Navy_CLEAN_PFAS_FOIA_request_covers.indd

NAVFAC
Naval Facilities Engineering Command

Groundwater Sample Results, Level 2 Laboratory Report, Level 4 Laboratory Report, Electronic Data Deliverable, Data Validation Report, and the Sample Location Report, SDG 1409070

Norfolk Naval Base
Norfolk, Virginia

July 2019

APPROVED FOR PUBLIC RELEASE; DISTRIBUTION UNLIMITED

ANALYTICAL SUMMARY DATA PACKAGE
SDG # 1409070

PROJECT NAME: NSN CTO-WE79
PROJECT LOCATION: NORFOLK, VA
CONTRACT #: 954774

SUBMITTAL TO:
Juliana Dean
CH2M HILL
5701 Cleveland St, Suite 200
Virginia Beach, VA 23462

SUBMITTAL BY:
Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (866)417-0548

LABORATORY CONTACT PERSON:
Project Manager: Sonya Gordon
Tel (615)345-1115
Fax (866)417-0548
Email: sgordon@empirlabs.com

Original Report Date: October 1, 2014
Report Revision #: 01
Revision Date: November 5, 2014
Total # of Pages: 72

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

L-A-B Accredited - Certificate Number L2226 - Testing

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Sample Delivery Group Case Narrative

Receipt Information:

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. Samples were subcontracted to Accutest Laboratories for Extractable by GCMS by Method 537 MOD.

Changes to the Revision:

Revision 01: The package was revised due to an incorrect client ID.

Statement of Data Authenticity:

I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

Empirical Laboratories, LLC
Certifications/Approvals
(Revised 08/05/2014)

DoD ELAP, Certificate Number L2226
- Aqueous
- Non-aqueous
- Expires: 11/30/2015

State of Florida, Department of Health – NELAP, Lab ID: E87646
- Clean Water Act
- RCRA/CERCLA
- Expires: 06/30/2015

State of Georgia, Environmental Protection Agency – NELAP, Self Certification
- Expires: 06/30/2015

State of Illinois, Environmental Protection Agency – NELAP, Certificate No.: 003300
- Groundwater
- Solid and Hazardous Waste
- Expires: 09/13/2015

State of Kentucky Department of Environmental Protection – NELAP, Certificate No.: 77
- Aqueous
- Non-aqueous
- Expires: 06/30/2015

State of New Jersey Department of Environmental Protection – NELAP, Lab ID: TN473
- Water Pollution
- Solid and Hazardous Waste
- Expires: 06/30/2015

State of North Carolina, Department of Environment and Natural Resources - Certificate No.: 643
- Aqueous
- Non-aqueous
- Expires: 12/31/2014

State of Texas, Commission on Environmental Quality – NELAP, Certificate No.: T104704307-14-10
- Aqueous
- Non-aqueous
- Expires: 12/31/2014

State of Utah, Department of Health – NELAP, Certificate No.: TN0042014-6
- Aqueous
- Non-aqueous
- Expires: 07/31/2015

Commonwealth of Virginia, Department of General Services – VELAP, Certificate No.: 2633 – Lab ID: 460243
- Aqueous
- Non-aqueous
- Expires: 12/14/2014

State of Washington, Department of Ecology – NELAP, Lab ID: C934-14
- Groundwater
- Solid and Hazardous Waste
- Expires: 03/18/2015

Sample Receipt Information

Accutest Laboratories Southeast

Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

CTO WE-79

Accutest JOB # FA18133 PAGE 1 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: CH2M Hill
Address: 5701 Cleveland St Suite 200
City: Virginia Beach State: VA Zip: 23462
Project Contact: Juliana Dean E-mail:
Phone#: 757-671-6232
Sampler(s) Name(s) (Printed): Kathryn Smith/VBO

Project Information

Project Name: NSN Site 1 LTM
Street:
City: State:
Project #: 470612.LT.FI.01
Fax #:
Client Purchase Order #: 954774

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NAOH-ZNAC	DI WATER	MEOH	PFCs	LAB USE ONLY
1	NBS01-B-EW8A-0914	09/08/14	10:40		GW	2		X								2	
2	NBS01-B-EW4B-0914		10:55			2										2	
3	NBS01-B-EW5A-0914		11:05			2										2	
4	NBS01-B-EW4A-0914		11:15			2										2	
5	NBS01-B-EW4AP-0914		11:20			2										2	
6	NBS01-B-EW3B-0914		11:30			2										2	
7	NBS01-B-EW7A-0914		11:40			2										2	
8	NBS01-B-EW3A-0914		11:55			2										2	
9	NBS01-B-EW2B-0914		12:05			2										2	
10	NBS01-A1-EW4B-R15		12:25			2										2	
11	NBS01-A1-EW3B-R15		12:45			2										2	
12	NBS01-A2-EW3B-R15	↓	13:15		↓	2		↓								2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- ☐ 10 Days Standard
- ☐ 7 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- ☐ COMMERCIAL "A" (RESULTS ONLY)
- ☐ COMMERCIAL "B" (RESULTS PLUS QC)
- ☐ REDT1 (EPA LEVEL 3)
- ☐ FULT1 (EPA LEVEL 4)
- ☐ EDD'S

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Kathryn Smith	09/09/14 18:00	2 FX	3 FX	9-10-14	4 J. Compe (ASE) 09:00
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.4

1409070 Summ Package

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Accutest Laboratories Southeast

Chain of Custody

CTO WE-79

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA18133 PAGE 2 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name CH2M Hill
Address 5701 Cleveland St, Suite 200
City Virginia Beach State VA Zip 23462
Project Contact Juliana Dean E-mail
Phone# 757-671-6232
Sampler(s) Name(s) (Printed) Kathryn Smith

Project Information

Project Name: NSN Site 1 LTM
Street
City State
Project # 470612.LT.FI.01
Fax #
Client Purchase Order # 954774

Analytical Information

PFCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION: OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH	PFCs	LAB USE ONLY
13	NBS01-A-GW-3-R15	09/09/14	11:45		GW	2										2	
14	NBS01-A2-mw11A-R15	↓	13:30		↓	2										2	
15	NBS01-EB09090914	↓	16:00		↓	2										2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- ☐ 10 Days Standard
- ☐ 7 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- ☐ COMMERCIAL "A" (RESULTS ONLY)
- ☐ COMMERCIAL "B" (RESULTS PLUS QC)
- ☐ REDT1 (EPA LEVEL 3)
- ☐ FULT1 (EPA LEVEL 4)
- ☐ EDD'S

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Kathryn Smith	09/09/14 18:00	2 FX	3 FX	9-10-14	4 J. Cook (ASR) 07:00
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

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1409070 Summ Package

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: EA18133 CLIENT: CH2M HILL PROJECT: NSN SHC

DATE/TIME RECEIVED: 9-10-14 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 7711 0020 2390

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 3.4

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE: 9-10-14 REVIEWER SIGNATURE/DATE: 09/10/14

RS 04/14

From: (757) 671-6220
Kathryn Smith

5701 Cleveland St
Suite 200
Virginia Beach, VA 23462

Origin ID: NTUA

FedEx Express

J14201406190326

Ship Date: 09SEP14
ActWgt: 55.0 LB
CAD: 104470428/INET3550

Delivery Address Bar Code

Ref # 470612.LT.FI.01
Invoice #
PO #
Dept #

SHIP TO: (407) 425-6700 BILL SENDER

Muna Mohammed
Accutest Laboratories
4405 VINELAND RD

ORLANDO, FL 32811

WED - 10 SEP 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7711 0020 2390

XH TIXA

32811
FL-US
MCO

522G1/CDB4/8A09

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

1409070

Empirical Laboratories, LLC

Client: CH2M Hill, Inc.
Project: NSN CTO-WE79

Project Manager: Sonya Gordon
Project Number: CH2_NSN_WE79

Report To:
CH2M Hill, Inc.
Juliana Dean
5701 Cleveland Street, Suite 200
Virginia Beach, VA 23462
Phone: (757) 671-6232
Fax: (303) 771-0952

Invoice To:
CH2M Hill, Inc.
Accounts Payable
P.O.Box 241329
Denver, CO 80224-____
Phone :(303) 771-0952
Fax: (303) 771-0952

Due to Client: 10/08/2014 16:00 *This is the projected due date to the client, at the time of receipt, and is for report delivery via upload, and/or email, and/or shipment to meet TAT as setup by project*

Received By: Sonya Gordon
Date Received: 09/10/2014 09:00
Logged In By: Sonya Gordon
Date Logged In: 09/12/2014 12:22

Samples Received at: **3.4°C**
Custody Seals: No
Received On Ice: No
Containers Intact: No
COC/Labels Agree: No
Preservation Confirme: No

Method	Test Code	Due	TAT	Expires	Comments
Accutest Laboratories (SUB)					
1409070-01 NBS01-B-EW8A-0914 [Water] Sampled 09/08/2014 10:40 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 09:40	Select PFC
1409070-02 NBS01-B-EW4B-0914 [Water] Sampled 09/08/2014 10:55 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 09:55	Select PFC
1409070-03 NBS01-B-EW5A-0914 [Water] Sampled 09/08/2014 11:05 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:05	Select PFC
1409070-04 NBS01-B-EW4A-0914 [Water] Sampled 09/08/2014 11:15 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:15	Select PFC
1409070-05 NBS01-B-EW4AP-0914 [Water] Sampled 09/08/2014 11:20 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:20	Select PFC
1409070-06 NBS01-B-EW3B-0914 [Water] Sampled 09/08/2014 11:30 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:30	Select PFC

1409070

Empirical Laboratories, LLC

Client:	**CH2M Hill, Inc.**	**Project Manager:**	**Sonya Gordon**
Project:	**NSN CTO-WE79**	**Project Number:**	**CH2_NSN_WE79**

Method	Test Code	Due	TAT	Expires	Comments
Accutest Laboratories (SUB)					
1409070-07 NBS01-B-EW7A-0914 [Water] Sampled 09/08/2014 11:40 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:40	Select PFC
1409070-08 NBS01-B-EW3A-0914 [Water] Sampled 09/08/2014 11:55 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:55	Select PFC
1409070-09 NBS01-B-EW2B-0914 [Water] Sampled 09/08/2014 12:05 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 11:05	Select PFC
1409070-10 NBS01-A1-EW4B-R15 [Water] Sampled 09/08/2014 12:25 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 11:25	Select PFC
1409070-11 NBS01-A1-EW3B-R15 [Water] Sampled 09/08/2014 12:45 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 11:45	Select PFC
1409070-12 NBS01-A2-EW3B-R15 [Water] Sampled 09/08/2014 13:15 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 12:15	Select PFC
1409070-13 NBS01-A-GW-3-R15 [Water] Sampled 09/09/2014 11:45 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/08/2015 10:45	Select PFC
1409070-14 NBS01-A2-MW11A-R15 [Water] Sampled 09/09/2014 13:30 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/08/2015 12:30	Select PFC
1409070-15 NBS01-EB090914 [Water] Sampled 09/09/2014 16:00 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/08/2015 15:00	Select PFC

Reviewed By

Date

Sample Receipt Confirmation

Empirical Labs

Job No: FA18133

NSN Site 1 LTM
Project No: 470612.LT.FT.01

Sample Number	Collected Date	Time	By	Received	TA	Matrix Code	Matrix Type	Client Sample ID
FA18133-1	09/08/14	10:40	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW8A-0914
FA18133-2	09/08/14	10:55	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW4B-0914
FA18133-3	09/08/14	11:05	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW5A-0914
FA18133-4	09/08/14	11:15	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW4A-0914
FA18133-5	09/08/14	11:20	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW4AP-0914
FA18133-6	09/08/14	11:30	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW3B-0914
FA18133-7	09/08/14	11:40	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW7A-0914
FA18133-8	09/08/14	11:55	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW3A-0914
FA18133-9	09/08/14	12:05	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW2A-0914
FA18133-10	09/08/14	12:25	KS	09/10/14	14	AQ	Ground Water	NBS01-A1-EW4B-R15
FA18133-11	09/08/14	12:45	KS	09/10/14	14	AQ	Ground Water	NBS01-A1-EW3B-R15
FA18133-12	09/08/14	13:15	KS	09/10/14	14	AQ	Ground Water	NBS01-A2-EW3B-R15
FA18133-13	09/09/14	11:45	KS	09/10/14	14	AQ	Ground Water	NBS01-A-GW-3-R15
FA18133-14	09/09/14	13:30	KS	09/10/14	14	AQ	Ground Water	NBS01-A2-MW11A-R15
FA18133-15	09/09/14	16:00	KS	09/10/14	14	AQ	Equipment Blank	NBS01-EB090914

Tests: LC537UCMR3

Tests are displayed after the samples to which they apply.

Sample Delivery Group Assignment Form

CLIENT: CH2M Hill, Inc.
PROJECT NAME: NSN CTO-WE79
SDG #: 1409070

QC LEVEL: Level IV
Report Due: 10/8/2014
Client Sample Count: 15

Sample Type	Sampled	Received	Lab ID	Client ID	Report Matrix	SUB_SPECIALTY
Client Sample	9/8/2014	9/10/2014	1409070-01	NBS01-B-EW8A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-02	NBS01-B-EW4B-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-03	NBS01-B-EW5A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-04	NBS01-B-EW4A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-05	NBS01-B-EW4AP-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-06	NBS01-B-EW3B-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-07	NBS01-B-EW7A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-08	NBS01-B-EW3A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-09	NBS01-B-EW2B-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-10	NBS01-A1-EW4B-R15	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-11	NBS01-A1-EW3B-R15	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-12	NBS01-A2-EW3B-R15	Ground Water	X
Client Sample	9/9/2014	9/10/2014	1409070-13	NBS01-A-GW-3-R15	Ground Water	X
Client Sample	9/9/2014	9/10/2014	1409070-14	NBS01-A2-MW11A-R15	Ground Water	X
Client Sample	9/9/2014	9/10/2014	1409070-15	NBS01-EB090914	Ground Water	X

SUBCONTRACT ORDER

Empirical Laboratories, LLC

1409070

SENDING LABORATORY:

Empirical Laboratories, LLC
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Phone: 615.345.1115
Fax: 866.417.0548
Project Manager: Sonya Gordon

RECEIVING LABORATORY:

Accutest Laboratories (SUB)
4405 Vineland Rd
Orlando, FL 32811
Phone :(407) 425-6700
Fax: (407) 425-0707

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: NBS01-B-EW8A-0914				
Reference No: 1409070-01 **Water**	**Sampled:09/08/2014 10:40**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 09:40		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW4B-0914				
Reference No: 1409070-02 **Water**	**Sampled:09/08/2014 10:55**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 09:55		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW5A-0914				
Reference No: 1409070-03 **Water**	**Sampled:09/08/2014 11:05**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:05		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW4A-0914				
Reference No: 1409070-04 **Water**	**Sampled:09/08/2014 11:15**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:15		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW4AP-0914				
Reference No: 1409070-05 **Water**	**Sampled:09/08/2014 11:20**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:20		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW3B-0914				
Reference No: 1409070-06 **Water**	**Sampled:09/08/2014 11:30**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:30		Select PFC
Containers Supplied:				

Released By	Date	Received By	Date
Released By	Date	Received By	Date

SUBCONTRACT ORDER

Empirical Laboratories, LLC

1409070

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: NBS01-B-EW7A-0914				
Reference No: 1409070-07	**Water**	**Sampled: 09/08/2014 11:40**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:40		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW3A-0914				
Reference No: 1409070-08	**Water**	**Sampled: 09/08/2014 11:55**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:55		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW2B-0914				
Reference No: 1409070-09	**Water**	**Sampled: 09/08/2014 12:05**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 11:05		Select PFC
Containers Supplied:				
Sample ID: NBS01-A1-EW4B-R15				
Reference No: 1409070-10	**Water**	**Sampled: 09/08/2014 12:25**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 11:25		Select PFC
Containers Supplied:				
Sample ID: NBS01-A1-EW3B-R15				
Reference No: 1409070-11	**Water**	**Sampled: 09/08/2014 12:45**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 11:45		Select PFC
Containers Supplied:				
Sample ID: NBS01-A2-EW3B-R15				
Reference No: 1409070-12	**Water**	**Sampled: 09/08/2014 13:15**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 12:15		Select PFC
Containers Supplied:				
Sample ID: NBS01-A-GW-3-R15				
Reference No: 1409070-13	**Water**	**Sampled: 09/09/2014 11:45**		
SUB_SPECIALTY	10/01/2014 14:00	03/08/2015 10:45		Select PFC
Containers Supplied:				
Sample ID: NBS01-A2-MW11A-R15				
Reference No: 1409070-14	**Water**	**Sampled: 09/09/2014 13:30**		
SUB_SPECIALTY	10/01/2014 14:00	03/08/2015 12:30		Select PFC
Containers Supplied:				

Released By	Date	Received By	Date
Released By	Date	Received By	Date

SUBCONTRACT ORDER

Empirical Laboratories, LLC

1409070

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: NBS01-EB090914				
Reference No: 1409070-15	**Water**	**Sampled: 09/09/2014 16:00**		
SUB_SPECIALTY	10/01/2014 14:00	03/08/2015 15:00		Select PFC
Containers Supplied:				

Released By	Date	Received By	Date
Released By	Date	Received By	Date

Subcontractor Data Package

Southeast ACCUTEST LABORATORIES

Reissue #1
10/23/14



Technical Report for

Empirical Labs

NSN Site 1 LTM

470612.LT.FT.01

Accutest Job Number: FA18133

Sampling Dates: 09/08/14 - 09/09/14

Report to:

Empirical Labs
621 Mainstream Dr Suite 270
Nashville, TN 37228
sgordon@empirlabs.com

ATTN: Sonya Gordon

Total number of pages in report: **396**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Muna Mohammed 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001)
DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), PA (68-03573), VA (460177),
AK, AR, GA, KY, MA, NV, OK, UT, WA

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Test results relate only to samples analyzed.

Accutest Laboratories is the sole authority for authorizing edits or modifications to this document. Unauthorized modification of this report is strictly prohibited.

October 23, 2014

Ms. Sonya Gordon
Empirical Laboratories, LLC
621 Mainstream Dr
Suite 270
Nashville, TN 37228

RE: Accutest job FA18133 Reissue

Dear Ms. Gordon,

The final report for job number FA18133 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

The sample ID has been revised.

Accutest apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

Accutest Laboratories, SE

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Accutest Laboratories

Sample Summary

Empirical Labs

Job No: FA18133

NSN Site 1 LTM
Project No: 470612.LT.FT.01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA18133-1	09/08/14	10:40	KS	09/10/14	AQ	Ground Water	NBS01-B-EW8A-0914
FA18133-2	09/08/14	10:55	KS	09/10/14	AQ	Ground Water	NBS01-B-EW4B-0914
FA18133-3	09/08/14	11:05	KS	09/10/14	AQ	Ground Water	NBS01-B-EW5A-0914
FA18133-4	09/08/14	11:15	KS	09/10/14	AQ	Ground Water	NBS01-B-EW4A-0914
FA18133-5	09/08/14	11:20	KS	09/10/14	AQ	Ground Water	NBS01-B-EW4AP-0914
FA18133-6	09/08/14	11:30	KS	09/10/14	AQ	Ground Water	NBS01-B-EW3B-0914
FA18133-7	09/08/14	11:40	KS	09/10/14	AQ	Ground Water	NBS01-B-EW7A-0914
FA18133-8	09/08/14	11:55	KS	09/10/14	AQ	Ground Water	NBS01-B-EW3A-0914
FA18133-9	09/08/14	12:05	KS	09/10/14	AQ	Ground Water	NBS01-B-EW2B-0914
FA18133-10	09/08/14	12:25	KS	09/10/14	AQ	Ground Water	NBS01-A1-EW4B-R15
FA18133-11	09/08/14	12:45	KS	09/10/14	AQ	Ground Water	NBS01-A1-EW3B-R15
FA18133-12	09/08/14	13:15	KS	09/10/14	AQ	Ground Water	NBS01-A2-EW3B-R15
FA18133-13	09/09/14	11:45	KS	09/10/14	AQ	Ground Water	NBS01-A-GW-3-R15

Accutest Laboratories

Sample Summary
(continued)

Empirical Labs

Job No: FA18133

NSN Site 1 LTM
Project No: 470612.LT.FT.01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA18133-14	09/09/14	13:30	KS	09/10/14	AQ	Ground Water	NBS01-A2-MW11A-R15
FA18133-15	09/09/14	16:00	KS	09/10/14	AQ	Equipment Blank	NBS01-EB090914

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Empirical Labs **Job No:** FA18133

Site: NSN Site 1 LTM **Report Date;** 9/24/2014 8:25:48 PM

15 Sample(s) were collected on/between 09/08/2014 and 09/09/2014 and were received at Accutest SE on 09/10/2014 properly preserved, at 3.4 Deg. C and intact. These Samples received an Accutest job number of FA18133. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method EPA 537 MOD

Matrix: AQ **Batch ID:** OP53121

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA18133-2MS, FA18133-2MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perfluorooctanoic acid are outside control limits. Outside control limits due to high level in sample relative to spike amount. % RPD was in control for MS/MSD. For method performance in a clean matrix, refer to Blank Spike.

Sample(s) OP53121-MB has surrogates outside control limits.

OP53121-MB for 13C2-PFDA: Outside control limits.

FA18133-6 for 13C2-PFDA: Associated CCV outside control limits.

FA18133-7 for 13C2-PFDA: Associated CCV outside control limits.

FA18133-8 for 13C2-PFDA: Associated CCV outside control limits.

FA18133-9 for 13C2-PFDA: Associated CCV outside control limits.

Matrix: AQ **Batch ID:** OP53158

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA18247-3MS, FA18247-3MSD were used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: September 24, 2014

Kim Benham, Client Services (signature on file)

Manual Integration Summary

Lab Sample ID	Analysis Type	File ID	Manual Integrations
FA18133-10	MSSEMI	Q7129.D	Perfluorooctanesulfonic acid
FA18133-11	MSSEMI	Q7130.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-12	MSSEMI	Q7131.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-13	MSSEMI	Q7132.D	13C2-PFDA, Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-14	MSSEMI	Q7133.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-2	MSSEMI	Q7046.D	Perfluorooctanesulfonic acid
FA18133-2	MSSEMI	Q7098.D	Perfluorooctanoic acid
FA18133-3	MSSEMI	Q7049.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-4	MSSEMI	Q7050.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-5	MSSEMI	Q7051.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-6	MSSEMI	Q7054.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-7	MSSEMI	Q7055.D	Perfluorooctanoic acid
FA18133-7	MSSEMI	Q7101.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
FA18133-8	MSSEMI	Q7056.D	Perfluorooctanoic acid
FA18133-9	MSSEMI	Q7057.D	Perfluorooctanoic acid
OP53121-BS	MSSEMI	Q7042.D	Perfluorobutanesulfonic acid, Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
OP53121-MS	MSSEMI	Q7099.D	Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
OP53121-MSD	MSSEMI	Q7100.D	Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
OP53158-BS	MSSEMI	Q7127.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
OP53158-MS	MSSEMI	Q7140.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
OP53158-MSD	MSSEMI	Q7141.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
SQ234-IC234	MSSEMI	Q6936.D	Perfluorooctanoic acid, Perfluoroundecanoic acid
SQ234-ICV234	MSSEMI	Q6945.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorotridecanoic acid, Perfluoroundecanoic acid

23 Manual Integrations were found for FA18133

Summary of Hits

Job Number: FA18133
Account: Empirical Labs
Project: NSN Site 1 LTM
Collected: 09/08/14 thru 09/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA18133-1	**NBS01-B-EW8A-0914**					
Perfluoroheptanoic acid		0.0224 J	0.028	0.022	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.0474 J	0.056	0.044	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0342	0.028	0.022	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.157	0.028	0.022	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.204	0.028	0.022	ug/l	EPA 537 MOD
FA18133-2	**NBS01-B-EW4B-0914**					
Perfluoroheptanoic acid		0.0391	0.021	0.017	ug/l	EPA 537 MOD
Perfluorooctanoic acid		1.00	0.21	0.17	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0125 J	0.021	0.017	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0936	0.021	0.017	ug/l	EPA 537 MOD
FA18133-3	**NBS01-B-EW5A-0914**					
Perfluoroheptanoic acid		0.0309	0.021	0.017	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.180	0.042	0.033	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.00944 J	0.021	0.017	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0436	0.021	0.017	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0882	0.021	0.017	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.0791	0.021	0.017	ug/l	EPA 537 MOD
FA18133-4	**NBS01-B-EW4A-0914**					
Perfluoroheptanoic acid		0.0201	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.0996	0.040	0.032	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0240	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.206	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.289	0.020	0.016	ug/l	EPA 537 MOD
FA18133-5	**NBS01-B-EW4AP-0914**					
Perfluoroheptanoic acid		0.0207	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.108	0.040	0.032	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0251	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.215	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.299	0.020	0.016	ug/l	EPA 537 MOD
FA18133-6	**NBS01-B-EW3B-0914**					
Perfluoroheptanoic acid		0.0679	0.025	0.020	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.143	0.050	0.040	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0517	0.025	0.020	ug/l	EPA 537 MOD

Summary of Hits

Job Number: FA18133
Account: Empirical Labs
Project: NSN Site 1 LTM
Collected: 09/08/14 thru 09/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Perfluorohexanesulfonic acid		0.417	0.025	0.020	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.351	0.025	0.020	ug/l	EPA 537 MOD
FA18133-7	**NBS01-B-EW7A-0914**					
Perfluoroheptanoic acid		0.0715	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.160	0.040	0.032	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.0155 J	0.020	0.016	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0486	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.334	0.20	0.16	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.903	0.20	0.16	ug/l	EPA 537 MOD
FA18133-8	**NBS01-B-EW3A-0914**					
Perfluoroheptanoic acid		0.155	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.308	0.040	0.032	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.0520	0.020	0.016	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0810	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.833	0.40	0.32	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		1.85	0.40	0.32	ug/l	EPA 537 MOD
FA18133-9	**NBS01-B-EW2B-0914**					
Perfluoroheptanoic acid		0.196	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.281	0.040	0.032	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.0197 J	0.020	0.016	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.202	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		1.53	0.29	0.24	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		1.91	0.29	0.24	ug/l	EPA 537 MOD
FA18133-10	**NBS01-A1-EW4B-R15**					
No hits reported in this sample.						
FA18133-11	**NBS01-A1-EW3B-R15**					
Perfluoroheptanoic acid		0.0283	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.0261 J	0.040	0.032	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0108 J	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0630	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.111	0.020	0.016	ug/l	EPA 537 MOD
FA18133-12	**NBS01-A2-EW3B-R15**					
Perfluorooctanoic acid		0.0357 J	0.040	0.032	ug/l	EPA 537 MOD

Summary of Hits

Job Number: FA18133
Account: Empirical Labs
Project: NSN Site 1 LTM
Collected: 09/08/14 thru 09/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Perfluorohexanesulfonic acid		0.0497	0.020	0.016	ug/l	EPA 537 MOD
FA18133-13	**NBS01-A-GW-3-R15**					
Perfluorooctanoic acid		0.146	0.040	0.032	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0539	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.0185 J	0.020	0.016	ug/l	EPA 537 MOD
FA18133-14	**NBS01-A2-MW11A-R15**					
Perfluoroheptanoic acid		0.292	0.21	0.17	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.746	0.42	0.33	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.221	0.21	0.17	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		2.00	0.21	0.17	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		1.29	0.21	0.17	ug/l	EPA 537 MOD
FA18133-15	**NBS01-EB090914**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW8A-0914		
Lab Sample ID:	FA18133-1	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7045.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	90.0 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0224	0.028	0.022	0.011	ug/l	J
335-67-1	Perfluorooctanoic acid	0.0474	0.056	0.044	0.022	ug/l	J
375-95-1	Perfluorononanoic acid	0.022 U	0.028	0.022	0.011	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0342	0.028	0.022	0.011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.157	0.028	0.022	0.011	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.204	0.028	0.022	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	95%		70-130%
	13C2-PFDA	122%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW4B-0914		
Lab Sample ID:	FA18133-2	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7046.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7098.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2	120 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0391	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	1.00 [a]	0.21	0.17	0.083	ug/l	
375-95-1	Perfluorononanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0125	0.021	0.017	0.0083	ug/l	J
355-46-4	Perfluorohexanesulfonic acid	0.0936	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	118%	122%	70-130%
	13C2-PFDA	119%	96%	70-130%

(a) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW5A-0914		
Lab Sample ID:	FA18133-3	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7049.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0309	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	0.180	0.042	0.033	0.017	ug/l	
375-95-1	Perfluorononanoic acid	0.00944	0.021	0.017	0.0083	ug/l	J
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0436	0.021	0.017	0.0083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0882	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0791	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	91%		70-130%
	13C2-PFDA	97%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW4A-0914		
Lab Sample ID:	FA18133-4	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7050.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0201	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.0996	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0240	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.206	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.289	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	87%		70-130%
	13C2-PFDA	99%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW4AP-0914		
Lab Sample ID:	FA18133-5	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7051.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0207	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.108	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0251	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.215	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.299	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	93%		70-130%
	13C2-PFDA	112%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW3B-0914		
Lab Sample ID:	FA18133-6	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7054.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0679	0.025	0.020	0.010	ug/l	
335-67-1	Perfluorooctanoic acid	0.143	0.050	0.040	0.020	ug/l	
375-95-1	Perfluorononanoic acid	0.020 U	0.025	0.020	0.010	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0517	0.025	0.020	0.010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.417	0.025	0.020	0.010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.351	0.025	0.020	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	96%		70-130%
	13C2-PFDA	117% [a]		70-130%

(a) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW7A-0914		
Lab Sample ID:	FA18133-7	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7055.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7101.D	10	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2	125 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0715	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.160	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.0155	0.020	0.016	0.0080	ug/l	J
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0486	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.334 [a]	0.20	0.16	0.080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.903 [a]	0.20	0.16	0.080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	97%	106%	70-130%
	13C2-PFDA	118% [b]	85%	70-130%

(a) Result is from Run# 2
(b) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW3A-0914		
Lab Sample ID:	FA18133-8	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7056.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7102.D	20	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2	125 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.155	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.308	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.0520	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0810	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.833 [a]	0.40	0.32	0.16	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	1.85 [a]	0.40	0.32	0.16	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	87%	99%	70-130%
	13C2-PFDA	105% [b]	70%	70-130%

(a) Result is from Run# 2
(b) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW2B-0914		
Lab Sample ID:	FA18133-9	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7057.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7103.D	10	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2	85.0 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.196	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.281	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.0197	0.020	0.016	0.0080	ug/l	J
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.202	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	1.53 [a]	0.29	0.24	0.12	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	1.91 [a]	0.29	0.24	0.12	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	92%	113%	70-130%
	13C2-PFDA	116% [b]	91%	70-130%

(a) Result is from Run# 2
(b) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A1-EW4B-R15		
Lab Sample ID:	FA18133-10	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7129.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	0.033 U	0.042	0.033	0.017	ug/l	
375-95-1	Perfluorononanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	114%		70-130%
	13C2-PFDA	120%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A1-EW3B-R15		
Lab Sample ID:	FA18133-11	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7130.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0283	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.0261	0.040	0.032	0.016	ug/l	J
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0108	0.020	0.016	0.0080	ug/l	J
355-46-4	Perfluorohexanesulfonic acid	0.0630	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.111	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	112%		70-130%
	13C2-PFDA	118%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A2-EW3B-R15		
Lab Sample ID:	FA18133-12	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7131.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.0357	0.040	0.032	0.016	ug/l	J
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.016 U	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0497	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.016 U	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	105%		70-130%
	13C2-PFDA	126%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A-GW-3-R15		
Lab Sample ID:	FA18133-13	**Date Sampled:**	09/09/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7132.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.146	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.016 U	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0539	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0185	0.020	0.016	0.0080	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	117%		70-130%
	13C2-PFDA	128%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A2-MW11A-R15		
Lab Sample ID:	FA18133-14	**Date Sampled:**	09/09/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7133.D	10	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.292	0.21	0.17	0.083	ug/l	
335-67-1	Perfluorooctanoic acid	0.746	0.42	0.33	0.17	ug/l	
375-95-1	Perfluorononanoic acid	0.17 U	0.21	0.17	0.083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.221	0.21	0.17	0.083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	2.00	0.21	0.17	0.083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	1.29	0.21	0.17	0.083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	118%		70-130%
	13C2-PFDA	108%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-EB090914		
Lab Sample ID:	FA18133-15	**Date Sampled:**	09/09/14
Matrix:	AQ - Equipment Blank	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7134.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	0.033 U	0.042	0.033	0.017	ug/l	
375-95-1	Perfluorononanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	114%		70-130%
	13C2-PFDA	119%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

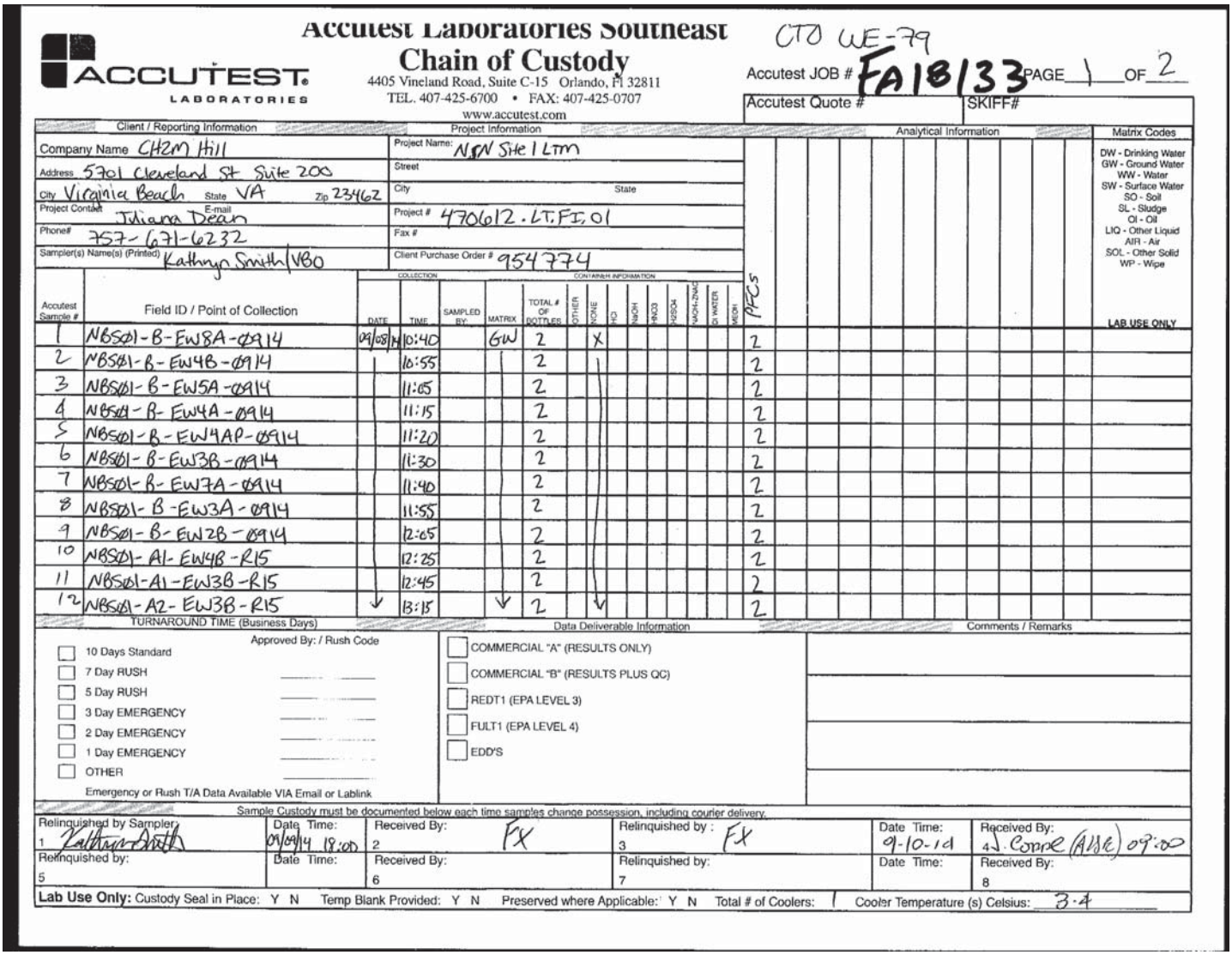
Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



ACCUTEST LABORATORIES

Accutest Laboratories Southeast

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

CTO WE-79

Accutest JOB # FA18133 PAGE 1 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: CH2M Hill
Address: 5701 Cleveland St Suite 200
City: Virginia Beach State: VA Zip: 23462
Project Contact: Juliana Dean E-mail:
Phone#: 757-671-6232
Sampler(s) Name(s) (Printed): Kathryn Smith/VBO

Project Information

Project Name: NSN Site 1 LTM
Street:
City: State:
Project #: 470612.LT.FI.01
Fax #:
Client Purchase Order #: 954774

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	PFCs	LAB USE ONLY
1	NBS01-B-EW8A-0914	09/08/14	10:40		GW	2		X								2	
2	NBS01-B-EW4B-0914		10:55			2										2	
3	NBS01-B-EW5A-0914		11:05			2										2	
4	NBS01-B-EW4A-0914		11:15			2										2	
5	NBS01-B-EW4AP-0914		11:20			2										2	
6	NBS01-B-EW3B-0914		11:30			2										2	
7	NBS01-B-EW7A-0914		11:40			2										2	
8	NBS01-B-EW3A-0914		11:55			2										2	
9	NBS01-B-EW2B-0914		12:05			2										2	
10	NBS01-A1-EW4B-R15		12:25			2										2	
11	NBS01-A1-EW3B-R15		12:45			2										2	
12	NBS01-A2-EW3B-R15	↓	13:15		↓	2		↓								2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

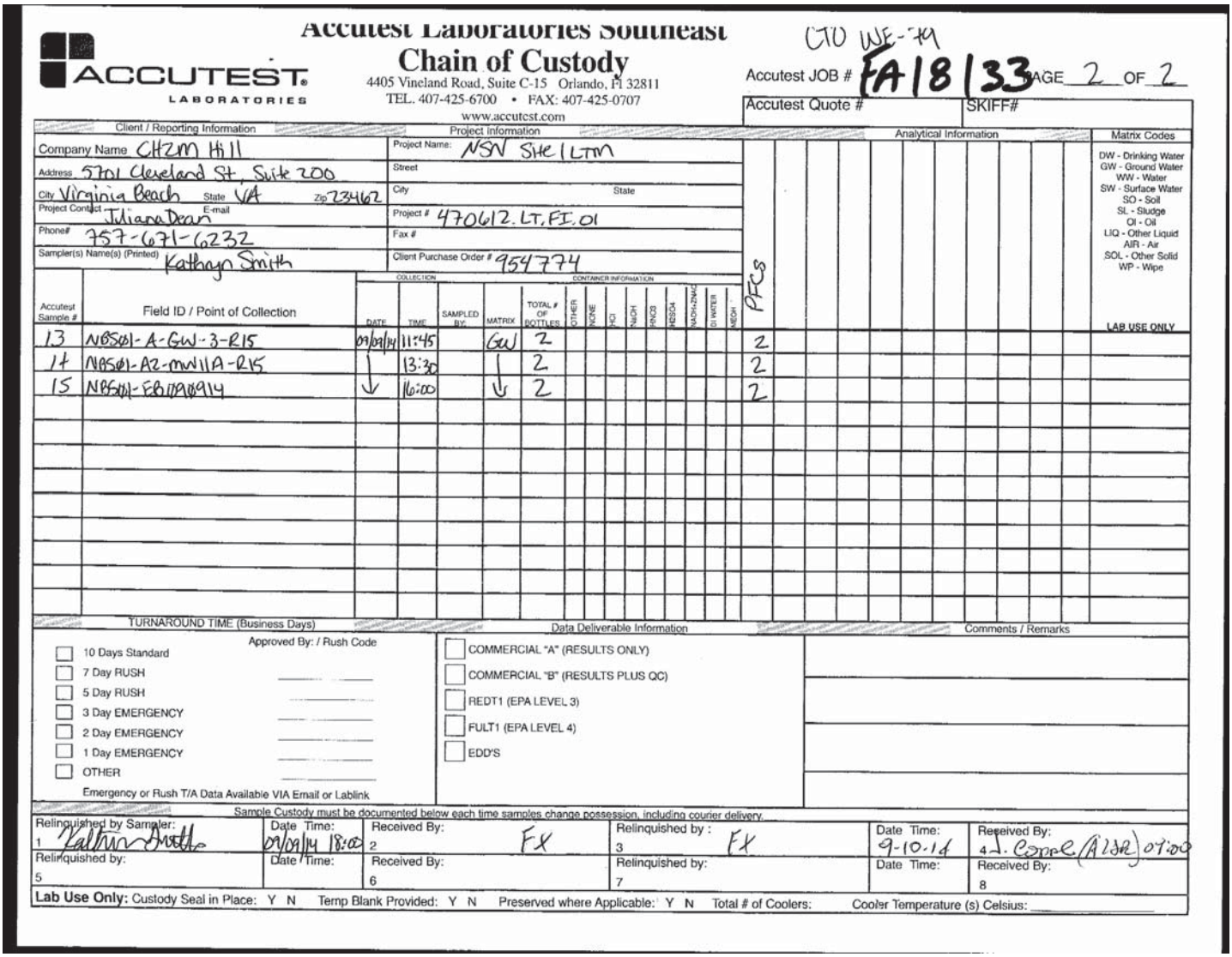
Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Kathryn Smith	09/09/14 18:00	2 FX	3 FX	9-10-14	4 J. Copple (ABE) 09:00
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.4

5.1 5

FA18133: Chain of Custody
Page 1 of 4



ACCUTEST LABORATORIES

Accutest Laboratories Southeast

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

CTO WE-79

Accutest JOB # FA18133 PAGE 2 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: CH2M Hill
Address: 5701 Cleveland St, Suite 200
City: Virginia Beach State: VA Zip: 23462
Project Contact: Juliana Dean E-mail:
Phone#: 757-671-6232
Sampler(s) Name(s) (Printed): Kathryn Smith

Project Information

Project Name: NSN SHELTM
Street:
City State:
Project #: 470612.LT.FI.01
Fax #:
Client Purchase Order #: 954774

Analytical Information

PFCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION	PFCs	LAB USE ONLY
13	NBS01-A-GW-3-R15	09/04/14	11:45		GW	2		2	
14	NBS01-A2-MW11A-R15		13:30			2		2	
15	NBS01-FB09080914		16:00			2		2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Kathryn Smith	09/04/14 18:00	2 FX	3 FX	9-10-14	4 A. Cooke (ASR) 07:00
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius:

5.1 5

FA18133: Chain of Custody
Page 2 of 4

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA18133 CLIENT: CH2M HILL PROJECT: NSN SHC

DATE/TIME RECEIVED: 9-10-14 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 7711 0020 9390

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 3.4

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE: 9-10-14 REVIEWER SIGNATURE/DATE: 09/10/14

RS 04/14

receipt confirmation 041514.xls

FA18133: Chain of Custody

Page 3 of 4

Page 1 of 1

From: (757) 671-6220
Kathryn Smith

5701 Cleveland St
Suite 200
Virginia Beach, VA 23462

Origin ID: NTUA

J1420140610026

Ship Date: 09SEP14
ActWgt: 55.0 LB
CAD: 104470428/INET3550

Delivery Address Bar Code

Ref # 470612.LT.FL01
Invoice #
PO #
Dept #

BILL SENDER

SHIP TO: (407) 425-5700
Muna Mohammed
Accutest Laboratories
4405 VINELAND RD

ORLANDO, FL 32811

TRK# 7711 0020 2390
0201

WED - 10 SEP 10:30A
PRIORITY OVERNIGHT

32811
FL-US
MCO

XH TIXA

S22610C646A03

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
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3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim. Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental, consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss. Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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FA18133: Chain of Custody
Page 4 of 4

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53121-MB	Q7044.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-1, FA18133-2, FA18133-3, FA18133-4, FA18133-5, FA18133-6, FA18133-7, FA18133-8, FA18133-9

CAS No.	Compound	Result	RL	MDL	Units	Q
375-85-9	Perfluoroheptanoic acid	ND	0.020	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.040	0.016	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.020	0.0080	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.020	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.020	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.020	0.0080	ug/l	

CAS No.	Surrogate Recoveries		Limits
	13C2-PFHxA	112%	70-130%
	13C2-PFDA	173%* [a]	70-130%

(a) Outside control limits.

Method Blank Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53158-MB	Q7128.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-10, FA18133-11, FA18133-12, FA18133-13, FA18133-14, FA18133-15

CAS No.	Compound	Result	RL	MDL	Units	Q
375-85-9	Perfluoroheptanoic acid	ND	0.020	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.040	0.016	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.020	0.0080	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.020	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.020	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.020	0.0080	ug/l	

CAS No.	Surrogate Recoveries		Limits
	13C2-PFHxA	104%	70-130%
	13C2-PFDA	108%	70-130%

Blank Spike Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53121-BS	Q7042.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-1, FA18133-2, FA18133-3, FA18133-4, FA18133-5, FA18133-6, FA18133-7, FA18133-8, FA18133-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-85-9	Perfluoroheptanoic acid	0.16	0.135	84	70-130
335-67-1	Perfluorooctanoic acid	0.16	0.154	96	70-130
375-95-1	Perfluorononanoic acid	0.16	0.153	96	70-130
375-73-5	Perfluorobutanesulfonic acid	0.16	0.208	130	70-130
355-46-4	Perfluorohexanesulfonic acid	0.16	0.192	120	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.16	0.159	99	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	107%	70-130%
	13C2-PFDA	112%	70-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53158-BS	Q7127.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-10, FA18133-11, FA18133-12, FA18133-13, FA18133-14, FA18133-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-85-9	Perfluoroheptanoic acid	0.16	0.143	89	70-130
335-67-1	Perfluorooctanoic acid	0.16	0.142	89	70-130
375-95-1	Perfluorononanoic acid	0.16	0.163	102	70-130
375-73-5	Perfluorobutanesulfonic acid	0.16	0.166	104	70-130
355-46-4	Perfluorohexanesulfonic acid	0.16	0.164	103	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.16	0.137	86	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	127%	70-130%
	13C2-PFDA	125%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53121-MS	Q7099.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240
OP53121-MSD	Q7100.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240
FA18133-2	Q7046.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
FA18133-2	Q7098.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-1, FA18133-2, FA18133-3, FA18133-4, FA18133-5, FA18133-6, FA18133-7, FA18133-8, FA18133-9

CAS No.	Compound	FA18133-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-85-9	Perfluoroheptanoic acid	0.0391		0.333	0.332	88	0.333	0.317	83	5	70-130/30
335-67-1	Perfluorooctanoic acid	1.00 [b]		0.333	1.23	69* [a]	0.333	1.25	75	2	70-130/30
375-95-1	Perfluorononanoic acid	0.021	U	0.333	0.364	109	0.333	0.372	112	2	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.0125	J	0.333	0.320	92	0.333	0.315	91	2	70-130/30
355-46-4	Perfluorohexanesulfonic acid	0.0936		0.333	0.400	92	0.333	0.383	87	4	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.021	U	0.333	0.287	86	0.333	0.290	87	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	FA18133-2	FA18133-2	Limits
	13C2-PFHxA	122%	114%	118%	122%	70-130%
	13C2-PFDA	88%	106%	119%	96%	70-130%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53158-MS	Q7140.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
OP53158-MSD	Q7141.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
FA18247-3	Q7146.D	1	09/24/14	MRE	09/18/14	OP53158	SQ242

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-10, FA18133-11, FA18133-12, FA18133-13, FA18133-14, FA18133-15

CAS No.	Compound	FA18247-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-85-9	Perfluoroheptanoic acid	0.020	U	0.333	0.298	89	0.333	0.278	83	7	70-130/30
335-67-1	Perfluorooctanoic acid	0.0179	J	0.333	0.330	94	0.333	0.301	85	9	70-130/30
375-95-1	Perfluorononanoic acid	0.020	U	0.333	0.378	113	0.333	0.334	100	12	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.020	U	0.333	0.300	90	0.333	0.286	86	5	70-130/30
355-46-4	Perfluorohexanesulfonic acid	0.0141	J	0.333	0.355	102	0.333	0.331	95	7	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.0255		0.333	0.297	81	0.333	0.263	71	12	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	FA18247-3	Limits
	13C2-PFHxA	101%	94%	86%	70-130%
	13C2-PFDA	118%	115%	122%	70-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ238-CC234	**Injection Date:**	09/18/14
Lab File ID:	Q7040.D	**Injection Time:**	13:08
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	41664	5.80	14375	6.33	19218	8.50
Upper Limit [c]	57426	6.80	22568	7.33	39822	9.50
Lower Limit [d]	19142	4.80	7523	5.33	13274	7.50

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
OP53121-BS	38900	5.80	12960	6.33	17027	8.48
OP53121-MB	41906	5.83	14000	6.39	18891	9.08
FA18133-1	44302	5.83	14554	6.39	21587	9.08
FA18133-2	40468	5.83	15299	6.39	22771	9.06
FA18133-3	45350	5.83	15288	6.39	22099	9.08
FA18133-4	45750	5.83	15367	6.39	22920	9.08
FA18133-5	42647	5.83	14254	6.39	21008	9.08

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ238-CC234	**Injection Date:**	09/18/14
Lab File ID:	Q7052.D	**Injection Time:**	17:43
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	50794	5.83	17305	6.39	23827	9.08
Upper Limit [c]	57426	6.83	22568	7.39	39822	10.08
Lower Limit [d]	19142	4.83	7523	5.39	13274	8.08

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
FA18133-6	52210	5.83	17376	6.39	24220	9.08
FA18133-7	43645	5.83	14096	6.39	21666	9.06
FA18133-8	45342	5.83	12862	6.39	23726	9.06
FA18133-9	52691	5.85	15836	6.39	26904	9.08
SQ238-ECC234	54164	5.85	18401	6.41	24878	9.09

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ240-CC234	**Injection Date:**	09/22/14
Lab File ID:	Q7097.D	**Injection Time:**	11:16
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	47151	5.85	18022	6.42	23814	9.40
Upper Limit [c]	57426	6.85	22568	7.42	39822	10.40
Lower Limit [d]	19142	4.85	7523	5.42	13274	8.40

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
FA18133-2	46318	5.85	18158	6.42	22660	9.38
OP53121-MS	47132	5.85	17734	6.42	23932	9.41
OP53121-MSD	46617	5.85	17693	6.42	23983	9.40
FA18133-7	50493	5.85	18075	6.42	24892	9.40
FA18133-8	53411	5.85	18877	6.42	26595	9.40
FA18133-9	48931	5.85	17564	6.42	24975	9.40

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ241-CC234	**Injection Date:**	09/23/14
Lab File ID:	Q7125.D	**Injection Time:**	11:39
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	46590	5.86	18288	6.42	32187	9.18
Upper Limit [c]	57426	6.86	22568	7.42	39822	10.18
Lower Limit [d]	19142	4.86	7523	5.42	13274	8.18

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
OP53158-BS	53833	5.86	20585	6.42	33697	9.21
OP53158-MB	56204	5.86	20724	6.42	33973	9.21
FA18133-10	52684	5.86	19710	6.42	32372	9.20
FA18133-11	50733	5.85	18694	6.42	32407	9.20
FA18133-12	48286	5.85	17473	6.41	30557	9.18
FA18133-13	49358	5.85	18602	6.41	31666	9.18
FA18133-14	51458	5.85	18858	6.41	32597	9.20
FA18133-15	55636	5.85	20356	6.41	33750	9.18

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ241-CC234	**Injection Date:**	09/23/14
Lab File ID:	Q7135.D	**Injection Time:**	15:01
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	49265	5.85	18466	6.41	31638	9.20
Upper Limit [c]	57426	6.85	22568	7.41	39822	10.20
Lower Limit [d]	19142	4.85	7523	5.41	13274	8.20

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
ZZZZZZ	56941	5.85	20637	6.41	35191	9.18
ZZZZZZ	51370	5.85	18632	6.41	31783	9.18
OP53158-MS	46796	5.85	17241	6.41	32286	9.18
OP53158-MSD	52148	5.83	18985	6.41	33597	9.18
SQ241-ECC234	52081	5.85	19353	6.42	34703	9.20

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Surrogate Recovery Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Method: EPA 537 MOD **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2
FA18133-1	Q7045.D	95	122
FA18133-2	Q7098.D	122	96
FA18133-2	Q7046.D	118	119
FA18133-3	Q7049.D	91	97
FA18133-4	Q7050.D	87	99
FA18133-5	Q7051.D	93	112
FA18133-6	Q7054.D	96	117 [a]
FA18133-7	Q7101.D	106	85
FA18133-7	Q7055.D	97	118 [a]
FA18133-8	Q7102.D	99	70
FA18133-8	Q7056.D	87	105 [a]
FA18133-9	Q7103.D	113	91
FA18133-9	Q7057.D	92	116 [a]
FA18133-10	Q7129.D	114	120
FA18133-11	Q7130.D	112	118
FA18133-12	Q7131.D	105	126
FA18133-13	Q7132.D	117	128
FA18133-14	Q7133.D	118	108
FA18133-15	Q7134.D	114	119
OP53121-BS	Q7042.D	107	112
OP53121-MB	Q7044.D	112	173* [b]
OP53121-MS	Q7099.D	122	88
OP53121-MSD	Q7100.D	114	106
OP53158-BS	Q7127.D	127	125
OP53158-MB	Q7128.D	104	108
OP53158-MS	Q7140.D	101	118
OP53158-MSD	Q7141.D	94	115

Surrogate Compounds	Recovery Limits
S1 = 13C2-PFHxA	70-130%
S2 = 13C2-PFDA	70-130%

(a) Associated CCV outside control limits.
(b) Outside control limits.

Initial Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ234-ICC234
Lab FileID: Q6939.D

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0912_PFC_SQ234\SQ234.batch.bin

Level ID : Calibration File
1 : D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2 : D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3 : D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4 : D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5 : D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6 : D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7 : D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Compound	1	2	3	4	5	6	7	AvgRF	%RSD	r^2
2) 13C2-PFDoDA	----------ISTD----------									
1) 13C2-PFDA	1.4694	1.2705	1.3641	1.3573	1.2782	1.1995	1.1677	1.3010	8.002	0.9925
8) PFDA	1.3529	1.1705	1.2774	1.2682	1.2016	1.1239	1.0824	1.2110	7.811	0.9913
9) PFDoDA	0.9528	0.9350	0.8811	0.8914	0.8903	0.8623	0.8657	0.8969	3.827	0.9994
10) PFDS	0.2240	0.2180	0.2018	0.2025	0.1985	0.1920	0.1929	0.2043	5.996	0.9989
19) PFTeDA	0.7532	0.6581	0.5739	0.5913	0.5950	0.5845	0.5932	0.6213	10.333	0.9994
20) PFTrDA	0.8594	0.8431	0.7924	0.7963	0.7967	0.7777	0.7789	0.8063	3.964	0.9999
21) PFUnDA	1.4969	1.2243	1.1198	1.0728	1.0513	1.0110	1.0658	1.1489	14.603	0.9948
4) 13C2-PFOA	----------ISTD----------									
3) 13C2-PFHxA	0.3285	0.3294	0.3113	0.3056	0.3013	0.2929	0.2943	0.3090	4.856	0.9992
6) PFBA	0.2472	0.2443	0.2374	0.2319	0.2354	0.2301	0.2321	0.2369	2.771	0.9998
11) PFHpA	0.4292	0.3812	0.3486	0.3311	0.3247	0.3126	0.3091	0.3481	12.464	0.9994
13) PFHxA	0.3782	0.3737	0.3488	0.3465	0.3428	0.3331	0.3339	0.3510	5.150	0.9992
15) PFNA	0.5906	0.5169	0.4639	0.4647	0.4599	0.4509	0.4500	0.4853	10.660	0.9996
16) PFOA	1.3992	1.1606	1.0285	1.0005	0.9828	0.9625	0.9647	1.0713	14.922	0.9959
18) PFPeA	0.1233	0.1212	0.1155	0.1139	0.1149	0.1115	0.1146	0.1164	3.645	0.9995
5) 13C4-PFOS	----------ISTD----------									
7) PFBS	0.4070	0.3735	0.3399	0.3254	0.3260	0.3064	0.3165	0.3421	10.450	0.9975
12) PFHpS	0.6380	0.6341	0.6144	0.5989	0.6054	0.5816	0.5927	0.6093	3.437	0.9993
14) PFHxS	0.6360	0.5636	0.5422	0.5072	0.5081	0.4775	0.4990	0.5334	10.027	0.9974
17) PFOS	1.3645	1.1081	1.0077	0.9890	0.9834	0.9433	0.9543	1.0500	14.167	0.9965

*(value) - Average RF below (value)

Initial Calibration Verification

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ234-ICV234
Lab FileID: Q6944.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0912_PFC_SQ234\SQ234.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q6944
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	0.000	# -100.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	20.367	1.8	101.8
PFBS	20.000	21.501	7.5	107.5
PFDA	20.000	21.272	6.4	106.4
PFDoDA	20.000	21.331	6.7	106.7
PFDS	20.000	21.521	7.6	107.6
PFHpA	20.000	20.021	0.1	100.1
PFHpS	20.000	0.000	0.0	0.0
PFHxA	20.000	20.765	3.8	103.8
PFHxS	20.000	21.704	8.5	108.5
PFNA	20.000	20.123	0.6	100.6
PFOA	20.000	20.065	0.3	100.3
PFOS	20.000	20.717	3.6	103.6
PFPeA	20.000	20.410	2.1	102.1
PFTeDA	20.000	22.398	12.0	112.0
PFTrDA	20.000	20.605	3.0	103.0
PFUnDA	20.000	20.271	1.4	101.4

CC Criteria: +/- 25%

Initial Calibration Verification

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ234-ICV234
Lab FileID: Q6945.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0912_PFC_SQ234\SQ234.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q6945
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	0.000	0.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	0.0	0.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	0.000	0.0	0.0
PFBS	20.000	24.861	24.3	124.3
PFDA	20.000	0.000	0.0	0.0
PFDoDA	20.000	0.000	0.0	0.0
PFDS	20.000	0.000	0.0	0.0
PFHpA	20.000	18.993	-5.0	95.0
PFHpS	20.000	0.000	0.0	0.0
PFHxA	20.000	0.000	0.0	0.0
PFHxS	20.000	23.899	19.5	119.5
PFNA	20.000	21.584	7.9	107.9
PFOA	20.000	19.090	-4.5	95.5
PFOS	20.000	20.549	2.7	102.7
PFPeA	20.000	0.000	0.0	0.0
PFTeDA	20.000	0.000	0.0	0.0
PFTrDA	20.000	0.000	0.0	0.0
PFUnDA	20.000	0.000	0.0	0.0

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ238-CC234
Lab FileID: Q7040.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0918_PFC_SQ238\sq238.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7040
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	18.400	-8.0	92.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	17.922	-10.4	89.6
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	19.197	-4.0	96.0
PFBS	20.000	22.198	11.0	111.0
PFDA	20.000	19.074	-4.6	95.4
PFDoDA	20.000	22.071	10.4	110.4
PFDS	20.000	34.945	# 74.7	174.7
PFHpA	20.000	18.761	-6.2	93.8
PFHpS	20.000	22.996	15.0	115.0
PFHxA	20.000	17.752	-11.2	88.8
PFHxS	20.000	22.504	12.5	112.5
PFNA	20.000	18.365	-8.2	91.8
PFOA	20.000	20.224	1.1	101.1
PFOS	20.000	20.472	2.4	102.4
PFPeA	20.000	18.341	-8.3	91.7
PFTeDA	20.000	17.120	-14.4	85.6
PFTrDA	20.000	20.963	4.8	104.8
PFUnDA	20.000	20.751	3.8	103.8

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ238-CC234
Lab FileID: Q7052.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0918_PFC_SQ238\sq238.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7052
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	24.592	23.0	123.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	18.322	-8.4	91.6
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	18.135	-9.3	90.7
PFBS	20.000	20.753	3.8	103.8
PFDA	20.000	25.246	# 26.2	126.2
PFDoDA	20.000	21.019	5.1	105.1
PFDS	20.000	29.276	# 46.4	146.4
PFHpA	20.000	18.853	-5.7	94.3
PFHpS	20.000	21.969	9.8	109.8
PFHxA	20.000	18.195	-9.0	91.0
PFHxS	20.000	21.277	6.4	106.4
PFNA	20.000	19.574	-2.1	97.9
PFOA	20.000	20.237	1.2	101.2
PFOS	20.000	20.272	1.4	101.4
PFPeA	20.000	17.848	-10.8	89.2
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	17.848	-10.8	89.2

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ238-ECC234
Lab FileID: Q7058.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0918_PFC_SQ238\sq238.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7058
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	25.439	# 27.2	127.2
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	18.005	-10.0	90.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	17.746	-11.3	88.7
PFBS	20.000	21.022	5.1	105.1
PFDA	20.000	26.155	# 30.8	130.8
PFDoDA	20.000	20.455	2.3	102.3
PFDS	20.000	29.804	# 49.0	149.0
PFHpA	20.000	18.367	-8.2	91.8
PFHpS	20.000	22.208	11.0	111.0
PFHxA	20.000	18.144	-9.3	90.7
PFHxS	20.000	21.447	7.2	107.2
PFNA	20.000	19.337	-3.3	96.7
PFOA	20.000	21.150	5.8	105.8
PFOS	20.000	21.385	6.9	106.9
PFPeA	20.000	18.040	-9.8	90.2
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	18.684	-6.6	93.4

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ240-CC234
Lab FileID: Q7097.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ240\sq240.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7097
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	15.346	-23.3	76.7
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.958	-0.2	99.8
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	15.759	-21.2	78.8
PFBS	20.000	16.564	-17.2	82.8
PFDA	20.000	16.061	-19.7	80.3
PFDoDA	20.000	20.693	3.5	103.5
PFDS	20.000	27.335	# 36.7	136.7
PFHpA	20.000	19.754	-1.2	98.8
PFHpS	20.000	18.628	-6.9	93.1
PFHxA	20.000	19.537	-2.3	97.7
PFHxS	20.000	17.664	-11.7	88.3
PFNA	20.000	21.830	9.1	109.1
PFOA	20.000	18.612	-6.9	93.1
PFOS	20.000	18.844	-5.8	94.2
PFPeA	20.000	18.095	-9.5	90.5
PFTeDA	20.000	19.829	-0.9	99.1
PFTrDA	20.000	24.222	21.1	121.1
PFUnDA	20.000	17.371	-13.1	86.9

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ240-CC234
Lab FileID: Q7104.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ240\sq240.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7104
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	18.108	-9.5	90.5
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.064	-4.7	95.3
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	16.120	-19.4	80.6
PFBS	20.000	16.842	-15.8	84.2
PFDA	20.000	17.403	-13.0	87.0
PFDoDA	20.000	20.569	2.8	102.8
PFDS	20.000	24.740	23.7	123.7
PFHpA	20.000	18.849	-5.8	94.2
PFHpS	20.000	18.580	-7.1	92.9
PFHxA	20.000	18.944	-5.3	94.7
PFHxS	20.000	17.578	-12.1	87.9
PFNA	20.000	21.684	8.4	108.4
PFOA	20.000	18.657	-6.7	93.3
PFOS	20.000	18.776	-6.1	93.9
PFPeA	20.000	17.728	-11.4	88.6
PFTeDA	20.000	19.252	-3.7	96.3
PFTrDA	20.000	23.134	15.7	115.7
PFUnDA	20.000	17.034	-14.8	85.2

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ241-CC234
Lab FileID: Q7125.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ241\sq241.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7125
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	22.249	11.2	111.2
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	20.190	1.0	101.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	19.393	-3.0	97.0
PFBS	20.000	18.883	-5.6	94.4
PFDA	20.000	21.949	9.7	109.7
PFDoDA	20.000	21.163	5.8	105.8
PFDS	20.000	23.630	18.2	118.2
PFHpA	20.000	20.160	0.8	100.8
PFHpS	20.000	20.524	2.6	102.6
PFHxA	20.000	19.878	-0.6	99.4
PFHxS	20.000	19.600	-2.0	98.0
PFNA	20.000	21.514	7.6	107.6
PFOA	20.000	19.892	-0.5	99.5
PFOS	20.000	20.644	3.2	103.2
PFPeA	20.000	19.819	-0.9	99.1
PFTeDA	20.000	24.273	21.4	121.4
PFTrDA	20.000	25.541	# 27.7	127.7
PFUnDA	20.000	29.363	# 46.8	146.8

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ241-CC234
Lab FileID: Q7135.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ241\sq241.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7135
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	20.656	3.3	103.3
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.782	-1.1	98.9
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	18.409	-8.0	92.0
PFBS	20.000	18.918	-5.4	94.6
PFDA	20.000	19.408	-3.0	97.0
PFDoDA	20.000	22.466	12.3	112.3
PFDS	20.000	24.908	24.5	124.5
PFHpA	20.000	20.806	4.0	104.0
PFHpS	20.000	20.455	2.3	102.3
PFHxA	20.000	19.493	-2.5	97.5
PFHxS	20.000	20.003	0.0	100.0
PFNA	20.000	22.490	12.5	112.5
PFOA	20.000	20.242	1.2	101.2
PFOS	20.000	20.647	3.2	103.2
PFPeA	20.000	19.050	-4.7	95.3
PFTeDA	20.000	17.180	-14.1	85.9
PFTrDA	20.000	23.020	15.1	115.1
PFUnDA	20.000	18.844	-5.8	94.2

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ241-ECC234
Lab FileID: Q7142.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ241\sq241.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7142
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	21.531	7.7	107.7
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.658	-1.7	98.3
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	18.615	-6.9	93.1
PFBS	20.000	19.148	-4.3	95.7
PFDA	20.000	20.343	1.7	101.7
PFDoDA	20.000	22.664	13.3	113.3
PFDS	20.000	23.948	19.7	119.7
PFHpA	20.000	20.470	2.4	102.4
PFHpS	20.000	20.551	2.8	102.8
PFHxA	20.000	19.304	-3.5	96.5
PFHxS	20.000	20.459	2.3	102.3
PFNA	20.000	22.638	13.2	113.2
PFOA	20.000	20.162	0.8	100.8
PFOS	20.000	20.546	2.7	102.7
PFPeA	20.000	19.217	-3.9	96.1
PFTeDA	20.000	17.980	-10.1	89.9
PFTrDA	20.000	22.802	14.0	114.0
PFUnDA	20.000	19.067	-4.7	95.3

CC Criteria: +/- 25%

ANALYTICAL DATA PACKAGE
SDG # 1409070

PROJECT NAME: NSN CTO-WE79
PROJECT LOCATION: NORFOLK, VA
CONTRACT #: 954774

SUBMITTAL TO:
Juliana Dean
CH2M HILL
5701 Cleveland St, Suite 200
Virginia Beach, VA 23462

SUBMITTAL BY:
Empirical Laboratories, LLC (EL)
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Tel (615)345-1115
Fax (866)417-0548

LABORATORY CONTACT PERSON:
Project Manager: Sonya Gordon
Tel (615)345-1115
Fax (866)417-0548
Email: sgordon@empirlabs.com

Original Report Date: October 1, 2014
Report Revision #: 01
Revision Date: November 5, 2014
Total # of Pages: 413

THIS DOCUMENT MEETS DoD QSM 4.2 STANDARDS

The results relate to only the samples associated with the referenced SDG and the submitted data has been produced in accordance with laboratory procedures. The Laboratory's Technical Lab Director, Mr. Rick Davis, is responsible for the final data produced and reported. His signature is listed at the end of the Case Narrative within the Analytical Data Package. If applicable to this report package, details on report revisions and the information on subcontracted analysis are listed in the package Case Narrative. This report shall not be reproduced, except in full, without the written approval of Empirical Laboratories, LLC.

L-A-B Accredited - Certificate Number L2226 - Testing

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5	Subcontracted Data	17

Sample Delivery Group Case Narrative

Receipt Information:

The samples were received within the preservation guidelines for the associated methods. The information associated with sample receipt and the Sample Delivery Group (SDG) are included within section 4 of this package, which also provides information on the link between the client sample ID listed on the COC and laboratory's assigned unique sample ID or WorkOrder #. The sample is tracked through the laboratory for all analysis via the assigned WorkOrder #.

All samples that were received were analyzed and none of the samples were placed on hold without analyses. Samples were subcontracted to Accutest Laboratories for Extractable by GCMS by Method 537 MOD.

Changes to the Revision:

Revision 01: The package was revised due to an incorrect client ID.

Statement of Data Authenticity:

I certify that, based upon my inquiry of those individuals immediately responsible for obtaining the information and to the best of my knowledge, the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, with the exception of the conditions detailed in this Case Narrative, as verified by my signature below. During absences, the Data Quality Manager, Technical Directors or Project Managers are authorized to sign this Statement of Data Authenticity.



Mr. Rick D. Davis
Laboratory Technical Director / VP Operations

Empirical Laboratories, LLC
Certifications/Approvals
(Revised 08/05/2014)

DoD ELAP, Certificate Number L2226
- Aqueous
- Non-aqueous
- Expires: 11/30/2015

State of Florida, Department of Health – NELAP, Lab ID: E87646
- Clean Water Act
- RCRA/CERCLA
- Expires: 06/30/2015

State of Georgia, Environmental Protection Agency – NELAP, Self Certification
- Expires: 06/30/2015

State of Illinois, Environmental Protection Agency – NELAP, Certificate No.: 003300
- Groundwater
- Solid and Hazardous Waste
- Expires: 09/13/2015

State of Kentucky Department of Environmental Protection – NELAP, Certificate No.: 77
- Aqueous
- Non-aqueous
- Expires: 06/30/2015

State of New Jersey Department of Environmental Protection – NELAP, Lab ID: TN473
- Water Pollution
- Solid and Hazardous Waste
- Expires: 06/30/2015

State of North Carolina, Department of Environment and Natural Resources - Certificate No.: 643
- Aqueous
- Non-aqueous
- Expires: 12/31/2014

State of Texas, Commission on Environmental Quality – NELAP, Certificate No.: T104704307-14-10
- Aqueous
- Non-aqueous
- Expires: 12/31/2014

State of Utah, Department of Health – NELAP, Certificate No.: TN0042014-6
- Aqueous
- Non-aqueous
- Expires: 07/31/2015

Commonwealth of Virginia, Department of General Services – VELAP, Certificate No.: 2633 – Lab ID: 460243
- Aqueous
- Non-aqueous
- Expires: 12/14/2014

State of Washington, Department of Ecology – NELAP, Lab ID: C934-14
- Groundwater
- Solid and Hazardous Waste
- Expires: 03/18/2015

Sample Receipt Information

Accutest Laboratories Southeast

Chain of Custody

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

CTO WE-79

Accutest JOB # FA18133 PAGE 1 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: CH2M Hill
Address: 5701 Cleveland St Suite 200
City: Virginia Beach State: VA Zip: 23462
Project Contact: Juliana Dean E-mail:
Phone#: 757-671-6232
Sampler(s) Name(s) (Printed): Kathryn Smith/VBO

Project Information

Project Name: NSN Site 1 LTM
Street:
City: State:
Project #: 470612.LT.FI.01
Fax #:
Client Purchase Order #: 954774

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	CONTAINER INFORMATION TOTAL # OF BOTTLES	OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH-ZnAc	DI WATER	MeOH	PFCs	LAB USE ONLY
1	NBS01-B-EW8A-0914	09/08/14	10:40		GW	2		X								2	
2	NBS01-B-EW4B-0914		10:55			2										2	
3	NBS01-B-EW5A-0914		11:05			2										2	
4	NBS01-B-EW4A-0914		11:15			2										2	
5	NBS01-B-EW4AP-0914		11:20			2										2	
6	NBS01-B-EW3B-0914		11:30			2										2	
7	NBS01-B-EW7A-0914		11:40			2										2	
8	NBS01-B-EW3A-0914		11:55			2										2	
9	NBS01-B-EW2B-0914		12:05			2										2	
10	NBS01-A1-EW4B-R15		12:25			2										2	
11	NBS01-A1-EW3B-R15		12:45			2										2	
12	NBS01-A2-EW3B-R15	↓	13:15		↓	2		↓								2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Kathryn Smith	09/09/14 18:00	2 FX	3 FX	9-10-14	4 J. Compe (ASE) 09:00
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.4

1409070

6

Accutest Laboratories Southeast

Chain of Custody

CTO WE-79

ACCUTEST LABORATORIES

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

Accutest JOB # FA18133 PAGE 2 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name CH2M Hill
Address 5701 Cleveland St, Suite 200
City Virginia Beach State VA Zip 23462
Project Contact Juliana Dean E-mail
Phone# 757-671-6232
Sampler(s) Name(s) (Printed) Kathryn Smith

Project Information

Project Name: NSN Site 1 LTM
Street
City State
Project # 470612.LT.FI.01
Fax #
Client Purchase Order # 954774

Analytical Information

PFCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	TIME	SAMPLED BY:	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION									PFCs	LAB USE ONLY
							OTHER	NONE	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI WATER	MEOH		
13	NBS01-A-GW-3-R15	09/09/14	11:45		GW	2										2	
14	NBS01-A2-MW11A-R15	↓	13:30		↓	2										2	
15	NBS001-EB090914	↓	16:00		↓	2										2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- ☐ 10 Days Standard
- ☐ 7 Day RUSH
- ☐ 5 Day RUSH
- ☐ 3 Day EMERGENCY
- ☐ 2 Day EMERGENCY
- ☐ 1 Day EMERGENCY
- ☐ OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- ☐ COMMERCIAL "A" (RESULTS ONLY)
- ☐ COMMERCIAL "B" (RESULTS PLUS QC)
- ☐ REDT1 (EPA LEVEL 3)
- ☐ FULT1 (EPA LEVEL 4)
- ☐ EDD'S

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

	Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1	Kathryn Smith	09/09/14 18:00	2 FX	3 FX	9-10-14	4 J. Cope (AISR) 07:00
5	Relinquished by:	Date Time:	6 Received By:	7 Relinquished by:	Date Time:	8 Received By:

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius: _____

1409070

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: EA18133 CLIENT: CH2M HILL PROJECT: NSN SHC

DATE/TIME RECEIVED: 9-10-14 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 7711 0020 2390

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 3.4

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE [signature] 9-10-14 REVIEWER SIGNATURE/DATE [signature] 09/10/14

From: (757) 671-6220
Kathryn Smith

5701 Cleveland St
Suite 200
Virginia Beach, VA 23462

Origin ID: NTUA

FedEx Express

J14201406190326

Ship Date: 09SEP14
ActWgt: 55.0 LB
CAD: 104470428/INET3550

Delivery Address Bar Code

Ref # 470612.LT.FI.01
Invoice #
PO #
Dept #

SHIP TO: (407) 425-6700 BILL SENDER

Muna Mohammed
Accutest Laboratories
4405 VINELAND RD

ORLANDO, FL 32811

WED - 10 SEP 10:30A
PRIORITY OVERNIGHT

TRK# 0201 7711 0020 2390

XH TIXA

32811
FL-US
MCO

522G1/CDB4/8A09

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1409070

Empirical Laboratories, LLC

Client: CH2M Hill, Inc.
Project: NSN CTO-WE79

Project Manager: Sonya Gordon
Project Number: CH2_NSN_WE79

Report To:
CH2M Hill, Inc.
Juliana Dean
5701 Cleveland Street, Suite 200
Virginia Beach, VA 23462
Phone: (757) 671-6232
Fax: (303) 771-0952

Invoice To:
CH2M Hill, Inc.
Accounts Payable
P.O.Box 241329
Denver, CO 80224-____
Phone :(303) 771-0952
Fax: (303) 771-0952

Due to Client: 10/08/2014 16:00 *This is the projected due date to the client, at the time of receipt, and is for report delivery via upload, and/or email, and/or shipment to meet TAT as setup by project*

Received By: Sonya Gordon
Date Received: 09/10/2014 09:00
Logged In By: Sonya Gordon
Date Logged In: 09/12/2014 12:22

Samples Received at: **3.4°C**

Custody Seals	No	Received On Ice	No
Containers Intact	No		
COC/Labels Agree	No		
Preservation Confirme	No		

Method	Test Code	Due	TAT	Expires	Comments
Accutest Laboratories (SUB)					
1409070-01 NBS01-B-EW8A-0914 [Water] Sampled 09/08/2014 10:40 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 09:40	Select PFC
1409070-02 NBS01-B-EW4B-0914 [Water] Sampled 09/08/2014 10:55 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 09:55	Select PFC
1409070-03 NBS01-B-EW5A-0914 [Water] Sampled 09/08/2014 11:05 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:05	Select PFC
1409070-04 NBS01-B-EW4A-0914 [Water] Sampled 09/08/2014 11:15 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:15	Select PFC
1409070-05 NBS01-B-EW4AP-0914 [Water] Sampled 09/08/2014 11:20 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:20	Select PFC
1409070-06 NBS01-B-EW3B-0914 [Water] Sampled 09/08/2014 11:30 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:30	Select PFC

1409070

Empirical Laboratories, LLC

Client:	**CH2M Hill, Inc.**	**Project Manager:**	**Sonya Gordon**
Project:	**NSN CTO-WE79**	**Project Number:**	**CH2_NSN_WE79**

Method	Test Code	Due	TAT	Expires	Comments
Accutest Laboratories (SUB)					
1409070-07 NBS01-B-EW7A-0914 [Water] Sampled 09/08/2014 11:40 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:40	Select PFC
1409070-08 NBS01-B-EW3A-0914 [Water] Sampled 09/08/2014 11:55 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 10:55	Select PFC
1409070-09 NBS01-B-EW2B-0914 [Water] Sampled 09/08/2014 12:05 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 11:05	Select PFC
1409070-10 NBS01-A1-EW4B-R15 [Water] Sampled 09/08/2014 12:25 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 11:25	Select PFC
1409070-11 NBS01-A1-EW3B-R15 [Water] Sampled 09/08/2014 12:45 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 11:45	Select PFC
1409070-12 NBS01-A2-EW3B-R15 [Water] Sampled 09/08/2014 13:15 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/07/2015 12:15	Select PFC
1409070-13 NBS01-A-GW-3-R15 [Water] Sampled 09/09/2014 11:45 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/08/2015 10:45	Select PFC
1409070-14 NBS01-A2-MW11A-R15 [Water] Sampled 09/09/2014 13:30 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/08/2015 12:30	Select PFC
1409070-15 NBS01-EB090914 [Water] Sampled 09/09/2014 16:00 Eastern 'Client Sample'					
SUB_SPECIAL	SUB_SPECIALTY	10/01/2014 14:00	20	03/08/2015 15:00	Select PFC

Reviewed By

Date

Sample Receipt Confirmation

Empirical Labs

Job No: FA18133

NSN Site 1 LTM
Project No: 470612.LT.FT.01

Sample Number	Collected Date	Time	By	Received	TA	Matrix Code	Matrix Type	Client Sample ID
FA18133-1	09/08/14	10:40	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW8A-0914
FA18133-2	09/08/14	10:55	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW4B-0914
FA18133-3	09/08/14	11:05	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW5A-0914
FA18133-4	09/08/14	11:15	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW4A-0914
FA18133-5	09/08/14	11:20	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW4AP-0914
FA18133-6	09/08/14	11:30	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW3B-0914
FA18133-7	09/08/14	11:40	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW7A-0914
FA18133-8	09/08/14	11:55	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW3A-0914
FA18133-9	09/08/14	12:05	KS	09/10/14	14	AQ	Ground Water	NBS01-B-EW2A-0914
FA18133-10	09/08/14	12:25	KS	09/10/14	14	AQ	Ground Water	NBS01-A1-EW4B-R15
FA18133-11	09/08/14	12:45	KS	09/10/14	14	AQ	Ground Water	NBS01-A1-EW3B-R15
FA18133-12	09/08/14	13:15	KS	09/10/14	14	AQ	Ground Water	NBS01-A2-EW3B-R15
FA18133-13	09/09/14	11:45	KS	09/10/14	14	AQ	Ground Water	NBS01-A-GW-3-R15
FA18133-14	09/09/14	13:30	KS	09/10/14	14	AQ	Ground Water	NBS01-A2-MW11A-R15
FA18133-15	09/09/14	16:00	KS	09/10/14	14	AQ	Equipment Blank	NBS01-EB090914

Tests: LC537UCMR3

Tests are displayed after the samples to which they apply.

Sample Delivery Group Assignment Form

CLIENT: CH2M Hill, Inc.
PROJECT NAME: NSN CTO-WE79
SDG #: 1409070

QC LEVEL: Level IV
Report Due: 10/8/2014
Client Sample Count: 15

Sample Type	Sampled	Received	Lab ID	Client ID	Report Matrix	SUB_SPECIALTY
Client Sample	9/8/2014	9/10/2014	1409070-01	NBS01-B-EW8A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-02	NBS01-B-EW4B-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-03	NBS01-B-EW5A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-04	NBS01-B-EW4A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-05	NBS01-B-EW4AP-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-06	NBS01-B-EW3B-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-07	NBS01-B-EW7A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-08	NBS01-B-EW3A-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-09	NBS01-B-EW2B-0914	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-10	NBS01-A1-EW4B-R15	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-11	NBS01-A1-EW3B-R15	Ground Water	X
Client Sample	9/8/2014	9/10/2014	1409070-12	NBS01-A2-EW3B-R15	Ground Water	X
Client Sample	9/9/2014	9/10/2014	1409070-13	NBS01-A-GW-3-R15	Ground Water	X
Client Sample	9/9/2014	9/10/2014	1409070-14	NBS01-A2-MW11A-R15	Ground Water	X
Client Sample	9/9/2014	9/10/2014	1409070-15	NBS01-EB090914	Ground Water	X

SUBCONTRACT ORDER

Empirical Laboratories, LLC

1409070

SENDING LABORATORY:

Empirical Laboratories, LLC
621 Mainstream Drive, Suite 270
Nashville, TN 37228
Phone: 615.345.1115
Fax: 866.417.0548
Project Manager: Sonya Gordon

RECEIVING LABORATORY:

Accutest Laboratories (SUB)
4405 Vineland Rd
Orlando, FL 32811
Phone :(407) 425-6700
Fax: (407) 425-0707

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: NBS01-B-EW8A-0914				
Reference No: 1409070-01 **Water**	**Sampled:09/08/2014 10:40**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 09:40		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW4B-0914				
Reference No: 1409070-02 **Water**	**Sampled:09/08/2014 10:55**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 09:55		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW5A-0914				
Reference No: 1409070-03 **Water**	**Sampled:09/08/2014 11:05**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:05		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW4A-0914				
Reference No: 1409070-04 **Water**	**Sampled:09/08/2014 11:15**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:15		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW4AP-0914				
Reference No: 1409070-05 **Water**	**Sampled:09/08/2014 11:20**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:20		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW3B-0914				
Reference No: 1409070-06 **Water**	**Sampled:09/08/2014 11:30**			
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:30		Select PFC
Containers Supplied:				

Released By	Date	Received By	Date
Released By	Date	Received By	Date

SUBCONTRACT ORDER

Empirical Laboratories, LLC

1409070

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: NBS01-B-EW7A-0914				
Reference No: 1409070-07	**Water**	**Sampled: 09/08/2014 11:40**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:40		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW3A-0914				
Reference No: 1409070-08	**Water**	**Sampled: 09/08/2014 11:55**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 10:55		Select PFC
Containers Supplied:				
Sample ID: NBS01-B-EW2B-0914				
Reference No: 1409070-09	**Water**	**Sampled: 09/08/2014 12:05**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 11:05		Select PFC
Containers Supplied:				
Sample ID: NBS01-A1-EW4B-R15				
Reference No: 1409070-10	**Water**	**Sampled: 09/08/2014 12:25**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 11:25		Select PFC
Containers Supplied:				
Sample ID: NBS01-A1-EW3B-R15				
Reference No: 1409070-11	**Water**	**Sampled: 09/08/2014 12:45**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 11:45		Select PFC
Containers Supplied:				
Sample ID: NBS01-A2-EW3B-R15				
Reference No: 1409070-12	**Water**	**Sampled: 09/08/2014 13:15**		
SUB_SPECIALTY	10/01/2014 14:00	03/07/2015 12:15		Select PFC
Containers Supplied:				
Sample ID: NBS01-A-GW-3-R15				
Reference No: 1409070-13	**Water**	**Sampled: 09/09/2014 11:45**		
SUB_SPECIALTY	10/01/2014 14:00	03/08/2015 10:45		Select PFC
Containers Supplied:				
Sample ID: NBS01-A2-MW11A-R15				
Reference No: 1409070-14	**Water**	**Sampled: 09/09/2014 13:30**		
SUB_SPECIALTY	10/01/2014 14:00	03/08/2015 12:30		Select PFC
Containers Supplied:				

Released By	Date	Received By	Date
Released By	Date	Received By	Date

SUBCONTRACT ORDER

Empirical Laboratories, LLC

1409070

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: NBS01-EB090914				
Reference No: 1409070-15	**Water**	**Sampled: 09/09/2014 16:00**		
SUB_SPECIALTY	10/01/2014 14:00	03/08/2015 15:00		Select PFC
Containers Supplied:				

Released By	Date	Received By	Date
Released By	Date	Received By	Date

Subcontractor Data Package

Southeast ACCUTEST LABORATORIES

Reissue #1
10/23/14



Technical Report for

Empirical Labs

NSN Site 1 LTM

470612.LT.FT.01

Accutest Job Number: FA18133

Sampling Dates: 09/08/14 - 09/09/14

Report to:

Empirical Labs
621 Mainstream Dr Suite 270
Nashville, TN 37228
sgordon@empirlabs.com

ATTN: Sonya Gordon

Total number of pages in report: **396**

Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Program and/or state specific certification programs as applicable.

Norm Farmer
Technical Director

Client Service contact: Muna Mohammed 407-425-6700

Certifications: FL (E83510), LA (03051), KS (E-10327), IA (366), IL (200063), NC (573), NJ (FL002), SC (96038001)
DoD ELAP (L-A-B L2229), CA (04226CA), TX (T104704404), PA (68-03573), VA (460177),
AK, AR, GA, KY, MA, NV, OK, UT, WA

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Test results relate only to samples analyzed.

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October 23, 2014

Ms. Sonya Gordon
Empirical Laboratories, LLC
621 Mainstream Dr
Suite 270
Nashville, TN 37228

RE: Accutest job FA18133 Reissue

Dear Ms. Gordon,

The final report for job number FA18133 has been edited to reflect requested corrections. These edits have been incorporated into the revised report.

The sample ID has been revised.

Accutest apologies for any inconvenience this may have caused. Please feel free to contact us if we can be of further assistance.

Sincerely,

Accutest Laboratories, SE

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Accutest Laboratories

Sample Summary

Empirical Labs

Job No: FA18133

NSN Site 1 LTM
Project No: 470612.LT.FT.01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Type	Client Sample ID
FA18133-1	09/08/14	10:40	KS	09/10/14	AQ	Ground Water	NBS01-B-EW8A-0914
FA18133-2	09/08/14	10:55	KS	09/10/14	AQ	Ground Water	NBS01-B-EW4B-0914
FA18133-3	09/08/14	11:05	KS	09/10/14	AQ	Ground Water	NBS01-B-EW5A-0914
FA18133-4	09/08/14	11:15	KS	09/10/14	AQ	Ground Water	NBS01-B-EW4A-0914
FA18133-5	09/08/14	11:20	KS	09/10/14	AQ	Ground Water	NBS01-B-EW4AP-0914
FA18133-6	09/08/14	11:30	KS	09/10/14	AQ	Ground Water	NBS01-B-EW3B-0914
FA18133-7	09/08/14	11:40	KS	09/10/14	AQ	Ground Water	NBS01-B-EW7A-0914
FA18133-8	09/08/14	11:55	KS	09/10/14	AQ	Ground Water	NBS01-B-EW3A-0914
FA18133-9	09/08/14	12:05	KS	09/10/14	AQ	Ground Water	NBS01-B-EW2B-0914
FA18133-10	09/08/14	12:25	KS	09/10/14	AQ	Ground Water	NBS01-A1-EW4B-R15
FA18133-11	09/08/14	12:45	KS	09/10/14	AQ	Ground Water	NBS01-A1-EW3B-R15
FA18133-12	09/08/14	13:15	KS	09/10/14	AQ	Ground Water	NBS01-A2-EW3B-R15
FA18133-13	09/09/14	11:45	KS	09/10/14	AQ	Ground Water	NBS01-A-GW-3-R15

Accutest Laboratories

Sample Summary
(continued)

Empirical Labs

Job No: FA18133

NSN Site 1 LTM
Project No: 470612.LT.FT.01

Sample Number	Collected Date	Time	By	Received	Matrix Code	Matrix Type	Client Sample ID
FA18133-14	09/09/14	13:30	KS	09/10/14	AQ	Ground Water	NBS01-A2-MW11A-R15
FA18133-15	09/09/14	16:00	KS	09/10/14	AQ	Equipment Blank	NBS01-EB090914

SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Empirical Labs **Job No:** FA18133

Site: NSN Site 1 LTM **Report Date;** 9/24/2014 8:25:48 PM

15 Sample(s) were collected on/between 09/08/2014 and 09/09/2014 and were received at Accutest SE on 09/10/2014 properly preserved, at 3.4 Deg. C and intact. These Samples received an Accutest job number of FA18133. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Extractables by GCMS By Method EPA 537 MOD

Matrix: AQ **Batch ID:** OP53121

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA18133-2MS, FA18133-2MSD were used as the QC samples indicated.

Matrix Spike Recovery(s) for Perfluorooctanoic acid are outside control limits. Outside control limits due to high level in sample relative to spike amount. % RPD was in control for MS/MSD. For method performance in a clean matrix, refer to Blank Spike.

Sample(s) OP53121-MB has surrogates outside control limits.

OP53121-MB for 13C2-PFDA: Outside control limits.

FA18133-6 for 13C2-PFDA: Associated CCV outside control limits.

FA18133-7 for 13C2-PFDA: Associated CCV outside control limits.

FA18133-8 for 13C2-PFDA: Associated CCV outside control limits.

FA18133-9 for 13C2-PFDA: Associated CCV outside control limits.

Matrix: AQ **Batch ID:** OP53158

All samples were extracted within the recommended method holding time.

All samples were analyzed within the recommended method holding time.

All method blanks for this batch meet method specific criteria.

Sample(s) FA18247-3MS, FA18247-3MSD were used as the QC samples indicated.

Accutest Laboratories Southeast (ALSE) certifies that this report meets the project requirements for analytical data produced for the samples as received at ALSE and as stated on the COC. ALSE certifies that the data meets the Data Quality Objectives for precision, accuracy and completeness as specified in the ALSE Quality Manual except as noted above. This report is to be used in its entirety. ALSE is not responsible for any assumptions of data quality if partial data packages are used.

Narrative prepared by:

_____ Date: September 24, 2014

Kim Benham, Client Services (signature on file)

Manual Integration Summary

Lab Sample ID	Analysis Type	File ID	Manual Integrations
FA18133-10	MSSEMI	Q7129.D	Perfluorooctanesulfonic acid
FA18133-11	MSSEMI	Q7130.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-12	MSSEMI	Q7131.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-13	MSSEMI	Q7132.D	13C2-PFDA, Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-14	MSSEMI	Q7133.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-2	MSSEMI	Q7046.D	Perfluorooctanesulfonic acid
FA18133-2	MSSEMI	Q7098.D	Perfluorooctanoic acid
FA18133-3	MSSEMI	Q7049.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-4	MSSEMI	Q7050.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-5	MSSEMI	Q7051.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-6	MSSEMI	Q7054.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
FA18133-7	MSSEMI	Q7055.D	Perfluorooctanoic acid
FA18133-7	MSSEMI	Q7101.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
FA18133-8	MSSEMI	Q7056.D	Perfluorooctanoic acid
FA18133-9	MSSEMI	Q7057.D	Perfluorooctanoic acid
OP53121-BS	MSSEMI	Q7042.D	Perfluorobutanesulfonic acid, Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
OP53121-MS	MSSEMI	Q7099.D	Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
OP53121-MSD	MSSEMI	Q7100.D	Perfluorohexanesulfonic acid, Perfluorohexanoic acid, Perfluorooctanesulfonic acid, Perfluorooctanoic acid
OP53158-BS	MSSEMI	Q7127.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
OP53158-MS	MSSEMI	Q7140.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
OP53158-MSD	MSSEMI	Q7141.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid
SQ234-IC234	MSSEMI	Q6936.D	Perfluorooctanoic acid, Perfluoroundecanoic acid
SQ234-ICV234	MSSEMI	Q6945.D	Perfluorohexanesulfonic acid, Perfluorooctanesulfonic acid, Perfluorotridecanoic acid, Perfluoroundecanoic acid

23 Manual Integrations were found for FA18133

Summary of Hits

Job Number: FA18133
Account: Empirical Labs
Project: NSN Site 1 LTM
Collected: 09/08/14 thru 09/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
FA18133-1	**NBS01-B-EW8A-0914**					
Perfluoroheptanoic acid		0.0224 J	0.028	0.022	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.0474 J	0.056	0.044	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0342	0.028	0.022	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.157	0.028	0.022	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.204	0.028	0.022	ug/l	EPA 537 MOD
FA18133-2	**NBS01-B-EW4B-0914**					
Perfluoroheptanoic acid		0.0391	0.021	0.017	ug/l	EPA 537 MOD
Perfluorooctanoic acid		1.00	0.21	0.17	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0125 J	0.021	0.017	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0936	0.021	0.017	ug/l	EPA 537 MOD
FA18133-3	**NBS01-B-EW5A-0914**					
Perfluoroheptanoic acid		0.0309	0.021	0.017	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.180	0.042	0.033	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.00944 J	0.021	0.017	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0436	0.021	0.017	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0882	0.021	0.017	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.0791	0.021	0.017	ug/l	EPA 537 MOD
FA18133-4	**NBS01-B-EW4A-0914**					
Perfluoroheptanoic acid		0.0201	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.0996	0.040	0.032	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0240	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.206	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.289	0.020	0.016	ug/l	EPA 537 MOD
FA18133-5	**NBS01-B-EW4AP-0914**					
Perfluoroheptanoic acid		0.0207	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.108	0.040	0.032	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0251	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.215	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.299	0.020	0.016	ug/l	EPA 537 MOD
FA18133-6	**NBS01-B-EW3B-0914**					
Perfluoroheptanoic acid		0.0679	0.025	0.020	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.143	0.050	0.040	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0517	0.025	0.020	ug/l	EPA 537 MOD

Summary of Hits

Job Number: FA18133
Account: Empirical Labs
Project: NSN Site 1 LTM
Collected: 09/08/14 thru 09/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Perfluorohexanesulfonic acid		0.417	0.025	0.020	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.351	0.025	0.020	ug/l	EPA 537 MOD
FA18133-7	**NBS01-B-EW7A-0914**					
Perfluoroheptanoic acid		0.0715	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.160	0.040	0.032	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.0155 J	0.020	0.016	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0486	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.334	0.20	0.16	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.903	0.20	0.16	ug/l	EPA 537 MOD
FA18133-8	**NBS01-B-EW3A-0914**					
Perfluoroheptanoic acid		0.155	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.308	0.040	0.032	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.0520	0.020	0.016	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0810	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.833	0.40	0.32	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		1.85	0.40	0.32	ug/l	EPA 537 MOD
FA18133-9	**NBS01-B-EW2B-0914**					
Perfluoroheptanoic acid		0.196	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.281	0.040	0.032	ug/l	EPA 537 MOD
Perfluorononanoic acid		0.0197 J	0.020	0.016	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.202	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		1.53	0.29	0.24	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		1.91	0.29	0.24	ug/l	EPA 537 MOD
FA18133-10	**NBS01-A1-EW4B-R15**					
No hits reported in this sample.						
FA18133-11	**NBS01-A1-EW3B-R15**					
Perfluoroheptanoic acid		0.0283	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.0261 J	0.040	0.032	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.0108 J	0.020	0.016	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0630	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.111	0.020	0.016	ug/l	EPA 537 MOD
FA18133-12	**NBS01-A2-EW3B-R15**					
Perfluorooctanoic acid		0.0357 J	0.040	0.032	ug/l	EPA 537 MOD

Summary of Hits

Job Number: FA18133
Account: Empirical Labs
Project: NSN Site 1 LTM
Collected: 09/08/14 thru 09/09/14

Lab Sample ID / Analyte	Client Sample ID	Result/ Qual	LOQ	LOD	Units	Method
Perfluorohexanesulfonic acid		0.0497	0.020	0.016	ug/l	EPA 537 MOD
FA18133-13	**NBS01-A-GW-3-R15**					
Perfluorooctanoic acid		0.146	0.040	0.032	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		0.0539	0.020	0.016	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		0.0185 J	0.020	0.016	ug/l	EPA 537 MOD
FA18133-14	**NBS01-A2-MW11A-R15**					
Perfluoroheptanoic acid		0.292	0.21	0.17	ug/l	EPA 537 MOD
Perfluorooctanoic acid		0.746	0.42	0.33	ug/l	EPA 537 MOD
Perfluorobutanesulfonic acid		0.221	0.21	0.17	ug/l	EPA 537 MOD
Perfluorohexanesulfonic acid		2.00	0.21	0.17	ug/l	EPA 537 MOD
Perfluorooctanesulfonic acid		1.29	0.21	0.17	ug/l	EPA 537 MOD
FA18133-15	**NBS01-EB090914**					
No hits reported in this sample.						

Sample Results

Report of Analysis

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW8A-0914		
Lab Sample ID:	FA18133-1	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7045.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	90.0 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0224	0.028	0.022	0.011	ug/l	J
335-67-1	Perfluorooctanoic acid	0.0474	0.056	0.044	0.022	ug/l	J
375-95-1	Perfluorononanoic acid	0.022 U	0.028	0.022	0.011	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0342	0.028	0.022	0.011	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.157	0.028	0.022	0.011	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.204	0.028	0.022	0.011	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	95%		70-130%
	13C2-PFDA	122%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW4B-0914		
Lab Sample ID:	FA18133-2	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7046.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7098.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2	120 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0391	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	1.00 [a]	0.21	0.17	0.083	ug/l	
375-95-1	Perfluorononanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0125	0.021	0.017	0.0083	ug/l	J
355-46-4	Perfluorohexanesulfonic acid	0.0936	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	118%	122%	70-130%
	13C2-PFDA	119%	96%	70-130%

(a) Result is from Run# 2

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW5A-0914		
Lab Sample ID:	FA18133-3	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7049.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0309	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	0.180	0.042	0.033	0.017	ug/l	
375-95-1	Perfluorononanoic acid	0.00944	0.021	0.017	0.0083	ug/l	J
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0436	0.021	0.017	0.0083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0882	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0791	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	91%		70-130%
	13C2-PFDA	97%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW4A-0914		
Lab Sample ID:	FA18133-4	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7050.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0201	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.0996	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0240	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.206	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.289	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	87%		70-130%
	13C2-PFDA	99%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW4AP-0914		
Lab Sample ID:	FA18133-5	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7051.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0207	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.108	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0251	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.215	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.299	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	93%		70-130%
	13C2-PFDA	112%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW3B-0914		
Lab Sample ID:	FA18133-6	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7054.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2							

	Initial Volume	Final Volume
Run #1	100 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0679	0.025	0.020	0.010	ug/l	
335-67-1	Perfluorooctanoic acid	0.143	0.050	0.040	0.020	ug/l	
375-95-1	Perfluorononanoic acid	0.020 U	0.025	0.020	0.010	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0517	0.025	0.020	0.010	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.417	0.025	0.020	0.010	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.351	0.025	0.020	0.010	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	96%		70-130%
	13C2-PFDA	117% [a]		70-130%

(a) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW7A-0914		
Lab Sample ID:	FA18133-7	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7055.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7101.D	10	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2	125 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0715	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.160	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.0155	0.020	0.016	0.0080	ug/l	J
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0486	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.334 [a]	0.20	0.16	0.080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.903 [a]	0.20	0.16	0.080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	97%	106%	70-130%
	13C2-PFDA	118% [b]	85%	70-130%

(a) Result is from Run# 2
(b) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW3A-0914		
Lab Sample ID:	FA18133-8	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7056.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7102.D	20	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2	125 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.155	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.308	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.0520	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0810	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.833 [a]	0.40	0.32	0.16	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	1.85 [a]	0.40	0.32	0.16	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	87%	99%	70-130%
	13C2-PFDA	105% [b]	70%	70-130%

(a) Result is from Run# 2
(b) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-B-EW2B-0914		
Lab Sample ID:	FA18133-9	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7057.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
Run #2	Q7103.D	10	09/22/14	MRE	09/16/14	OP53121	SQ240

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2	85.0 ml	1.0 ml

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.196	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.281	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.0197	0.020	0.016	0.0080	ug/l	J
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.202	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	1.53 [a]	0.29	0.24	0.12	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	1.91 [a]	0.29	0.24	0.12	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	92%	113%	70-130%
	13C2-PFDA	116% [b]	91%	70-130%

(a) Result is from Run# 2
(b) Associated CCV outside control limits.

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A1-EW4B-R15		
Lab Sample ID:	FA18133-10	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7129.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	0.033 U	0.042	0.033	0.017	ug/l	
375-95-1	Perfluorononanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	114%		70-130%
	13C2-PFDA	120%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A1-EW3B-R15		
Lab Sample ID:	FA18133-11	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7130.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.0283	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.0261	0.040	0.032	0.016	ug/l	J
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.0108	0.020	0.016	0.0080	ug/l	J
355-46-4	Perfluorohexanesulfonic acid	0.0630	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.111	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	112%		70-130%
	13C2-PFDA	118%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A2-EW3B-R15		
Lab Sample ID:	FA18133-12	**Date Sampled:**	09/08/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7131.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.0357	0.040	0.032	0.016	ug/l	J
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.016 U	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0497	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.016 U	0.020	0.016	0.0080	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	105%		70-130%
	13C2-PFDA	126%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A-GW-3-R15		
Lab Sample ID:	FA18133-13	**Date Sampled:**	09/09/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7132.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	125 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	0.146	0.040	0.032	0.016	ug/l	
375-95-1	Perfluorononanoic acid	0.016 U	0.020	0.016	0.0080	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.016 U	0.020	0.016	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.0539	0.020	0.016	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.0185	0.020	0.016	0.0080	ug/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	117%		70-130%
	13C2-PFDA	128%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-A2-MW11A-R15		
Lab Sample ID:	FA18133-14	**Date Sampled:**	09/09/14
Matrix:	AQ - Ground Water	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7133.D	10	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.292	0.21	0.17	0.083	ug/l	
335-67-1	Perfluorooctanoic acid	0.746	0.42	0.33	0.17	ug/l	
375-95-1	Perfluorononanoic acid	0.17 U	0.21	0.17	0.083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.221	0.21	0.17	0.083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	2.00	0.21	0.17	0.083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	1.29	0.21	0.17	0.083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	118%		70-130%
	13C2-PFDA	108%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Accutest Laboratories

Report of Analysis

Client Sample ID:	NBS01-EB090914		
Lab Sample ID:	FA18133-15	**Date Sampled:**	09/09/14
Matrix:	AQ - Equipment Blank	**Date Received:**	09/10/14
Method:	EPA 537 MOD EPA 537 MOD	**Percent Solids:**	n/a
Project:	NSN Site 1 LTM		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Q7134.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
Run #2							

	Initial Volume	Final Volume
Run #1	120 ml	1.0 ml
Run #2		

Perfluorinated Carboxylic Acids and Sulfonates

CAS No.	Compound	Result	LOQ	LOD	DL	Units	Q
PERFLUOROALKYLCARBOXYLIC ACIDS							
375-85-9	Perfluoroheptanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
335-67-1	Perfluorooctanoic acid	0.033 U	0.042	0.033	0.017	ug/l	
375-95-1	Perfluorononanoic acid	0.017 U	0.021	0.017	0.0083	ug/l	
PERFLUOROALKYLSULFONATES							
375-73-5	Perfluorobutanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
355-46-4	Perfluorohexanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	0.017 U	0.021	0.017	0.0083	ug/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
	13C2-PFHxA	114%		70-130%
	13C2-PFDA	119%		70-130%

U = Not detected LOD = Limit of Detection J = Indicates an estimated value
LOQ = Limit of Quantitation DL = Detection Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

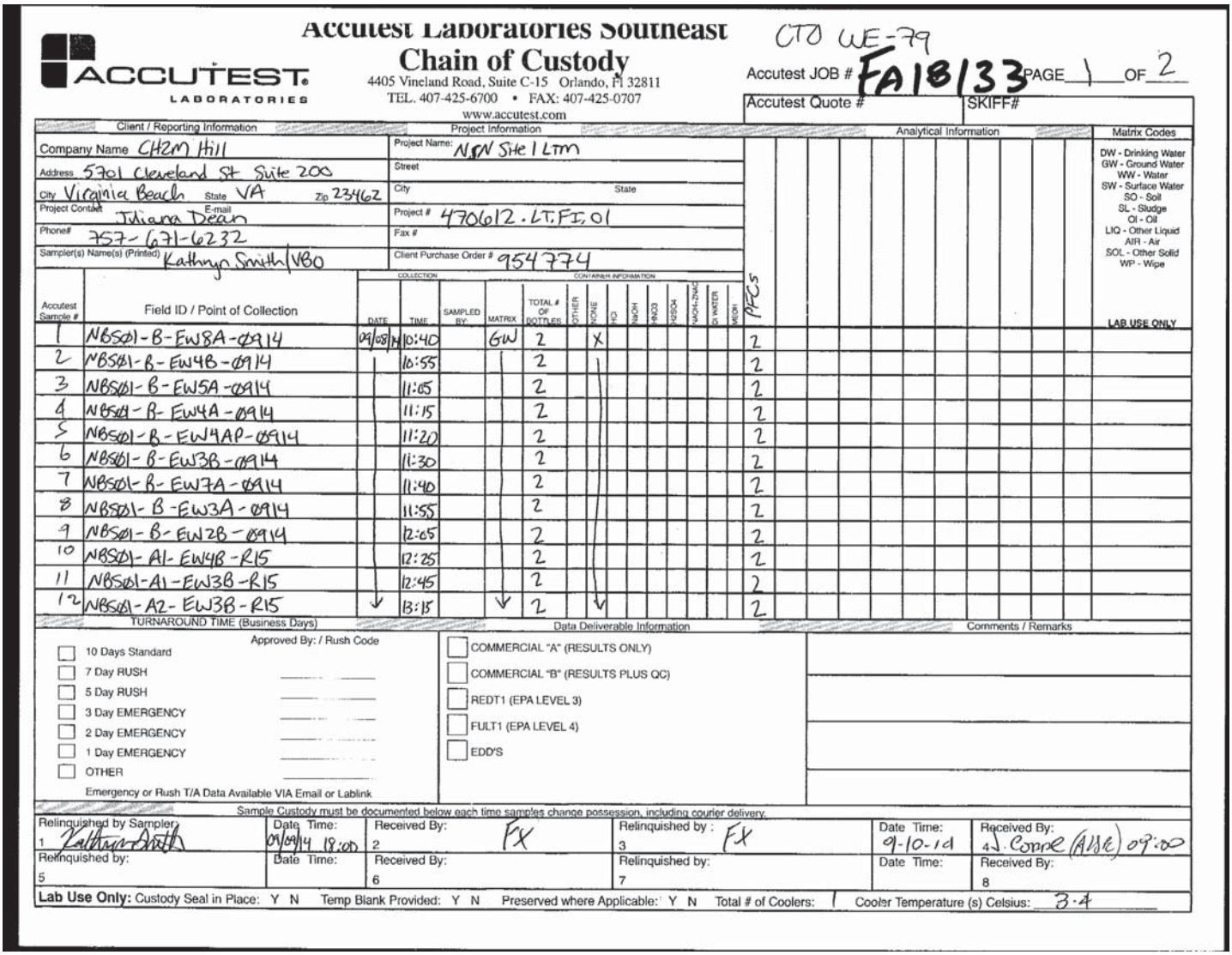
Southeast ACCUTEST LABORATORIES

Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody



ACCUTEST LABORATORIES

Accutest Laboratories Southeast

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
www.accutest.com

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Accutest JOB # FA18133 PAGE 1 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: CH2M Hill
Address: 5701 Cleveland St Suite 200
City: Virginia Beach State: VA Zip: 23462
Project Contact: Juliana Dean E-mail:
Phone#: 757-671-6232
Sampler(s) Name(s) (Printed): Kathryn Smith/VBO

Project Information

Project Name: NSN Site 1 LTM
Street:
City: State:
Project #: 470612.LT.FI.01
Fax #:
Client Purchase Order #: 954774

Analytical Information

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	Collection Date	Collection Time	Sampled By	Matrix	Total # of Bottles	Other	None	HCl	NaOH	HNO3	H2SO4	NaOH+ZnAc	DI Water	MeOH	PFCs	LAB USE ONLY
1	NBS01-B-EW8A-0914	09/08/14	10:40		GW	2		X								2	
2	NBS01-B-EW4B-0914		10:55			2										2	
3	NBS01-B-EW5A-0914		11:05			2										2	
4	NBS01-B-EW4A-0914		11:15			2										2	
5	NBS01-B-EW4AP-0914		11:20			2										2	
6	NBS01-B-EW3B-0914		11:30			2										2	
7	NBS01-B-EW7A-0914		11:40			2										2	
8	NBS01-B-EW3A-0914		11:55			2										2	
9	NBS01-B-EW2B-0914		12:05			2										2	
10	NBS01-A1-EW4B-R15		12:25			2										2	
11	NBS01-A1-EW3B-R15		12:45			2										2	
12	NBS01-A2-EW3B-R15	↓	13:15		↓	2		↓								2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

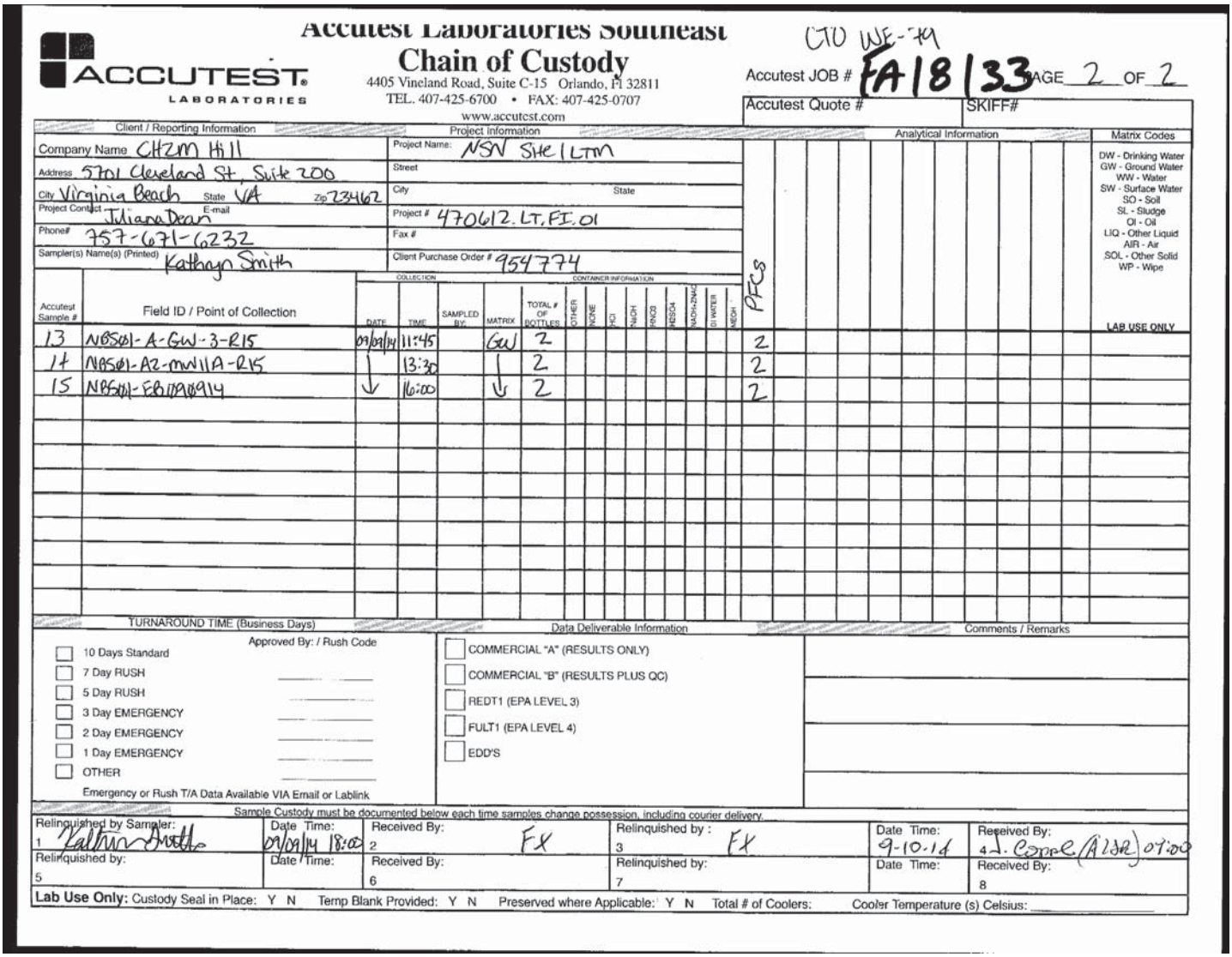
Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Kathryn Smith	09/09/14 18:00	2 FX	3 FX	9-10-14	4 J. Copple (ABE) 09:00
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: 1 Cooler Temperature (s) Celsius: 3.4

5.1 5

FA18133: Chain of Custody
Page 1 of 4



ACCUTEST LABORATORIES

Accutest Laboratories Southeast

Chain of Custody

4405 Vineland Road, Suite C-15 Orlando, Fl 32811
TEL. 407-425-6700 • FAX: 407-425-0707
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Accutest JOB # FA18133 PAGE 2 OF 2

Accutest Quote # | SKIFF#

Client / Reporting Information

Company Name: CH2M Hill
Address: 5701 Cleveland St, Suite 200
City: Virginia Beach State: VA Zip: 23462
Project Contact: Juliana Dean E-mail:
Phone#: 757-671-6232
Sampler(s) Name(s) (Printed): Kathryn Smith

Project Information

Project Name: NSN SHELTM
Street:
City State:
Project #: 470612.LT.FI.01
Fax #:
Client Purchase Order #: 954774

Analytical Information

PFCs

Matrix Codes

DW - Drinking Water
GW - Ground Water
WW - Water
SW - Surface Water
SO - Soil
SL - Sludge
OI - Oil
LIQ - Other Liquid
AIR - Air
SOL - Other Solid
WP - Wipe

Accutest Sample #	Field ID / Point of Collection	COLLECTION DATE	COLLECTION TIME	SAMPLED BY	MATRIX	TOTAL # OF BOTTLES	CONTAINER INFORMATION	PFCs	LAB USE ONLY
13	NBS01-A-GW-3-R15	09/04/14	11:45		GW	2		2	
14	NBS01-A2-MW11A-R15		13:30			2		2	
15	NBS01-FB09080914		16:00			2		2	

TURNAROUND TIME (Business Days)

Approved By: / Rush Code

- [ ] 10 Days Standard
- [ ] 7 Day RUSH
- [ ] 5 Day RUSH
- [ ] 3 Day EMERGENCY
- [ ] 2 Day EMERGENCY
- [ ] 1 Day EMERGENCY
- [ ] OTHER

Emergency or Rush T/A Data Available VIA Email or Lablink

Data Deliverable Information

- [ ] COMMERCIAL "A" (RESULTS ONLY)
- [ ] COMMERCIAL "B" (RESULTS PLUS QC)
- [ ] REDT1 (EPA LEVEL 3)
- [ ] FULT1 (EPA LEVEL 4)
- [ ] EDD'S

Comments / Remarks

Sample Custody must be documented below each time samples change possession, including courier delivery.

Relinquished by Sampler:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
1 Kathryn Smith	09/04/14 18:00	2 FX	3 FX	9-10-14	4 A. Cooke (ASR) 07:00
Relinquished by:	Date Time:	Received By:	Relinquished by:	Date Time:	Received By:
5		6	7		8

Lab Use Only: Custody Seal in Place: Y N Temp Blank Provided: Y N Preserved where Applicable: Y N Total # of Coolers: Cooler Temperature (s) Celsius:

5.1 5

FA18133: Chain of Custody
Page 2 of 4

ACCUTEST LABORATORIES SAMPLE RECEIPT CONFIRMATION

ACCUTEST'S JOB NUMBER: FA18133 CLIENT: CH2M HILL PROJECT: NSN SHC

DATE/TIME RECEIVED: 9-10-14 09:00 {MM/DD/YY 24:00} NUMBER OF COOLERS RECEIVED: 1

METHOD OF DELIVERY: (FEDEX) UPS ACCUTEST COURIER GREYHOUND DELIVERY OTHER

AIRBILL NUMBERS: 7711 0020 9390

COOLER INFORMATION

- [ ] CUSTODY SEAL NOT PRESENT OR NOT INTACT
- [ ] CHAIN OF CUSTODY NOT RECEIVED (COC)
- [ ] ANALYSIS REQUESTED IS UNCLEAR OR MISSING
- [ ] SAMPLE DATES OR TIMES UNCLEAR OR MISSING
- [ ] TEMPERATURE CRITERIA NOT MET

TRIP BLANK INFORMATION

- [ ] TRIP BLANK PROVIDED
- [X] TRIP BLANK NOT PROVIDED
- [X] TRIP BLANK NOT ON COC
- [ ] TRIP BLANK INTACT
- [ ] TRIP BLANK NOT INTACT
- [ ] RECEIVED WATER TRIP BLANK
- [ ] RECEIVED SOIL TRIP BLANK

MISC. INFORMATION

NUMBER OF ENCORES ? 25-GRAM_____ 5-GRAM_____

NUMBER OF 5035 FIELD KITS ? _____

NUMBER OF LAB FILTERED METALS ? _____

TEMPERATURE INFORMATION

- [ ] IR THERM ID 1 CORR. FACTOR +0.4
- [ ] OBSERVED TEMPS: 3.0
- [ ] CORRECTED TEMPS: 3.4

SAMPLE INFORMATION

- [ ] INCORRECT NUMBER OF CONTAINERS USED
- [ ] SAMPLE RECEIVED IMPROPERLY PRESERVED
- [ ] INSUFFICIENT VOLUME FOR ANALYSIS
- [ ] DATES/TIMES ON COC DO NOT MATCH SAMPLE LABEL
- [ ] ID'S ON COC DO NOT MATCH LABEL
- [ ] VOC VIALS HAVE HEADSPACE (MACRO BUBBLES)
- [ ] BOTTLES RECEIVED BUT ANALYSIS NOT REQUESTED
- [ ] NO BOTTLES RECEIVED FOR ANALYSIS REQUESTED
- [ ] UNCLEAR FILTERING OR COMPOSITING INSTRUCTIONS
- [ ] SAMPLE CONTAINER(S) RECEIVED BROKEN
- [ ] 5035 FIELD KITS NOT RECEIVED WITHIN 48 HOURS
- [ ] BULK VOA SOIL JARS NOT RECEIVED WITHIN 48 HOURS
- [ ] % SOLIDS JAR NOT RECEIVED
- [ ] RESIDUAL CHLORINE PRESENT

{APPICABLE TO EPA 600 SERIES OR NORTH CAROLINA ORGANICS}

SUMMARY OF COMMENTS:

TECHNICIAN SIGNATURE/DATE: 9-10-14 REVIEWER SIGNATURE/DATE: 09/10/14

RS 04/14

receipt confirmation 041514.xls

FA18133: Chain of Custody

Page 3 of 4

Page 1 of 1

From: (757) 671-6220
Kathryn Smith

5701 Cleveland St
Suite 200
Virginia Beach, VA 23462

Origin ID: NTUA

J1420140610026

Ship Date: 09SEP14
ActWgt: 55.0 LB
CAD: 104470428/INET3550

Delivery Address Bar Code

Ref # 470612.LT.FL01
Invoice #
PO #
Dept #

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FA18133: Chain of Custody
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Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries
- Initial and Continuing Calibration Summaries

Method Blank Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53121-MB	Q7044.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-1, FA18133-2, FA18133-3, FA18133-4, FA18133-5, FA18133-6, FA18133-7, FA18133-8, FA18133-9

CAS No.	Compound	Result	RL	MDL	Units	Q
375-85-9	Perfluoroheptanoic acid	ND	0.020	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.040	0.016	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.020	0.0080	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.020	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.020	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.020	0.0080	ug/l	

CAS No.	Surrogate Recoveries		Limits
	13C2-PFHxA	112%	70-130%
	13C2-PFDA	173%* [a]	70-130%

(a) Outside control limits.

Method Blank Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53158-MB	Q7128.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-10, FA18133-11, FA18133-12, FA18133-13, FA18133-14, FA18133-15

CAS No.	Compound	Result	RL	MDL	Units	Q
375-85-9	Perfluoroheptanoic acid	ND	0.020	0.0080	ug/l	
335-67-1	Perfluorooctanoic acid	ND	0.040	0.016	ug/l	
375-95-1	Perfluorononanoic acid	ND	0.020	0.0080	ug/l	
375-73-5	Perfluorobutanesulfonic acid	ND	0.020	0.0080	ug/l	
355-46-4	Perfluorohexanesulfonic acid	ND	0.020	0.0080	ug/l	
1763-23-1	Perfluorooctanesulfonic acid	ND	0.020	0.0080	ug/l	

CAS No.	Surrogate Recoveries		Limits
	13C2-PFHxA	104%	70-130%
	13C2-PFDA	108%	70-130%

Blank Spike Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53121-BS	Q7042.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-1, FA18133-2, FA18133-3, FA18133-4, FA18133-5, FA18133-6, FA18133-7, FA18133-8, FA18133-9

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-85-9	Perfluoroheptanoic acid	0.16	0.135	84	70-130
335-67-1	Perfluorooctanoic acid	0.16	0.154	96	70-130
375-95-1	Perfluorononanoic acid	0.16	0.153	96	70-130
375-73-5	Perfluorobutanesulfonic acid	0.16	0.208	130	70-130
355-46-4	Perfluorohexanesulfonic acid	0.16	0.192	120	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.16	0.159	99	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	107%	70-130%
	13C2-PFDA	112%	70-130%

* = Outside of Control Limits.

Blank Spike Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53158-BS	Q7127.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-10, FA18133-11, FA18133-12, FA18133-13, FA18133-14, FA18133-15

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
375-85-9	Perfluoroheptanoic acid	0.16	0.143	89	70-130
335-67-1	Perfluorooctanoic acid	0.16	0.142	89	70-130
375-95-1	Perfluorononanoic acid	0.16	0.163	102	70-130
375-73-5	Perfluorobutanesulfonic acid	0.16	0.166	104	70-130
355-46-4	Perfluorohexanesulfonic acid	0.16	0.164	103	70-130
1763-23-1	Perfluorooctanesulfonic acid	0.16	0.137	86	70-130

CAS No.	Surrogate Recoveries	BSP	Limits
	13C2-PFHxA	127%	70-130%
	13C2-PFDA	125%	70-130%

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53121-MS	Q7099.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240
OP53121-MSD	Q7100.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240
FA18133-2	Q7046.D	1	09/18/14	MRE	09/16/14	OP53121	SQ238
FA18133-2	Q7098.D	5	09/22/14	MRE	09/16/14	OP53121	SQ240

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-1, FA18133-2, FA18133-3, FA18133-4, FA18133-5, FA18133-6, FA18133-7, FA18133-8, FA18133-9

CAS No.	Compound	FA18133-2 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-85-9	Perfluoroheptanoic acid	0.0391		0.333	0.332	88	0.333	0.317	83	5	70-130/30
335-67-1	Perfluorooctanoic acid	1.00 [b]		0.333	1.23	69* [a]	0.333	1.25	75	2	70-130/30
375-95-1	Perfluorononanoic acid	0.021	U	0.333	0.364	109	0.333	0.372	112	2	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.0125	J	0.333	0.320	92	0.333	0.315	91	2	70-130/30
355-46-4	Perfluorohexanesulfonic acid	0.0936		0.333	0.400	92	0.333	0.383	87	4	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.021	U	0.333	0.287	86	0.333	0.290	87	1	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	FA18133-2	FA18133-2	Limits
	13C2-PFHxA	122%	114%	118%	122%	70-130%
	13C2-PFDA	88%	106%	119%	96%	70-130%

(a) Outside control limits due to high level in sample relative to spike amount.
(b) Result is from Run #2.

* = Outside of Control Limits.

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP53158-MS	Q7140.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
OP53158-MSD	Q7141.D	1	09/23/14	MRE	09/18/14	OP53158	SQ241
FA18247-3	Q7146.D	1	09/24/14	MRE	09/18/14	OP53158	SQ242

The QC reported here applies to the following samples: **Method:** EPA 537 MOD

FA18133-10, FA18133-11, FA18133-12, FA18133-13, FA18133-14, FA18133-15

CAS No.	Compound	FA18247-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	Spike ug/l	MSD ug/l	MSD %	RPD	Limits Rec/RPD
375-85-9	Perfluoroheptanoic acid	0.020	U	0.333	0.298	89	0.333	0.278	83	7	70-130/30
335-67-1	Perfluorooctanoic acid	0.0179	J	0.333	0.330	94	0.333	0.301	85	9	70-130/30
375-95-1	Perfluorononanoic acid	0.020	U	0.333	0.378	113	0.333	0.334	100	12	70-130/30
375-73-5	Perfluorobutanesulfonic acid	0.020	U	0.333	0.300	90	0.333	0.286	86	5	70-130/30
355-46-4	Perfluorohexanesulfonic acid	0.0141	J	0.333	0.355	102	0.333	0.331	95	7	70-130/30
1763-23-1	Perfluorooctanesulfonic acid	0.0255		0.333	0.297	81	0.333	0.263	71	12	70-130/30

CAS No.	Surrogate Recoveries	MS	MSD	FA18247-3	Limits
	13C2-PFHxA	101%	94%	86%	70-130%
	13C2-PFDA	118%	115%	122%	70-130%

* = Outside of Control Limits.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ238-CC234	**Injection Date:**	09/18/14
Lab File ID:	Q7040.D	**Injection Time:**	13:08
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	41664	5.80	14375	6.33	19218	8.50
Upper Limit [c]	57426	6.80	22568	7.33	39822	9.50
Lower Limit [d]	19142	4.80	7523	5.33	13274	7.50

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
OP53121-BS	38900	5.80	12960	6.33	17027	8.48
OP53121-MB	41906	5.83	14000	6.39	18891	9.08
FA18133-1	44302	5.83	14554	6.39	21587	9.08
FA18133-2	40468	5.83	15299	6.39	22771	9.06
FA18133-3	45350	5.83	15288	6.39	22099	9.08
FA18133-4	45750	5.83	15367	6.39	22920	9.08
FA18133-5	42647	5.83	14254	6.39	21008	9.08

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ238-CC234	**Injection Date:**	09/18/14
Lab File ID:	Q7052.D	**Injection Time:**	17:43
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	50794	5.83	17305	6.39	23827	9.08
Upper Limit [c]	57426	6.83	22568	7.39	39822	10.08
Lower Limit [d]	19142	4.83	7523	5.39	13274	8.08

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
FA18133-6	52210	5.83	17376	6.39	24220	9.08
FA18133-7	43645	5.83	14096	6.39	21666	9.06
FA18133-8	45342	5.83	12862	6.39	23726	9.06
FA18133-9	52691	5.85	15836	6.39	26904	9.08
SQ238-ECC234	54164	5.85	18401	6.41	24878	9.09

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ240-CC234	**Injection Date:**	09/22/14
Lab File ID:	Q7097.D	**Injection Time:**	11:16
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	47151	5.85	18022	6.42	23814	9.40
Upper Limit [c]	57426	6.85	22568	7.42	39822	10.40
Lower Limit [d]	19142	4.85	7523	5.42	13274	8.40

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
FA18133-2	46318	5.85	18158	6.42	22660	9.38
OP53121-MS	47132	5.85	17734	6.42	23932	9.41
OP53121-MSD	46617	5.85	17693	6.42	23983	9.40
FA18133-7	50493	5.85	18075	6.42	24892	9.40
FA18133-8	53411	5.85	18877	6.42	26595	9.40
FA18133-9	48931	5.85	17564	6.42	24975	9.40

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ241-CC234	**Injection Date:**	09/23/14
Lab File ID:	Q7125.D	**Injection Time:**	11:39
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	46590	5.86	18288	6.42	32187	9.18
Upper Limit [c]	57426	6.86	22568	7.42	39822	10.18
Lower Limit [d]	19142	4.86	7523	5.42	13274	8.18

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
OP53158-BS	53833	5.86	20585	6.42	33697	9.21
OP53158-MB	56204	5.86	20724	6.42	33973	9.21
FA18133-10	52684	5.86	19710	6.42	32372	9.20
FA18133-11	50733	5.85	18694	6.42	32407	9.20
FA18133-12	48286	5.85	17473	6.41	30557	9.18
FA18133-13	49358	5.85	18602	6.41	31666	9.18
FA18133-14	51458	5.85	18858	6.41	32597	9.20
FA18133-15	55636	5.85	20356	6.41	33750	9.18

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Internal Standard Area Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Check Std:	SQ241-CC234	**Injection Date:**	09/23/14
Lab File ID:	Q7135.D	**Injection Time:**	15:01
Instrument ID:	GCMSQ	**Method:**	EPA 537 MOD

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
Initial Cal [a]	38284	5.85	15045	6.39	26548	8.96
Check Std [b]	49265	5.85	18466	6.41	31638	9.20
Upper Limit [c]	57426	6.85	22568	7.41	39822	10.20
Lower Limit [d]	19142	4.85	7523	5.41	13274	8.20

Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT
ZZZZZZ	56941	5.85	20637	6.41	35191	9.18
ZZZZZZ	51370	5.85	18632	6.41	31783	9.18
OP53158-MS	46796	5.85	17241	6.41	32286	9.18
OP53158-MSD	52148	5.83	18985	6.41	33597	9.18
SQ241-ECC234	52081	5.85	19353	6.42	34703	9.20

IS 1 = 13C2-PFOA
IS 2 = 13C4-PFOS
IS 3 = 13C2-PFDoDA

(a) Initial Cal is: SQ234-ICC234 Q6939.D 09/12/14 13:11. Area is AVERAGE of initial cal points.
(b) Check Std Limit = -50 to +50% of initial cal area.
(c) Upper Limit = +50% of initial standard area; Retention time +1 minutes of check standard.
(d) Lower Limit = -50% of initial standard area; Retention time -1 minutes of check standard.

Semivolatile Surrogate Recovery Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Method: EPA 537 MOD **Matrix:** AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2
FA18133-1	Q7045.D	95	122
FA18133-2	Q7098.D	122	96
FA18133-2	Q7046.D	118	119
FA18133-3	Q7049.D	91	97
FA18133-4	Q7050.D	87	99
FA18133-5	Q7051.D	93	112
FA18133-6	Q7054.D	96	117 [a]
FA18133-7	Q7101.D	106	85
FA18133-7	Q7055.D	97	118 [a]
FA18133-8	Q7102.D	99	70
FA18133-8	Q7056.D	87	105 [a]
FA18133-9	Q7103.D	113	91
FA18133-9	Q7057.D	92	116 [a]
FA18133-10	Q7129.D	114	120
FA18133-11	Q7130.D	112	118
FA18133-12	Q7131.D	105	126
FA18133-13	Q7132.D	117	128
FA18133-14	Q7133.D	118	108
FA18133-15	Q7134.D	114	119
OP53121-BS	Q7042.D	107	112
OP53121-MB	Q7044.D	112	173* [b]
OP53121-MS	Q7099.D	122	88
OP53121-MSD	Q7100.D	114	106
OP53158-BS	Q7127.D	127	125
OP53158-MB	Q7128.D	104	108
OP53158-MS	Q7140.D	101	118
OP53158-MSD	Q7141.D	94	115

Surrogate Compounds	Recovery Limits
S1 = 13C2-PFHxA	70-130%
S2 = 13C2-PFDA	70-130%

(a) Associated CCV outside control limits.
(b) Outside control limits.

Initial Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ234-ICC234
Lab FileID: Q6939.D

Initial Calibration ReSponse Factors - D:\MassHunter\Data\0912_PFC_SQ234\SQ234.batch.bin

Level ID : Calibration File
1 : D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2 : D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3 : D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4 : D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5 : D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6 : D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7 : D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Compound	1	2	3	4	5	6	7	AvgRF	%RSD	r^2
2) 13C2-PFDoDA	----------ISTD----------									
1) 13C2-PFDA	1.4694	1.2705	1.3641	1.3573	1.2782	1.1995	1.1677	1.3010	8.002	0.9925
8) PFDA	1.3529	1.1705	1.2774	1.2682	1.2016	1.1239	1.0824	1.2110	7.811	0.9913
9) PFDoDA	0.9528	0.9350	0.8811	0.8914	0.8903	0.8623	0.8657	0.8969	3.827	0.9994
10) PFDS	0.2240	0.2180	0.2018	0.2025	0.1985	0.1920	0.1929	0.2043	5.996	0.9989
19) PFTeDA	0.7532	0.6581	0.5739	0.5913	0.5950	0.5845	0.5932	0.6213	10.333	0.9994
20) PFTrDA	0.8594	0.8431	0.7924	0.7963	0.7967	0.7777	0.7789	0.8063	3.964	0.9999
21) PFUnDA	1.4969	1.2243	1.1198	1.0728	1.0513	1.0110	1.0658	1.1489	14.603	0.9948
4) 13C2-PFOA	----------ISTD----------									
3) 13C2-PFHxA	0.3285	0.3294	0.3113	0.3056	0.3013	0.2929	0.2943	0.3090	4.856	0.9992
6) PFBA	0.2472	0.2443	0.2374	0.2319	0.2354	0.2301	0.2321	0.2369	2.771	0.9998
11) PFHpA	0.4292	0.3812	0.3486	0.3311	0.3247	0.3126	0.3091	0.3481	12.464	0.9994
13) PFHxA	0.3782	0.3737	0.3488	0.3465	0.3428	0.3331	0.3339	0.3510	5.150	0.9992
15) PFNA	0.5906	0.5169	0.4639	0.4647	0.4599	0.4509	0.4500	0.4853	10.660	0.9996
16) PFOA	1.3992	1.1606	1.0285	1.0005	0.9828	0.9625	0.9647	1.0713	14.922	0.9959
18) PFPeA	0.1233	0.1212	0.1155	0.1139	0.1149	0.1115	0.1146	0.1164	3.645	0.9995
5) 13C4-PFOS	----------ISTD----------									
7) PFBS	0.4070	0.3735	0.3399	0.3254	0.3260	0.3064	0.3165	0.3421	10.450	0.9975
12) PFHpS	0.6380	0.6341	0.6144	0.5989	0.6054	0.5816	0.5927	0.6093	3.437	0.9993
14) PFHxS	0.6360	0.5636	0.5422	0.5072	0.5081	0.4775	0.4990	0.5334	10.027	0.9974
17) PFOS	1.3645	1.1081	1.0077	0.9890	0.9834	0.9433	0.9543	1.0500	14.167	0.9965

*(value) - Average RF below (value)

Initial Calibration Verification

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ234-ICV234
Lab FileID: Q6944.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0912_PFC_SQ234\SQ234.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q6944
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	0.000	# -100.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	# -100.0	0.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	20.367	1.8	101.8
PFBS	20.000	21.501	7.5	107.5
PFDA	20.000	21.272	6.4	106.4
PFDoDA	20.000	21.331	6.7	106.7
PFDS	20.000	21.521	7.6	107.6
PFHpA	20.000	20.021	0.1	100.1
PFHpS	20.000	0.000	0.0	0.0
PFHxA	20.000	20.765	3.8	103.8
PFHxS	20.000	21.704	8.5	108.5
PFNA	20.000	20.123	0.6	100.6
PFOA	20.000	20.065	0.3	100.3
PFOS	20.000	20.717	3.6	103.6
PFPeA	20.000	20.410	2.1	102.1
PFTeDA	20.000	22.398	12.0	112.0
PFTrDA	20.000	20.605	3.0	103.0
PFUnDA	20.000	20.271	1.4	101.4

CC Criteria: +/- 25%

Initial Calibration Verification

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ234-ICV234
Lab FileID: Q6945.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0912_PFC_SQ234\SQ234.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q6945
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	0.000	0.0	0.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	0.000	0.0	0.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	0.000	0.0	0.0
PFBS	20.000	24.861	24.3	124.3
PFDA	20.000	0.000	0.0	0.0
PFDoDA	20.000	0.000	0.0	0.0
PFDS	20.000	0.000	0.0	0.0
PFHpA	20.000	18.993	-5.0	95.0
PFHpS	20.000	0.000	0.0	0.0
PFHxA	20.000	0.000	0.0	0.0
PFHxS	20.000	23.899	19.5	119.5
PFNA	20.000	21.584	7.9	107.9
PFOA	20.000	19.090	-4.5	95.5
PFOS	20.000	20.549	2.7	102.7
PFPeA	20.000	0.000	0.0	0.0
PFTeDA	20.000	0.000	0.0	0.0
PFTrDA	20.000	0.000	0.0	0.0
PFUnDA	20.000	0.000	0.0	0.0

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ238-CC234
Lab FileID: Q7040.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0918_PFC_SQ238\sq238.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7040
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	18.400	-8.0	92.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	17.922	-10.4	89.6
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	19.197	-4.0	96.0
PFBS	20.000	22.198	11.0	111.0
PFDA	20.000	19.074	-4.6	95.4
PFDoDA	20.000	22.071	10.4	110.4
PFDS	20.000	34.945	# 74.7	174.7
PFHpA	20.000	18.761	-6.2	93.8
PFHpS	20.000	22.996	15.0	115.0
PFHxA	20.000	17.752	-11.2	88.8
PFHxS	20.000	22.504	12.5	112.5
PFNA	20.000	18.365	-8.2	91.8
PFOA	20.000	20.224	1.1	101.1
PFOS	20.000	20.472	2.4	102.4
PFPeA	20.000	18.341	-8.3	91.7
PFTeDA	20.000	17.120	-14.4	85.6
PFTrDA	20.000	20.963	4.8	104.8
PFUnDA	20.000	20.751	3.8	103.8

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ238-CC234
Lab FileID: Q7052.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0918_PFC_SQ238\sq238.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7052
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	24.592	23.0	123.0
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	18.322	-8.4	91.6
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	18.135	-9.3	90.7
PFBS	20.000	20.753	3.8	103.8
PFDA	20.000	25.246	# 26.2	126.2
PFDoDA	20.000	21.019	5.1	105.1
PFDS	20.000	29.276	# 46.4	146.4
PFHpA	20.000	18.853	-5.7	94.3
PFHpS	20.000	21.969	9.8	109.8
PFHxA	20.000	18.195	-9.0	91.0
PFHxS	20.000	21.277	6.4	106.4
PFNA	20.000	19.574	-2.1	97.9
PFOA	20.000	20.237	1.2	101.2
PFOS	20.000	20.272	1.4	101.4
PFPeA	20.000	17.848	-10.8	89.2
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	17.848	-10.8	89.2

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ238-ECC234
Lab FileID: Q7058.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0918_PFC_SQ238\sq238.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7058
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	25.439	# 27.2	127.2
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	18.005	-10.0	90.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	17.746	-11.3	88.7
PFBS	20.000	21.022	5.1	105.1
PFDA	20.000	26.155	# 30.8	130.8
PFDoDA	20.000	20.455	2.3	102.3
PFDS	20.000	29.804	# 49.0	149.0
PFHpA	20.000	18.367	-8.2	91.8
PFHpS	20.000	22.208	11.0	111.0
PFHxA	20.000	18.144	-9.3	90.7
PFHxS	20.000	21.447	7.2	107.2
PFNA	20.000	19.337	-3.3	96.7
PFOA	20.000	21.150	5.8	105.8
PFOS	20.000	21.385	6.9	106.9
PFPeA	20.000	18.040	-9.8	90.2
PFTeDA	20.000	0.000	# -100.0	0.0
PFTrDA	20.000	0.000	# -100.0	0.0
PFUnDA	20.000	18.684	-6.6	93.4

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ240-CC234
Lab FileID: Q7097.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ240\sq240.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7097
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	15.346	-23.3	76.7
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.958	-0.2	99.8
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	15.759	-21.2	78.8
PFBS	20.000	16.564	-17.2	82.8
PFDA	20.000	16.061	-19.7	80.3
PFDoDA	20.000	20.693	3.5	103.5
PFDS	20.000	27.335	# 36.7	136.7
PFHpA	20.000	19.754	-1.2	98.8
PFHpS	20.000	18.628	-6.9	93.1
PFHxA	20.000	19.537	-2.3	97.7
PFHxS	20.000	17.664	-11.7	88.3
PFNA	20.000	21.830	9.1	109.1
PFOA	20.000	18.612	-6.9	93.1
PFOS	20.000	18.844	-5.8	94.2
PFPeA	20.000	18.095	-9.5	90.5
PFTeDA	20.000	19.829	-0.9	99.1
PFTrDA	20.000	24.222	21.1	121.1
PFUnDA	20.000	17.371	-13.1	86.9

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ240-CC234
Lab FileID: Q7104.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ240\sq240.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7104
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	18.108	-9.5	90.5
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.064	-4.7	95.3
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	16.120	-19.4	80.6
PFBS	20.000	16.842	-15.8	84.2
PFDA	20.000	17.403	-13.0	87.0
PFDoDA	20.000	20.569	2.8	102.8
PFDS	20.000	24.740	23.7	123.7
PFHpA	20.000	18.849	-5.8	94.2
PFHpS	20.000	18.580	-7.1	92.9
PFHxA	20.000	18.944	-5.3	94.7
PFHxS	20.000	17.578	-12.1	87.9
PFNA	20.000	21.684	8.4	108.4
PFOA	20.000	18.657	-6.7	93.3
PFOS	20.000	18.776	-6.1	93.9
PFPeA	20.000	17.728	-11.4	88.6
PFTeDA	20.000	19.252	-3.7	96.3
PFTrDA	20.000	23.134	15.7	115.7
PFUnDA	20.000	17.034	-14.8	85.2

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ241-CC234
Lab FileID: Q7125.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ241\sq241.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7125
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	22.249	11.2	111.2
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	20.190	1.0	101.0
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	19.393	-3.0	97.0
PFBS	20.000	18.883	-5.6	94.4
PFDA	20.000	21.949	9.7	109.7
PFDoDA	20.000	21.163	5.8	105.8
PFDS	20.000	23.630	18.2	118.2
PFHpA	20.000	20.160	0.8	100.8
PFHpS	20.000	20.524	2.6	102.6
PFHxA	20.000	19.878	-0.6	99.4
PFHxS	20.000	19.600	-2.0	98.0
PFNA	20.000	21.514	7.6	107.6
PFOA	20.000	19.892	-0.5	99.5
PFOS	20.000	20.644	3.2	103.2
PFPeA	20.000	19.819	-0.9	99.1
PFTeDA	20.000	24.273	21.4	121.4
PFTrDA	20.000	25.541	# 27.7	127.7
PFUnDA	20.000	29.363	# 46.8	146.8

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM

Sample: SQ241-CC234
Lab FileID: Q7135.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ241\sq241.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7135
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	20.656	3.3	103.3
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.782	-1.1	98.9
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	18.409	-8.0	92.0
PFBS	20.000	18.918	-5.4	94.6
PFDA	20.000	19.408	-3.0	97.0
PFDoDA	20.000	22.466	12.3	112.3
PFDS	20.000	24.908	24.5	124.5
PFHpA	20.000	20.806	4.0	104.0
PFHpS	20.000	20.455	2.3	102.3
PFHxA	20.000	19.493	-2.5	97.5
PFHxS	20.000	20.003	0.0	100.0
PFNA	20.000	22.490	12.5	112.5
PFOA	20.000	20.242	1.2	101.2
PFOS	20.000	20.647	3.2	103.2
PFPeA	20.000	19.050	-4.7	95.3
PFTeDA	20.000	17.180	-14.1	85.9
PFTrDA	20.000	23.020	15.1	115.1
PFUnDA	20.000	18.844	-5.8	94.2

CC Criteria: +/- 25%

Continuing Calibration Summary

Job Number: FA18133
Account: ELTNN Empirical Labs
Project: NSN Site 1 LTM
Sample: SQ241-ECC234
Lab FileID: Q7142.D

Continuing Calibration Report

Batch: D:\MassHunter\Data\0922_PFC_SQ241\sq241.batch.bin

Level ID:Calibration File
1:D:\MassHunter\Data\0912_PFC_SQ234\Q6936.d
2:D:\MassHunter\Data\0912_PFC_SQ234\Q6937.d
3:D:\MassHunter\Data\0912_PFC_SQ234\Q6938.d
4:D:\MassHunter\Data\0912_PFC_SQ234\Q6939.d
5:D:\MassHunter\Data\0912_PFC_SQ234\Q6940.d
6:D:\MassHunter\Data\0912_PFC_SQ234\Q6941.d
7:D:\MassHunter\Data\0912_PFC_SQ234\Q6942.d

Data File: Q7142
Type : QC
Level : 4

Cpnd Name	Exp. Conc	Final Conc	Dev %	Area %
13C2-PFDA	20.000	21.531	7.7	107.7
13C2-PFDoDA	---	--ISTD--		
13C2-PFHxA	20.000	19.658	-1.7	98.3
13C2-PFOA	---	--ISTD--		
13C4-PFOS	---	--ISTD--		
PFBA	20.000	18.615	-6.9	93.1
PFBS	20.000	19.148	-4.3	95.7
PFDA	20.000	20.343	1.7	101.7
PFDoDA	20.000	22.664	13.3	113.3
PFDS	20.000	23.948	19.7	119.7
PFHpA	20.000	20.470	2.4	102.4
PFHpS	20.000	20.551	2.8	102.8
PFHxA	20.000	19.304	-3.5	96.5
PFHxS	20.000	20.459	2.3	102.3
PFNA	20.000	22.638	13.2	113.2
PFOA	20.000	20.162	0.8	100.8
PFOS	20.000	20.546	2.7	102.7
PFPeA	20.000	19.217	-3.9	96.1
PFTeDA	20.000	17.980	-10.1	89.9
PFTrDA	20.000	22.802	14.0	114.0
PFUnDA	20.000	19.067	-4.7	95.3

CC Criteria: +/- 25%

Southeast ACCUTEST LABORATORIES

GC/MS Semi-volatiles

Raw Data

Perfluorinated Compounds by LC/MS/MS.

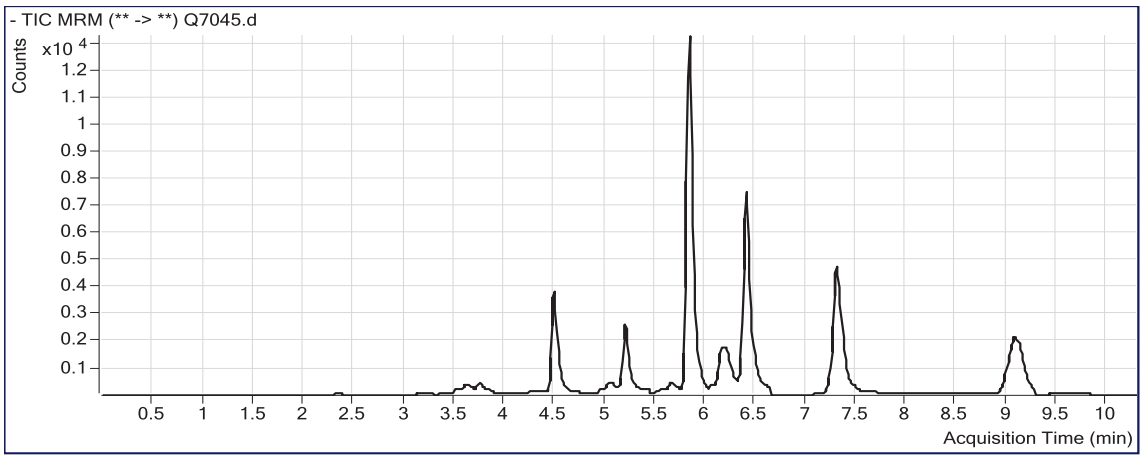
Data File	:	Q7045.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 15:28
Sample Name	:	fa18133-1
Vial	:	Vial 8
Sample Info	:	OP53121,SQ238,90,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.833	415.0 -> 370.0	44302	20.000	µg/L	0.013
13C4-PFOS	6.394	503.0 -> 80.0	14554	20.000	µg/L	0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	21587	20.000	µg/L	0.567
System Monitoring Compounds						
13C2-PFHxA	4.491	315.0 -> 270.0	12522	19.08	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 95.38%			
13C2-PFDA	7.295	515.0 -> 470.0	32056	24.49	µg/L	0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 122.43%			
Target Compounds						**Qvalue**
PFPeA	3.624	263.0 -> 219.0	1123	4.456	µg/L	100
PFBS	3.753	299.0 -> 80.0	708	3.075	µg/L	100
PFHxA	4.483	313.0 -> 269.0	3092	4.148	µg/L	91
PFHxS	5.192	399.0 -> 80.0	5108	14.150	µg/L	86
PFHpA	5.197	363.0 -> 319.0	1558	2.014	µg/L	99
PFOA	5.836	413.0 -> 369.0	10251	4.268	µg/L	81
PFOS	6.396	499.0 -> 80.0	13666	18.348	µg/L	80
PFNA	6.462	463.0 -> 419.0	707	0.671	µg/L	100

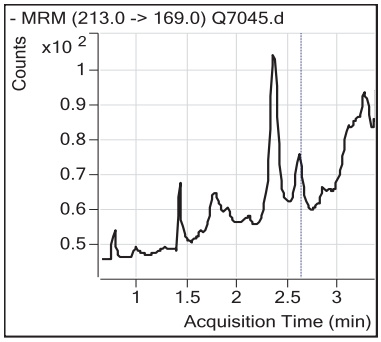
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

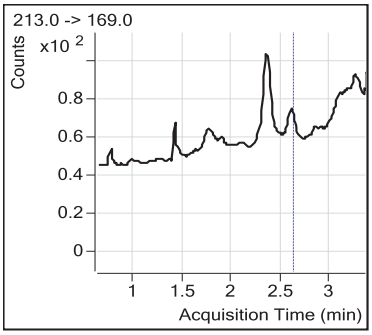
Perfluorinated Compounds by LC/MS/MS.

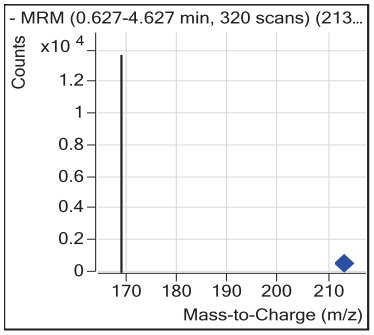
Data File	:	Q7045.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 15:28
Sample Name	:	fa18133-1
Vial	:	Vial 8
Sample Info	:	OP53121,SQ238,90,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



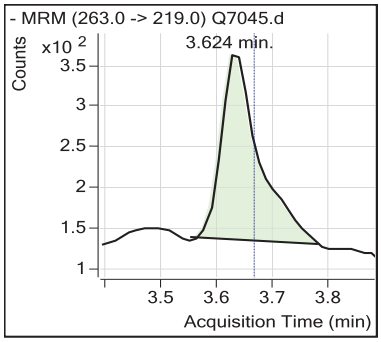
PFBA

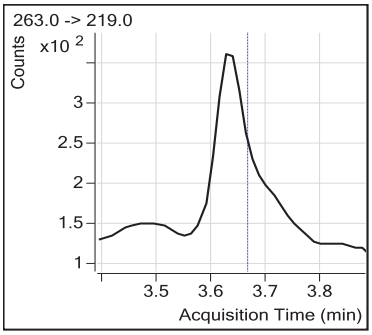


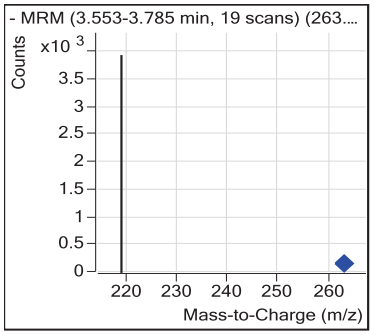




PFPeA

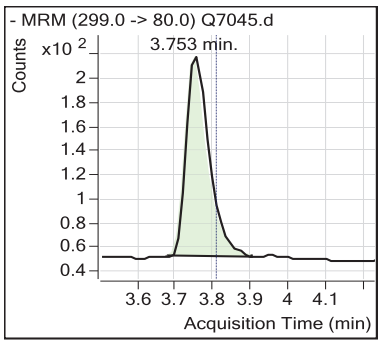


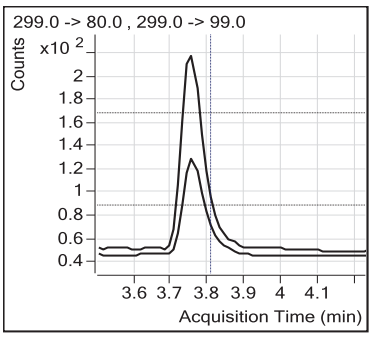


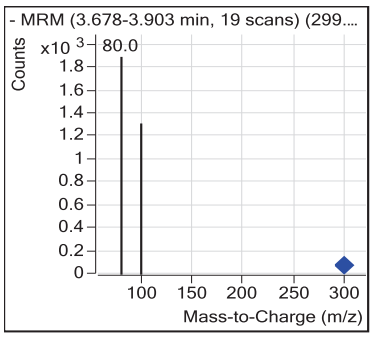


Perfluorinated Compounds by LC/MS/MS.

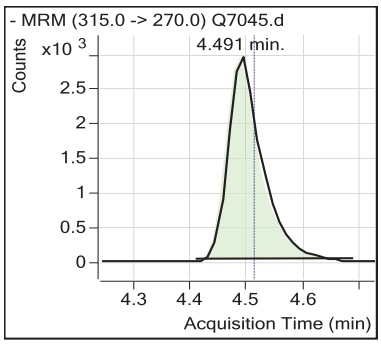
PFBS

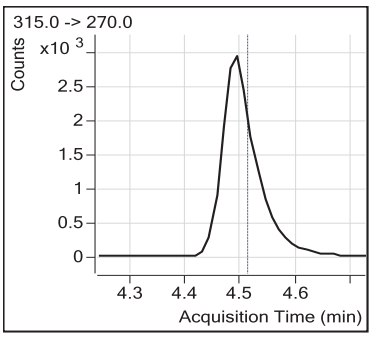


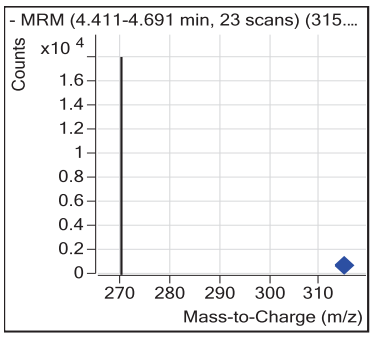




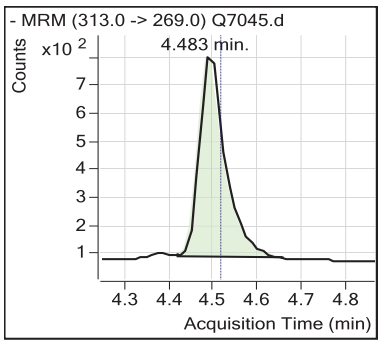
13C2-PFHxA

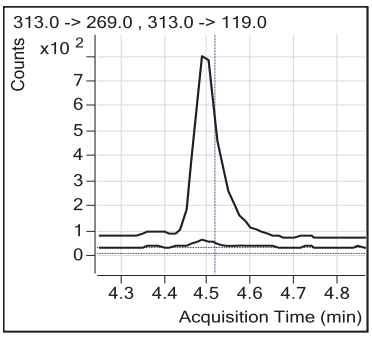


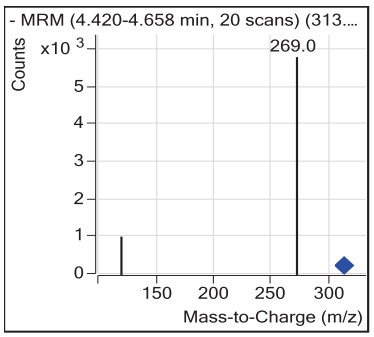




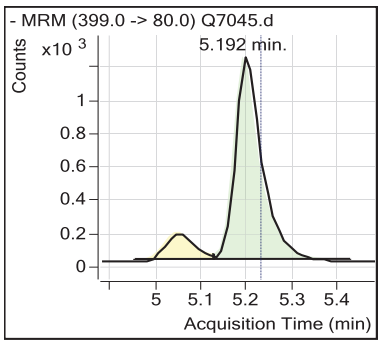
PFHxA

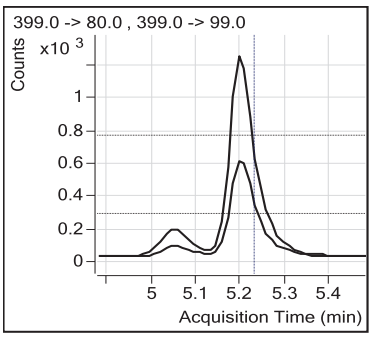


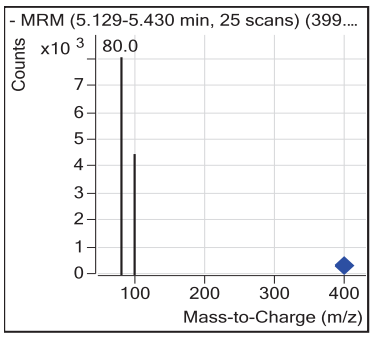




PFHxS

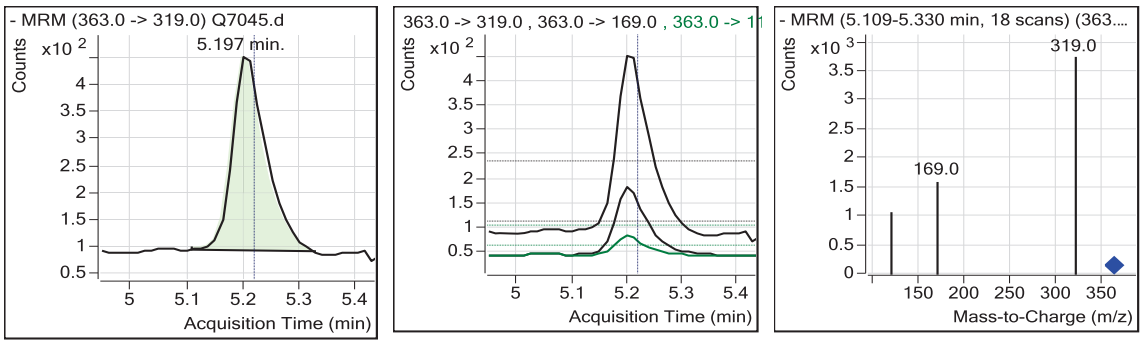




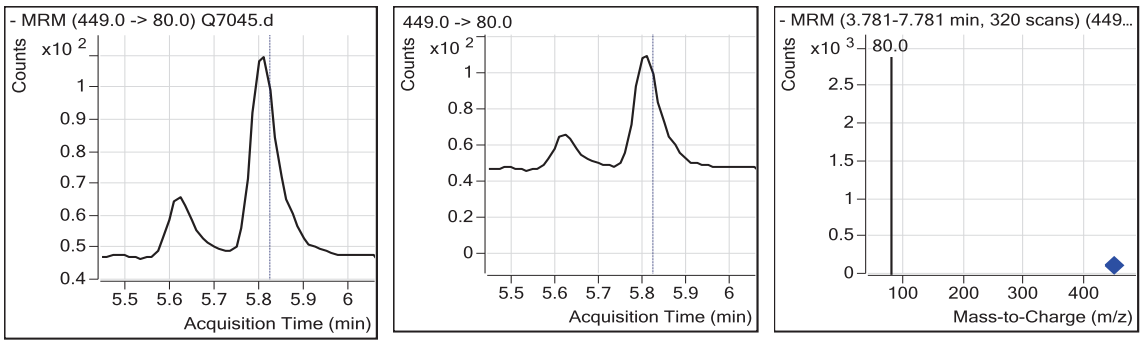


Perfluorinated Compounds by LC/MS/MS.

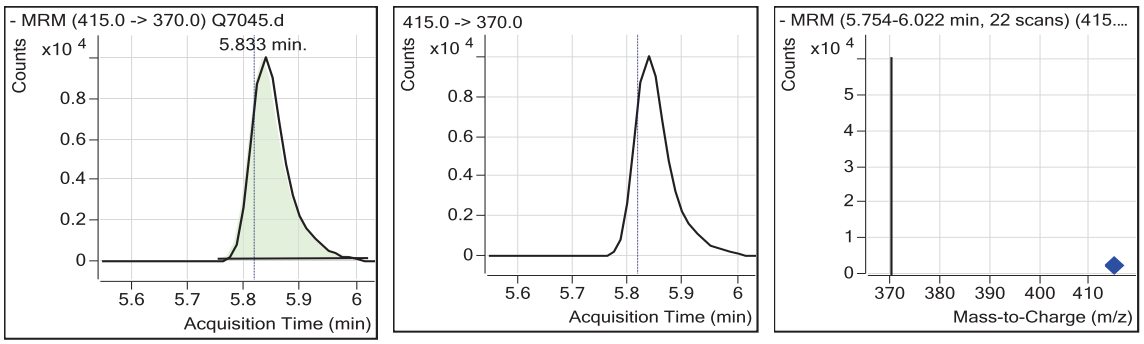
PFHpA



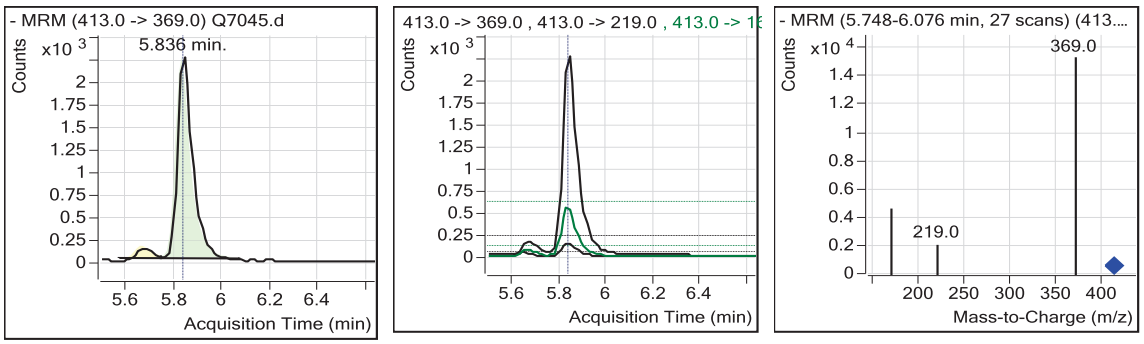
PFHpS



13C2-PFOA

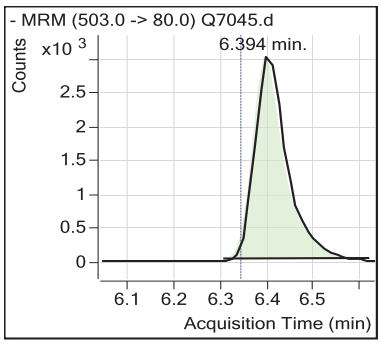


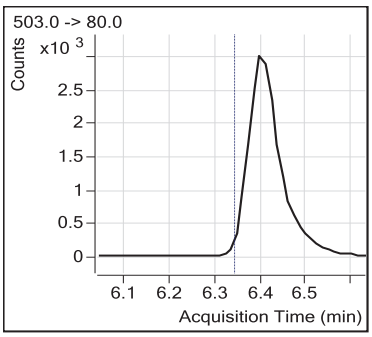
PFOA

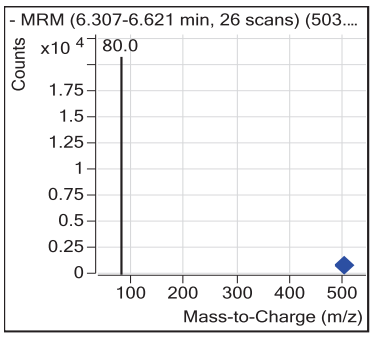


Perfluorinated Compounds by LC/MS/MS.

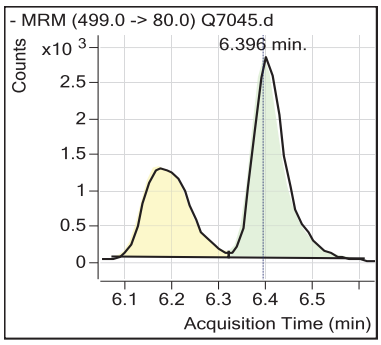
13C4-PFOS

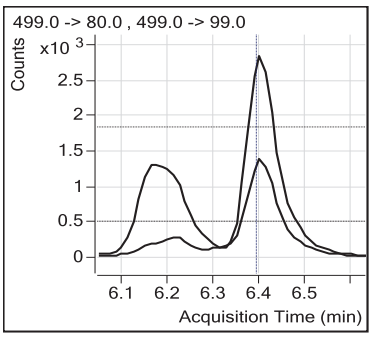


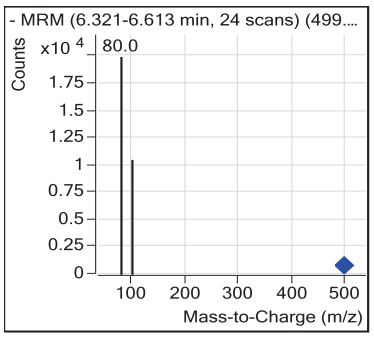




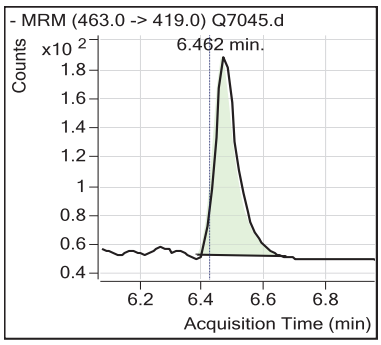
PFOS

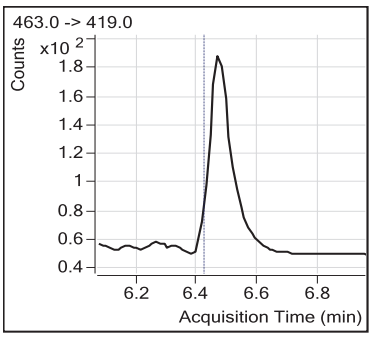


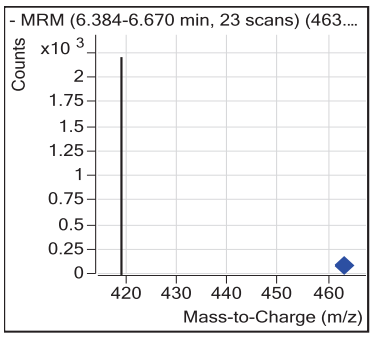




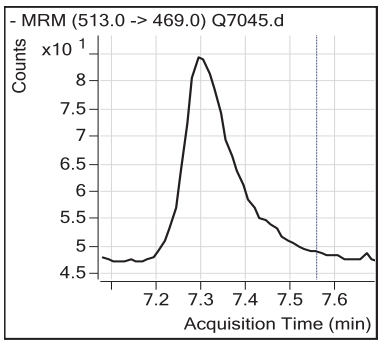
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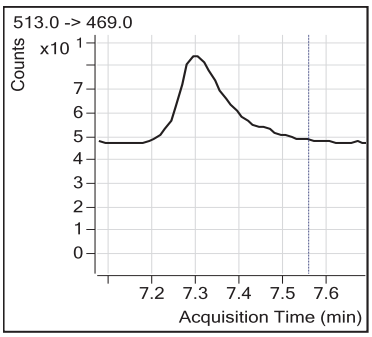


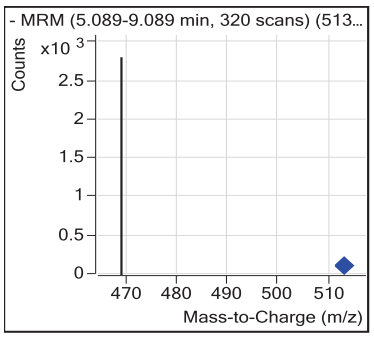




PFDA

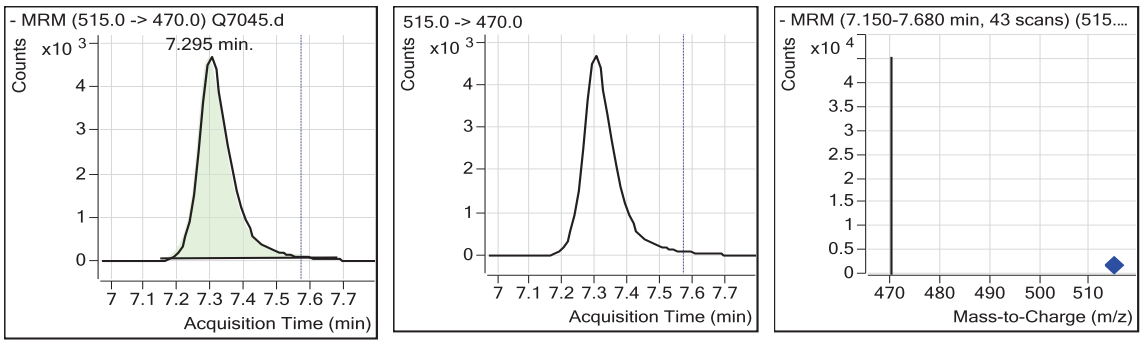




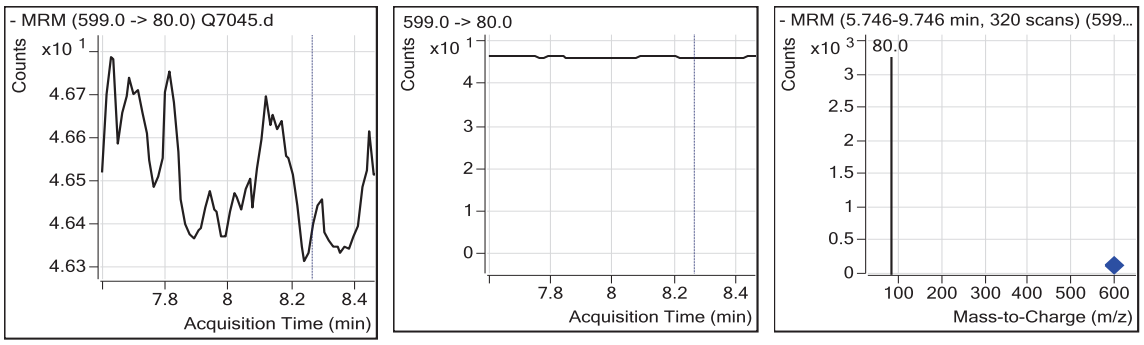


Perfluorinated Compounds by LC/MS/MS.

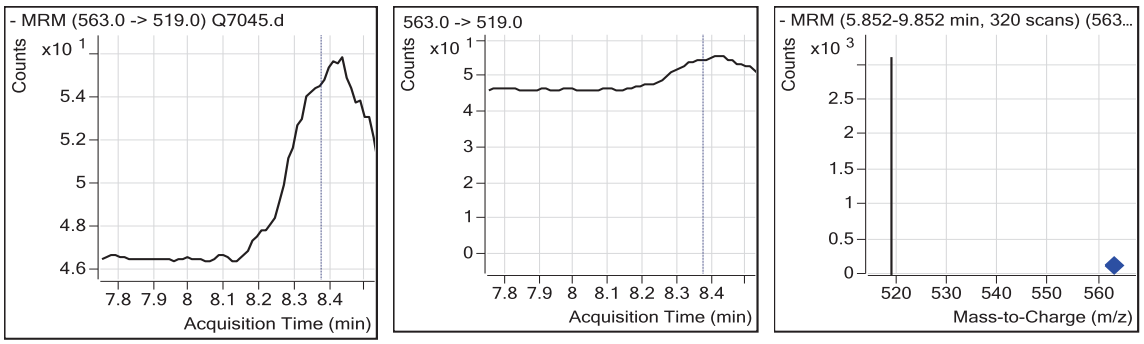
13C2-PFDA



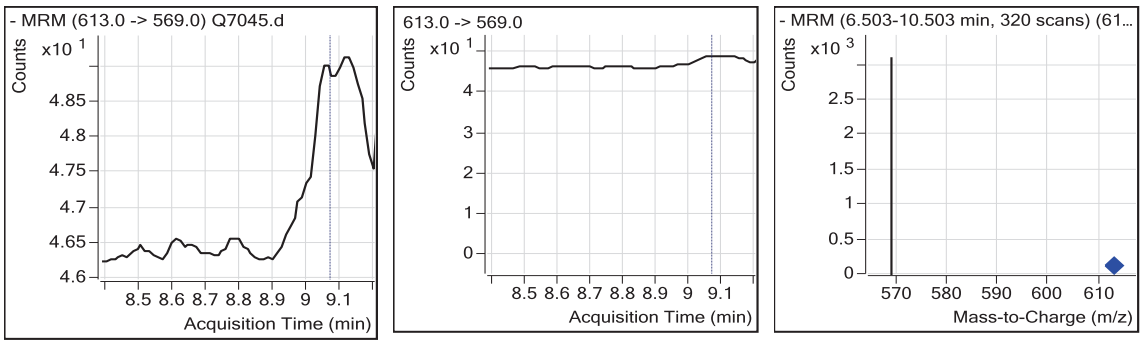
PFDS



PFUnDA

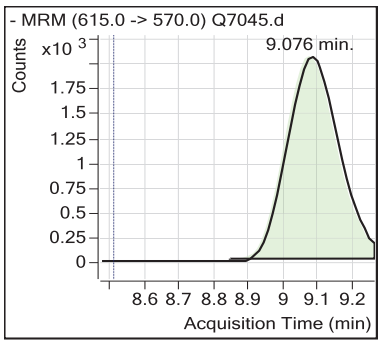


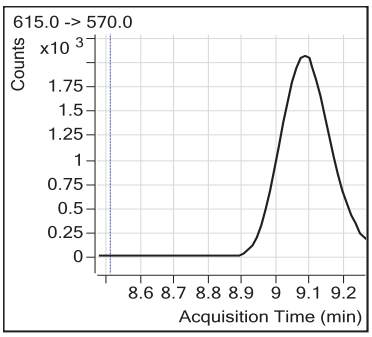
PFDoDA

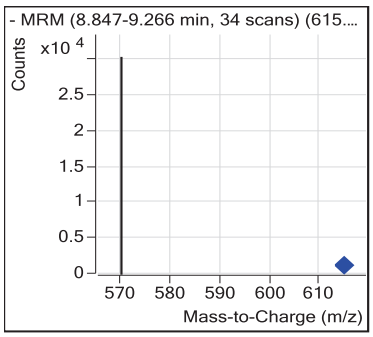


Perfluorinated Compounds by LC/MS/MS.

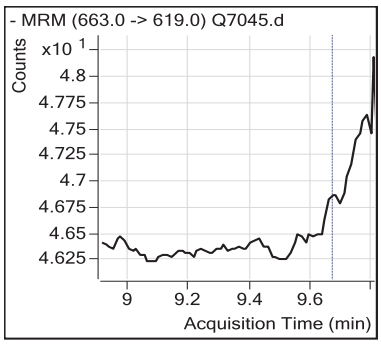
13C2-PFDoDA

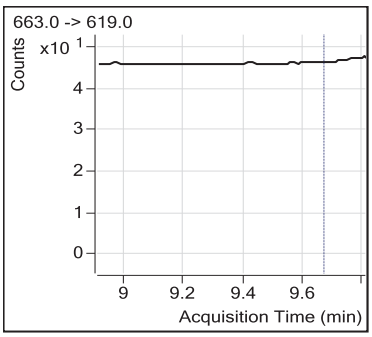


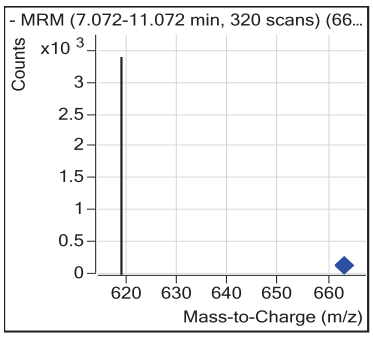




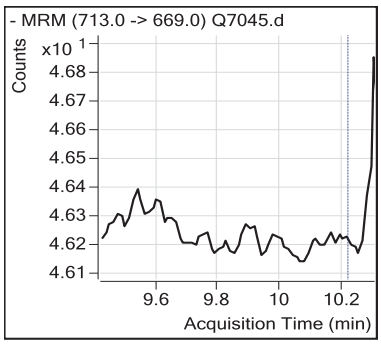
PFTrDA

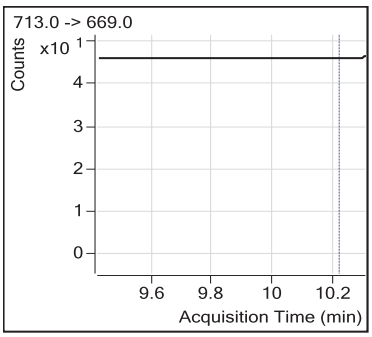


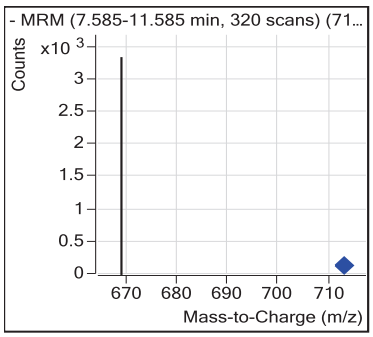




PFTeDA







Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling 09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

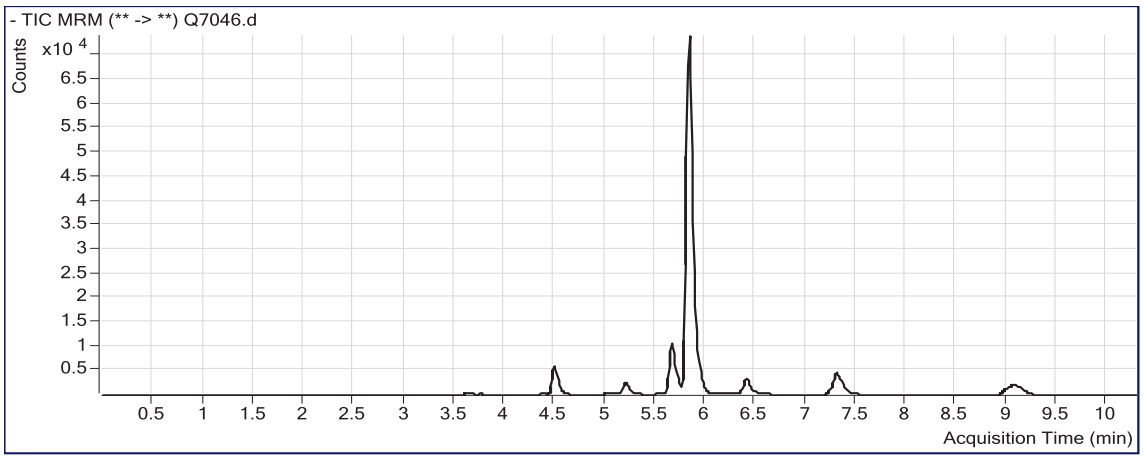
Data File	:	Q7046.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 15:48
Sample Name	:	fa18133-2
Vial	:	Vial 9
Sample Info	:	OP53121,SQ238,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	40468	20.000	µg/L		0.013
13C4-PFOS	6.394	503.0 -> 80.0	15299	20.000	µg/L		0.050
13C2-PFDoDA	9.064	615.0 -> 570.0	22771	20.000	µg/L		0.555
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	14177	23.64	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 118.22%				
13C2-PFDA	7.295	515.0 -> 470.0	32787	23.74	µg/L		0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 118.71%				
Target Compounds							**Qvalue**
PFPeA	3.636	263.0 -> 219.0	2037	8.851	µg/L		100
PFBS	3.753	299.0 -> 80.0	363	1.501	µg/L		97
PFHxA	4.495	313.0 -> 269.0	11457	16.825	µg/L		99
PFHxS	5.205	399.0 -> 80.0	4263	11.233	µg/L		84
PFHpA	5.210	363.0 -> 319.0	3296	4.694	µg/L		99
PFOA	5.836	413.0 -> 369.0	267665	133.713	µg/L	m	76
PFOS	6.171	499.0 -> 80.0	708	0.863	µg/L	m	94

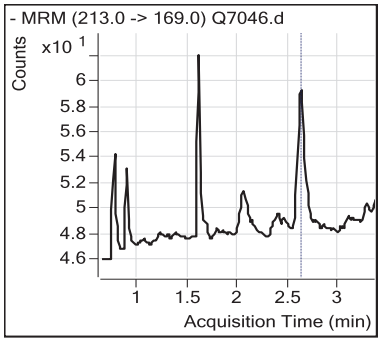
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

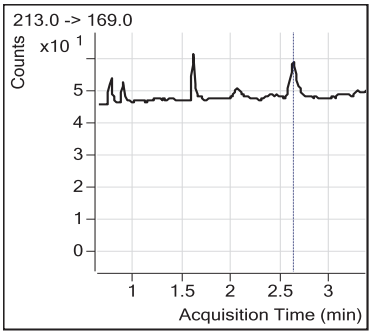
Perfluorinated Compounds by LC/MS/MS.

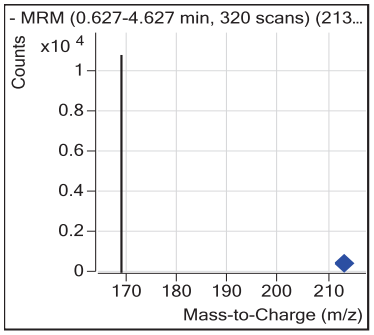
Data File	:	Q7046.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 15:48
Sample Name	:	fa18133-2
Vial	:	Vial 9
Sample Info	:	OP53121,SQ238,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



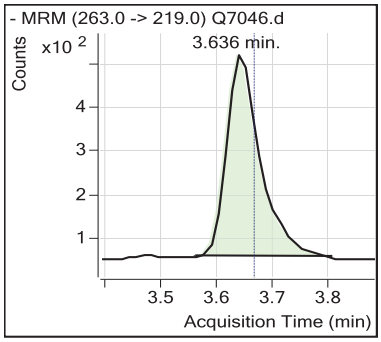
PFBA

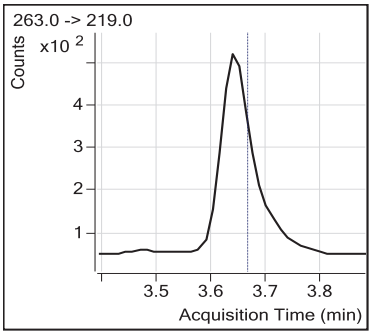


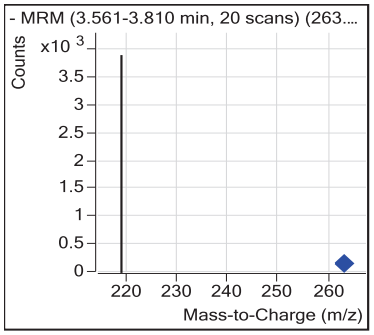




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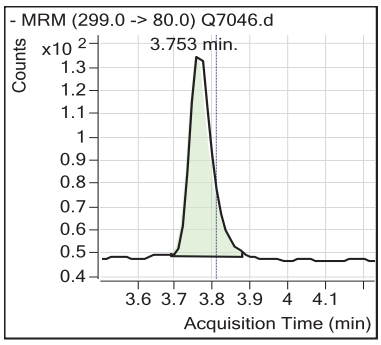


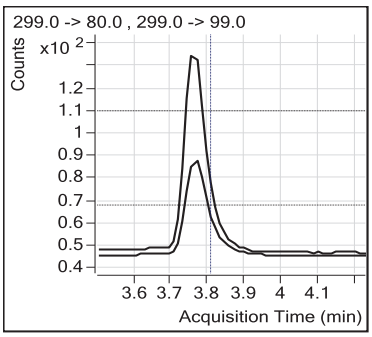


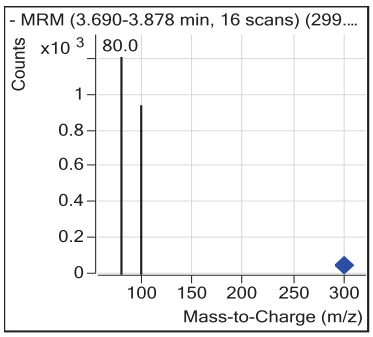


Perfluorinated Compounds by LC/MS/MS.

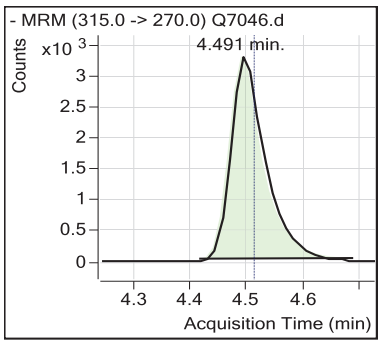
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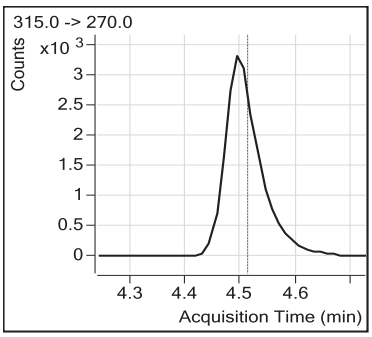


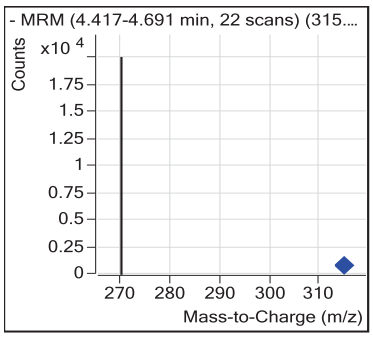




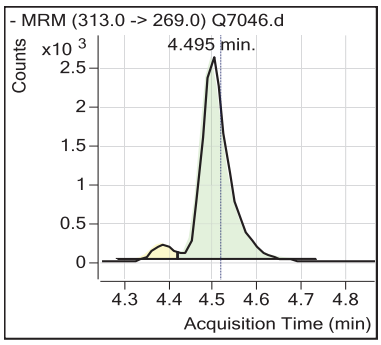
13C2-PFHxA

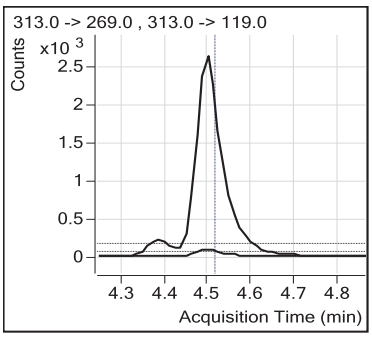


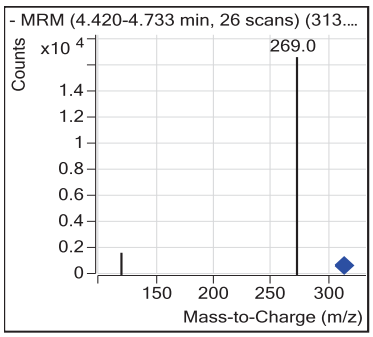




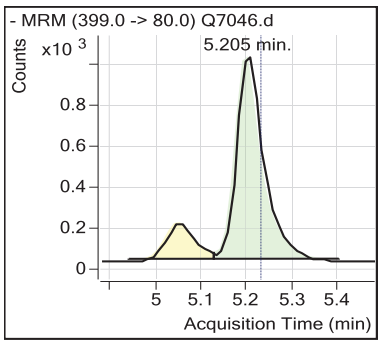
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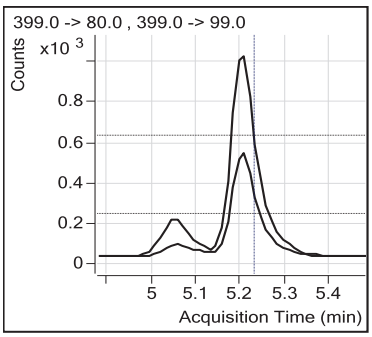


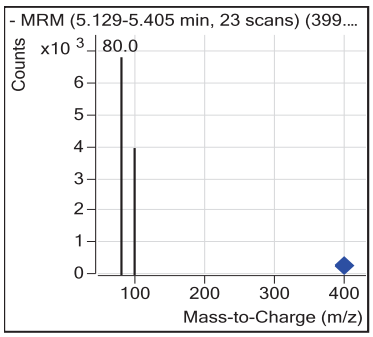




PFHxS

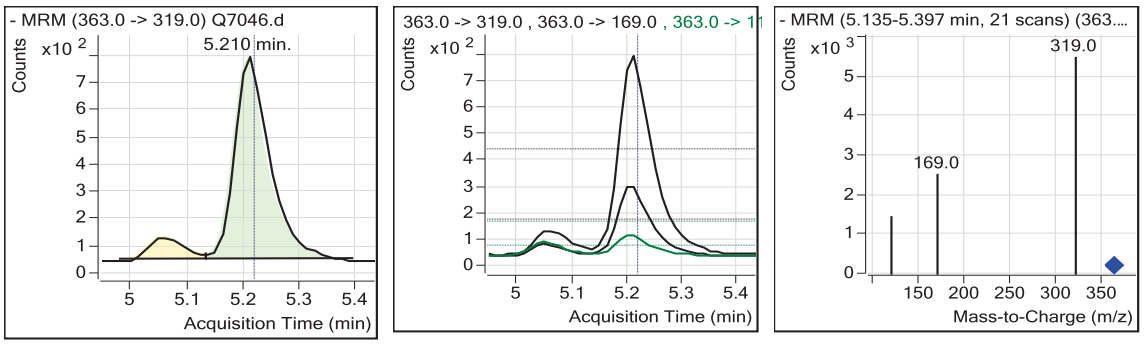




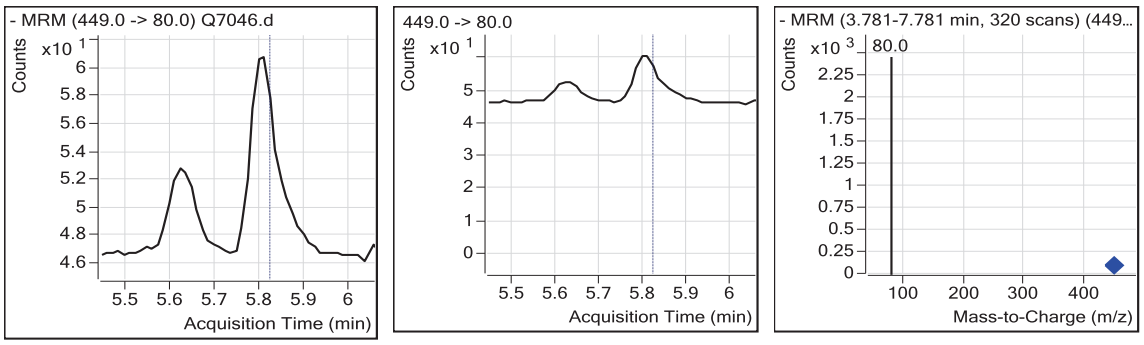


Perfluorinated Compounds by LC/MS/MS.

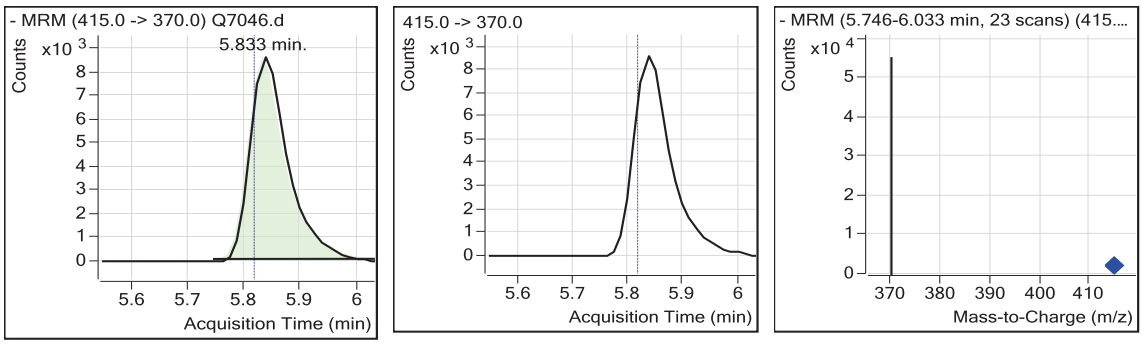
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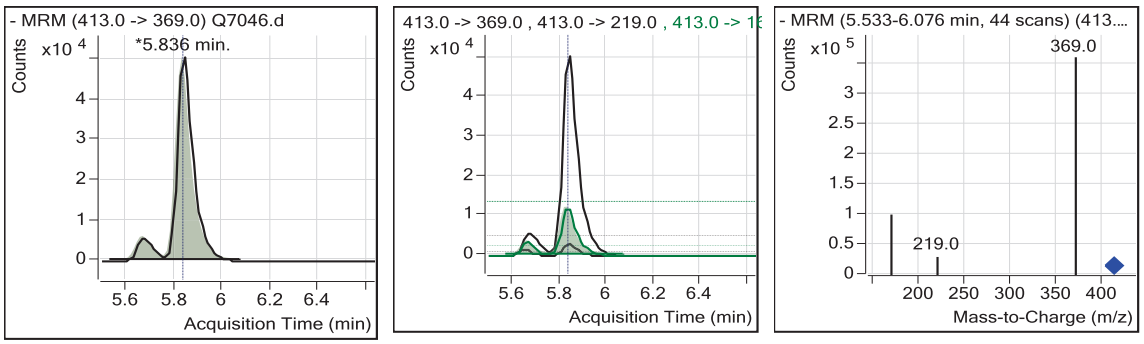
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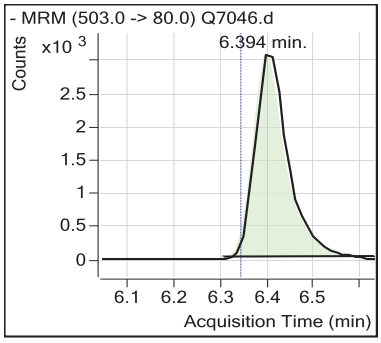


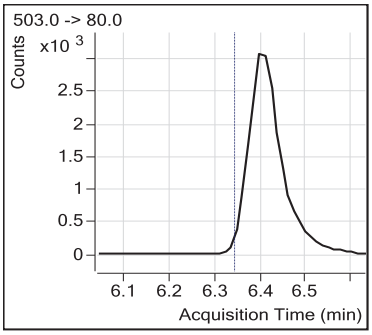
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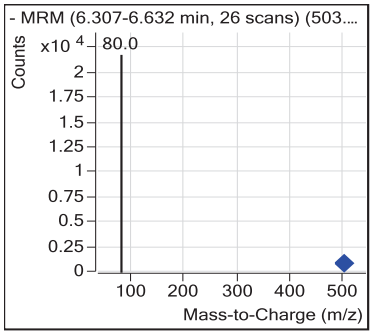


Perfluorinated Compounds by LC/MS/MS.

