.8	-44.2	50.0	
I13C2-PFOA	1.0	276937.7	479624.1	-42.3	50.0	
I13C4-PFOS	1.0	57081.2	91278.0	-37.5	50.0	
I13C2-PFDA	1.0	495221.0	675082.3	-26.6	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	308768.7	13C3-PFBA	265689.2	1.162	1.149	1.000	1.011	101.1	70.0-130.0	
E13C3-PFBS	74946.3	13C3-PFBA	265689.2	0.282	0.259	1.000	1.088	108.8	70.0-130.0	
E13C5-PFHxA	425093.3	13C2-PFOA	276937.7	1.535	1.383	1.000	1.110	111.0	70.0-130.0	
E13C3-PFHxS	55670.4	13C2-PFOA	276937.7	0.201	0.182	1.000	1.107	110.7	70.0-130.0	
E13C4-PFHpA	340309.9	13C2-PFOA	276937.7	1.229	1.155	1.000	1.063	106.3	70.0-130.0	
E13C8-PFOA	371137.5	13C2-PFOA	276937.7	1.340	1.263	1.000	1.061	106.1	70.0-130.0	
E13C8-PFOS	56360.8	13C4-PFOS	57081.2	0.987	1.011	1.000	0.977	97.7	70.0-130.0	
E13C9-PFNA	312702.4	13C4-PFOS	57081.2	5.478	5.620	1.000	0.975	97.5	70.0-130.0	
E13C6-PFDA	683058.9	13C2-PFDA	495221.0	1.379	1.411	1.000	0.978	97.8	70.0-130.0	
Ed3-NMeFOSAA	99029.5	13C2-PFDA	495221.0	0.200	0.234	1.000	0.854	85.4	70.0-130.0	
E13C7-PFUnDA	534176.4	13C2-PFDA	495221.0	1.079	1.095	1.000	0.985	98.5	70.0-130.0	
Ed5-NEtFOSAA	106072.3	13C2-PFDA	495221.0	0.214	0.221	1.000	0.970	97.0	70.0-130.0	
E13C2-PFDoDA	630559.7	13C2-PFDA	495221.0	1.273	1.313	1.000	0.970	97.0	70.0-130.0	
E13C2-PFTeDA	524413.1	13C2-PFDA	495221.0	1.059	1.119	1.000	0.946	94.6	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Analyte Quantitation Peak Table

Sample Name: CCV3

Instrument Name: LM24960

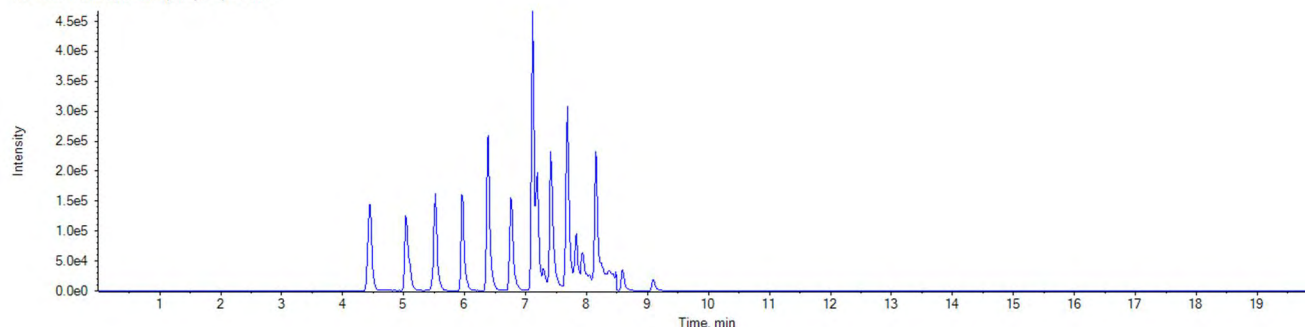
File Name: 17JAN06-04.wiff

Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	5.10	1.000	24332.9	A	13C3-PFBS	5.10	74946.3	0.325	1.420
PFHxA	5.52	1.000	148714.2	A	13C5-PFHxA	5.52	425093.3	0.350	1.571
PFHxS	5.96	1.000	52688.3	A	13C3-PFHxS	5.96	55670.4	0.946	1.532
PFHpA	5.96	1.000	143007.9	A	13C4-PFHpA	5.96	340309.9	0.420	1.793
PFOA	6.39	1.000	115834.1	A	13C8-PFOA	6.38	371137.5	0.312	1.547
PFOS	6.75	1.000	62296.2	A	13C8-PFOS	6.75	56360.8	1.105	1.772
PFNA	6.77	1.000	135806.1	A	13C9-PFNA	6.77	312702.4	0.434	1.707
PFDA	7.12	1.000	226847.4	A	13C6-PFDA	7.12	683058.9	0.332	1.783
NMeFOSAA	7.30	1.000	29462.4	A	d3-NMeFOSAA	7.30	99029.5	0.298	1.398
PFDS	7.38	1.090	16432.3	A	13C8-PFOS	6.75	56360.8	0.292	1.427
PFUnDA	7.42	1.000	212922.0	A	13C7-PFUnDA	7.41	534176.4	0.399	1.626
NEtFOSAA	7.46	1.000	32800.6	A	d5-NEtFOSAA	7.45	106072.3	0.309	1.488
PFDODA	7.69	1.000	216233.6	A	13C2-PFDODA	7.69	630559.7	0.343	1.715
PFTTrDA	7.93	1.030	174692.2	A	13C2-PFDODA	7.69	630559.7	0.277	1.784
PFTeDA	8.15	1.000	157452.2	A	13C2-PFTeDA	8.15	524413.1	0.300	1.648

Total Ion Chromatogram

TIC from 17JAN06-04.wiff (sample 1) - CCV3



APPROVED

By JWK at 9:27 am, 1/6/17

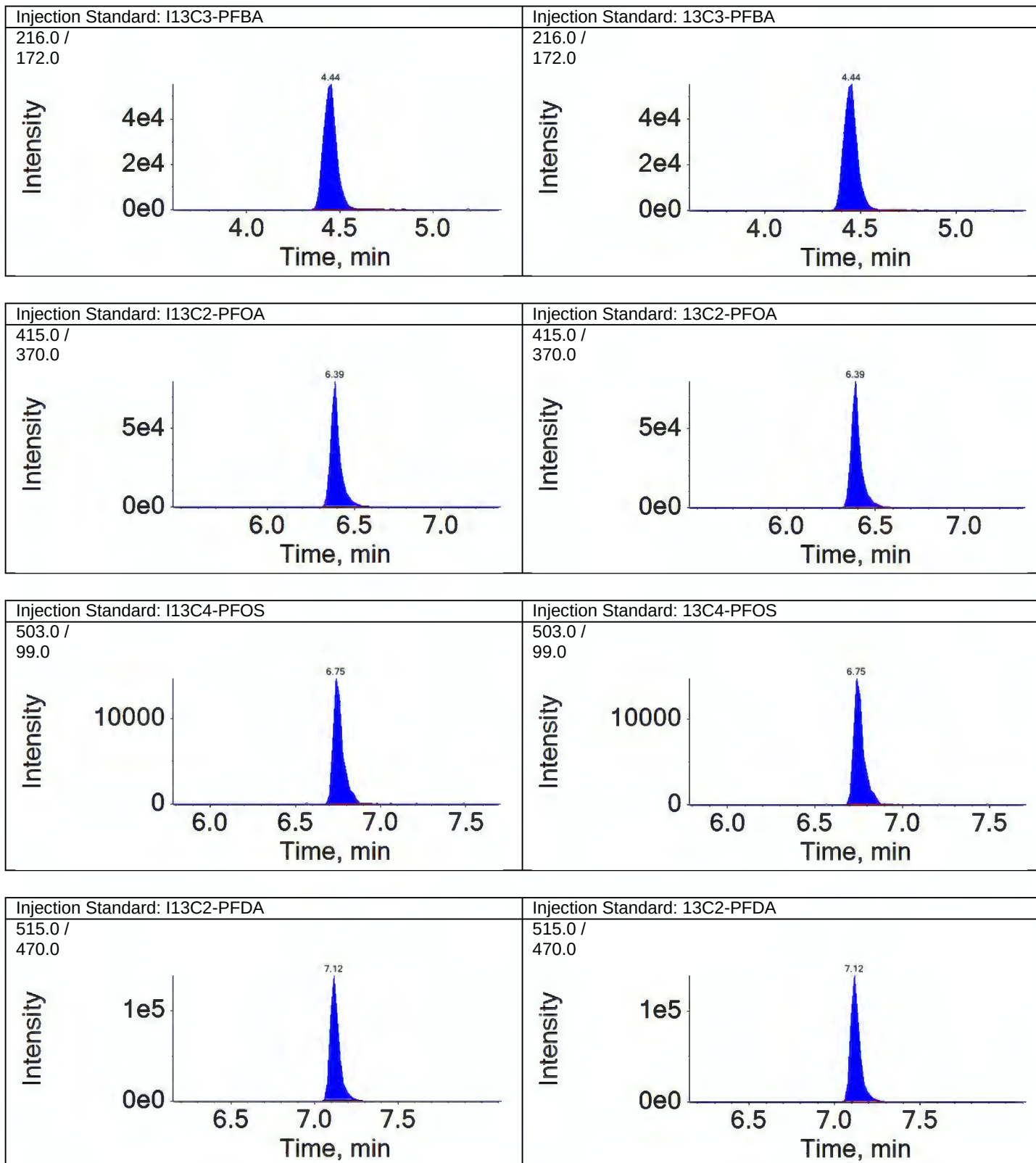
MCR17 Page 162 of 207

REVIEWED

By uild at 10:25 am, 1/6/17

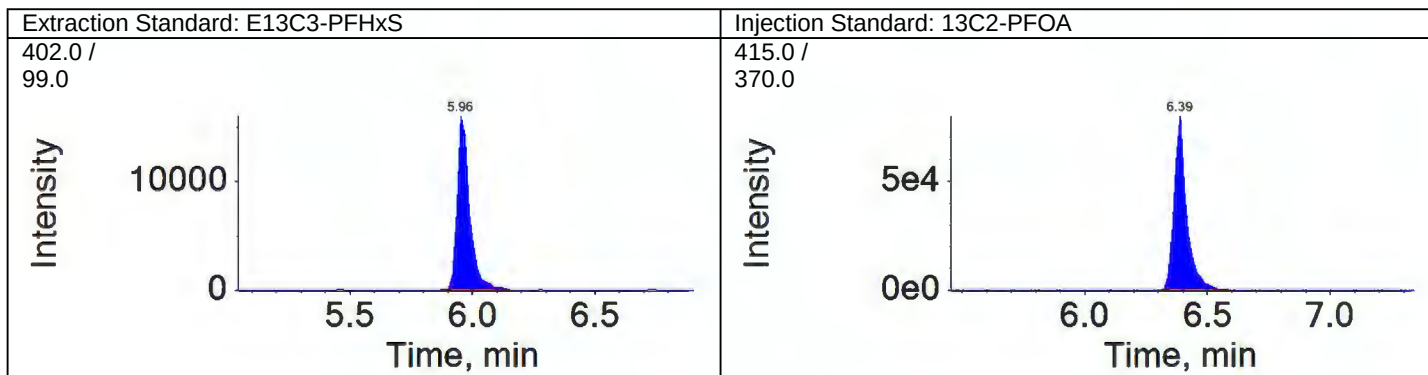
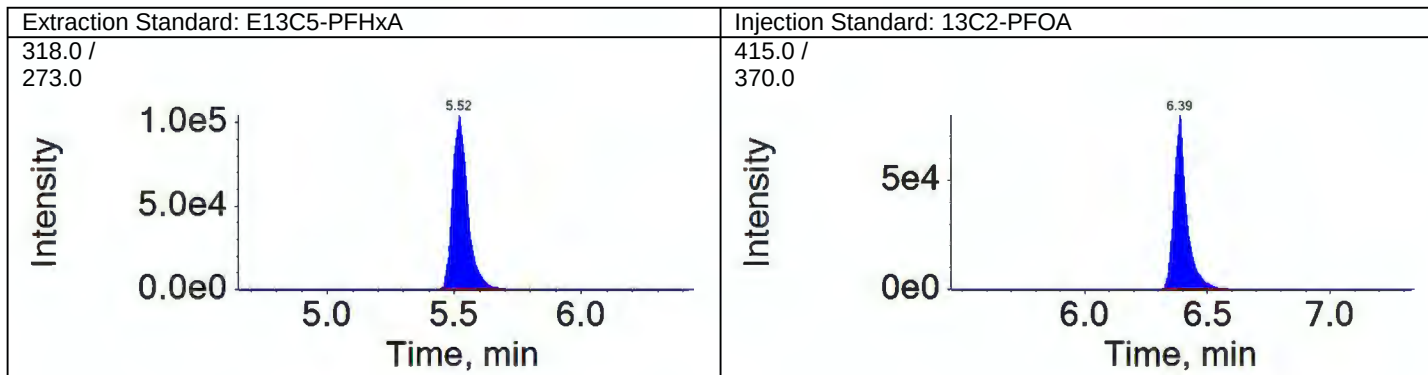
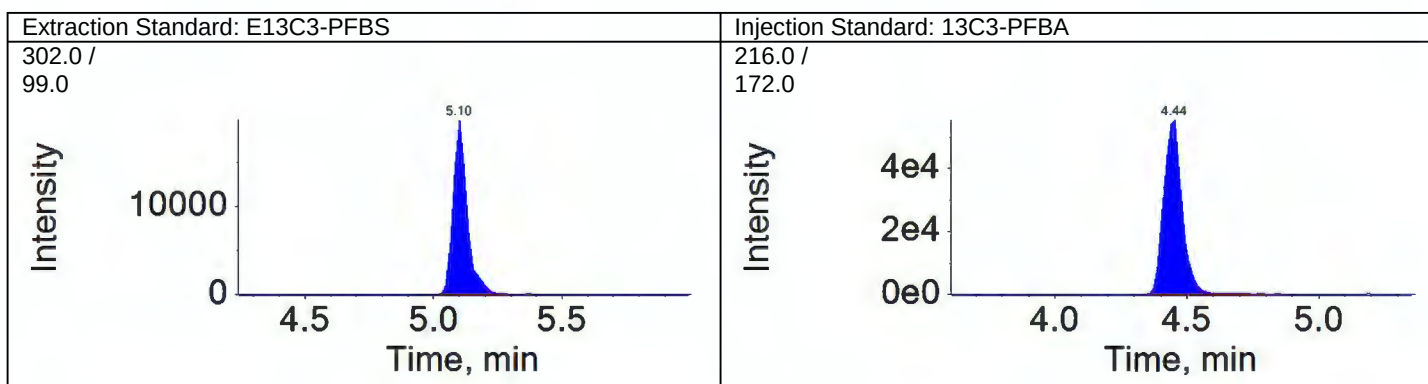
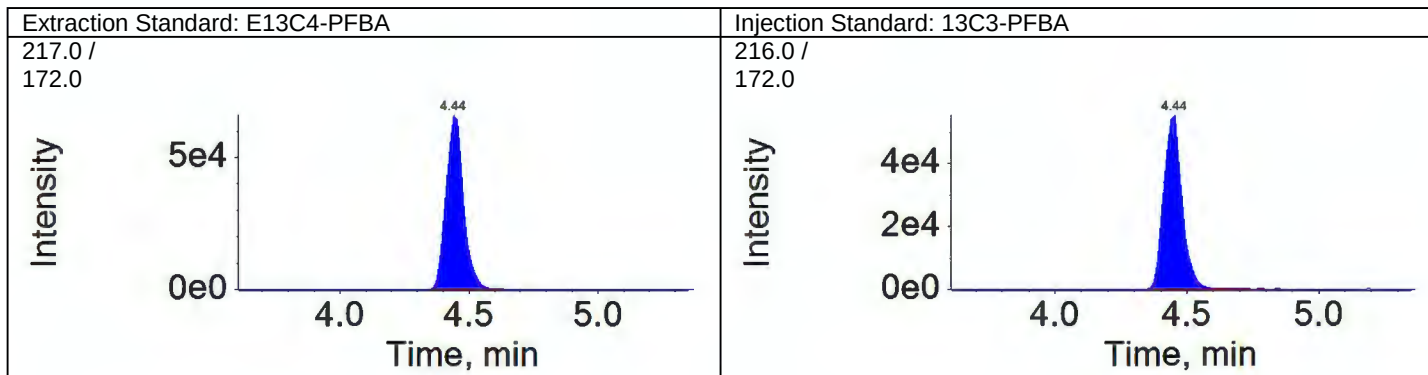
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



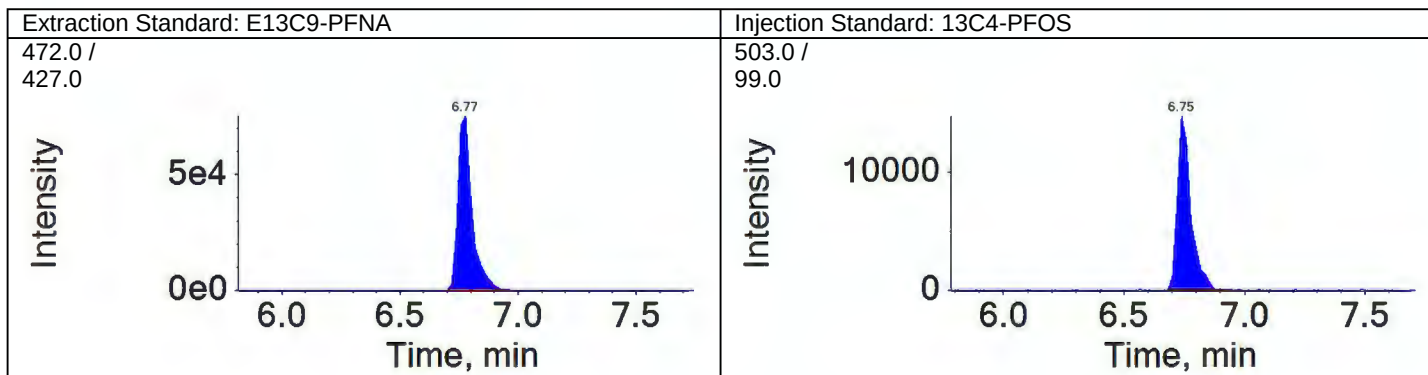
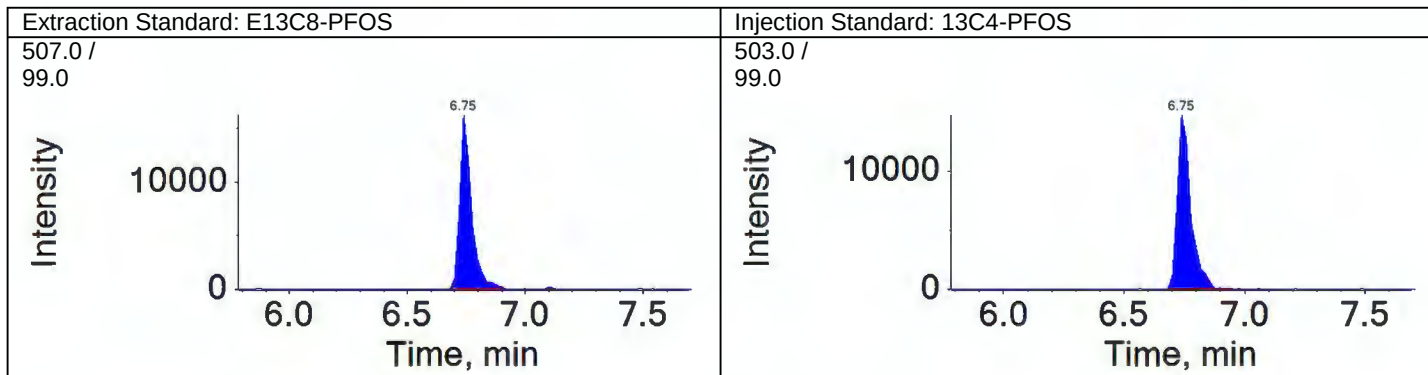
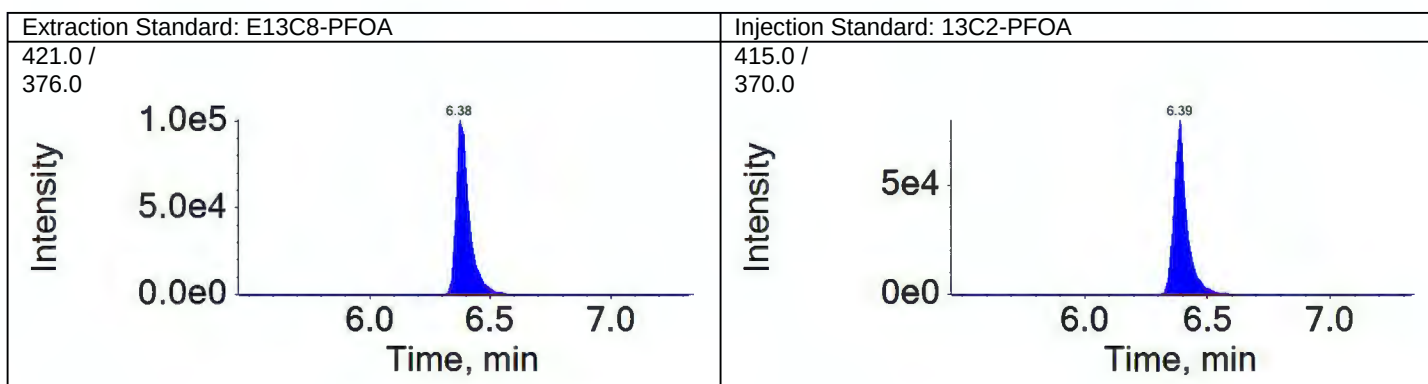
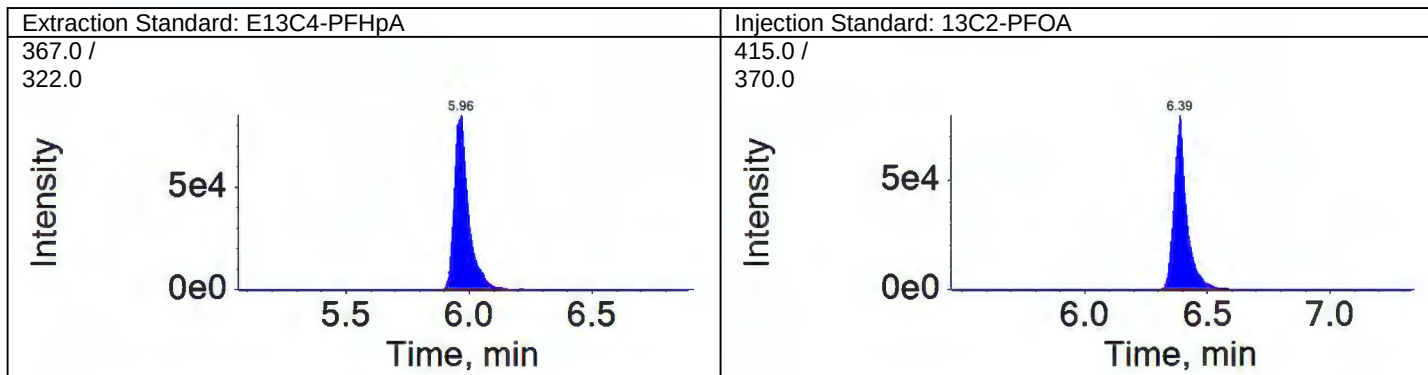
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QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