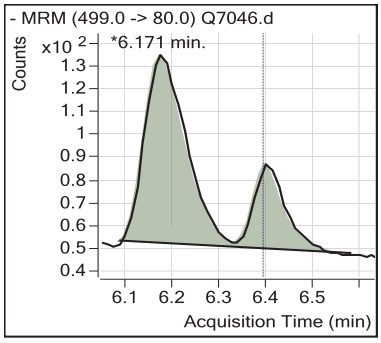
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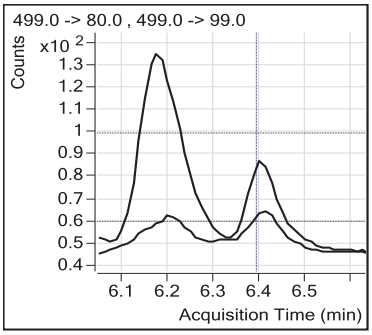


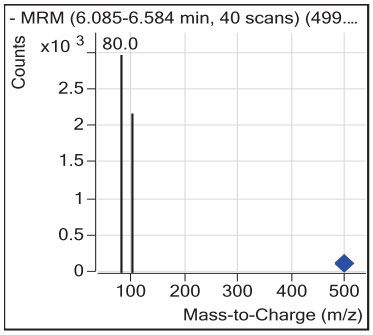




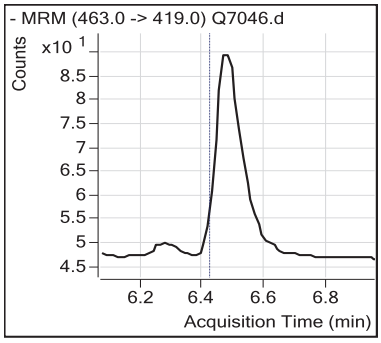
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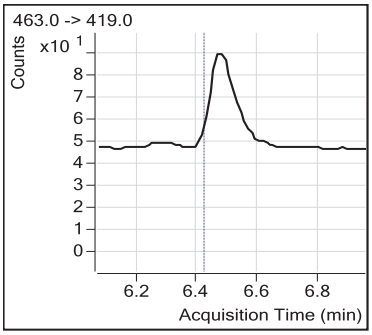


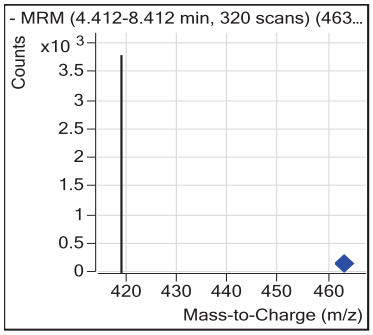




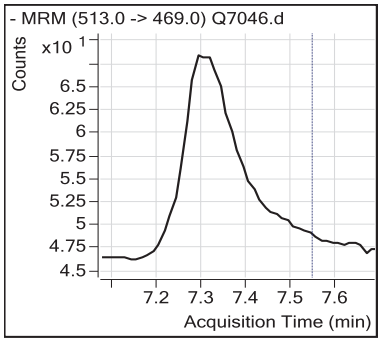
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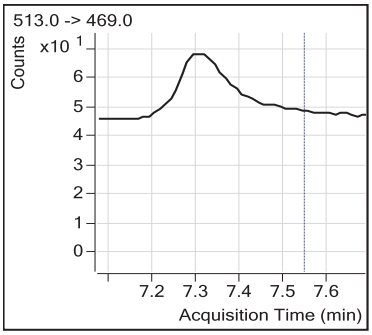


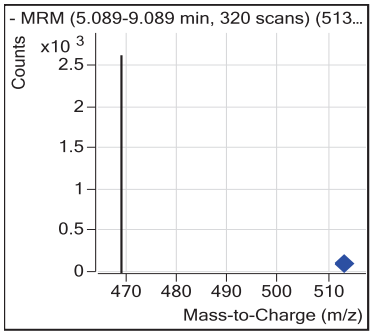




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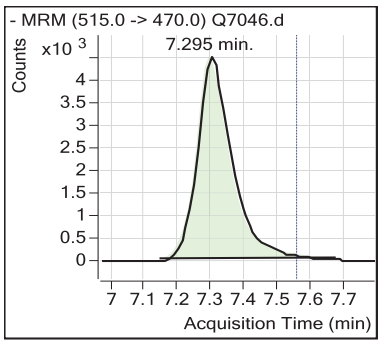


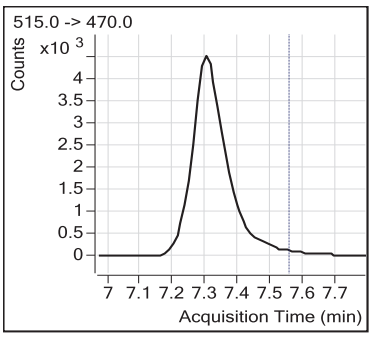


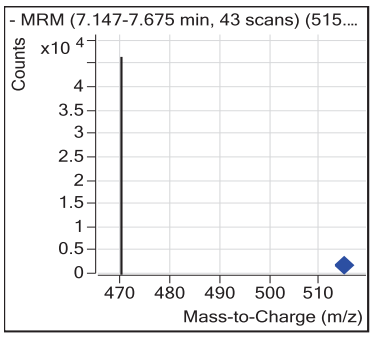


Perfluorinated Compounds by LC/MS/MS.

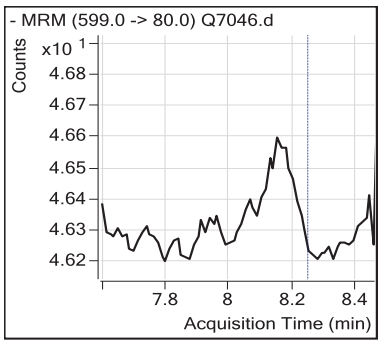
13C2-PFDA

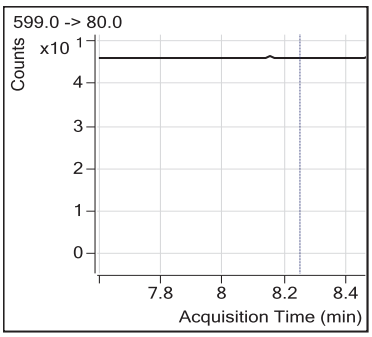


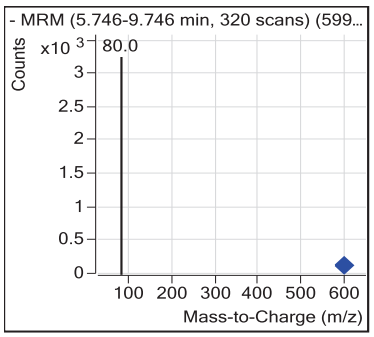




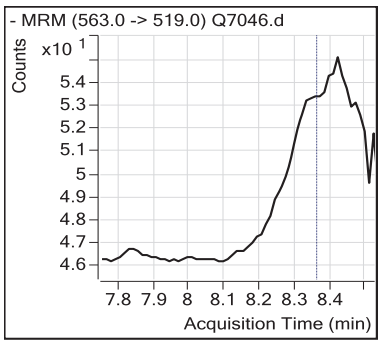
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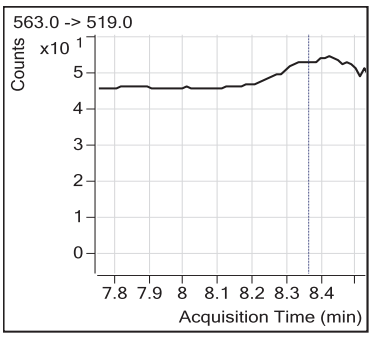


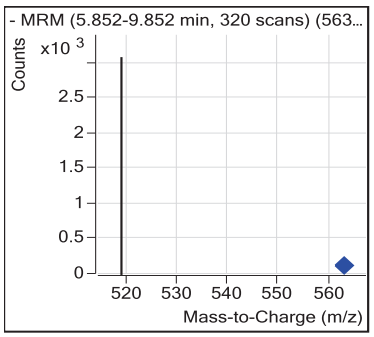




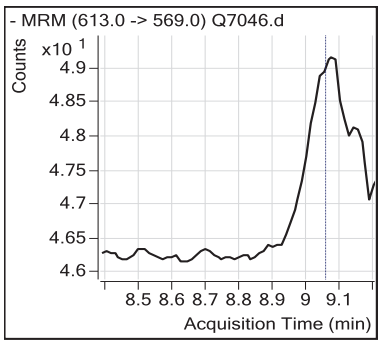
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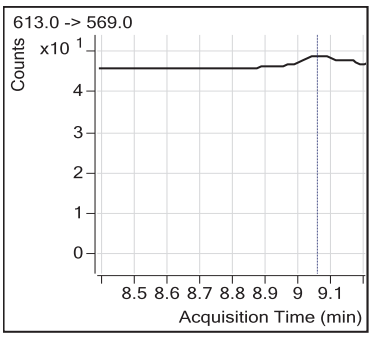


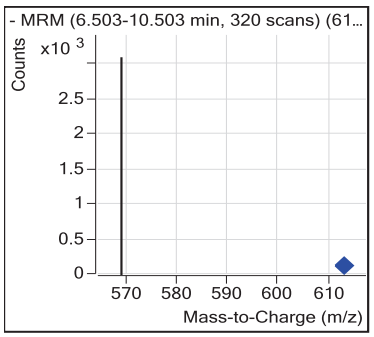




PFDoDA

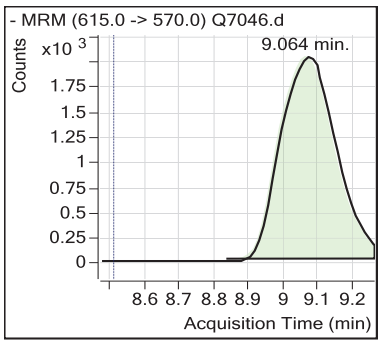


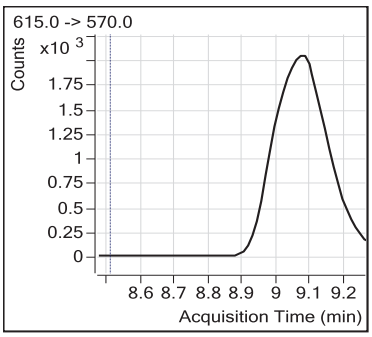


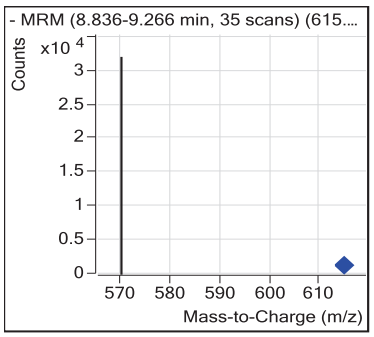


Perfluorinated Compounds by LC/MS/MS.

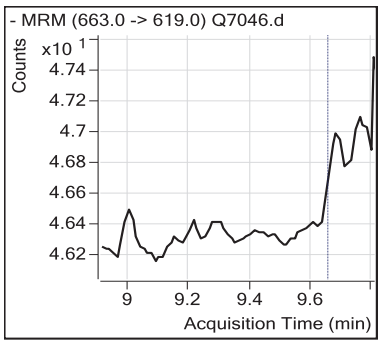
13C2-PFDoDA

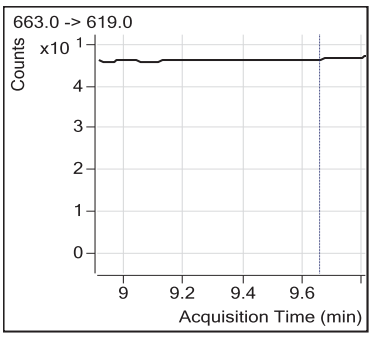


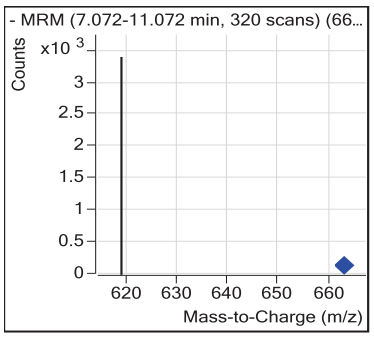




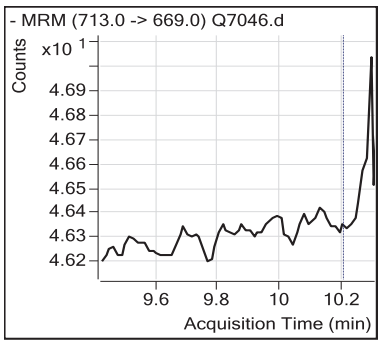
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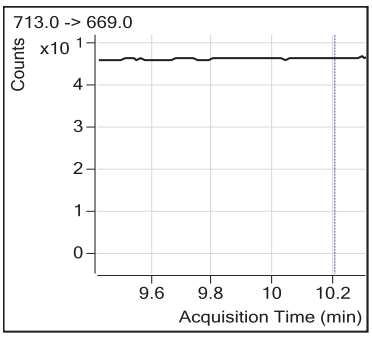


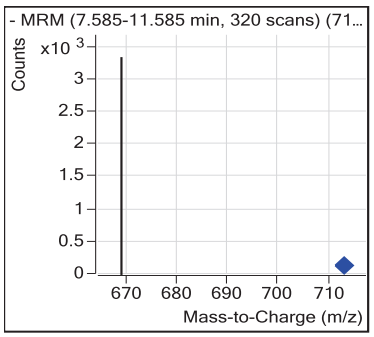




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-2
Lab FileID: Q7046.D
Injection Time: 09/18/14 15:48
Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling 09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

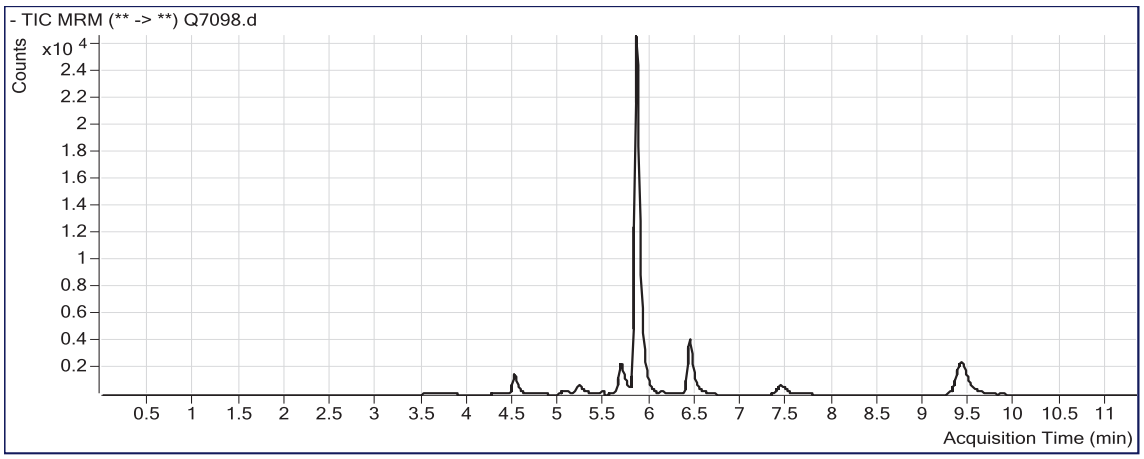
Data File	:	Q7098.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 12:03
Sample Name	:	FA18133-2
Vial	:	Vial 4
Sample Info	:	OP53121,SQ240,120,,,1,5,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	46318	20.000	µg/L		-0.013
13C4-PFOS	6.419	503.0 -> 80.0	18158	20.000	µg/L		-0.013
13C2-PFDoDA	9.384	615.0 -> 570.0	22660	20.000	µg/L		-0.013
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	3338	4.86	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 24.32%				
13C2-PFDA	7.420	515.0 -> 470.0	5263	3.83	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 19.15%				
Target Compounds							**Qvalue**
PFPeA	3.649	263.0 -> 219.0	446	1.694	µg/L		100
PFBS	3.765	299.0 -> 80.0	77	0.270	µg/L	m	99
PFHxA	4.508	313.0 -> 269.0	2849	3.656	µg/L	m	99
PFHxS	5.205	399.0 -> 80.0	976	2.168	µg/L	m	87
PFHpA	5.222	363.0 -> 319.0	811	0.999	µg/L	m	96
PFOA	5.848	413.0 -> 369.0	56985	24.044	µg/L	m	85
PFOS	6.184	499.0 -> 80.0	256	0.263	µg/L	m	94
PFNA	6.478	463.0 -> 419.0	684	0.620	µg/L		100
PFTeDA	10.898	713.0 -> 669.0	498	0.741	µg/L		100

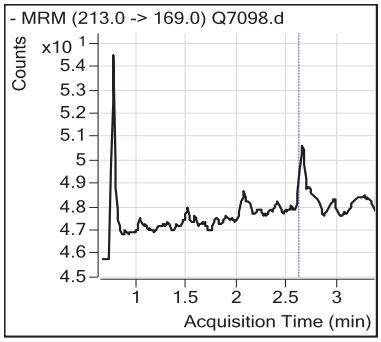
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

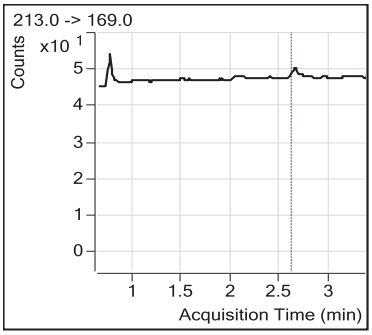
Perfluorinated Compounds by LC/MS/MS.

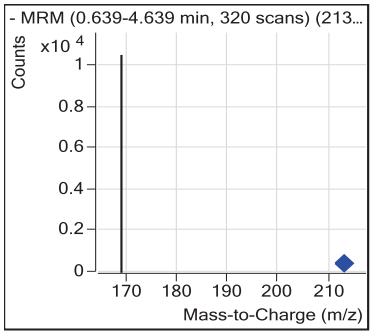
Data File	:	Q7098.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 12:03
Sample Name	:	FA18133-2
Vial	:	Vial 4
Sample Info	:	OP53121,SQ240,120,,,1,5,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05



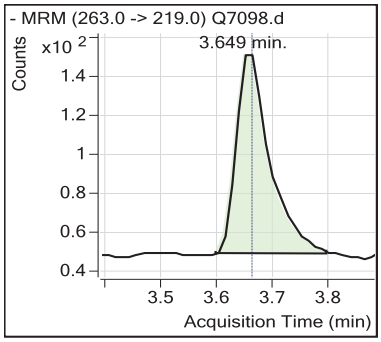
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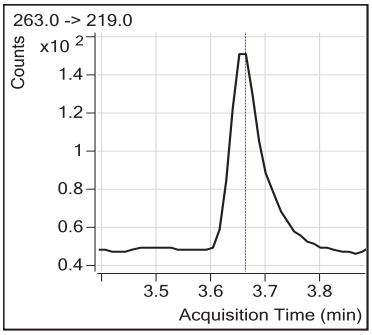


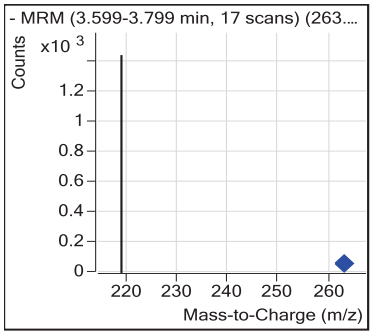




PFPeA

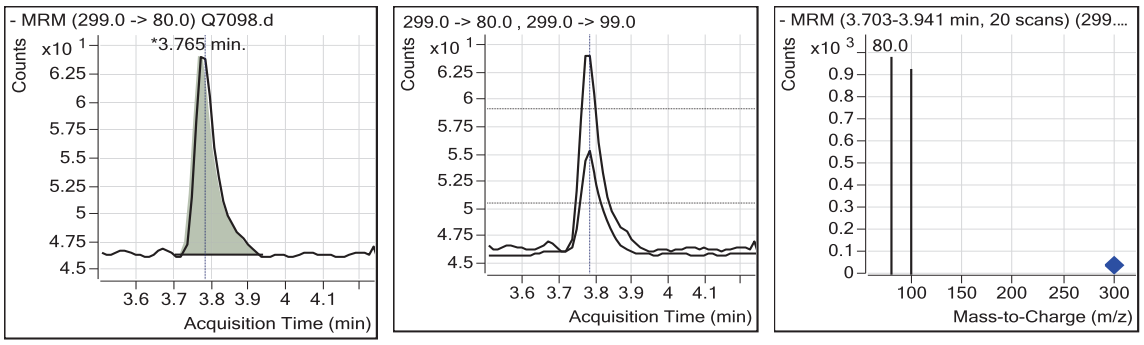




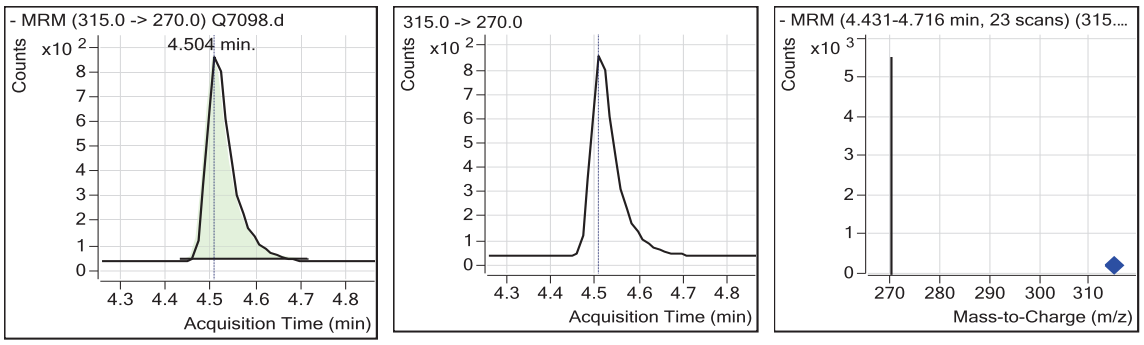


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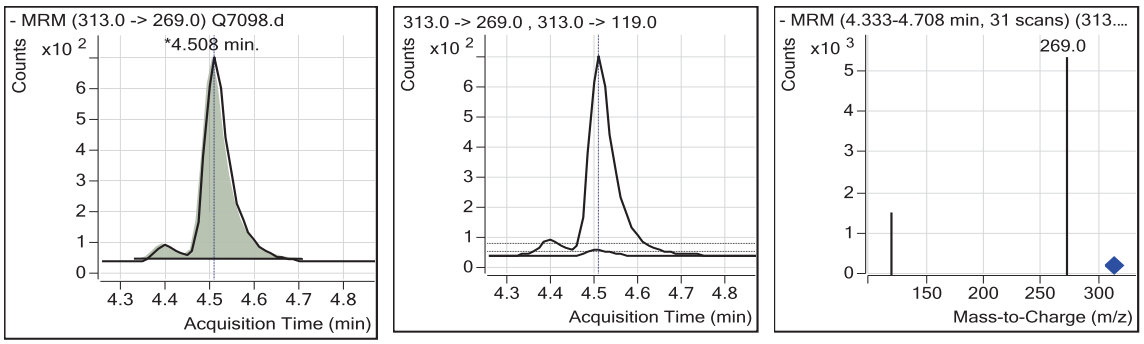
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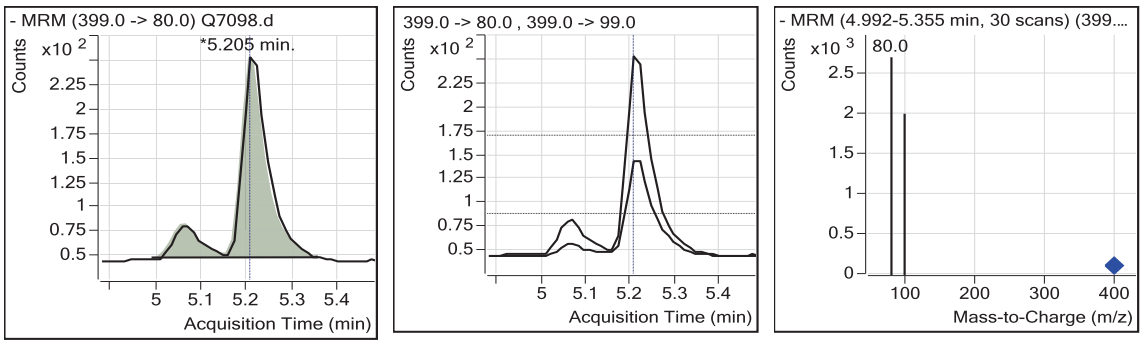
13C2-PFHxA



PFHxA

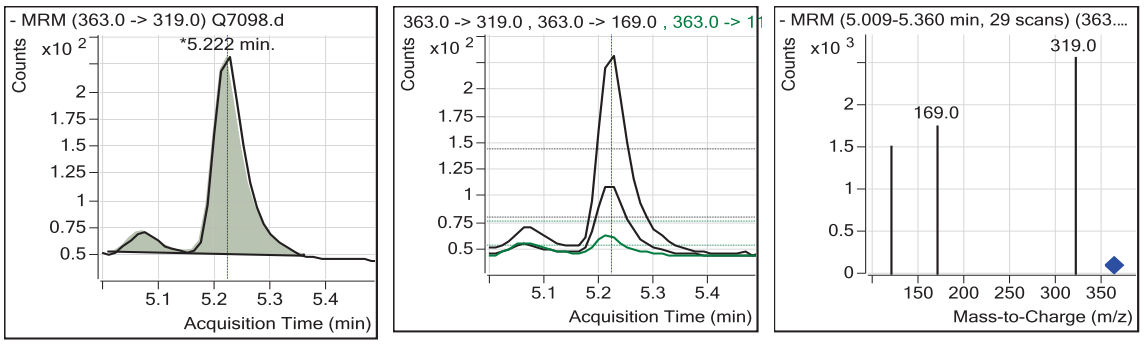


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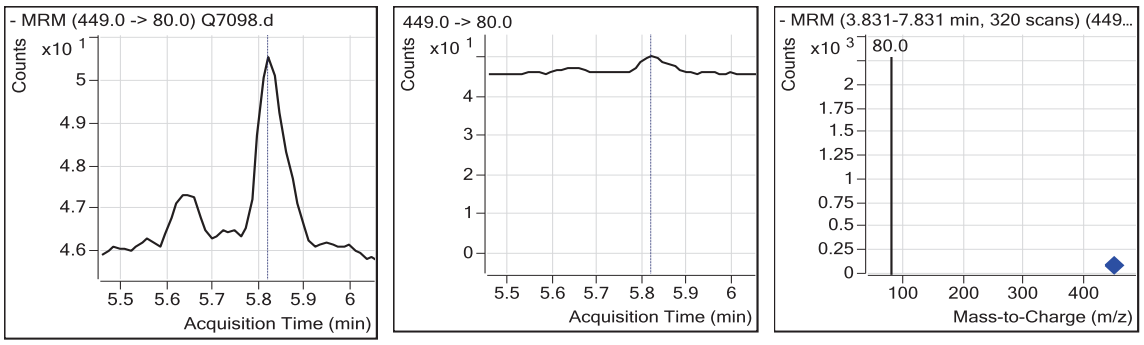


Perfluorinated Compounds by LC/MS/MS.

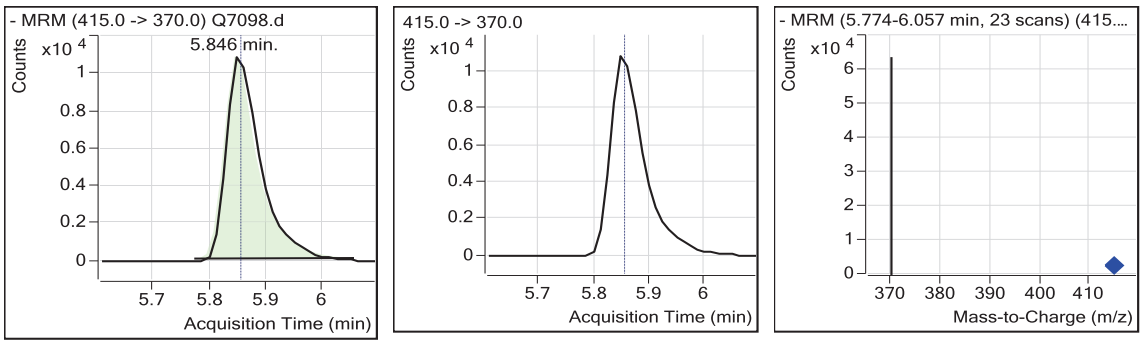
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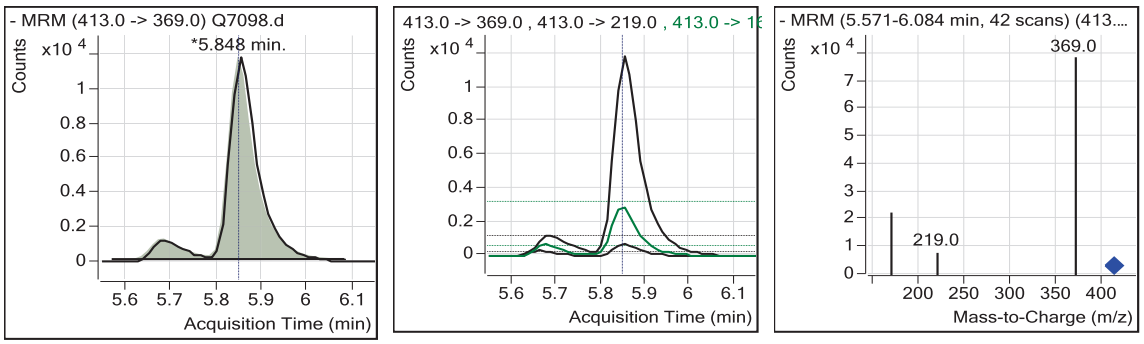
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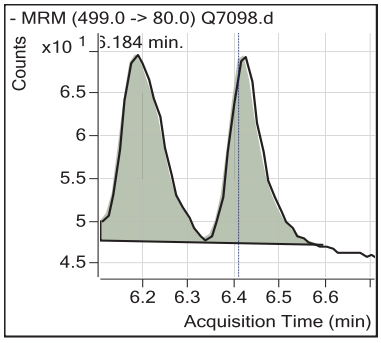


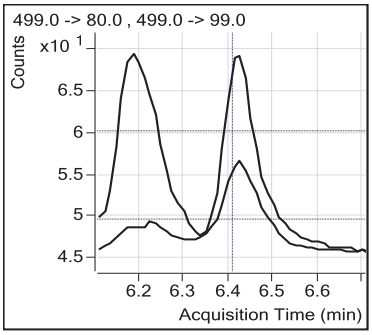
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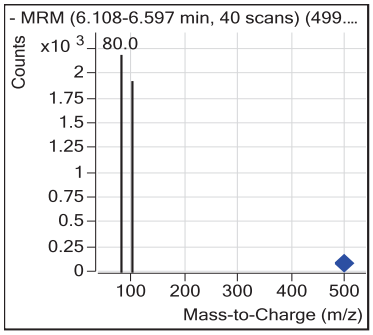


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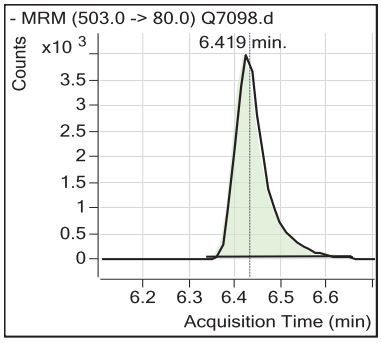
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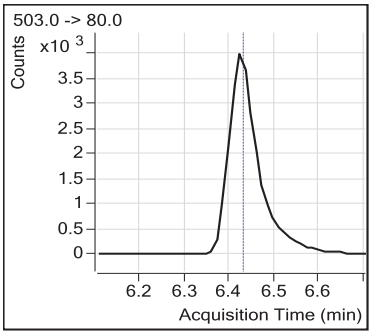


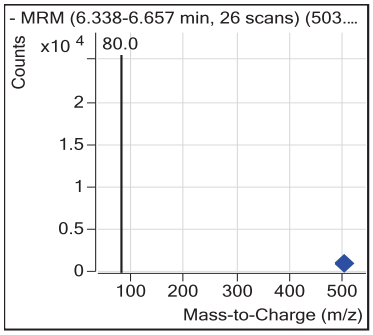




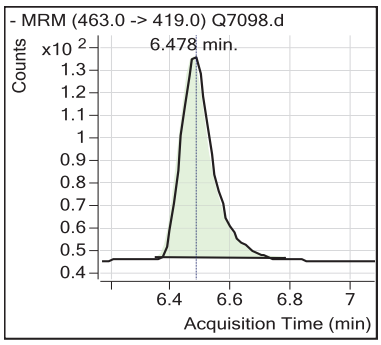
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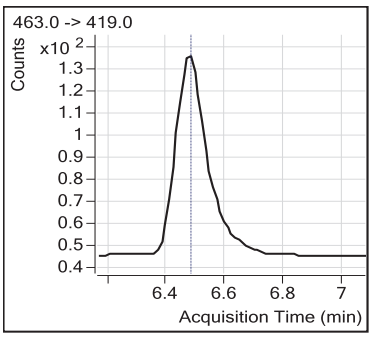


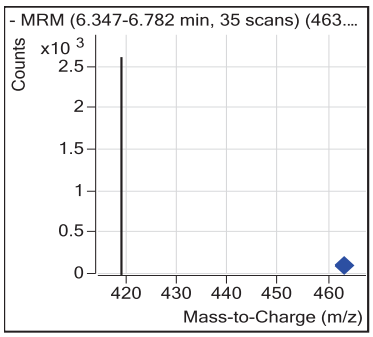




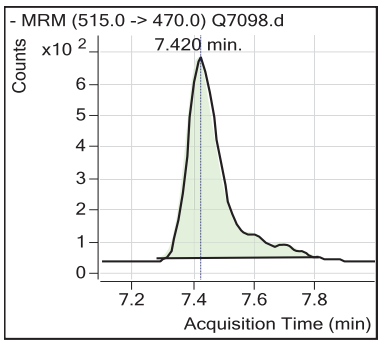
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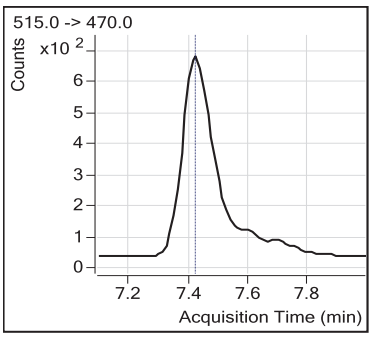


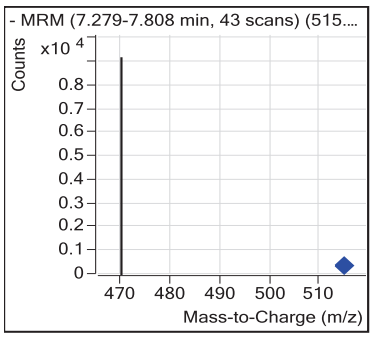




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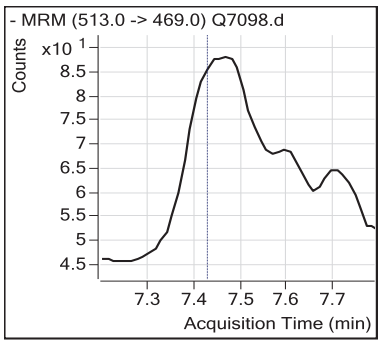


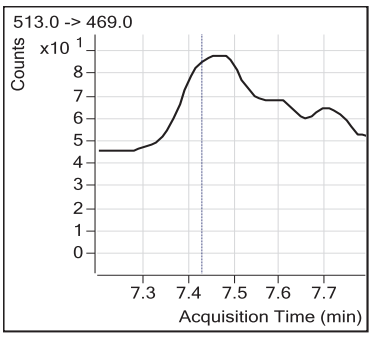


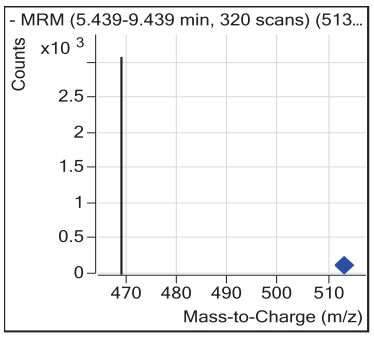


Perfluorinated Compounds by LC/MS/MS.

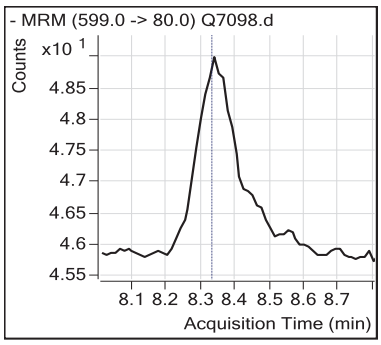
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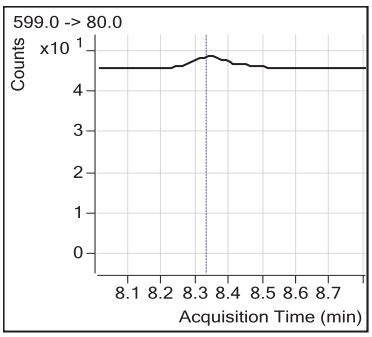


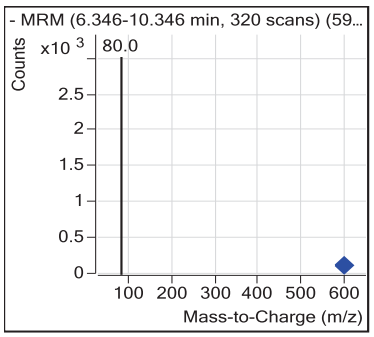




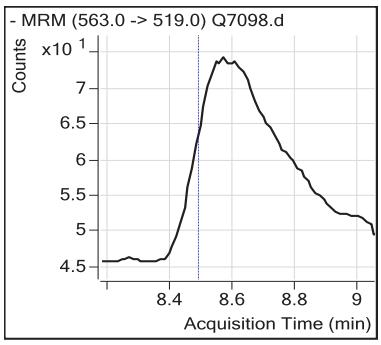
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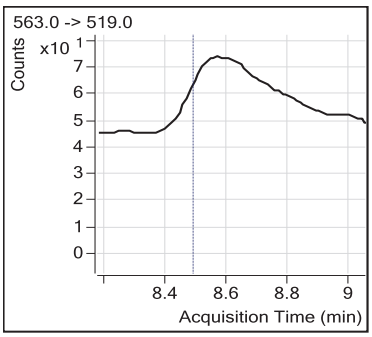


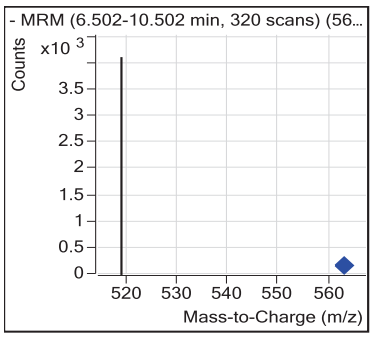




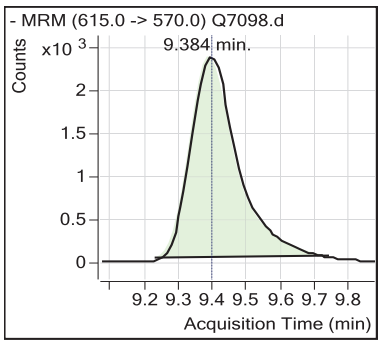
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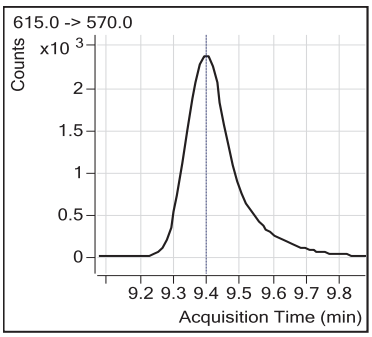


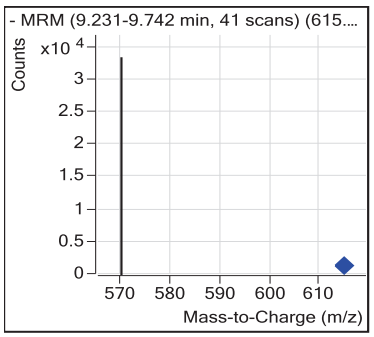




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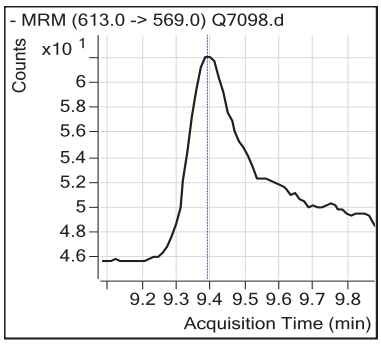


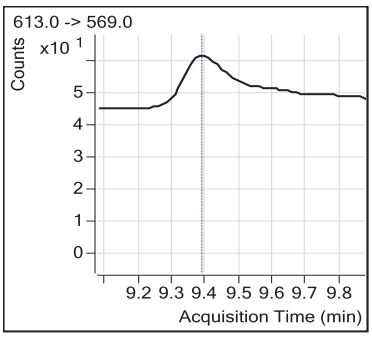


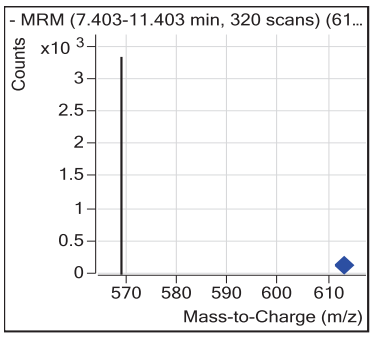


Perfluorinated Compounds by LC/MS/MS.

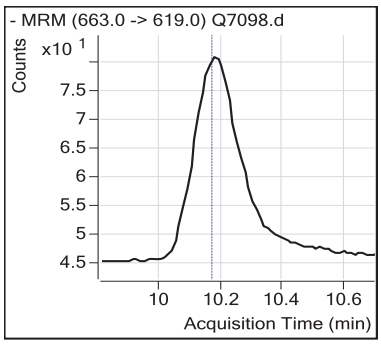
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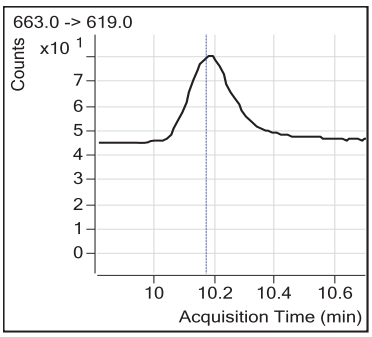


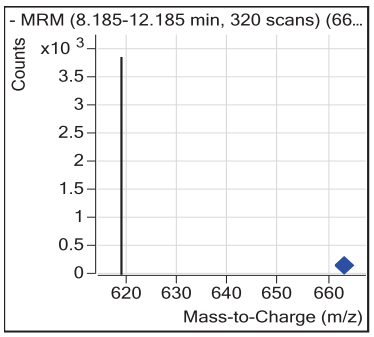




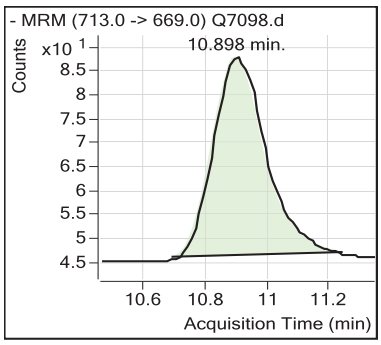
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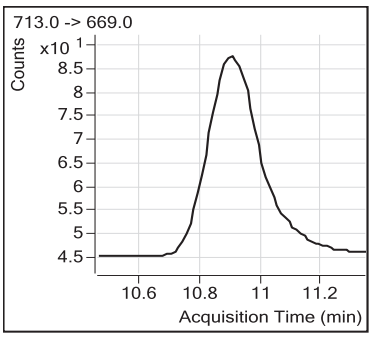


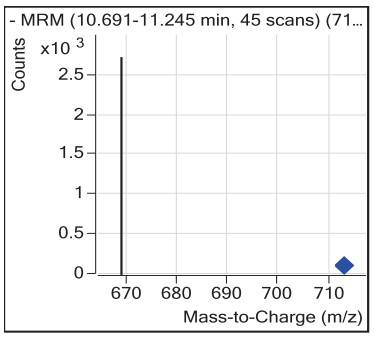




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-2
Lab FileID: Q7098.D
Injection Time: 09/22/14 12:03
Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanesulfonic acid	375-73-5		3.77	Split peak
Perfluorohexanoic acid	307-24-4		4.51	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluoroheptanoic acid	375-85-9		5.22	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.18	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling 09/22/14 14:41

Perfluorinated Compounds by LC/MS/MS.

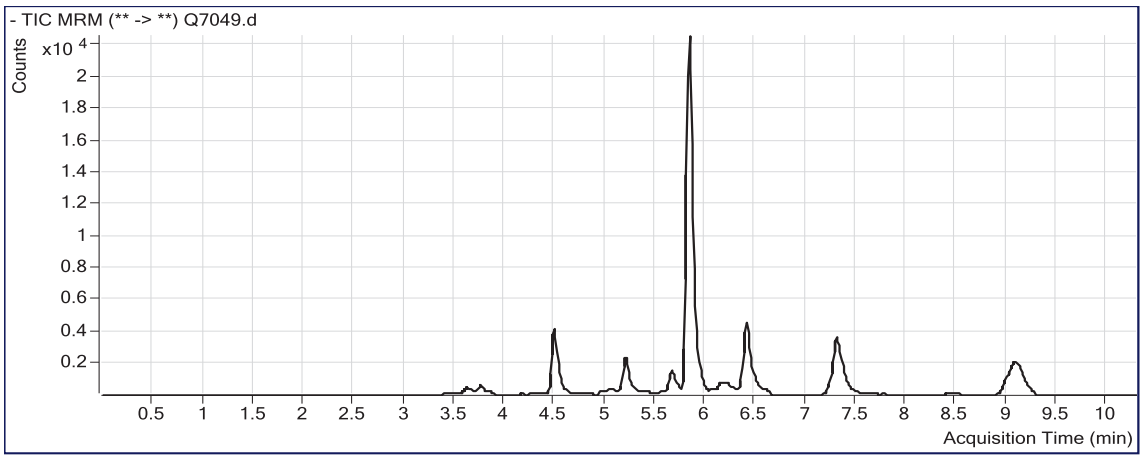
Data File	:	Q7049.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 16:45
Sample Name	:	fa18133-3
Vial	:	Vial 12
Sample Info	:	OP53121,SQ238,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	45350	20.000	µg/L		0.013
13C4-PFOS	6.394	503.0 -> 80.0	15288	20.000	µg/L		0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	22099	20.000	µg/L		0.567
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	12168	18.11	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 90.54%				
13C2-PFDA	7.295	515.0 -> 470.0	26102	19.48	µg/L		0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 97.38%				
Target Compounds							**Qvalue**
PFPeA	3.636	263.0 -> 219.0	1470	5.701	µg/L		100
PFBS	3.753	299.0 -> 80.0	1266	5.230	µg/L		97
PFHxA	4.495	313.0 -> 269.0	5736	7.516	µg/L		99
PFHxS	5.192	399.0 -> 80.0	4013	10.584	µg/L	m	88
PFHpA	5.210	363.0 -> 319.0	2921	3.703	µg/L		99
PFOA	5.836	413.0 -> 369.0	48551	21.643	µg/L	m	78
PFOS	6.396	499.0 -> 80.0	7609	9.494	µg/L	m	94
PFNA	6.475	463.0 -> 419.0	1223	1.133	µg/L		100
PFDA	7.301	513.0 -> 469.0	319	0.255	µg/L		100

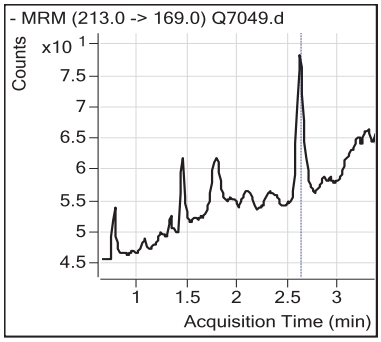
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

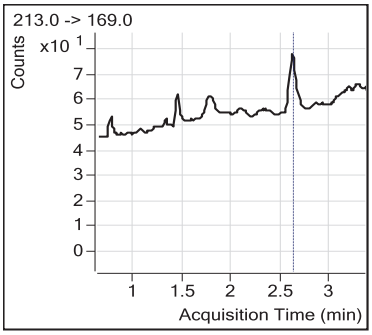
Perfluorinated Compounds by LC/MS/MS.

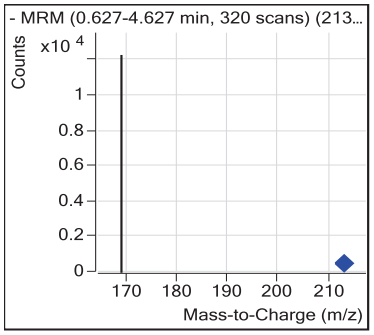
Data File	:	Q7049.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 16:45
Sample Name	:	fa18133-3
Vial	:	Vial 12
Sample Info	:	OP53121,SQ238,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



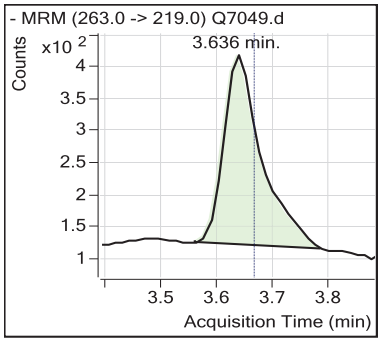
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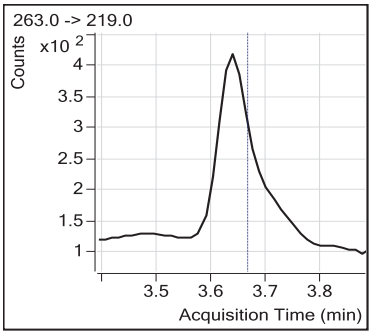


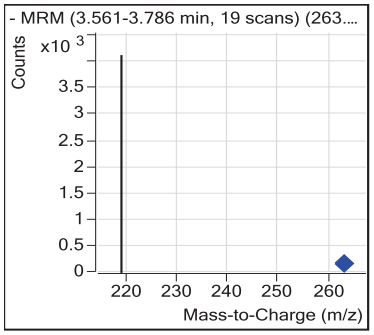




PFPeA

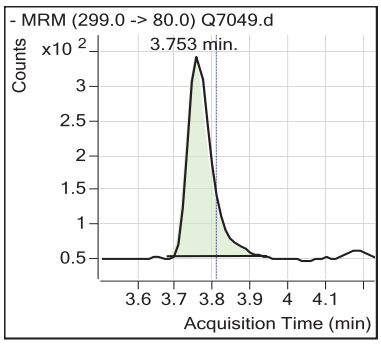


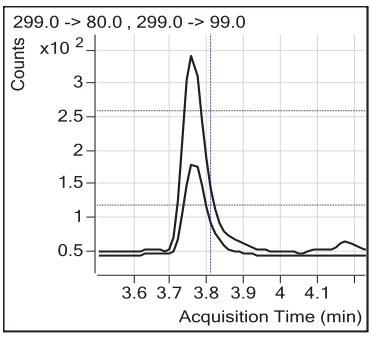


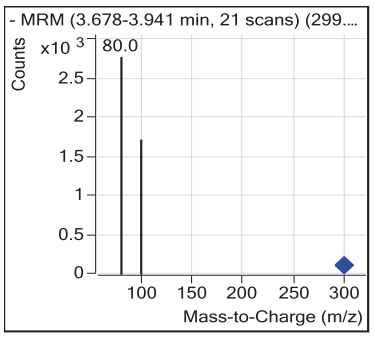


Perfluorinated Compounds by LC/MS/MS.

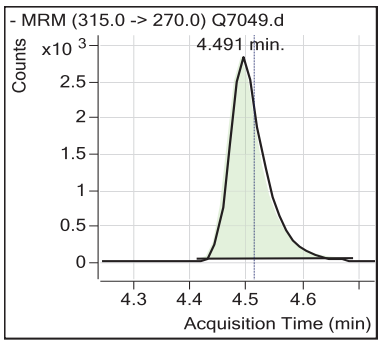
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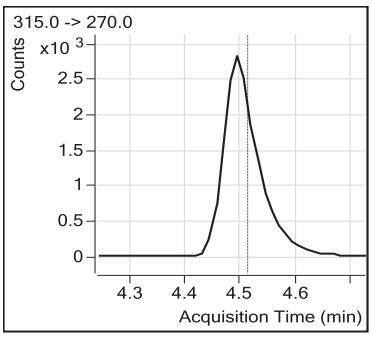


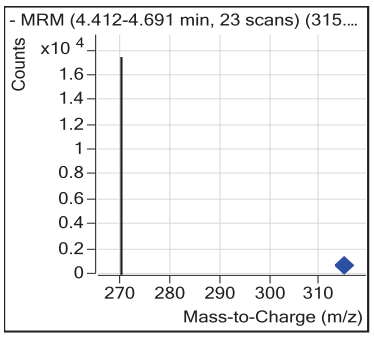




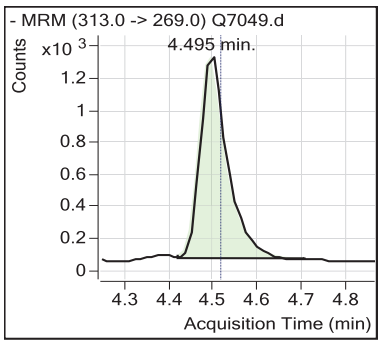
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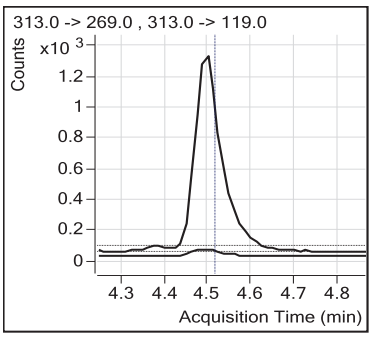


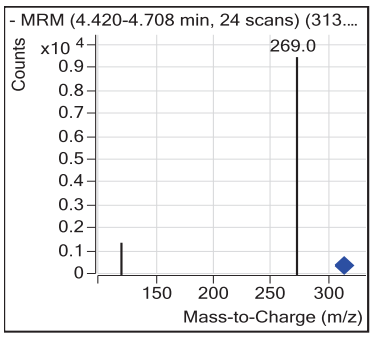




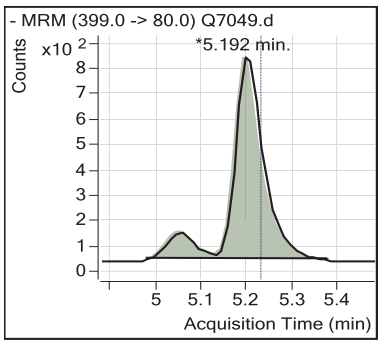
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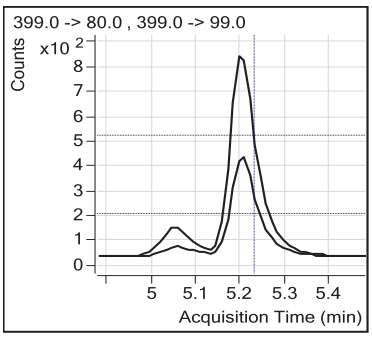


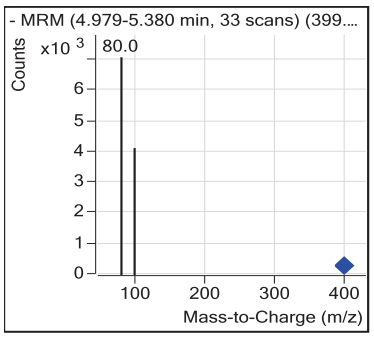




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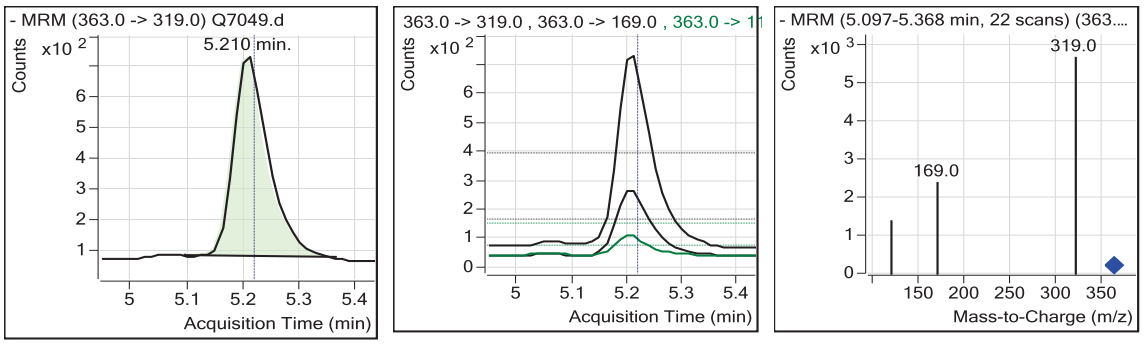




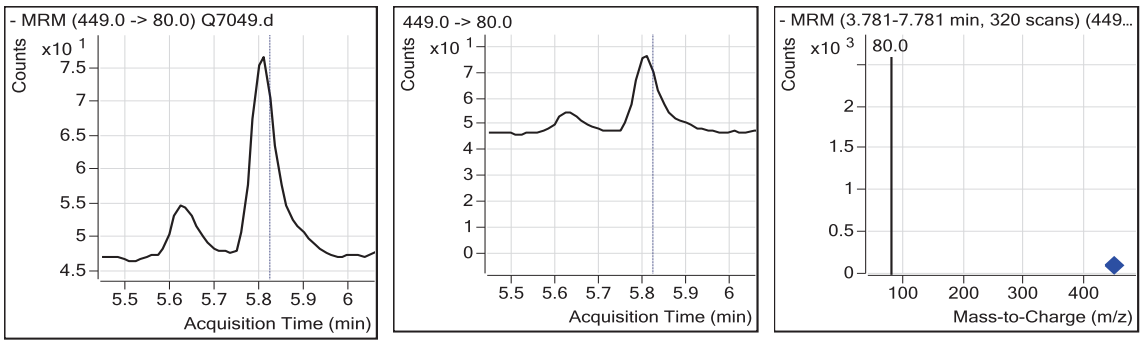


Perfluorinated Compounds by LC/MS/MS.

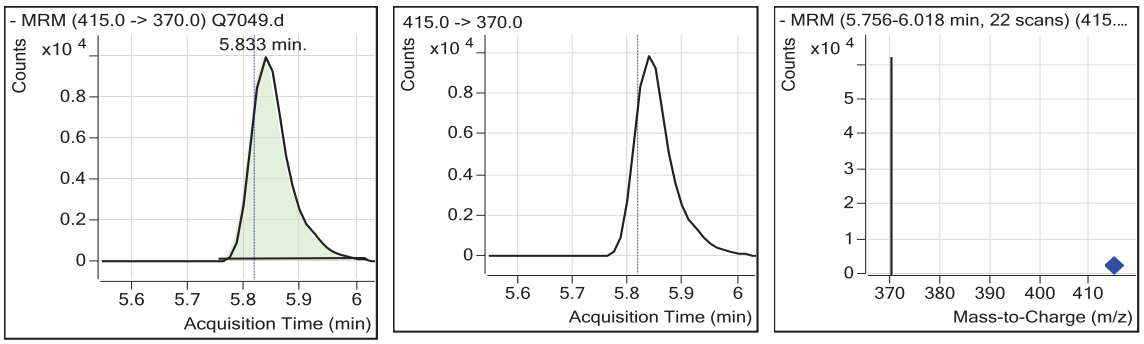
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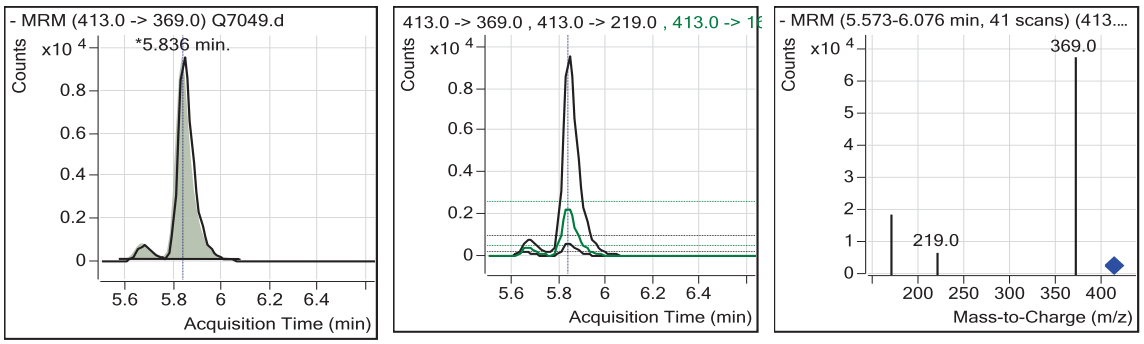
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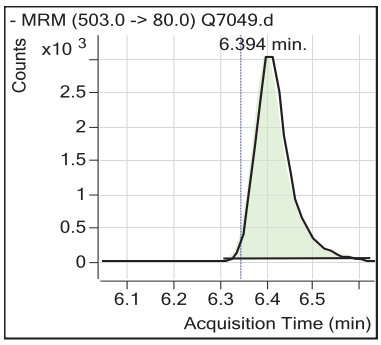


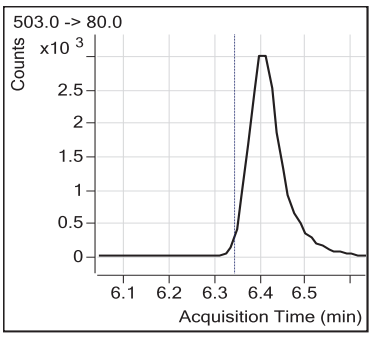
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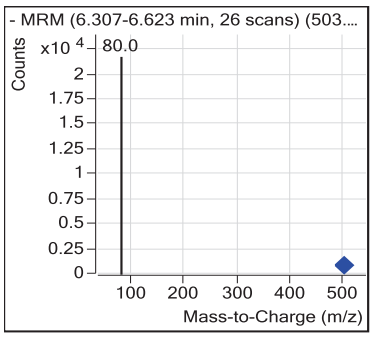


Perfluorinated Compounds by LC/MS/MS.

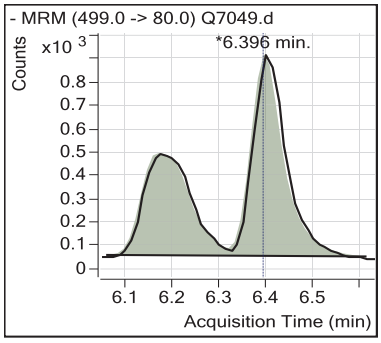
13C4-PFOS

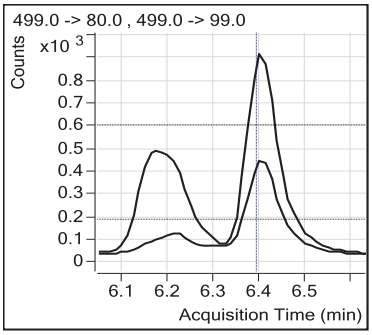


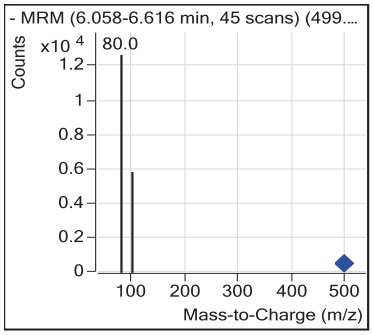




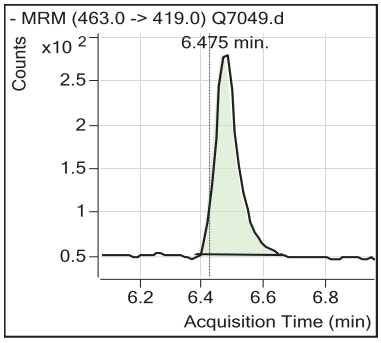
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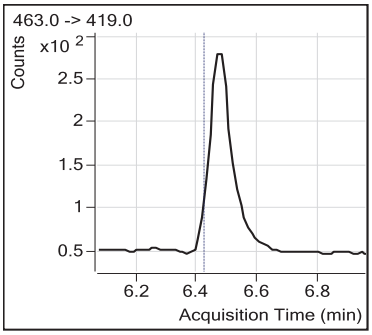


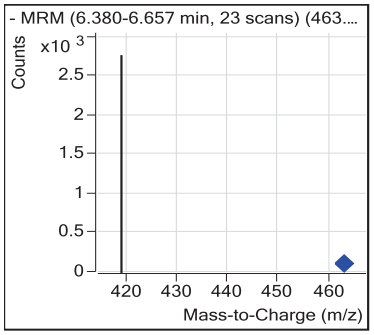




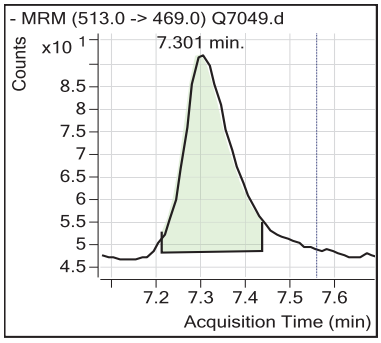
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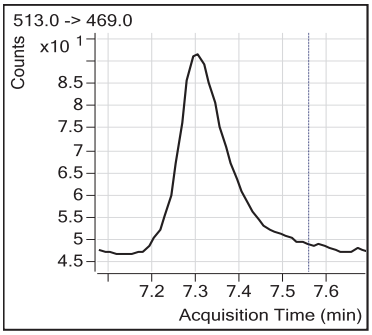


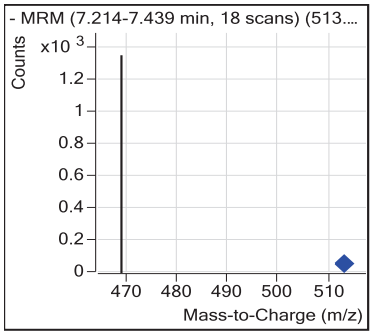




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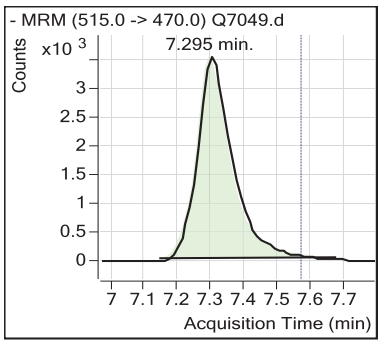


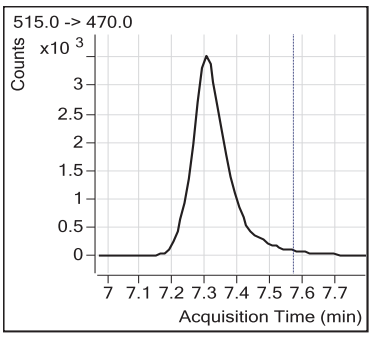


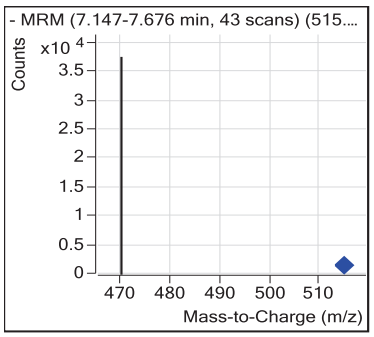


Perfluorinated Compounds by LC/MS/MS.

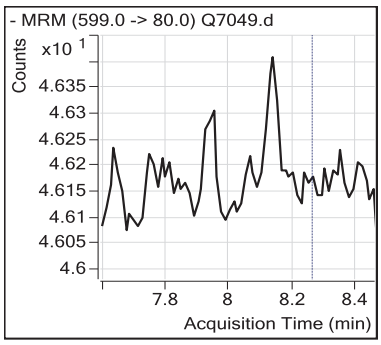
13C2-PFDA

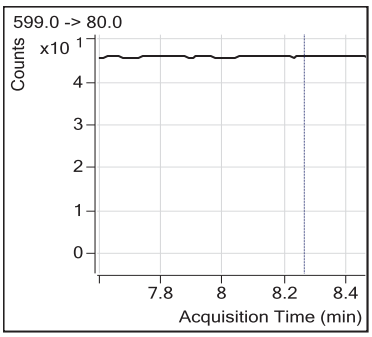


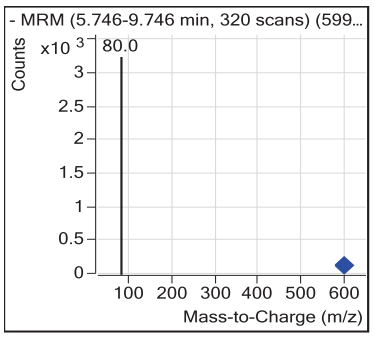




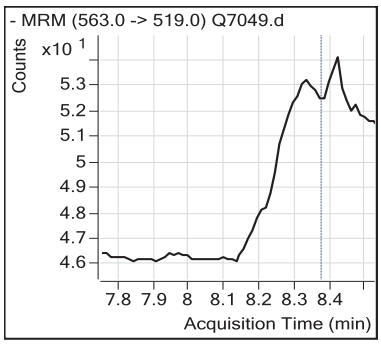
PFDS

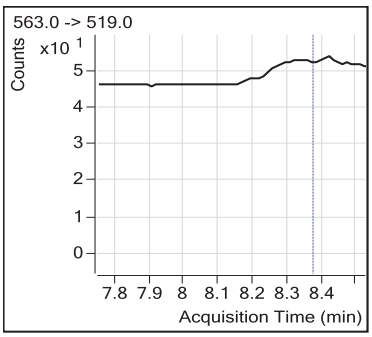


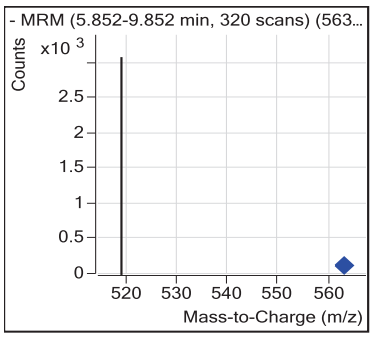




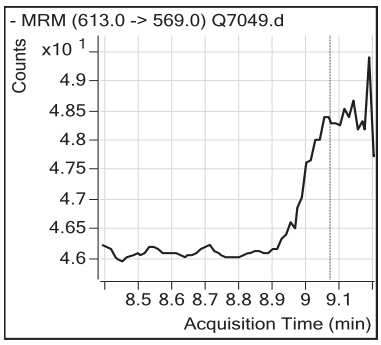
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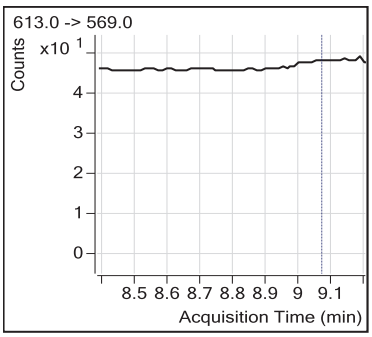


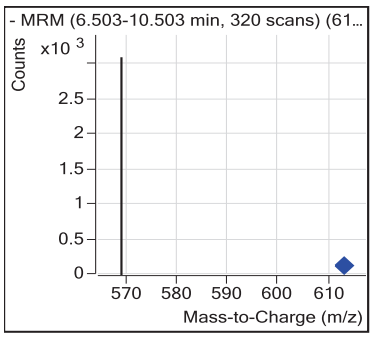




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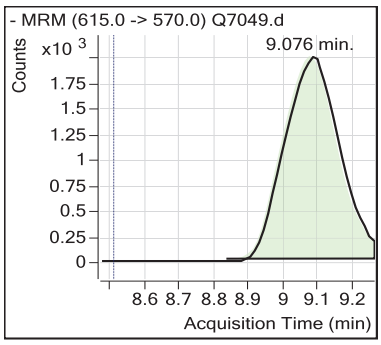


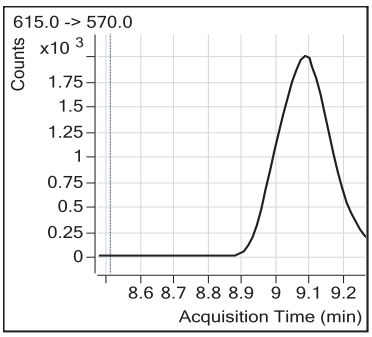


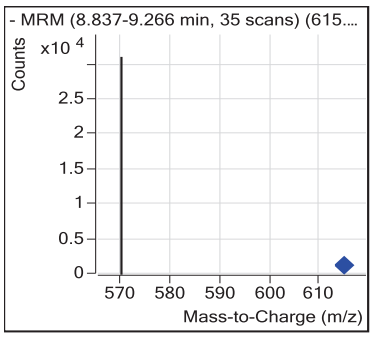


Perfluorinated Compounds by LC/MS/MS.

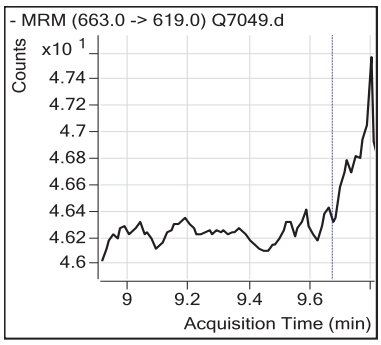
13C2-PFDoDA

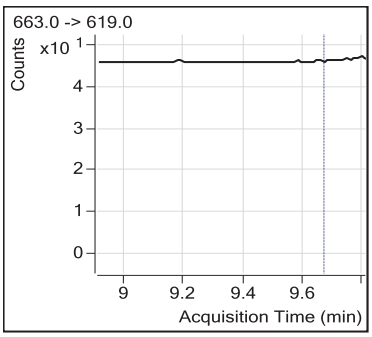


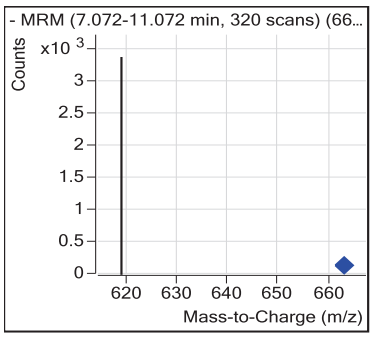




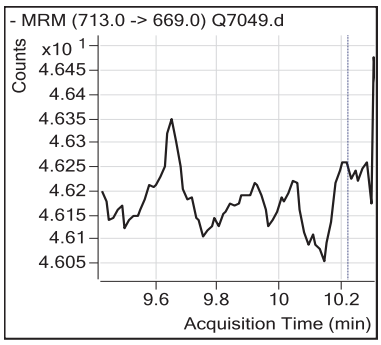
PFTrDA

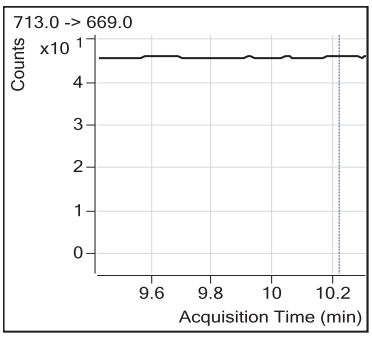


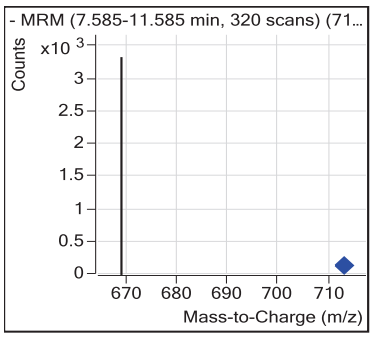




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-3
Lab FileID: Q7049.D
Injection Time: 09/18/14 16:45
Method: EPA 537 MOD
Analyst approved: 09/19/14 10:12 Mike Eger
Supervisor approved: 09/22/14 14:41 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling 09/22/14 14:41

Perfluorinated Compounds by LC/MS/MS.

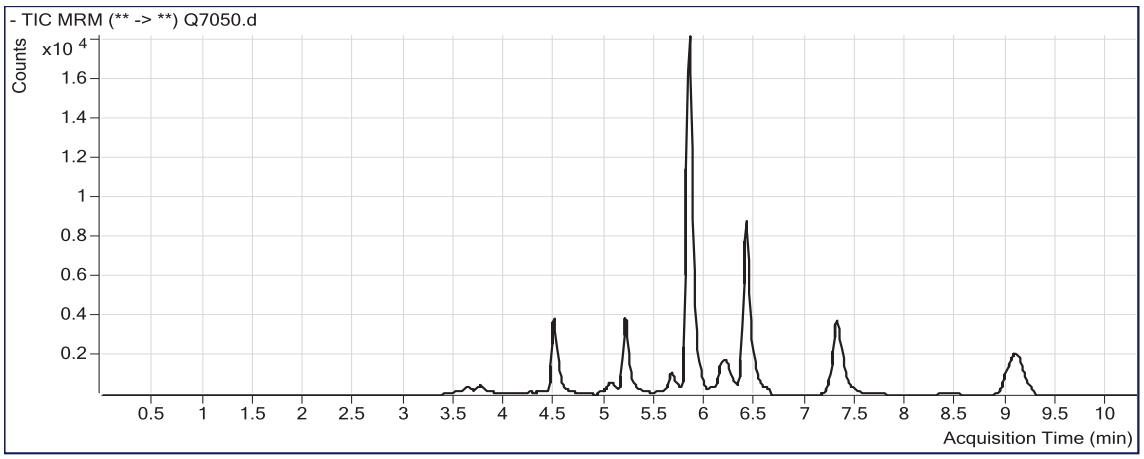
Data File	:	Q7050.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 17:04
Sample Name	:	fa18133-4
Vial	:	Vial 13
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	45750	20.000	µg/L		0.013
13C4-PFOS	6.394	503.0 -> 80.0	15367	20.000	µg/L		0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	22920	20.000	µg/L		0.567
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	11773	17.37	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 86.84%				
13C2-PFDA	7.295	515.0 -> 470.0	27653	19.89	µg/L		0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 99.47%				
Target Compounds							**Qvalue**
PFPeA	3.636	263.0 -> 219.0	1078	4.142	µg/L		100
PFBS	3.753	299.0 -> 80.0	731	3.005	µg/L		96
PFHxA	4.483	313.0 -> 269.0	4407	5.725	µg/L		99
PFHxS	5.192	399.0 -> 80.0	9838	25.810	µg/L	m	88
PFHpA	5.197	363.0 -> 319.0	2002	2.509	µg/L		97
PFOA	5.836	413.0 -> 369.0	30151	12.446	µg/L	m	76
PFOS	6.396	499.0 -> 80.0	27017	36.123	µg/L	m	99
PFNA	6.462	463.0 -> 419.0	752	0.690	µg/L		100

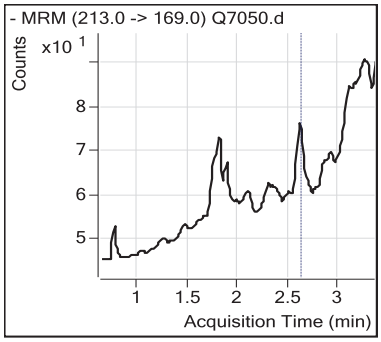
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

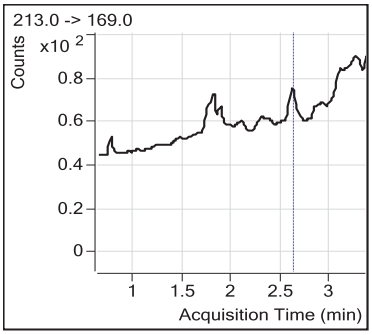
Perfluorinated Compounds by LC/MS/MS.

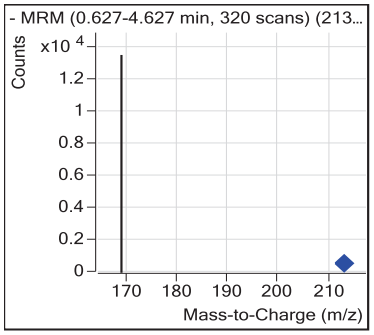
Data File	:	Q7050.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 17:04
Sample Name	:	fa18133-4
Vial	:	Vial 13
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



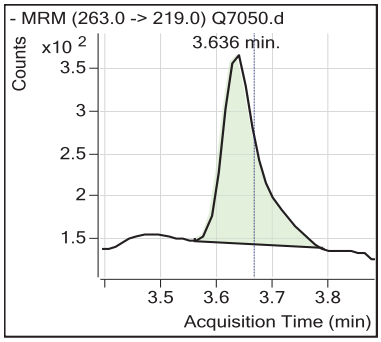
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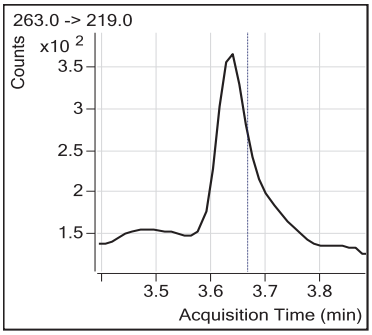


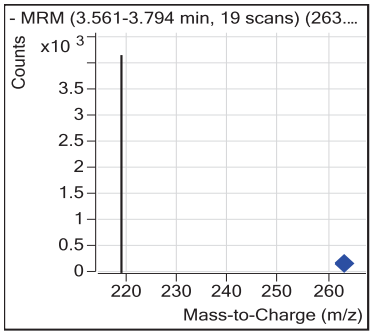




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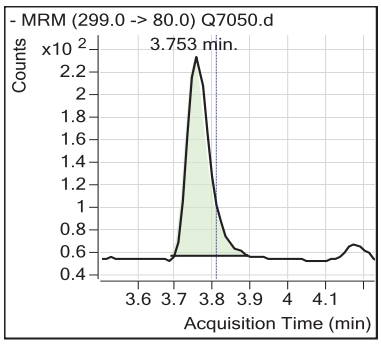


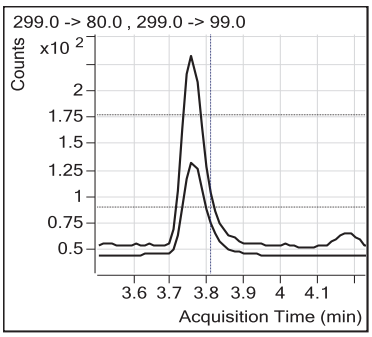


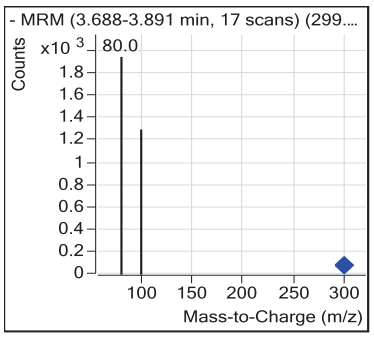


Perfluorinated Compounds by LC/MS/MS.

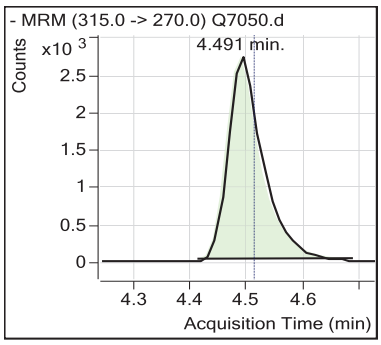
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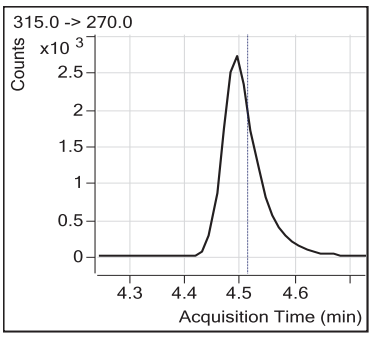


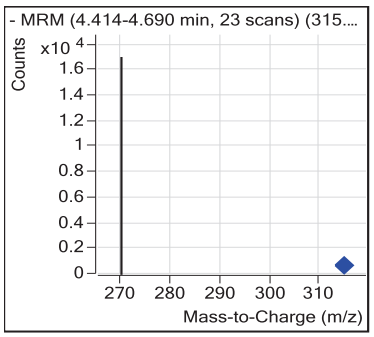




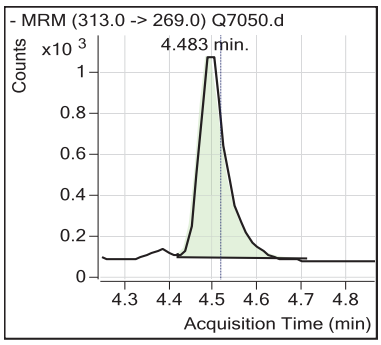
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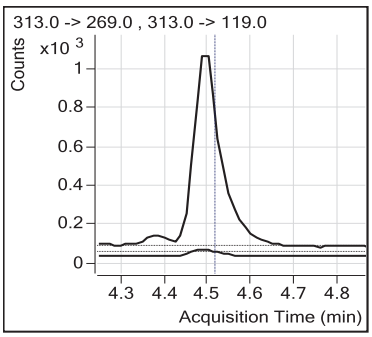


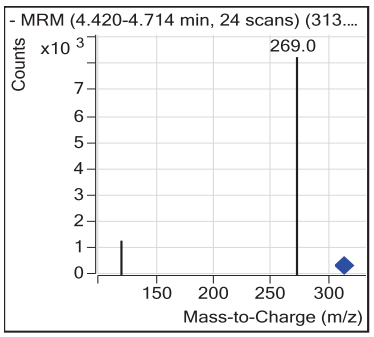




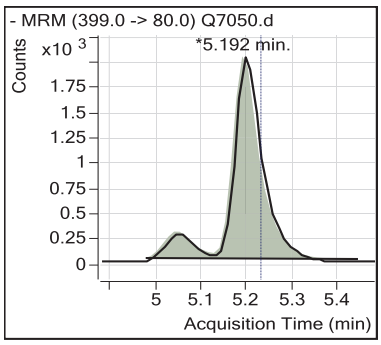
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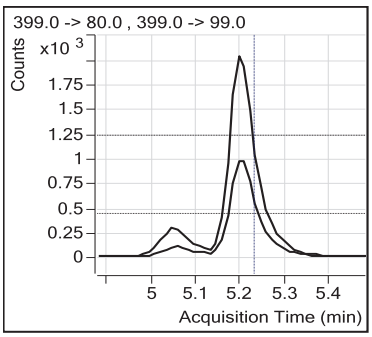


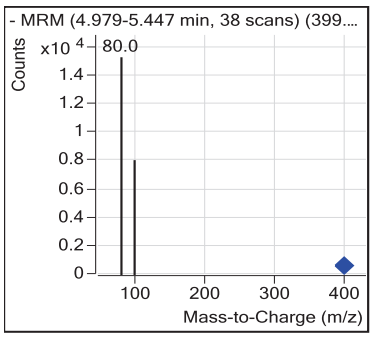




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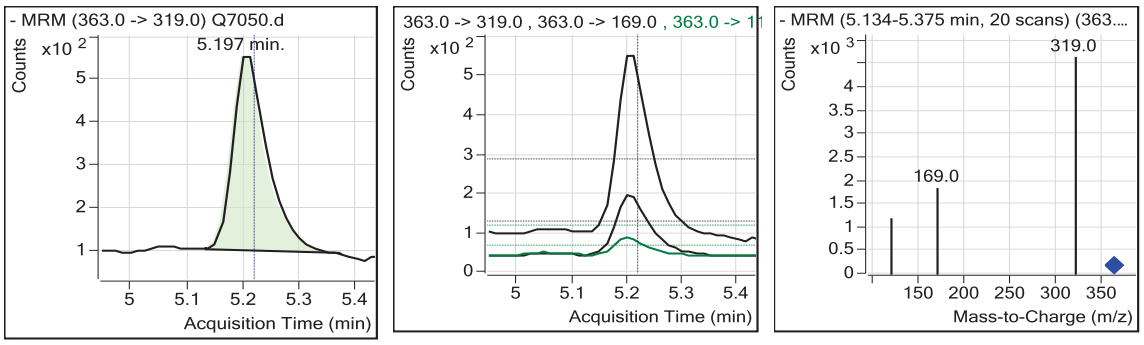




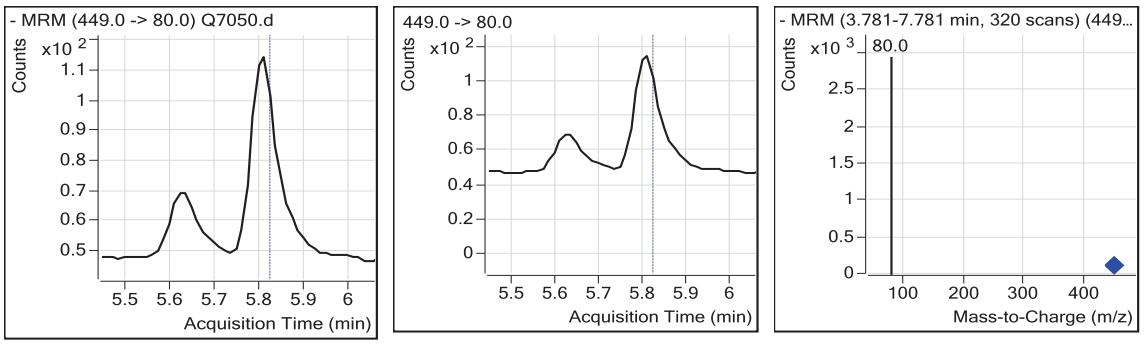


Perfluorinated Compounds by LC/MS/MS.

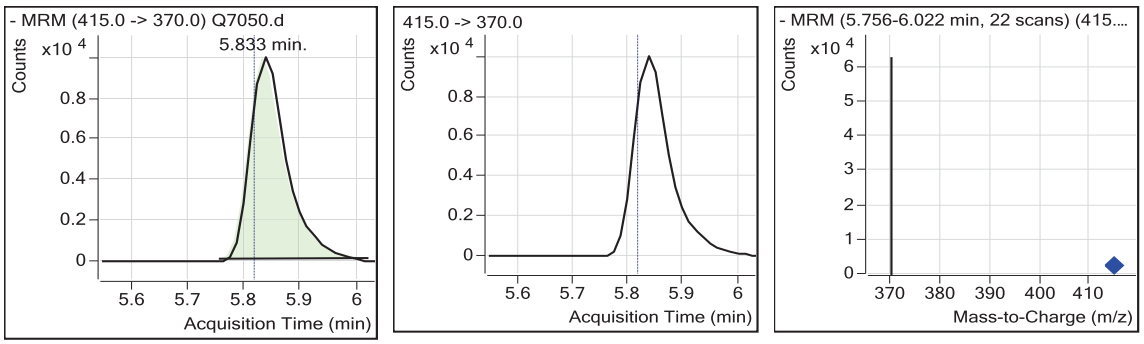
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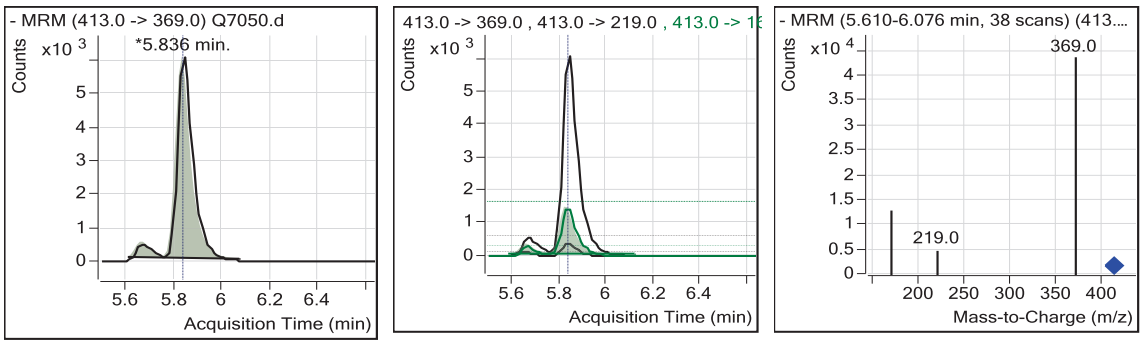
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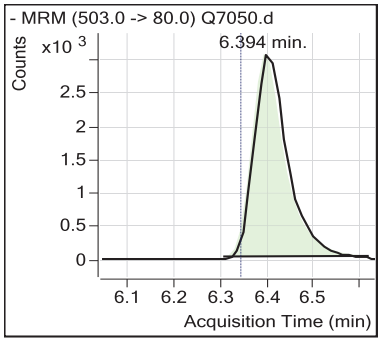


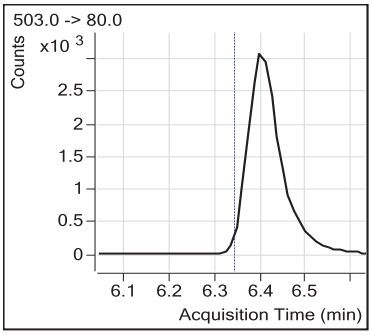
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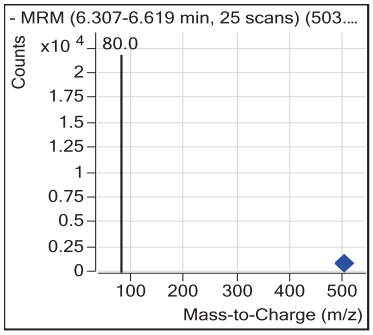


Perfluorinated Compounds by LC/MS/MS.

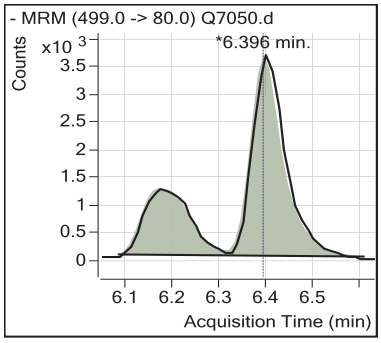
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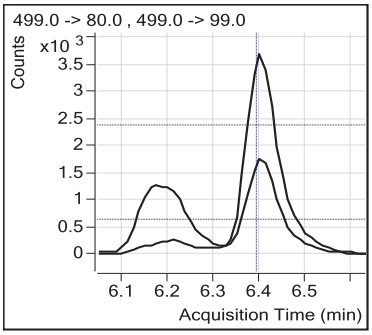


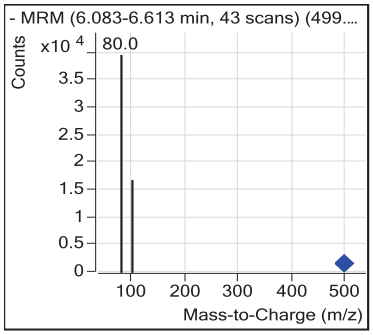




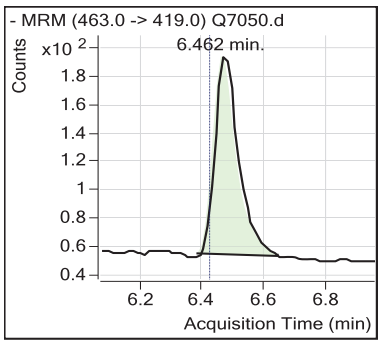
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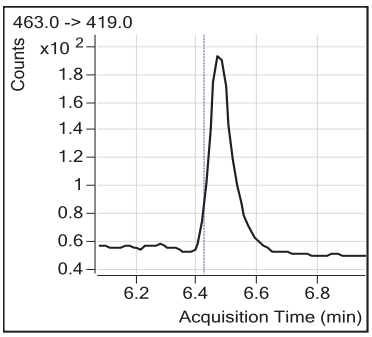


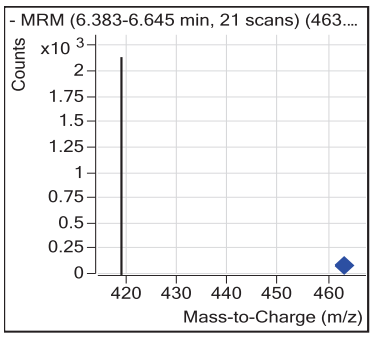




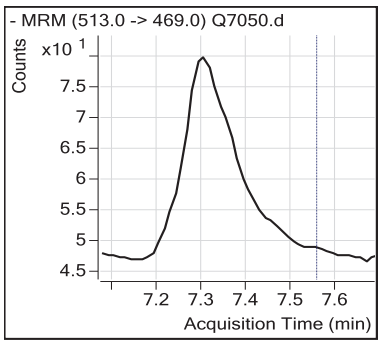
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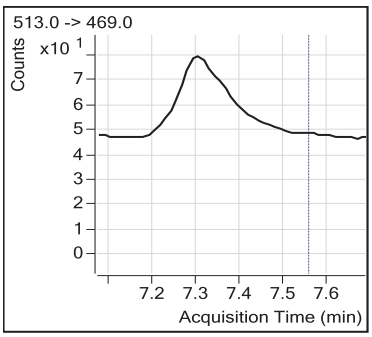


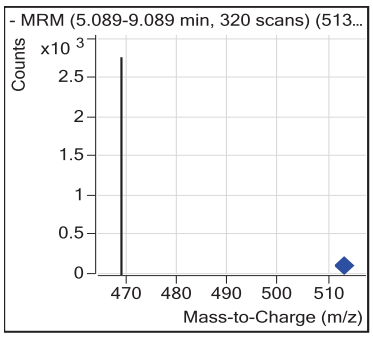




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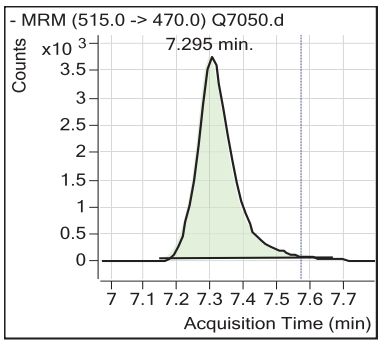


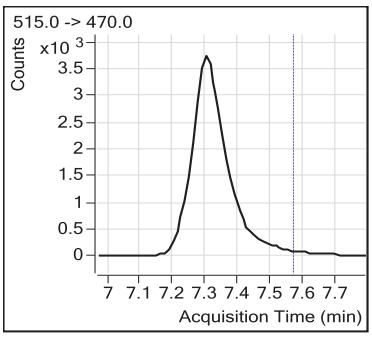


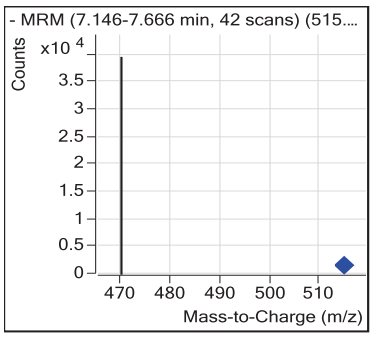


Perfluorinated Compounds by LC/MS/MS.

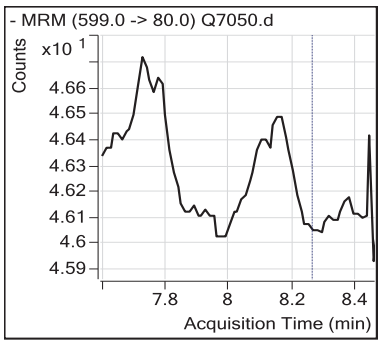
13C2-PFDA

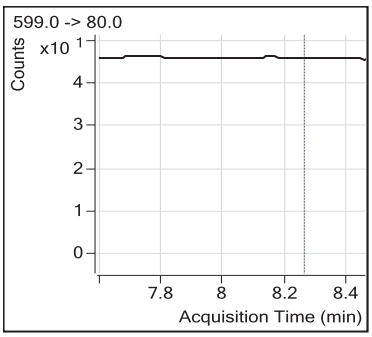


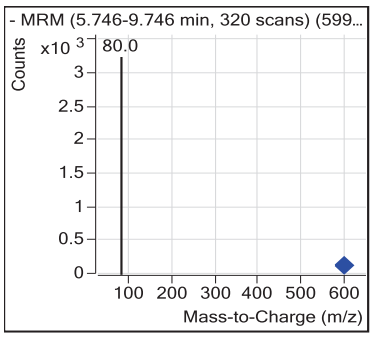




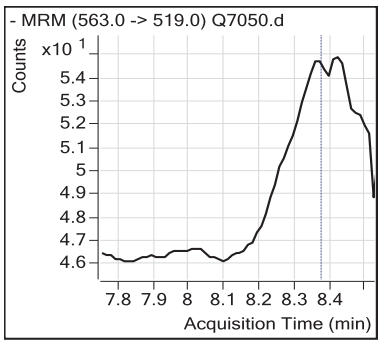
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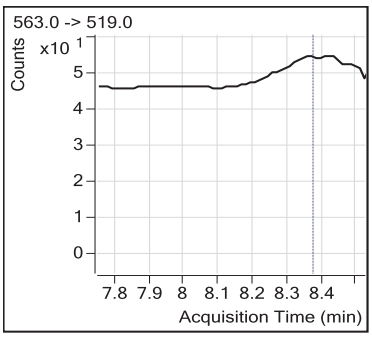


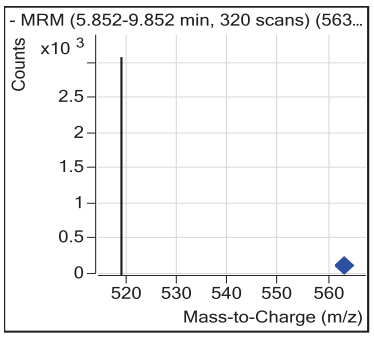




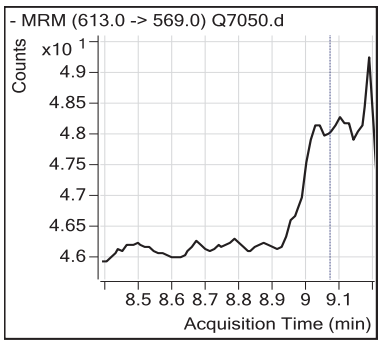
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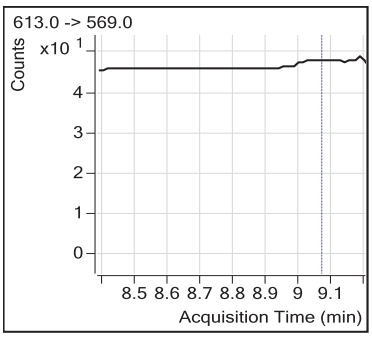


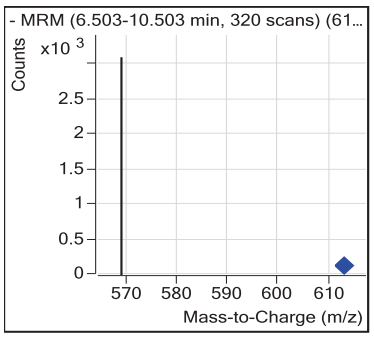




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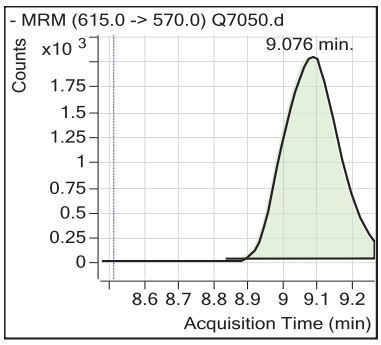


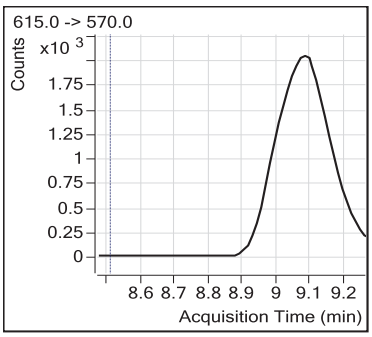


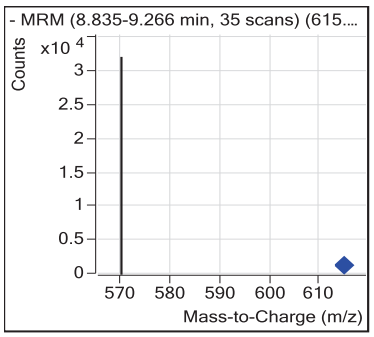


Perfluorinated Compounds by LC/MS/MS.

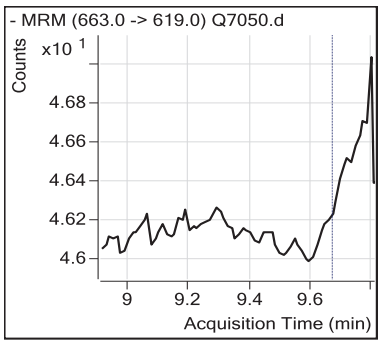
13C2-PFDoDA

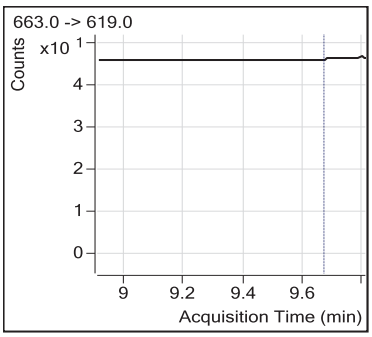


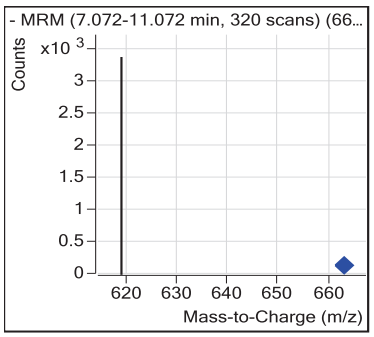




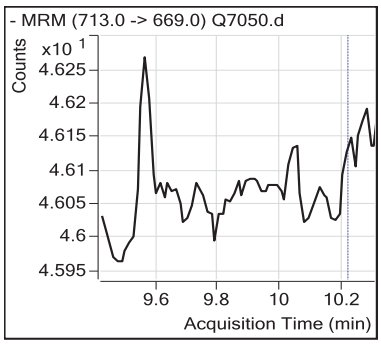
PFTrDA

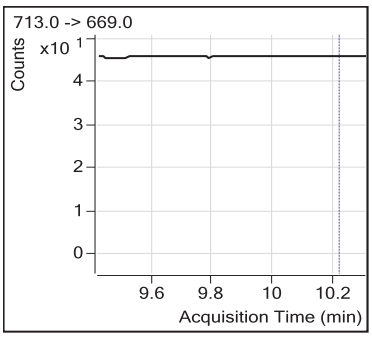


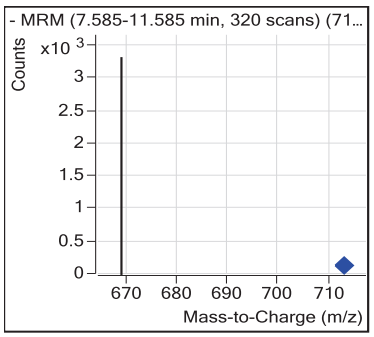




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-4
Lab FileID: Q7050.D
Injection Time: 09/18/14 17:04
Method: EPA 537 MOD
Analyst approved: 09/19/14 10:12 Mike Eger
Supervisor approved: 09/22/14 14:41 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/22/14 14:41

Perfluorinated Compounds by LC/MS/MS.

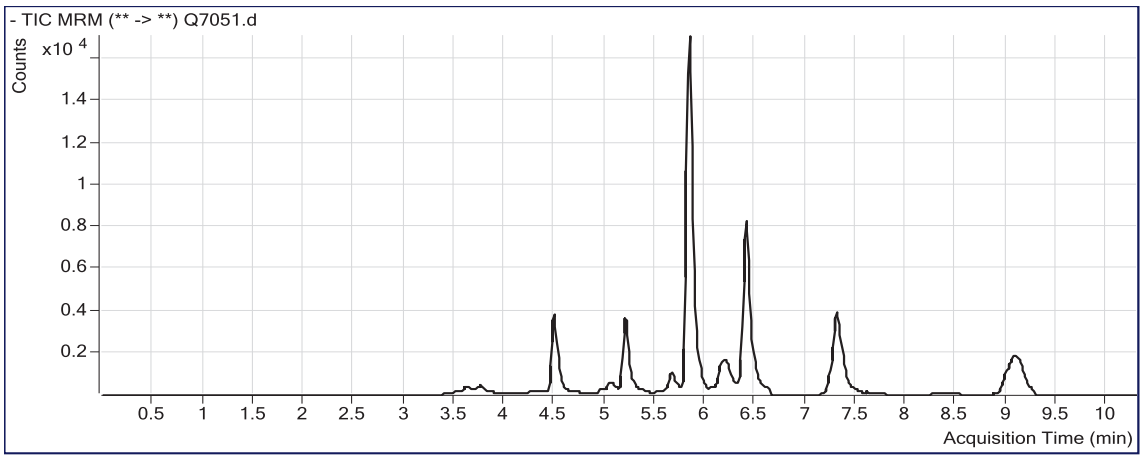
Data File	:	Q7051.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 17:24
Sample Name	:	fa18133-5
Vial	:	Vial 14
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	42647	20.000	µg/L		0.013
13C4-PFOS	6.394	503.0 -> 80.0	14254	20.000	µg/L		0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	21008	20.000	µg/L		0.567
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	11733	18.57	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 92.83%				
13C2-PFDA	7.295	515.0 -> 470.0	28449	22.33	µg/L		0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 111.65%				
Target Compounds							**Qvalue**
PFPeA	3.636	263.0 -> 219.0	1026	4.230	µg/L		100
PFBS	3.753	299.0 -> 80.0	707	3.134	µg/L		99
PFHxA	4.495	313.0 -> 269.0	4205	5.860	µg/L		99
PFHxS	5.192	399.0 -> 80.0	9510	26.899	µg/L	m	89
PFHpA	5.210	363.0 -> 319.0	1922	2.583	µg/L		99
PFOA	5.836	413.0 -> 369.0	28517	13.518	µg/L	m	76
PFOS	6.396	499.0 -> 80.0	25808	37.335	µg/L	m	99
PFNA	6.462	463.0 -> 419.0	757	0.745	µg/L		100

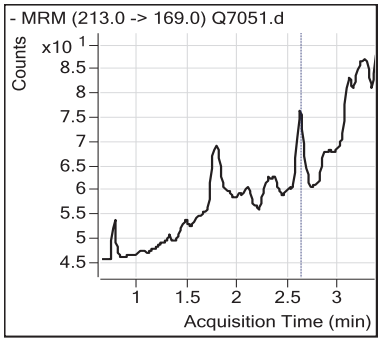
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

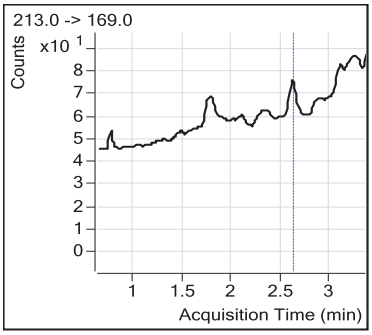
Perfluorinated Compounds by LC/MS/MS.

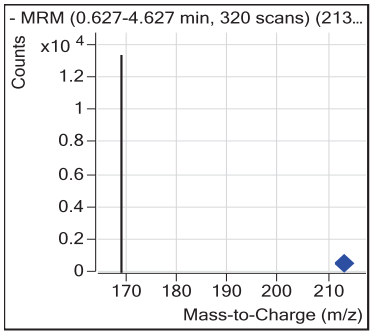
Data File	:	Q7051.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 17:24
Sample Name	:	fa18133-5
Vial	:	Vial 14
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



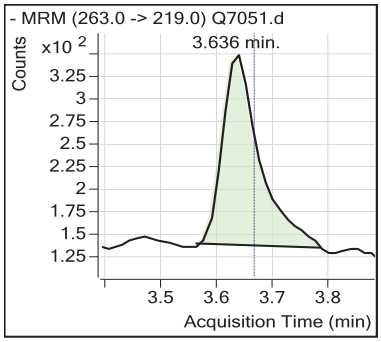
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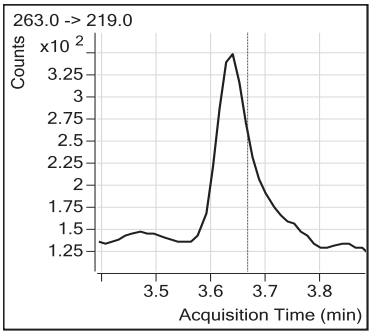


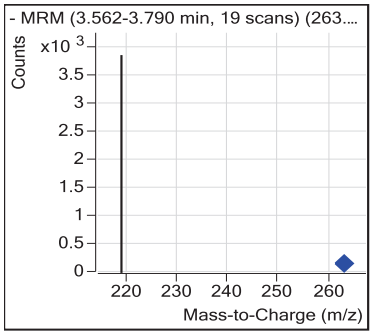




PFPeA

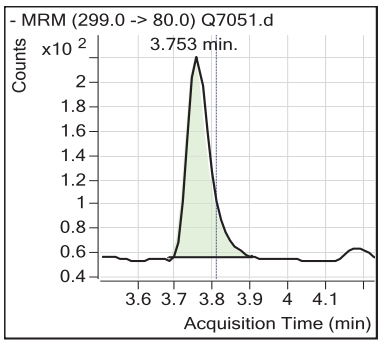


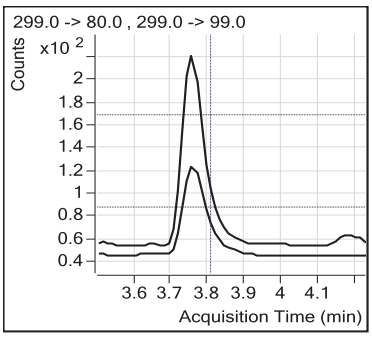


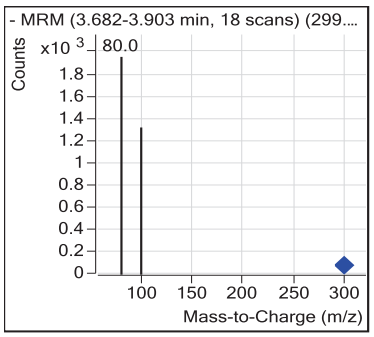


Perfluorinated Compounds by LC/MS/MS.

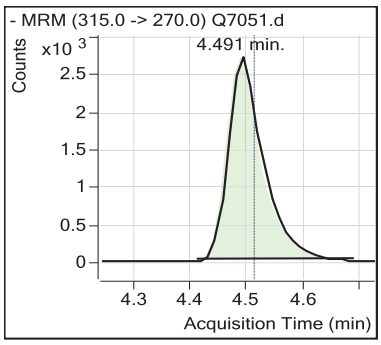
PFBS

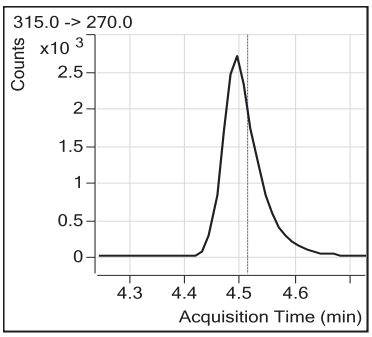


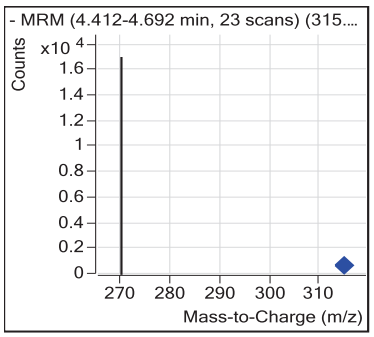




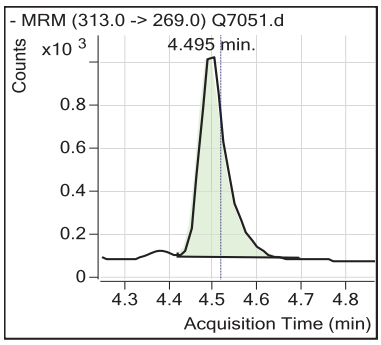
13C2-PFHxA

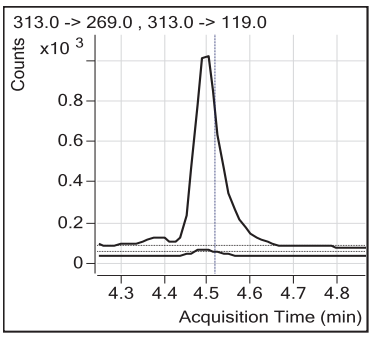


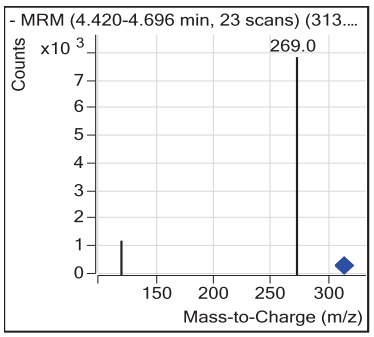




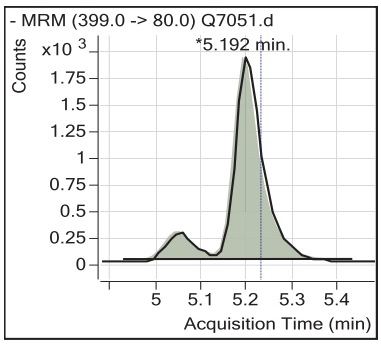
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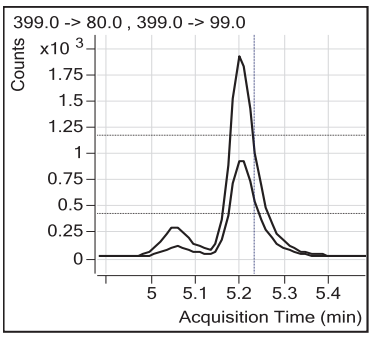


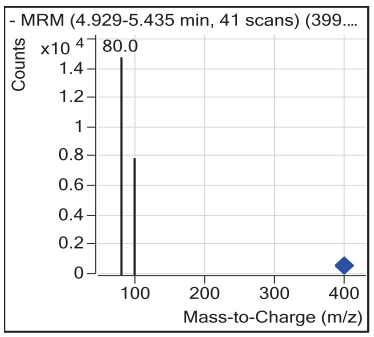




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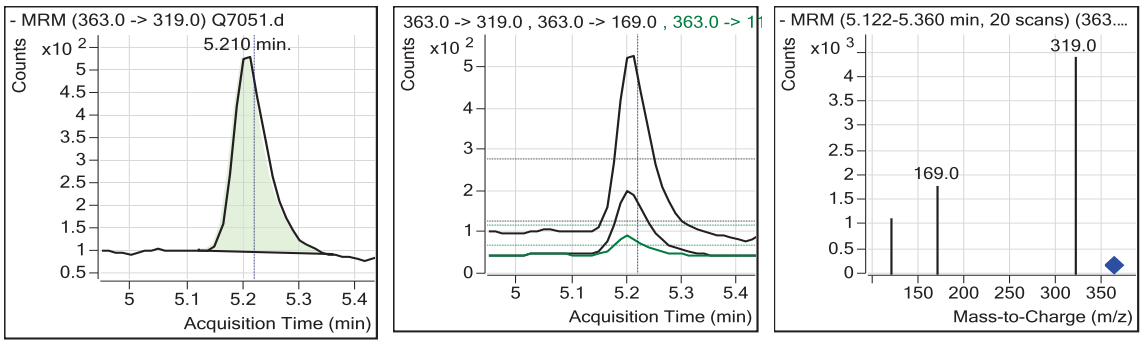




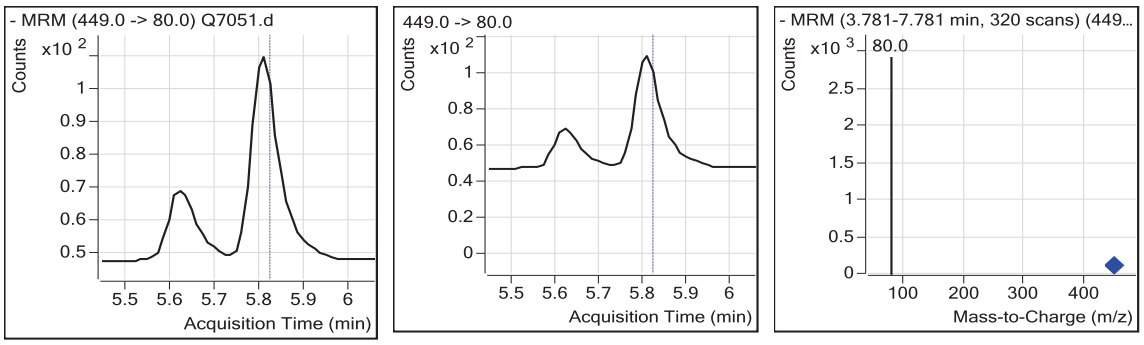


Perfluorinated Compounds by LC/MS/MS.

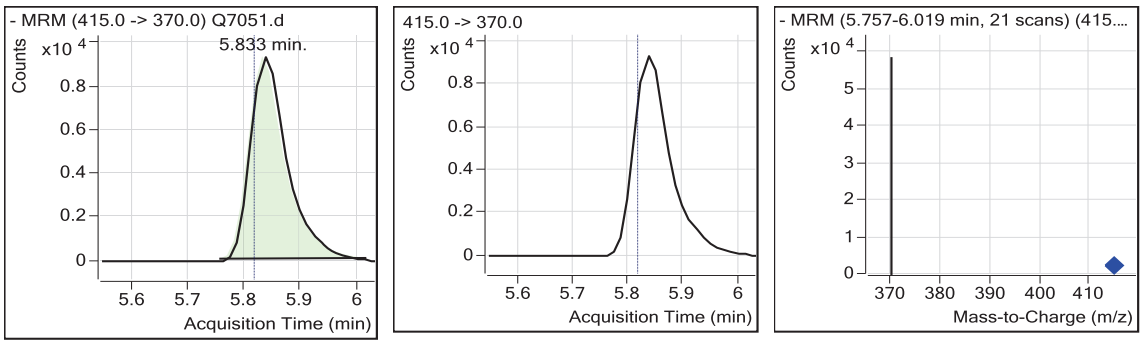
PFHpA



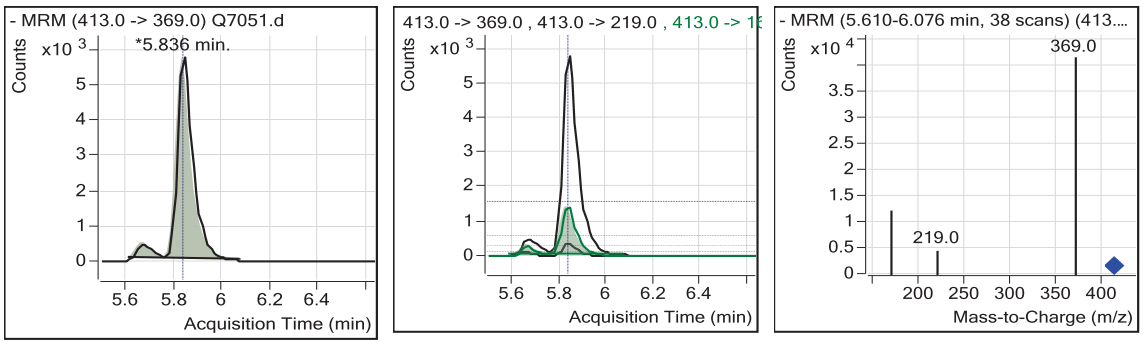
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13C2-PFOA

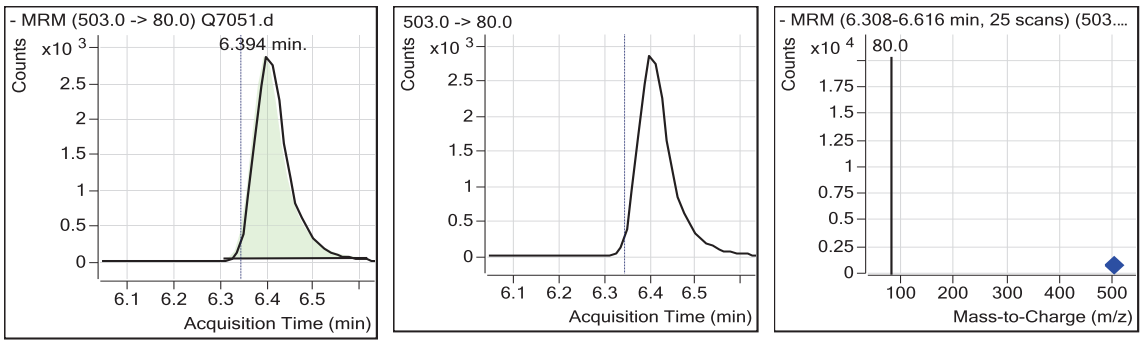


PFOA

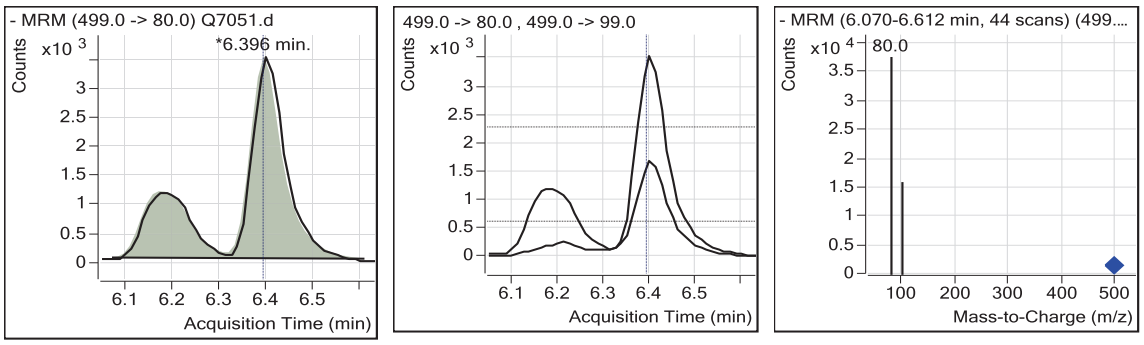


Perfluorinated Compounds by LC/MS/MS.

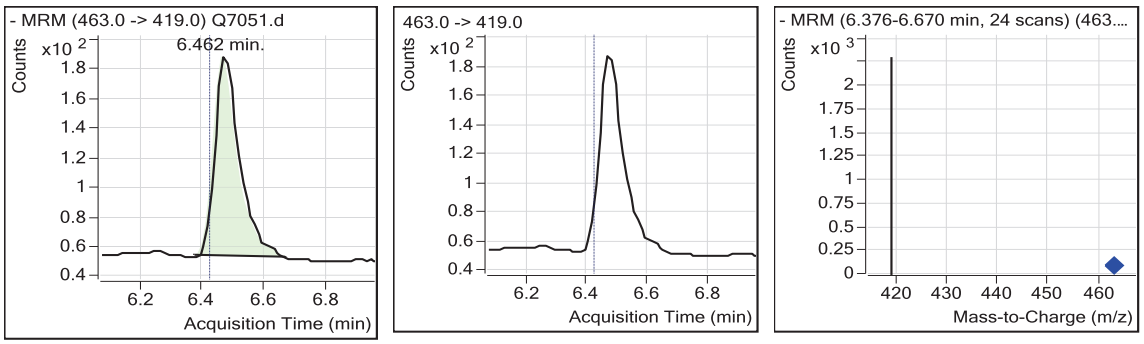
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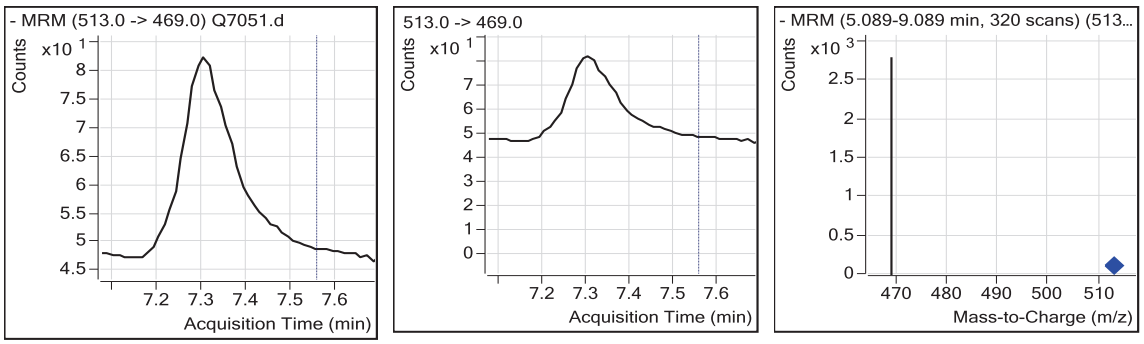
PFOS



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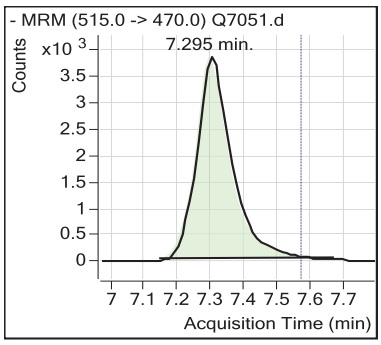


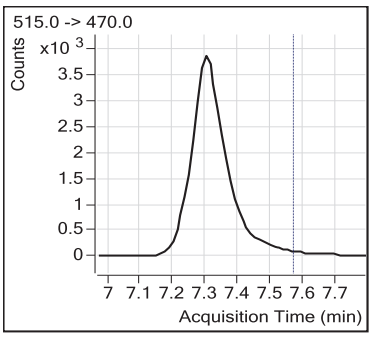
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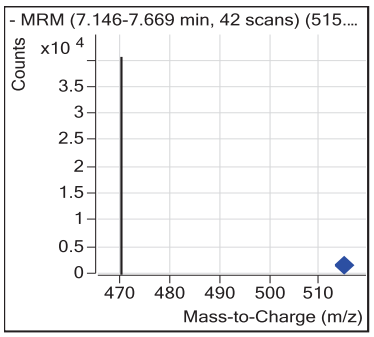


Perfluorinated Compounds by LC/MS/MS.

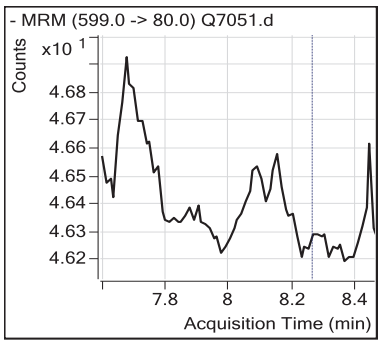
13C2-PFDA

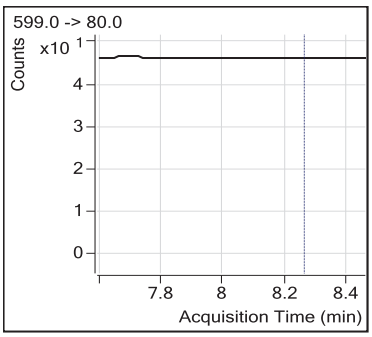


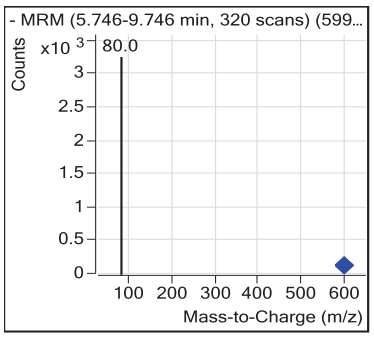




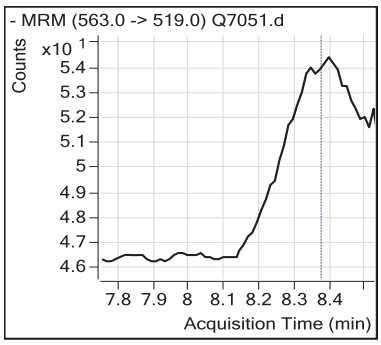
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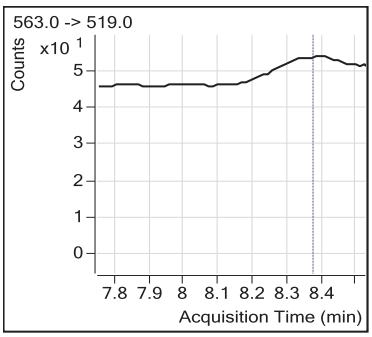


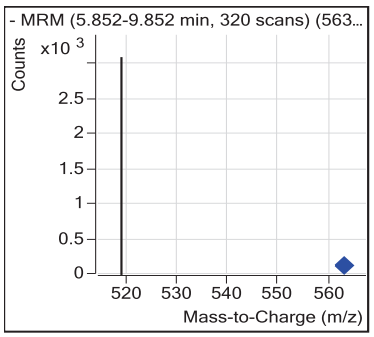




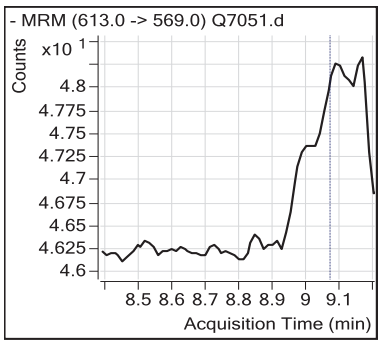
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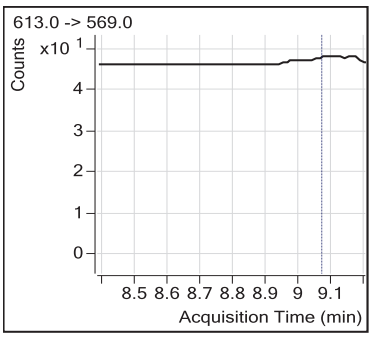


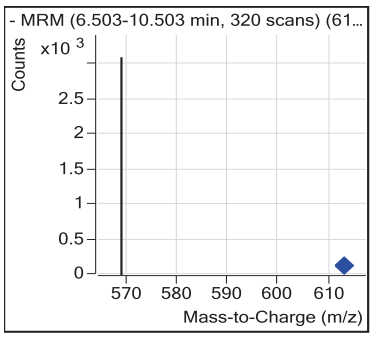




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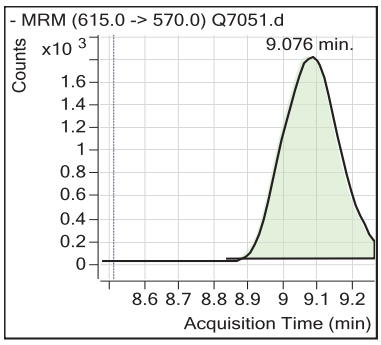


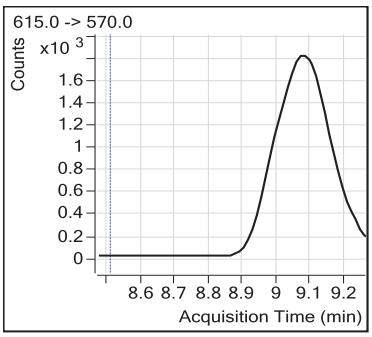


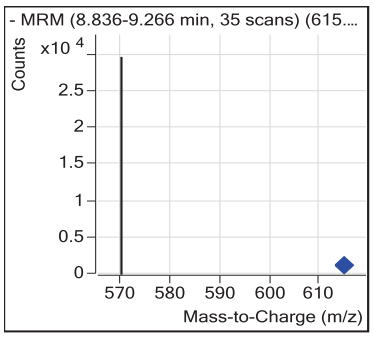


Perfluorinated Compounds by LC/MS/MS.

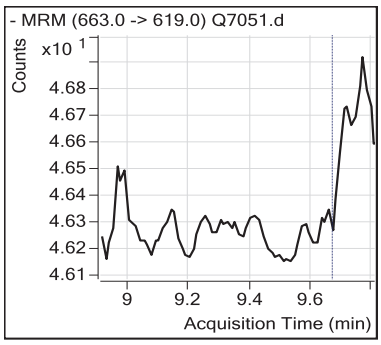
13C2-PFDoDA

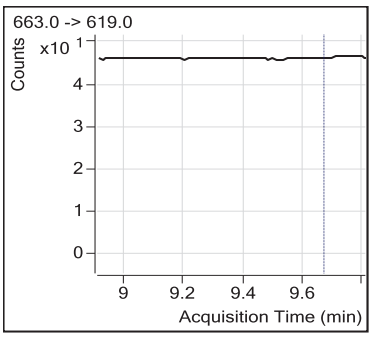


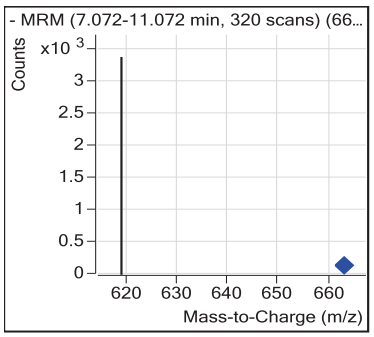




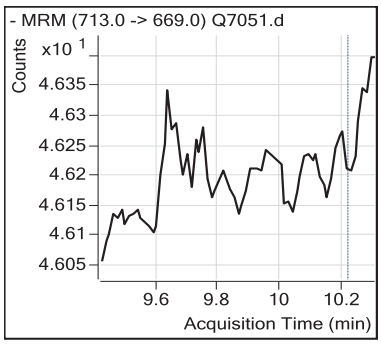
PFTrDA

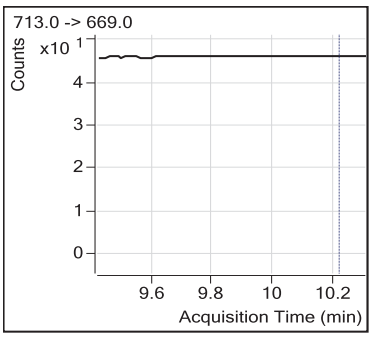


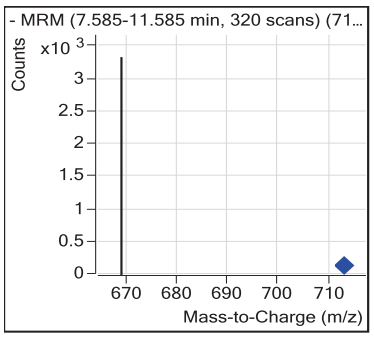




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-5
Lab FileID: Q7051.D
Injection Time: 09/18/14 17:24
Method: EPA 537 MOD
Analyst approved: 09/19/14 10:12 Mike Eger
Supervisor approved: 09/22/14 14:41 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/22/14 14:41

Perfluorinated Compounds by LC/MS/MS.

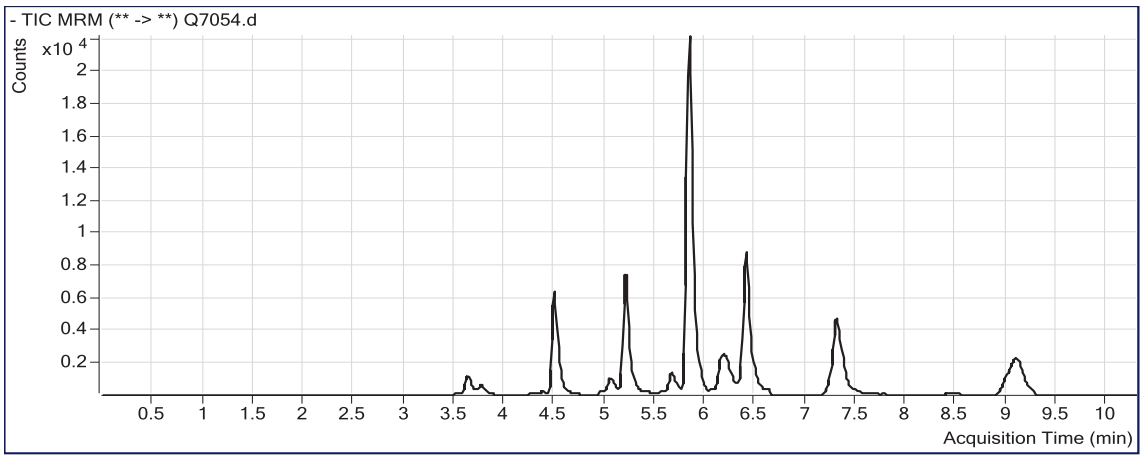
Data File	:	Q7054.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 18:21
Sample Name	:	fa18133-6
Vial	:	Vial 15
Sample Info	:	OP53121,SQ238,100,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	52210	20.000	µg/L		0.013
13C4-PFOS	6.394	503.0 -> 80.0	17376	20.000	µg/L		0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	24220	20.000	µg/L		0.567
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	14907	19.27	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 96.35%				
13C2-PFDA	7.295	515.0 -> 470.0	34261	23.33	µg/L		0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 116.63%				
Target Compounds							**Qvalue**
PFPeA	3.636	263.0 -> 219.0	4772	16.072	µg/L		100
PFBS	3.753	299.0 -> 80.0	1421	5.167	µg/L		100
PFHxA	4.495	313.0 -> 269.0	12099	13.771	µg/L	m	99
PFHxS	5.192	399.0 -> 80.0	17952	41.654	µg/L	m	88
PFHpA	5.210	363.0 -> 319.0	6114	6.785	µg/L		99
PFHpS	5.806	449.0 -> 80.0	838	1.628	µg/L	m	100
PFOA	5.836	413.0 -> 369.0	39358	14.314	µg/L	m	77
PFOS	6.396	499.0 -> 80.0	29809	35.149	µg/L	m	99
PFNA	6.462	463.0 -> 419.0	699	0.562	µg/L		100

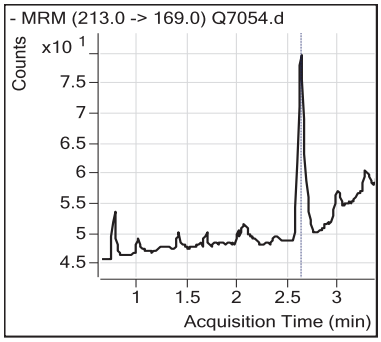
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

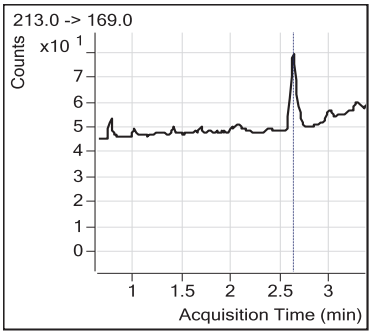
Perfluorinated Compounds by LC/MS/MS.

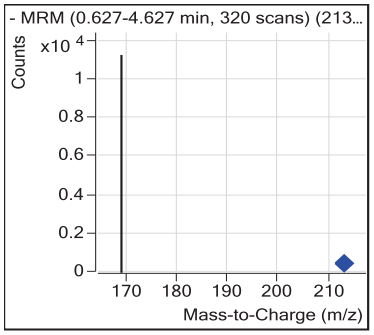
Data File	:	Q7054.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 18:21
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Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



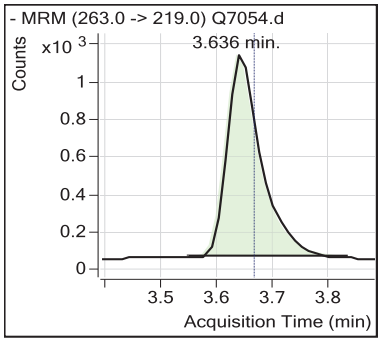
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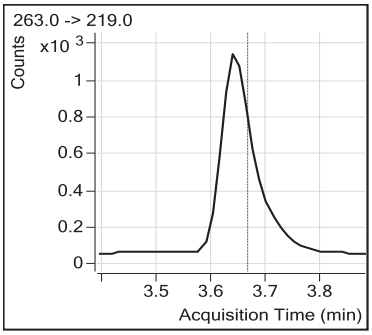


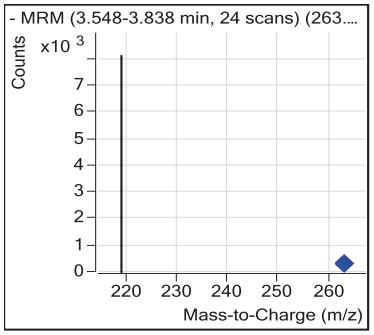




PFPeA

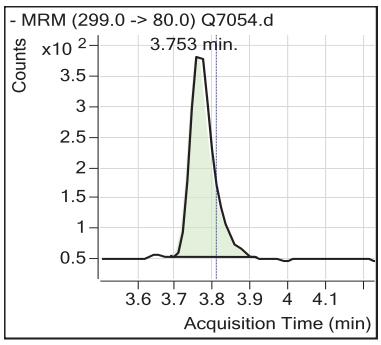


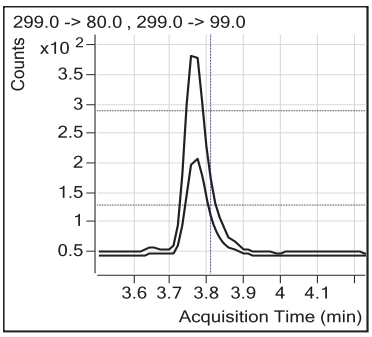


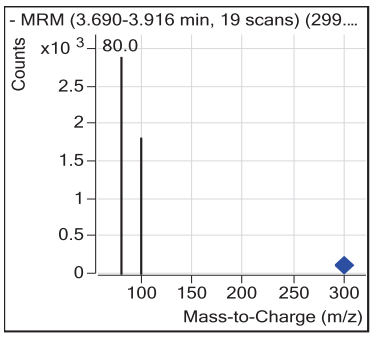


Perfluorinated Compounds by LC/MS/MS.

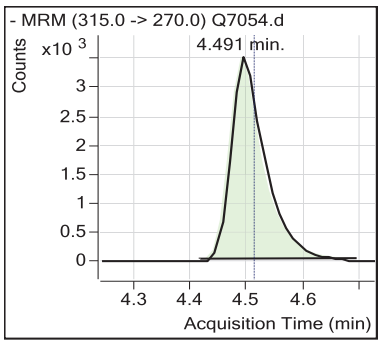
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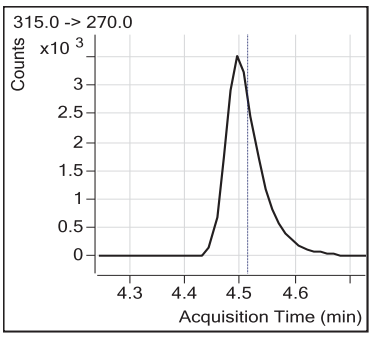


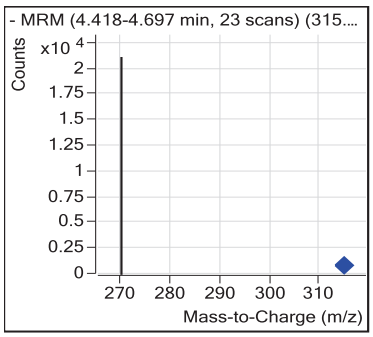




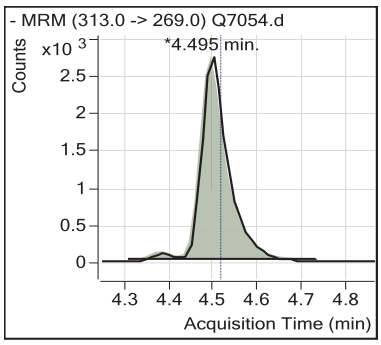
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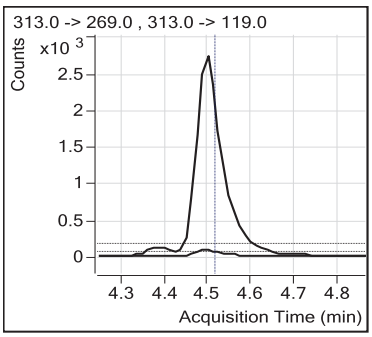


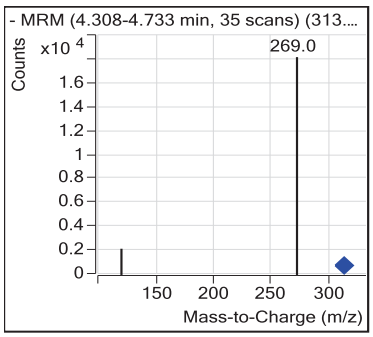




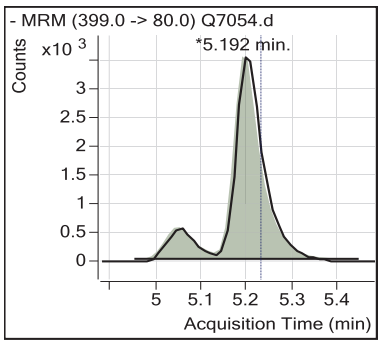
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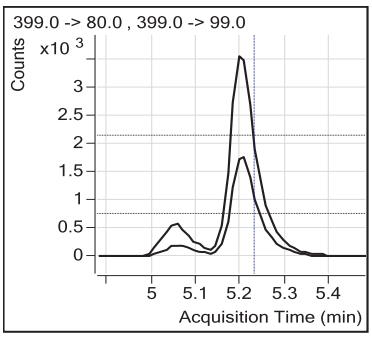


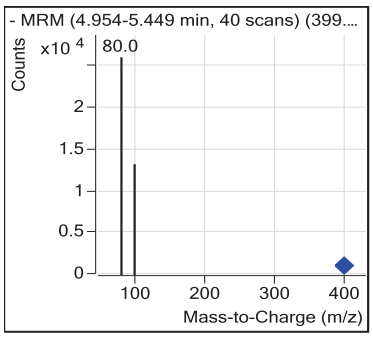




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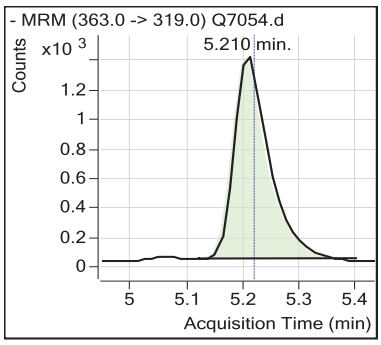


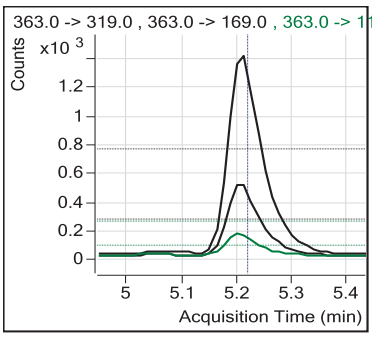


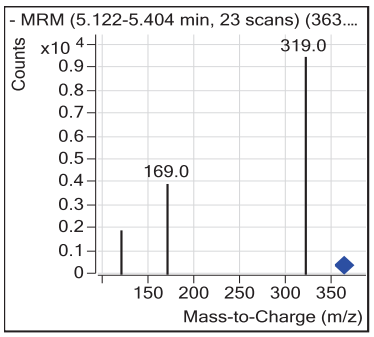


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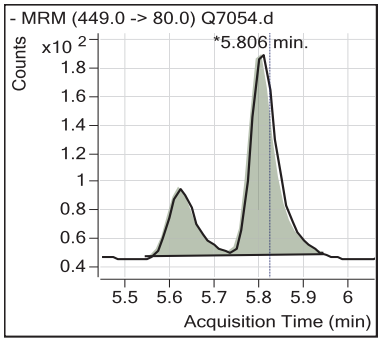
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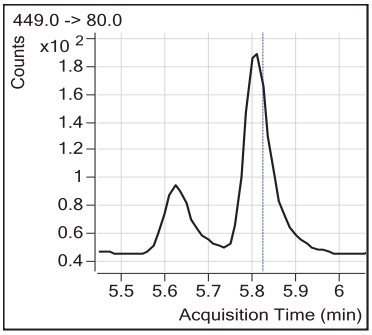


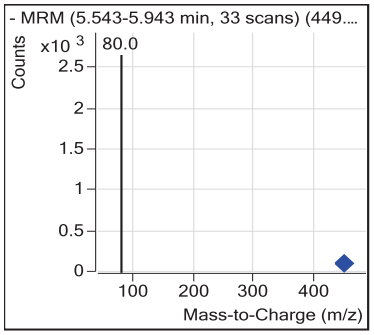




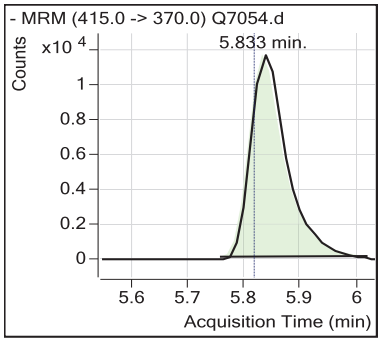
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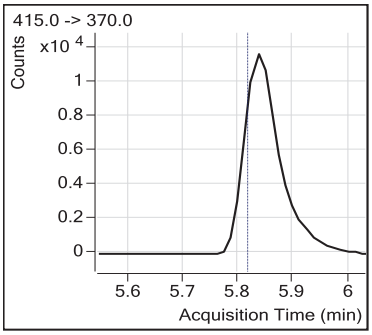


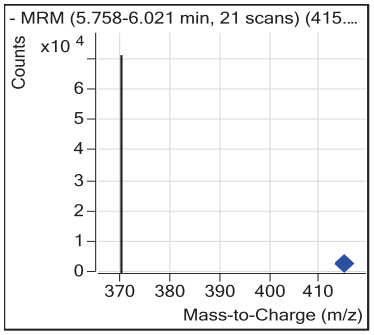




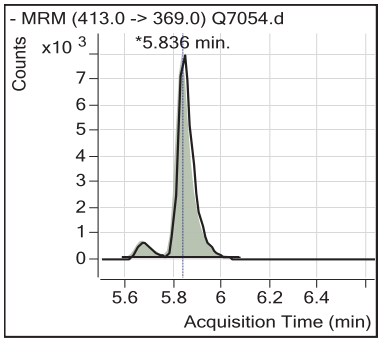
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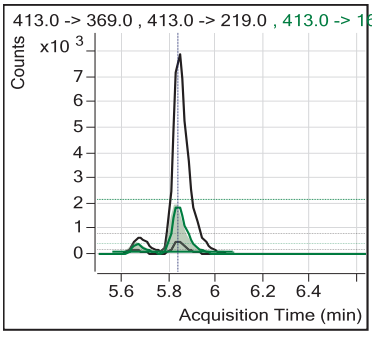


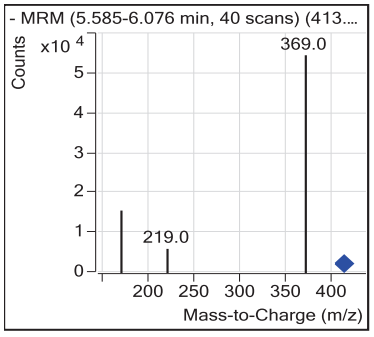




PFOA

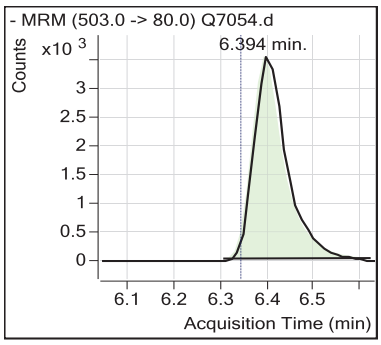


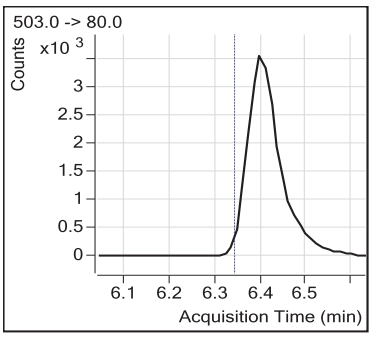


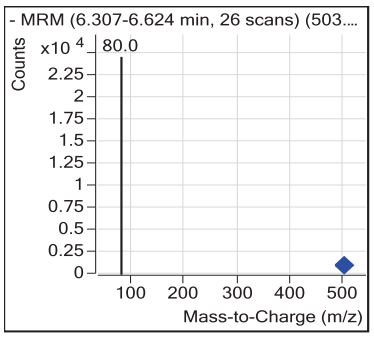


Perfluorinated Compounds by LC/MS/MS.

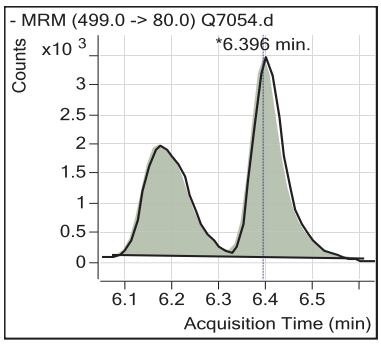
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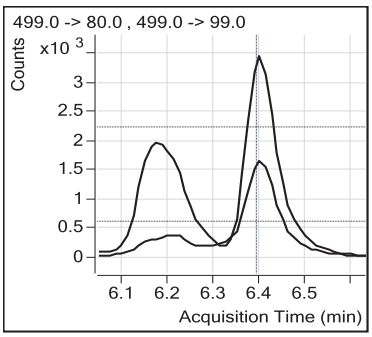


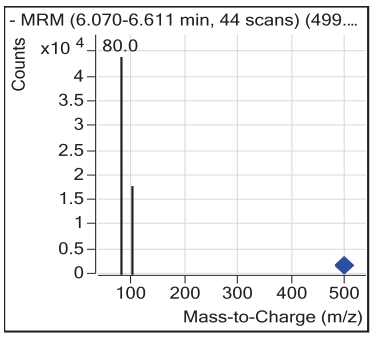




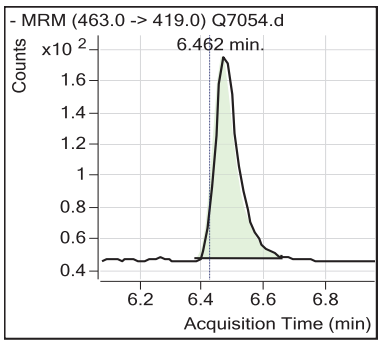
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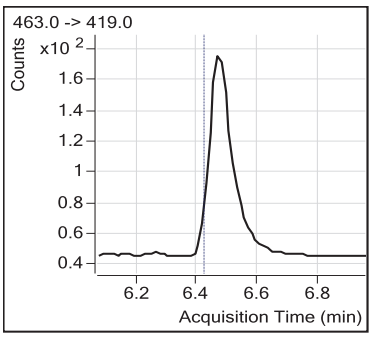


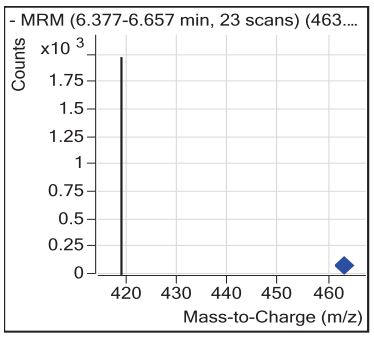




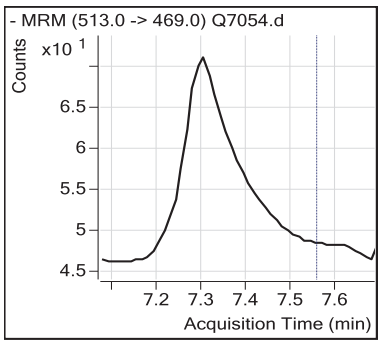
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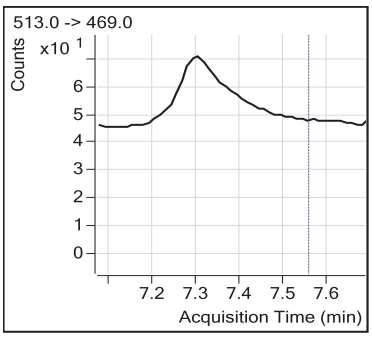


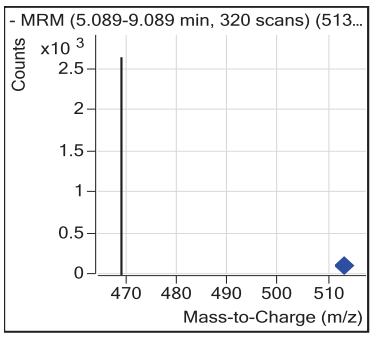




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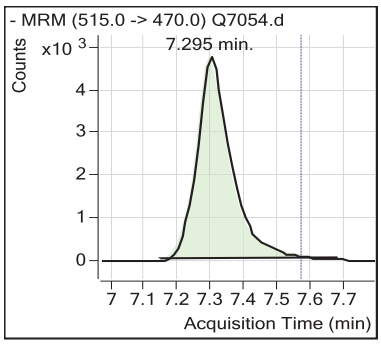


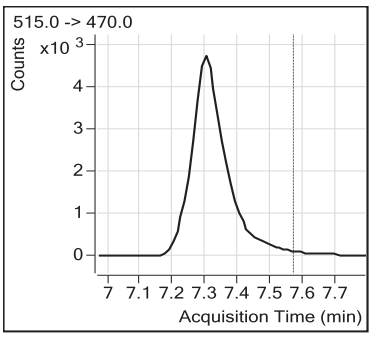


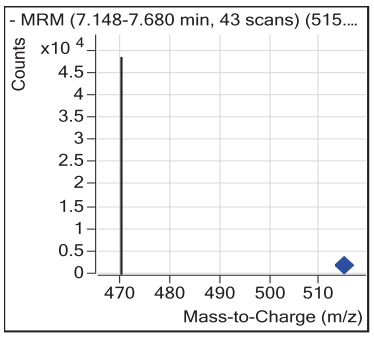


Perfluorinated Compounds by LC/MS/MS.

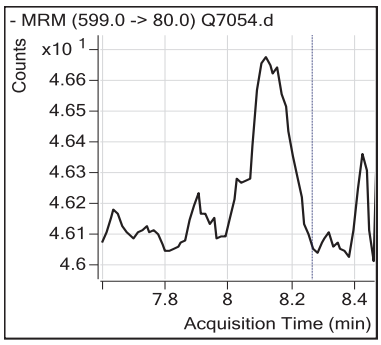
13C2-PFDA

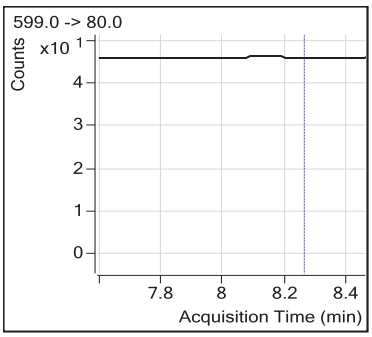


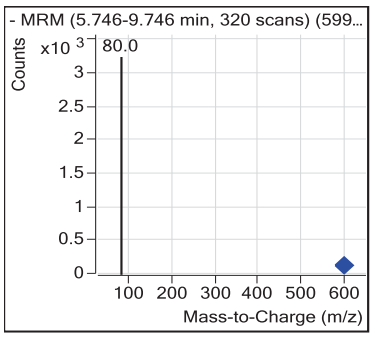




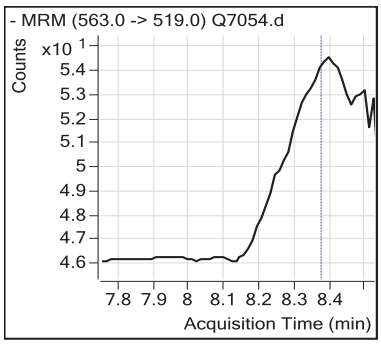
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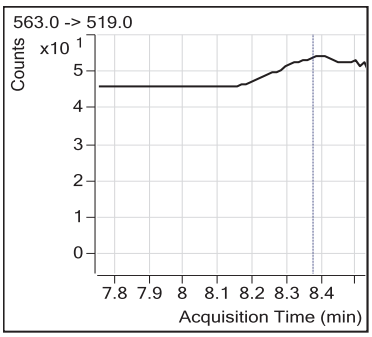


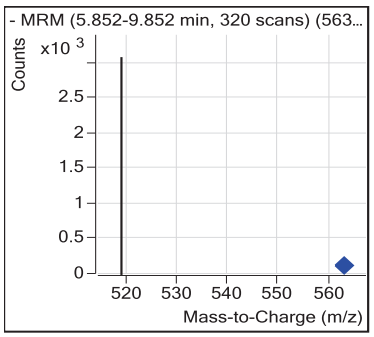




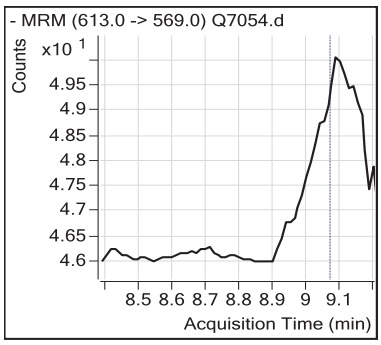
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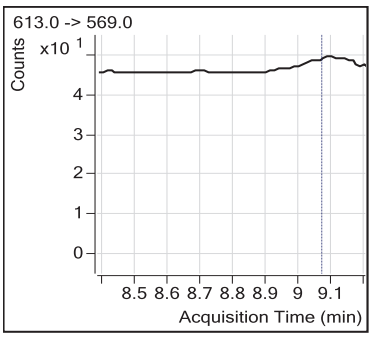


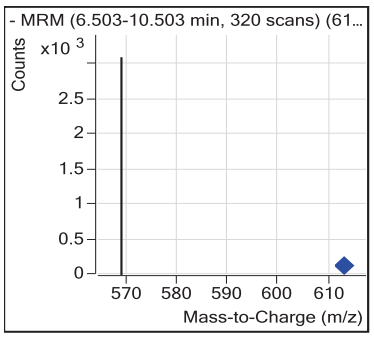




PFDoDA

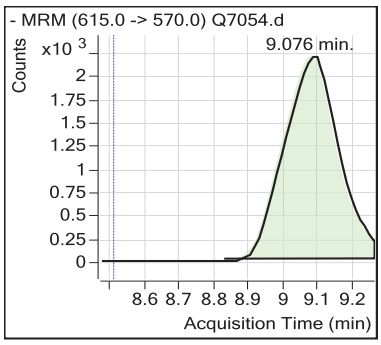


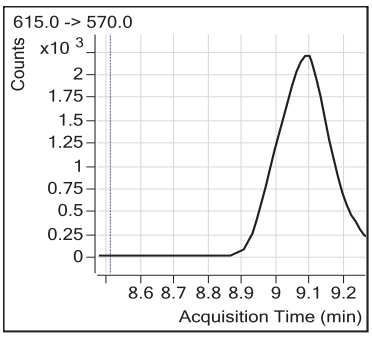


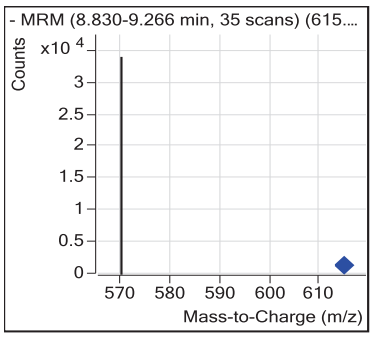


Perfluorinated Compounds by LC/MS/MS.

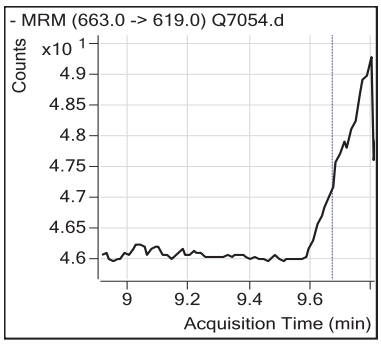
13C2-PFDoDA

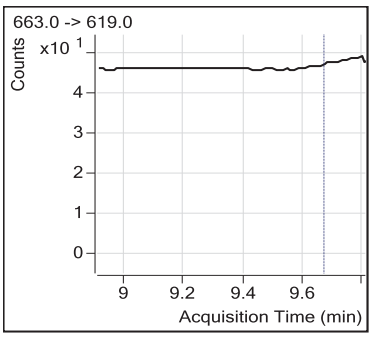


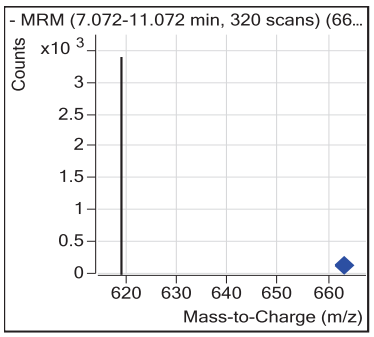




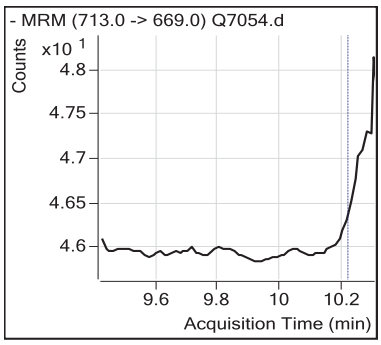
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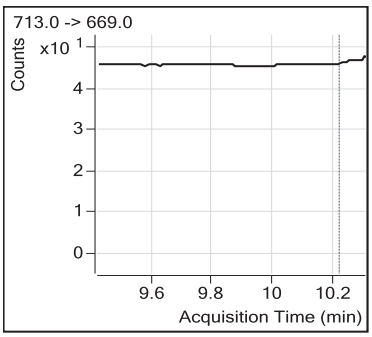


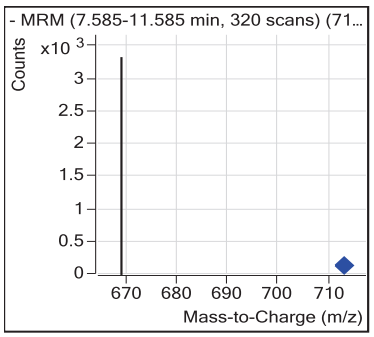




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-6
Lab FileID: Q7054.D
Injection Time: 09/18/14 18:21
Method: EPA 537 MOD
Analyst approved: 09/19/14 10:12 Mike Eger
Supervisor approved: 09/22/14 14:41 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanoic acid	307-24-4		4.50	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluoroheptanesulfonic acid			5.81	Split peak
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

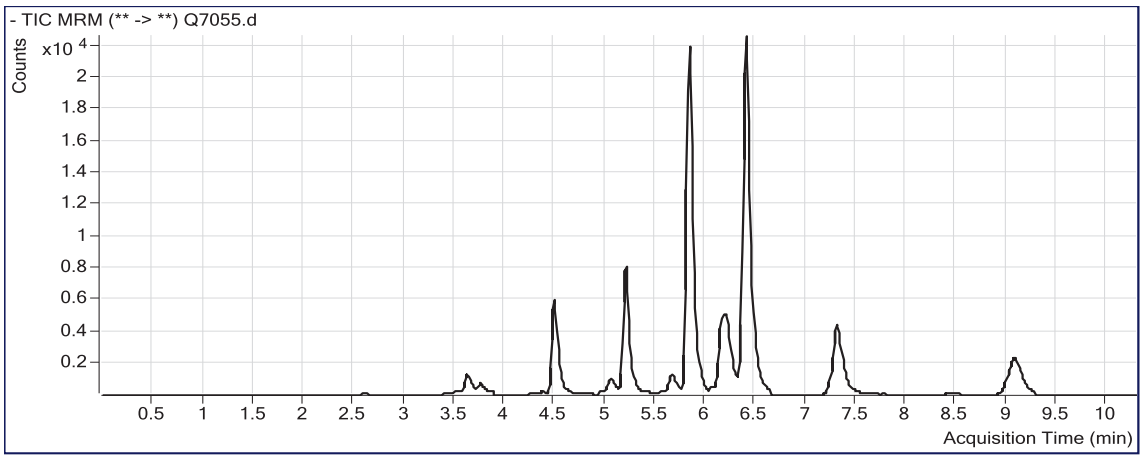
Data File	:	Q7055.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 18:41
Sample Name	:	fa18133-7
Vial	:	Vial 16
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	43645	20.000	µg/L		0.013
13C4-PFOS	6.394	503.0 -> 80.0	14096	20.000	µg/L		0.050
13C2-PFDoDA	9.064	615.0 -> 570.0	21666	20.000	µg/L		0.555
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	12568	19.44	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 97.18%				
13C2-PFDA	7.295	515.0 -> 470.0	31096	23.67	µg/L		0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 118.33%				
Target Compounds							**Qvalue**
PFBA	2.602	213.0 -> 169.0	457	0.902	µg/L		100
PFPeA	3.636	263.0 -> 219.0	4875	19.641	µg/L		100
PFBS	3.753	299.0 -> 80.0	1355	6.071	µg/L		100
PFHxA	4.495	313.0 -> 269.0	13021	17.729	µg/L	m	99
PFHxS	5.192	399.0 -> 80.0	19124	54.698	µg/L	m	90
PFHpA	5.210	363.0 -> 319.0	6696	8.937	µg/L		99
PFHpS	5.806	449.0 -> 80.0	1015	2.430	µg/L	m	100
PFOA	5.836	413.0 -> 369.0	45207	20.000	µg/L	m	77
PFOS	6.396	499.0 -> 80.0	95490	138.786	µg/L	m	98
PFNA	6.462	463.0 -> 419.0	2013	1.940	µg/L		100
PFDA	7.301	513.0 -> 469.0	556	0.454	µg/L		100

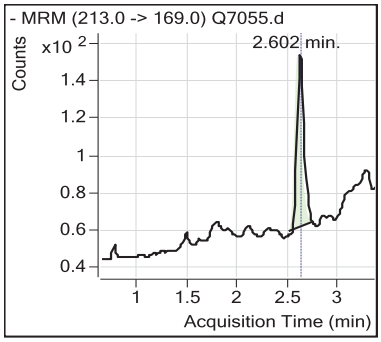
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

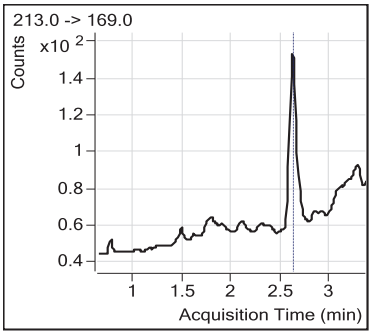
Perfluorinated Compounds by LC/MS/MS.

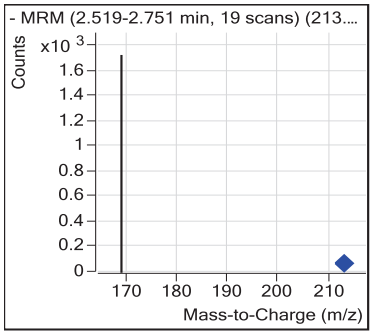
Data File	:	Q7055.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 18:41
Sample Name	:	fa18133-7
Vial	:	Vial 16
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



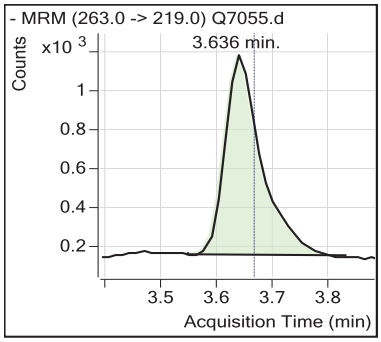
PFBA

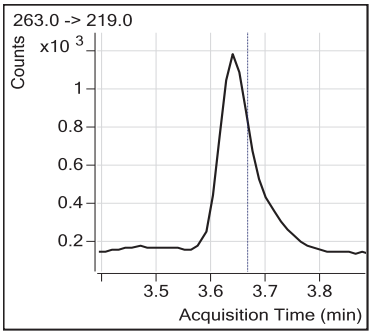


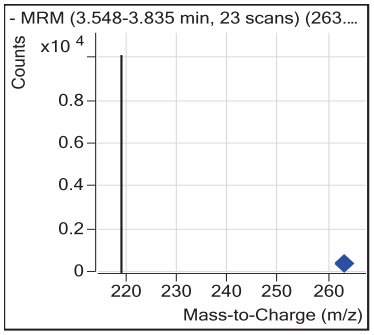




PFPeA

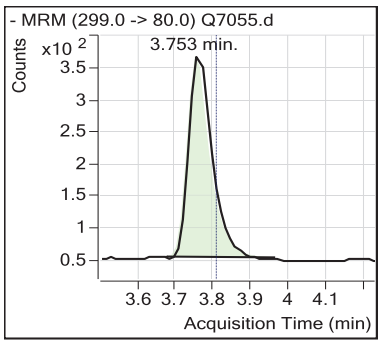


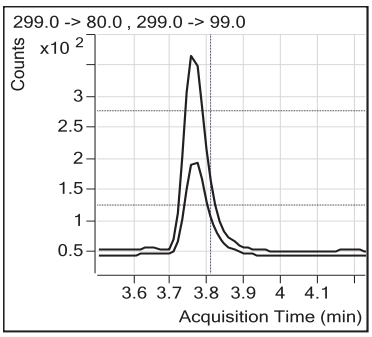


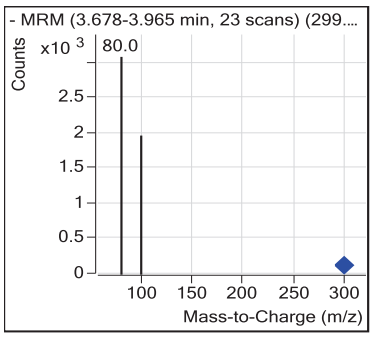


Perfluorinated Compounds by LC/MS/MS.

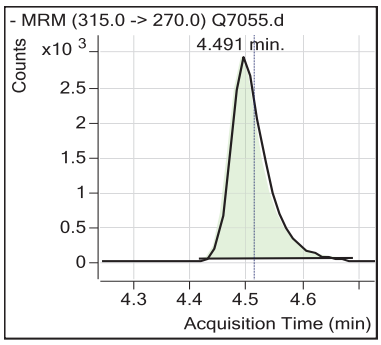
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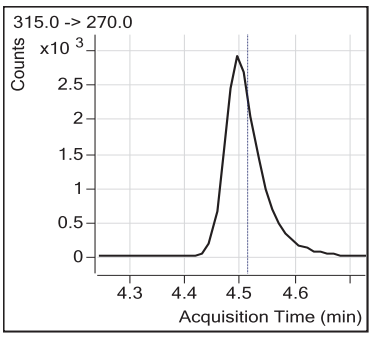


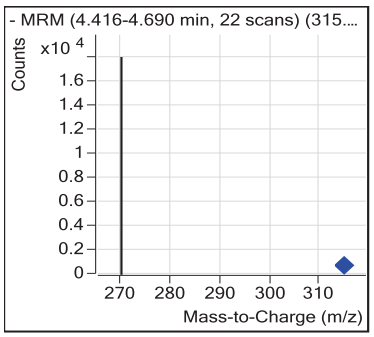




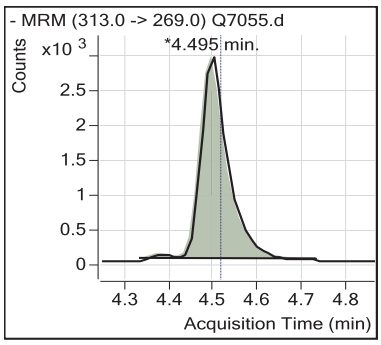
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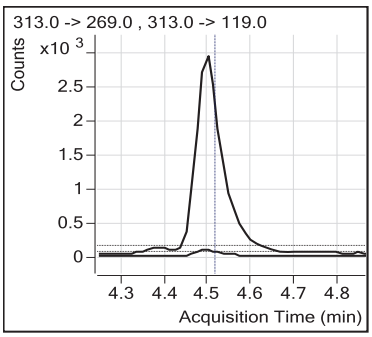


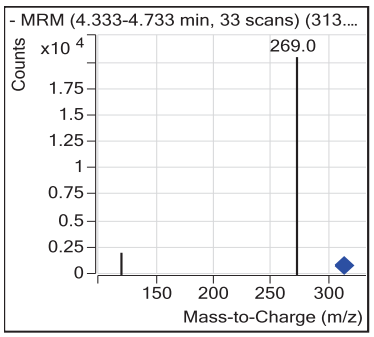




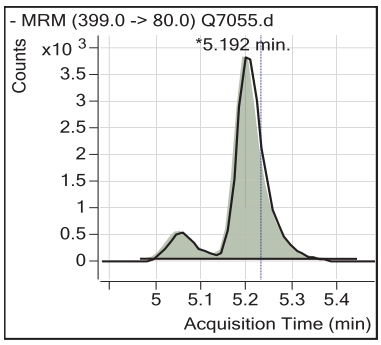
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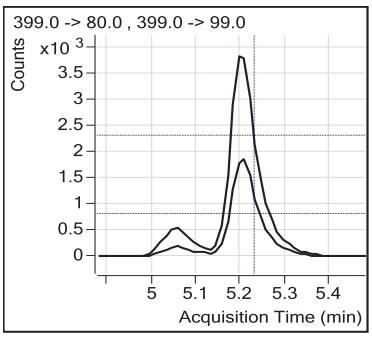


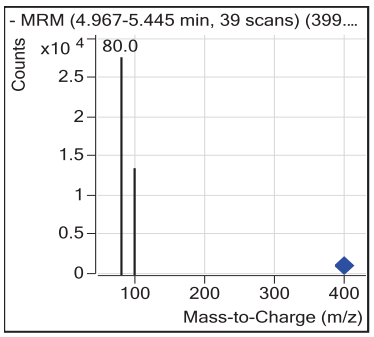




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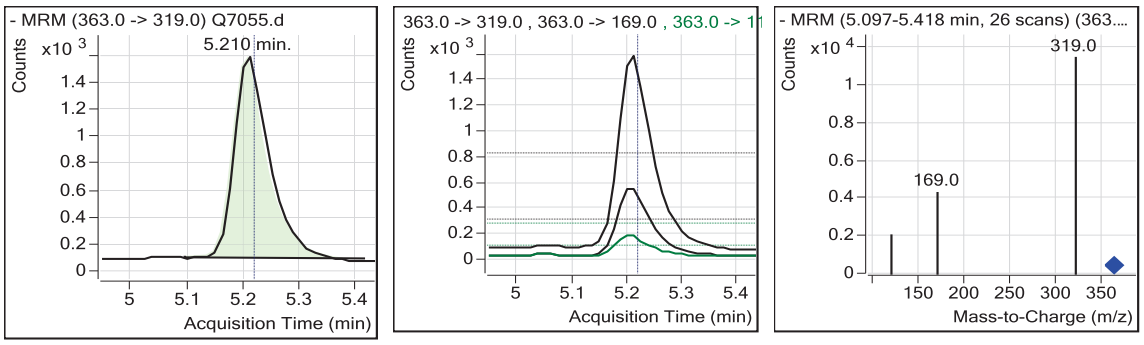




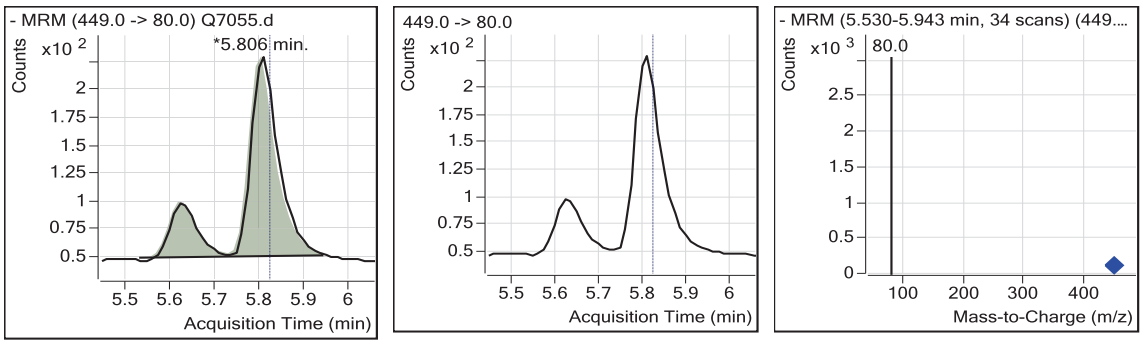


Perfluorinated Compounds by LC/MS/MS.

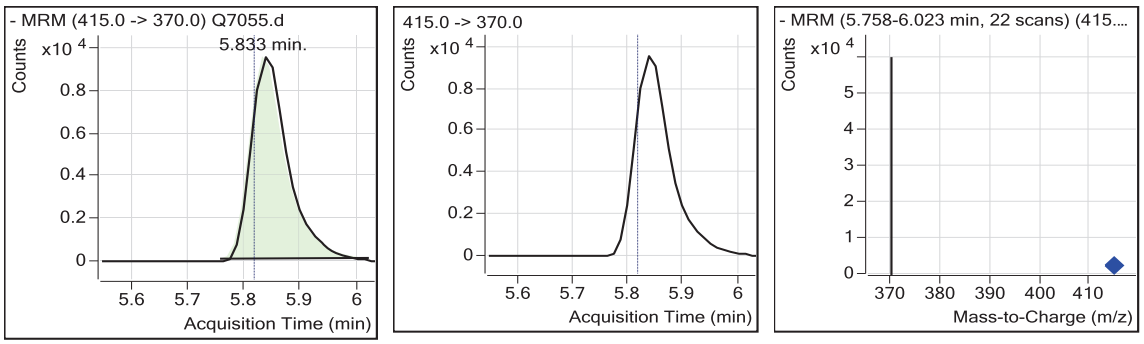
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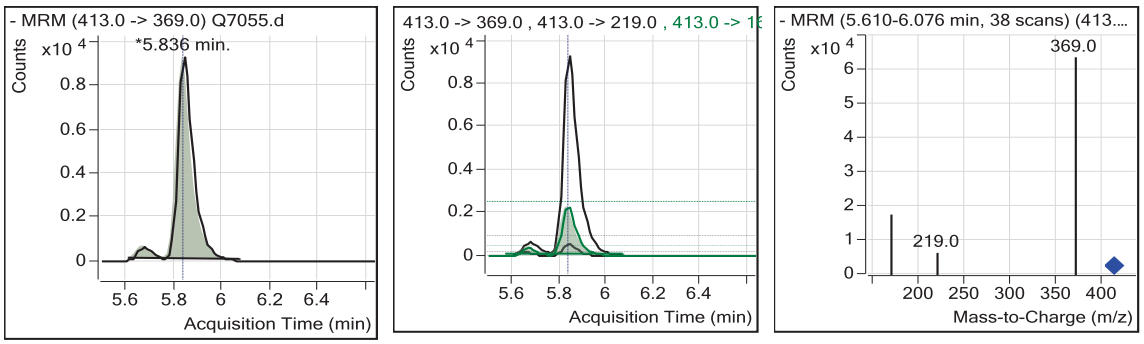
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13C2-PFOA

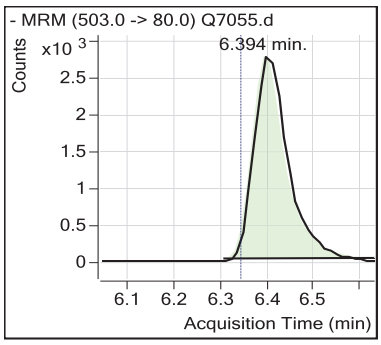


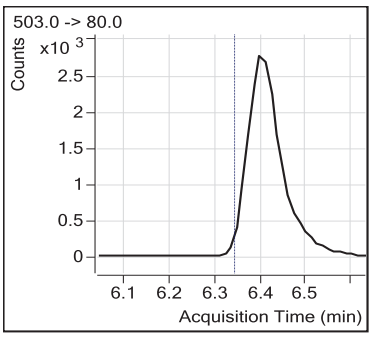
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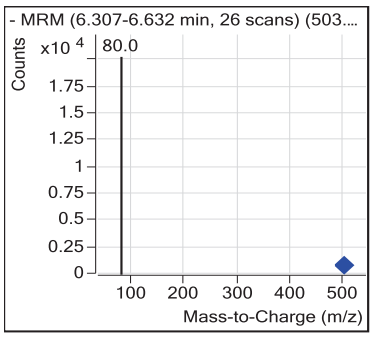


Perfluorinated Compounds by LC/MS/MS.

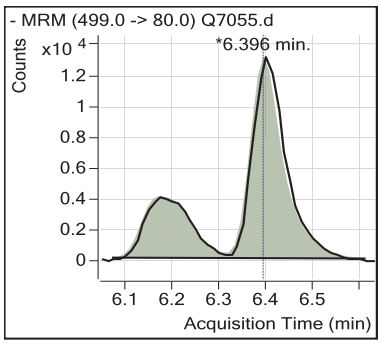
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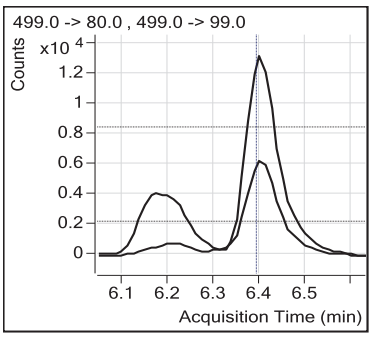


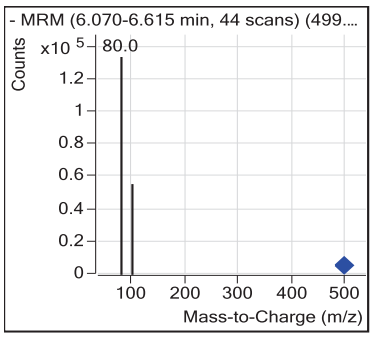




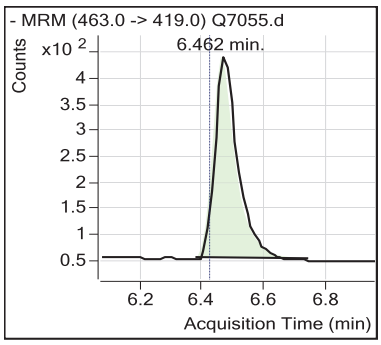
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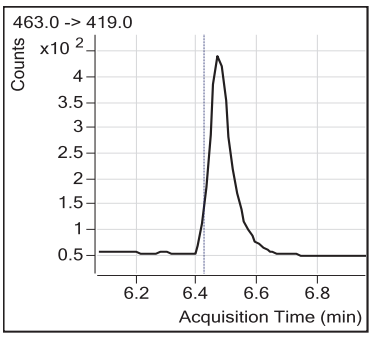


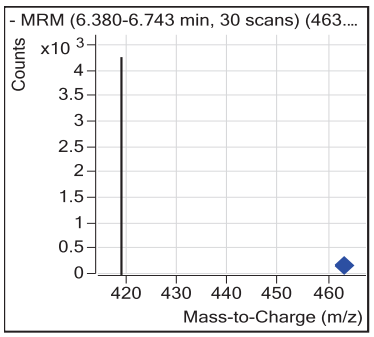




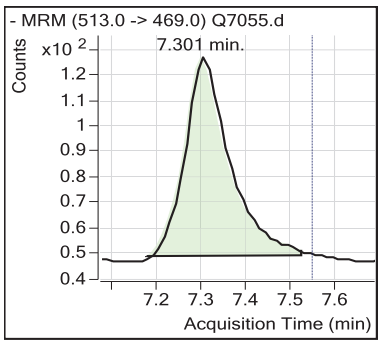
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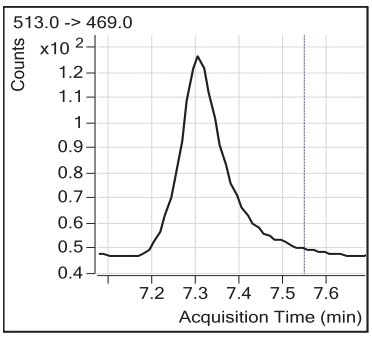


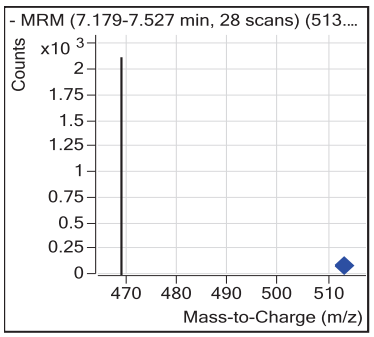




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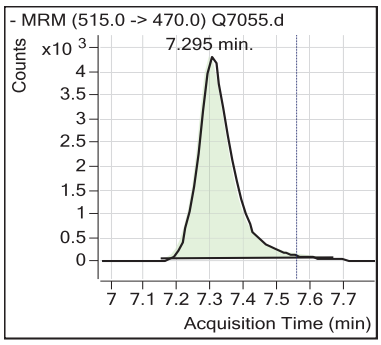


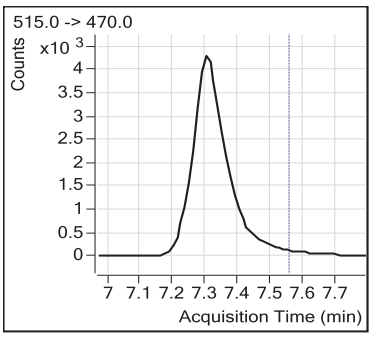


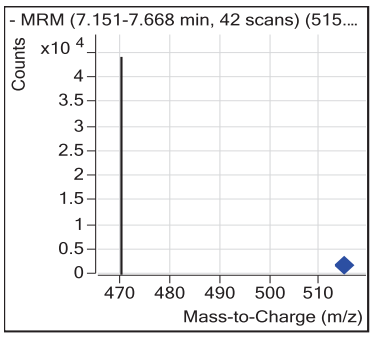


Perfluorinated Compounds by LC/MS/MS.