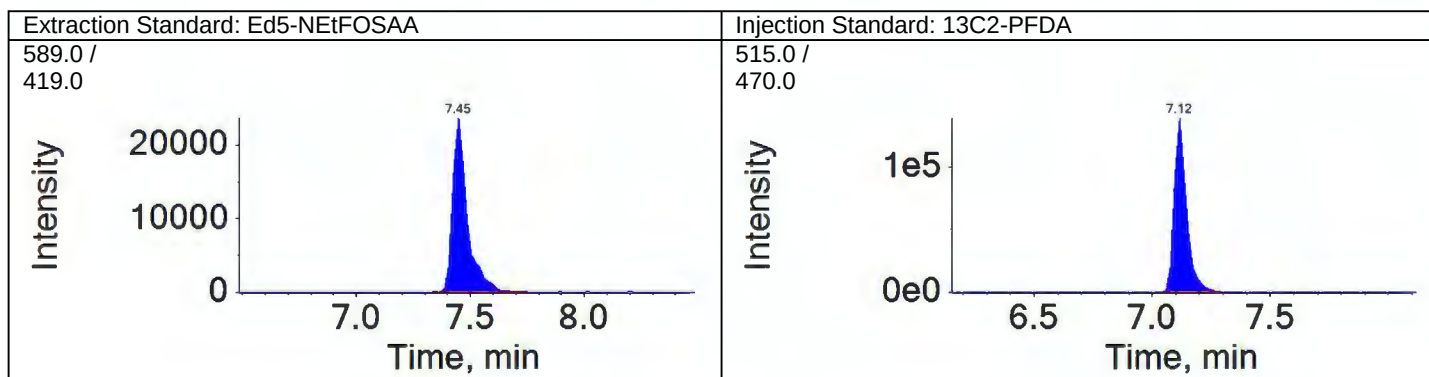
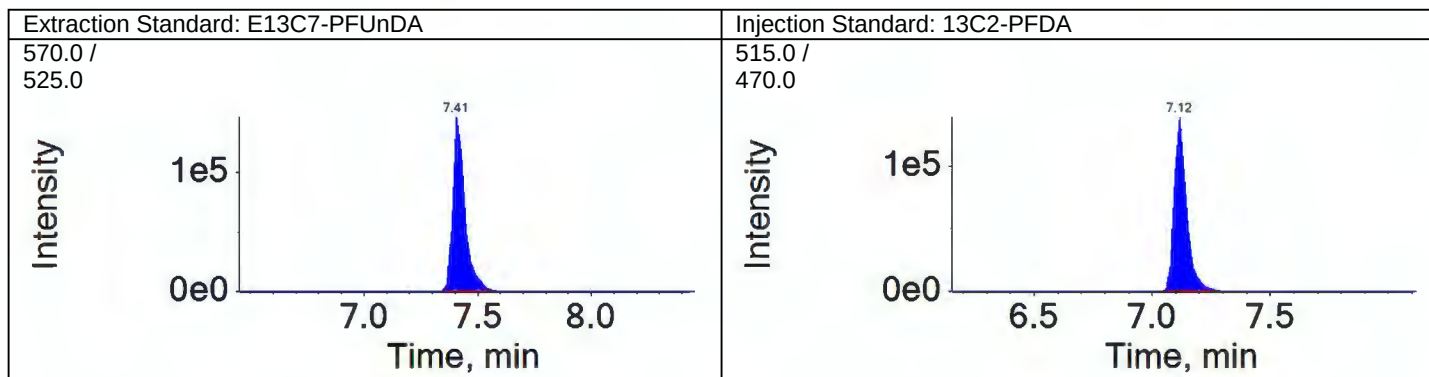
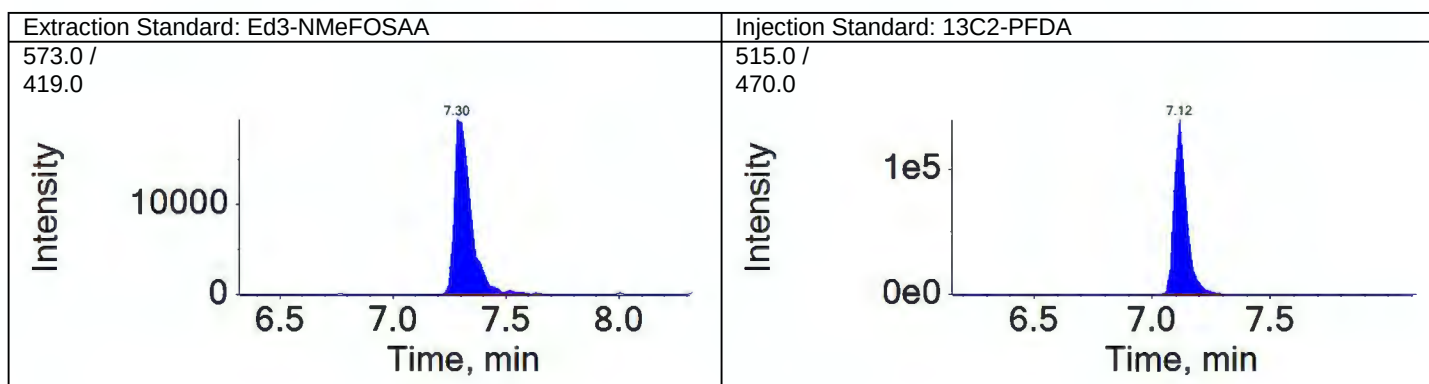
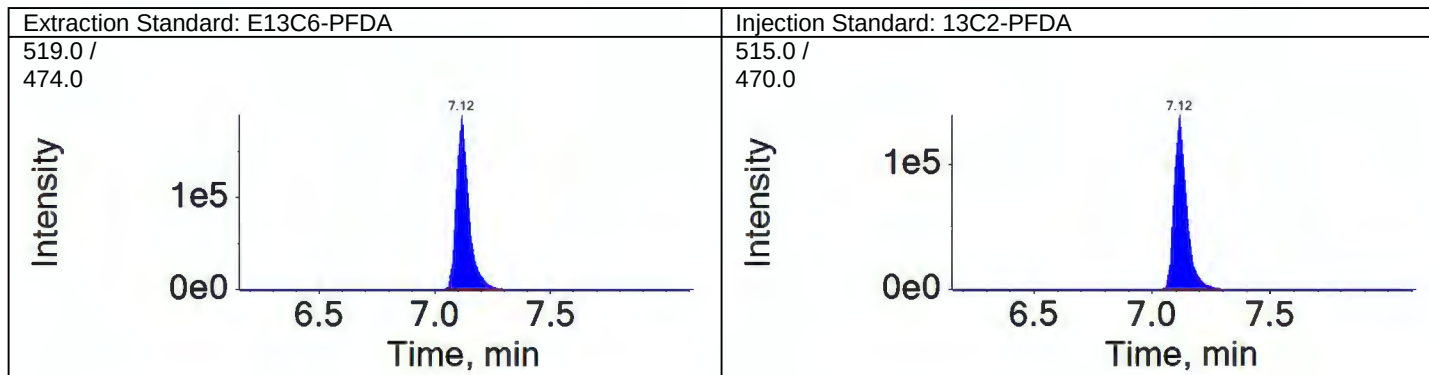
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



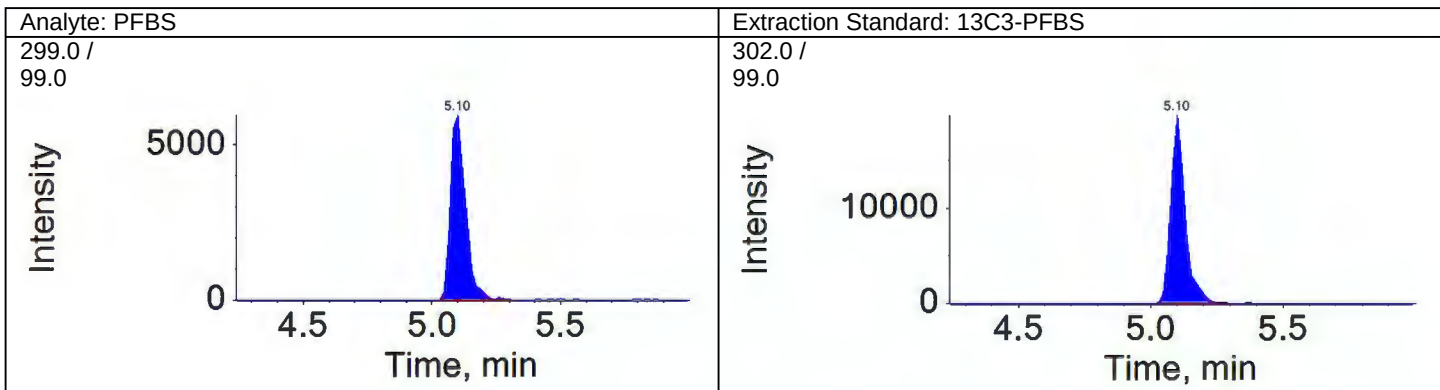
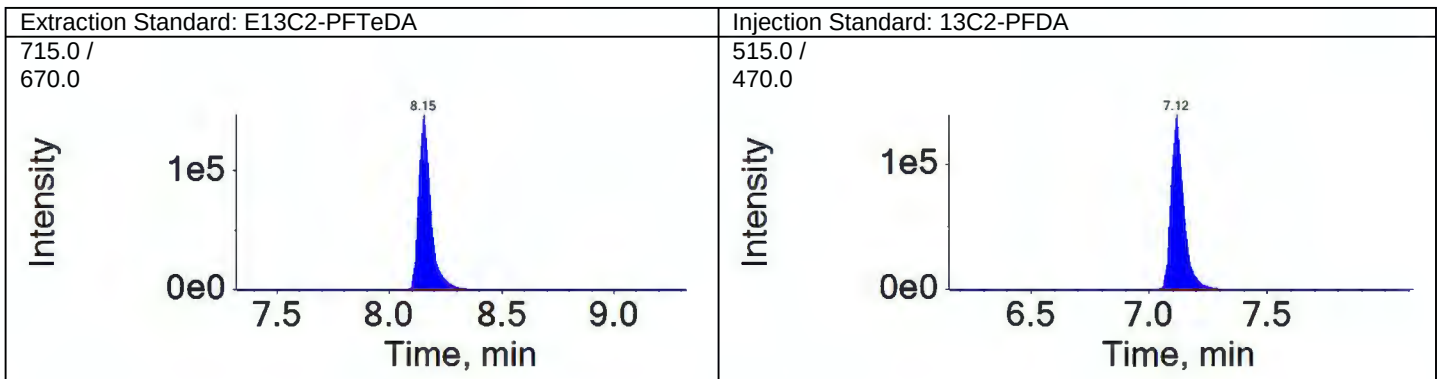
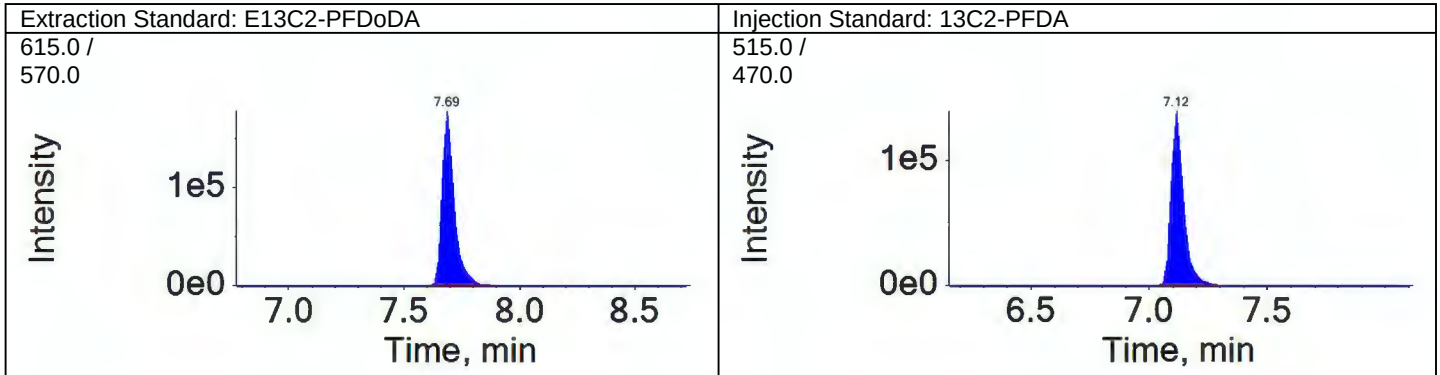
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



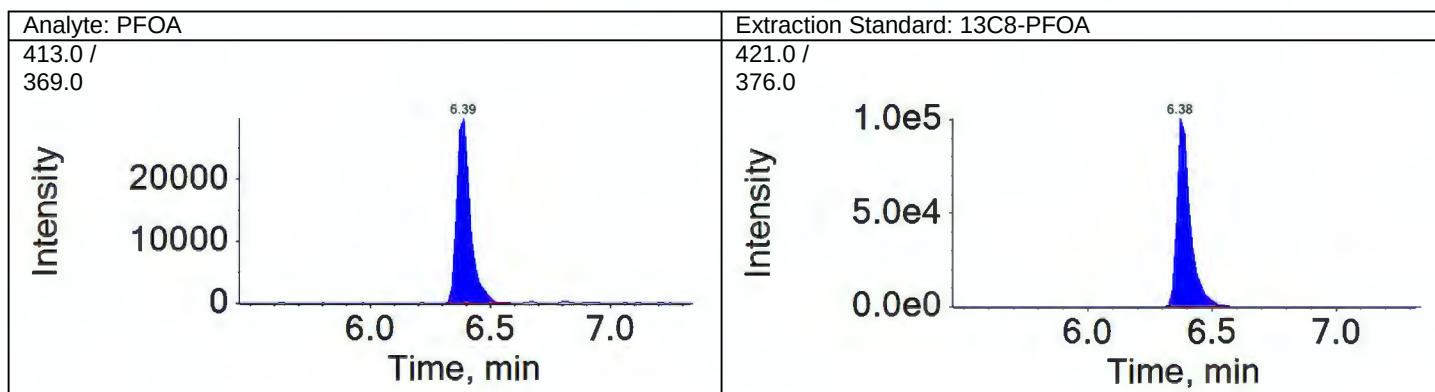
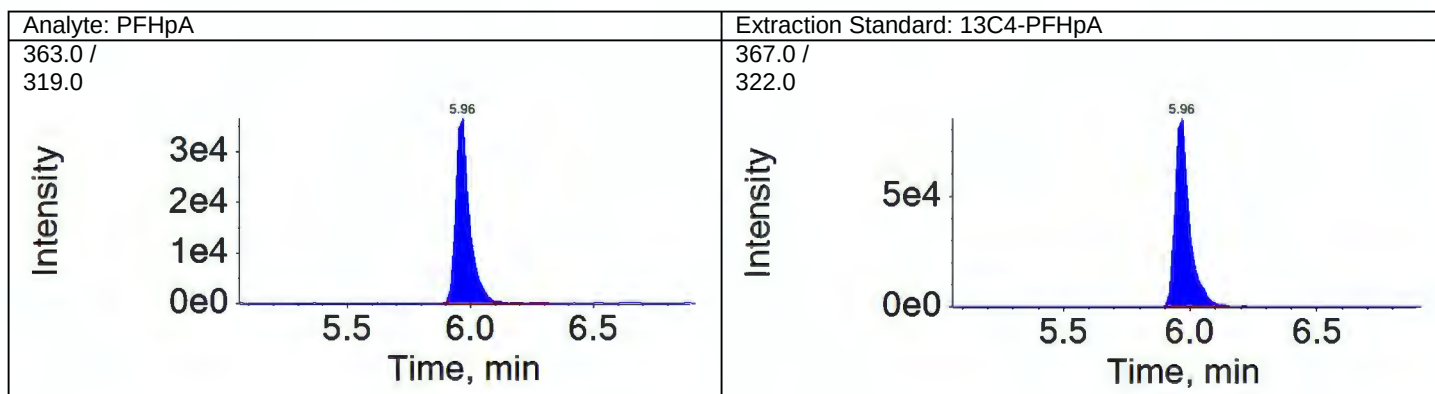
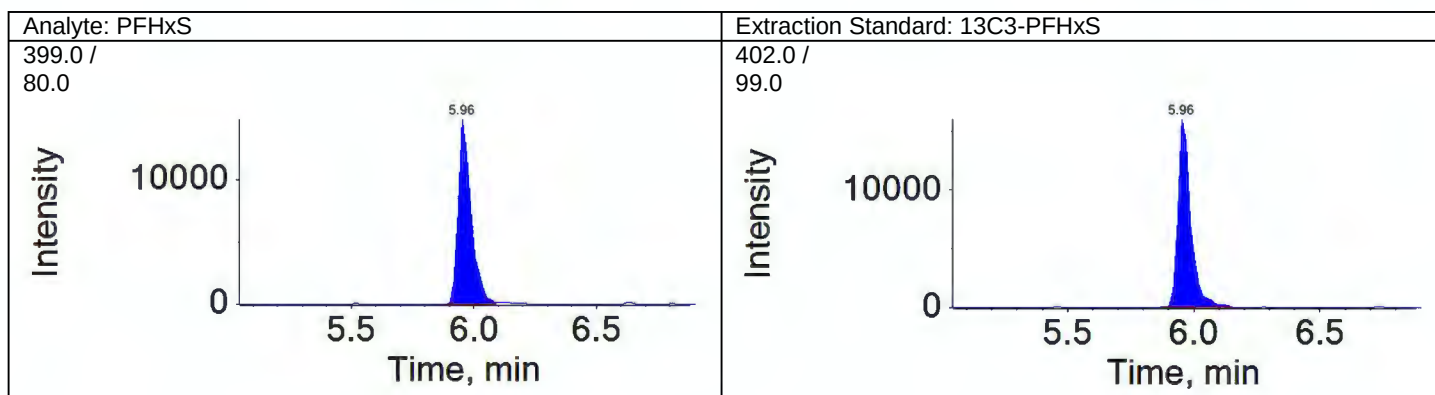
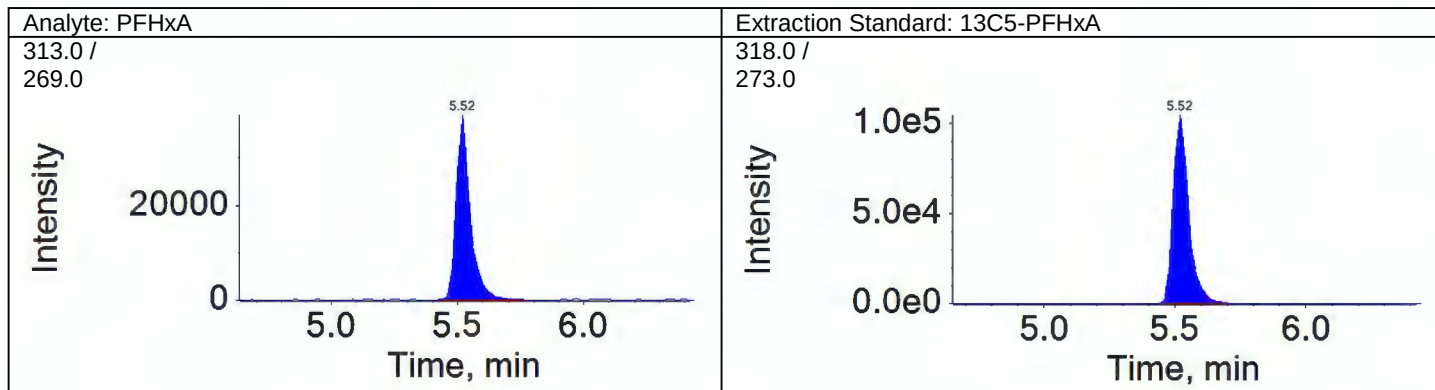
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



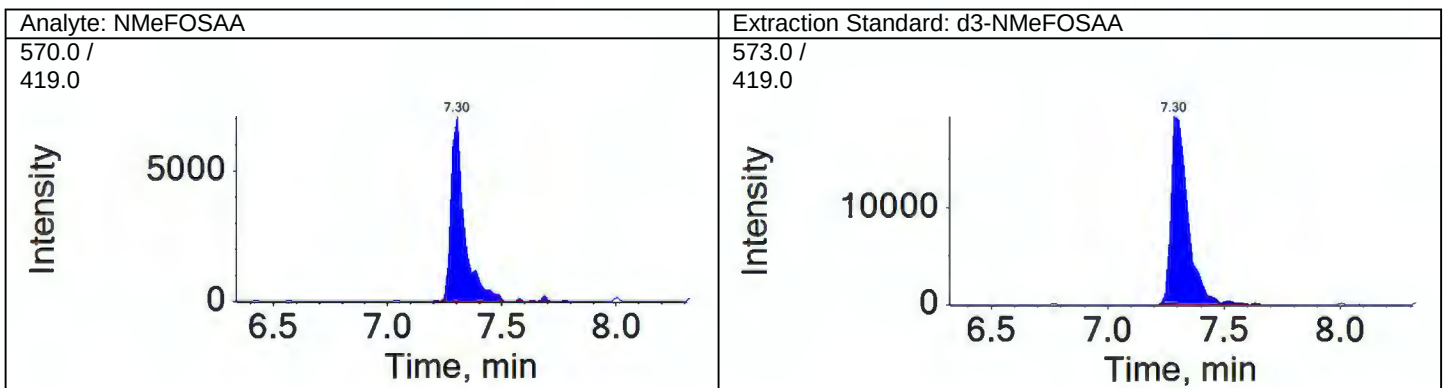
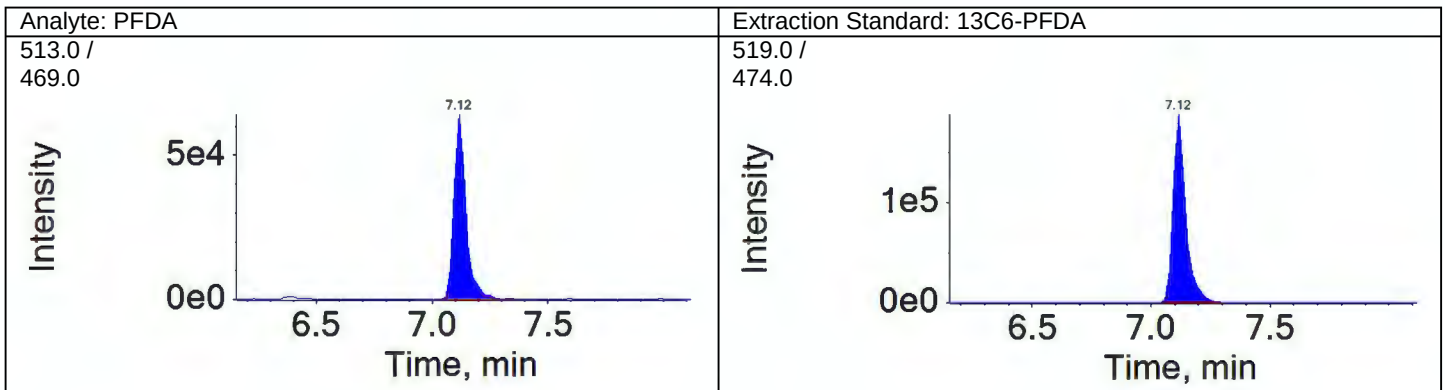
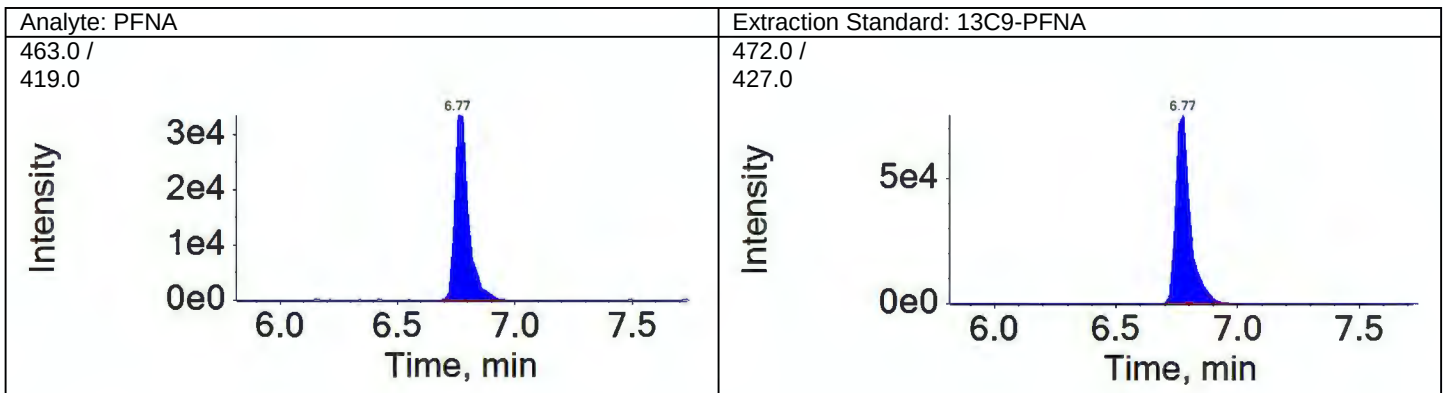
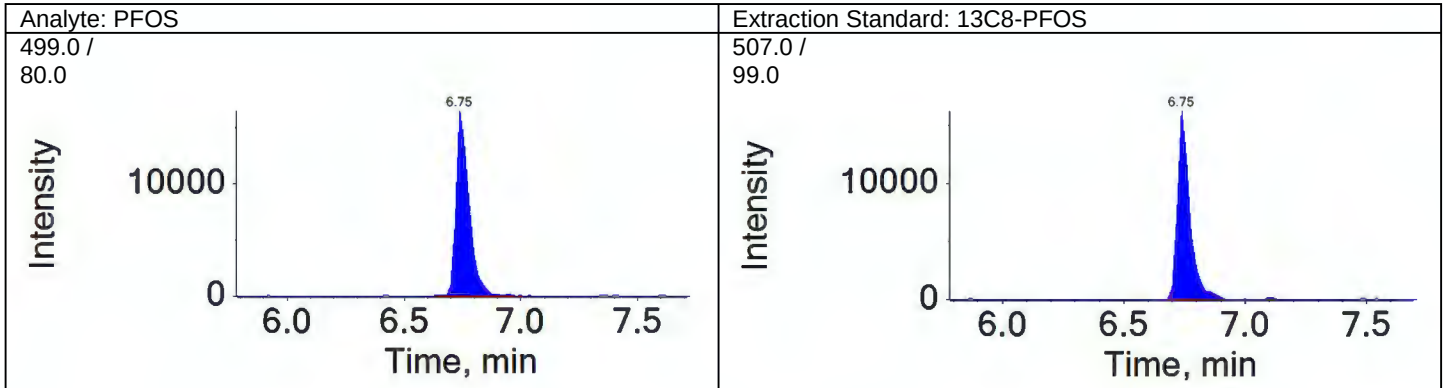
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



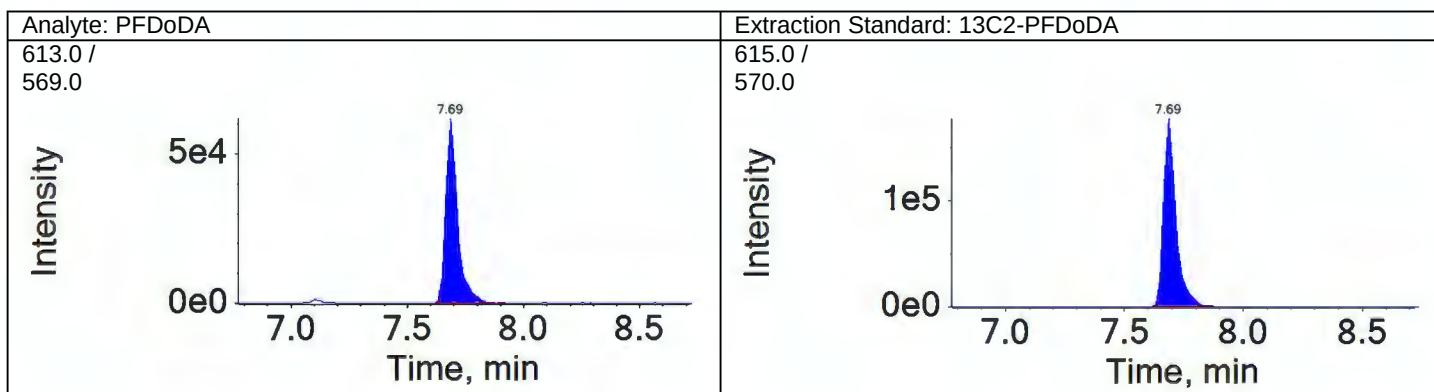
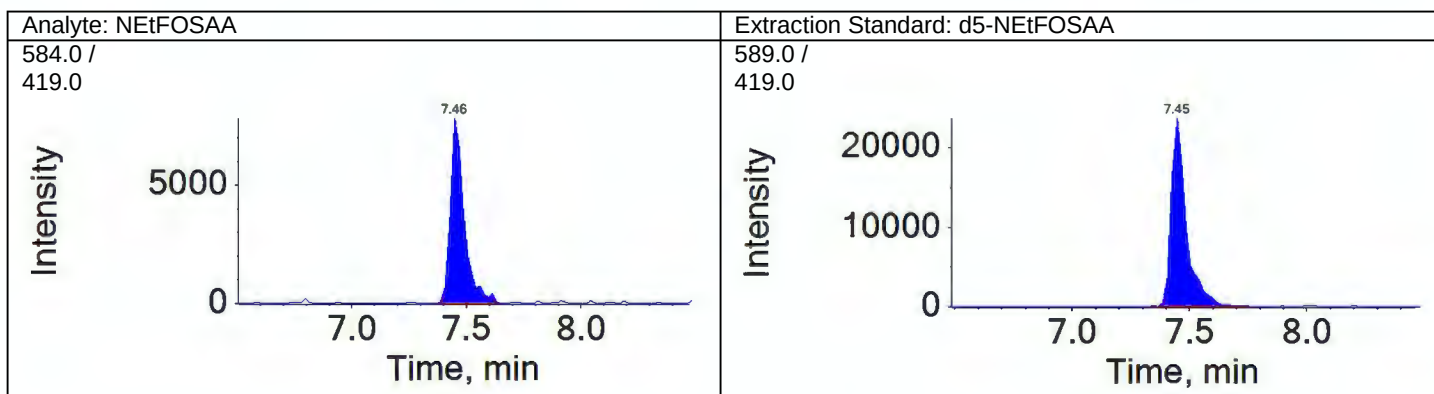
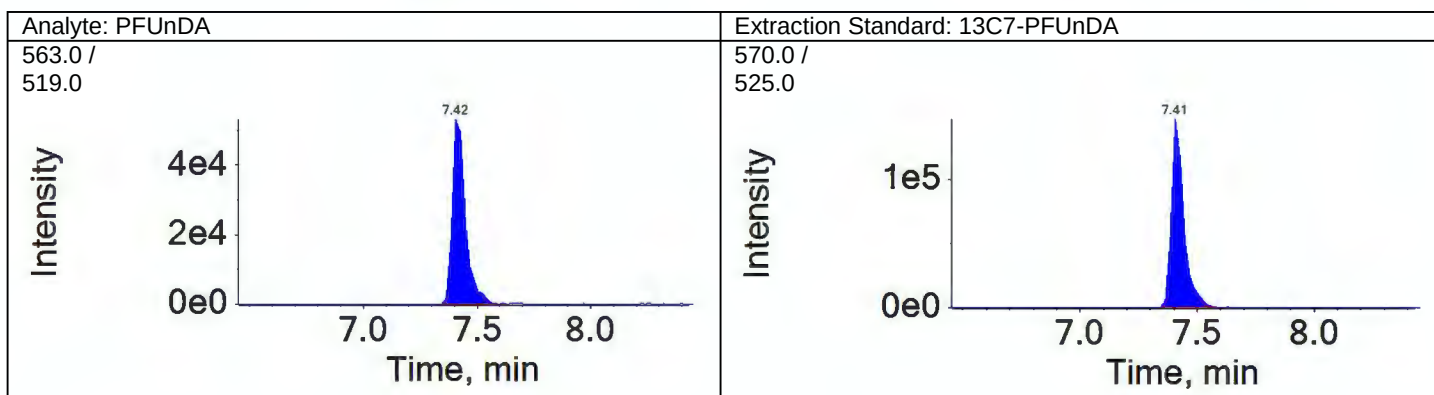
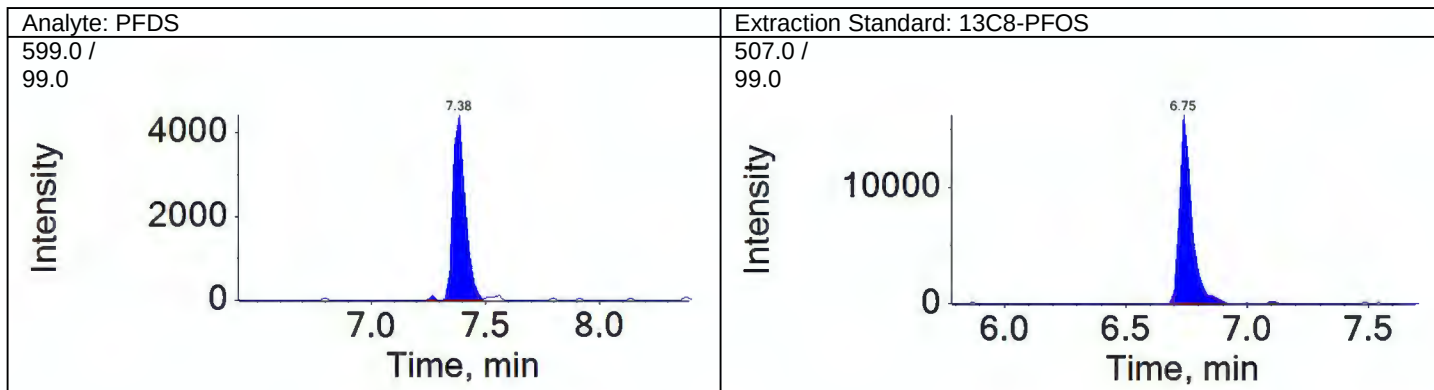
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



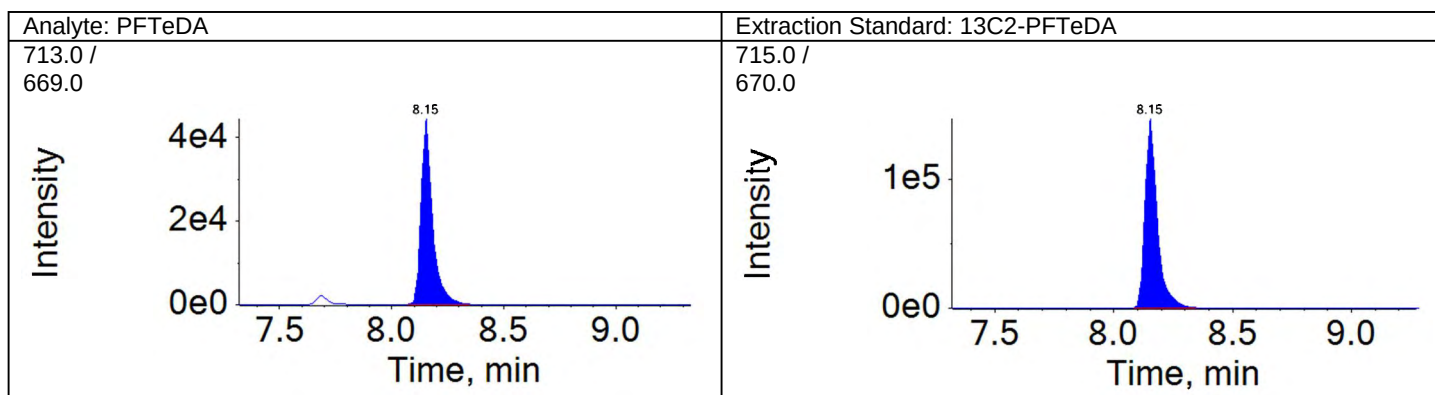
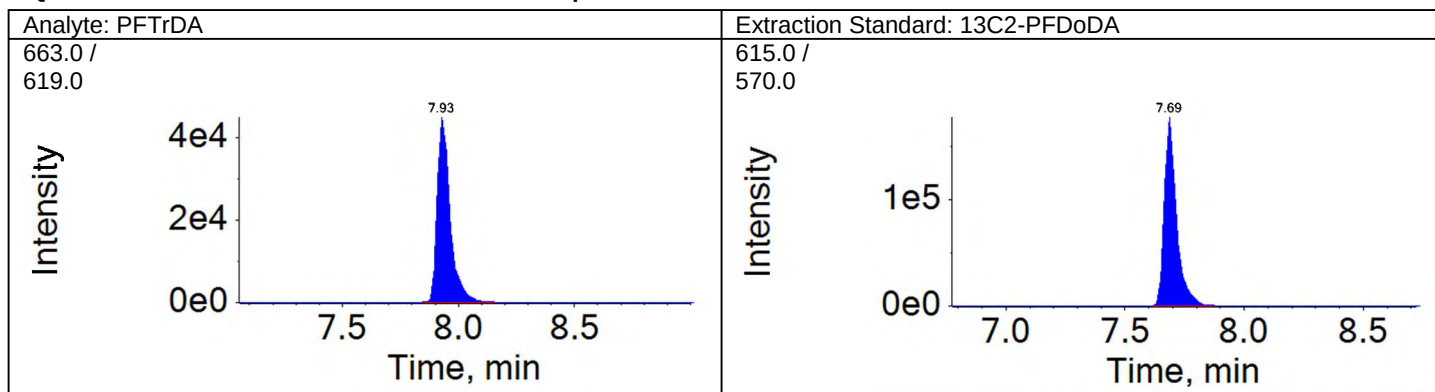
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QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	CCV4		Data File:	17JAN06-07.wiff
Sample ID:	CALPFC31637F		Acquis Date:	2017-01-06T08:35:13
Sample Type:	Quality Control		Instrument:	LM24960
Vial Position:	4		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ CCV3-4
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	N/A		Operator:	Not calculated
Sample Wt.:	1.00000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C3-PFBA	1.0	261671.2	475795.8	-45.0	50.0	
I13C2-PFOA	1.0	320103.5	479624.1	-33.3	50.0	
I13C4-PFOS	1.0	57551.1	91278.0	-37.0	50.0	
I13C2-PFDA	1.0	481598.0	675082.3	-28.7	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C4-PFBA	304632.6	13C3-PFBA	261671.2	1.164	1.149	1.000	1.013	101.3	70.0-130.0	
E13C3-PFBS	78123.7	13C3-PFBA	261671.2	0.299	0.259	1.000	1.151	115.1	70.0-130.0	
E13C5-PFHxA	401436.3	13C2-PFOA	320103.5	1.254	1.383	1.000	0.907	90.7	70.0-130.0	
E13C3-PFHxS	48935.1	13C2-PFOA	320103.5	0.153	0.182	1.000	0.842	84.2	70.0-130.0	
E13C4-PFHpA	364439.8	13C2-PFOA	320103.5	1.139	1.155	1.000	0.985	98.5	70.0-130.0	
E13C8-PFOA	358648.4	13C2-PFOA	320103.5	1.120	1.263	1.000	0.887	88.7	70.0-130.0	
E13C8-PFOS	55017.9	13C4-PFOS	57551.1	0.956	1.011	1.000	0.946	94.6	70.0-130.0	
E13C9-PFNA	310307.6	13C4-PFOS	57551.1	5.392	5.620	1.000	0.959	95.9	70.0-130.0	
E13C6-PFDA	682286.0	13C2-PFDA	481598.0	1.417	1.411	1.000	1.004	100.4	70.0-130.0	
Ed3-NMeFOSAA	97345.5	13C2-PFDA	481598.0	0.202	0.234	1.000	0.864	86.4	70.0-130.0	
E13C7-PFUnDA	540311.9	13C2-PFDA	481598.0	1.122	1.095	1.000	1.025	102.5	70.0-130.0	
Ed5-NEtFOSAA	94527.8	13C2-PFDA	481598.0	0.196	0.221	1.000	0.889	88.9	70.0-130.0	
E13C2-PFDoDA	614987.0	13C2-PFDA	481598.0	1.277	1.313	1.000	0.973	97.3	70.0-130.0	
E13C2-PFTeDA	517486.6	13C2-PFDA	481598.0	1.075	1.119	1.000	0.960	96.0	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam

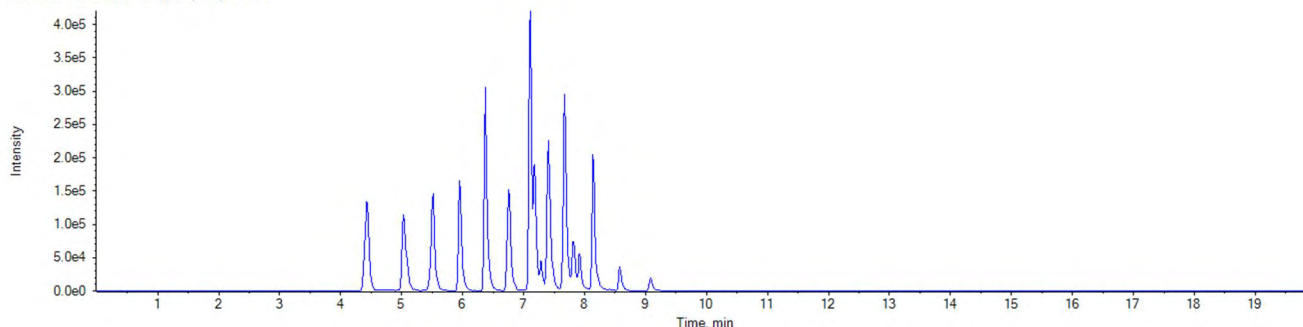
Analyte Quantitation Peak Table

Sample Name: CCV4		Instrument Name: LM24960	File Name: 17JAN06-07.wiff
Sample Wt	Sample Vol	Dilution Factor	PrepFactor
1.00000	1.000	1.00	1.000

Analyte Name	RT	RRT	Analyte Area Response	Int Typ	ES Name	ES RT	ES Area Response	Area Ratio	Sample Result (ng/g)
PFBS	5.09	1.000	25519.7	A	13C3-PFBS	5.09	78123.7	0.327	1.429
PFHxA	5.51	1.000	139725.1	A	13C5-PFHxA	5.51	401436.3	0.348	1.563
PFHxS	5.95	1.000	52407.6	A	13C3-PFHxS	5.95	48935.1	1.071	1.733
PFHpA	5.95	1.000	137672.8	A	13C4-PFHpA	5.95	364439.8	0.378	1.611
PFOA	6.37	1.000	127041.6	A	13C8-PFOA	6.37	358648.4	0.354	1.755
PFOS	6.74	1.000	63753.8	A	13C8-PFOS	6.74	55017.9	1.159	1.858
PFNA	6.77	1.000	138990.3	A	13C9-PFNA	6.76	310307.6	0.448	1.760
PFDA	7.11	1.000	216122.7	A	13C6-PFDA	7.11	682286.0	0.317	1.700
NMeFOSAA	7.29	1.000	36173.0	A	d3-NMeFOSAA	7.29	97345.5	0.372	1.747
PFDS	7.37	1.090	17001.8	A	13C8-PFOS	6.74	55017.9	0.309	1.512
PFUnDA	7.41	1.000	221448.9	A	13C7-PFUnDA	7.41	540311.9	0.410	1.672
NEtFOSAA	7.44	1.000	32543.8	A	d5-NEtFOSAA	7.44	94527.8	0.344	1.656
PFDoDA	7.67	1.000	222239.9	A	13C2-PFDoDA	7.68	614987.0	0.361	1.807
PFTTrDA	7.92	1.030	173369.7	A	13C2-PFDoDA	7.68	614987.0	0.282	1.816
PFTeDA	8.14	1.000	163550.0	A	13C2-PFTeDA	8.14	517486.6	0.316	1.735