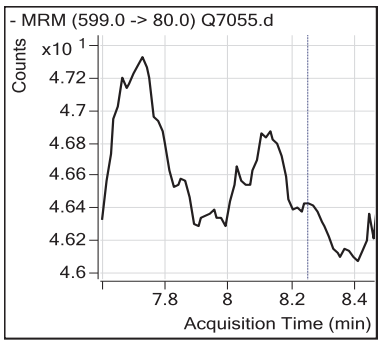
13C2-PFDA

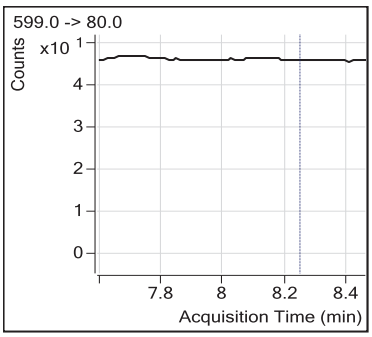


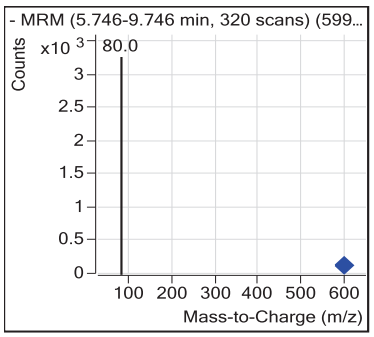




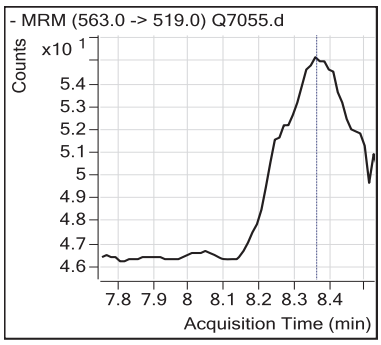
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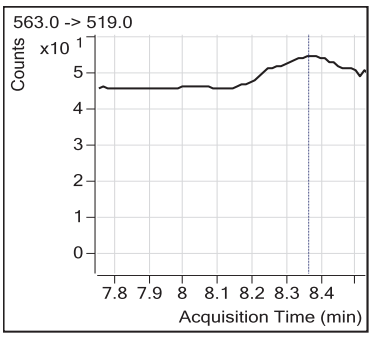


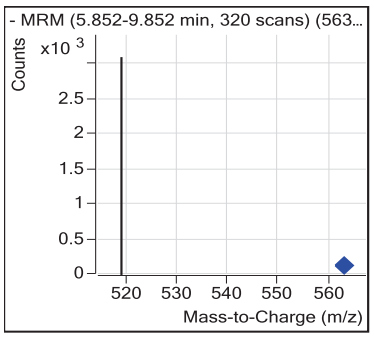




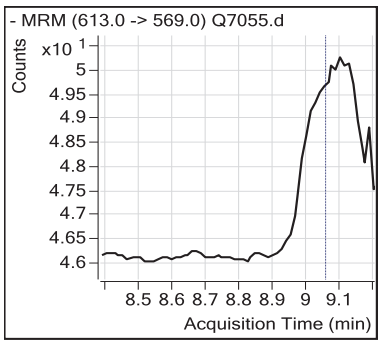
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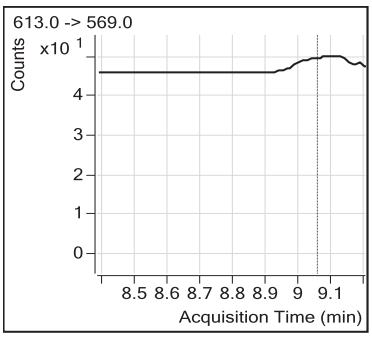


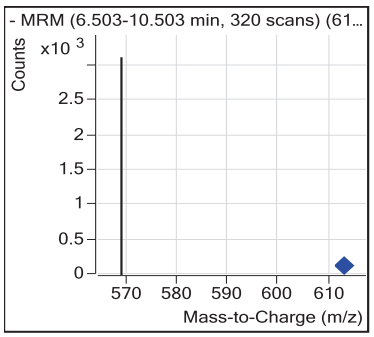




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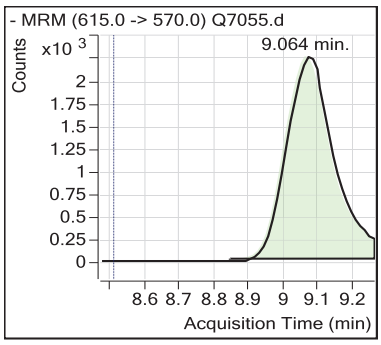


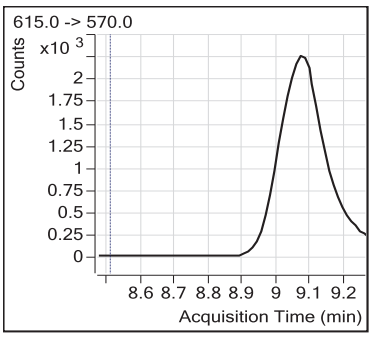


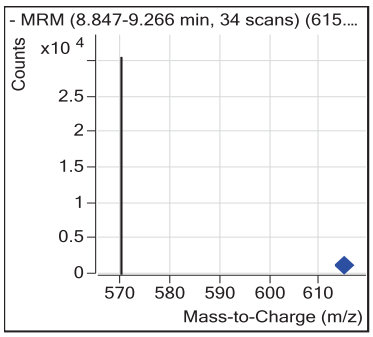


Perfluorinated Compounds by LC/MS/MS.

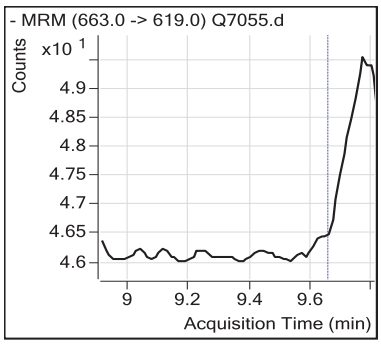
13C2-PFDoDA

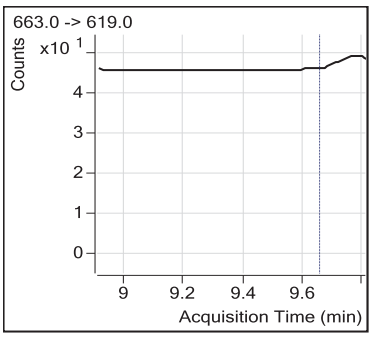


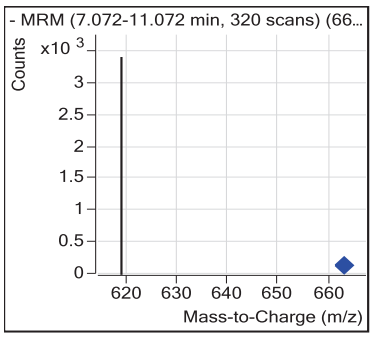




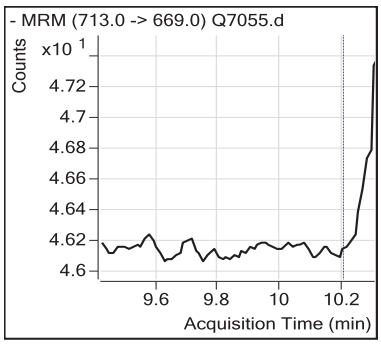
PFTrDA

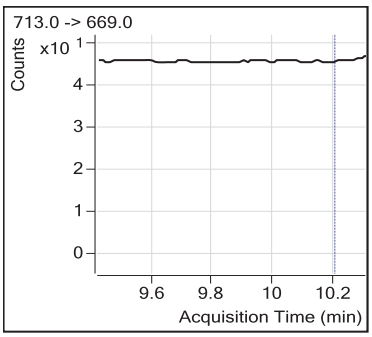


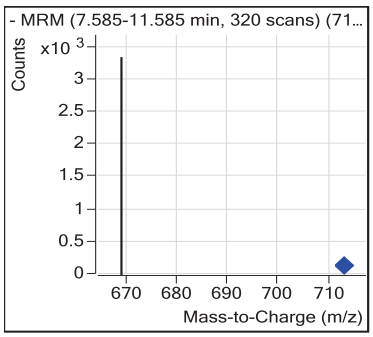




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-7
Lab FileID: Q7055.D
Injection Time: 09/18/14 18:41
Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanoic acid	307-24-4		4.50	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluoroheptanesulfonic acid			5.81	Split peak
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling 09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

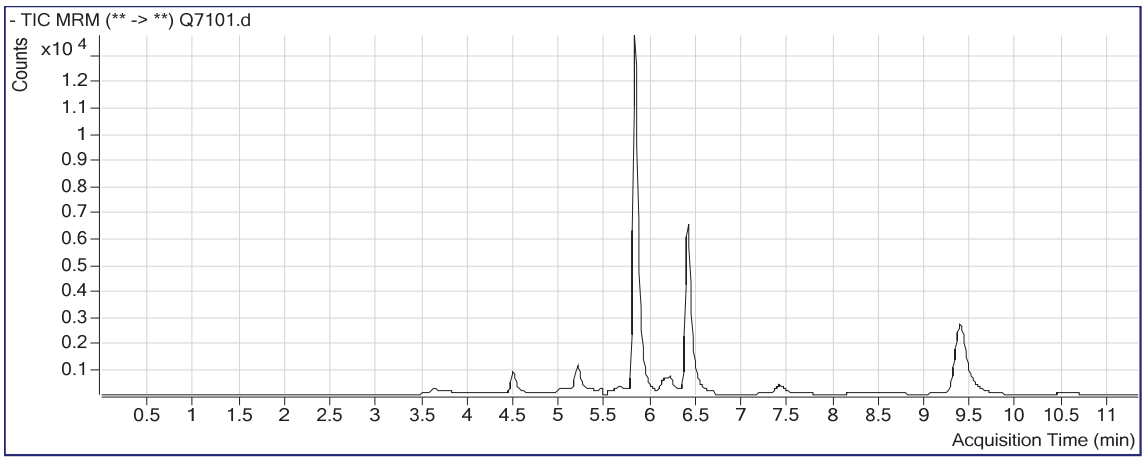
Data File	:	Q7101.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 13:01
Sample Name	:	FA18133-7
Vial	:	Vial 7
Sample Info	:	OP53121,SQ240,125,,,1,10,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	50493	20.000	µg/L		-0.013
13C4-PFOS	6.419	503.0 -> 80.0	18075	20.000	µg/L		-0.013
13C2-PFDoDA	9.397	615.0 -> 570.0	24892	20.000	µg/L		0.000
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	1591	2.13	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 10.63%				
13C2-PFDA	7.420	515.0 -> 470.0	2554	1.69	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 8.46%				
Target Compounds							**Qvalue**
PFPeA	3.649	263.0 -> 219.0	588	2.047	µg/L		100
PFHxA	4.508	313.0 -> 269.0	1575	1.853	µg/L		100
PFHxS	5.205	399.0 -> 80.0	1873	4.177	µg/L	m	84
PFHpA	5.222	363.0 -> 319.0	829	0.937	µg/L		97
PFOA	5.848	413.0 -> 369.0	5126	1.860	µg/L	m	78
PFOS	6.422	499.0 -> 80.0	10641	11.284	µg/L	m	98
PFNA	6.491	463.0 -> 419.0	414	0.344	µg/L		100

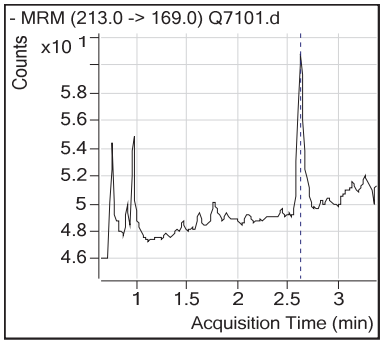
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

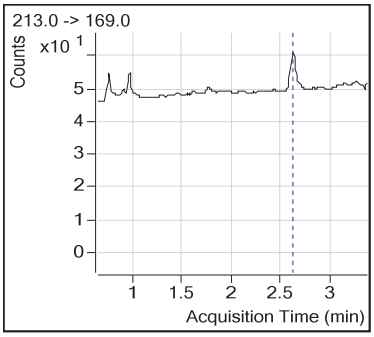
Perfluorinated Compounds by LC/MS/MS.

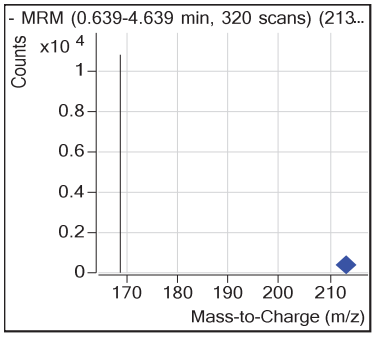
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Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 13:01
Sample Name	:	FA18133-7
Vial	:	Vial 7
Sample Info	:	OP53121,SQ240,125,,,1,10,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05



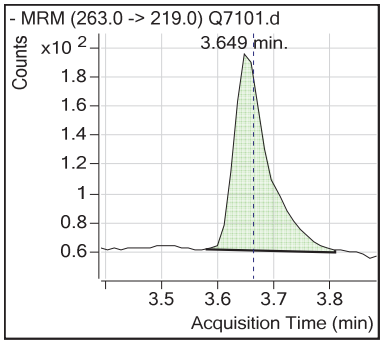
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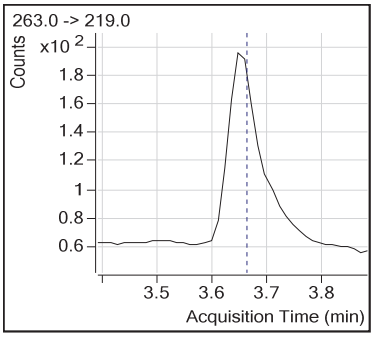


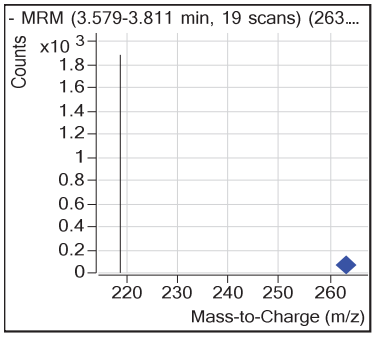




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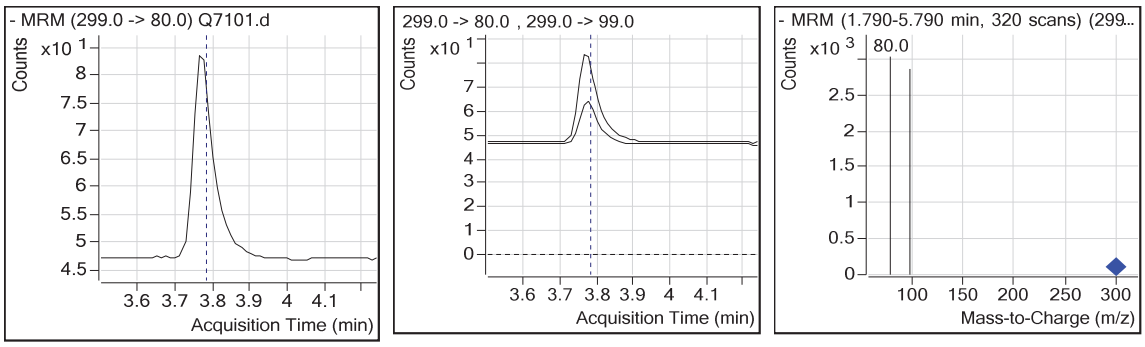




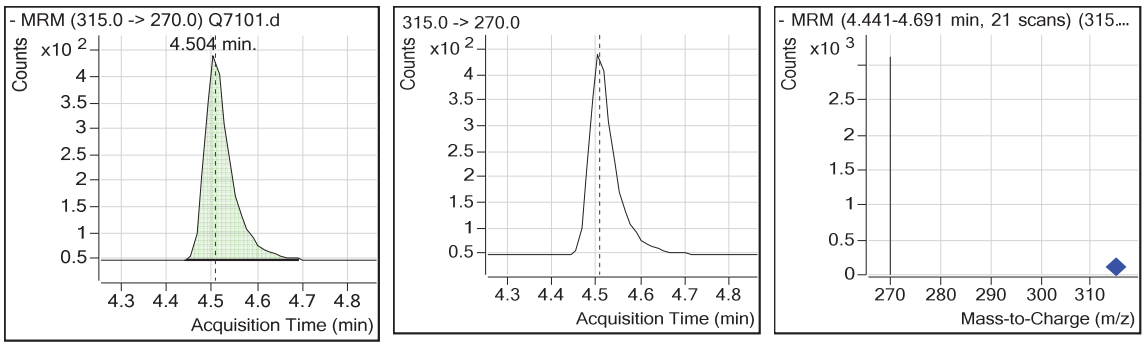


Perfluorinated Compounds by LC/MS/MS.

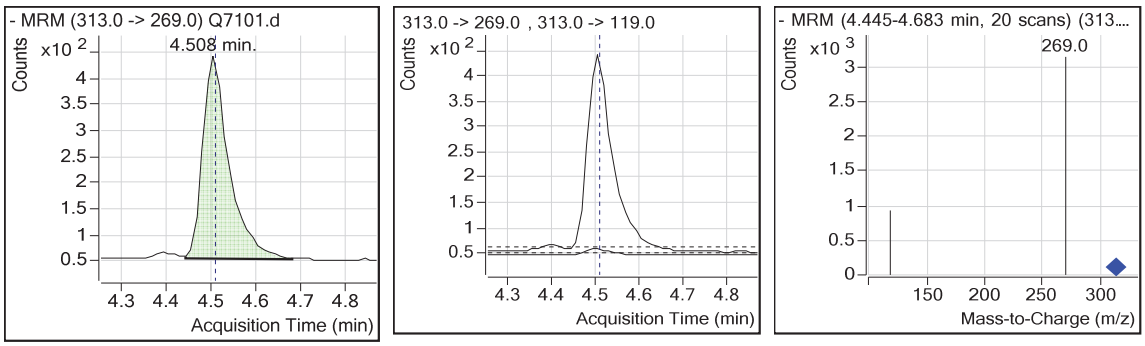
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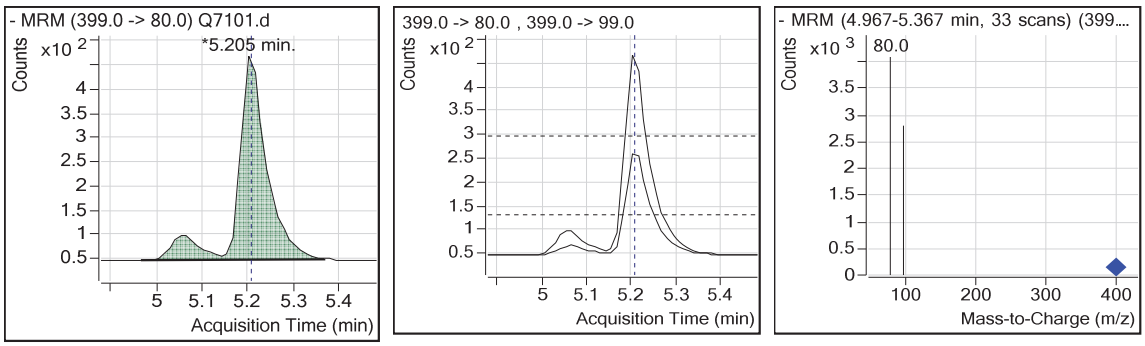
13C2-PFHxA



PFHxA

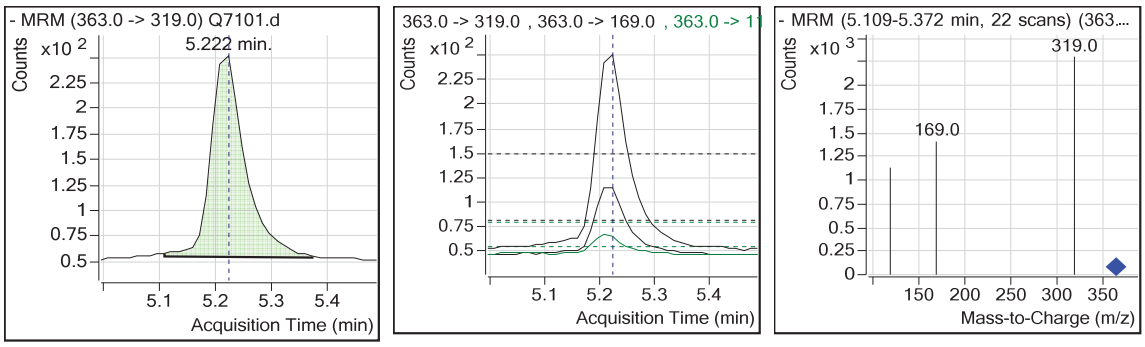


PFHxS

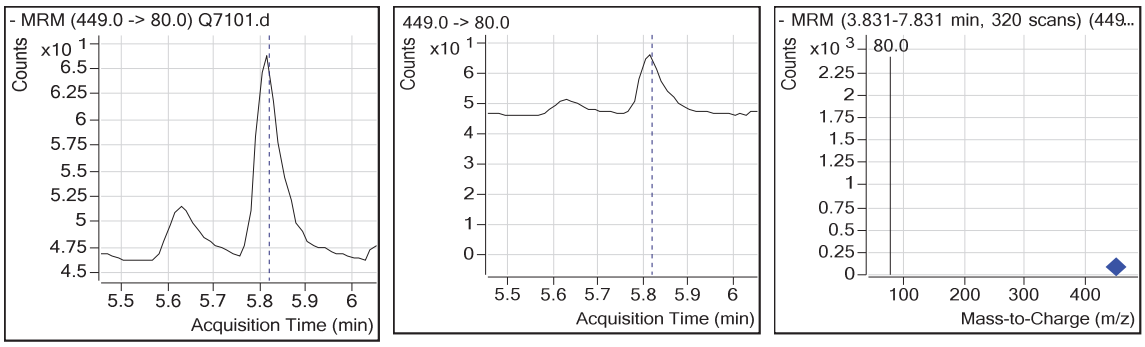


Perfluorinated Compounds by LC/MS/MS.

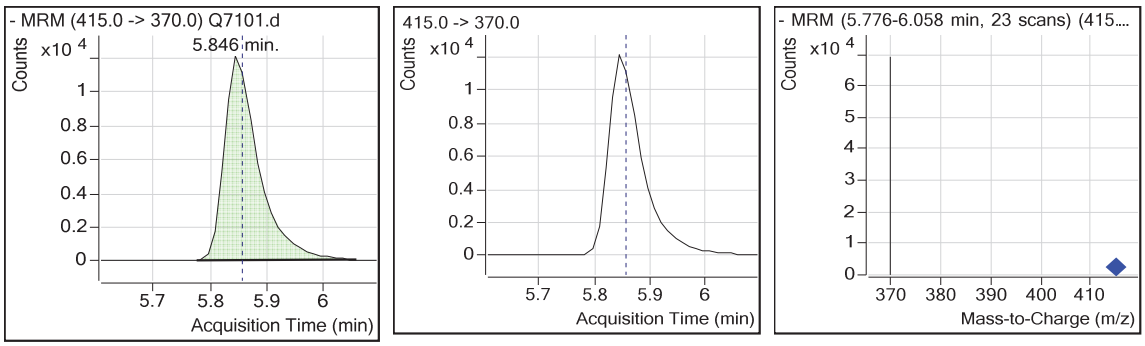
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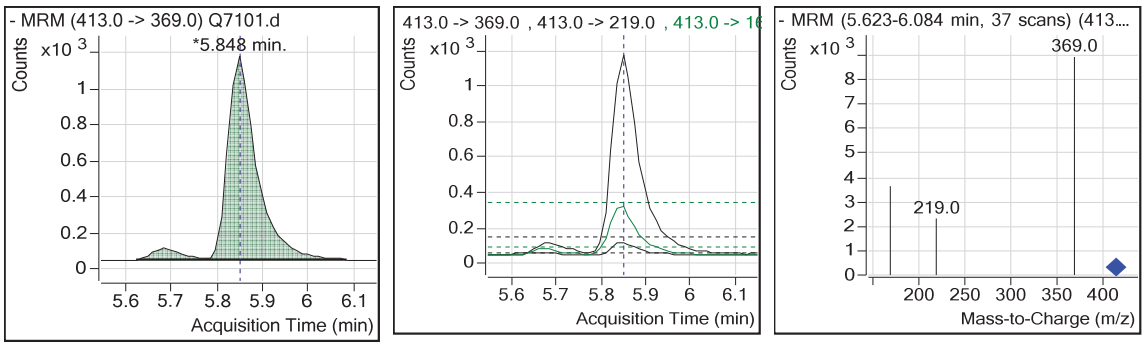
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13C2-PFOA

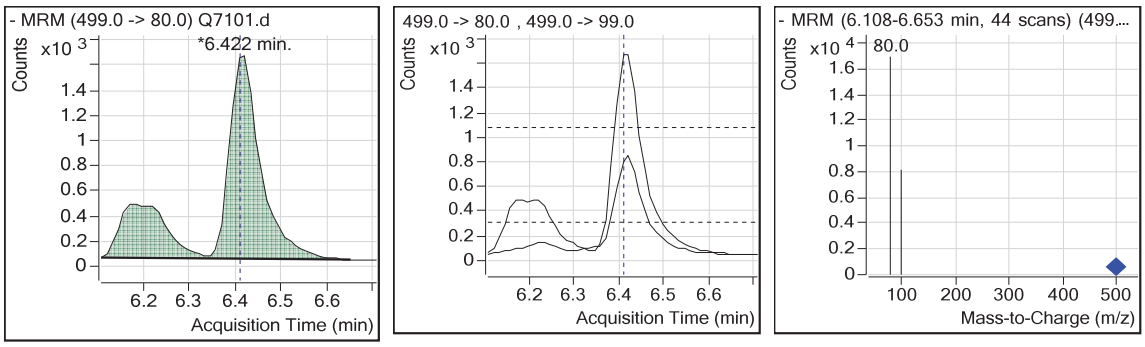


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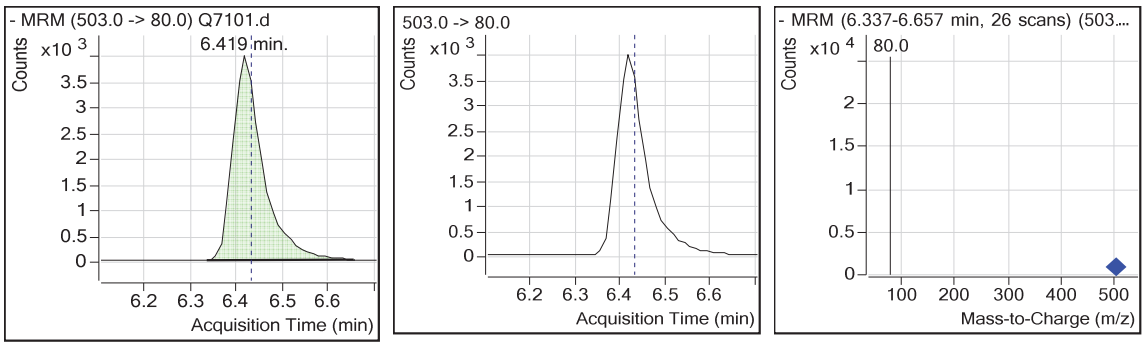


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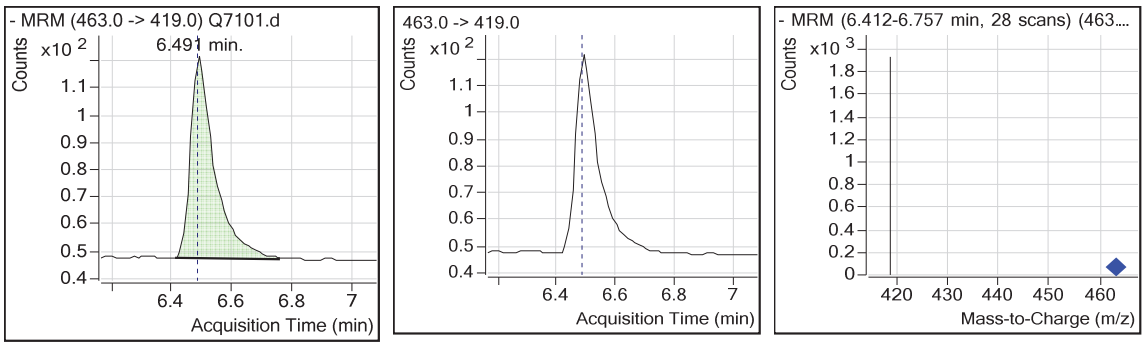
PFOS



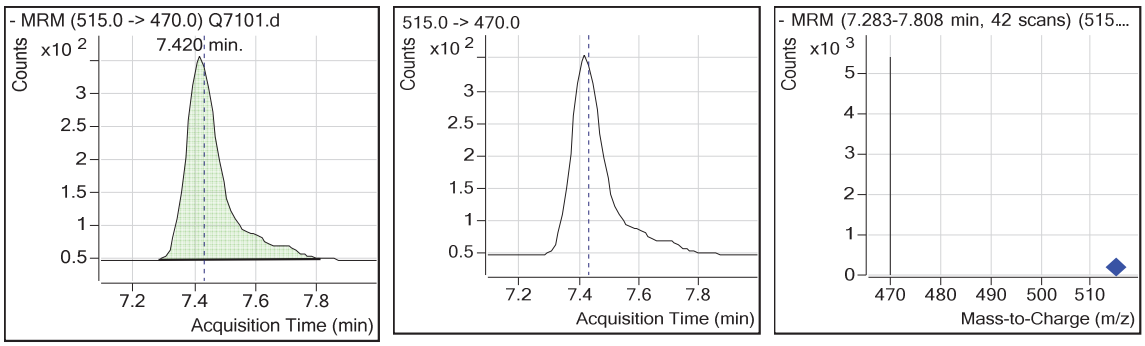
13C4-PFOS



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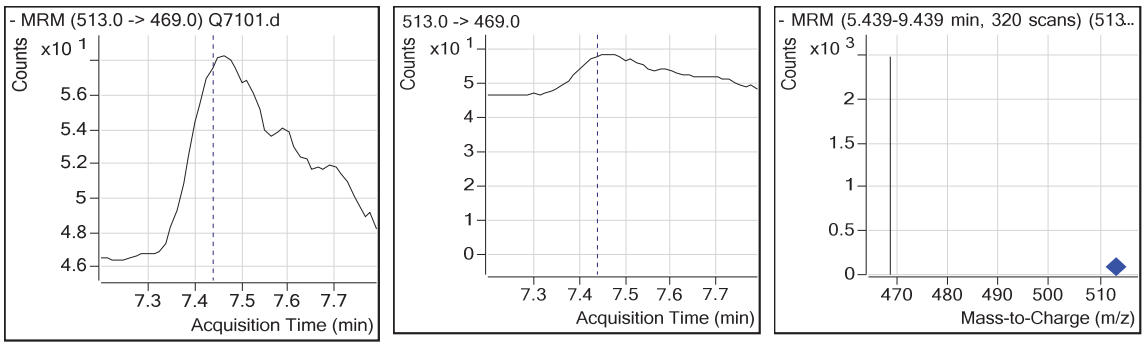


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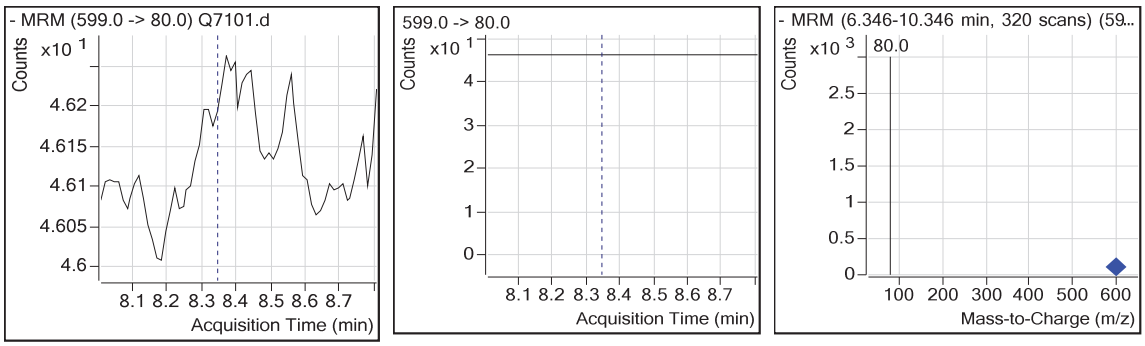


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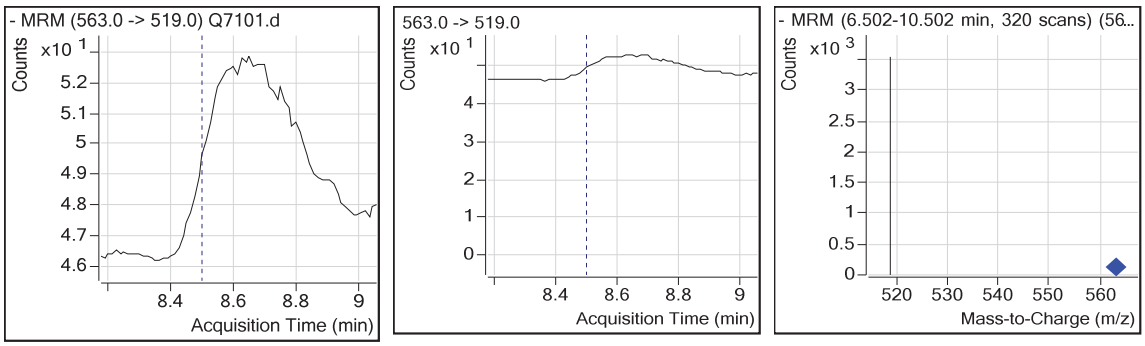
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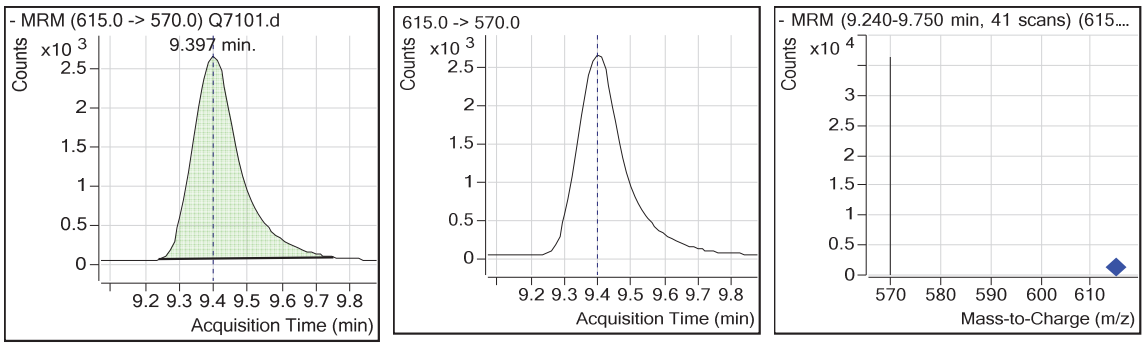
PFDS



PFUnDA

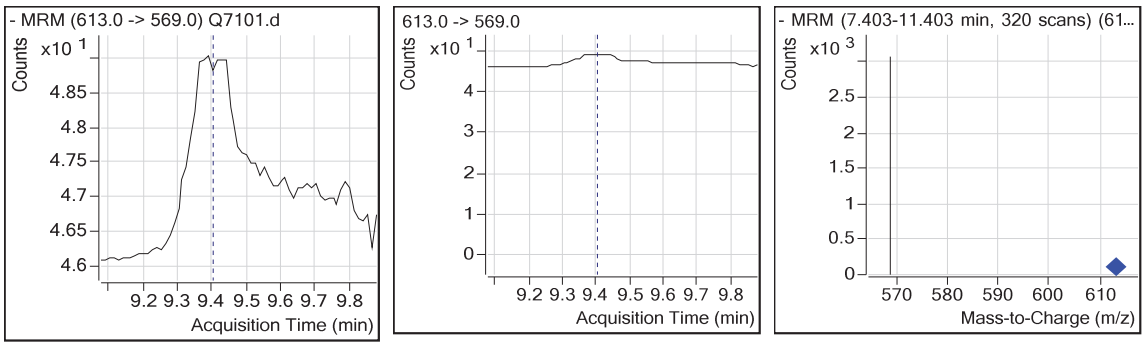


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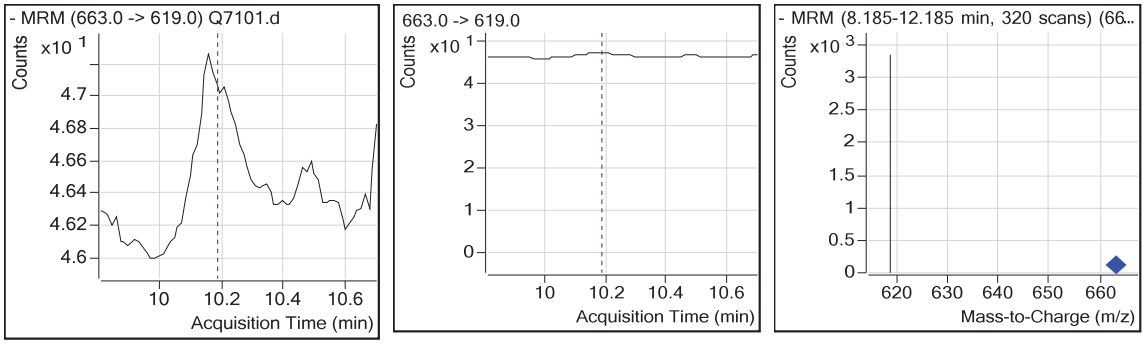


Perfluorinated Compounds by LC/MS/MS.

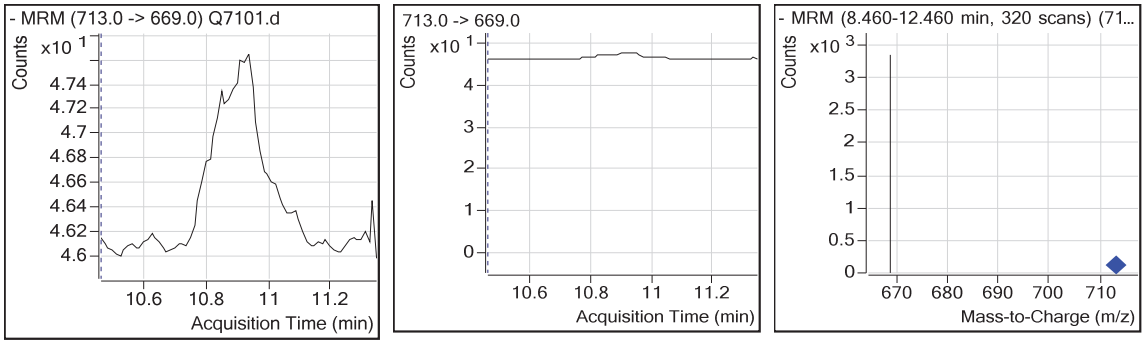
PFDoDA



PFTrDA



PFTeDA



Manual Integration Approval Summary

Sample Number: FA18133-7
Lab FileID: Q7101.D
Injection Time: 09/22/14 13:01
Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.42	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

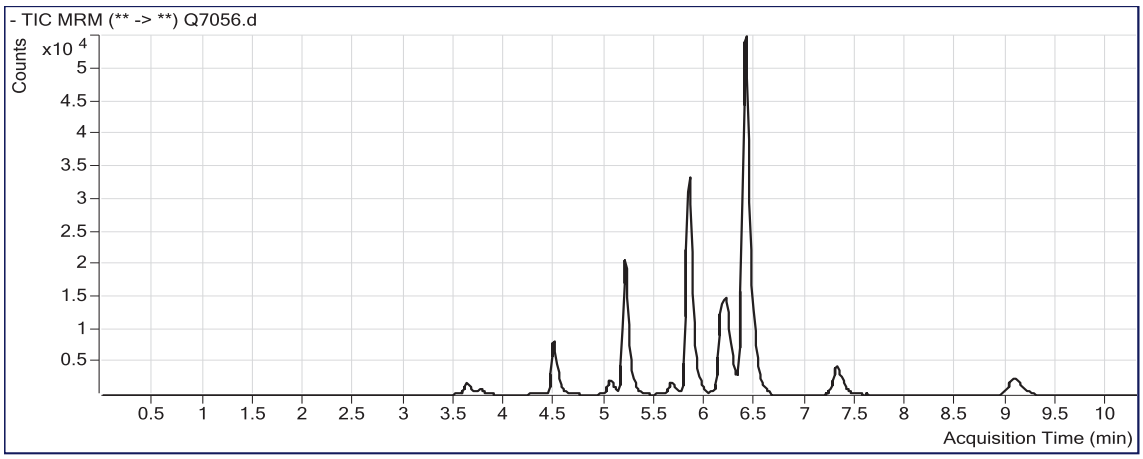
Data File	:	Q7056.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 19:00
Sample Name	:	fa18133-8
Vial	:	Vial 17
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	45342	20.000	µg/L		0.013
13C4-PFOS	6.394	503.0 -> 80.0	12862	20.000	µg/L		0.050
13C2-PFDoDA	9.064	615.0 -> 570.0	23726	20.000	µg/L		0.555
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	11755	17.50	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 87.48%				
13C2-PFDA	7.295	515.0 -> 470.0	30354	21.10	µg/L		0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 105.48%				
Target Compounds							**Qvalue**
PFPeA	3.636	263.0 -> 219.0	7436	28.838	µg/L		100
PFBS	3.753	299.0 -> 80.0	2061	10.124	µg/L		100
PFHxA	4.483	313.0 -> 269.0	24023	31.485	µg/L	m	99
PFHxS	5.192	399.0 -> 80.0	52493	164.551	µg/L	m	90
PFHpA	5.197	363.0 -> 319.0	14717	19.430	µg/L		100
PFHpS	5.806	449.0 -> 80.0	3175	8.331	µg/L	m	100
PFOA	5.836	413.0 -> 369.0	86231	38.446	µg/L	m	79
PFOS	6.396	499.0 -> 80.0	276076	439.760	µg/L	m	98
PFNA	6.462	463.0 -> 419.0	6970	6.501	µg/L		100
PFDA	7.301	513.0 -> 469.0	862	0.642	µg/L		100

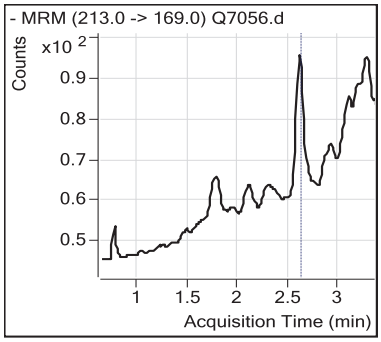
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

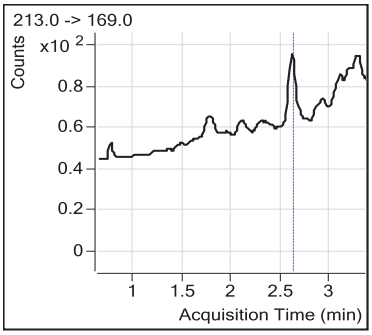
Perfluorinated Compounds by LC/MS/MS.

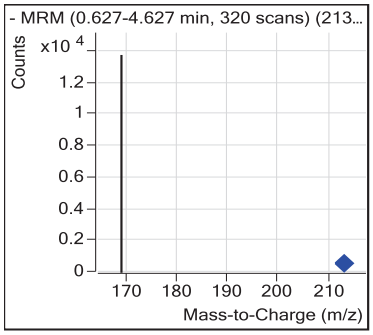
Data File	:	Q7056.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 19:00
Sample Name	:	fa18133-8
Vial	:	Vial 17
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



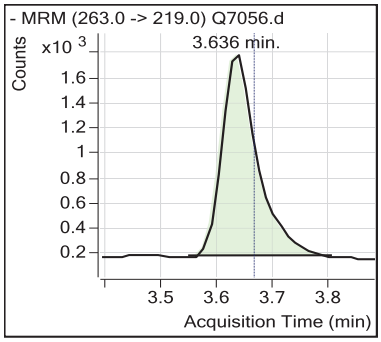
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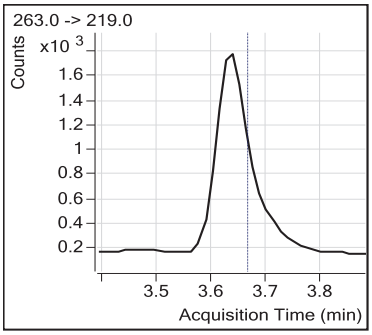


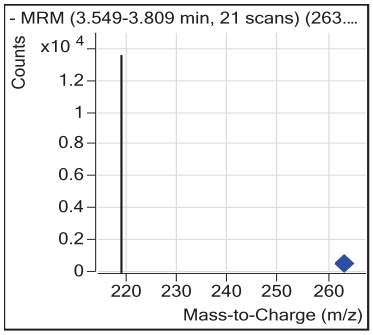




PFPeA

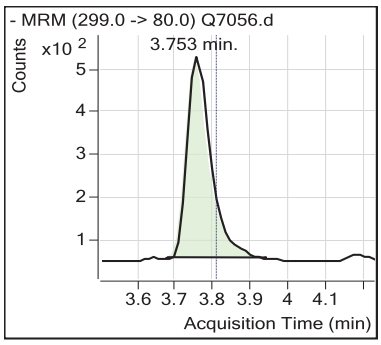


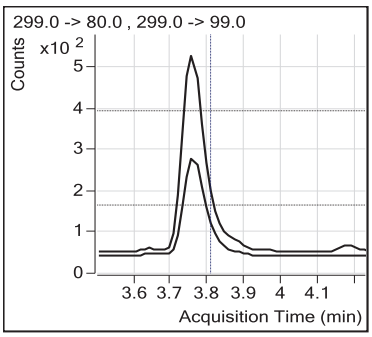


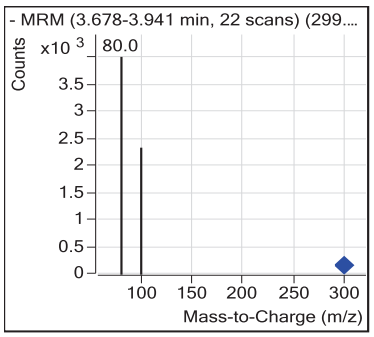


Perfluorinated Compounds by LC/MS/MS.

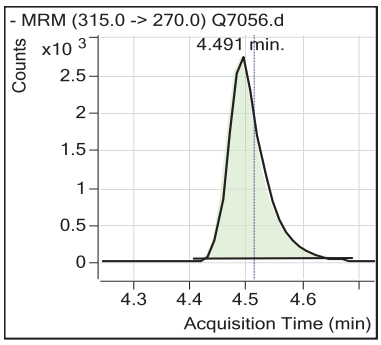
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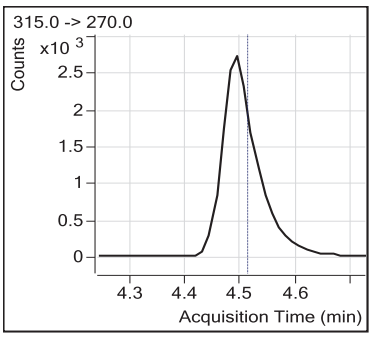


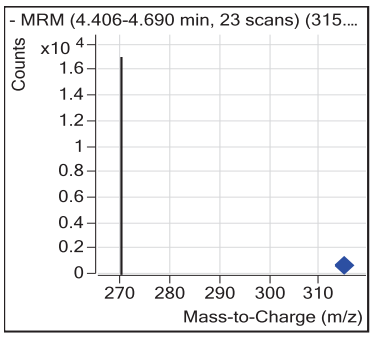




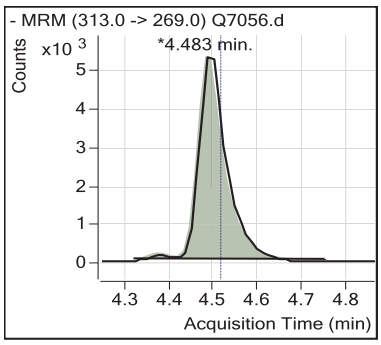
13C2-PFHxA

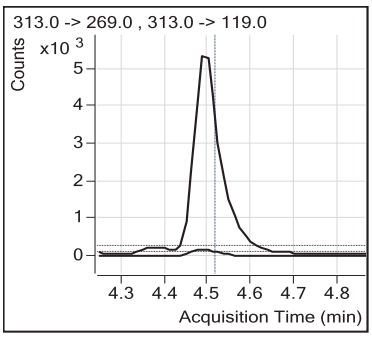


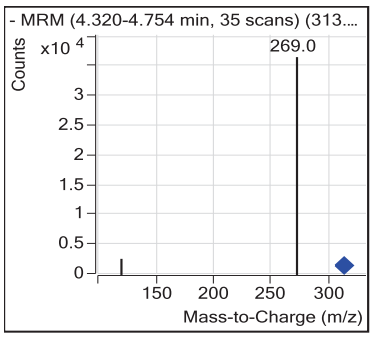




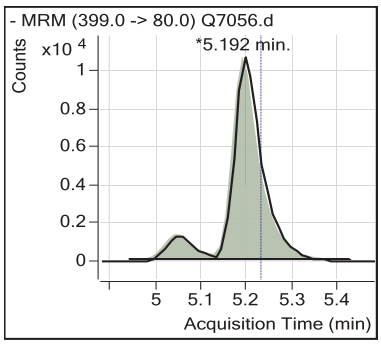
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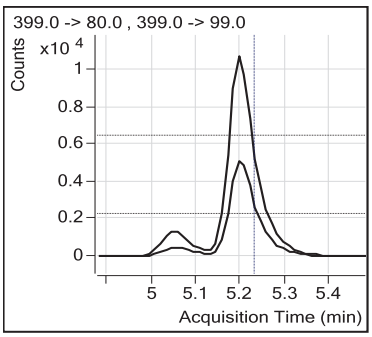


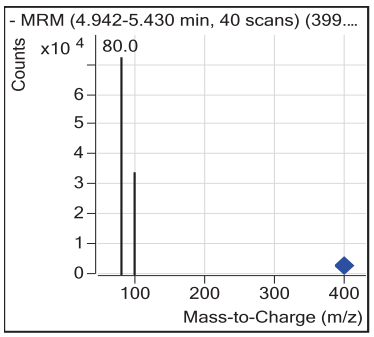




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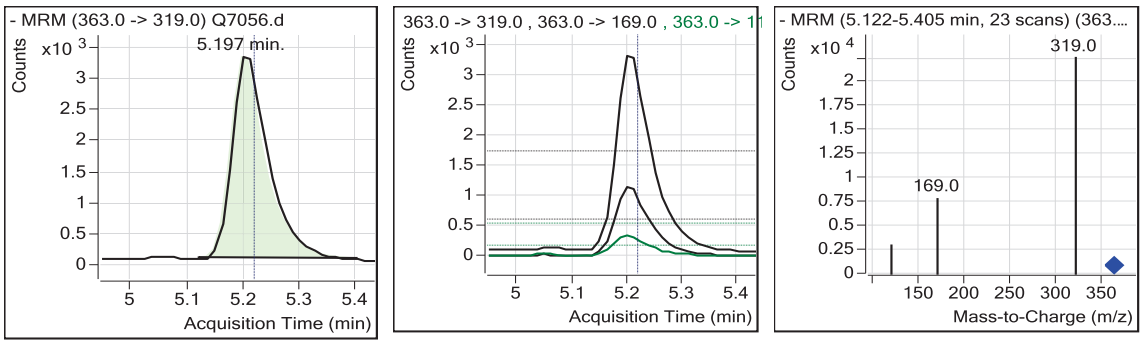




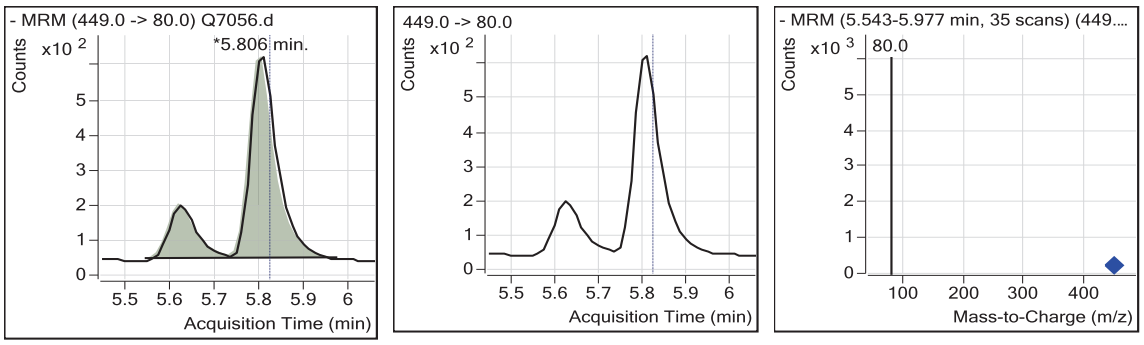


Perfluorinated Compounds by LC/MS/MS.

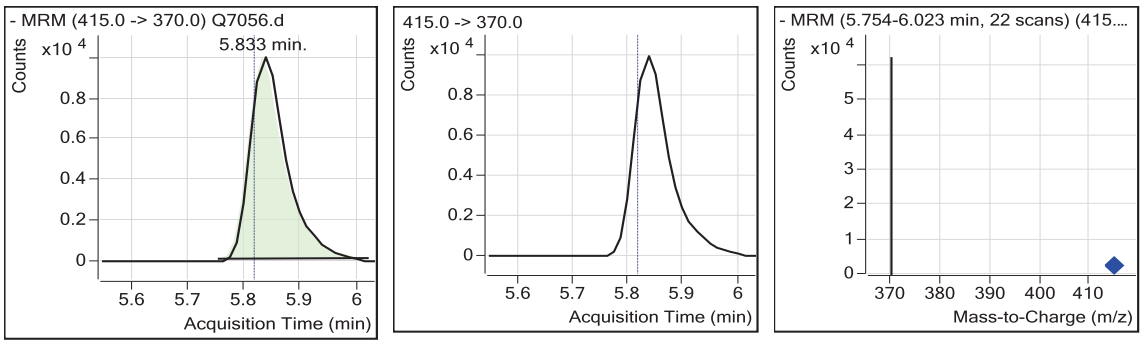
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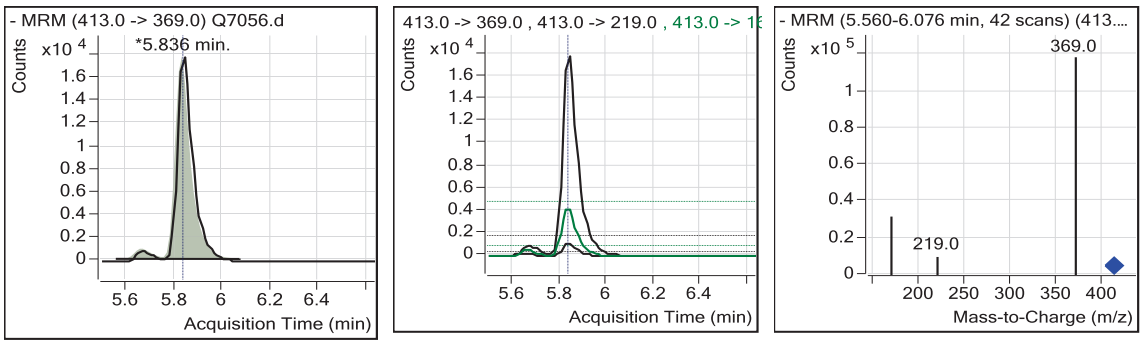
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13C2-PFOA



PFOA

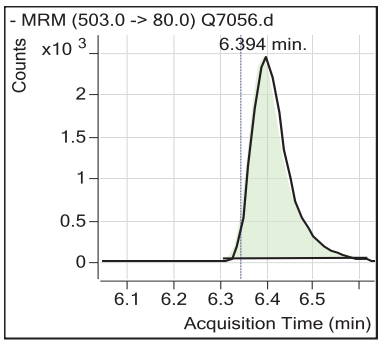


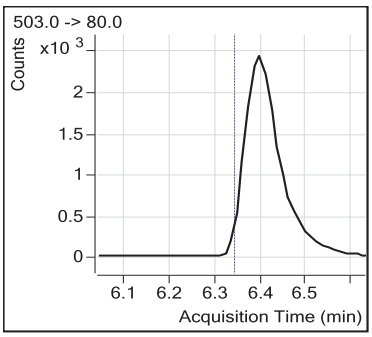
7.1.10

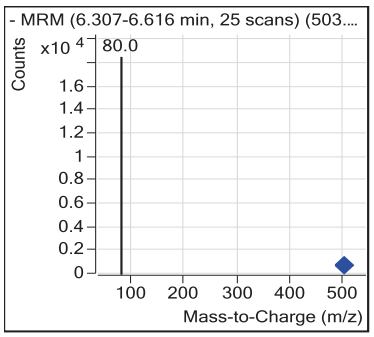
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Perfluorinated Compounds by LC/MS/MS.

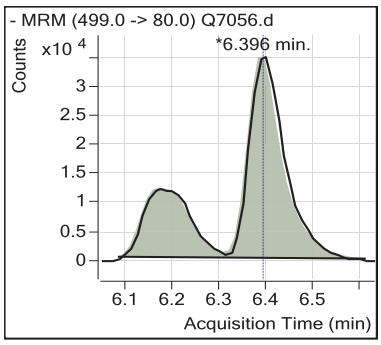
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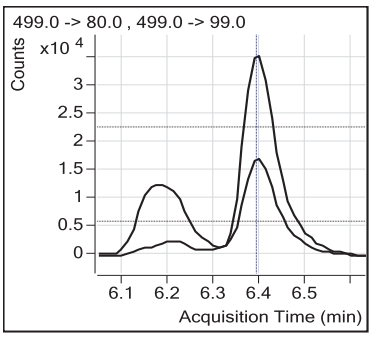


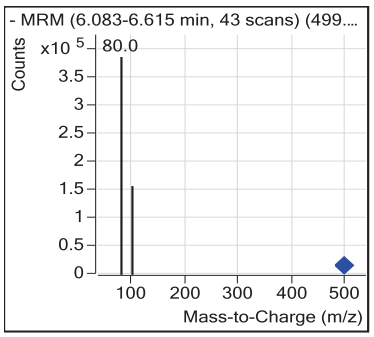




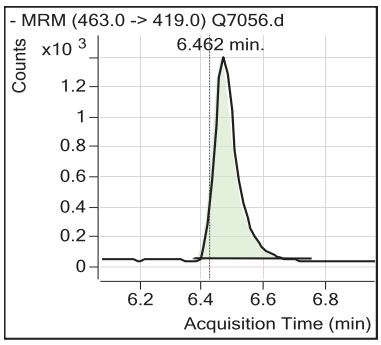
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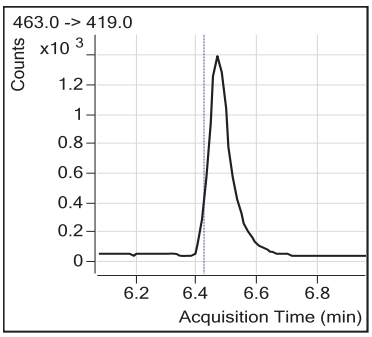


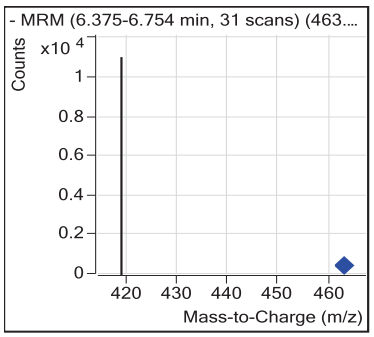




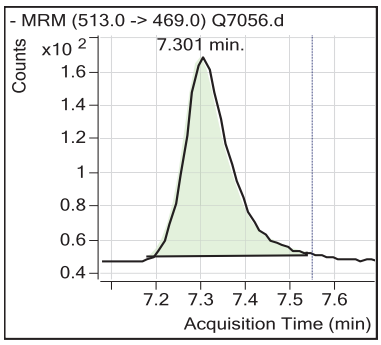
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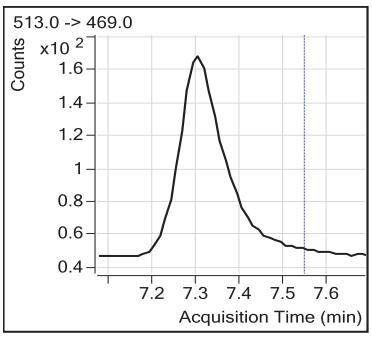


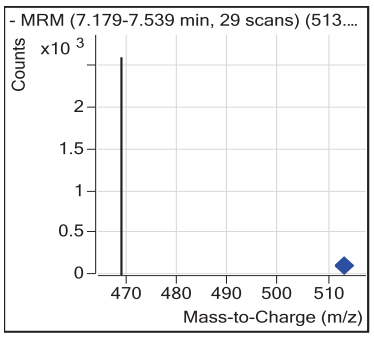




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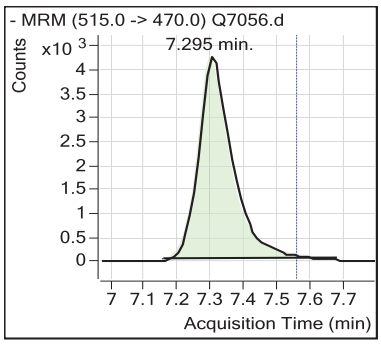


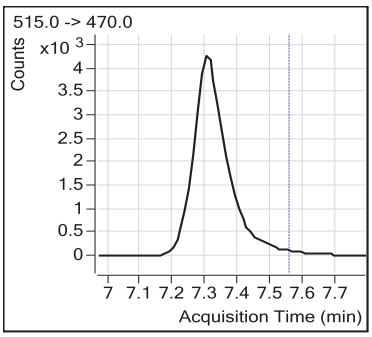


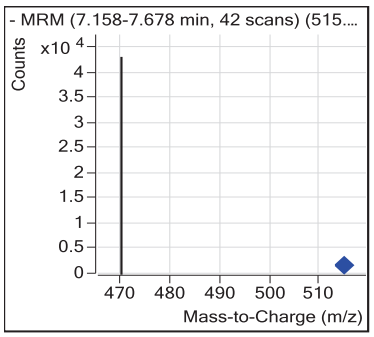


Perfluorinated Compounds by LC/MS/MS.

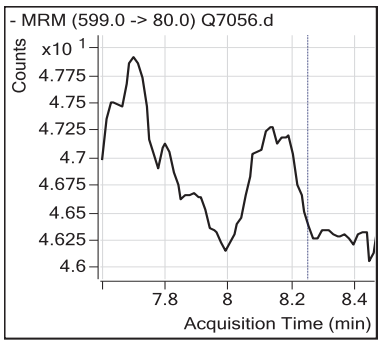
13C2-PFDA

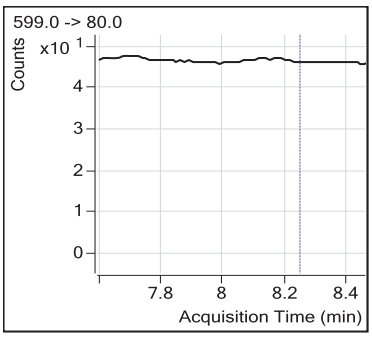


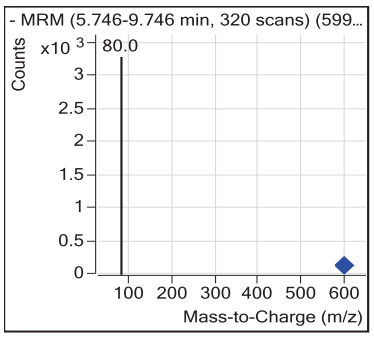




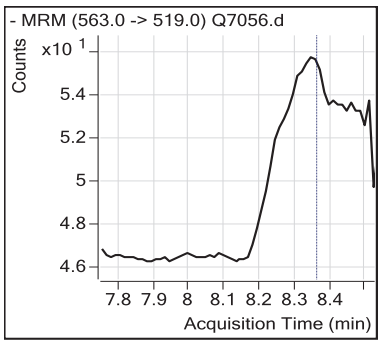
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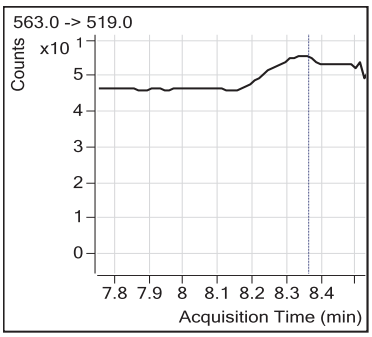


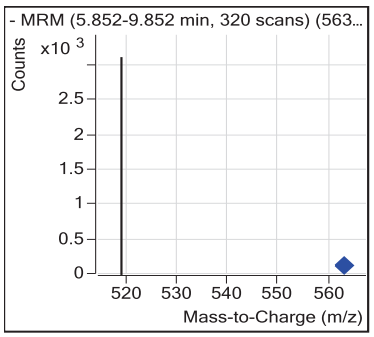




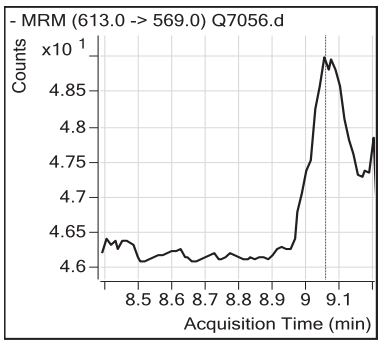
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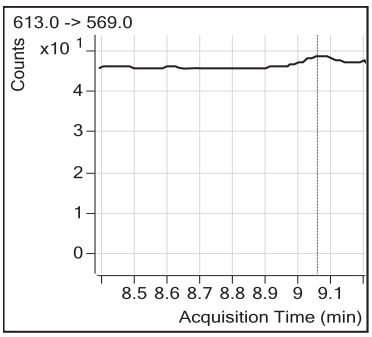


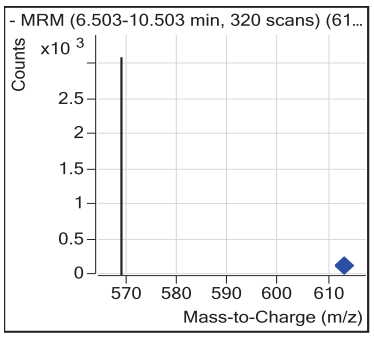




PFDoDA

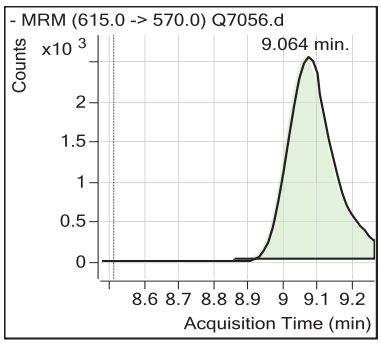


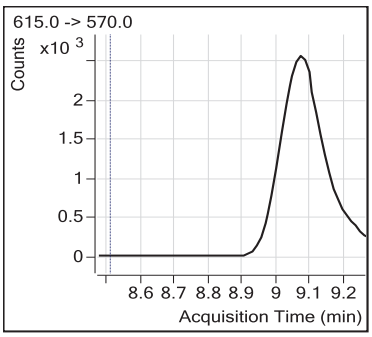


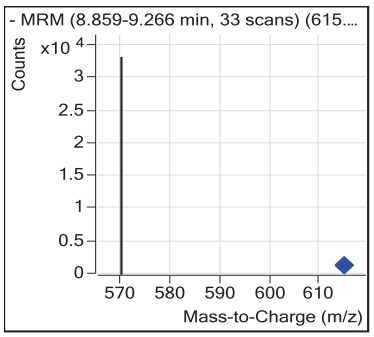


Perfluorinated Compounds by LC/MS/MS.

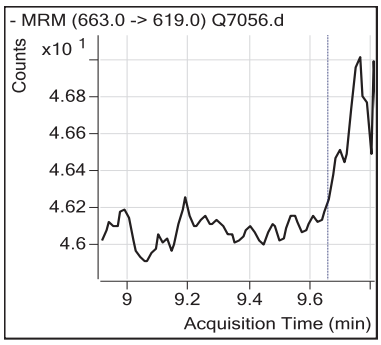
13C2-PFDoDA

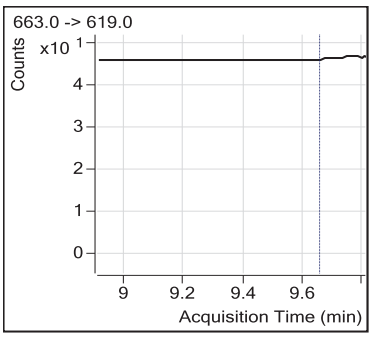


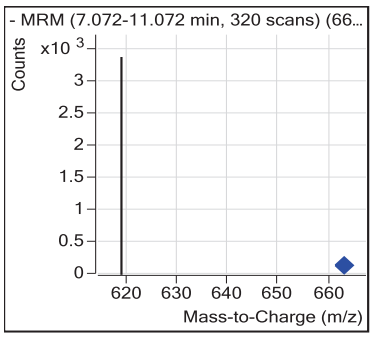




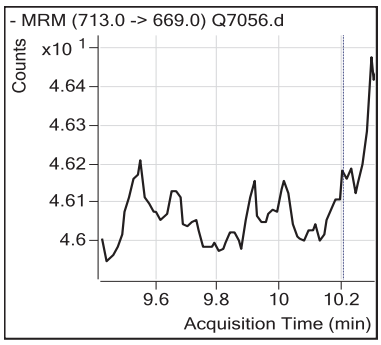
PFTrDA

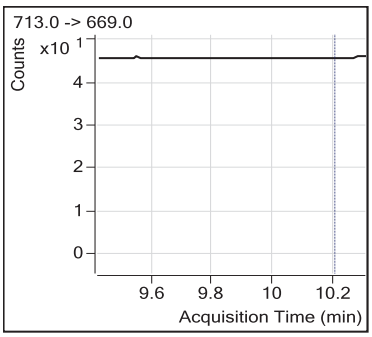


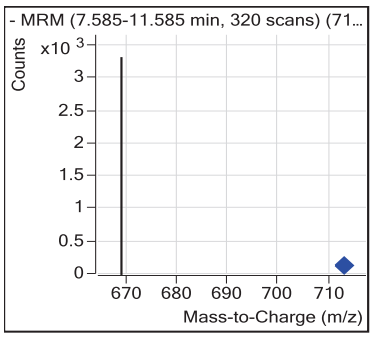




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-8
Lab FileID: Q7056.D
Injection Time: 09/18/14 19:00
Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanoic acid	307-24-4		4.48	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.19	Split peak
Perfluoroheptanesulfonic acid			5.81	Split peak
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Perfluorinated Compounds by LC/MS/MS.

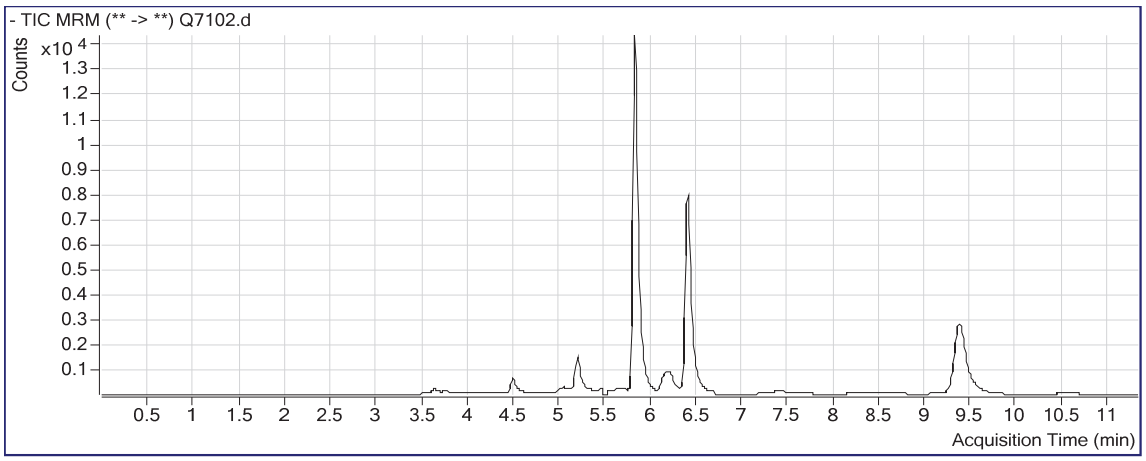
Data File	:	Q7102.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 13:20
Sample Name	:	FA18133-8
Vial	:	Vial 8
Sample Info	:	OP53121,SQ240,125,,,1,20,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	53411	20.000	µg/L	-0.013
13C4-PFOS	6.419	503.0 -> 80.0	18877	20.000	µg/L	-0.013
13C2-PFDoDA	9.397	615.0 -> 570.0	26595	20.000	µg/L	0.000
System Monitoring Compounds						
13C2-PFHxA	4.504	315.0 -> 270.0	782	0.99	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 4.94%			
13C2-PFDA	7.408	515.0 -> 470.0	1127	0.70	µg/L	-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 3.49%			
Target Compounds						**Qvalue**
PFPeA	3.649	263.0 -> 219.0	472	1.552	µg/L	100
PFHxA	4.508	313.0 -> 269.0	1521	1.692	µg/L	91
PFHxS	5.205	399.0 -> 80.0	2437	5.205	µg/L	86
PFHpA	5.210	363.0 -> 319.0	1031	1.103	µg/L	92
PFOA	5.848	413.0 -> 369.0	4686	1.606	µg/L	82
PFOS	6.410	499.0 -> 80.0	11357	11.539	µg/L	79
PFNA	6.491	463.0 -> 419.0	635	0.499	µg/L	100

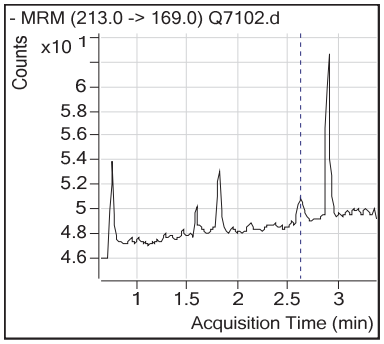
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

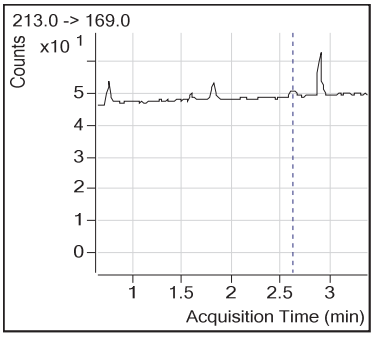
Perfluorinated Compounds by LC/MS/MS.

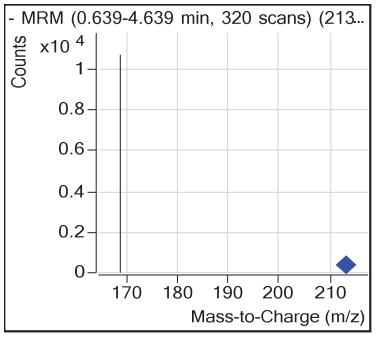
Data File	:	Q7102.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 13:20
Sample Name	:	FA18133-8
Vial	:	Vial 8
Sample Info	:	OP53121,SQ240,125,,,1,20,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05



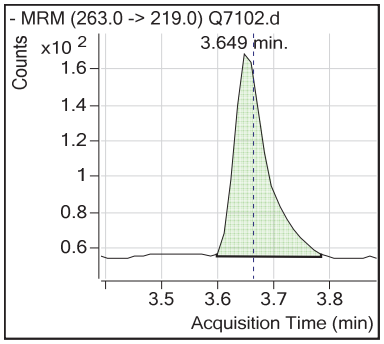
PFBA

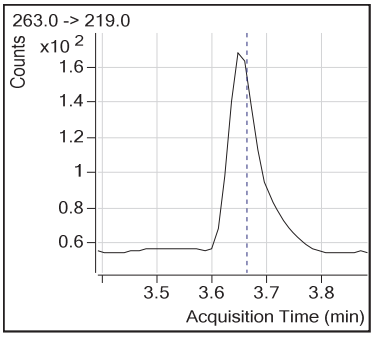


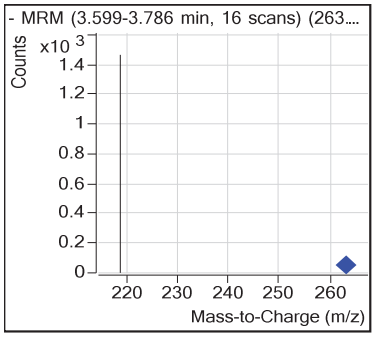




PFPeA

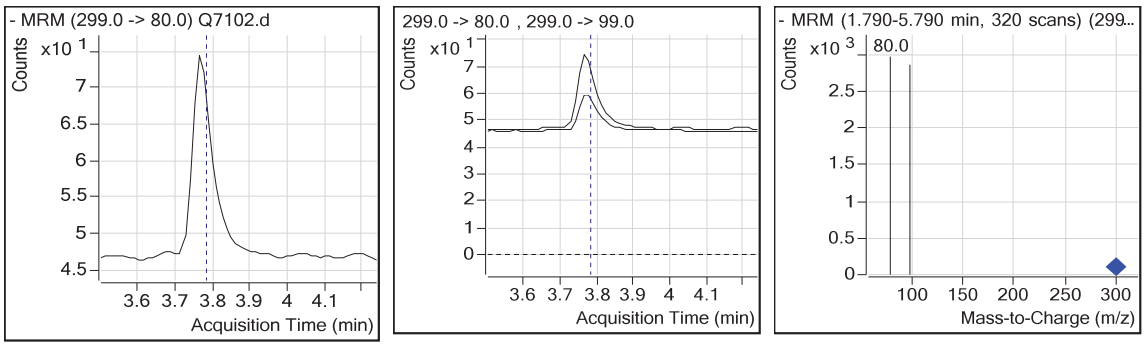




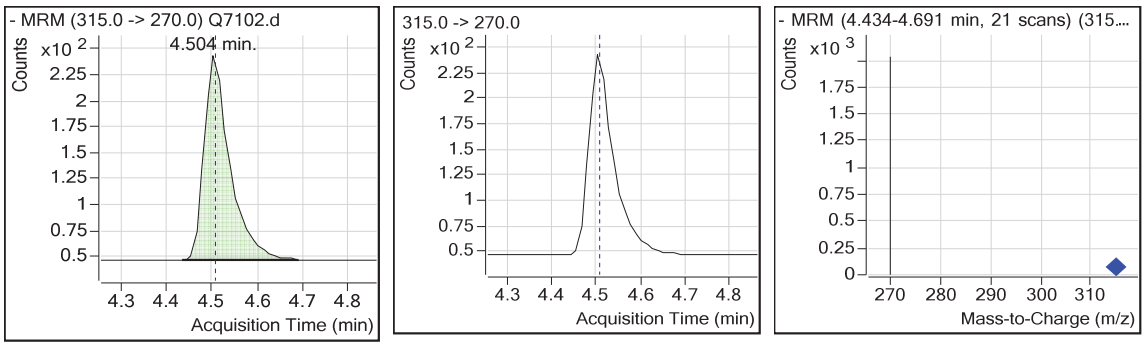


Perfluorinated Compounds by LC/MS/MS.

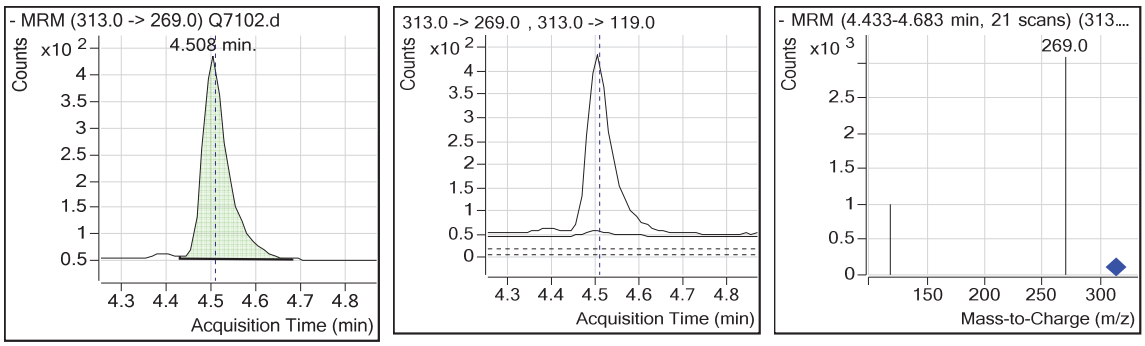
PFBS



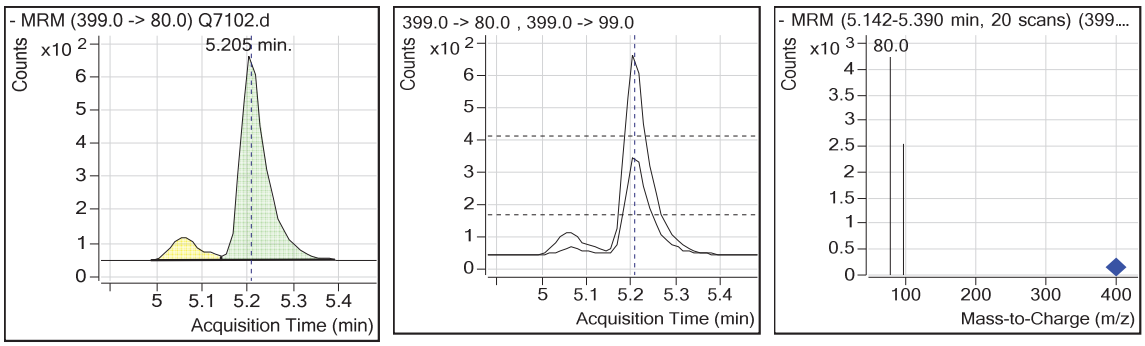
13C2-PFHxA



PFHxA

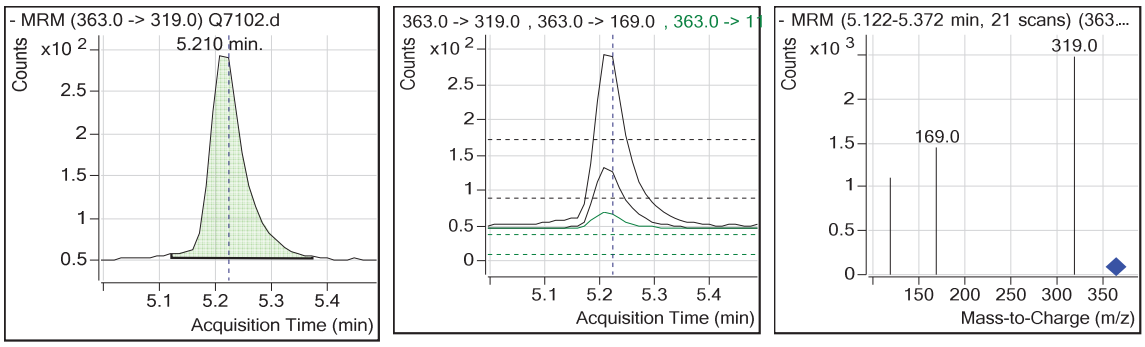


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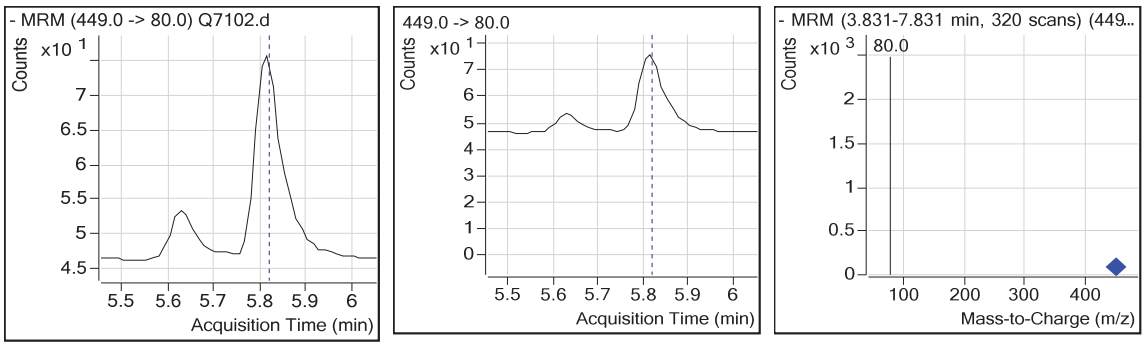


Perfluorinated Compounds by LC/MS/MS.

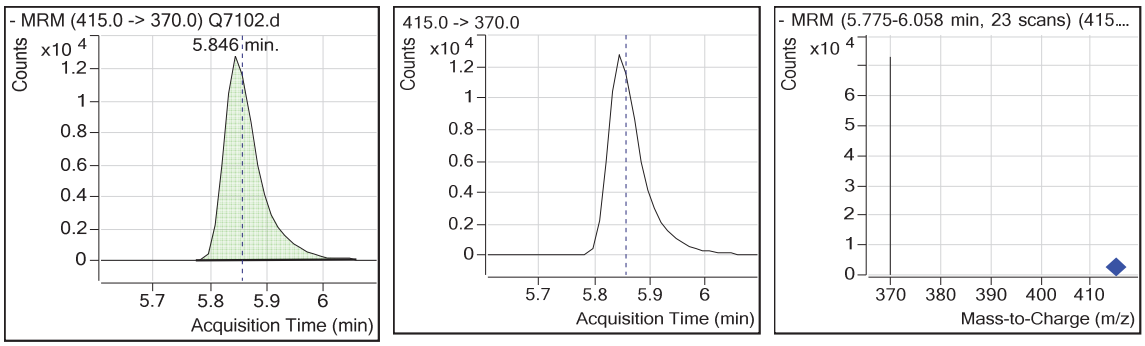
PFHpA



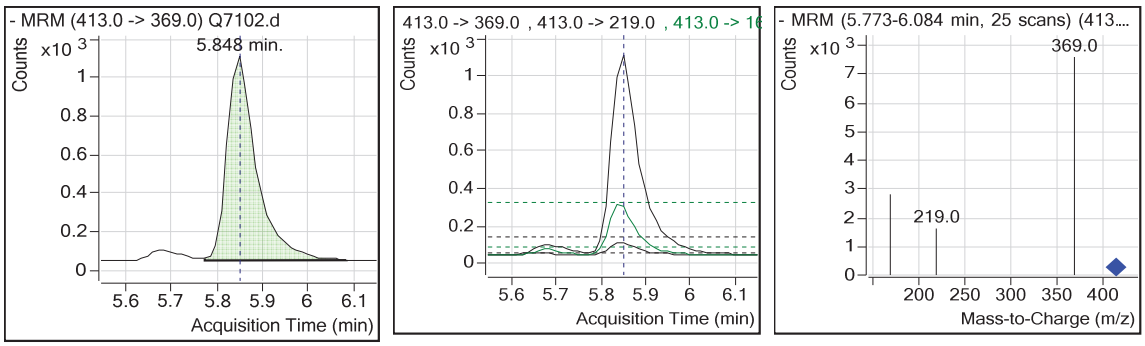
PFHpS



13C2-PFOA

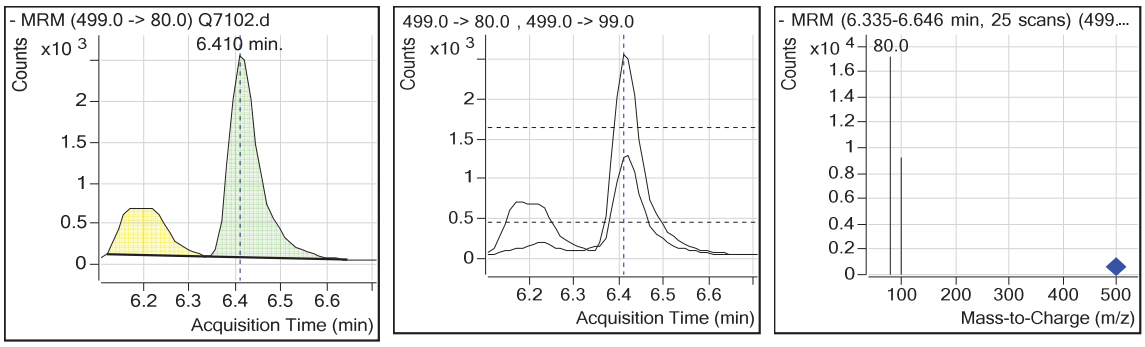


PFOA

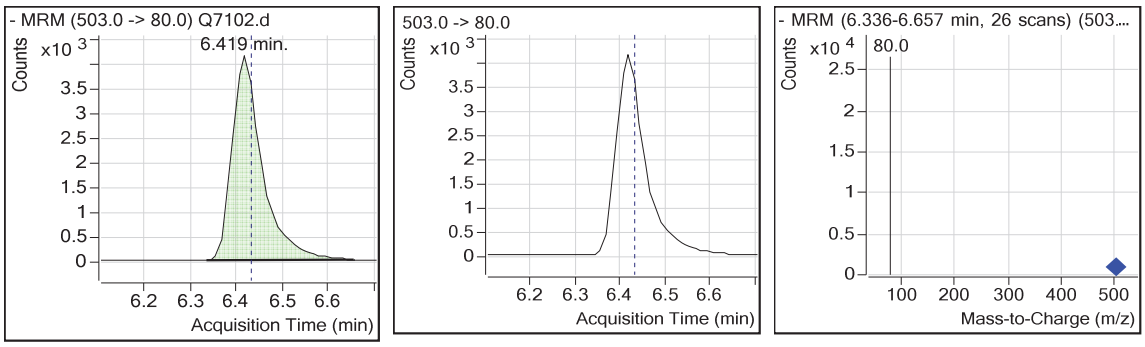


Perfluorinated Compounds by LC/MS/MS.

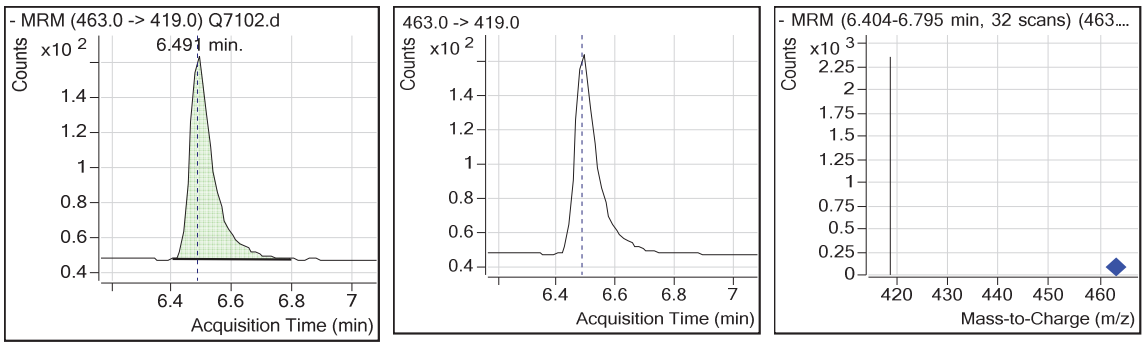
PFOS



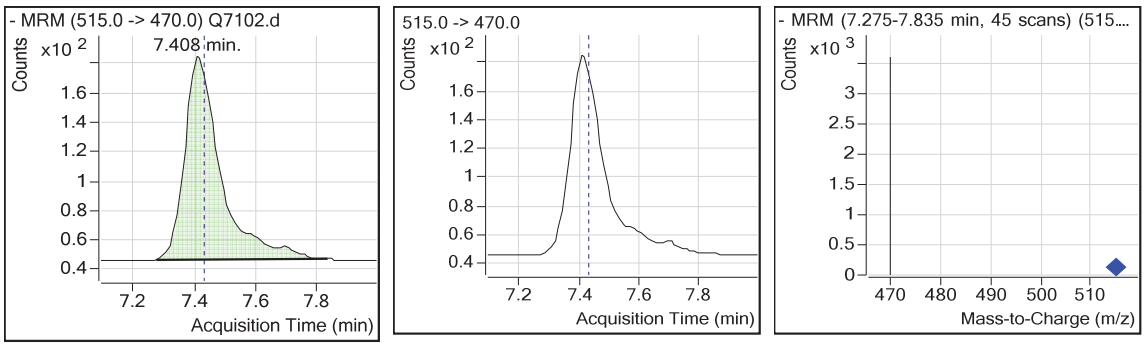
13C4-PFOS



PFNA

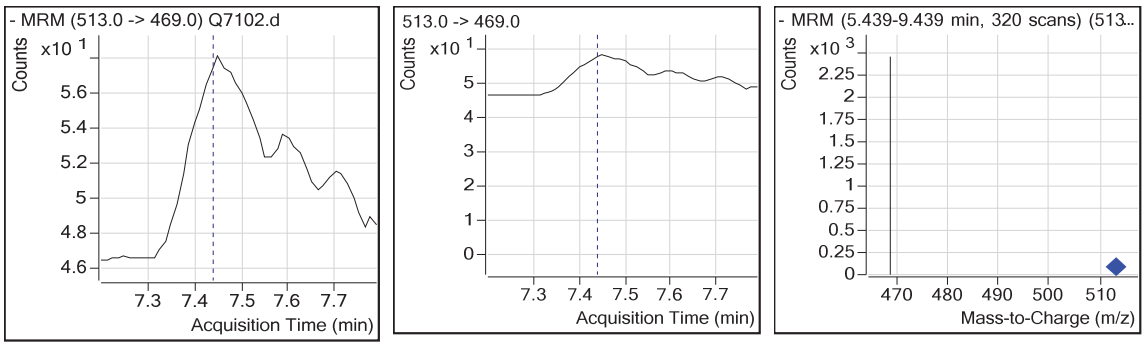


13C2-PFDA

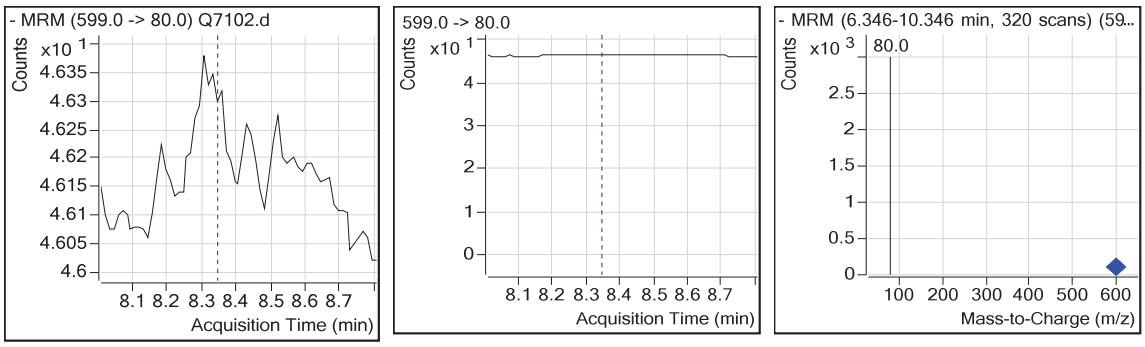


Perfluorinated Compounds by LC/MS/MS.

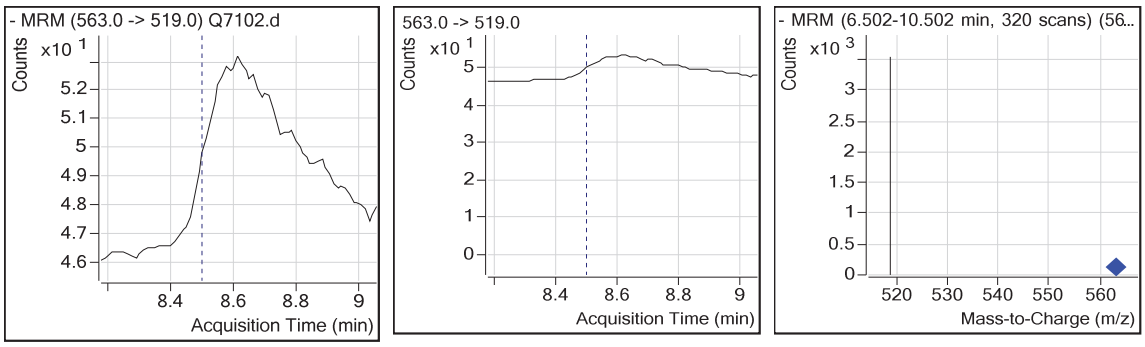
PFDA



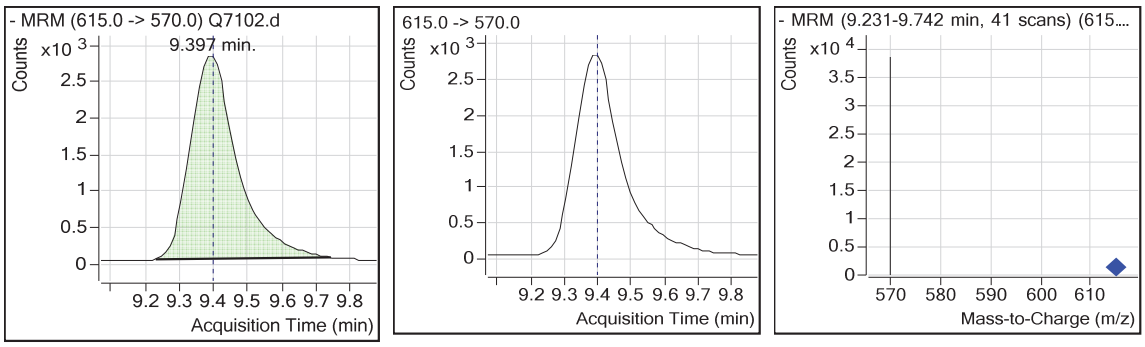
PFDS



PFUnDA

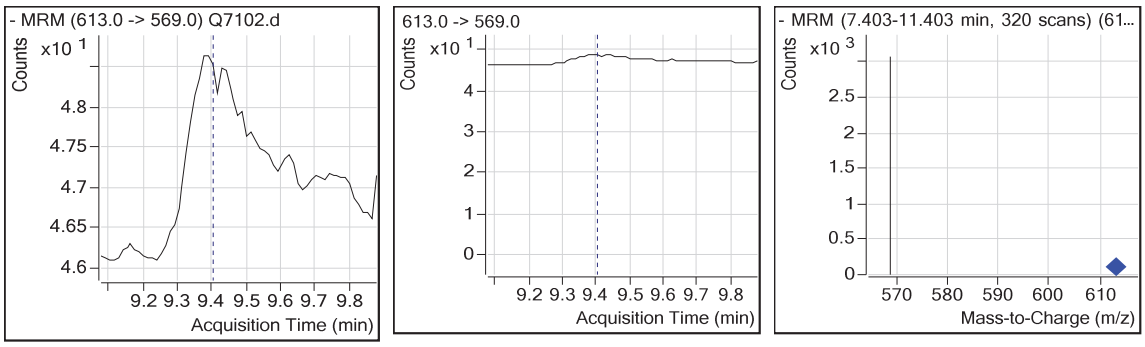


13C2-PFDoDA

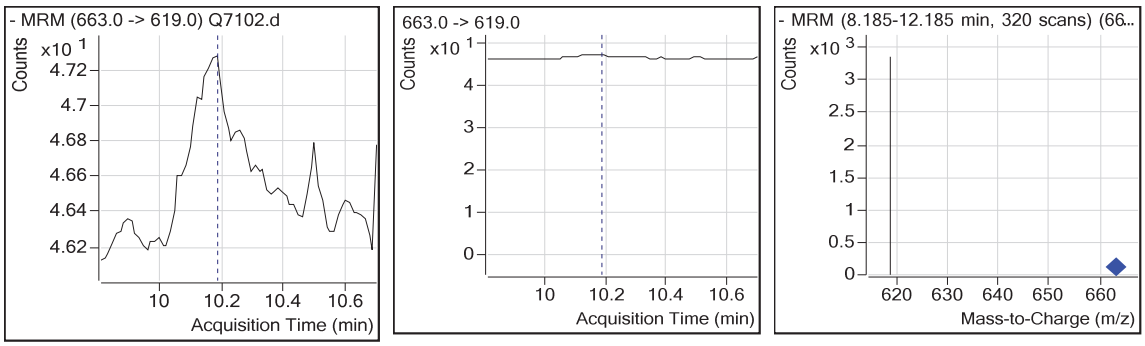


Perfluorinated Compounds by LC/MS/MS.

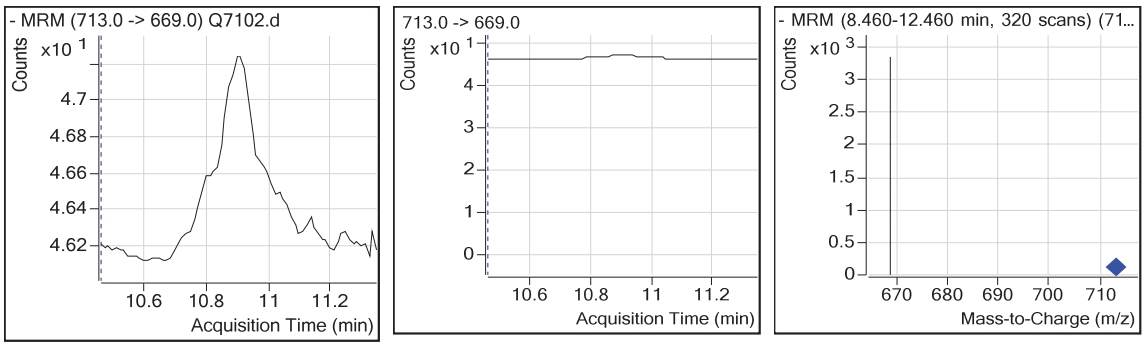
PFDoDA



PFTrDA



PFTeDA



Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

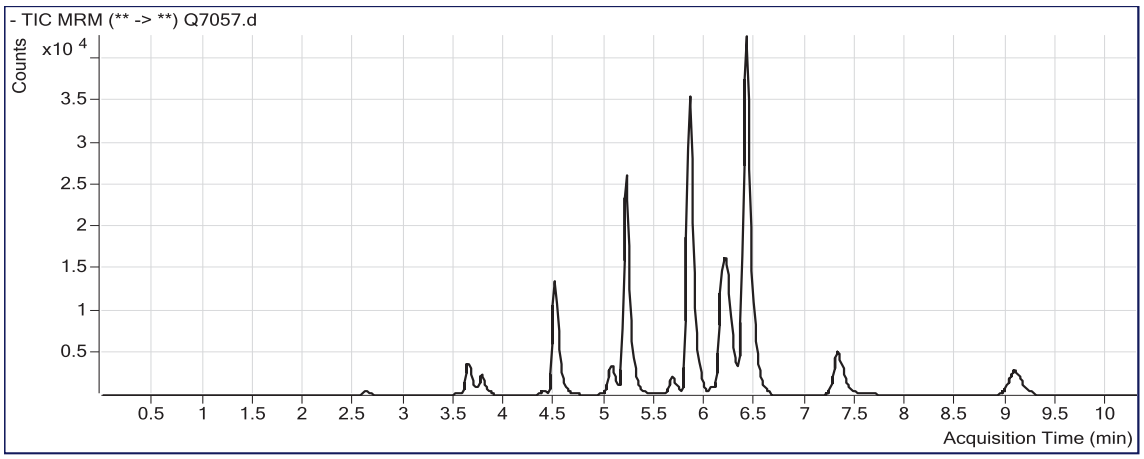
Data File	:	Q7057.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 19:19
Sample Name	:	fa18133-9
Vial	:	Vial 18
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	52691	20.000	µg/L		0.025
13C4-PFOS	6.394	503.0 -> 80.0	15836	20.000	µg/L		0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	26904	20.000	µg/L		0.567
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	14394	18.44	µg/L		0.000
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 92.18%				
13C2-PFDA	7.308	515.0 -> 470.0	37749	23.14	µg/L		0.213
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 115.68%				
Target Compounds							**Qvalue**
PFBA	2.614	213.0 -> 169.0	2441	3.991	µg/L		100
PFPeA	3.649	263.0 -> 219.0	16583	55.341	µg/L		100
PFBS	3.765	299.0 -> 80.0	6341	25.299	µg/L		99
PFHxA	4.495	313.0 -> 269.0	46523	52.471	µg/L	m	100
PFHxS	5.205	399.0 -> 80.0	68856	175.300	µg/L	m	87
PFHpA	5.210	363.0 -> 319.0	21325	24.559	µg/L		100
PFHpS	5.806	449.0 -> 80.0	4798	10.224	µg/L	m	100
PFOA	5.836	413.0 -> 369.0	91504	35.107	µg/L	m	79
PFOS	6.396	499.0 -> 80.0	235824	305.080	µg/L	m	100
PFNA	6.475	463.0 -> 419.0	3080	2.460	µg/L		100

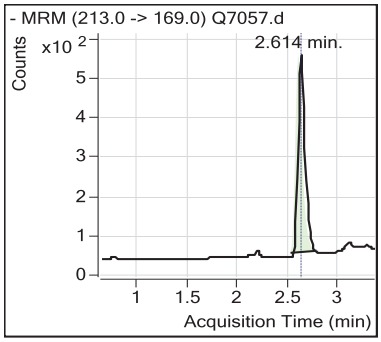
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

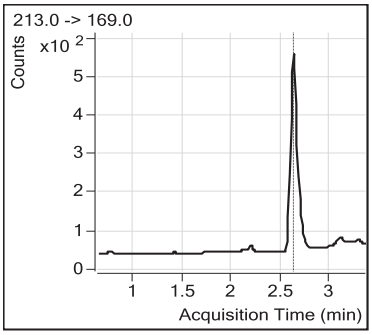
Perfluorinated Compounds by LC/MS/MS.

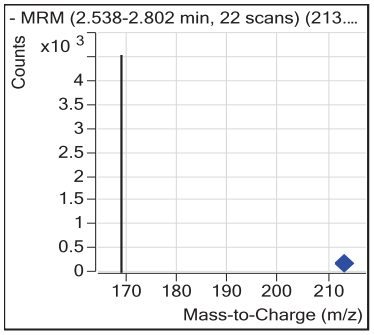
Data File	:	Q7057.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 19:19
Sample Name	:	fa18133-9
Vial	:	Vial 18
Sample Info	:	OP53121,SQ238,125,,,1,,water
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Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



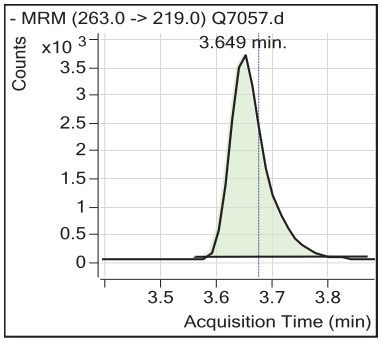
PFBA

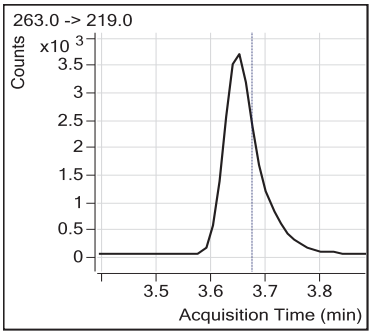


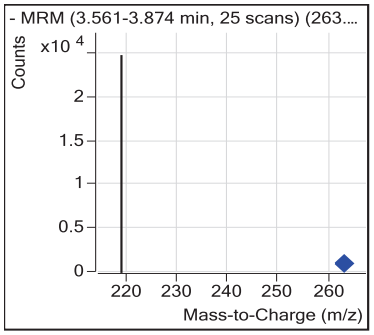




PFPeA

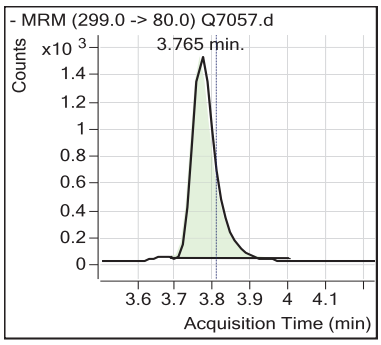


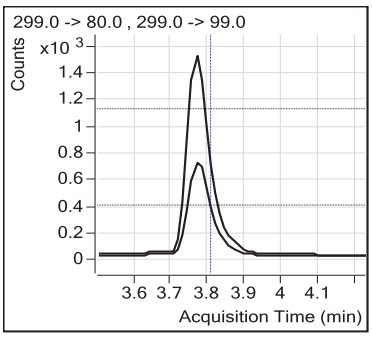


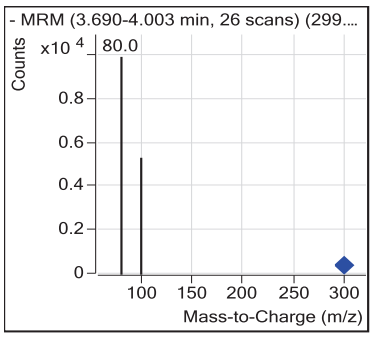


Perfluorinated Compounds by LC/MS/MS.

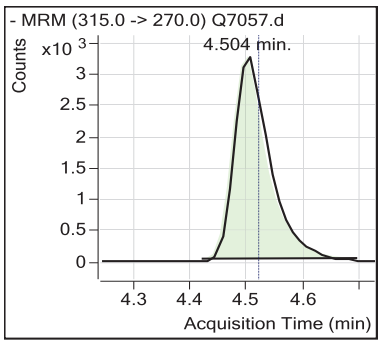
PFBS

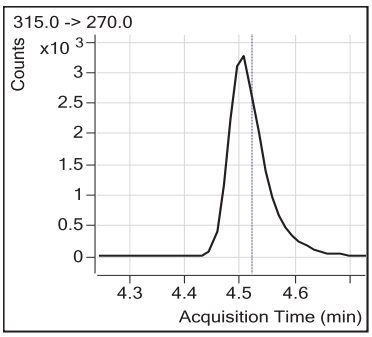


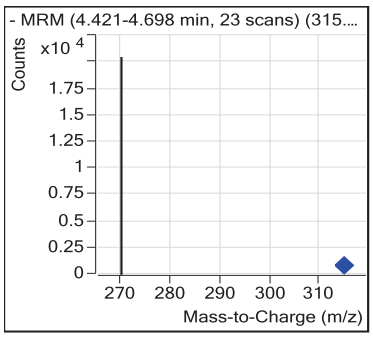




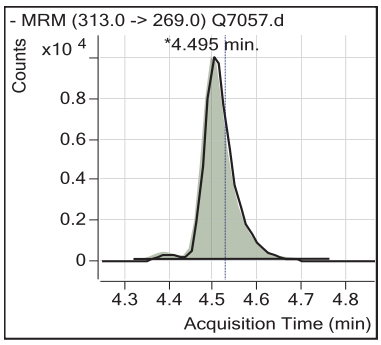
13C2-PFHxA

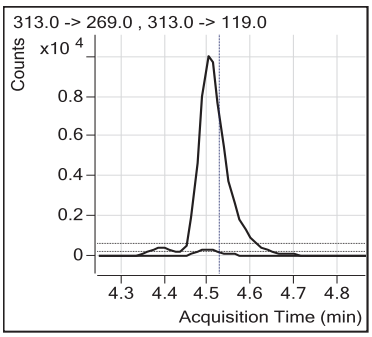


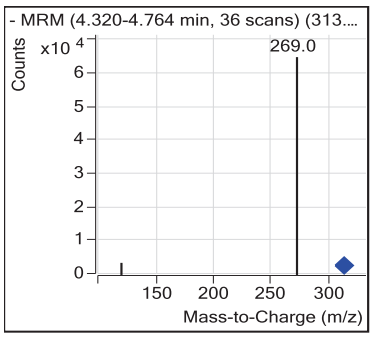




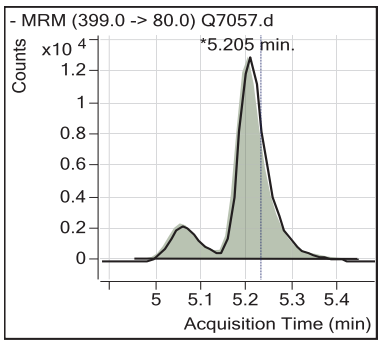
PFHxA

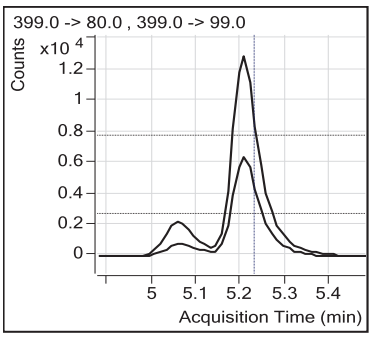


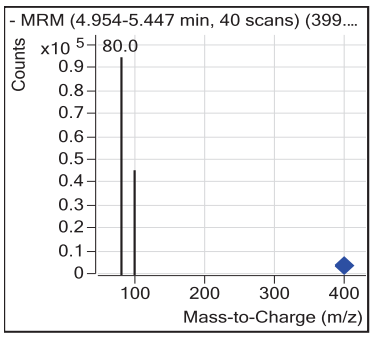




PFHxS

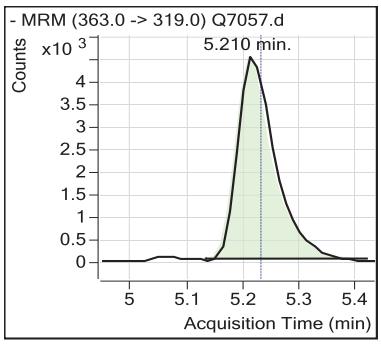


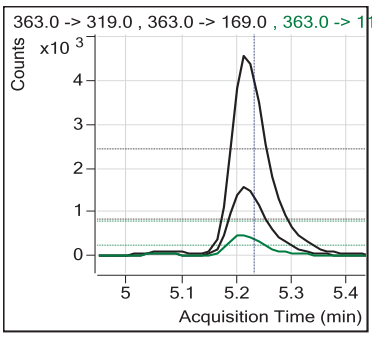


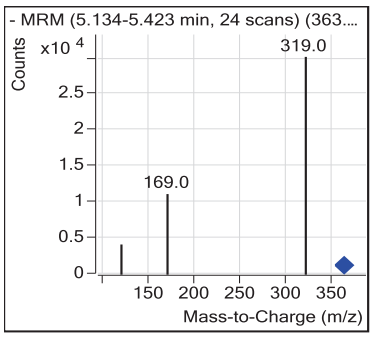


Perfluorinated Compounds by LC/MS/MS.

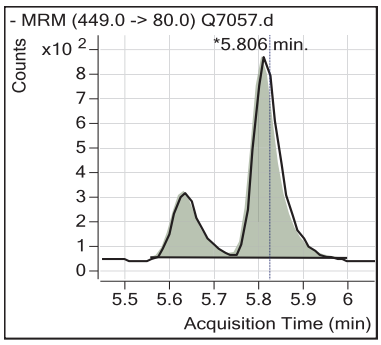
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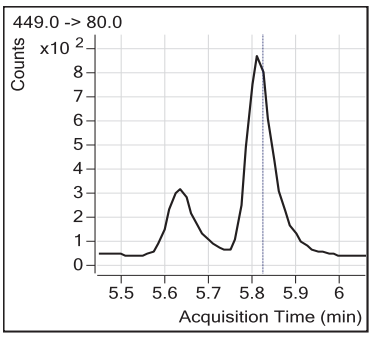


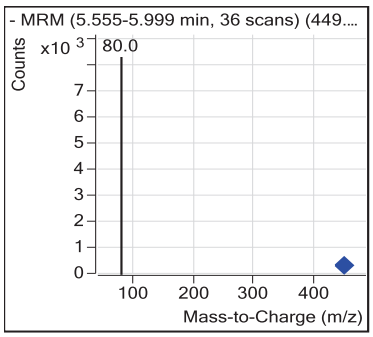




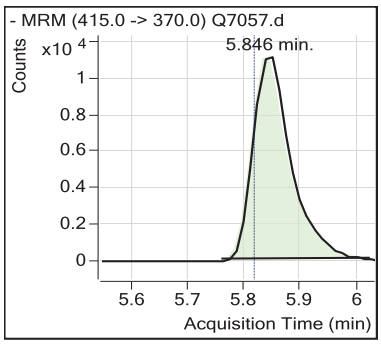
PFHpS

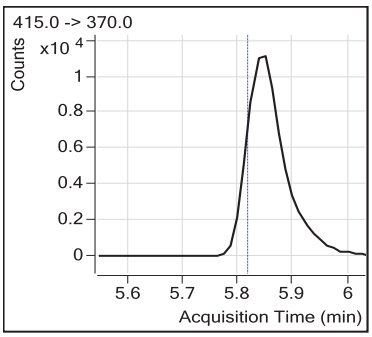


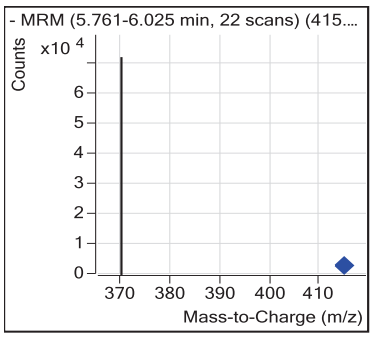




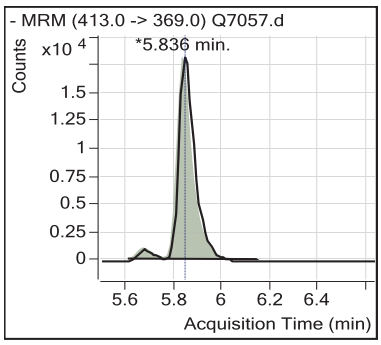
13C2-PFOA

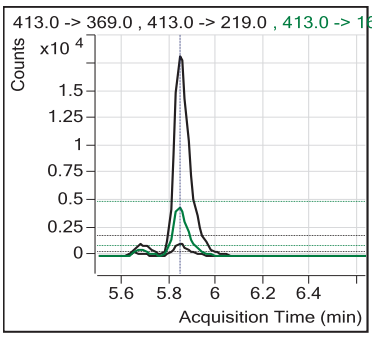


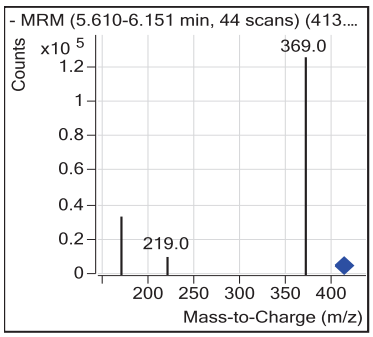




PFOA

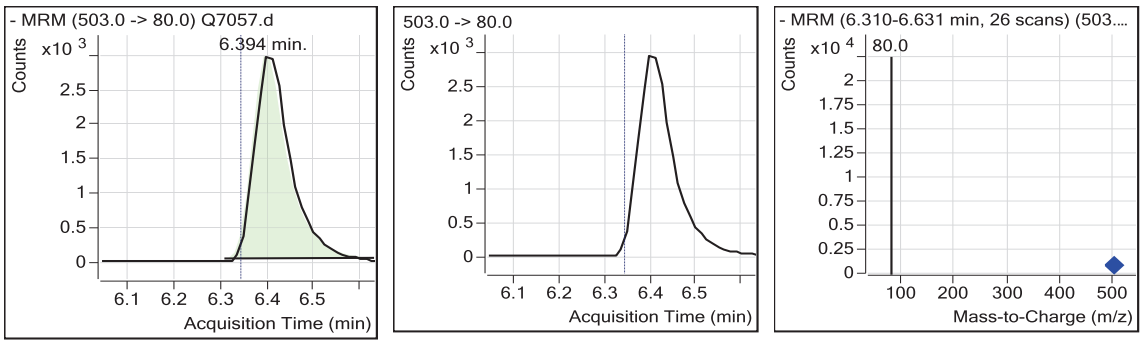




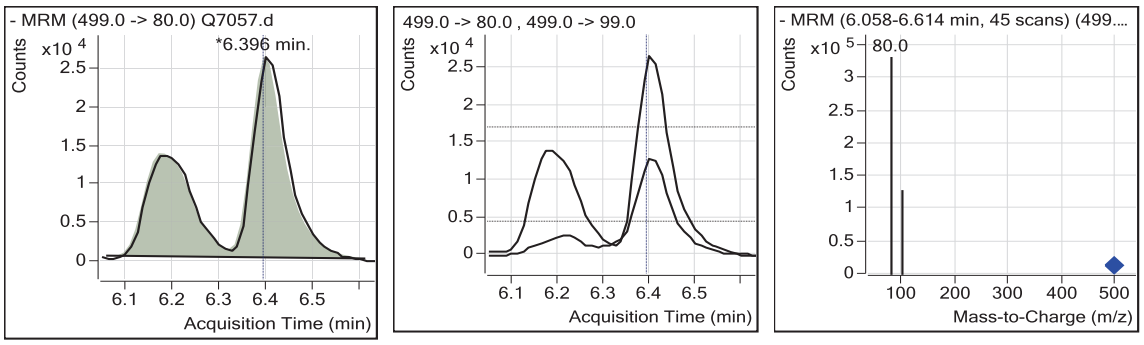


Perfluorinated Compounds by LC/MS/MS.

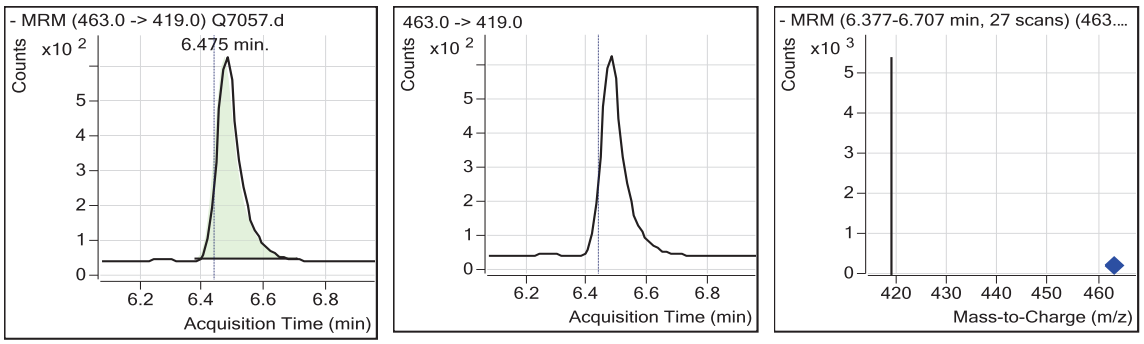
13C4-PFOS



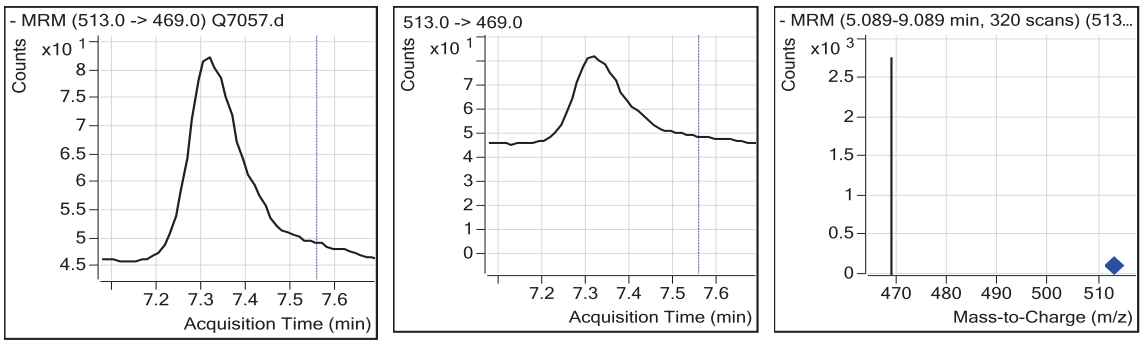
PFOS



PFNA

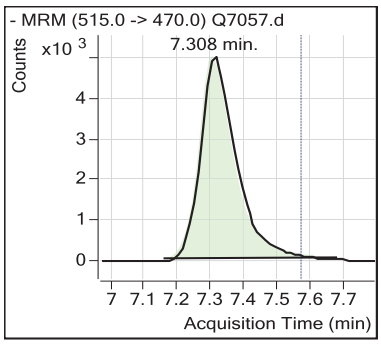


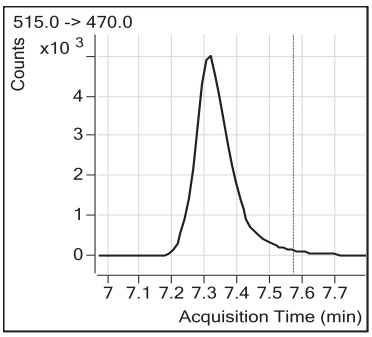
PFDA

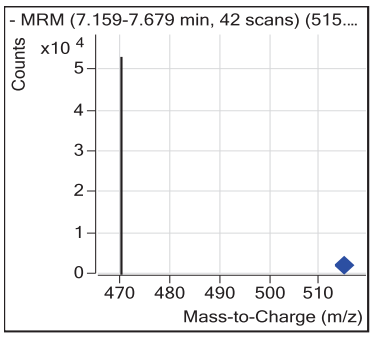


Perfluorinated Compounds by LC/MS/MS.

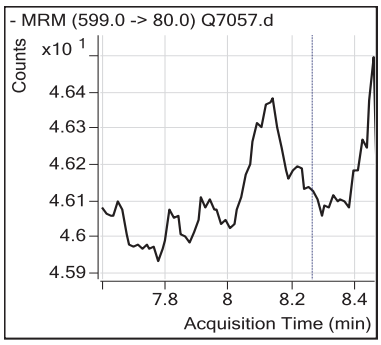
13C2-PFDA

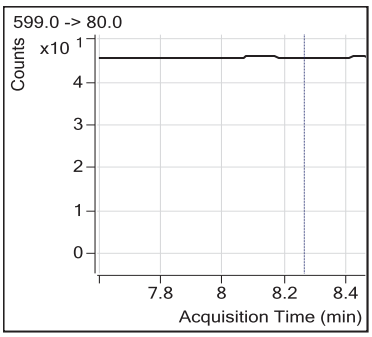


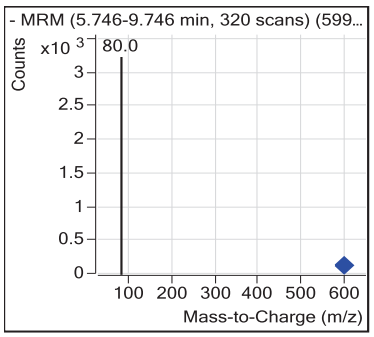




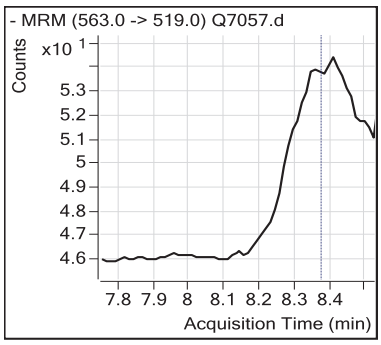
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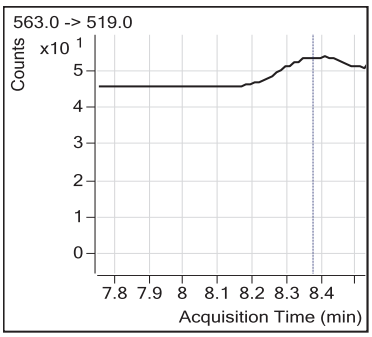


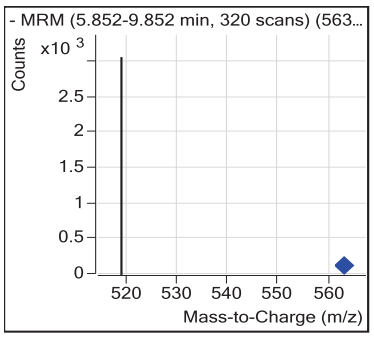




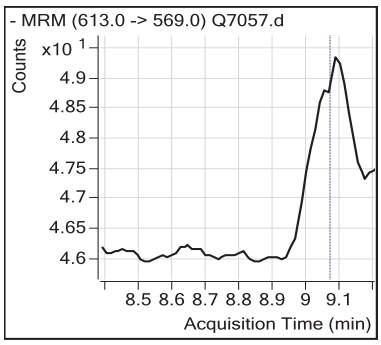
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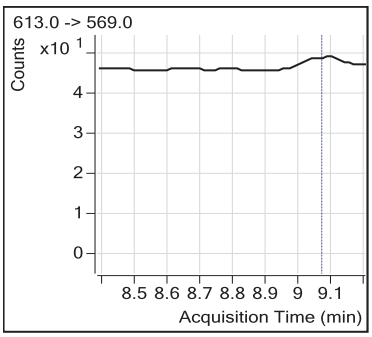


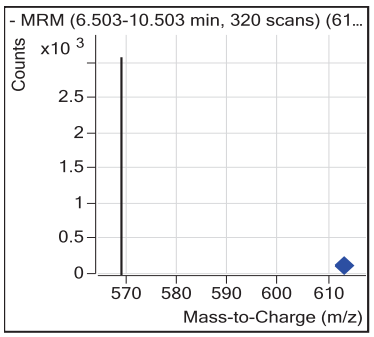




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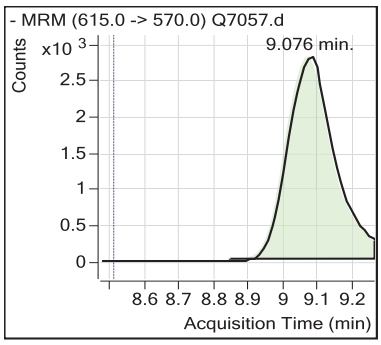


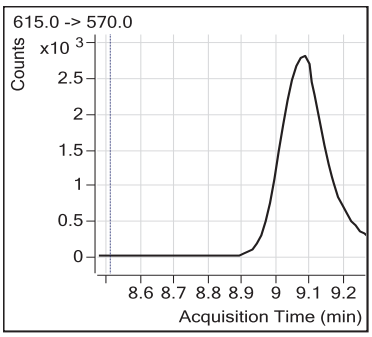


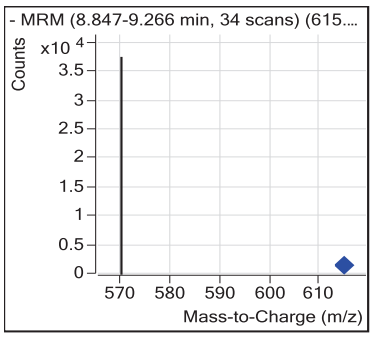


Perfluorinated Compounds by LC/MS/MS.

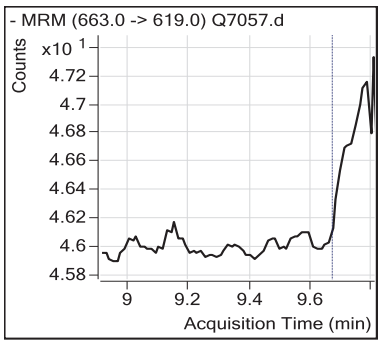
13C2-PFDoDA

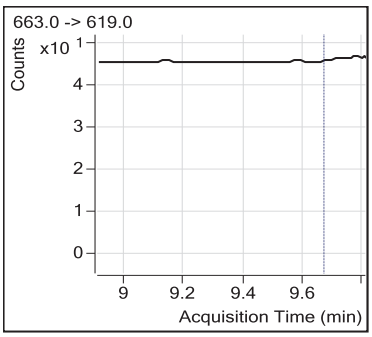


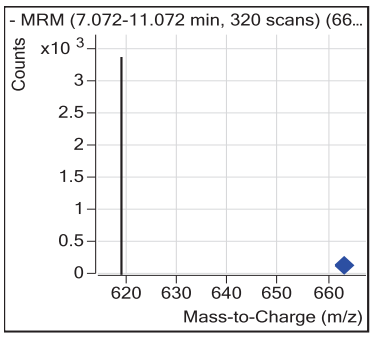




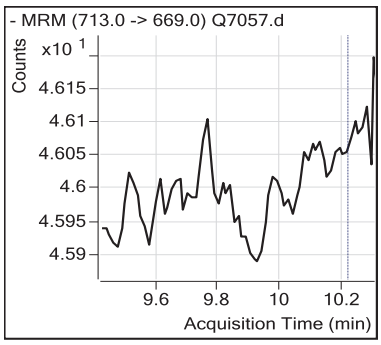
PFTrDA

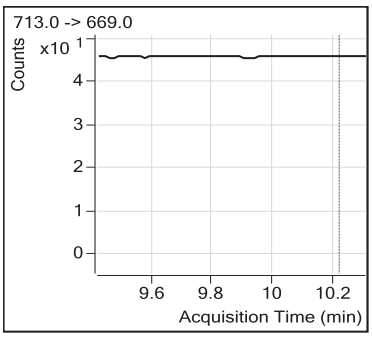


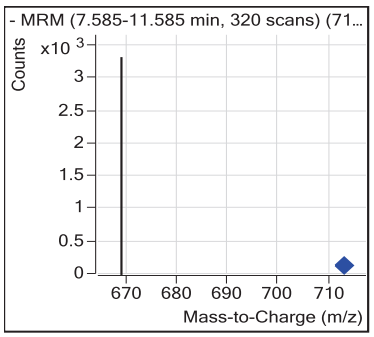




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-9
Lab FileID: Q7057.D
Injection Time: 09/18/14 19:19

Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanoic acid	307-24-4		4.50	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluoroheptanesulfonic acid			5.81	Split peak
Perfluorooctanoic acid	335-67-1		5.84	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Perfluorinated Compounds by LC/MS/MS.

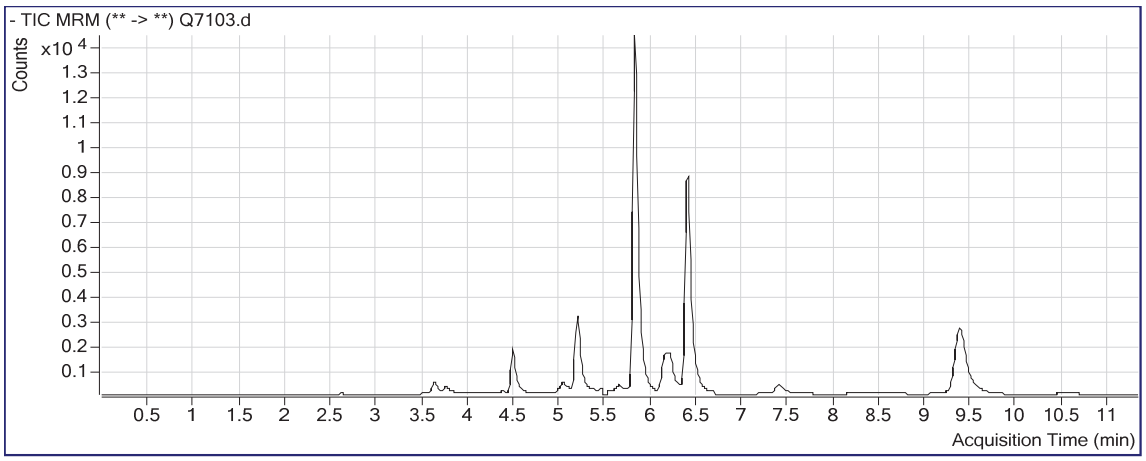
Data File	:	Q7103.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 13:39
Sample Name	:	FA18133-9
Vial	:	Vial 9
Sample Info	:	OP53121,SQ240,85,,,1,10,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	48931	20.000	µg/L	-0.013
13C4-PFOS	6.419	503.0 -> 80.0	17564	20.000	µg/L	-0.013
13C2-PFDoDA	9.397	615.0 -> 570.0	24975	20.000	µg/L	0.000
System Monitoring Compounds						
13C2-PFHxA	4.504	315.0 -> 270.0	1637	2.26	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 11.29%			
13C2-PFDA	7.420	515.0 -> 470.0	2745	1.81	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 9.06%			
Target Compounds						**Qvalue**
PFPeA	3.649	263.0 -> 219.0	1677	6.027	µg/L	100
PFBS	3.765	299.0 -> 80.0	565	2.032	µg/L	99
PFHxA	4.508	313.0 -> 269.0	5060	6.146	µg/L	100
PFHxS	5.205	399.0 -> 80.0	5665	13.004	µg/L	83
PFHpA	5.210	363.0 -> 319.0	2554	2.995	µg/L	97
PFHpS	5.806	449.0 -> 80.0	307	0.589	µg/L	100
PFOA	5.848	413.0 -> 369.0	8560	3.217	µg/L	82
PFOS	6.410	499.0 -> 80.0	14685	16.243	µg/L	77
PFNA	6.491	463.0 -> 419.0	527	0.452	µg/L	100

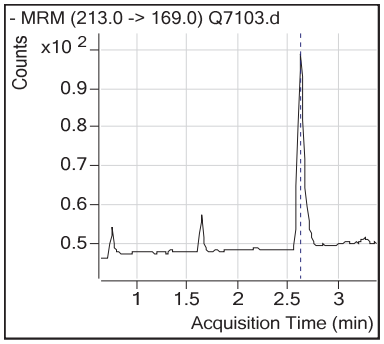
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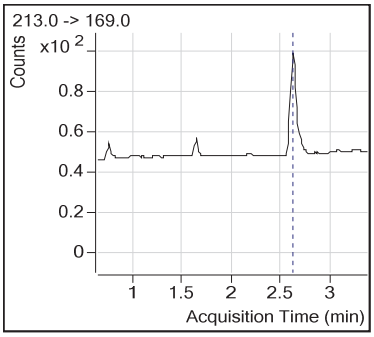
Perfluorinated Compounds by LC/MS/MS.

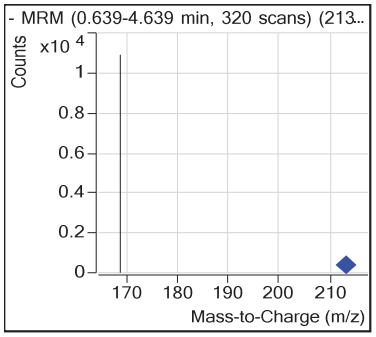
Data File	:	Q7103.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 13:39
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Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05



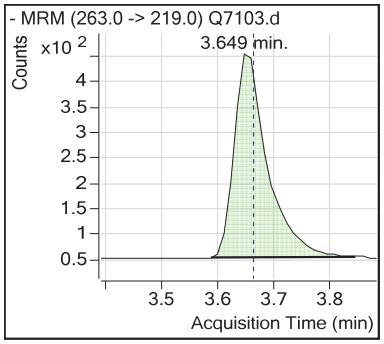
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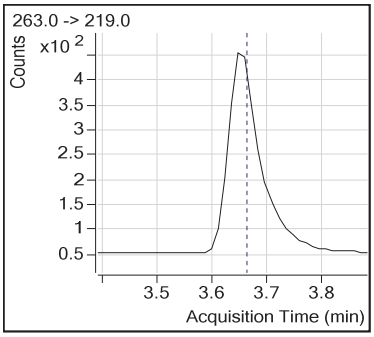


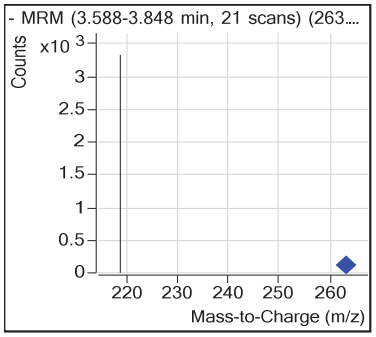




PFPeA

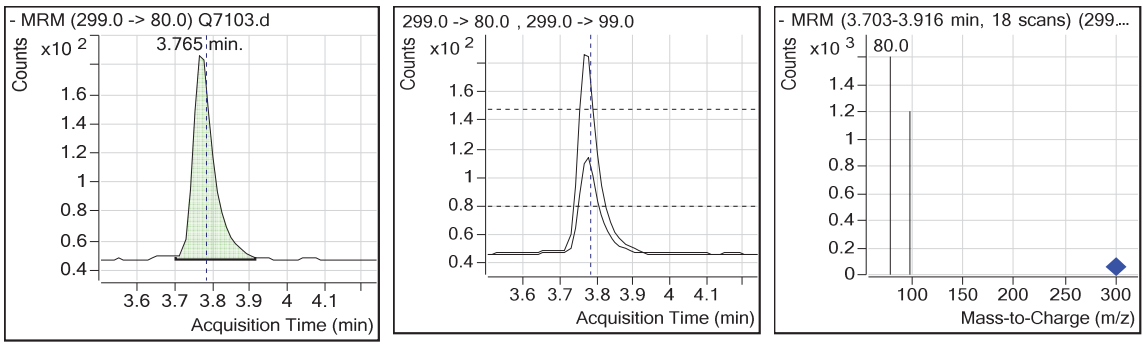




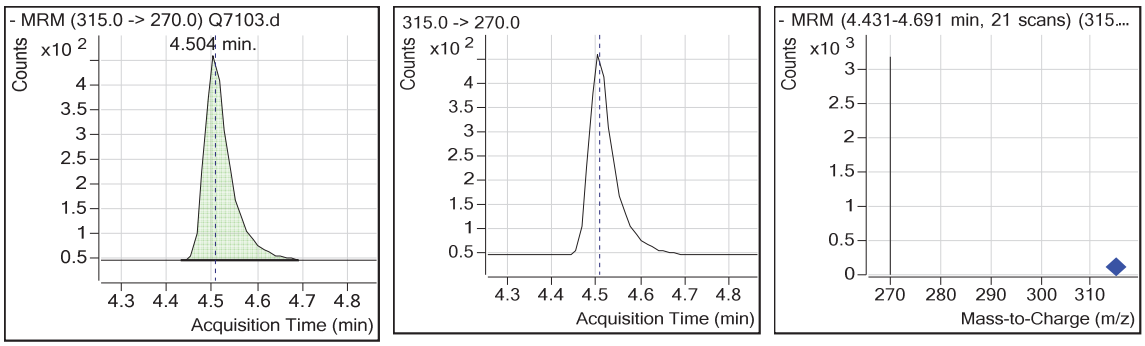


Perfluorinated Compounds by LC/MS/MS.

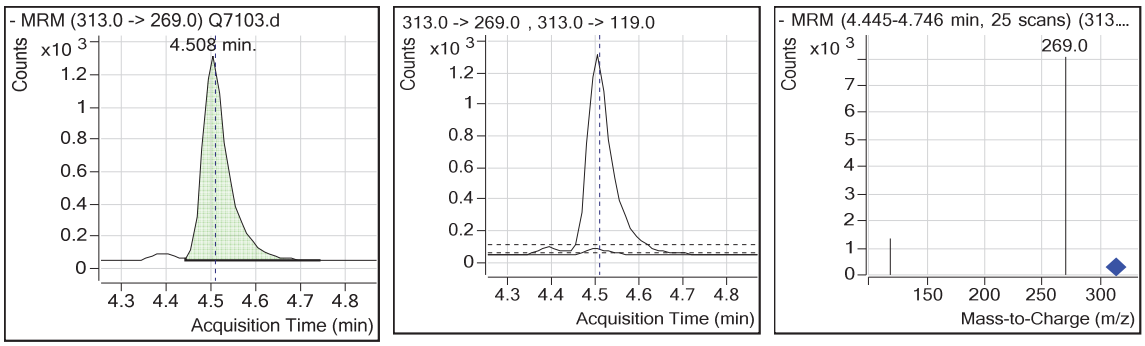
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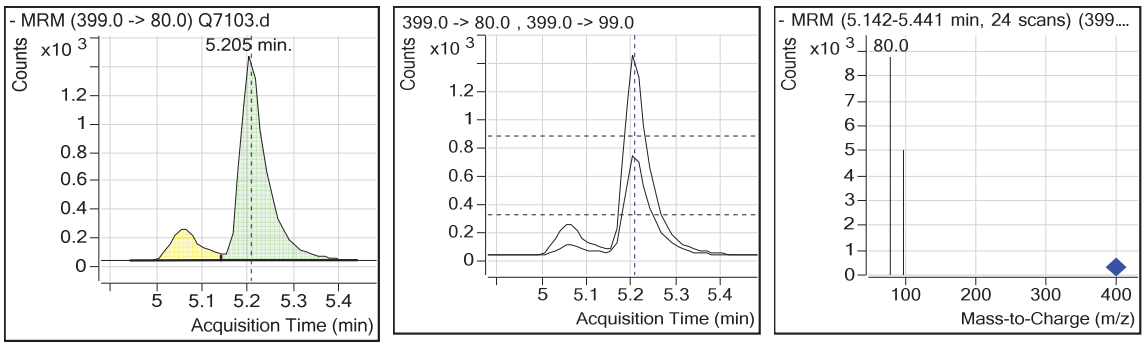
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PFHxA

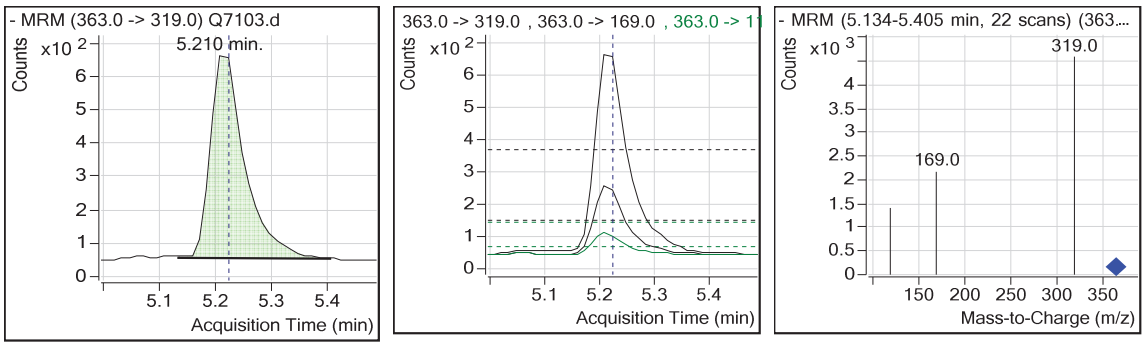


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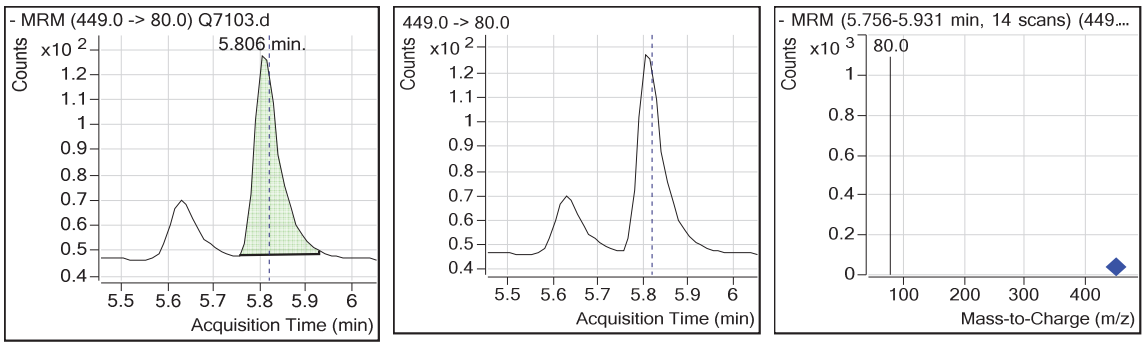


Perfluorinated Compounds by LC/MS/MS.

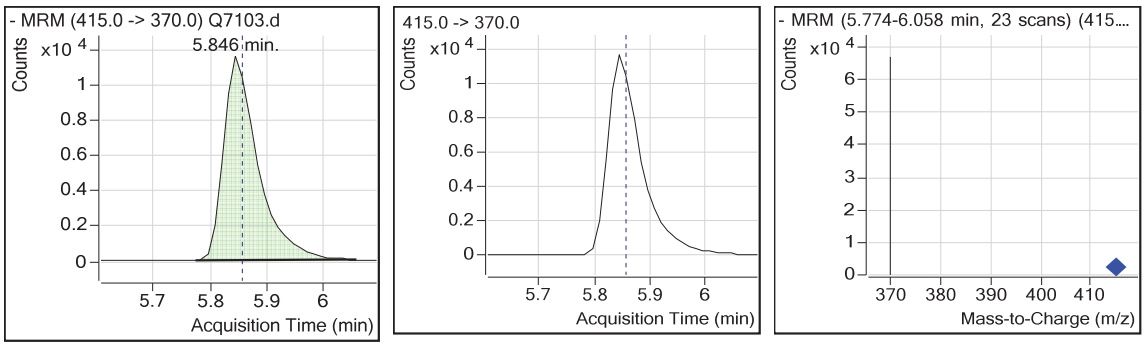
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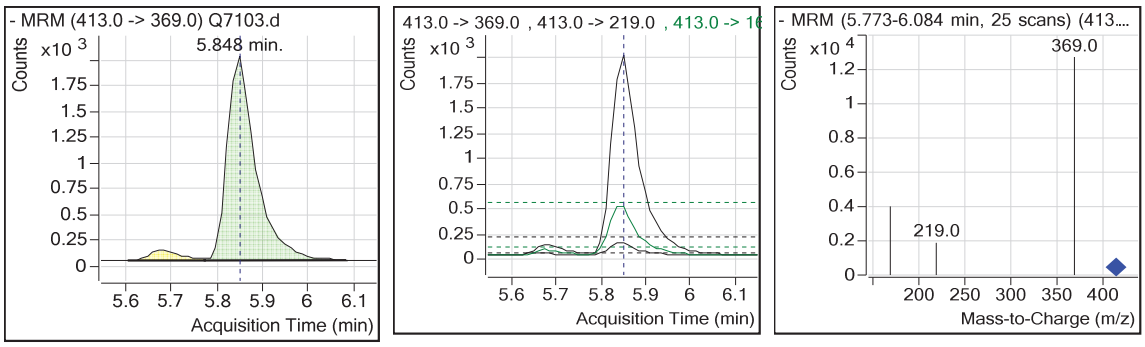
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13C2-PFOA

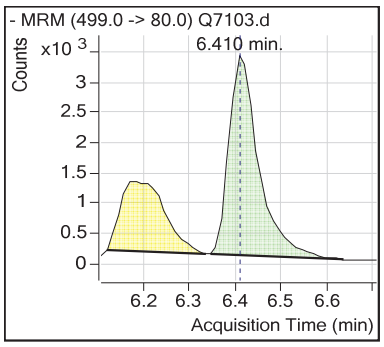


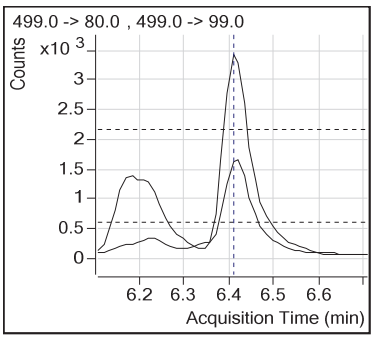
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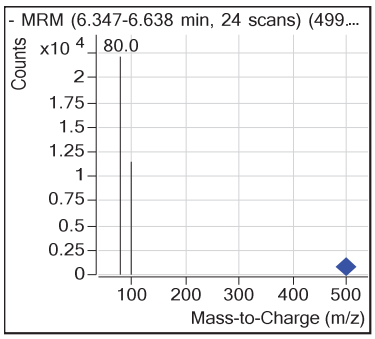


Perfluorinated Compounds by LC/MS/MS.

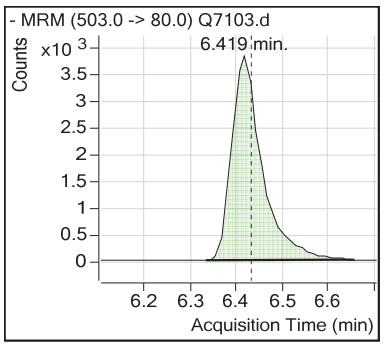
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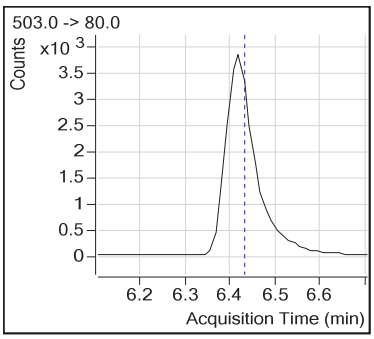


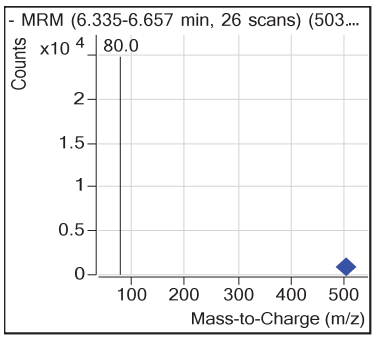




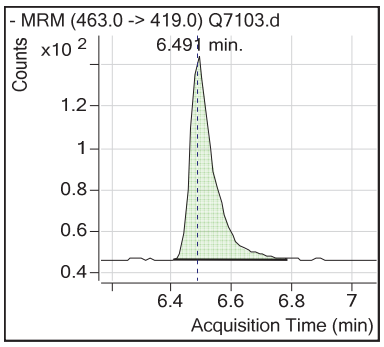
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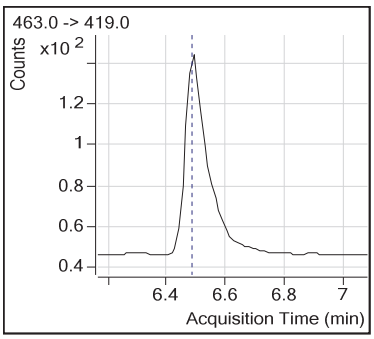


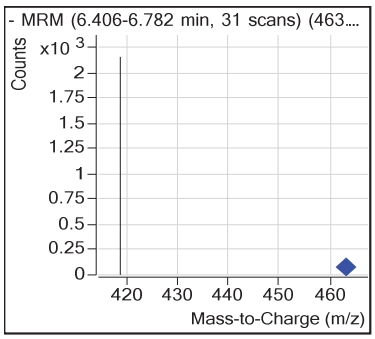




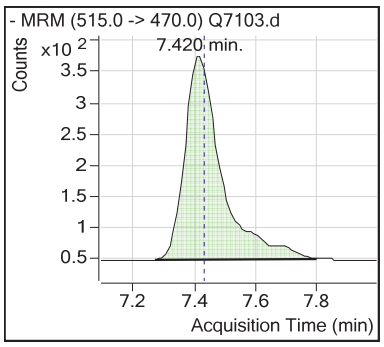
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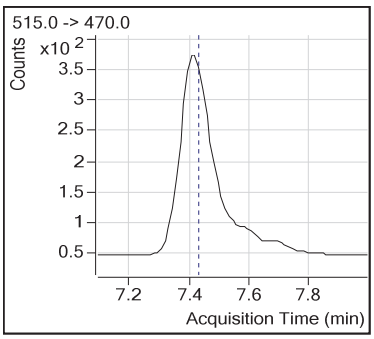


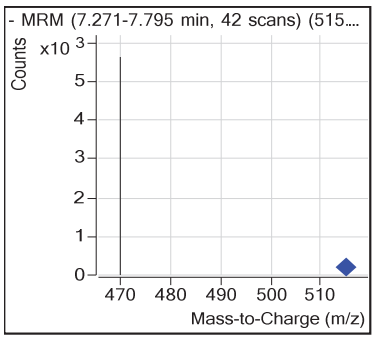




13C2-PFDA

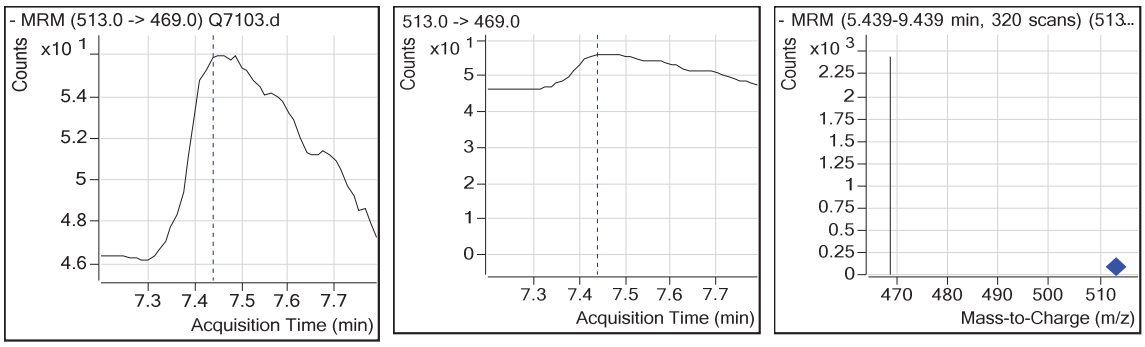




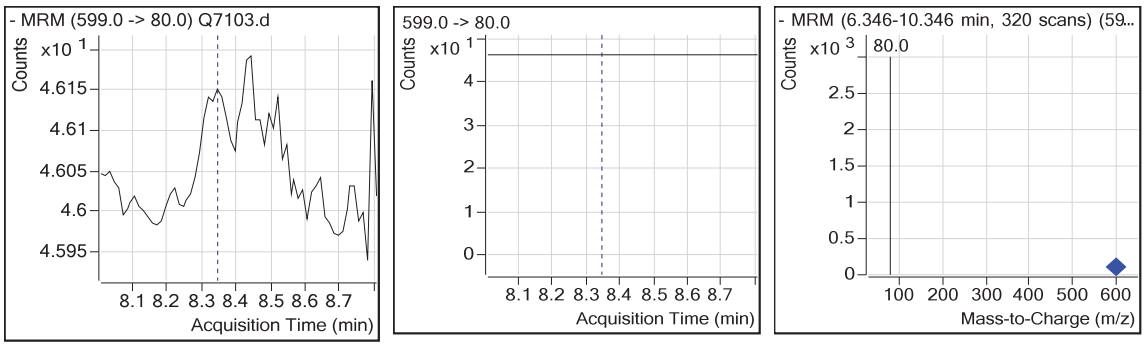


Perfluorinated Compounds by LC/MS/MS.

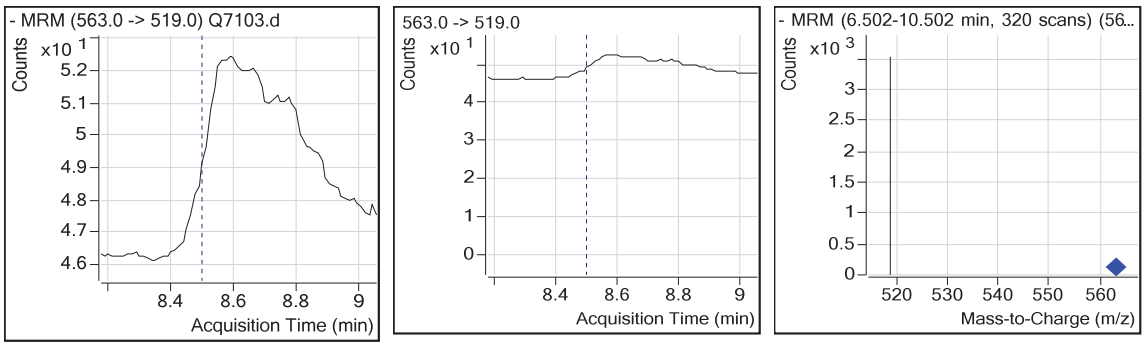
PFDA



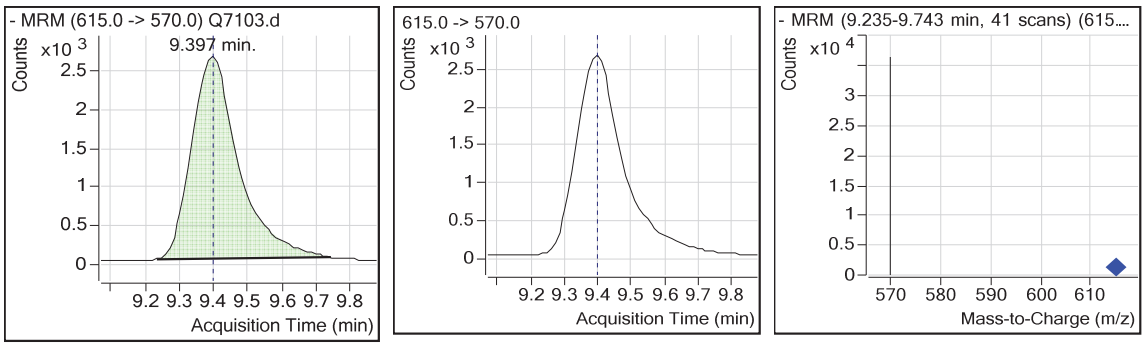
PFDS



PFUnDA

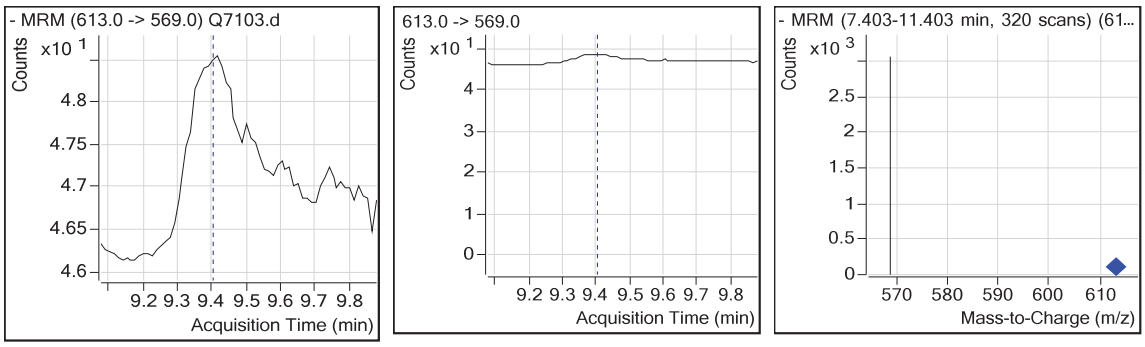


13C2-PFDoDA

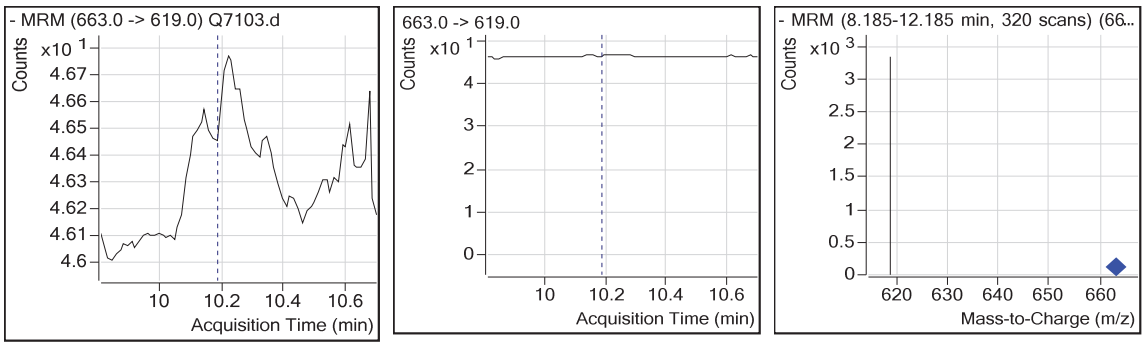


Perfluorinated Compounds by LC/MS/MS.

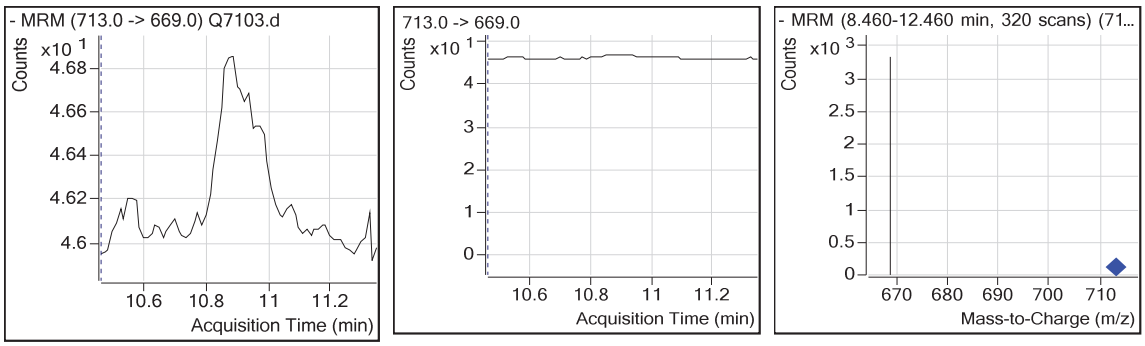
PFDoDA



PFTrDA



PFTeDA



Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling 09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

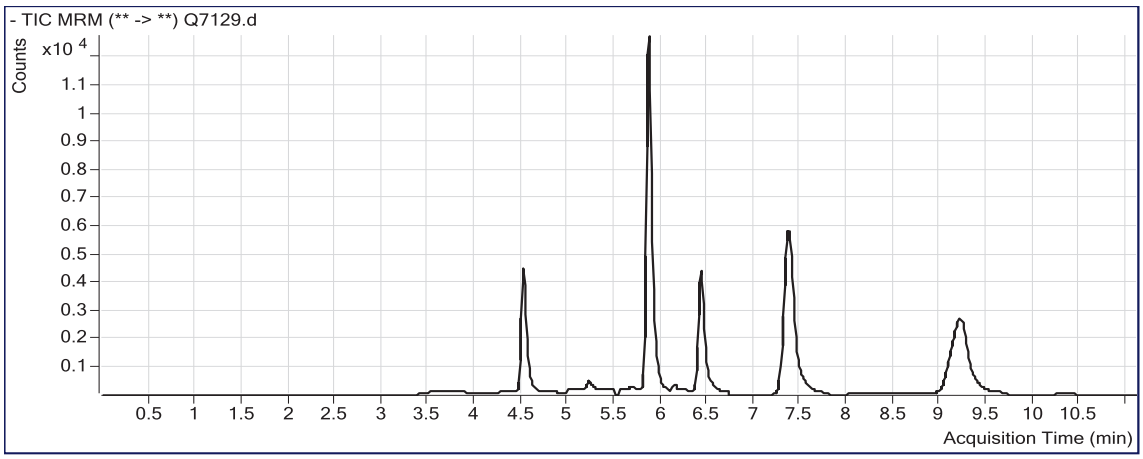
Data File	:	Q7129.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 13:00
Sample Name	:	FA18133-10
Vial	:	Vial 5
Sample Info	:	OP53158,SQ241,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.858	415.0 -> 370.0	52684	20.000	µg/L		0.000
13C4-PFOS	6.419	503.0 -> 80.0	19710	20.000	µg/L		-0.013
13C2-PFDoDA	9.197	615.0 -> 570.0	32372	20.000	µg/L		-0.200
System Monitoring Compounds							
13C2-PFHxA	4.516	315.0 -> 270.0	17749	22.74	µg/L		0.000
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 113.68%				
13C2-PFDA	7.345	515.0 -> 470.0	47257	24.07	µg/L		-0.088
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 120.35%				
Target Compounds							**Qvalue**
PFPeA	3.661	263.0 -> 219.0	227	0.756	µg/L		100
PFHxA	4.520	313.0 -> 269.0	722	0.814	µg/L		91
PFHxS	5.217	399.0 -> 80.0	472	0.966	µg/L		84
PFHpA	5.222	363.0 -> 319.0	377	0.408	µg/L		47
PFOA	5.861	413.0 -> 369.0	2635	0.914	µg/L		83
PFOS	6.422	499.0 -> 80.0	990	0.936	µg/L	m	91

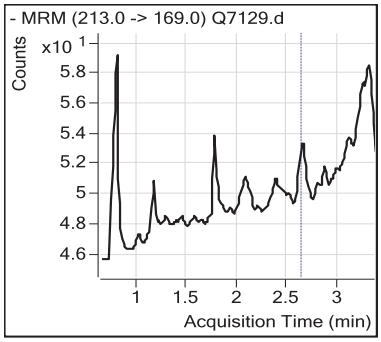
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

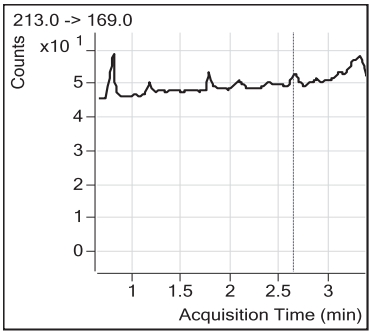
Perfluorinated Compounds by LC/MS/MS.

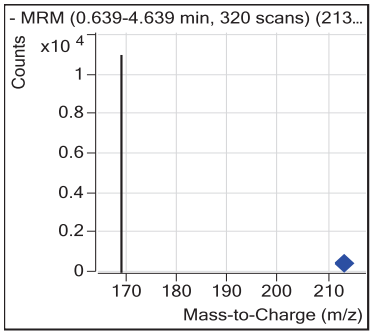
Data File	:	Q7129.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 13:00
Sample Name	:	FA18133-10
Vial	:	Vial 5
Sample Info	:	OP53158,SQ241,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



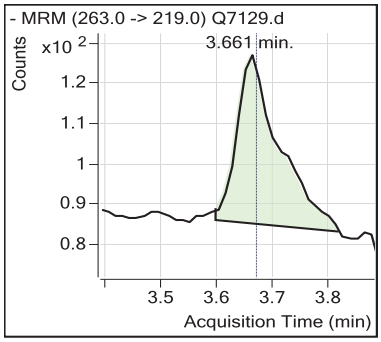
PFBA

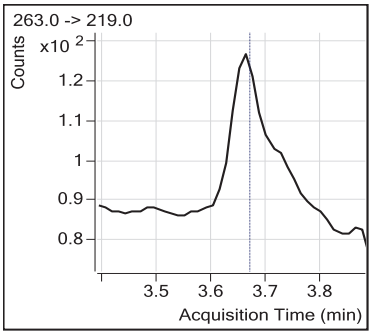


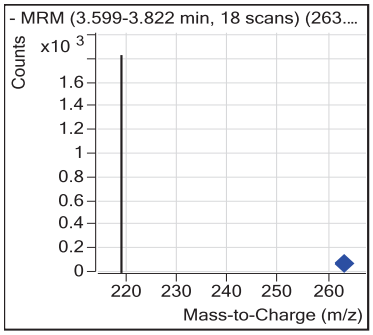




PFPeA

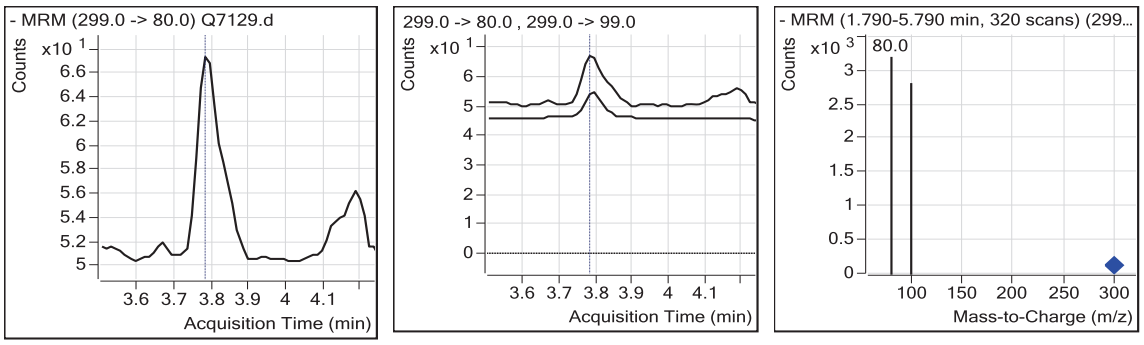




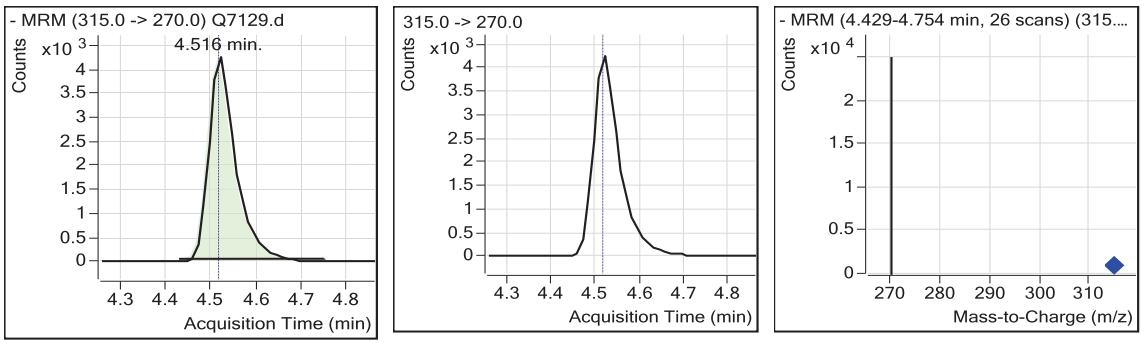


Perfluorinated Compounds by LC/MS/MS.

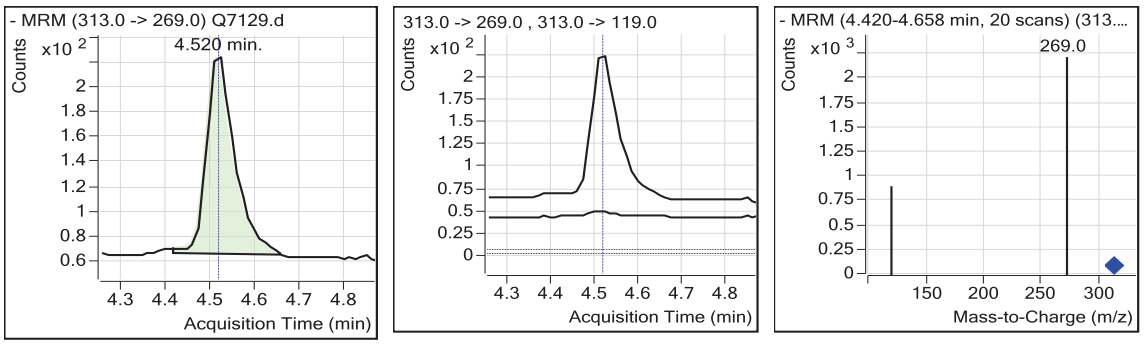
PFBS



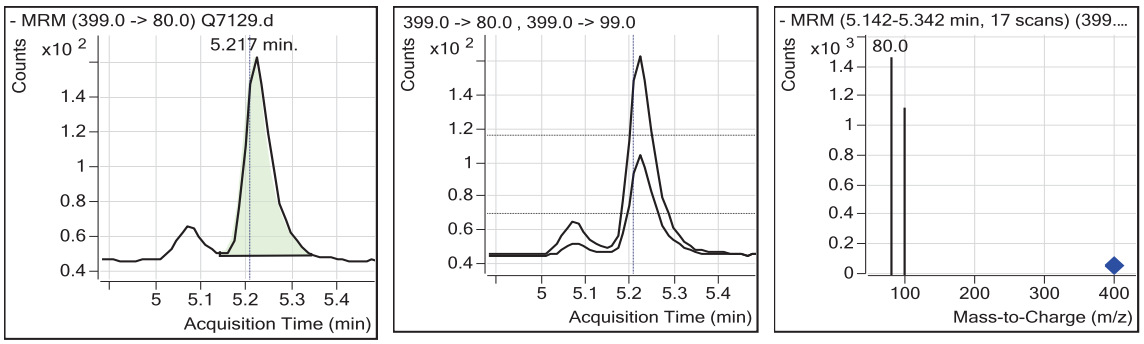
13C2-PFHxA



PFHxA

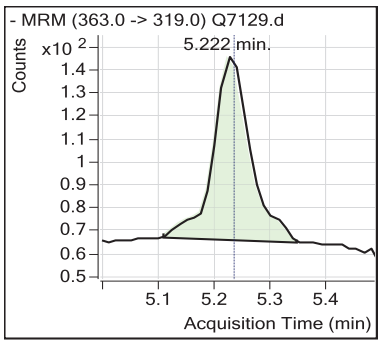


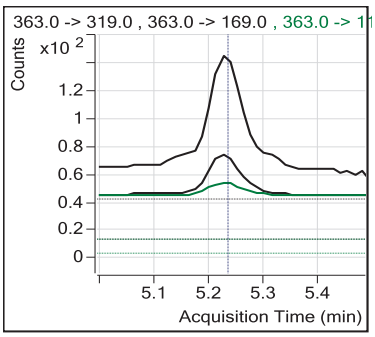
PFHxS

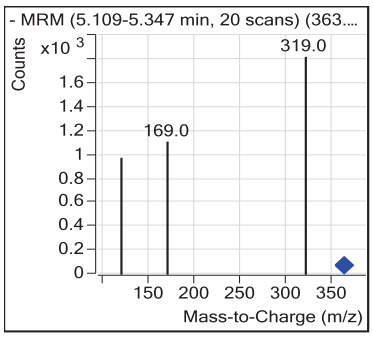


Perfluorinated Compounds by LC/MS/MS.

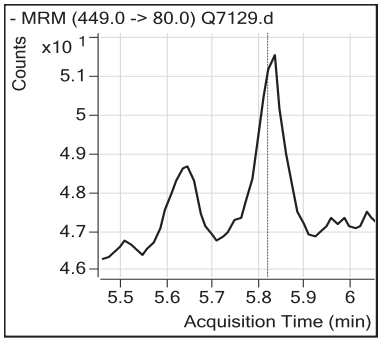
PFHpA

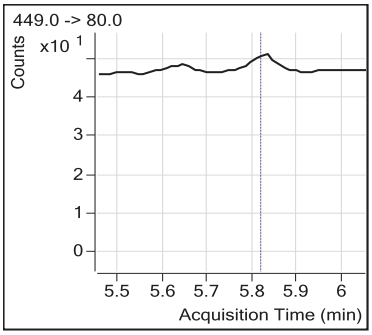


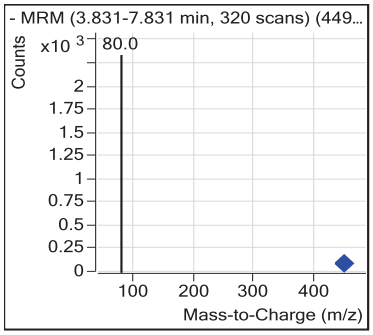




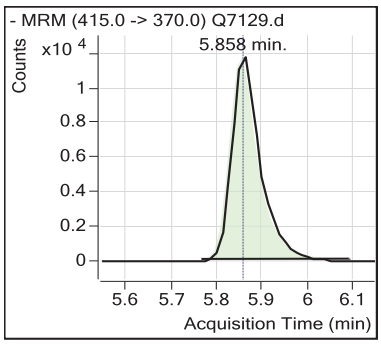
PFHpS

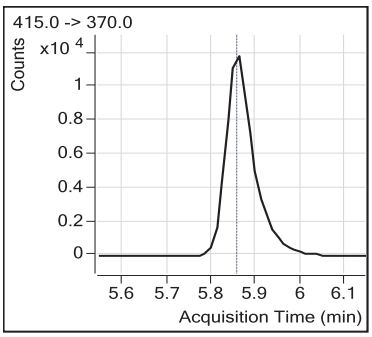


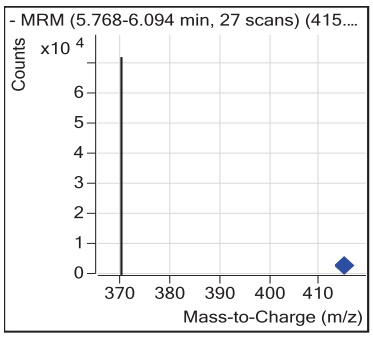




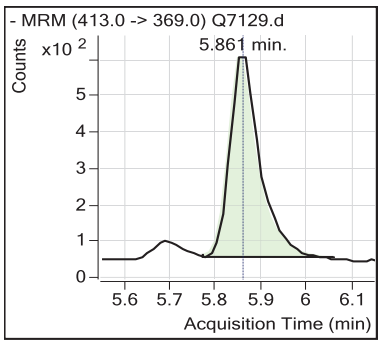
13C2-PFOA

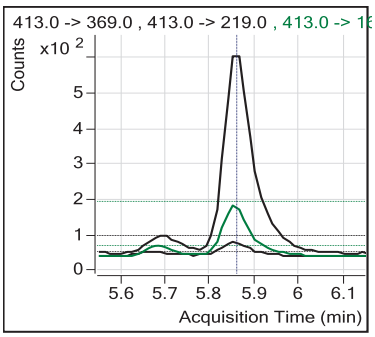


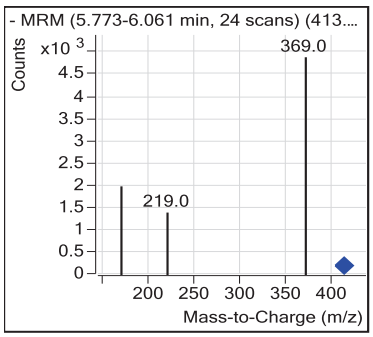




PFOA

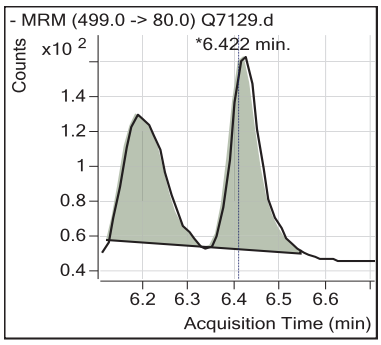


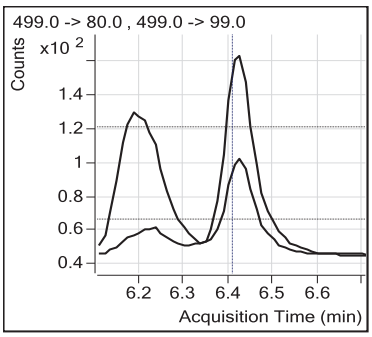


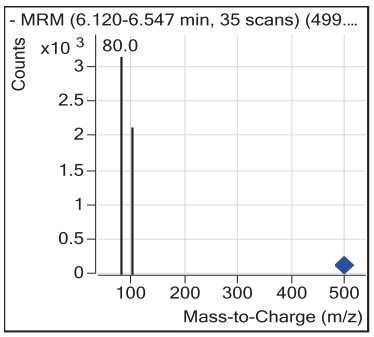


Perfluorinated Compounds by LC/MS/MS.

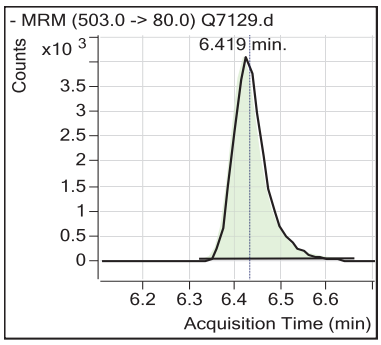
PFOS

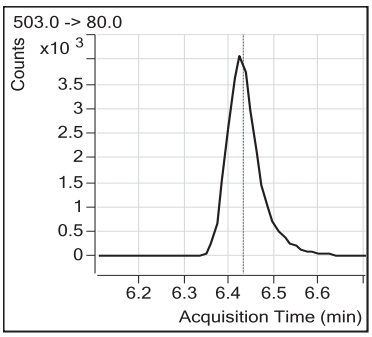


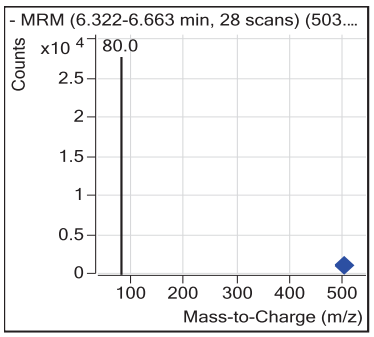




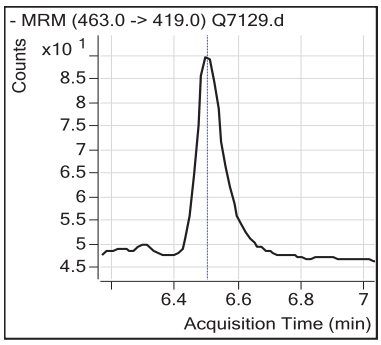
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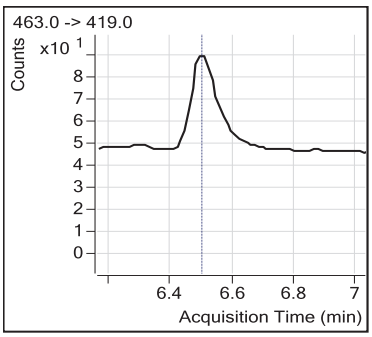


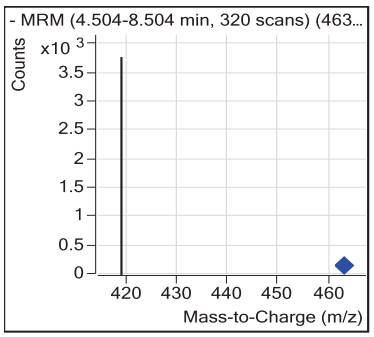




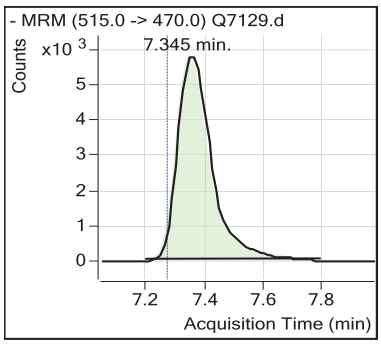
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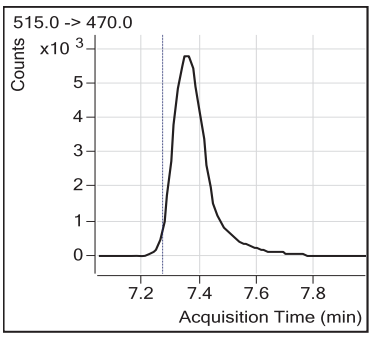


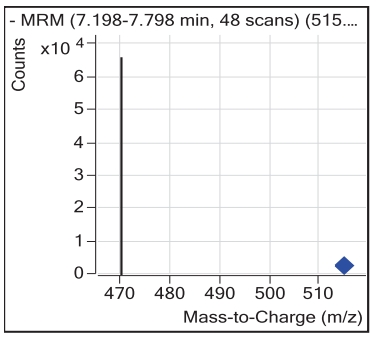




13C2-PFDA

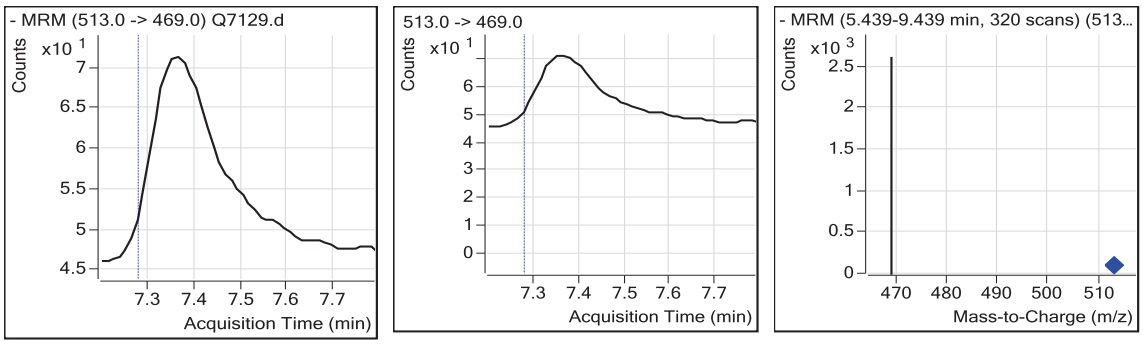




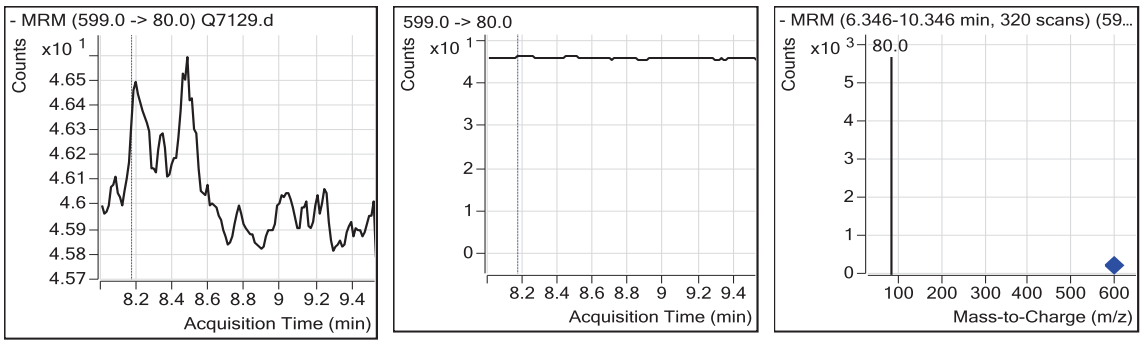


Perfluorinated Compounds by LC/MS/MS.

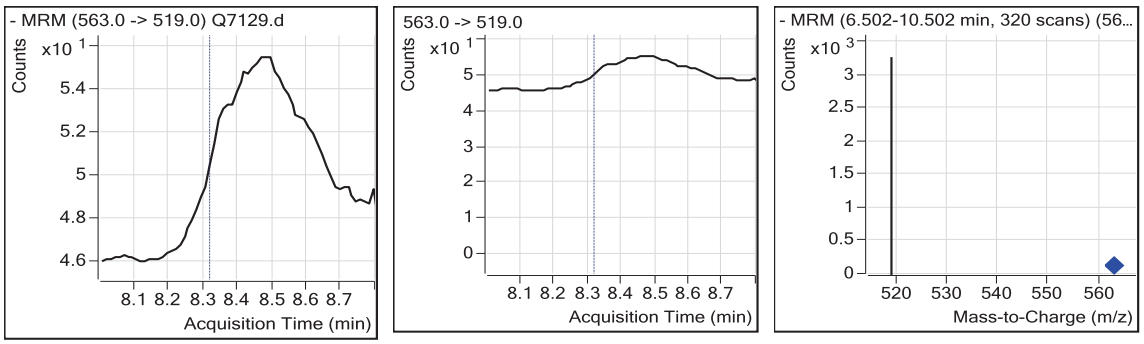
PFDA



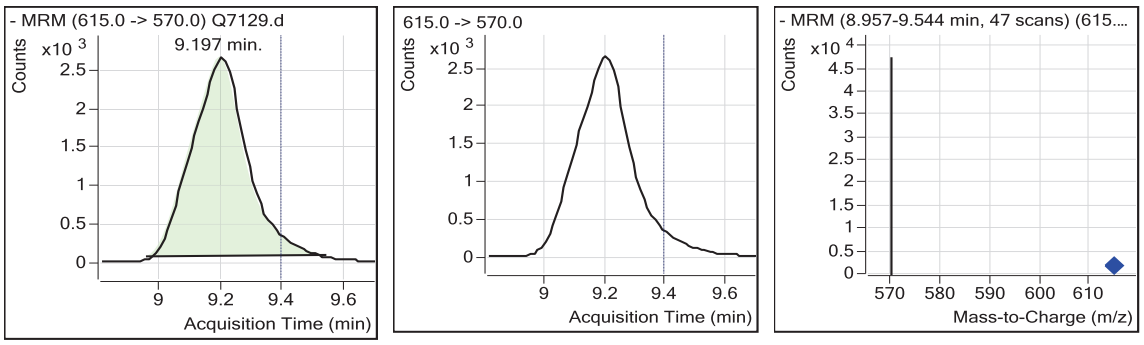
PFDS



PFUnDA



13C2-PFDoDA

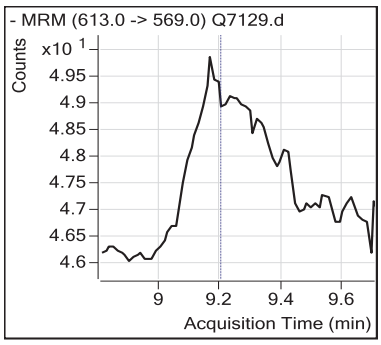


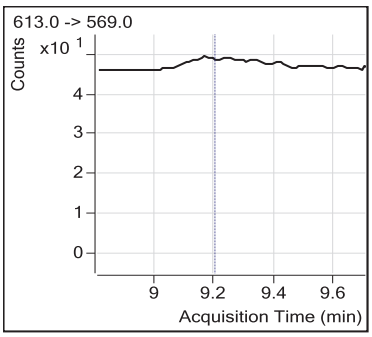
7.1.14

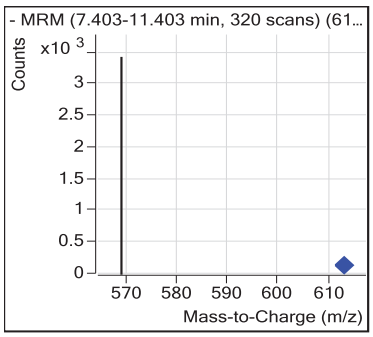
7

Perfluorinated Compounds by LC/MS/MS.