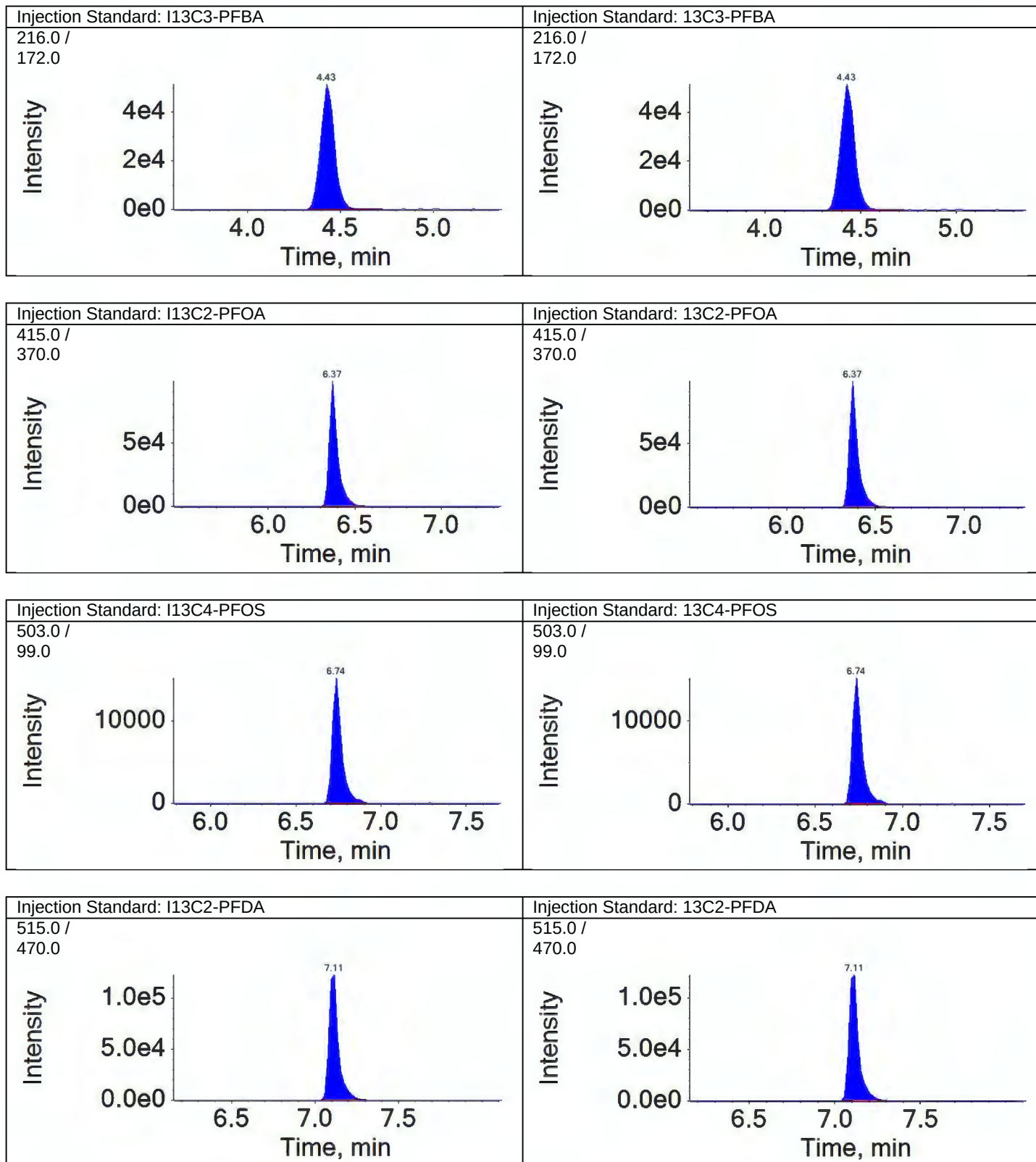
Total Ion Chromatogram

TIC from 17JAN06-07.wiff (sample 1) - CCV4



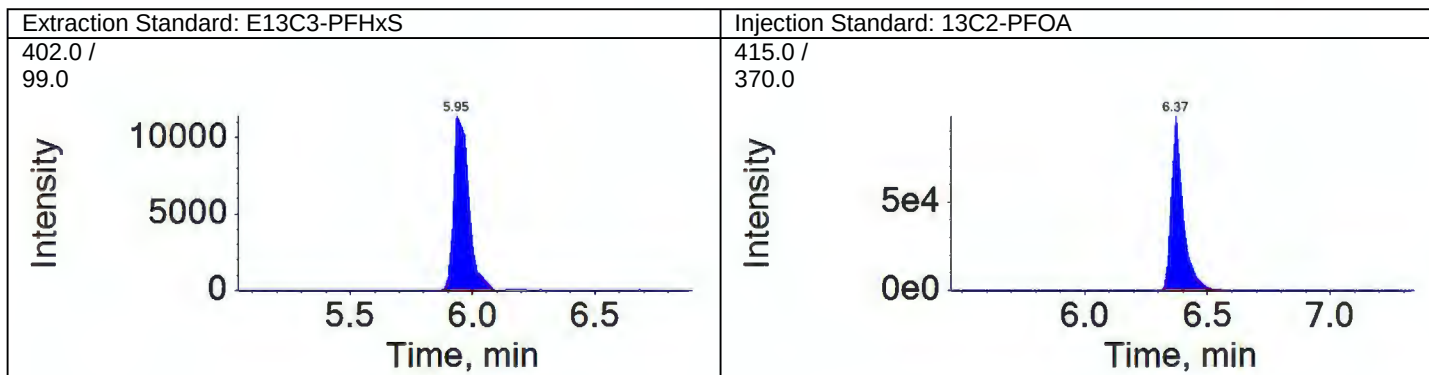
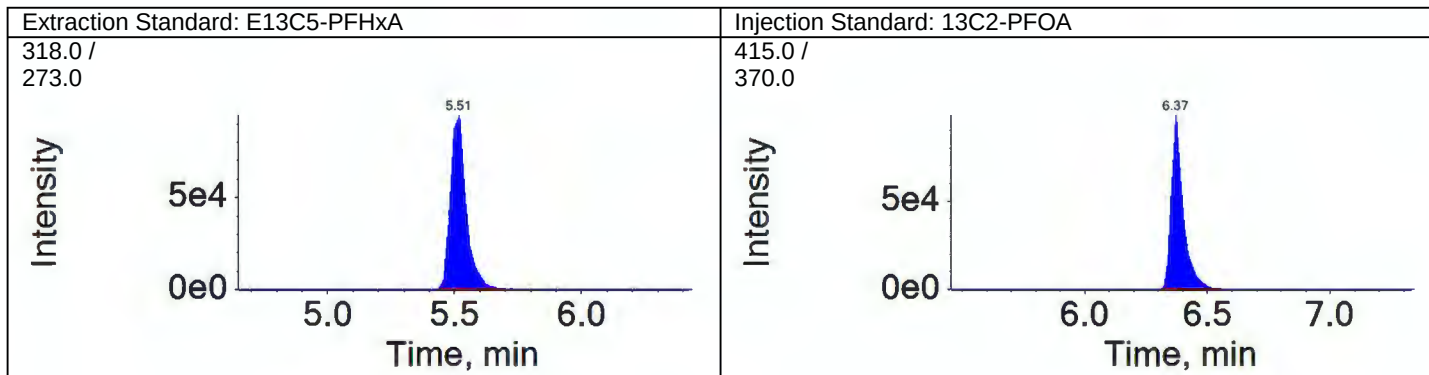
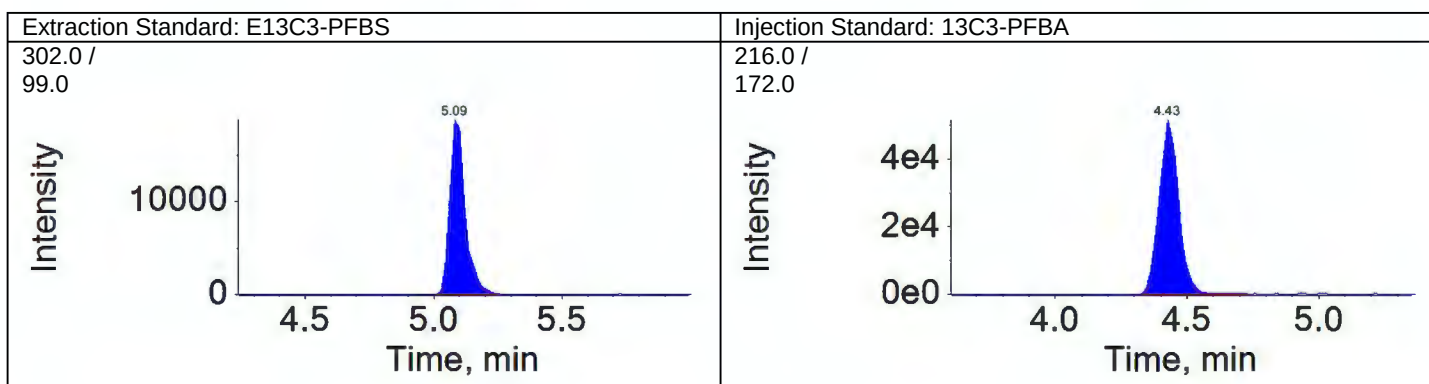
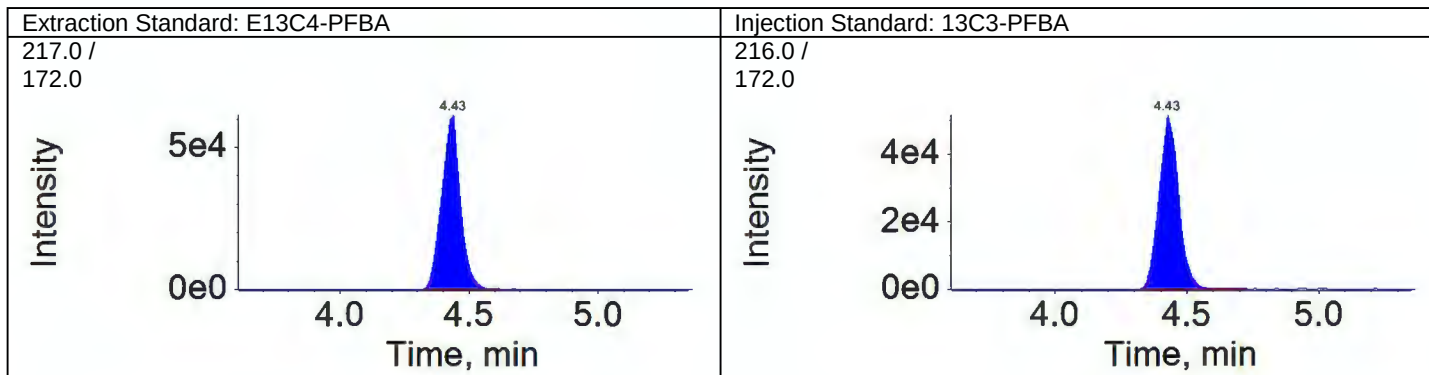
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



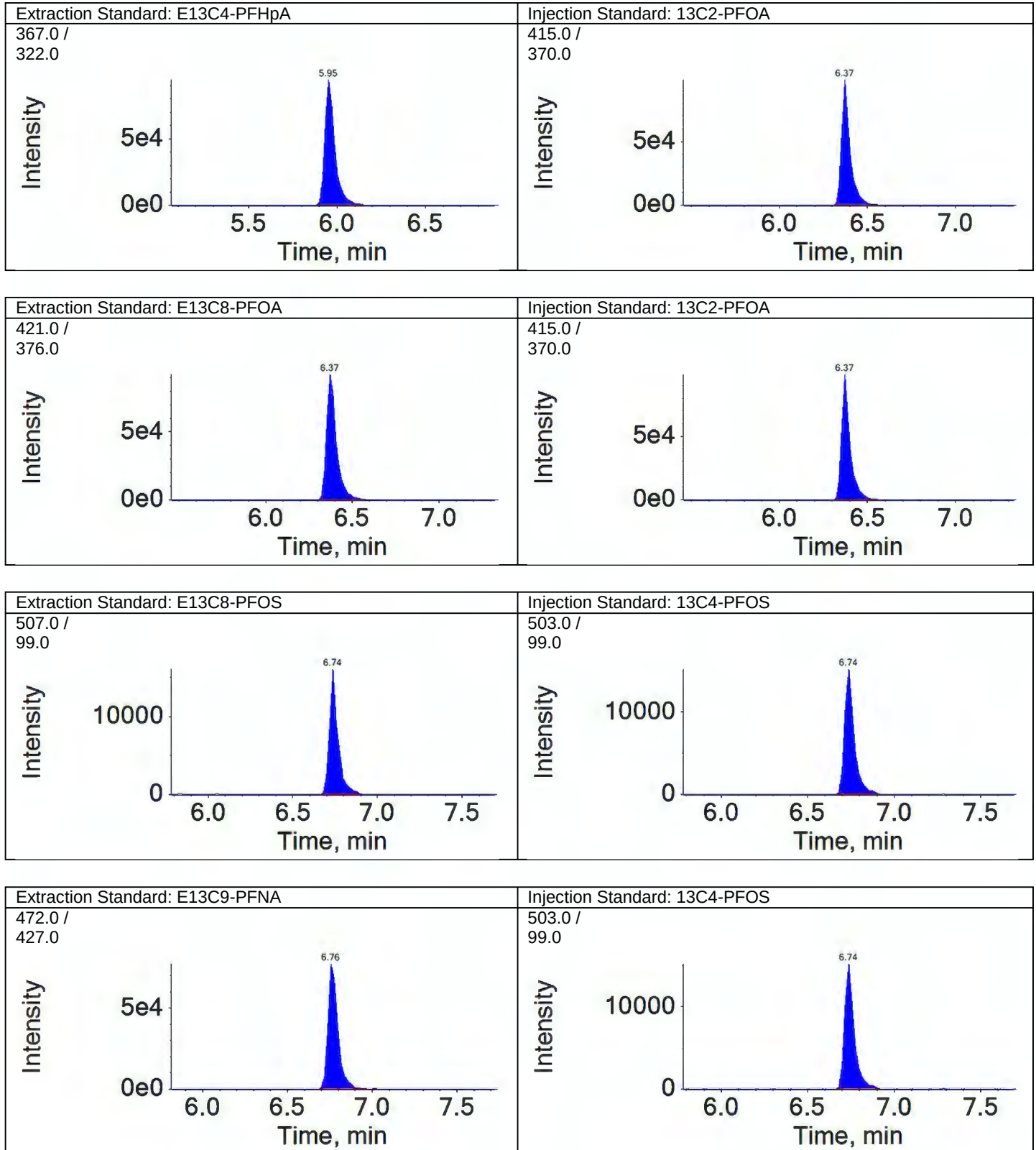
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QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



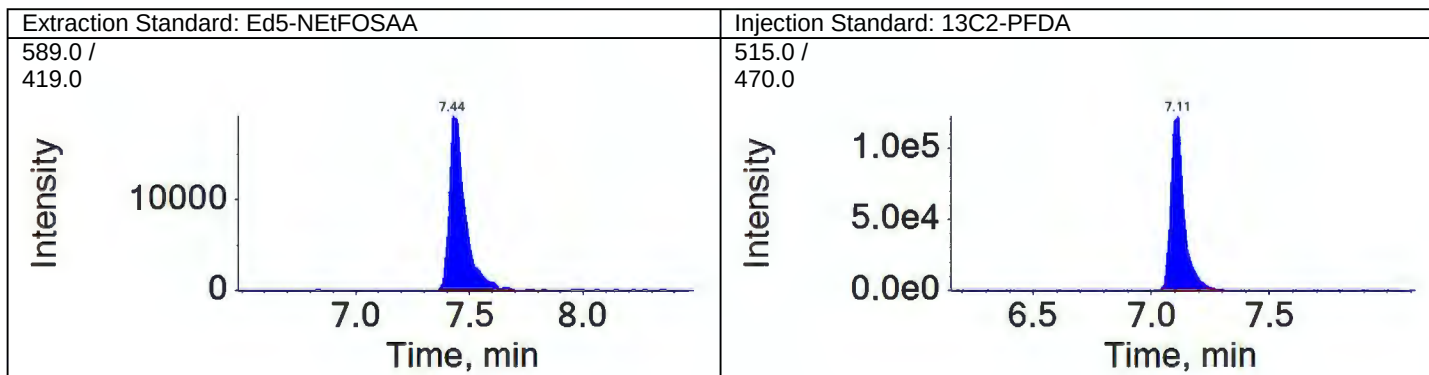
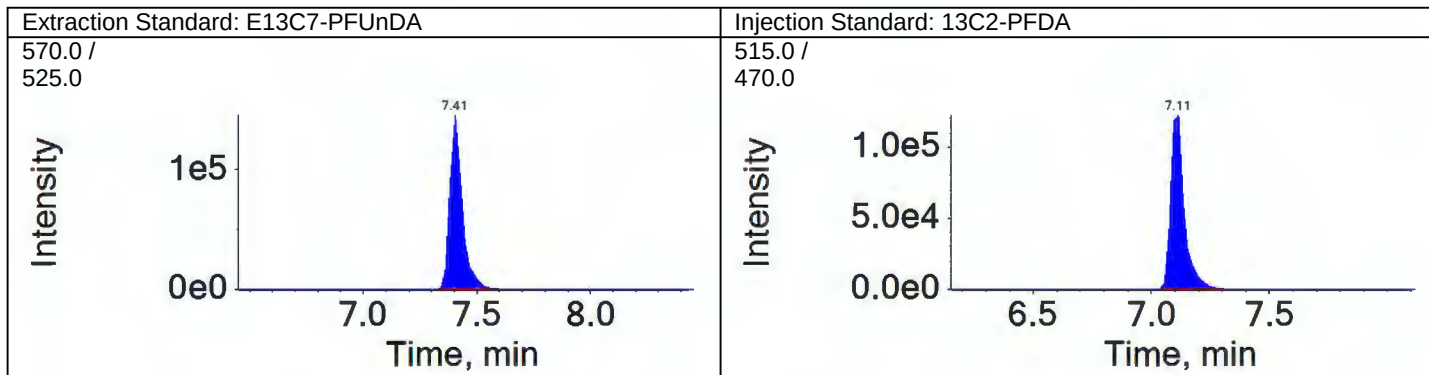
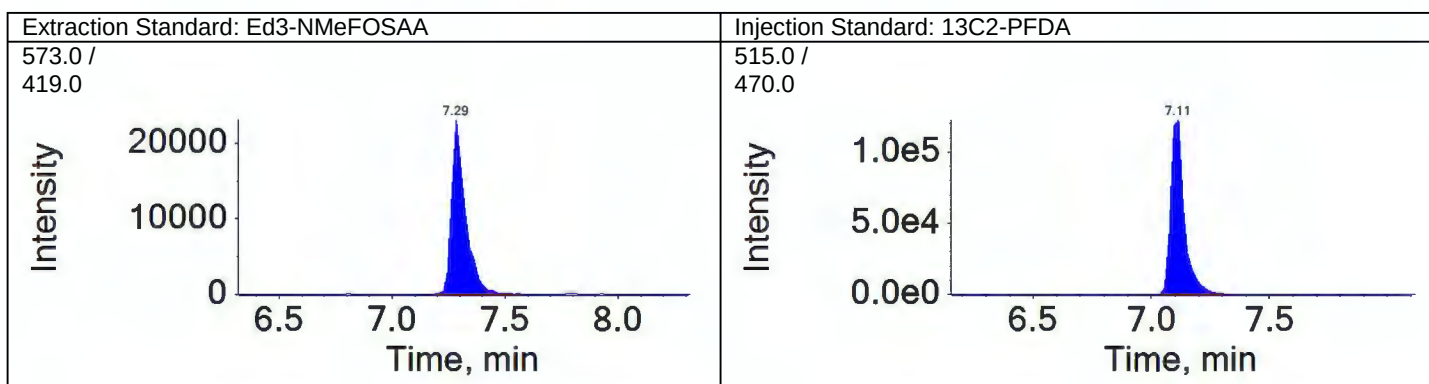
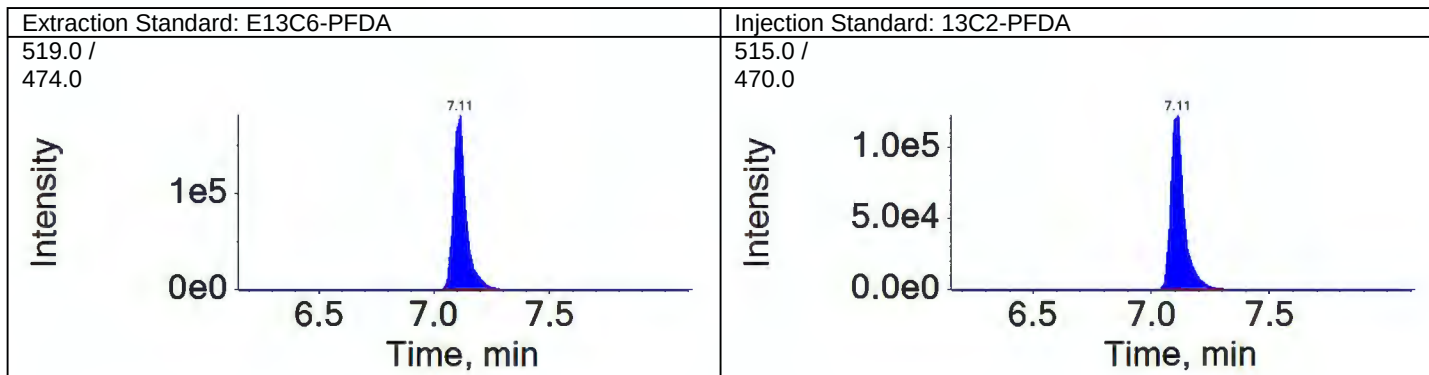
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Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



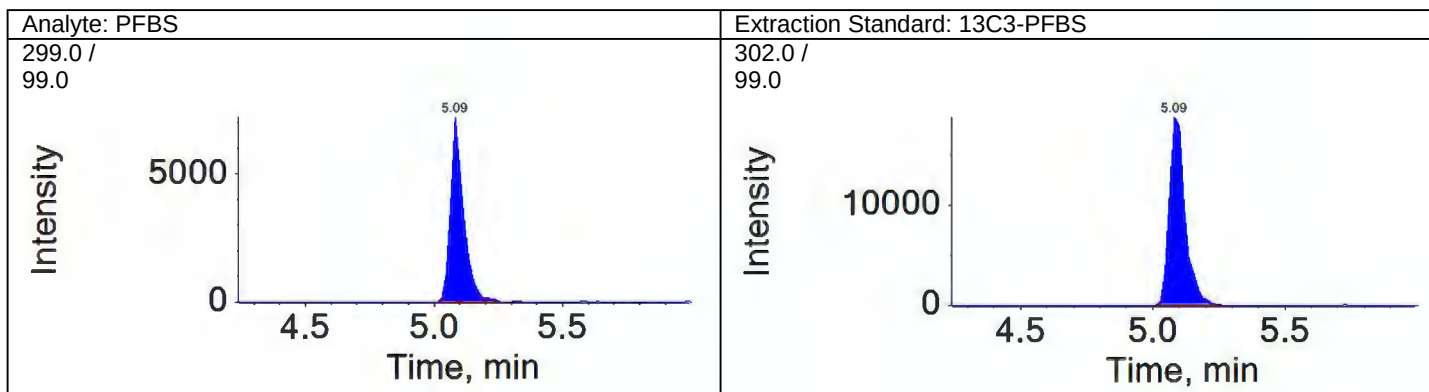
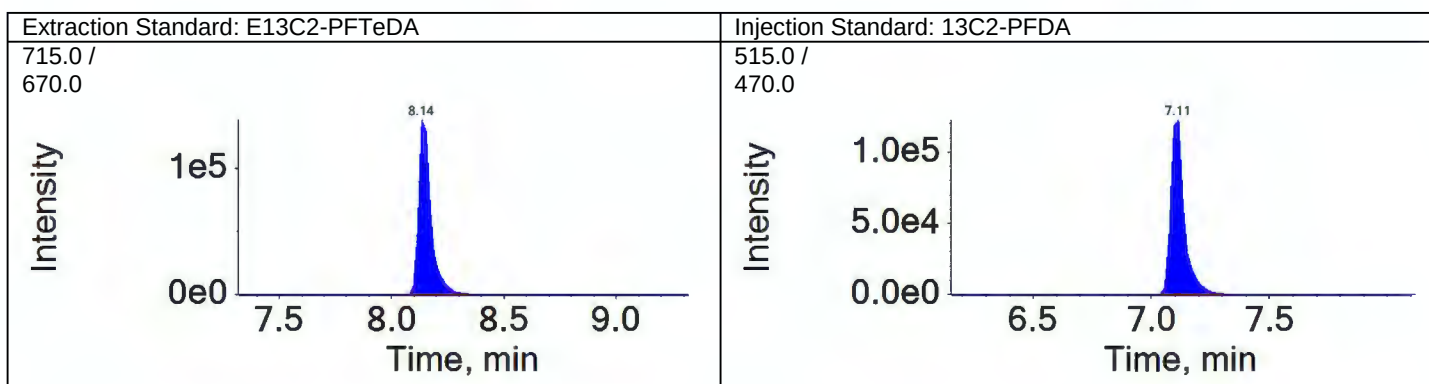
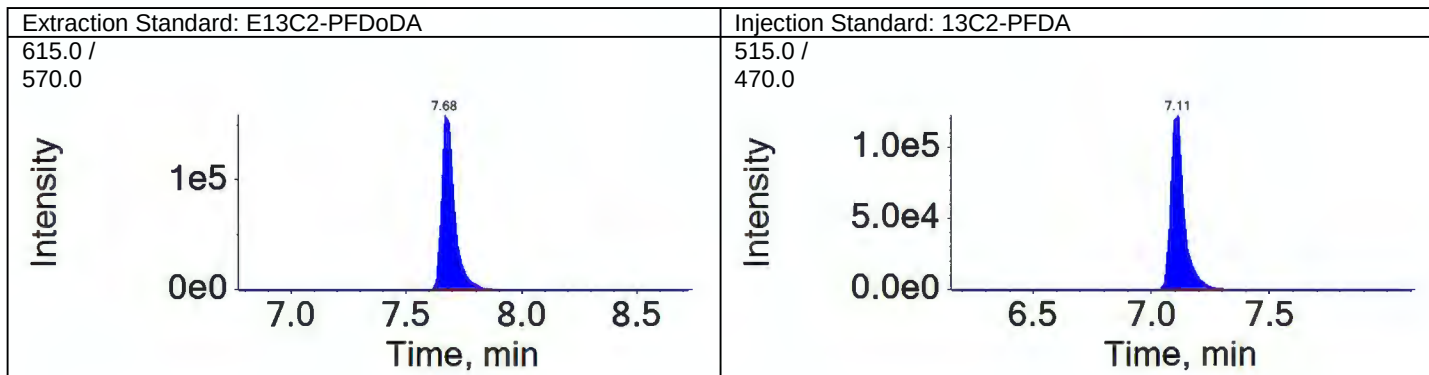
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Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



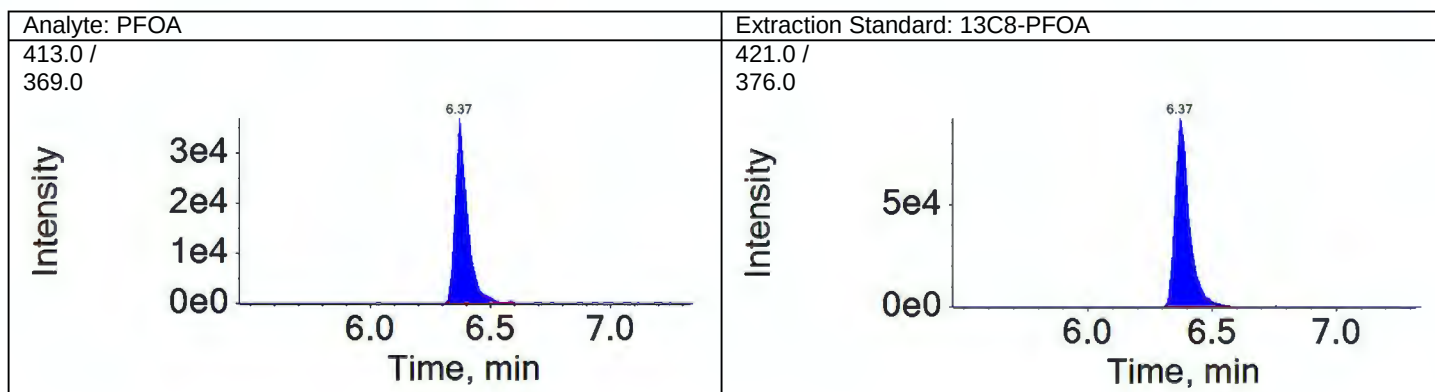
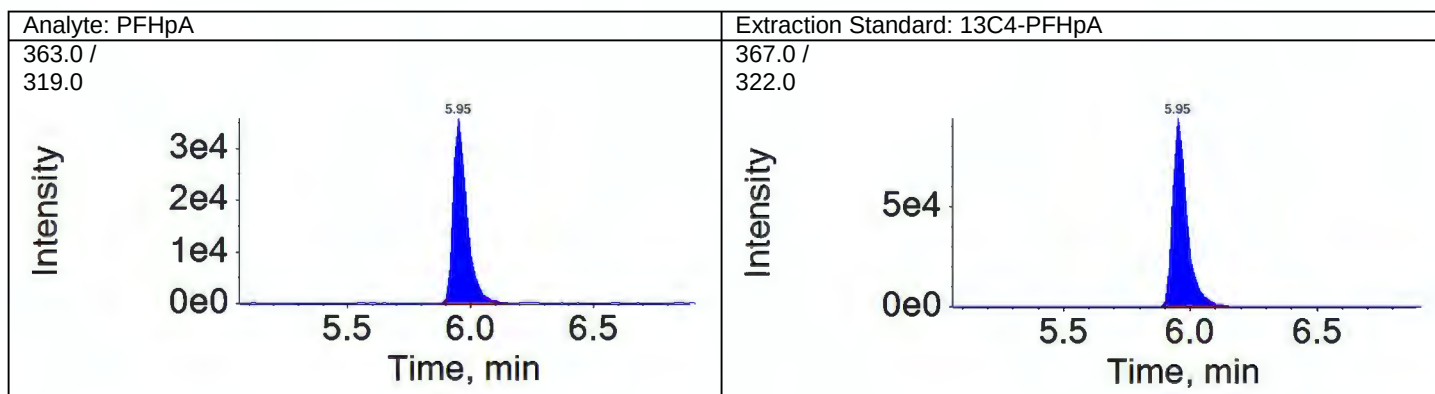
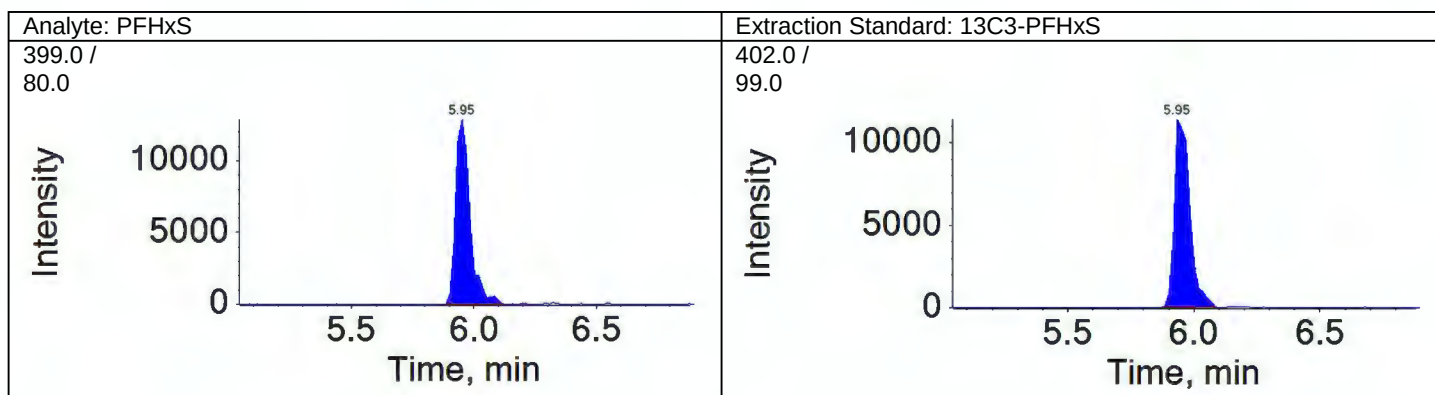
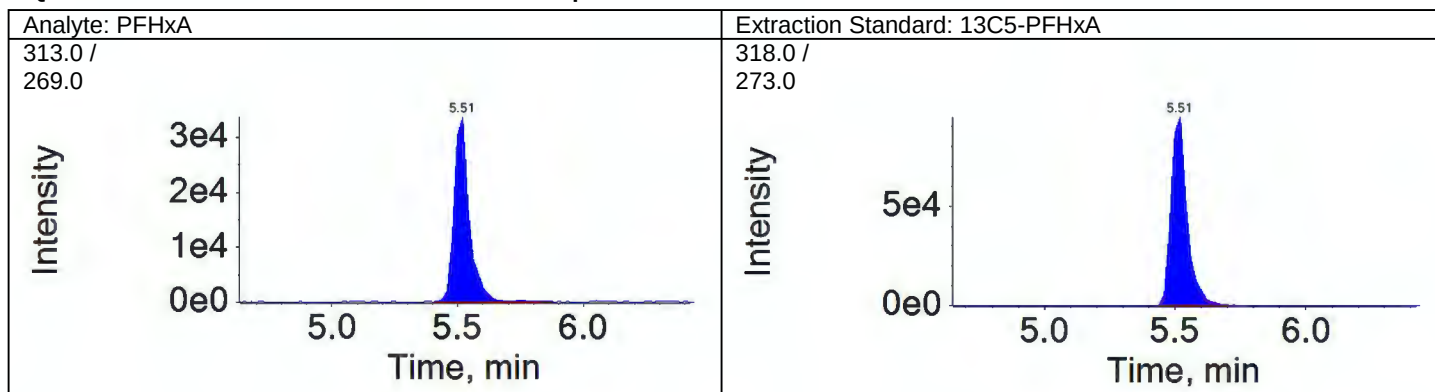
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QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



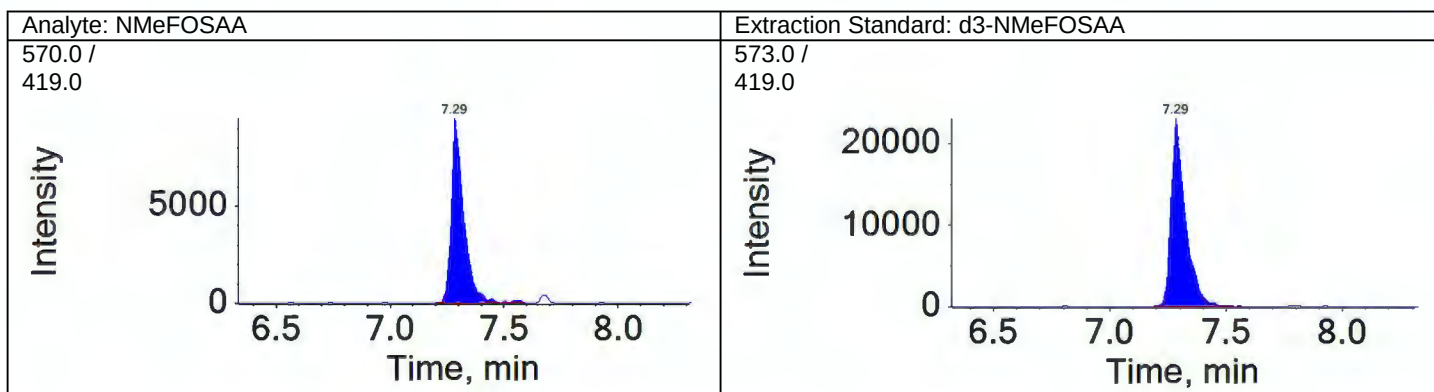
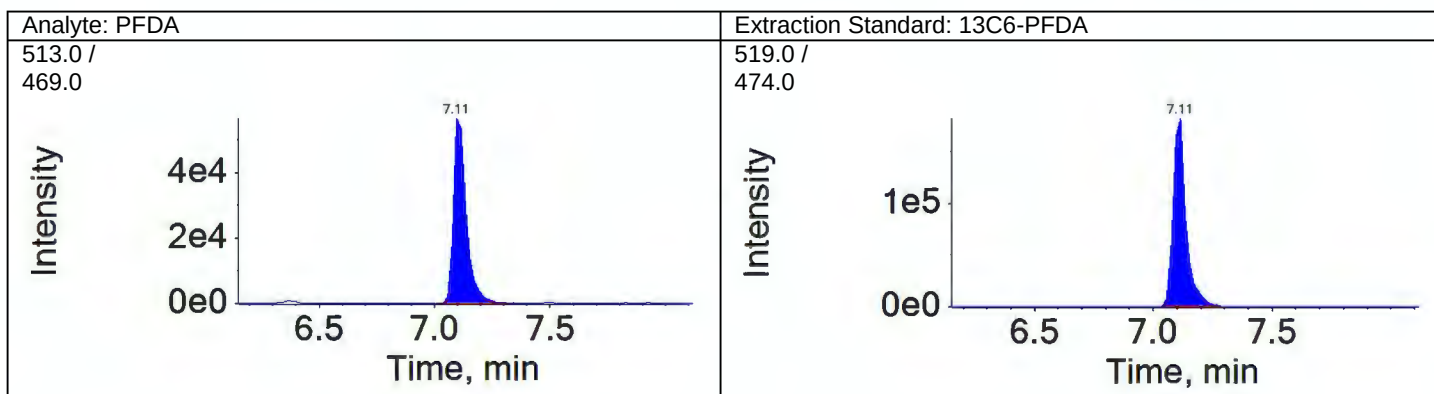
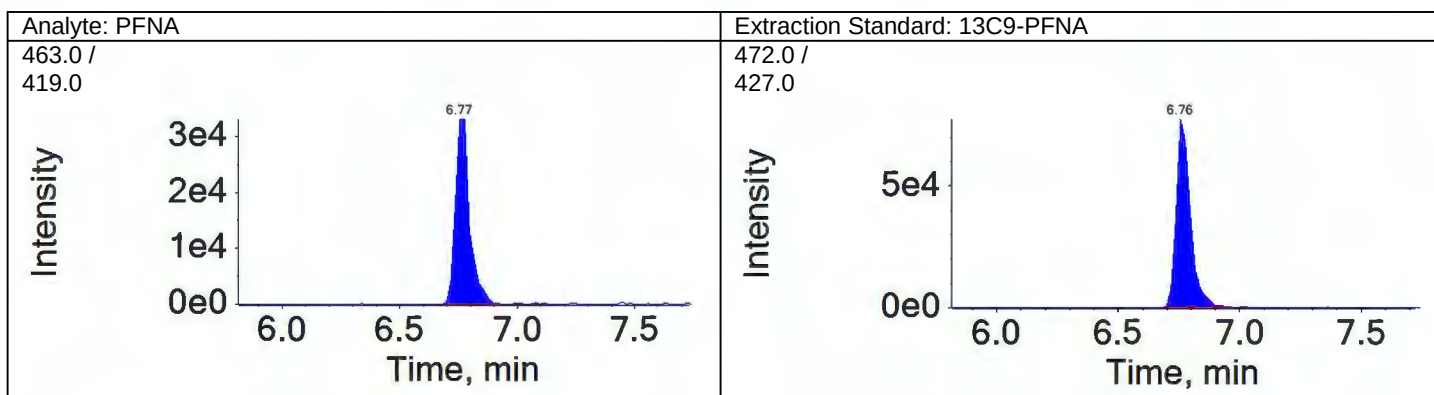
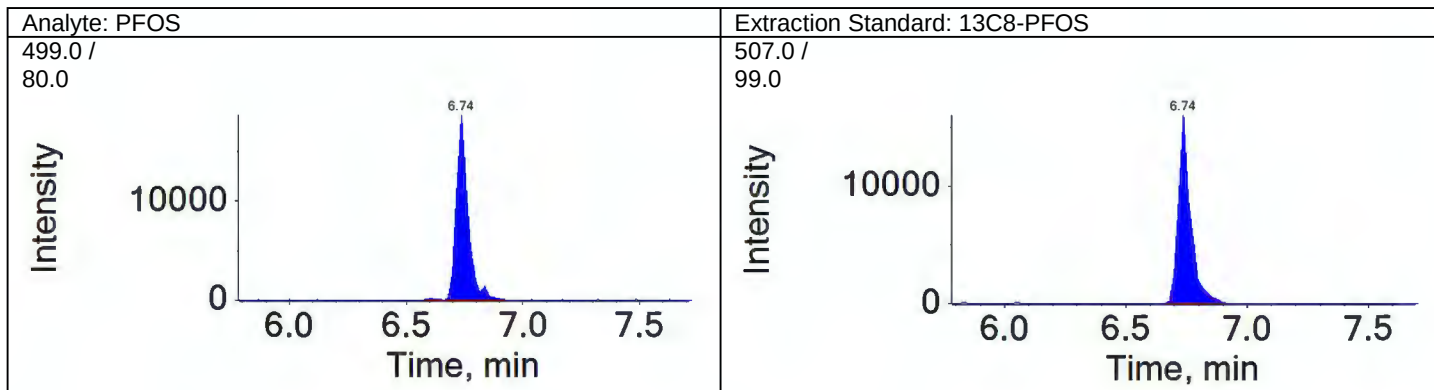
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QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