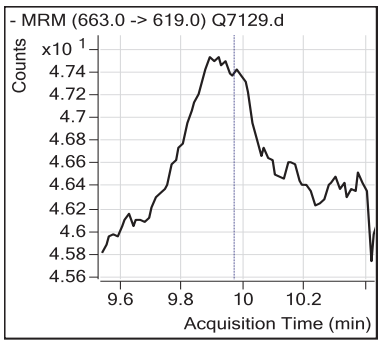
PFDoDA

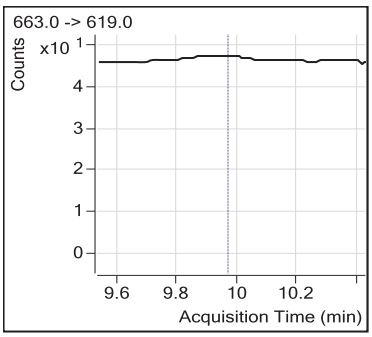


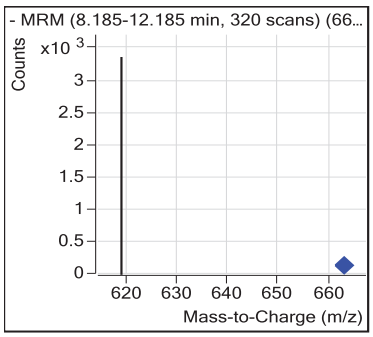




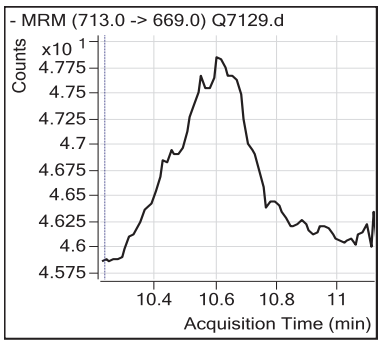
PFTrDA

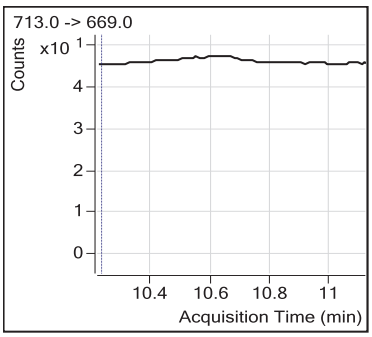


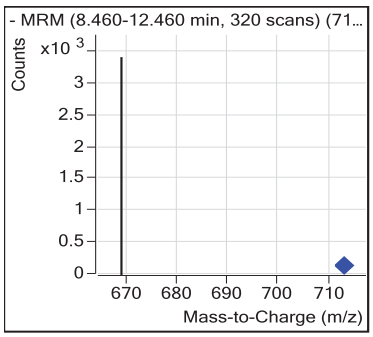




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-10
Lab FileID: Q7129.D
Injection Time: 09/23/14 13:00
Method: EPA 537 MOD
Analyst approved: 09/24/14 14:05 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanesulfonic acid	1763-23-1		6.42	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

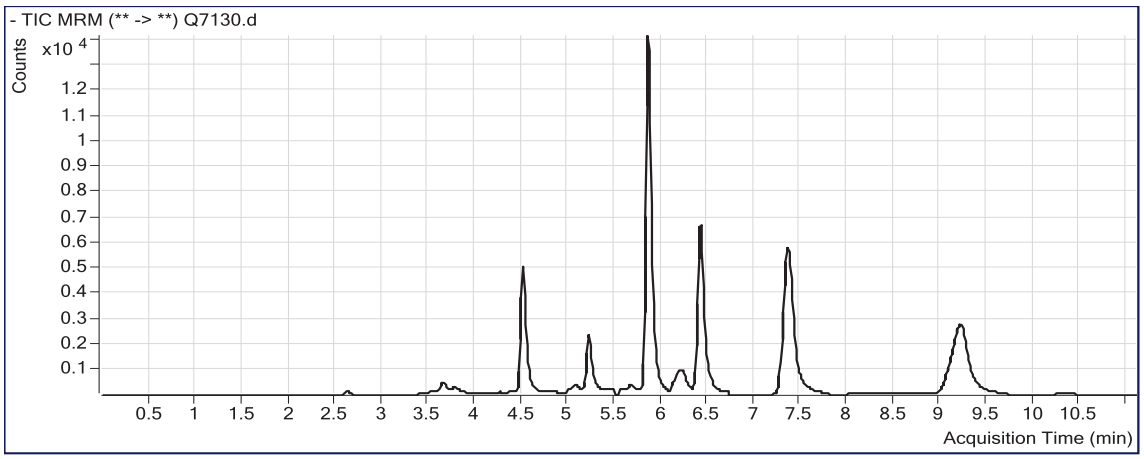
Data File	:	Q7130.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 13:19
Sample Name	:	FA18133-11
Vial	:	Vial 6
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	50733	20.000	µg/L		-0.013
13C4-PFOS	6.419	503.0 -> 80.0	18694	20.000	µg/L		-0.013
13C2-PFDoDA	9.197	615.0 -> 570.0	32407	20.000	µg/L		-0.200
System Monitoring Compounds							
13C2-PFHxA	4.516	315.0 -> 270.0	16894	22.47	µg/L		0.000
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 112.37%				
13C2-PFDA	7.345	515.0 -> 470.0	46545	23.68	µg/L		-0.088
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 118.41%				
Target Compounds							**Qvalue**
PFBA	2.627	213.0 -> 169.0	617	1.048	µg/L		100
PFPeA	3.661	263.0 -> 219.0	1610	5.579	µg/L		100
PFBS	3.778	299.0 -> 80.0	399	1.347	µg/L		98
PFHxA	4.508	313.0 -> 269.0	4377	5.127	µg/L		91
PFHxS	5.217	399.0 -> 80.0	3649	7.870	µg/L	m	91
PFHpA	5.222	363.0 -> 319.0	3128	3.543	µg/L		99
PFOA	5.848	413.0 -> 369.0	9006	3.265	µg/L	m	78
PFOS	6.410	499.0 -> 80.0	13450	13.888	µg/L	m	90
PFNA	6.491	463.0 -> 419.0	902	0.747	µg/L		100

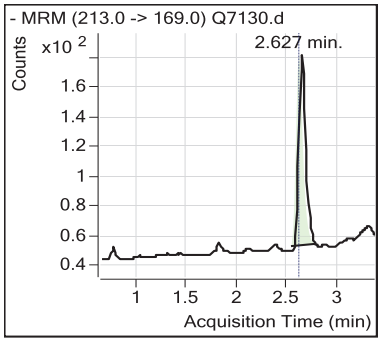
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

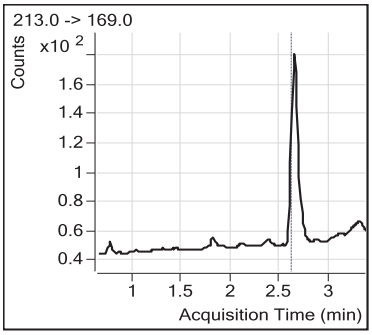
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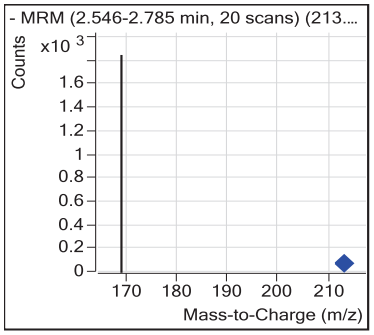
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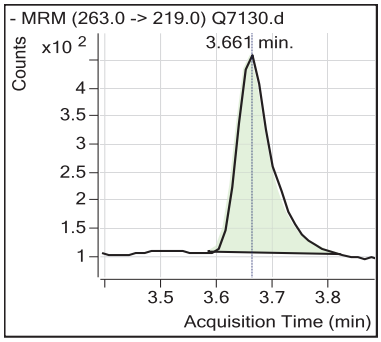
PFBA

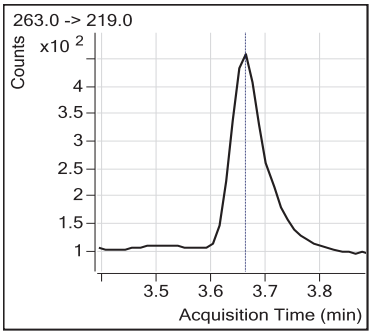


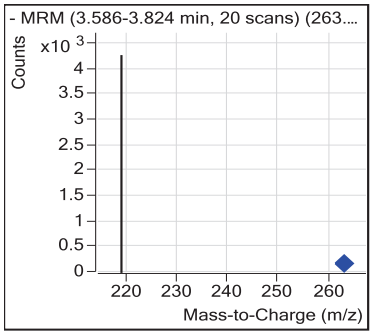




PFPeA

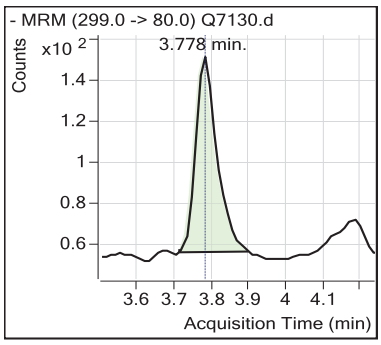


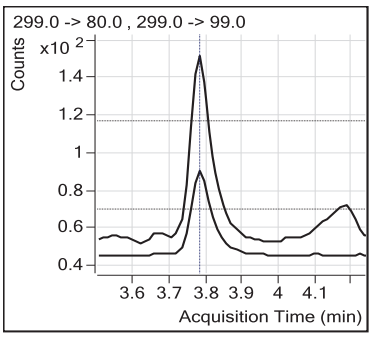


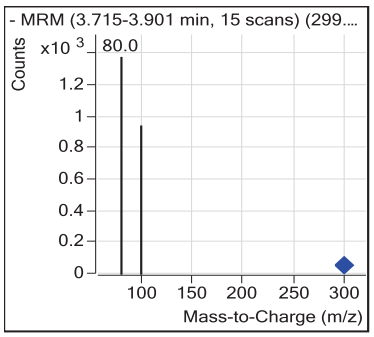


Perfluorinated Compounds by LC/MS/MS.

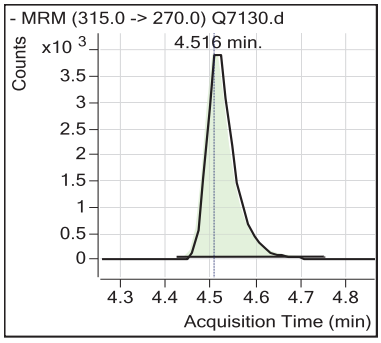
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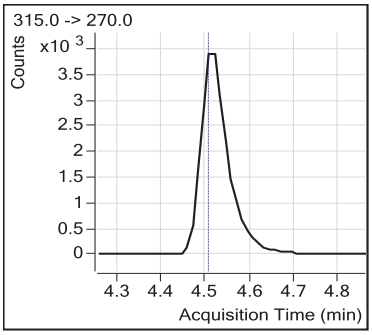


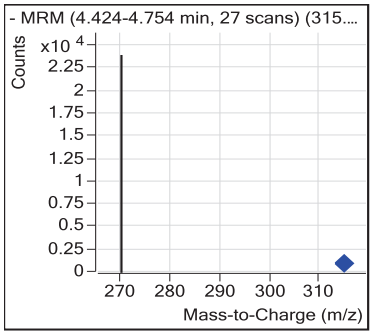




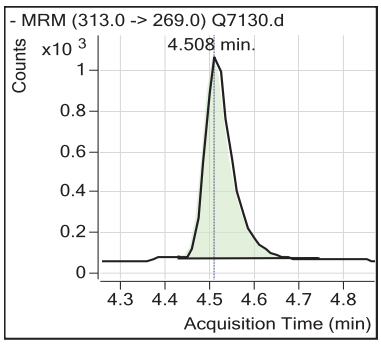
13C2-PFHxA

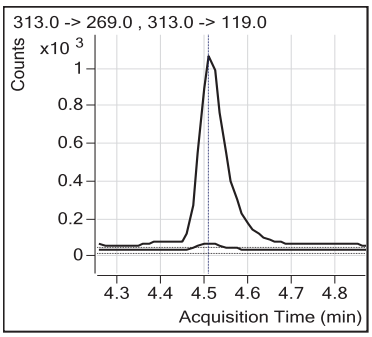


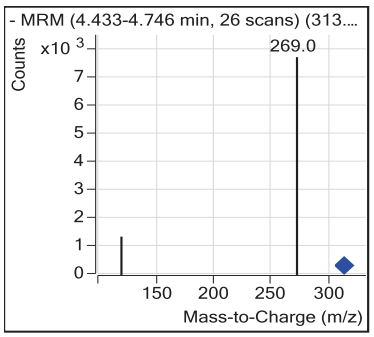




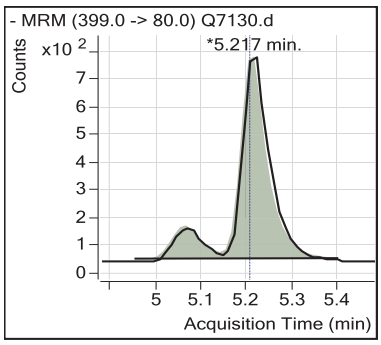
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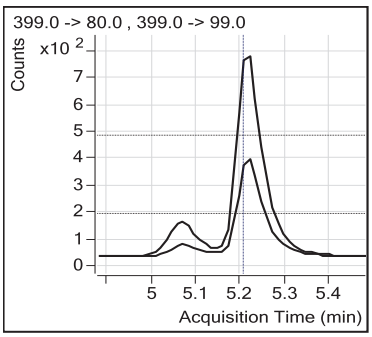


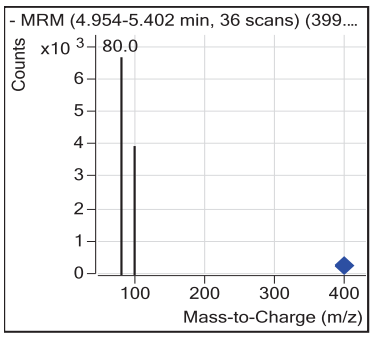




PFHxS

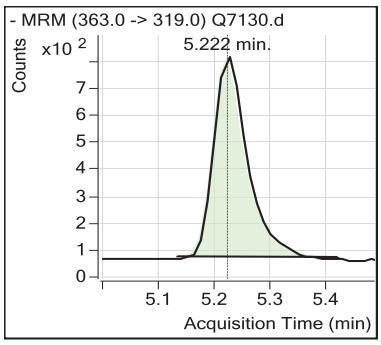


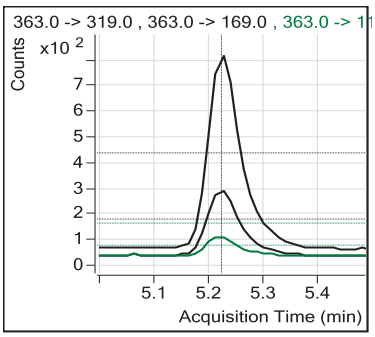


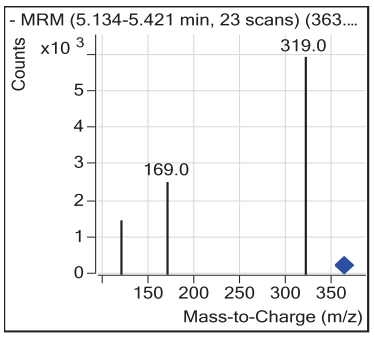


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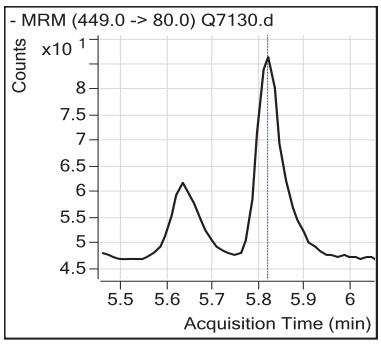
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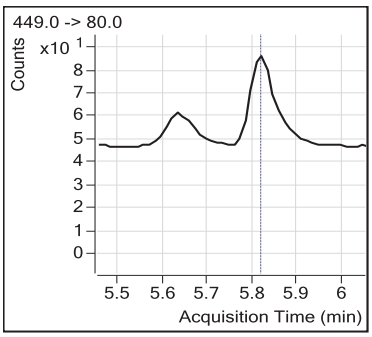


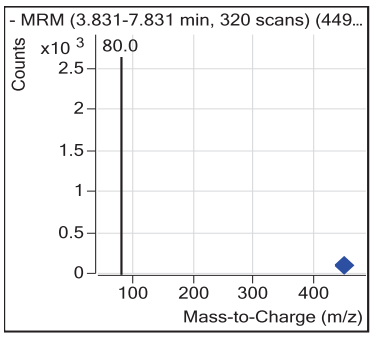




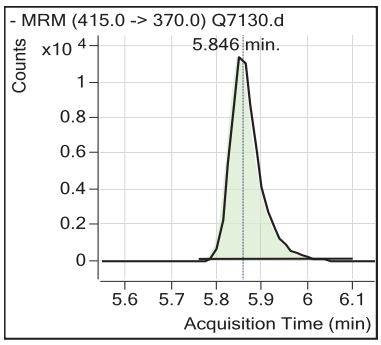
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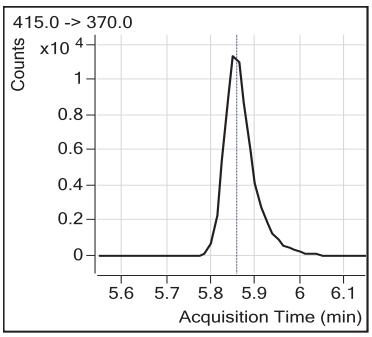


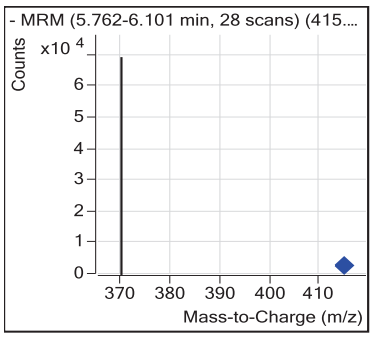




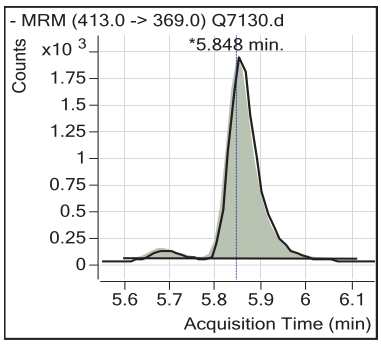
13C2-PFOA

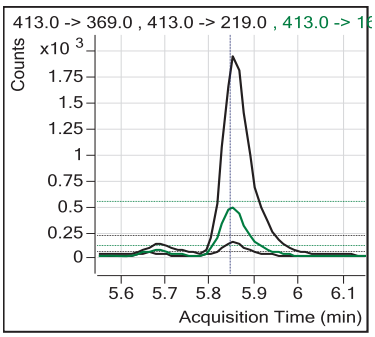


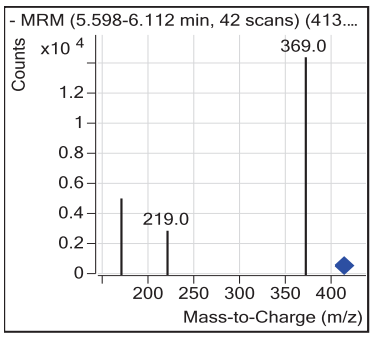




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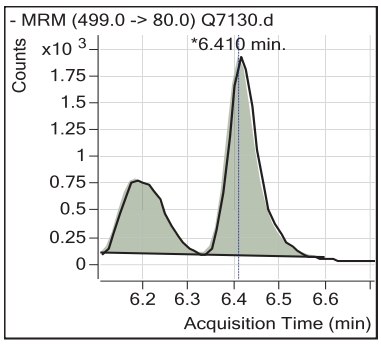


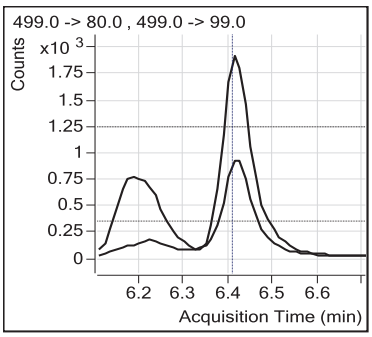


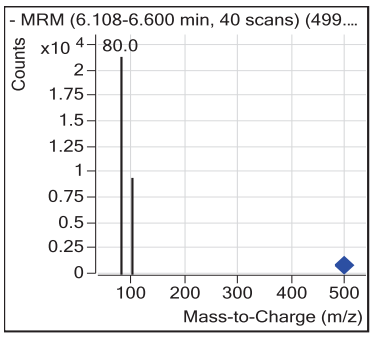


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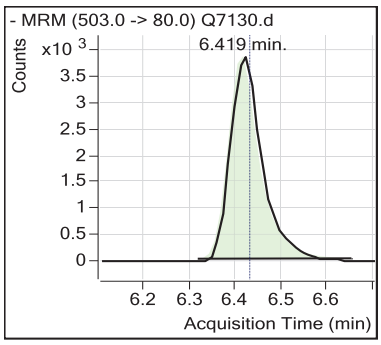
PFOS

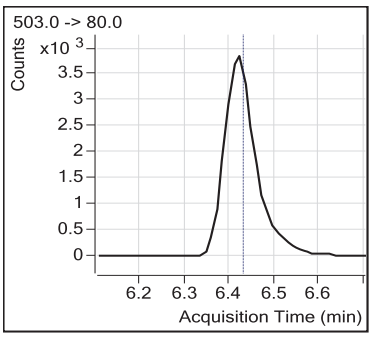


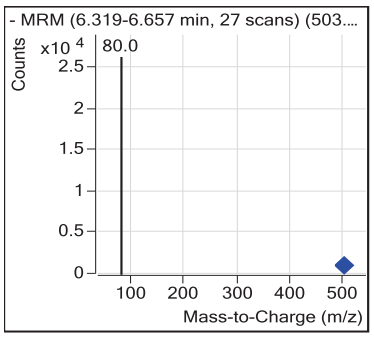




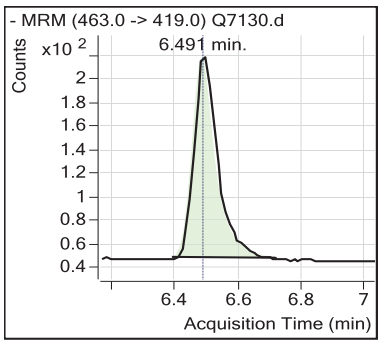
13C4-PFOS

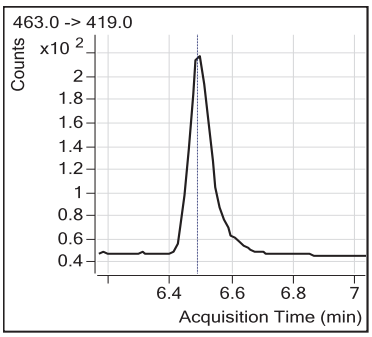


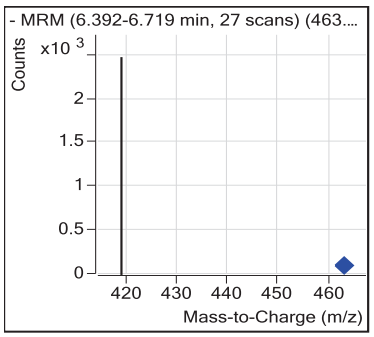




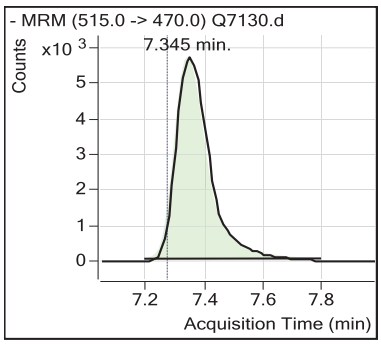
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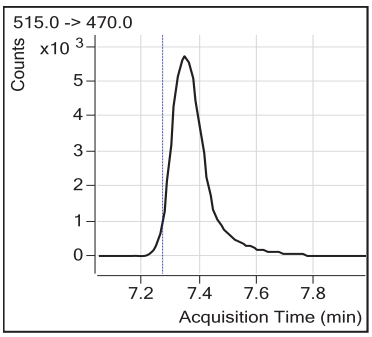


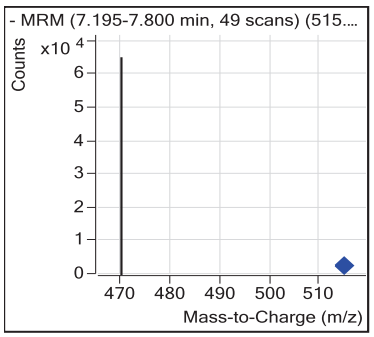




13C2-PFDA

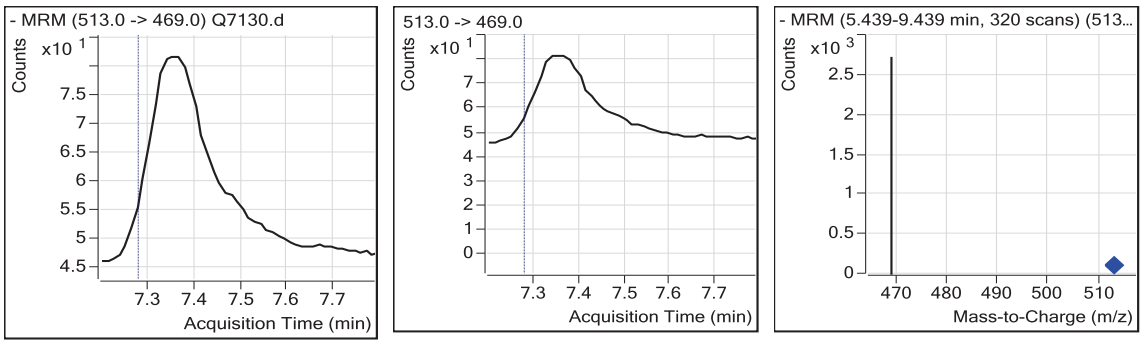




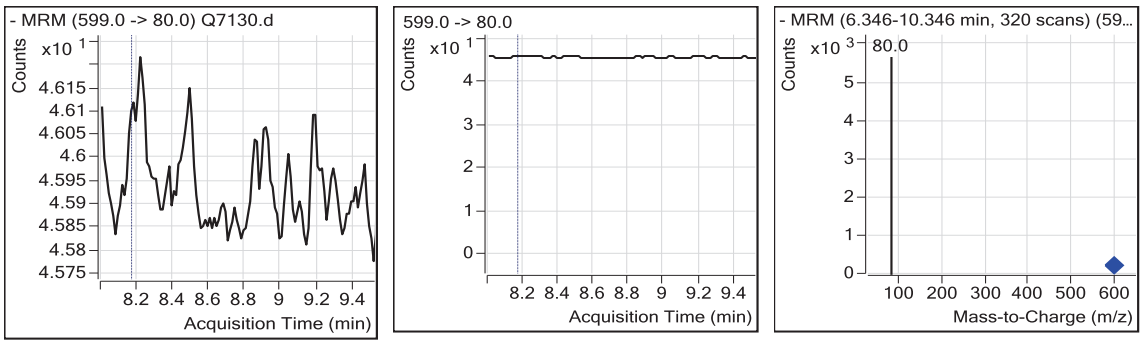


Perfluorinated Compounds by LC/MS/MS.

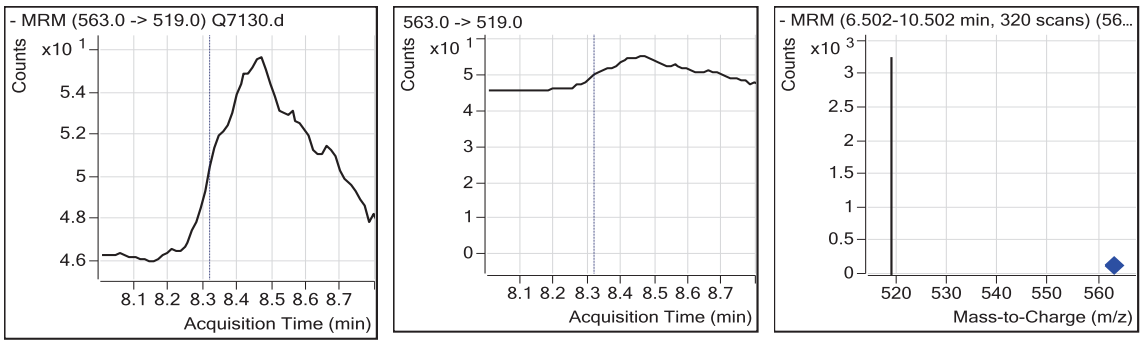
PFDA



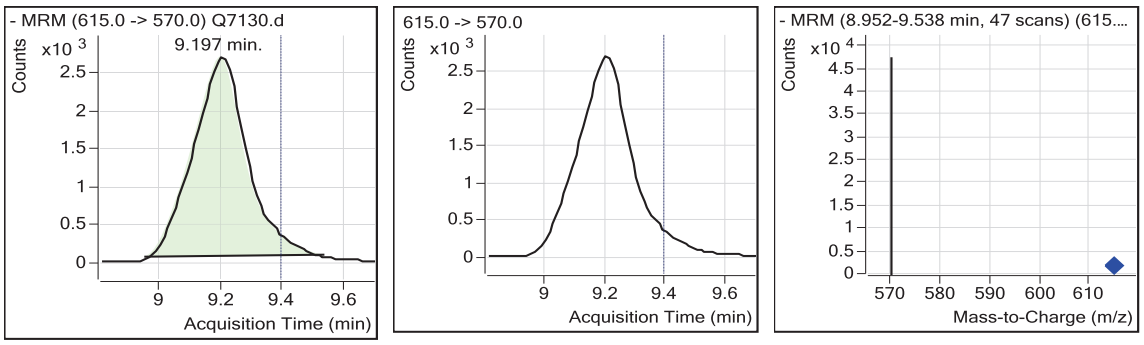
PFDS



PFUnDA



13C2-PFDoDA

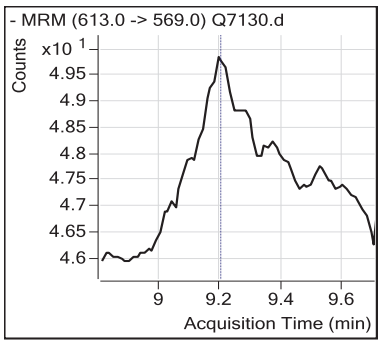


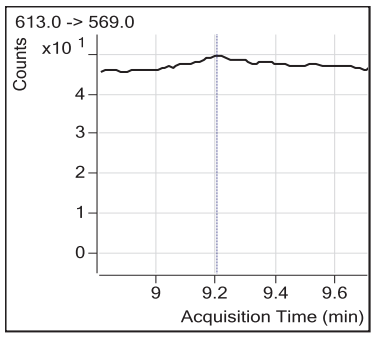
7.1.15

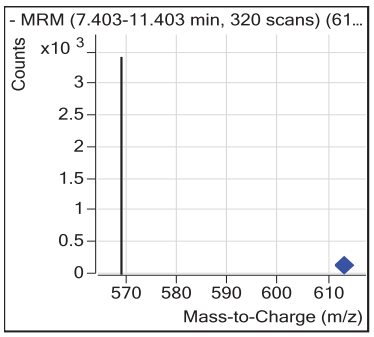
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Perfluorinated Compounds by LC/MS/MS.

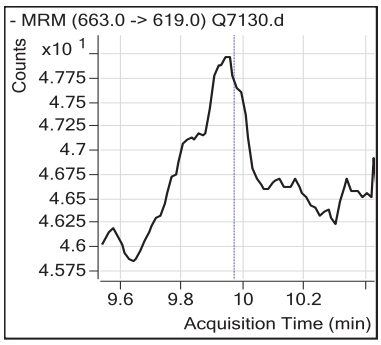
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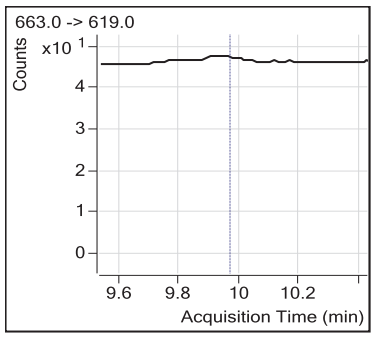


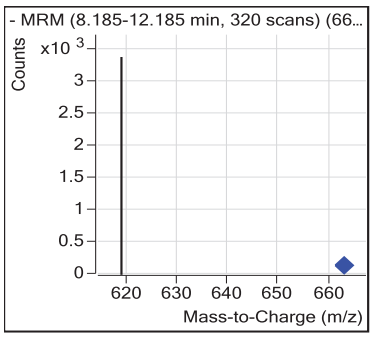




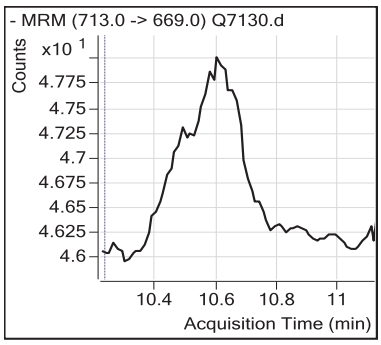
PFTrDA

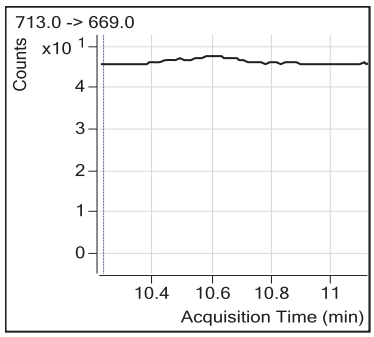


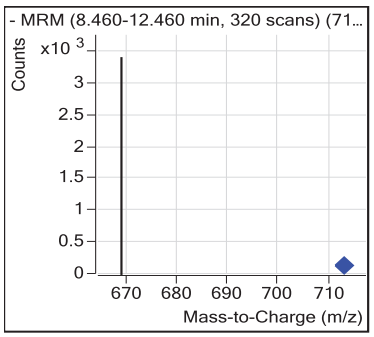




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-11
Lab FileID: Q7130.D
Injection Time: 09/23/14 13:19
Method: EPA 537 MOD
Analyst approved: 09/24/14 14:05 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.22	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.41	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

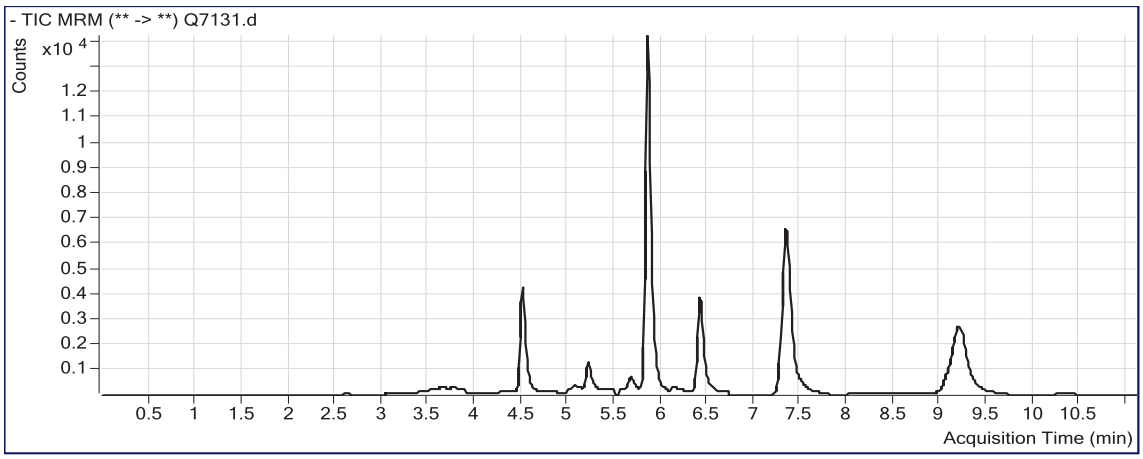
Data File	:	Q7131.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 13:38
Sample Name	:	FA18133-12
Vial	:	Vial 7
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	48286	20.000	µg/L		-0.013
13C4-PFOS	6.407	503.0 -> 80.0	17473	20.000	µg/L		-0.025
13C2-PFDoDA	9.184	615.0 -> 570.0	30557	20.000	µg/L		-0.213
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	15091	21.09	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 105.47%				
13C2-PFDA	7.320	515.0 -> 470.0	46684	25.19	µg/L		-0.113
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 125.95%				
Target Compounds							**Qvalue**
PFBA	3.265	213.0 -> 169.0	635	1.132	µg/L		100
PFPeA	3.649	263.0 -> 219.0	567	2.064	µg/L		100
PFHxA	4.508	313.0 -> 269.0	2143	2.638	µg/L		98
PFHxS	5.205	399.0 -> 80.0	2690	6.208	µg/L	m	90
PFHpA	5.210	363.0 -> 319.0	695	0.822	µg/L		90
PFOA	5.848	413.0 -> 369.0	11686	4.467	µg/L	# m	74
PFOS	6.172	499.0 -> 80.0	617	0.658	µg/L	m	86

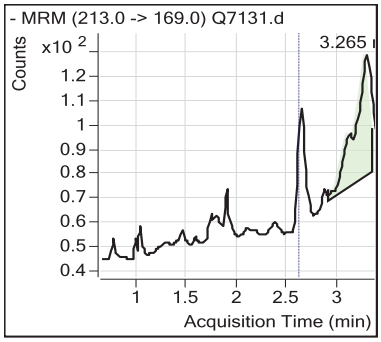
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

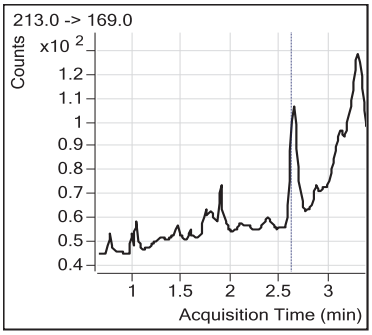
Perfluorinated Compounds by LC/MS/MS.

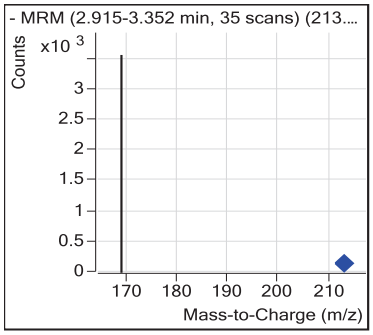
Data File	:	Q7131.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 13:38
Sample Name	:	FA18133-12
Vial	:	Vial 7
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



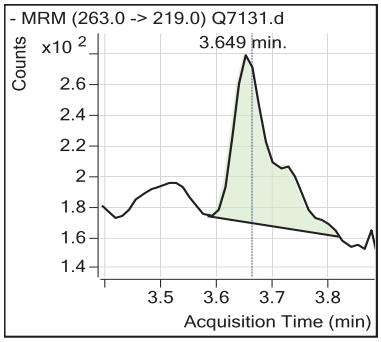
PFBA

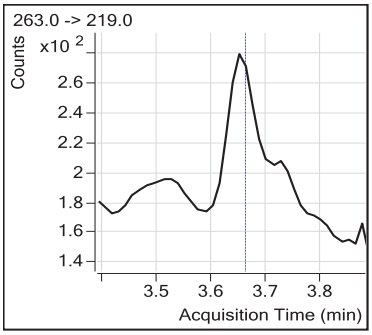


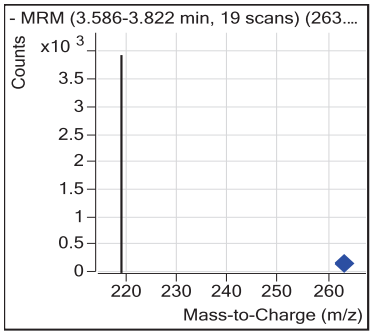




PFPeA

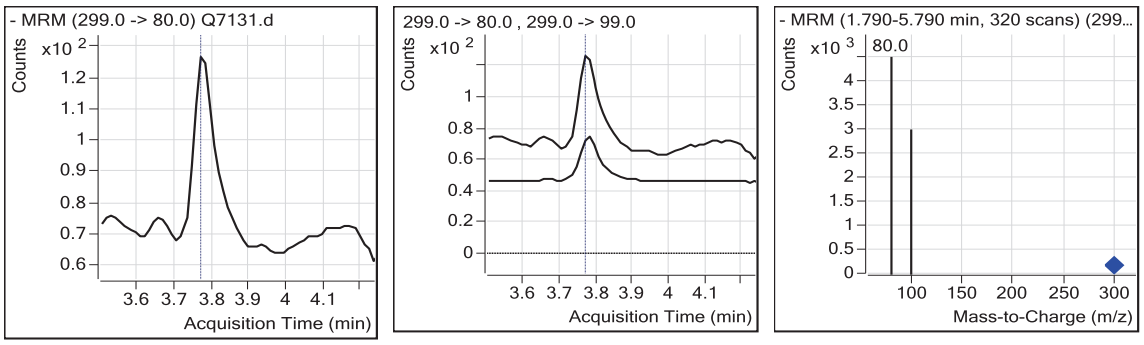




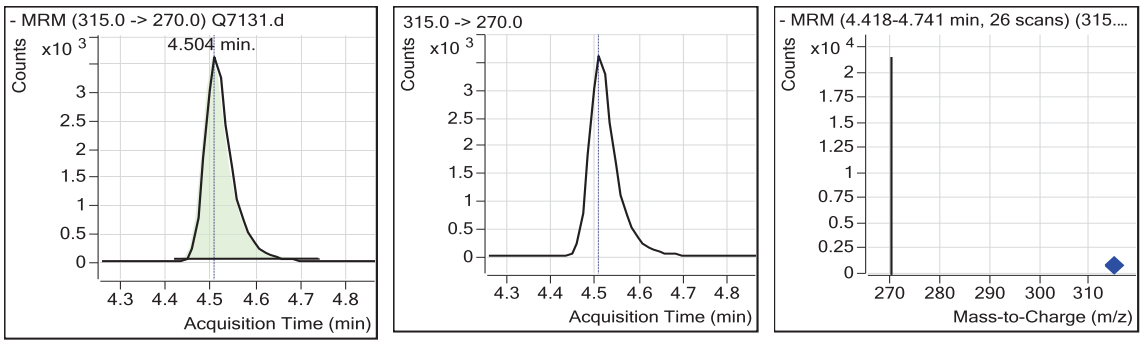


Perfluorinated Compounds by LC/MS/MS.

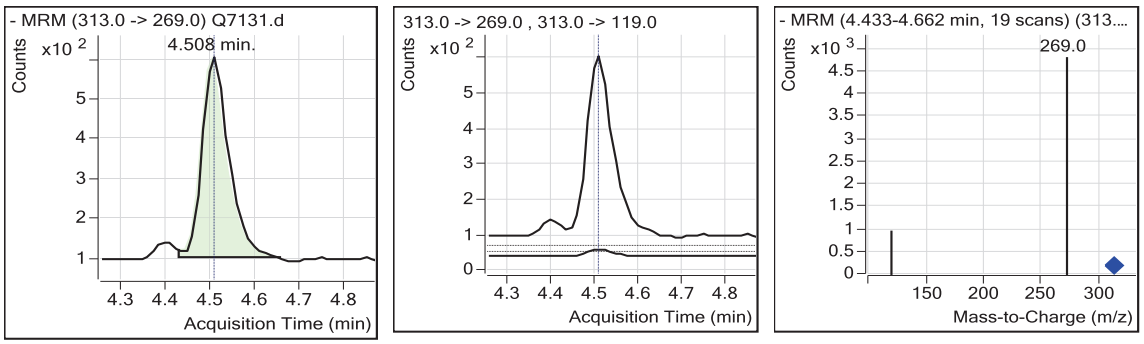
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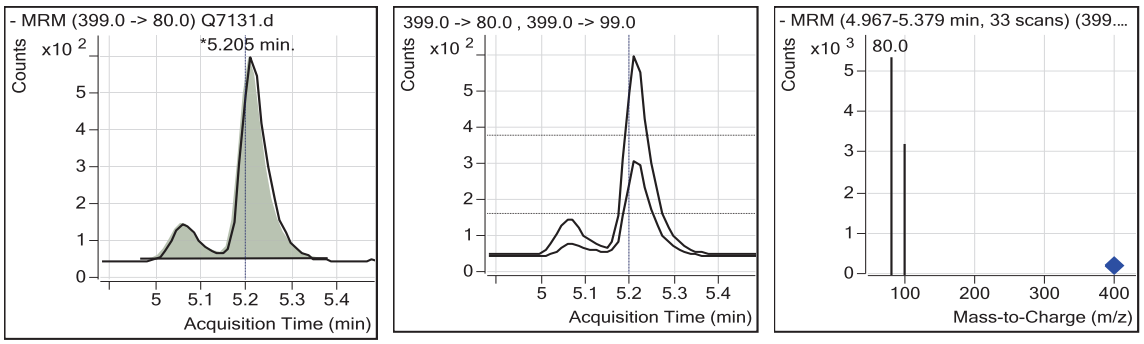
13C2-PFHxA



PFHxA

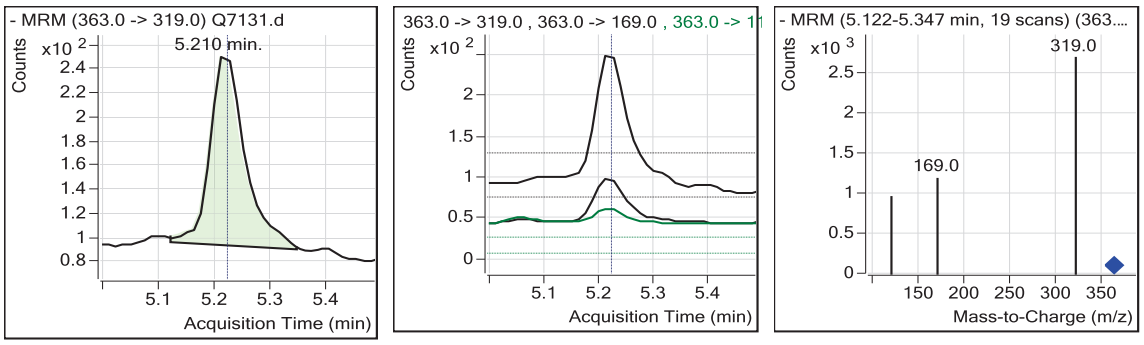


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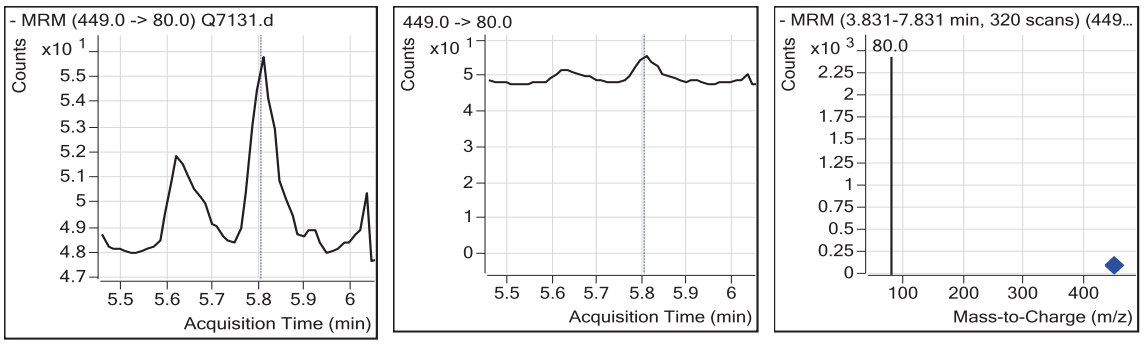


Perfluorinated Compounds by LC/MS/MS.

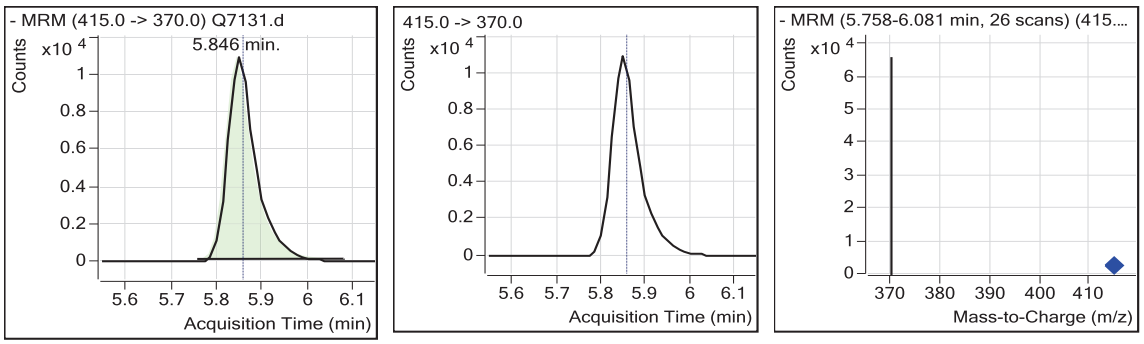
PFHpA



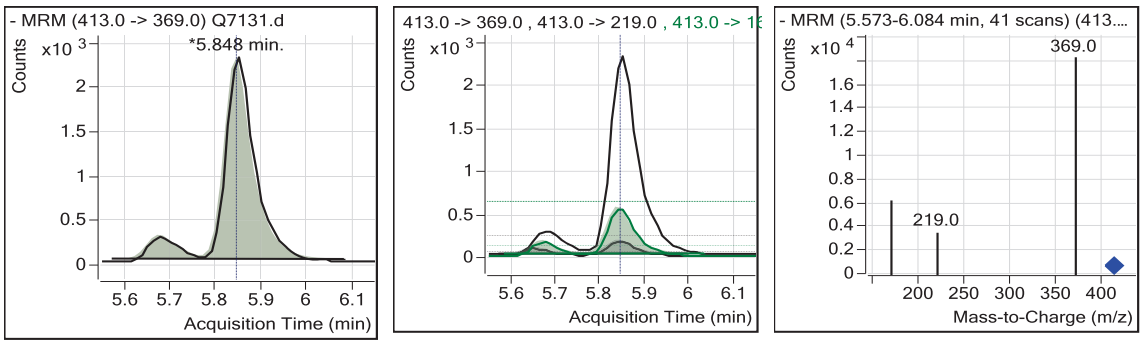
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13C2-PFOA

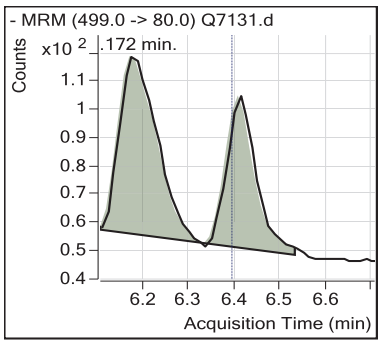


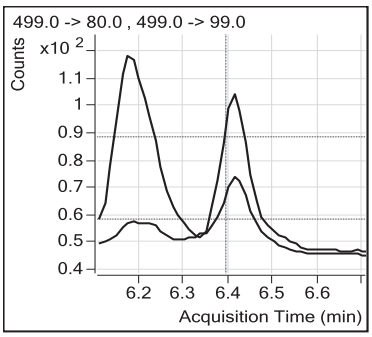
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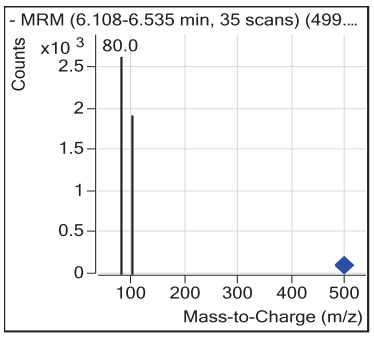


Perfluorinated Compounds by LC/MS/MS.

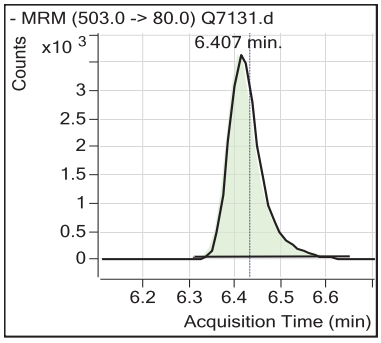
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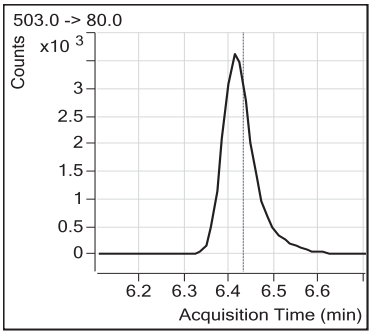


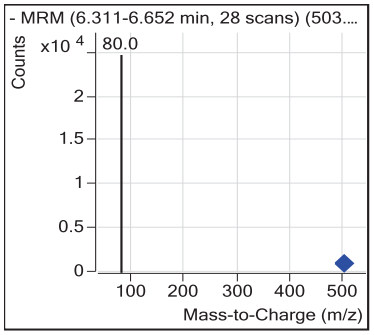




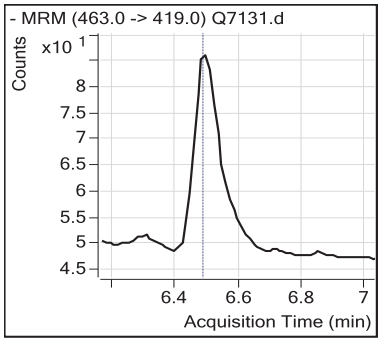
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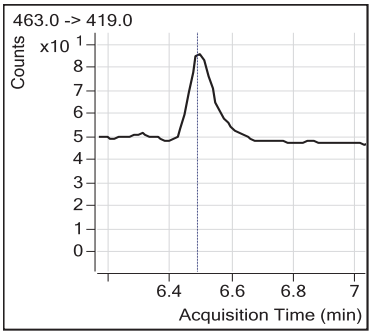


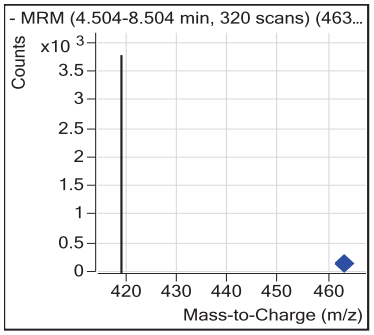




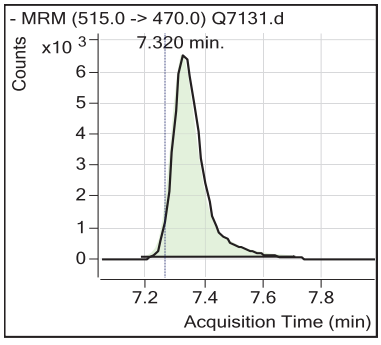
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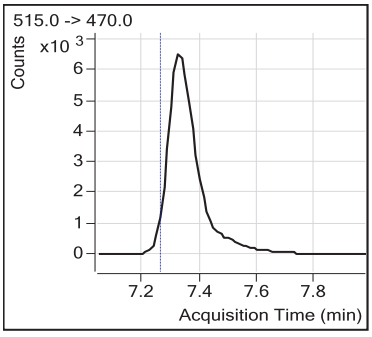


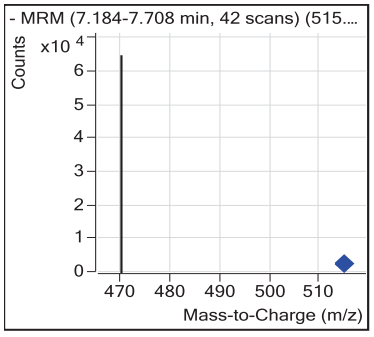




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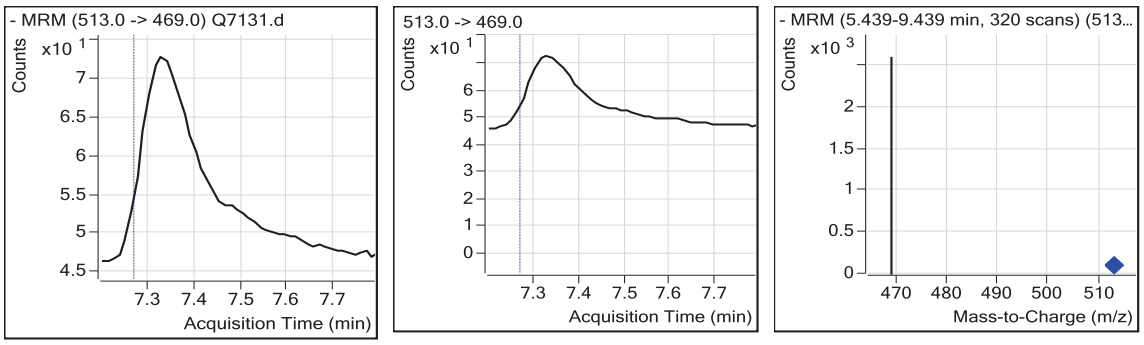




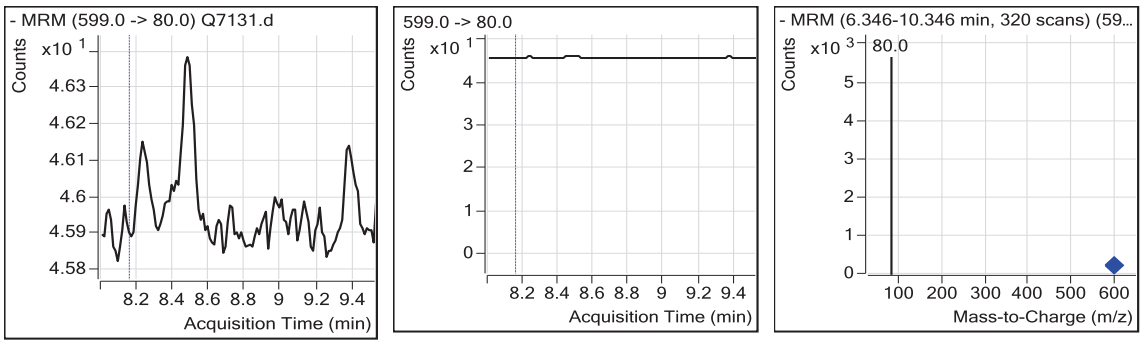


Perfluorinated Compounds by LC/MS/MS.

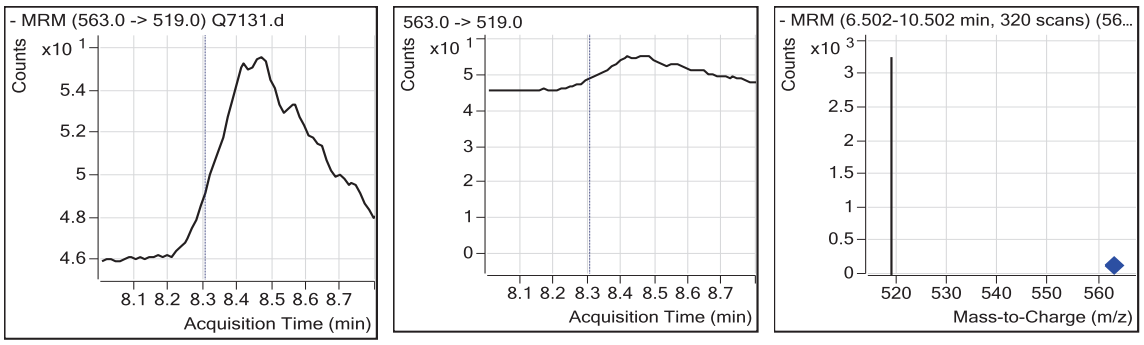
PFDA



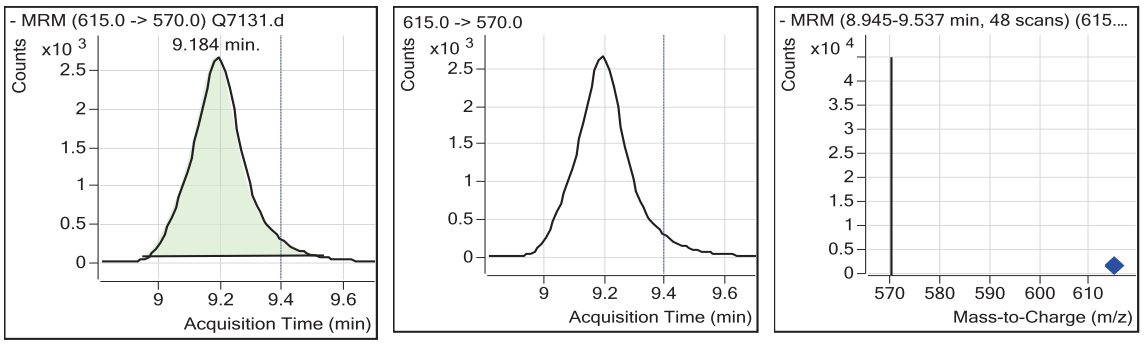
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PFUnDA

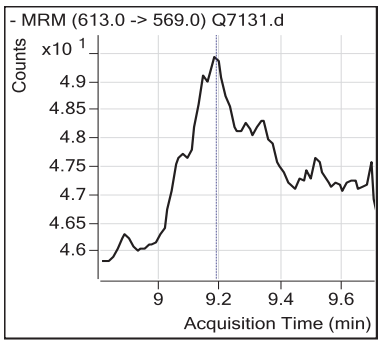


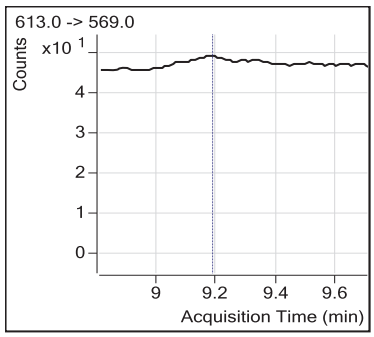
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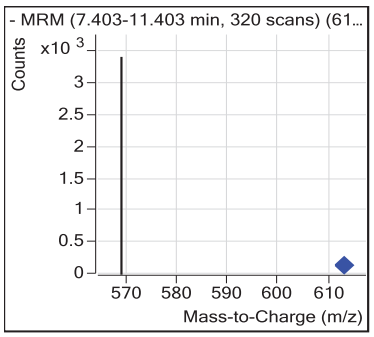


Perfluorinated Compounds by LC/MS/MS.

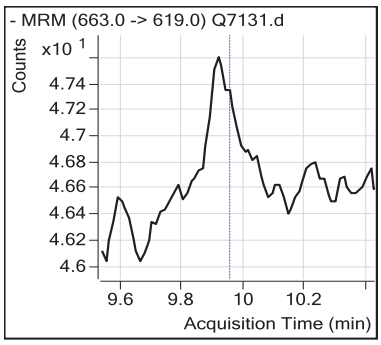
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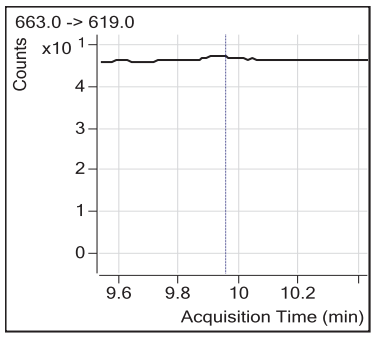


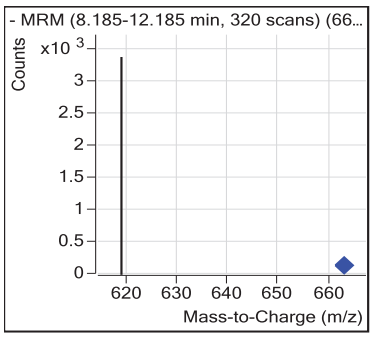




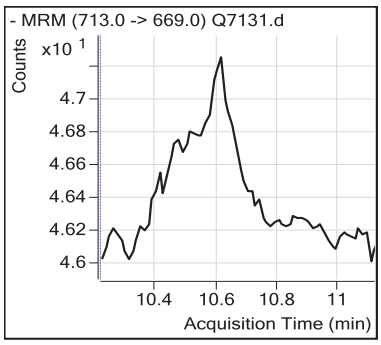
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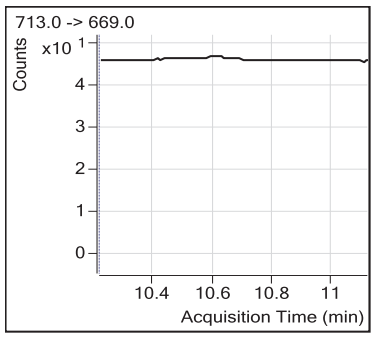


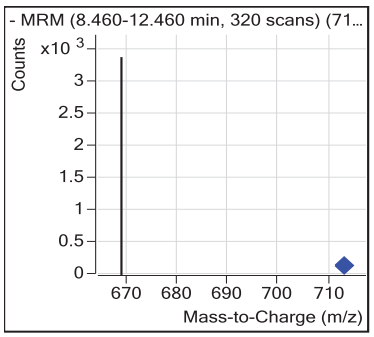




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-12
Lab FileID: Q7131.D
Injection Time: 09/23/14 13:38
Method: EPA 537 MOD
Analyst approved: 09/24/14 14:05 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.17	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

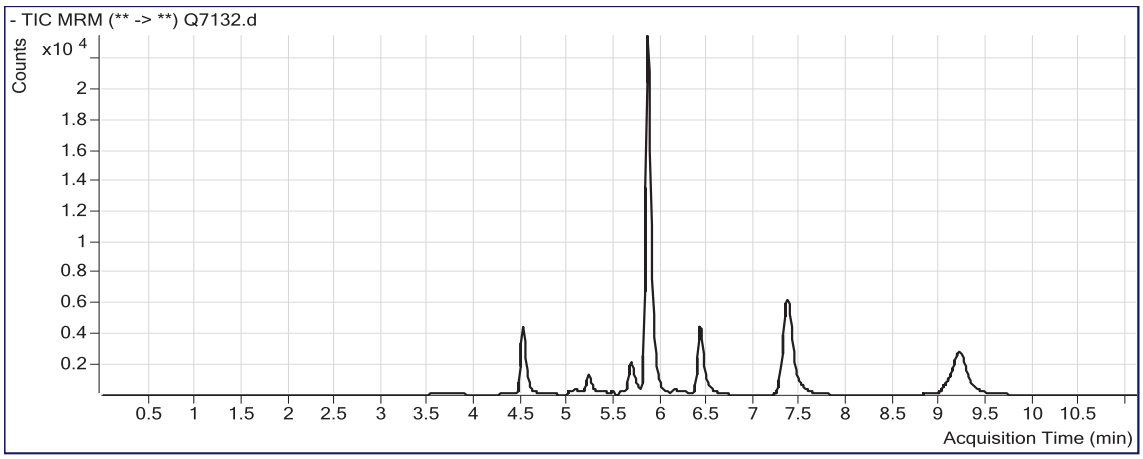
Data File	:	Q7132.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 13:57
Sample Name	:	FA18133-13
Vial	:	Vial 8
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	49358	20.000	µg/L		-0.013
13C4-PFOS	6.407	503.0 -> 80.0	18602	20.000	µg/L		-0.025
13C2-PFDoDA	9.184	615.0 -> 570.0	31666	20.000	µg/L		-0.213
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	17082	23.36	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 116.78%				
13C2-PFDA	7.332	515.0 -> 470.0	49169	25.60	µg/L		-0.100
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 128.01%				
Target Compounds							**Qvalue**
PFPeA	3.661	263.0 -> 219.0	298	1.062	µg/L		100
PFHxA	4.508	313.0 -> 269.0	2049	2.467	µg/L	m	91
PFHxS	5.205	399.0 -> 80.0	3106	6.731	µg/L	m	94
PFHpA	5.222	363.0 -> 319.0	577	0.667	µg/L		88
PFOA	5.848	413.0 -> 369.0	46827	18.222	µg/L	m	75
PFOS	6.410	499.0 -> 80.0	2295	2.309	µg/L	m	100
PFNA	6.491	463.0 -> 419.0	352	0.299	µg/L		100

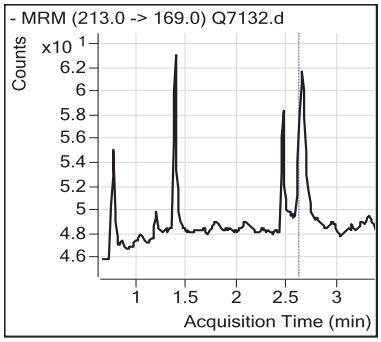
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

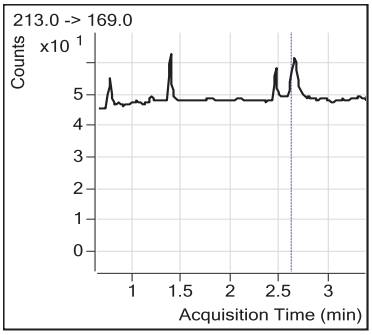
Perfluorinated Compounds by LC/MS/MS.

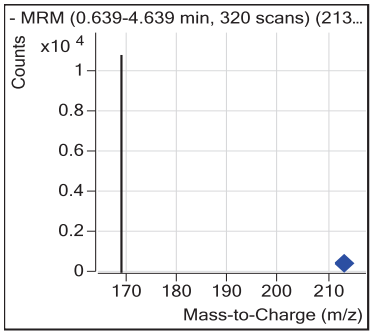
Data File	:	Q7132.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 13:57
Sample Name	:	FA18133-13
Vial	:	Vial 8
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



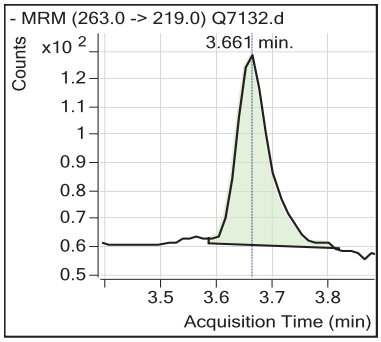
PFBA

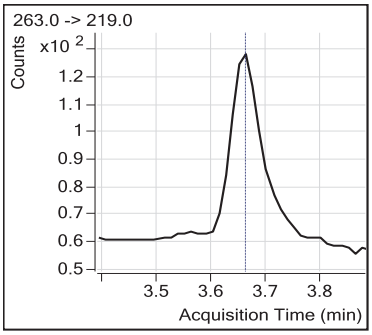


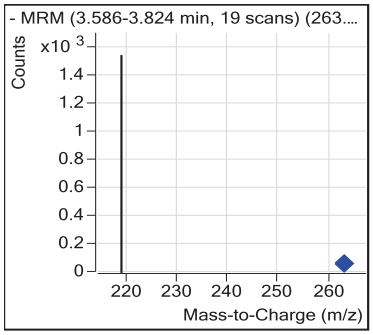




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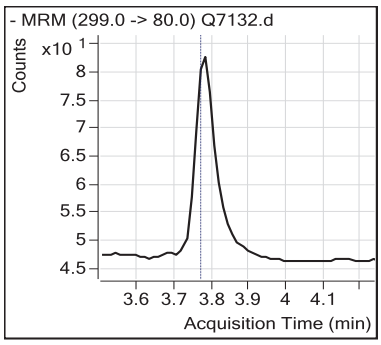


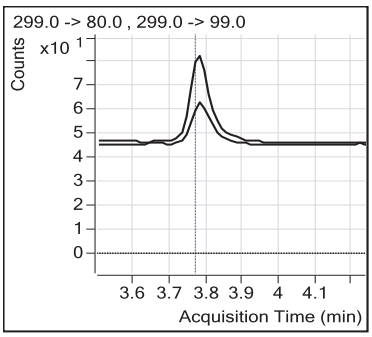


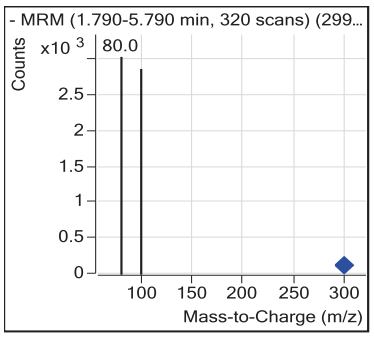


Perfluorinated Compounds by LC/MS/MS.

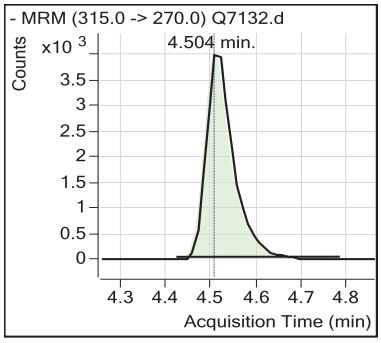
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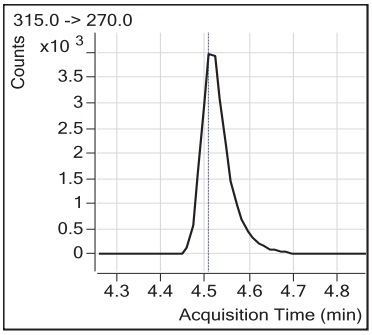


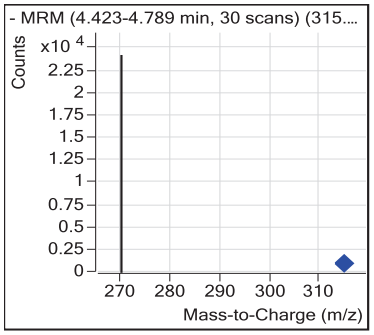




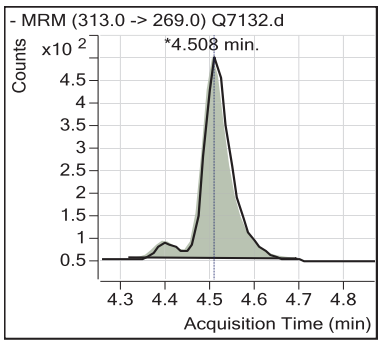
13C2-PFHxA

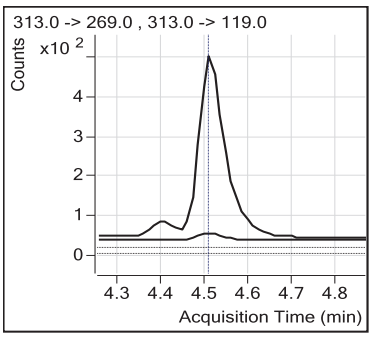


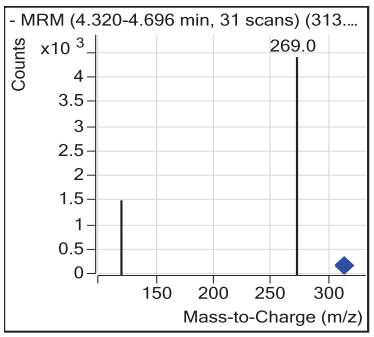




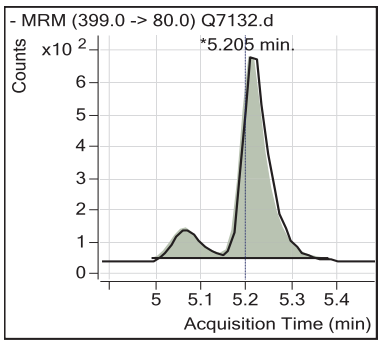
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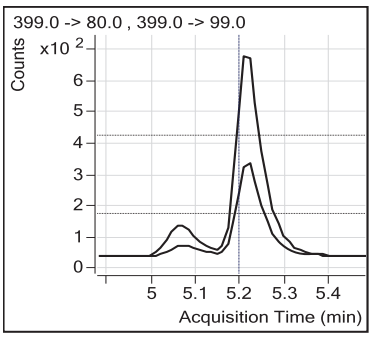


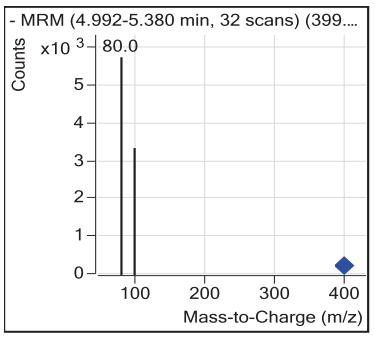




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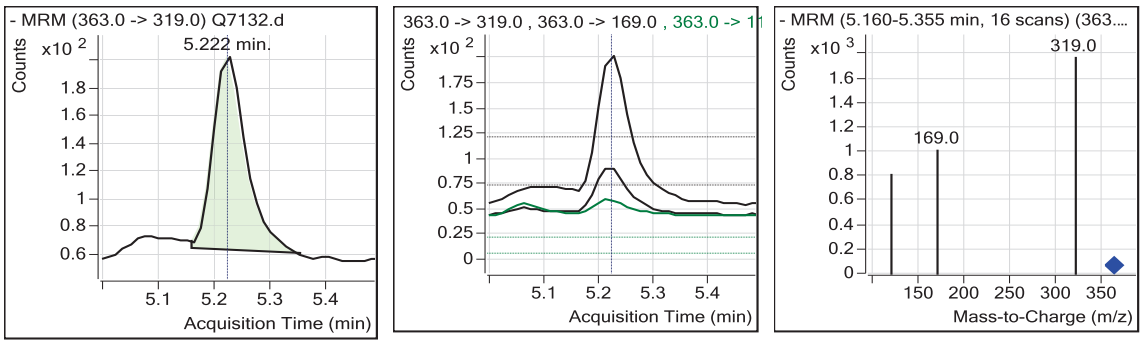




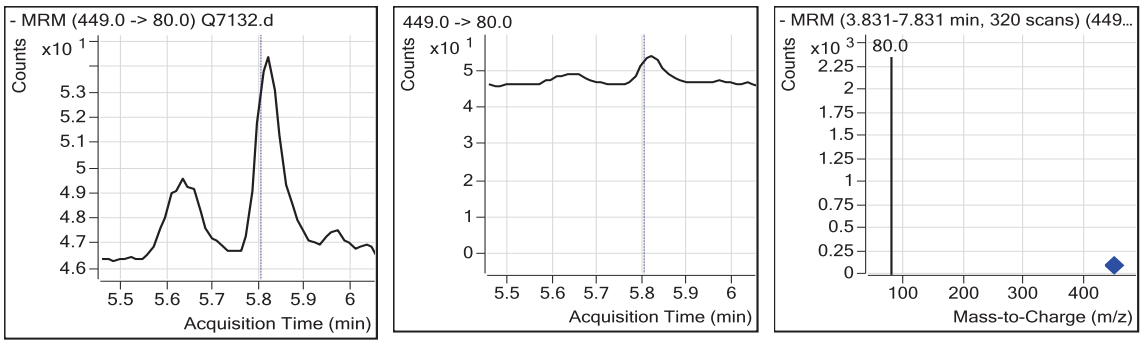


Perfluorinated Compounds by LC/MS/MS.

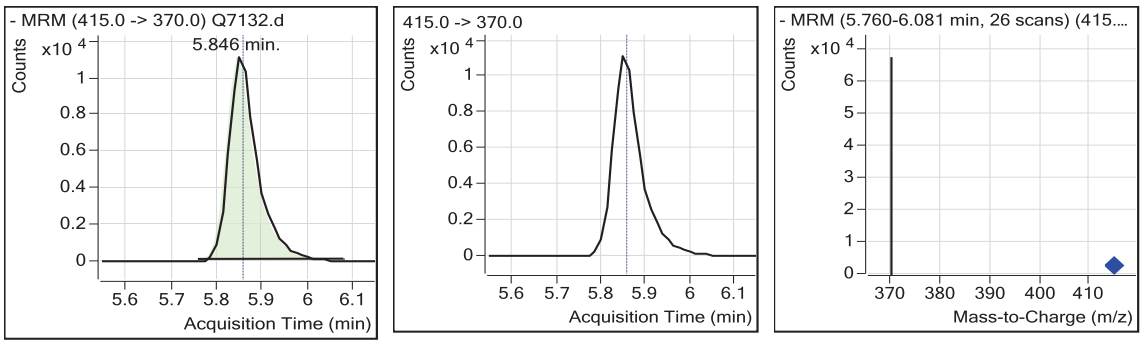
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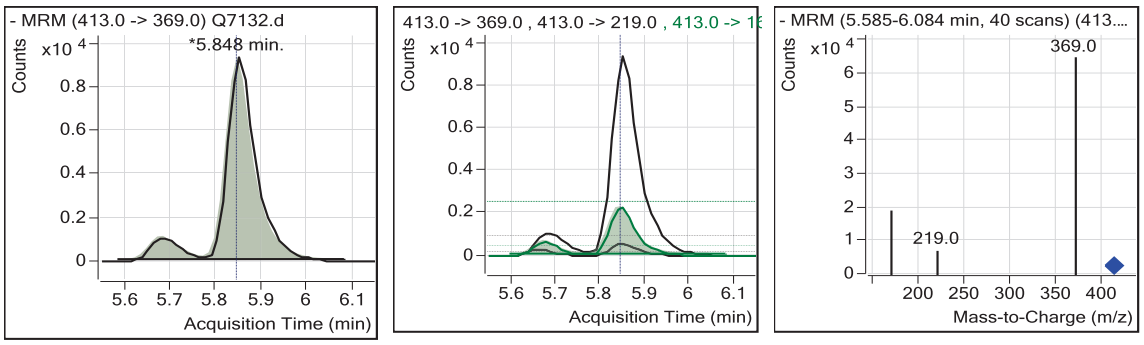
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13C2-PFOA

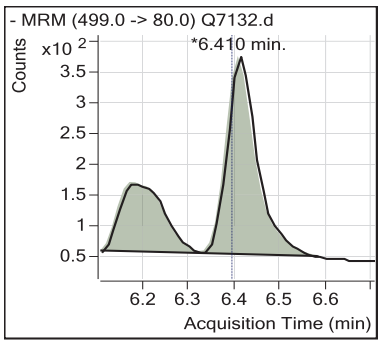


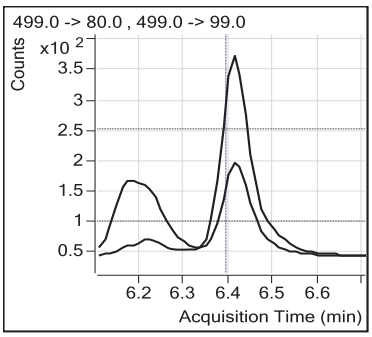
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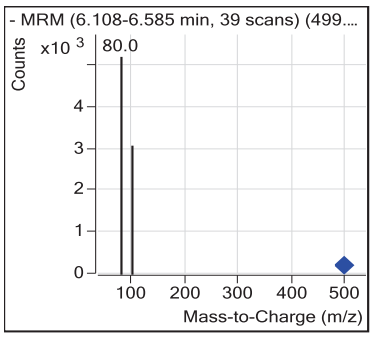


Perfluorinated Compounds by LC/MS/MS.

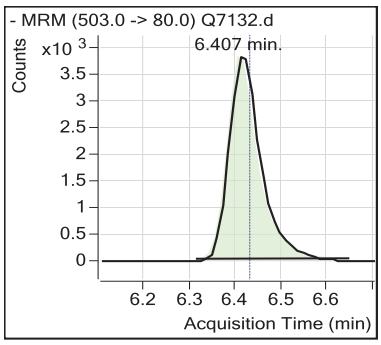
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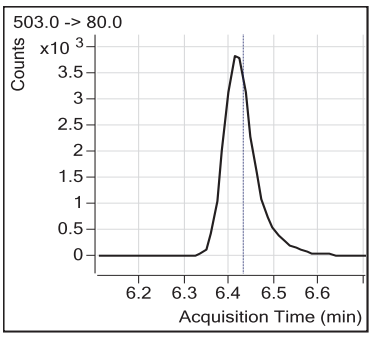


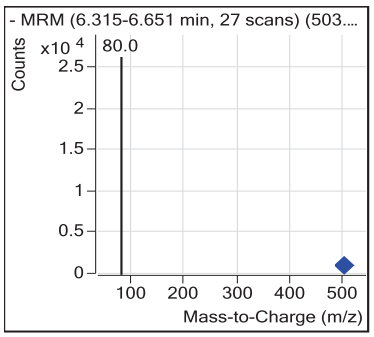




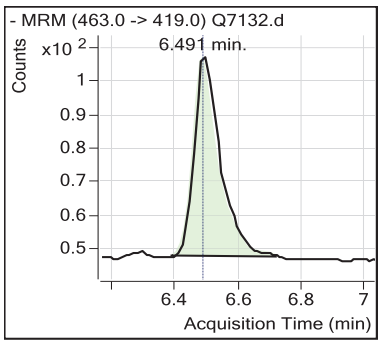
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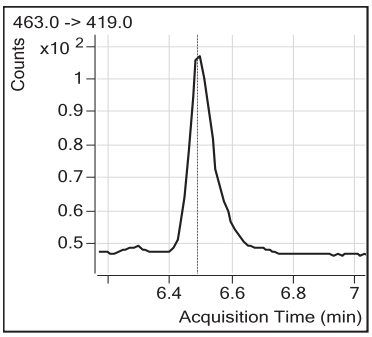


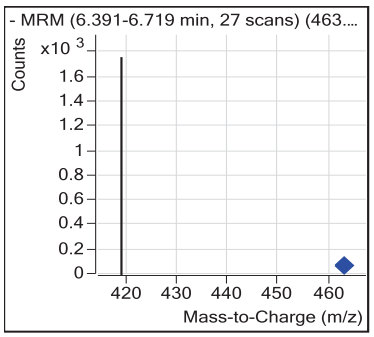




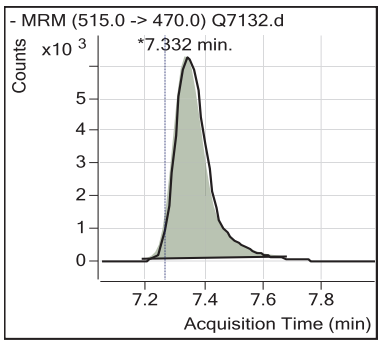
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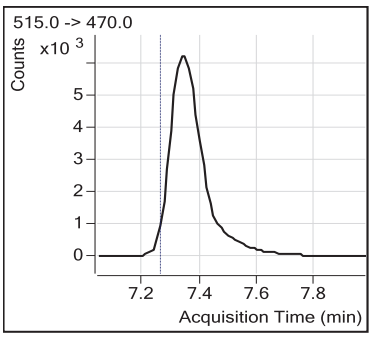


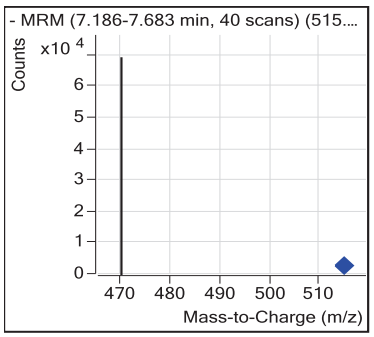




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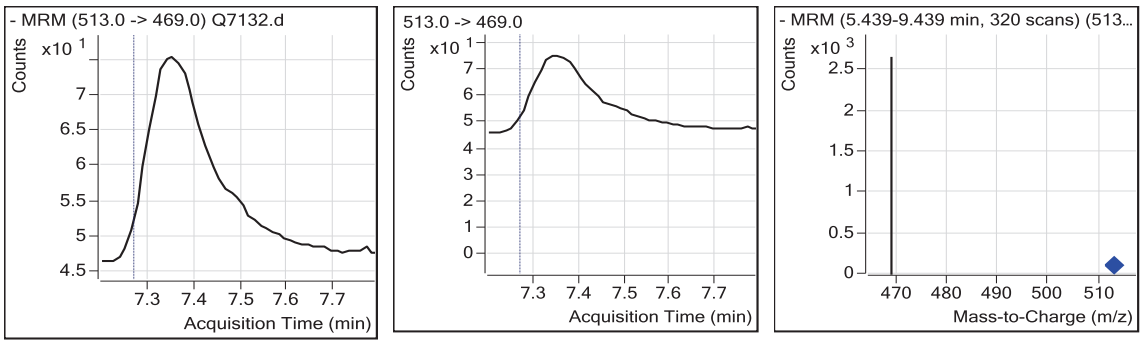




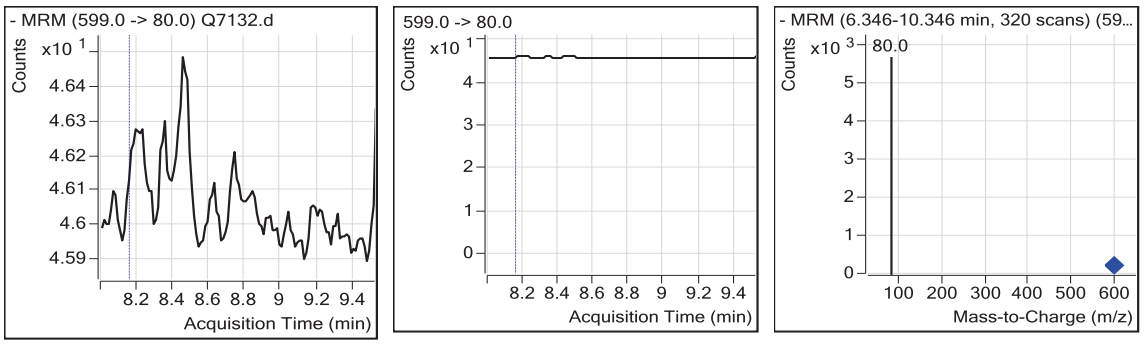


Perfluorinated Compounds by LC/MS/MS.

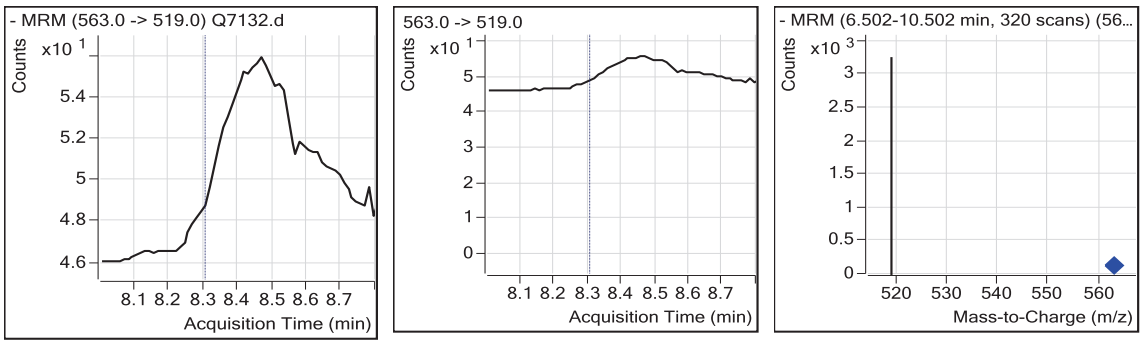
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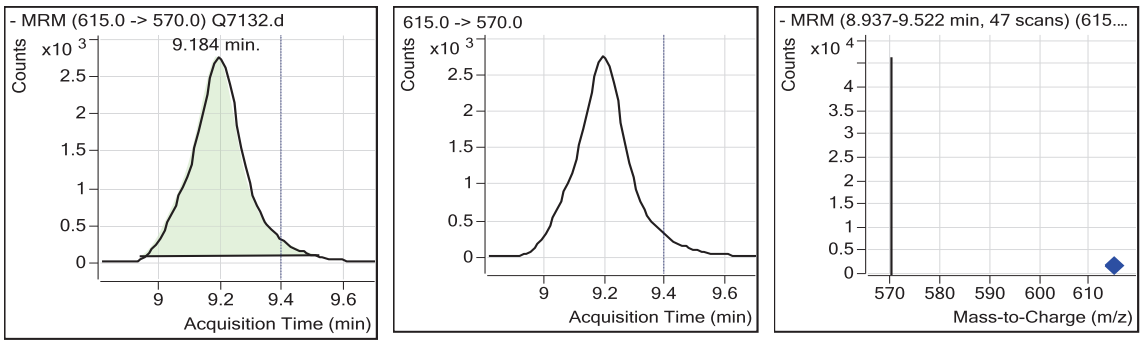
PFDS



PFUnDA



13C2-PFDoDA

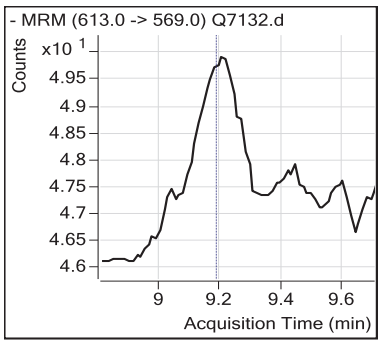


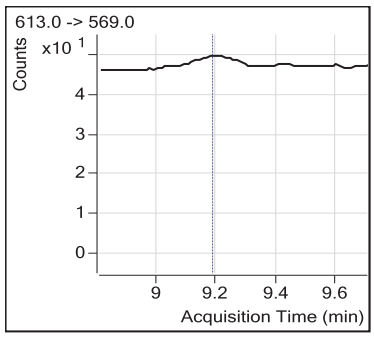
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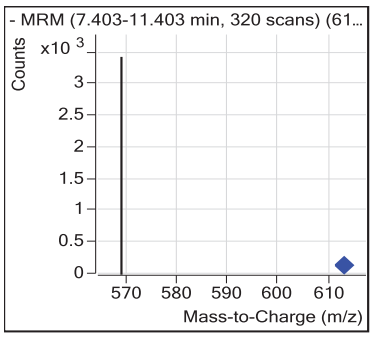
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Perfluorinated Compounds by LC/MS/MS.

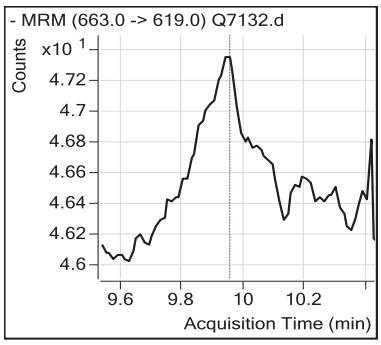
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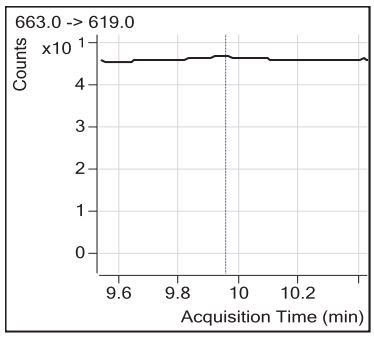


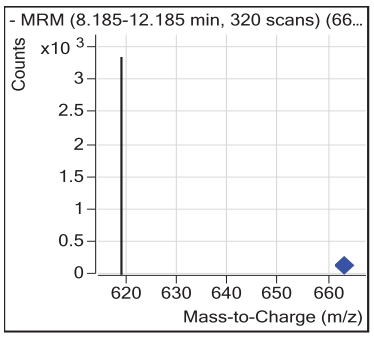




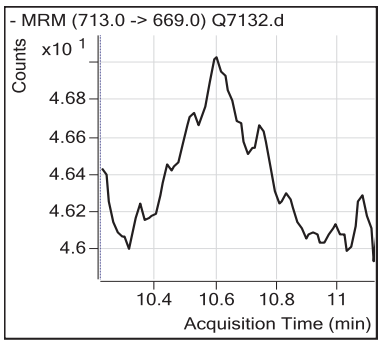
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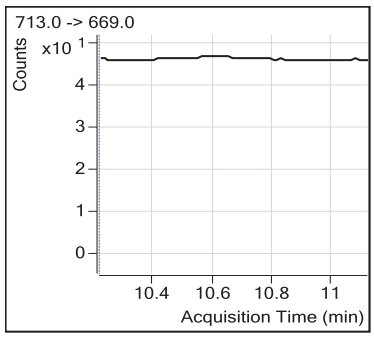


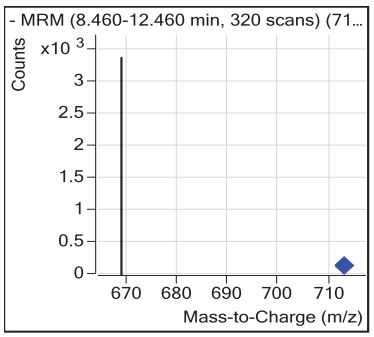




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-13
Lab FileID: Q7132.D
Injection Time: 09/23/14 13:57
Method: EPA 537 MOD
Analyst approved: 09/24/14 14:05 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanoic acid	307-24-4		4.51	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.41	Split peak
13C2-PFDA			7.33	Poor instrument integration

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling 09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

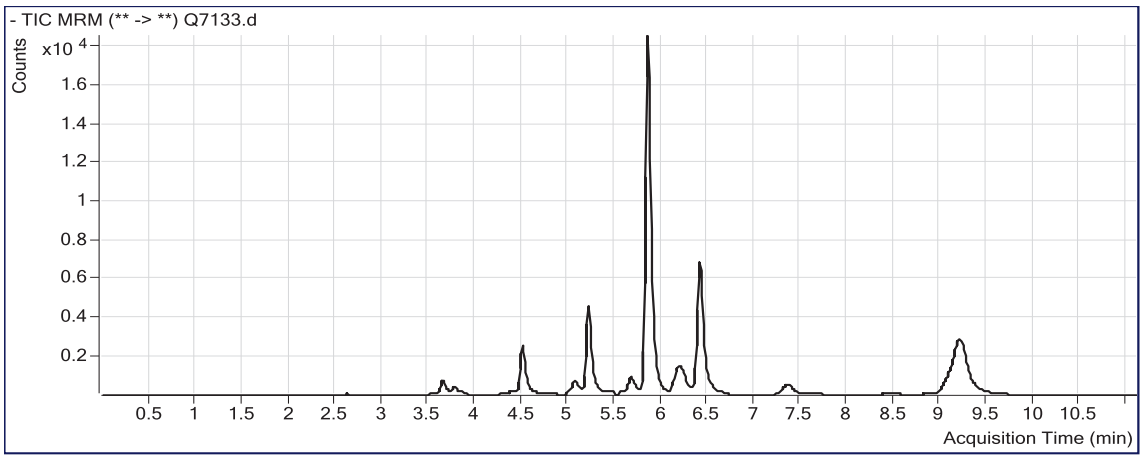
Data File	:	Q7133.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 14:17
Sample Name	:	FA18133-14
Vial	:	Vial 9
Sample Info	:	OP53158,SQ241,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	51458	20.000	µg/L		-0.013
13C4-PFOS	6.407	503.0 -> 80.0	18858	20.000	µg/L		-0.025
13C2-PFDoDA	9.197	615.0 -> 570.0	32597	20.000	µg/L		-0.200
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	1803	2.37	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 11.83%				
13C2-PFDA	7.345	515.0 -> 470.0	4278	2.16	µg/L		-0.088
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 10.82%				
Target Compounds							**Qvalue**
PFPeA	3.661	263.0 -> 219.0	2509	8.576	µg/L		100
PFBS	3.778	299.0 -> 80.0	792	2.653	µg/L		99
PFHxA	4.508	313.0 -> 269.0	8545	9.868	µg/L	m	100
PFHxS	5.205	399.0 -> 80.0	11225	24.000	µg/L	m	89
PFHpA	5.222	363.0 -> 319.0	3138	3.504	µg/L		99
PFHpS	5.818	449.0 -> 80.0	545	0.976	µg/L	m	100
PFOA	5.848	413.0 -> 369.0	24654	8.957	µg/L	m	76
PFOS	6.410	499.0 -> 80.0	15034	15.455	µg/L	m	99
PFNA	6.478	463.0 -> 419.0	393	0.320	µg/L		100

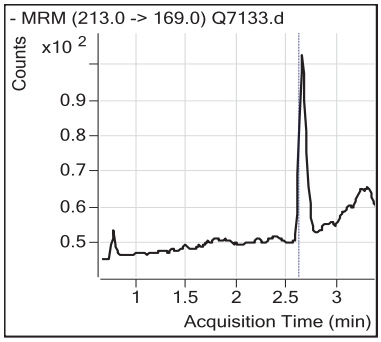
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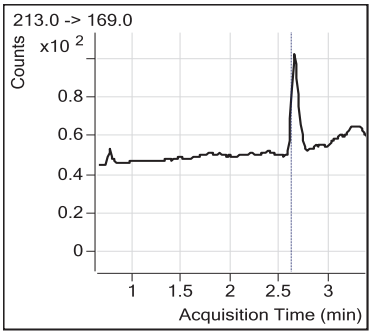
Perfluorinated Compounds by LC/MS/MS.

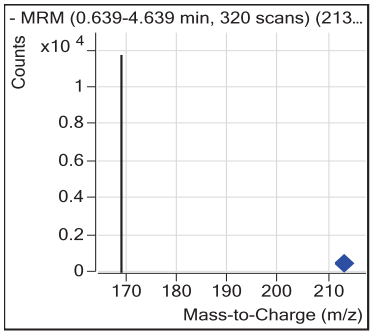
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Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 14:17
Sample Name	:	FA18133-14
Vial	:	Vial 9
Sample Info	:	OP53158,SQ241,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



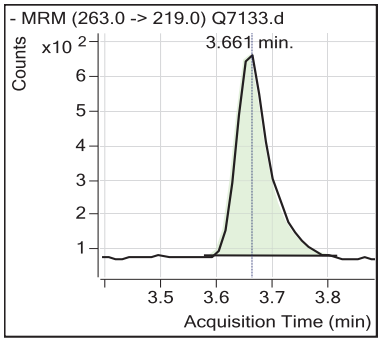
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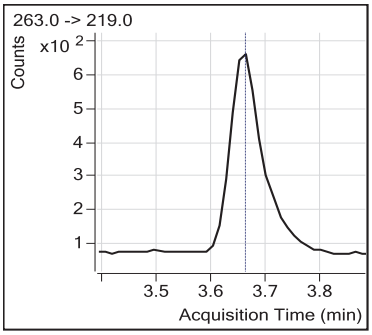


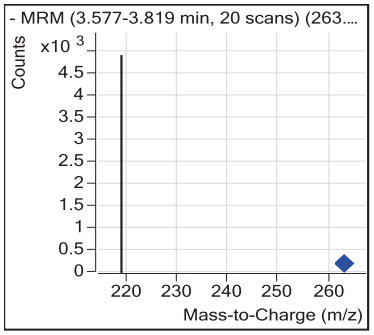




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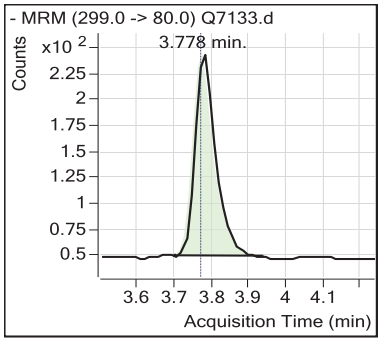


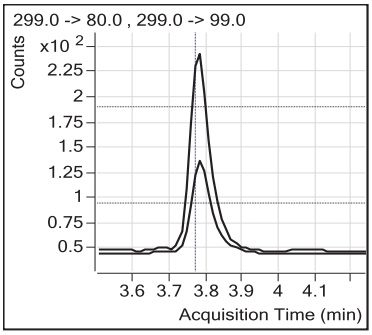


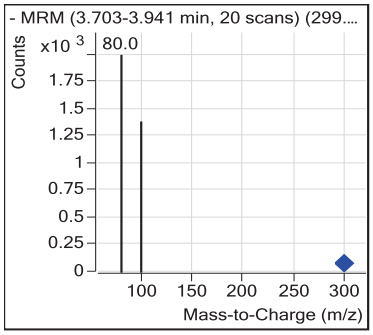


Perfluorinated Compounds by LC/MS/MS.

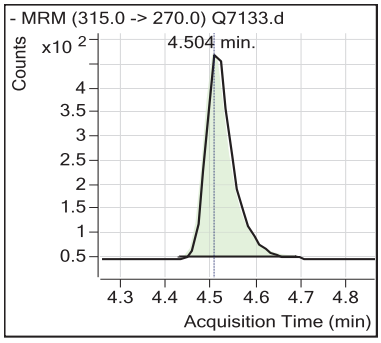
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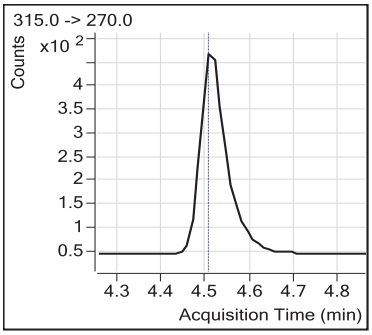


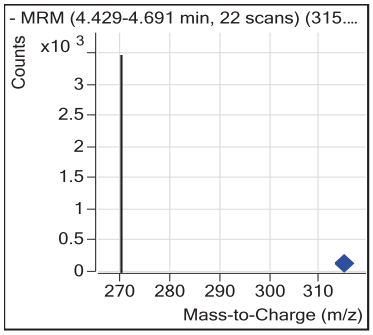




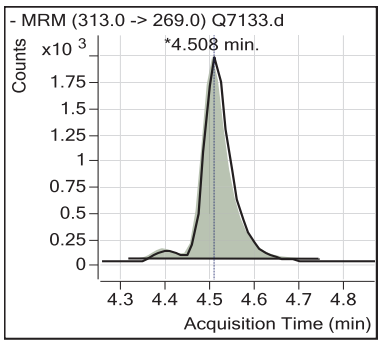
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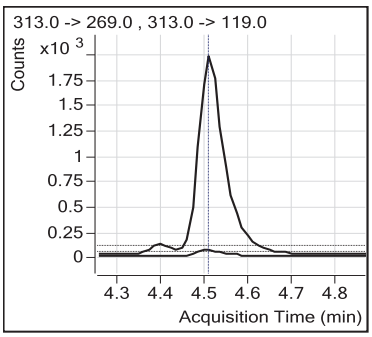


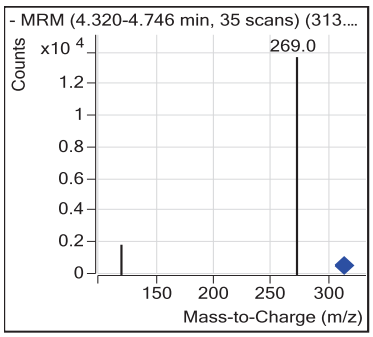




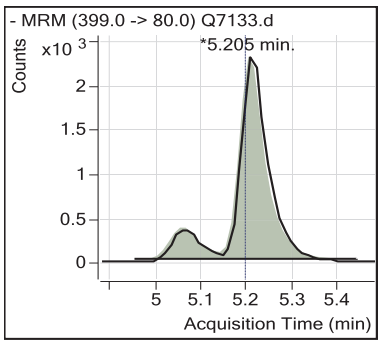
PFHxA

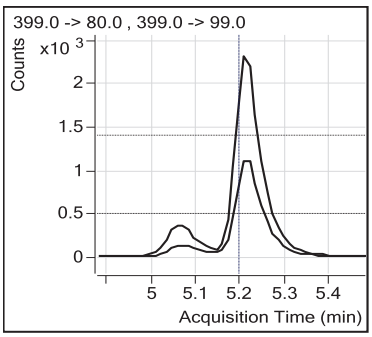


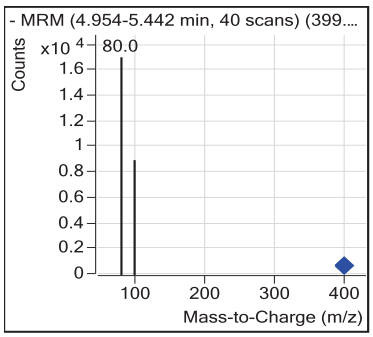




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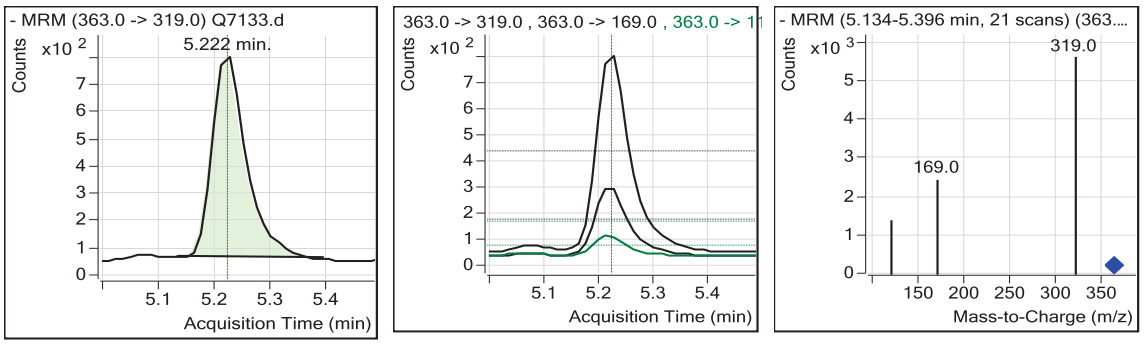




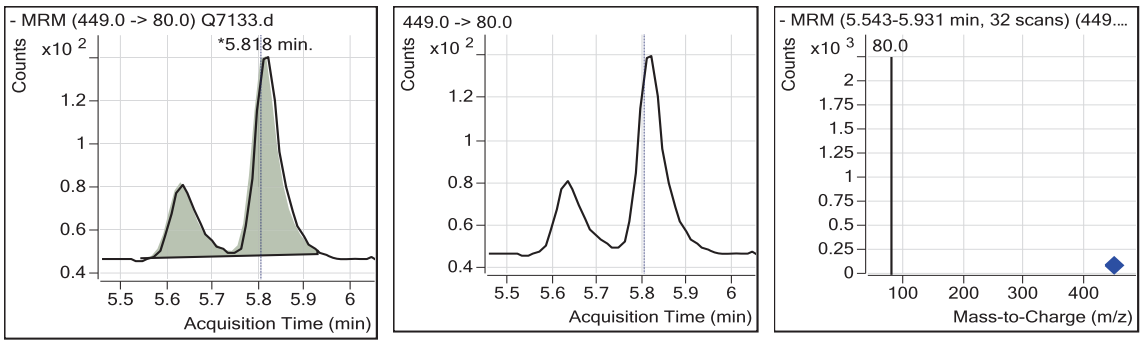


Perfluorinated Compounds by LC/MS/MS.

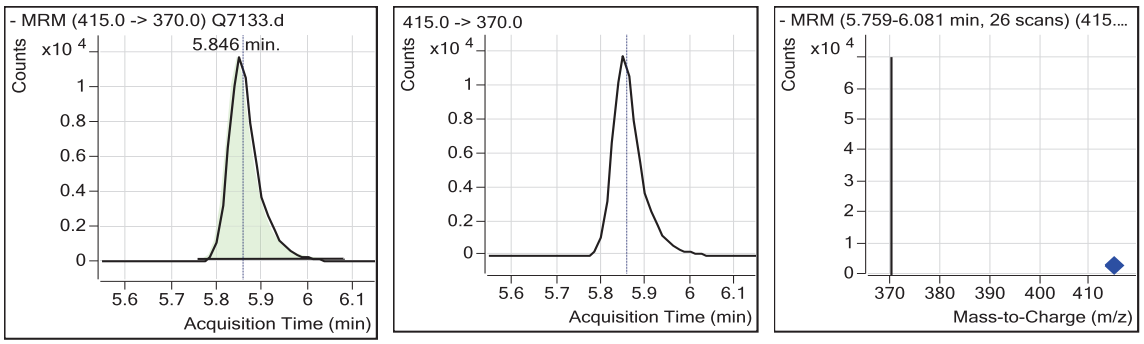
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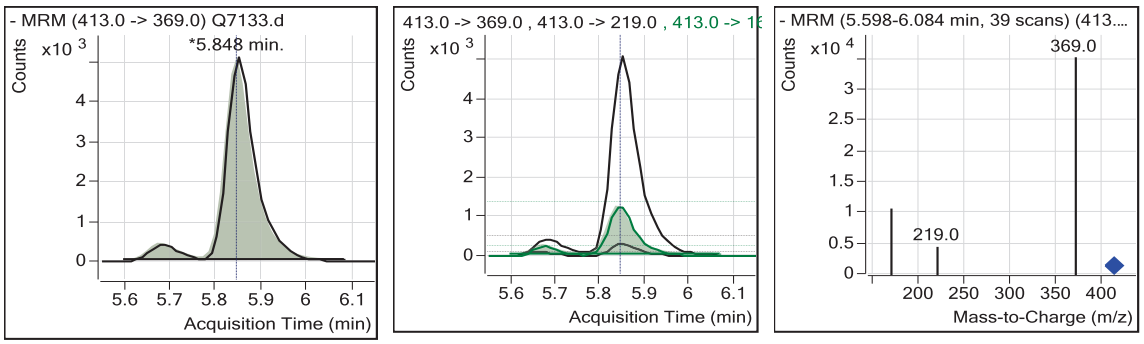
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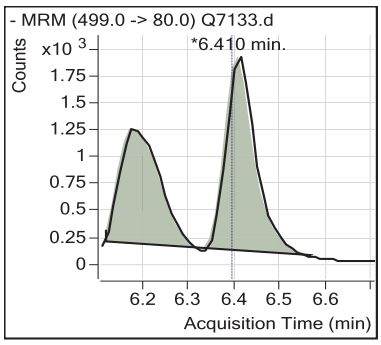


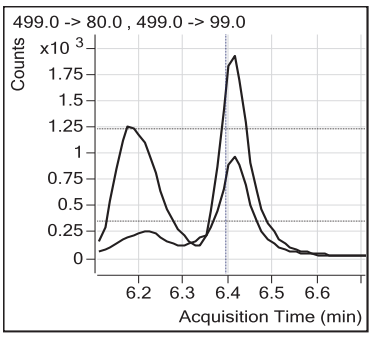
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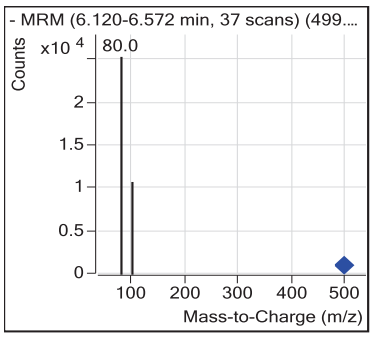


Perfluorinated Compounds by LC/MS/MS.

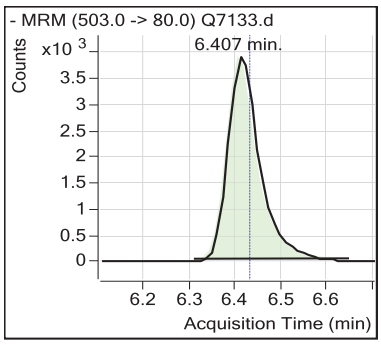
PFOS

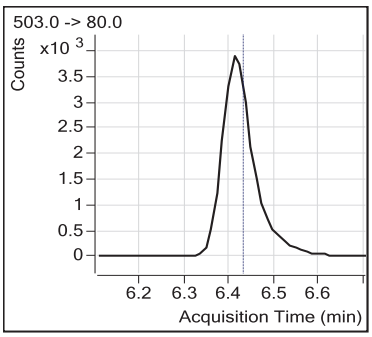


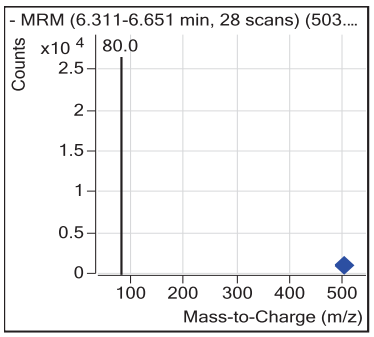




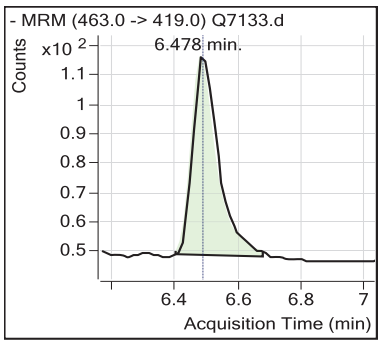
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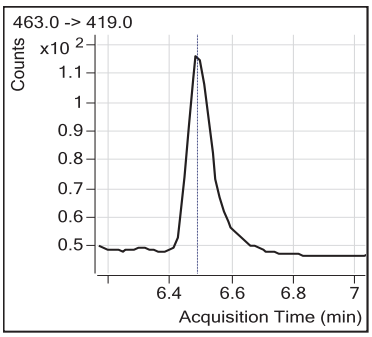


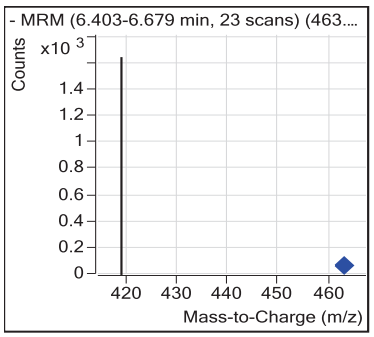




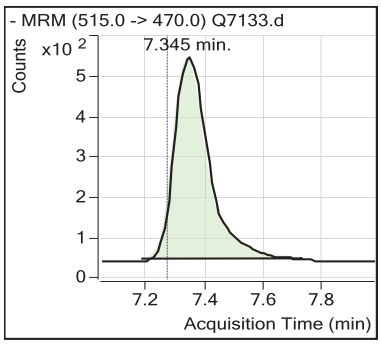
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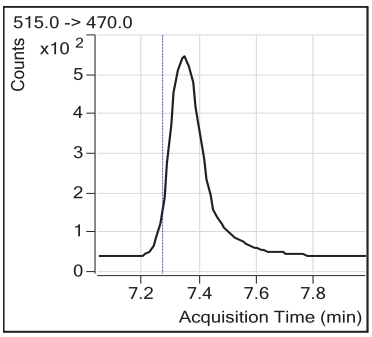


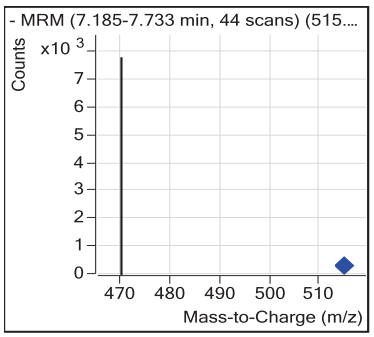




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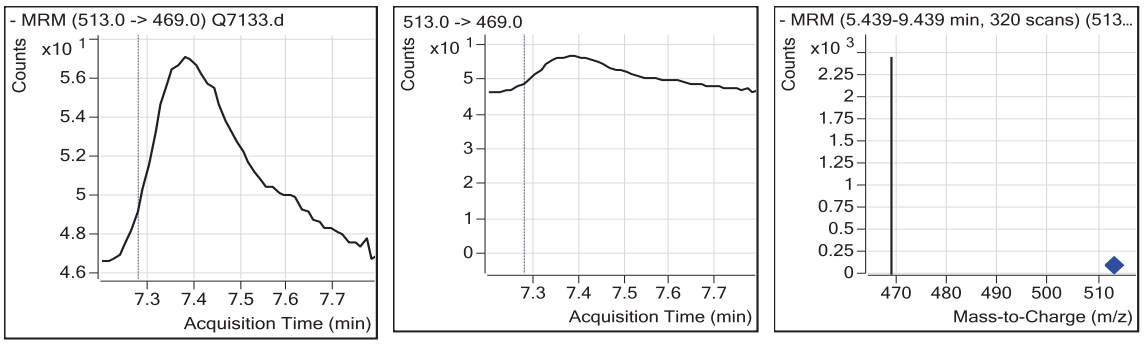




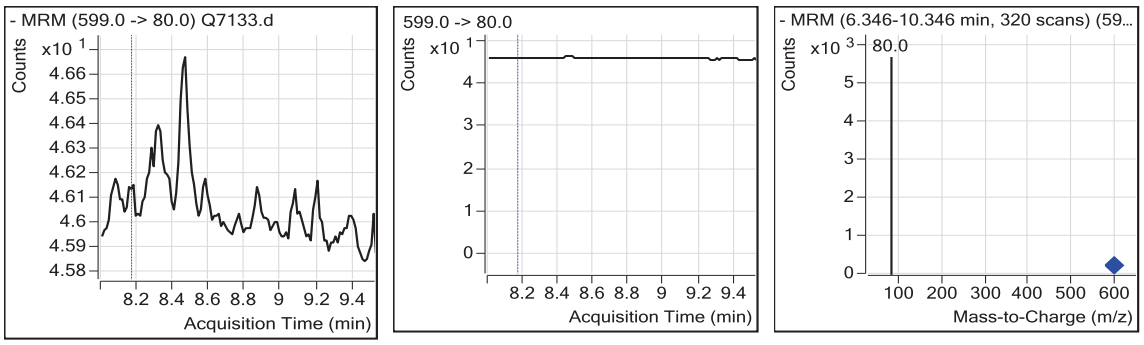


Perfluorinated Compounds by LC/MS/MS.

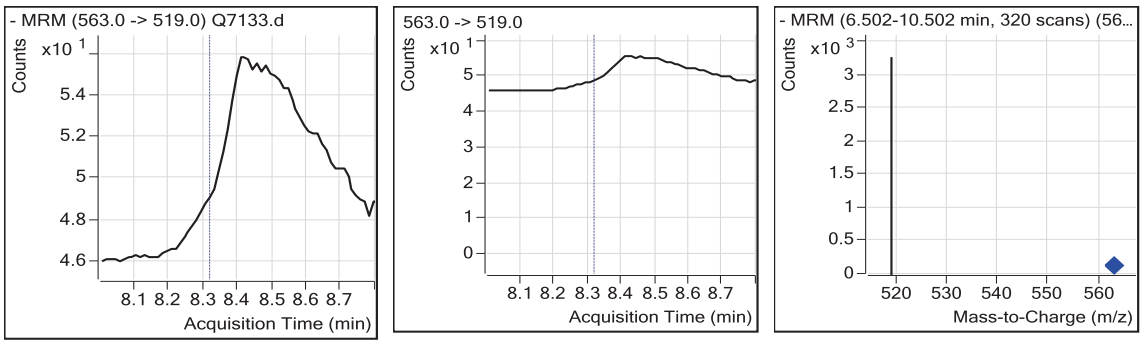
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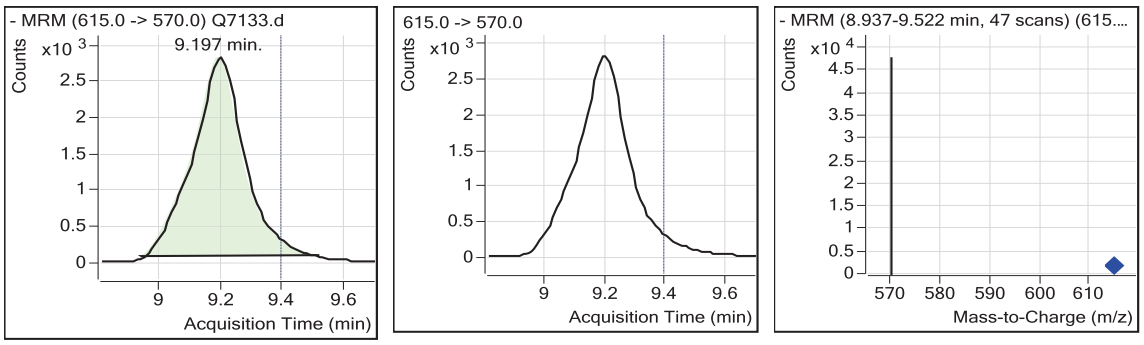
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PFUnDA

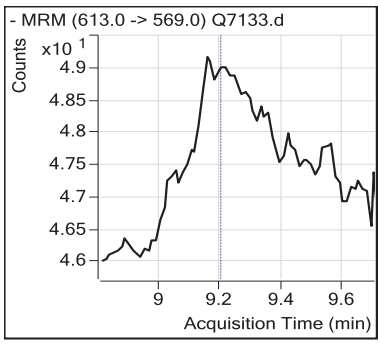


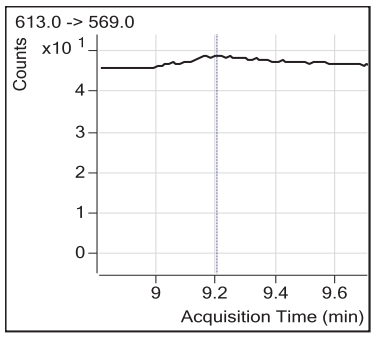
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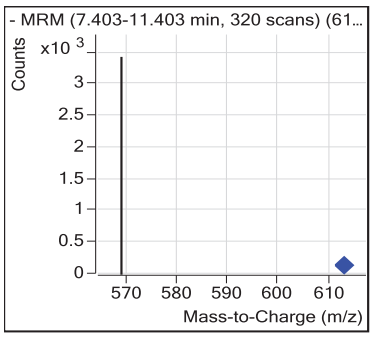


Perfluorinated Compounds by LC/MS/MS.

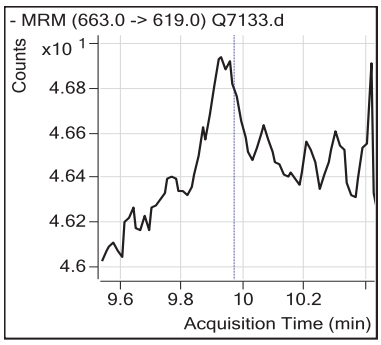
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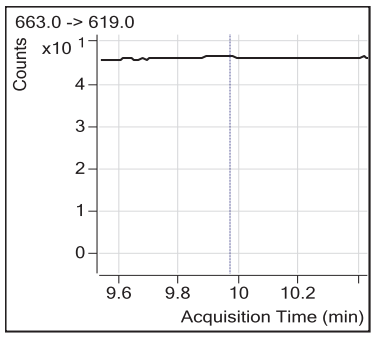


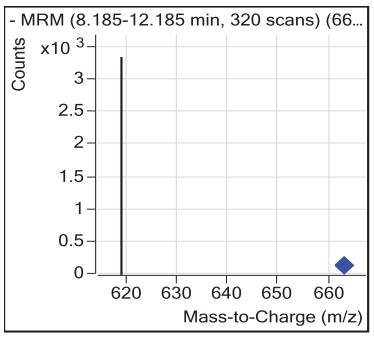




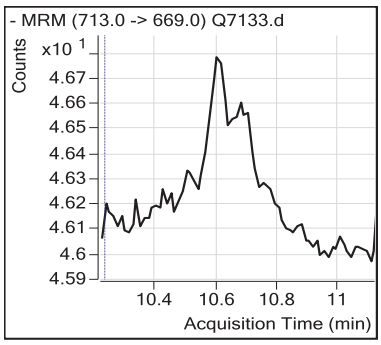
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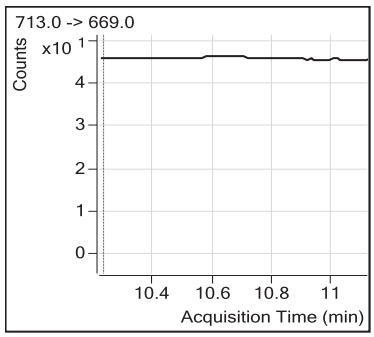


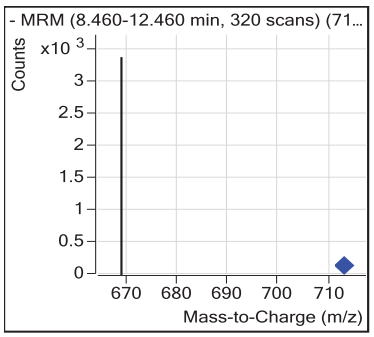




PFTeDA







Manual Integration Approval Summary

Sample Number: FA18133-14
Lab FileID: Q7133.D
Injection Time: 09/23/14 14:17
Method: EPA 537 MOD
Analyst approved: 09/24/14 14:07 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanoic acid	307-24-4		4.51	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluoroheptanesulfonic acid			5.82	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.41	Split peak

Perfluorinated Compounds by LC/MS/MS.

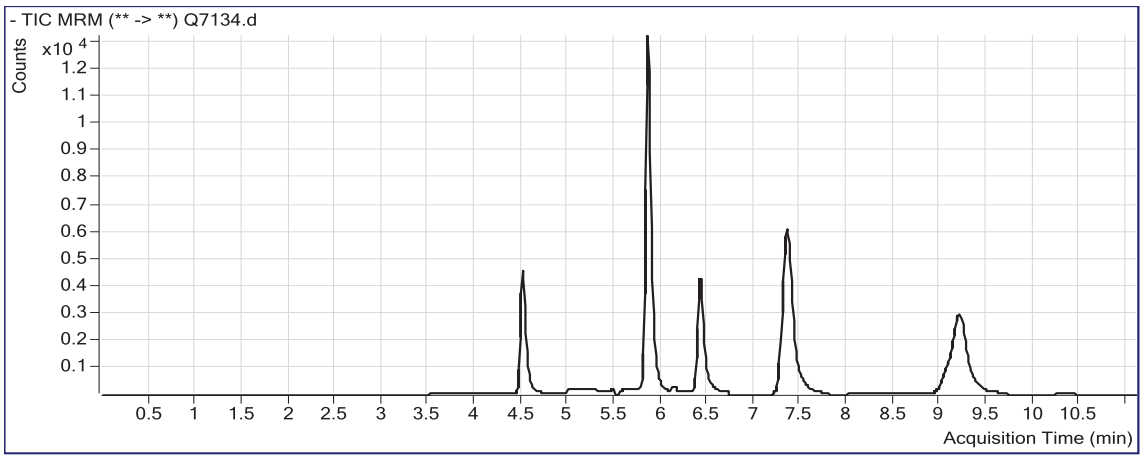
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Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 14:41
Sample Name	:	FA18133-15
Vial	:	Vial 10
Sample Info	:	OP53158,SQ241,120,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	55636	20.000	µg/L	-0.013
13C4-PFOS	6.407	503.0 -> 80.0	20356	20.000	µg/L	-0.025
13C2-PFDoDA	9.184	615.0 -> 570.0	33750	20.000	µg/L	-0.213
System Monitoring Compounds						
13C2-PFHxA	4.504	315.0 -> 270.0	18742	22.74	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 113.68%			
13C2-PFDA	7.332	515.0 -> 470.0	48908	23.89	µg/L	-0.100
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 119.47%			
Target Compounds						**Qvalue**
PFOA	5.836	413.0 -> 369.0	955	0.313	µg/L	82
PFNA	6.491	463.0 -> 419.0	333	0.251	µg/L	100
PFDA	7.351	513.0 -> 469.0	382	0.200	µg/L	100

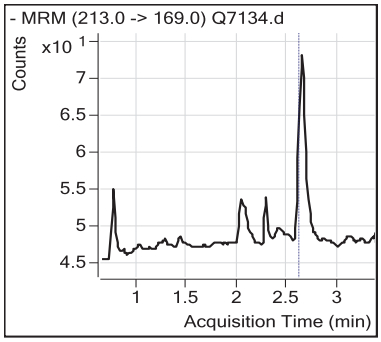
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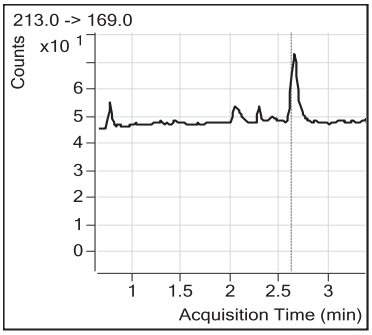
Perfluorinated Compounds by LC/MS/MS.

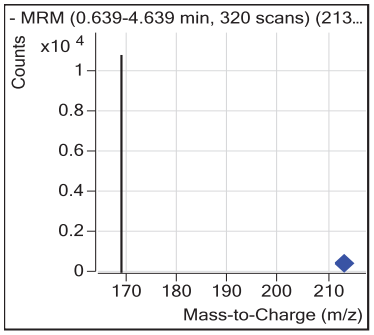
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Operator	:	mikee
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Vial	:	Vial 10
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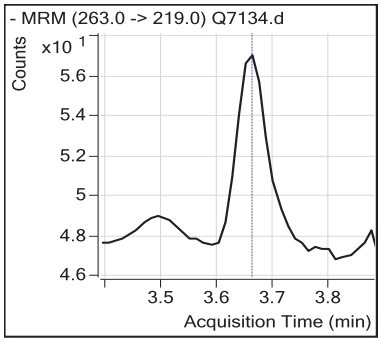
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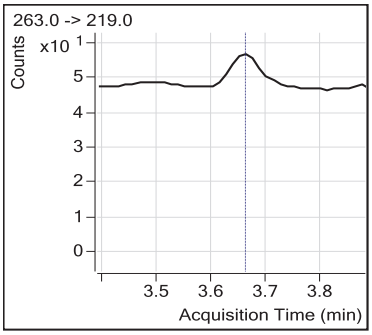


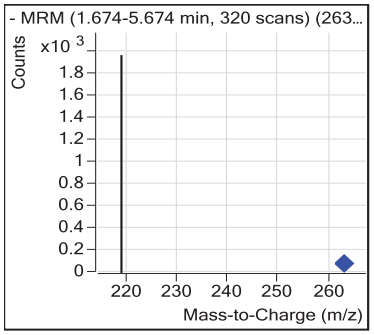




PFPeA

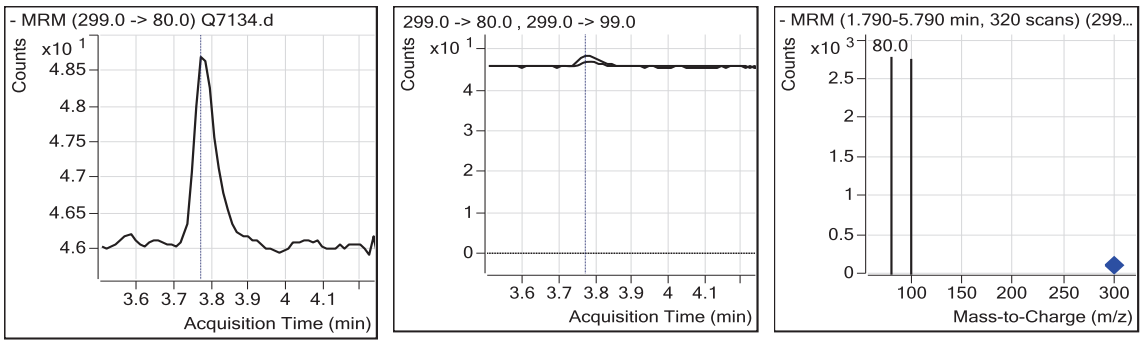




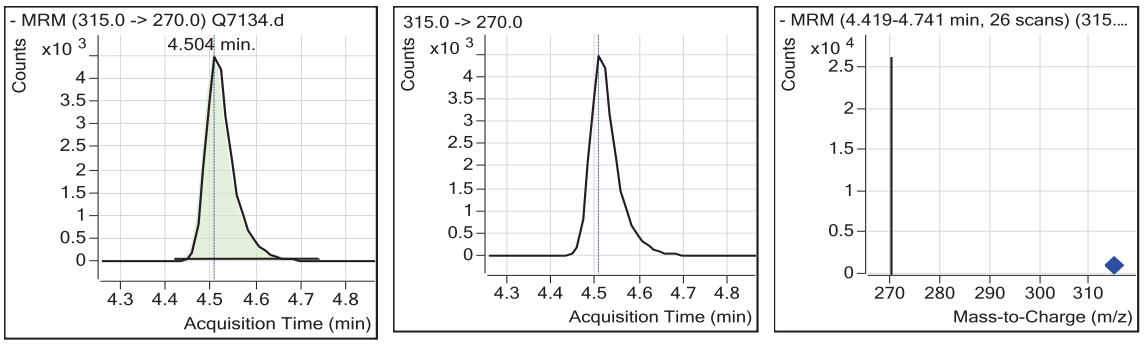


Perfluorinated Compounds by LC/MS/MS.

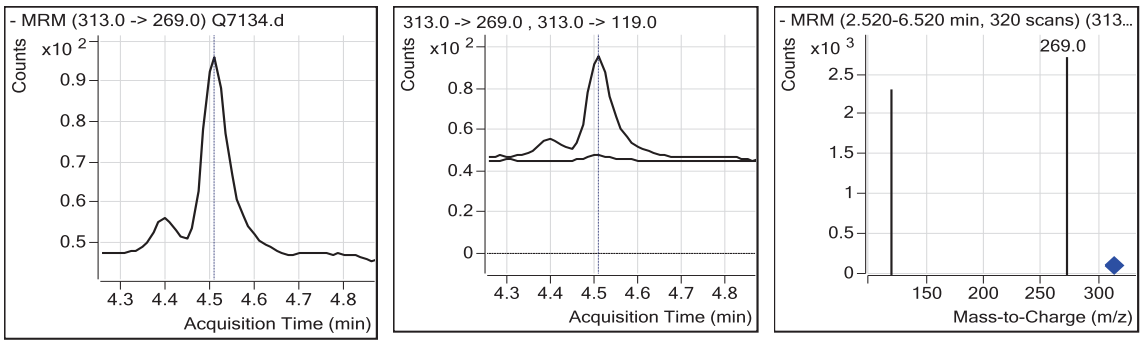
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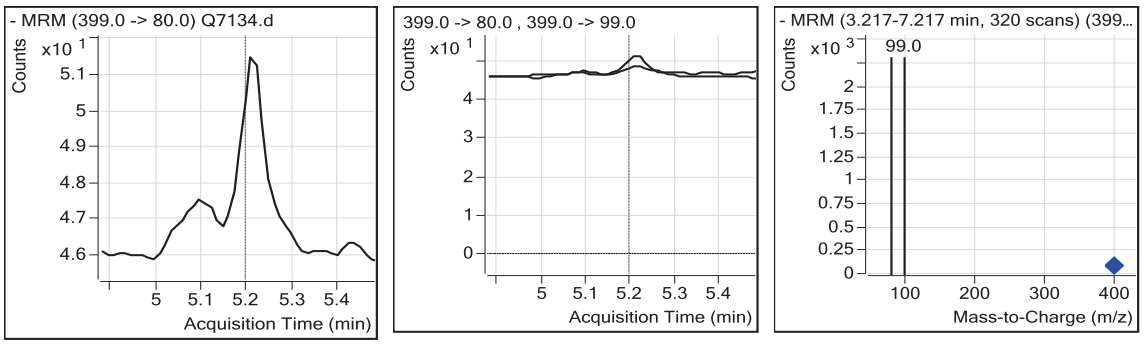
13C2-PFHxA



PFHxA

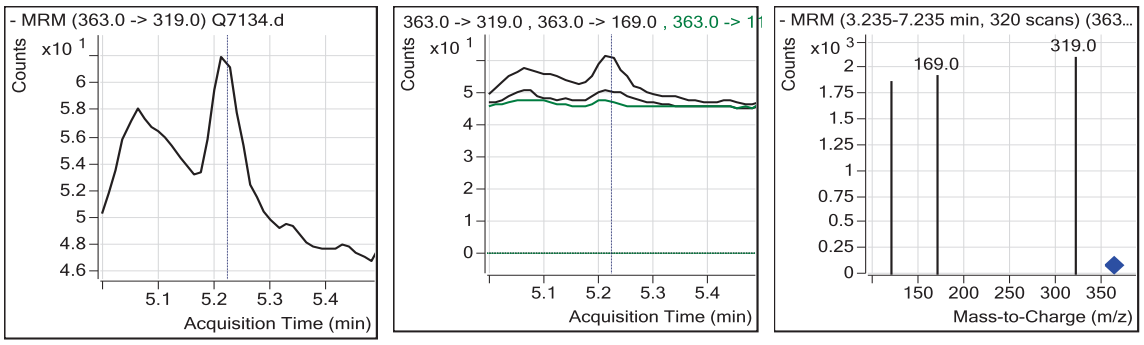


PFHxS

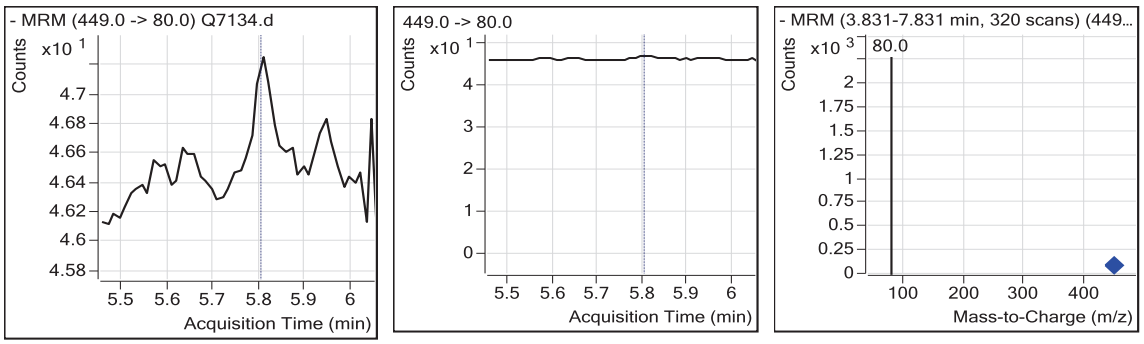


Perfluorinated Compounds by LC/MS/MS.

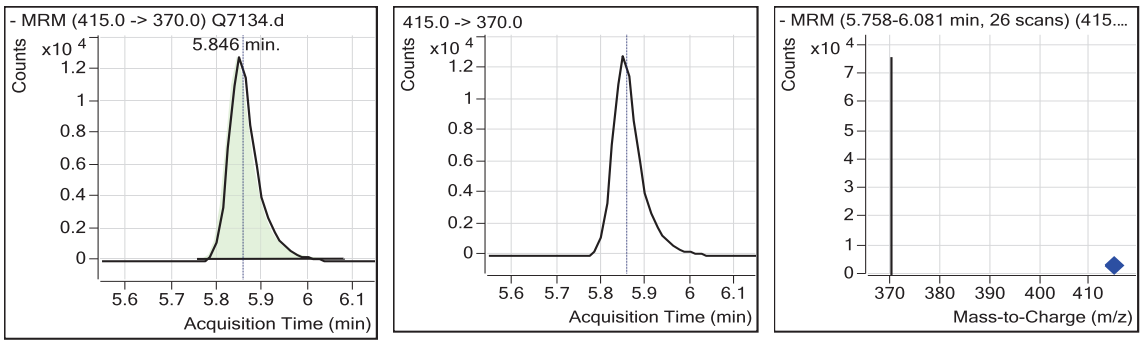
PFHpA



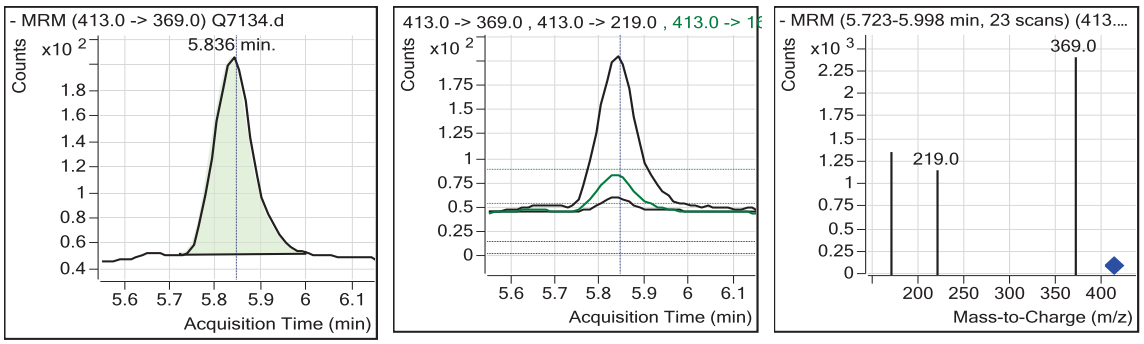
PFHpS



13C2-PFOA



PFOA

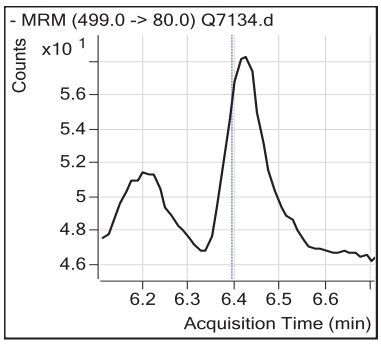


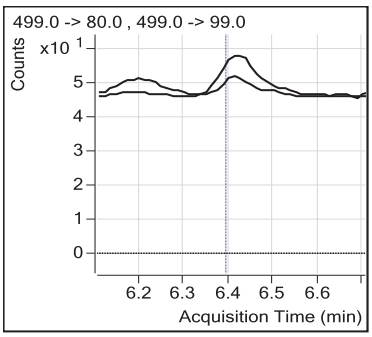
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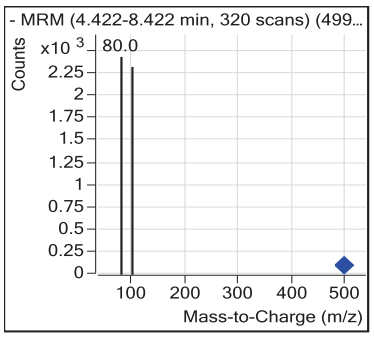
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Perfluorinated Compounds by LC/MS/MS.

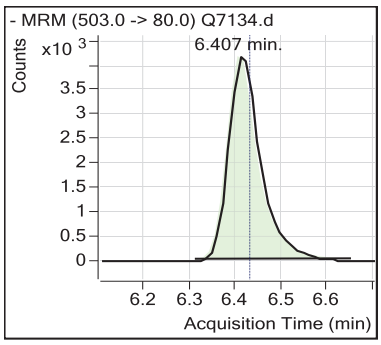
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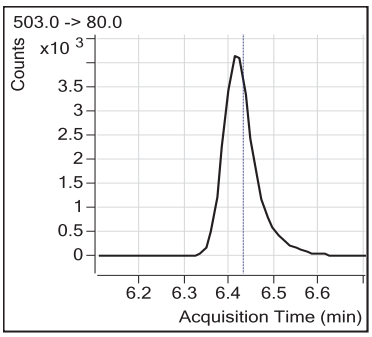


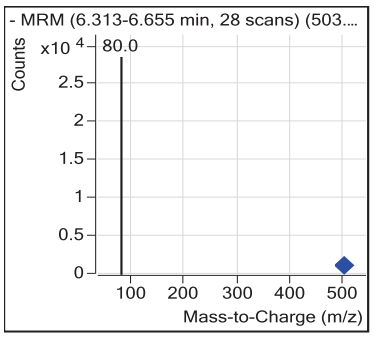




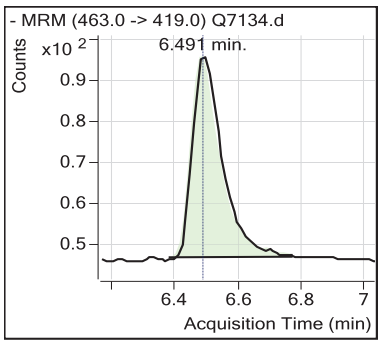
13C4-PFOS

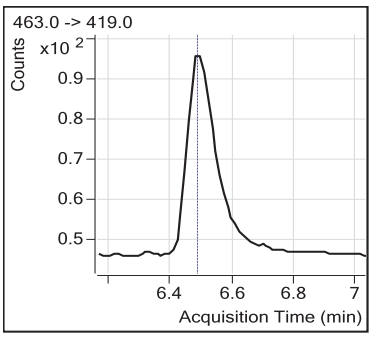


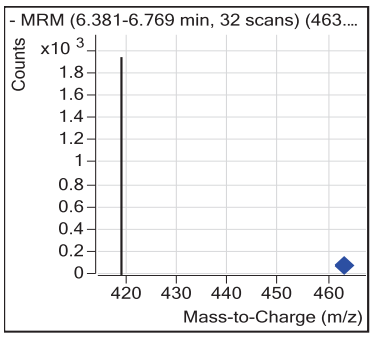




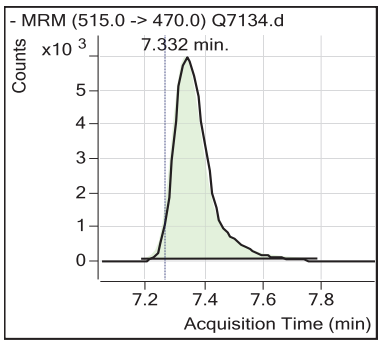
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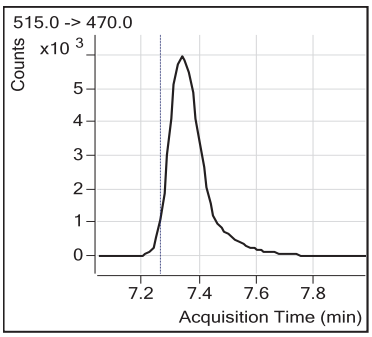


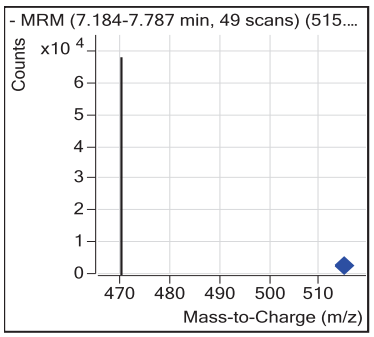




13C2-PFDA

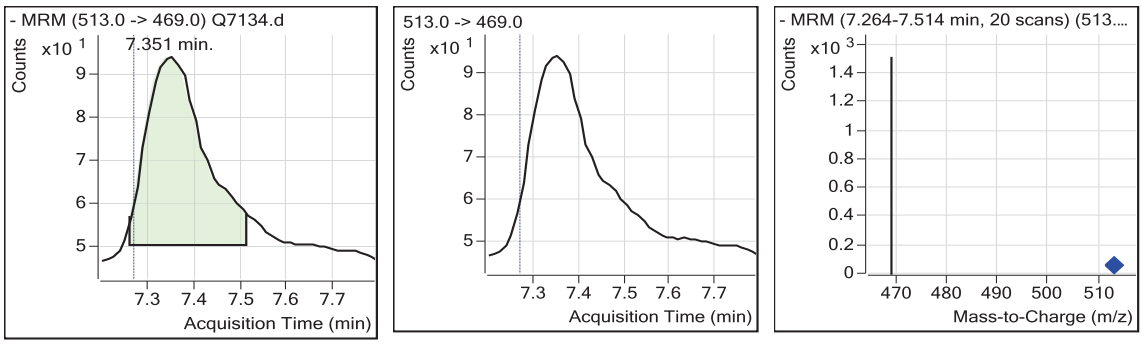




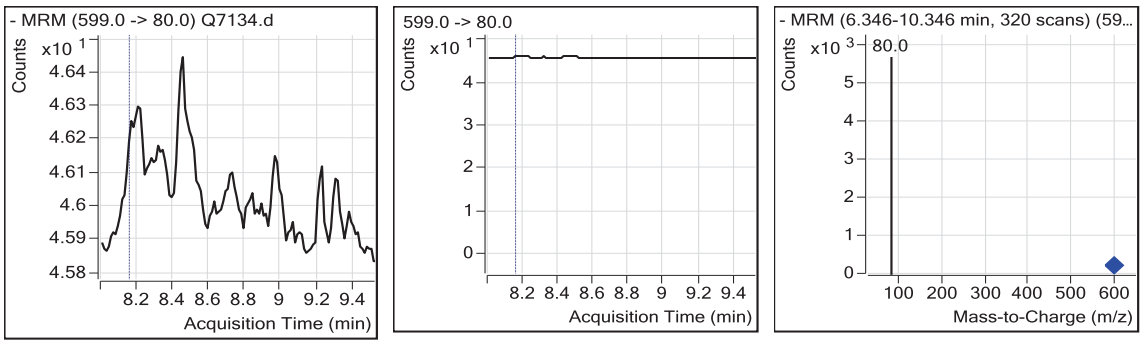


Perfluorinated Compounds by LC/MS/MS.

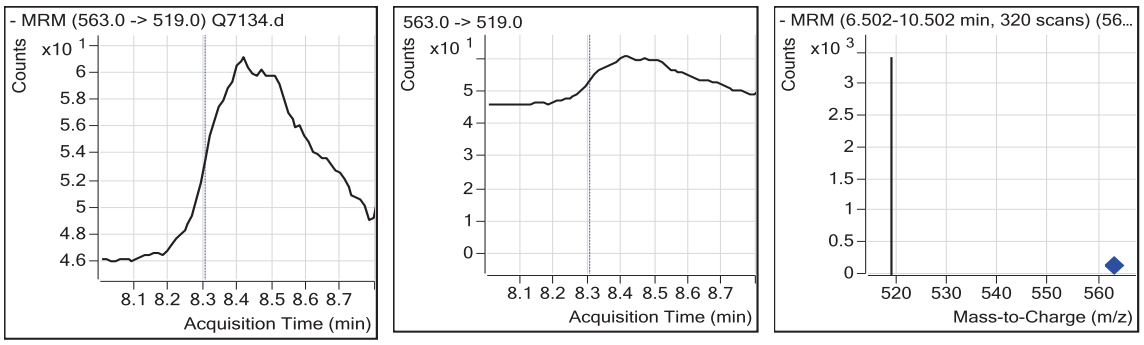
PFDA



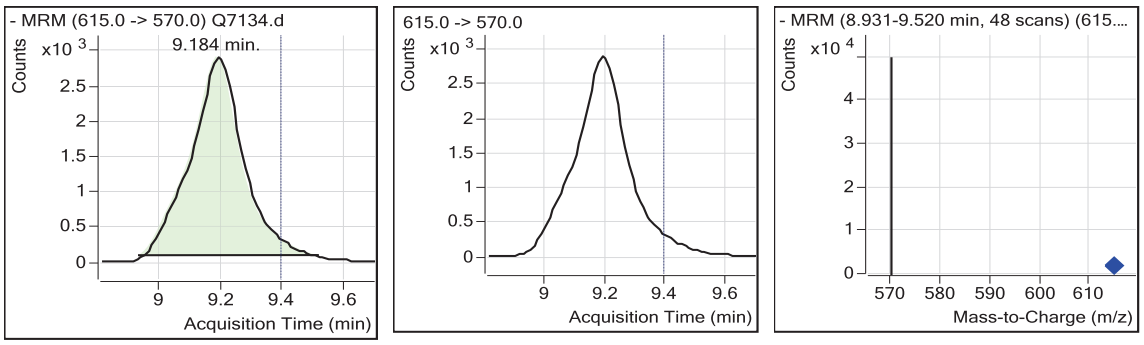
PFDS



PFUnDA

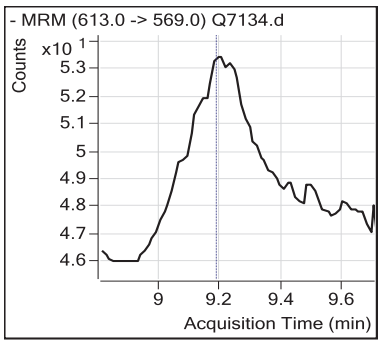


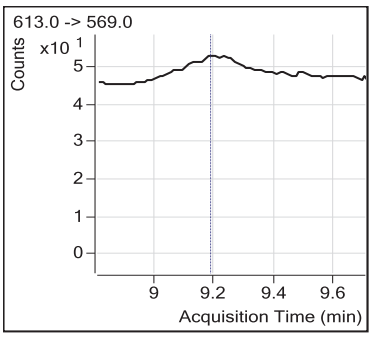
13C2-PFDoDA

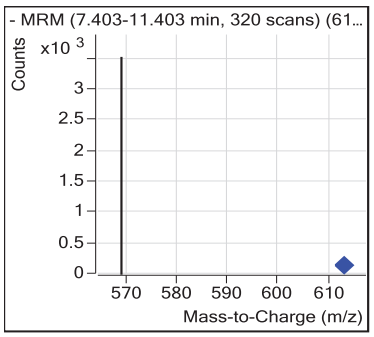


Perfluorinated Compounds by LC/MS/MS.

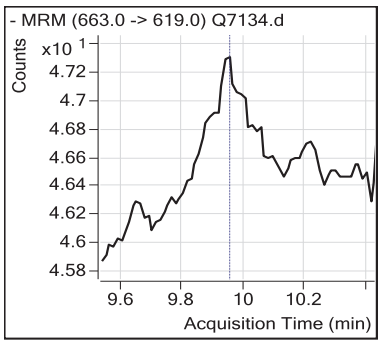
PFDoDA

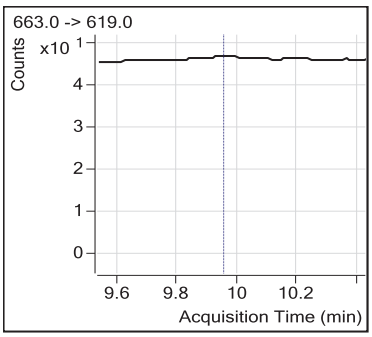


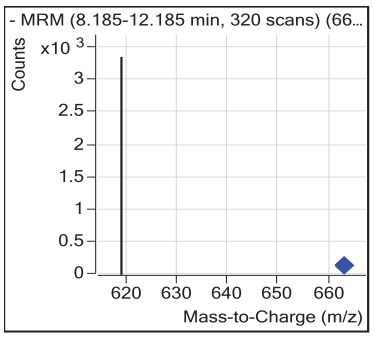




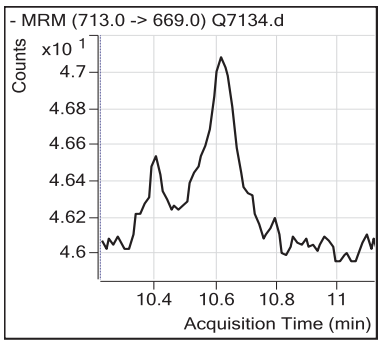
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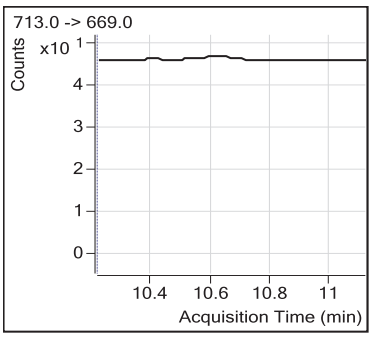


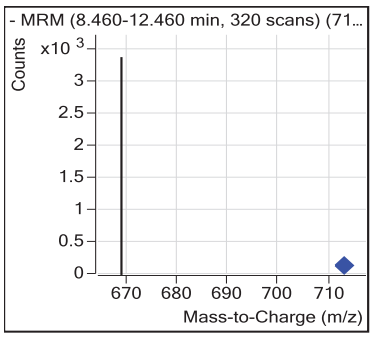




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

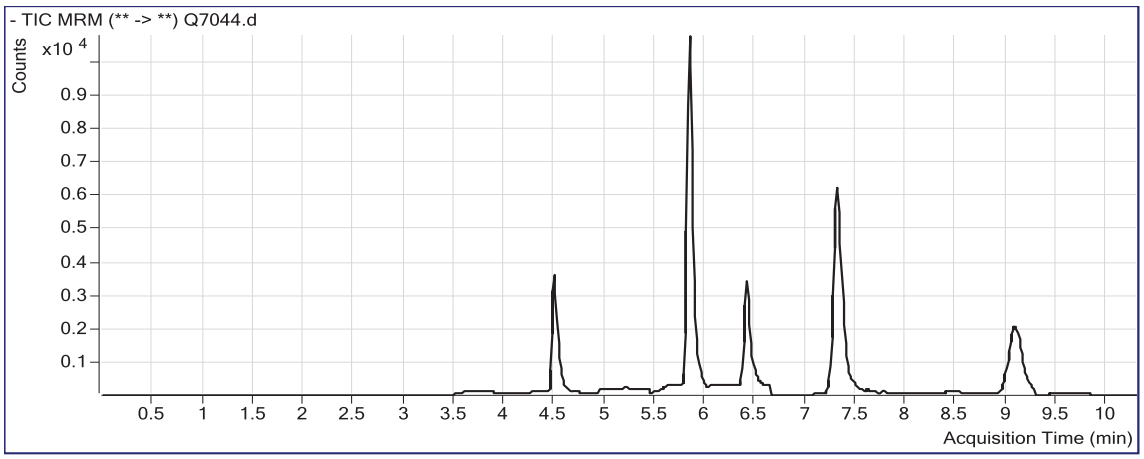
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Operator	:	mikee
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Acquisition date	:	2014-09-18 15:09
Sample Name	:	op53121-mb
Vial	:	Vial 7
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.833	415.0 -> 370.0	41906	20.000	µg/L	0.013
13C4-PFOS	6.394	503.0 -> 80.0	14000	20.000	µg/L	0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	18891	20.000	µg/L	0.567
System Monitoring Compounds						
13C2-PFHxA	4.491	315.0 -> 270.0	13967	22.49	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 112.47%			
13C2-PFDA	7.295	515.0 -> 470.0	39570	34.54	µg/L	0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 172.69%			
Target Compounds						**Qvalue**
PFOA	5.836	413.0 -> 369.0	1930	0.841	µg/L	80
PFNA	6.462	463.0 -> 419.0	613	0.614	µg/L	100
PFDA	7.301	513.0 -> 469.0	538	0.504	µg/L	100

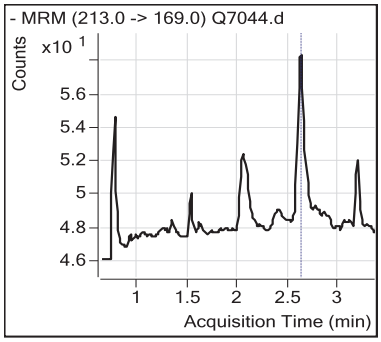
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

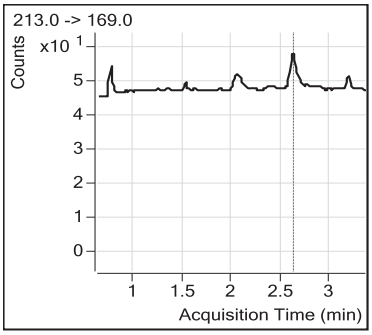
Perfluorinated Compounds by LC/MS/MS.

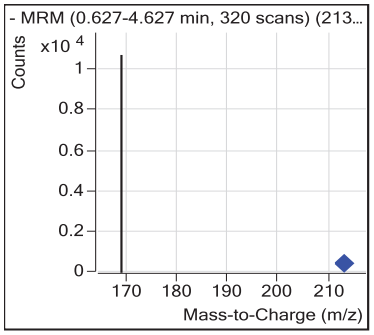
Data File	:	Q7044.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 15:09
Sample Name	:	op53121-mb
Vial	:	Vial 7
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



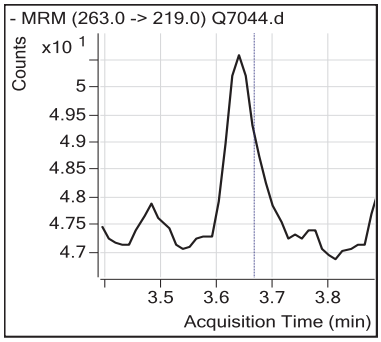
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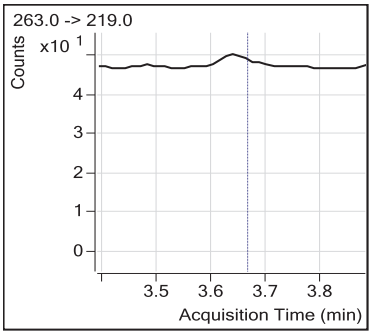


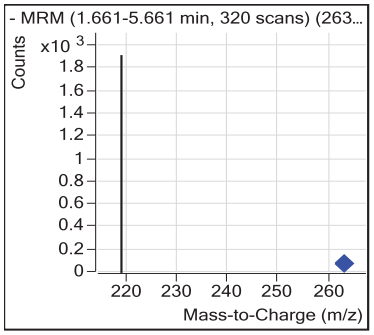




PFPeA

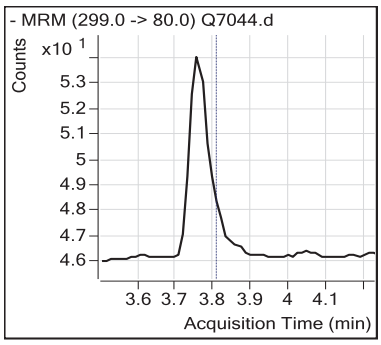


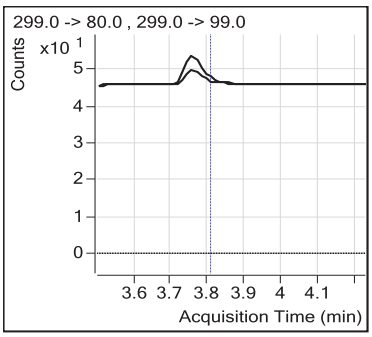


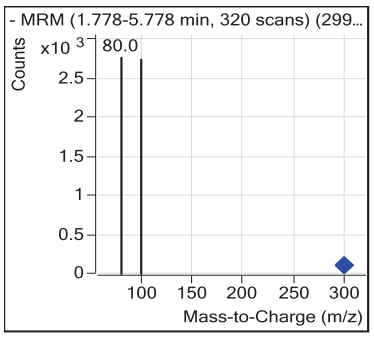


Perfluorinated Compounds by LC/MS/MS.

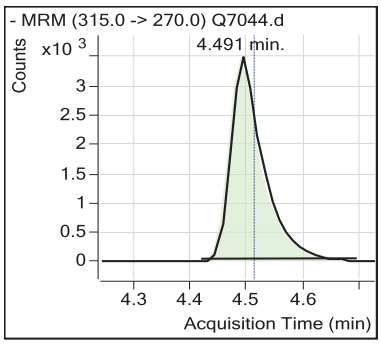
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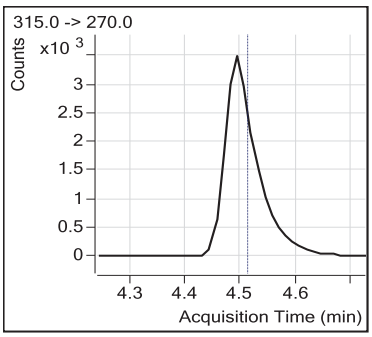


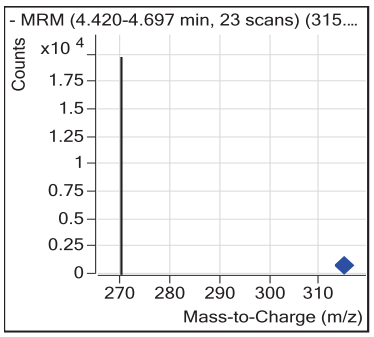




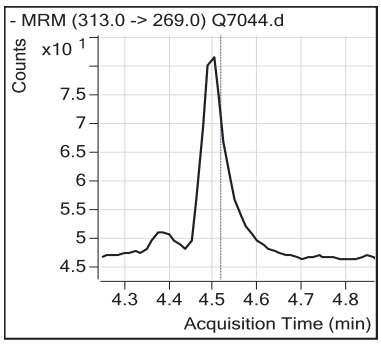
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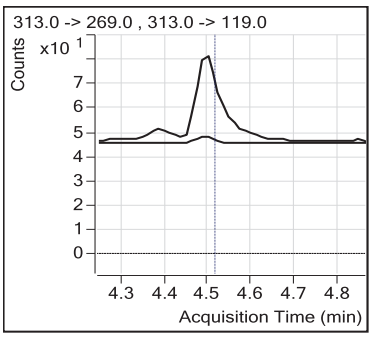


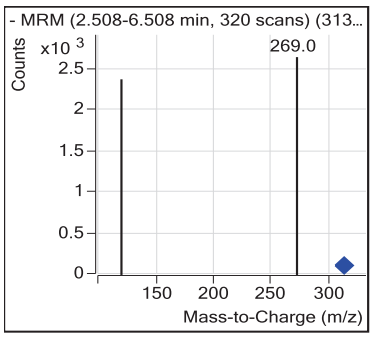




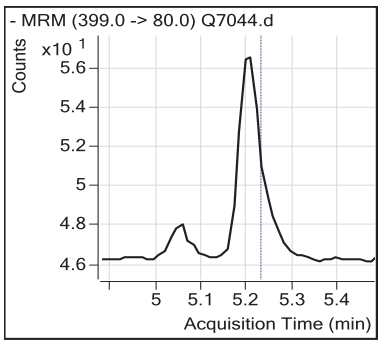
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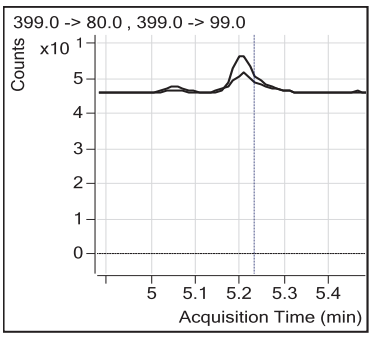


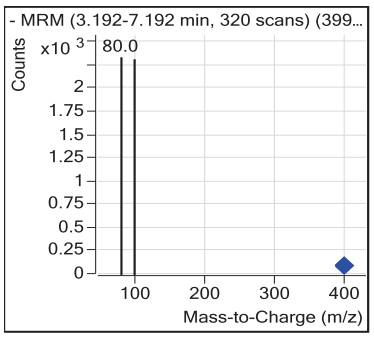




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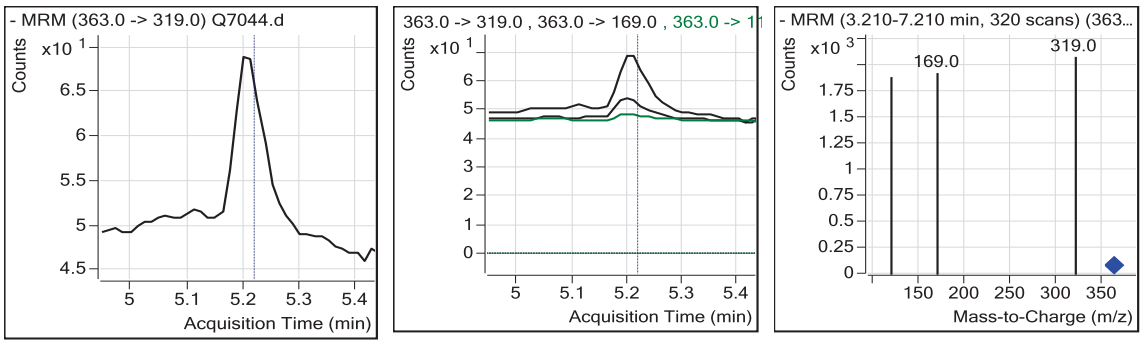




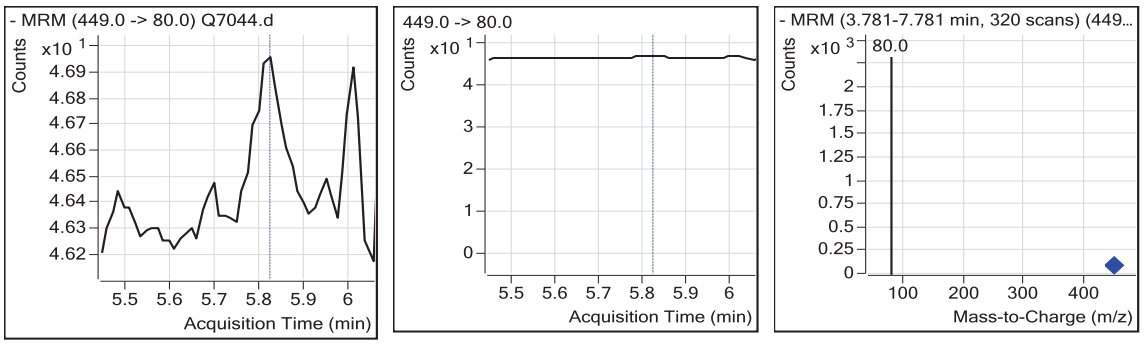


Perfluorinated Compounds by LC/MS/MS.

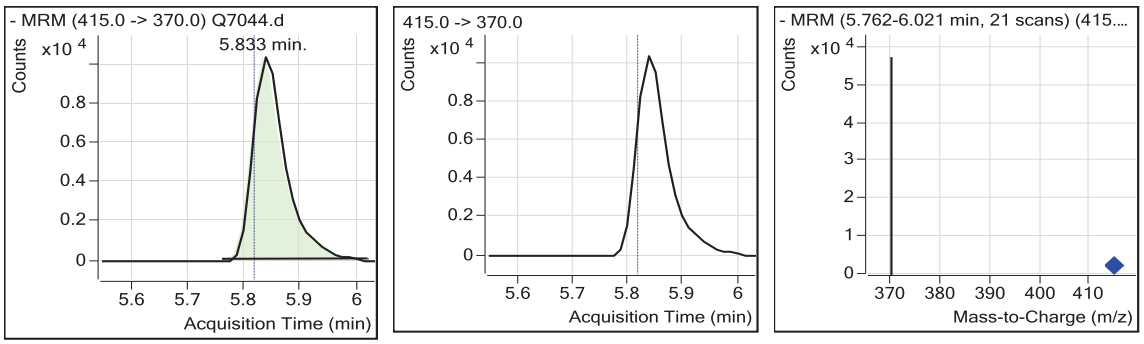
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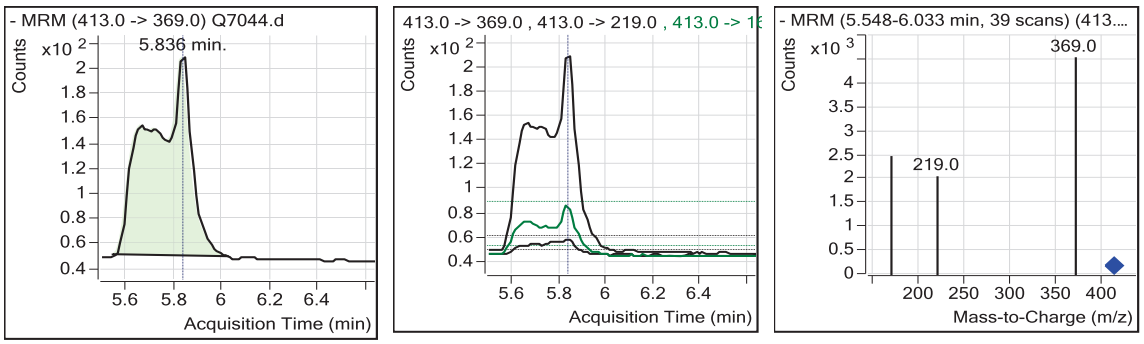
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13C2-PFOA

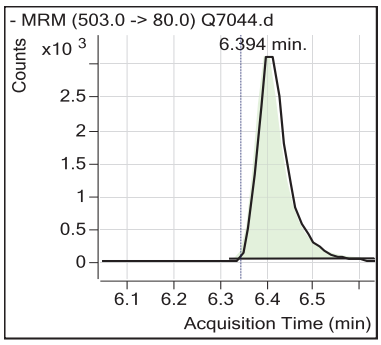


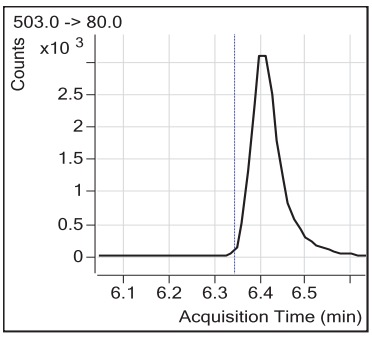
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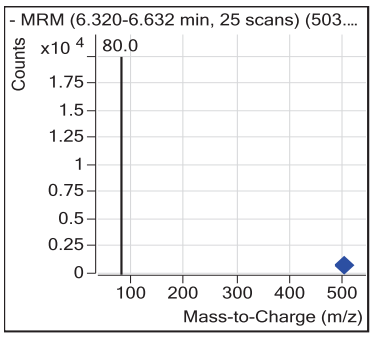


Perfluorinated Compounds by LC/MS/MS.

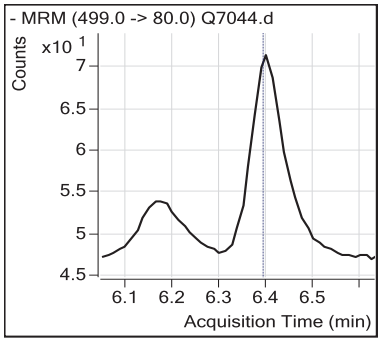
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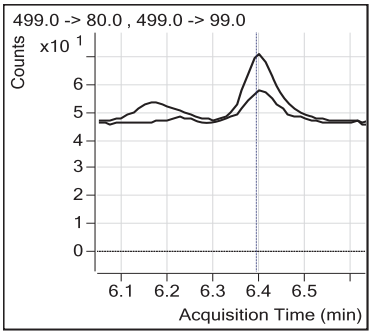


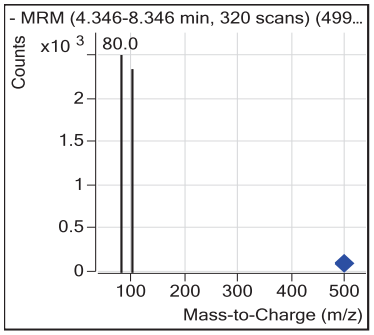




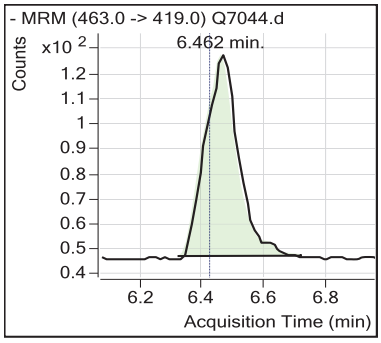
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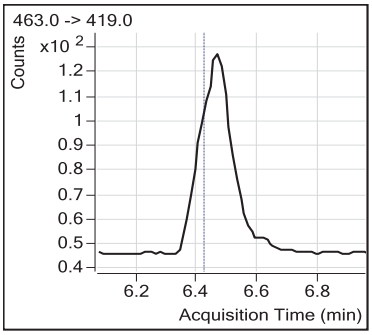


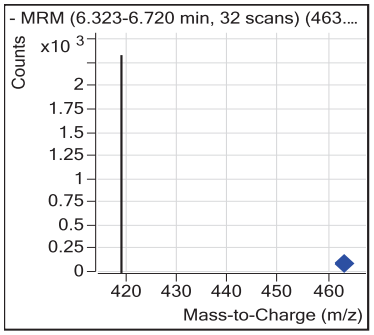




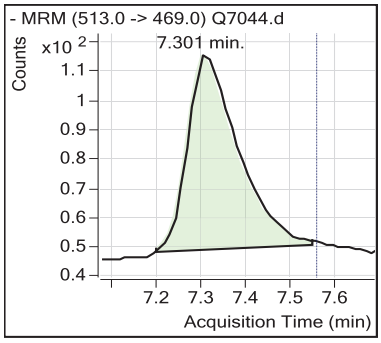
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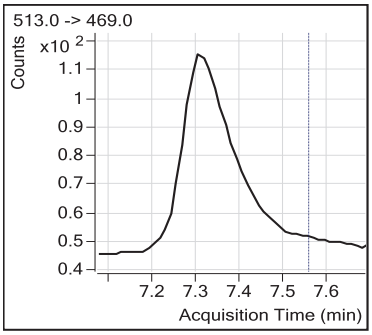


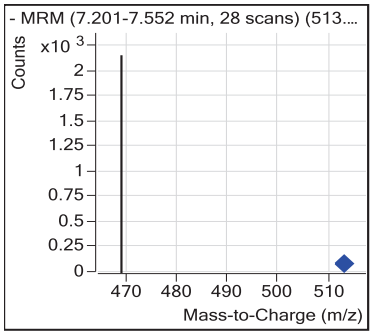




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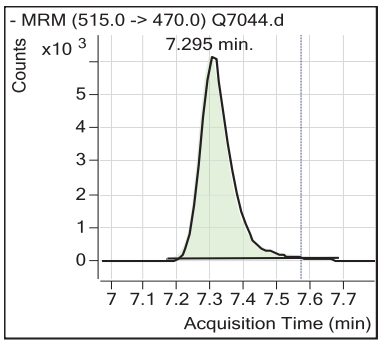


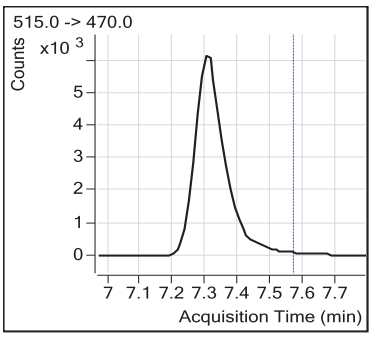


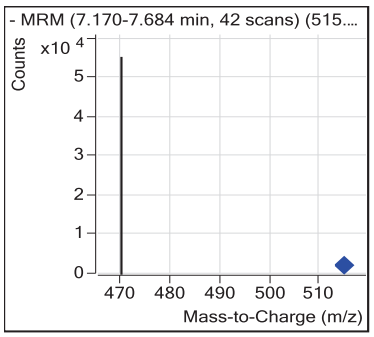


Perfluorinated Compounds by LC/MS/MS.

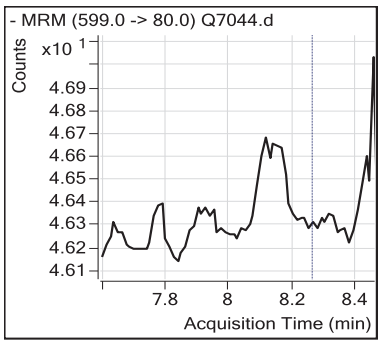
13C2-PFDA

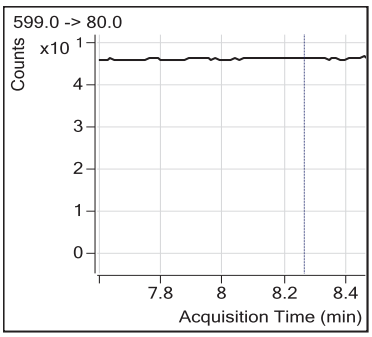


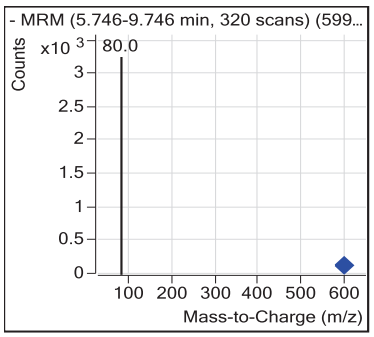




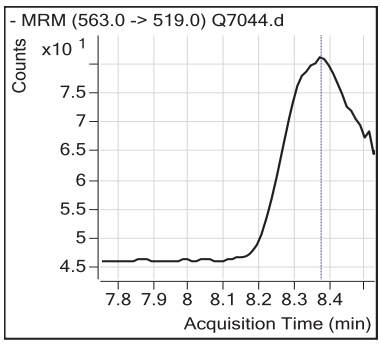
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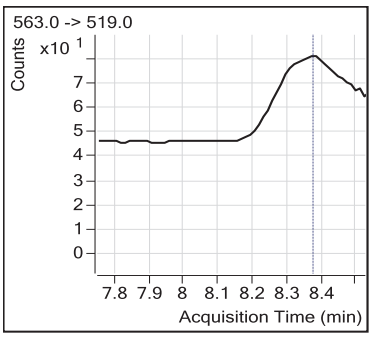


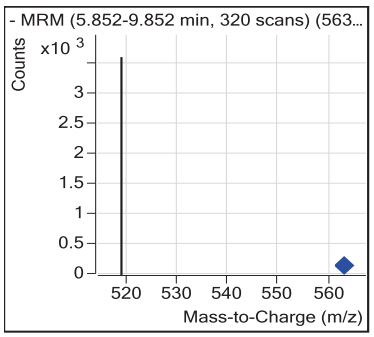




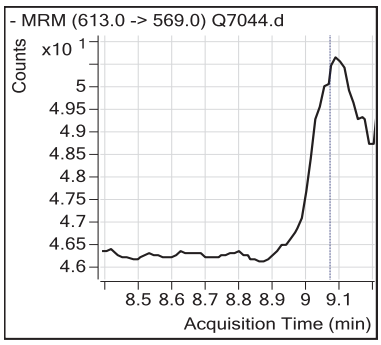
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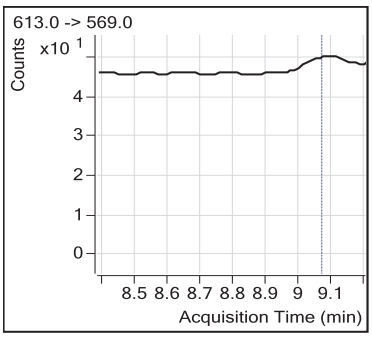


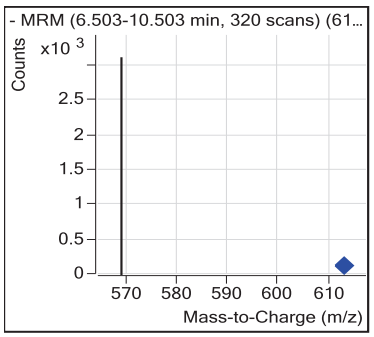




PFDoDA

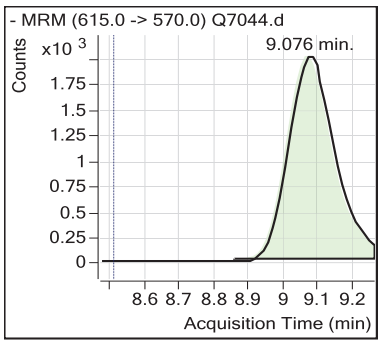


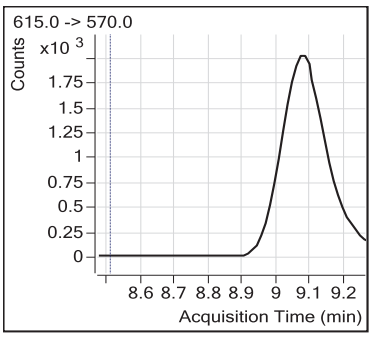


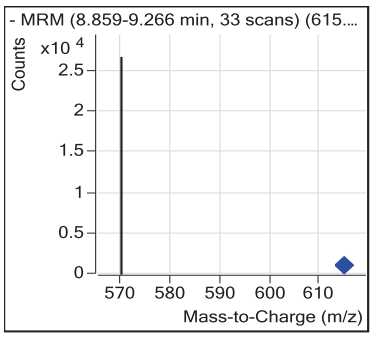


Perfluorinated Compounds by LC/MS/MS.

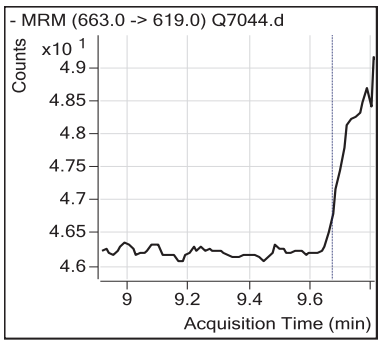
13C2-PFDoDA

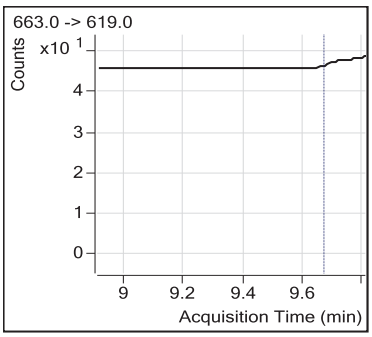


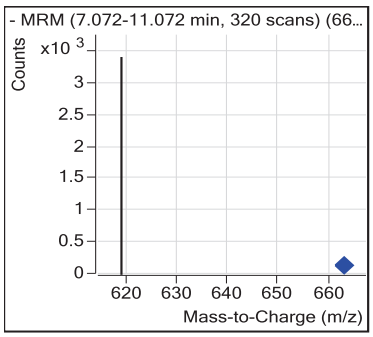




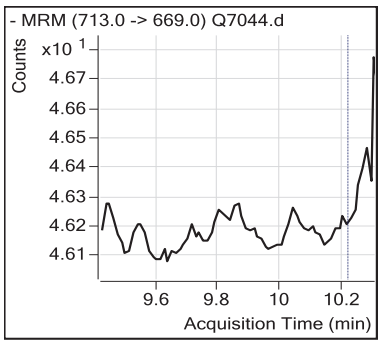
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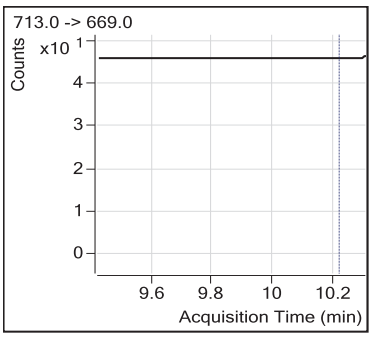


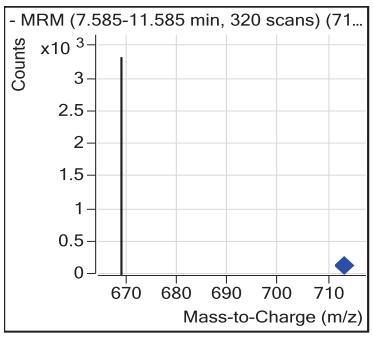




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

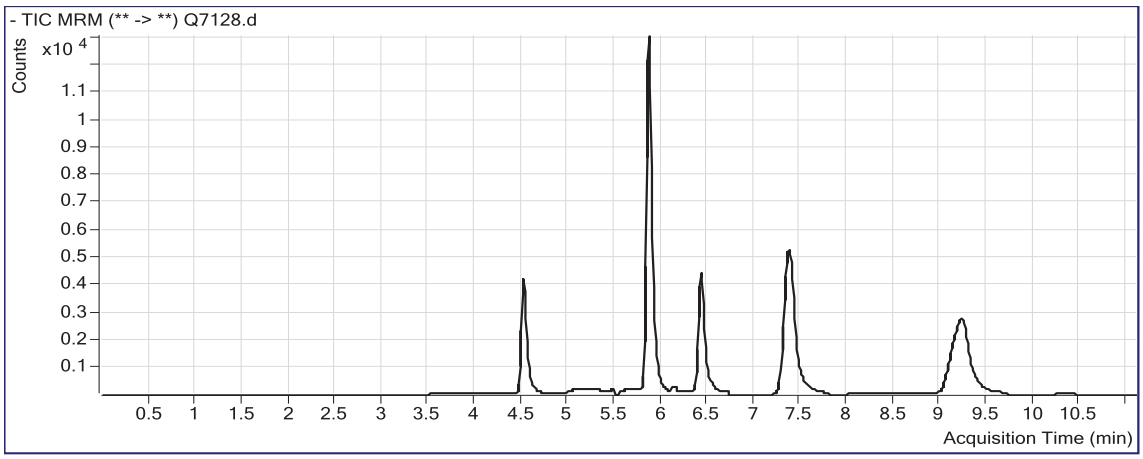
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Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 12:41
Sample Name	:	OP53158-MB
Vial	:	Vial 4
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.858	415.0 -> 370.0	56204	20.000	µg/L	0.000
13C4-PFOS	6.419	503.0 -> 80.0	20724	20.000	µg/L	-0.013
13C2-PFDoDA	9.209	615.0 -> 570.0	33973	20.000	µg/L	-0.188
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	17298	20.77	µg/L	0.000
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 103.86%			
13C2-PFDA	7.357	515.0 -> 470.0	44606	21.65	µg/L	-0.075
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 108.25%			
Target Compounds						**Qvalue**
PFOA	5.848	413.0 -> 369.0	695	0.225	µg/L	79

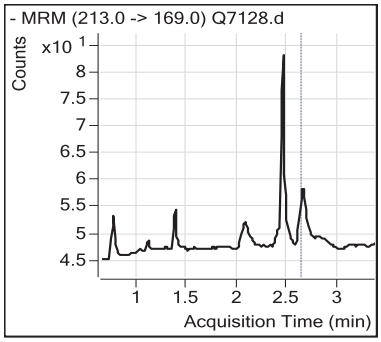
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

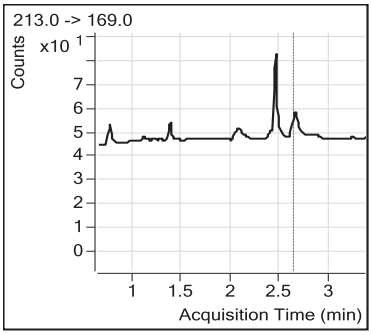
Perfluorinated Compounds by LC/MS/MS.