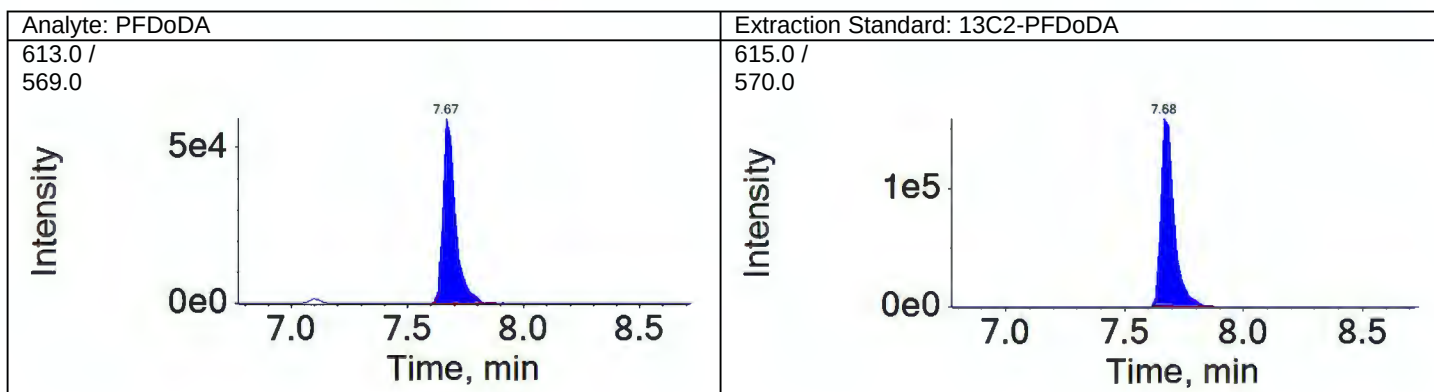
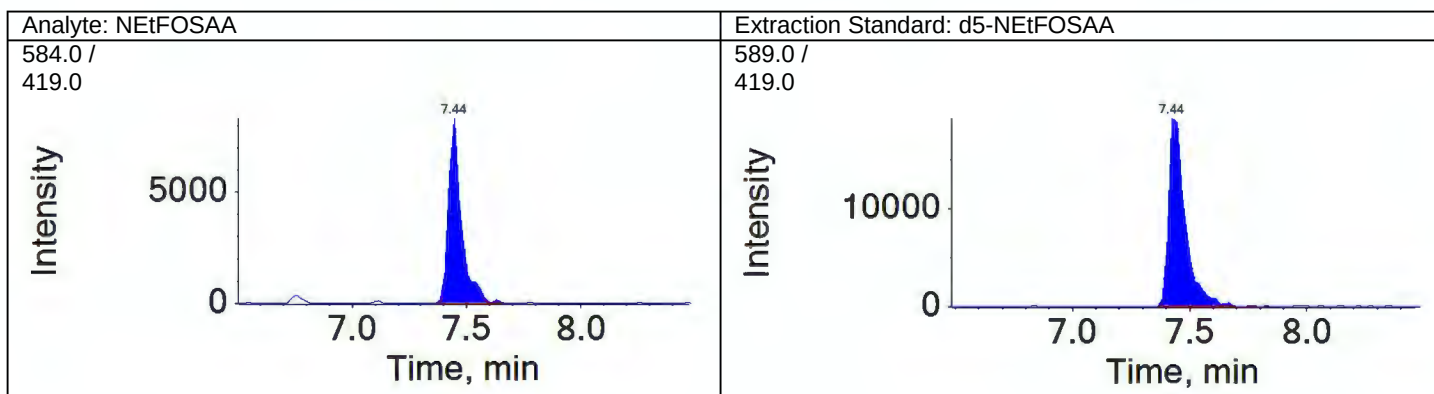
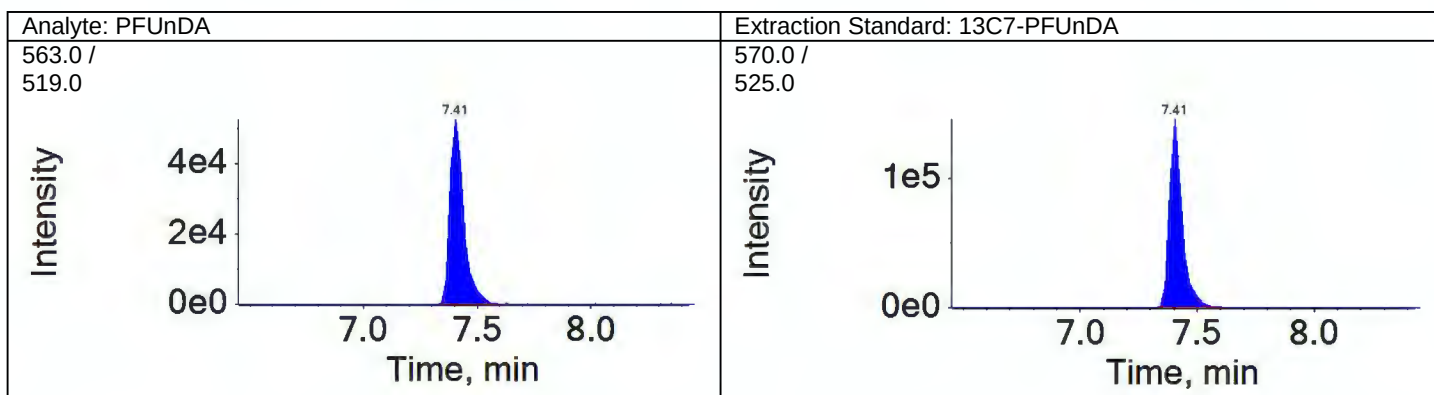
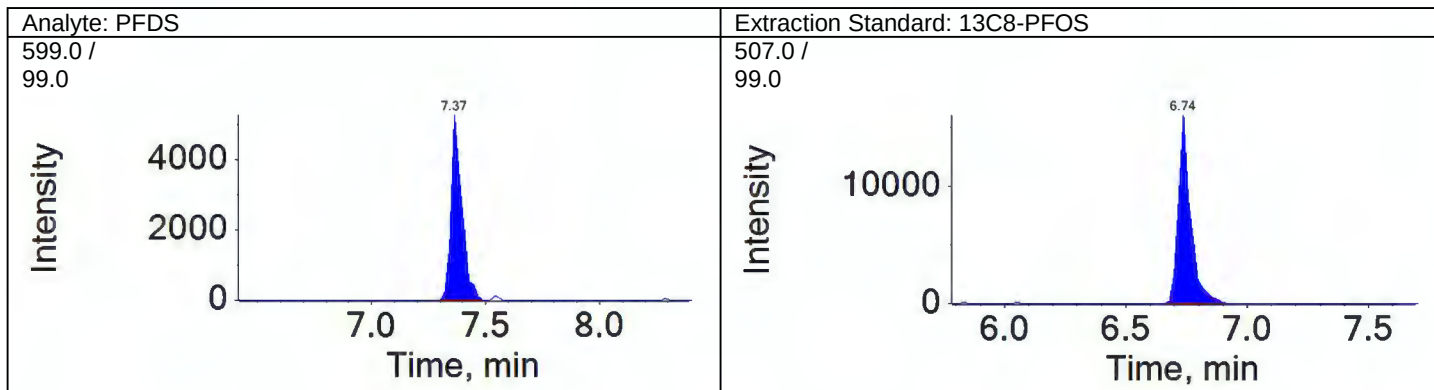
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QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



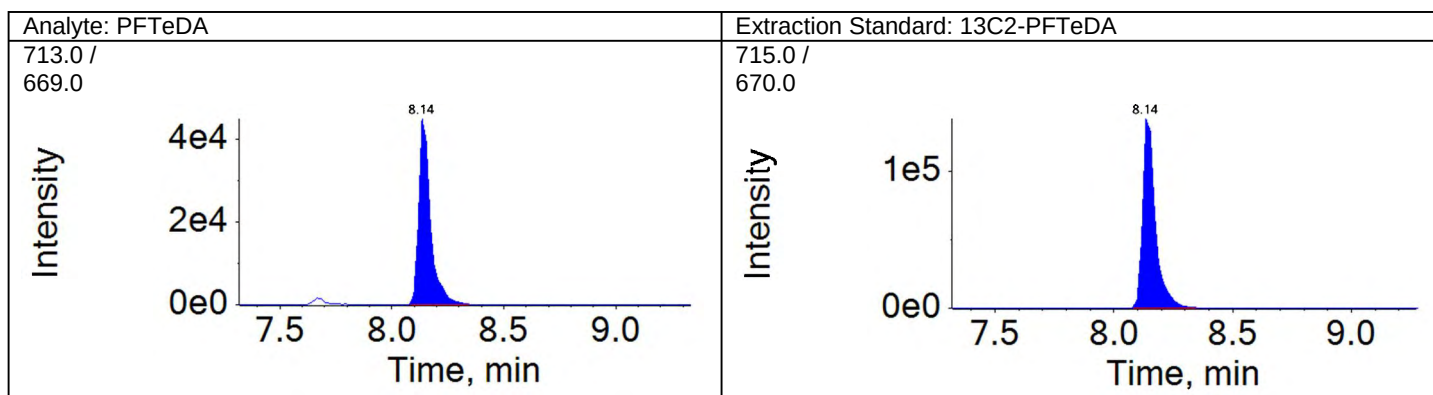
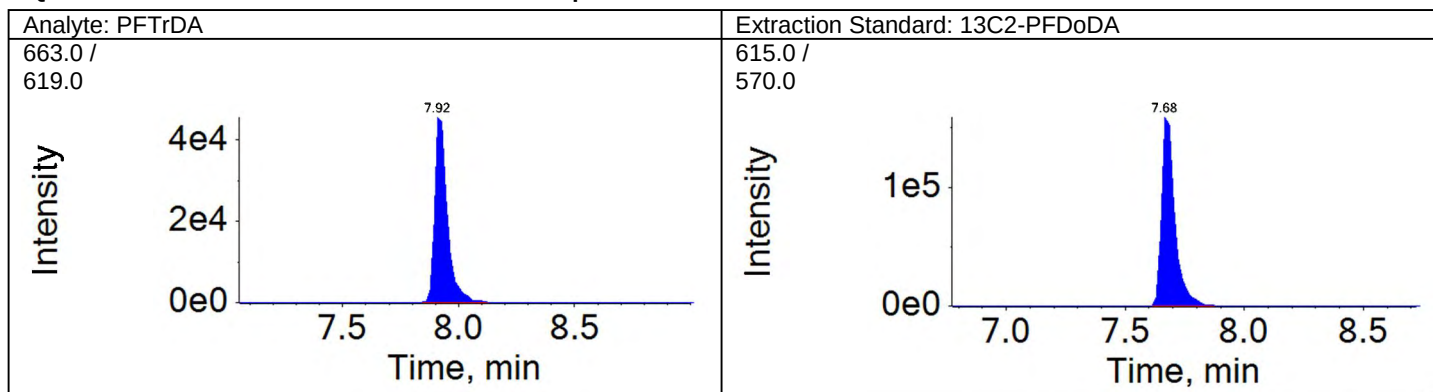
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ CCV3-4 1/6/2017 9:04:25 AM
Acquisition Method: PFC-32-16NOV02.dam



Department 4037 Free Form Notebook

Title: PFC LINEAR & BRANCHED INT.

From Page No.: _____

10/05/16

PFC Linear and Branched Intermediate Std in MeOH / H₂O 96:4

	STD Conc ng/mL	Stock Conc ng/mL	Prep Vol.	Final Vol.
A				
T-PFOS (1)	2000.00	50000	0.400	10
br-PFHxSK (2)	2000.00	50000	0.400	10
T-PFOA (3)	500.00	50000	0.100	10

B				
T-PFOS (1)	200.00	50000	0.040	10
br-PFHxSK (2)	200.00	50000	0.040	10
T-PFOA (3)	50.00	50000	0.010	10

C				
T-PFOS (1)	20.00	50000	0.004	10
br-PFHxSK (2)	20.00	50000	0.004	10
T-PFOA (3)	5.00	50000	0.001	10

	Wellington Labs Lot#	Expiration Date
T-PFOS (1)	TPFOS0805	9/2/2020
br-PFHxSK (2)	brPFHxSK0615	7/3/2020
T-PFOA (3)	TPFOA0216	2/12/2021

Prep Date: 10/5/2016
Analyst: JWK9524
Expiration Date: 4/5/2017

10/05/16 JWK9524

To Page No.: _____

REVIEWED:

PAGES:

DATE:

Department 4037 Free Form Notebook

Title: EXPANDED LIST ICV STANDARDFrom Page No.: N/A11/1/17
JWK9524

PFC Second Source Spiking STD in methanol / water 96:4

A		Stock Conc.(ng/mL)	Prep Vol (mL)		Final Vol
			Final Conc. (ng/mL)	Prep Vol. (mL)	tot (mL)
	PFC-MXA (1)	2000	500	1.25	5
1	PFBA	2000	500		
2	PFPeA	2000	500		
3	PFHxA	2000	500		
4	PFHpA	2000	500		
5	PFOA	2000	500		
6	PFNA	2000	500		
7	PFDA	2000	500		
8	PFUnDA	2000	500		
9	PFDaA	2000	500		
10	PFTrDA	2000	500		
11	PFTeDa	2000	500		
	PFS-MXA (2)				
12	PFBS	1770	442.5	1.25	5
13	PFHxS	1890	472.5		
14	PFOS	1910	477.2		
10	8:2FTS (3)	50000	500	0.050	5
11	NetFOSAA (4)	50000	500	0.050	5
12	NMeFOSAA (5)	50000	500	0.050	5

	Lot#	Expiration Date
PFC-MXA (1)	PFSMXA0913	9/11/2018
PFS-MXA (2)	PFSMXA1115	11/6/2020
NetFOSAA (4)	NetFOSAA0113	1/29/2018
NMeFOSAA (5)	NMeFOSAA1214	12/9/2019

Pipette ID's P100-1
P1000-1

PFC Expanded List ICV solution in methanol / water 96:4

B		Interm. Conc.(ng/mL)	Final Conc. (ng/mL)	Prep Vol. (mL)	Inj. Std (6) Vol (mL)	Ext. Std (7) Vol (mL)	Final Vol (mL)
1	PFBA	500	20.0				
2	PFPeA	500	20.0				
3	PFHxA	500	20.0				
4	PFHpA	500	20.0				
5	PFOA	500	20.0				
6	PFNA	500	20.0				
7	PFDA	500	20.0				
8	PFUnDA	500	20.0				
9	PFDaA	500	20.0				
10	PFTrDA	500	20.0				
11	PFTeDa	500	20.0				
12	PFBS	442.5	17.68				
13	PFHxS	472.5	18.91				
14	PFOS	477.2	19.12				
15	NetFOSAA	500	20.0				
16	NMeFOSAA	500	20.0				

Note: Solution B is an intermediate of Solution A.

Labeled Injection Std (6)
Labeled Ext. Std (7)Standards Lot# SS1634837A
IS1632337AExpiration Date 1/13/2017
1/13/2017Prep Date: 11/14/2016
Analyst: JWK9524
Expiration Date: 4/14/2017

(8)

(8) THIS STANDARD WAS POST DOCUMENTED. JWK9524 11/1/17

To Page No.: N/A

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PAGES:

DATE:

Raw QC Data

PFAS by LC/MS/MS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	BLK004003		Data File:	17JAN05-17.wiff
Sample ID:	17004003		Acquis Date:	2017-01-05T14:06:44
Sample Type:	Unknown		Instrument:	LM24960
Vial Position:	91		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	17004003		Operator:	Not calculated
Sample Wt.:	0.10000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	416037.7	479624.1	-13.3	50.0	
I13C4-PFOS	1.0	64816.8	91278.0	-29.0	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	342291.5	13C2-PFOA	416037.7	0.823	1.263	10.000	6.514	65.1	70.0-130.0	OOS
E13C8-PFOS	51558.8	13C4-PFOS	64816.8	0.796	1.011	10.000	7.869	78.7	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

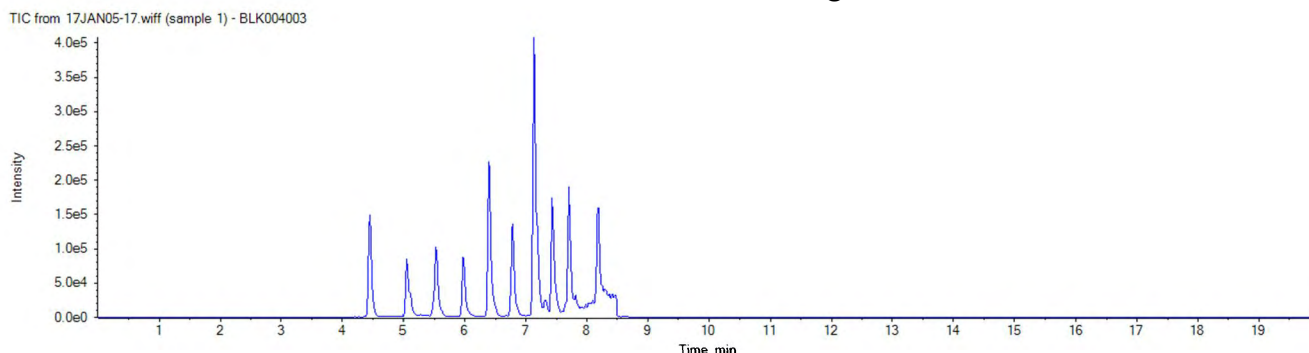
Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Analyte Quantitation Peak Table

Sample Name: BLK004003			Instrument Name: LM24960			File Name: 17JAN05-17.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.10000		1.000		1.00			1.000		

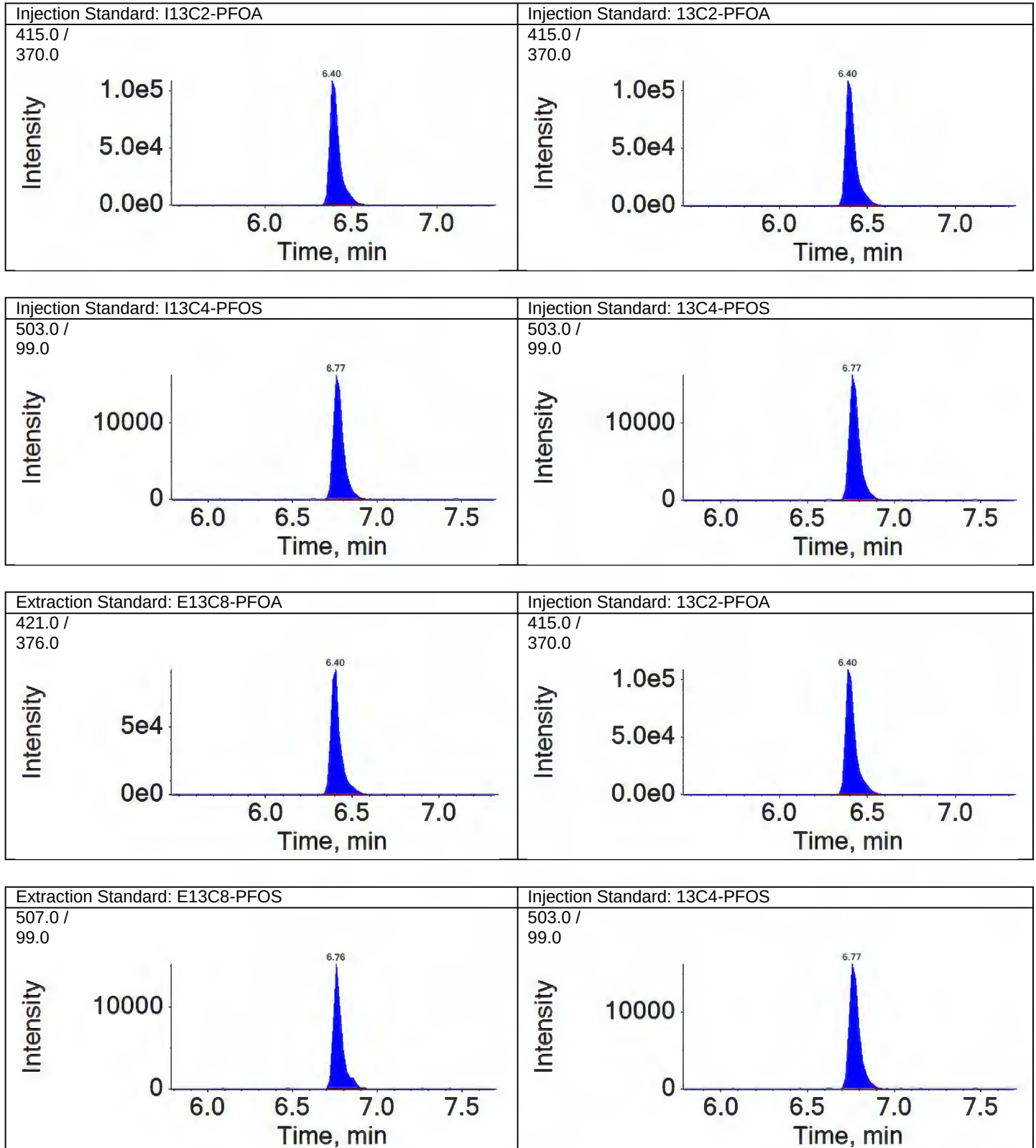
<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.40	1.000	2255.7	M	13C8-PFOA	6.40	342291.5	0.007	0.327
PFOS	N/A	N/A	N/A	A	13C8-PFOS	6.76	51558.8	N/A	

Total Ion Chromatogram



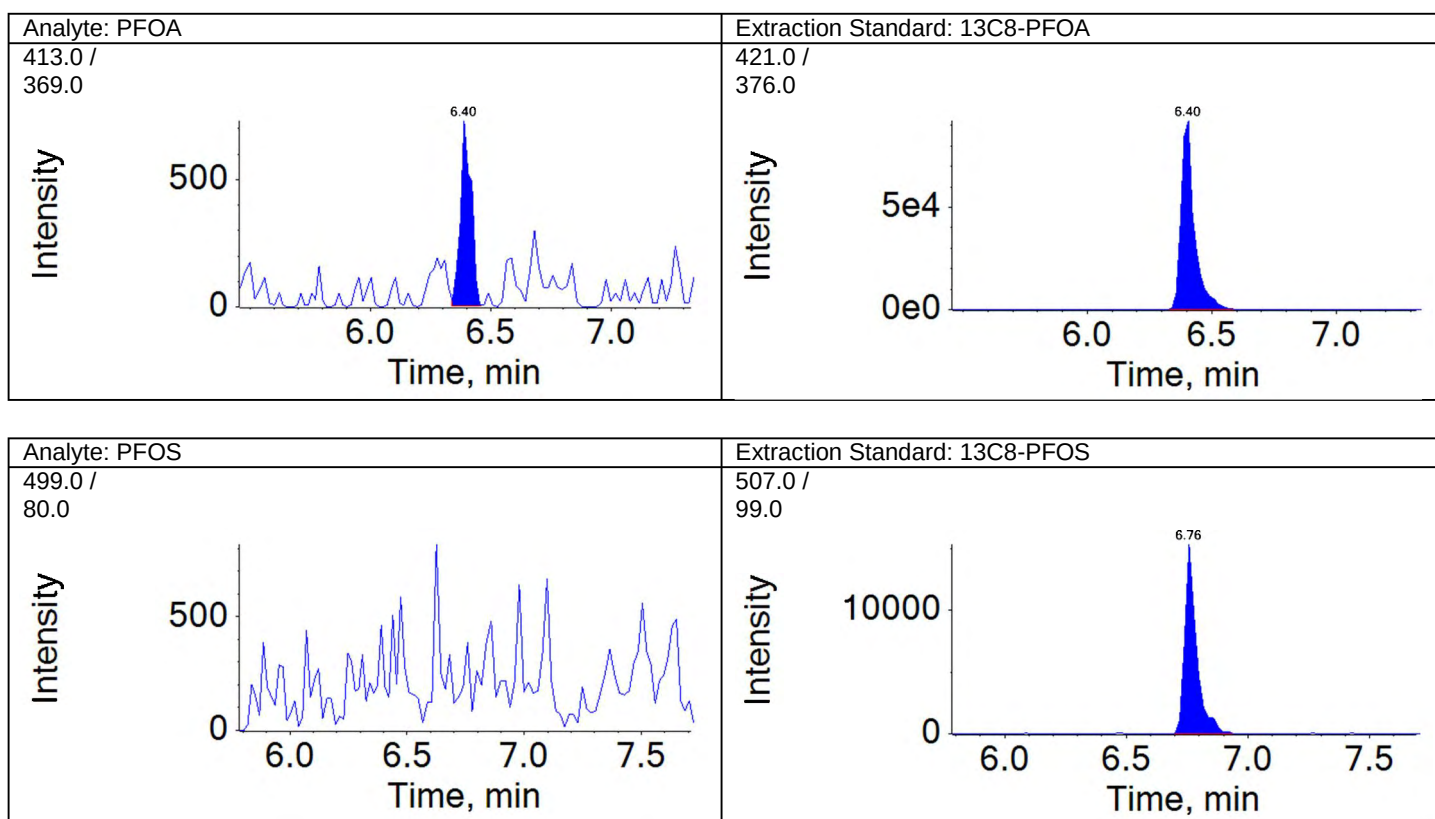
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

Component Name:

PFOA

RT (min.):

6.40

Peak Area:

3143.7

Mass Range:

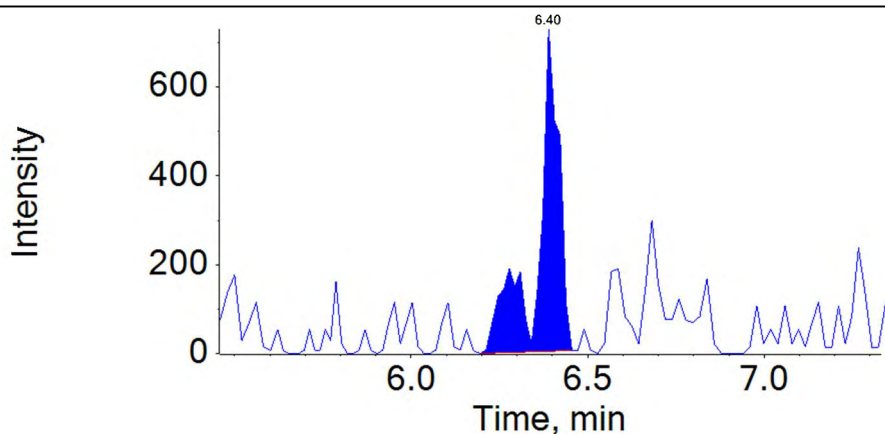
413.0 / 369.0

File Name:

17JAN05-17.wiff

Sample Name:

BLK004003



Integration Comment: incorrect integration

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	8766906MS			Data File:		17JAN05-21.wiff
Sample ID:	EPA 537 Rev 1.1 17004003 16MC- PW117-P1-1228 Grab Groundwater			Acquis Date:		2017-01-05T15:28:53
Sample Type:	Quality Control			Instrument:		LM24960
Vial Position:	95			Acquis Method:		PFC-32-16NOV02.dam
Injection Vol:	5.00			Result Table:		MQ 17004003
QMethod File:	PFC-32-16DEC13			ICAL Name:		16DEC11ICAL
Batch Number:	17004003			Operator:		Not calculated
Sample Wt.:	0.06662			Dilution Factor:		1.00
Sample Vol.:	1.000			Prep Factor:		1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	503289.6	479624.1	4.9	50.0	
I13C4-PFOS	1.0	82836.3	91278.0	-9.2	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	300132.6	13C2-PFOA	503289.6	0.596	1.263	15.011	7.087	47.2	70.0-130.0	OOS
E13C8-PFOS	43764.3	13C4-PFOS	82836.3	0.528	1.011	15.011	7.845	52.3	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

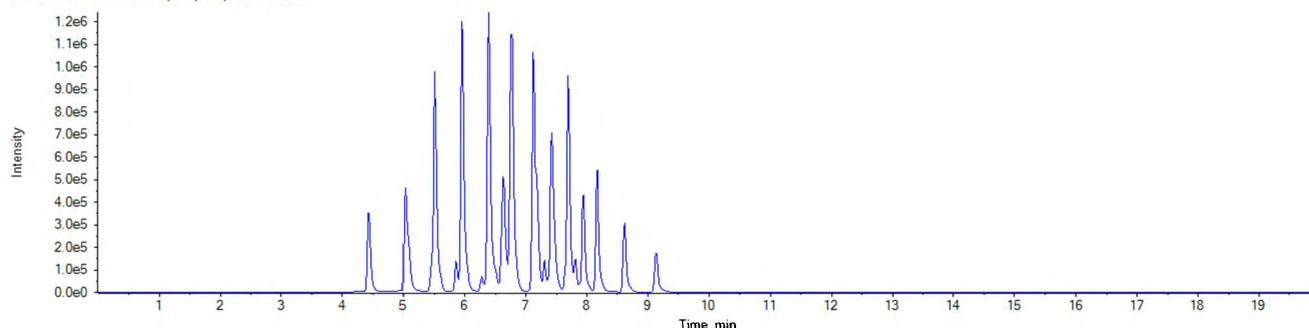
Analyte Quantitation Peak Table

Sample Name: 8766906MS			Instrument Name: LM24960			File Name: 17JAN05-21.wiff			
Sample Wt		Sample Vol			Dilution Factor			PrepFactor	
0.06662		1.000			1.00			1.000	

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.39	1.000	1936854.2	M	13C8-PFOA	6.39	300132.6	6.453	480.056
PFOS	6.73	1.000	4826071.6	M	13C8-PFOS	6.75	43764.3	110.274	2653.714

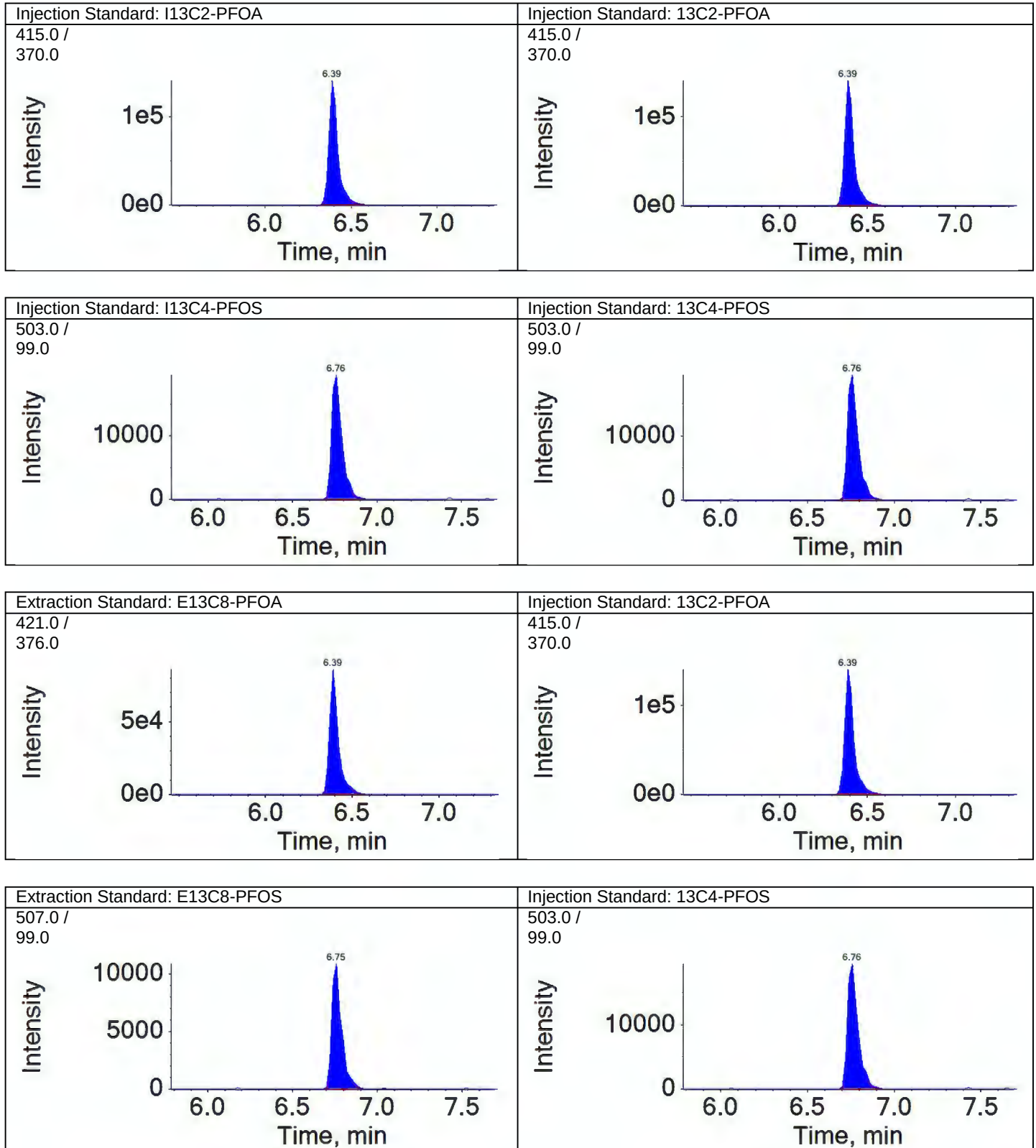
Total Ion Chromatogram

TIC from 17JAN05-21.wiff (sample 1) - 8766906MS



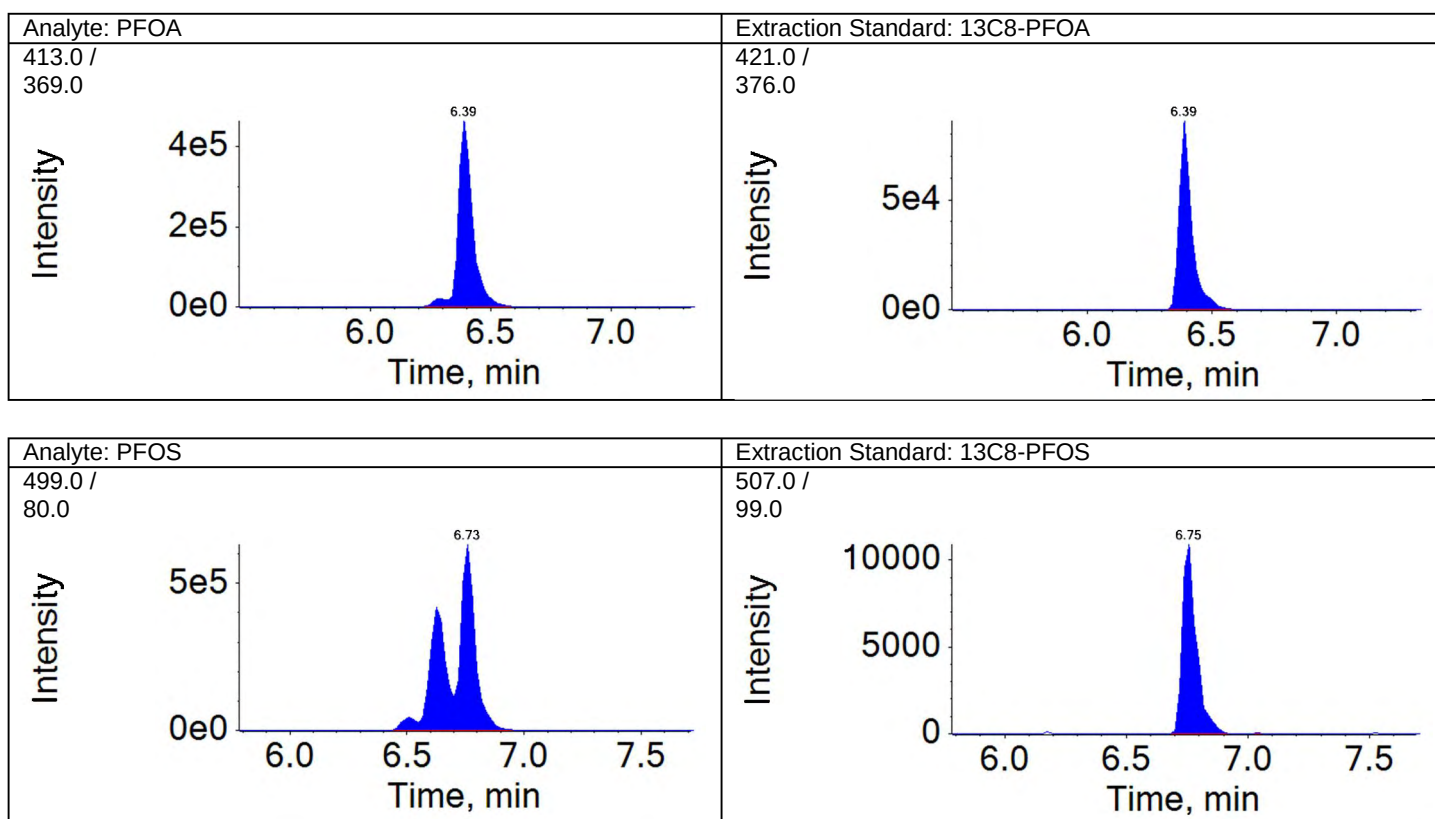
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



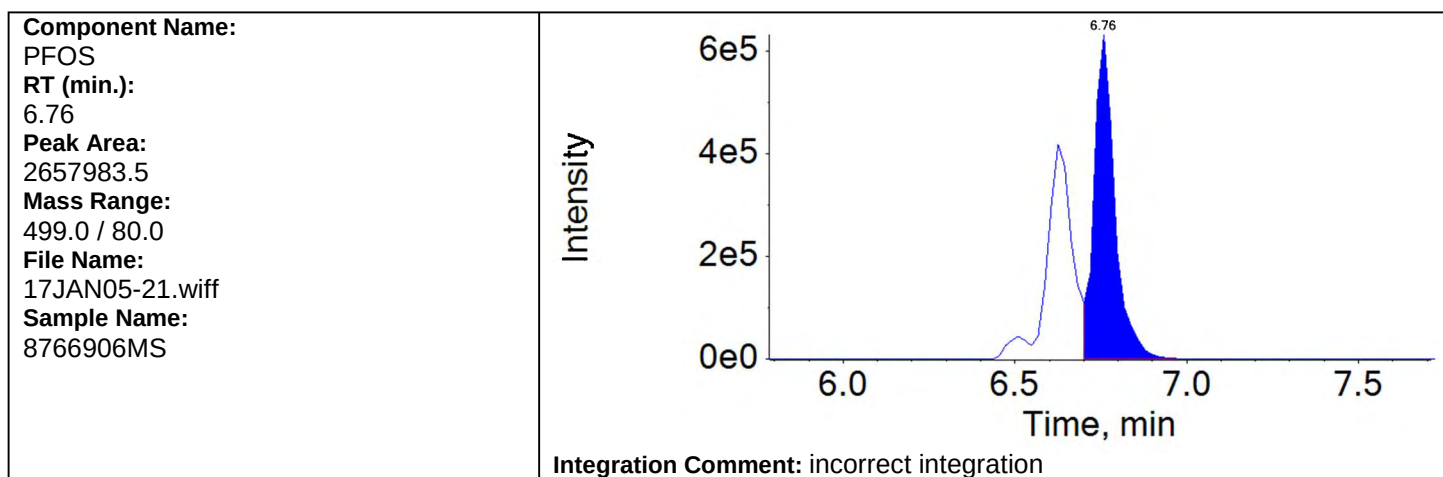
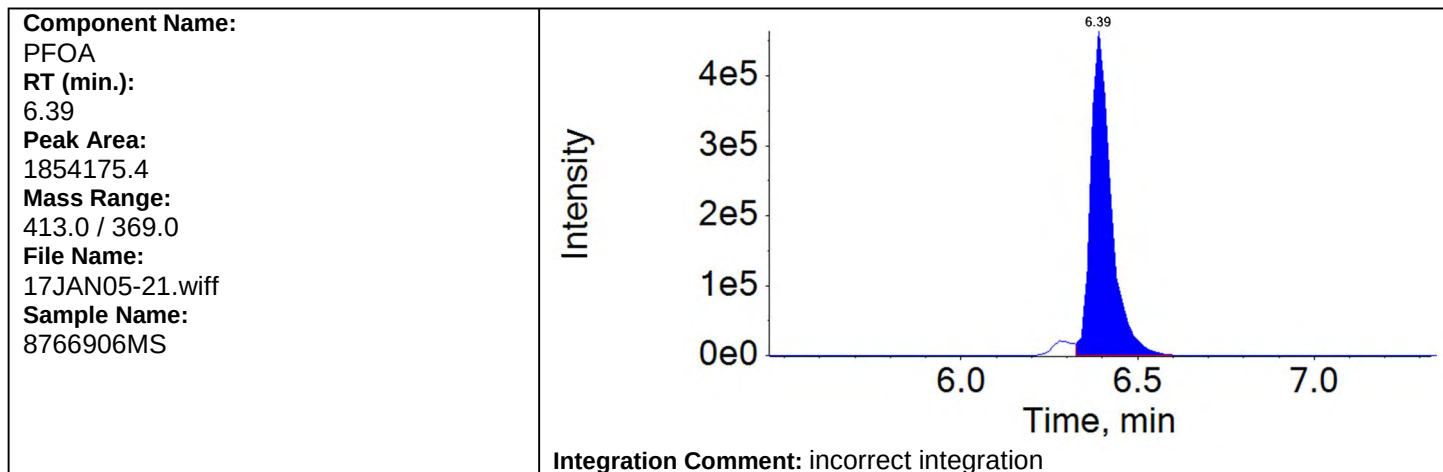
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13



Results Table Name: MQ 17004003
Results Table Date: 1/6/2017 7:37:31 AM

Acquisition Method: PFC-32-16NOV02.dam
QMethod File: PFC-32-16DEC13

APPROVED

By JWK at 8:10 am, 1/6/17

REVIEWED

By uild at 11:38 am, 1/6/17

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	LCS004003		Data File:	17JAN05-18.wiff
Sample ID:	17004003		Acquis Date:	2017-01-05T14:27:17
Sample Type:	Quality Control		Instrument:	LM24960
Vial Position:	92		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	17004003		Operator:	Not calculated
Sample Wt.:	0.10000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	305977.8	479624.1	-36.2	50.0	
I13C4-PFOS	1.0	62502.1	91278.0	-31.5	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	337488.6	13C2-PFOA	305977.8	1.103	1.263	10.000	8.733	87.3	70.0-130.0	
E13C8-PFOS	41830.2	13C4-PFOS	62502.1	0.669	1.011	10.000	6.621	66.2	70.0-130.0	OOS

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

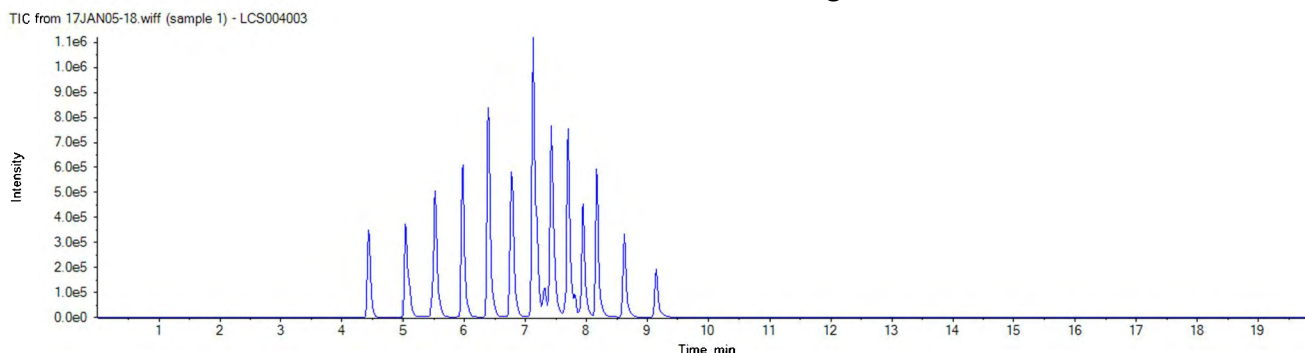
Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Analyte Quantitation Peak Table

Sample Name: LCS004003			Instrument Name: LM24960			File Name: 17JAN05-18.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.10000		1.000		1.00			1.000		

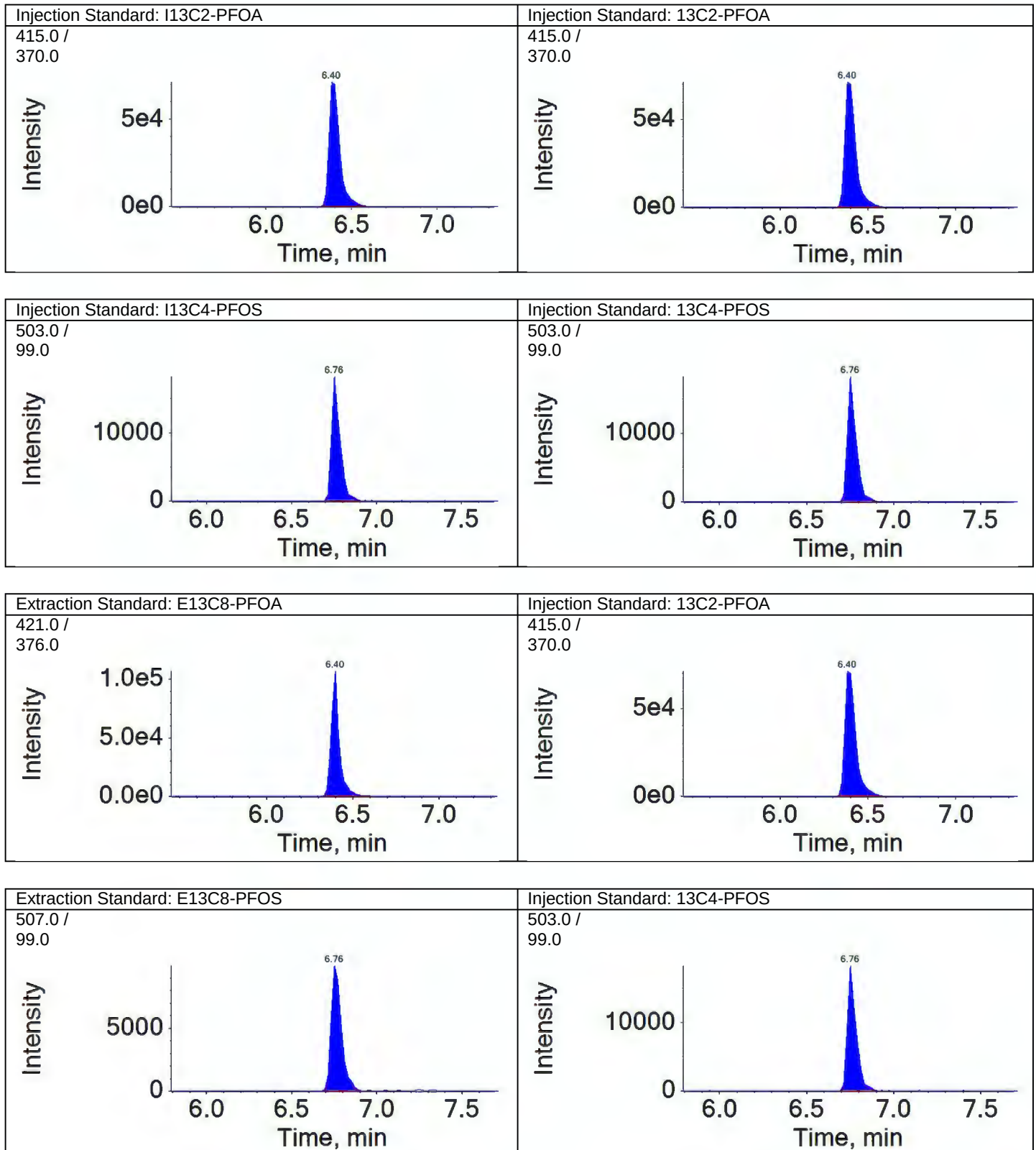
<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.40	1.000	1194830.0	A	13C8-PFOA	6.40	337488.6	3.540	175.452
PFOS	6.76	1.000	554472.5	A	13C8-PFOS	6.76	41830.2	13.255	212.508