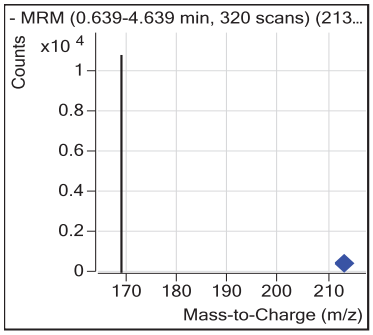
Data File	:	Q7128.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 12:41
Sample Name	:	OP53158-MB
Vial	:	Vial 4
Sample Info	:	OP53158,SQ241,125,,,1,,water
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Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



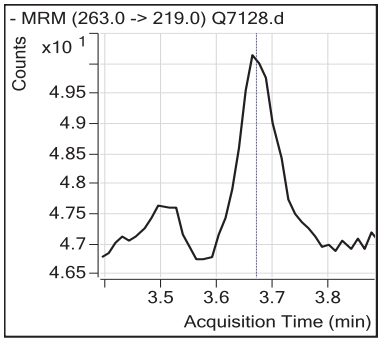
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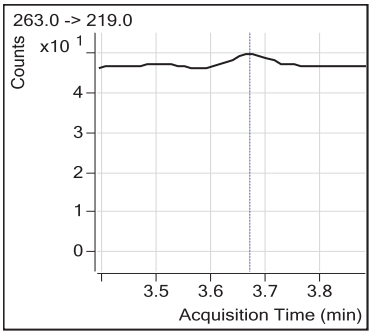


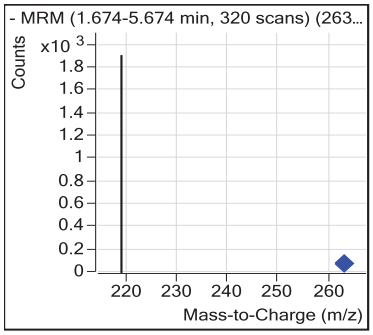




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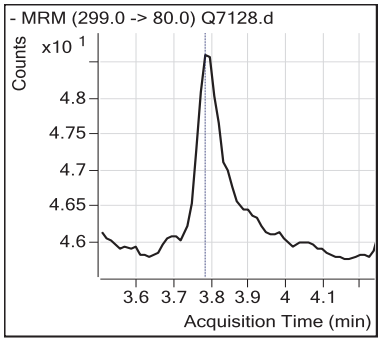


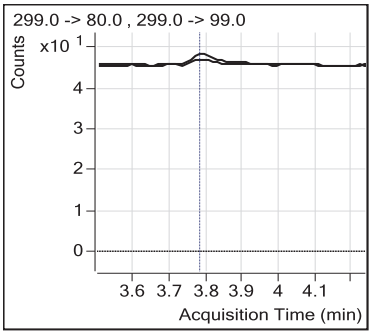


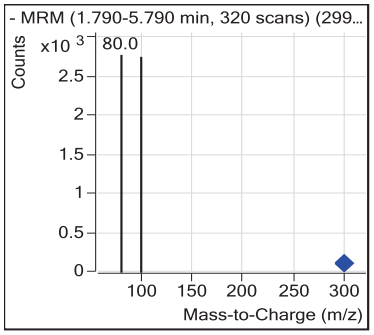


Perfluorinated Compounds by LC/MS/MS.

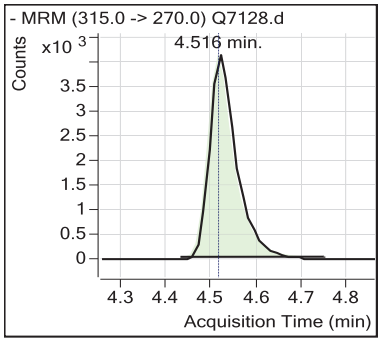
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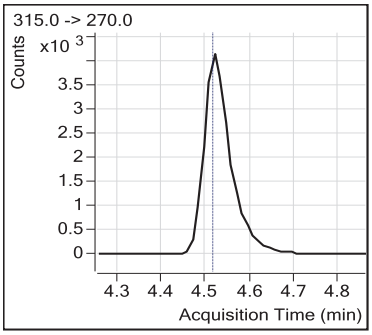


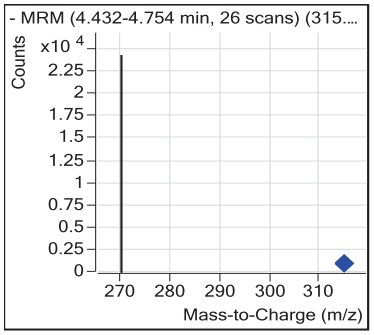




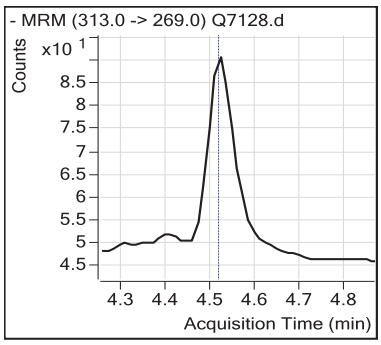
13C2-PFHxA

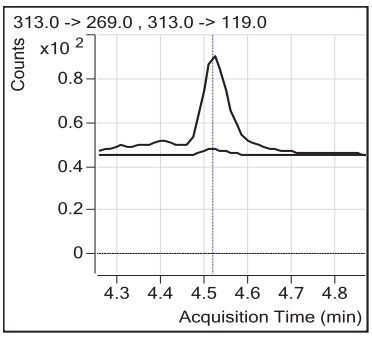


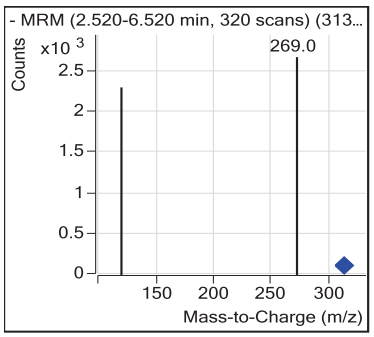




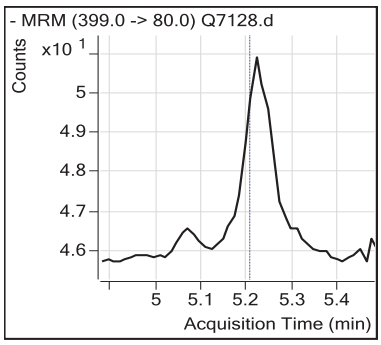
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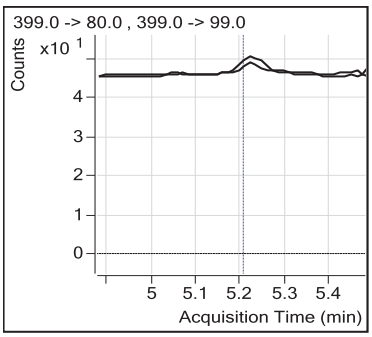


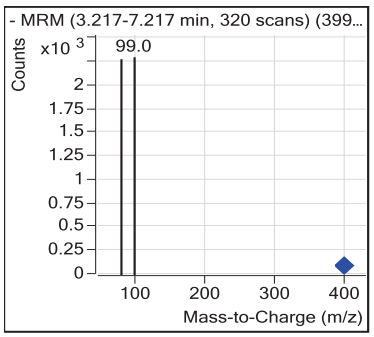




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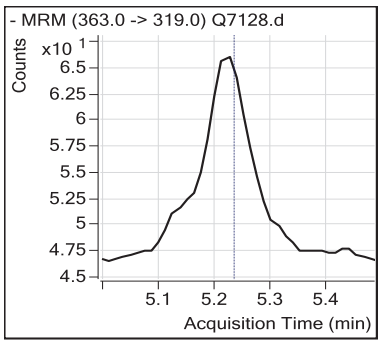


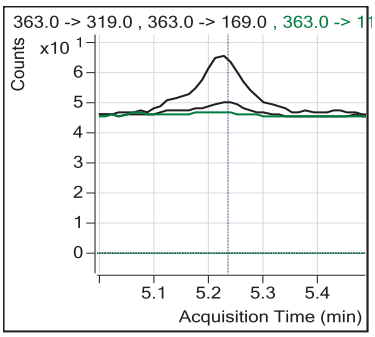


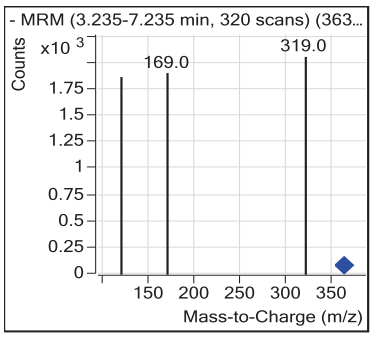


Perfluorinated Compounds by LC/MS/MS.

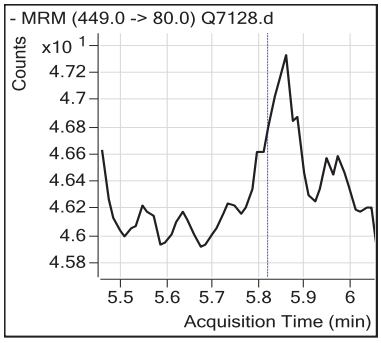
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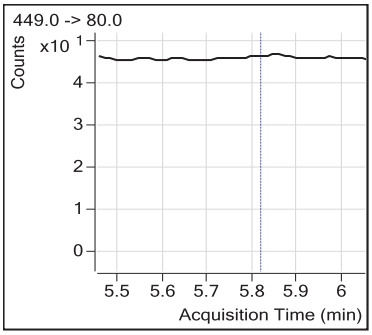


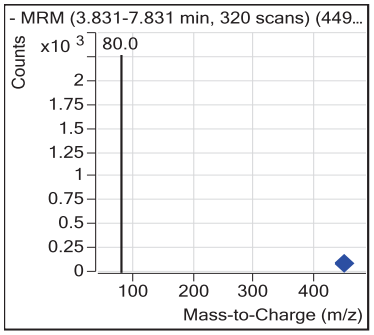




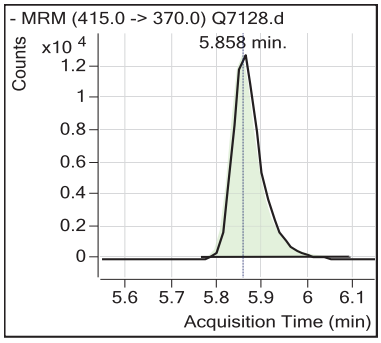
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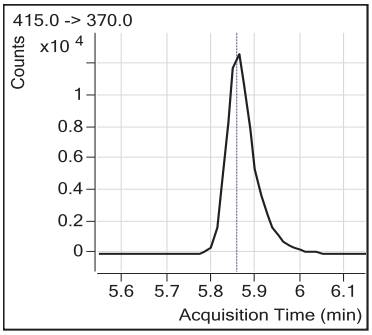


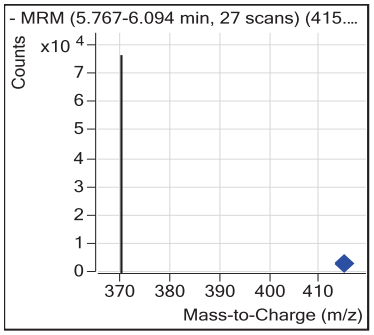




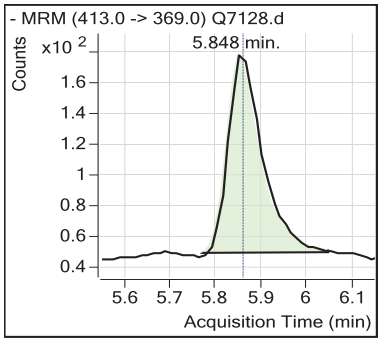
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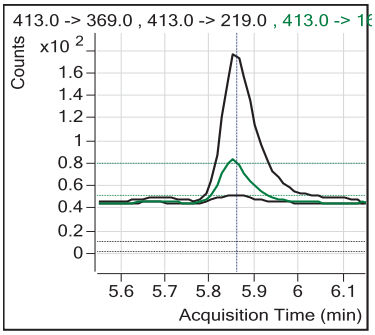


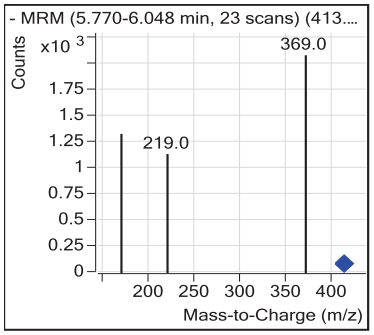




PFOA

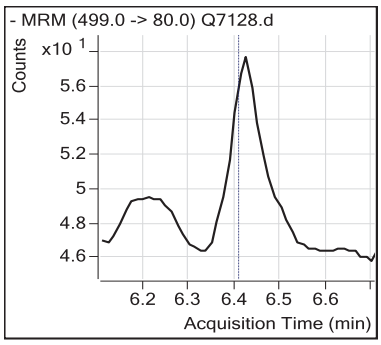


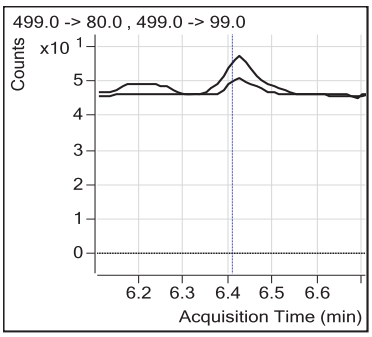


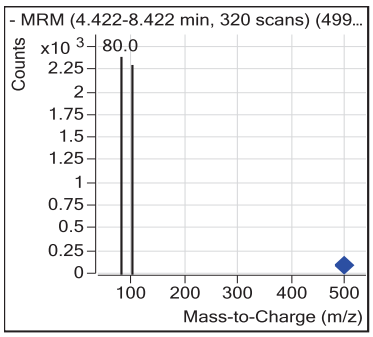


Perfluorinated Compounds by LC/MS/MS.

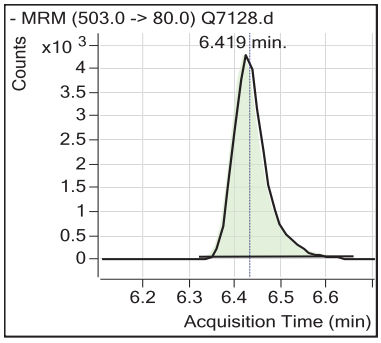
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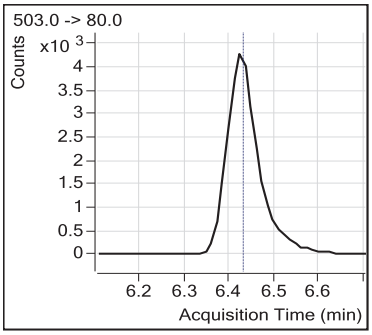


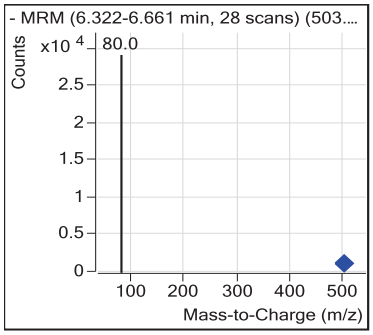




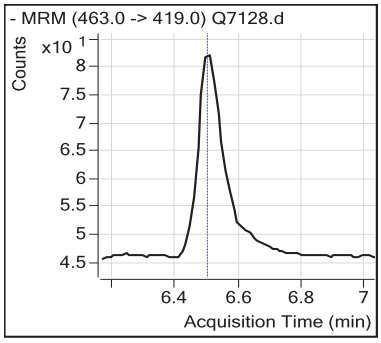
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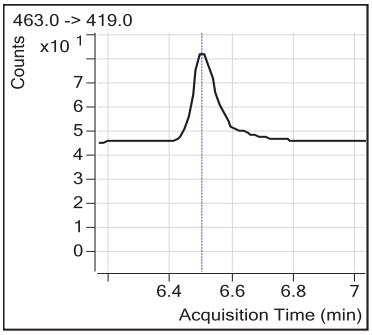


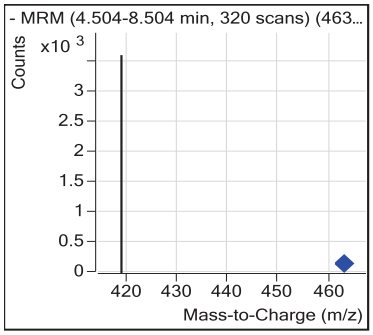




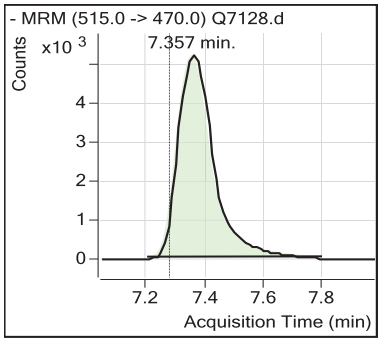
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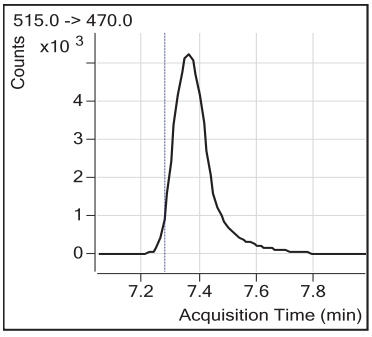


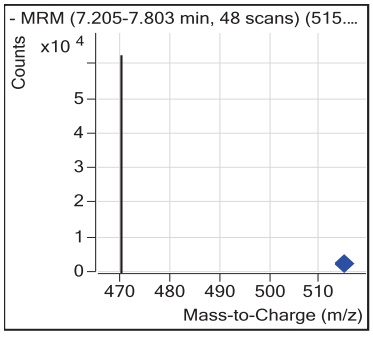




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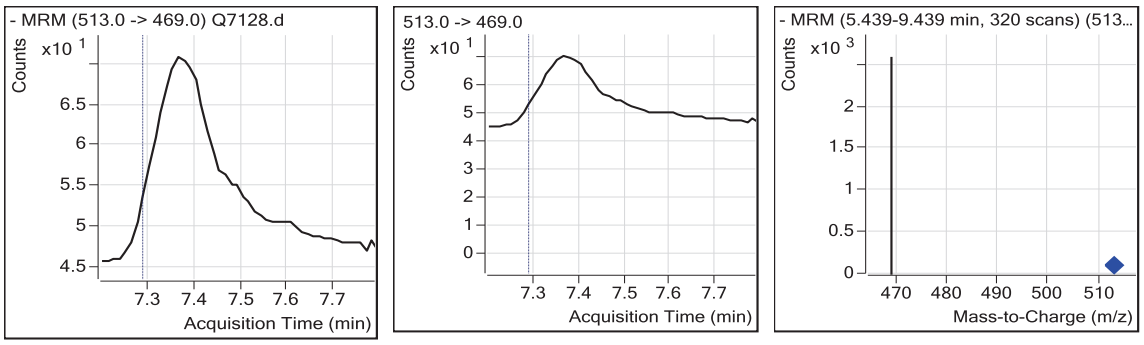




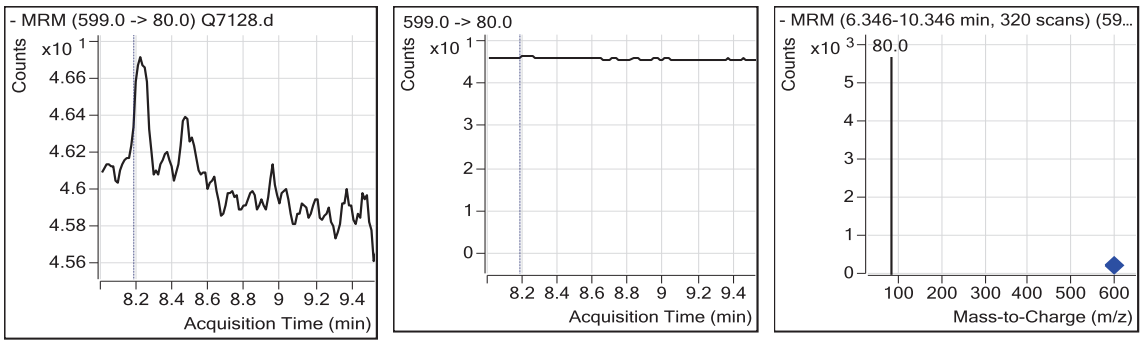


Perfluorinated Compounds by LC/MS/MS.

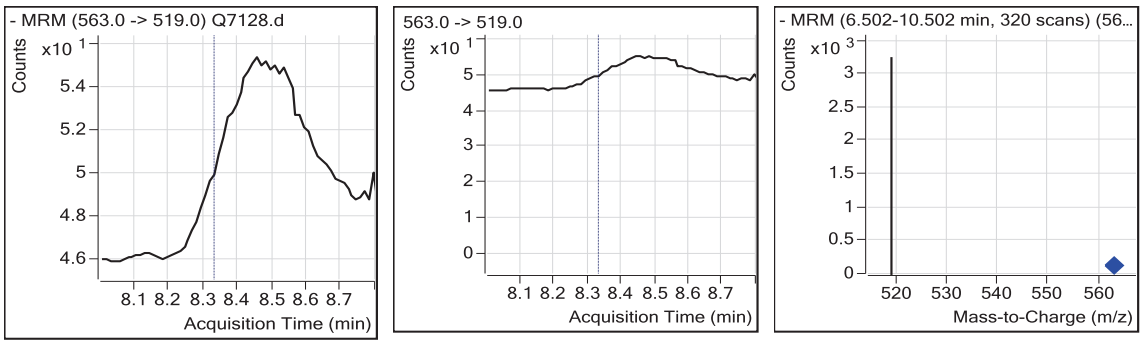
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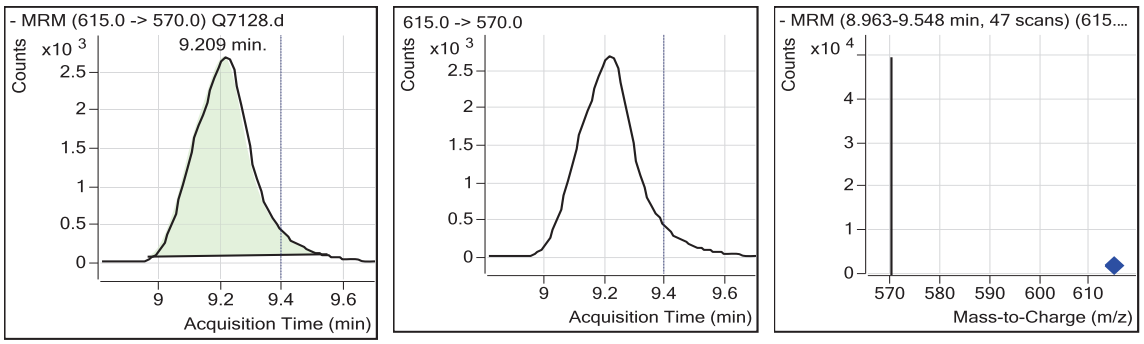
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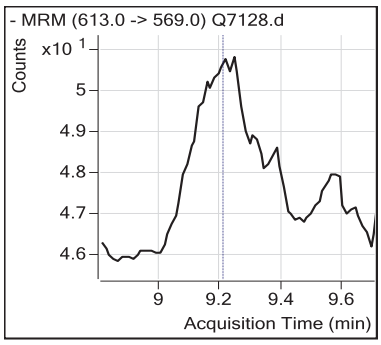


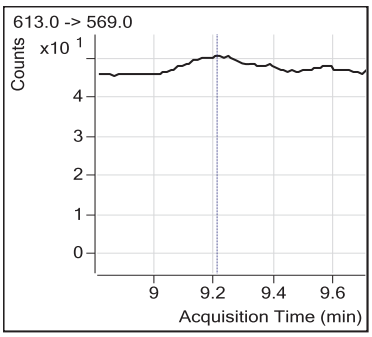
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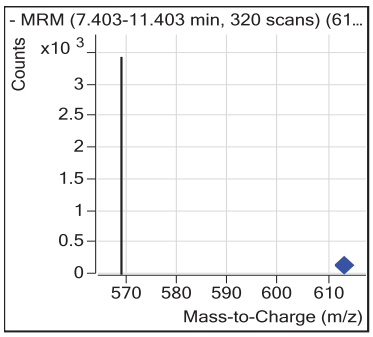


Perfluorinated Compounds by LC/MS/MS.

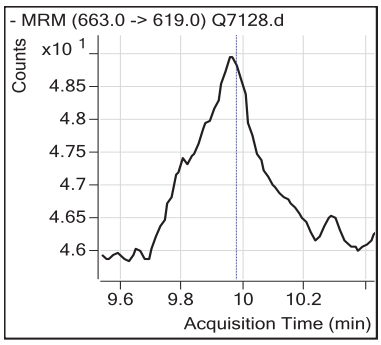
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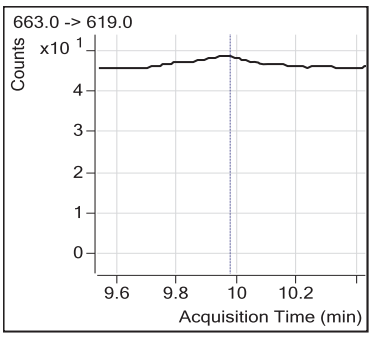


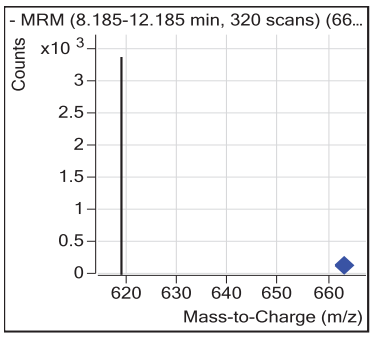




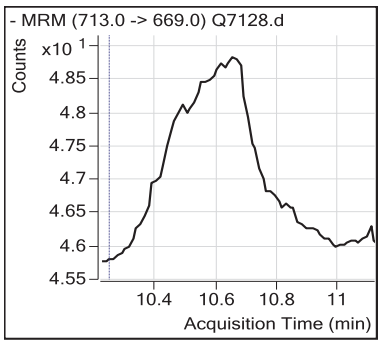
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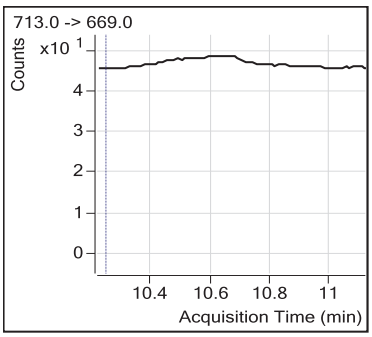


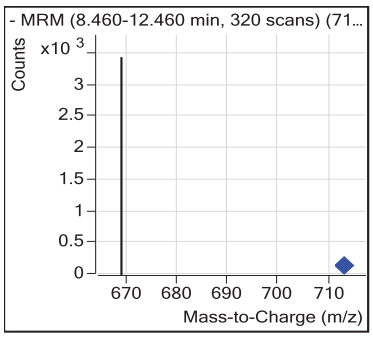




PFTeDA







Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/22/14 14:41

Perfluorinated Compounds by LC/MS/MS.

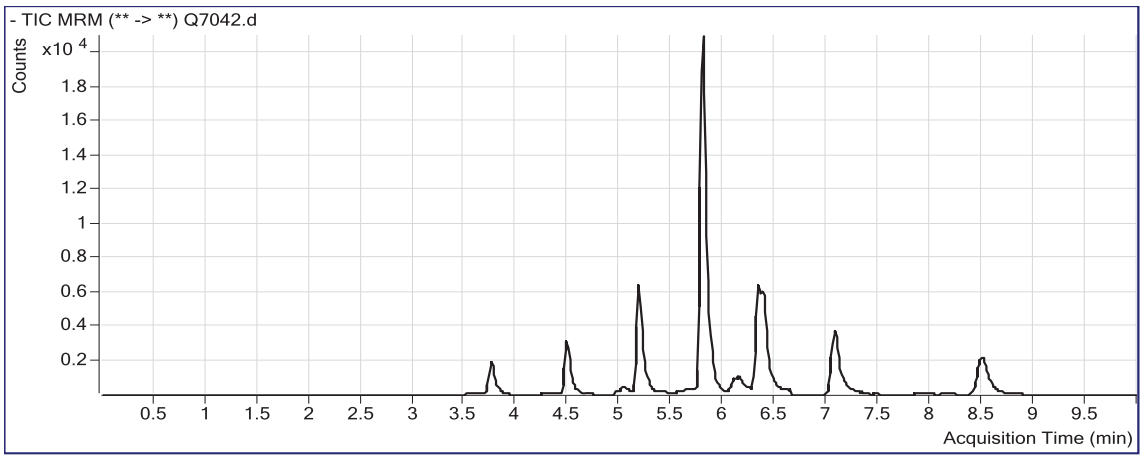
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Operator	:	mikee
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Acquisition date	:	2014-09-18 14:01
Sample Name	:	op53121-bs
Vial	:	Vial 6
Sample Info	:	OP53121,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.796	415.0 -> 370.0	38900	20.000	µg/L		-0.025
13C4-PFOS	6.332	503.0 -> 80.0	12960	20.000	µg/L		-0.013
13C2-PFDoDA	8.484	615.0 -> 570.0	17027	20.000	µg/L		-0.025
System Monitoring Compounds							
13C2-PFHxA	4.479	315.0 -> 270.0	12373	21.47	µg/L		-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 107.34%				
13C2-PFDA	7.070	515.0 -> 470.0	23155	22.42	µg/L		-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 112.11%				
Target Compounds							**Qvalue**
PFBS	3.753	299.0 -> 80.0	5341	26.039	µg/L	m	97
PFHxS	5.180	399.0 -> 80.0	7708	23.980	µg/L	m	90
PFHpA	5.185	363.0 -> 319.0	11029	16.859	µg/L		99
PFOA	5.798	413.0 -> 369.0	38753	19.190	µg/L		82
PFOS	6.321	499.0 -> 80.0	13104	19.838	µg/L	m	98
PFNA	6.387	463.0 -> 419.0	17328	19.126	µg/L		100

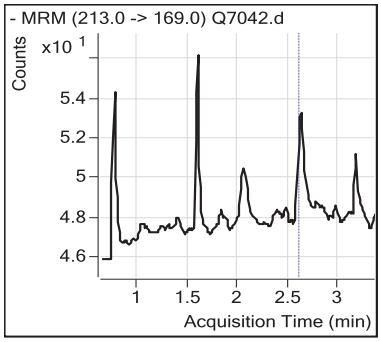
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

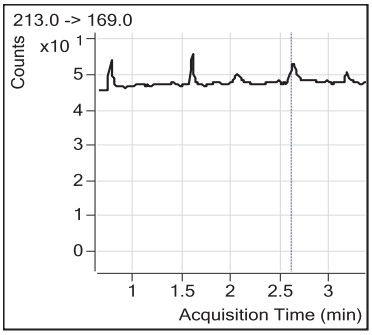
Perfluorinated Compounds by LC/MS/MS.

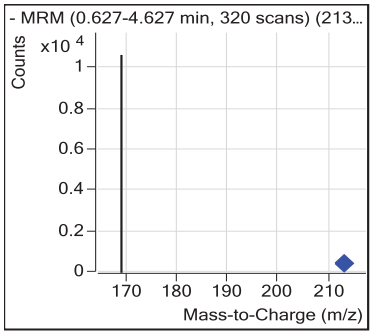
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Acquisition date	:	2014-09-18 14:01
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Vial	:	Vial 6
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Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



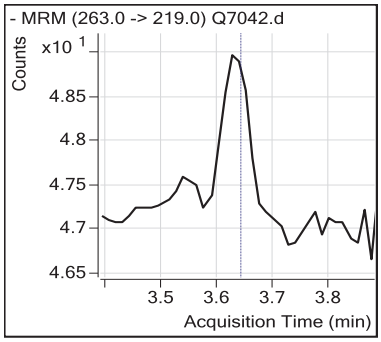
PFBA

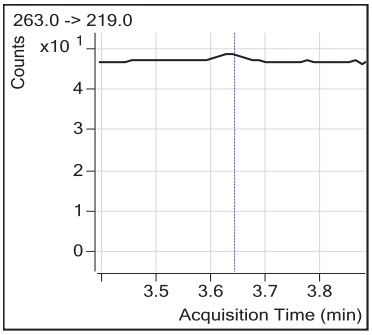


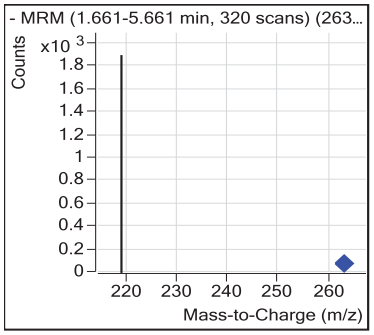




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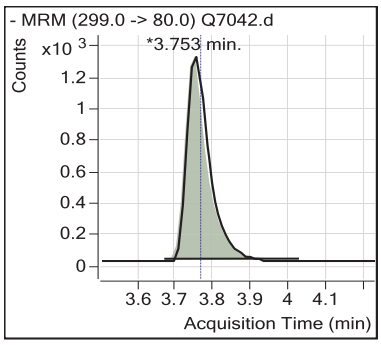


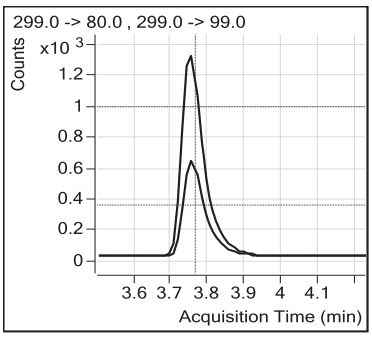


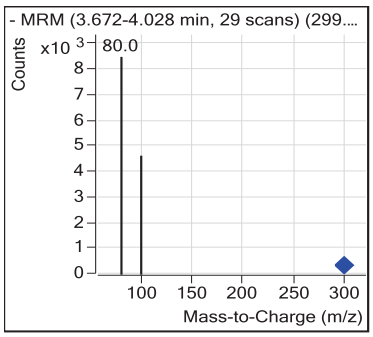


Perfluorinated Compounds by LC/MS/MS.

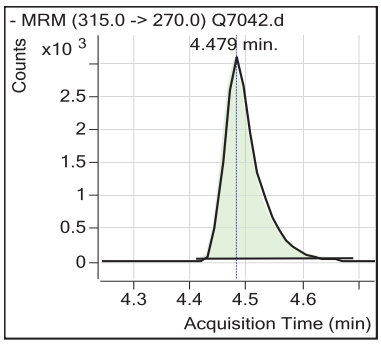
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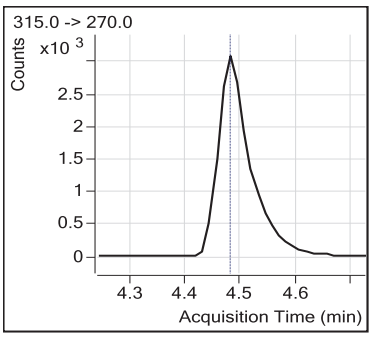


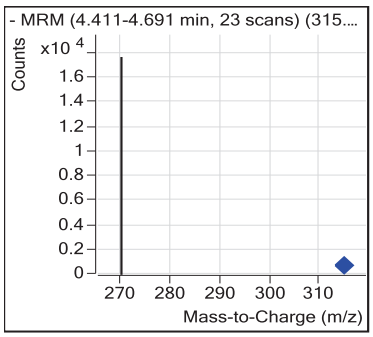




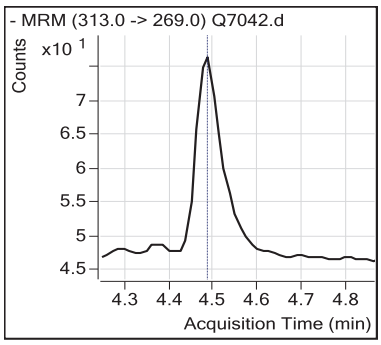
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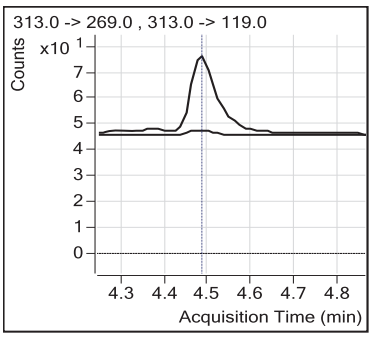


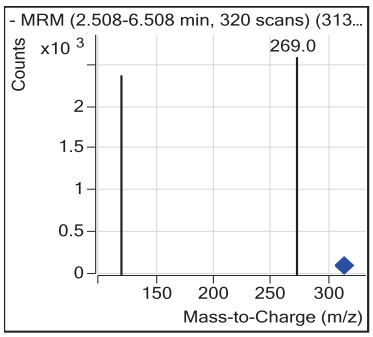




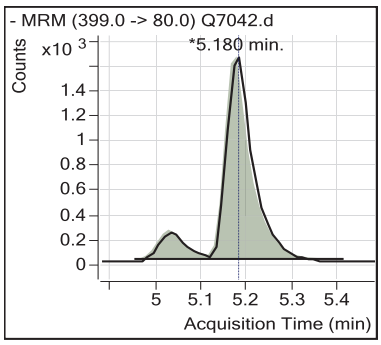
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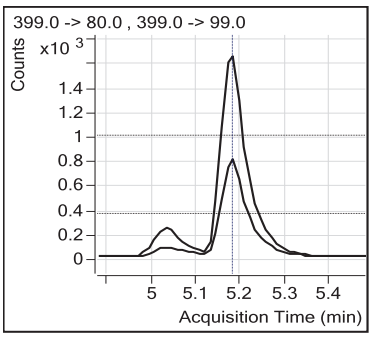


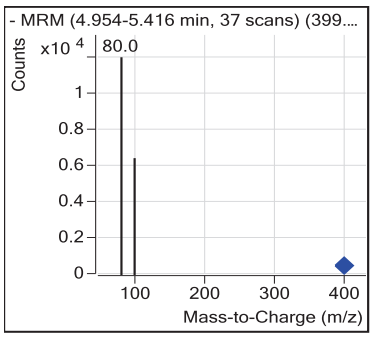




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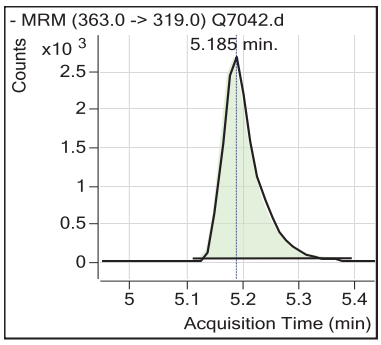


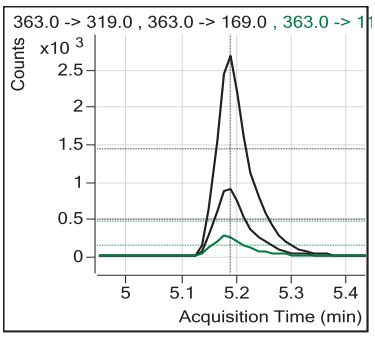


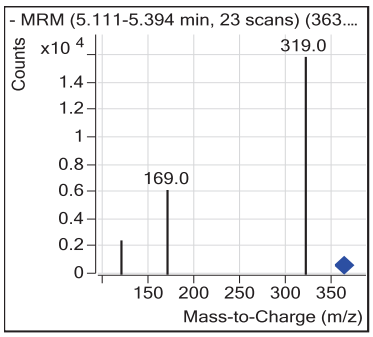


Perfluorinated Compounds by LC/MS/MS.

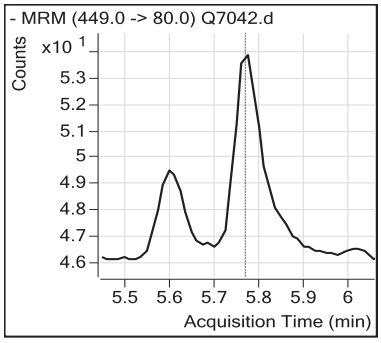
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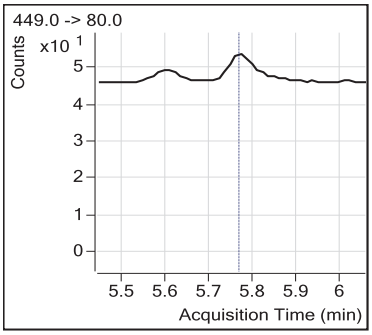


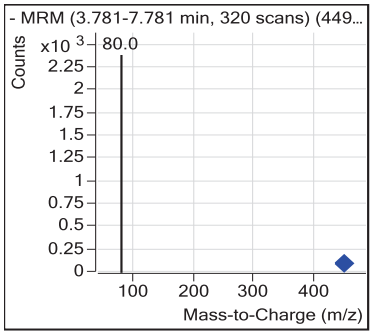




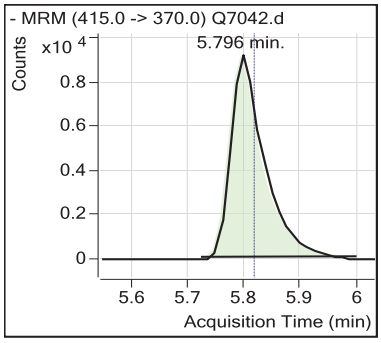
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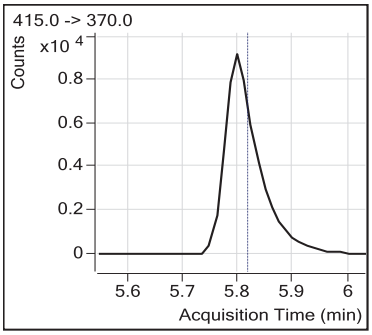


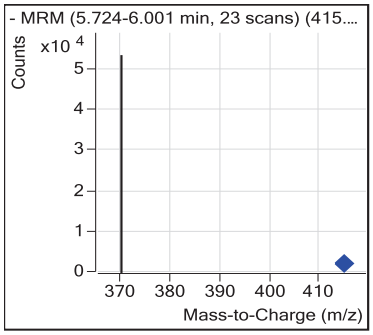




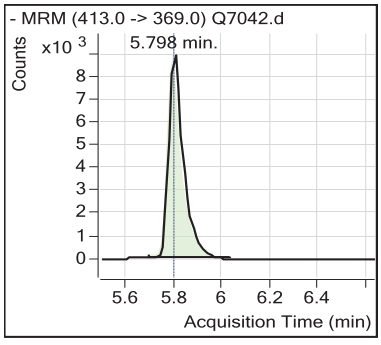
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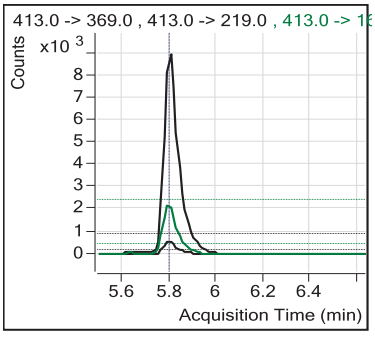


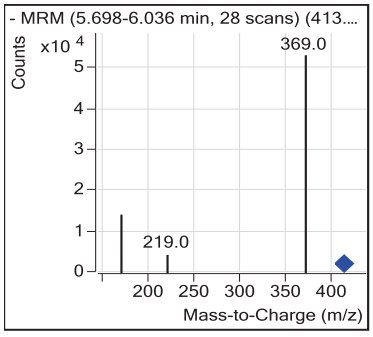




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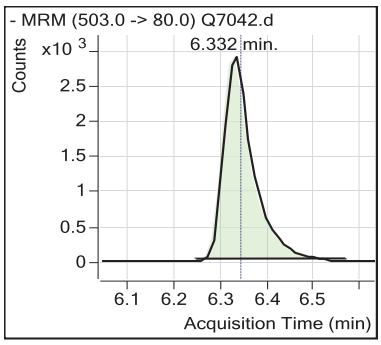


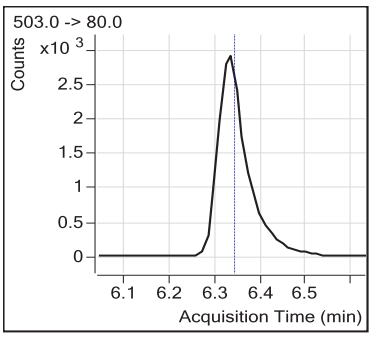


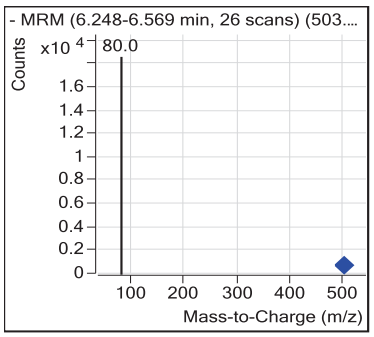


Perfluorinated Compounds by LC/MS/MS.

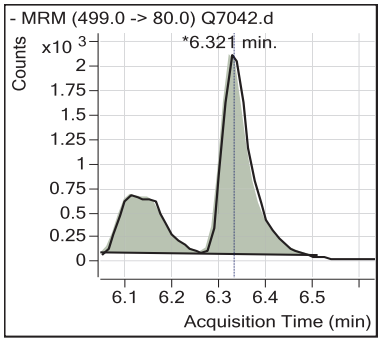
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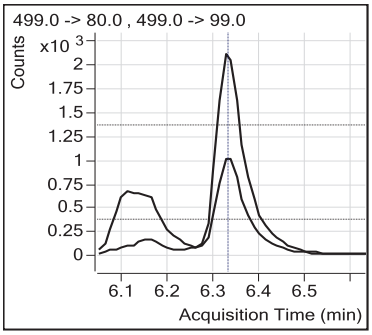


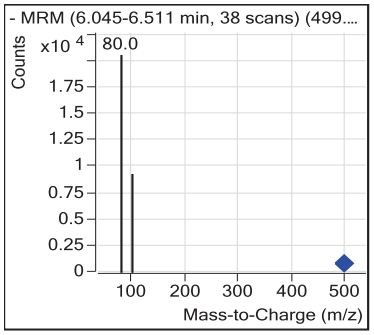




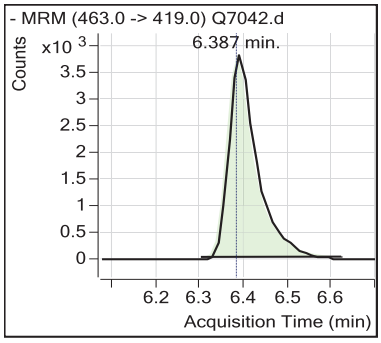
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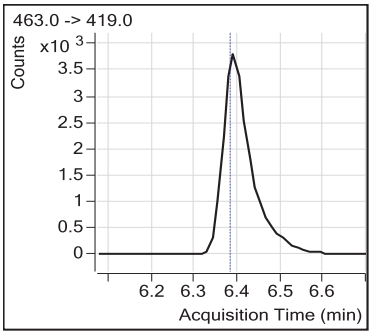


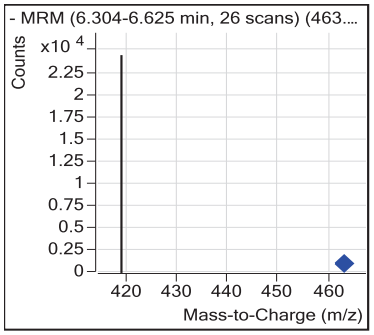




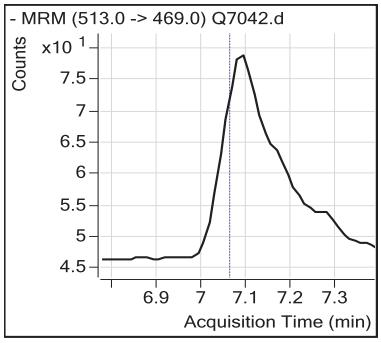
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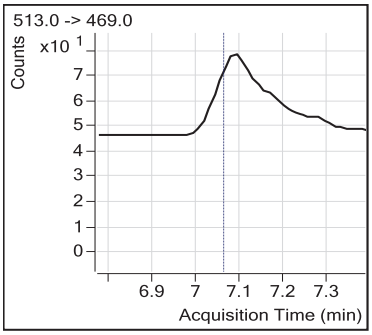


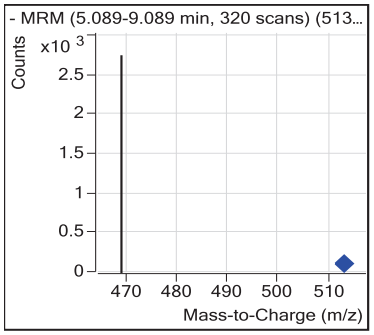




PFDA

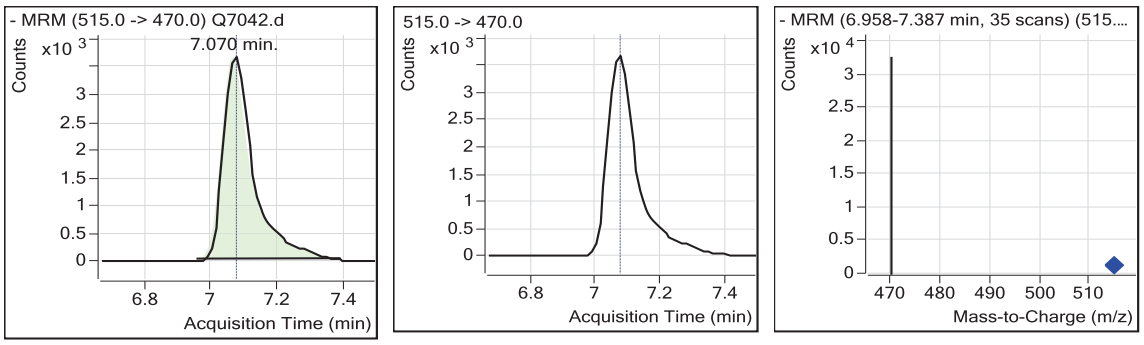




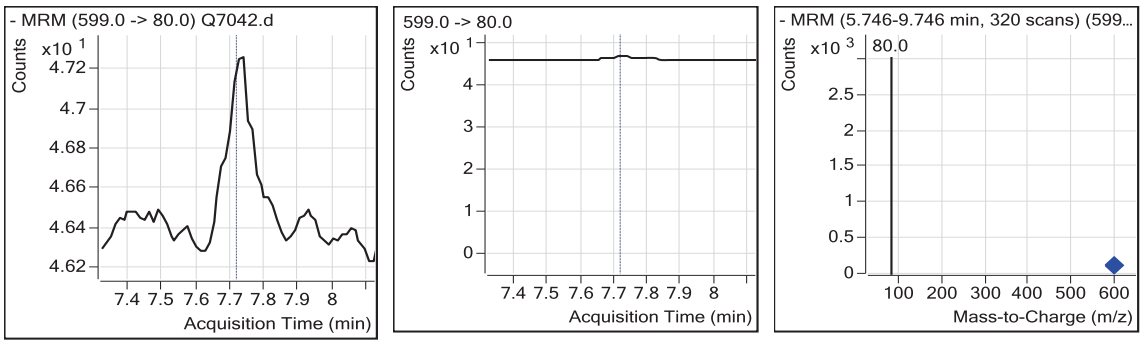


Perfluorinated Compounds by LC/MS/MS.

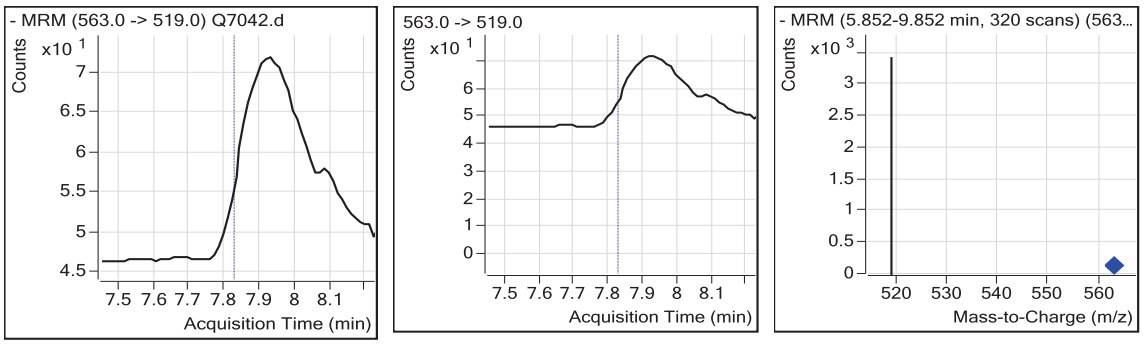
13C2-PFDA



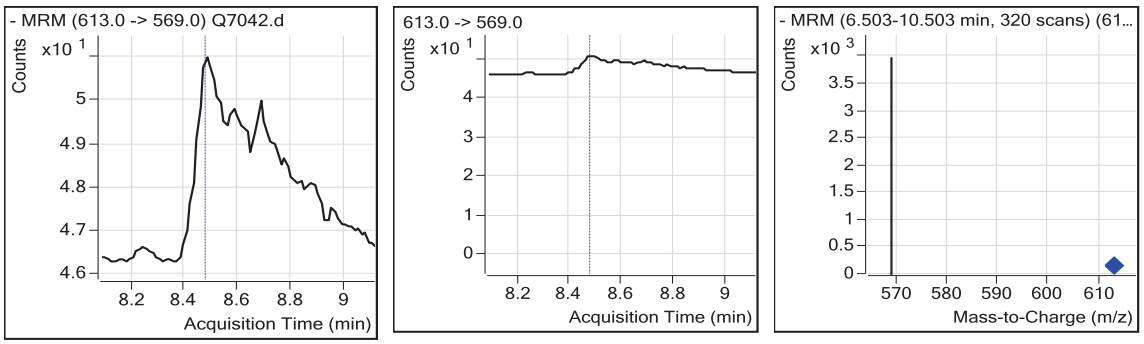
PFDS



PFUnDA

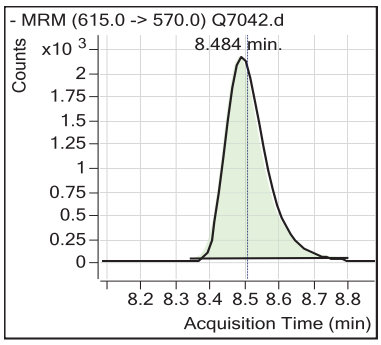


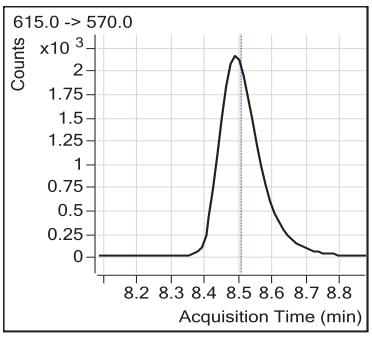
PFDoDA

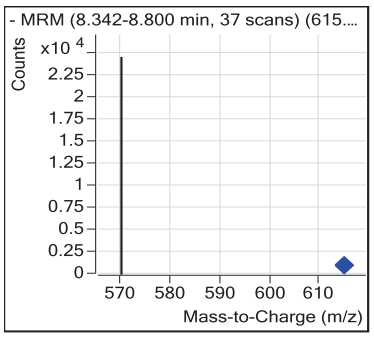


Perfluorinated Compounds by LC/MS/MS.

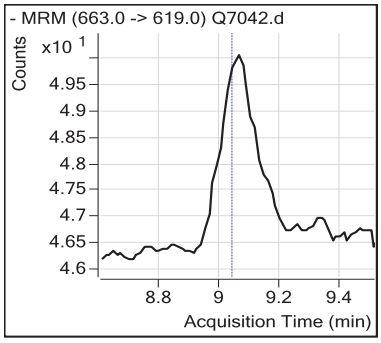
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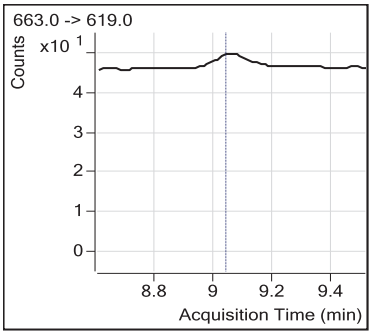


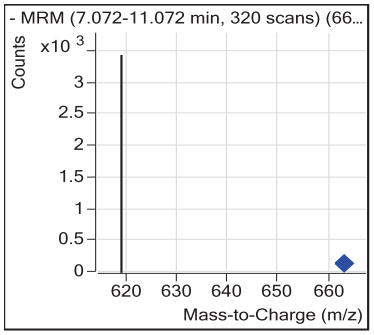




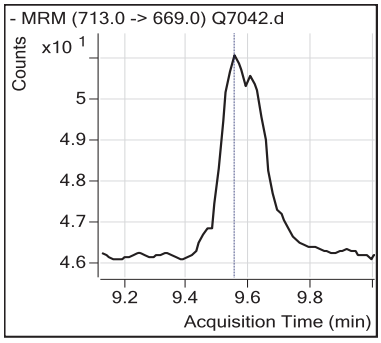
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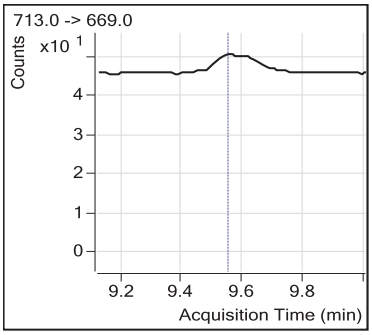


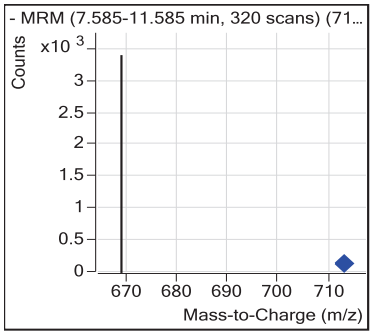




PFTeDA







Manual Integration Approval Summary

Sample Number: OP53121-BS
Lab FileID: Q7042.D
Injection Time: 09/18/14 14:01
Method: EPA 537 MOD
Analyst approved: 09/19/14 10:12 Mike Eger
Supervisor approved: 09/22/14 14:41 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorobutanesulfonic acid	375-73-5		3.75	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.18	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.32	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

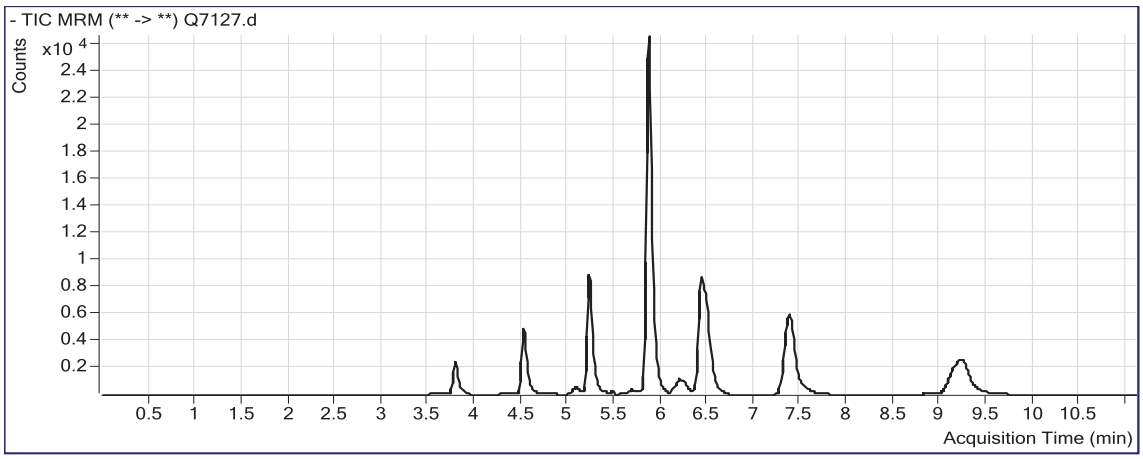
Data File	:	Q7127.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 12:21
Sample Name	:	OP53158-BS
Vial	:	Vial 3
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.858	415.0 -> 370.0	53833	20.000	µg/L		0.000
13C4-PFOS	6.419	503.0 -> 80.0	20585	20.000	µg/L		-0.013
13C2-PFDoDA	9.209	615.0 -> 570.0	33697	20.000	µg/L		-0.188
System Monitoring Compounds							
13C2-PFHxA	4.516	315.0 -> 270.0	20305	25.46	µg/L		0.000
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 127.28%				
13C2-PFDA	7.357	515.0 -> 470.0	51063	24.99	µg/L		-0.075
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 124.93%				
Target Compounds							**Qvalue**
PFBS	3.778	299.0 -> 80.0	6747	20.708	µg/L		97
PFHxS	5.217	399.0 -> 80.0	10485	20.535	µg/L	m	89
PFHpA	5.222	363.0 -> 319.0	16103	17.832	µg/L		99
PFOA	5.861	413.0 -> 369.0	49969	17.807	µg/L		82
PFOS	6.422	499.0 -> 80.0	18080	17.103	µg/L	m	95
PFNA	6.491	463.0 -> 419.0	25462	20.338	µg/L		100

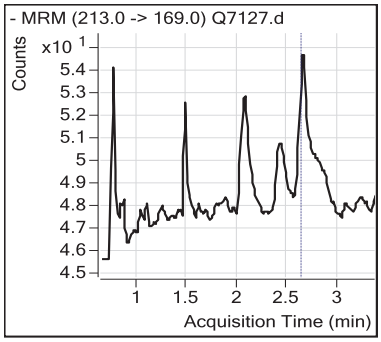
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

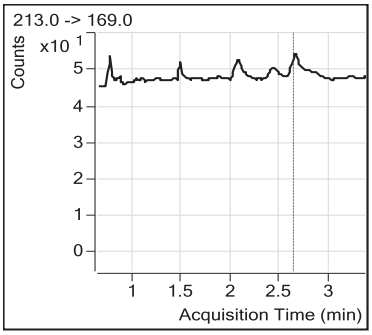
Perfluorinated Compounds by LC/MS/MS.

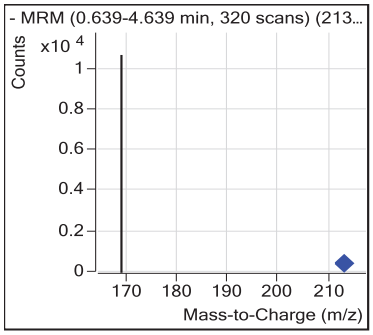
Data File	:	Q7127.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 12:21
Sample Name	:	OP53158-BS
Vial	:	Vial 3
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



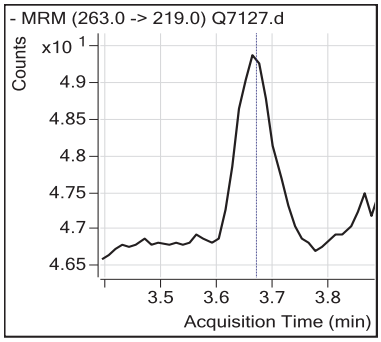
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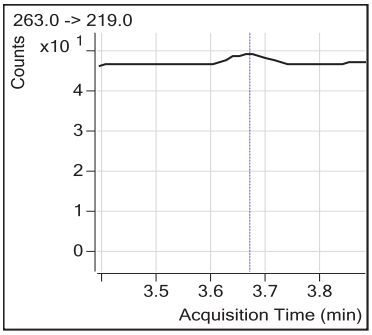


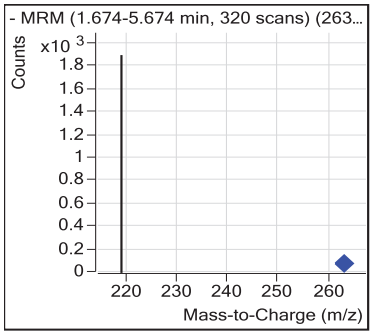




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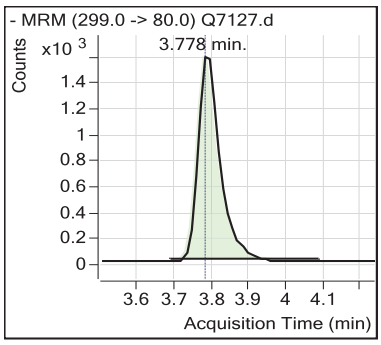


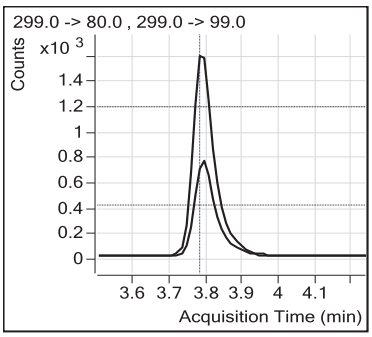


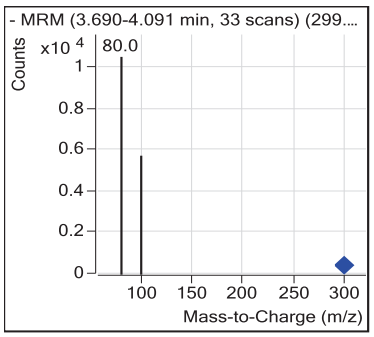


Perfluorinated Compounds by LC/MS/MS.

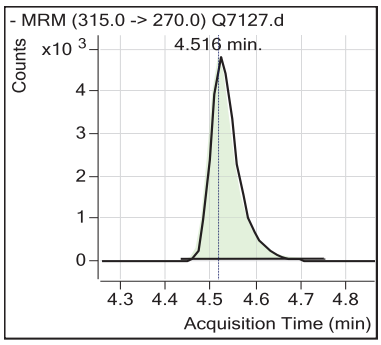
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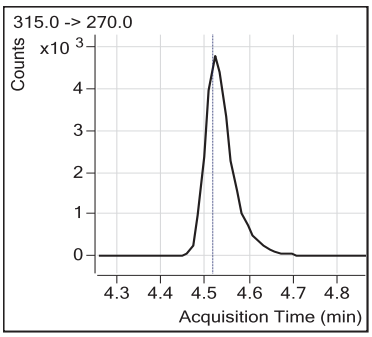


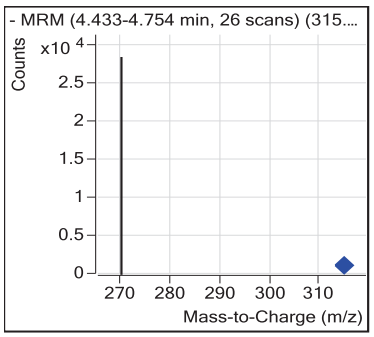




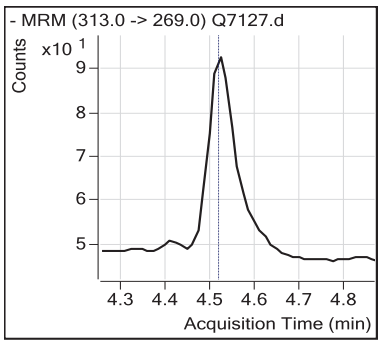
13C2-PFHxA

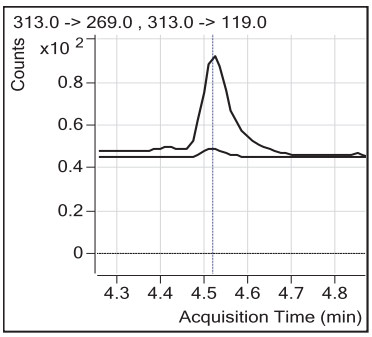


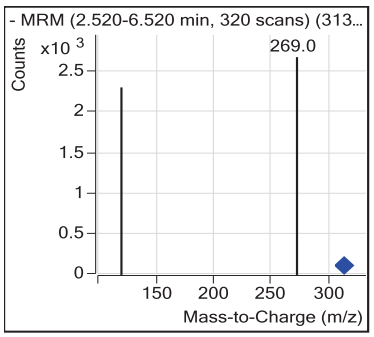




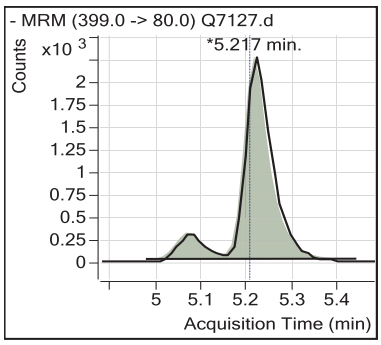
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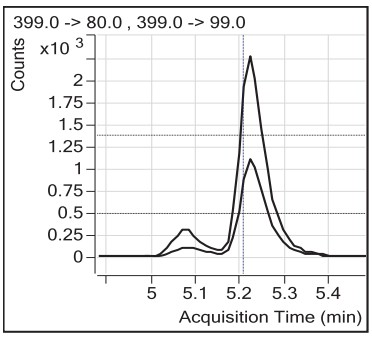


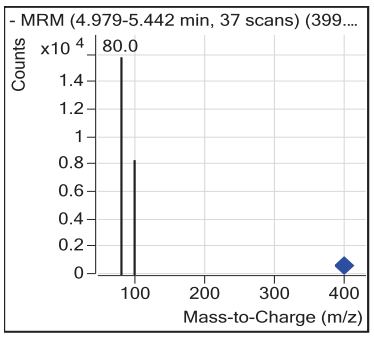




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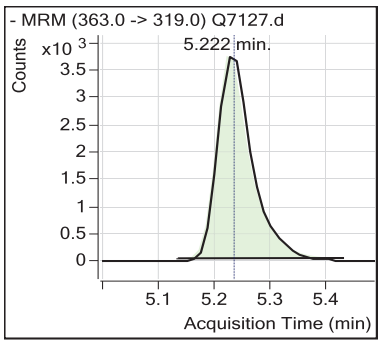


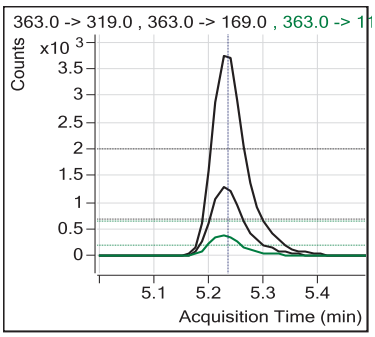


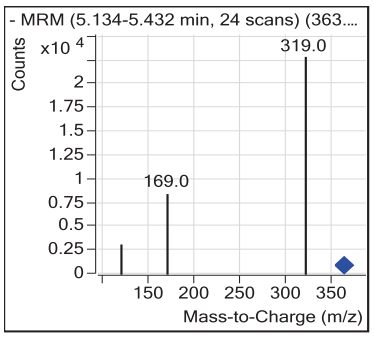


Perfluorinated Compounds by LC/MS/MS.

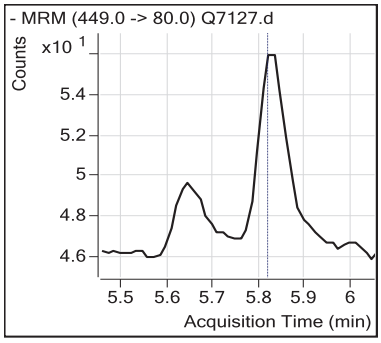
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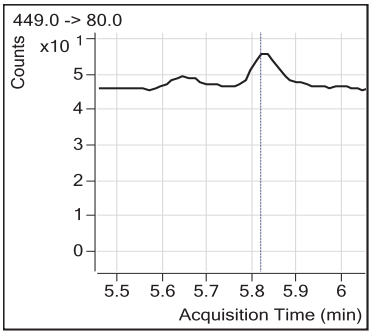


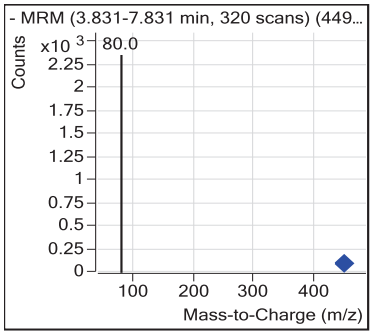




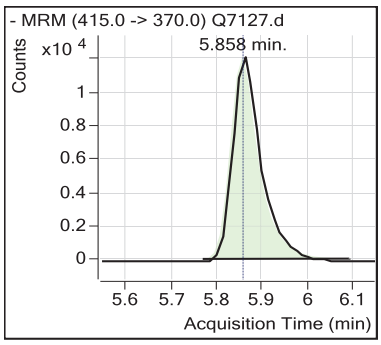
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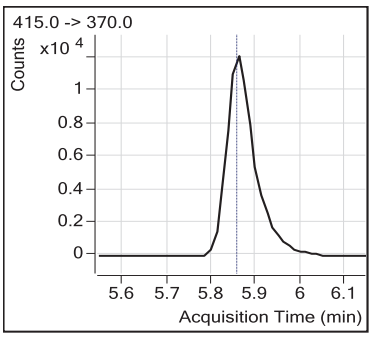


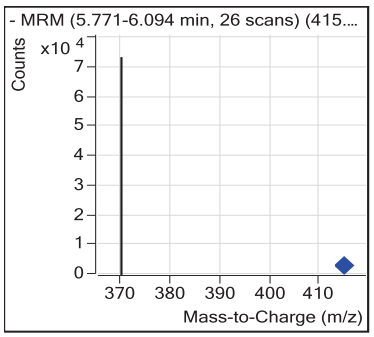




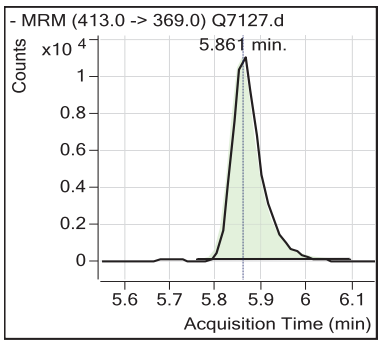
13C2-PFOA

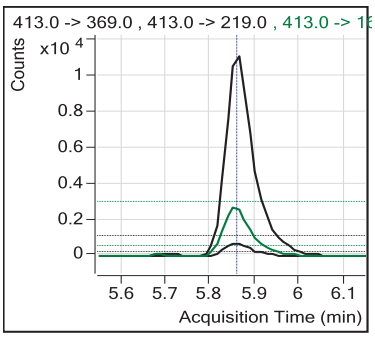


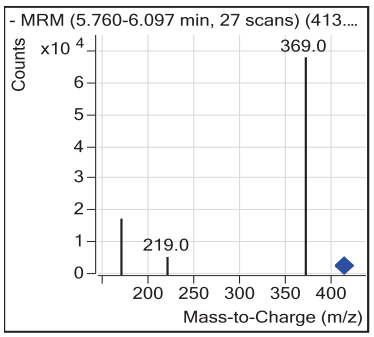




PFOA

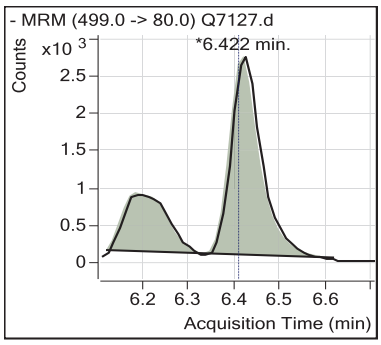


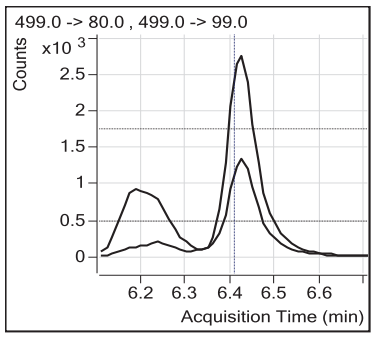


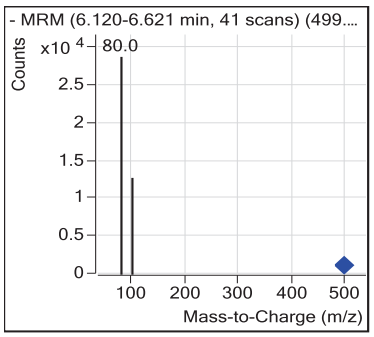


Perfluorinated Compounds by LC/MS/MS.

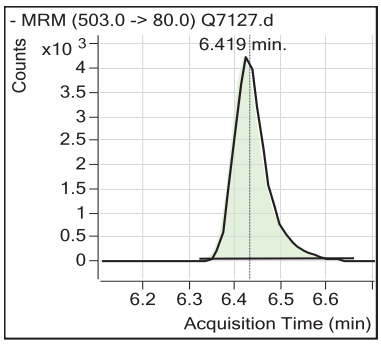
PFOS

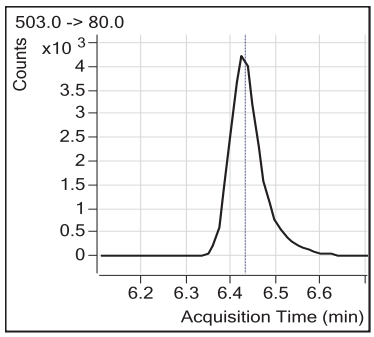


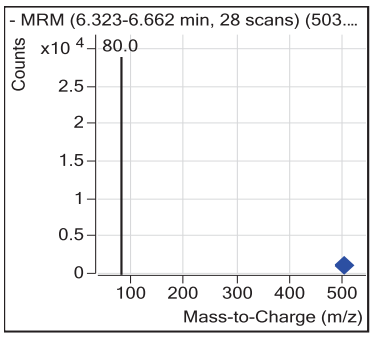




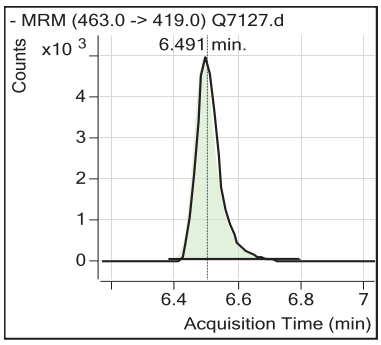
13C4-PFOS

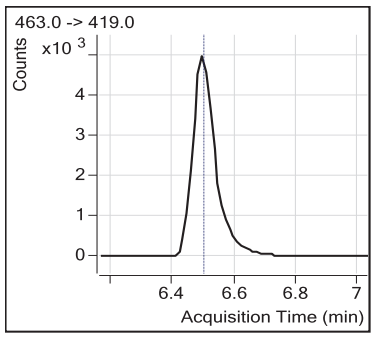


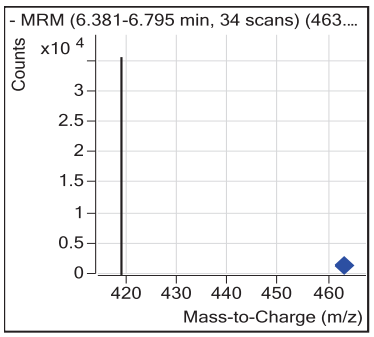




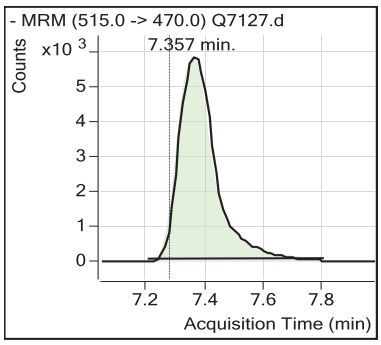
PFNA

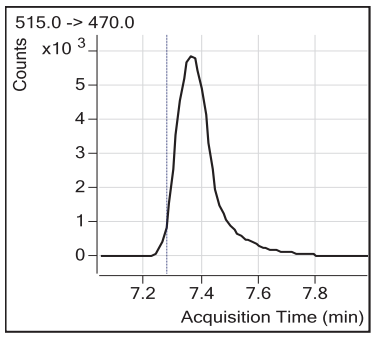


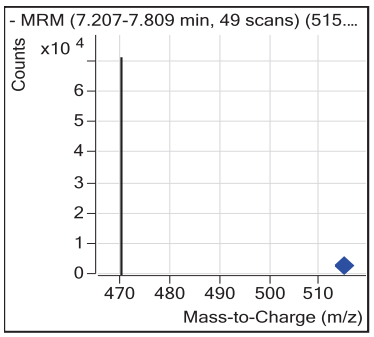




13C2-PFDA

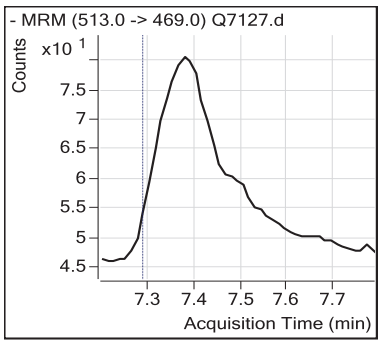


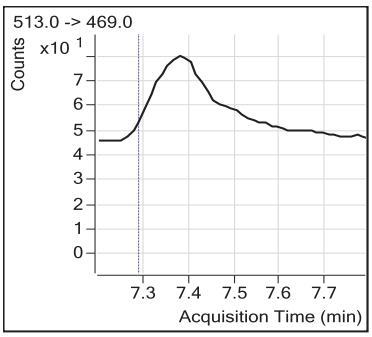


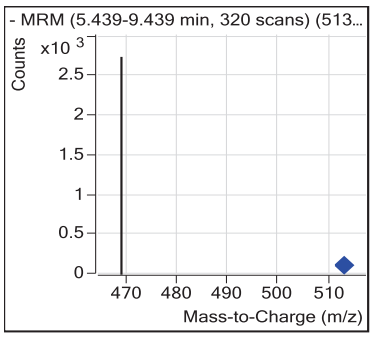


Perfluorinated Compounds by LC/MS/MS.

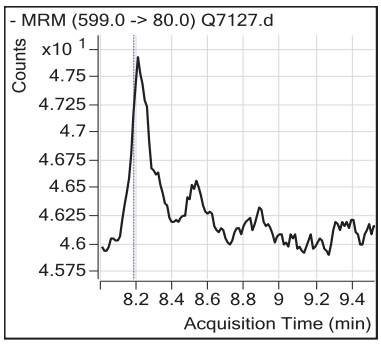
PFDA

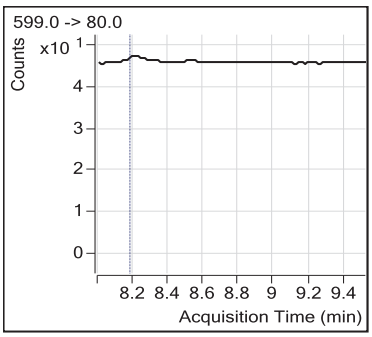


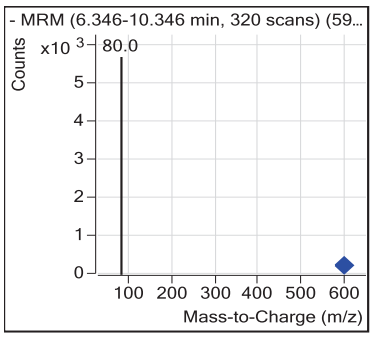




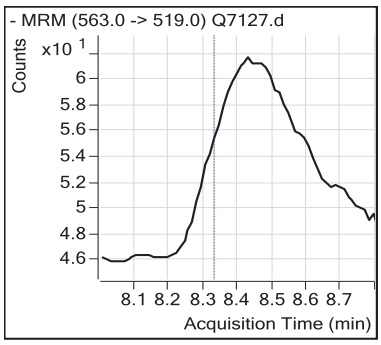
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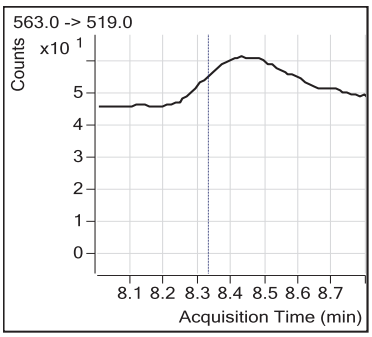


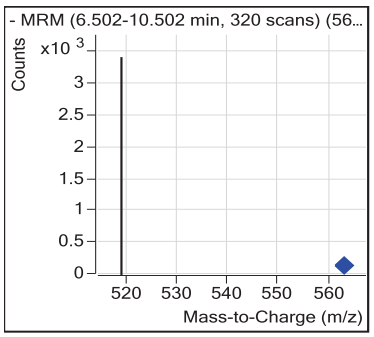




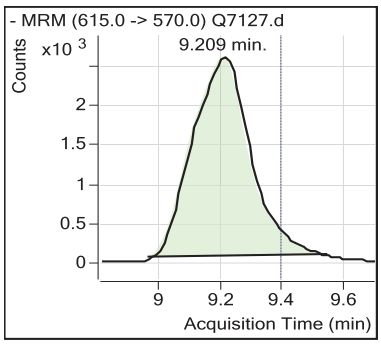
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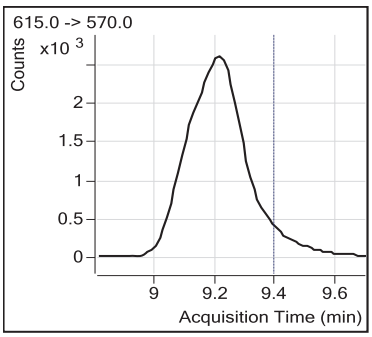


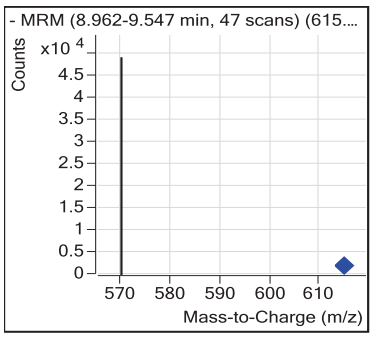




13C2-PFDoDA

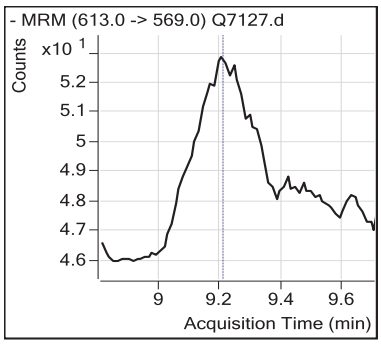


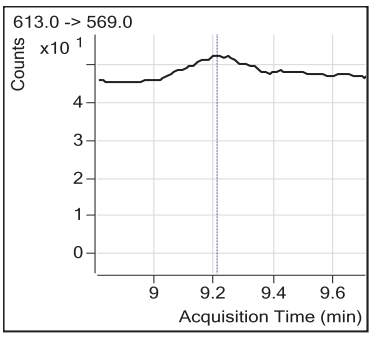


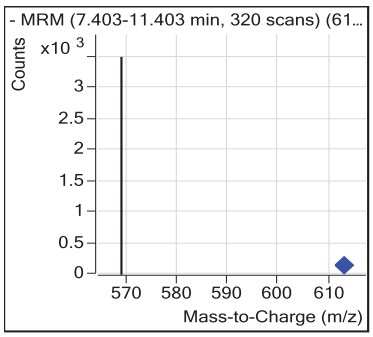


Perfluorinated Compounds by LC/MS/MS.

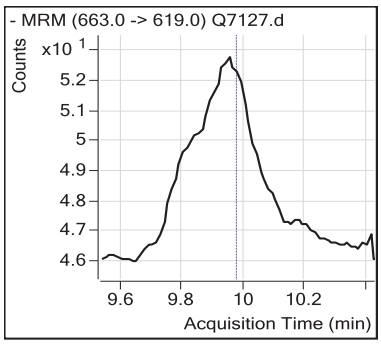
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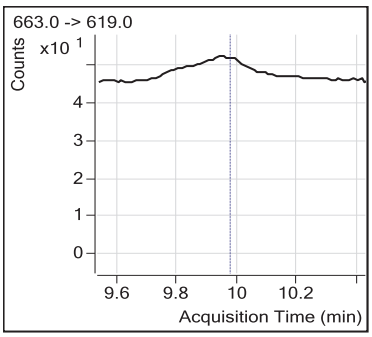


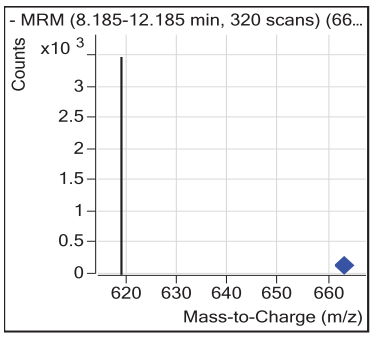




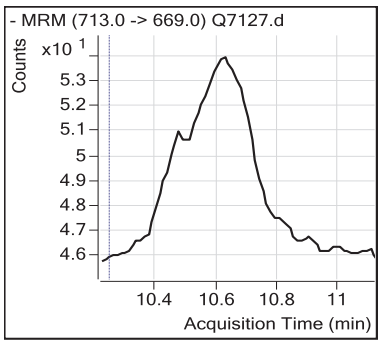
PFTrDA

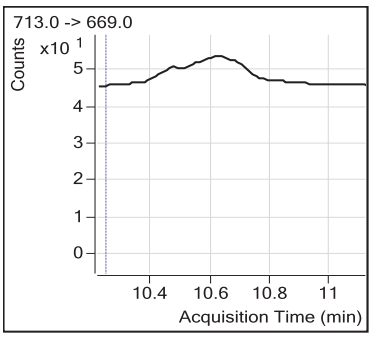


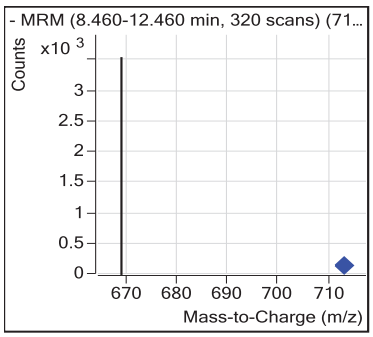




PFTeDA







Manual Integration Approval Summary

Sample Number: OP53158-BS
Lab FileID: Q7127.D
Injection Time: 09/23/14 12:21
Method: EPA 537 MOD
Analyst approved: 09/24/14 14:05 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.22	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.42	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

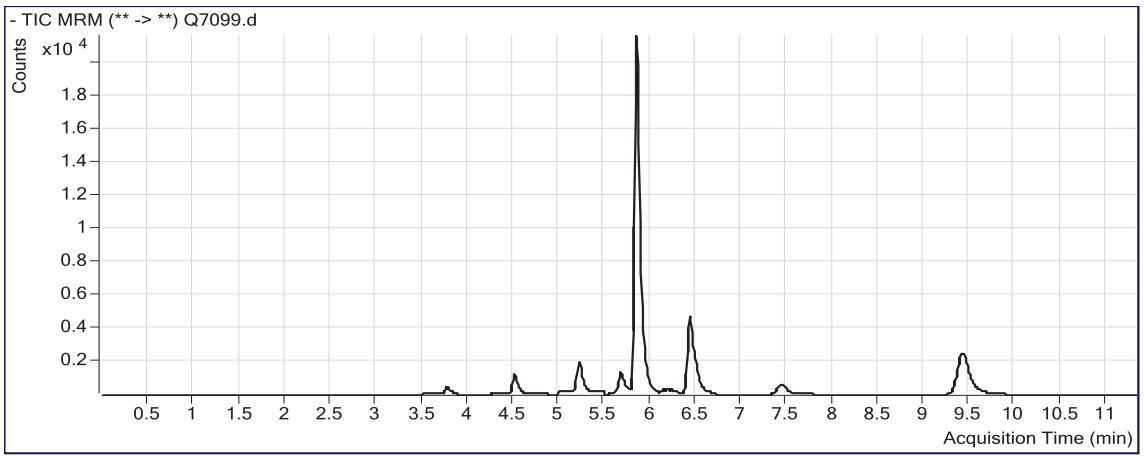
Data File	:	Q7099.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 12:22
Sample Name	:	OP53121-MS
Vial	:	Vial 5
Sample Info	:	OP53121,SQ240,60,,,1,5,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	47132	20.000	µg/L		-0.013
13C4-PFOS	6.419	503.0 -> 80.0	17734	20.000	µg/L		-0.013
13C2-PFDoDA	9.409	615.0 -> 570.0	23932	20.000	µg/L		0.013
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	3398	4.87	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 24.33%				
13C2-PFDA	7.420	515.0 -> 470.0	5132	3.54	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 17.68%				
Target Compounds							**Qvalue**
PFPeA	3.661	263.0 -> 219.0	208	0.774	µg/L	m	100
PFBS	3.778	299.0 -> 80.0	1079	3.846	µg/L		96
PFHxA	4.508	313.0 -> 269.0	1360	1.715	µg/L	m	99
PFHxS	5.205	399.0 -> 80.0	2113	4.804	µg/L	m	87
PFHpA	5.222	363.0 -> 319.0	3260	3.980	µg/L		96
PFOA	5.848	413.0 -> 369.0	36467	14.709	µg/L	m	75
PFOS	6.422	499.0 -> 80.0	3249	3.439	µg/L	m	100
PFNA	6.491	463.0 -> 419.0	4876	4.364	µg/L		100

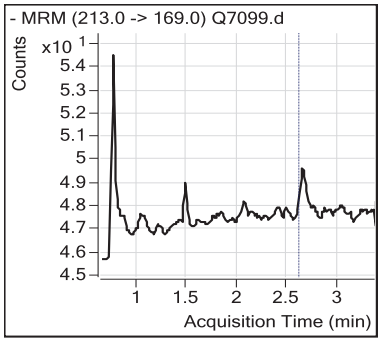
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

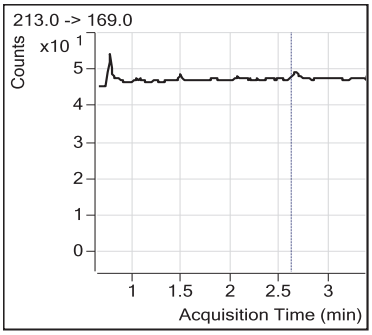
Perfluorinated Compounds by LC/MS/MS.

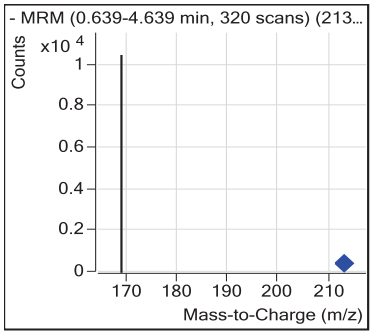
Data File	:	Q7099.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 12:22
Sample Name	:	OP53121-MS
Vial	:	Vial 5
Sample Info	:	OP53121,SQ240,60,,,1,5,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05



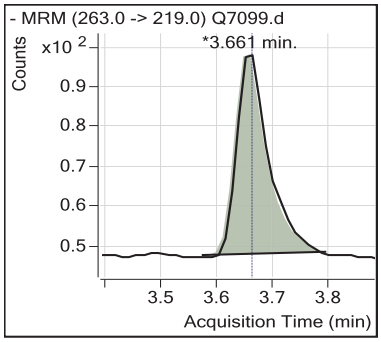
PFBA

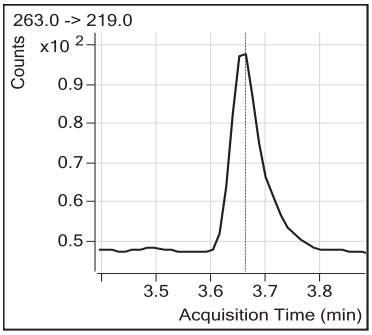


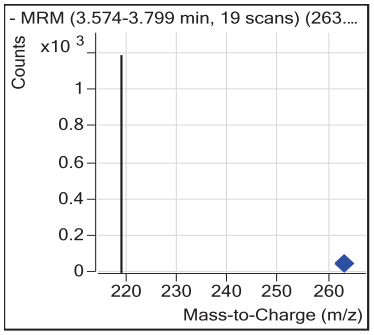




PFPeA

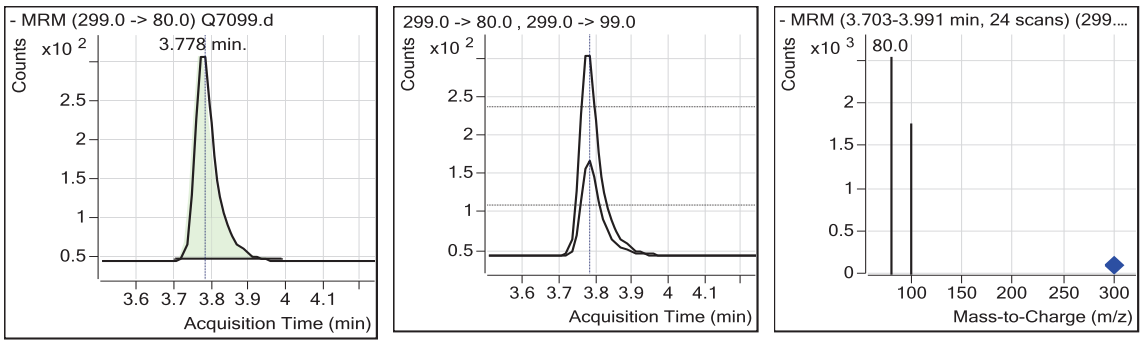




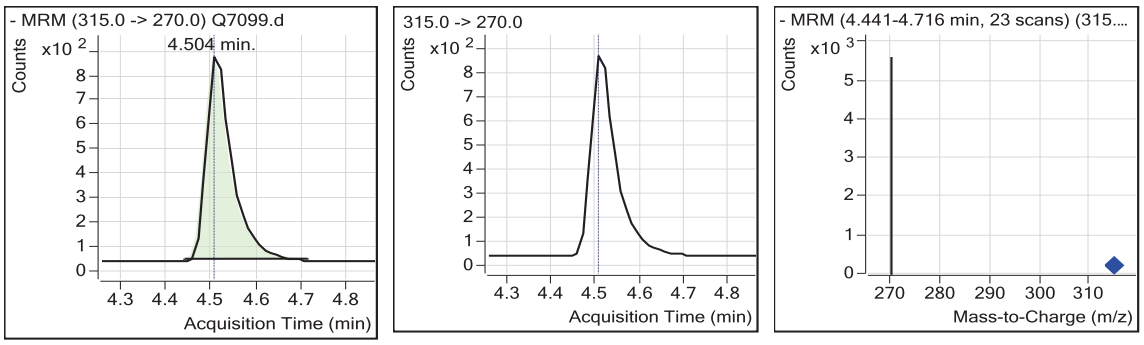


Perfluorinated Compounds by LC/MS/MS.

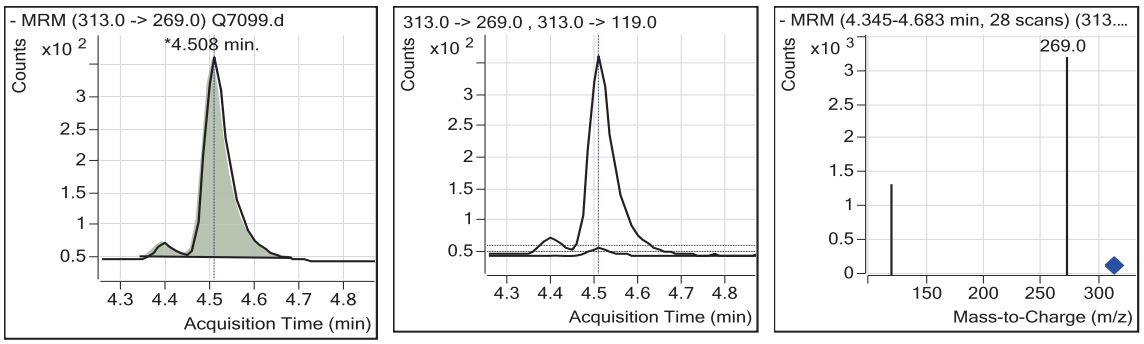
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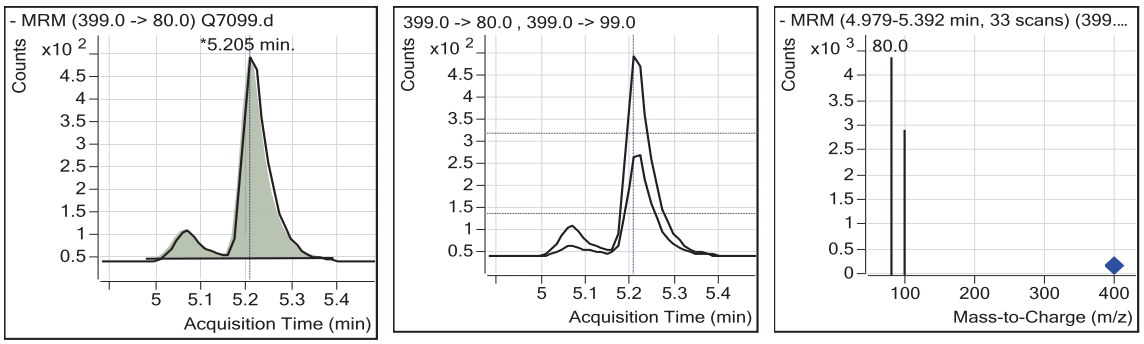
13C2-PFHxA



PFHxA

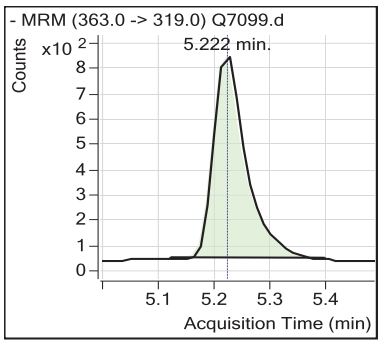


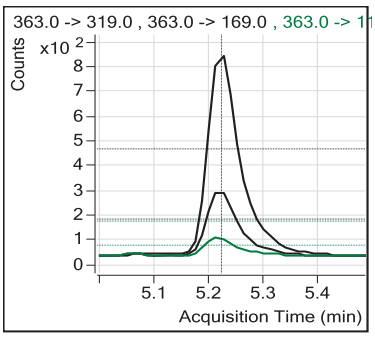
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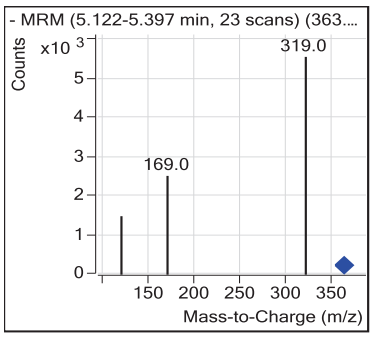


Perfluorinated Compounds by LC/MS/MS.

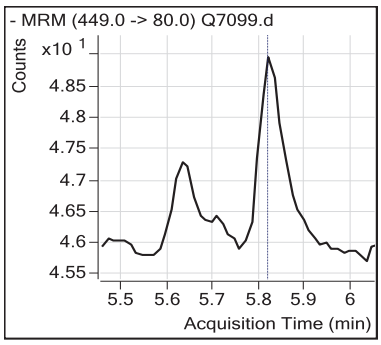
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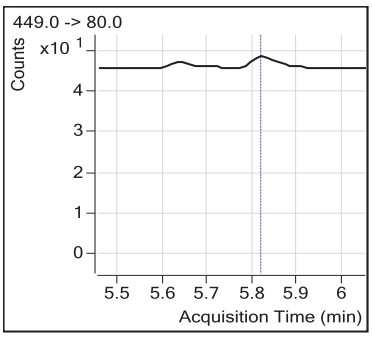


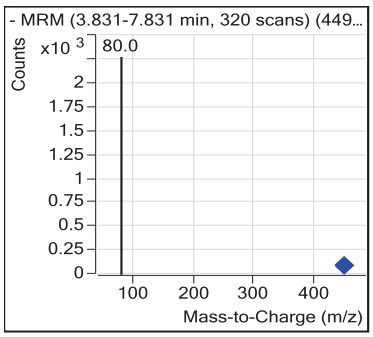




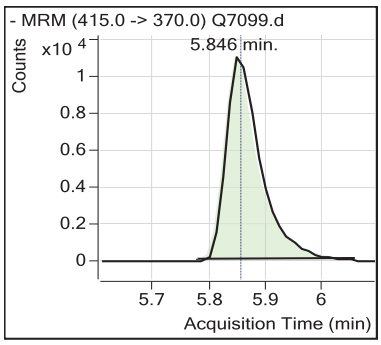
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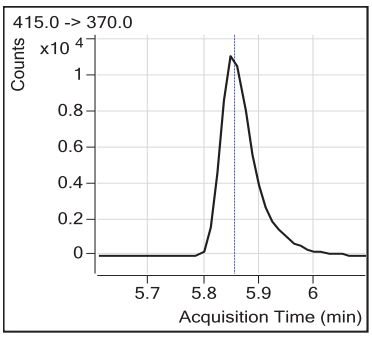


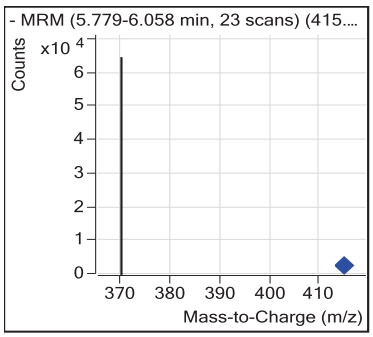




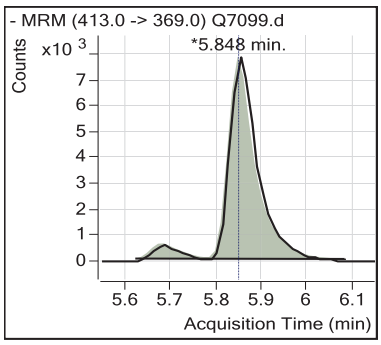
13C2-PFOA

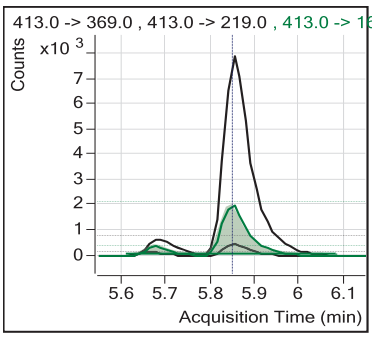


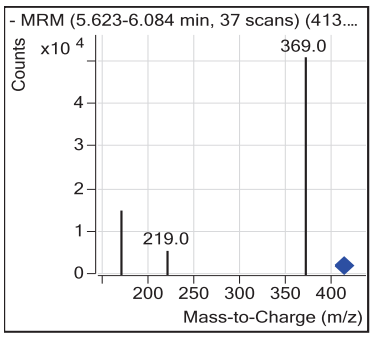




PFOA

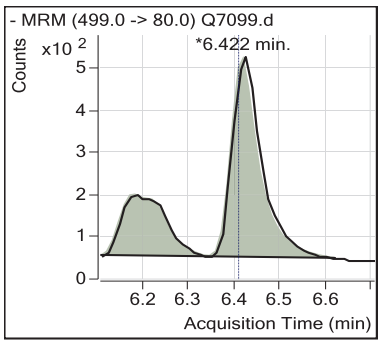


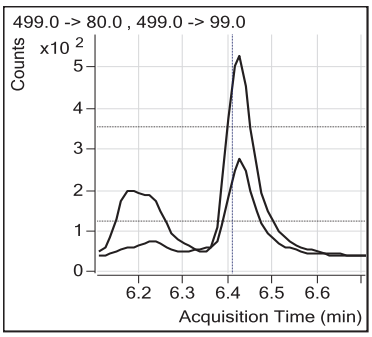


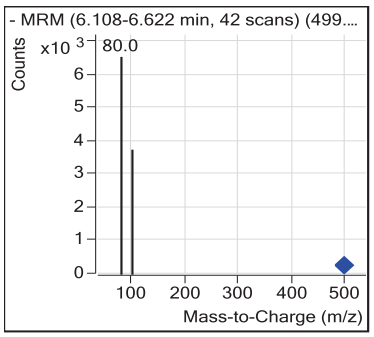


Perfluorinated Compounds by LC/MS/MS.

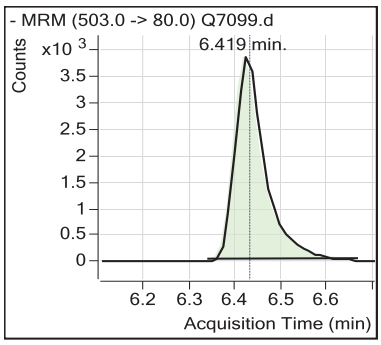
PFOS

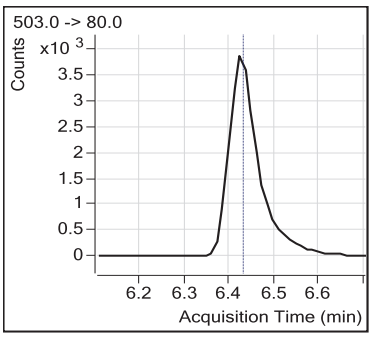


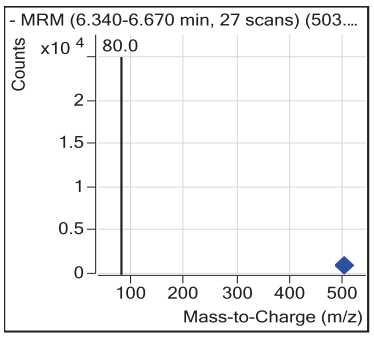




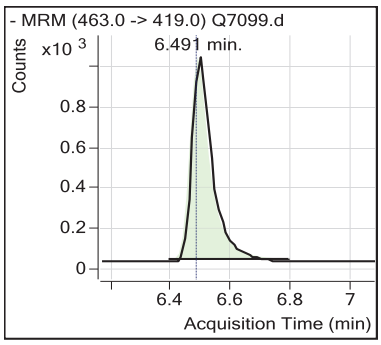
13C4-PFOS

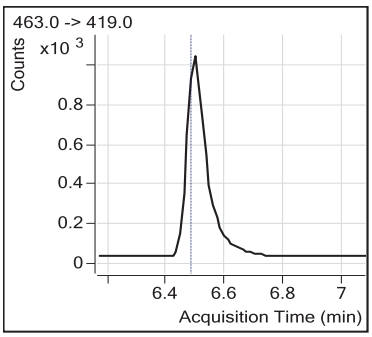


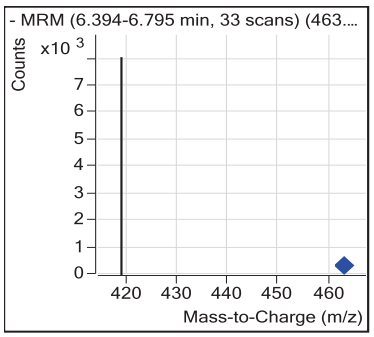




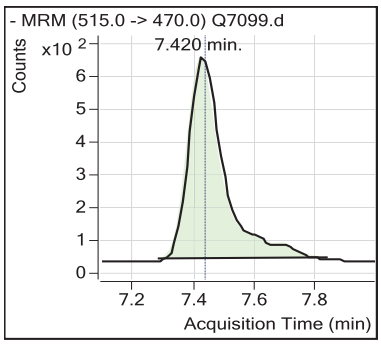
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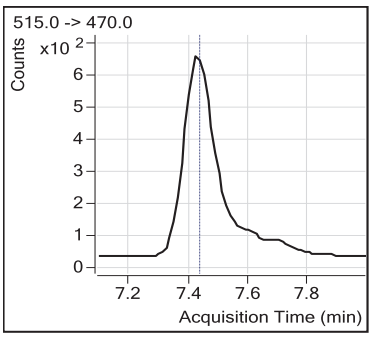


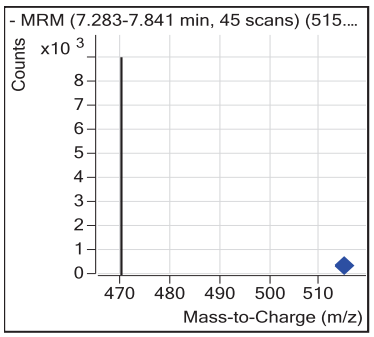




13C2-PFDA

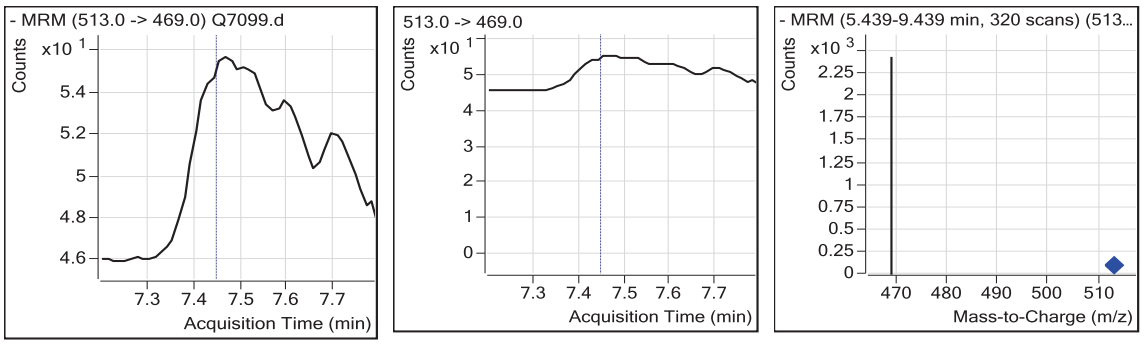




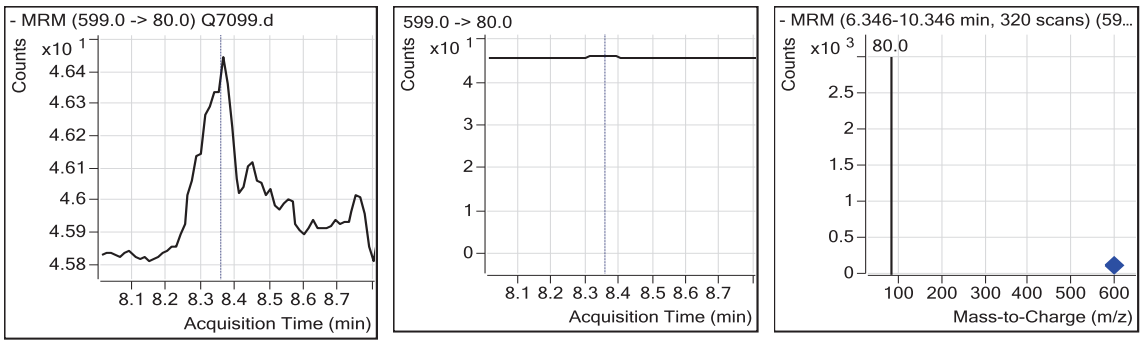


Perfluorinated Compounds by LC/MS/MS.

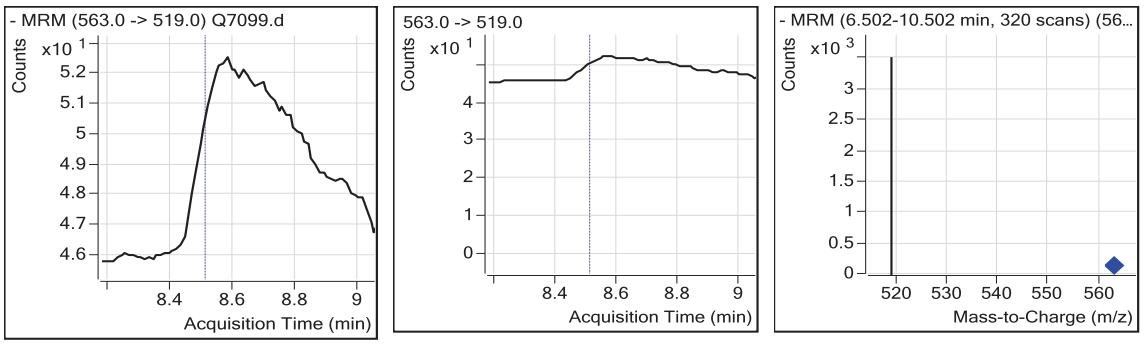
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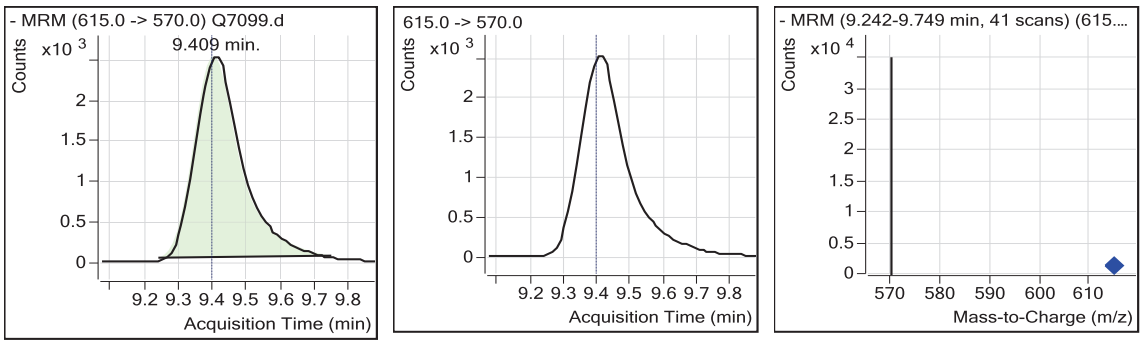
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PFUnDA

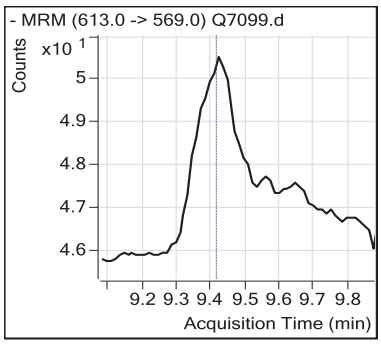


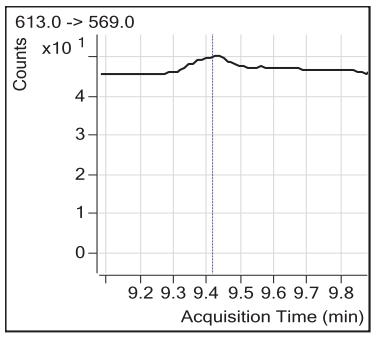
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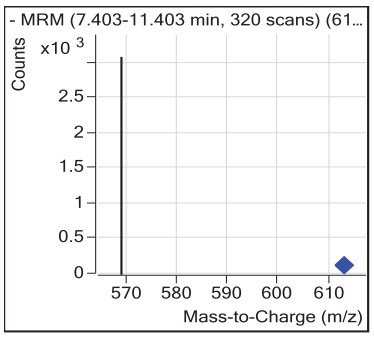


Perfluorinated Compounds by LC/MS/MS.

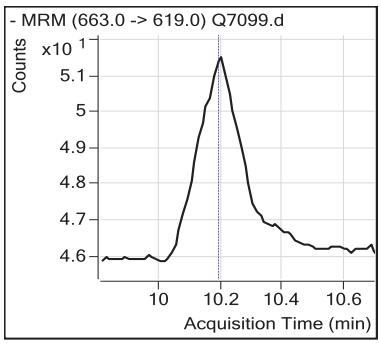
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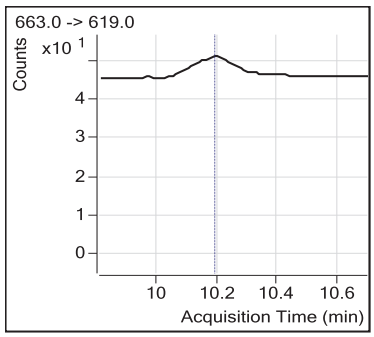


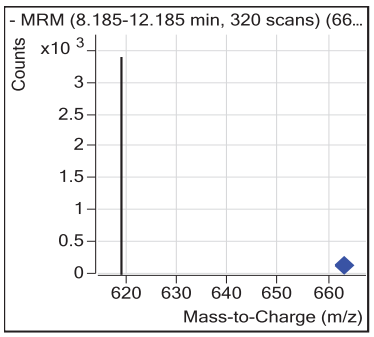




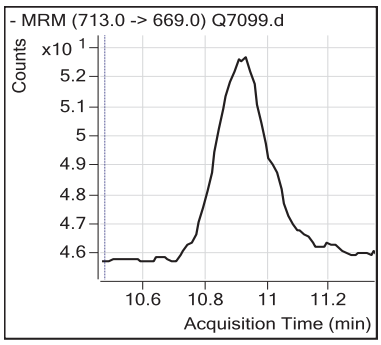
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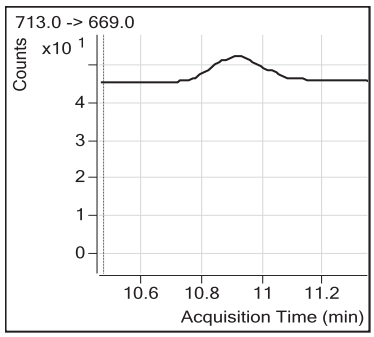


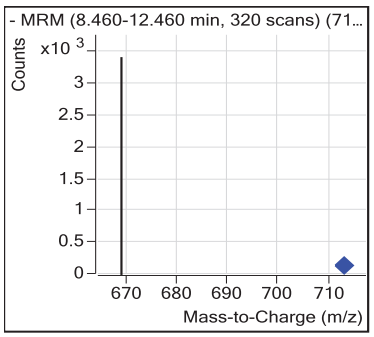




PFTeDA







Manual Integration Approval Summary

Sample Number: OP53121-MS
Lab FileID: Q7099.D
Injection Time: 09/22/14 12:22

Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoropentanoic acid	2706-90-3		3.66	Split peak
Perfluorohexanoic acid	307-24-4		4.51	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.42	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:02

Perfluorinated Compounds by LC/MS/MS.

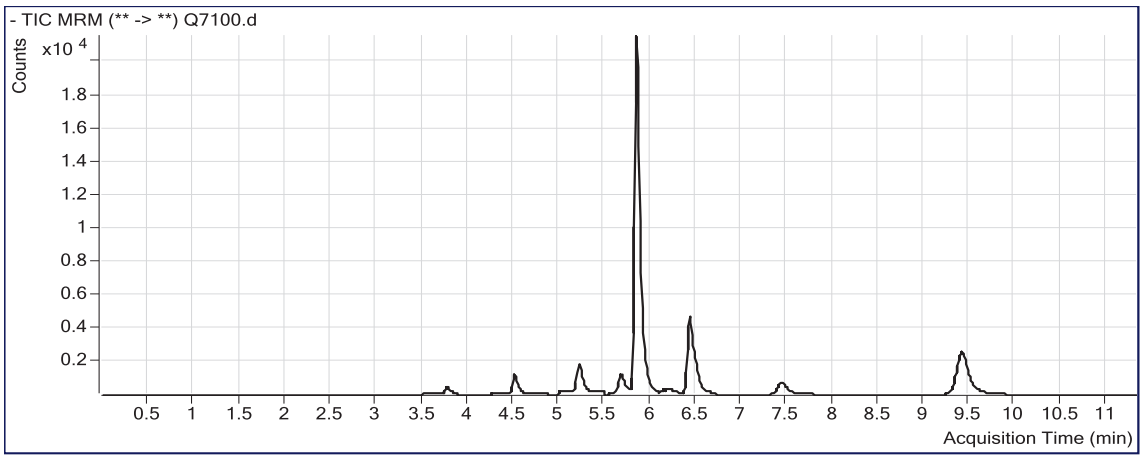
Data File	:	Q7100.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 12:42
Sample Name	:	OP53121-MSD
Vial	:	Vial 6
Sample Info	:	OP53121,SQ240,60,,,1,5,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	46617	20.000	µg/L		-0.013
13C4-PFOS	6.419	503.0 -> 80.0	17693	20.000	µg/L		-0.013
13C2-PFDoDA	9.397	615.0 -> 570.0	23983	20.000	µg/L		0.000
System Monitoring Compounds							
13C2-PFHxA	4.504	315.0 -> 270.0	3162	4.58	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 22.89%				
13C2-PFDA	7.420	515.0 -> 470.0	6190	4.26	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 21.28%				
Target Compounds							**Qvalue**
PFPeA	3.649	263.0 -> 219.0	219	0.826	µg/L	m	100
PFBS	3.765	299.0 -> 80.0	1059	3.780	µg/L		97
PFHxA	4.508	313.0 -> 269.0	1306	1.665	µg/L	m	99
PFHxS	5.205	399.0 -> 80.0	2016	4.594	µg/L	m	88
PFHpA	5.222	363.0 -> 319.0	3086	3.806	µg/L		99
PFOA	5.848	413.0 -> 369.0	36797	15.019	µg/L	m	76
PFOS	6.422	499.0 -> 80.0	3278	3.477	µg/L	m	99
PFNA	6.491	463.0 -> 419.0	4927	4.458	µg/L		100

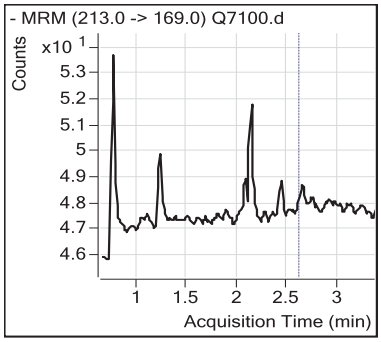
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

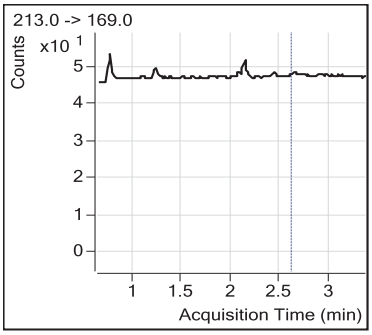
Perfluorinated Compounds by LC/MS/MS.

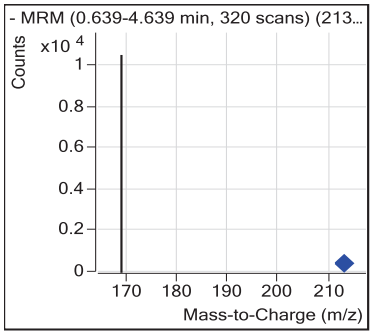
Data File	:	Q7100.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 12:42
Sample Name	:	OP53121-MSD
Vial	:	Vial 6
Sample Info	:	OP53121,SQ240,60,,,1,5,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05



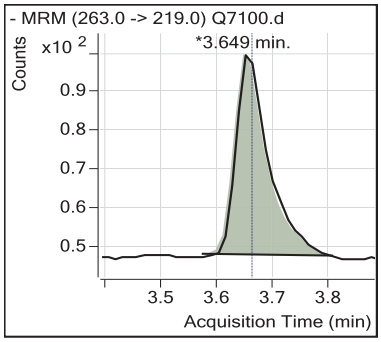
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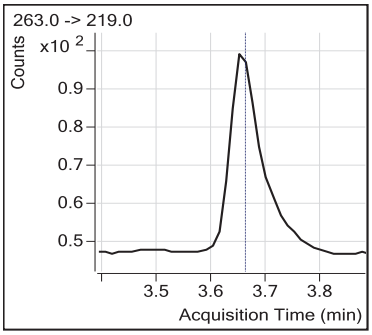


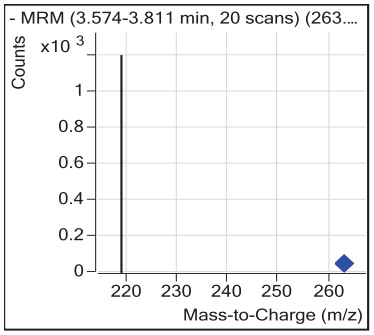




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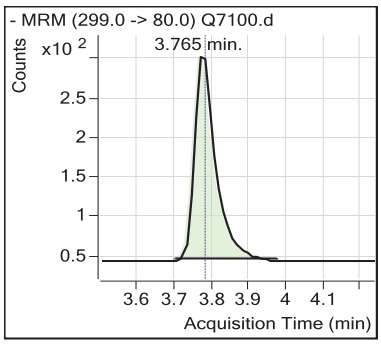


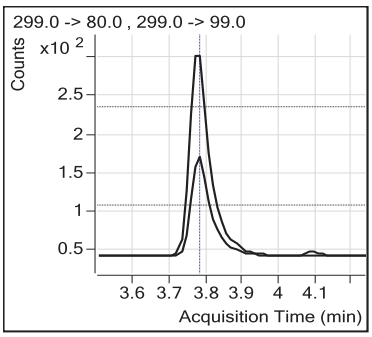


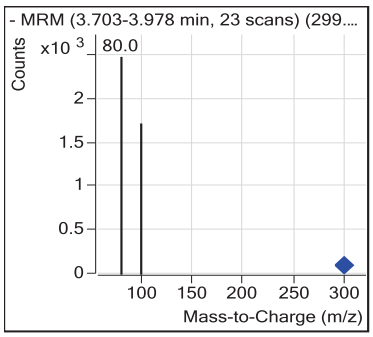


Perfluorinated Compounds by LC/MS/MS.

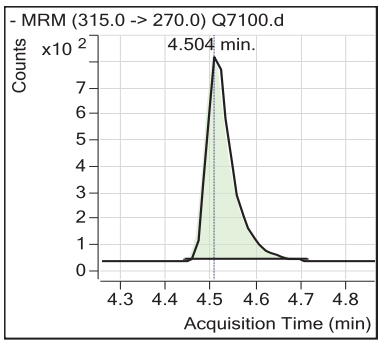
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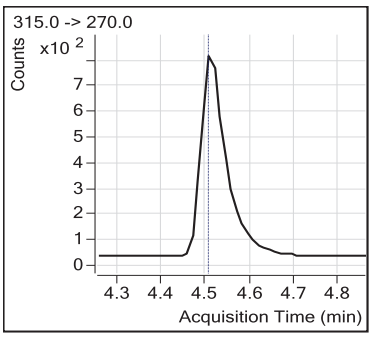


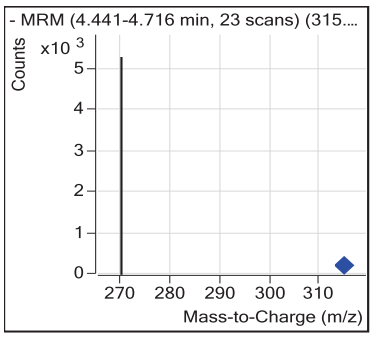




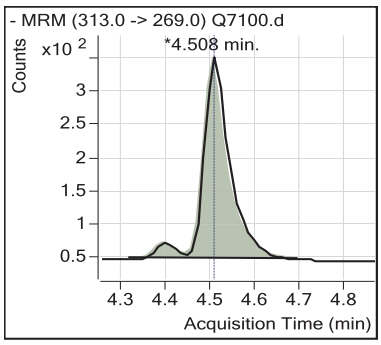
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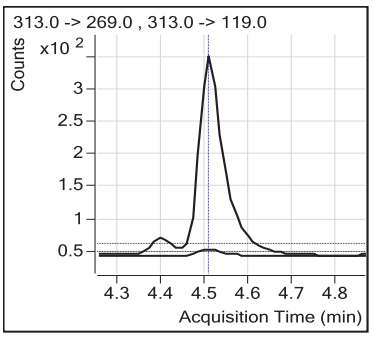


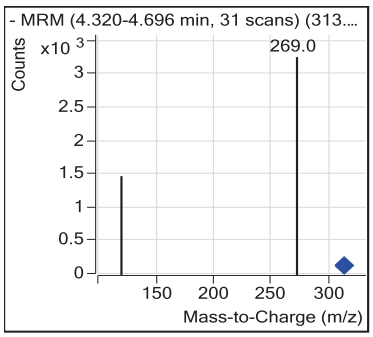




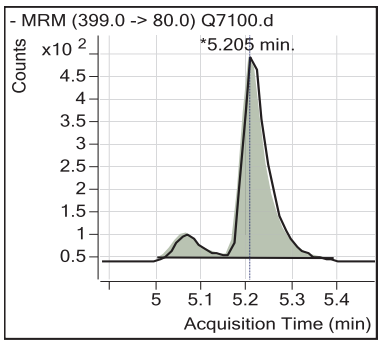
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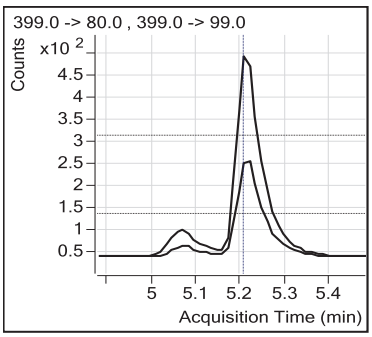


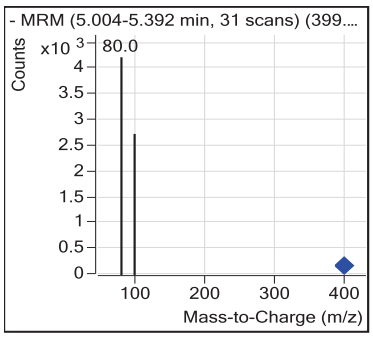




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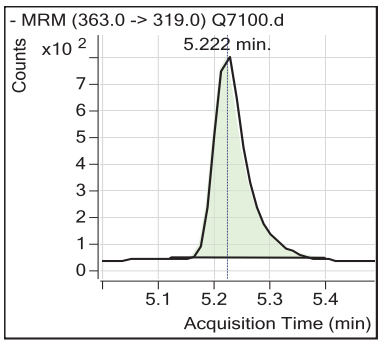


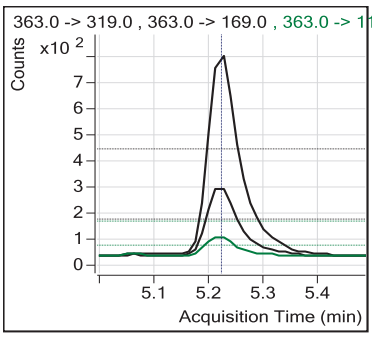


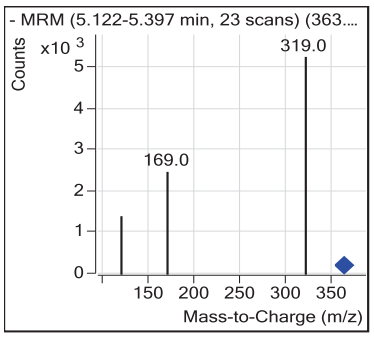


Perfluorinated Compounds by LC/MS/MS.

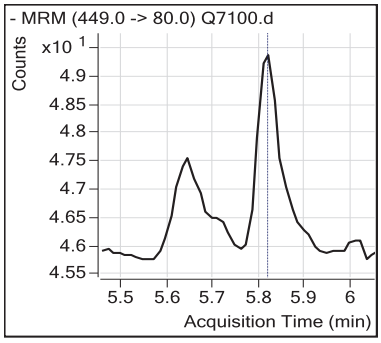
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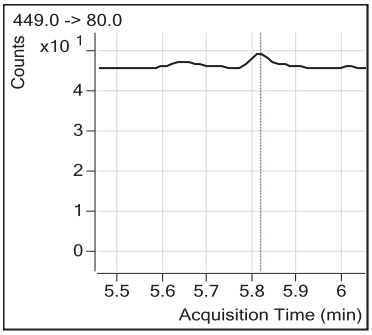


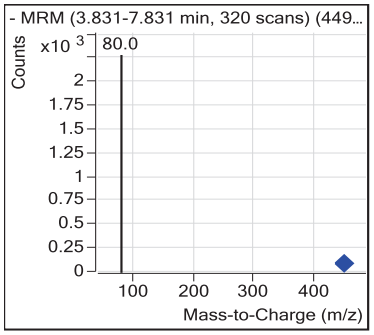




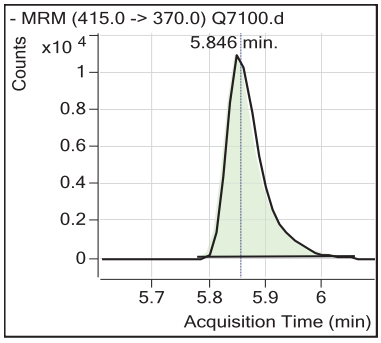
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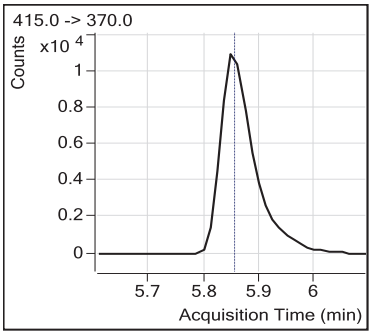


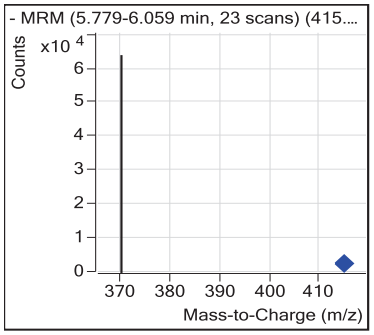




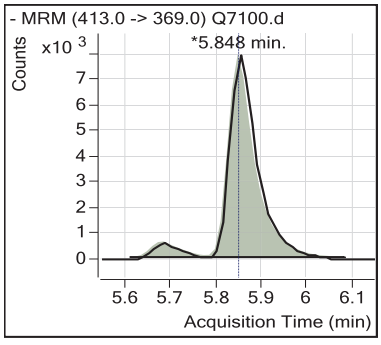
13C2-PFOA

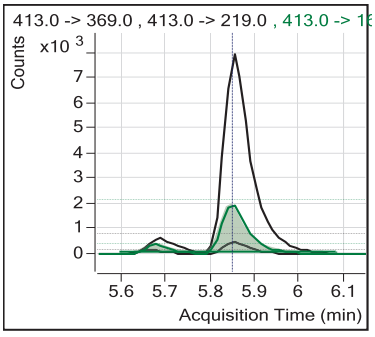


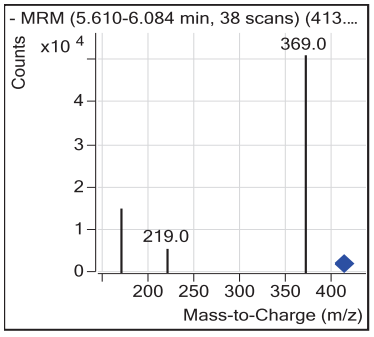




PFOA

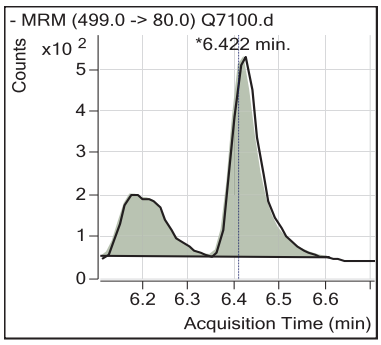


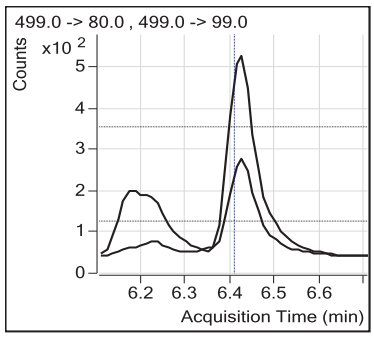


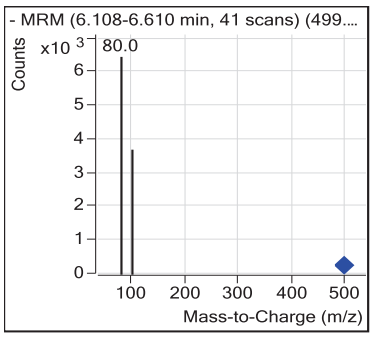


Perfluorinated Compounds by LC/MS/MS.

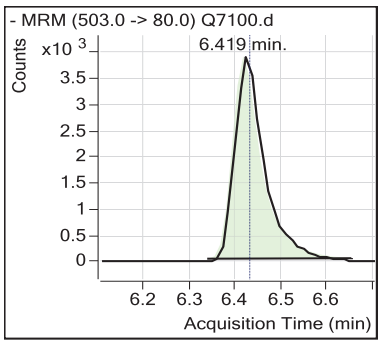
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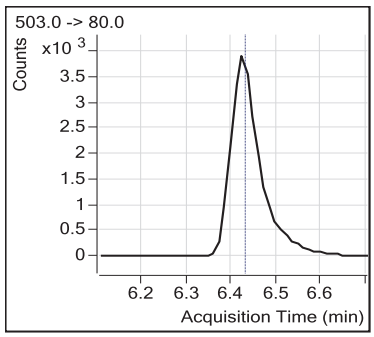


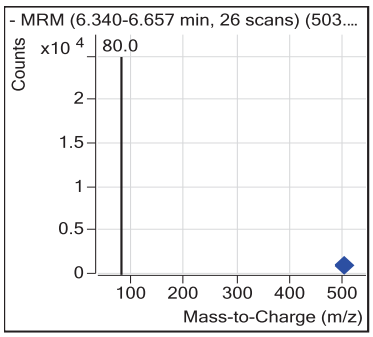




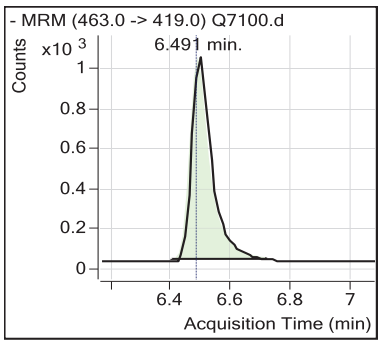
13C4-PFOS

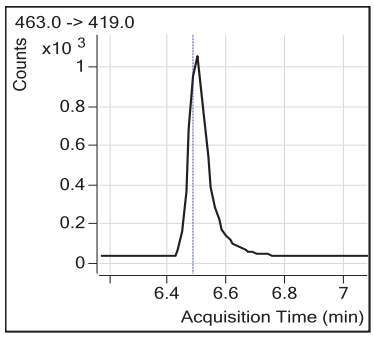


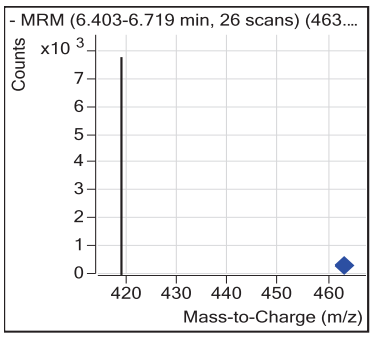




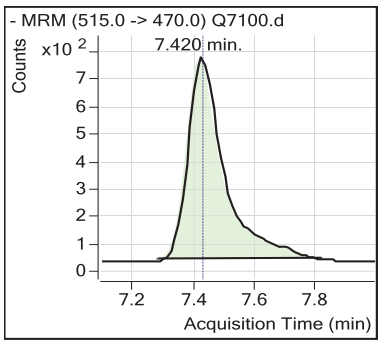
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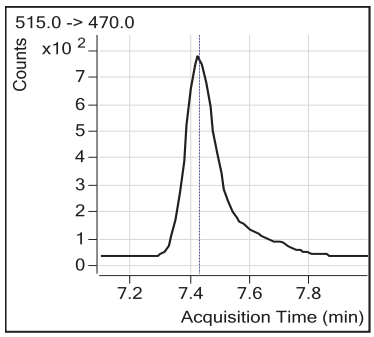


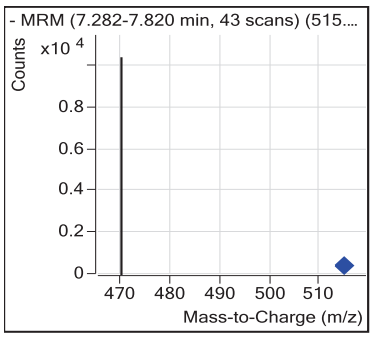




13C2-PFDA

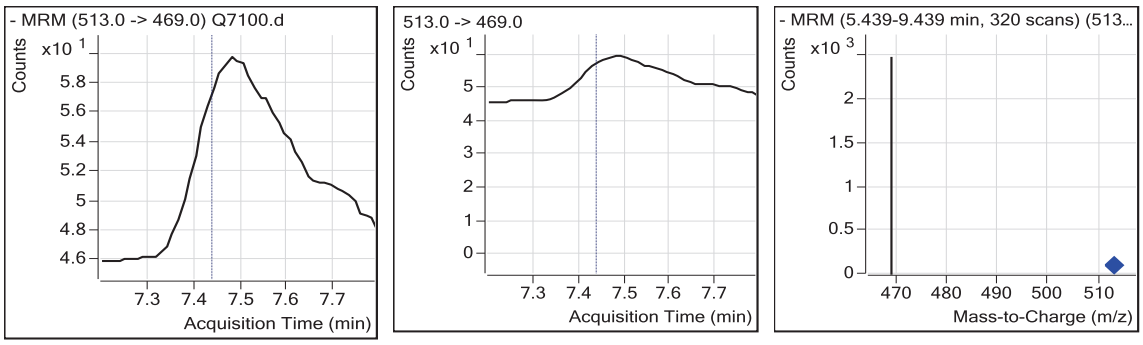




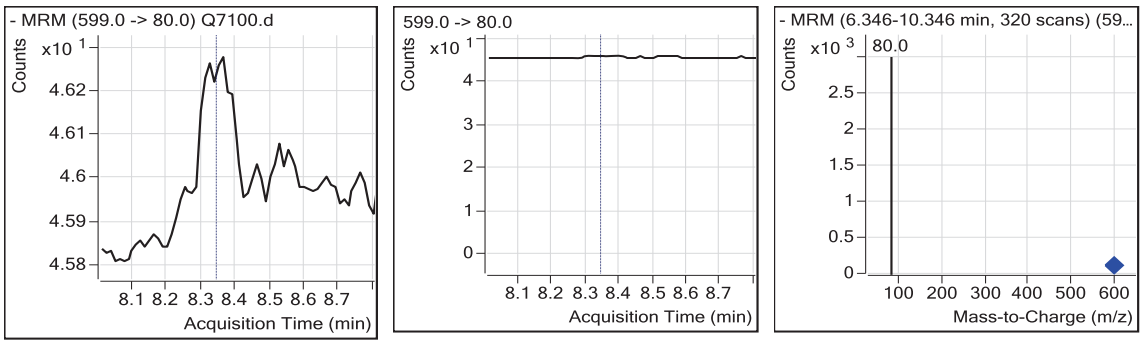


Perfluorinated Compounds by LC/MS/MS.

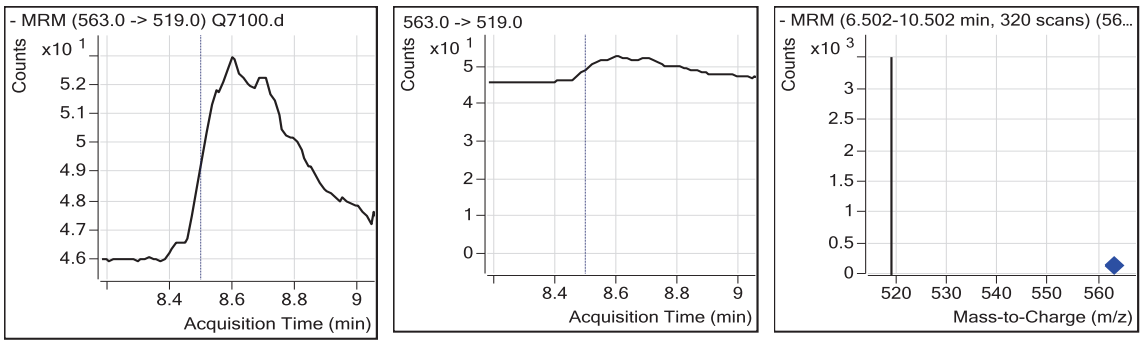
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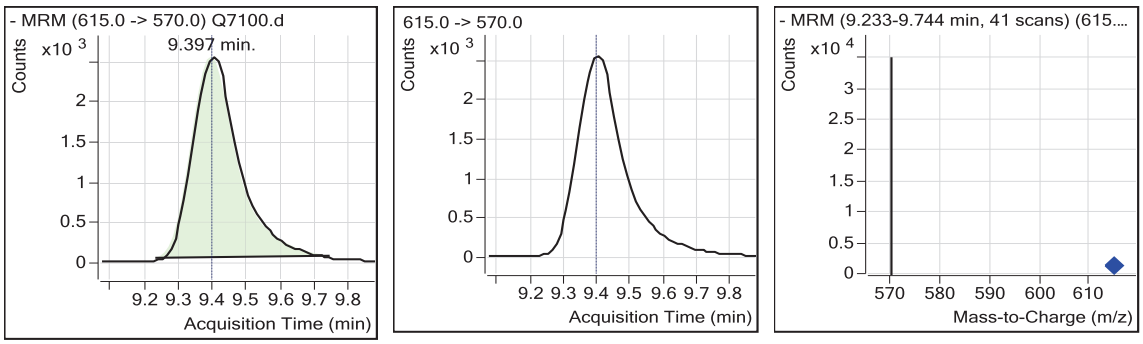
PFDS



PFUnDA

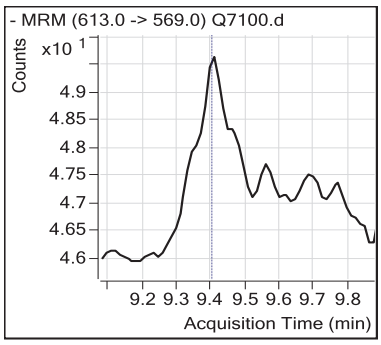


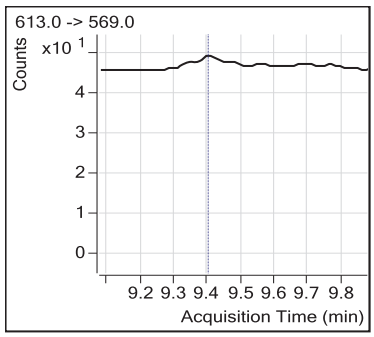
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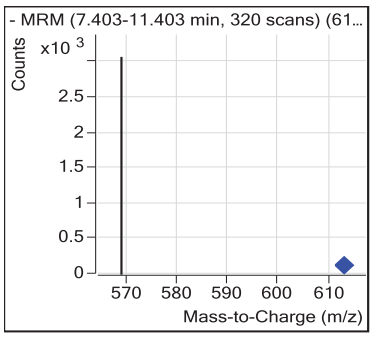


Perfluorinated Compounds by LC/MS/MS.

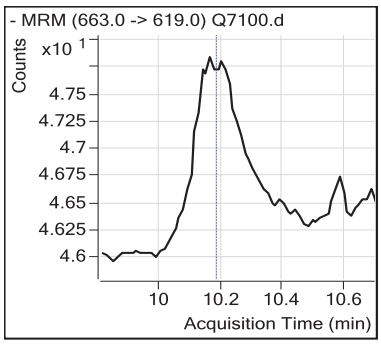
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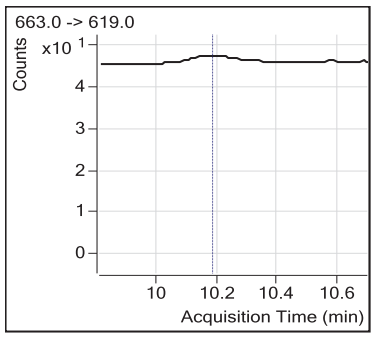


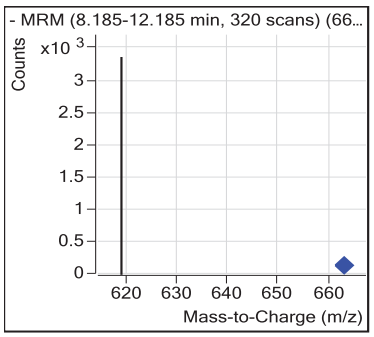




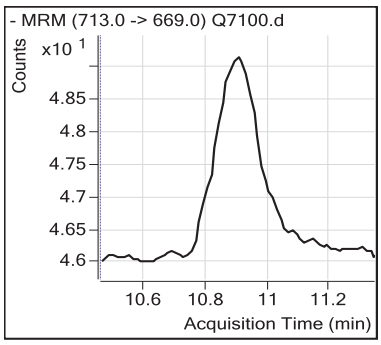
PFTrDA

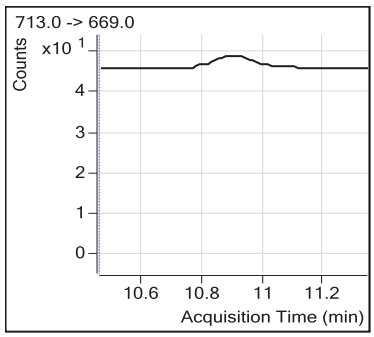


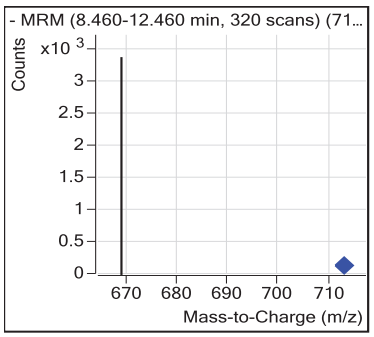




PFTeDA







Manual Integration Approval Summary

Sample Number: OP53121-MSD
Lab FileID: Q7100.D
Injection Time: 09/22/14 12:42
Method: EPA 537 MOD
Analyst approved: 09/24/14 11:02 Mike Eger
Supervisor approved: 09/24/14 16:02 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluoropentanoic acid	2706-90-3		3.65	Split peak
Perfluorohexanoic acid	307-24-4		4.51	Split peak
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanoic acid	335-67-1		5.85	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.42	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

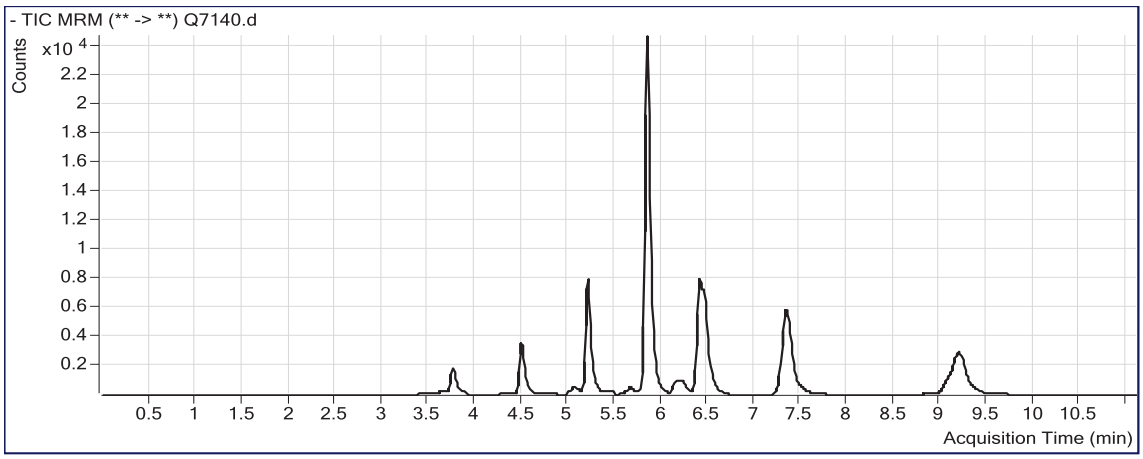
Data File	:	Q7140.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 16:37
Sample Name	:	OP53158-MS
Vial	:	Vial 14
Sample Info	:	OP53158,SQ241,60,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	46796	20.000	µg/L		-0.013
13C4-PFOS	6.407	503.0 -> 80.0	17241	20.000	µg/L		-0.025
13C2-PFDoDA	9.184	615.0 -> 570.0	32286	20.000	µg/L		-0.213
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	14060	20.28	µg/L		-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 101.39%				
13C2-PFDA	7.332	515.0 -> 470.0	46029	23.51	µg/L		-0.100
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 117.54%				
Target Compounds							**Qvalue**
PFBA	1.751	213.0 -> 169.0	832	1.531	µg/L		100
PFPeA	3.711	263.0 -> 219.0	315	1.184	µg/L		100
PFBS	3.753	299.0 -> 80.0	4911	17.996	µg/L		97
PFHxA	4.495	313.0 -> 269.0	437	0.555	µg/L		91
PFHxS	5.205	399.0 -> 80.0	9112	21.309	µg/L	m	88
PFHpA	5.210	363.0 -> 319.0	14044	17.894	µg/L		98
PFOA	5.836	413.0 -> 369.0	47963	19.777	µg/L		82
PFOS	6.397	499.0 -> 80.0	15759	17.836	µg/L	m	95
PFNA	6.466	463.0 -> 419.0	24617	22.684	µg/L		100

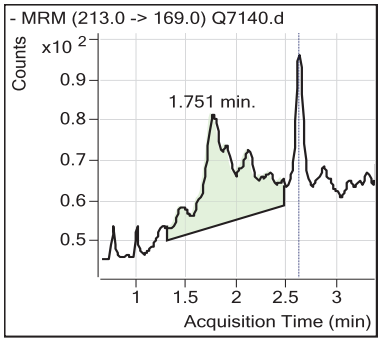
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

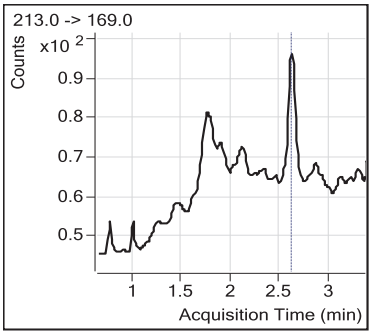
Perfluorinated Compounds by LC/MS/MS.

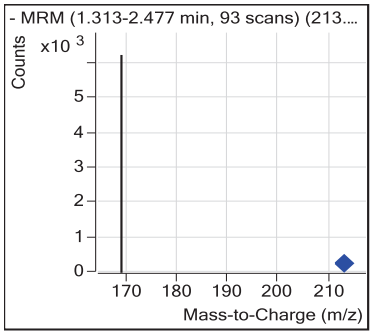
Data File	:	Q7140.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 16:37
Sample Name	:	OP53158-MS
Vial	:	Vial 14
Sample Info	:	OP53158,SQ241,60,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



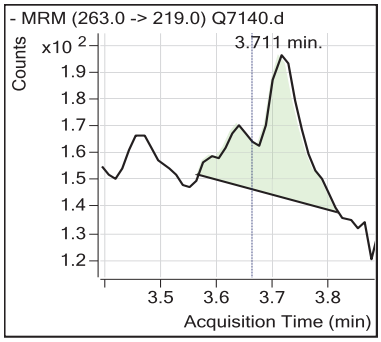
PFBA

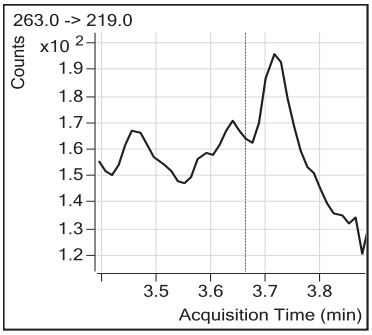


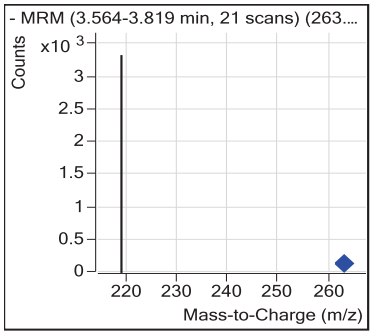




PFPeA

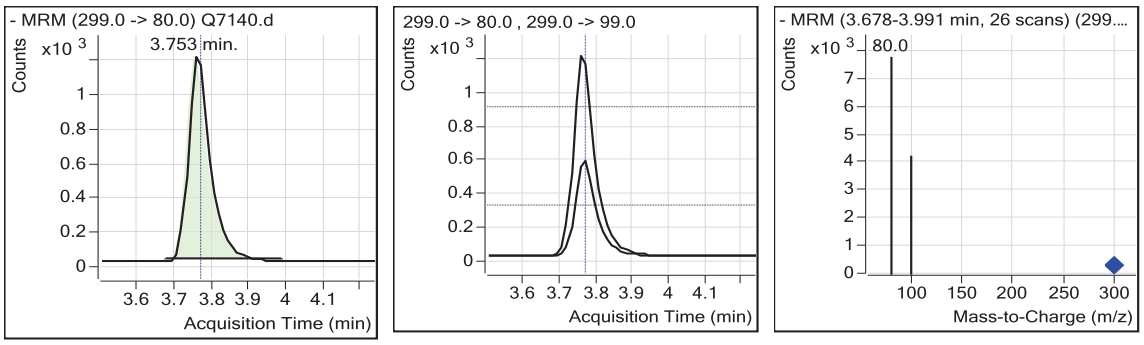




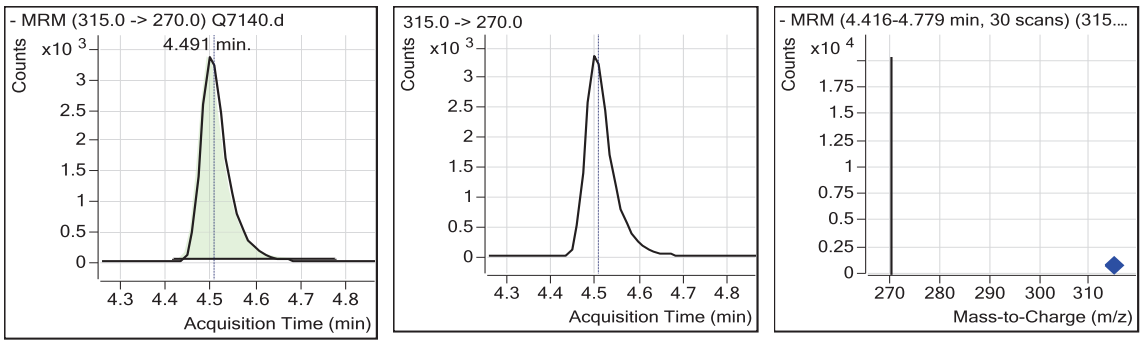


Perfluorinated Compounds by LC/MS/MS.

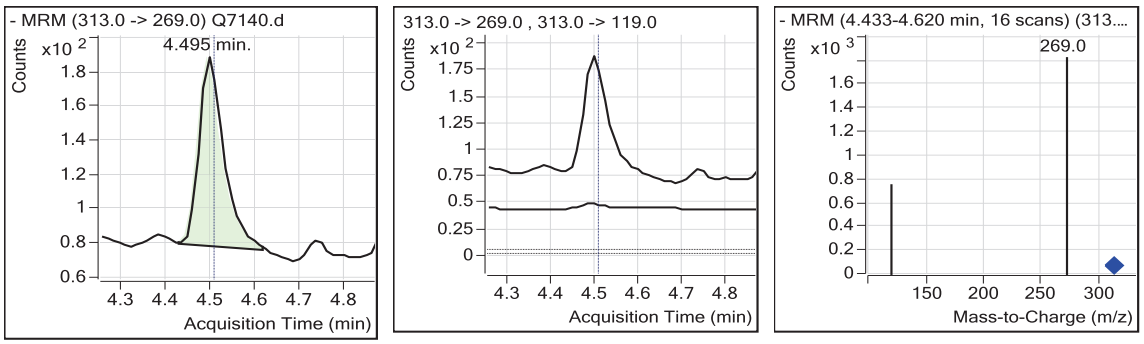
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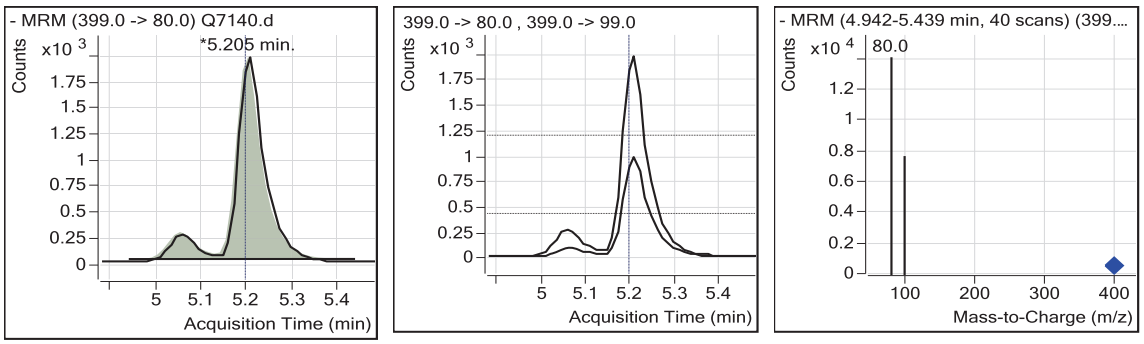
13C2-PFHxA



PFHxA

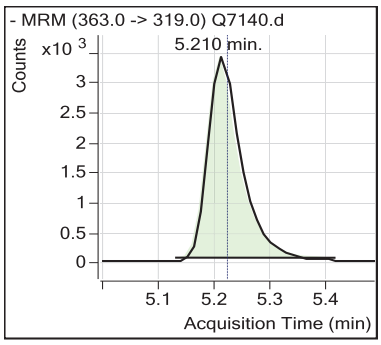


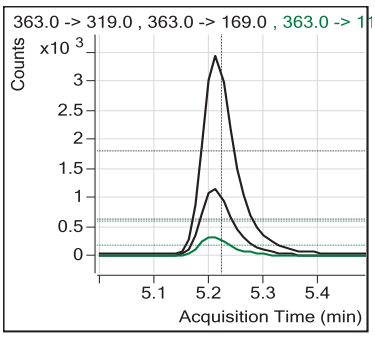
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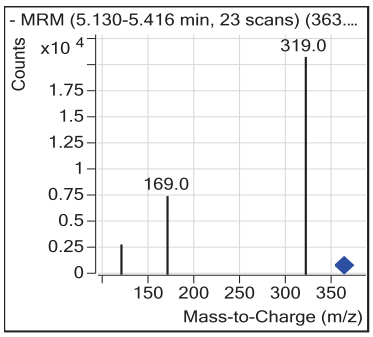


Perfluorinated Compounds by LC/MS/MS.

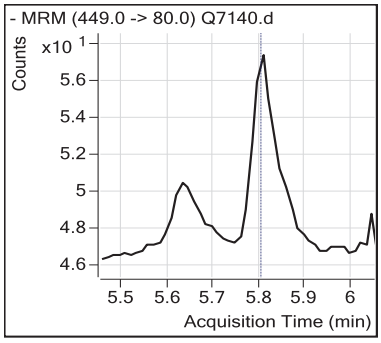
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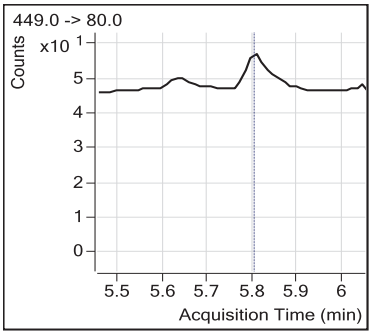


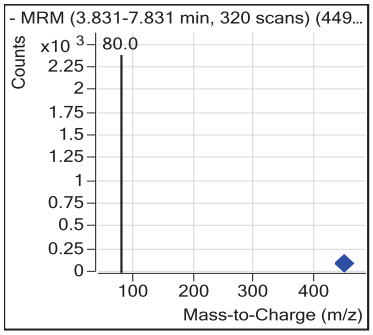




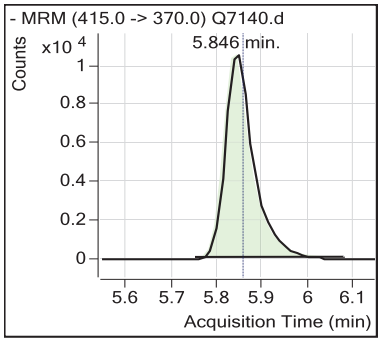
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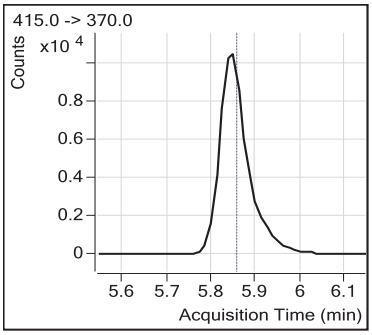


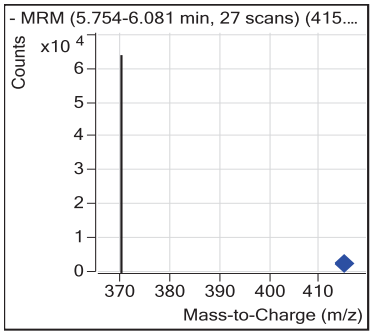




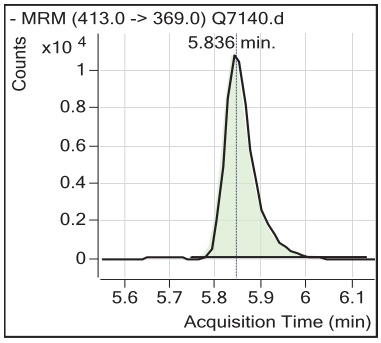
13C2-PFOA

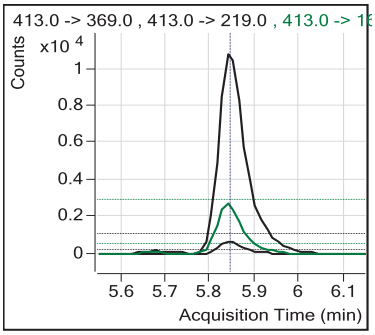


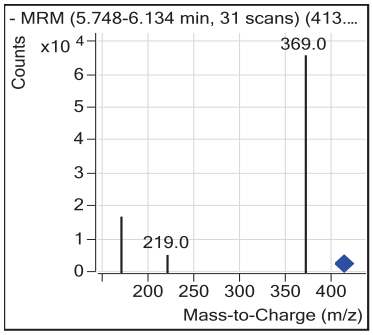




PFOA

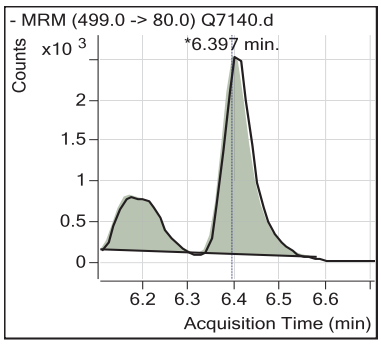


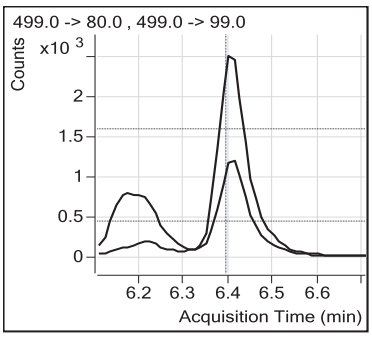


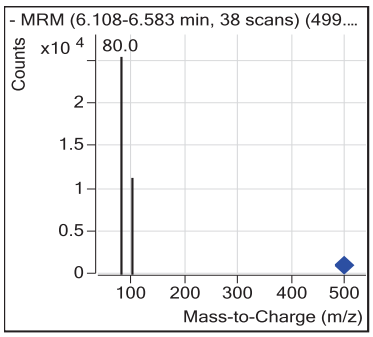


Perfluorinated Compounds by LC/MS/MS.

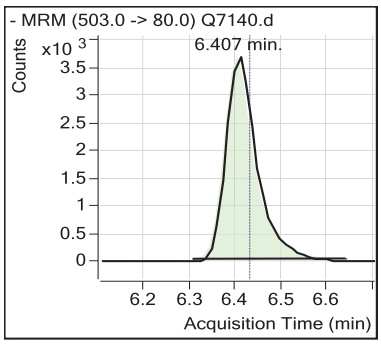
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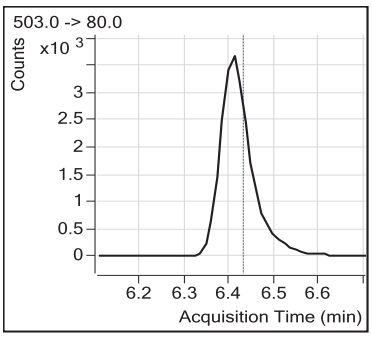


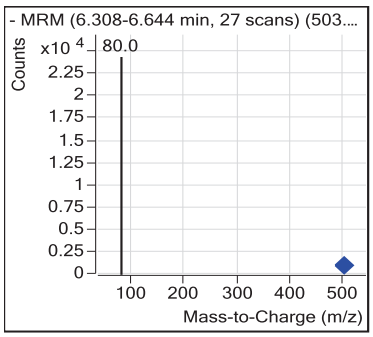




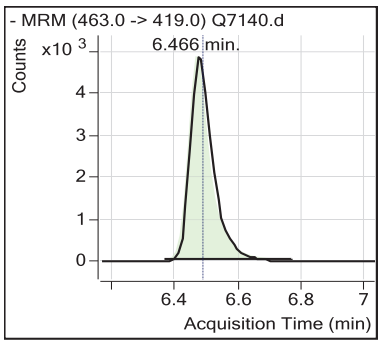
13C4-PFOS

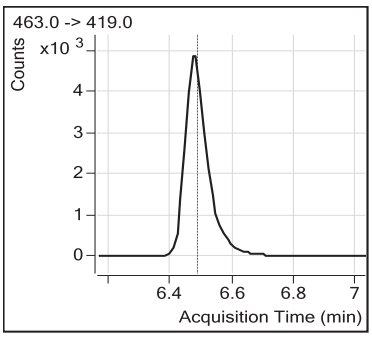


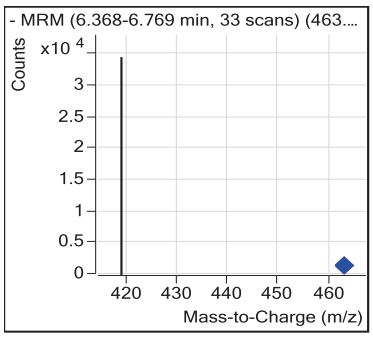




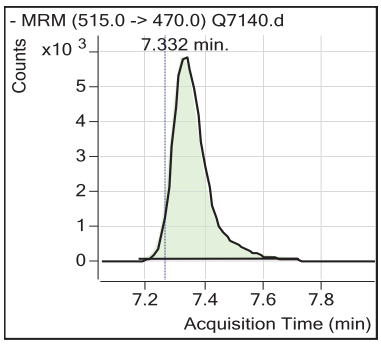
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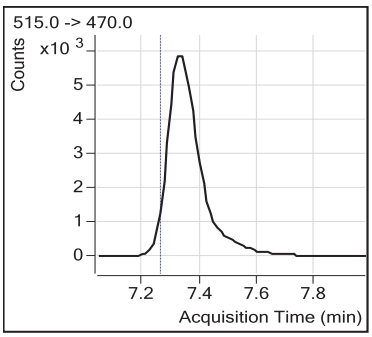


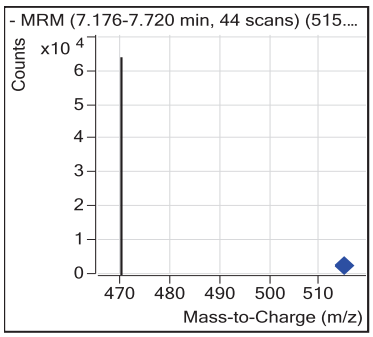




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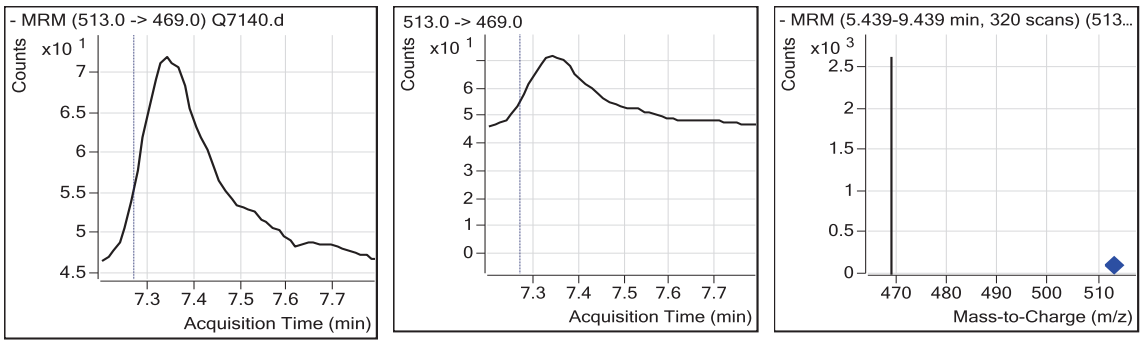




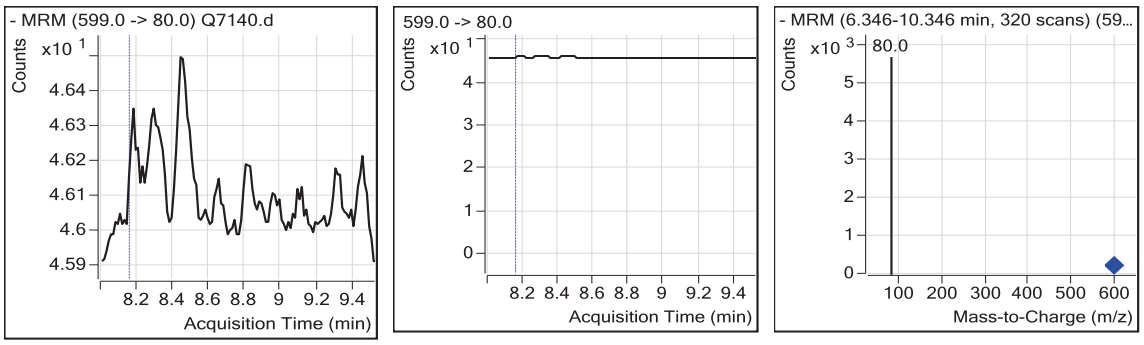


Perfluorinated Compounds by LC/MS/MS.

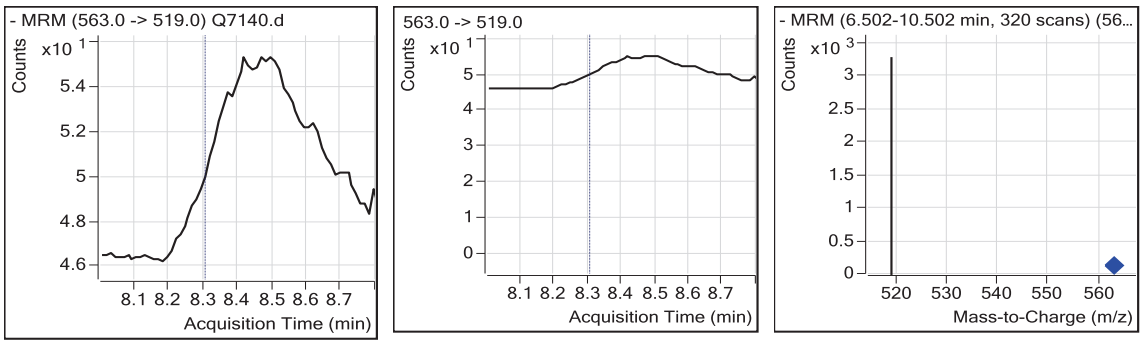
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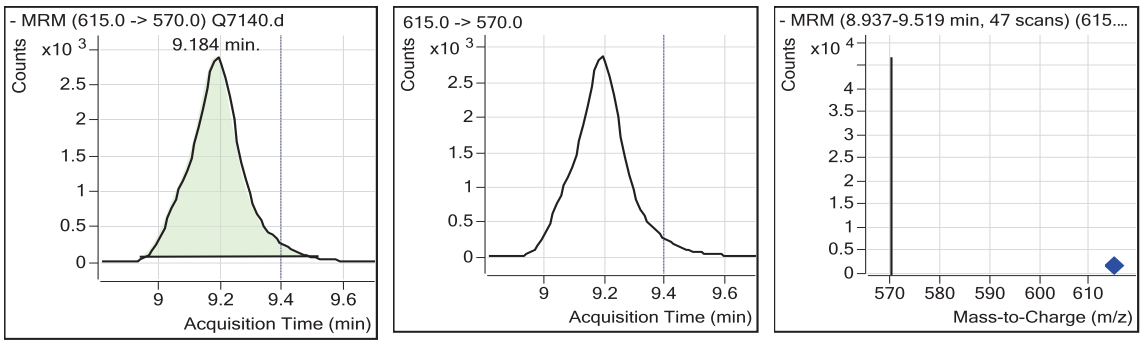
PFDS



PFUnDA

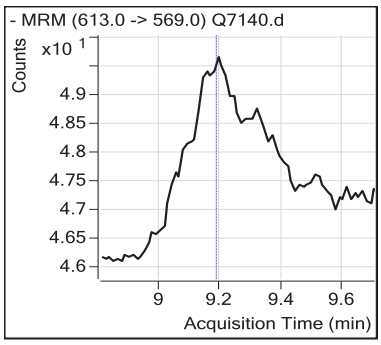


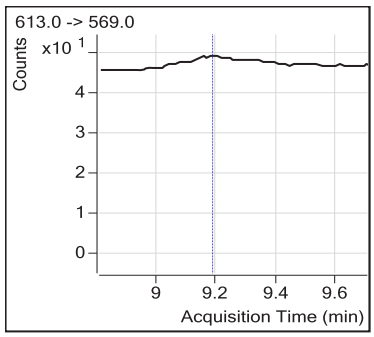
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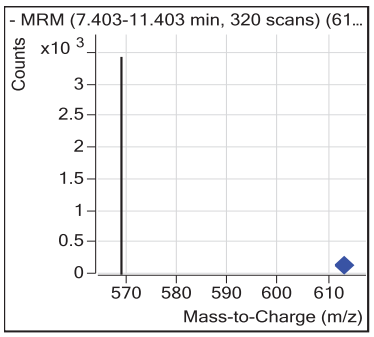


Perfluorinated Compounds by LC/MS/MS.

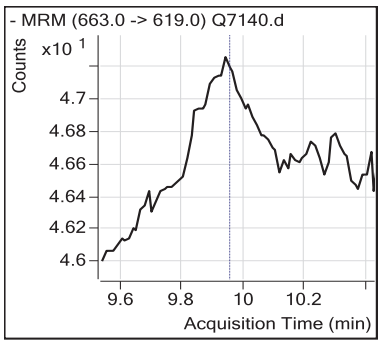
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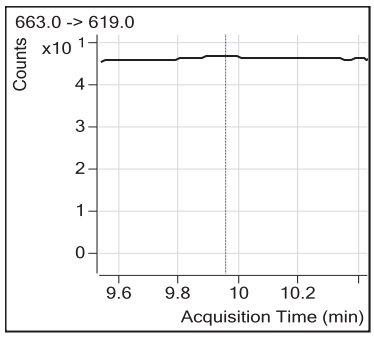


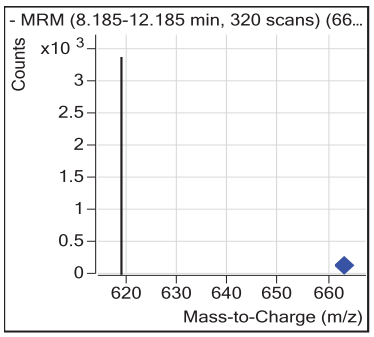




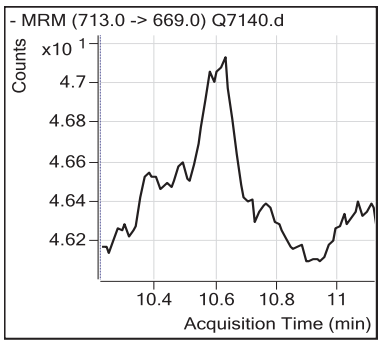
PFTrDA

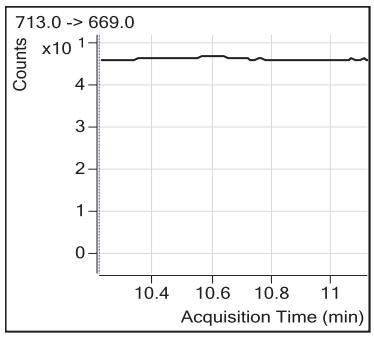


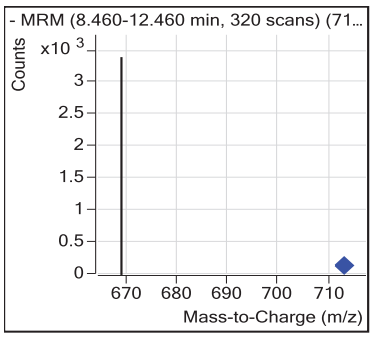




PFTeDA







Manual Integration Approval Summary

Sample Number: OP53158-MS
Lab FileID: Q7140.D
Injection Time: 09/23/14 16:37

Method: EPA 537 MOD
Analyst approved: 09/24/14 14:08 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Mark Erstling
09/24/14 16:06

Perfluorinated Compounds by LC/MS/MS.

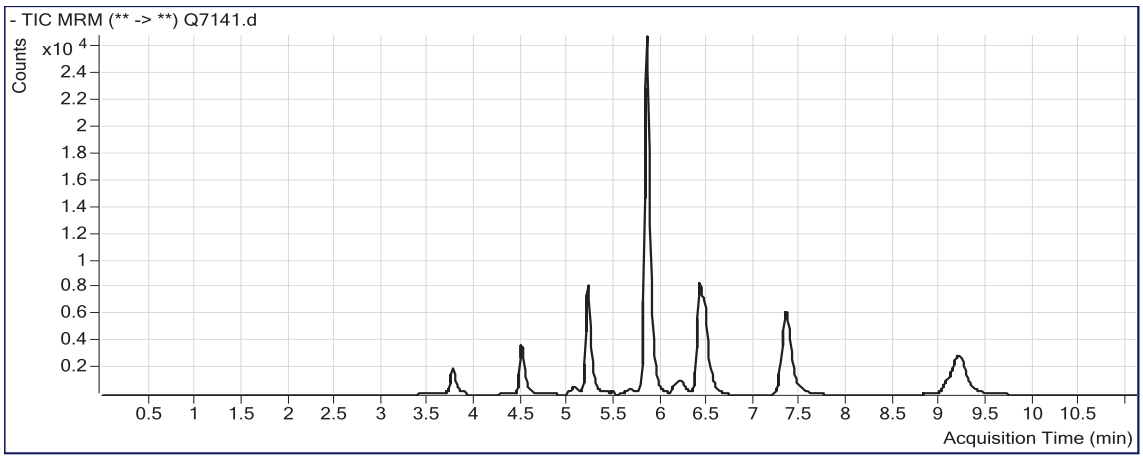
Data File	:	Q7141.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 16:56
Sample Name	:	OP53158-MSD
Vial	:	Vial 15
Sample Info	:	OP53158,SQ241,60,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.833	415.0 -> 370.0	52148	20.000	µg/L		-0.025
13C4-PFOS	6.407	503.0 -> 80.0	18985	20.000	µg/L		-0.025
13C2-PFDoDA	9.184	615.0 -> 570.0	33597	20.000	µg/L		-0.213
System Monitoring Compounds							
13C2-PFHxA	4.491	315.0 -> 270.0	14486	18.75	µg/L		-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 93.74%				
13C2-PFDA	7.320	515.0 -> 470.0	46665	22.90	µg/L		-0.113
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 114.51%				
Target Compounds							**Qvalue**
PFBA	1.726	213.0 -> 169.0	678	1.120	µg/L		100
PFPeA	3.711	263.0 -> 219.0	353	1.190	µg/L		100
PFBS	3.753	299.0 -> 80.0	5149	17.136	µg/L		97
PFHxA	4.495	313.0 -> 269.0	445	0.507	µg/L	#	94
PFHxS	5.205	399.0 -> 80.0	9364	19.886	µg/L	m	90
PFHpA	5.210	363.0 -> 319.0	14614	16.655	µg/L		99
PFOA	5.836	413.0 -> 369.0	49015	18.044	µg/L		83
PFOS	6.397	499.0 -> 80.0	15457	15.798	µg/L	m	95
PFNA	6.478	463.0 -> 419.0	24324	20.049	µg/L		100

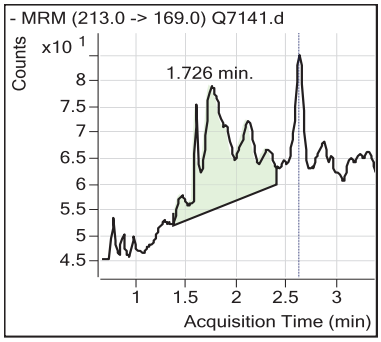
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

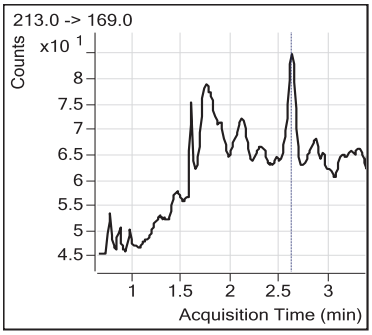
Perfluorinated Compounds by LC/MS/MS.

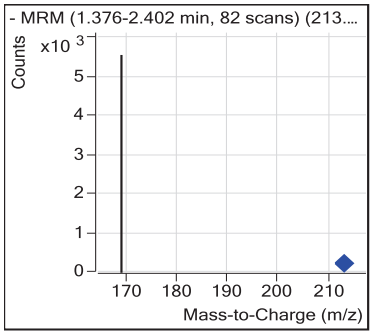
Data File	:	Q7141.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 16:56
Sample Name	:	OP53158-MSD
Vial	:	Vial 15
Sample Info	:	OP53158,SQ241,60,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



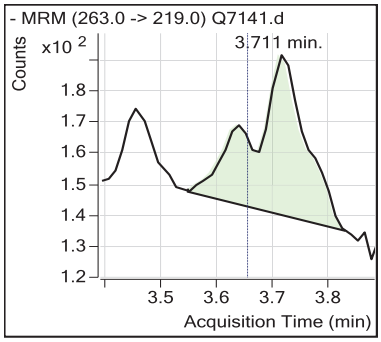
PFBA

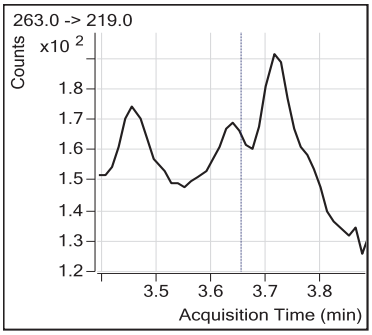


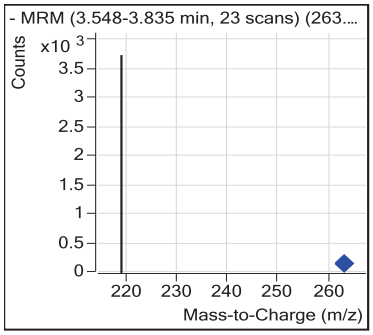




PFPeA

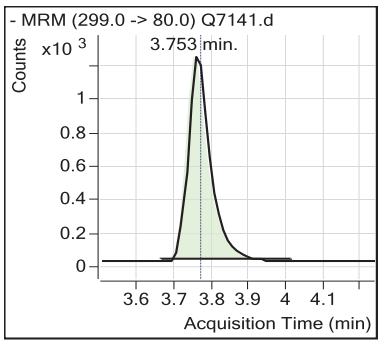


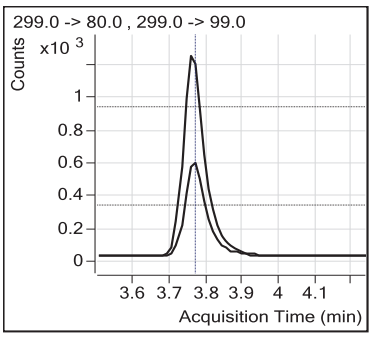


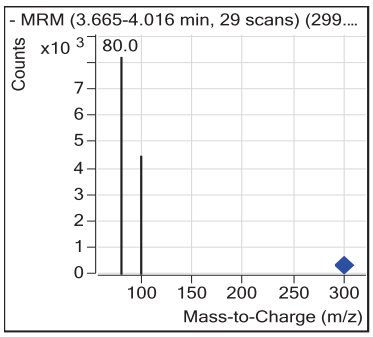


Perfluorinated Compounds by LC/MS/MS.