Total Ion Chromatogram



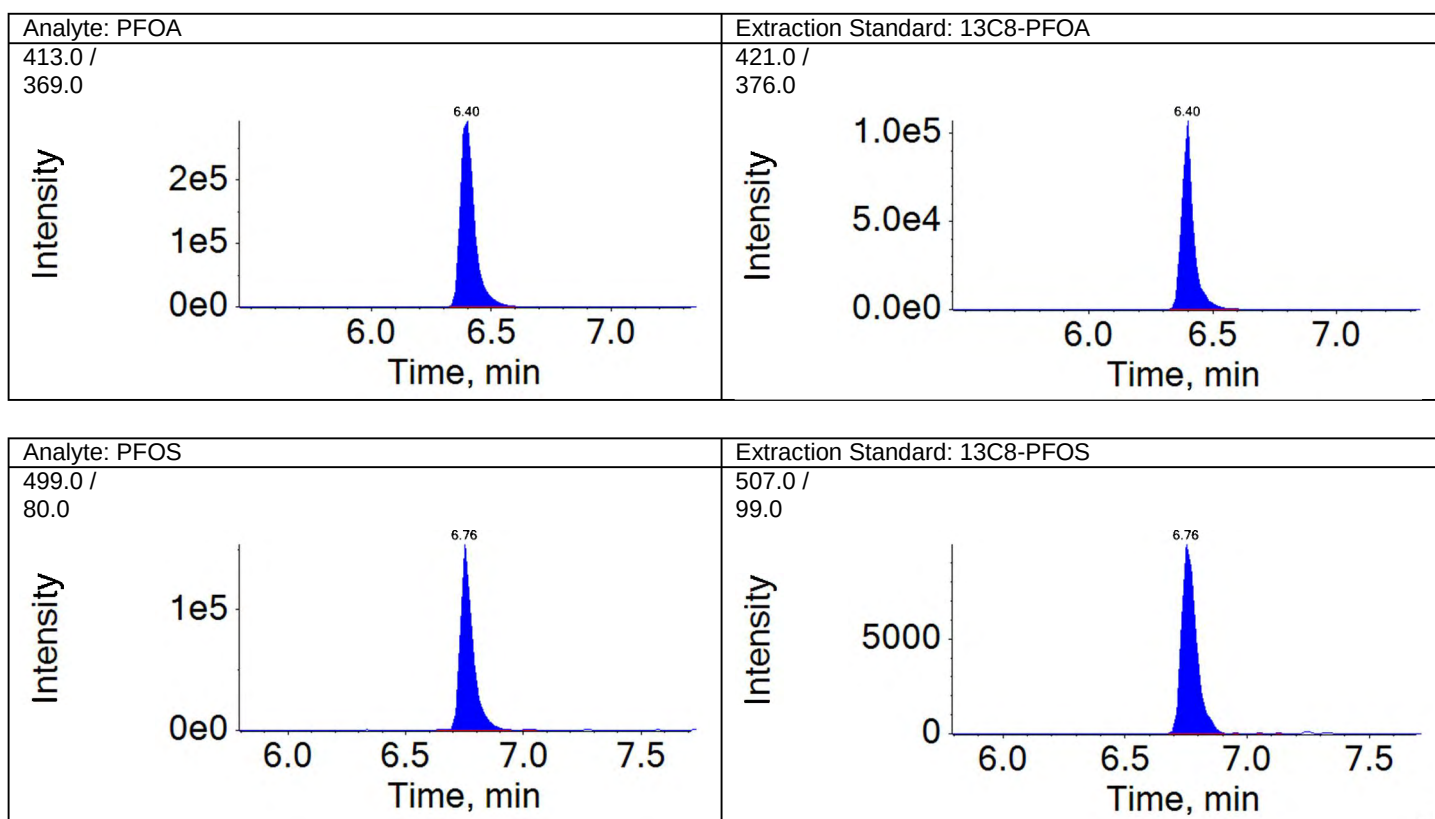
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

Sample Name:	LCSDA		Data File:	17JAN05-19.wiff
Sample ID:	17004003		Acquis Date:	2017-01-05T14:47:50
Sample Type:	Quality Control		Instrument:	LM24960
Vial Position:	93		Acquis Method:	PFC-32-16NOV02.dam
Injection Vol:	5.00		Result Table:	MQ 17004003
QMethod File:	PFC-32-16DEC13		ICAL Name:	16DEC11ICAL
Batch Number:	17004003		Operator:	Not calculated
Sample Wt.:	0.10000		Dilution Factor:	1.00
Sample Vol.:	1.000		Prep Factor:	1.000

Injection Standard Peak Table

Injection Standard Name	Inj Std Conc	Injection Std Peak Area	ICAL Injection Standard AVG	Injection Std %Diff	Injection Std %Diff Limit	Injection Std %Diff OOS
I13C2-PFOA	1.0	331580.7	479624.1	-30.9	50.0	
I13C4-PFOS	1.0	63383.2	91278.0	-30.6	50.0	

Extraction Standard Peak Table

Extraction Standard Name	Ext Std Area	Inj Std Name	Inj Std Area	Area Ratio	AVG Area Ratio	Ext Std Conc	Ext Std Result	Ext Std %REC	Ext Std %REC Limit	Ext Std OOS
E13C8-PFOA	322516.2	13C2-PFOA	331580.7	0.973	1.263	10.000	7.701	77.0	70.0-130.0	
E13C8-PFOS	47133.6	13C4-PFOS	63383.2	0.744	1.011	10.000	7.357	73.6	70.0-130.0	

ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam

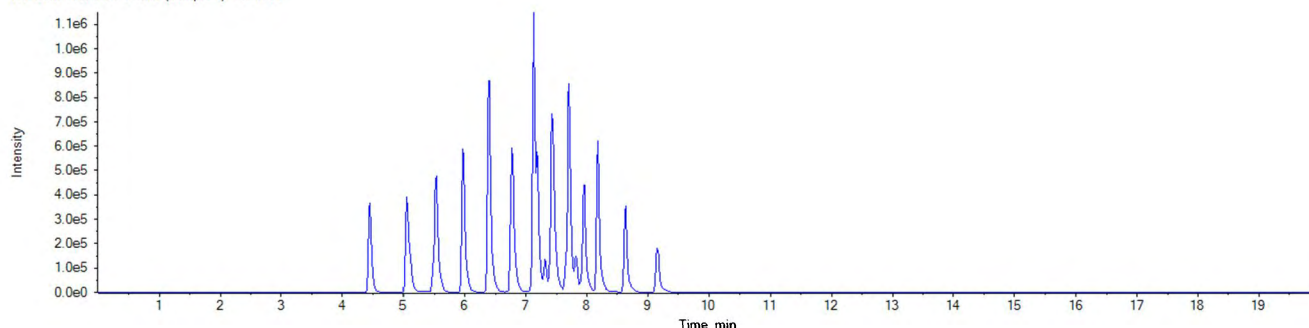
Analyte Quantitation Peak Table

Sample Name: LCSDA			Instrument Name: LM24960			File Name: 17JAN05-19.wiff			
Sample Wt		Sample Vol		Dilution Factor			PrepFactor		
0.10000		1.000		1.00			1.000		

<u>Analytet Name</u>	<u>RT</u>	<u>RRT</u>	<u>Analyte Area Response</u>	<u>Int Typ</u>	<u>ES Name</u>	<u>ES RT</u>	<u>ES Area Response</u>	<u>Area Ratio</u>	<u>Sample Result (ng/L)</u>
PFOA	6.40	1.000	1223429.9	A	13C8-PFOA	6.40	322516.2	3.793	187.992
PFOS	6.76	1.000	602899.8	A	13C8-PFOS	6.76	47133.6	12.791	205.069

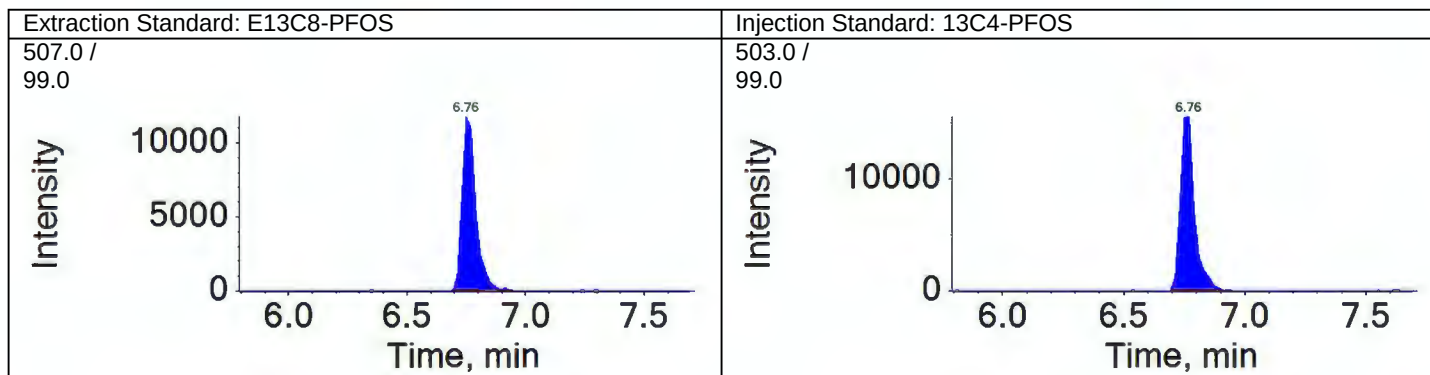
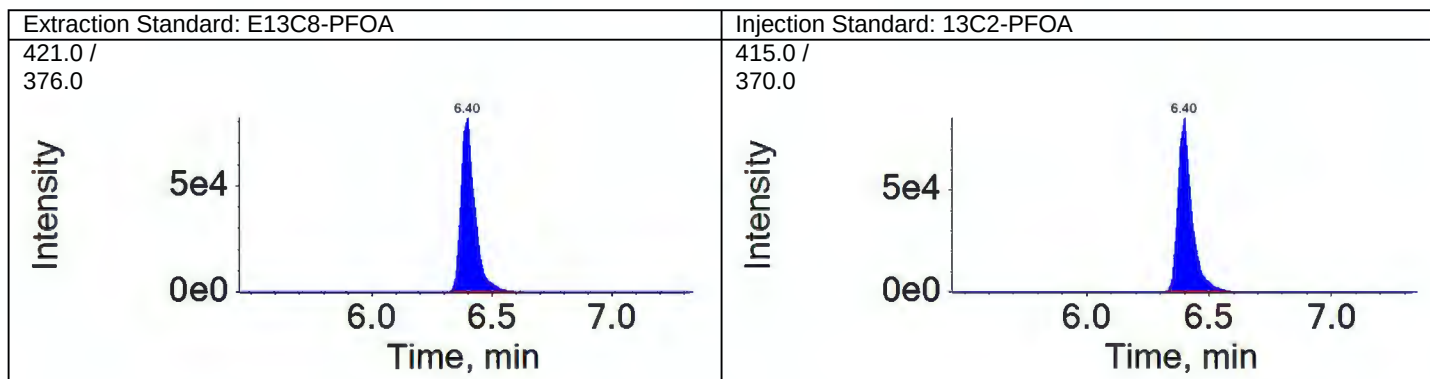
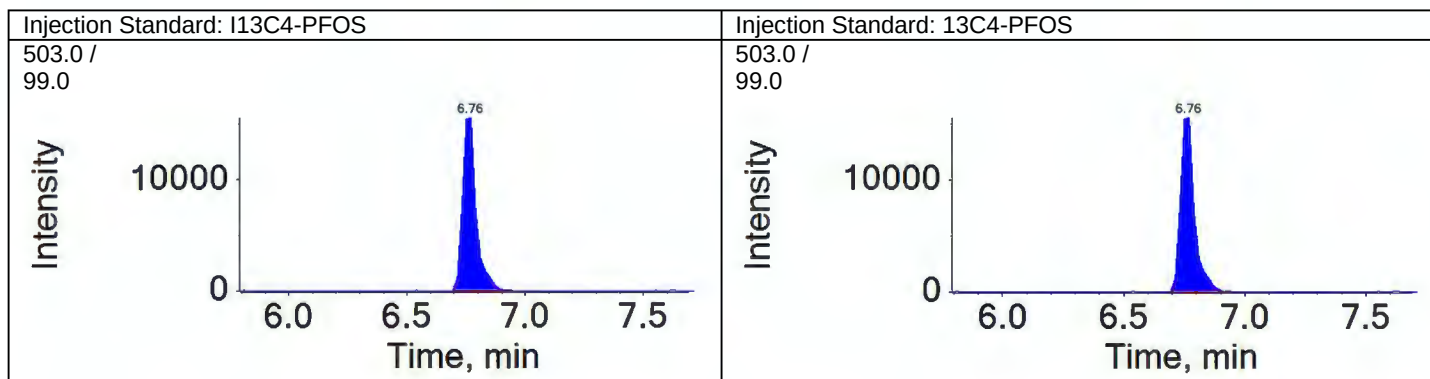
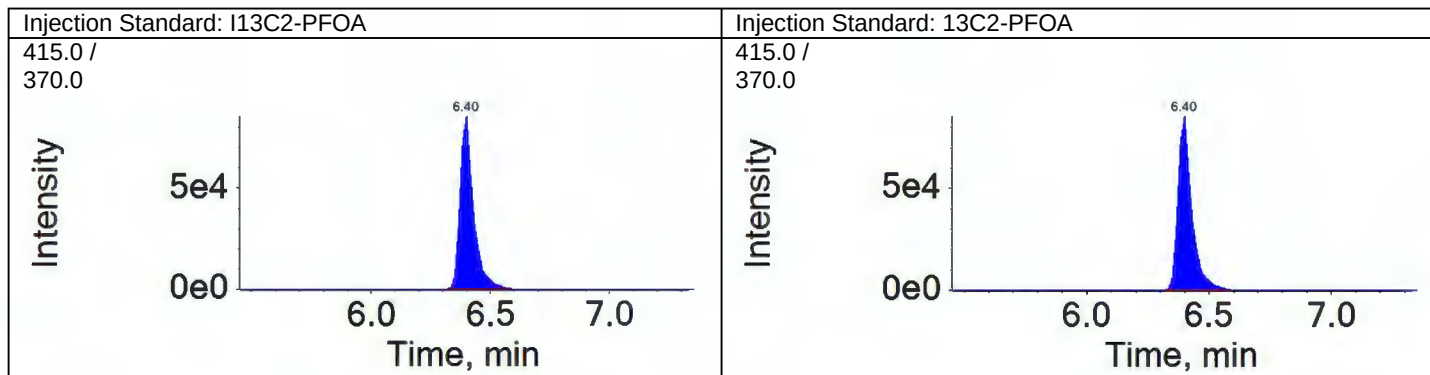
Total Ion Chromatogram

TIC from 17JAN05-19.wiff (sample 1) - LCSDA



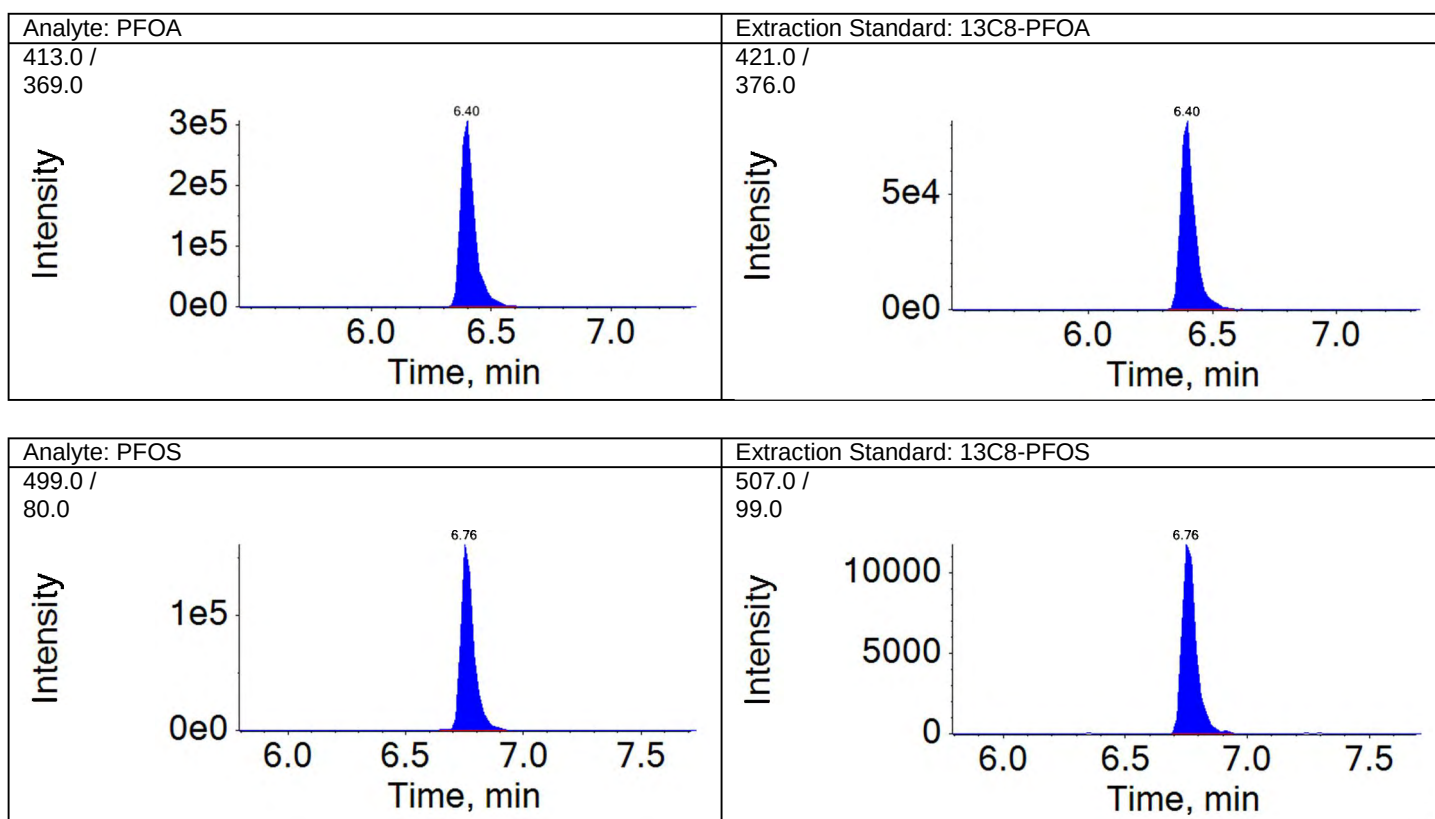
ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



ICAL Name: 16DEC11ICAL
QMethod Name: PFC-32-16DEC13

Result Table: MQ 17004003 1/6/2017 7:37:31 AM
Acquisition Method: PFC-32-16NOV02.dam



Preparation Logs

PFAS by LC/MS/MS

Organic Extraction Batchlog

Assigned to: 10262 Devon Whooley

Reviewed by: JWK9524

Start Date: 1/4/17

Start time: 15:35

17004003

Tech 1: DW 10262

Tech 2:

Analyses on Batch: PFAS in Water by LC/MS/MS

Dept: 37 Prep Analysis: 14091 PFAA Water Prep										
QC	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	MS Sol.	Amt (mL)	FV (uL)	IS amt (uL)	BC	Comments
8766906MS	CR176MS	66.62	SS1636437A	.025	LCSPEX1637A	.04	1ml	10	201a	Limited sample
BLANKA	BLK004003	100		.025	N/A	N/A		10	—	
LCSA	OPR004003	100		.025	LCSPEX1637A	.04		10	—	
LCSDA		100		.025		.04		10	—	

Reagent/Material/Equip	Lot No./ID No.
96% MeOH:H2O	166459
Acetate Buffer	37511131637E
Auto-pipette (IS)	P100-1
Auto-pipette (LCS)	P100-1
Auto-pipette (SS)	P100-1
Auto-pipette (dilutions)	P100-1
Auto-pipette (extract vial)	P1000-1
Internal Standard	IS1636437A
Methanol	166459
Milli-Q H2O	House 1/4/17
NH4OH:H2O	1026212131637A
NH4OH:MeOH	37512121637E
SPE Cartridge	62104184-01
Sodium Thiosulfate	114350A
Trizma	

Spike Solutions: Witness: JWK9524

Instrument: LM24960

Sequence: 16DEC11AFC - 17JAN05 / 17JAN06

Sample #	Sample Code	Amt (g)	SS/IS Sol.	Amt (mL)	FV (uL)	IS Amt (uL)	BC	Comments	Analyses	Due Date	Prio
1 8766901 R	CR171	72.39	SS1636437A	.025	1ml	10	201a		10954	01/05/2017	S
2 8766902 R	CR172	100.19		.025		10	201a		10954	01/05/2017	S
3 8766903 R	CR173	100.29		.025		10	201a		10954	01/05/2017	S
4 8766904 R	CR174	100.34		.025		10	201a		10954	01/05/2017	S
5 8766905 R	CR175	100.02		.025		10	201a	DL10	10954	01/05/2017	S
6 8766906 R	CR176	99.84		.025		10	201a	DL10	10954	01/05/2017	S

DL10 - 100µL OF EXTRACT WAS MIXED WITH 877µL OF 96% MeOH:H₂O & 22.5µL OF SS1636437A SS/IS, 10µL OF IS1636437A WAS ADDED TO 200µL OF THE SOLUTION PRIOR TO INJECTION. 1/6/17 JWK9524

Balance #	B629764122	SPE Manifold	115	Vacuum Port		N-evap	C
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17004003