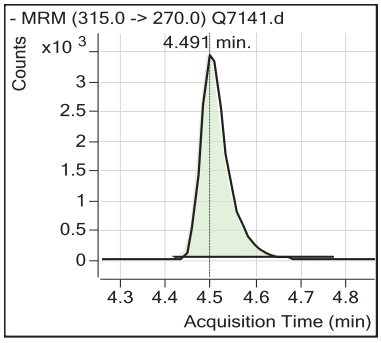
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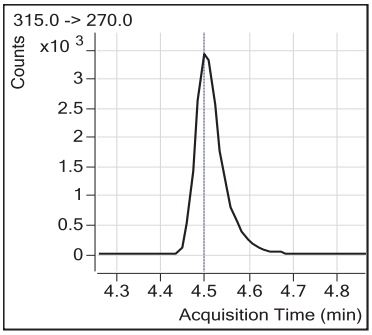


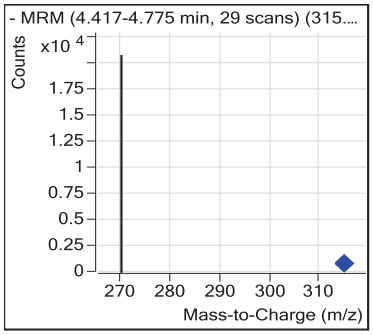




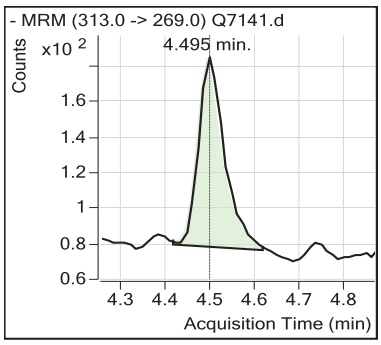
13C2-PFHxA

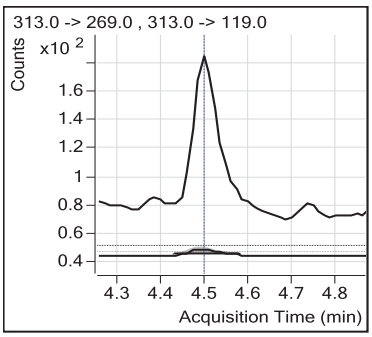


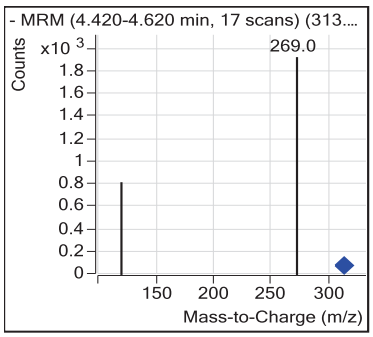




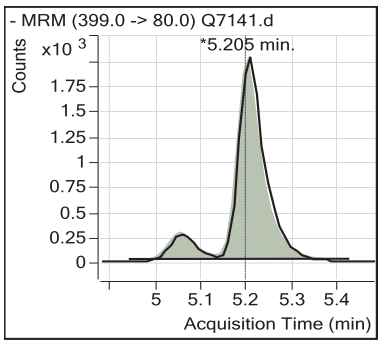
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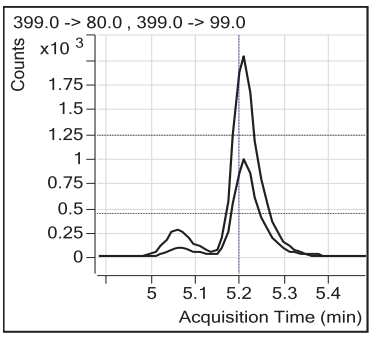


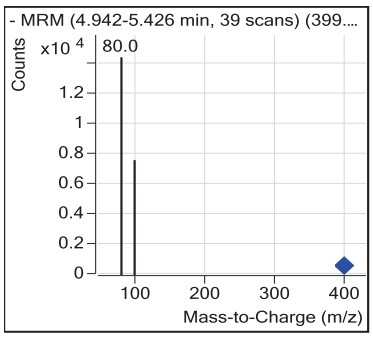




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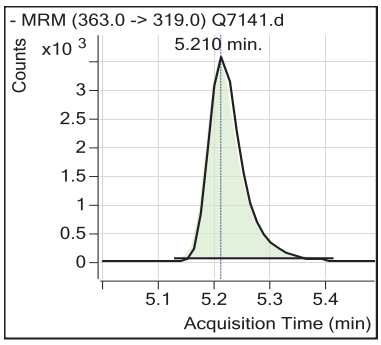


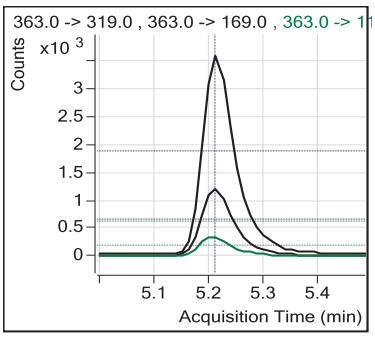


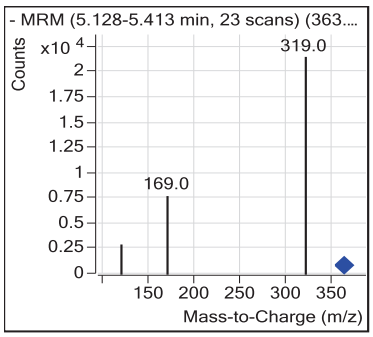


Perfluorinated Compounds by LC/MS/MS.

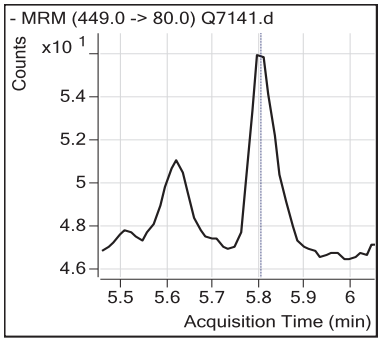
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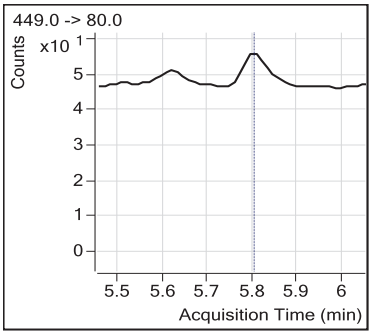


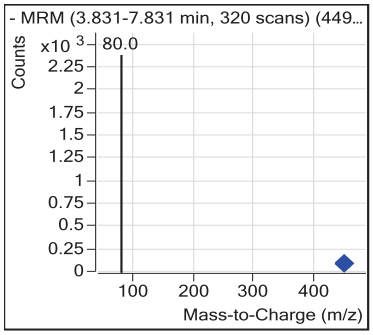




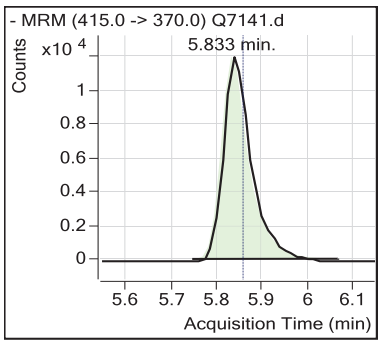
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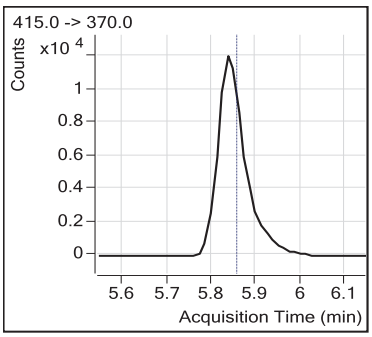


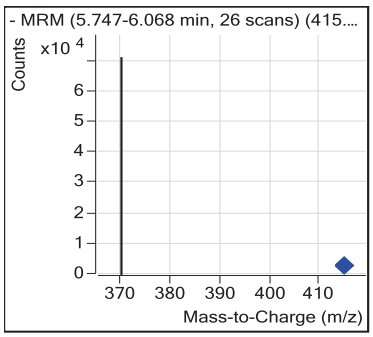




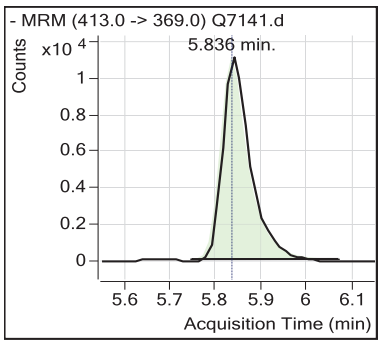
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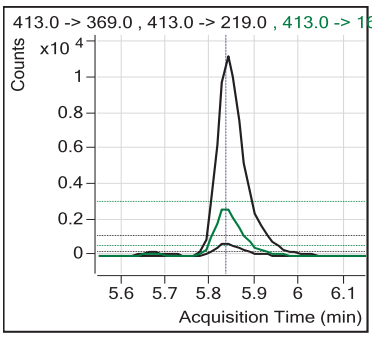


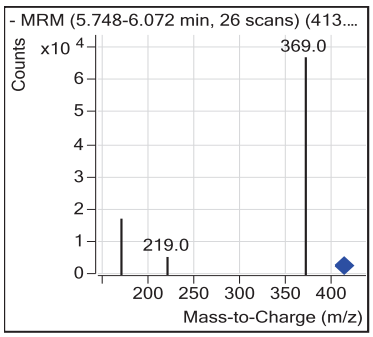




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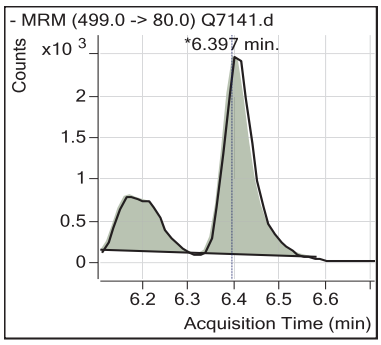


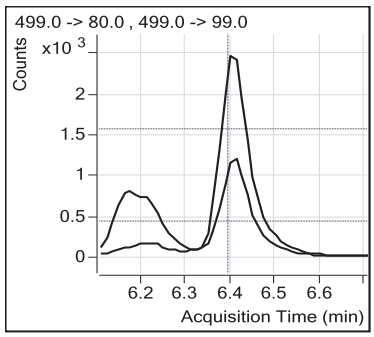


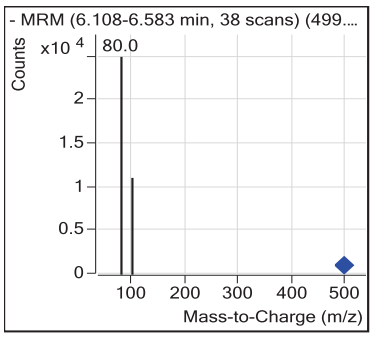


Perfluorinated Compounds by LC/MS/MS.

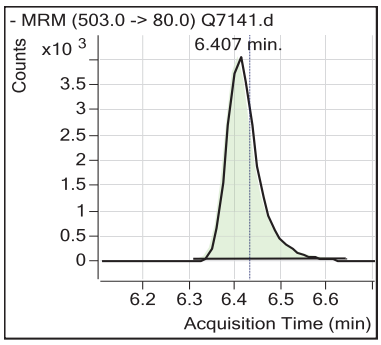
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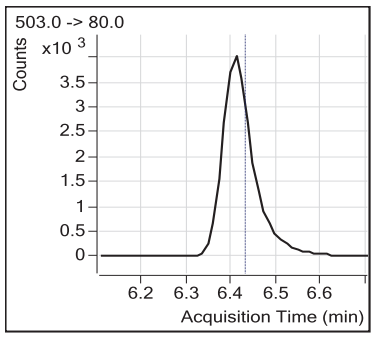


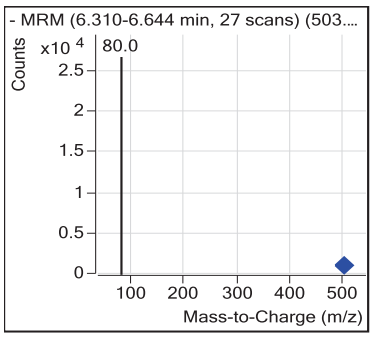




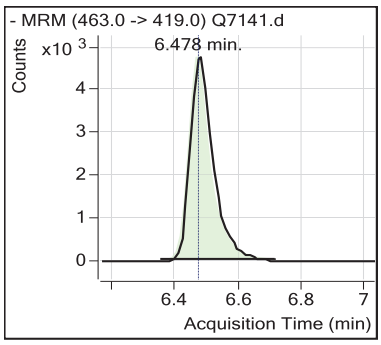
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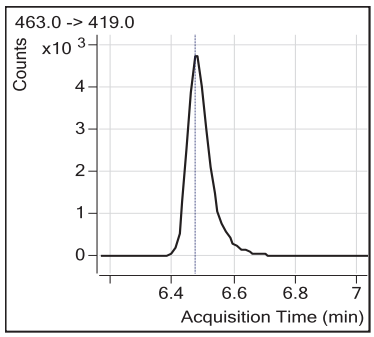


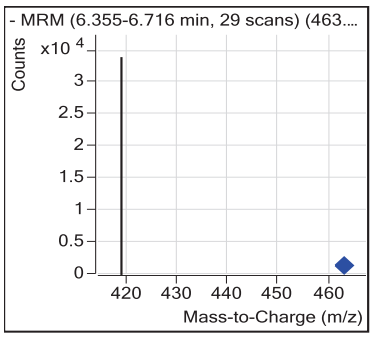




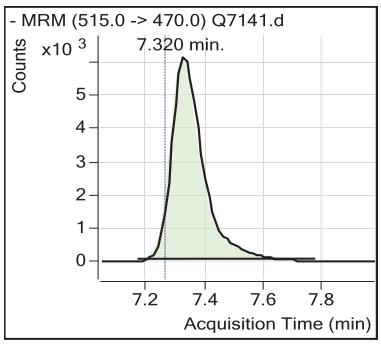
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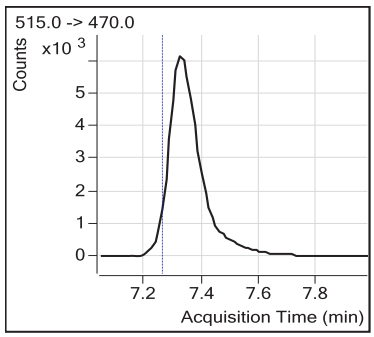


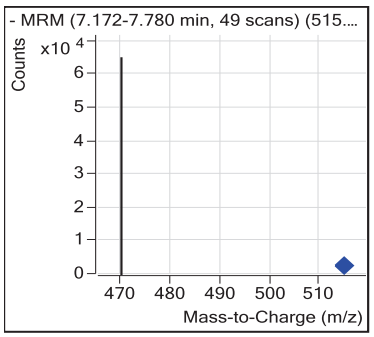




13C2-PFDA

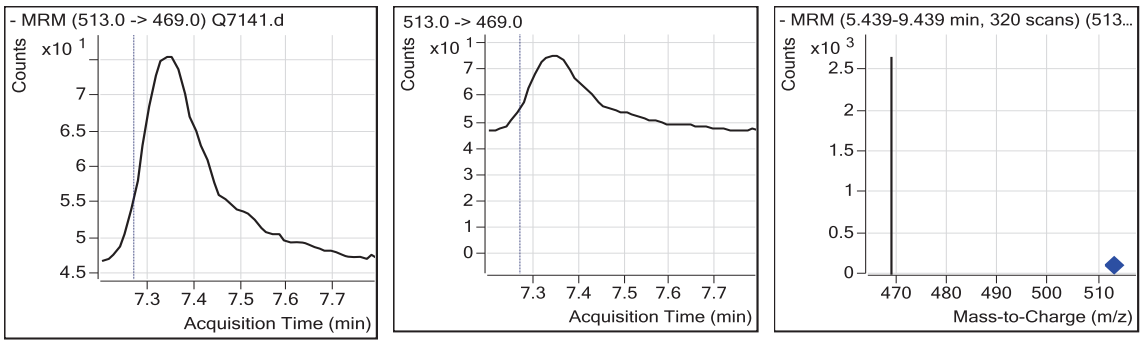




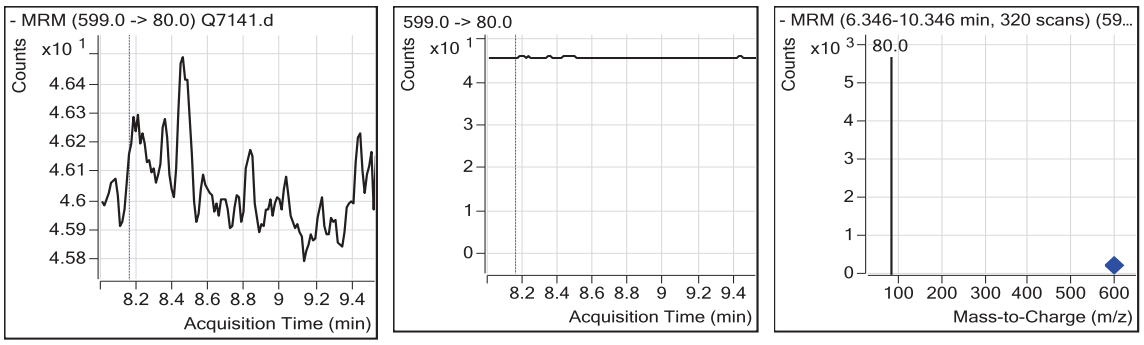


Perfluorinated Compounds by LC/MS/MS.

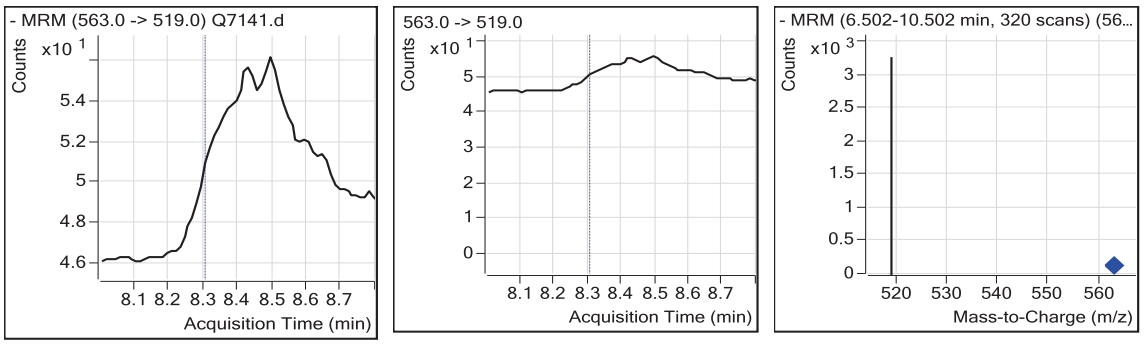
PFDA



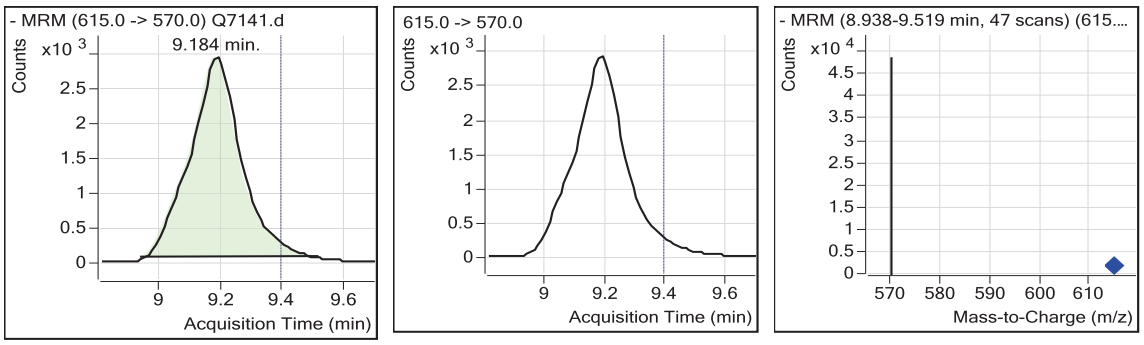
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PFUnDA

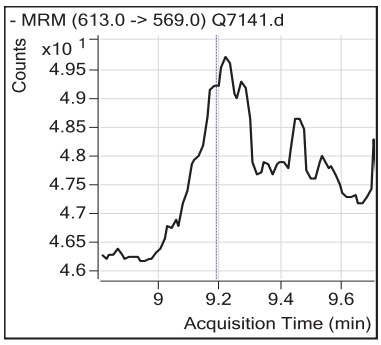


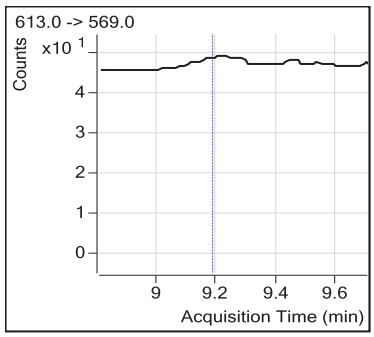
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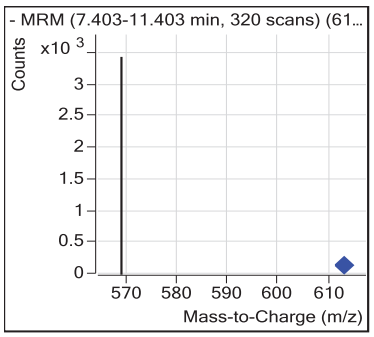


Perfluorinated Compounds by LC/MS/MS.

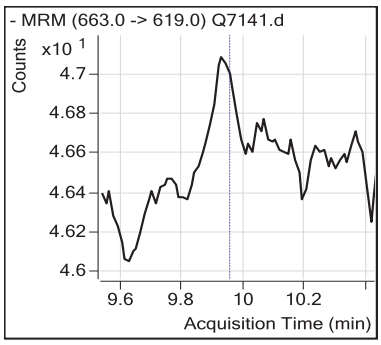
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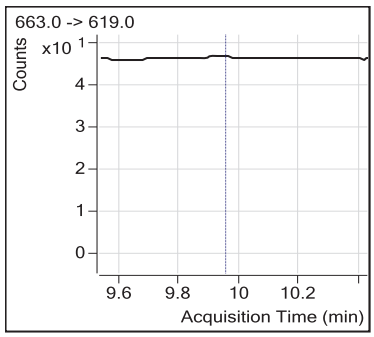


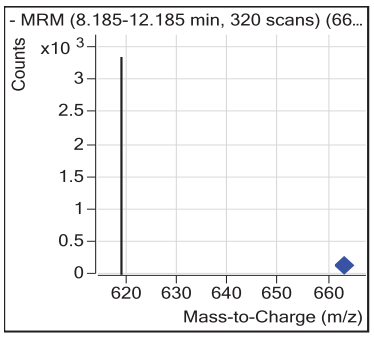




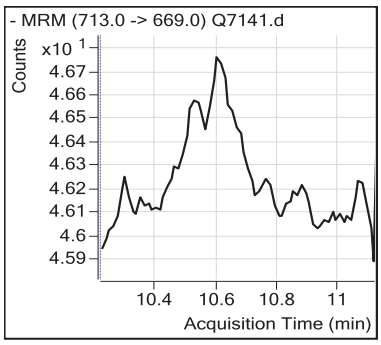
PFTrDA

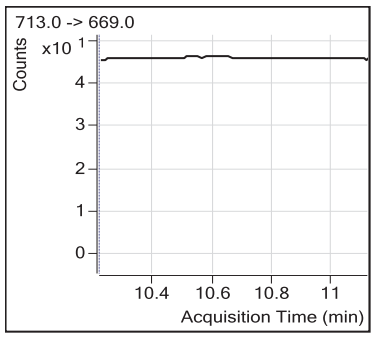


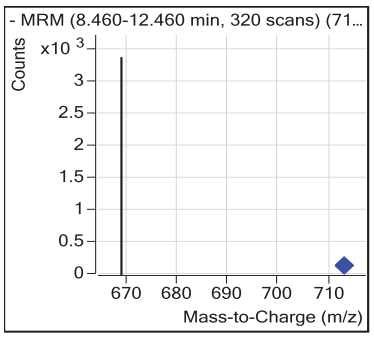




PFTeDA







Manual Integration Approval Summary

Sample Number: OP53158-MSD
Lab FileID: Q7141.D
Injection Time: 09/23/14 16:56

Method: EPA 537 MOD
Analyst approved: 09/24/14 14:08 Mike Eger
Supervisor approved: 09/24/14 16:06 Mark Erstling

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.21	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak

Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan 09/15/14 10:34

Perfluorinated Compounds by LC/MS/MS.

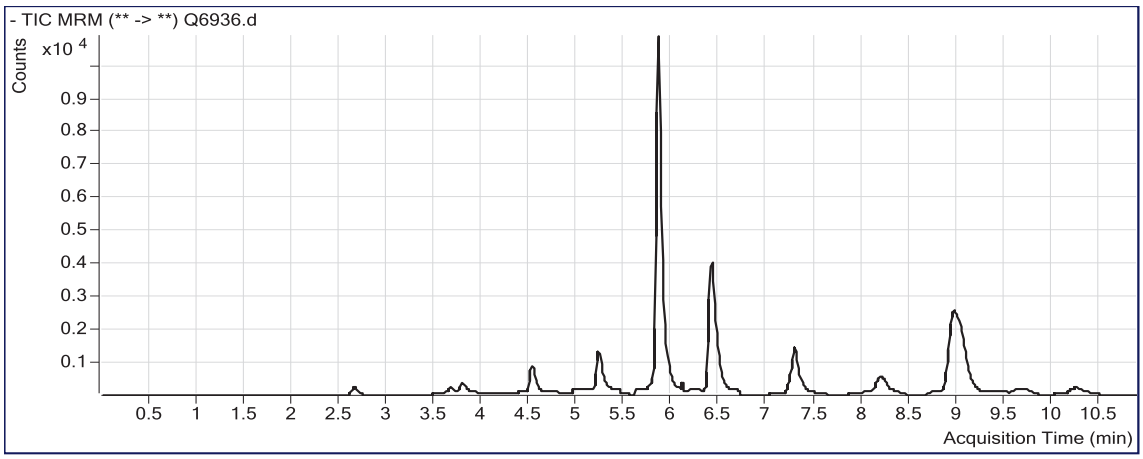
Data File	:	Q6936.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 12:14
Sample Name	:	IC234-2.5
Vial	:	Vial 4
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	36911	20.000	µg/L		0.000
13C4-PFOS	6.407	503.0 -> 80.0	14292	20.000	µg/L		0.000
13C2-PFDoDA	8.959	615.0 -> 570.0	24347	20.000	µg/L		0.037
System Monitoring Compounds							
13C2-PFHxA	4.516	315.0 -> 270.0	1516	2.77	µg/L		0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 13.86%				
13C2-PFDA	7.282	515.0 -> 470.0	4472	3.03	µg/L		-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 15.14%				
Target Compounds							**Qvalue**
PFBA	2.639	213.0 -> 169.0	1141	2.662	µg/L		100
PFPeA	3.674	263.0 -> 219.0	569	2.711	µg/L		100
PFBS	3.790	299.0 -> 80.0	727	3.214	µg/L		100
PFHxA	4.520	313.0 -> 269.0	1745	2.810	µg/L		99
PFHxS	5.217	399.0 -> 80.0	1136	3.205	µg/L		90
PFHpA	5.222	363.0 -> 319.0	1980	3.080	µg/L		98
PFHpS	5.818	449.0 -> 80.0	1140	2.691	µg/L		100
PFOA	5.848	413.0 -> 369.0	6456	3.217	µg/L	m	80
PFOS	6.397	499.0 -> 80.0	2438	3.199	µg/L		89
PFNA	6.466	463.0 -> 419.0	2725	3.110	µg/L		100
PFDA	7.289	513.0 -> 469.0	4117	2.989	µg/L		100
PFDS	8.046	599.0 -> 80.0	682	2.879	µg/L		100
PFUnDA	8.190	563.0 -> 519.0	4556	3.251	µg/L	m	100
PFDoDA	8.963	613.0 -> 569.0	2900	2.734	µg/L		100
PFTrDA	9.635	663.0 -> 619.0	2615	2.654	µg/L		100
PFTeDA	10.235	713.0 -> 669.0	2292	3.177	µg/L		100

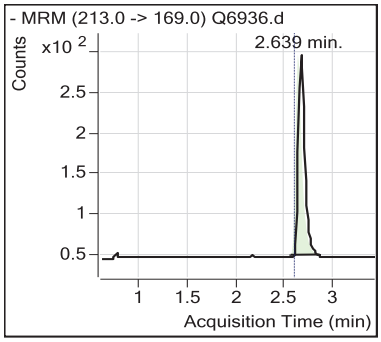
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

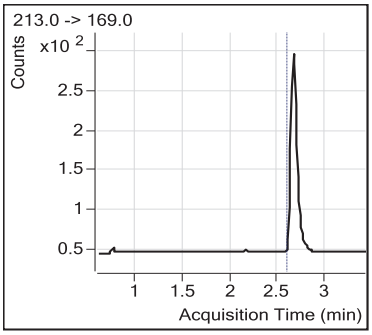
Perfluorinated Compounds by LC/MS/MS.

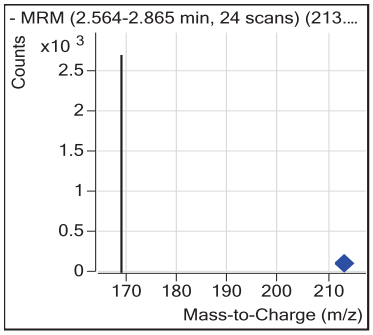
Data File	:	Q6936.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 12:14
Sample Name	:	IC234-2.5
Vial	:	Vial 4
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



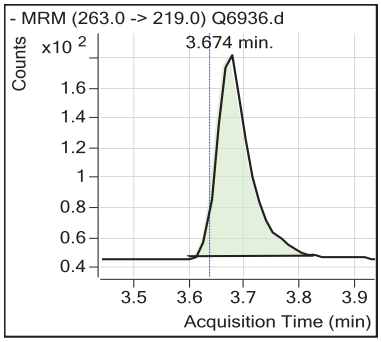
PFBA

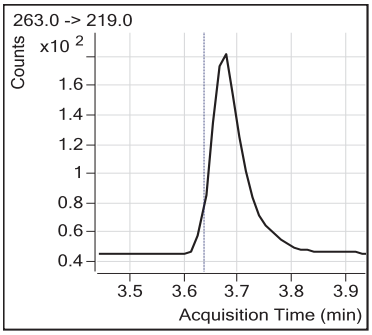


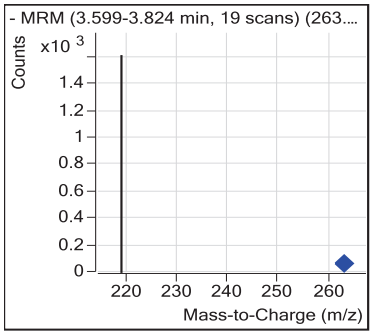




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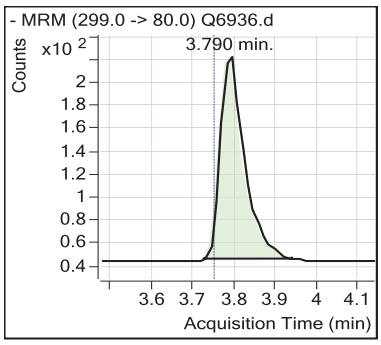


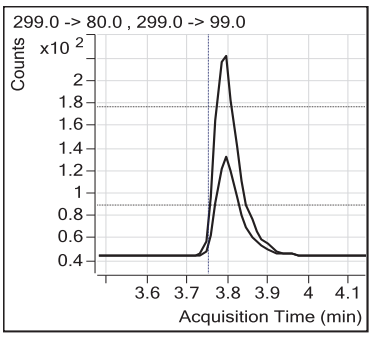


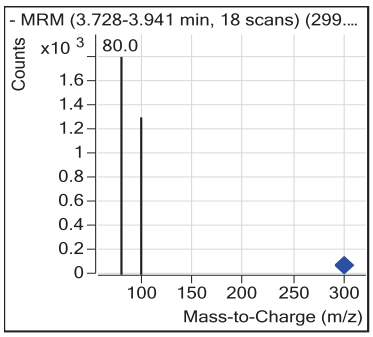


Perfluorinated Compounds by LC/MS/MS.

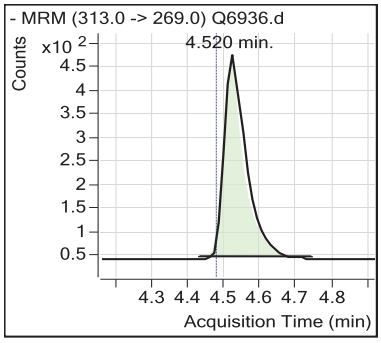
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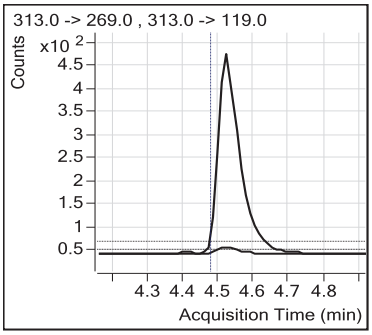


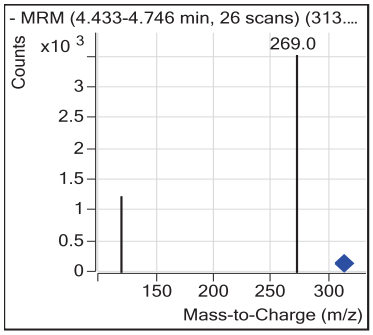




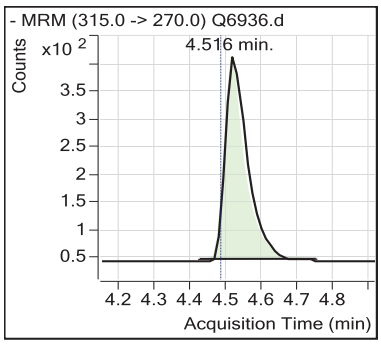
PFHxA

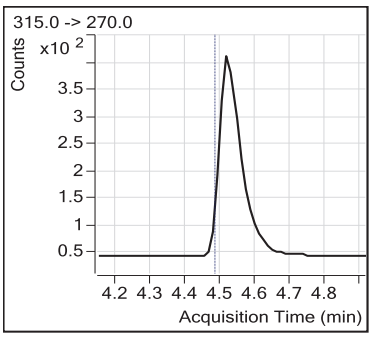


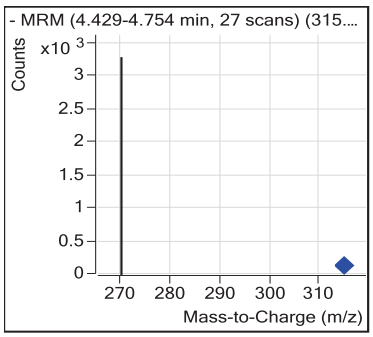




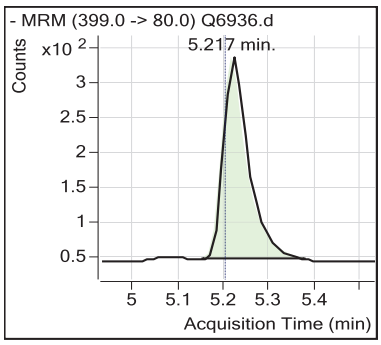
13C2-PFHxA

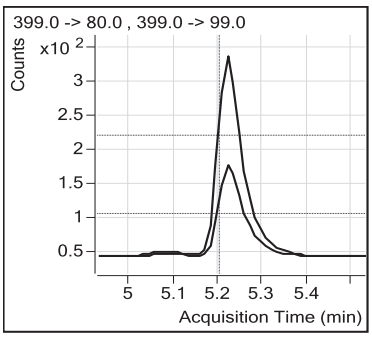


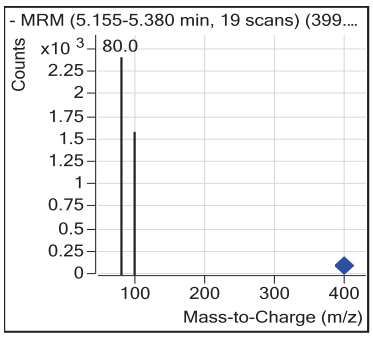




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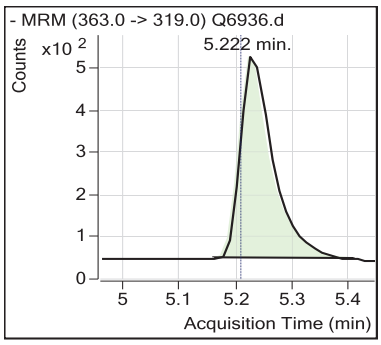


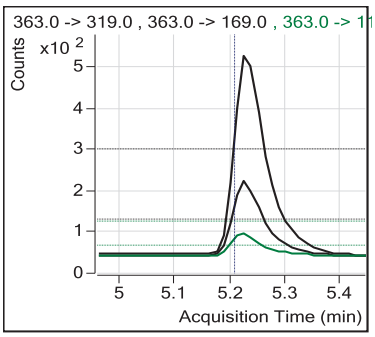


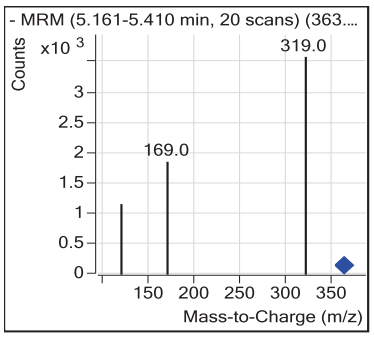


Perfluorinated Compounds by LC/MS/MS.

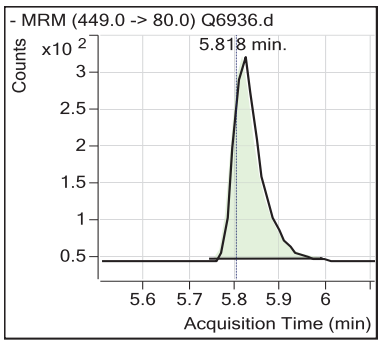
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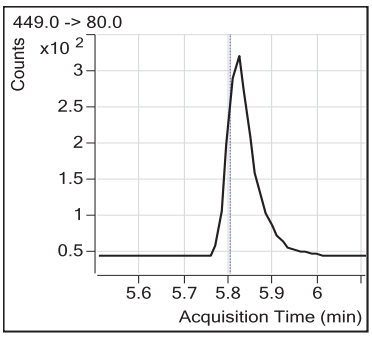


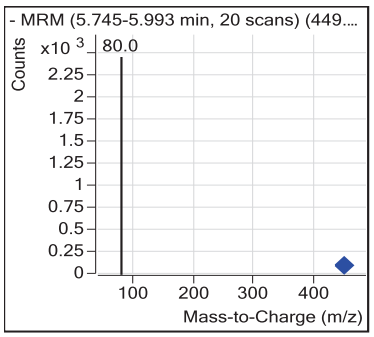




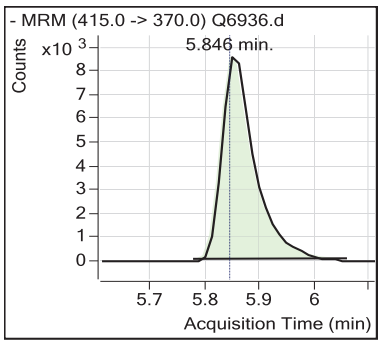
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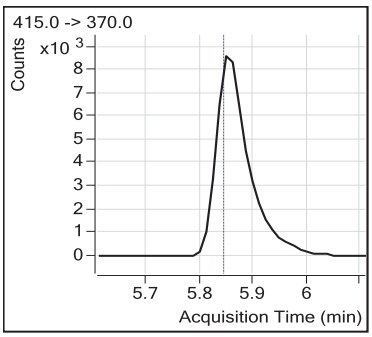


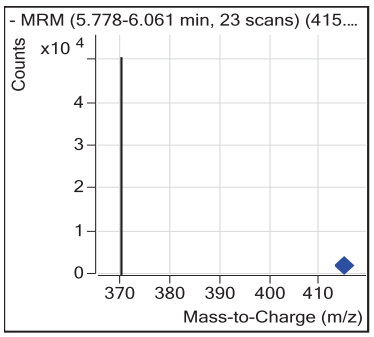




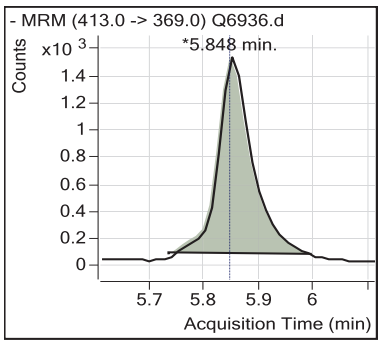
13C2-PFOA

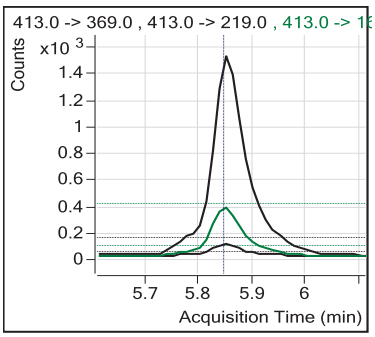


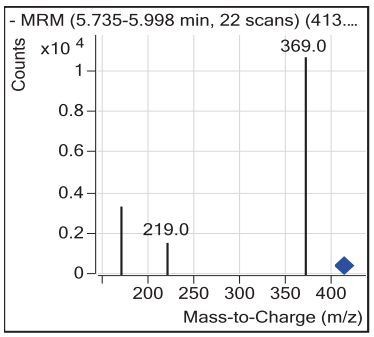




PFOA

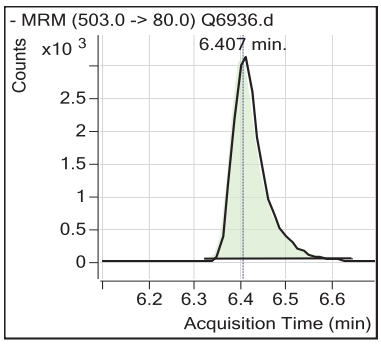


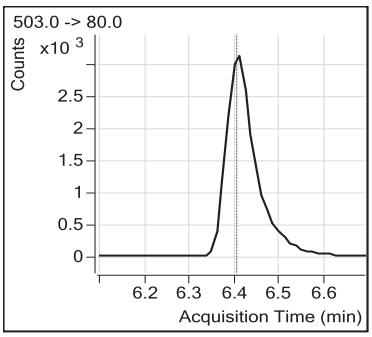


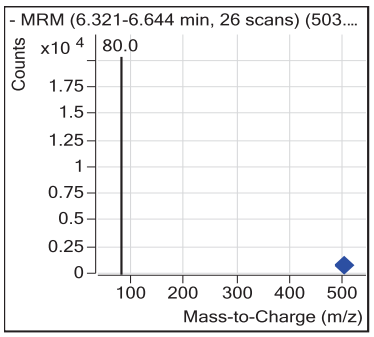


Perfluorinated Compounds by LC/MS/MS.

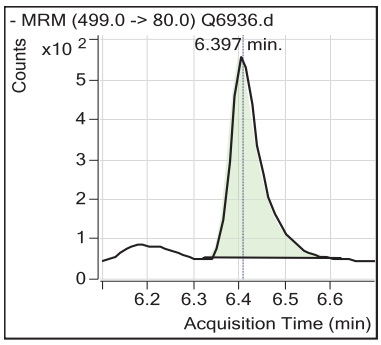
13C4-PFOS

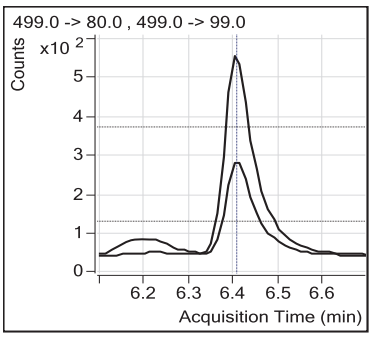


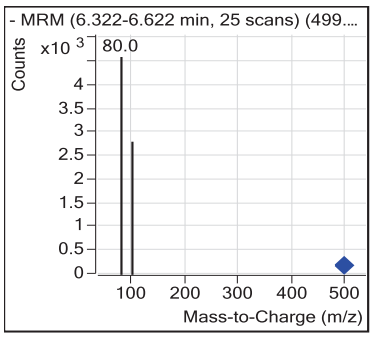




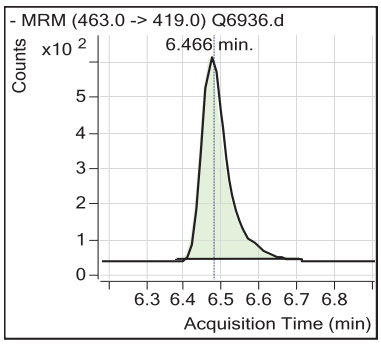
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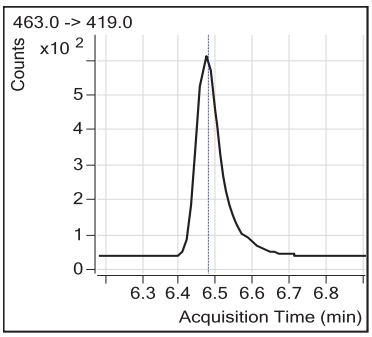


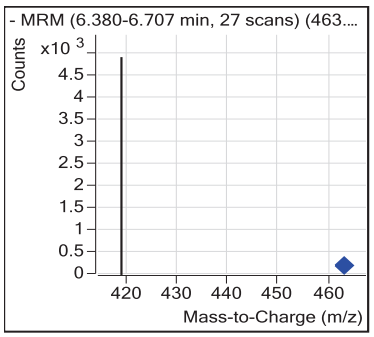




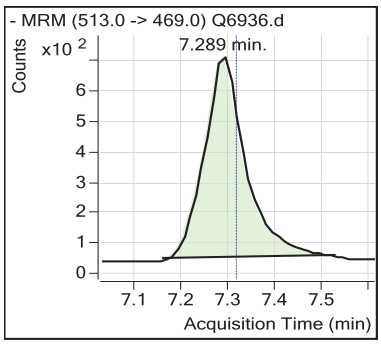
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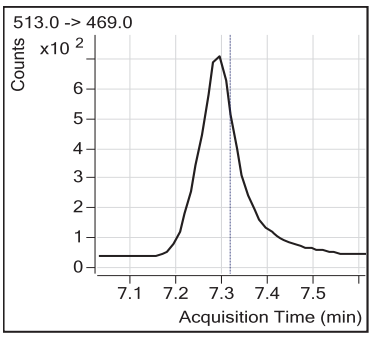


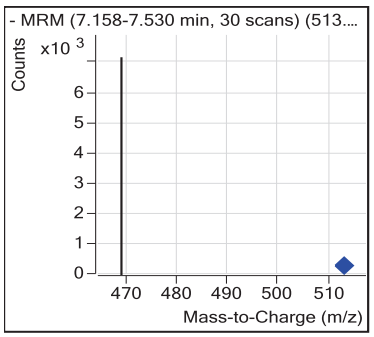




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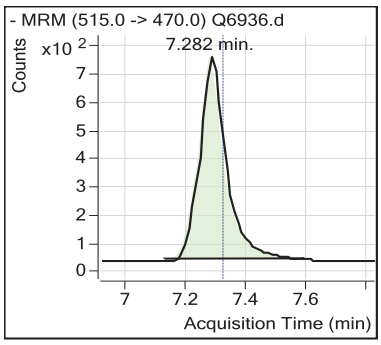


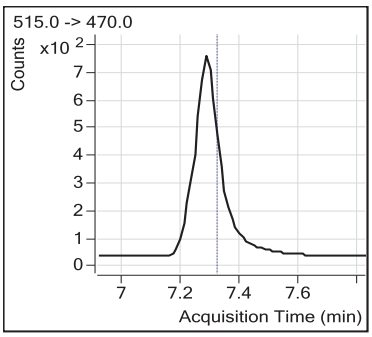


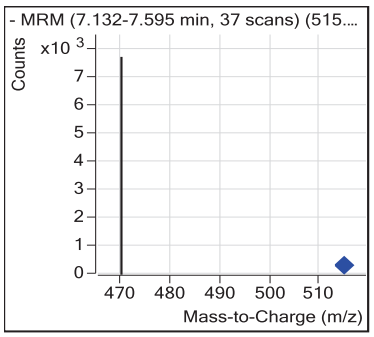


Perfluorinated Compounds by LC/MS/MS.

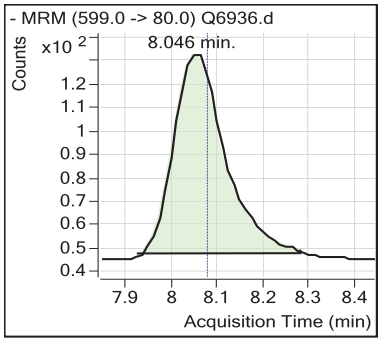
13C2-PFDA

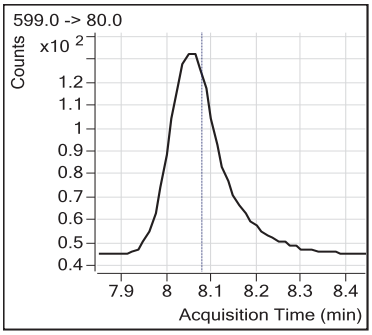


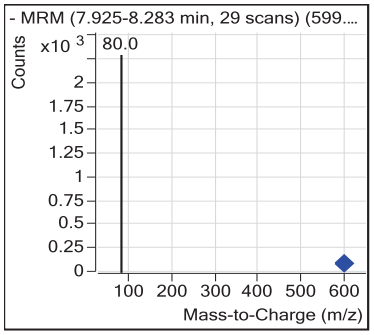




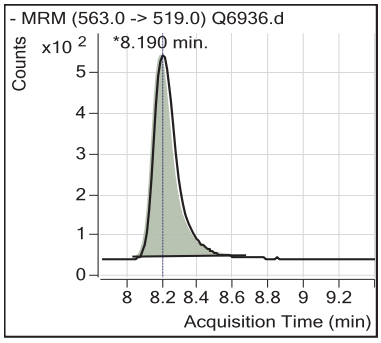
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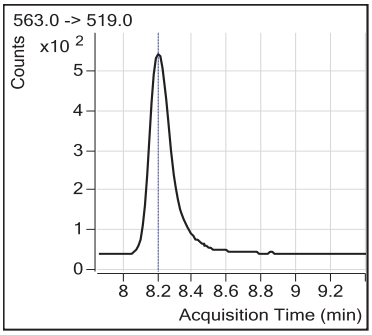


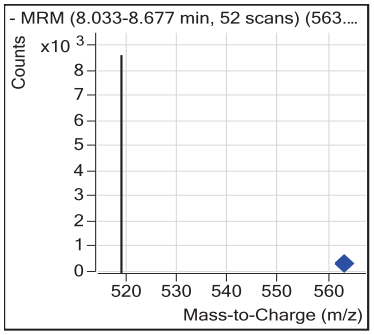




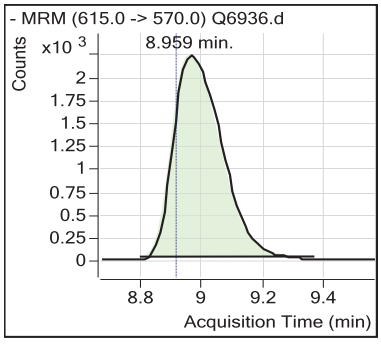
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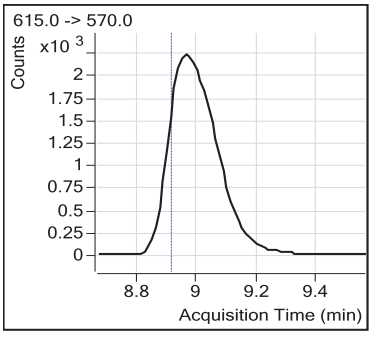


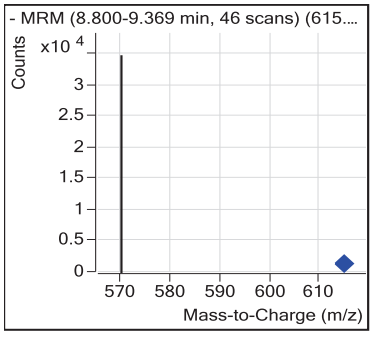




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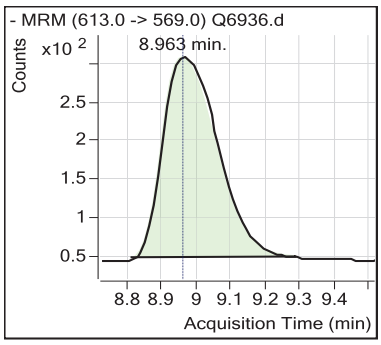


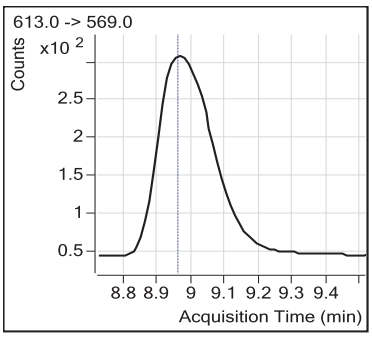


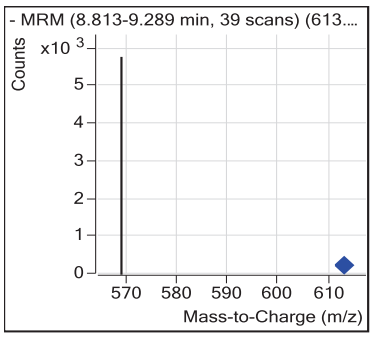


Perfluorinated Compounds by LC/MS/MS.

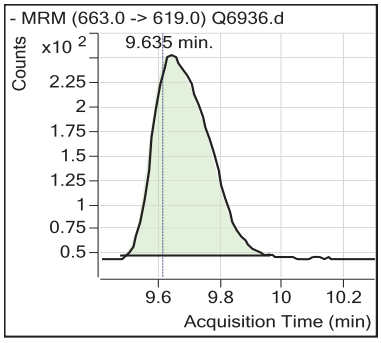
PFDoDA

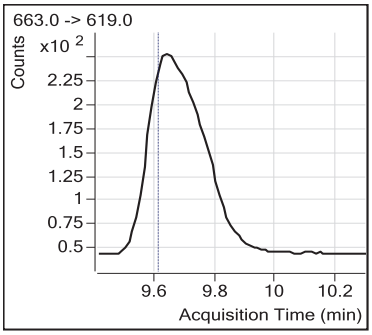


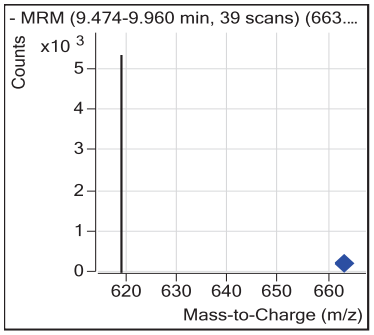




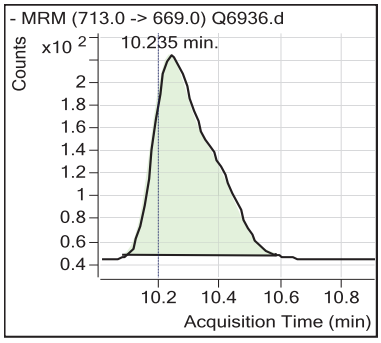
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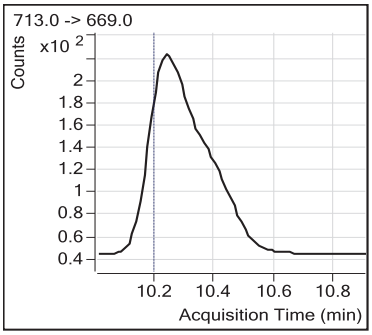


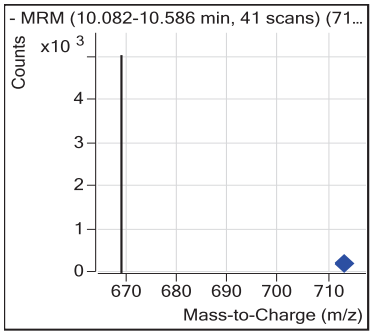




PFTeDA







Manual Integration Approval Summary

Sample Number: SQ234-IC234
Lab FileID: Q6936.D
Injection Time: 09/12/14 12:14
Method: EPA 537 MOD
Analyst approved: 09/15/14 08:44 Mike Eger
Supervisor approved: 09/15/14 10:34 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorooctanoic acid	335-67-1		5.85	Poor instrument integration
Perfluoroundecanoic acid	2058-94-8		8.19	Poor instrument integration

Perfluorinated Compounds by LC/MS/MS.

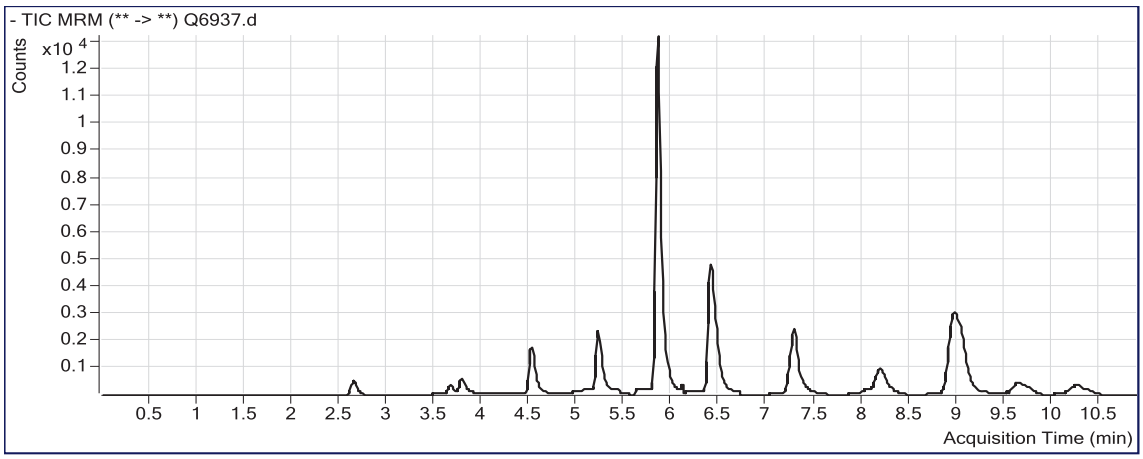
Data File	:	Q6937.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 12:33
Sample Name	:	IC234-5.0
Vial	:	Vial 5
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	39360	20.000	µg/L	0.000
13C4-PFOS	6.394	503.0 -> 80.0	15233	20.000	µg/L	-0.013
13C2-PFDoDA	8.959	615.0 -> 570.0	26321	20.000	µg/L	0.037
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	3242	5.56	µg/L	0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 27.79%			
13C2-PFDA	7.282	515.0 -> 470.0	8360	5.24	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 26.19%			
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	2404	5.261	µg/L	100
PFPeA	3.661	263.0 -> 219.0	1193	5.329	µg/L	100
PFBS	3.778	299.0 -> 80.0	1423	5.900	µg/L	100
PFHxA	4.520	313.0 -> 269.0	3677	5.552	µg/L	99
PFHxS	5.217	399.0 -> 80.0	2146	5.681	µg/L	87
PFHpA	5.222	363.0 -> 319.0	3751	5.504	µg/L	96
PFHpS	5.806	449.0 -> 80.0	2415	5.350	µg/L	100
PFOA	5.848	413.0 -> 369.0	11420	5.369	µg/L	83
PFOS	6.397	499.0 -> 80.0	4220	5.224	µg/L	88
PFNA	6.466	463.0 -> 419.0	5086	5.458	µg/L	100
PFDA	7.276	513.0 -> 469.0	7702	5.173	µg/L	100
PFDS	8.046	599.0 -> 80.0	1434	5.601	µg/L	100
PFUnDA	8.190	563.0 -> 519.0	8056	5.344	µg/L	100
PFDoDA	8.963	613.0 -> 569.0	6152	5.366	µg/L	100
PFTrDA	9.635	663.0 -> 619.0	5548	5.218	µg/L	100
PFTeDA	10.248	713.0 -> 669.0	4331	5.553	µg/L	100

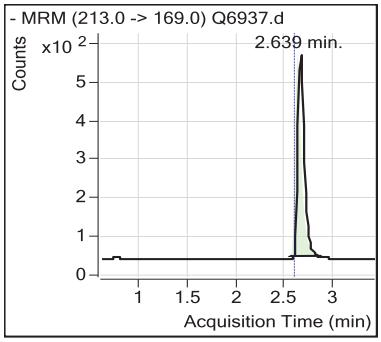
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

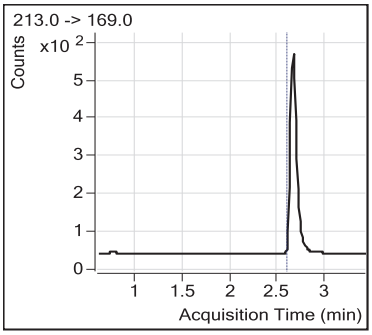
Perfluorinated Compounds by LC/MS/MS.

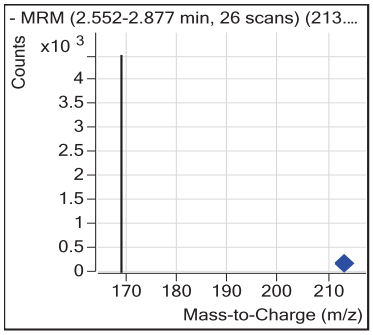
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Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 12:33
Sample Name	:	IC234-5.0
Vial	:	Vial 5
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



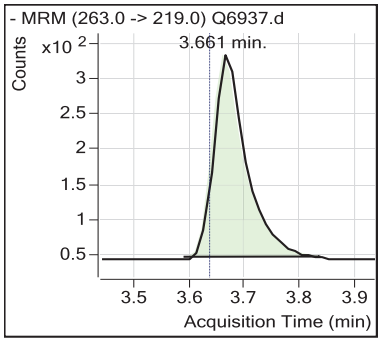
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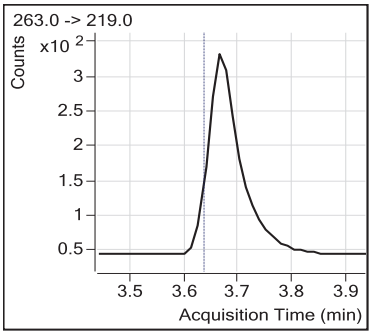


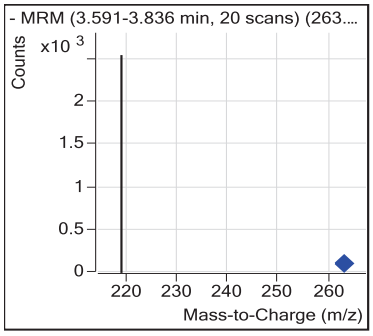




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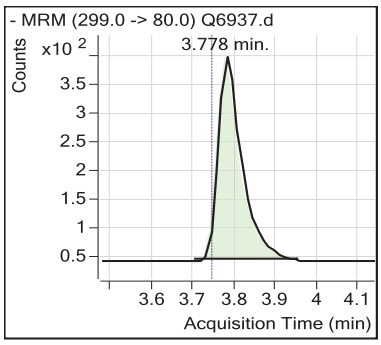


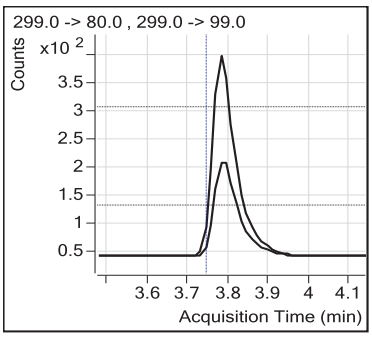


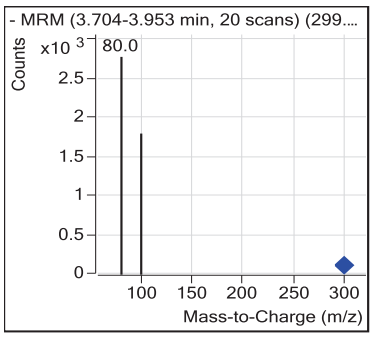


Perfluorinated Compounds by LC/MS/MS.

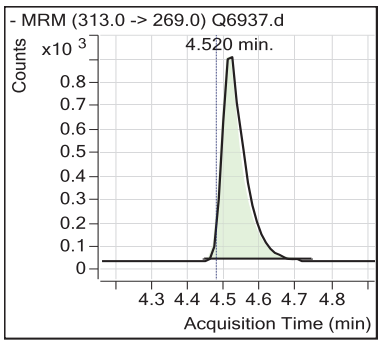
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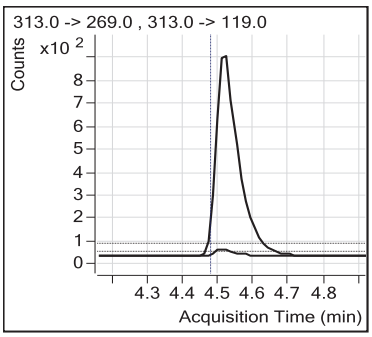


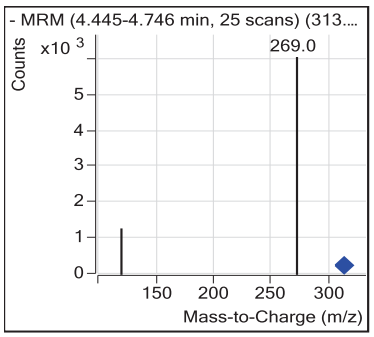




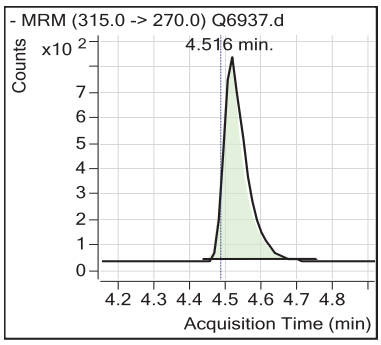
PFHxA

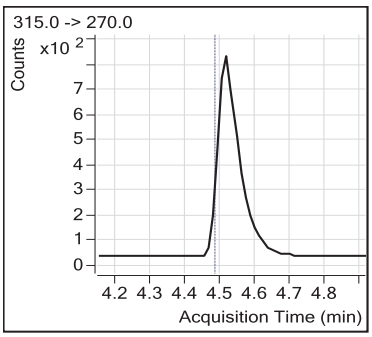


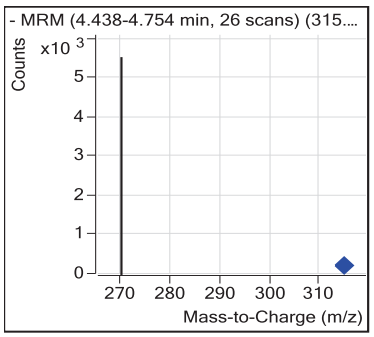




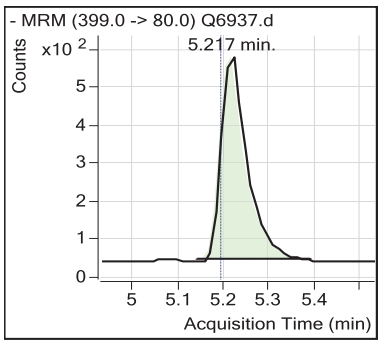
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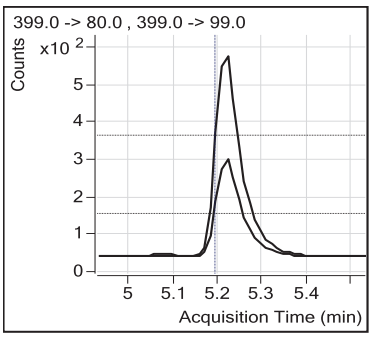


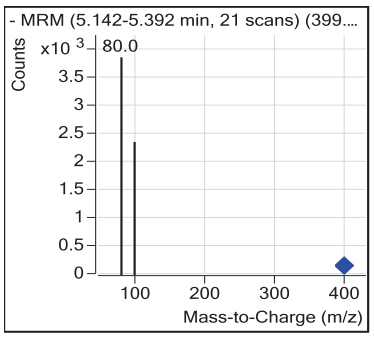




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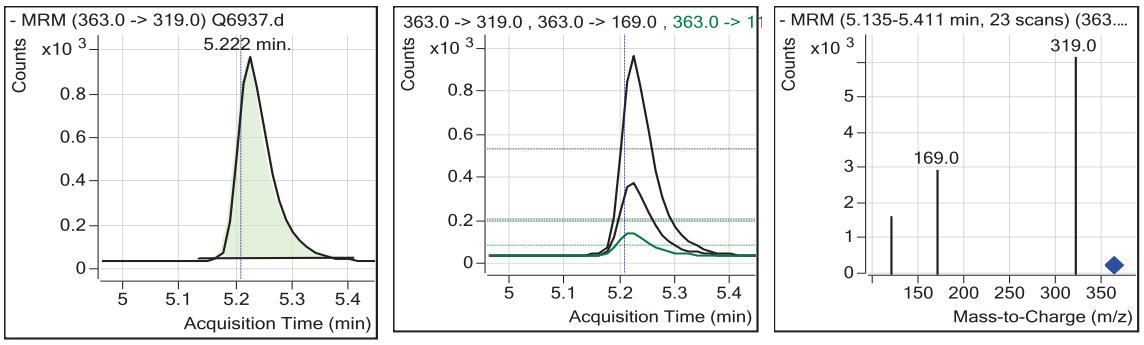




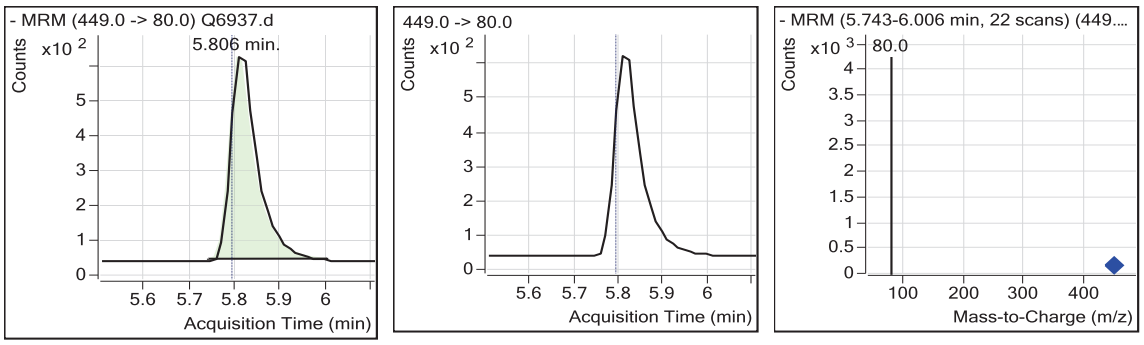


Perfluorinated Compounds by LC/MS/MS.

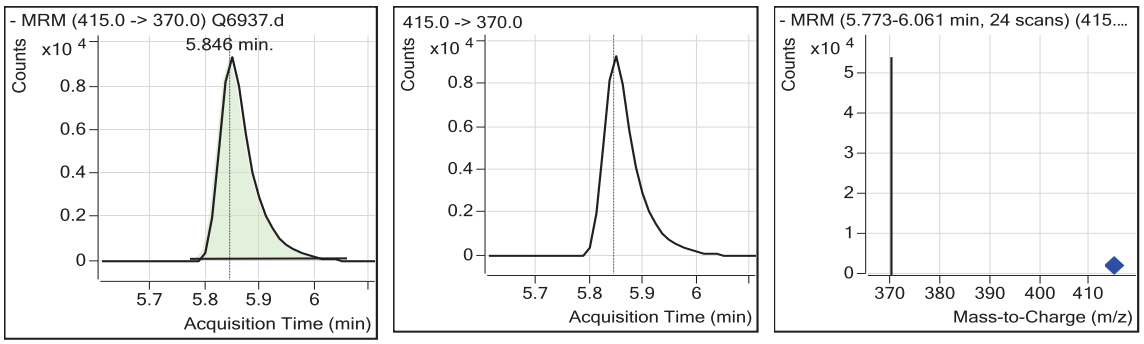
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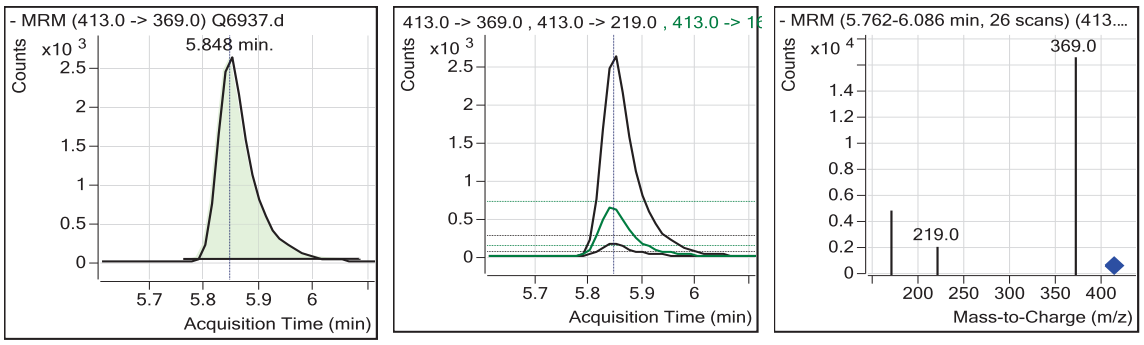
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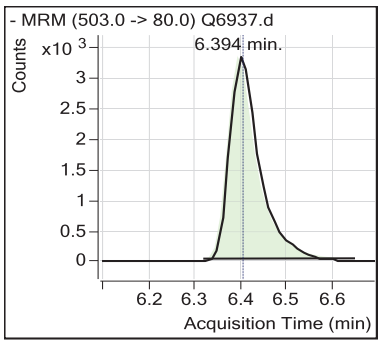


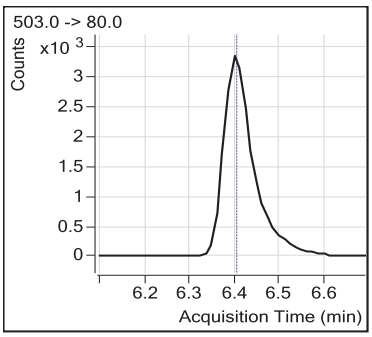
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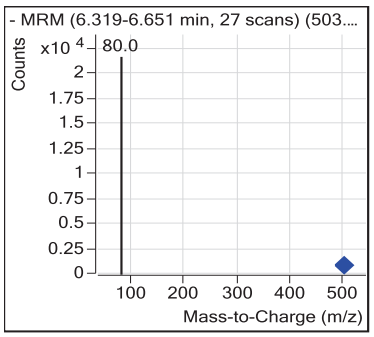


Perfluorinated Compounds by LC/MS/MS.

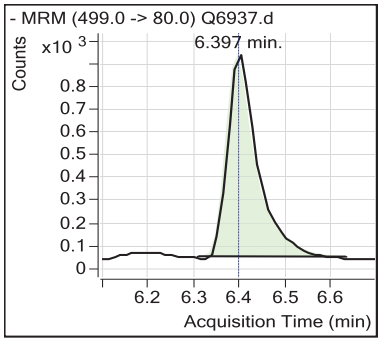
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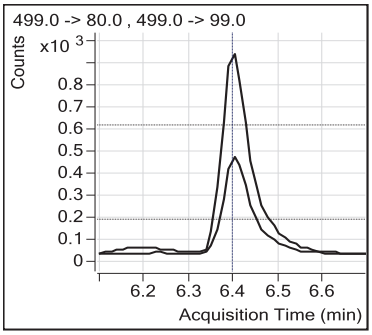


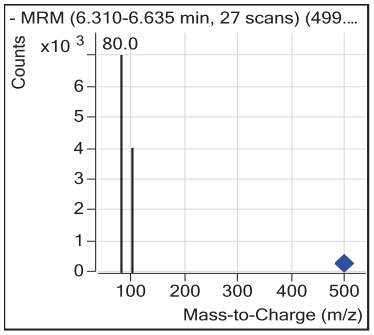




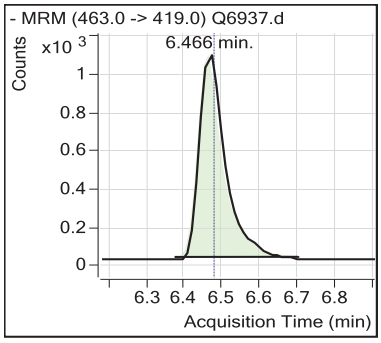
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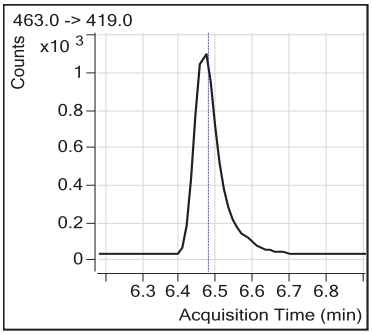


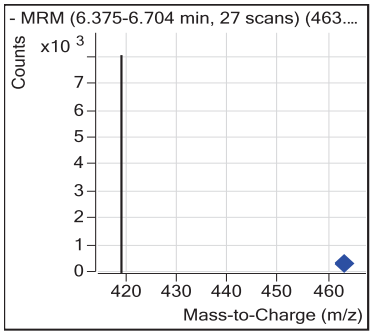




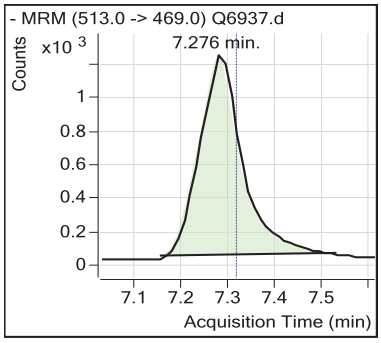
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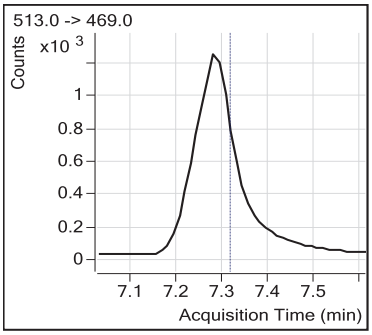


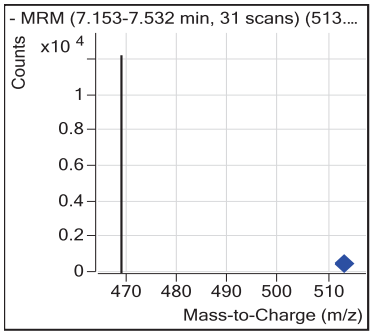




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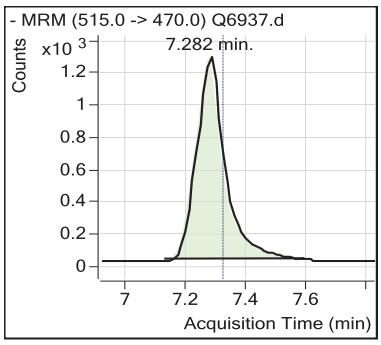


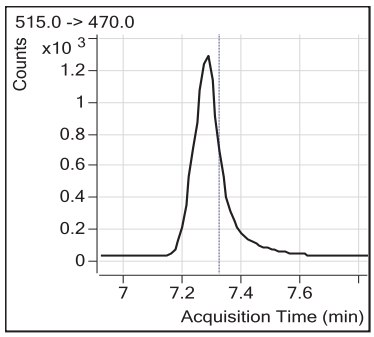


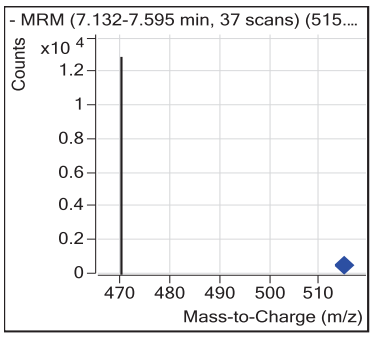


Perfluorinated Compounds by LC/MS/MS.

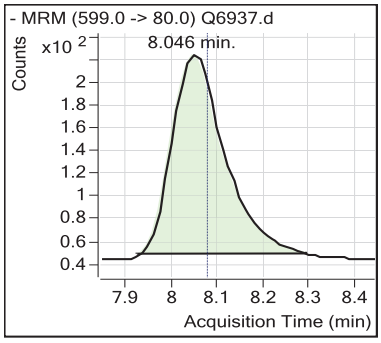
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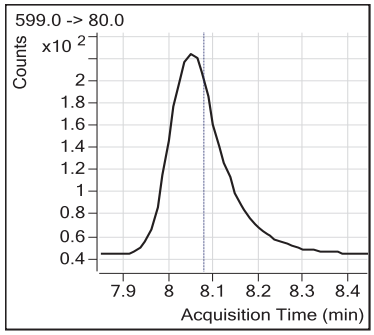


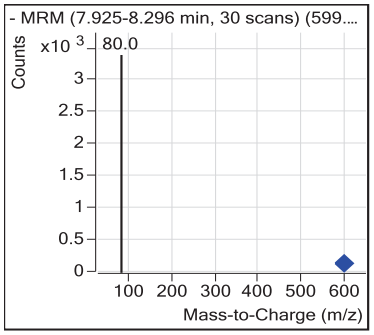




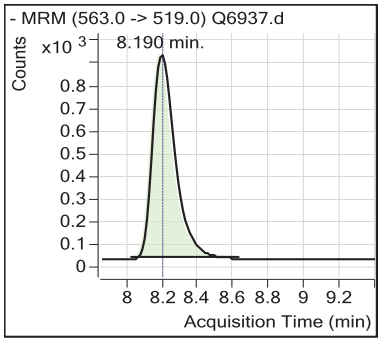
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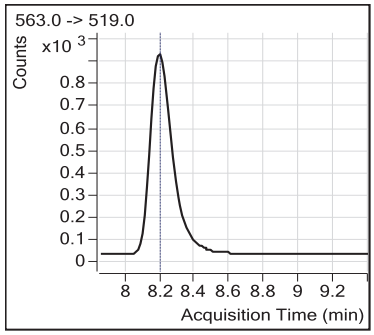


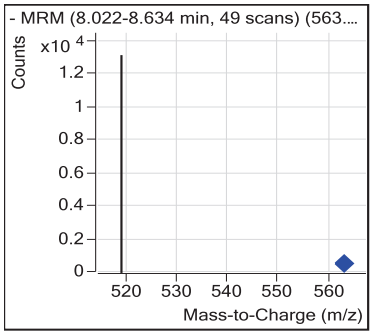




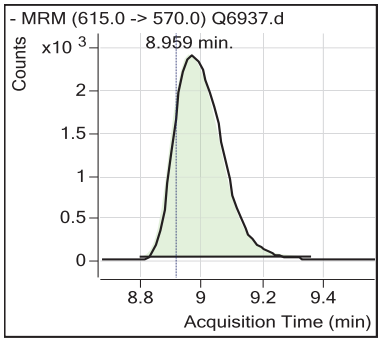
PFUnDA

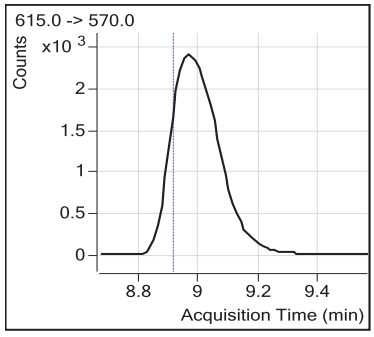


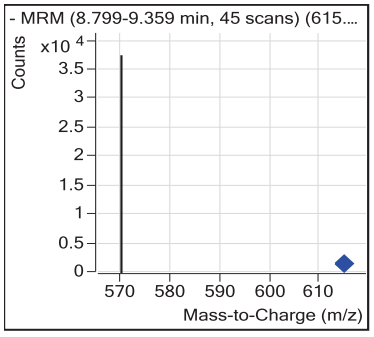




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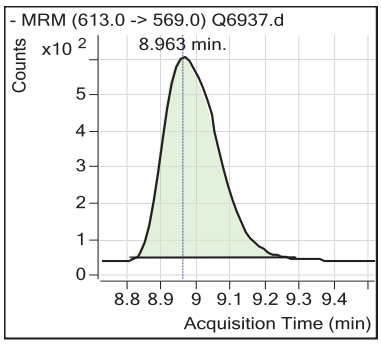


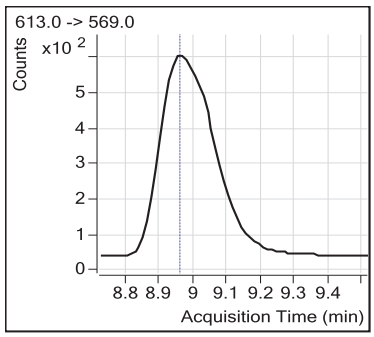


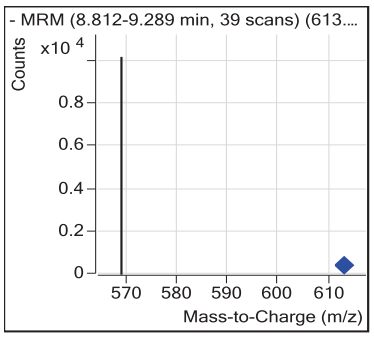


Perfluorinated Compounds by LC/MS/MS.

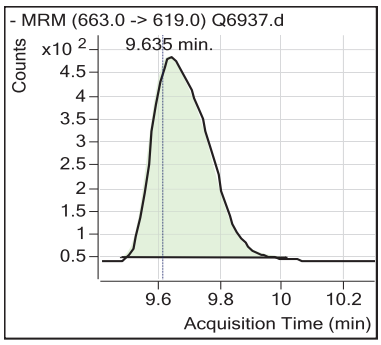
PFDoDA

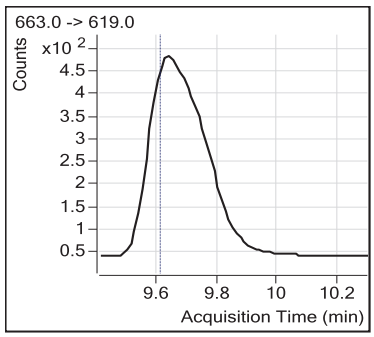


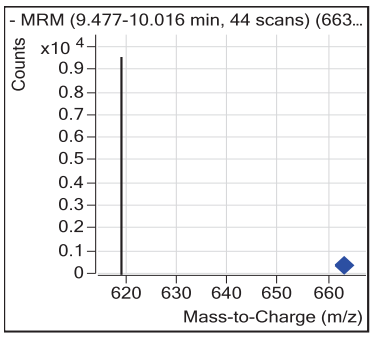




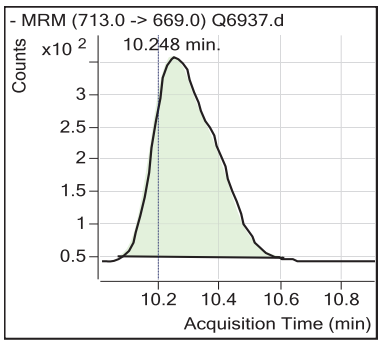
PFTrDA

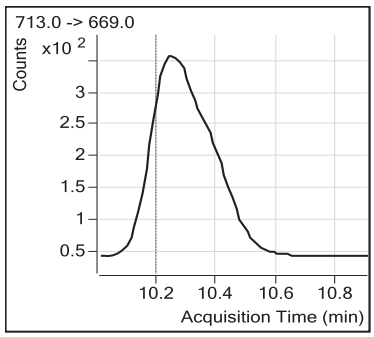


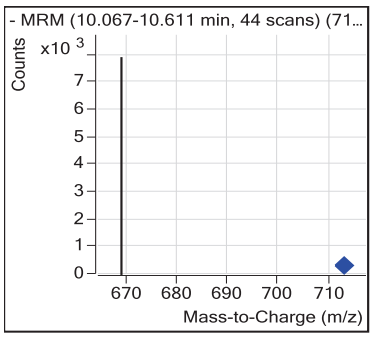




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

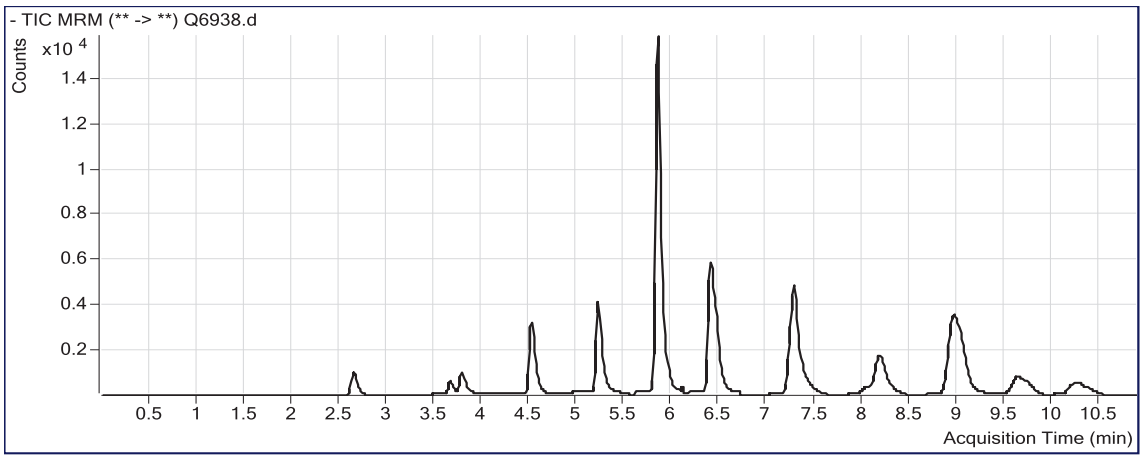
Data File	:	Q6938.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 12:52
Sample Name	:	IC234-10
Vial	:	Vial 6
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	38921	20.000	µg/L	0.000
13C4-PFOS	6.394	503.0 -> 80.0	14952	20.000	µg/L	-0.013
13C2-PFDoDA	8.959	615.0 -> 570.0	26306	20.000	µg/L	0.037
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	6058	10.50	µg/L	0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 52.52%			
13C2-PFDA	7.282	515.0 -> 470.0	17943	11.25	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 56.23%			
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	4620	10.222	µg/L	100
PFPeA	3.661	263.0 -> 219.0	2248	10.158	µg/L	100
PFBS	3.778	299.0 -> 80.0	2541	10.738	µg/L	98
PFHxA	4.520	313.0 -> 269.0	6787	10.363	µg/L	99
PFHxS	5.217	399.0 -> 80.0	4053	10.930	µg/L	90
PFHpA	5.222	363.0 -> 319.0	6784	10.188	µg/L	98
PFHpS	5.806	449.0 -> 80.0	4593	10.367	µg/L	100
PFOA	5.848	413.0 -> 369.0	20015	9.633	µg/L	83
PFOS	6.397	499.0 -> 80.0	7534	9.614	µg/L	87
PFNA	6.466	463.0 -> 419.0	9028	9.849	µg/L	100
PFDA	7.276	513.0 -> 469.0	16802	11.290	µg/L	100
PFDS	8.046	599.0 -> 80.0	2654	10.372	µg/L	100
PFUnDA	8.177	563.0 -> 519.0	14729	9.881	µg/L	100
PFDoDA	8.963	613.0 -> 569.0	11590	10.113	µg/L	100
PFTrDA	9.635	663.0 -> 619.0	10423	9.848	µg/L	100
PFTeDA	10.248	713.0 -> 669.0	7549	9.688	µg/L	100

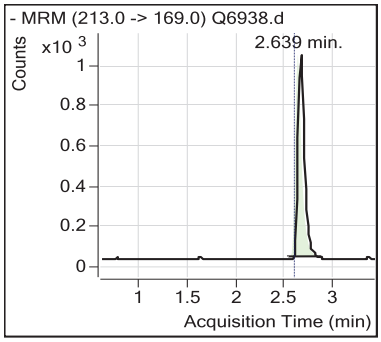
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

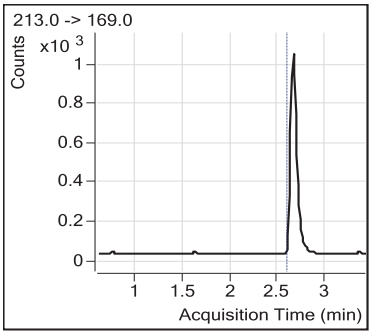
Perfluorinated Compounds by LC/MS/MS.

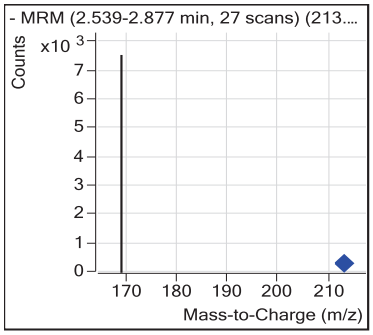
Data File	:	Q6938.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 12:52
Sample Name	:	IC234-10
Vial	:	Vial 6
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



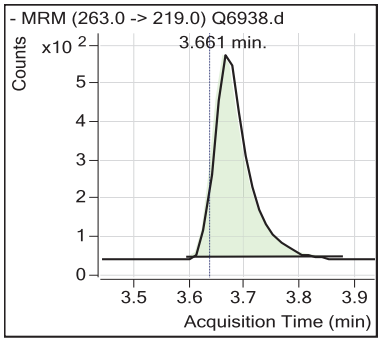
PFBA

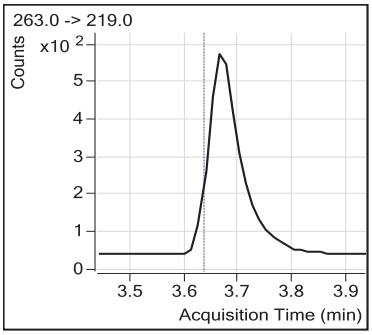


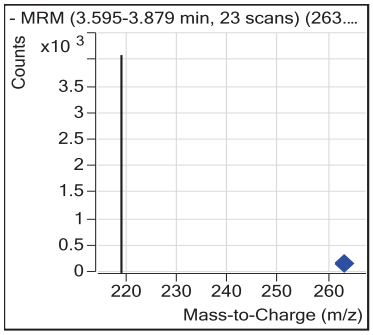




PFPeA

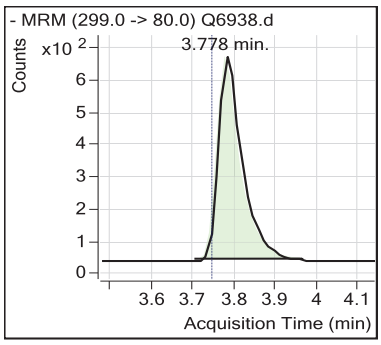


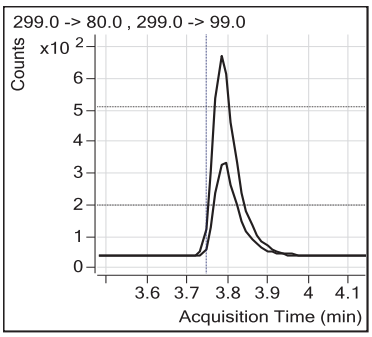


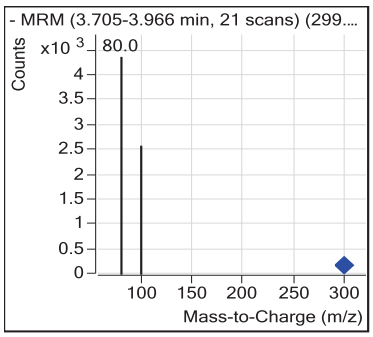


Perfluorinated Compounds by LC/MS/MS.

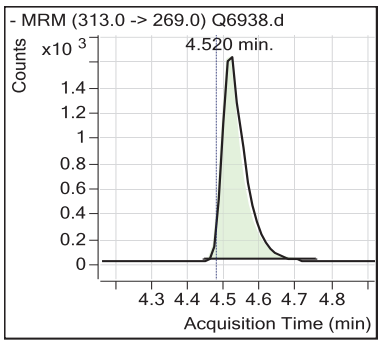
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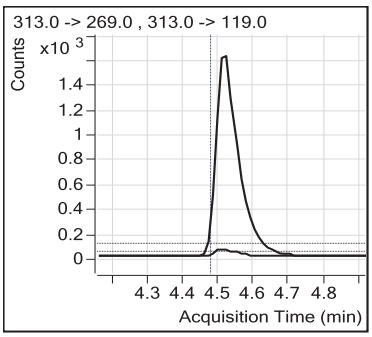


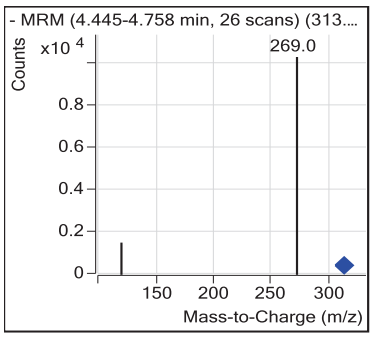




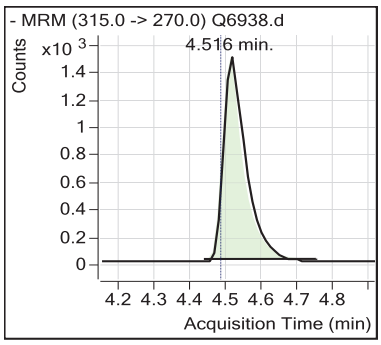
PFHxA

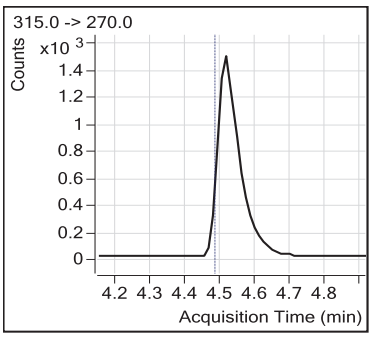


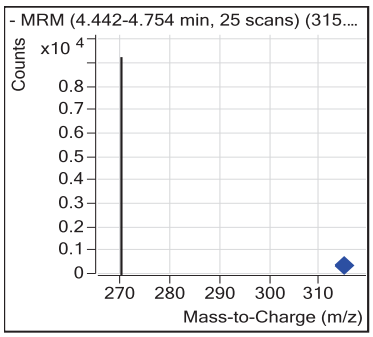




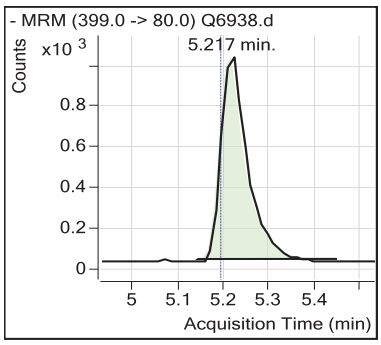
13C2-PFHxA

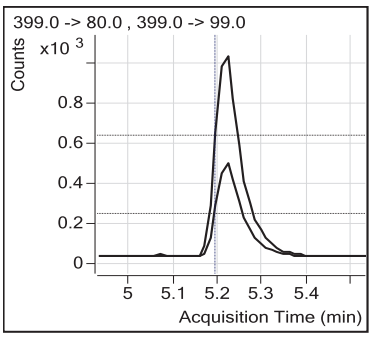


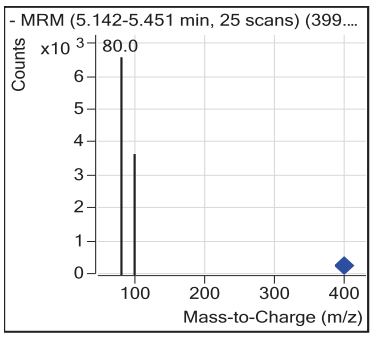




PFHxS

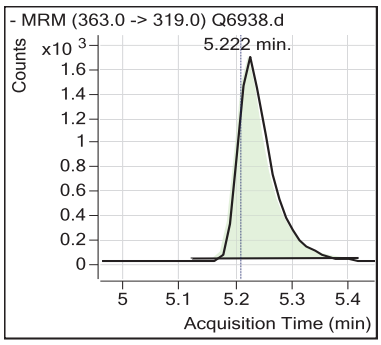


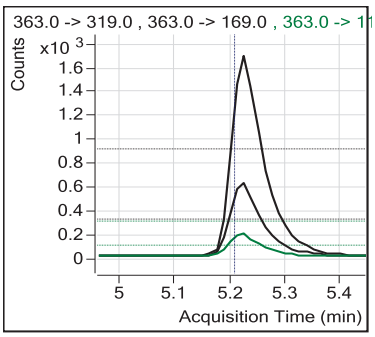


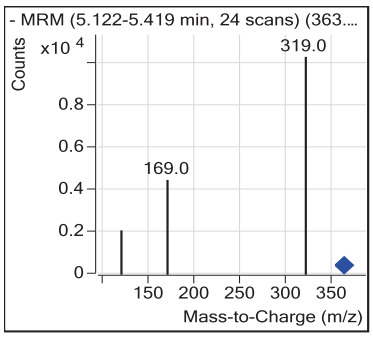


Perfluorinated Compounds by LC/MS/MS.

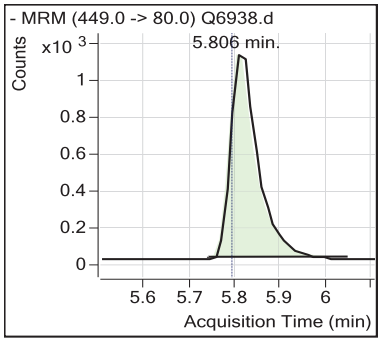
PFHpA

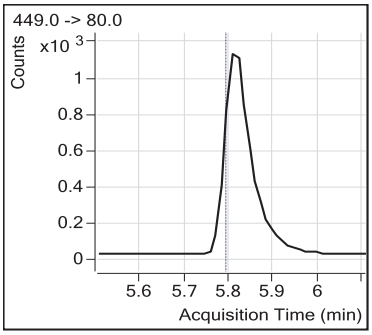


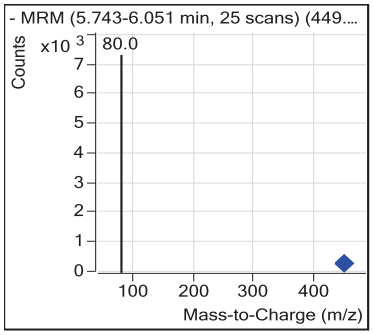




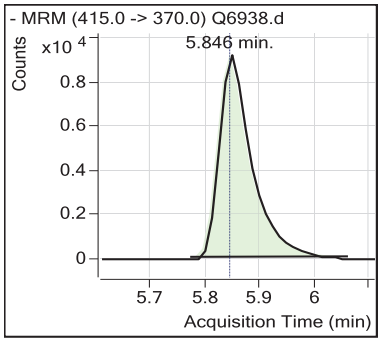
PFHpS

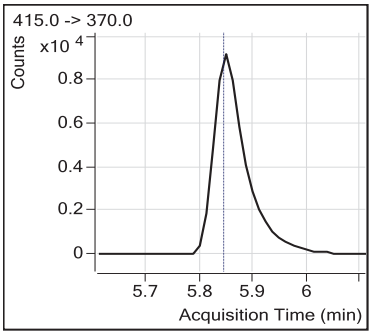


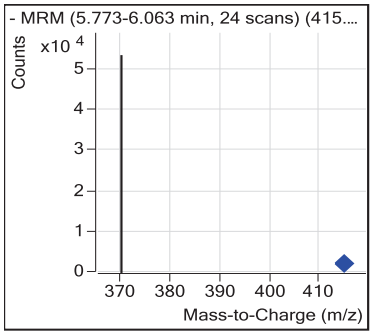




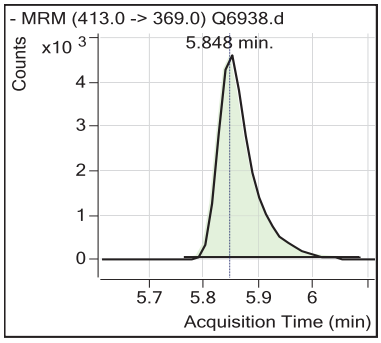
13C2-PFOA

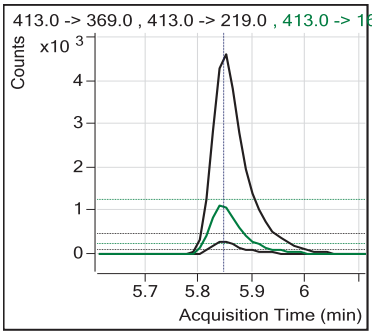


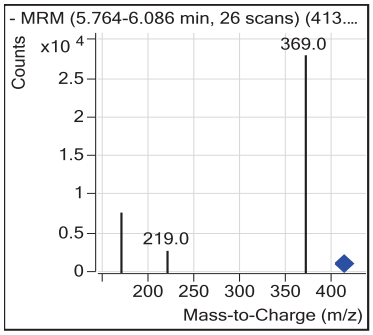




PFOA





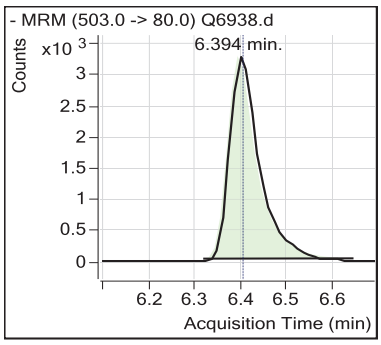


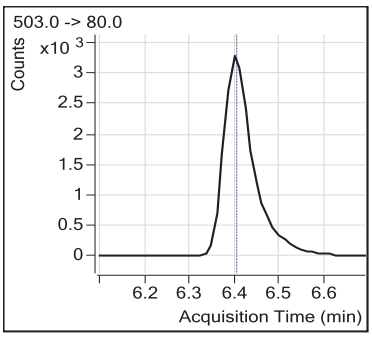
7.5.3

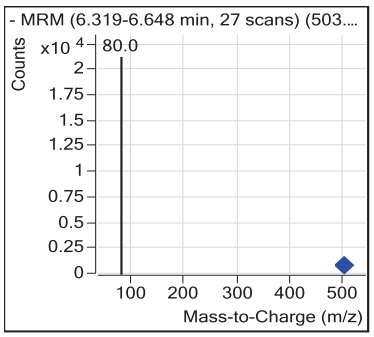
7

Perfluorinated Compounds by LC/MS/MS.

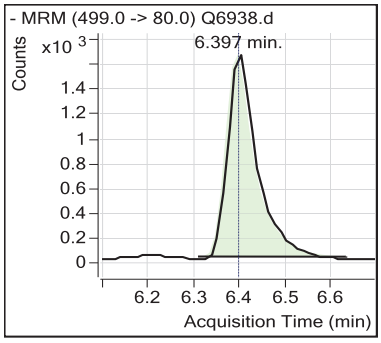
13C4-PFOS

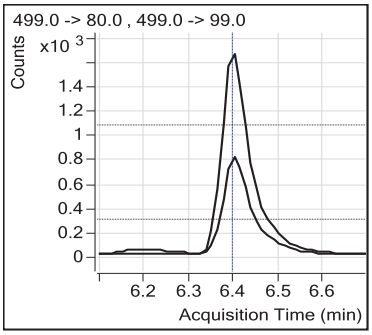


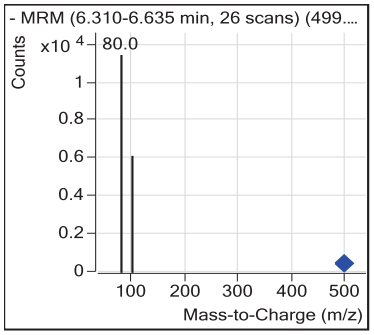




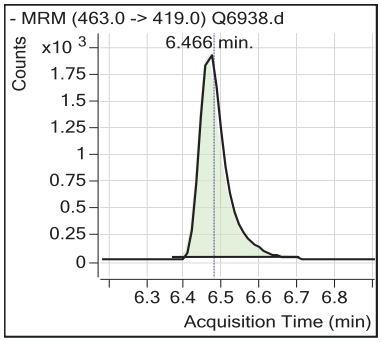
PFOS

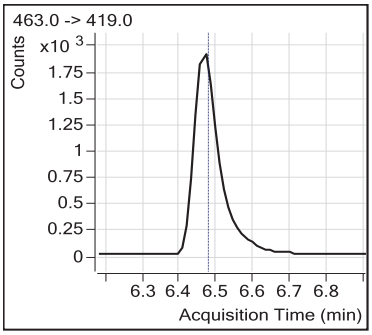


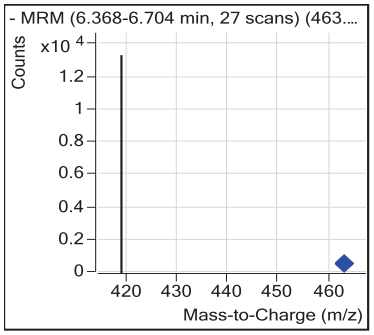




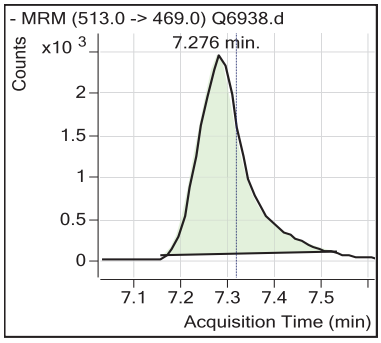
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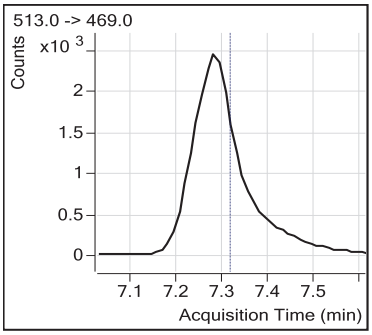


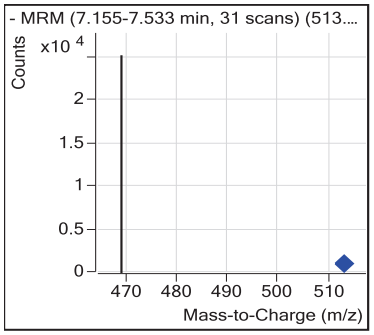




PFDA

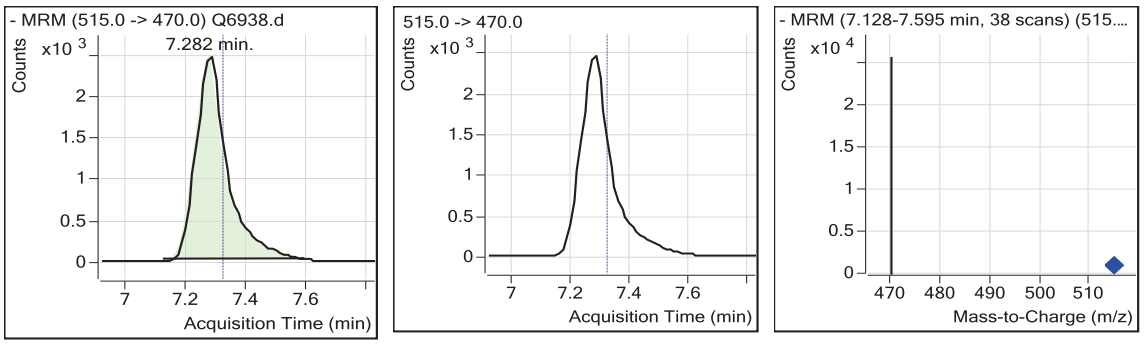




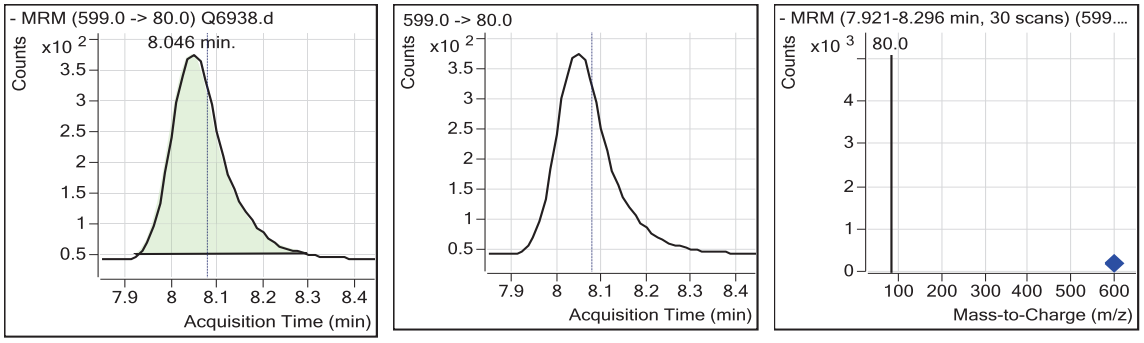


Perfluorinated Compounds by LC/MS/MS.

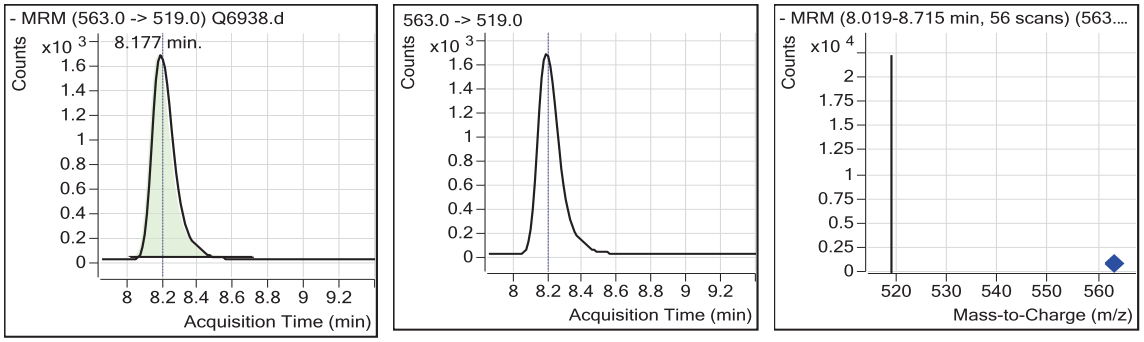
13C2-PFDA



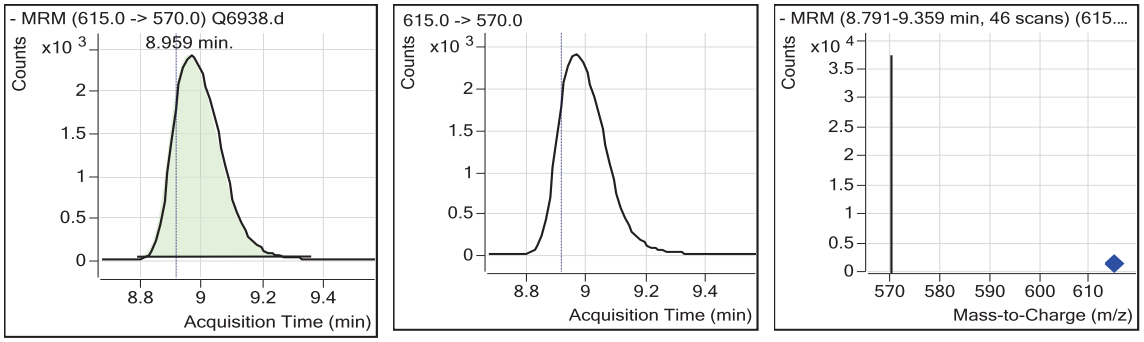
PFDS



PFUnDA

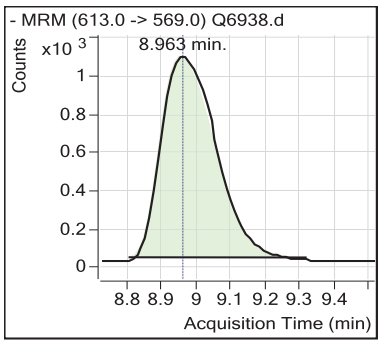


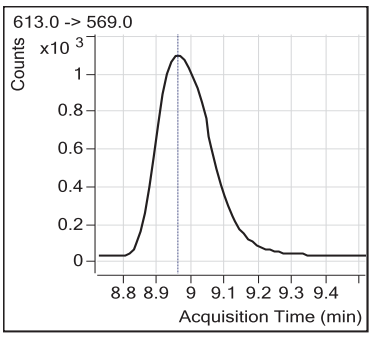
13C2-PFDoDA

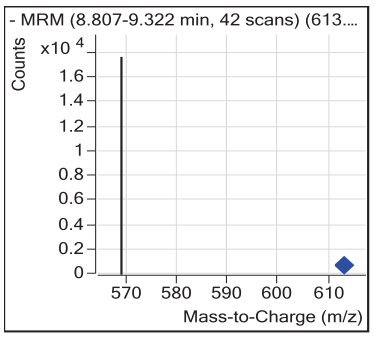


Perfluorinated Compounds by LC/MS/MS.

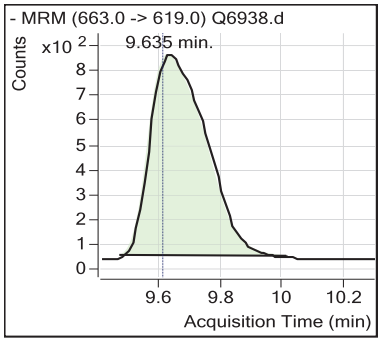
PFDoDA

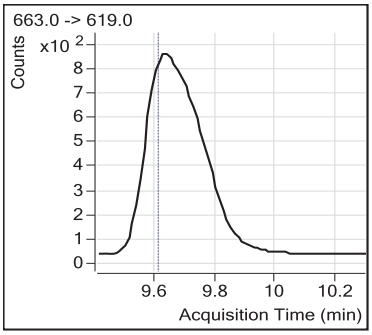


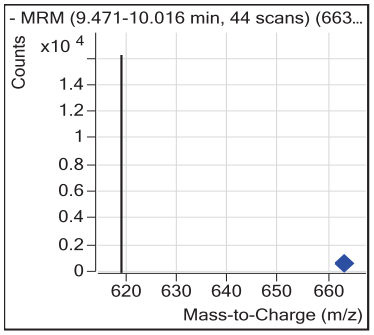




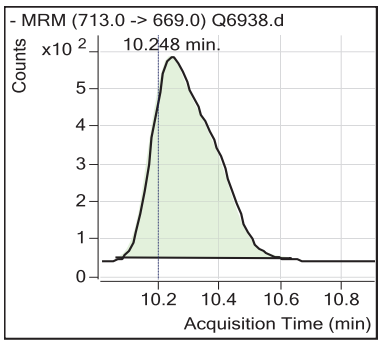
PFTrDA

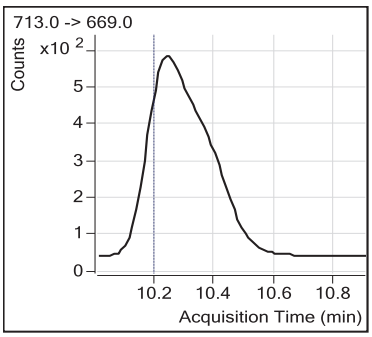


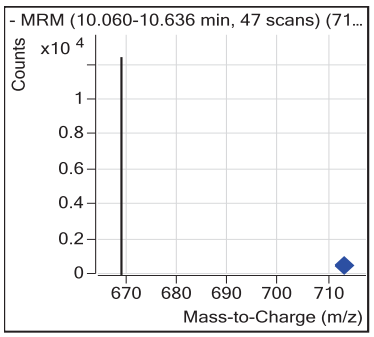




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

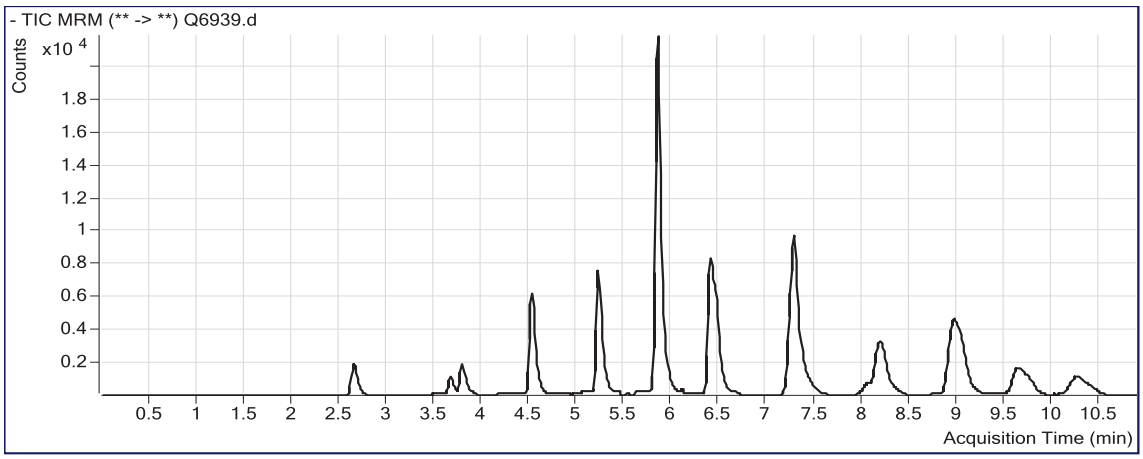
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Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 13:11
Sample Name	:	ICC234-20
Vial	:	Vial 7
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	38623	20.000	µg/L	0.000
13C4-PFOS	6.394	503.0 -> 80.0	15197	20.000	µg/L	-0.013
13C2-PFDoDA	8.959	615.0 -> 570.0	26613	20.000	µg/L	0.037
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	11803	20.62	µg/L	0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 103.12%			
13C2-PFDA	7.282	515.0 -> 470.0	36122	22.38	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 111.90%			
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	8956	19.971	µg/L	100
PFPeA	3.661	263.0 -> 219.0	4399	20.029	µg/L	100
PFBS	3.778	299.0 -> 80.0	4946	20.561	µg/L	97
PFHxA	4.520	313.0 -> 269.0	13384	20.593	µg/L	99
PFHxS	5.217	399.0 -> 80.0	7707	20.448	µg/L	87
PFHpA	5.222	363.0 -> 319.0	12789	19.844	µg/L	97
PFHpS	5.806	449.0 -> 80.0	9101	20.212	µg/L	100
PFOA	5.848	413.0 -> 369.0	38644	19.278	µg/L	82
PFOS	6.397	499.0 -> 80.0	15030	19.380	µg/L	88
PFNA	6.466	463.0 -> 419.0	17947	19.971	µg/L	100
PFDA	7.276	513.0 -> 469.0	33751	22.418	µg/L	100
PFDS	8.046	599.0 -> 80.0	5390	20.818	µg/L	100
PFUnDA	8.190	563.0 -> 519.0	28551	19.370	µg/L	100
PFDoDA	8.963	613.0 -> 569.0	23724	20.463	µg/L	100
PFTrDA	9.635	663.0 -> 619.0	21192	19.967	µg/L	100
PFTeDA	10.248	713.0 -> 669.0	15736	19.979	µg/L	100

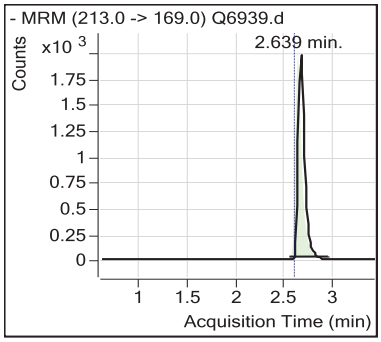
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

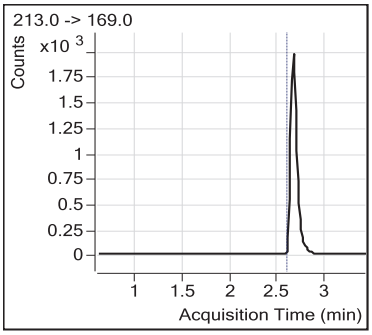
Perfluorinated Compounds by LC/MS/MS.

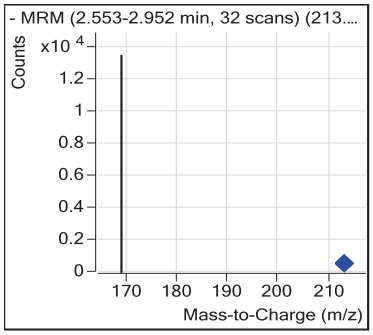
Data File	:	Q6939.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 13:11
Sample Name	:	ICC234-20
Vial	:	Vial 7
Sample Info	:	OP53043,SQ234,125,,,1,,water
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Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



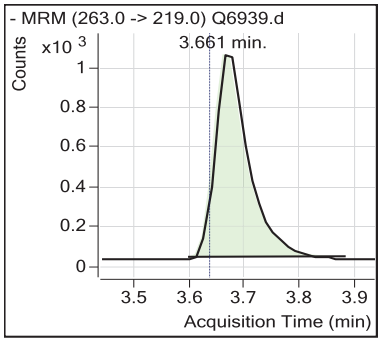
PFBA

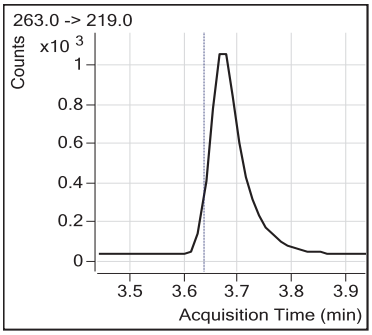


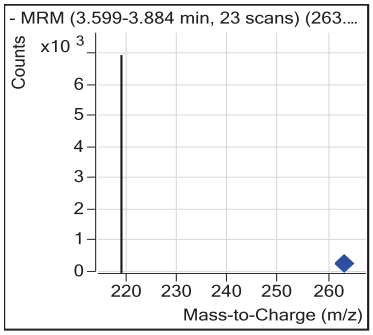




PFPeA

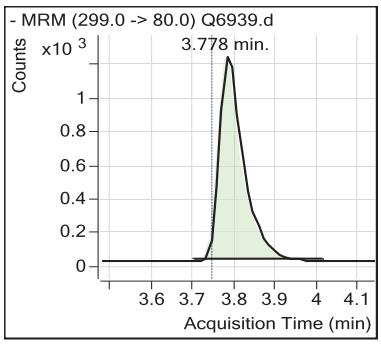


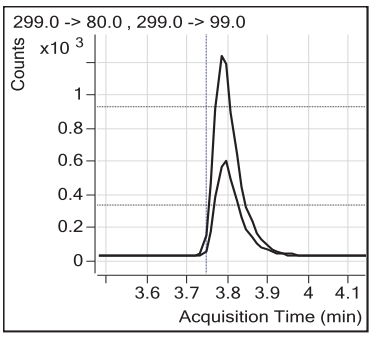


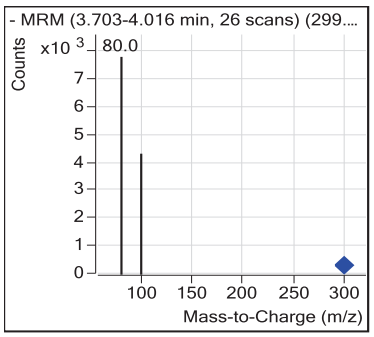


Perfluorinated Compounds by LC/MS/MS.

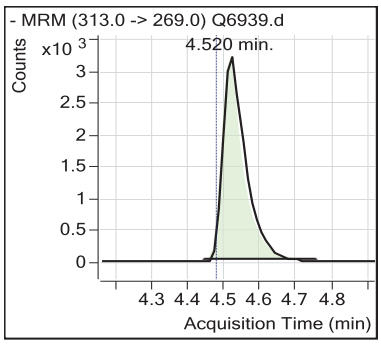
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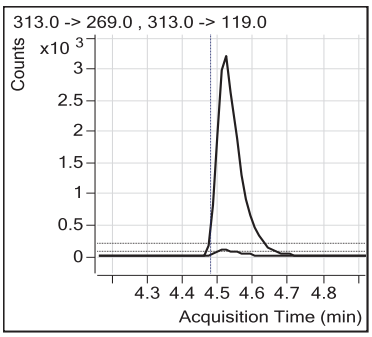


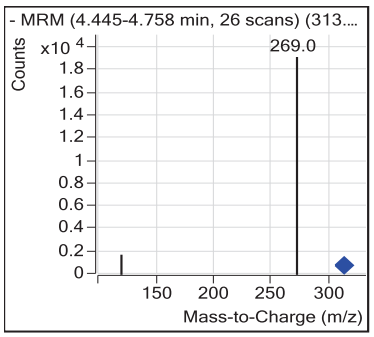




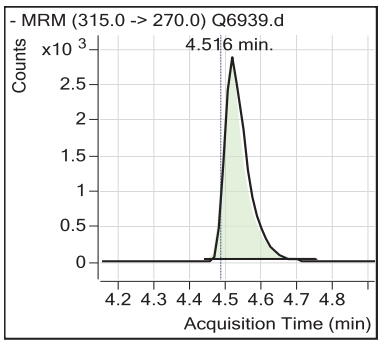
PFHxA

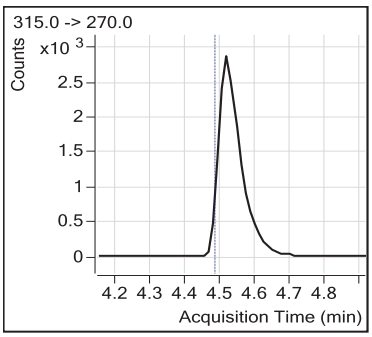


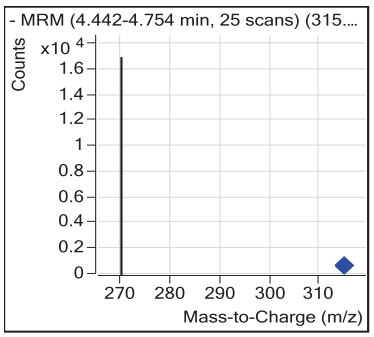




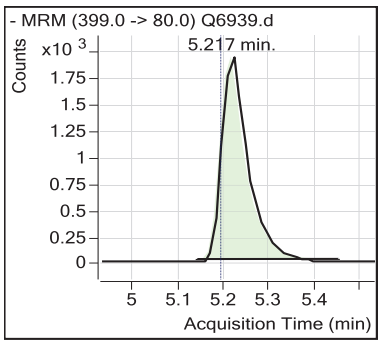
13C2-PFHxA

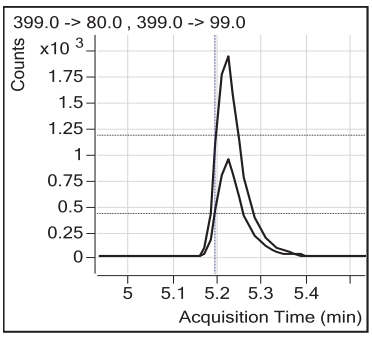


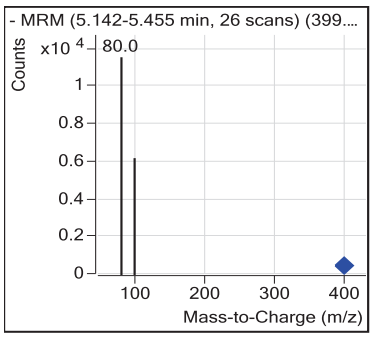




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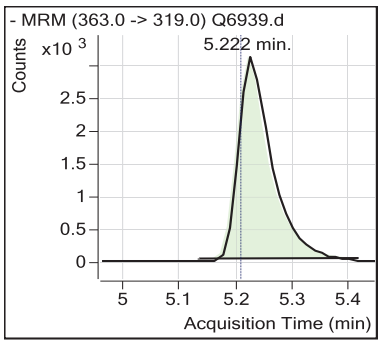


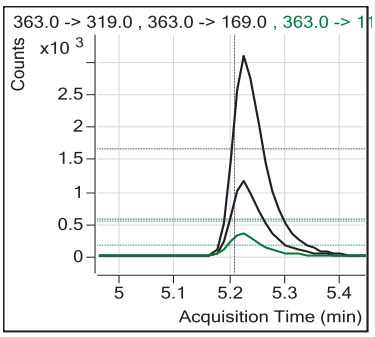


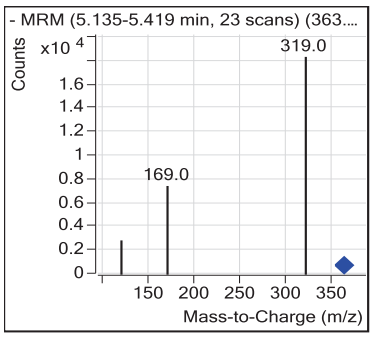


Perfluorinated Compounds by LC/MS/MS.

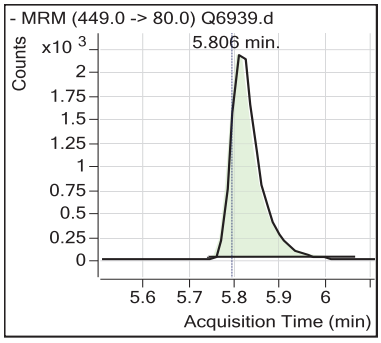
PFHpA

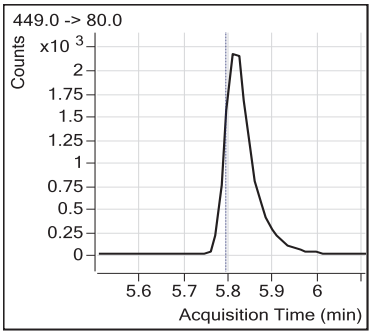


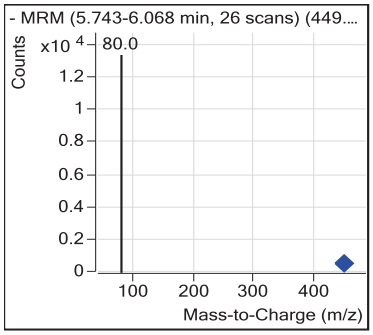




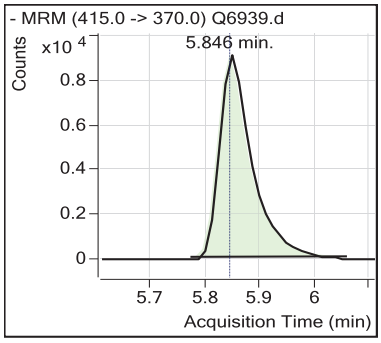
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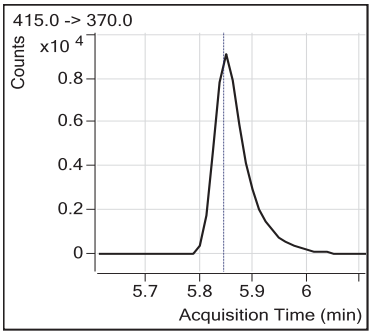


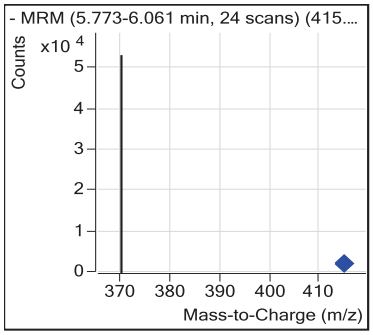




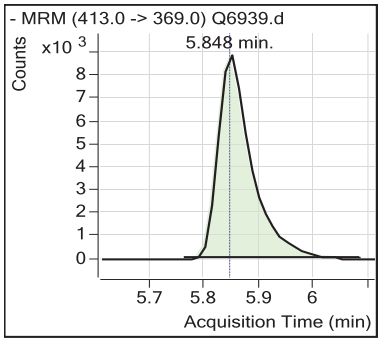
13C2-PFOA

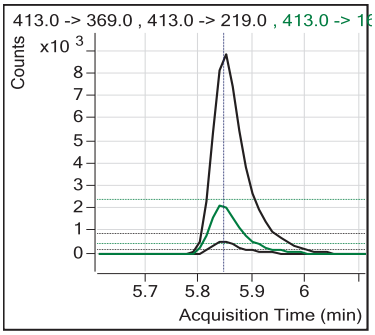


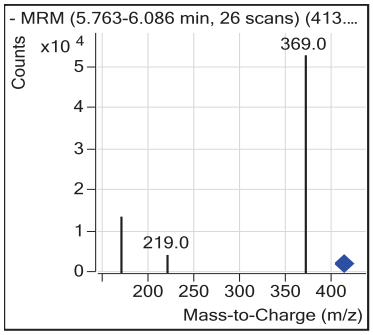




PFOA





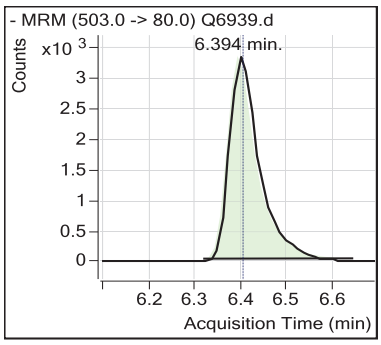


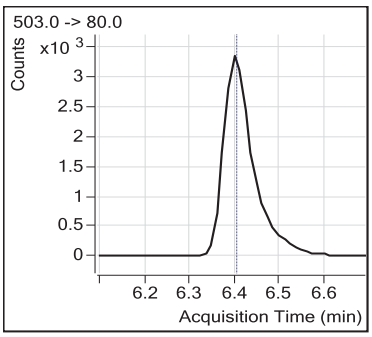
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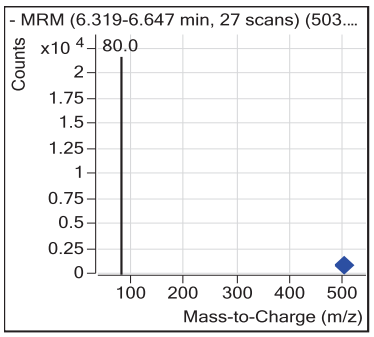
7

Perfluorinated Compounds by LC/MS/MS.

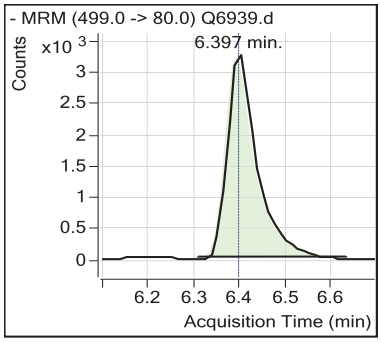
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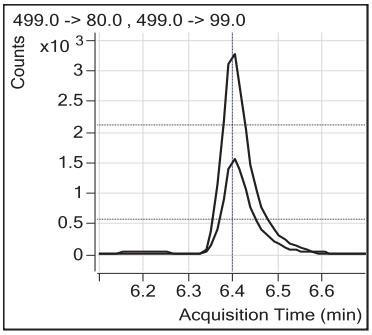


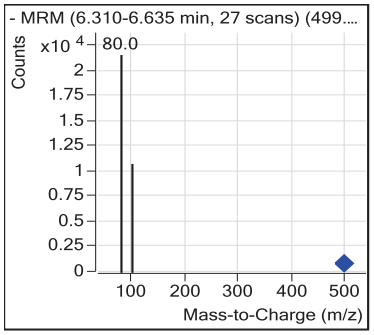




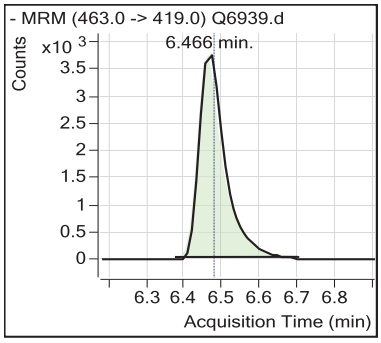
PFOS

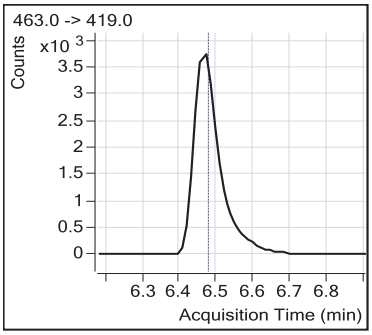


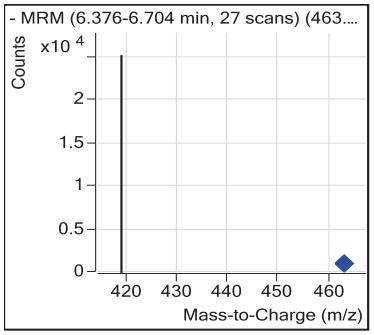




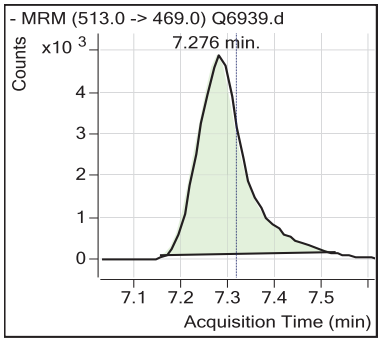
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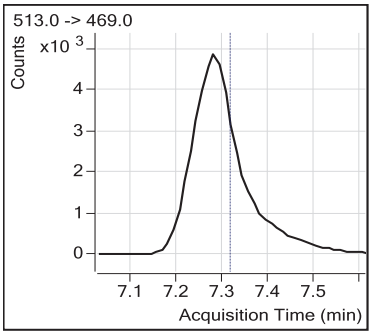


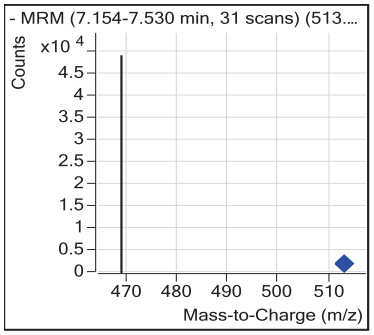




PFDA

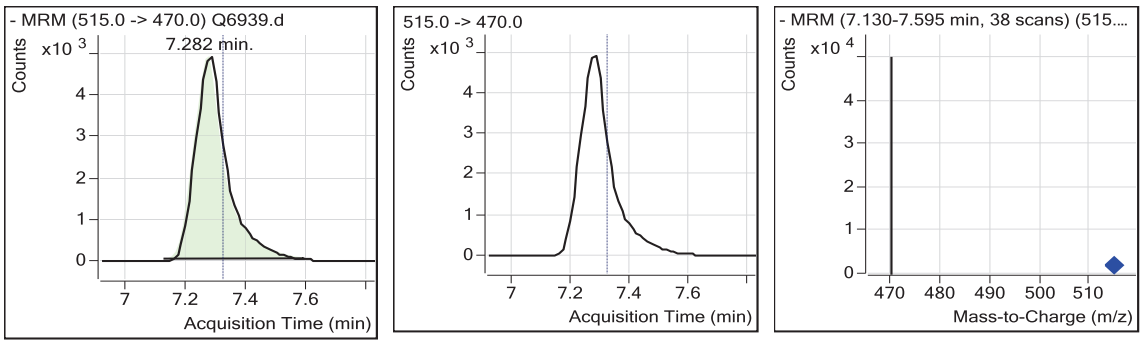




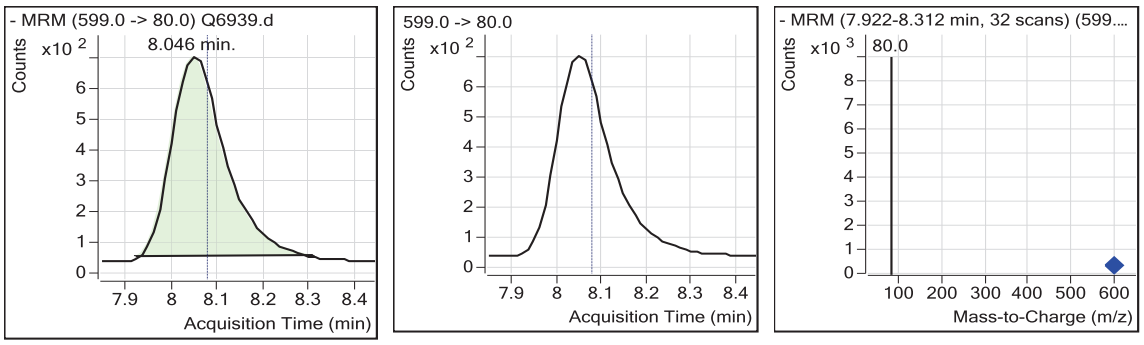


Perfluorinated Compounds by LC/MS/MS.

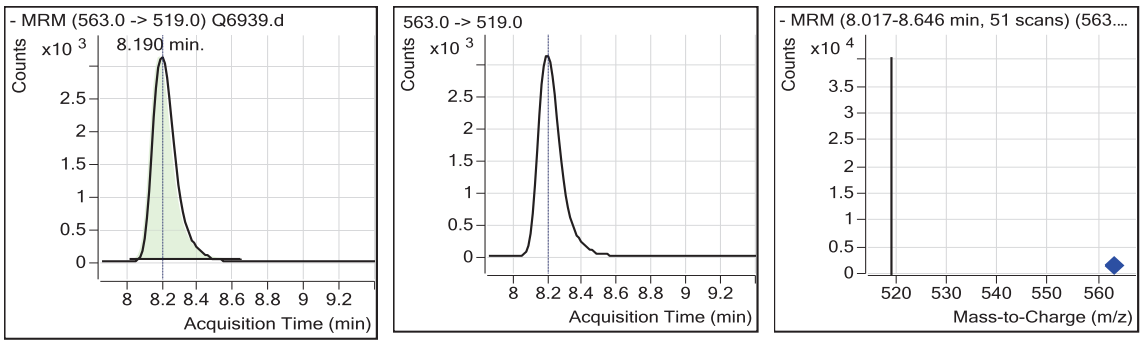
13C2-PFDA



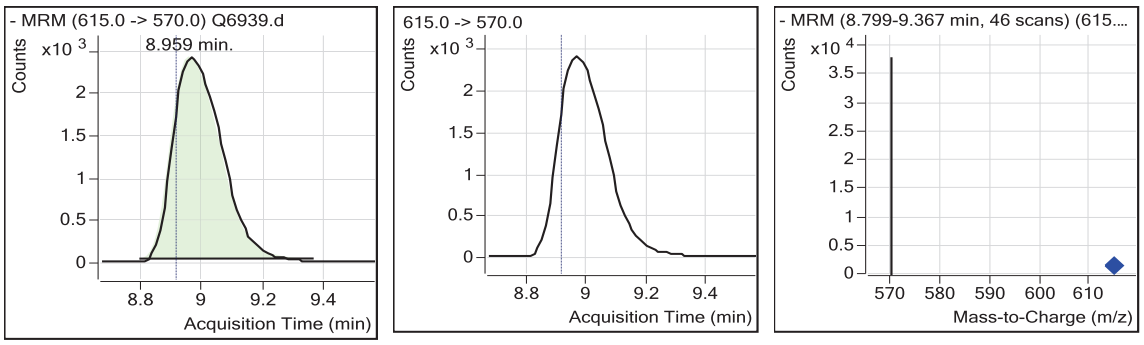
PFDS



PFUnDA

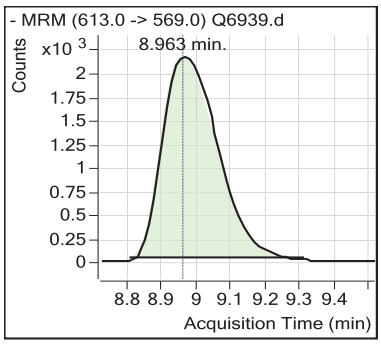


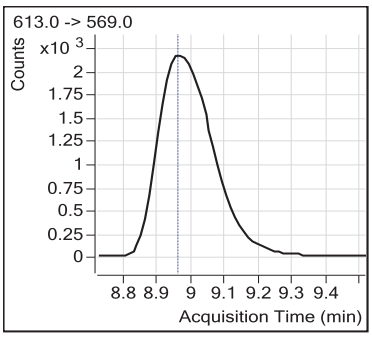
13C2-PFDoDA

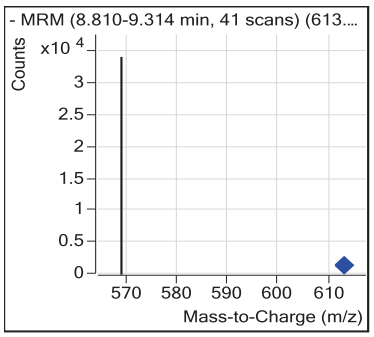


Perfluorinated Compounds by LC/MS/MS.

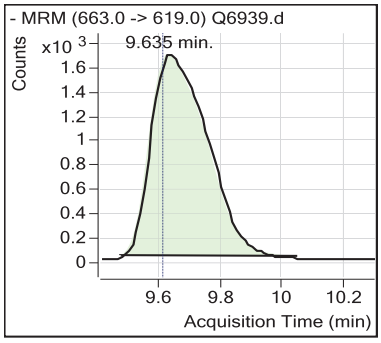
PFDoDA

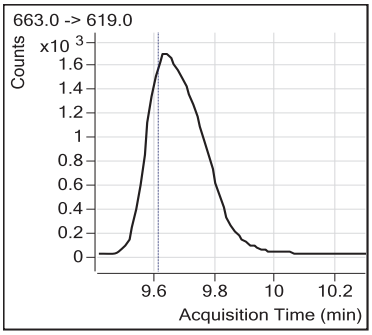


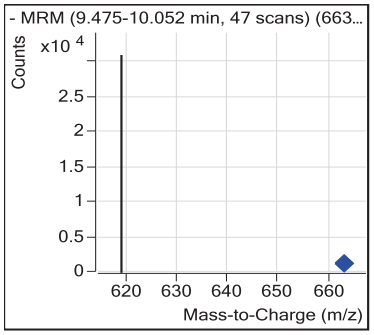




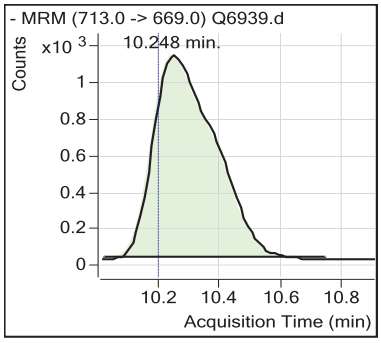
PFTrDA

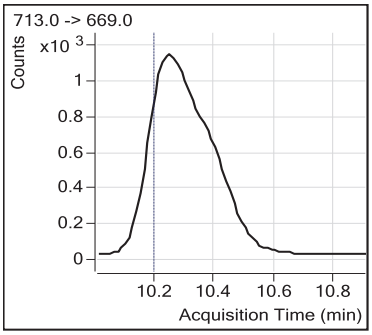


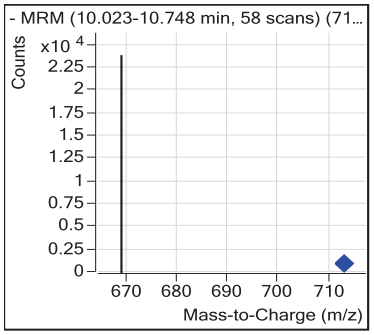




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

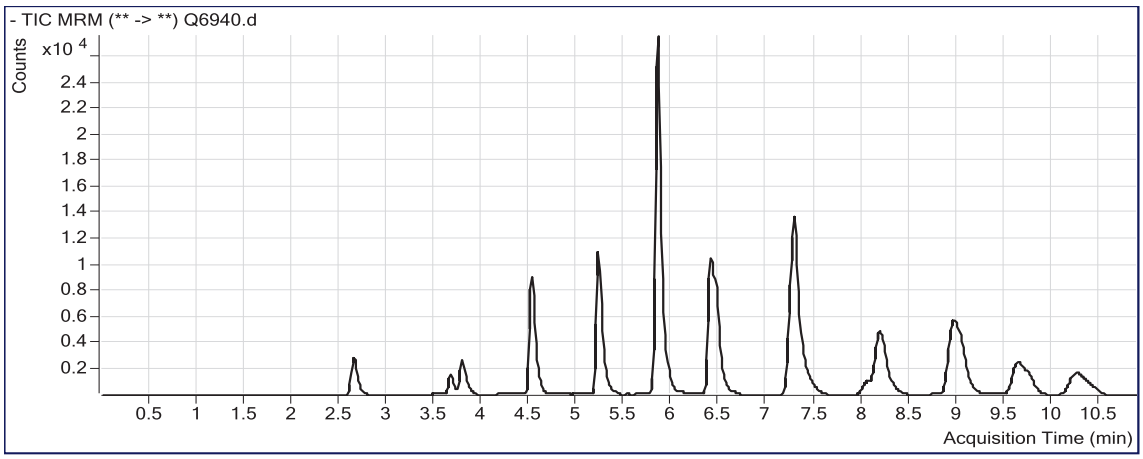
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Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 13:30
Sample Name	:	IC234-30
Vial	:	Vial 8
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	38030	20.000	µg/L	0.000
13C4-PFOS	6.394	503.0 -> 80.0	14988	20.000	µg/L	-0.013
13C2-PFDoDA	8.959	615.0 -> 570.0	26774	20.000	µg/L	0.037
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	17186	30.50	µg/L	0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 152.49%			
13C2-PFDA	7.282	515.0 -> 470.0	51332	31.61	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 158.07%			
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	13428	30.411	µg/L	100
PFPeA	3.661	263.0 -> 219.0	6556	30.313	µg/L	100
PFBS	3.778	299.0 -> 80.0	7329	30.894	µg/L	97
PFHxA	4.520	313.0 -> 269.0	19556	30.558	µg/L	99
PFHxS	5.217	399.0 -> 80.0	11423	30.726	µg/L	88
PFHpA	5.222	363.0 -> 319.0	18522	29.987	µg/L	97
PFHpS	5.818	449.0 -> 80.0	13610	30.645	µg/L	100
PFOA	5.848	413.0 -> 369.0	56064	29.270	µg/L	83
PFOS	6.397	499.0 -> 80.0	22108	29.758	µg/L	88
PFNA	6.466	463.0 -> 419.0	26233	30.013	µg/L	100
PFDA	7.276	513.0 -> 469.0	48257	31.860	µg/L	100
PFDS	8.046	599.0 -> 80.0	7973	30.612	µg/L	100
PFUnDA	8.190	563.0 -> 519.0	42223	29.167	µg/L	100
PFDoDA	8.963	613.0 -> 569.0	35755	30.655	µg/L	100
PFTrDA	9.635	663.0 -> 619.0	31995	30.233	µg/L	100
PFTeDA	10.248	713.0 -> 669.0	23895	30.180	µg/L	100

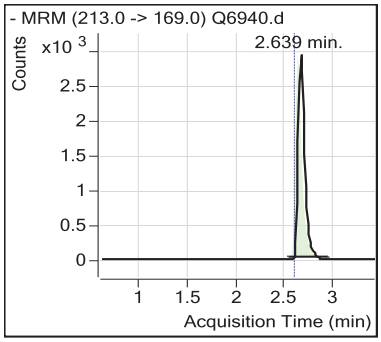
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

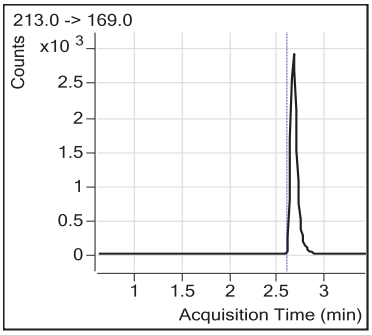
Perfluorinated Compounds by LC/MS/MS.

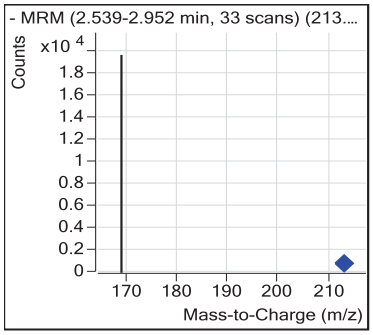
Data File	:	Q6940.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 13:30
Sample Name	:	IC234-30
Vial	:	Vial 8
Sample Info	:	OP53043,SQ234,125,,,1,,water
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Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



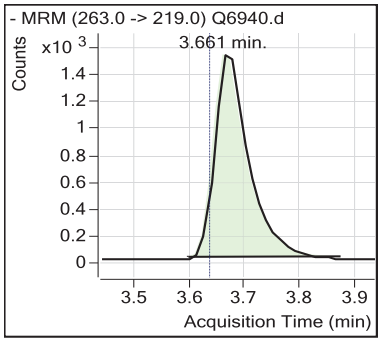
PFBA

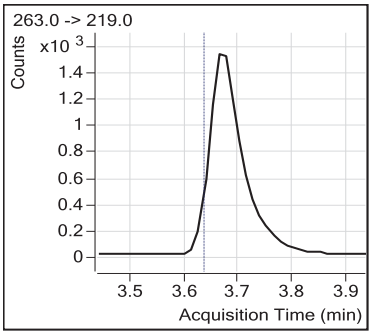


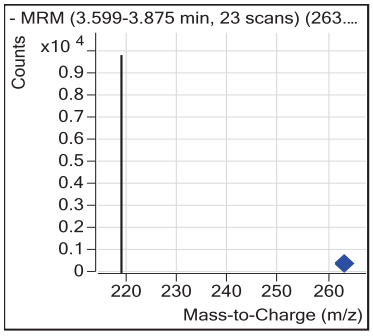




PFPeA

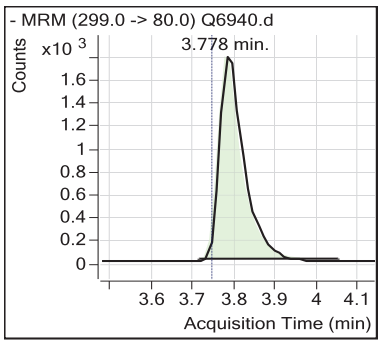


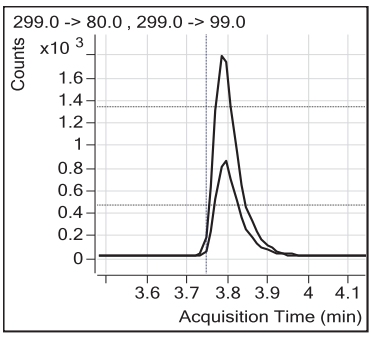


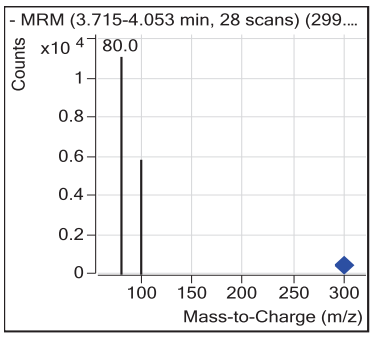


Perfluorinated Compounds by LC/MS/MS.

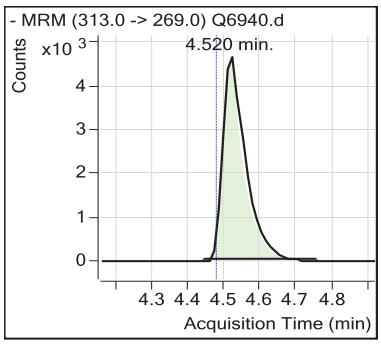
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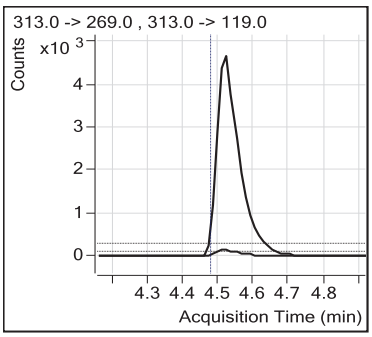


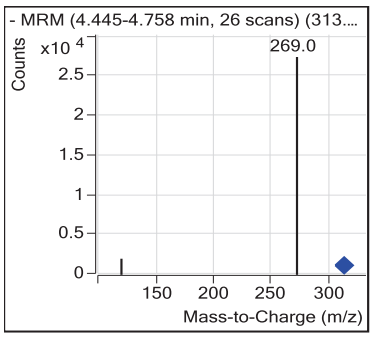




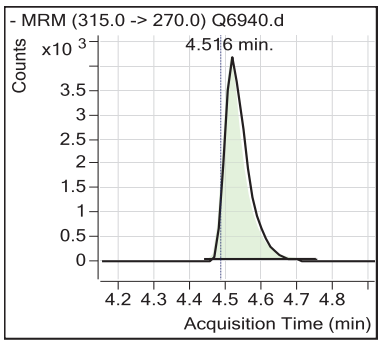
PFHxA

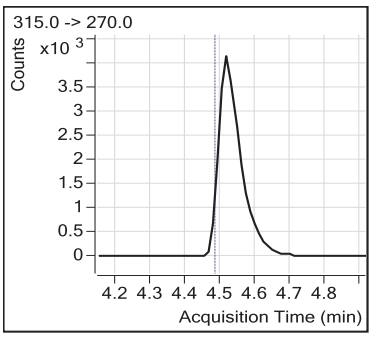


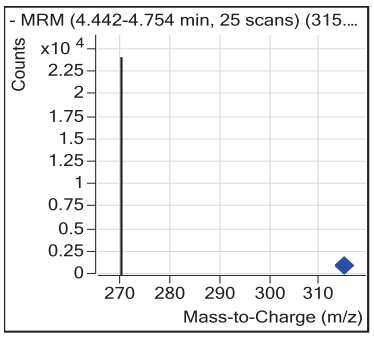




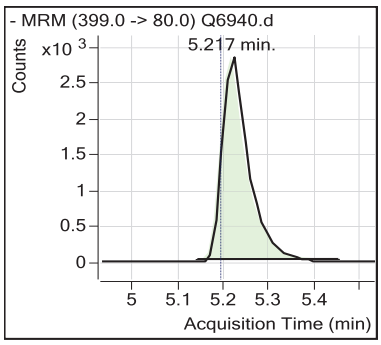
13C2-PFHxA

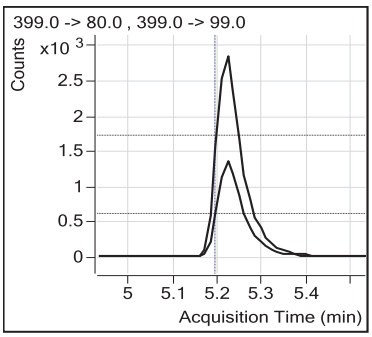


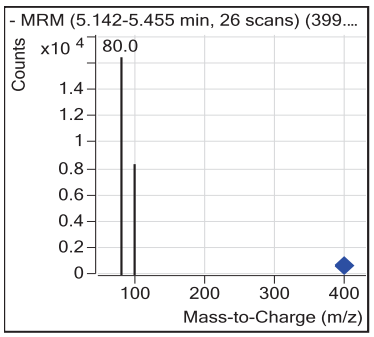




PFHxS

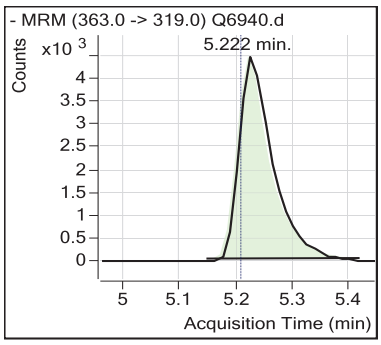


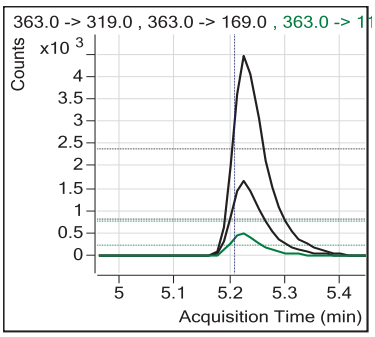


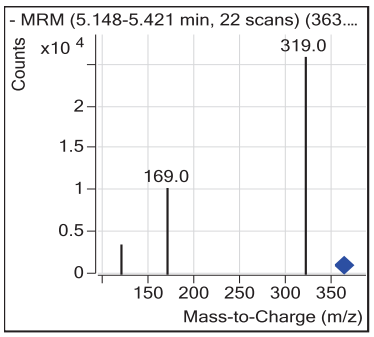


Perfluorinated Compounds by LC/MS/MS.

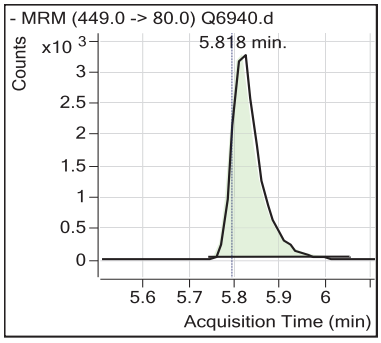
PFHpA

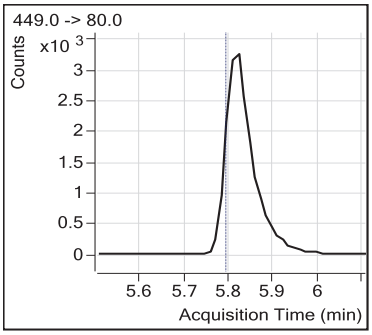


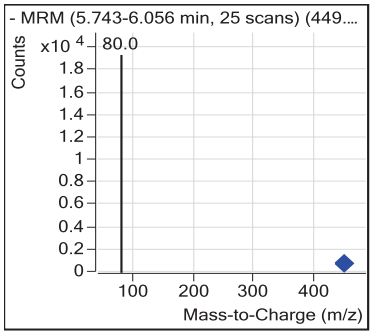




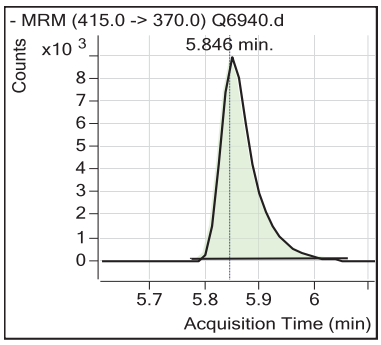
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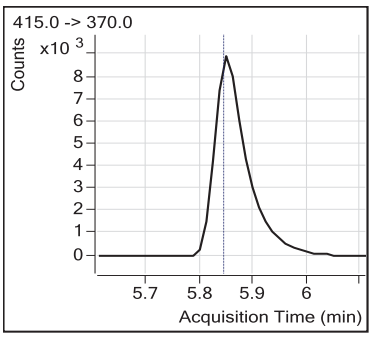


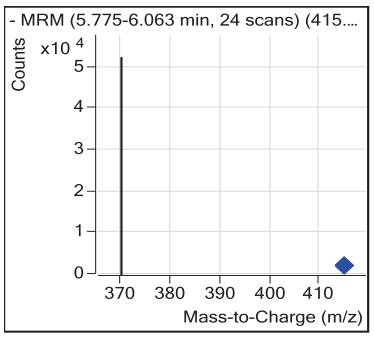




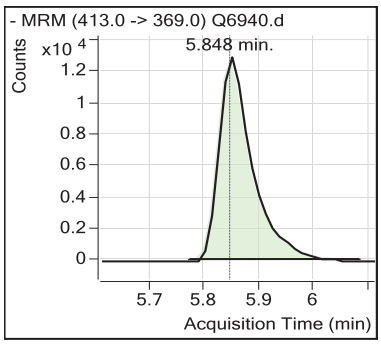
13C2-PFOA

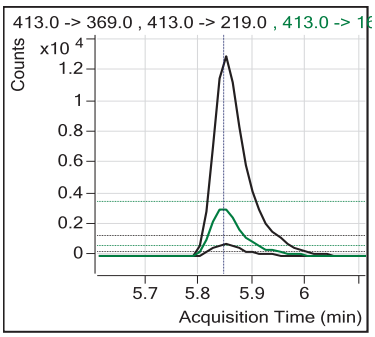


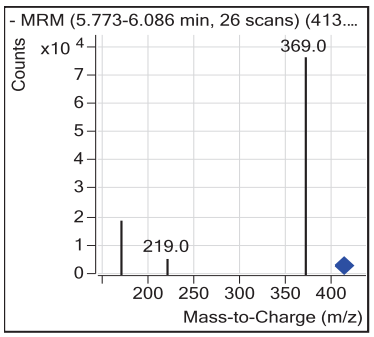




PFOA





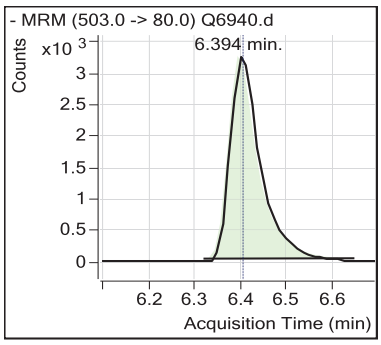


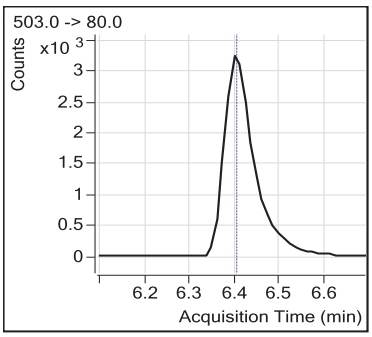
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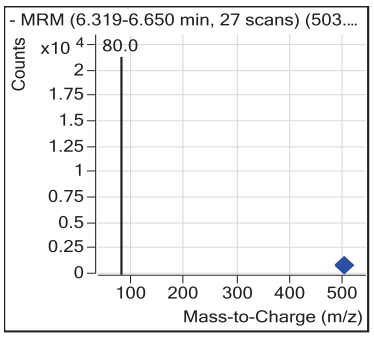
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Perfluorinated Compounds by LC/MS/MS.

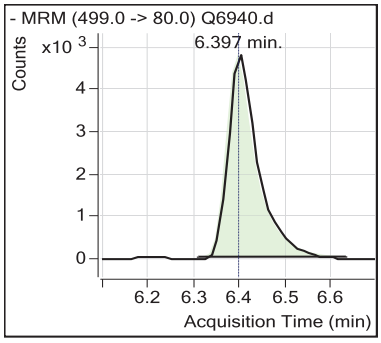
13C4-PFOS

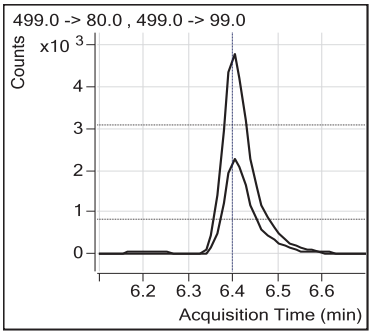


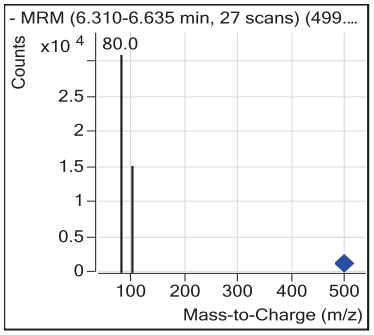




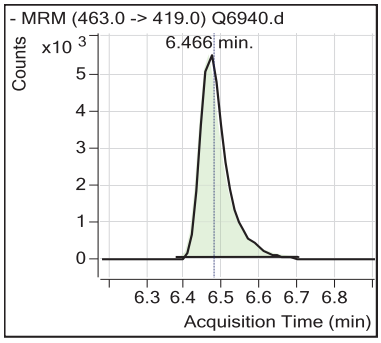
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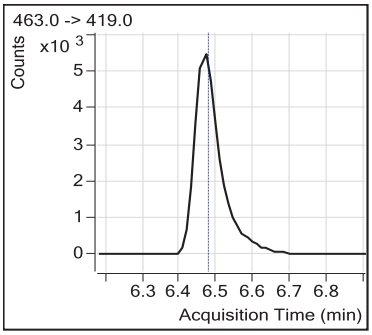


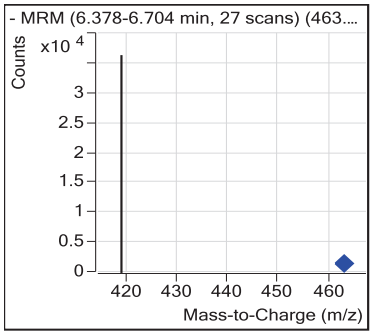




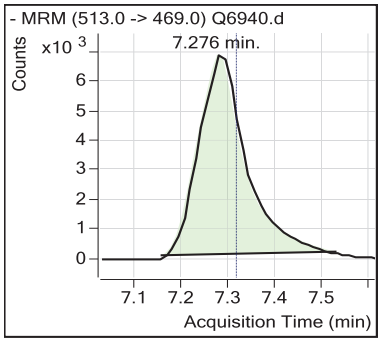
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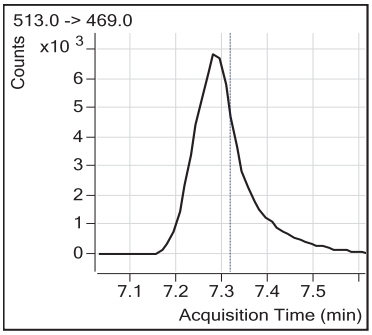


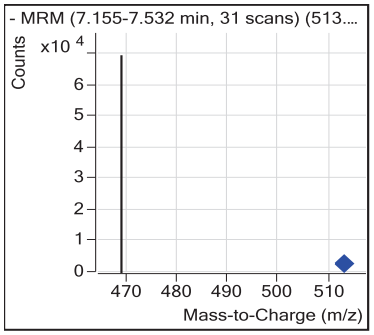




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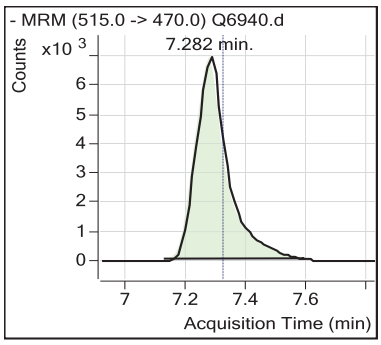


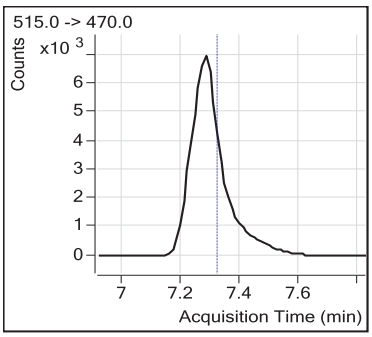


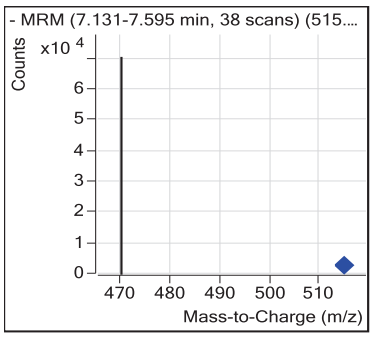


Perfluorinated Compounds by LC/MS/MS.

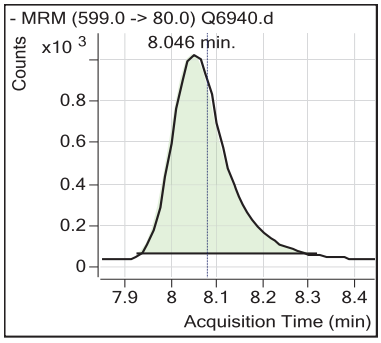
13C2-PFDA

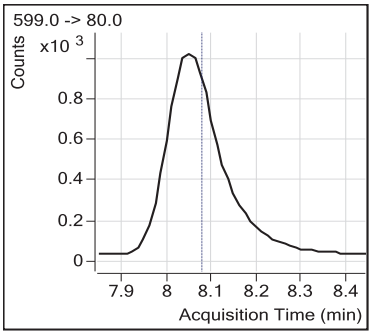


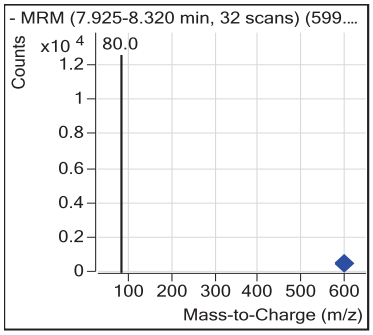




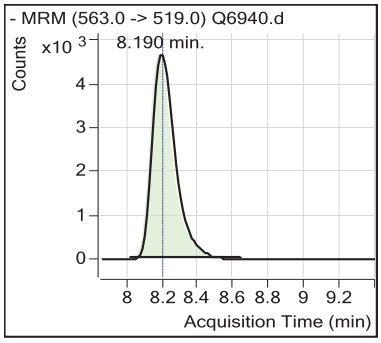
PFDS

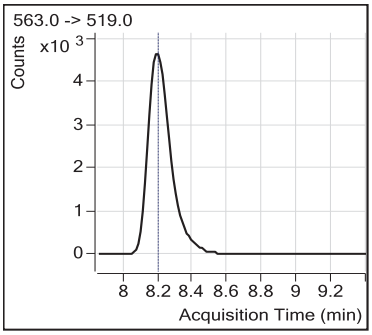


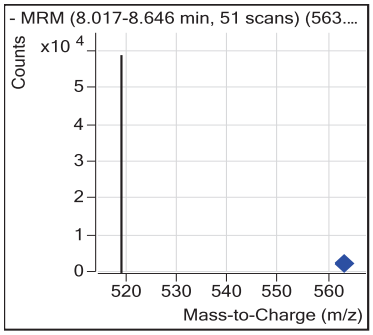




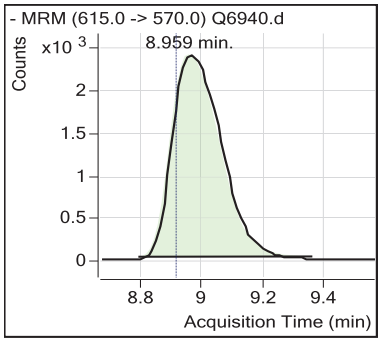
PFUnDA

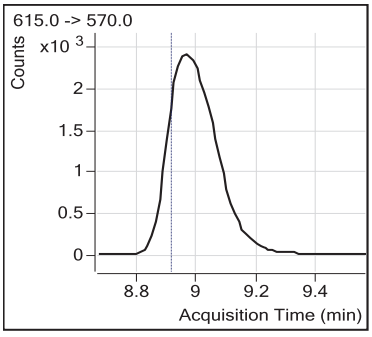


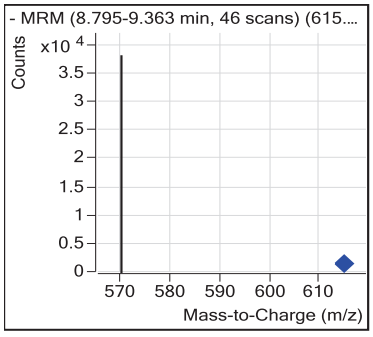




13C2-PFDoDA

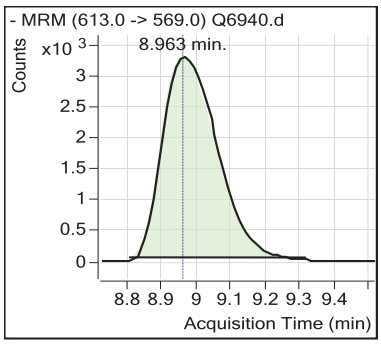


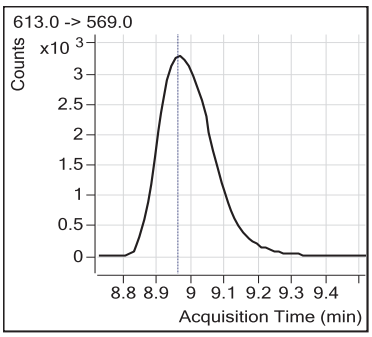


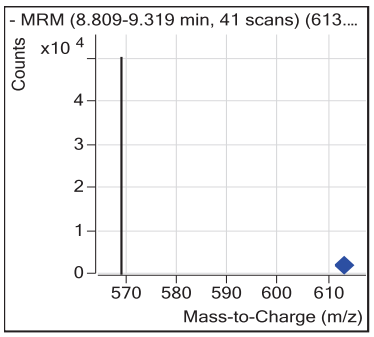


Perfluorinated Compounds by LC/MS/MS.

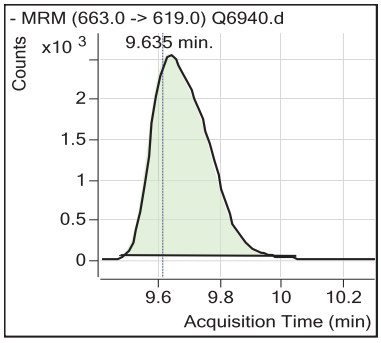
PFDoDA

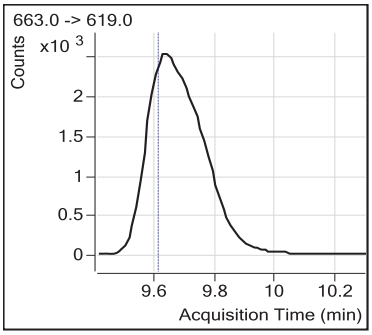


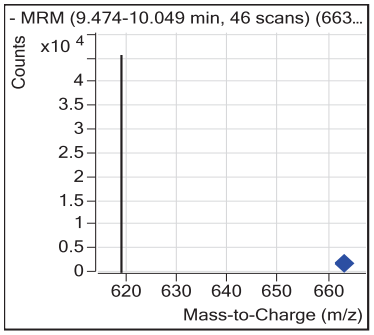




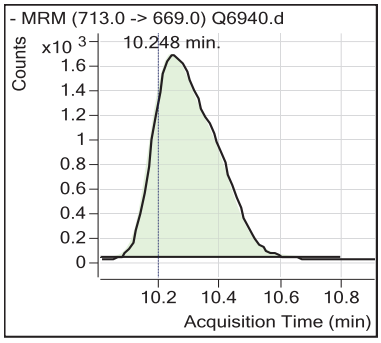
PFTrDA

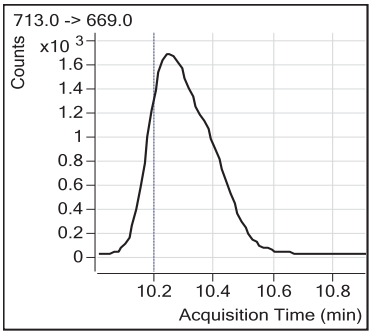


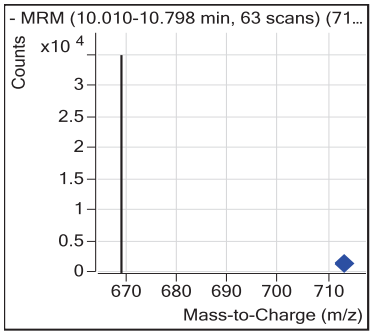




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

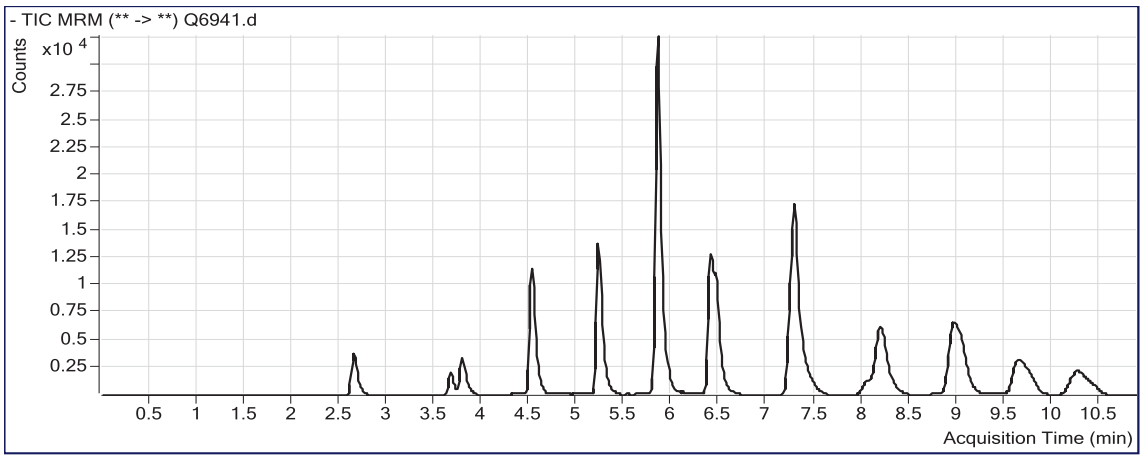
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Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 13:50
Sample Name	:	IC234-40
Vial	:	Vial 9
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	37538	20.000	µg/L	0.000
13C4-PFOS	6.394	503.0 -> 80.0	15181	20.000	µg/L	-0.013
13C2-PFDoDA	8.972	615.0 -> 570.0	27068	20.000	µg/L	0.050
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	21987	39.53	µg/L	0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 197.66%			
13C2-PFDA	7.282	515.0 -> 470.0	64934	39.56	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 197.78%			
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	17278	39.643	µg/L	100
PFPeA	3.674	263.0 -> 219.0	8370	39.211	µg/L	100
PFBS	3.790	299.0 -> 80.0	9302	38.713	µg/L	97
PFHxA	4.520	313.0 -> 269.0	25011	39.595	µg/L	99
PFHxS	5.217	399.0 -> 80.0	14498	38.504	µg/L	86
PFHpA	5.222	363.0 -> 319.0	23467	39.506	µg/L	97
PFHpS	5.818	449.0 -> 80.0	17659	39.257	µg/L	100
PFOA	5.848	413.0 -> 369.0	72263	39.448	µg/L	83
PFOS	6.397	499.0 -> 80.0	28639	39.100	µg/L	88
PFNA	6.466	463.0 -> 419.0	33850	39.709	µg/L	100
PFDA	7.276	513.0 -> 469.0	60841	39.732	µg/L	100
PFDS	8.058	599.0 -> 80.0	10394	39.473	µg/L	100
PFUnDA	8.190	563.0 -> 519.0	54733	38.265	µg/L	100
PFDoDA	8.963	613.0 -> 569.0	46682	39.589	µg/L	100
PFTrDA	9.635	663.0 -> 619.0	42102	39.678	µg/L	100
PFTeDA	10.248	713.0 -> 669.0	31643	39.560	µg/L	100

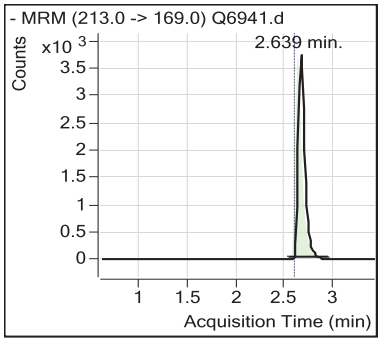
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

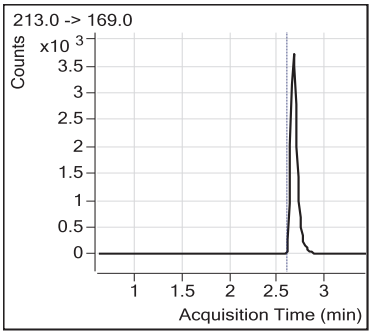
Perfluorinated Compounds by LC/MS/MS.

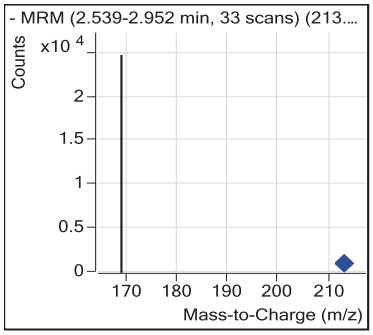
Data File	:	Q6941.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 13:50
Sample Name	:	IC234-40
Vial	:	Vial 9
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



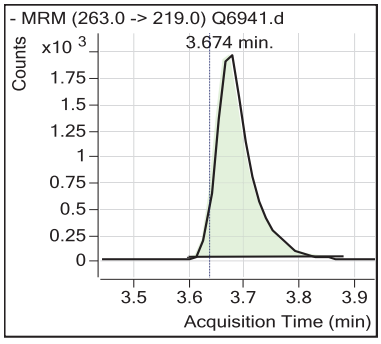
PFBA

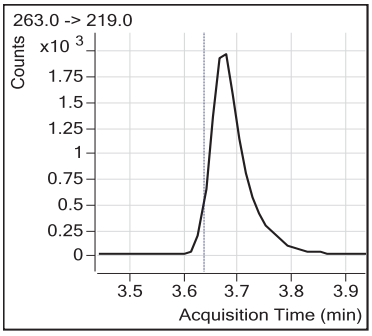


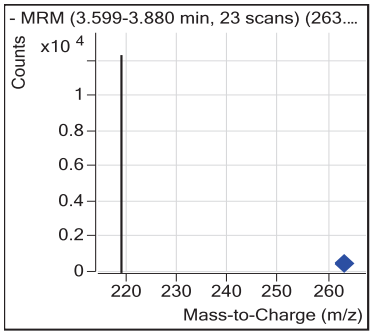




PFPeA

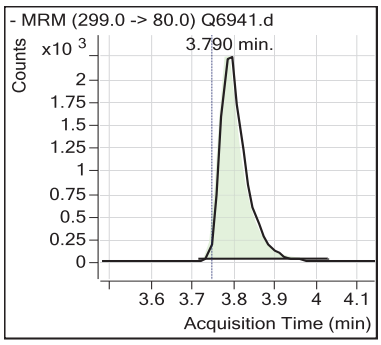


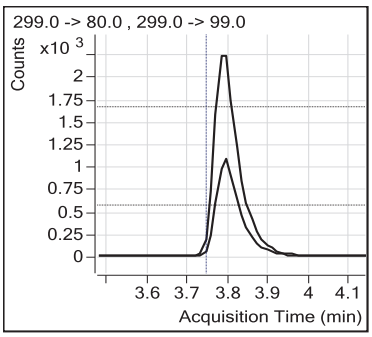


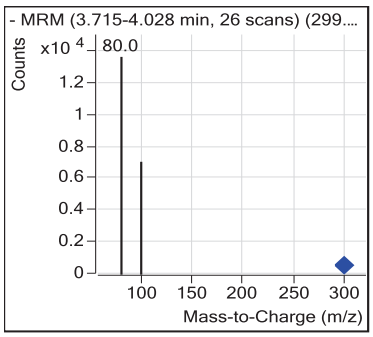


Perfluorinated Compounds by LC/MS/MS.

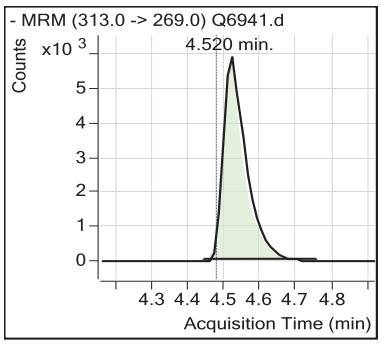
PFBS

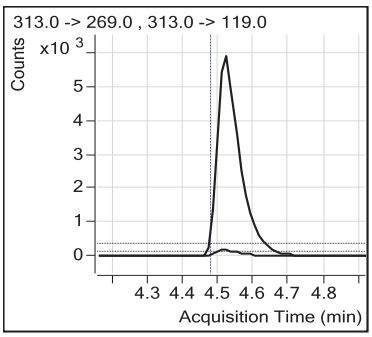


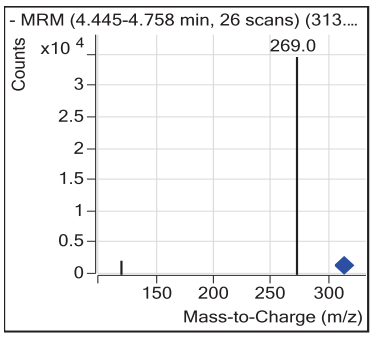




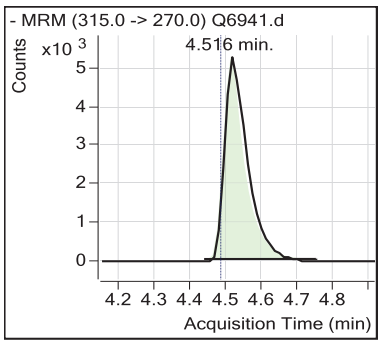
PFHxA

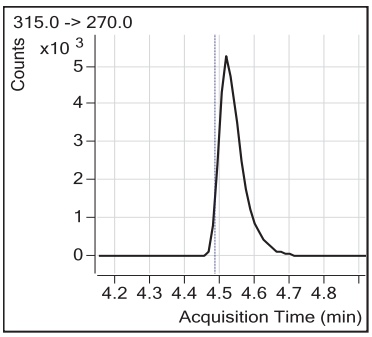


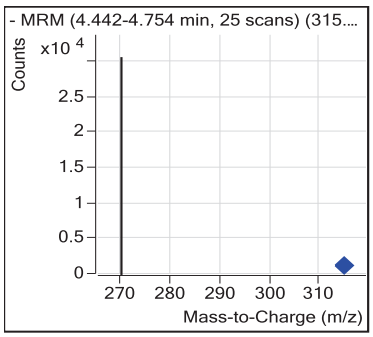




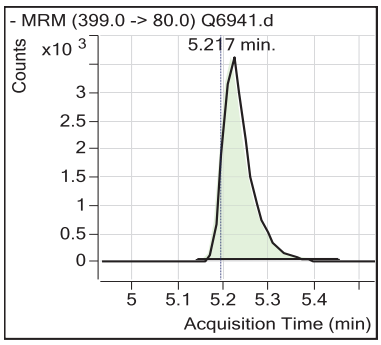
13C2-PFHxA

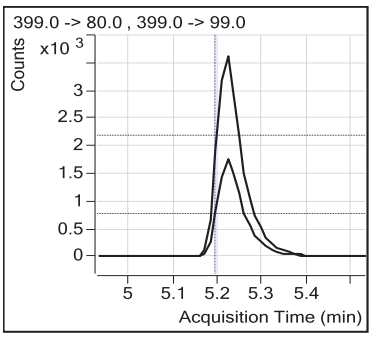


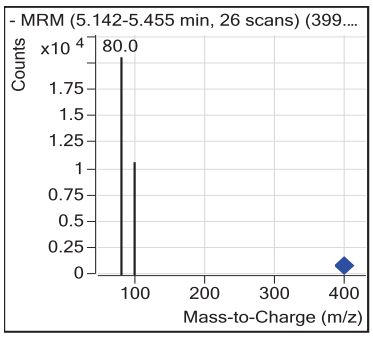




PFHxS





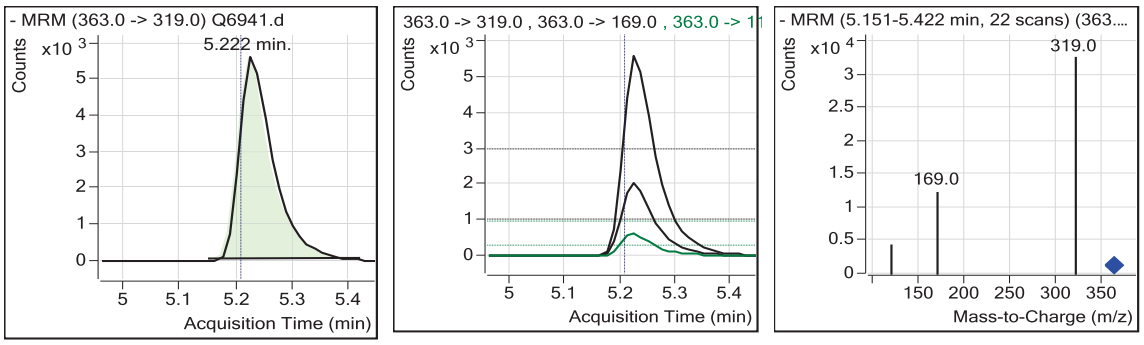


7.5.6

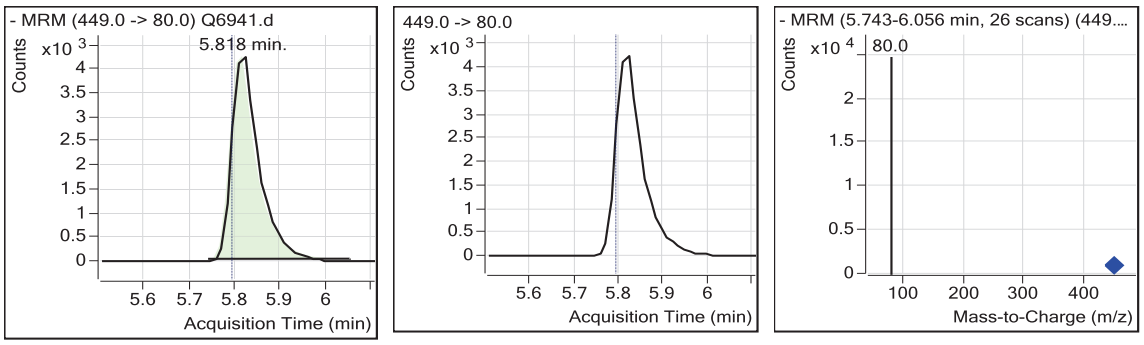
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Perfluorinated Compounds by LC/MS/MS.

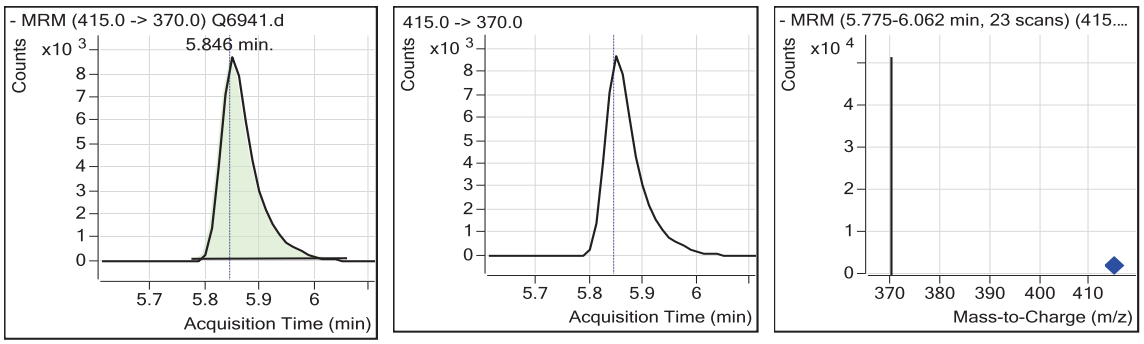
PFHpA



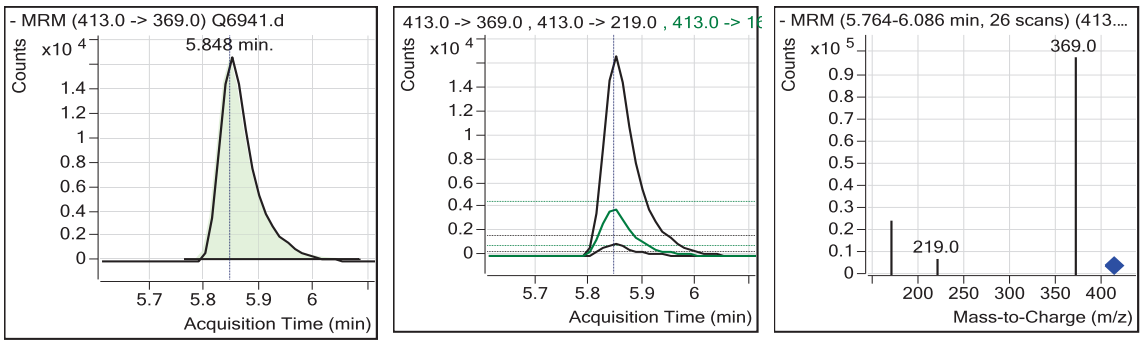
PFHpS



13C2-PFOA

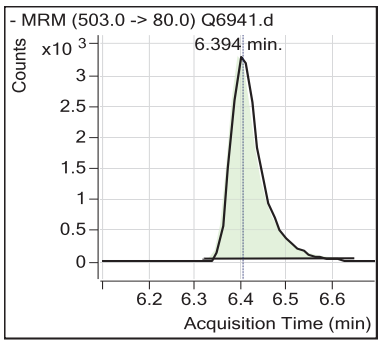


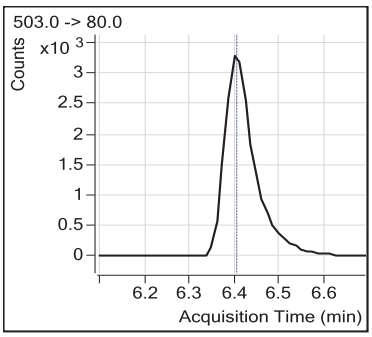
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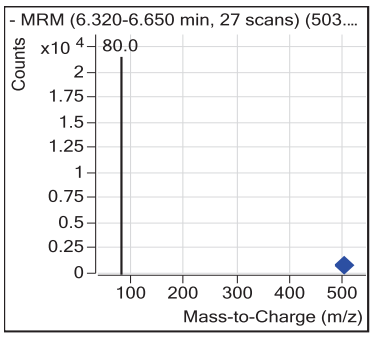


Perfluorinated Compounds by LC/MS/MS.

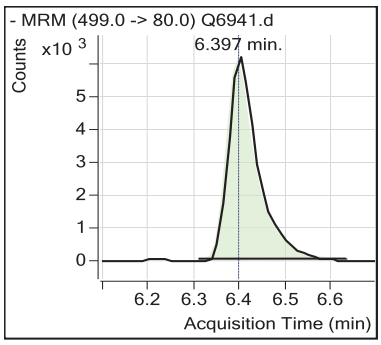
13C4-PFOS

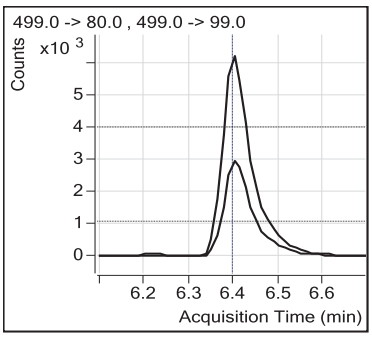


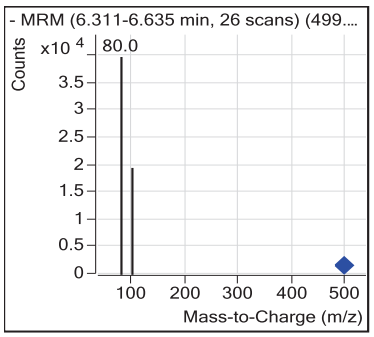




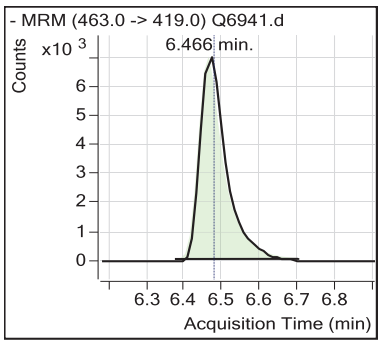
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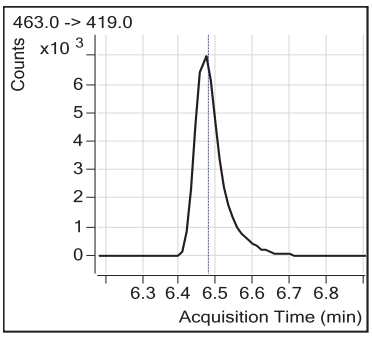


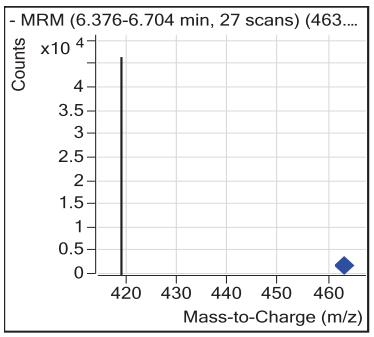




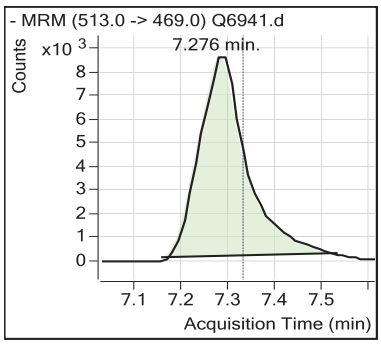
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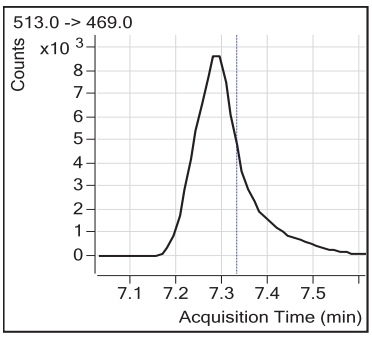


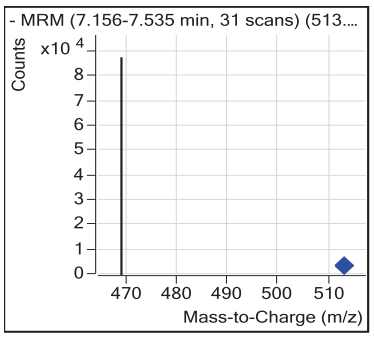




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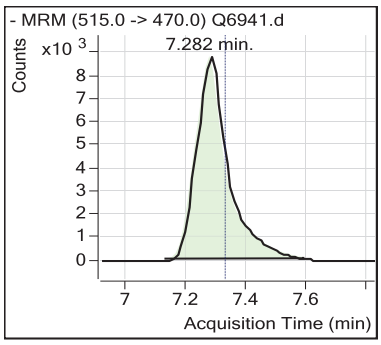


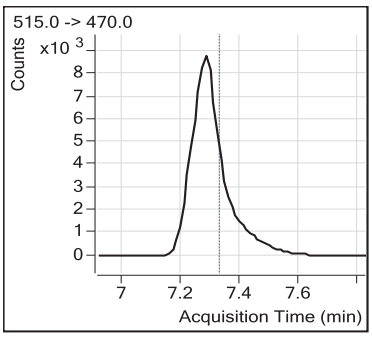


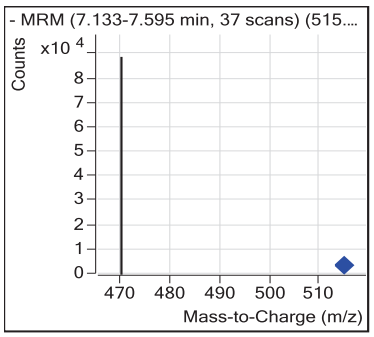


Perfluorinated Compounds by LC/MS/MS.

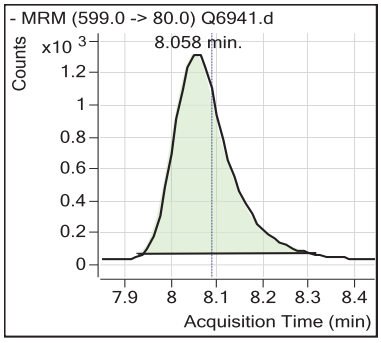
13C2-PFDA

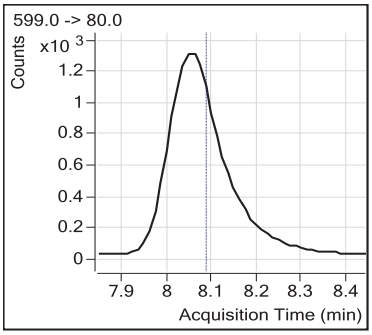


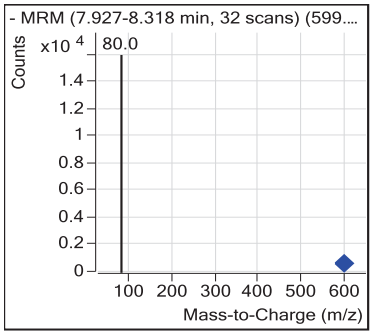




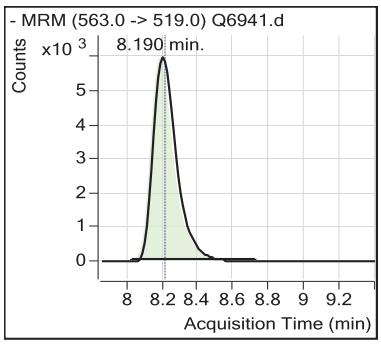
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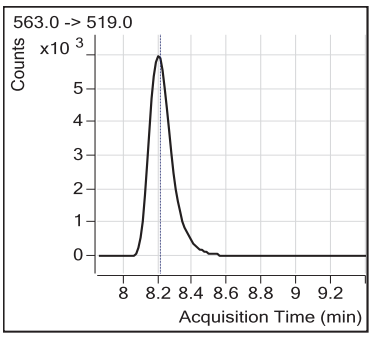


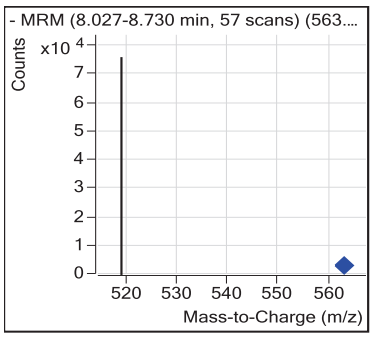




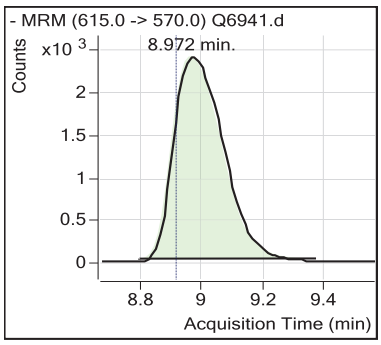
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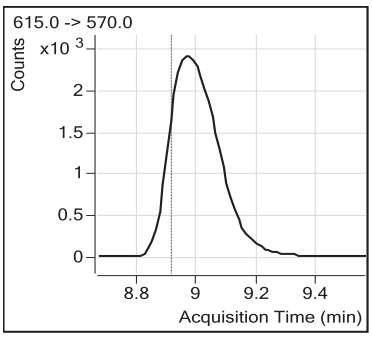


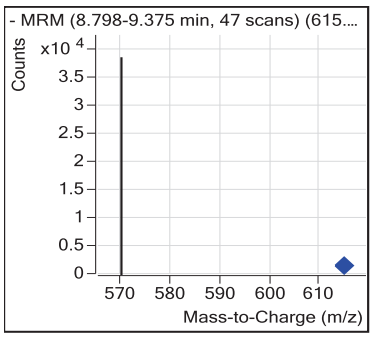




13C2-PFDoDA

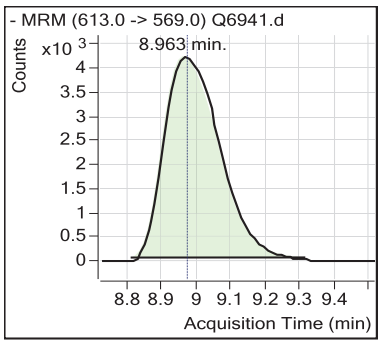


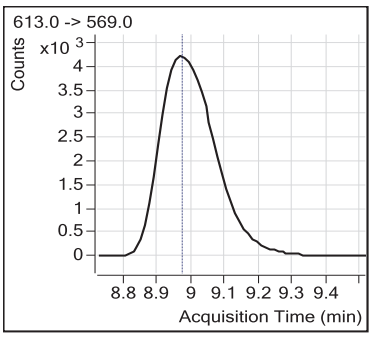


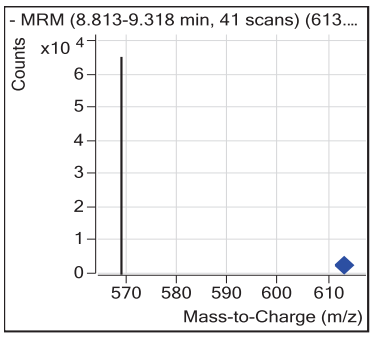


Perfluorinated Compounds by LC/MS/MS.

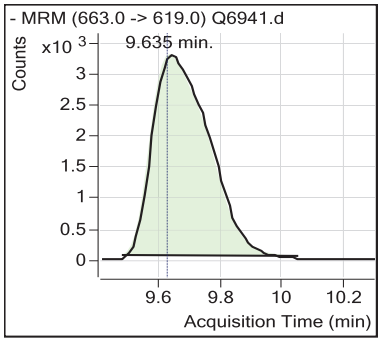
PFDoDA

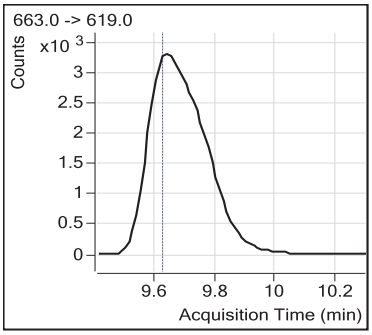


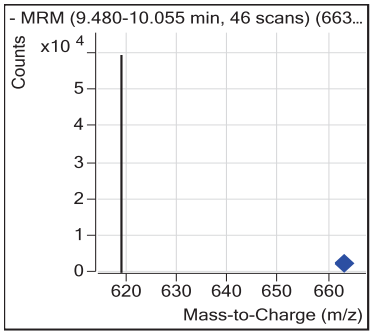




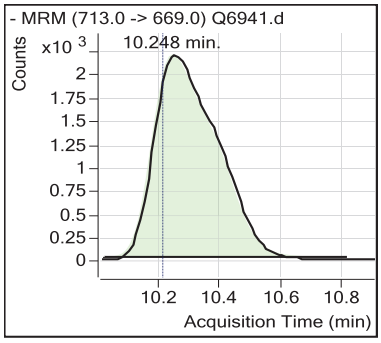
PFTrDA

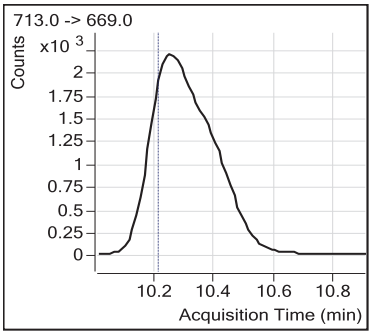


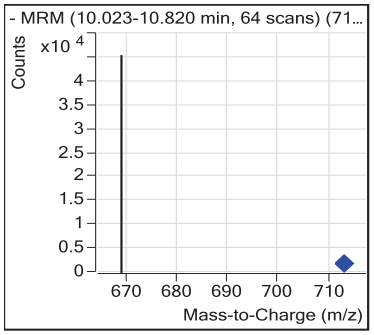




PFTeDA







7.5.6

7

Perfluorinated Compounds by LC/MS/MS.

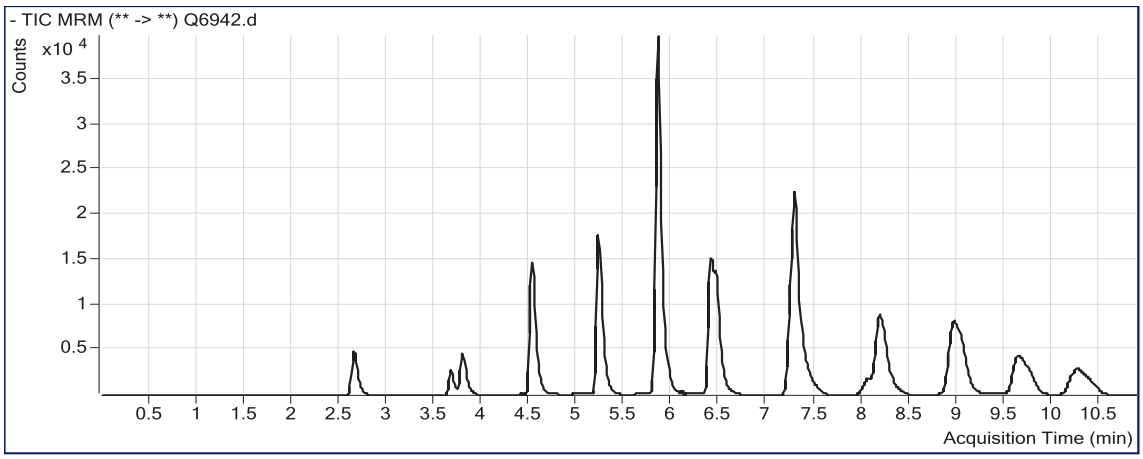
Data File	:	Q6942.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 14:11
Sample Name	:	IC234-50
Vial	:	Vial 10
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	38604	20.000	µg/L	0.000
13C4-PFOS	6.407	503.0 -> 80.0	15474	20.000	µg/L	0.000
13C2-PFDoDA	8.959	615.0 -> 570.0	28407	20.000	µg/L	0.037
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	28402	49.66	µg/L	0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 248.28%			
13C2-PFDA	7.282	515.0 -> 470.0	82929	48.14	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 240.68%			
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	22399	49.972	µg/L	100
PFPeA	3.674	263.0 -> 219.0	11055	50.357	µg/L	100
PFBS	3.790	299.0 -> 80.0	12245	49.996	µg/L	98
PFHxA	4.520	313.0 -> 269.0	32225	49.608	µg/L	99
PFHxS	5.217	399.0 -> 80.0	19302	50.293	µg/L	89
PFHpA	5.222	363.0 -> 319.0	29836	50.356	µg/L	97
PFHpS	5.818	449.0 -> 80.0	22928	50.005	µg/L	100
PFOA	5.848	413.0 -> 369.0	93102	51.346	µg/L	83
PFOS	6.397	499.0 -> 80.0	36915	51.269	µg/L	88
PFNA	6.466	463.0 -> 419.0	43427	50.191	µg/L	100
PFDA	7.289	513.0 -> 469.0	76866	47.831	µg/L	100
PFDS	8.046	599.0 -> 80.0	13700	49.574	µg/L	100
PFUnDA	8.177	563.0 -> 519.0	75690	52.292	µg/L	100
PFDoDA	8.963	613.0 -> 569.0	61478	49.680	µg/L	100
PFTrDA	9.635	663.0 -> 619.0	55313	50.133	µg/L	100
PFTeDA	10.248	713.0 -> 669.0	42125	50.226	µg/L	100

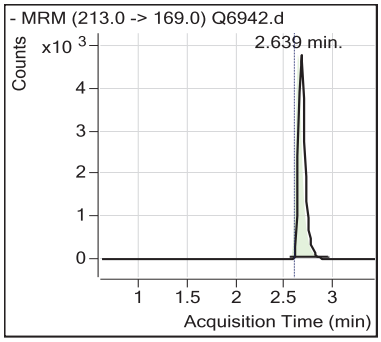
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

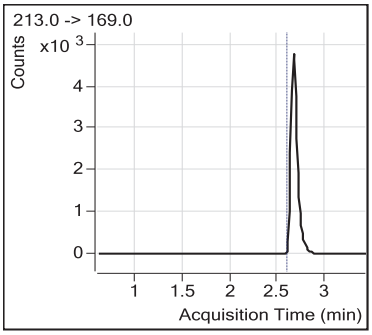
Perfluorinated Compounds by LC/MS/MS.

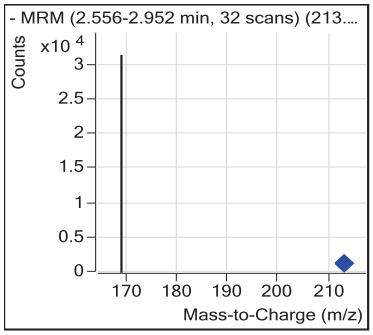
Data File	:	Q6942.d
Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 14:11
Sample Name	:	IC234-50
Vial	:	Vial 10
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



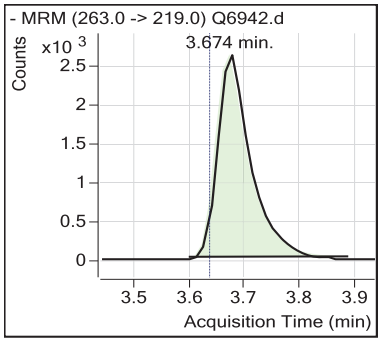
PFBA

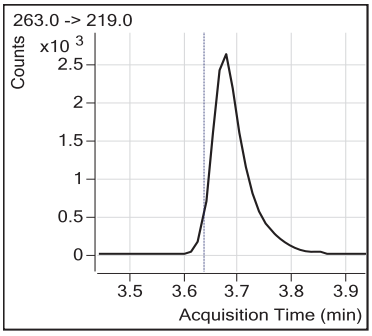


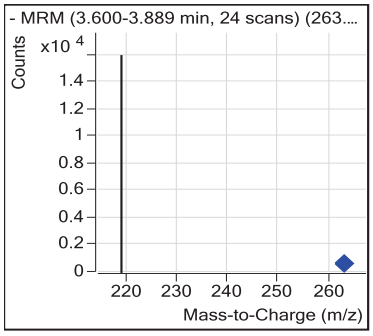




PFPeA

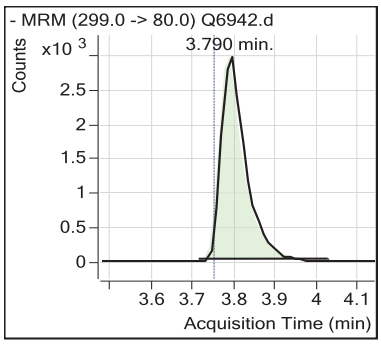


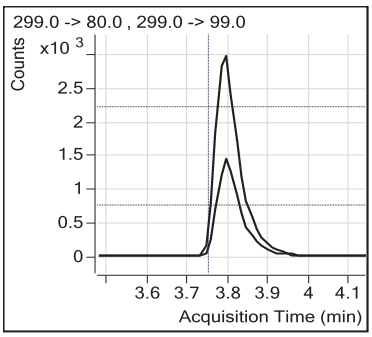


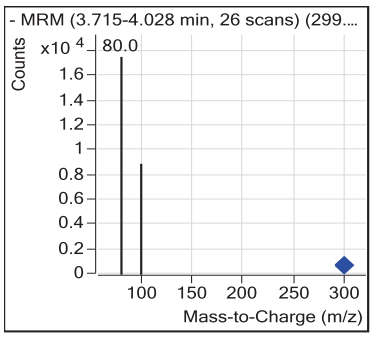


Perfluorinated Compounds by LC/MS/MS.

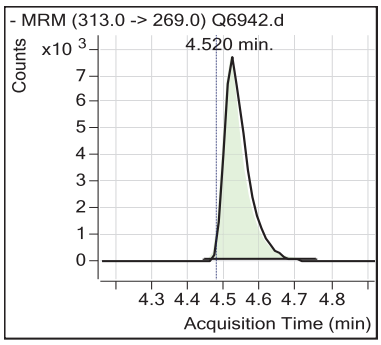
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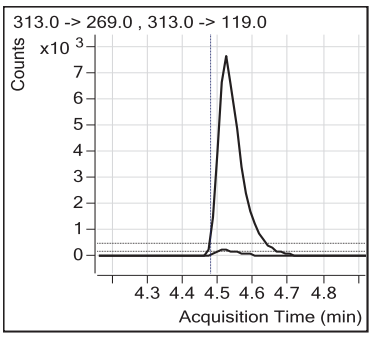


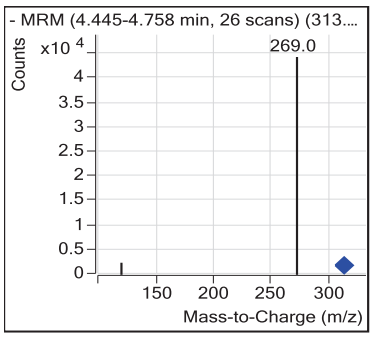




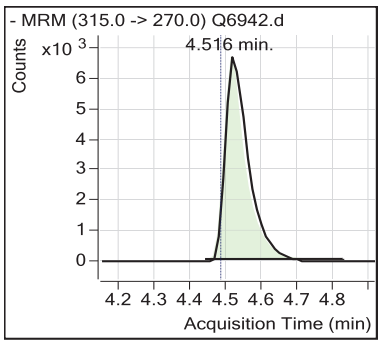
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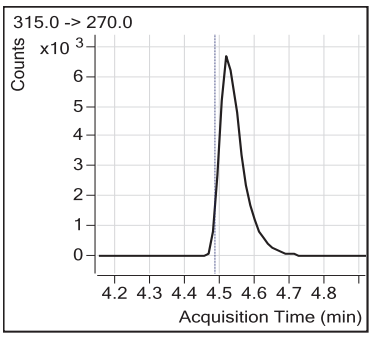


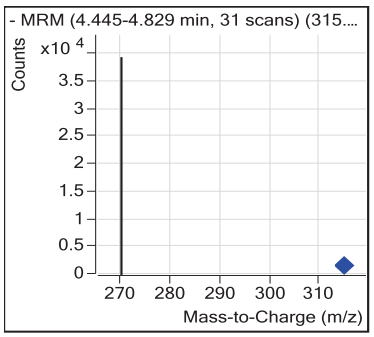




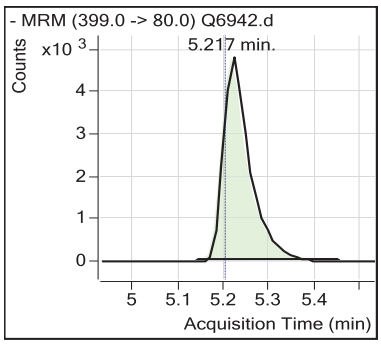
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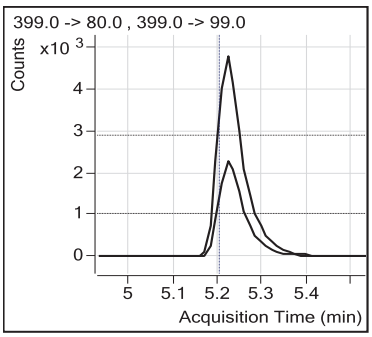


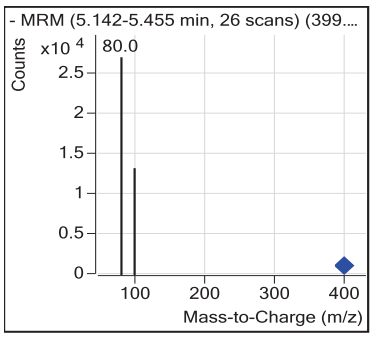




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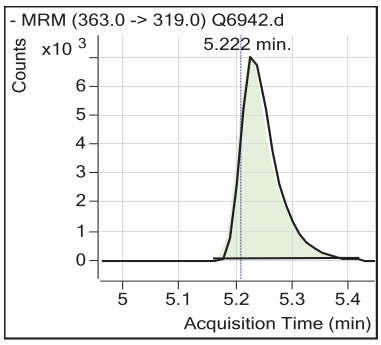


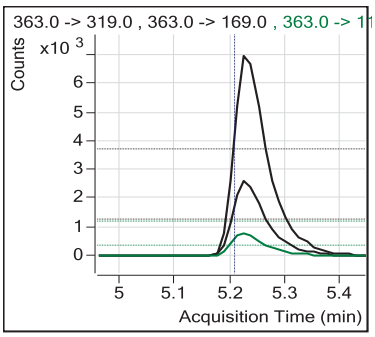


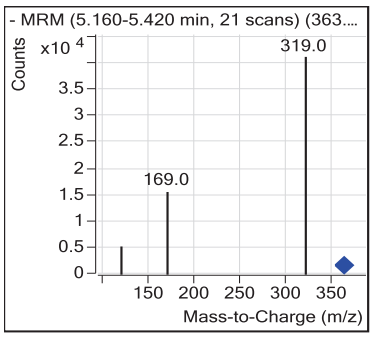


Perfluorinated Compounds by LC/MS/MS.

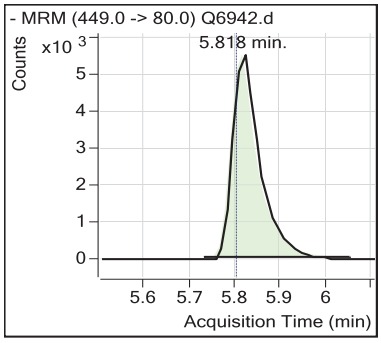
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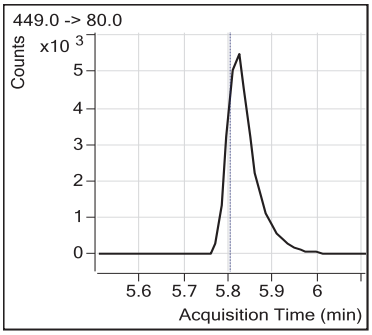


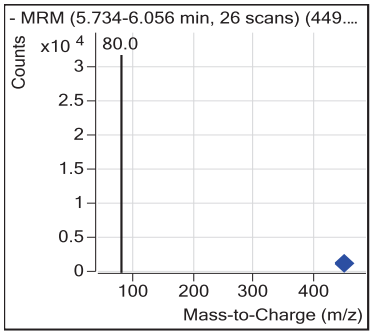




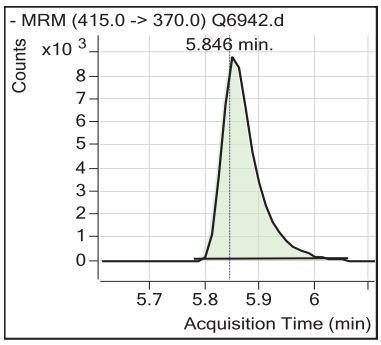
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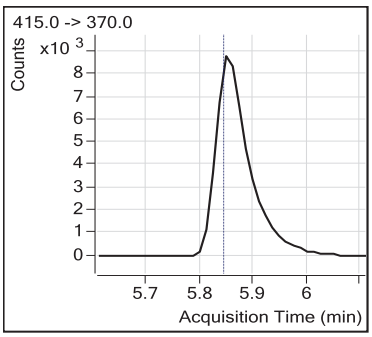


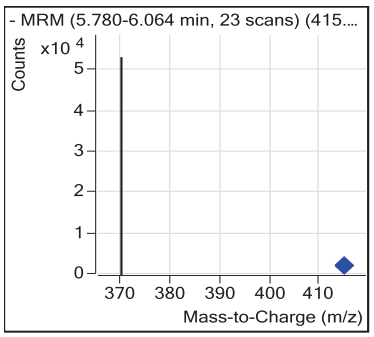




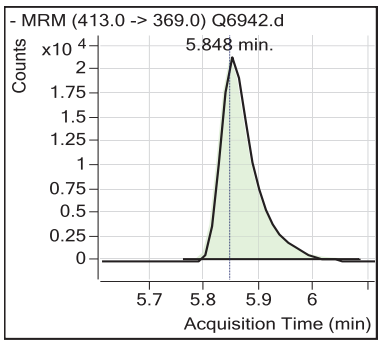
13C2-PFOA

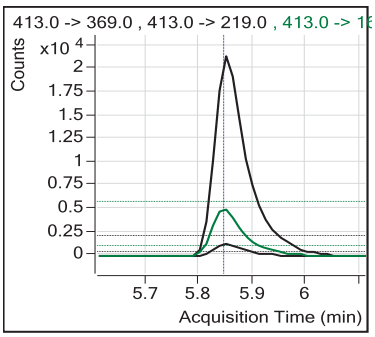


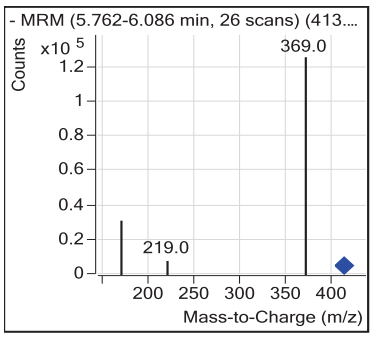




PFOA





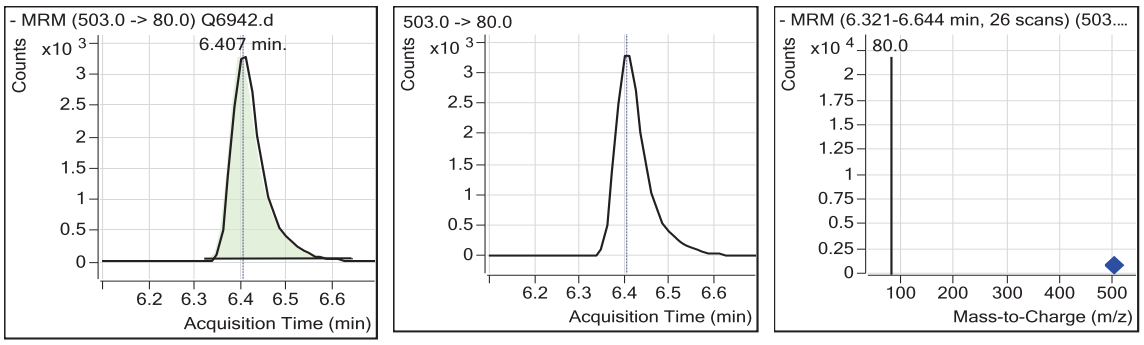


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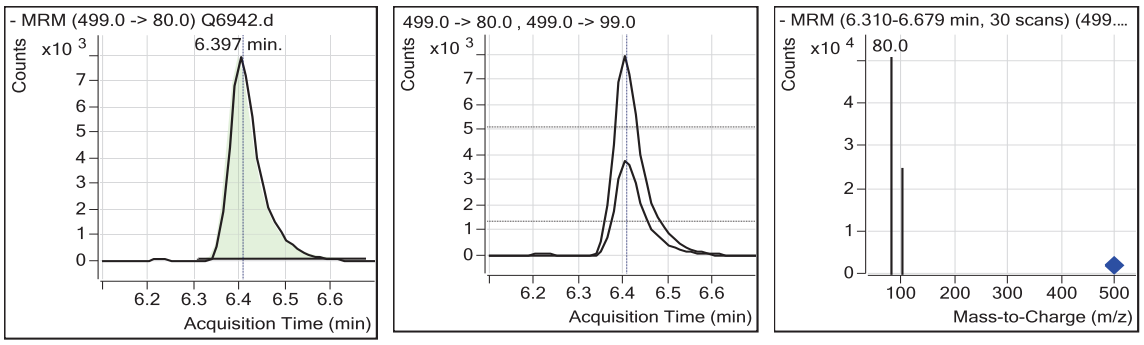
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Perfluorinated Compounds by LC/MS/MS.

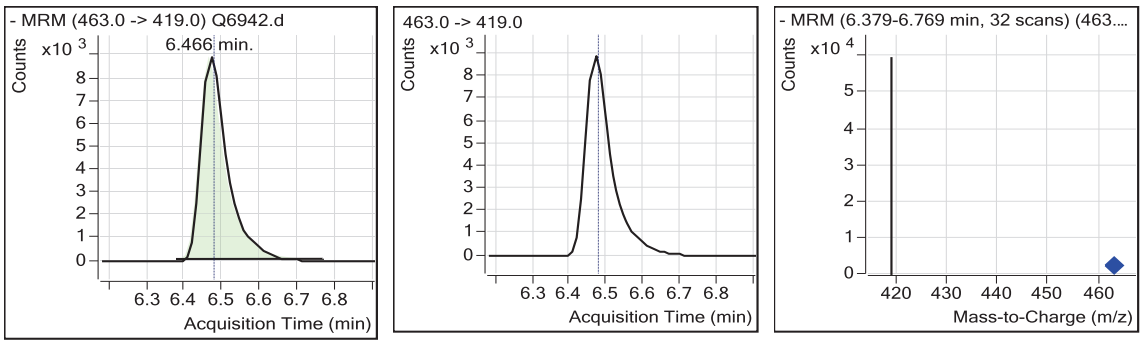
13C4-PFOS



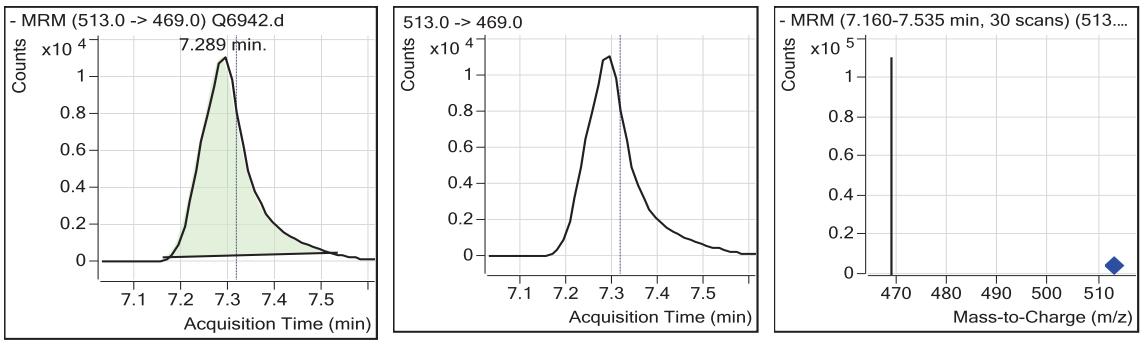
PFOS



PFNA

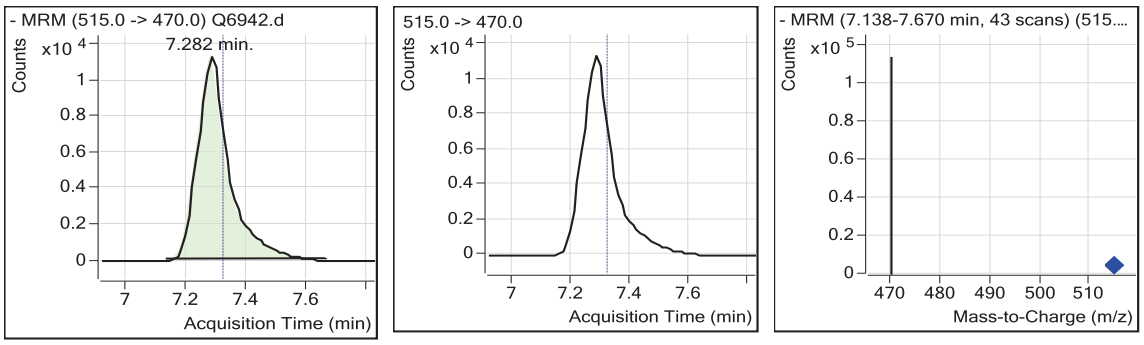


PFDA

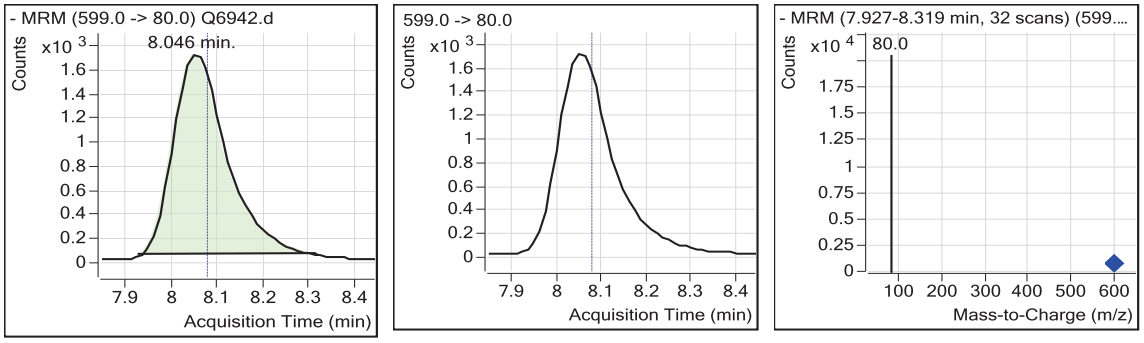


Perfluorinated Compounds by LC/MS/MS.

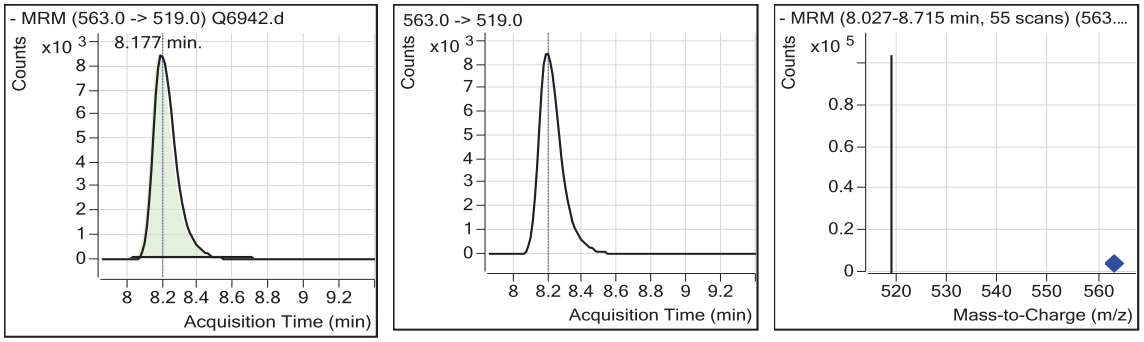
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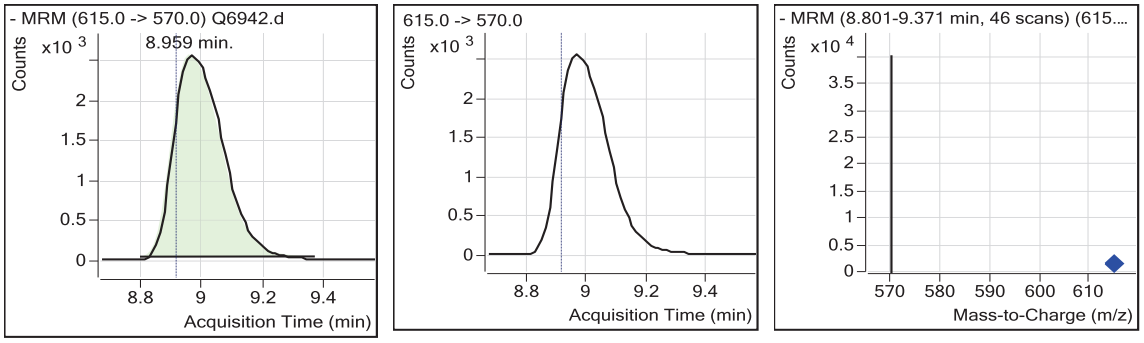
PFDS



PFUnDA



13C2-PFDoDA

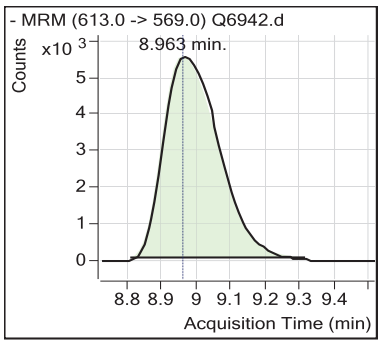


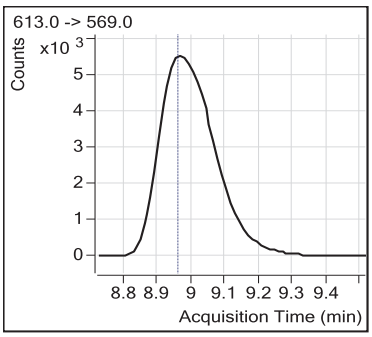
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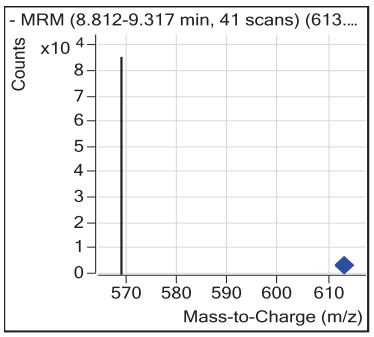
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Perfluorinated Compounds by LC/MS/MS.

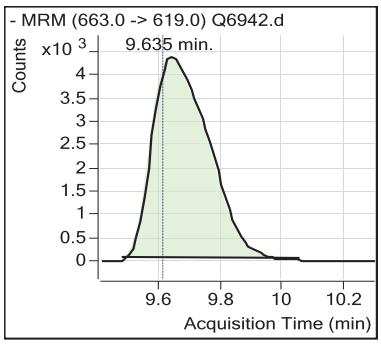
PFDoDA

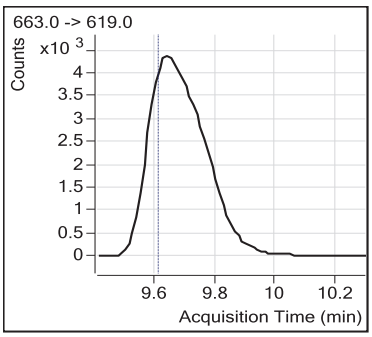


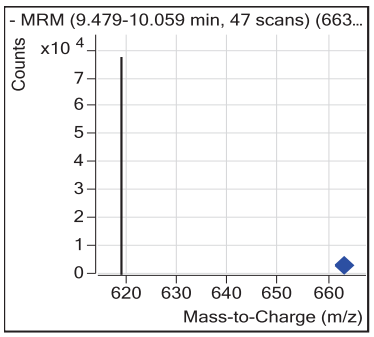




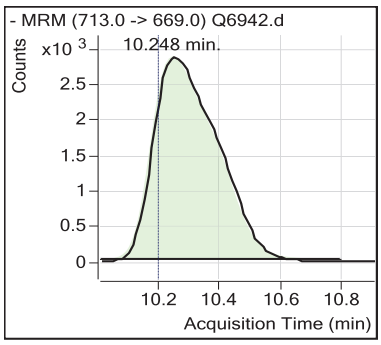
PFTrDA

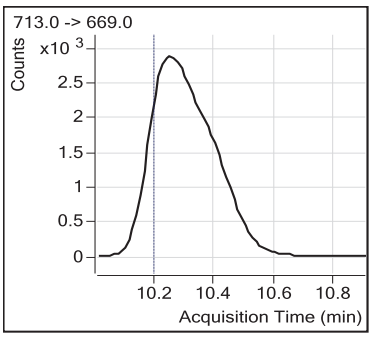


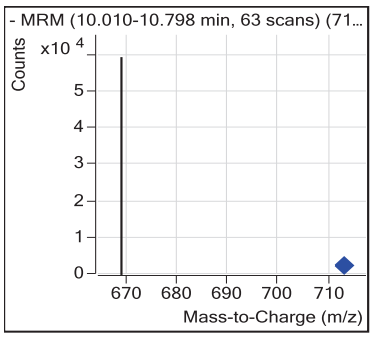




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

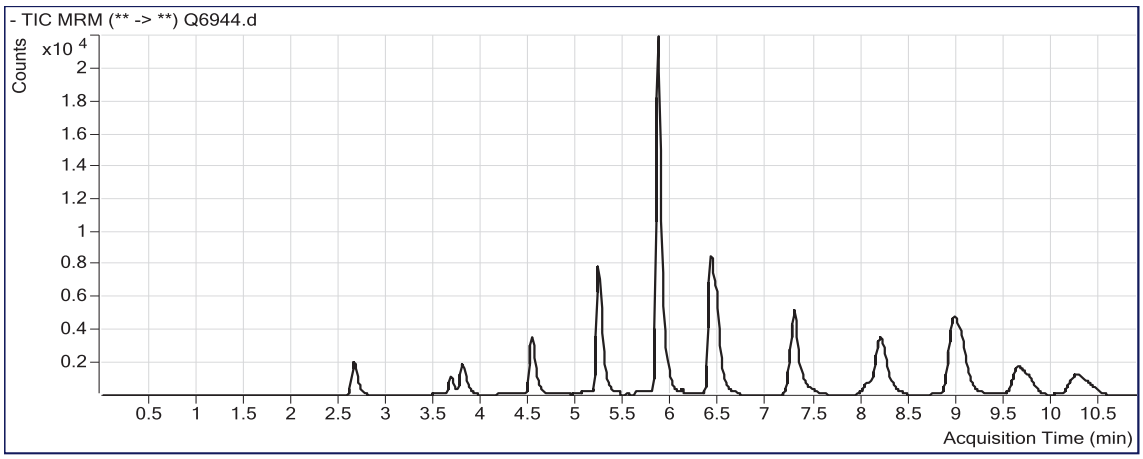
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Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 15:06
Sample Name	:	ICV234-20
Vial	:	Vial 11
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	39866	20.000	µg/L	0.000
13C4-PFOS	6.394	503.0 -> 80.0	15056	20.000	µg/L	-0.013
13C2-PFDoDA	8.959	615.0 -> 570.0	27256	20.000	µg/L	0.037
System Monitoring Compounds						
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	9427	20.367	µg/L	100
PFPeA	3.674	263.0 -> 219.0	4627	20.410	µg/L	100
PFBS	3.790	299.0 -> 80.0	5124	21.501	µg/L	97
PFHxA	4.520	313.0 -> 269.0	13930	20.765	µg/L	99
PFHxS	5.217	399.0 -> 80.0	8105	21.704	µg/L	87
PFHpA	5.222	363.0 -> 319.0	13313	20.021	µg/L	97
PFOA	5.848	413.0 -> 369.0	41420	20.065	µg/L	83
PFOS	6.397	499.0 -> 80.0	15858	20.717	µg/L	88
PFNA	6.466	463.0 -> 419.0	18662	20.123	µg/L	100
PFDA	7.289	513.0 -> 469.0	32799	21.272	µg/L	100
PFDS	8.046	599.0 -> 80.0	5706	21.521	µg/L	100
PFUnDA	8.190	563.0 -> 519.0	30535	20.271	µg/L	100
PFDoDA	8.963	613.0 -> 569.0	25328	21.331	µg/L	100
PFTrDA	9.635	663.0 -> 619.0	22385	20.605	µg/L	100
PFTeDA	10.248	713.0 -> 669.0	18064	22.398	µg/L	100

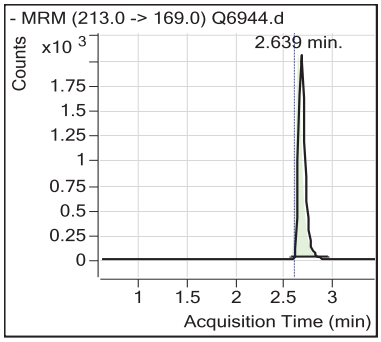
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

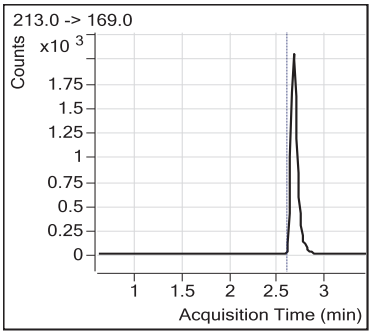
Perfluorinated Compounds by LC/MS/MS.

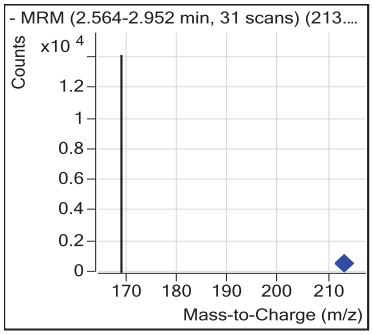
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Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 15:06
Sample Name	:	ICV234-20
Vial	:	Vial 11
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10



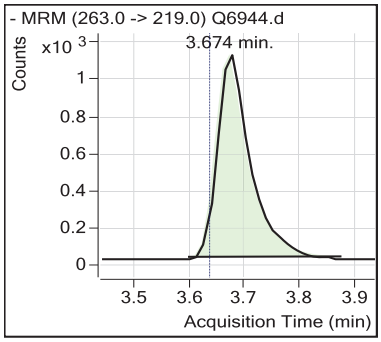
PFBA

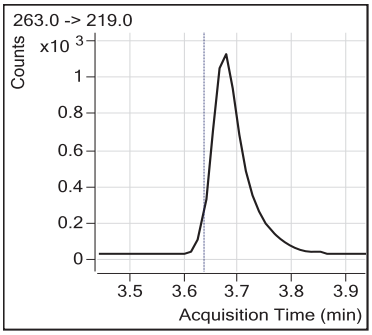


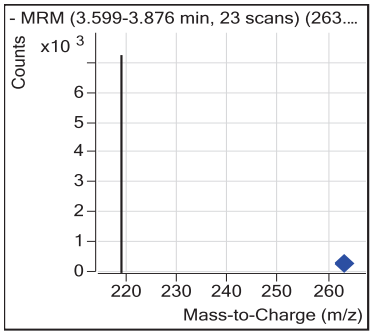




PFPeA

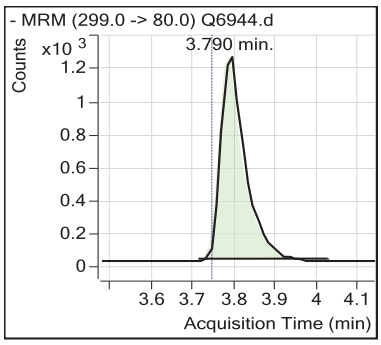


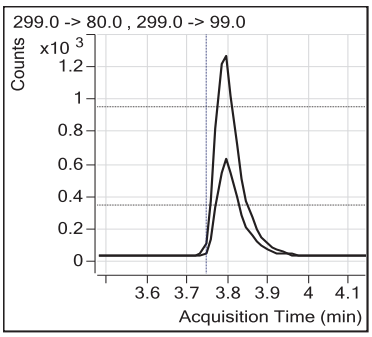


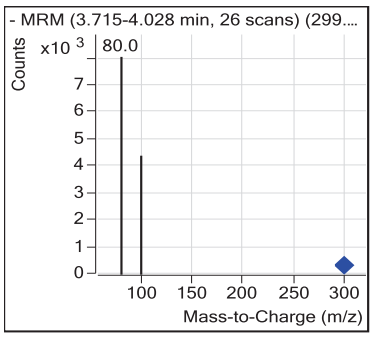


Perfluorinated Compounds by LC/MS/MS.

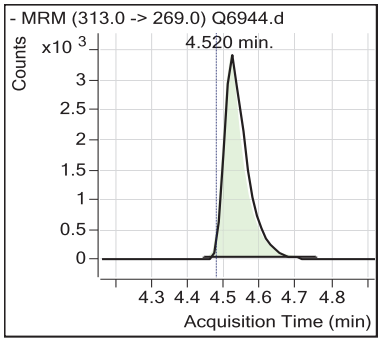
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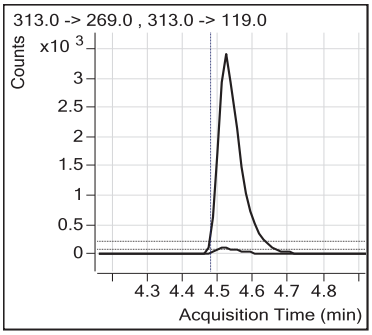


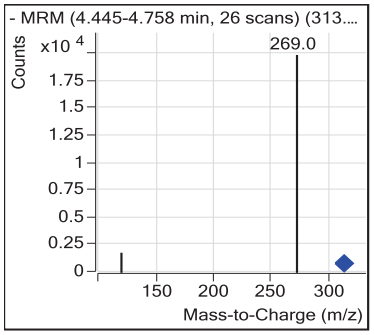




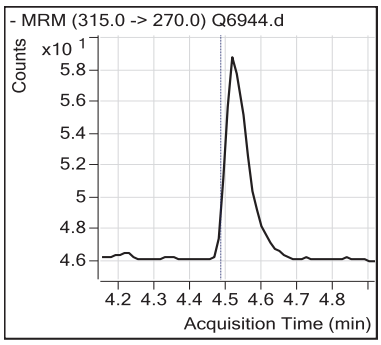
PFHxA

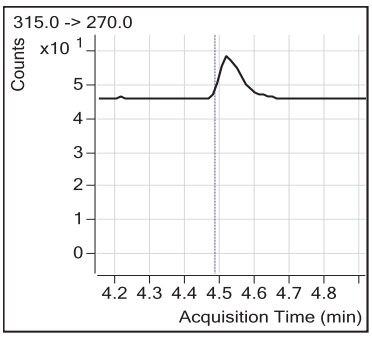


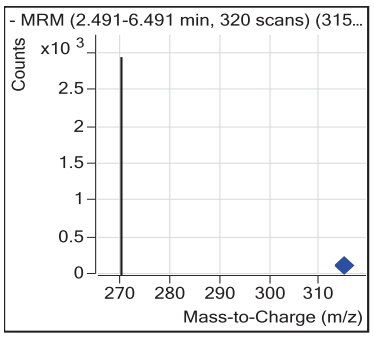




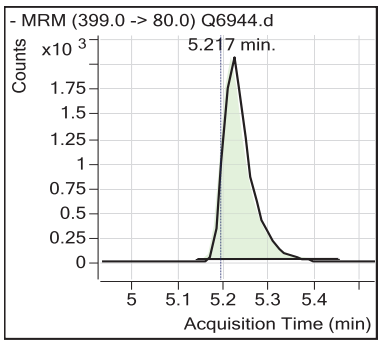
13C2-PFHxA

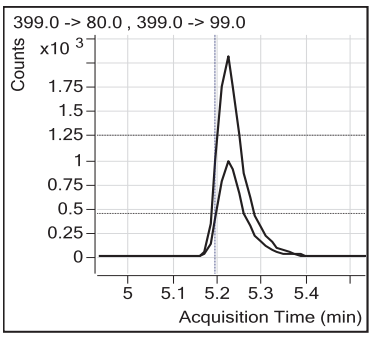


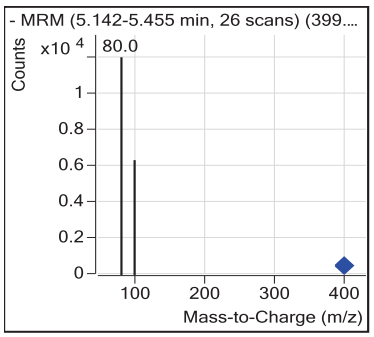




PFHxS

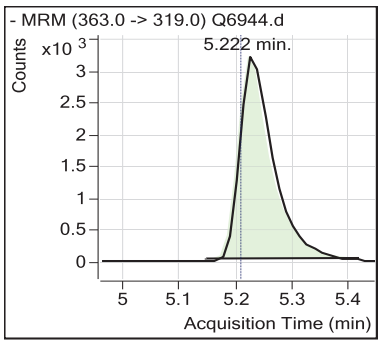


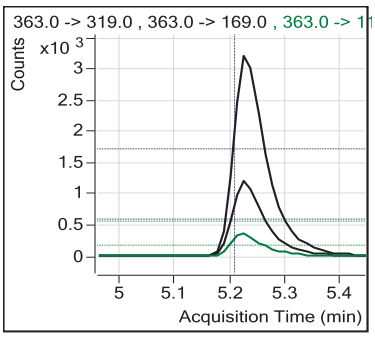


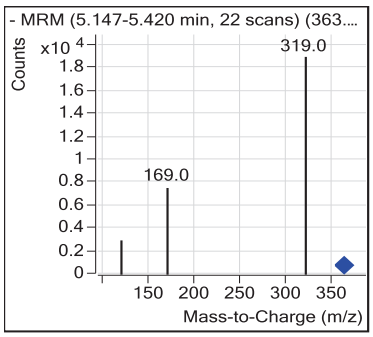


Perfluorinated Compounds by LC/MS/MS.

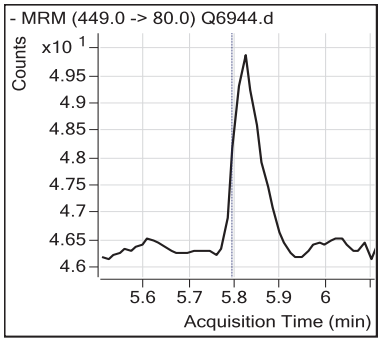
PFHpA

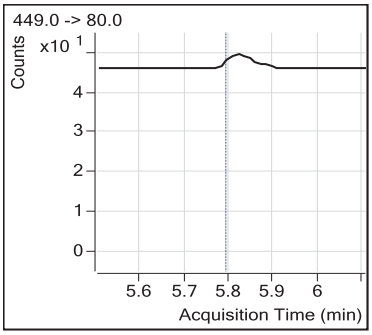


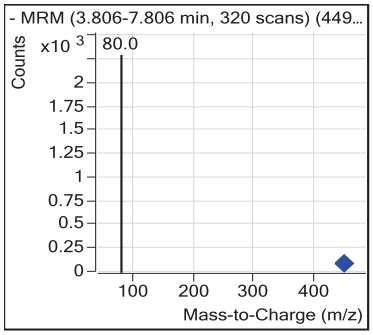




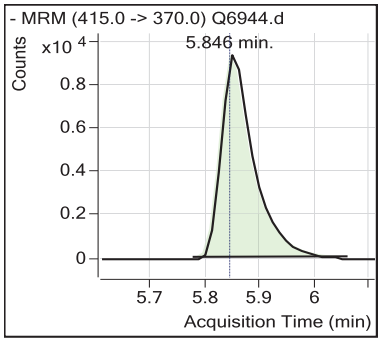
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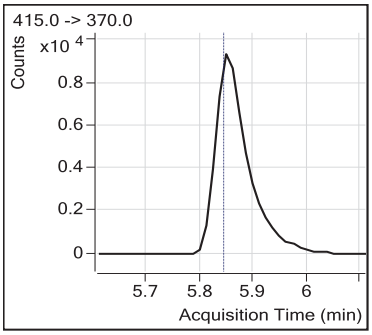


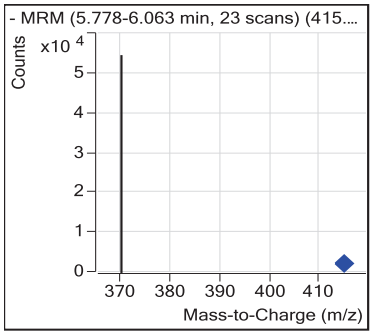




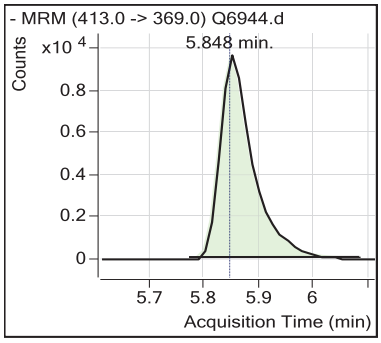
13C2-PFOA

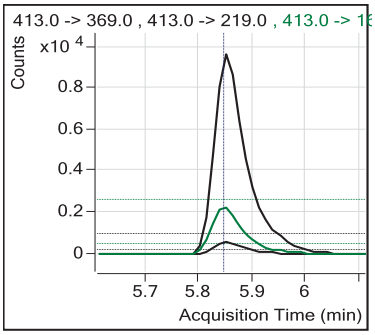


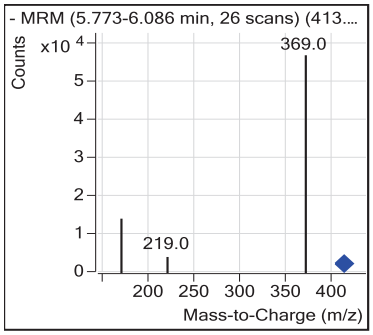




PFOA





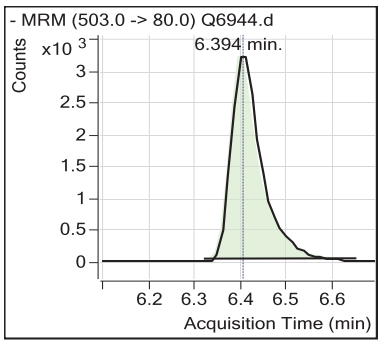


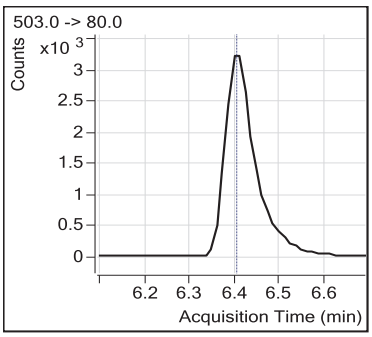
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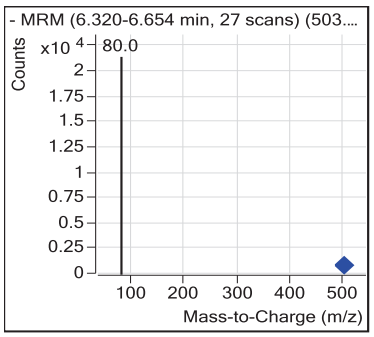
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Perfluorinated Compounds by LC/MS/MS.

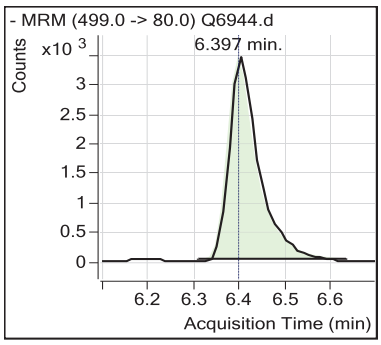
13C4-PFOS

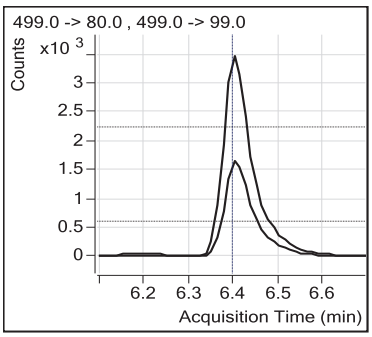


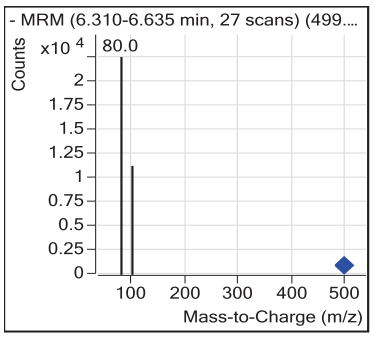




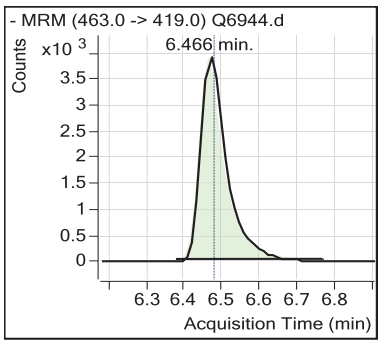
PFOS

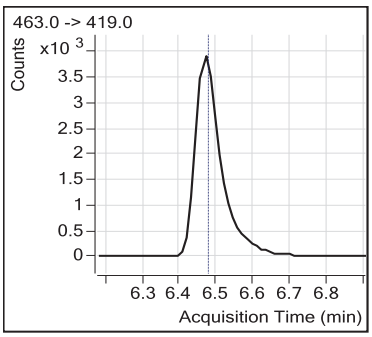


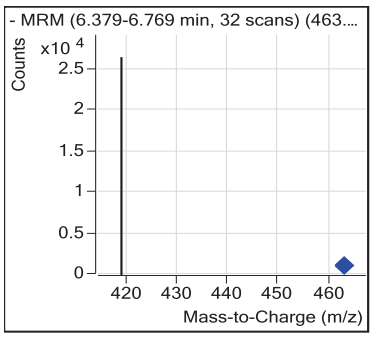




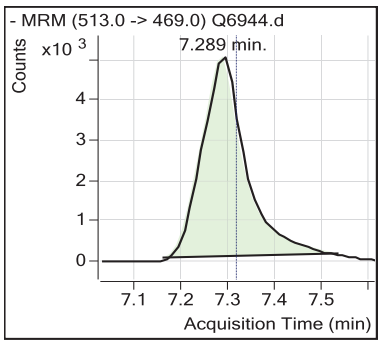
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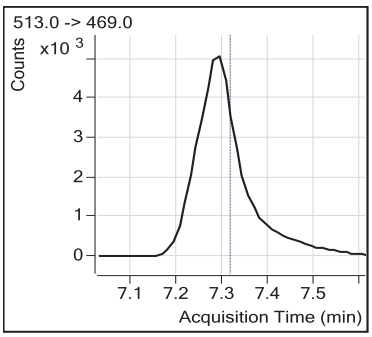


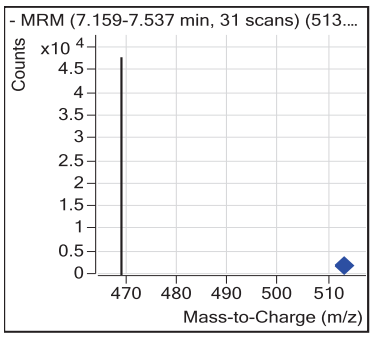




PFDA

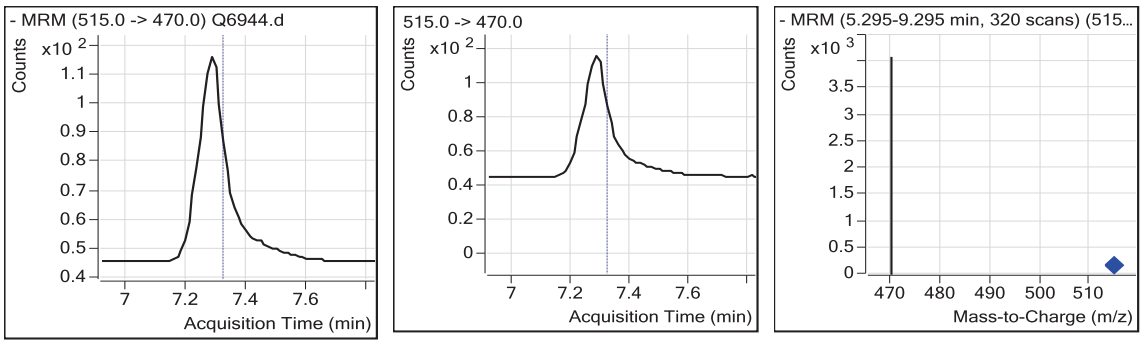




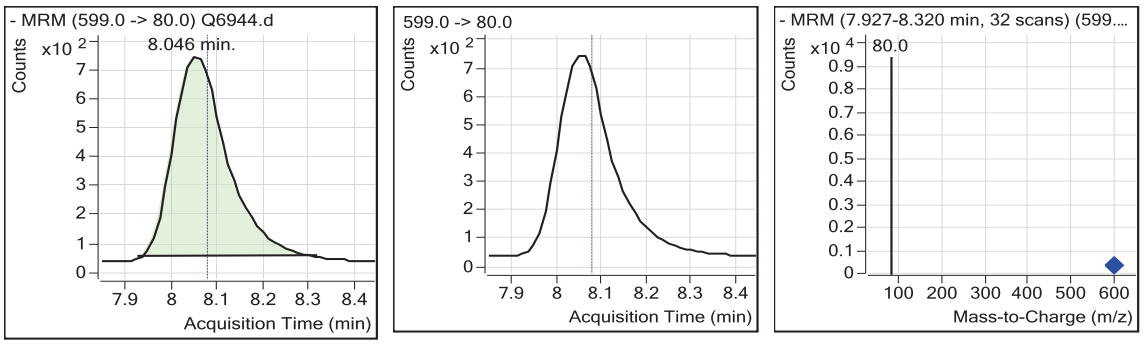


Perfluorinated Compounds by LC/MS/MS.

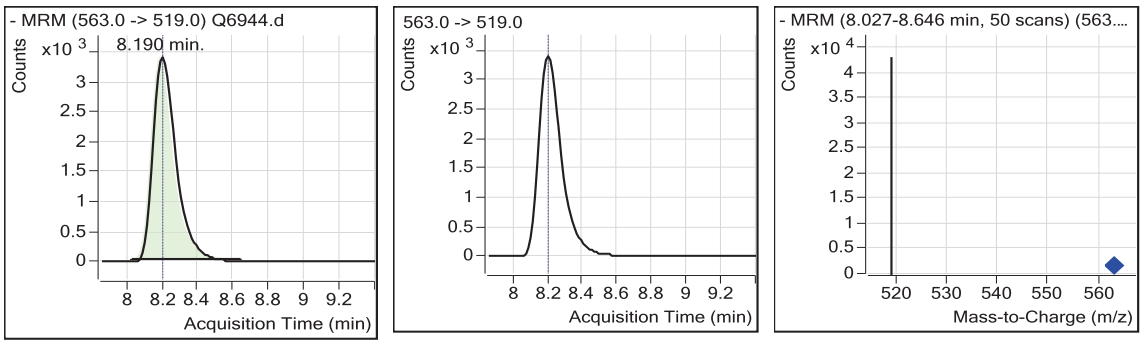
13C2-PFDA



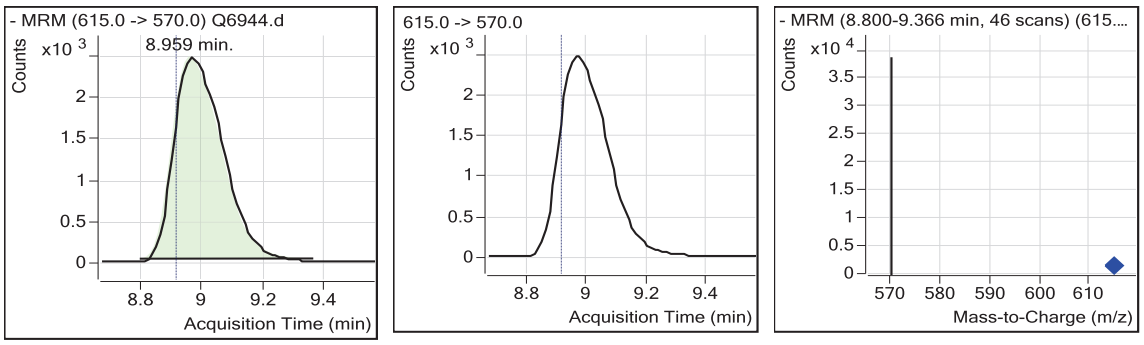
PFDS



PFUnDA



13C2-PFDoDA

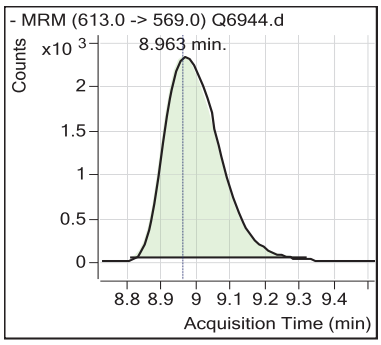


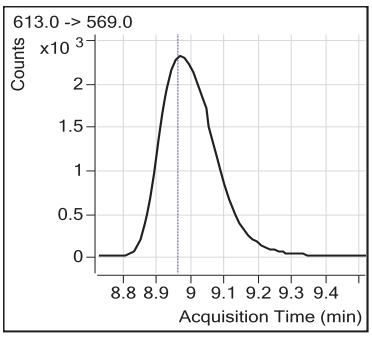
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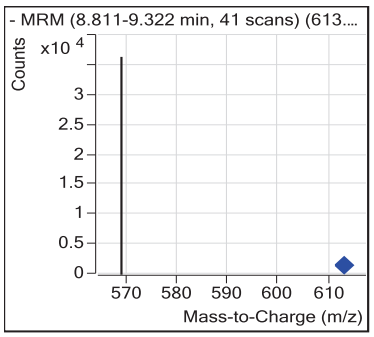
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Perfluorinated Compounds by LC/MS/MS.

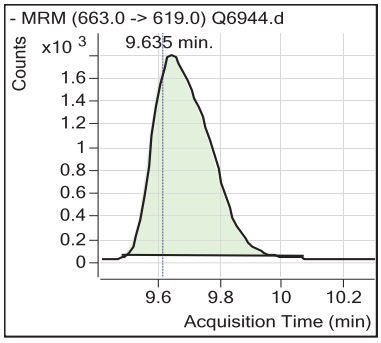
PFDoDA

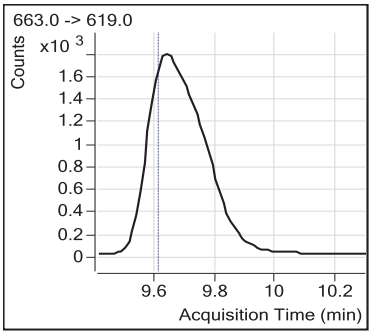


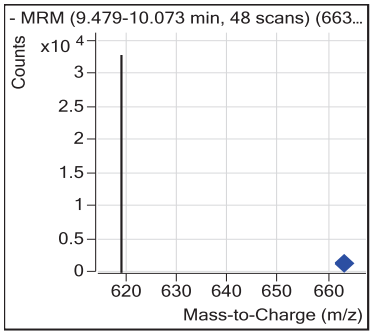




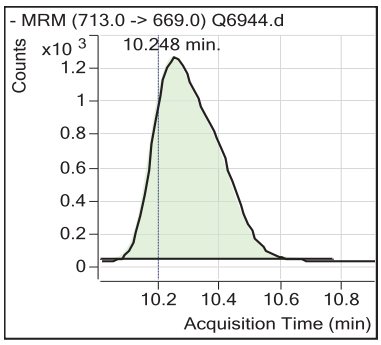
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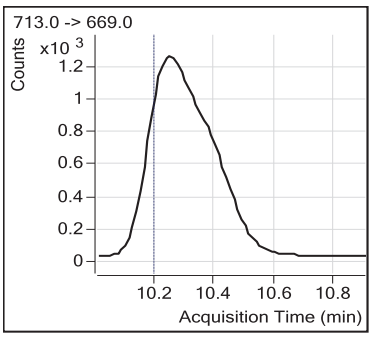


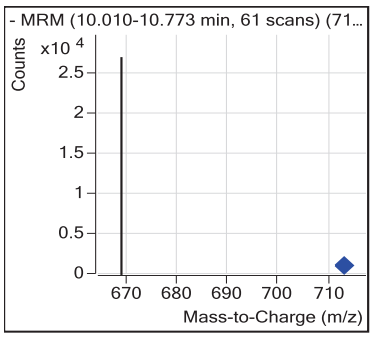




PFTeDA







Manual Integrations APPROVED (compounds with "m" flag)
Naresh Jiawan
09/15/14 10:34

Perfluorinated Compounds by LC/MS/MS.

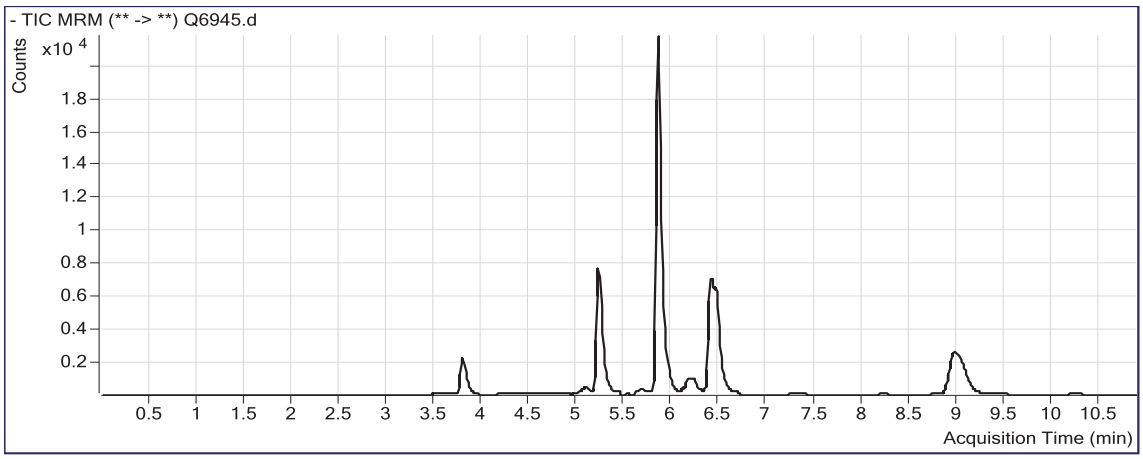
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Operator	:	NANCYF
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-12 15:25
Sample Name	:	ICV234-20
Vial	:	Vial 12
Sample Info	:	OP53043,SQ234,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	SQ234.batch.bin
Last Calib Update	:	2014-09-15 08:10

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
13C2-PFOA	5.846	415.0 -> 370.0	40644	20.000	µg/L		0.000
13C4-PFOS	6.407	503.0 -> 80.0	15375	20.000	µg/L		0.000
13C2-PFDoDA	8.972	615.0 -> 570.0	28204	20.000	µg/L		0.050
System Monitoring Compounds							
Target Compounds							**Qvalue**
PFBS	3.790	299.0 -> 80.0	6050	24.861	µg/L		96
PFHxS	5.217	399.0 -> 80.0	9114	23.899	µg/L	m	89
PFHpA	5.222	363.0 -> 319.0	12910	18.993	µg/L		97
PFOA	5.848	413.0 -> 369.0	40292	19.090	µg/L		83
PFOS	6.397	499.0 -> 80.0	16071	20.549	µg/L	m	98
PFNA	6.466	463.0 -> 419.0	20371	21.584	µg/L		100
PFUnDA	8.202	563.0 -> 519.0	0	0.000	µg/L	m	1
PFTrDA	9.635	663.0 -> 619.0	0	0.000	µg/L	m	1

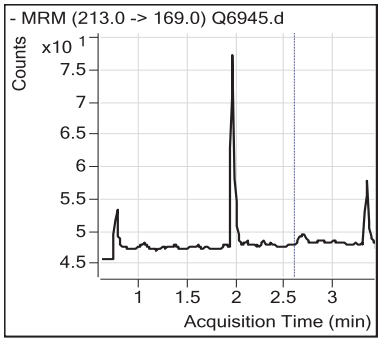
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

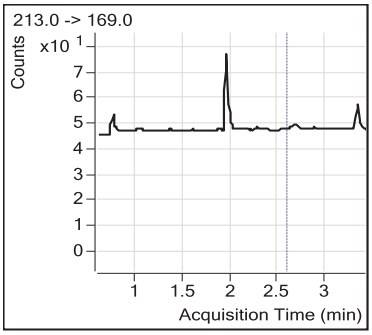
Perfluorinated Compounds by LC/MS/MS.

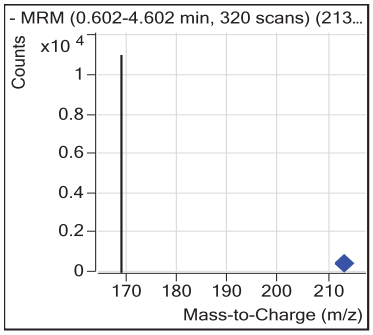
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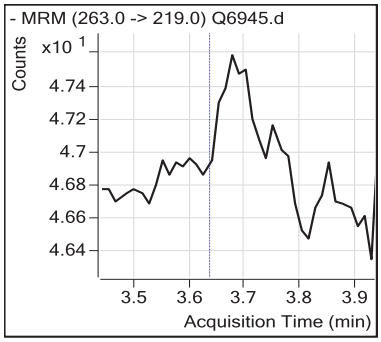
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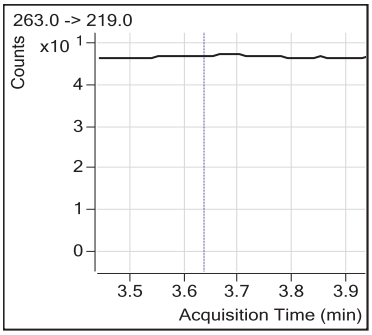


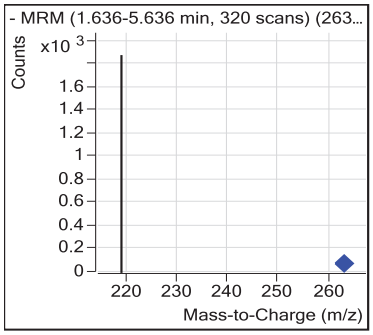




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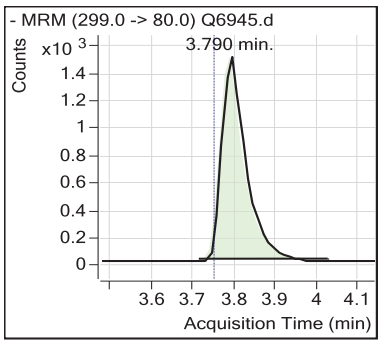


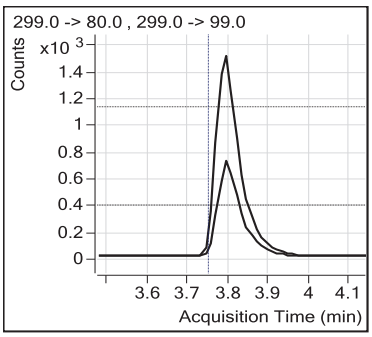


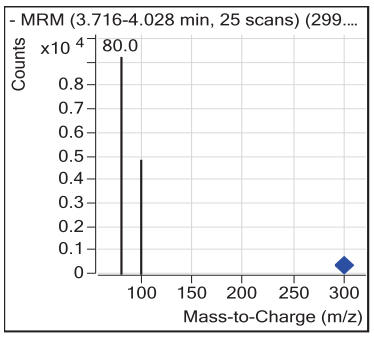


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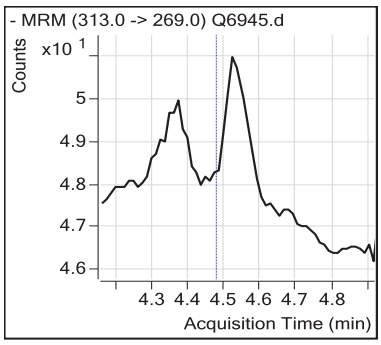
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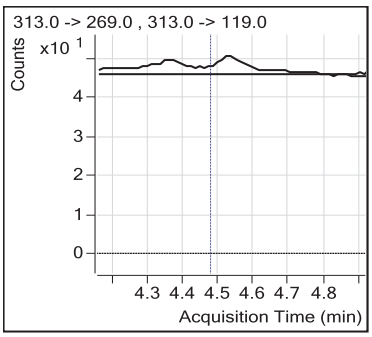


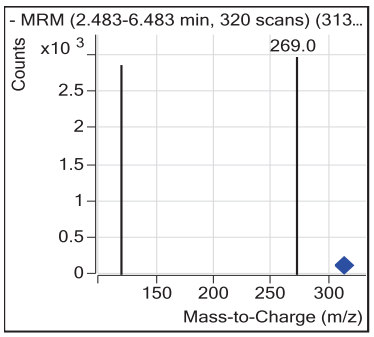




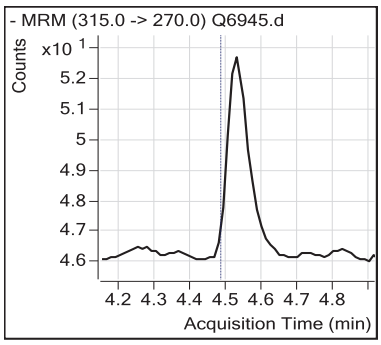
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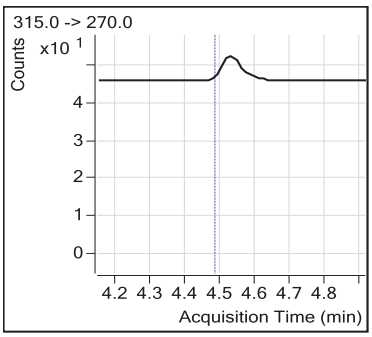


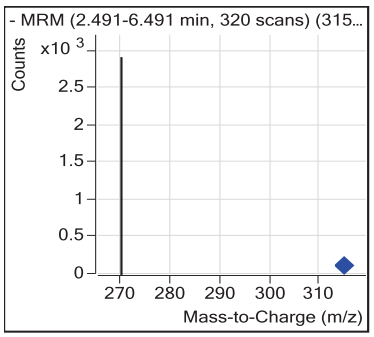




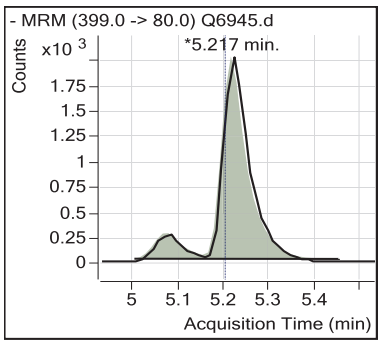
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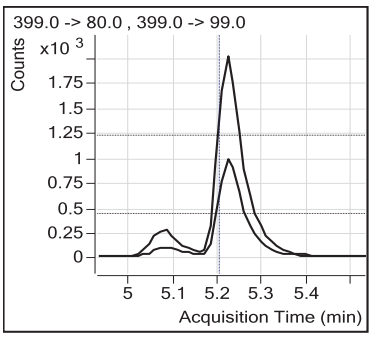


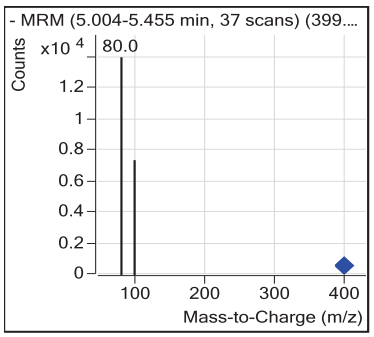




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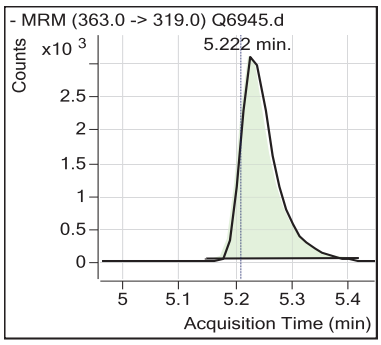


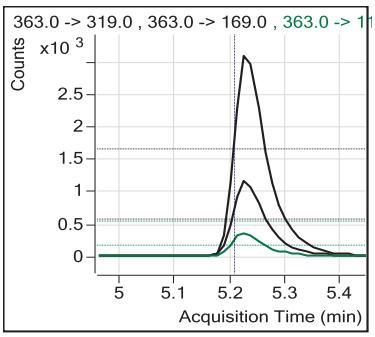


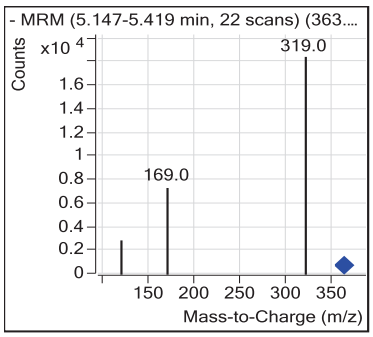


Perfluorinated Compounds by LC/MS/MS.

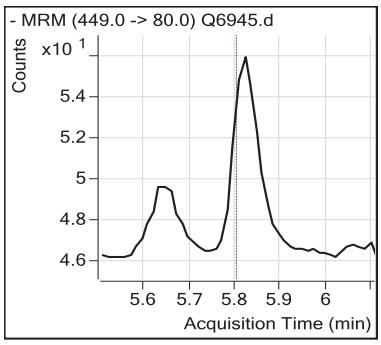
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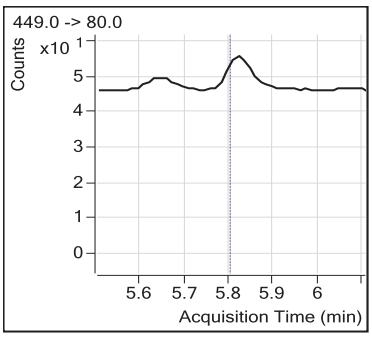


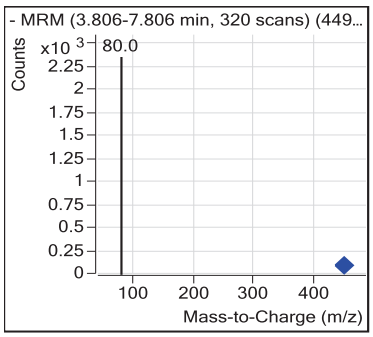




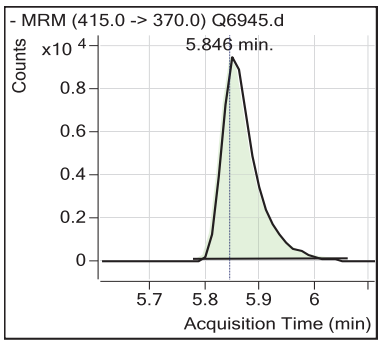
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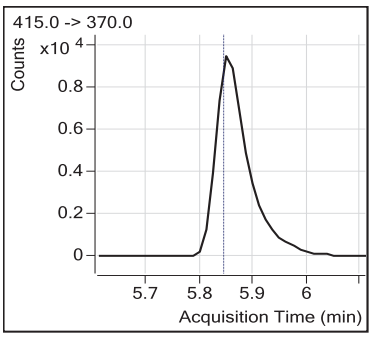


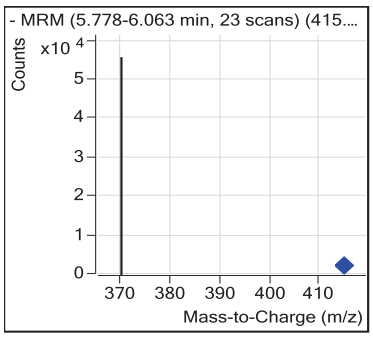




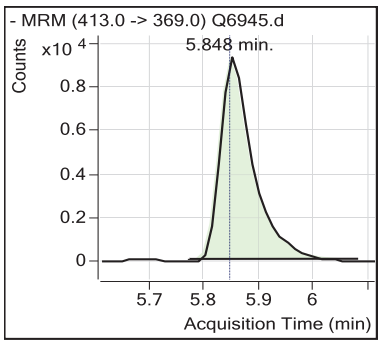
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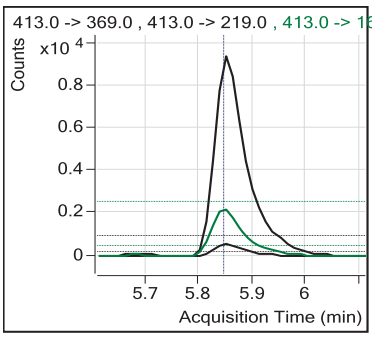


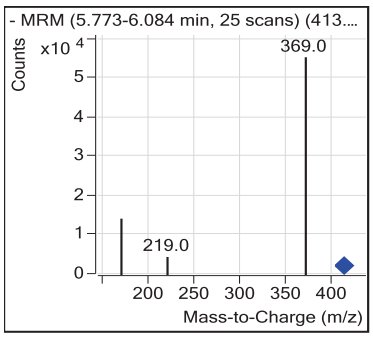




PFOA





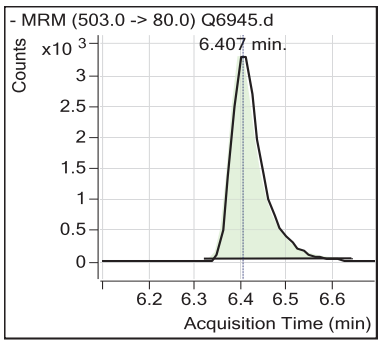


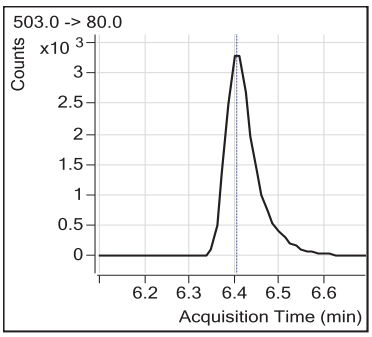
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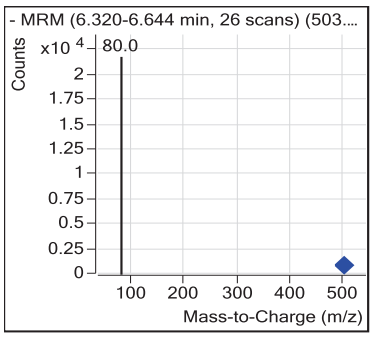
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Perfluorinated Compounds by LC/MS/MS.

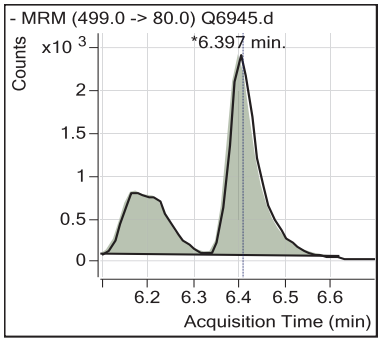
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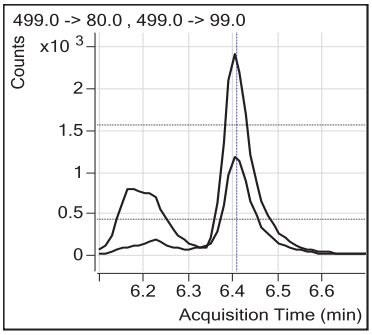


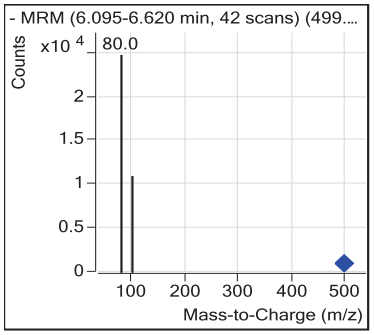




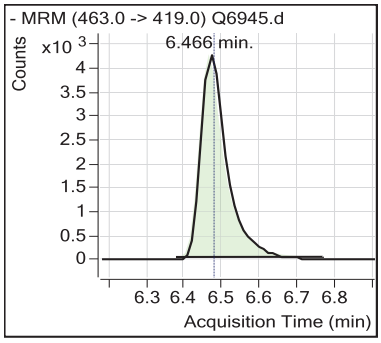
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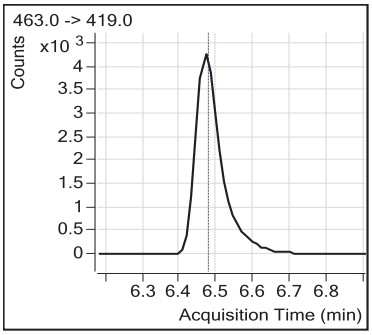


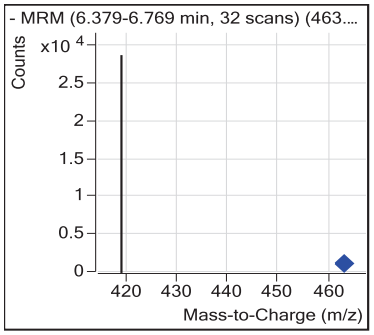




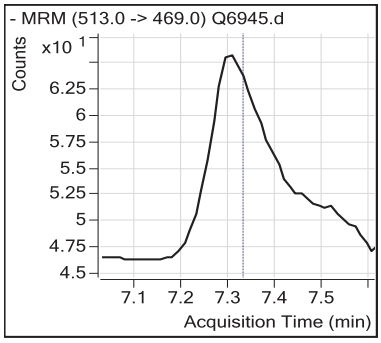
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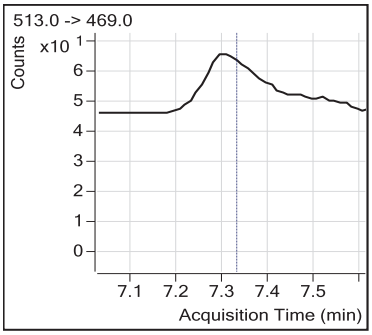


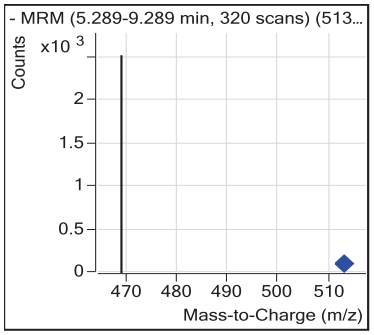




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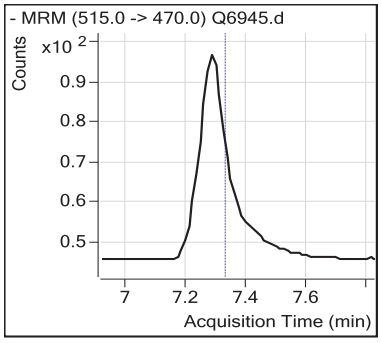


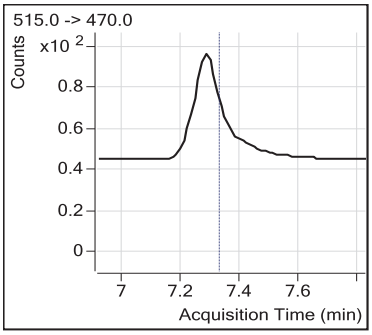


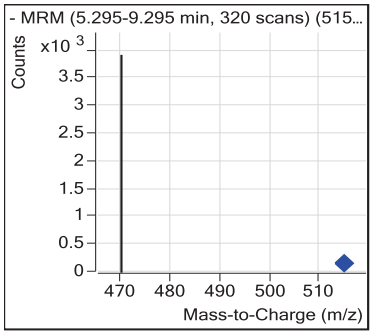


Perfluorinated Compounds by LC/MS/MS.

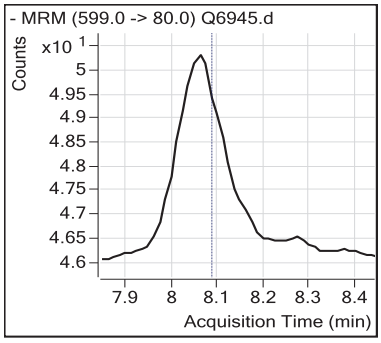
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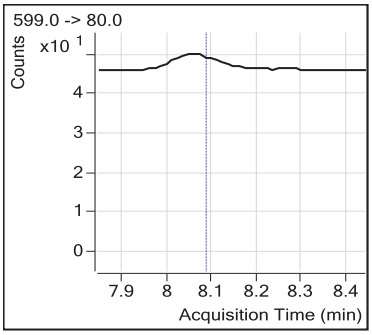


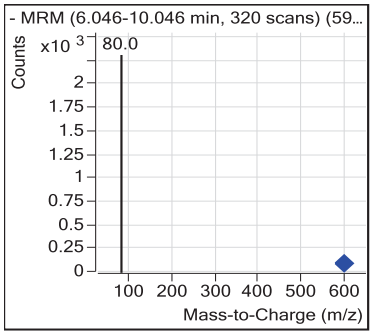




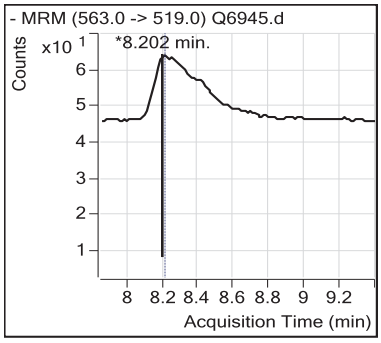
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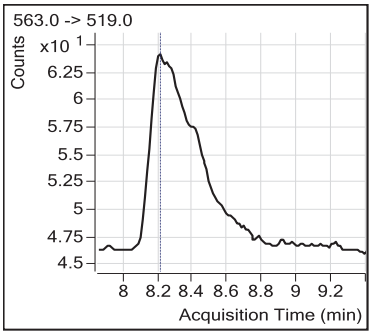


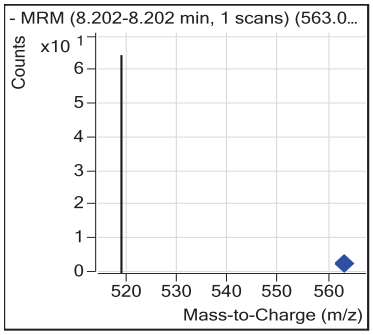




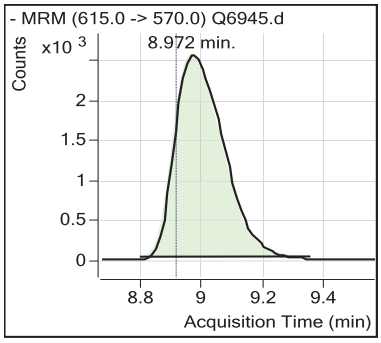
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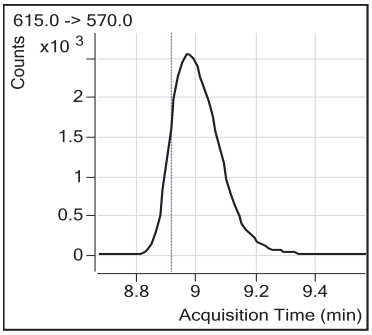


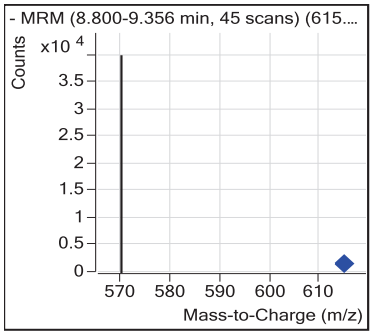




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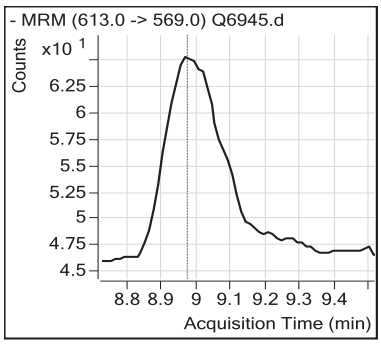


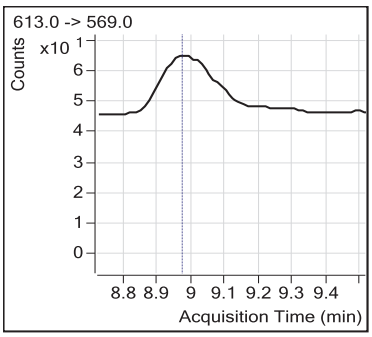


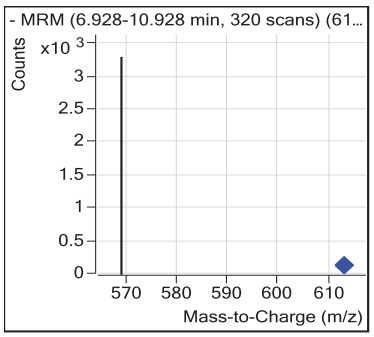


Perfluorinated Compounds by LC/MS/MS.

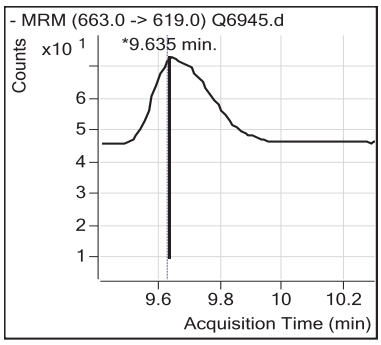
PFDoDA

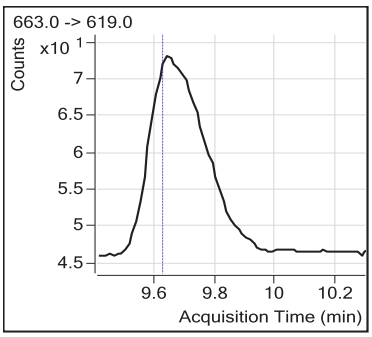


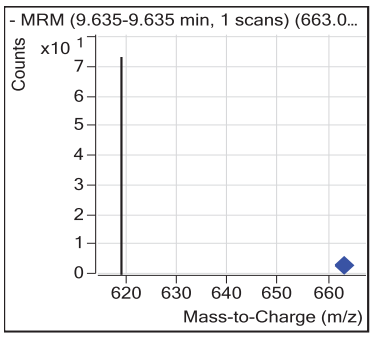




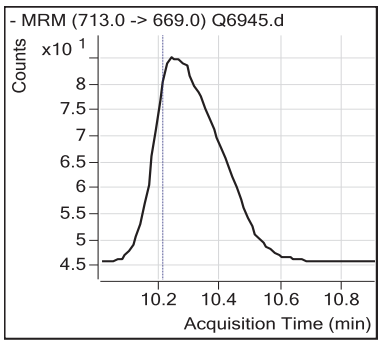
PFTrDA

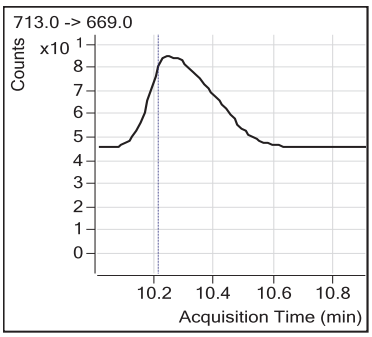


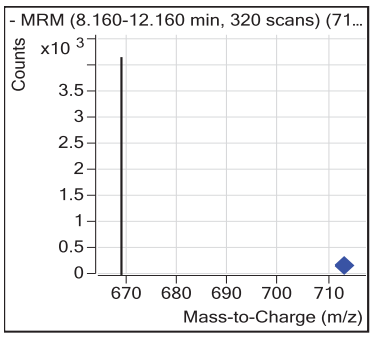




PFTeDA







Manual Integration Approval Summary

Sample Number: SQ234-ICV234
Lab FileID: Q6945.D
Injection Time: 09/12/14 15:25
Method: EPA 537 MOD
Analyst approved: 09/15/14 08:44 Mike Eger
Supervisor approved: 09/15/14 10:34 Naresh Jiawan

Parameter	CAS	Sig#	R.T. (min.)	Reason
Perfluorohexanesulfonic acid	355-46-4		5.22	Split peak
Perfluorooctanesulfonic acid	1763-23-1		6.40	Split peak
Perfluoroundecanoic acid	2058-94-8		8.20	Poor instrument integration
Perfluorotridecanoic acid	72629-94-8		9.63	Poor instrument integration

Perfluorinated Compounds by LC/MS/MS.

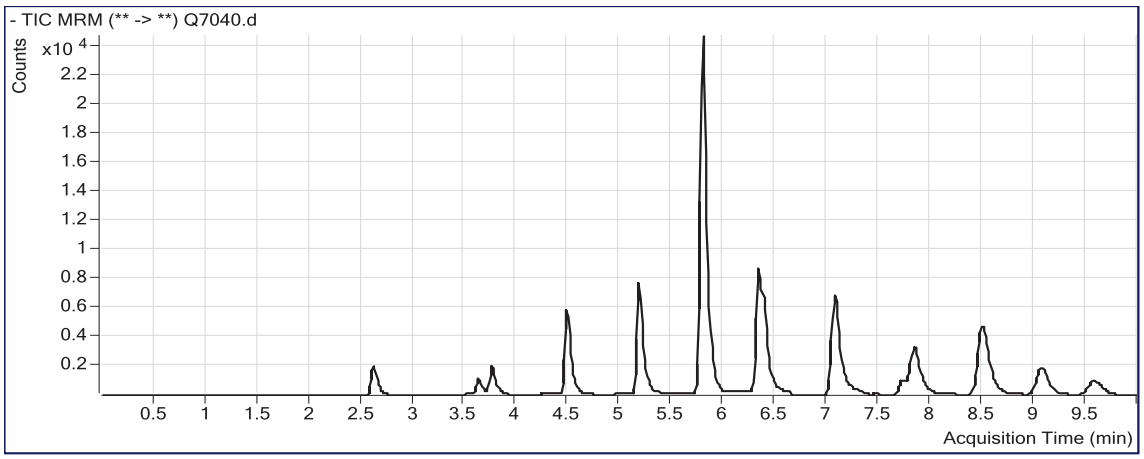
Data File	:	Q7040.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 13:08
Sample Name	:	cc234-20
Vial	:	Vial 2
Sample Info	:	OP53105,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.796	415.0 -> 370.0	41664	20.000	µg/L	-0.025
13C4-PFOS	6.332	503.0 -> 80.0	14375	20.000	µg/L	-0.013
13C2-PFDoDA	8.497	615.0 -> 570.0	19218	20.000	µg/L	-0.013
System Monitoring Compounds						
13C2-PFHxA	4.479	315.0 -> 270.0	11064	17.92	µg/L	-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 89.61%			
13C2-PFDA	7.070	515.0 -> 470.0	21446	18.40	µg/L	-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 92.00%			
Target Compounds						**Qvalue**
PFBA	2.614	213.0 -> 169.0	9286	19.197	µg/L	100
PFPeA	3.636	263.0 -> 219.0	4346	18.341	µg/L	100
PFBS	3.753	299.0 -> 80.0	5051	22.198	µg/L	98
PFHxA	4.483	313.0 -> 269.0	12446	17.752	µg/L	99
PFHxS	5.180	399.0 -> 80.0	8024	22.504	µg/L	87
PFHpA	5.185	363.0 -> 319.0	13080	18.761	µg/L	98
PFHpS	5.768	449.0 -> 80.0	9795	22.996	µg/L	100
PFOA	5.798	413.0 -> 369.0	43609	20.224	µg/L	82
PFOS	6.333	499.0 -> 80.0	14973	20.472	µg/L	88
PFNA	6.387	463.0 -> 419.0	17837	18.365	µg/L	100
PFDA	7.076	513.0 -> 469.0	20736	19.074	µg/L	100
PFDS	7.721	599.0 -> 80.0	6533	34.945	µg/L	100
PFUnDA	7.840	563.0 -> 519.0	22014	20.751	µg/L	100
PFDoDA	8.490	613.0 -> 569.0	18477	22.071	µg/L	100
PFTrDA	9.060	663.0 -> 619.0	16052	20.963	µg/L	100
PFTeDA	9.573	713.0 -> 669.0	9740	17.120	µg/L	100

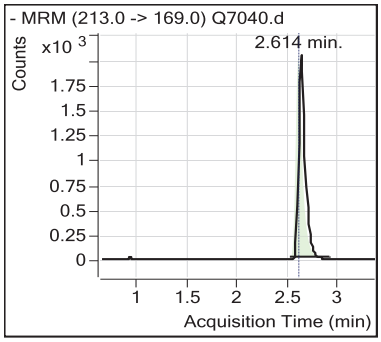
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

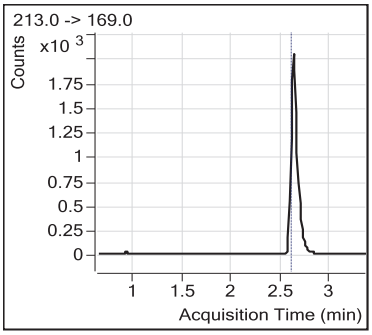
Perfluorinated Compounds by LC/MS/MS.

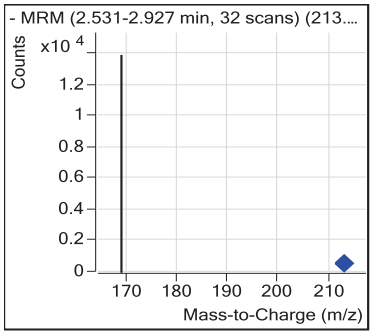
Data File	:	Q7040.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 13:08
Sample Name	:	cc234-20
Vial	:	Vial 2
Sample Info	:	OP53105,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



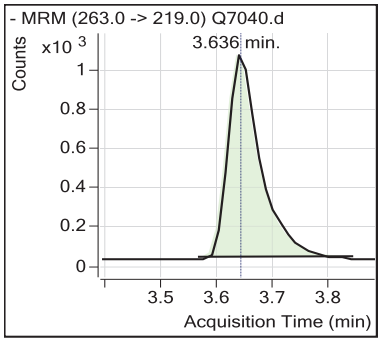
PFBA

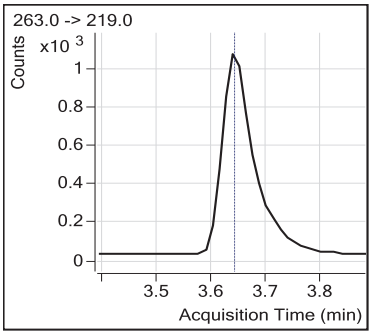


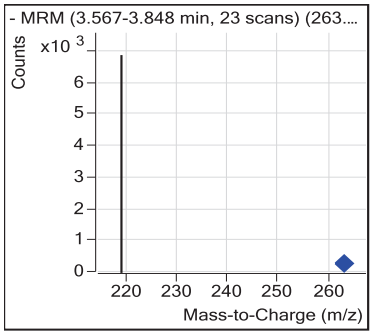




PFPeA

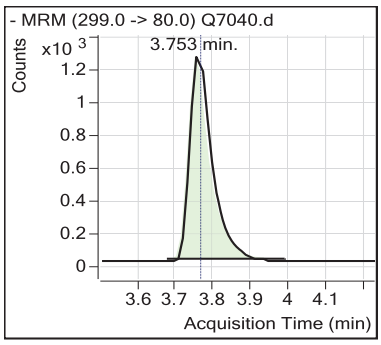


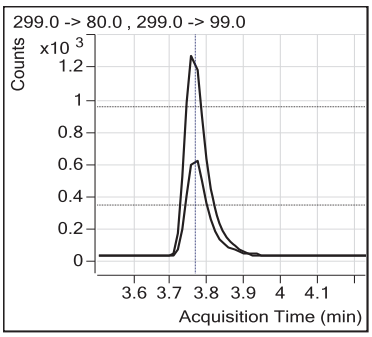


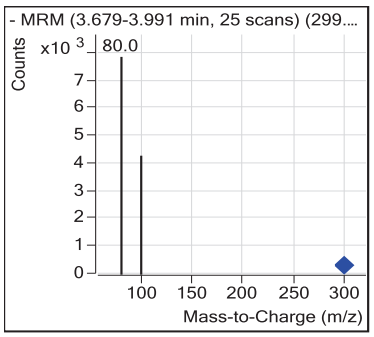


Perfluorinated Compounds by LC/MS/MS.

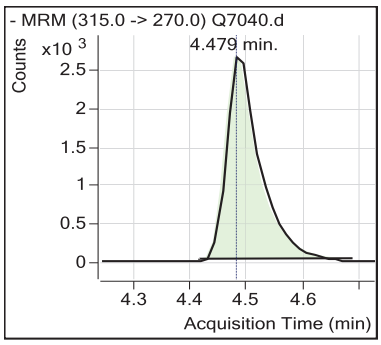
PFBS

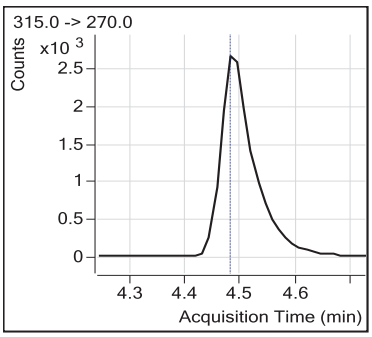


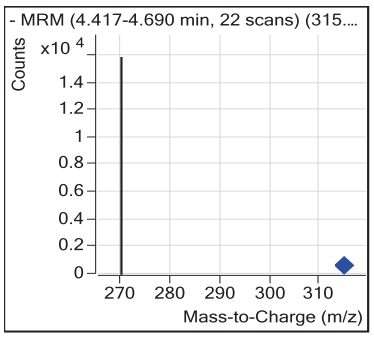




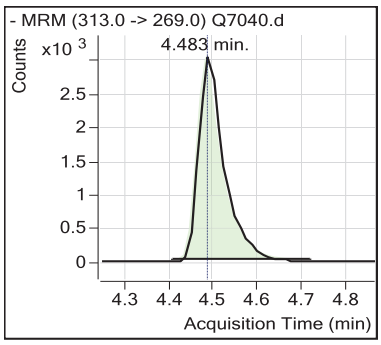
13C2-PFHxA

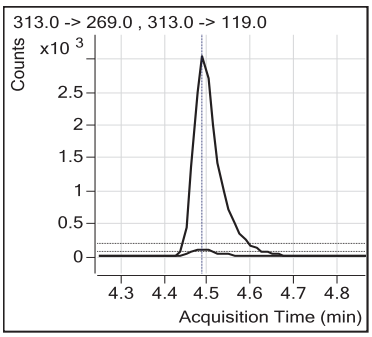


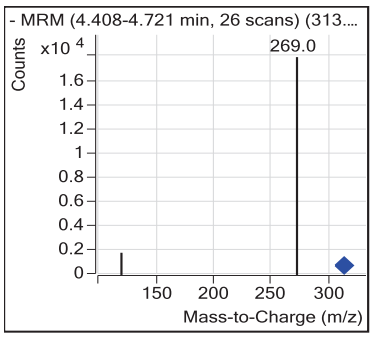




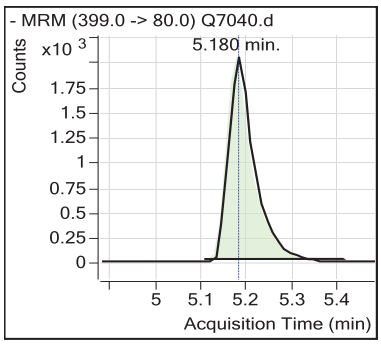
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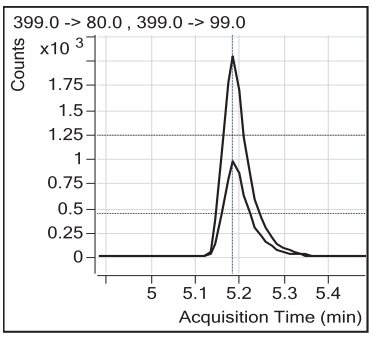


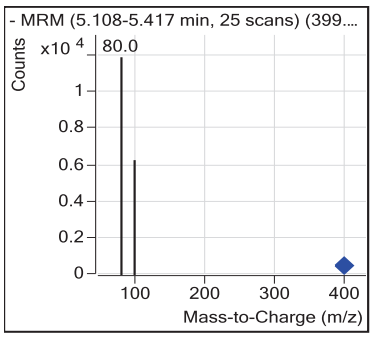




PFHxS

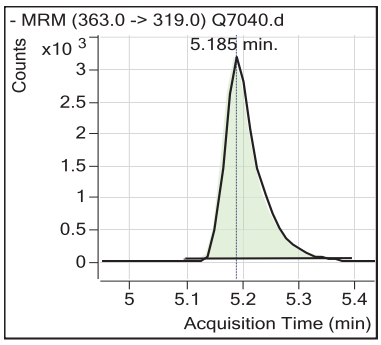


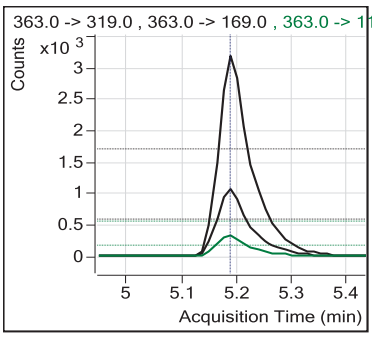


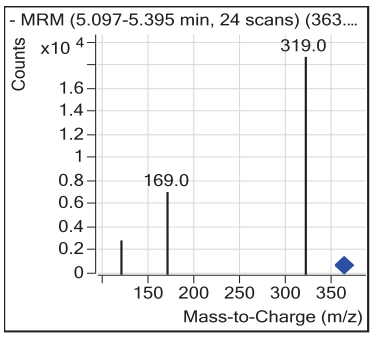


Perfluorinated Compounds by LC/MS/MS.

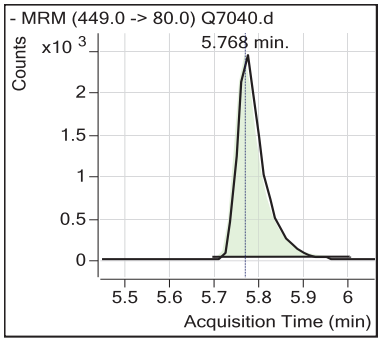
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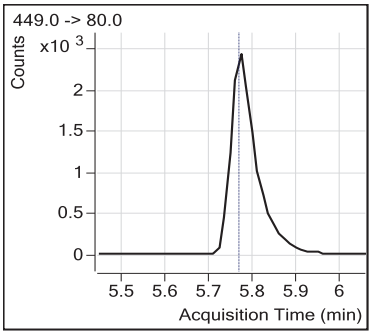


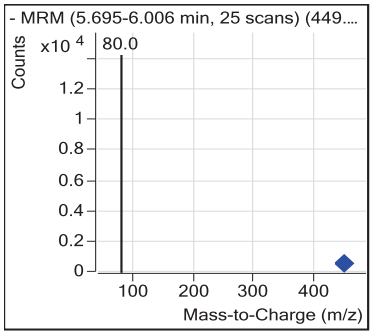




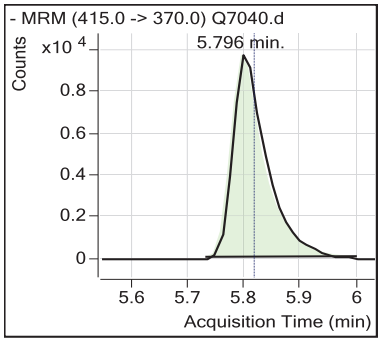
PFHpS

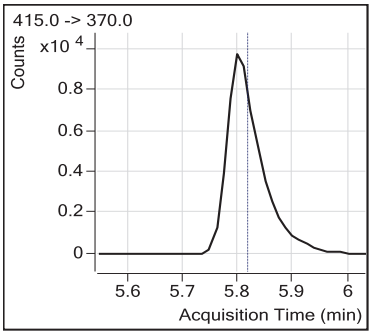


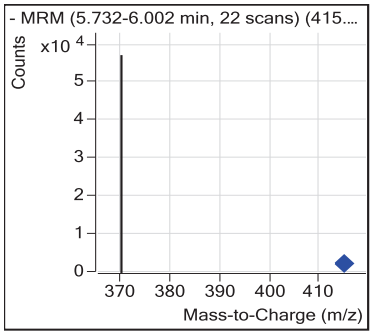




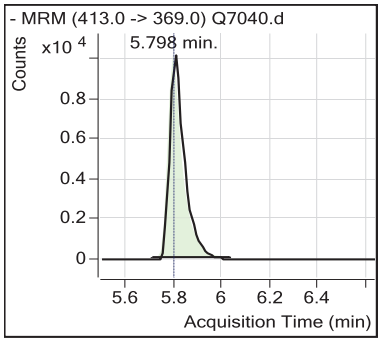
13C2-PFOA

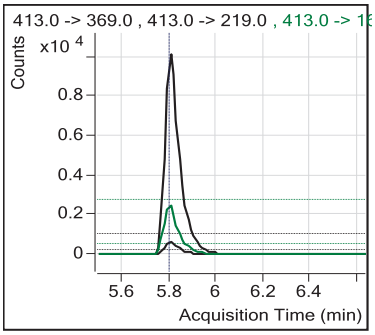


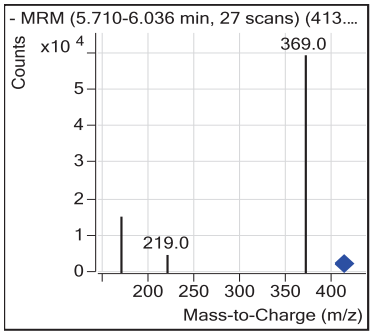




PFOA





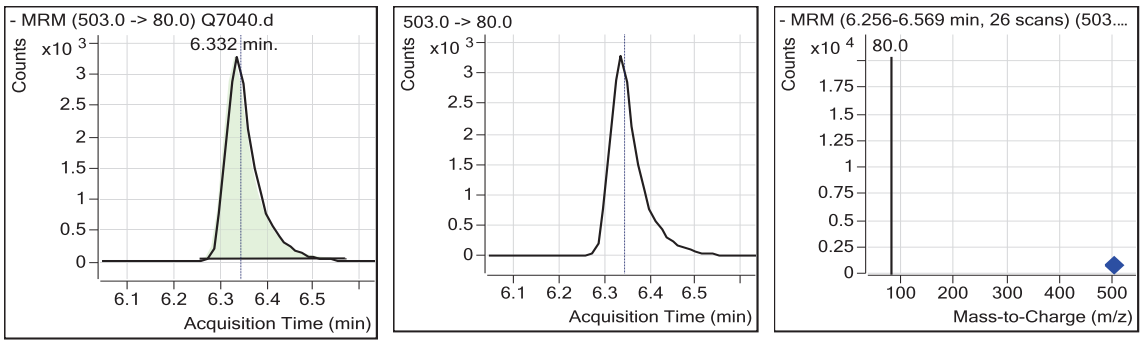


7.5.10

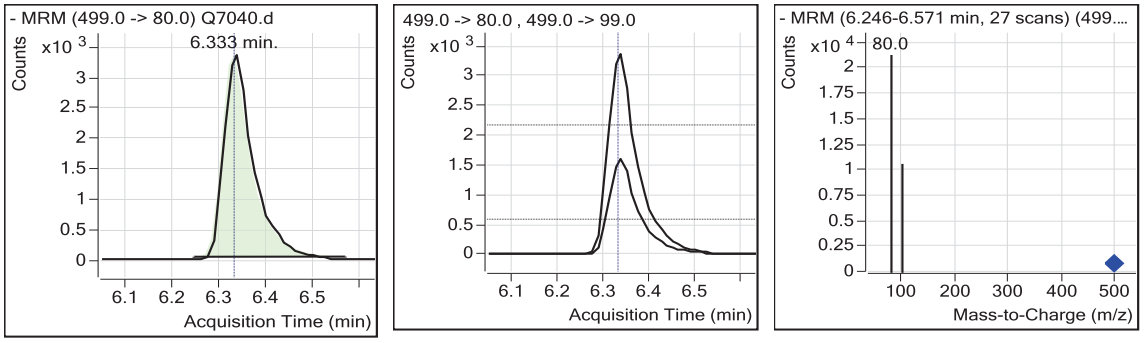
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Perfluorinated Compounds by LC/MS/MS.

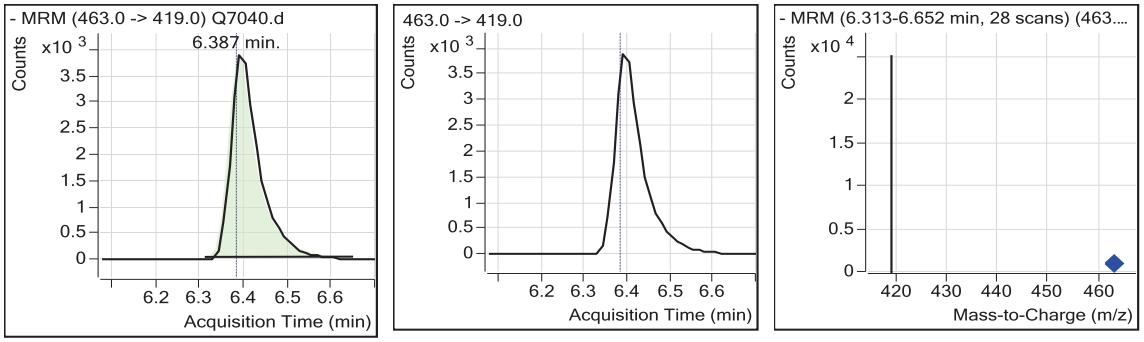
13C4-PFOS



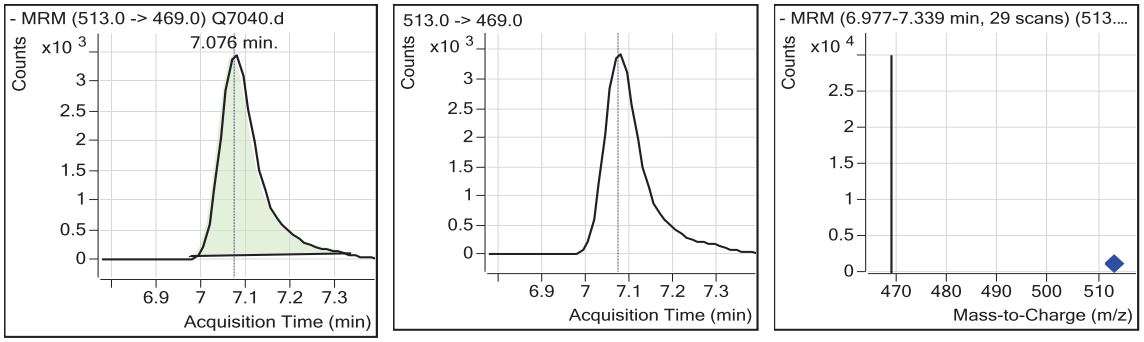
PFOS



PFNA

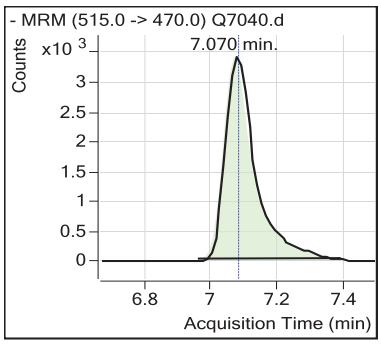


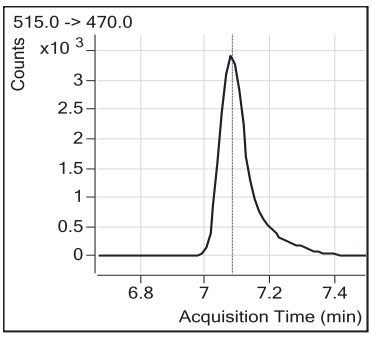
PFDA

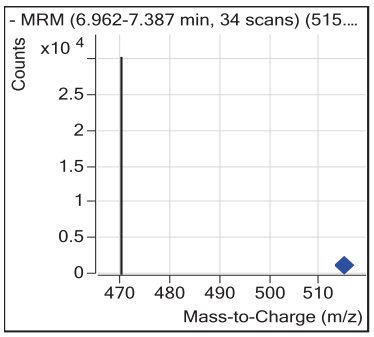


Perfluorinated Compounds by LC/MS/MS.

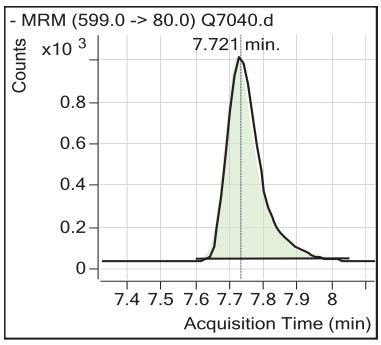
13C2-PFDA

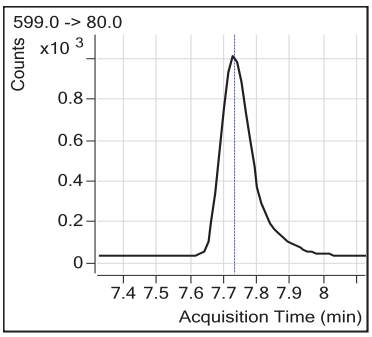


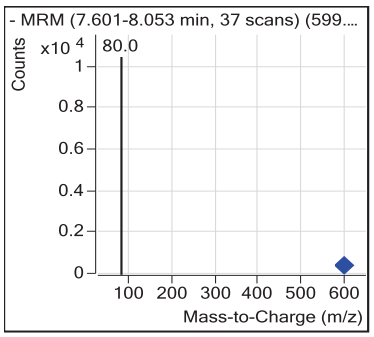




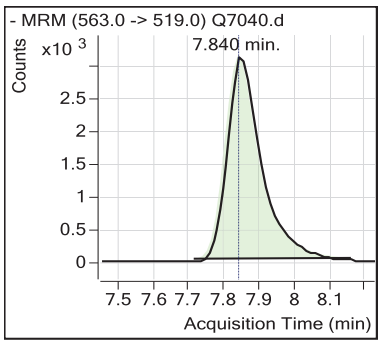
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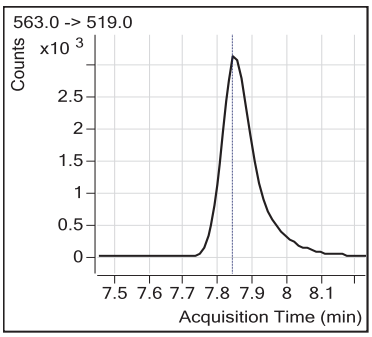


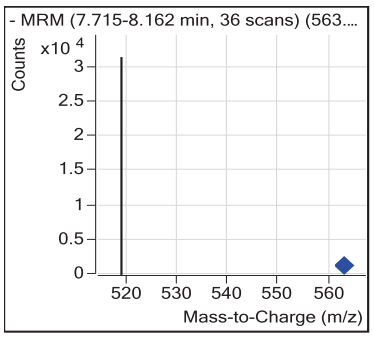




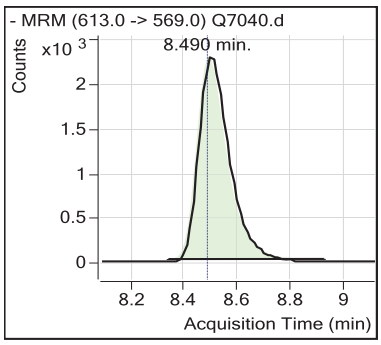
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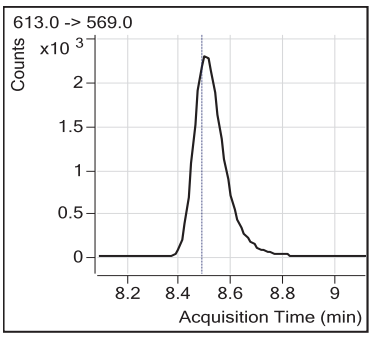


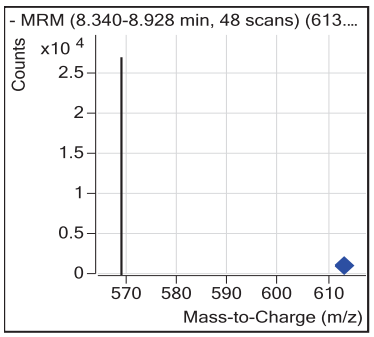




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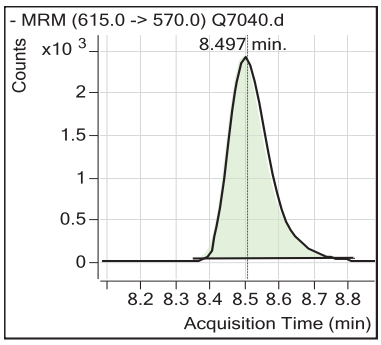


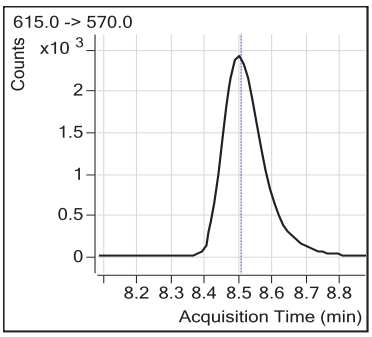


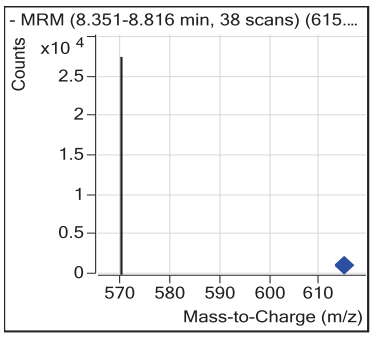


Perfluorinated Compounds by LC/MS/MS.

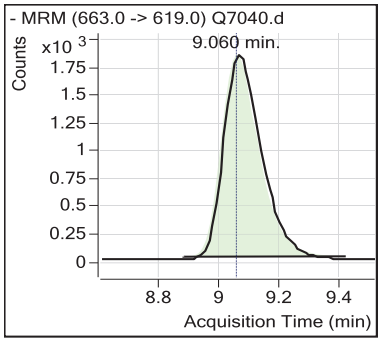
13C2-PFDoDA

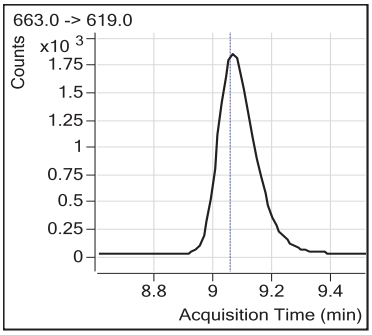


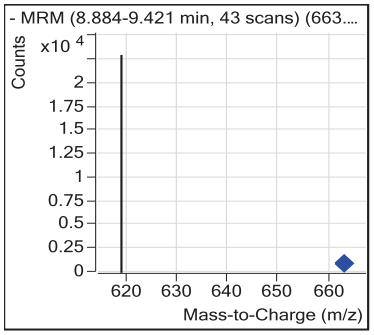




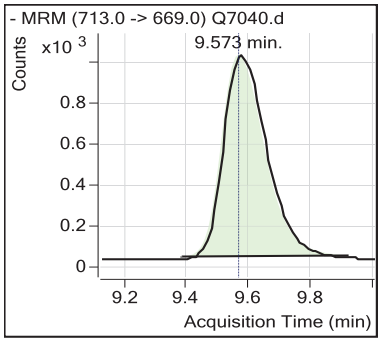
PFTrDA

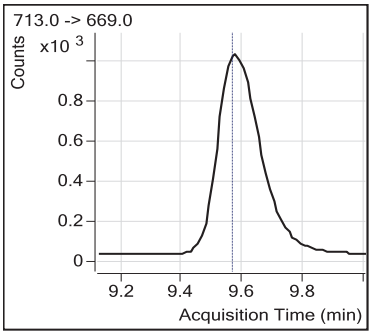


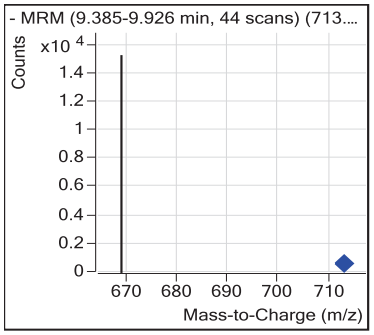




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

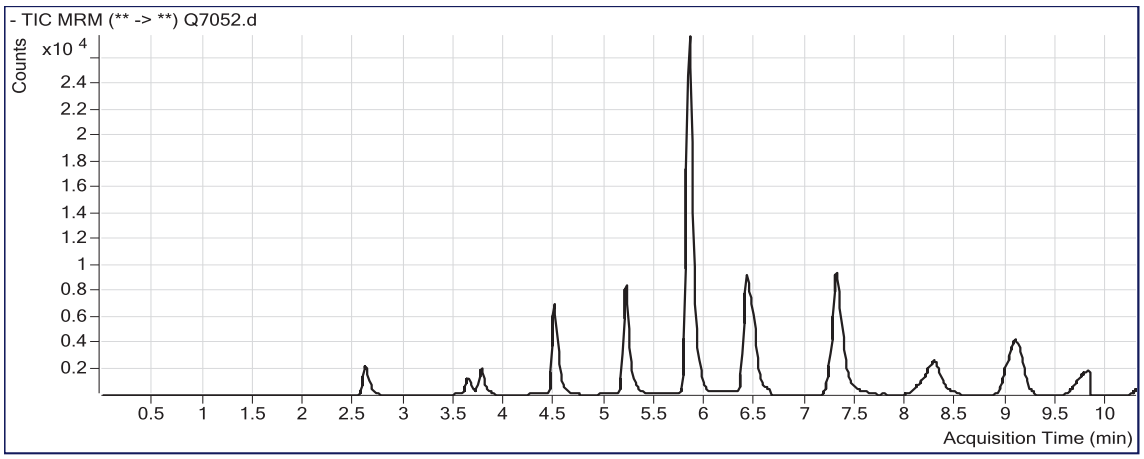
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Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 17:43
Sample Name	:	cc234-20
Vial	:	Vial 2
Sample Info	:	OP53105,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.833	415.0 -> 370.0	50794	20.000	µg/L	0.013
13C4-PFOS	6.394	503.0 -> 80.0	17305	20.000	µg/L	0.050
13C2-PFDoDA	9.076	615.0 -> 570.0	23827	20.000	µg/L	0.567
System Monitoring Compounds						
13C2-PFHxA	4.491	315.0 -> 270.0	13790	18.32	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 91.61%			
13C2-PFDA	7.295	515.0 -> 470.0	35537	24.59	µg/L	0.200
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 122.96%			
Target Compounds						**Qvalue**
PFBA	2.614	213.0 -> 169.0	10695	18.135	µg/L	100
PFPeA	3.636	263.0 -> 219.0	5156	17.848	µg/L	100
PFBS	3.765	299.0 -> 80.0	5684	20.753	µg/L	97
PFHxA	4.495	313.0 -> 269.0	15551	18.195	µg/L	99
PFHxS	5.205	399.0 -> 80.0	9132	21.277	µg/L	87
PFHpA	5.210	363.0 -> 319.0	16021	18.853	µg/L	100
PFHpS	5.806	449.0 -> 80.0	11265	21.969	µg/L	100
PFOA	5.836	413.0 -> 369.0	53200	20.237	µg/L	82
PFOS	6.396	499.0 -> 80.0	17858	20.272	µg/L	87
PFNA	6.462	463.0 -> 419.0	23144	19.574	µg/L	100
PFDA	7.289	513.0 -> 469.0	34031	25.246	µg/L	100
PFDS	8.121	599.0 -> 80.0	6786	29.276	µg/L	100
PFUnDA	8.277	563.0 -> 519.0	23641	17.848	µg/L	100
PFDoDA	9.080	613.0 -> 569.0	21818	21.019	µg/L	100

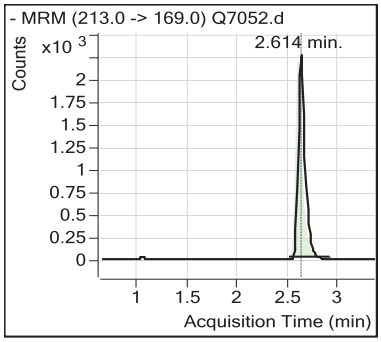
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

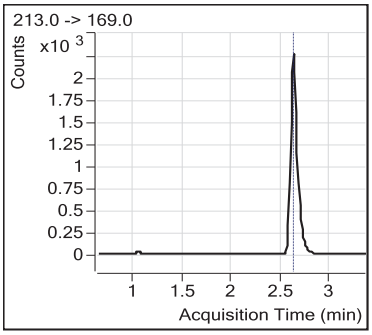
Perfluorinated Compounds by LC/MS/MS.

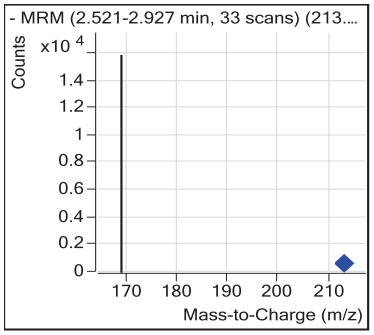
Data File	:	Q7052.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 17:43
Sample Name	:	cc234-20
Vial	:	Vial 2
Sample Info	:	OP53105,SQ238,125,,,1,,water
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Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



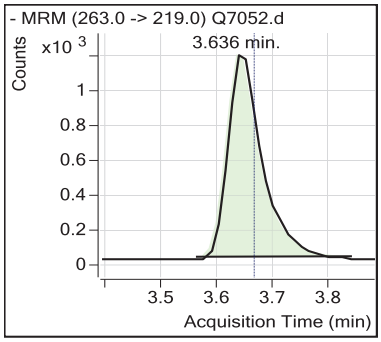
PFBA

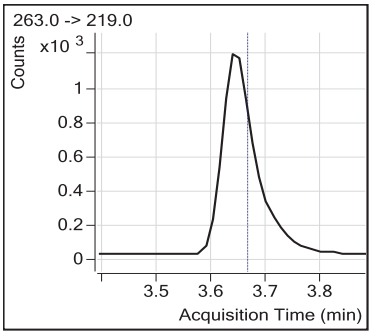


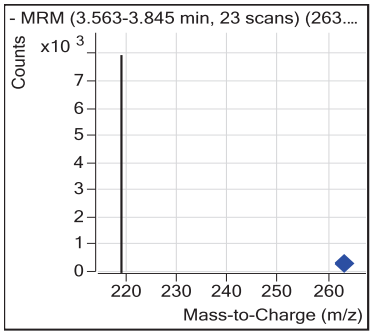




PFPeA

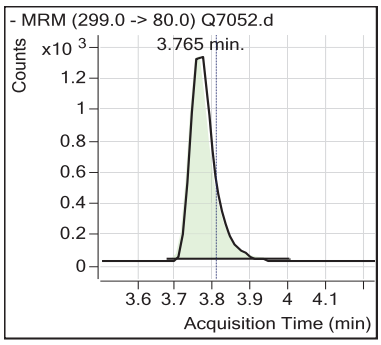


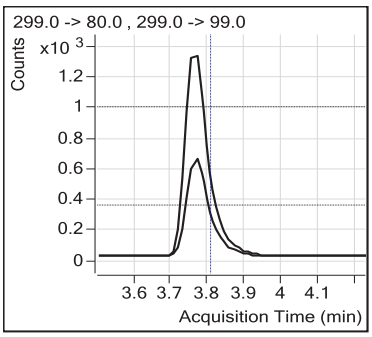


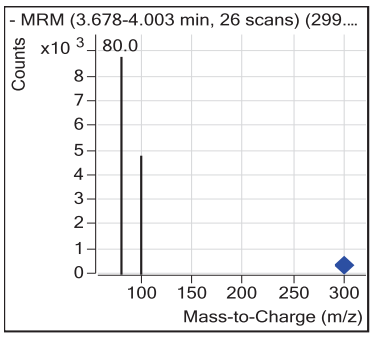


Perfluorinated Compounds by LC/MS/MS.

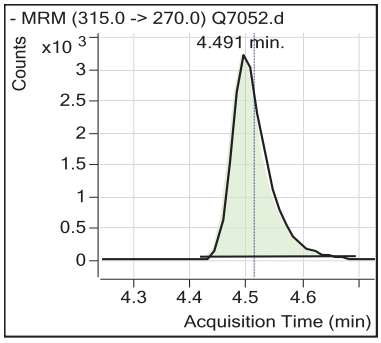
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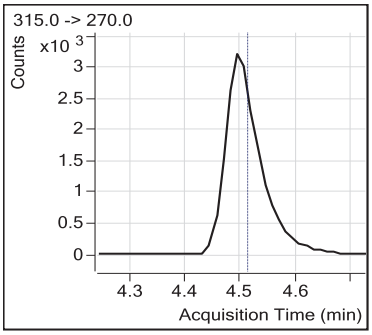


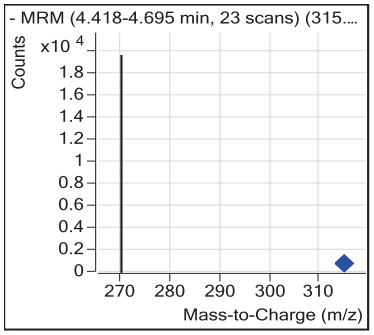




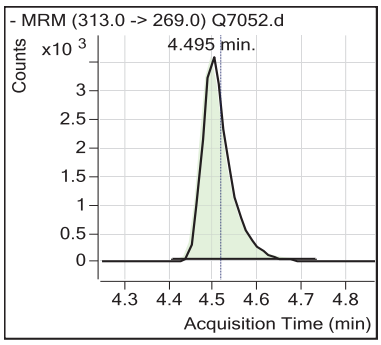
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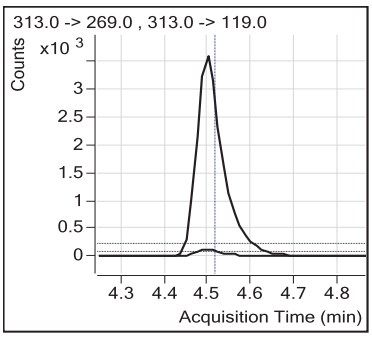


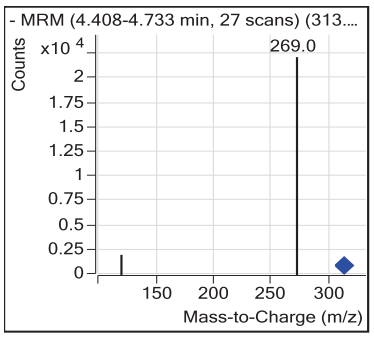




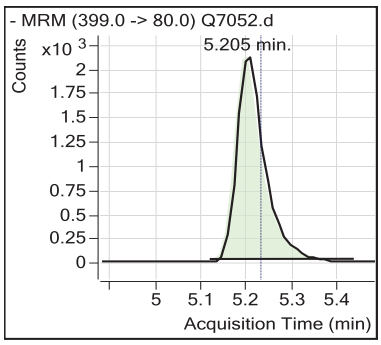
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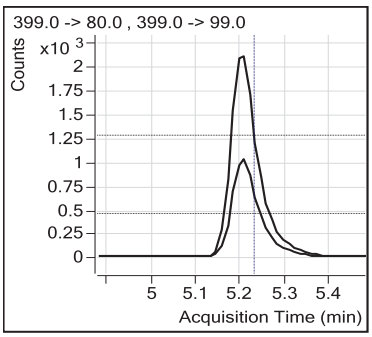


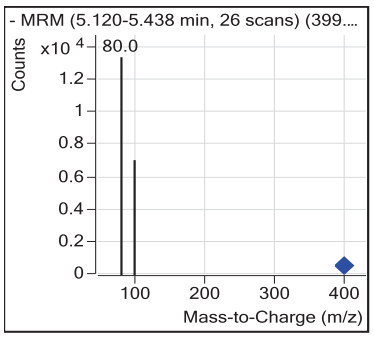




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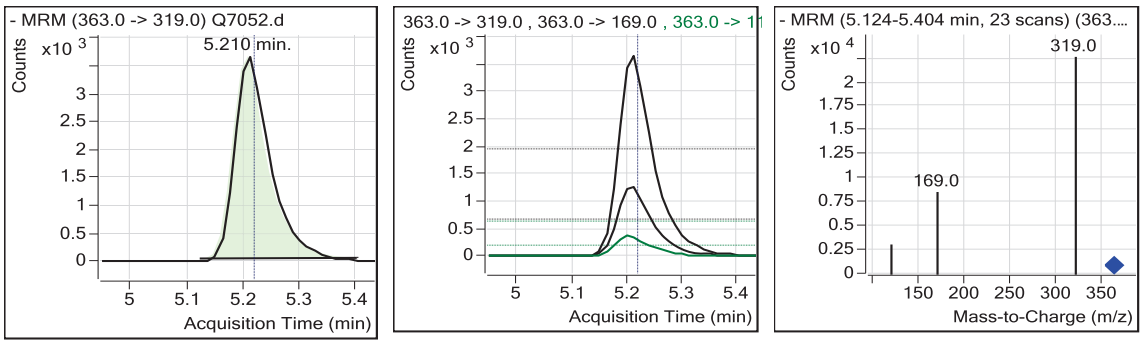




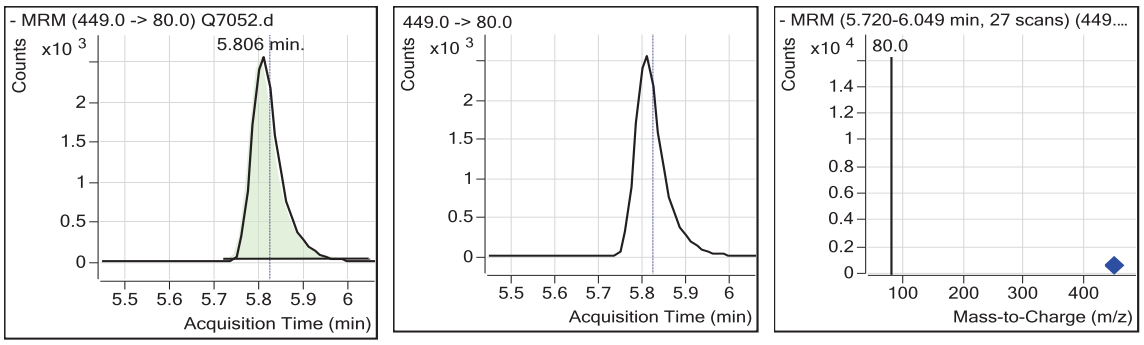


Perfluorinated Compounds by LC/MS/MS.

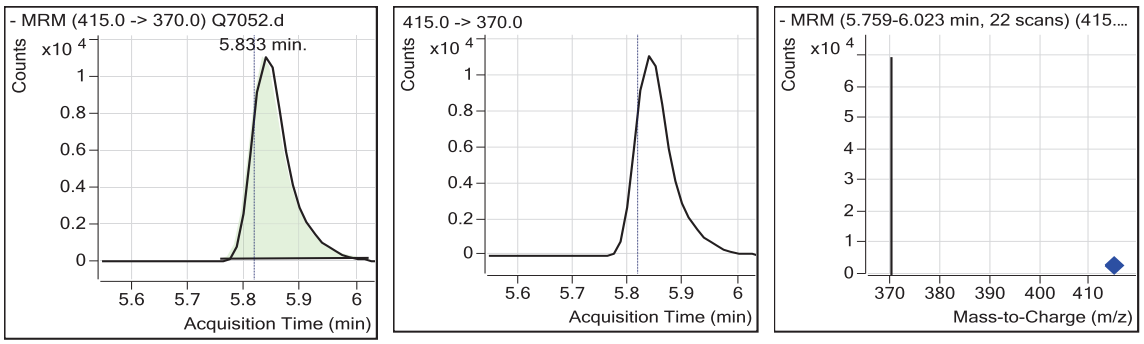
PFHpA



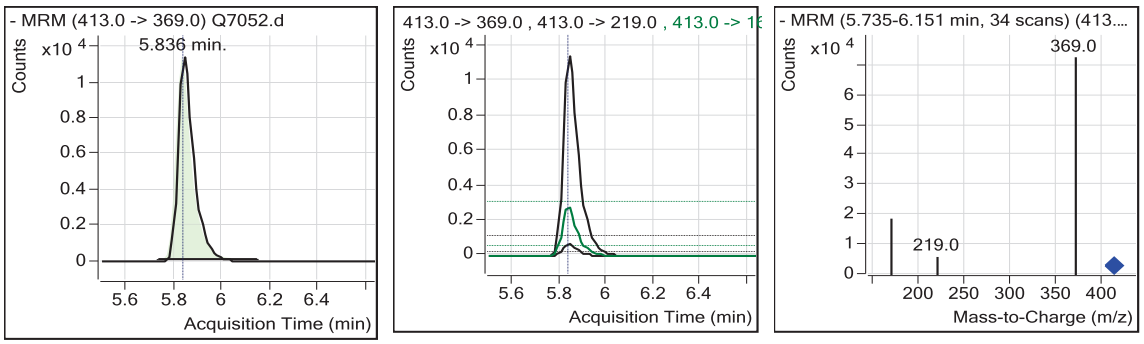
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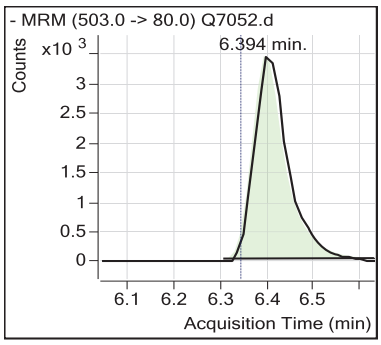


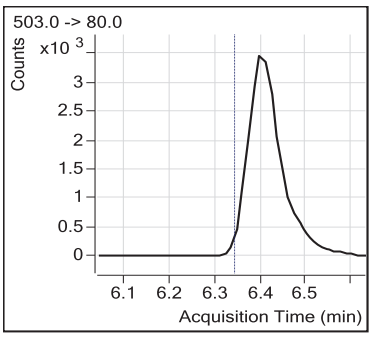
PFOA

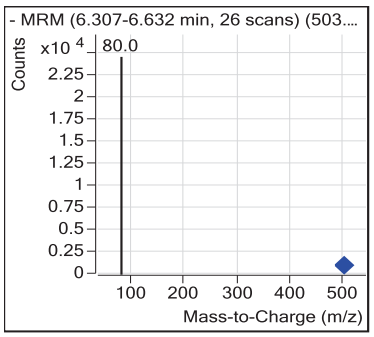


Perfluorinated Compounds by LC/MS/MS.

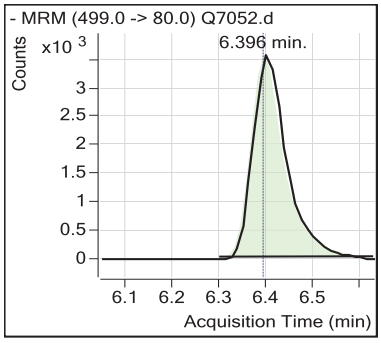
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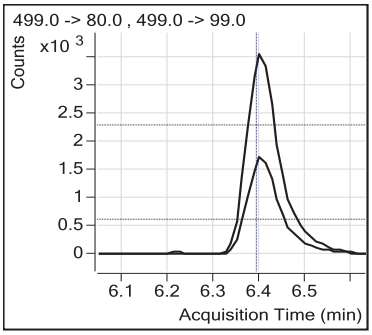


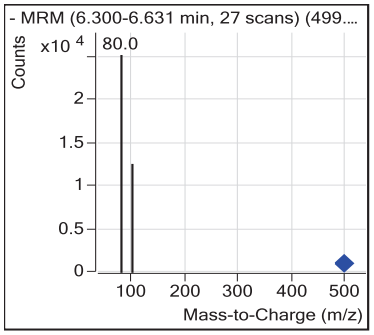




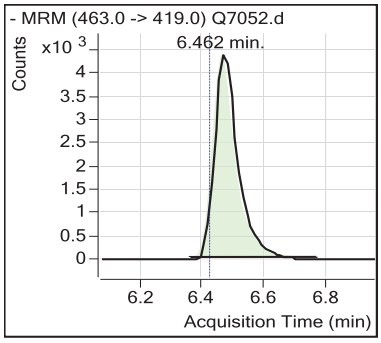
PFOS

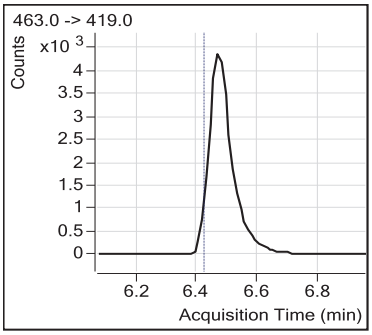


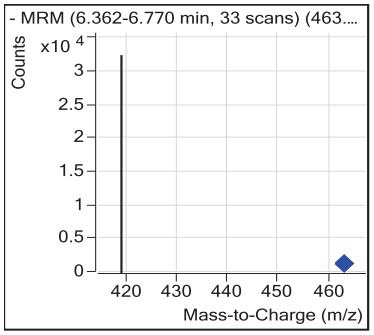




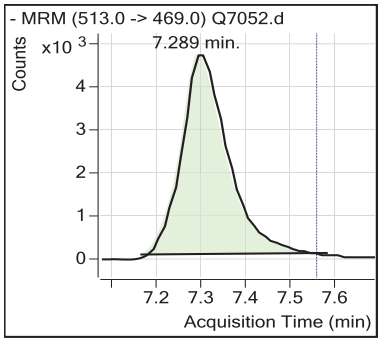
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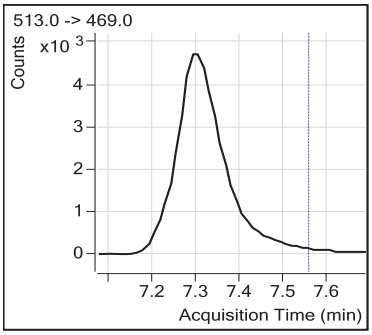


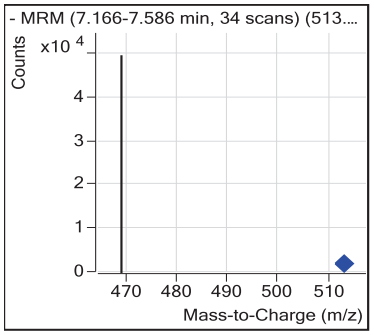




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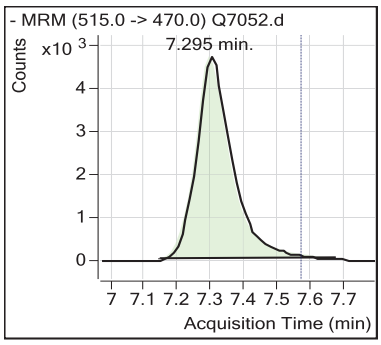


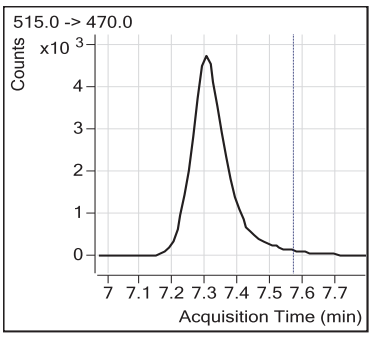


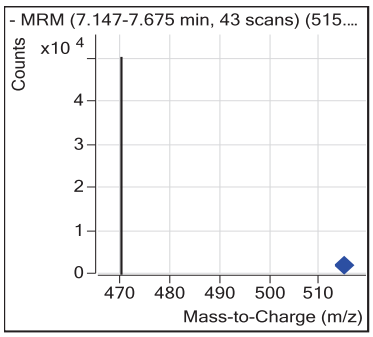


Perfluorinated Compounds by LC/MS/MS.

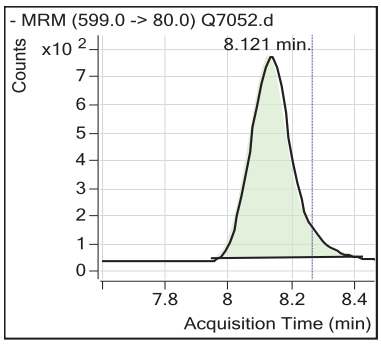
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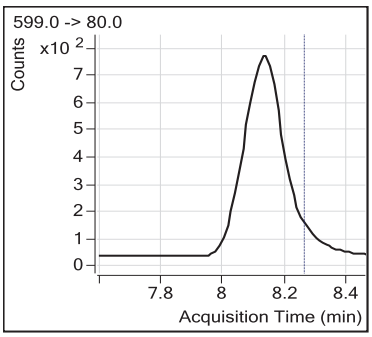


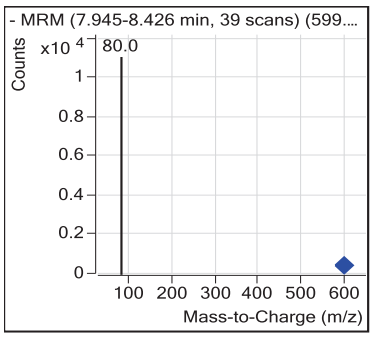




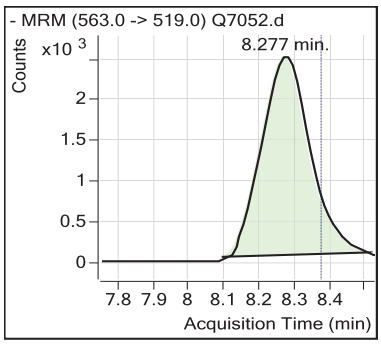
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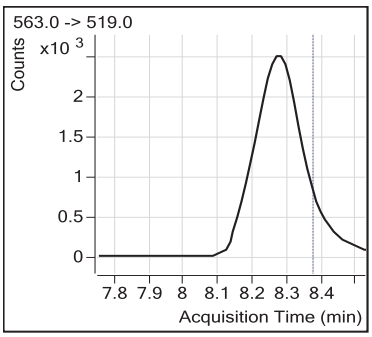


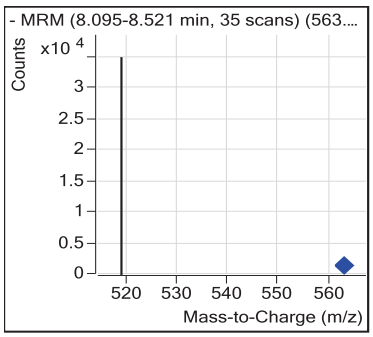




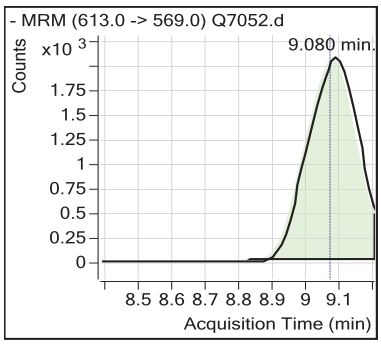
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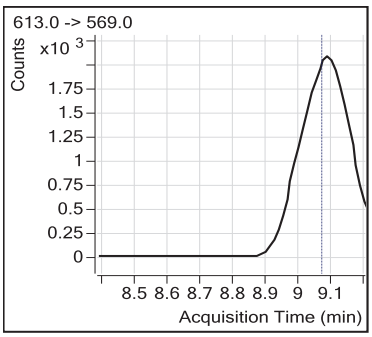


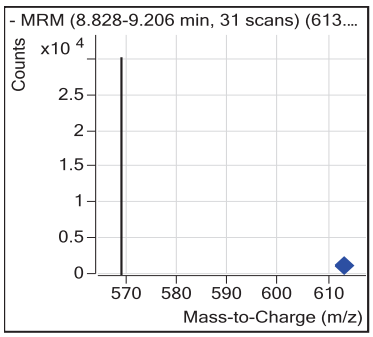




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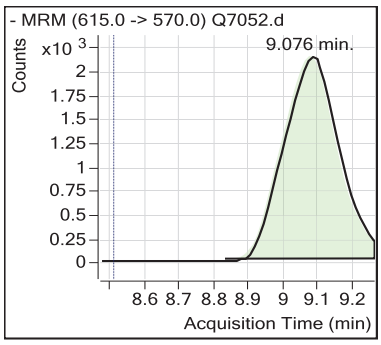


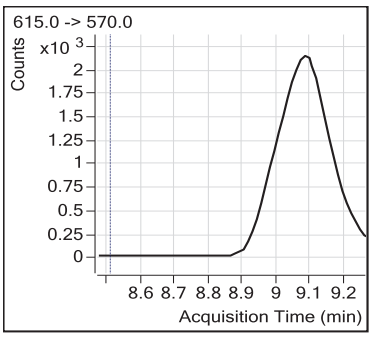


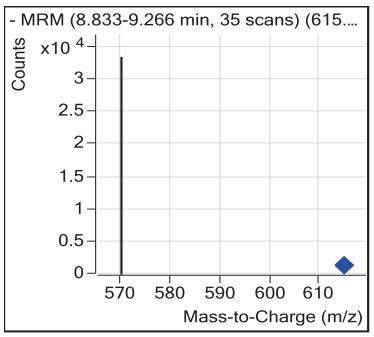


Perfluorinated Compounds by LC/MS/MS.

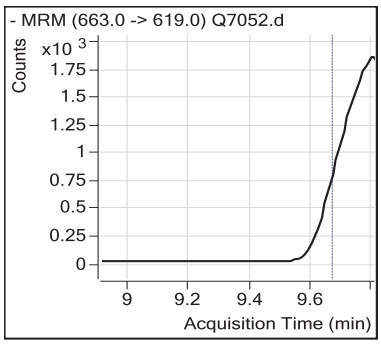
13C2-PFDoDA

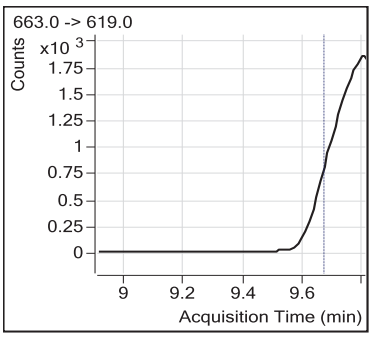


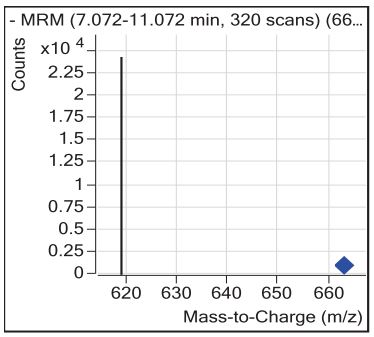




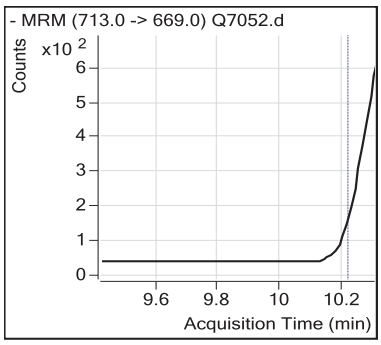
PFTrDA

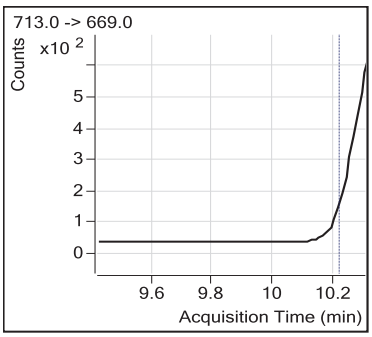


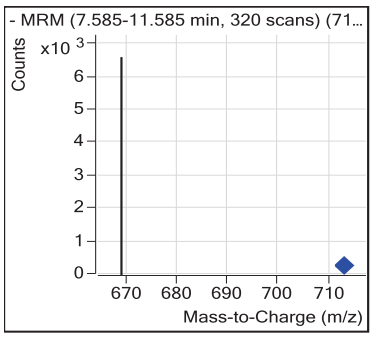




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

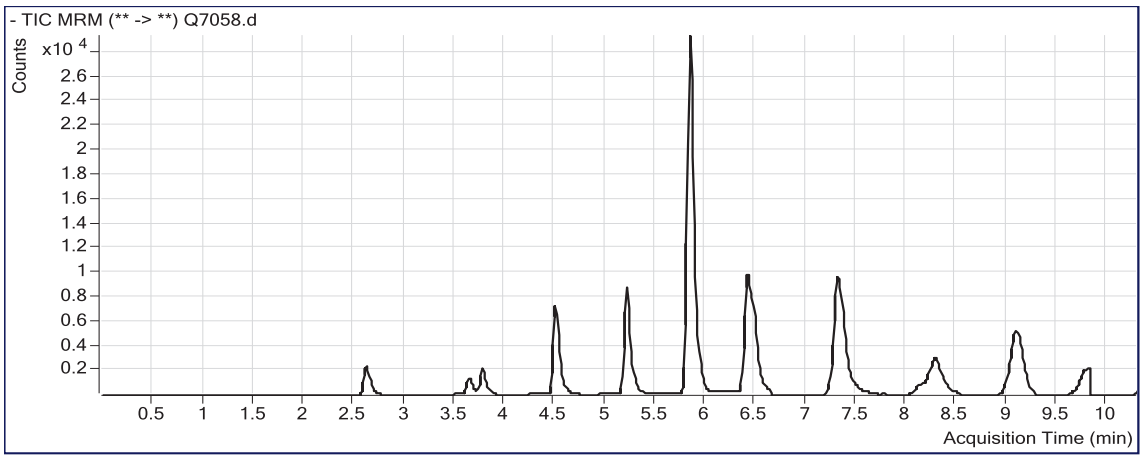
Data File	:	Q7058.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 19:38
Sample Name	:	ecc234-20
Vial	:	Vial 2
Sample Info	:	OP53105,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	54164	20.000	µg/L	0.025
13C4-PFOS	6.407	503.0 -> 80.0	18401	20.000	µg/L	0.063
13C2-PFDoDA	9.089	615.0 -> 570.0	24878	20.000	µg/L	0.580
System Monitoring Compounds						
13C2-PFHxA	4.504	315.0 -> 270.0	14450	18.00	µg/L	0.000
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 90.02%			
13C2-PFDA	7.308	515.0 -> 470.0	38382	25.44	µg/L	0.213
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 127.20%			
Target Compounds						**Qvalue**
PFBA	2.627	213.0 -> 169.0	11160	17.746	µg/L	100
PFPeA	3.649	263.0 -> 219.0	5557	18.040	µg/L	100
PFBS	3.778	299.0 -> 80.0	6123	21.022	µg/L	97
PFHxA	4.508	313.0 -> 269.0	16537	18.144	µg/L	99
PFHxS	5.205	399.0 -> 80.0	9789	21.447	µg/L	89
PFHpA	5.222	363.0 -> 319.0	16664	18.367	µg/L	99
PFHpS	5.806	449.0 -> 80.0	12109	22.208	µg/L	100
PFOA	5.848	413.0 -> 369.0	56666	21.150	µg/L	82
PFOS	6.408	499.0 -> 80.0	19208	21.385	µg/L	88
PFNA	6.475	463.0 -> 419.0	24388	19.337	µg/L	100
PFDA	7.314	513.0 -> 469.0	36810	26.155	µg/L	100
PFDS	8.134	599.0 -> 80.0	7213	29.804	µg/L	100
PFUnDA	8.277	563.0 -> 519.0	25787	18.684	µg/L	100
PFDoDA	9.093	613.0 -> 569.0	22168	20.455	µg/L	100

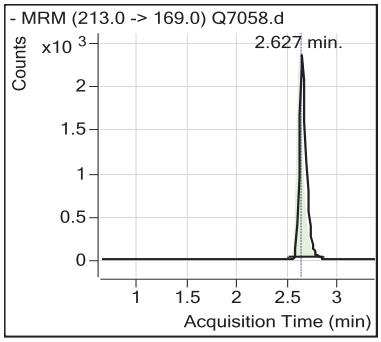
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

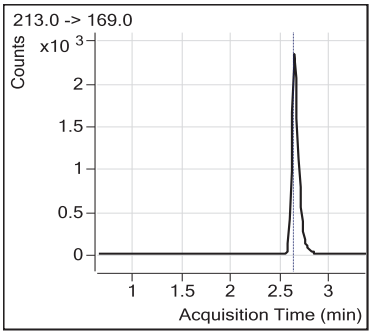
Perfluorinated Compounds by LC/MS/MS.

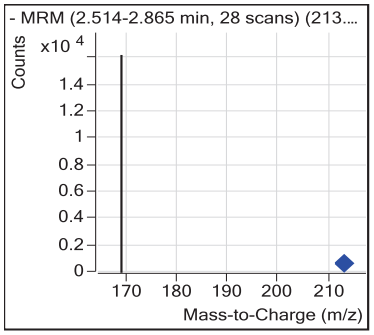
Data File	:	Q7058.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-18 19:38
Sample Name	:	ecc234-20
Vial	:	Vial 2
Sample Info	:	OP53105,SQ238,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq238.batch.bin
Last Calib Update	:	2014-09-16 09:05



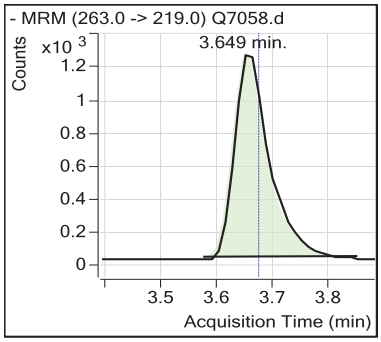
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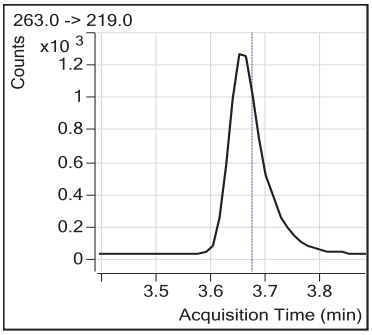


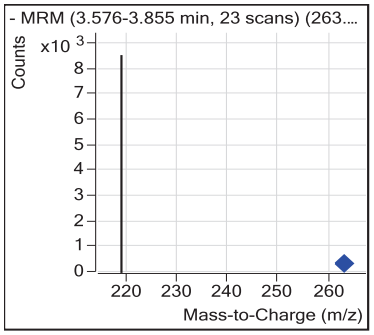




PFPeA

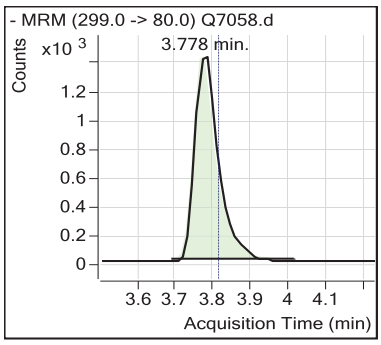


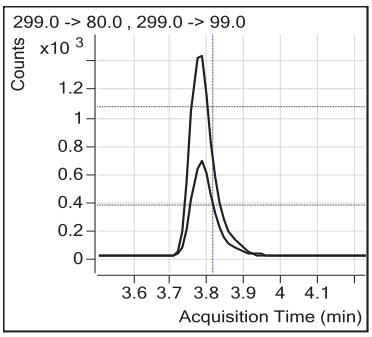


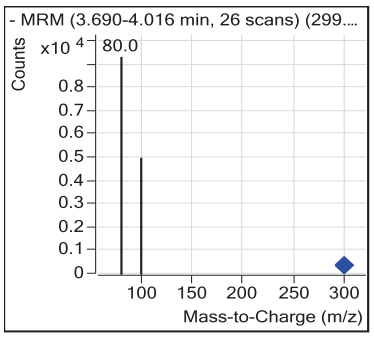


Perfluorinated Compounds by LC/MS/MS.

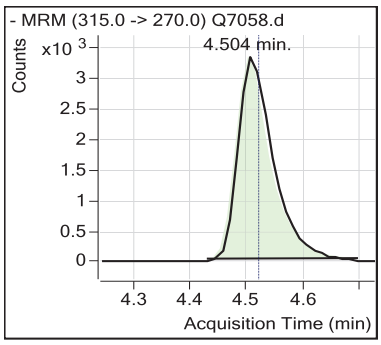
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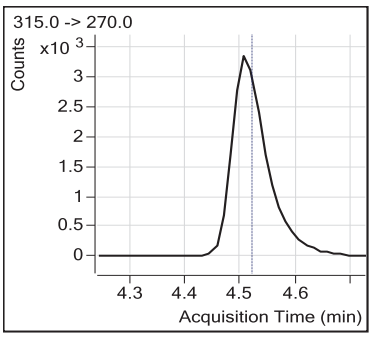


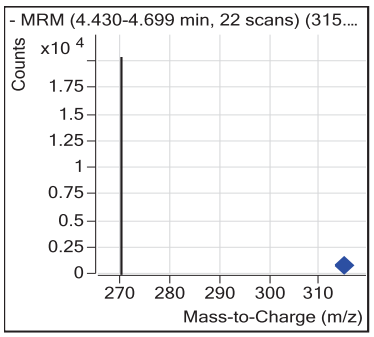




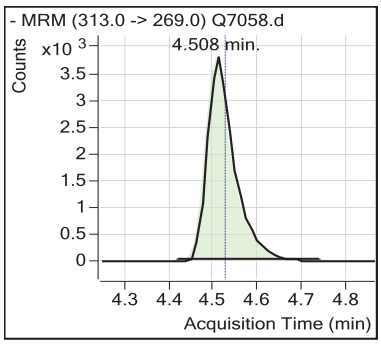
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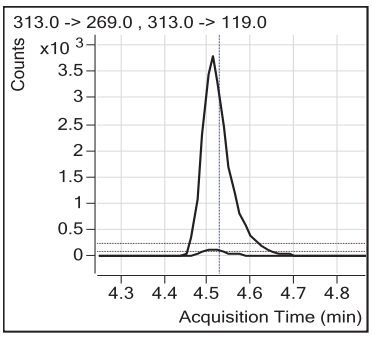


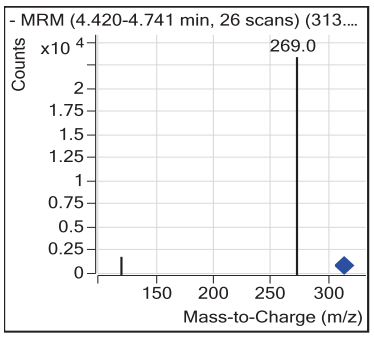




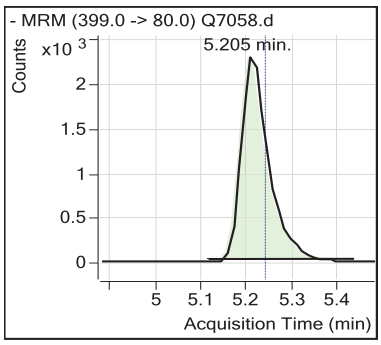
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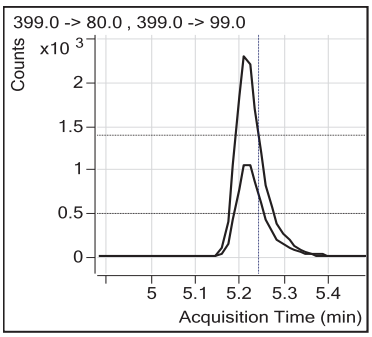


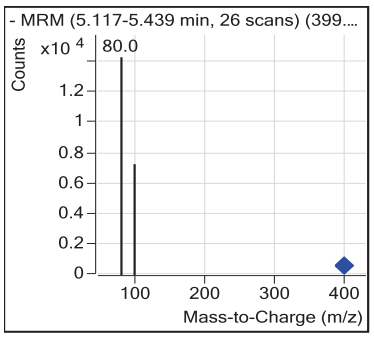




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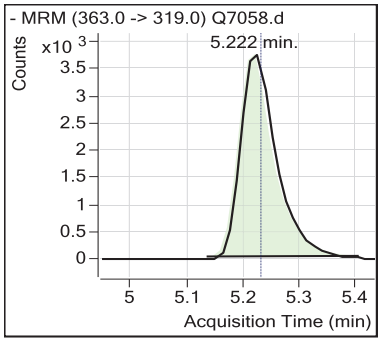


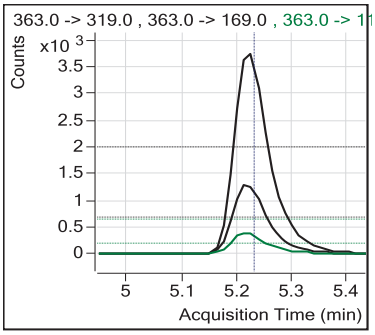


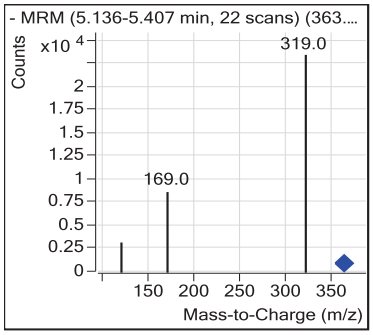


Perfluorinated Compounds by LC/MS/MS.

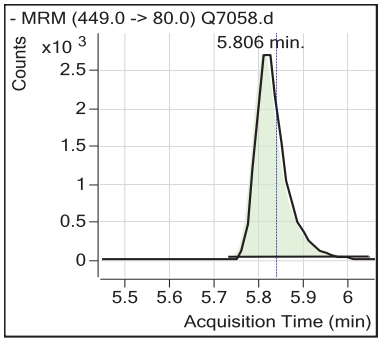
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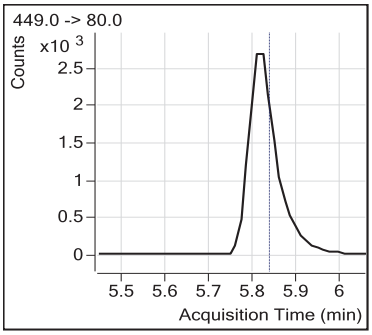


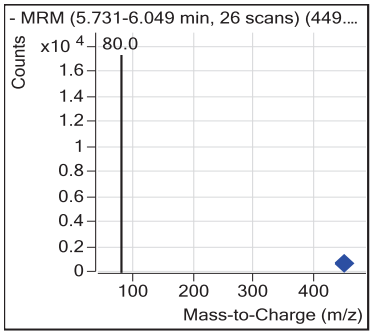




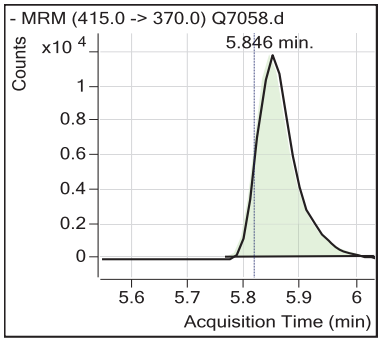
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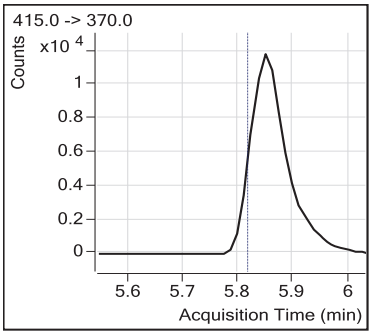


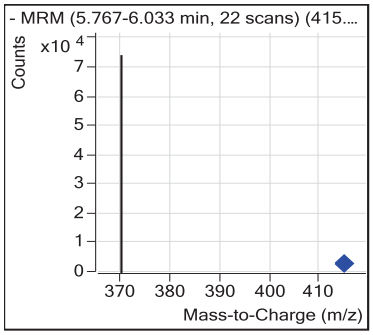




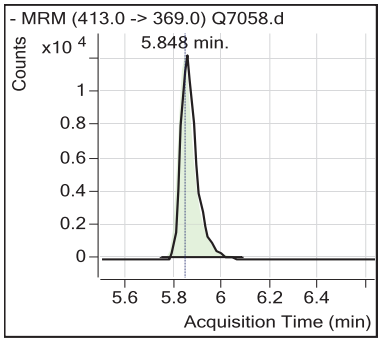
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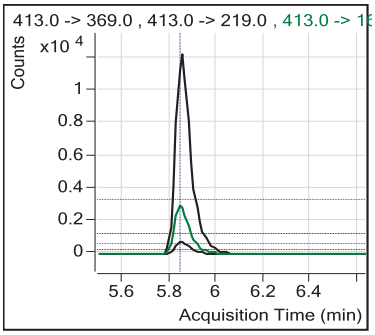


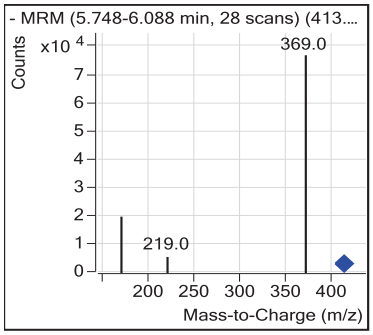




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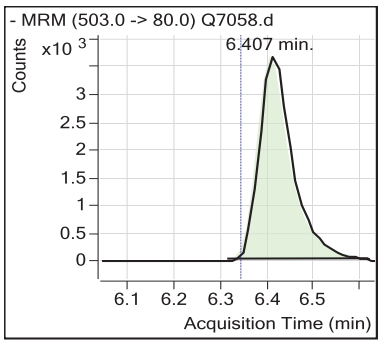


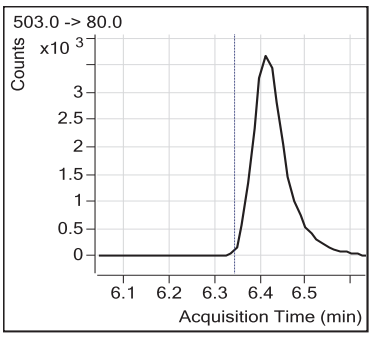


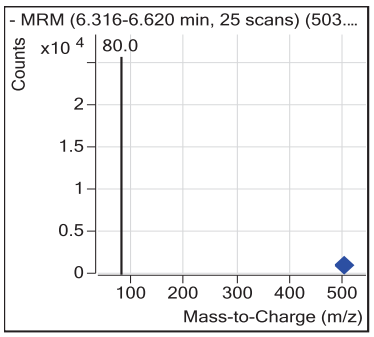


Perfluorinated Compounds by LC/MS/MS.

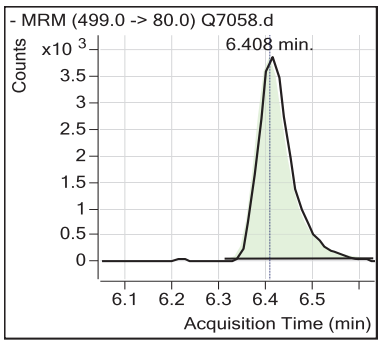
13C4-PFOS

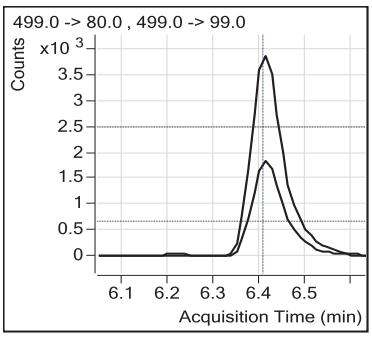


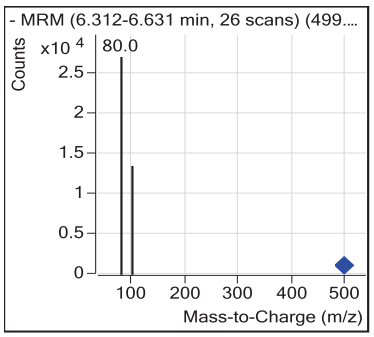




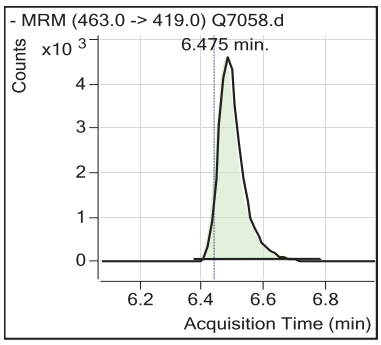
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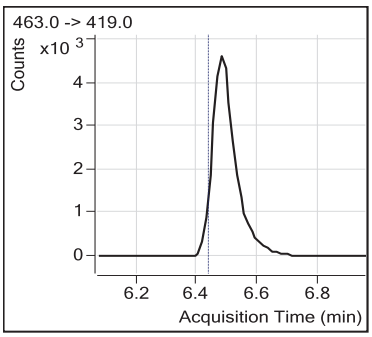


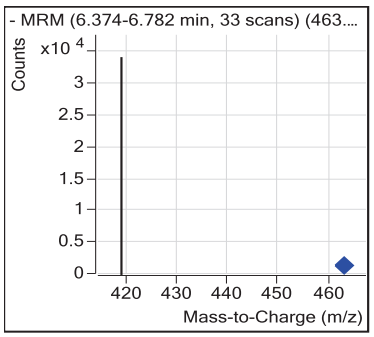




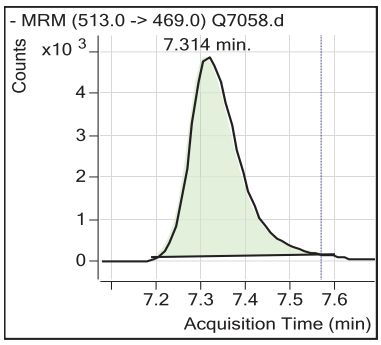
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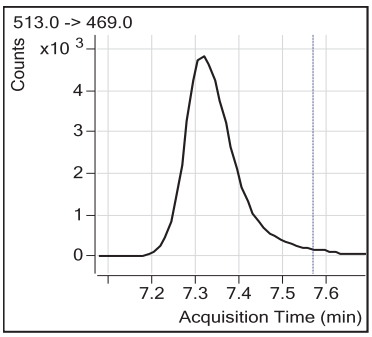


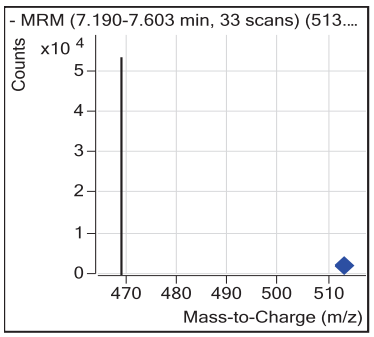




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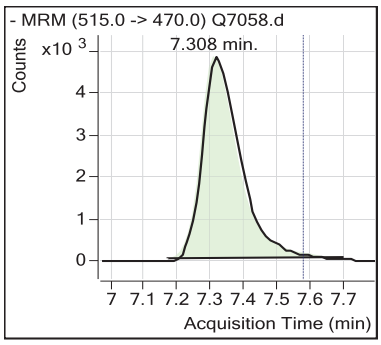


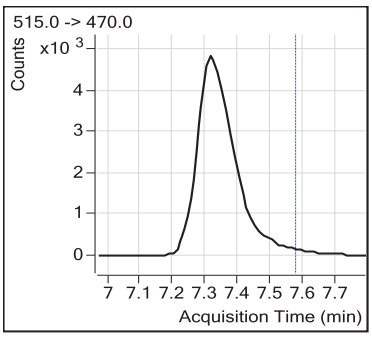


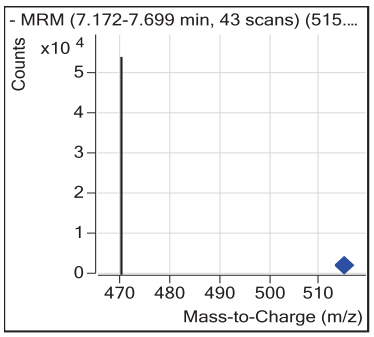


Perfluorinated Compounds by LC/MS/MS.

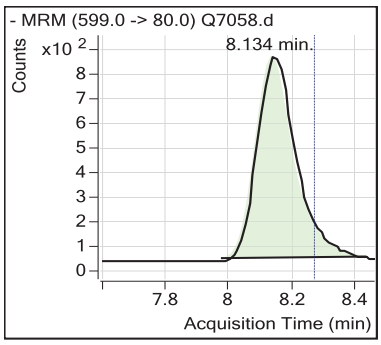
13C2-PFDA

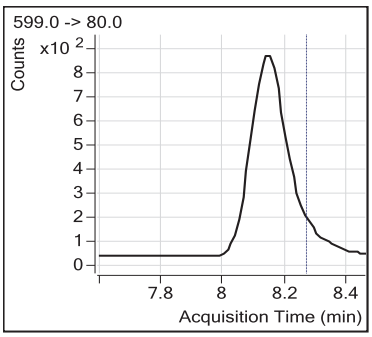


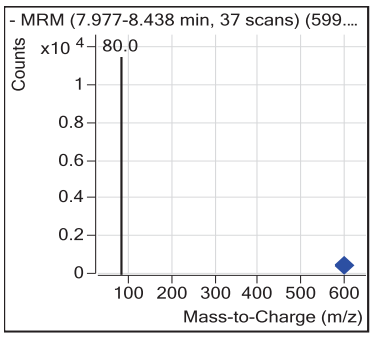




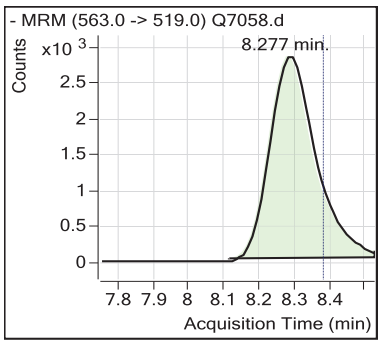
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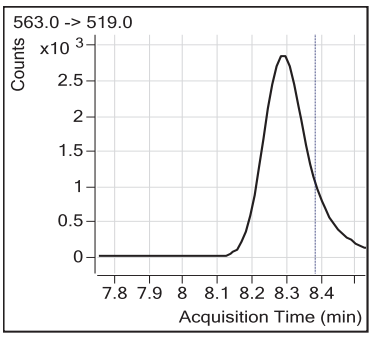


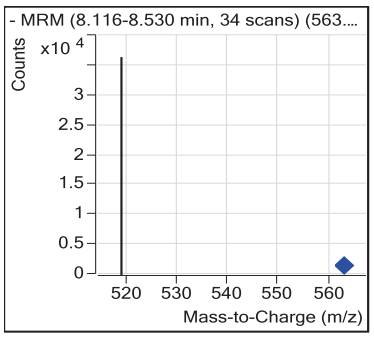




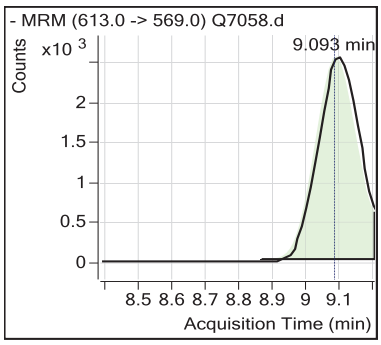
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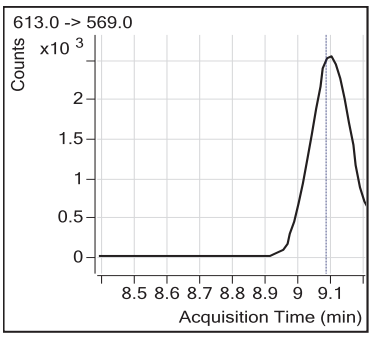


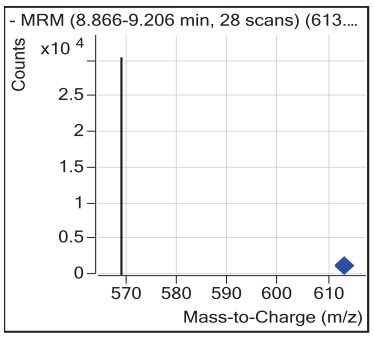




PFDoDA

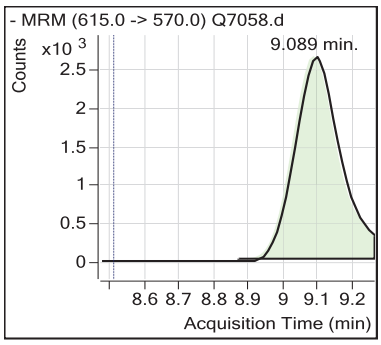


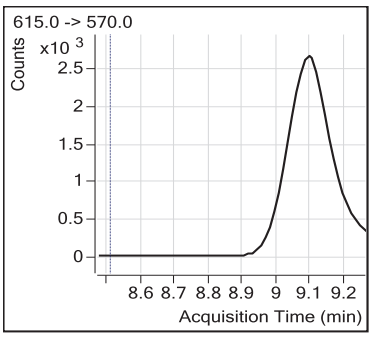


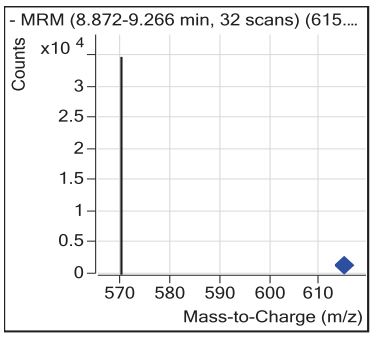


Perfluorinated Compounds by LC/MS/MS.

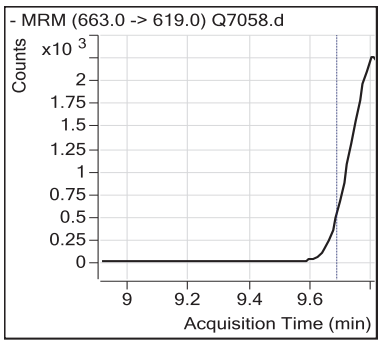
13C2-PFDoDA

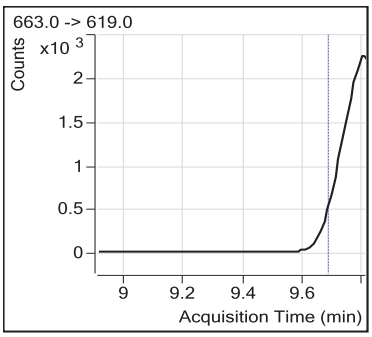


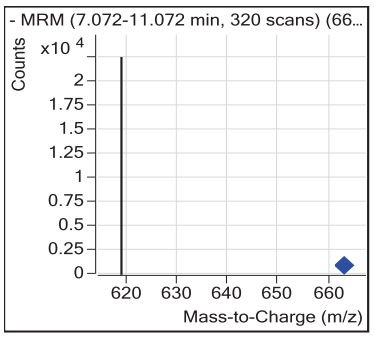




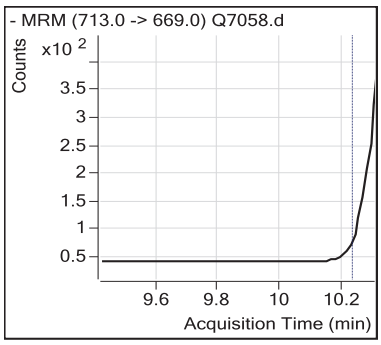
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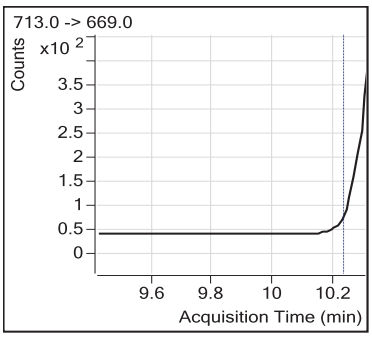


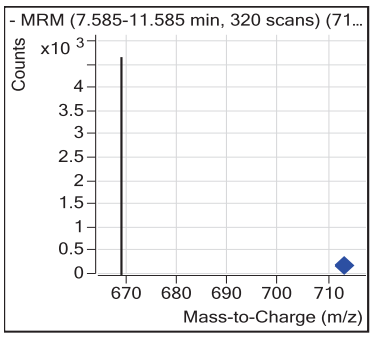




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

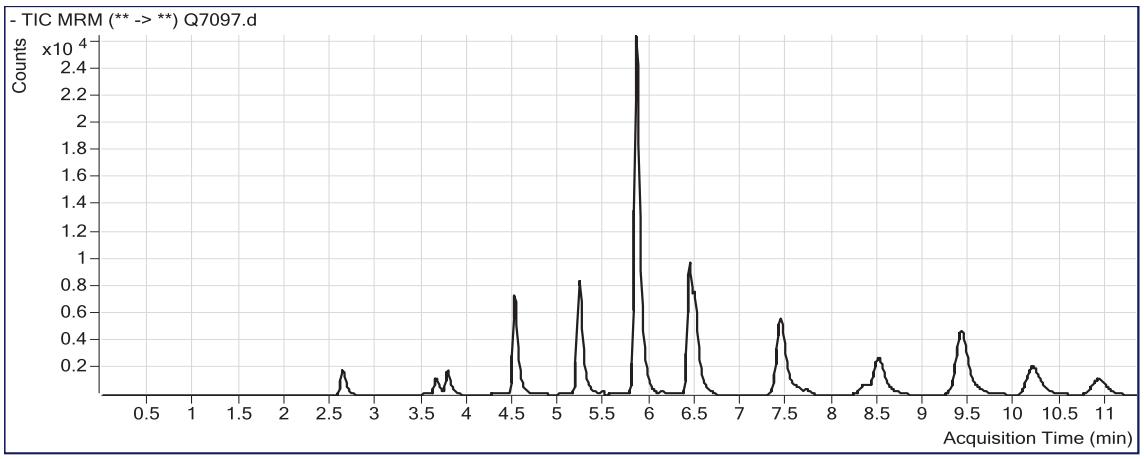
Data File	:	Q7097.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 11:16
Sample Name	:	CC234-20
Vial	:	Vial 3
Sample Info	:	OP53158,SQ240,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	47151	20.000	µg/L	-0.013
13C4-PFOS	6.419	503.0 -> 80.0	18022	20.000	µg/L	-0.013
13C2-PFDoDA	9.397	615.0 -> 570.0	23814	20.000	µg/L	0.000
System Monitoring Compounds						
13C2-PFHxA	4.504	315.0 -> 270.0	13943	19.96	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 99.79%			
13C2-PFDA	7.420	515.0 -> 470.0	22164	15.35	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 76.73%			
Target Compounds						**Qvalue**
PFBA	2.627	213.0 -> 169.0	8627	15.759	µg/L	100
PFPeA	3.661	263.0 -> 219.0	4852	18.095	µg/L	100
PFBS	3.778	299.0 -> 80.0	4725	16.564	µg/L	99
PFHxA	4.508	313.0 -> 269.0	15501	19.537	µg/L	99
PFHxS	5.205	399.0 -> 80.0	7896	17.664	µg/L	88
PFHpA	5.222	363.0 -> 319.0	15546	19.754	µg/L	98
PFHpS	5.818	449.0 -> 80.0	9947	18.628	µg/L	100
PFOA	5.848	413.0 -> 369.0	45637	18.612	µg/L	82
PFOS	6.422	499.0 -> 80.0	17357	18.844	µg/L	87
PFNA	6.491	463.0 -> 419.0	23894	21.830	µg/L	100
PFDA	7.414	513.0 -> 469.0	21638	16.061	µg/L	100
PFDS	8.333	599.0 -> 80.0	6333	27.335	µg/L	100
PFUnDA	8.490	563.0 -> 519.0	23024	17.371	µg/L	100
PFDoDA	9.391	613.0 -> 569.0	21467	20.693	µg/L	100
PFTrDA	10.185	663.0 -> 619.0	22920	24.222	µg/L	100
PFTeDA	10.898	713.0 -> 669.0	13976	19.829	µg/L	100

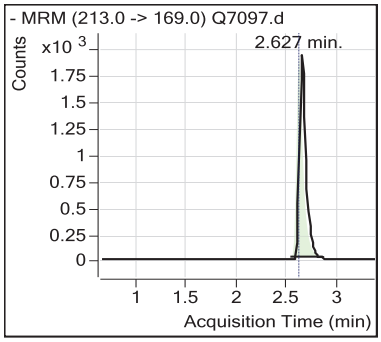
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

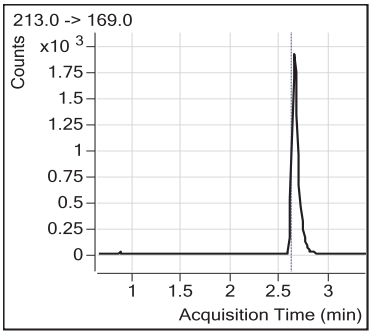
Perfluorinated Compounds by LC/MS/MS.

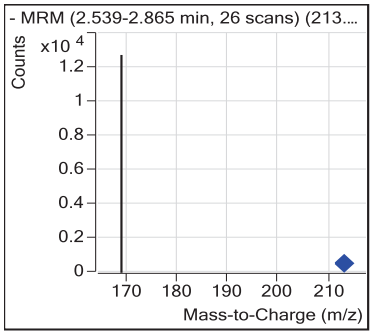
Data File	:	Q7097.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 11:16
Sample Name	:	CC234-20
Vial	:	Vial 3
Sample Info	:	OP53158,SQ240,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05



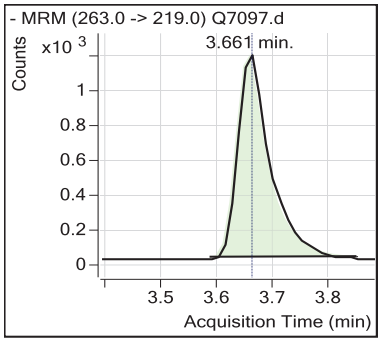
PFBA

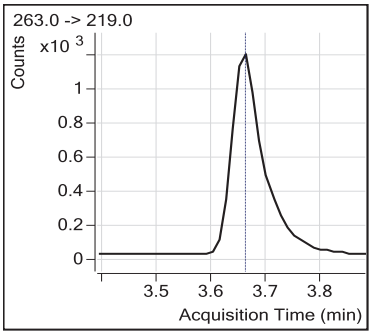


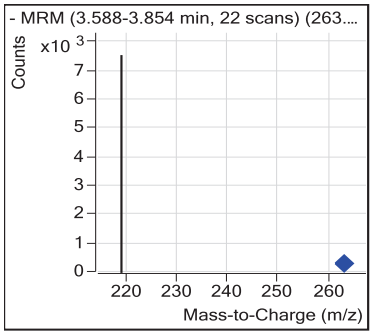




PFPeA

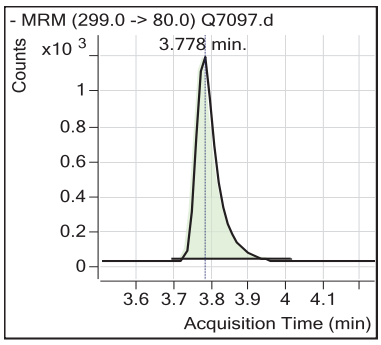


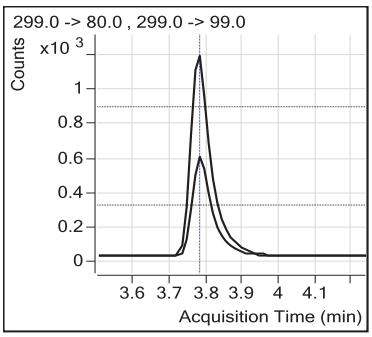


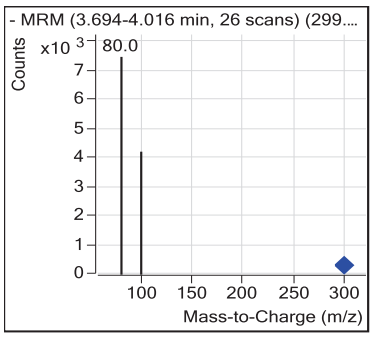


Perfluorinated Compounds by LC/MS/MS.

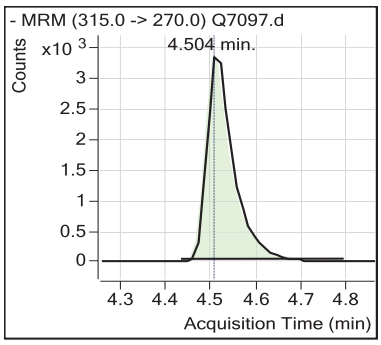
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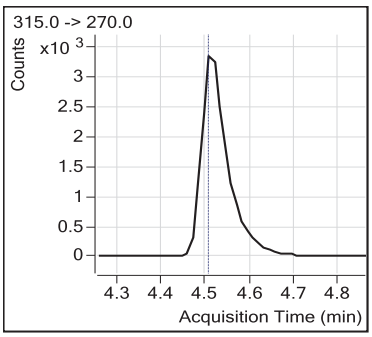


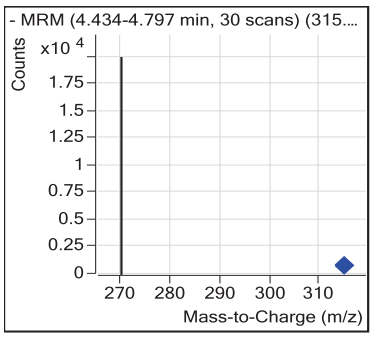




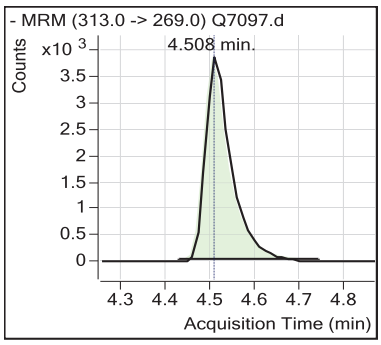
13C2-PFHxA

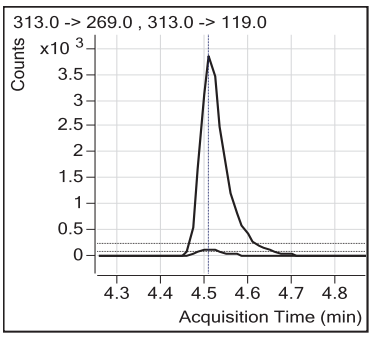


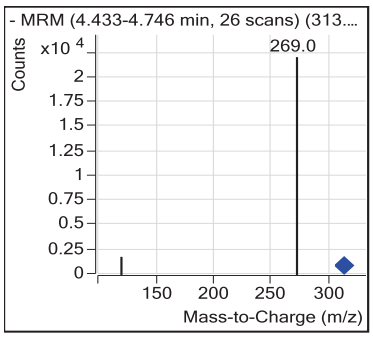




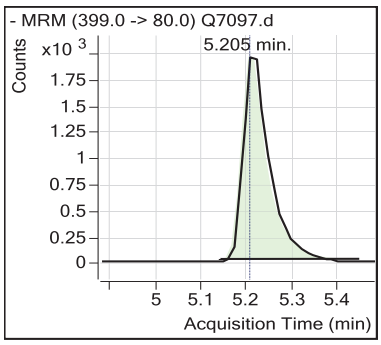
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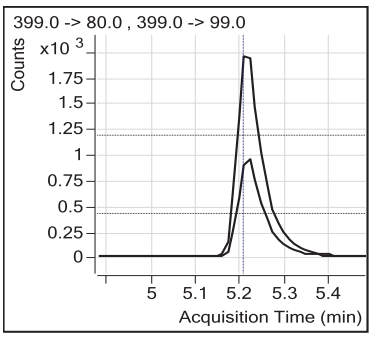


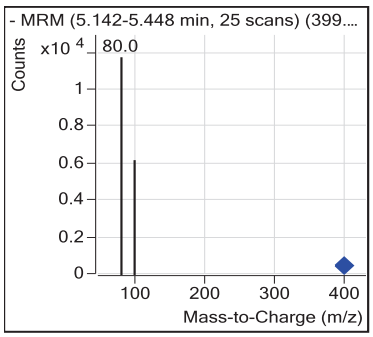




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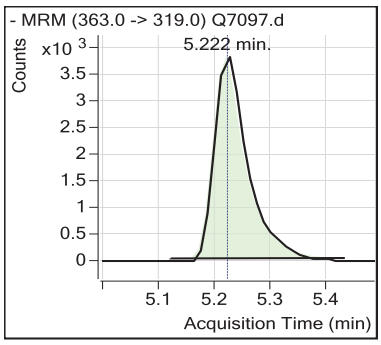


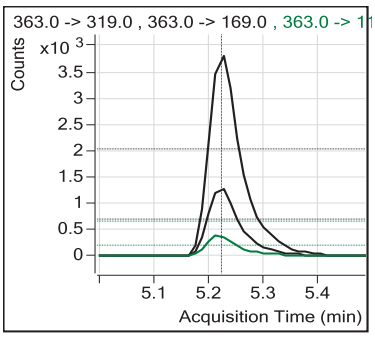


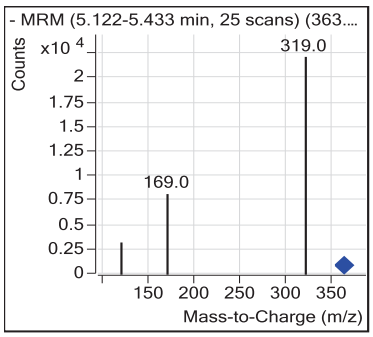


Perfluorinated Compounds by LC/MS/MS.

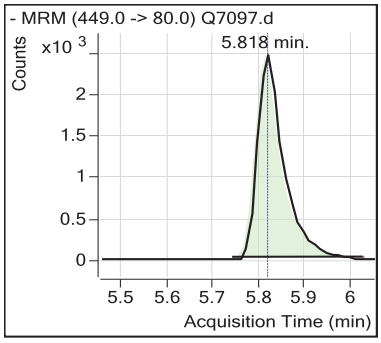
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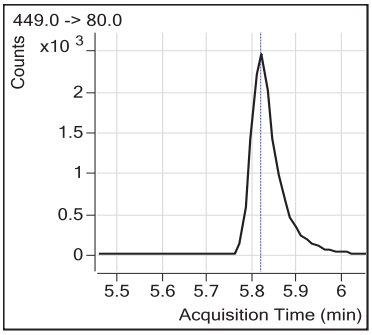


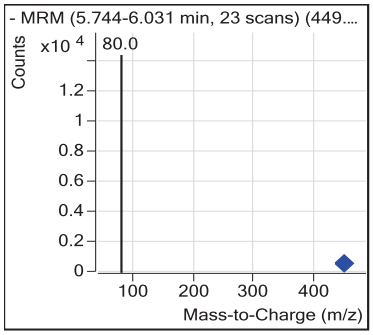




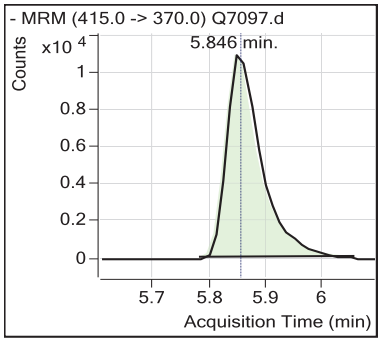
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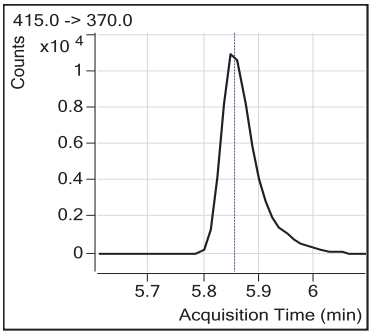


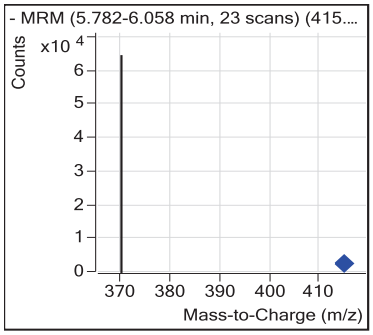




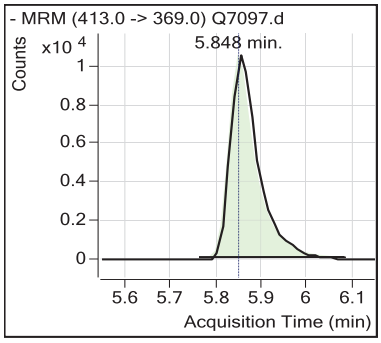
13C2-PFOA

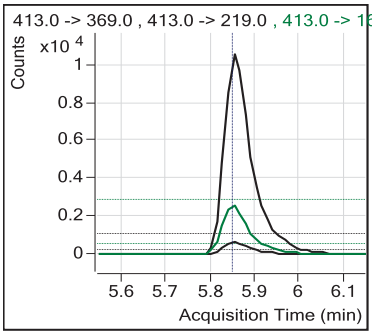


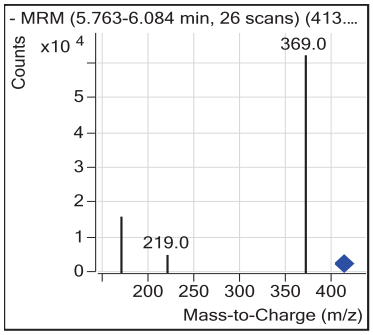




PFOA

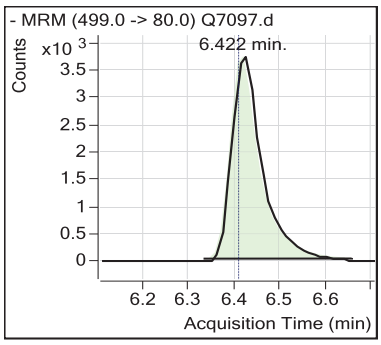


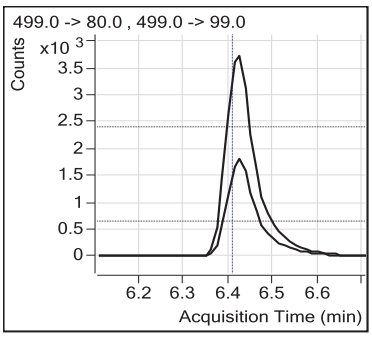


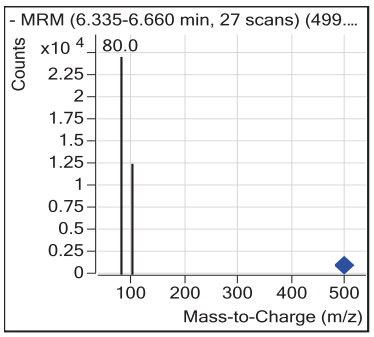


Perfluorinated Compounds by LC/MS/MS.

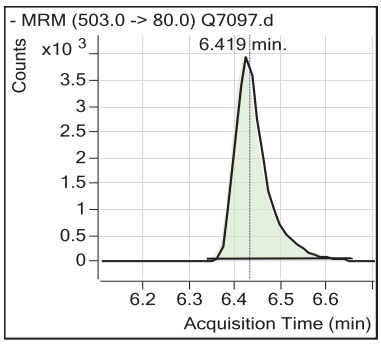
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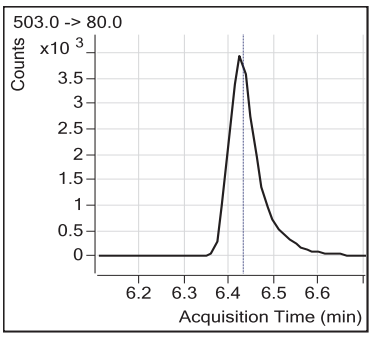


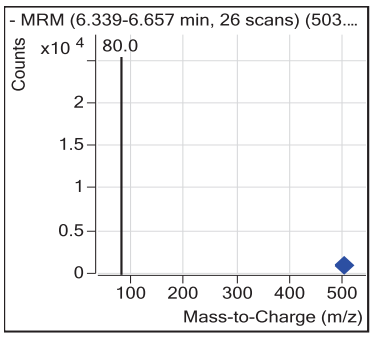




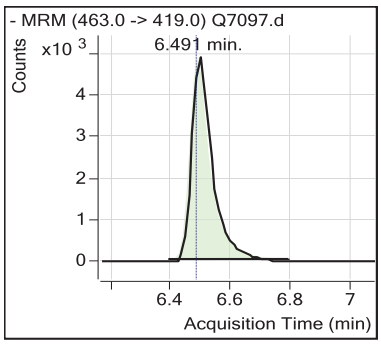
13C4-PFOS

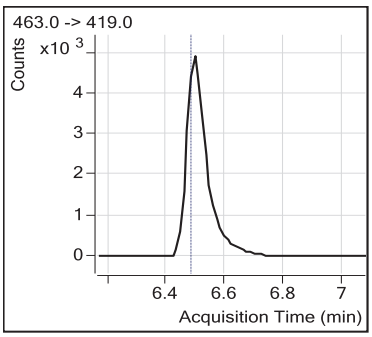


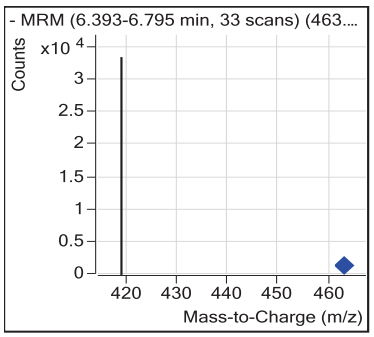




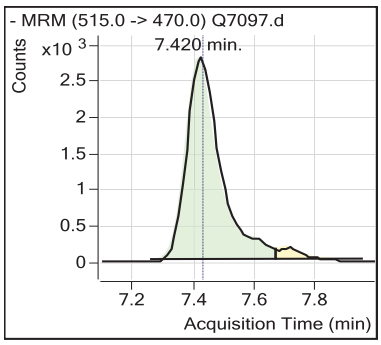
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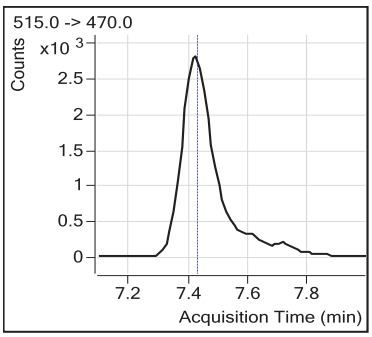


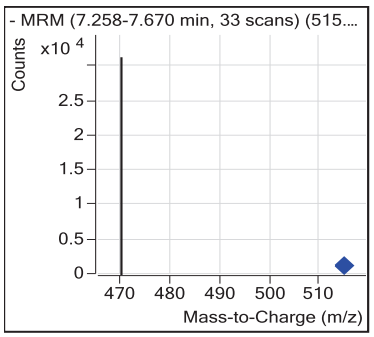




13C2-PFDA

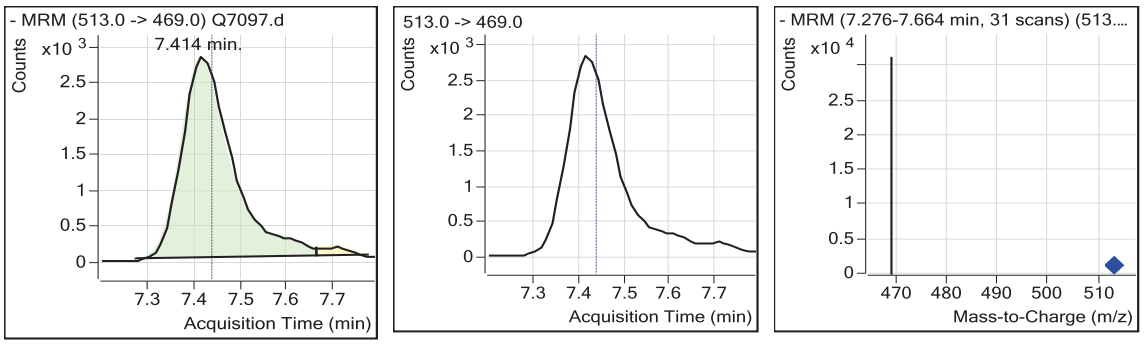




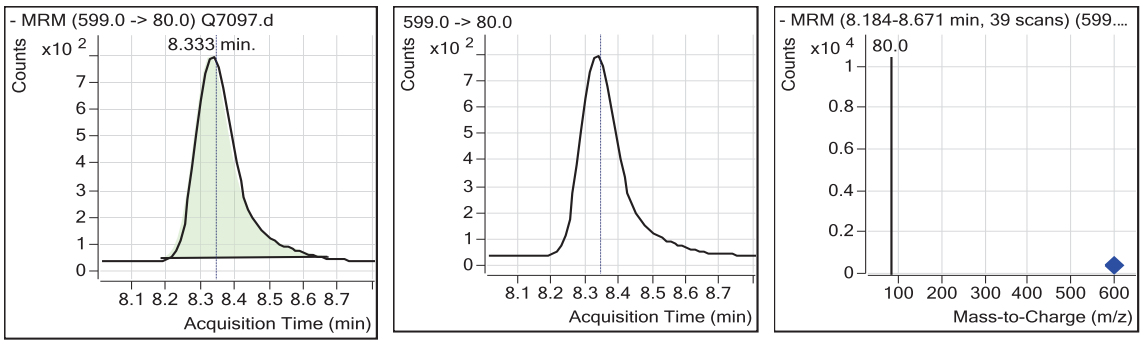


Perfluorinated Compounds by LC/MS/MS.

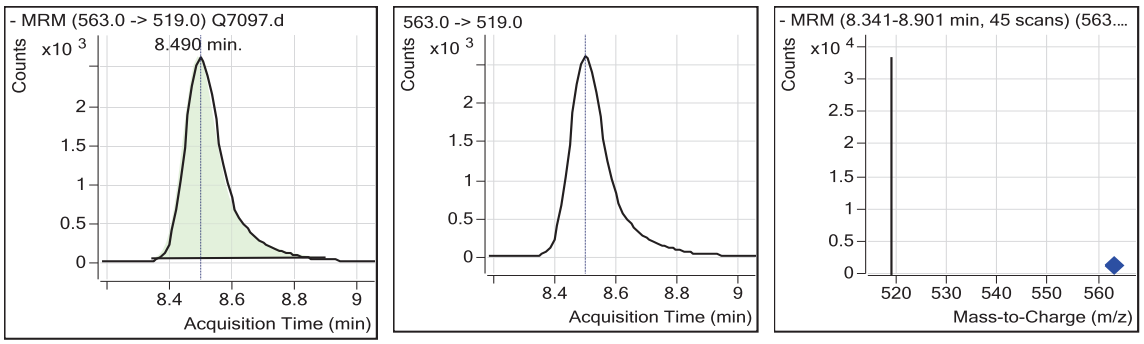
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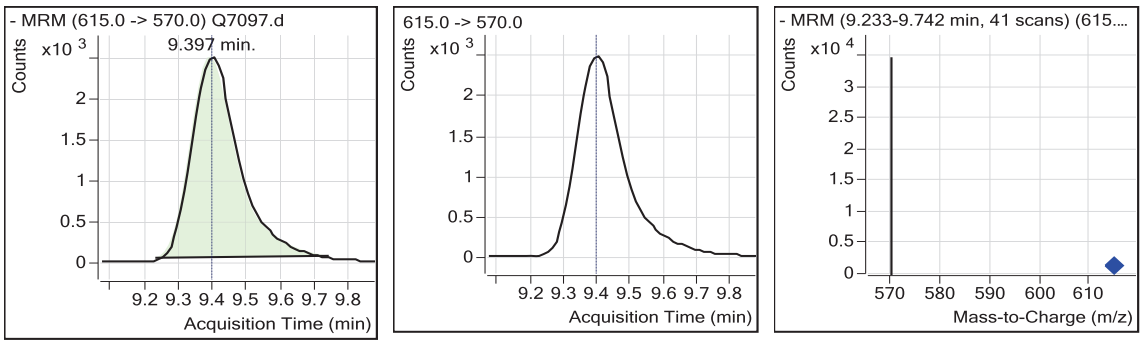
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PFUnDA

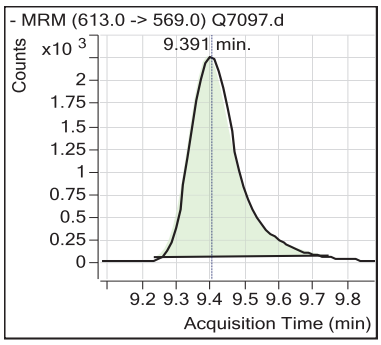


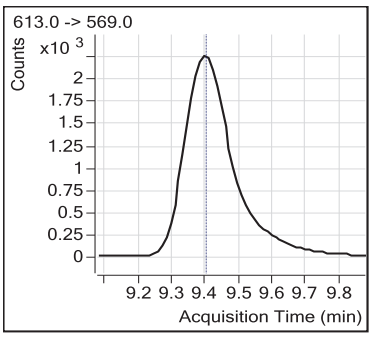
13C2-PFDoDA

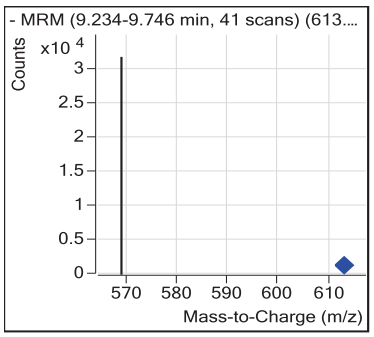


Perfluorinated Compounds by LC/MS/MS.

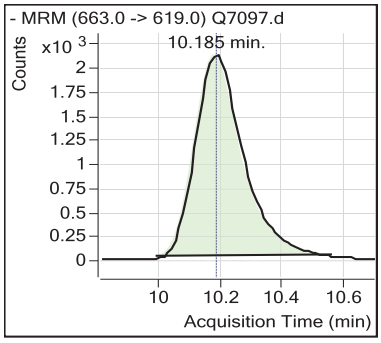
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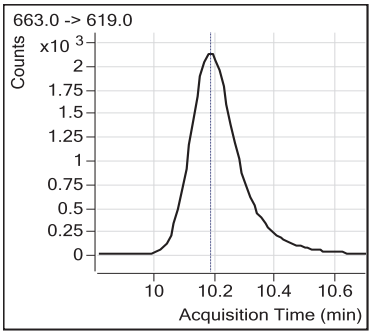


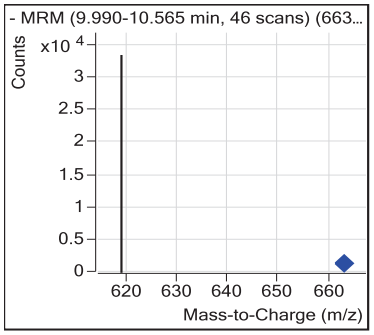




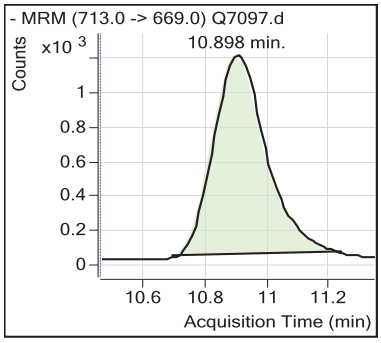
PFTrDA

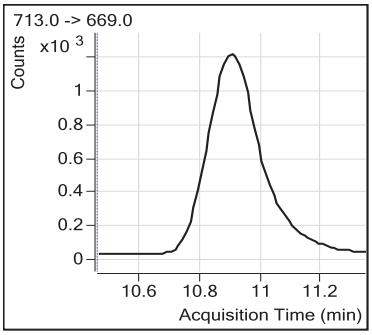


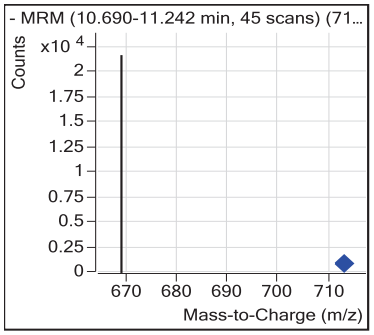




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

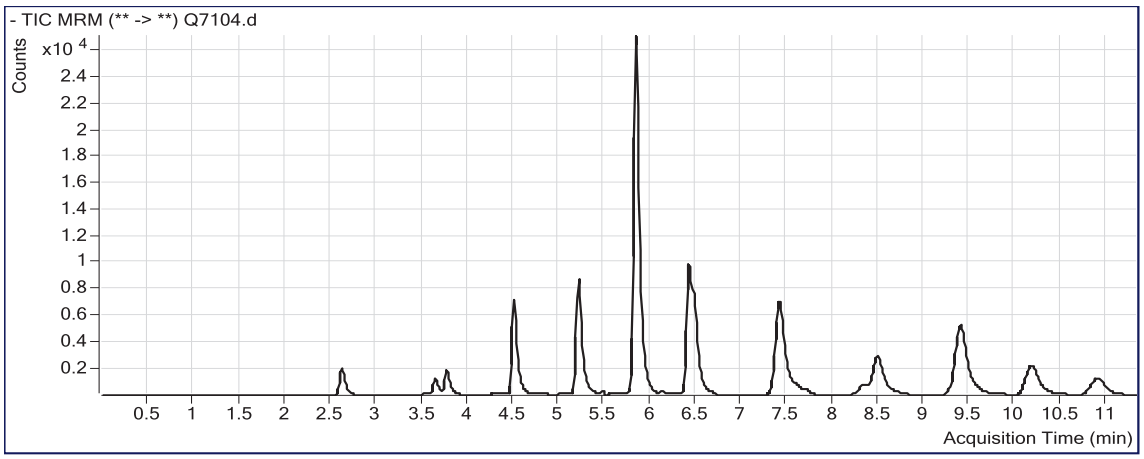
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Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-22 13:59
Sample Name	:	CC234-20
Vial	:	Vial 3
Sample Info	:	OP53121,SQ240,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq240.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	49352	20.000	µg/L	-0.013
13C4-PFOS	6.419	503.0 -> 80.0	18625	20.000	µg/L	-0.013
13C2-PFDoDA	9.384	615.0 -> 570.0	26288	20.000	µg/L	-0.013
System Monitoring Compounds						
13C2-PFHxA	4.504	315.0 -> 270.0	13941	19.06	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 95.32%			
13C2-PFDA	7.408	515.0 -> 470.0	28870	18.11	µg/L	-0.025
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 90.54%			
Target Compounds						**Qvalue**
PFBA	2.614	213.0 -> 169.0	9237	16.120	µg/L	100
PFPeA	3.649	263.0 -> 219.0	4976	17.728	µg/L	100
PFBS	3.765	299.0 -> 80.0	4965	16.842	µg/L	98
PFHxA	4.495	313.0 -> 269.0	15732	18.944	µg/L	100
PFHxS	5.205	399.0 -> 80.0	8120	17.578	µg/L	87
PFHpA	5.210	363.0 -> 319.0	15563	18.849	µg/L	99
PFHpS	5.806	449.0 -> 80.0	10254	18.580	µg/L	100
PFOA	5.848	413.0 -> 369.0	47877	18.657	µg/L	83
PFOS	6.410	499.0 -> 80.0	17876	18.776	µg/L	87
PFNA	6.478	463.0 -> 419.0	24847	21.684	µg/L	100
PFDA	7.401	513.0 -> 469.0	25881	17.403	µg/L	100
PFDS	8.321	599.0 -> 80.0	6327	24.740	µg/L	100
PFUnDA	8.477	563.0 -> 519.0	24943	17.034	µg/L	100
PFDoDA	9.391	613.0 -> 569.0	23556	20.569	µg/L	100
PFTrDA	10.160	663.0 -> 619.0	24187	23.134	µg/L	100
PFTeDA	10.886	713.0 -> 669.0	14979	19.252	µg/L	100

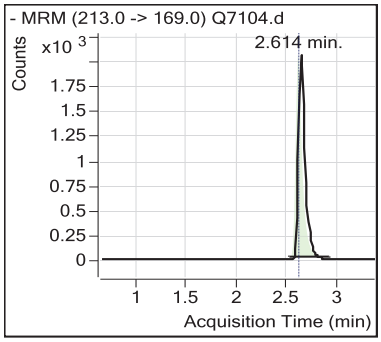
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

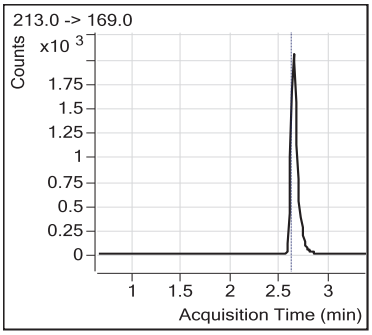
Perfluorinated Compounds by LC/MS/MS.

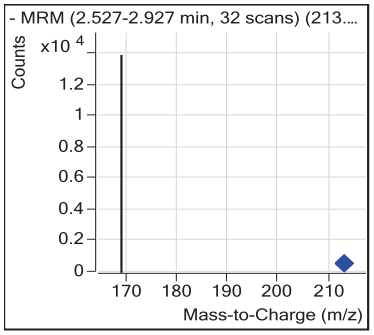
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Operator	:	mikee
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Acquisition date	:	2014-09-22 13:59
Sample Name	:	CC234-20
Vial	:	Vial 3
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Last Calib Update	:	2014-09-16 09:05



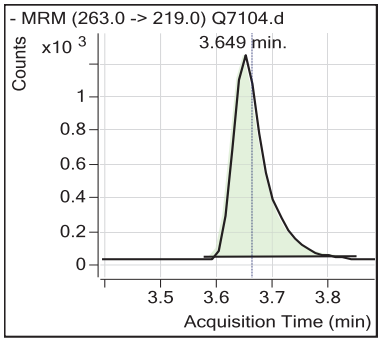
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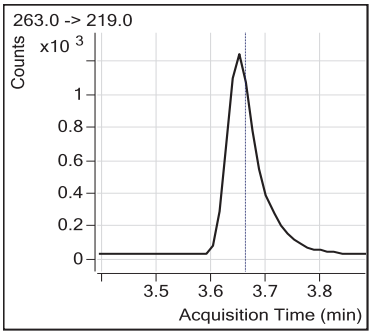


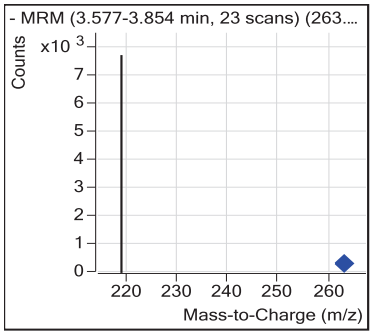




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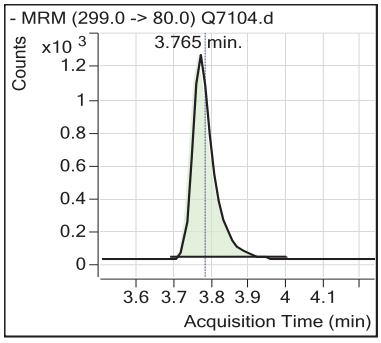


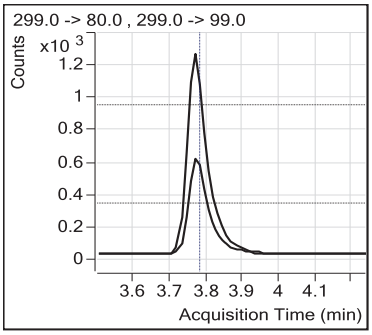


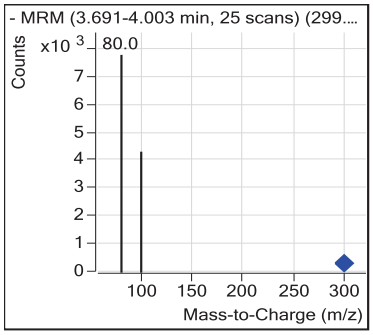


Perfluorinated Compounds by LC/MS/MS.

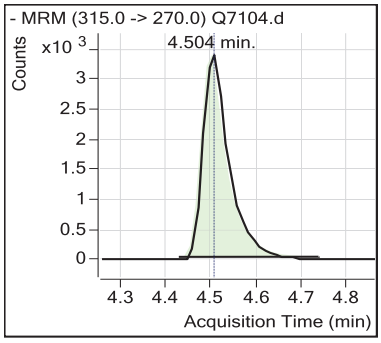
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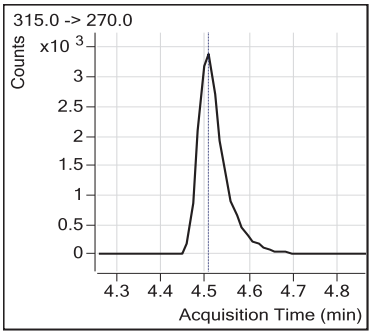


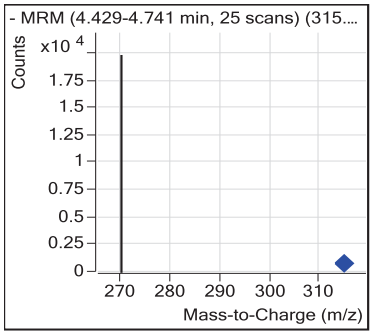




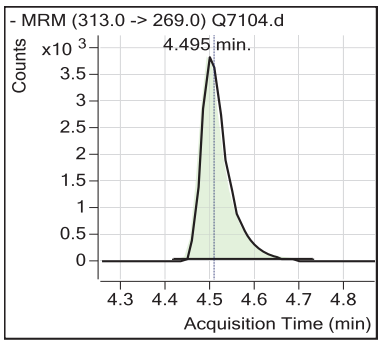
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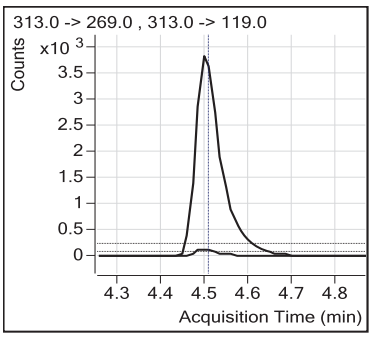


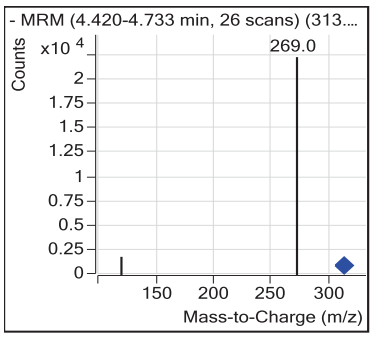




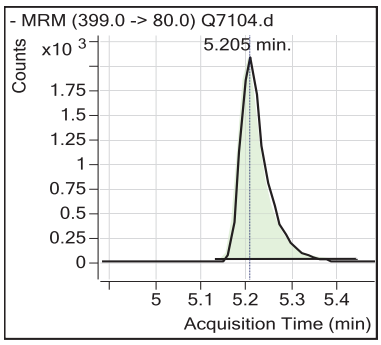
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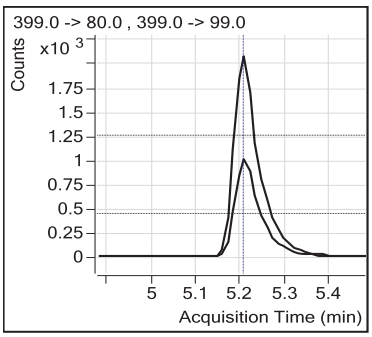


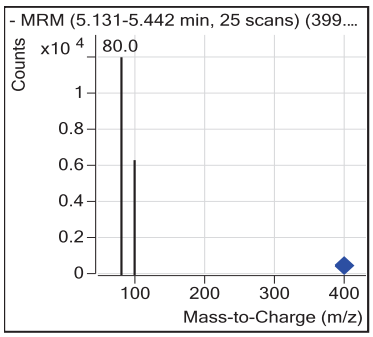




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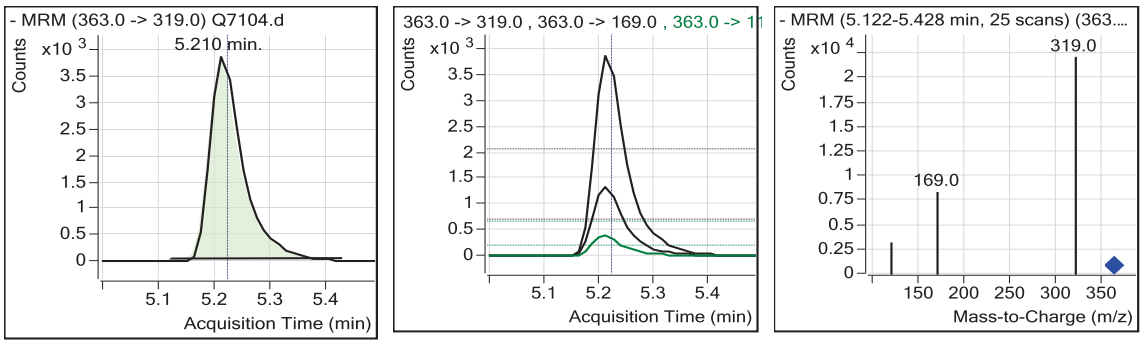




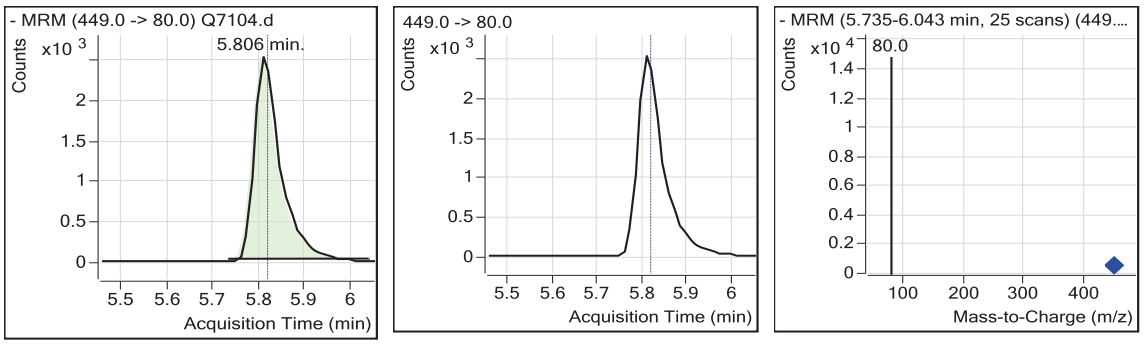


Perfluorinated Compounds by LC/MS/MS.

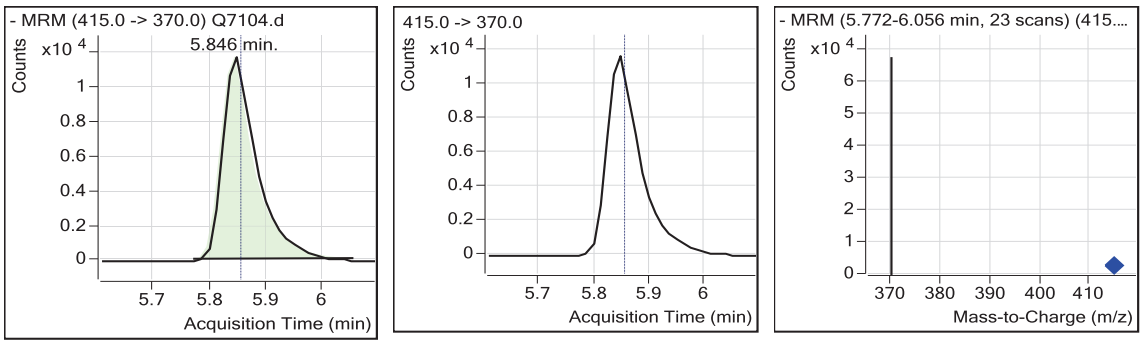
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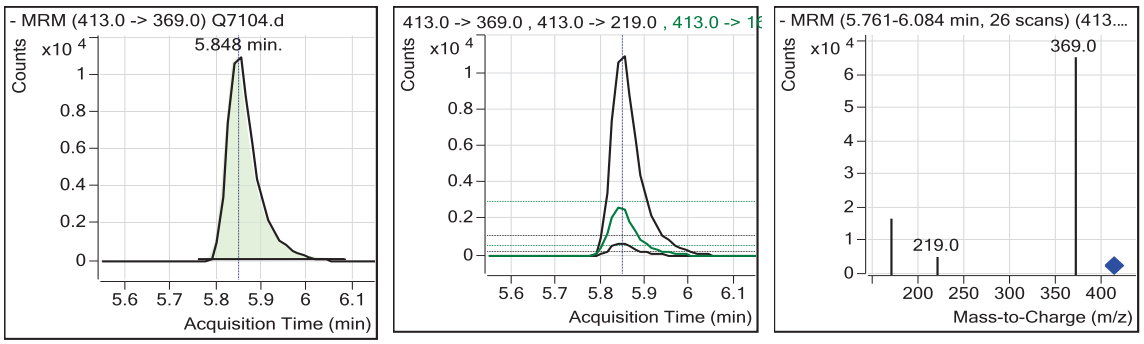
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13C2-PFOA



PFOA

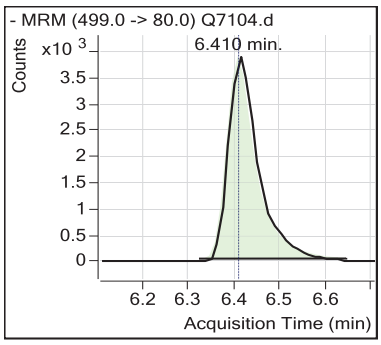


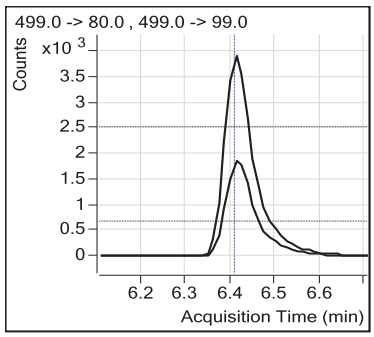
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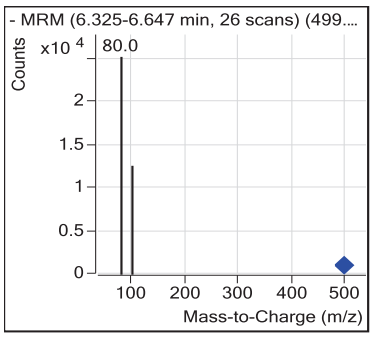
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Perfluorinated Compounds by LC/MS/MS.

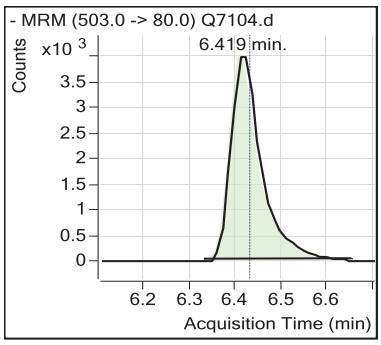
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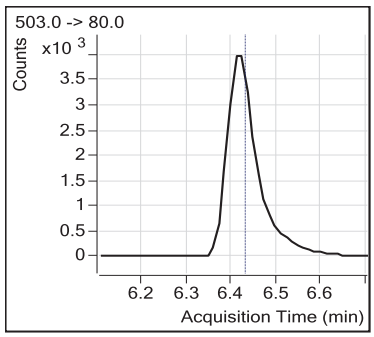


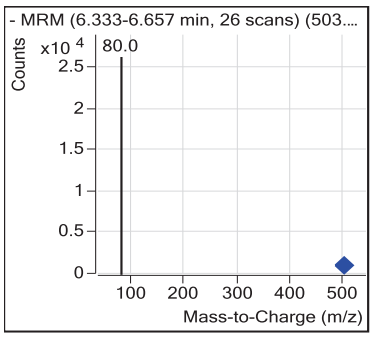




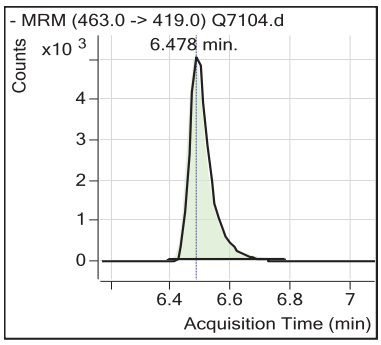
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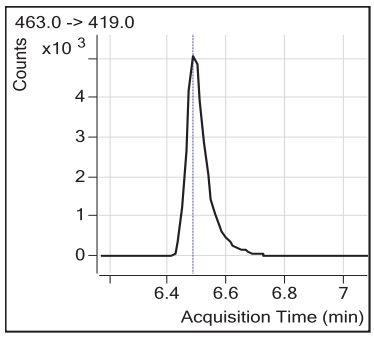


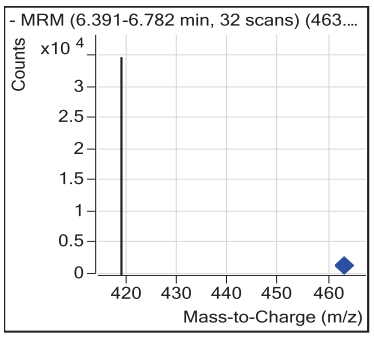




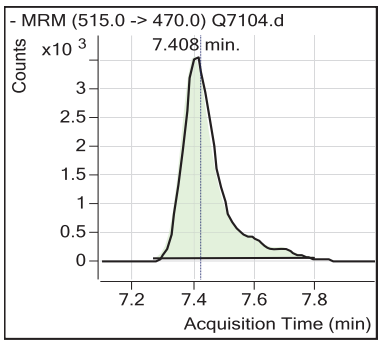
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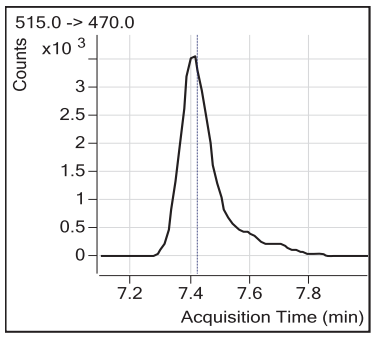


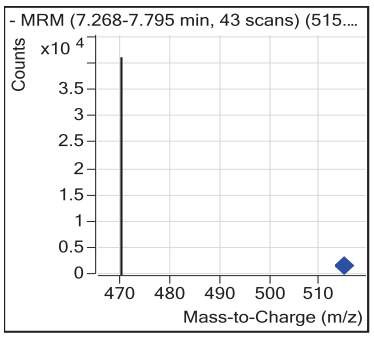




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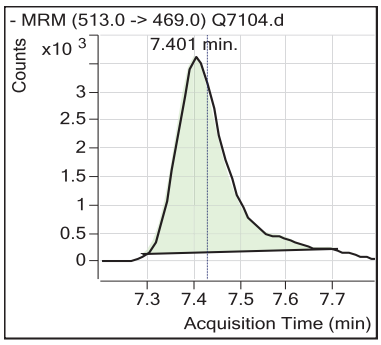


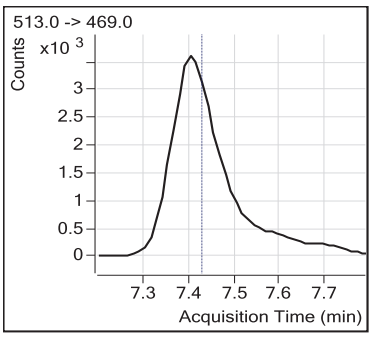


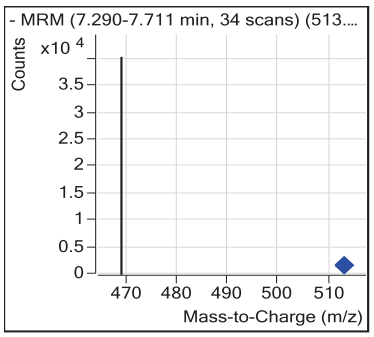


Perfluorinated Compounds by LC/MS/MS.

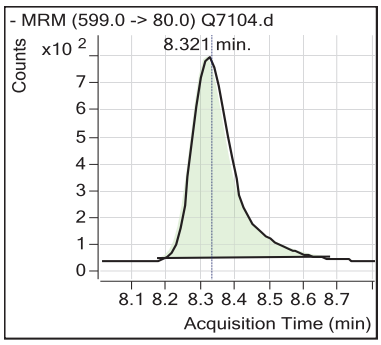
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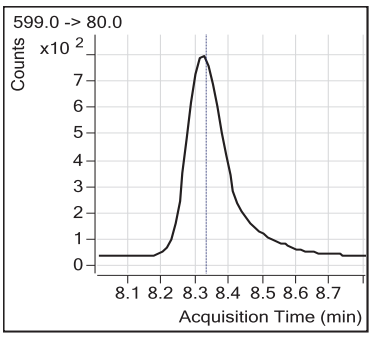


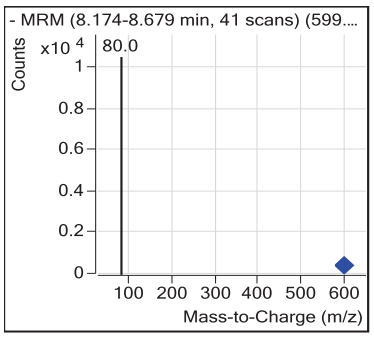




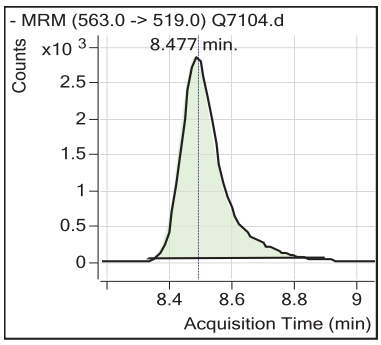
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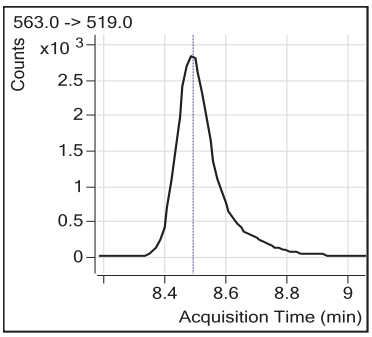


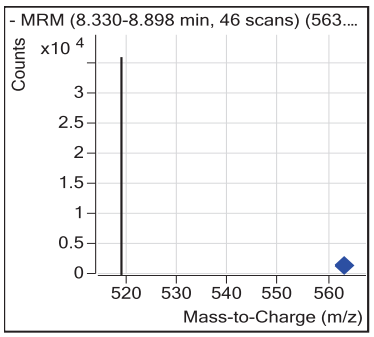




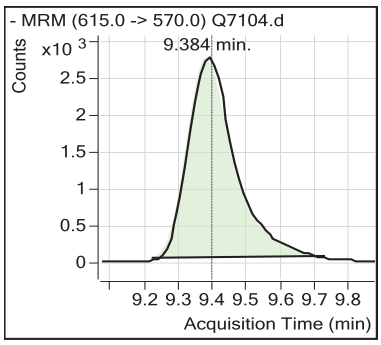
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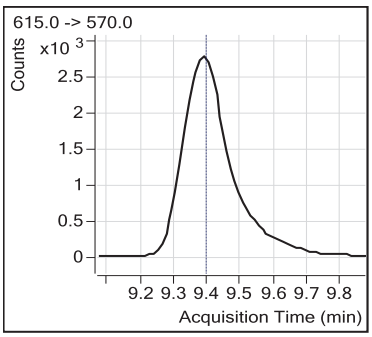


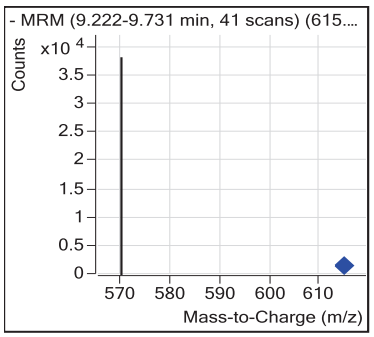




13C2-PFDoDA

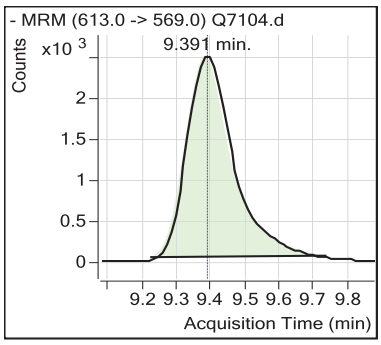


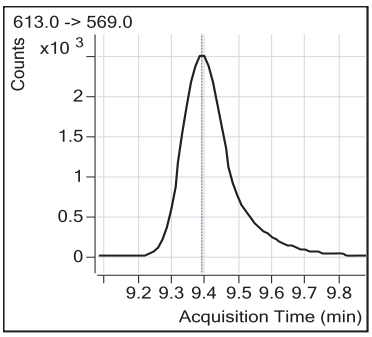


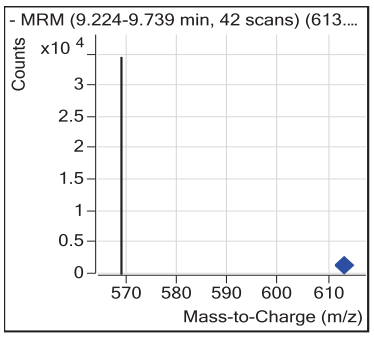


Perfluorinated Compounds by LC/MS/MS.

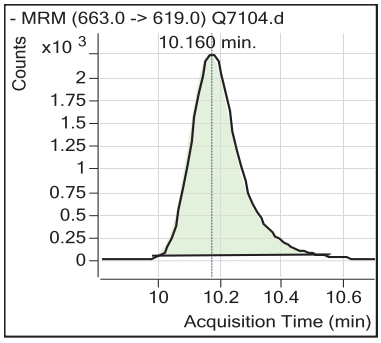
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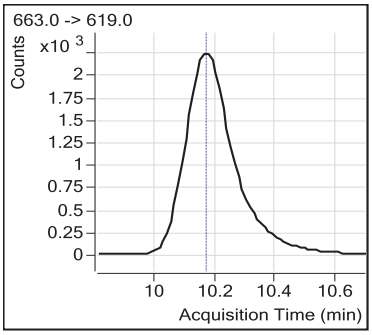


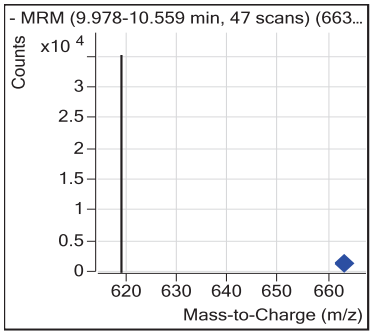




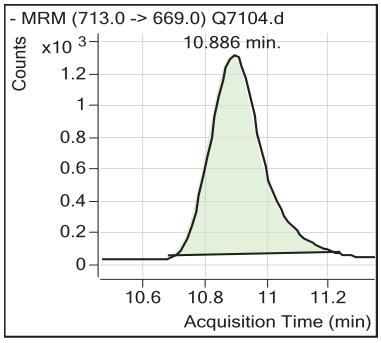
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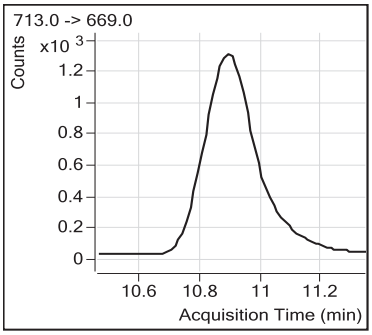


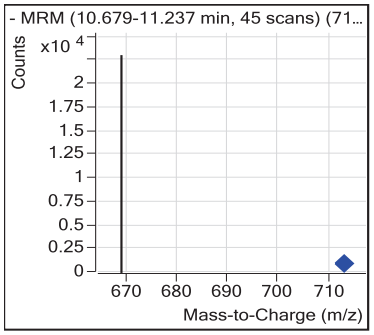




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

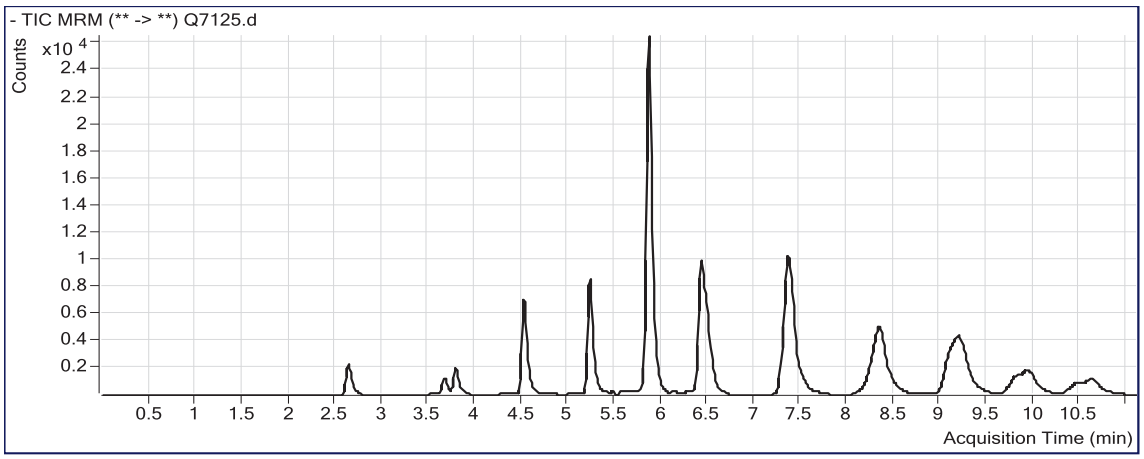
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Acquisition date	:	2014-09-23 11:39
Sample Name	:	cc234-20
Vial	:	Vial 1
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.858	415.0 -> 370.0	46590	20.000	µg/L	0.000
13C4-PFOS	6.419	503.0 -> 80.0	18288	20.000	µg/L	-0.013
13C2-PFDoDA	9.184	615.0 -> 570.0	32187	20.000	µg/L	-0.213
System Monitoring Compounds						
13C2-PFHxA	4.529	315.0 -> 270.0	13938	20.19	µg/L	0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 100.95%			
13C2-PFDA	7.357	515.0 -> 470.0	43431	22.25	µg/L	-0.075
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 111.25%			
Target Compounds						**Qvalue**
PFBA	2.639	213.0 -> 169.0	10491	19.393	µg/L	100
PFPeA	3.674	263.0 -> 219.0	5251	19.819	µg/L	100
PFBS	3.790	299.0 -> 80.0	5466	18.883	µg/L	96
PFHxA	4.520	313.0 -> 269.0	15584	19.878	µg/L	99
PFHxS	5.217	399.0 -> 80.0	8891	19.600	µg/L	86
PFHpA	5.235	363.0 -> 319.0	15660	20.160	µg/L	99
PFHpS	5.831	449.0 -> 80.0	11122	20.524	µg/L	100
PFOA	5.861	413.0 -> 369.0	48012	19.892	µg/L	81
PFOS	6.422	499.0 -> 80.0	19199	20.644	µg/L	89
PFNA	6.491	463.0 -> 419.0	23277	21.514	µg/L	100
PFDA	7.351	513.0 -> 469.0	39966	21.949	µg/L	100
PFDS	8.196	599.0 -> 80.0	7399	23.630	µg/L	100
PFUnDA	8.340	563.0 -> 519.0	51075	29.363	µg/L	100
PFDoDA	9.176	613.0 -> 569.0	29673	21.163	µg/L	100
PFTrDA	9.923	663.0 -> 619.0	32628	25.541	µg/L	100
PFTeDA	10.611	713.0 -> 669.0	23114	24.273	µg/L	100

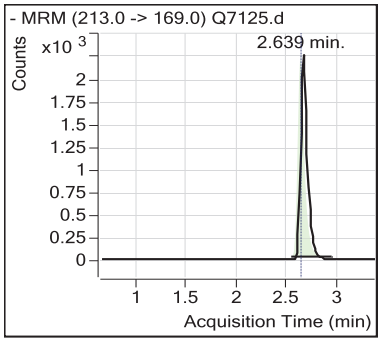
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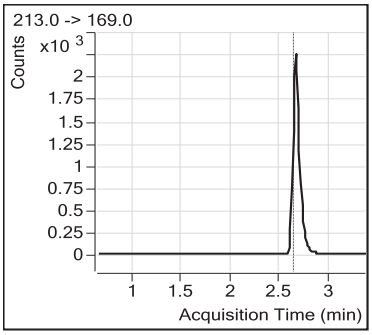
Perfluorinated Compounds by LC/MS/MS.

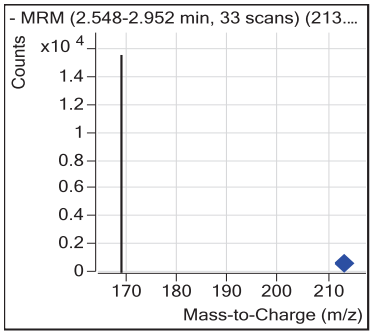
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Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 11:39
Sample Name	:	cc234-20
Vial	:	Vial 1
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



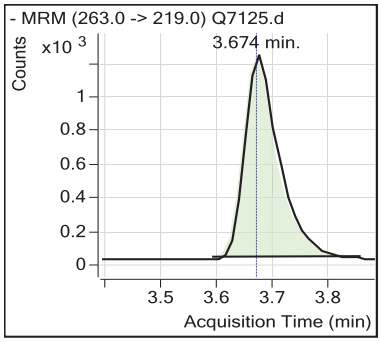
PFBA

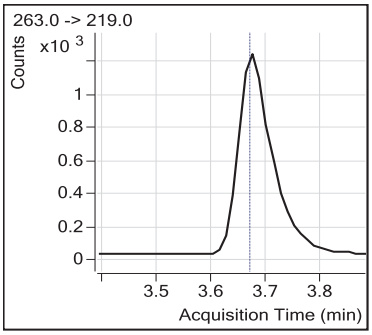


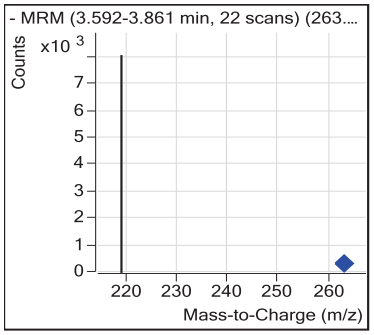




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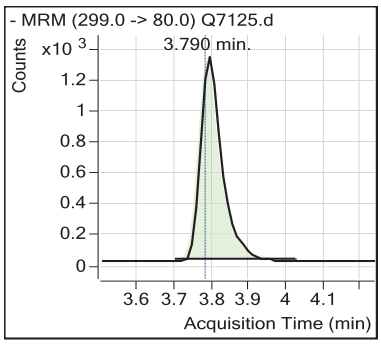


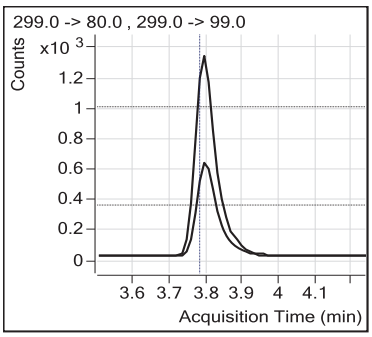


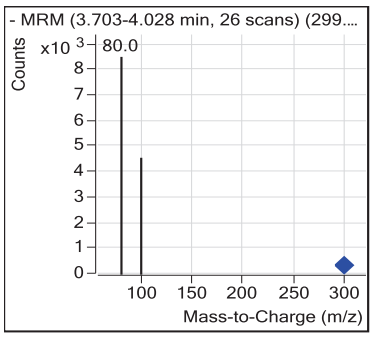


Perfluorinated Compounds by LC/MS/MS.

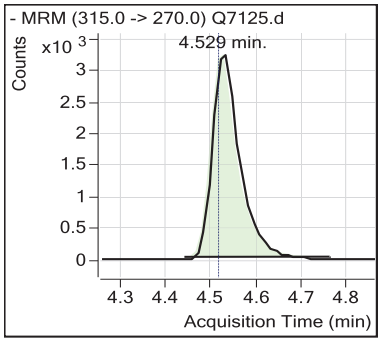
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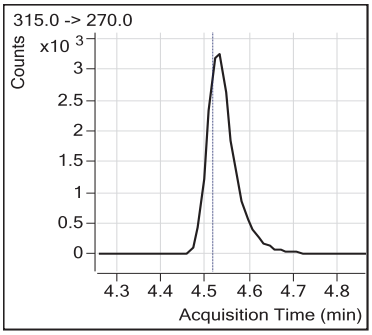


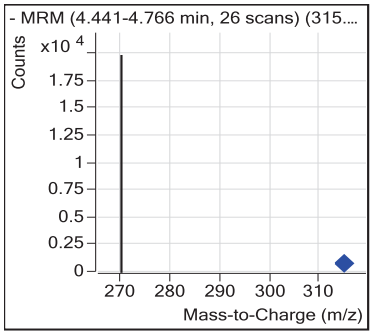




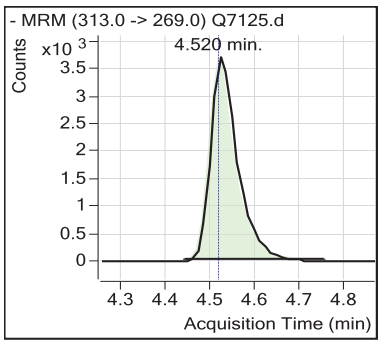
13C2-PFHxA

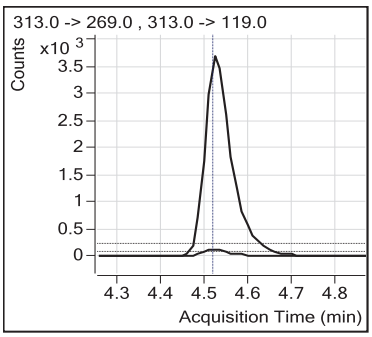


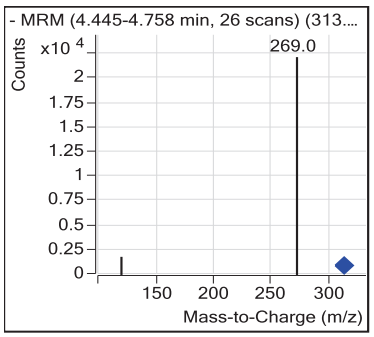




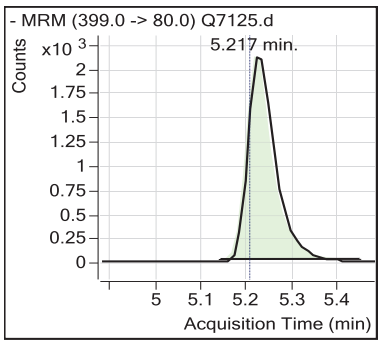
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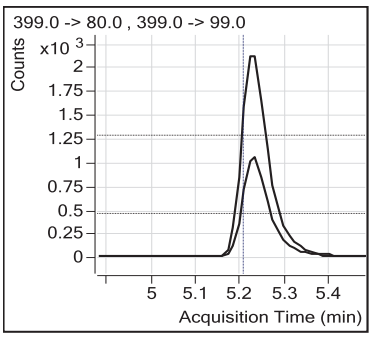


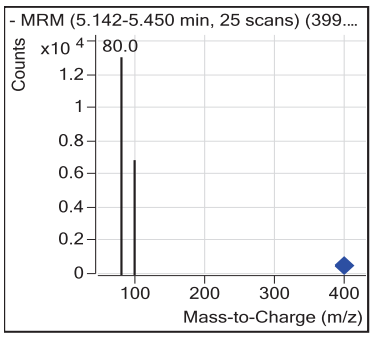




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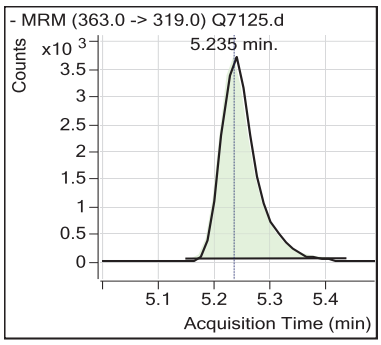


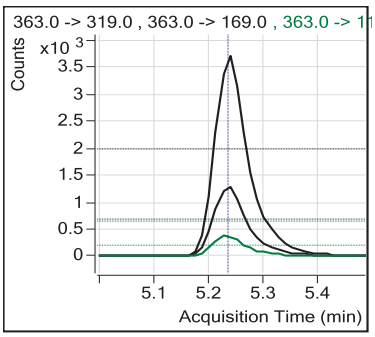


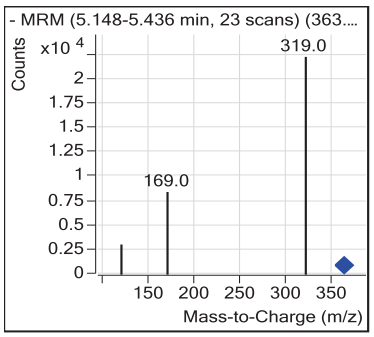


Perfluorinated Compounds by LC/MS/MS.

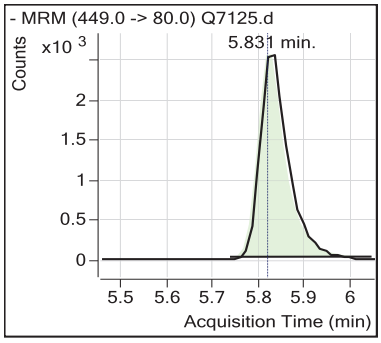
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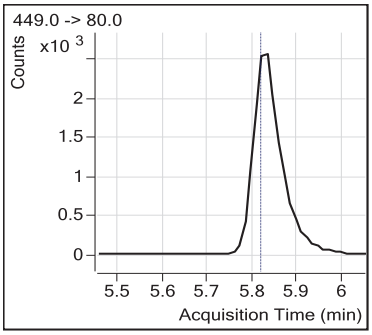


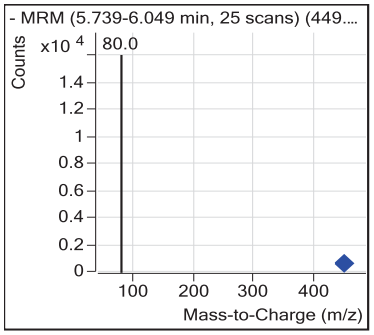




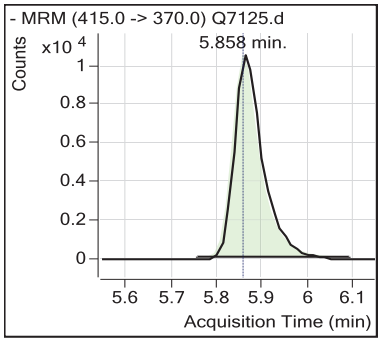
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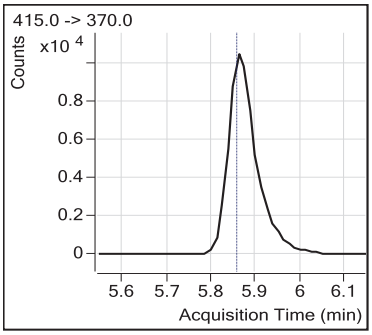


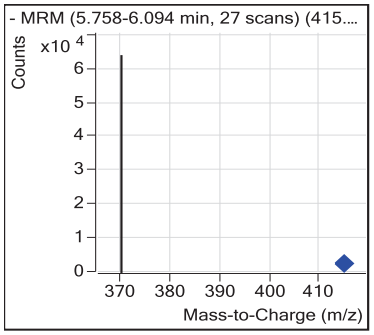




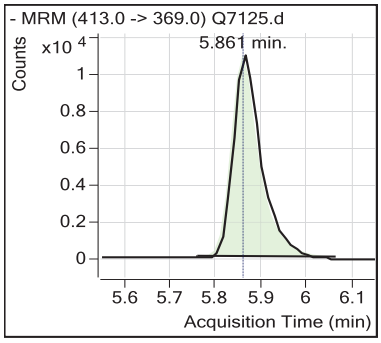
13C2-PFOA

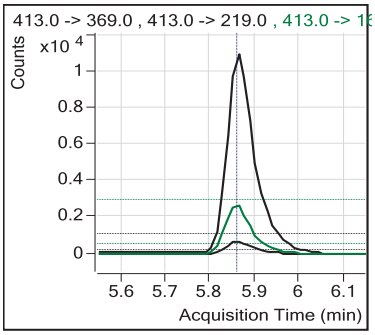


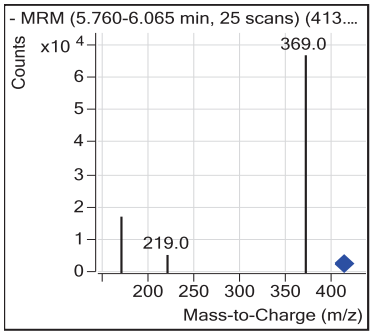




PFOA

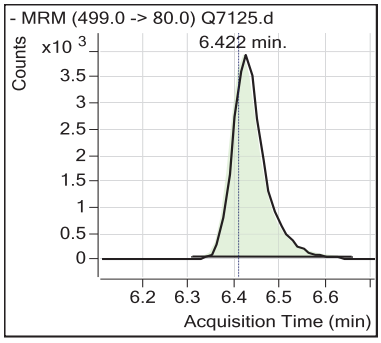


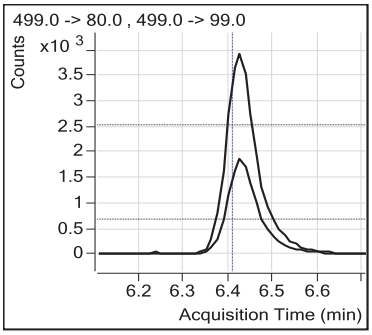


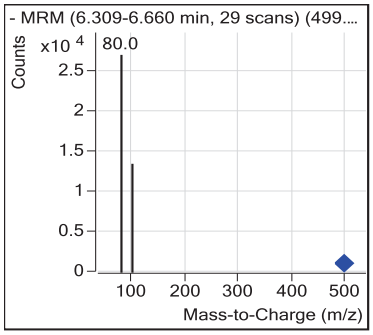


Perfluorinated Compounds by LC/MS/MS.

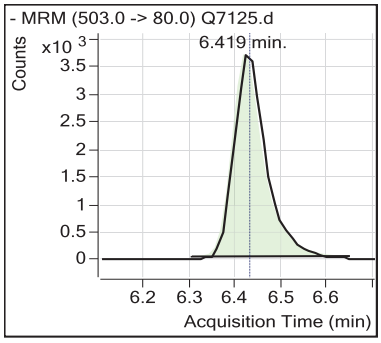
PFOS

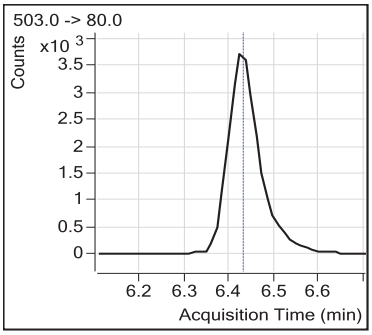


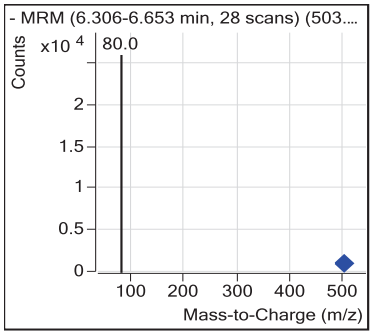




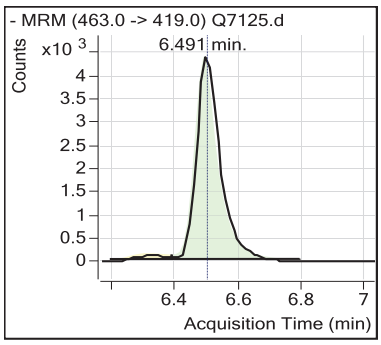
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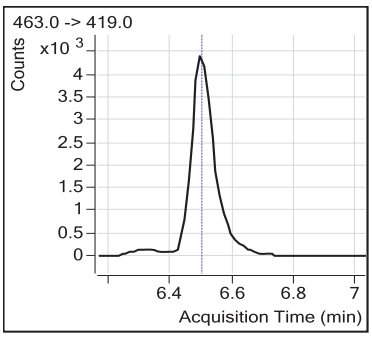


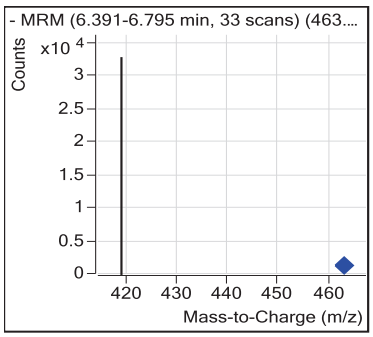




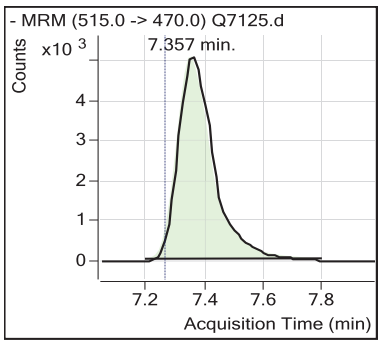
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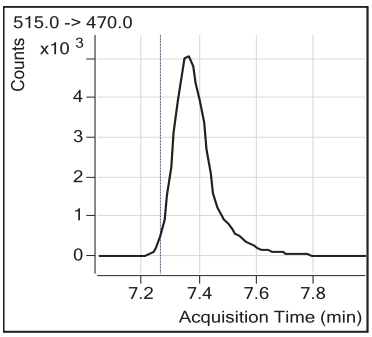


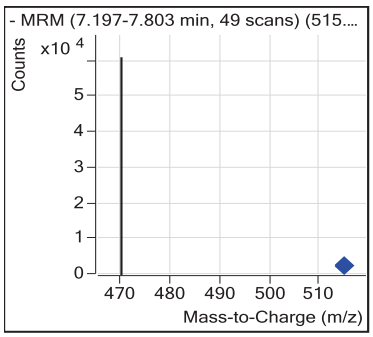




13C2-PFDA

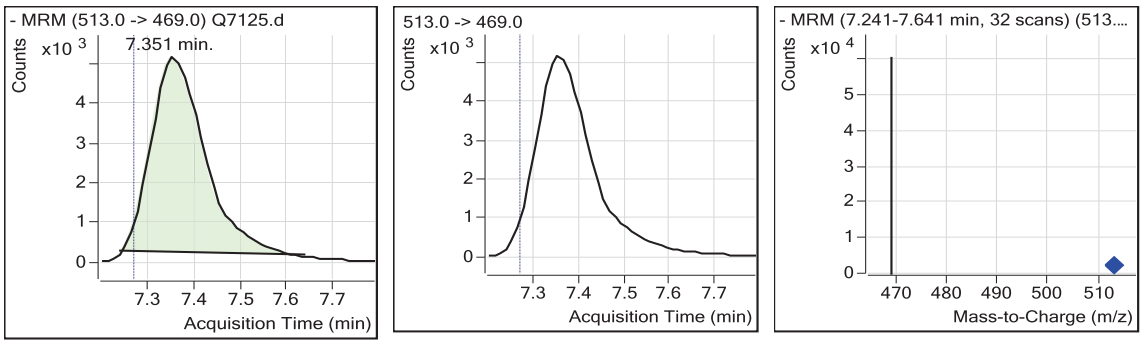




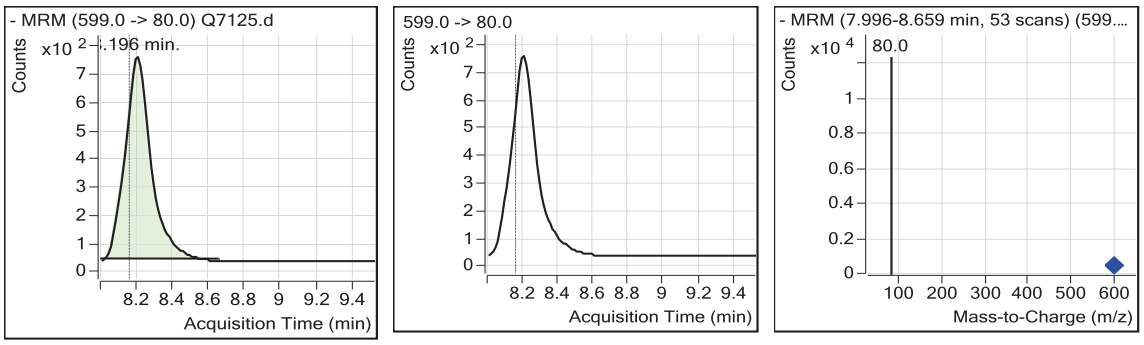


Perfluorinated Compounds by LC/MS/MS.

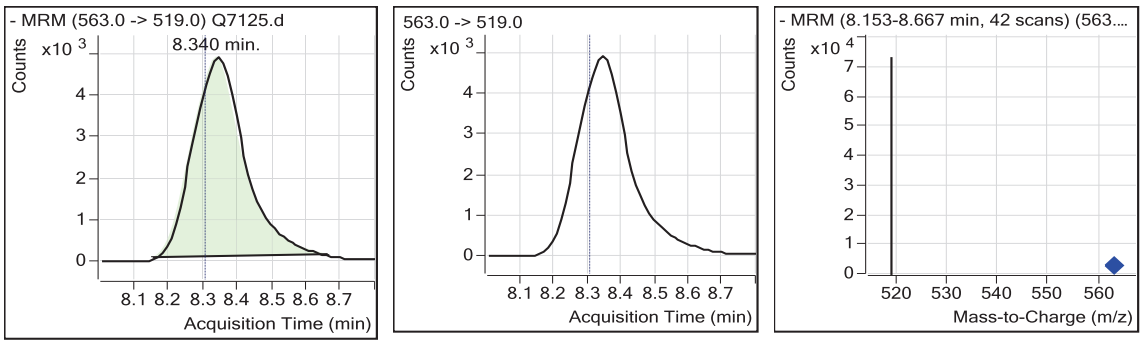
PFDA



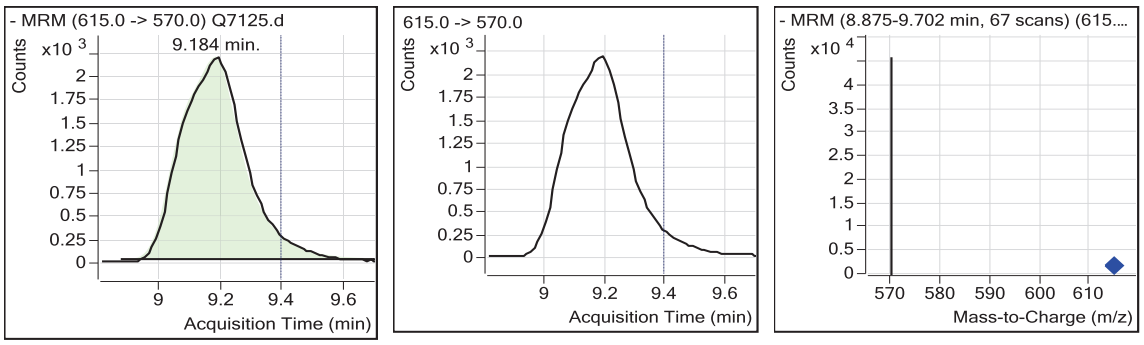
PFDS



PFUnDA

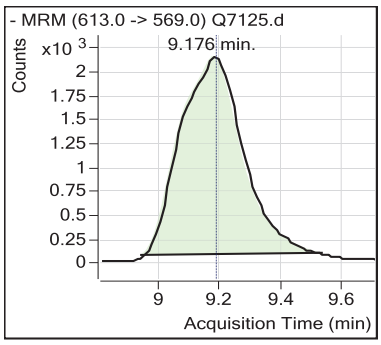


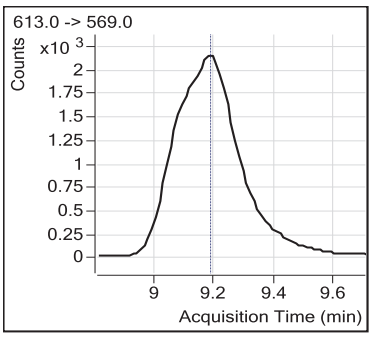
13C2-PFDoDA

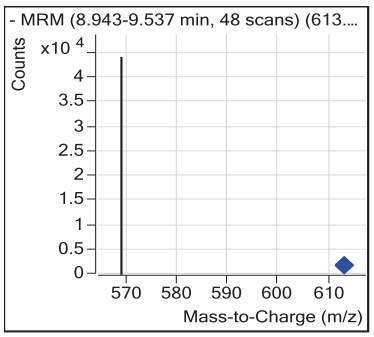


Perfluorinated Compounds by LC/MS/MS.

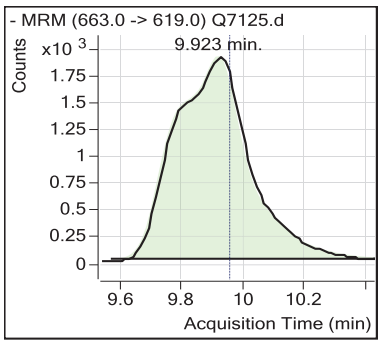
PFDoDA

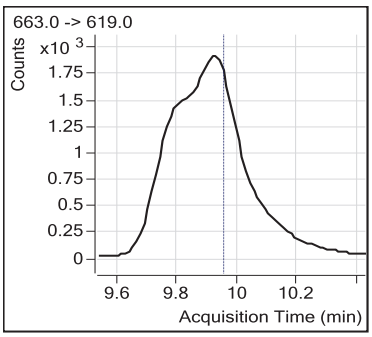


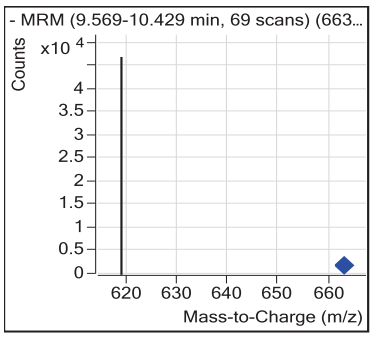




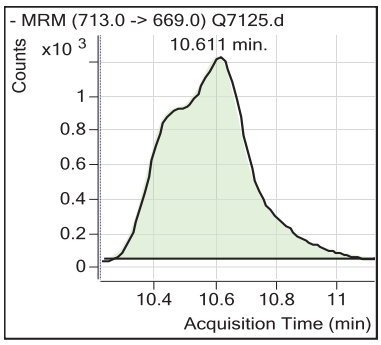
PFTrDA

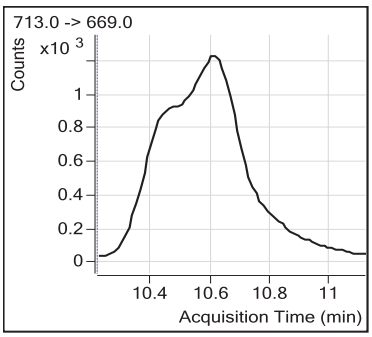


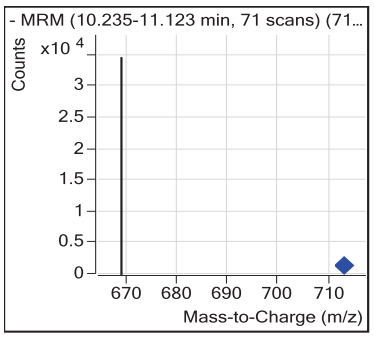




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

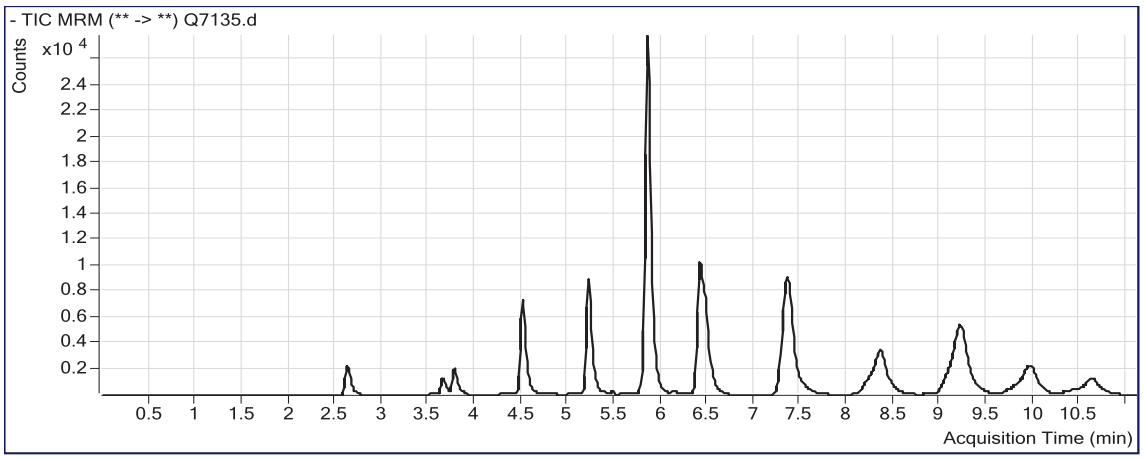
Data File	:	Q7135.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 15:01
Sample Name	:	CC234-20
Vial	:	Vial 2
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	49265	20.000	µg/L	-0.013
13C4-PFOS	6.407	503.0 -> 80.0	18466	20.000	µg/L	-0.025
13C2-PFDoDA	9.197	615.0 -> 570.0	31638	20.000	µg/L	-0.200
System Monitoring Compounds						
13C2-PFHxA	4.504	315.0 -> 270.0	14440	19.78	µg/L	-0.013
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 98.91%			
13C2-PFDA	7.345	515.0 -> 470.0	39635	20.66	µg/L	-0.088
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 103.28%			
Target Compounds						**Qvalue**
PFBA	2.627	213.0 -> 169.0	10530	18.409	µg/L	100
PFPeA	3.661	263.0 -> 219.0	5337	19.050	µg/L	100
PFBS	3.778	299.0 -> 80.0	5529	18.918	µg/L	98
PFHxA	4.508	313.0 -> 269.0	16160	19.493	µg/L	99
PFHxS	5.205	399.0 -> 80.0	9161	20.003	µg/L	87
PFHpA	5.222	363.0 -> 319.0	17061	20.806	µg/L	99
PFHpS	5.818	449.0 -> 80.0	11192	20.455	µg/L	100
PFOA	5.848	413.0 -> 369.0	51610	20.242	µg/L	82
PFOS	6.410	499.0 -> 80.0	19388	20.647	µg/L	88
PFNA	6.478	463.0 -> 419.0	25701	22.490	µg/L	100
PFDA	7.339	513.0 -> 469.0	34737	19.408	µg/L	100
PFDS	8.196	599.0 -> 80.0	7666	24.908	µg/L	100
PFUnDA	8.352	563.0 -> 519.0	33064	18.844	µg/L	100
PFDoDA	9.201	613.0 -> 569.0	30964	22.466	µg/L	100
PFTrDA	9.935	663.0 -> 619.0	28969	23.020	µg/L	100
PFTeDA	10.611	713.0 -> 669.0	16090	17.180	µg/L	100

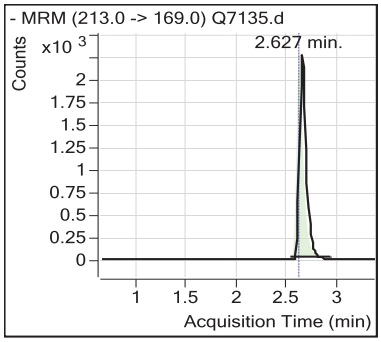
(#) = Qualifier Out of Range; (m) = Manual Integration; (+) = Area Summed

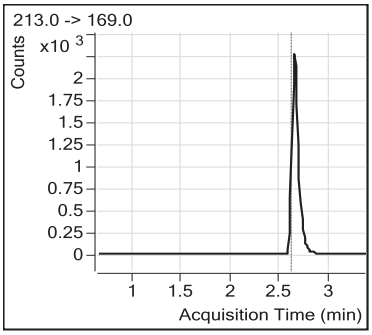
Perfluorinated Compounds by LC/MS/MS.

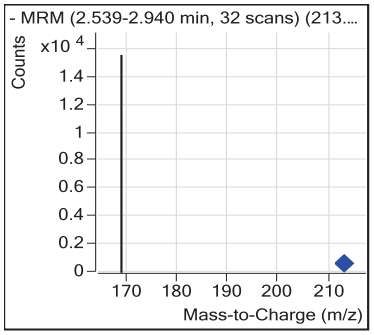
Data File	:	Q7135.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 15:01
Sample Name	:	CC234-20
Vial	:	Vial 2
Sample Info	:	OP53158,SQ241,125,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



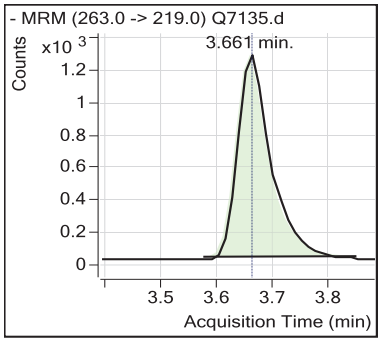
PFBA

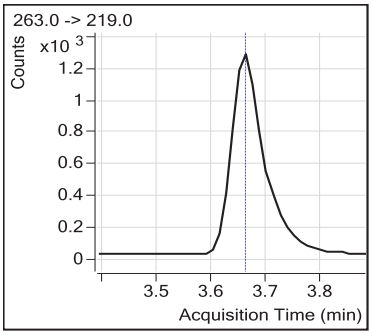


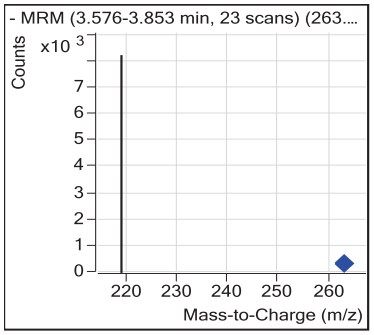




PFPeA

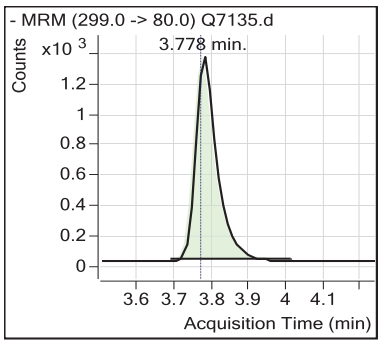


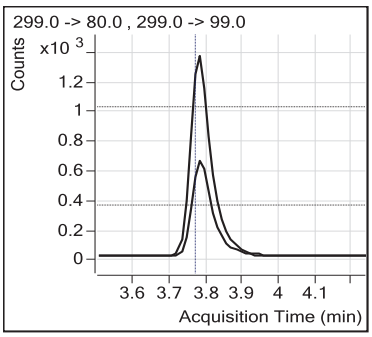


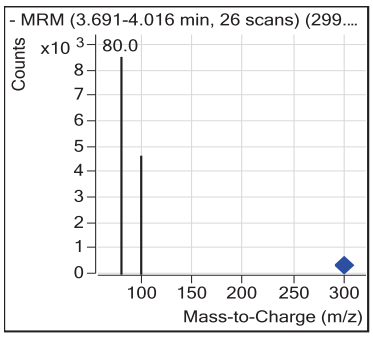


Perfluorinated Compounds by LC/MS/MS.

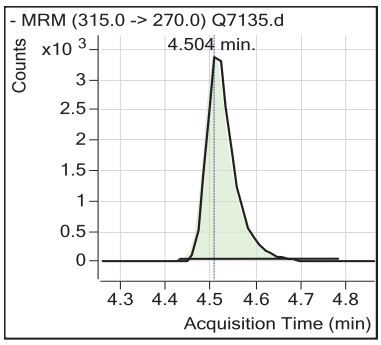
PFBS

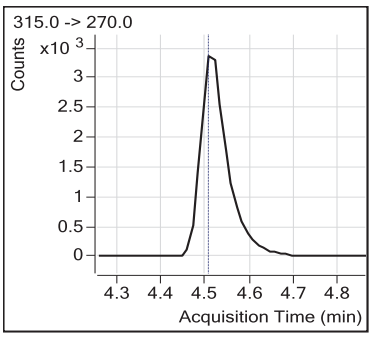


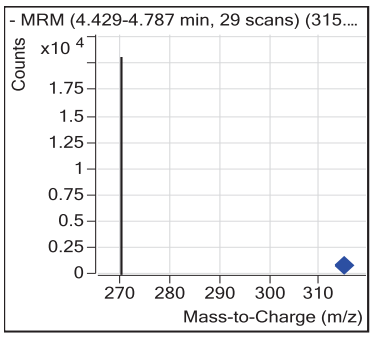




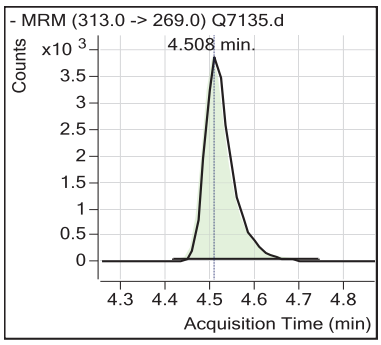
13C2-PFHxA

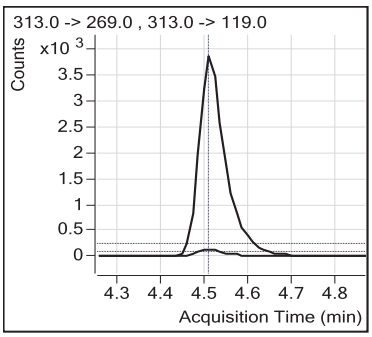


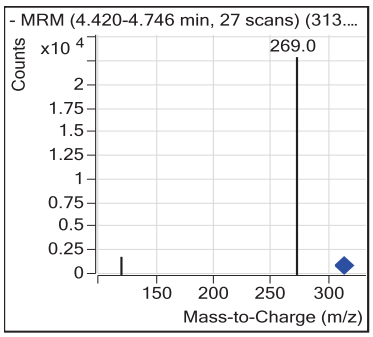




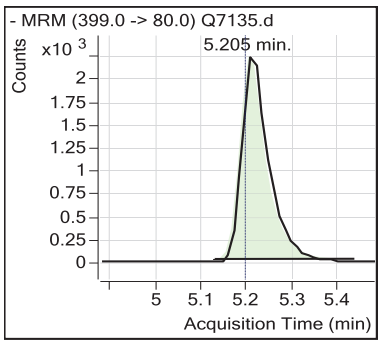
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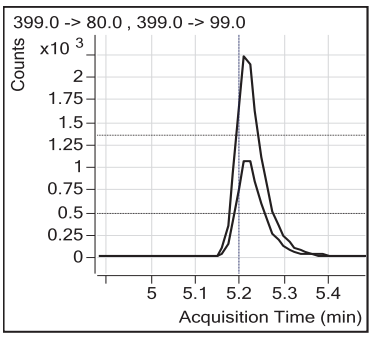


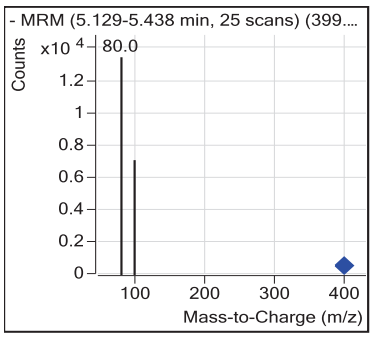




PFHxS

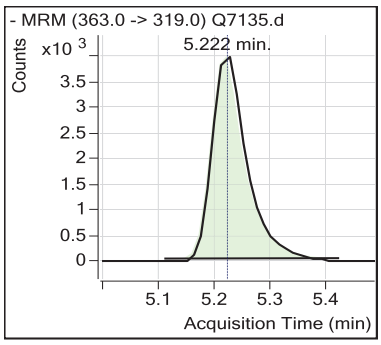


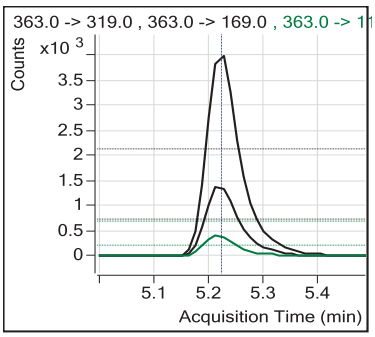


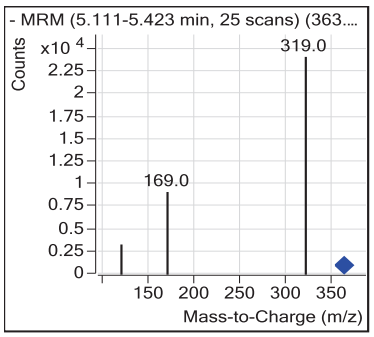


Perfluorinated Compounds by LC/MS/MS.

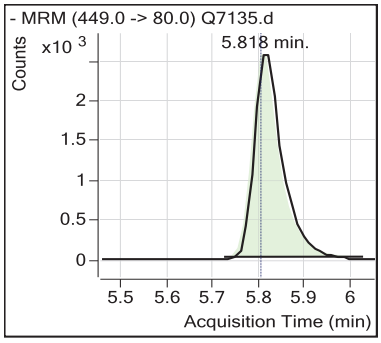
PFHpA

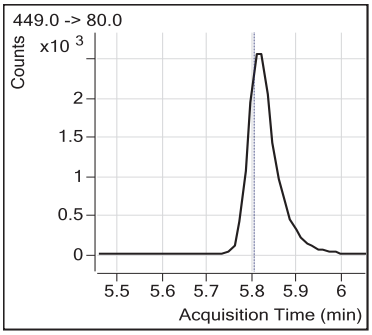


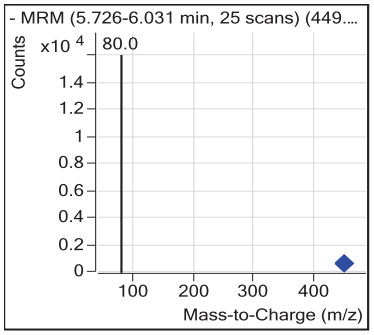




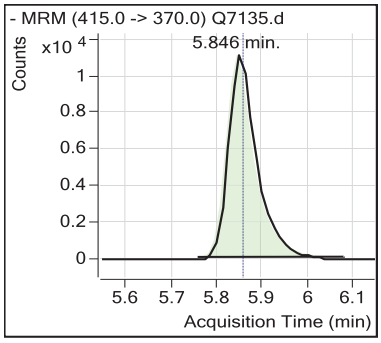
PFHpS

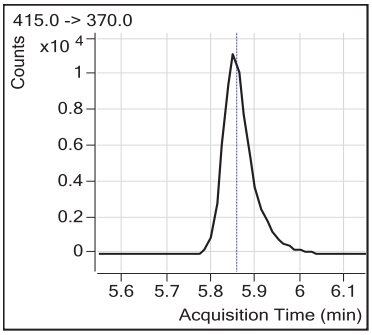


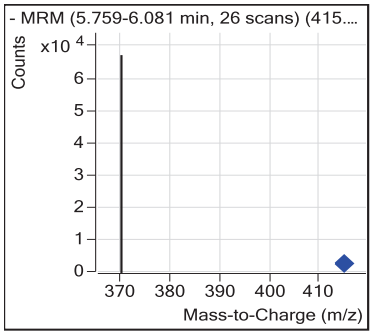




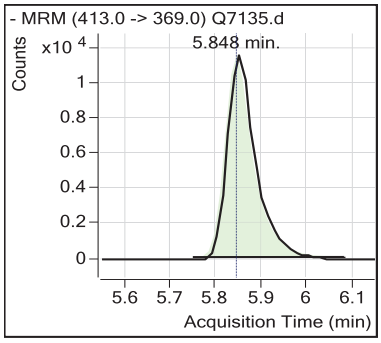
13C2-PFOA

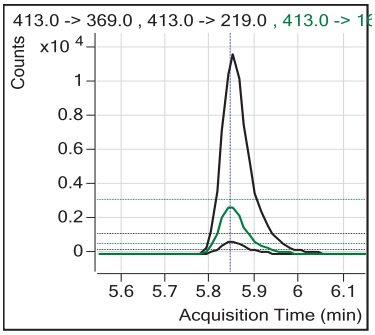


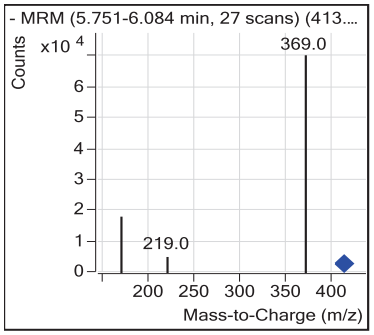




PFOA





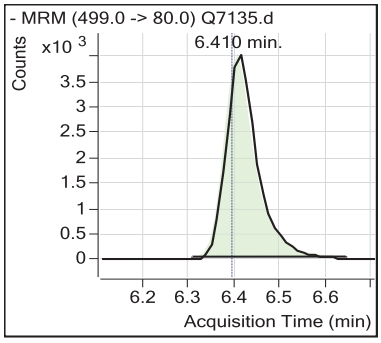


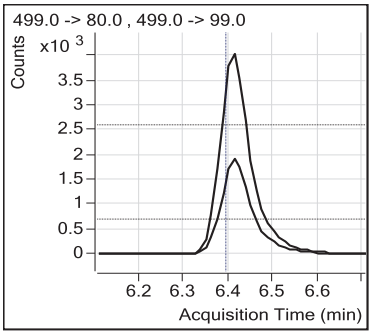
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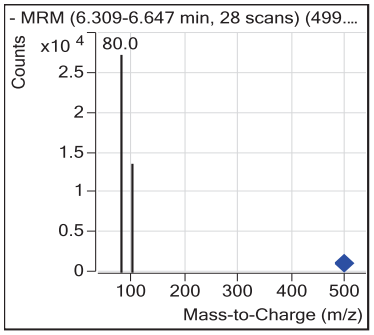
7

Perfluorinated Compounds by LC/MS/MS.

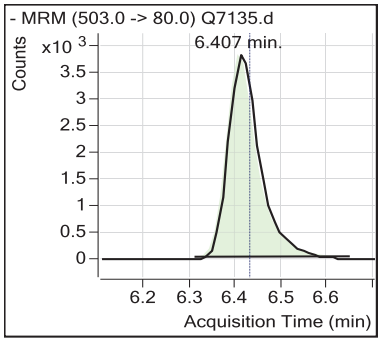
PFOS

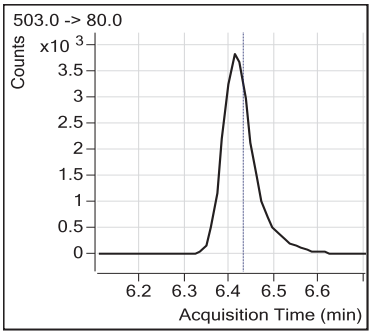


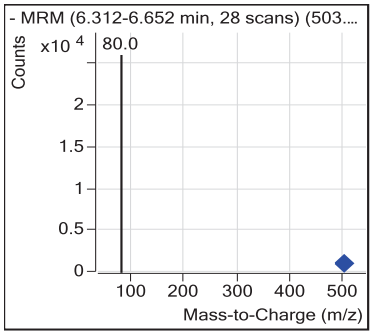




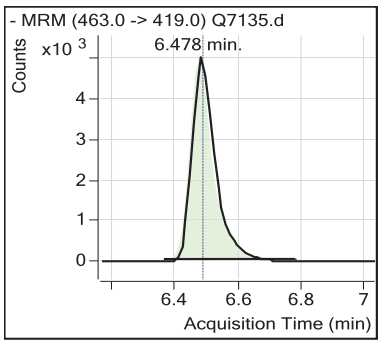
13C4-PFOS

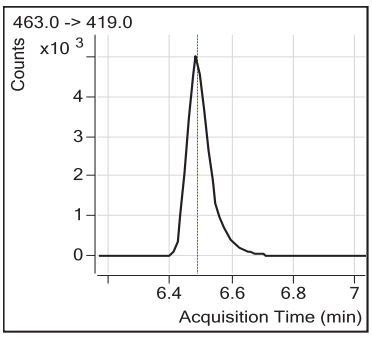


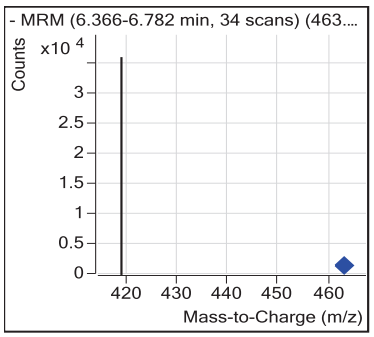




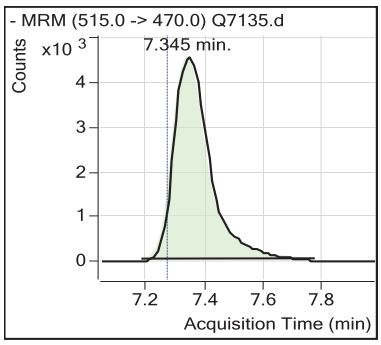
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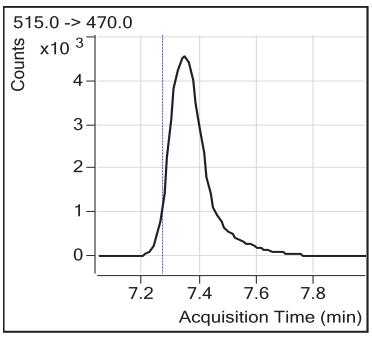


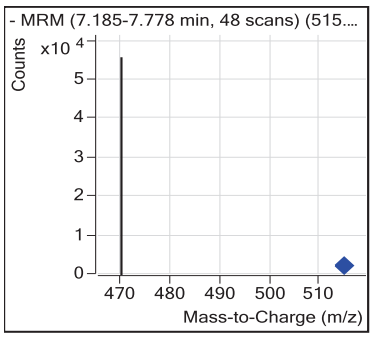




13C2-PFDA

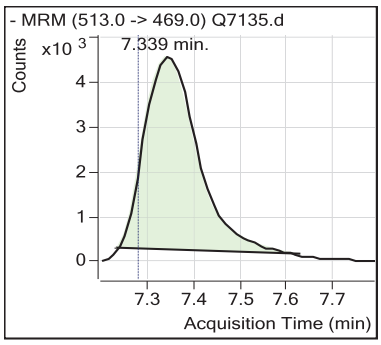


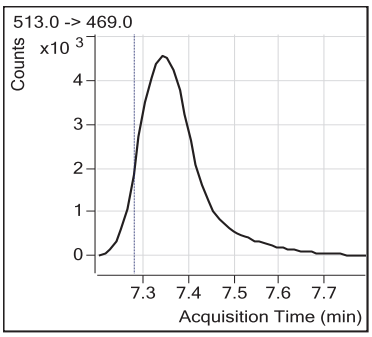


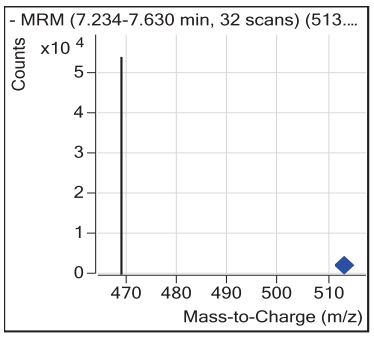


Perfluorinated Compounds by LC/MS/MS.

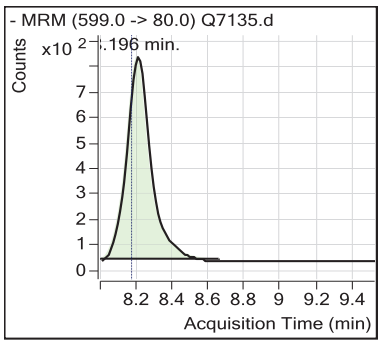
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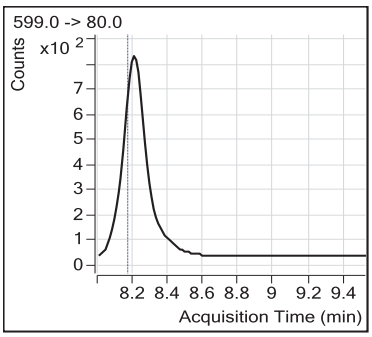


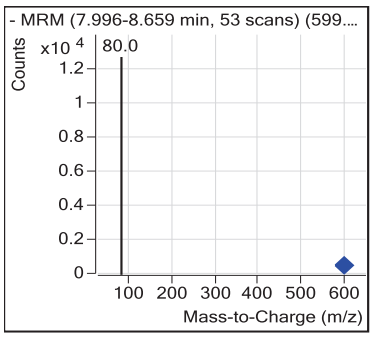




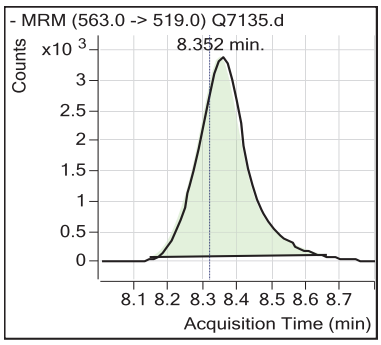
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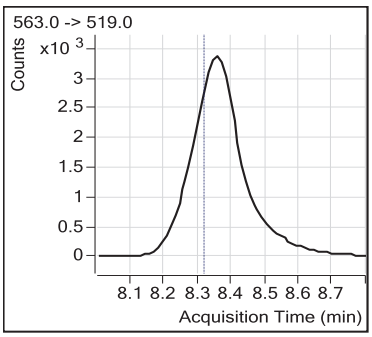


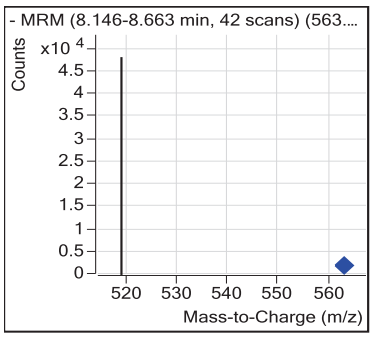




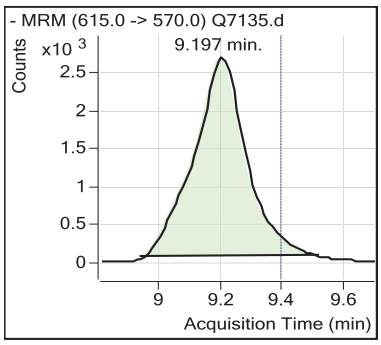
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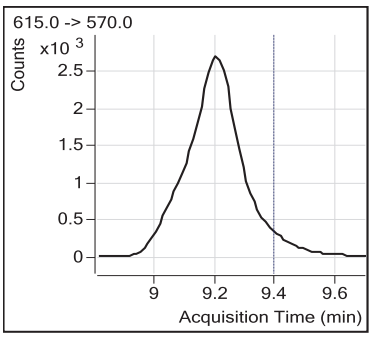


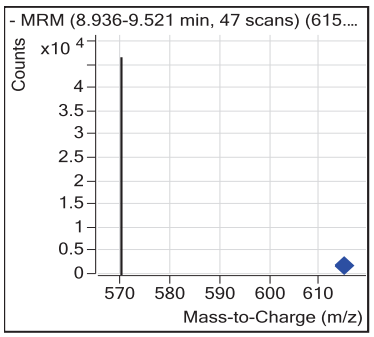




13C2-PFDoDA

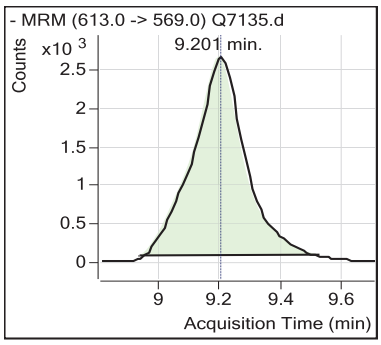


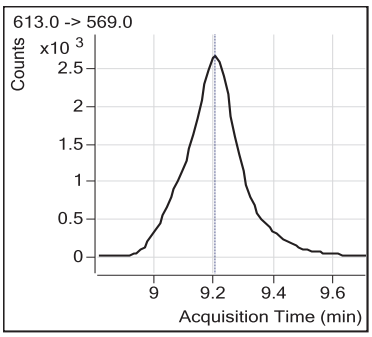


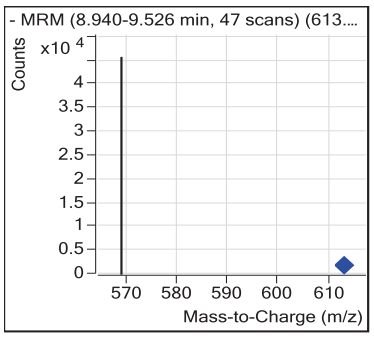


Perfluorinated Compounds by LC/MS/MS.

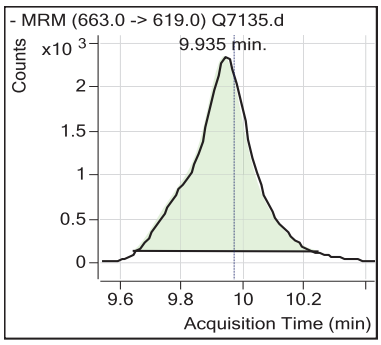
PFDoDA

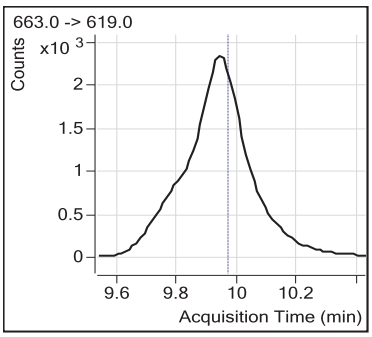


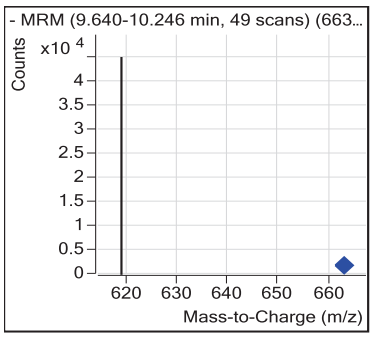




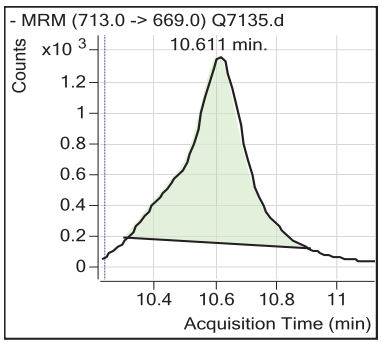
PFTrDA

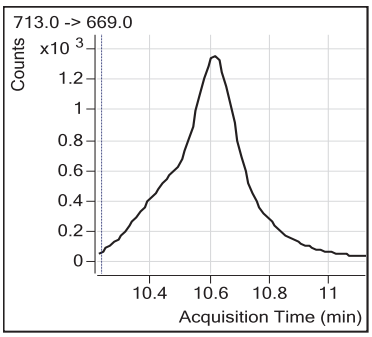


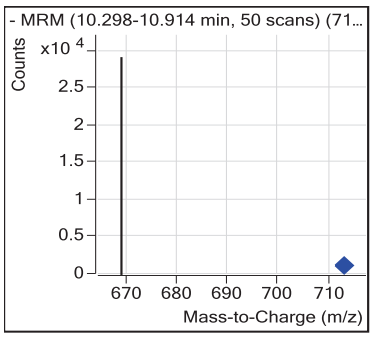




PFTeDA







Perfluorinated Compounds by LC/MS/MS.

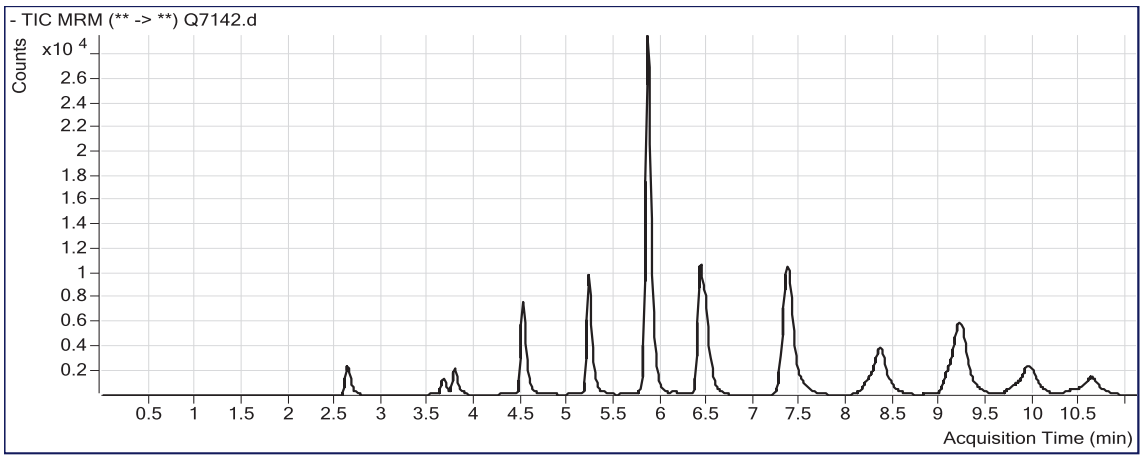
Data File	:	Q7142.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 17:15
Sample Name	:	ECC234-20
Vial	:	Vial 2
Sample Info	:	OP53158,SQ241,60,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
13C2-PFOA	5.846	415.0 -> 370.0	52081	20.000	µg/L	-0.013
13C4-PFOS	6.419	503.0 -> 80.0	19353	20.000	µg/L	-0.013
13C2-PFDoDA	9.197	615.0 -> 570.0	34703	20.000	µg/L	-0.200
System Monitoring Compounds						
13C2-PFHxA	4.516	315.0 -> 270.0	15169	19.66	µg/L	0.000
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 98.29%			
13C2-PFDA	7.345	515.0 -> 470.0	45317	21.53	µg/L	-0.088
Spiked Amount: 20.000	Range: 14 - 26		Recovery = 107.66%			
Target Compounds						**Qvalue**
PFBA	2.627	213.0 -> 169.0	11257	18.615	µg/L	100
PFPeA	3.661	263.0 -> 219.0	5692	19.217	µg/L	100
PFBS	3.778	299.0 -> 80.0	5865	19.148	µg/L	97
PFHxA	4.508	313.0 -> 269.0	16918	19.304	µg/L	99
PFHxS	5.217	399.0 -> 80.0	9821	20.459	µg/L	88
PFHpA	5.222	363.0 -> 319.0	17760	20.470	µg/L	100
PFHpS	5.818	449.0 -> 80.0	11785	20.551	µg/L	100
PFOA	5.848	413.0 -> 369.0	54358	20.162	µg/L	83
PFOS	6.410	499.0 -> 80.0	20226	20.546	µg/L	88
PFNA	6.478	463.0 -> 419.0	27343	22.638	µg/L	100
PFDA	7.339	513.0 -> 469.0	39937	20.343	µg/L	100
PFDS	8.196	599.0 -> 80.0	8085	23.948	µg/L	100
PFUnDA	8.352	563.0 -> 519.0	36675	19.067	µg/L	100
PFDoDA	9.188	613.0 -> 569.0	34263	22.664	µg/L	100
PFTrDA	9.935	663.0 -> 619.0	31481	22.802	µg/L	100
PFTeDA	10.598	713.0 -> 669.0	18470	17.980	µg/L	100

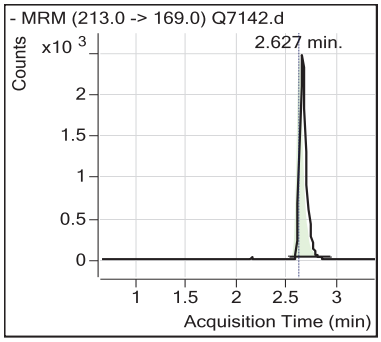
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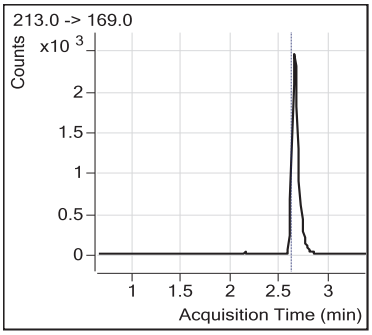
Perfluorinated Compounds by LC/MS/MS.

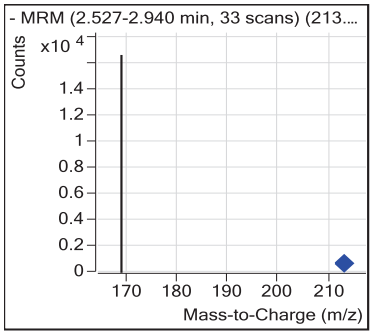
Data File	:	Q7142.d
Operator	:	mikee
Acq Method Name	:	dMRM_PFOA_PFOS.m
Acquisition date	:	2014-09-23 17:15
Sample Name	:	ECC234-20
Vial	:	Vial 2
Sample Info	:	OP53158,SQ241,60,,,1,,water
Quant Method	:	PFC_0912_SQ234.quantmethod.xml
Quant Batch Name	:	sq241.batch.bin
Last Calib Update	:	2014-09-16 09:05



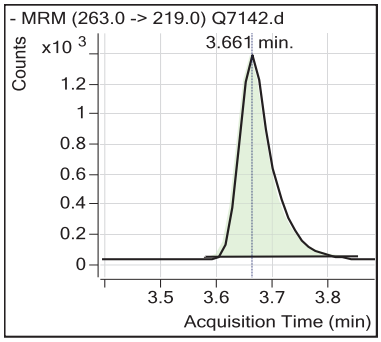
PFBA

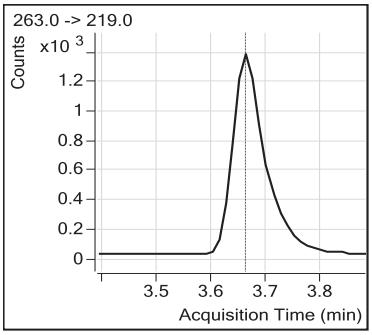


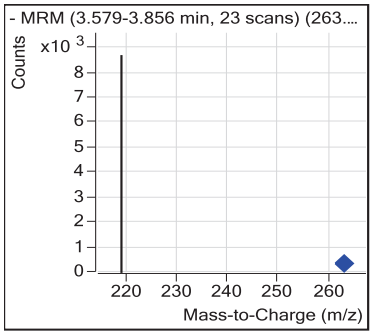




PFPeA

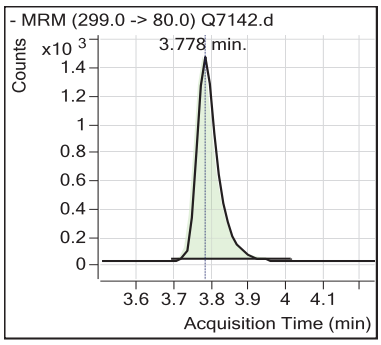


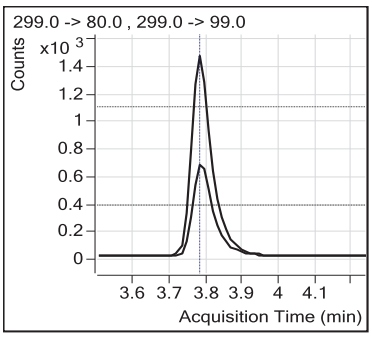


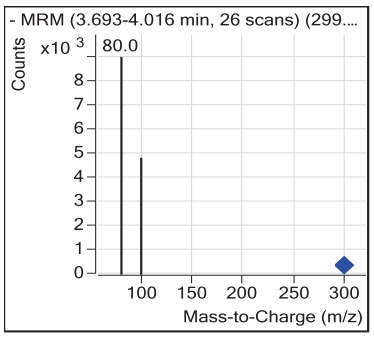


Perfluorinated Compounds by LC/MS/MS.

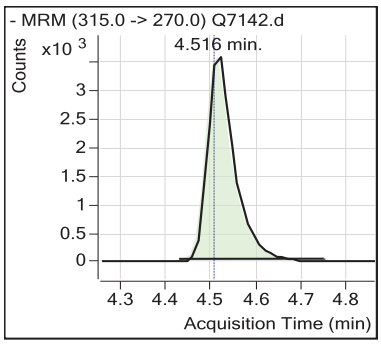
PFBS

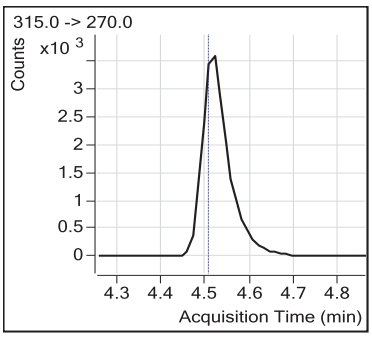


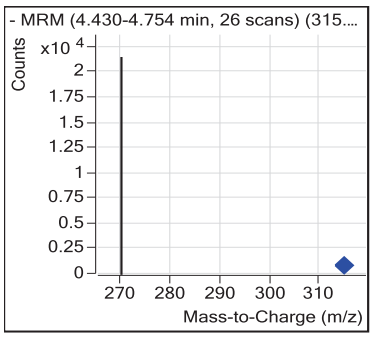




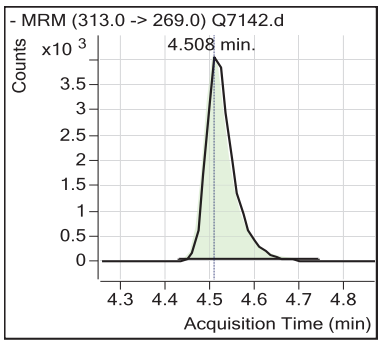
13C2-PFHxA

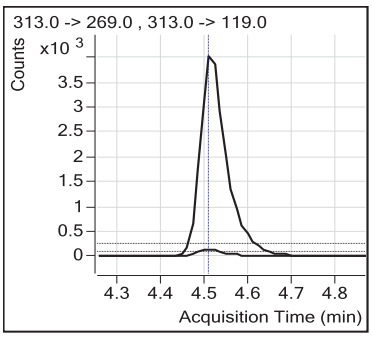


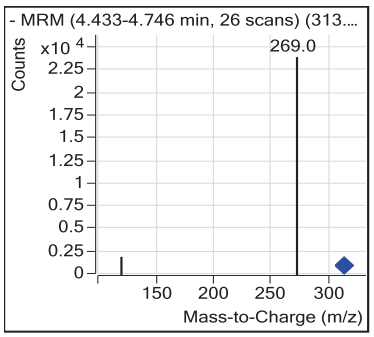




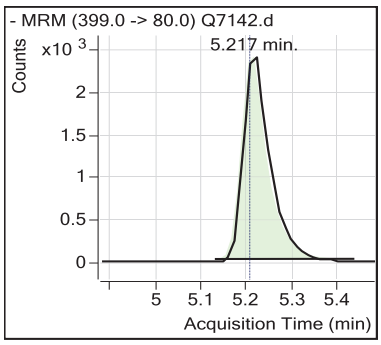
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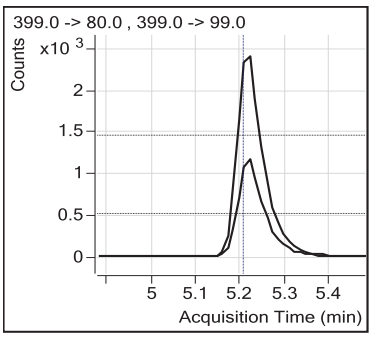


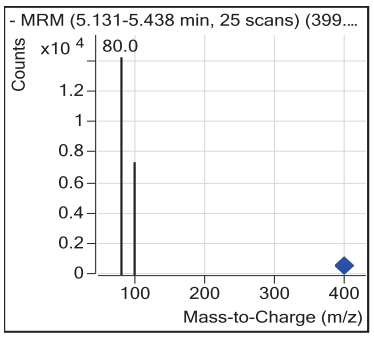




PFHxS

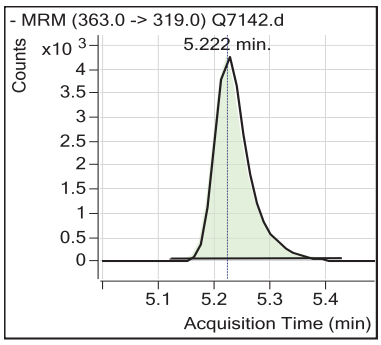


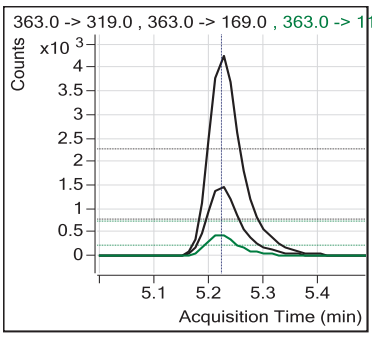


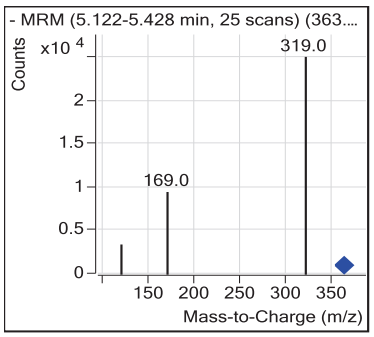


Perfluorinated Compounds by LC/MS/MS.

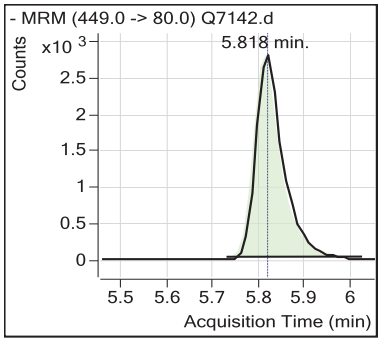
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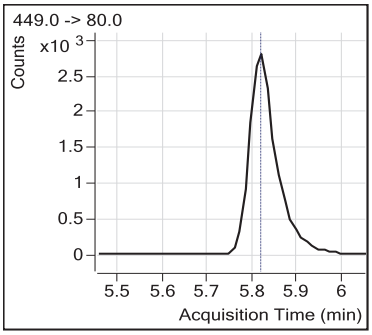


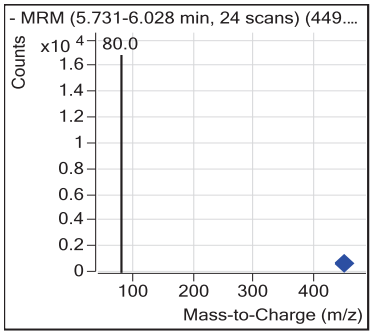




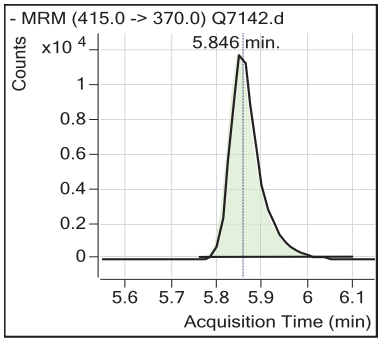
PFHpS

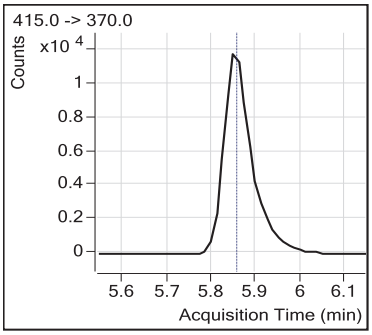


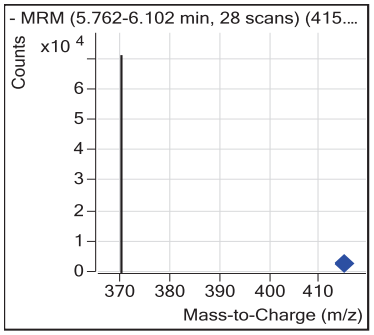




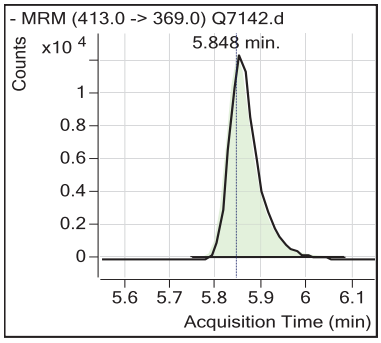
13C2-PFOA

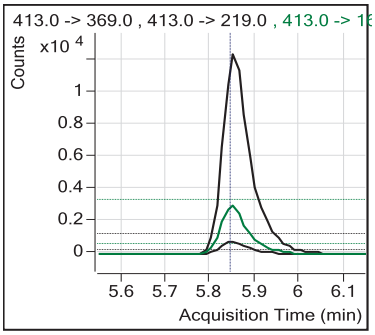


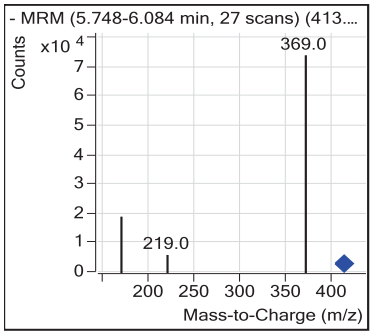




PFOA





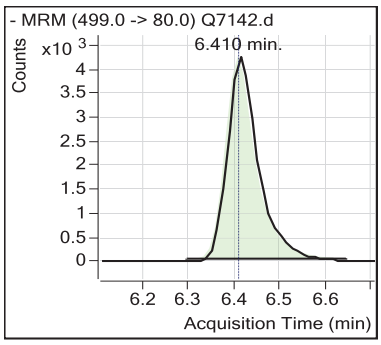


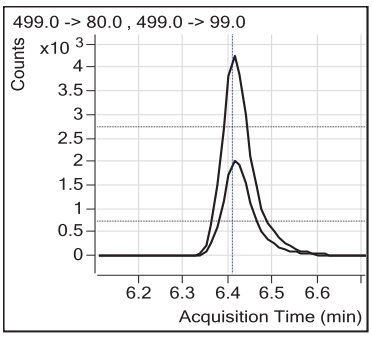
7.5.17

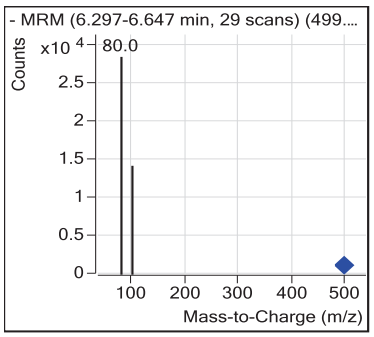
7

Perfluorinated Compounds by LC/MS/MS.

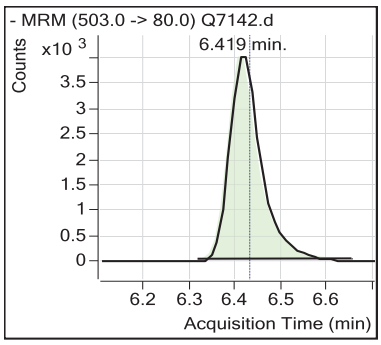
PFOS

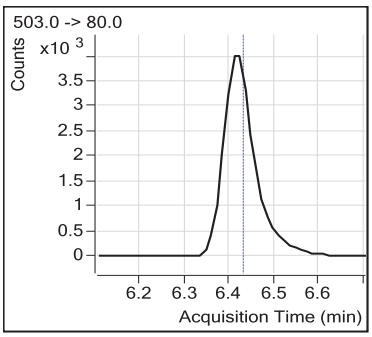


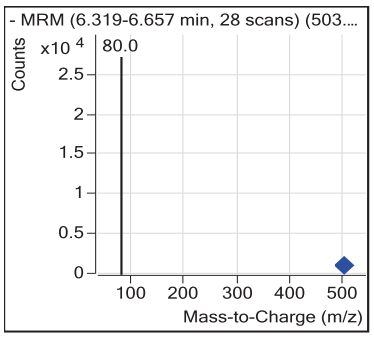




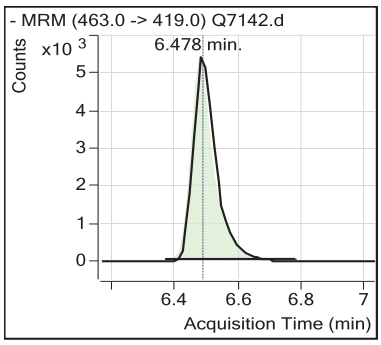
13C4-PFOS

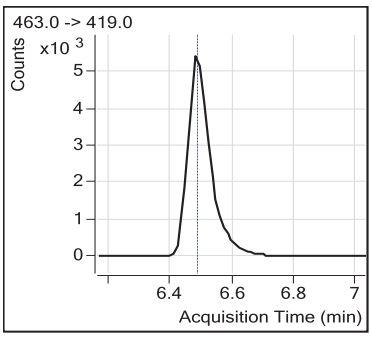


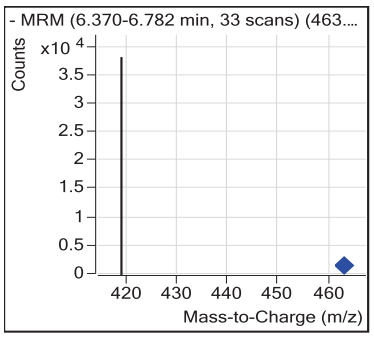




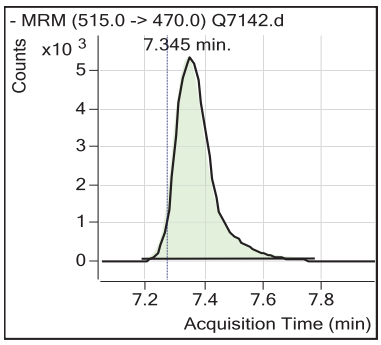
PFNA

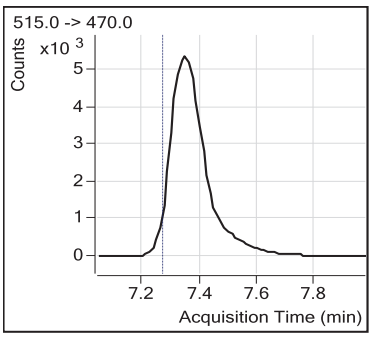


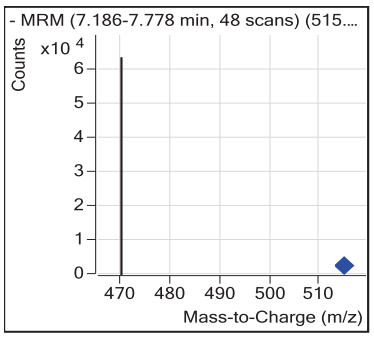




13C2-PFDA

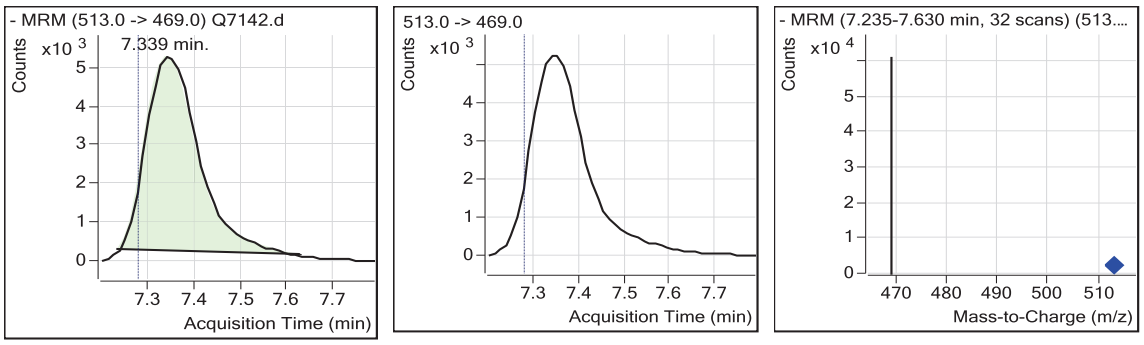




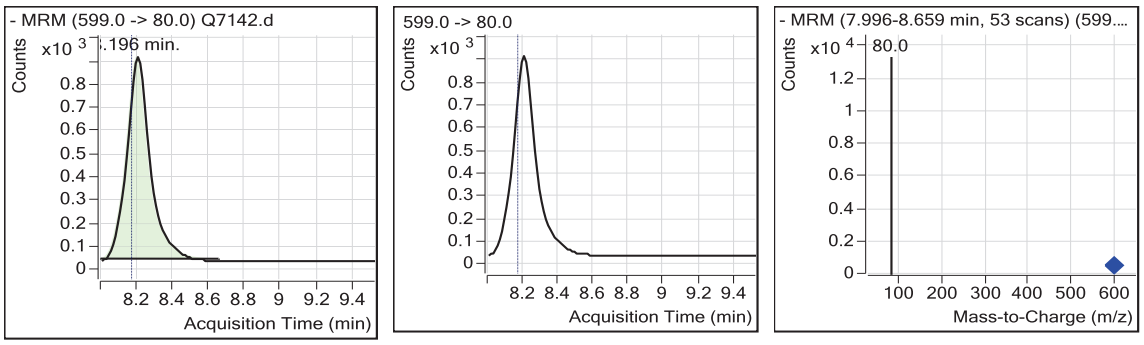


Perfluorinated Compounds by LC/MS/MS.

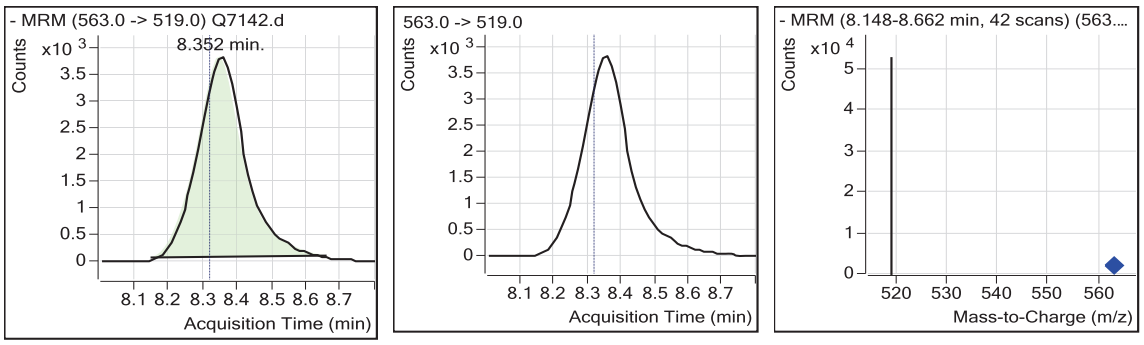
PFDA



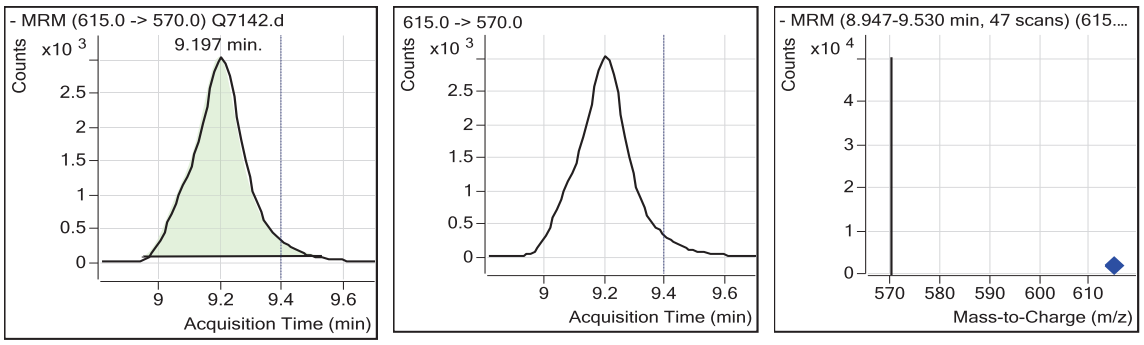
PFDS



PFUnDA

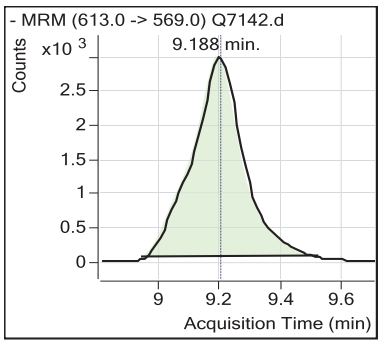


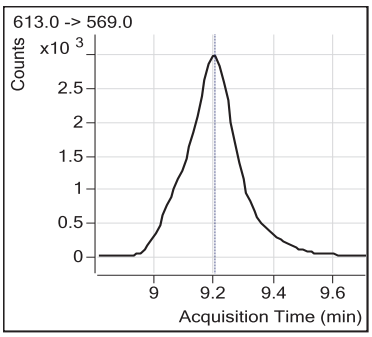
13C2-PFDoDA

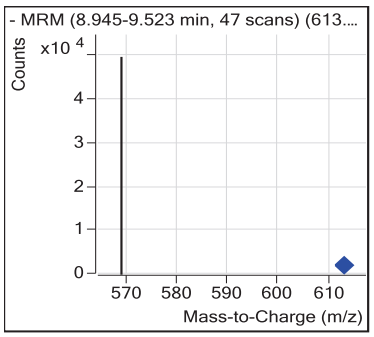


Perfluorinated Compounds by LC/MS/MS.

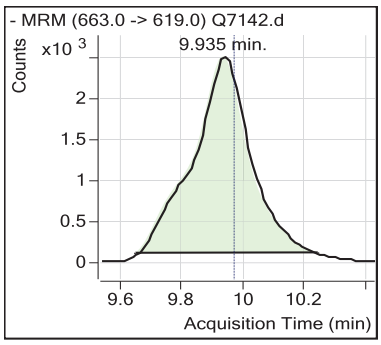
PFDoDA

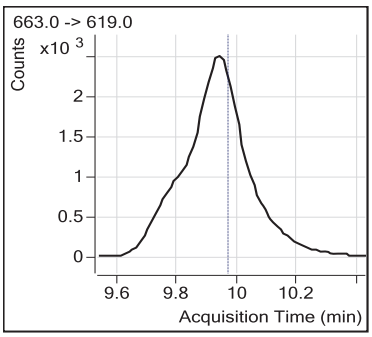


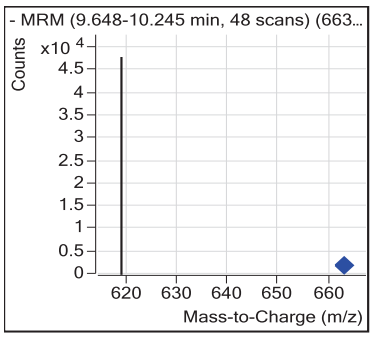




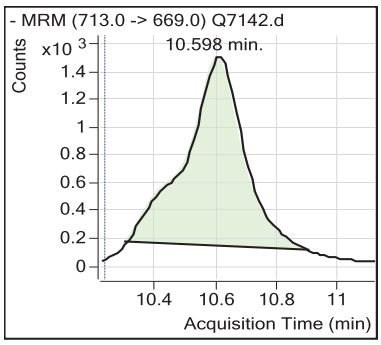
PFTrDA

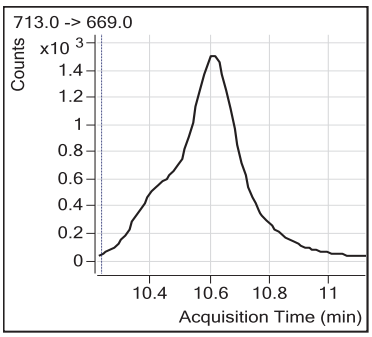


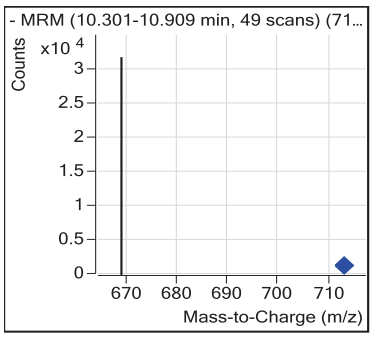




PFTeDA







ACCUTEST LABORATORIES SE

DATE:	9/12/14
COLUMN TYPE:	Poroshell EC-C18
AMOUNT INJECTED:	7.5 ul
INSTRUMENT:	LCMS1-Q
HEAD PRESSURE:	414

LCMS1-Q ANALYSIS LOG

METHODS:	PFOA-PFOS
ACQ. METHOD:	CHARM-PFOA-PFOS
PROC. METHOD:	PFC_9-12-14234
CALIB. DATE:	9/12/14
RUN BATCH: SQ	234

ANALYST:	
SOLVENT A LOT #:	95/5 063121/039724
SOLVENT B LOT #:	054761
WATER LOT #:	063121
ISTD Lot #:	LC 460

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	SCON	ION RATIO	MANUAL INTS RATIONALE, PK #	COMMENTS
Q 6932	1	CCB	PFC						—
Q 33	1	CCB							—
Q 34	2	STD check		LC475	2nd/500				—
Q 35	3	Spike check		LC474	LW/500				—
Q 36	4	IC 234-2.5		LC475	25/500			PDB	—
Q 37	5	-5.0			50/500				—
Q 38	6	-10.0			100/500				—
Q 39	7	ICC 234-20.0			200/500				—
Q 40	8	IC 234-30			300/500				—
Q 41	9	-40			400/500				—
Q 42	10	-50			1				MASS DNR
Q 43	4	ICV 234-~~20~~ 25		~~7047~~	~~5~~/500				
Q 44	11	ICV 234-20		LC474	40/500			SP	MASS
Q 45	12	ICV 234-20		7047	5/500				MASS
Q 46	1	CCB		—	—				
Q 47	13	OP53043-MB		53043	1				BDL
Q 48	14	-BS							✓
Q 49	15	FA11748-22							BDL
Q 50	16	FA17902-1							BDL
Q 57	17	FA17921-1							✓

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

LCMS1_Q_log.xls NF rev. 10/12

Analyst's Signature:

ACCUTEST LABORATORIES SE

DATE:	9/12/14
COLUMN TYPE:	Poroshell 120 C18
AMOUNT INJECTED:	7.5 ul
INSTRUMENT:	LCMS1-Q
HEAD PRESSURE:	4M

LCMS1-Q ANALYSIS LOG

METHODS:	PFOA . PFOS
ACQ. METHOD:	dMRM - PFOA.PFOS
PROC. METHOD:	PFC-9/2-SQ234
CALIB. DATE:	9/12/14
RUN BATCH: SQ	234

ANALYST:	MLE
SOLVENT A LOT #:	95/5 063121 / 034724
SOLVENT B LOT #:	054761
WATER LOT #:	063121
ISTD Lot #:	LC460

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	SCON	ION RATIO	MANUAL INTS RATIONALE, PK #	COMMENTS
Q 69 52	18	FA17921.2	PFC	53043	1			SP	—
Q 53	19	FA17922-1						SP	—
Q 54	20	op53043-MS							✓
Q 55	21	L -MSD							✓
Q 56	22	FA17922-2						SP	✓
Q 57	7	CC234-20		LC475	200/500				PASS
Q 58	1	CCB		—	—				
Q 59	23	FA17827-1		53043	20/500			SP	—
Q 60	24	L -1			5/500			SP	—
Q 61	7	ECC234-20		LC475	200/500				PASS
Q									
Q									
Q									
Q									
Q									
Q									
Q									
Q									
Q									

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

LCMS1_Q_log.xls NF rev. 10/12

Analyst's Signature: MLEger

ACCUTEST LABORATORIES SE

DATE:	09-18-14
COLUMN TYPE:	Porshell EC C18
AMOUNT INJECTED:	7.5 ul
INSTRUMENT:	LCMS1-Q
HEAD PRESSURE:	

LCMS1-Q ANALYSIS LOG

METHODS:	PFOA PFOS
ACQ. METHOD:	dMRM -PFOA-PFOS
PROC. METHOD:	PFC 9th SQ234
CALIB. DATE:	09-18-14
RUN BATCH: SQ	238

ANALYST:	MRE NMS
SOLVENT A LOT #:	9T/5 71546/039124
SOLVENT B LOT #:	074761
WATER LOT #:	071546
ISTD Lot #:	LL460

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	SCON	ION RATIO	MANUAL INTS RATIONALE, PK #	COMMENTS
Q 7031	1	ccb	PFC	—	—				✓
Q 32	1	ccb		—	—				
Q 33	2	CC234-20		LC475	200+300				T PR
Q 34	2	CC234-20		⊥	⊥				PDBS PFOS T
Q 35	3	OP53105-bs		OP53105	1x				✓
Q 36	4	-mb		⊥	⊥				✓
Q 37	5	CC234-20		LC475	200+300				PDBS
Q 38	21	ccb		—	—				
Q 39	15	FA,18660-4		OP53105	1x				✓
Q 40	52	CC234-20		LC475	200+300				PDBS PFOS T
Q 41	21	ccb		—	—				Bpk
Q 42	6	OP53121-bs		OP53121	1x				✓
Q 43	7	-mb							RT shift pr
Q 44	7	-mb							BR
Q 45	8	FA18133-1							✓
Q 46	9	-2							✓
Q 47	10	OP53121-ms							✓
Q 48	11	-msd							✓
Q 49	12	FA18133-3							✓
Q 50	13	-4							✓

nms 09-19-14

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
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Analyst's Signature: Mary Saunders

ACCUTEST LABORATORIES SE

DATE:	09-18-14
COLUMN TYPE:	Phenomenex ECLIB
AMOUNT INJECTED:	7.5 ul
INSTRUMENT:	LCMS1-Q
HEAD PRESSURE:	

LCMS1-Q ANALYSIS LOG

METHODS:	PFOA PFOS
ACQ. METHOD:	dmam PFOA PFOS
PROC. METHOD:	PFC 912 SQ234
CALIB. DATE:	09-12-14
RUN BATCH: SQ	238

ANALYST:	MAE NAS
SOLVENT A LOT #:	9515 715946/039124
SOLVENT B LOT #:	054761
WATER LOT #:	071546
ISTD Lot #:	LC460

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	SCON	ION RATIO	MANUAL INTS RATIONALE, PK #	COMMENTS
Q 7051	14	FA18133-5	PFC	OP53121	1X				✓
Q 52	2	CC 234-20		LC475	200+300				PASS PFOS↑ C13,14 low
Q 53	1	CCB							
Q 54	15	FA 18133-6		OP53121	1X				
Q 55	16	-7							
Q 56	17	-8							
Q 57	18	-9							
Q 58	2	CC 234-20		LC475	200+300				PASS PFOS ss↑ PFOS.↑ C13,14 low PFOA↑ C14 low
Q 59	1	CCB							RA, Run stopped
Q 60	19	OP53159-BS		OP53159	1X				
Q 61	20	-MB							
Q 62	21	FA18144-3							
Q 63	22	OP53159-MS							
Q 64	23	-MSD							
Q 65	24	FA18144-4							
Q 66	25	-5							
Q 67	2	CC 234-20		LC475	200+300				
Q									
Q									
Q									

NAS 09-19-14

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

ACCUTEST LABORATORIES SE

DATE:	09/22/14
COLUMN TYPE:	Poroshell EC C18
AMOUNT INJECTED:	7.5 ul
INSTRUMENT: LCMS1-Q	2
HEAD PRESSURE:	398

lw 09/23/14

LCMS1-Q ANALYSIS LOG

METHODS:	PFOA = PFOS
ACQ. METHOD:	DMRM-PFOA PFOS
PROC. METHOD:	PFC 972SQ234
CALIB. DATE:	09/12/14
RUN BATCH: SQ	240

ANALYST:	
SOLVENT A LOT #:	95/5 071546/035724
SOLVENT B LOT #:	DB1652
WATER LOT #:	071546
ISTD Lot #:	LC460

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	SCON	ION RATIO	MANUAL INTS RATIONALE, PK #	COMMENTS
Q 7094	1	std test	PFC		1X				
Q 95	2	ccb		—	—				
Q 96	2	ccb		—	—				
Q 97	3	CC234-20		LC475	200/500				PFOS *
Q 98	4	FA18133-2		OP53121	100:500			SP	—
Q 99	5	OP53121-MS			↓			↓	—
Q 7100	6	OP53121-MSD			↓			↓	—
Q 01	7	FA18133-7			50:500			↓	—
Q 02	8	FA18133-8			25:500			↓	—
Q 03	9	FA18133-9			50:500			↓	—
Q 04	3	CC234-20		LC475	200/500				PFOS
Q 05	2	ccb		—	—				BAL
Q 06	10	OP53158-MS		OP53158	1X				RR RT Δ
Q 07	11	OP53158-BS			↓				↓
Q 08	12	FA18247-3			50:500			SP	RR 1X
Q 09	13	FA18133-10			1X			↓	
Q 10	14	FA18133-11			↓			↓	
Q 11	15	FA18133-12			↓			↓	
Q 12	16	FA18133-13			↓			↓	
Q 13	17	FA18133-14	↓	↓	50:500			↓	RR 10X

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

ACCUTEST LABORATORIES SE

DATE:	09/24/14
COLUMN TYPE:	Poroshell EC18
AMOUNT INJECTED:	7.5 ul
INSTRUMENT:	LCMS1-Q
HEAD PRESSURE:	398

LCMS1-Q ANALYSIS LOG

METHODS:	PFOA-PFOS
ACQ. METHOD:	DMLM-PFOA PFOS
PROC. METHOD:	PFC 912 SQ 234
CALIB. DATE:	09/12/14
RUN BATCH: SQ	240

ANALYST:	
SOLVENT A LOT #:	95/5 071546/025124
SOLVENT B LOT #:	08/052
WATER LOT #:	071546
ISTD Lot #:	LC460

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	SCON	ION RATIO	MANUAL INTS RATIONALE, PK #	COMMENTS
Q 7114	18	FA 18133-15	PFC	op53158	1x				FR RTΔ
Q 15	3	CCC234-20	↓	↓	200/500				RTΔ FR
Q 16	2	clb	—	—	—				BDL
Q 17	19	FA18147-1		op53158	1x			SP	—
Q 18	20	FA18147-2						↓	—
Q 19	21	FA18147-3							—
Q 20	22	op53158-MS							—
Q 21	23	op53158-MSD		↓	↓				/
Q 22	3	ECC234-20	↓	LC475	200/500				RTΔ
Q									
Q									
Q									
Q									
Q									
Q									
Q									
Q									
Q									
Q									
Q									

MK 09/23/14

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

LCMS1_Q_log.xls NF rev. 10/12

Analyst's Signature:

ACCUTEST LABORATORIES SE

DATE:	09-23-14
COLUMN TYPE:	Poroshell EC C18
AMOUNT INJECTED:	7.5 ul
INSTRUMENT:	LCMS1-Q
HEAD PRESSURE:	3466

LCMS1-Q ANALYSIS LOG

METHODS:	PFOA-PFOS
ACQ. METHOD:	AMAM -PFOA-PFOS
PROC. METHOD:	PFC 912 SA 234
CALIB. DATE:	09-12-14
RUN BATCH: SQ	241

ANALYST:	MAE NMS
SOLVENT A LOT #:	975 071546/025724
SOLVENT B LOT #:	VB 1052
WATER LOT #:	071546
ISTD Lot #:	LC460

DATA FILE	ALS #	SAMPLE ID	SAMPLE METHOD	OP BATCH	DF	SCON	ION RATIO	MANUAL INTS RATIONALE, PK #	COMMENTS
Q 67123	1	Std test	PFC	LC475	200/500				✓
Q 24	1	Std test	"	"	"				✓
Q 25	1	CC 234-20		LC475	200/500				Pass PFTrDA, PFTuDA ✓
Q 26	2	ccb			—				ND ✓
Q NMS 092414 27	3	OP53158-bs		OP53158	1x				✓
Q 28	4	-mb							ND
Q 29	5	FA16133-10							✓
Q 30	6	-11							✓
Q 31	7	-12							✓
Q 32	8	-13			"				✓
Q 33	9	-14			TO: 500 10x				✓
Q 34	10	-15		"	1x				✓
Q 35	2	CC 234-20		LC475	200/500				Pass
Q 36	1	ccb			—				ND ✓
Q 37	11	FA16147-1		OP53158	1x				✓
Q 38	12	-2							✓
Q 39	13	-3							✓ RR SSL
Q 40	14	OP53158-ms							✓
Q 41	15	-msd			"				✓
Q 42	2	CCC 234-20		LC475	200/500				Pass

Manual Integration Rationale SOP QA029: **MP** Missed Peak, **OP** Overlapping Peak, **SP** Split Peak, **PDB** Poorly Defined Baseline, **BR** Baseline Ripple, **PII** Poor Instrument Integration
All strikeouts must be initialed and dated. If correction was not due to a transcription error, then list the reason for correction.

LCMS1_Q_log.xls NF rev. 10/12

Analyst's Signature: MAE

ACCUTEST LABORATORIES SE

SPE LIQUID SAMPLE PREP REPORT

Date/Time: 09/16/14 1130 Started {mm/dd/yy 24:00}

Date/Time: 09/16/14 1500 Finished {mm/dd/yy 24:00}

Batch#: OP53121

Prep Method: 3535A or Method (circle)

Analytical Method: LC537

Ext. By: MB Vialed By: MB

MB 09/15/14

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP53121 MB	X	~~1000~~	6	N/A	20 ul		1 ml	125 mL
OP53121 BS	X	~~1000~~				80 ul		125 mL
FA18133-1	1	90						
-2	1	120						
-3	1	120						
-4	1	125						
-5	1	125						
-6	1	100						
-7	1	125						
-8	1	125						
-9	1	BS						
FA18133-2 MS	2	60	6	N/A	20 ul	80 ul	1 ml	
-2 MSD	2	60	"	"	"	"	"	
DUP								

MB 09/16/14

Comments:

Surr. ID: LC473A Conc: 1ppm Exp. Date: 03/10/15 Inj. By: MB Ver. By MB

Spk.1 ID: LC474 Conc: 250ppb Exp. Date: 03/12/15 Inj. By: MB Ver. By MB

Spk.2 ID: / Conc: / Exp. Date: / Inj. By: / Ver. By /

CH2CL2 Lot # / Hexane Lot # / Na2SO4 Lot# /

Acetonitrile Lot # / Methanol Lot # 054761 Water Lot# OP52648

Syringe Filter Lot# / SPE Lot # 5300-190 Reagent # /

Relinquished By: Date: 09/16/14

Accepted By: Date: 09-17-14

NF rev. 09/14/12 extwater_spe 091412.xls

ACCUTEST LABORATORIES SE

SPE LIQUID SAMPLE PREP REPORT

Date/Time Started: 09/18/14 1000 {mm/dd/yy 24:00}

Date/Time Finished: 09/18/14 1430 {mm/dd/yy 24:00}

Prep Method: ~~3535A~~ or Method (circle)

Analytical Method: ~~8330~~ LC537 MB 09/18/14

Batch#: OP53158

Ext. By: MB

Vialed By: MB

Sample ID	Bottle Number	Amount Extracted (ml)	Initial pH	Adjusted pH	Surrogate Amount	Spike Amount	Final Volume (ml)	Comments
OP 53158 MB	X	125	6	N/A	20ul		1.0ml	
OP53158 BS	X	125	↓	↓	↓	80ul	↓	
FA18133-10	1	120	↓	↓	↓	↓	↓	
-11	1	120	↓	↓	↓	↓	↓	
-12	1	125	↓	↓	↓	↓	↓	
-13	1	125	↓	↓	↓	↓	↓	
-14	1	120	↓	↓	↓	↓	↓	
-15	1	120	↓	↓	↓	↓	↓	
FA18247-1	1	120	↓	↓	↓	↓	↓	
-2	1	120	↓	↓	↓	↓	↓	
-3	1	125	↓	↓	↓	↓	↓	
				MB 09/18/14				
FA18247-3 MS	3	60	6	N/A	20ul	80ul	1.0ml	
-3 MSD	3	60	↓	↓	↓	↓	↓	
DUP								

Comments:

Surr. ID: LC473A Conc: 1ppm Exp. Date: 03/10/15 Inj. By: MB Ver. By MB

Spk.1 ID: LC474 Conc: 250ppb Exp. Date: 03/12/15 Inj. By: MB Ver. By MB

Spk.2 ID: / Conc: / Exp. Date: / Inj. By: / Ver. By /

CH2CL2 Lot #: / Hexane Lot #: / Na2SO4 Lot#: /

Acetonitrile Lot #: / Methanol Lot # 054761 Water Lot# OP52648

Syringe Filter Lot#: / SPE Lot # ~~S30~~ S300-190 MB 09/18/14 Reagent #: /

Relinquished By: [signature] Date: 09/18/14

Accepted By: [signature] Date: 9/18/14

NF rev. 09/14/12 extwater_spe 091412.xls

| Contract_ID | DO_CTO_Number | Phase | Installation_ID | Sample_Name | CH2M_Code | Analyst | Analytical | PBC_Code | Lab_Code | Lab_Name | Leachate_Method | Sample_Basis | Extraction_N | Result | Lab_Q | Sample_Medium | QC_Level | DateTime_Collected | Date_Received | Leachate_Date | Leachate_Time | Extraction_DT | Extraction | Analysis_Dat | Analysis_Tim | Lab_Sample_ID | Dilut | Run | Percent_Moisture | Percent_Lipid | Chem_Name | Analyte_ID | Analyte_Value | Original | Result_Units | Lab_Q | Validator_Qualifier | QC_Column_Type | Analyte | Result_Narrative | QC_Control_Limit_Code | QC_Accuracy_Upper | QC_Accuracy_Lower | Control_Limit_Date | QC_Narrative | MDL | Detection_Limit | QSM_Version | DL | LOD | LOQ | SDG | Analysis_Batch | Validator_Name | Val_Date |
|---|---|---

| Contract_ID | DO_CTO_Number | Phase | Installation_ID | Sample_Name | CH2M_Code | Analysis | Analytical_PBC | Code | Lab_Code | Lab_Name | Leachate_Method | Sample_Basis | Extraction_ID | Result | Lab_ID | Sample_Medium | QC_Level | DateTime_Collected | Date_Received | Leachate_Date | Leachate_Time | Extraction_ID | Extraction_Analysis_Date | Analytical_Batch | Lab_Sample_ID | Dilution | Run | Percent_Moisture | Percent_Lipid | Chem_Name | Analyte_ID | Analyte_Value | Original_Result | Result_Units | Lab_Qualifier | Validator_Qualifier | QC_Column_Type | Analysis_Method | Result_Narrative | QC_Control_Limit_Code | QC_Accuracy_Upper | QC_Accuracy_Lower | Control_Limit_Date | QC_Narrative | MDL | Detection_Limit | QSM_Version | DL | LOD | LOQ | SDG | Analysis_Batch | Validator_Name | Val_Date |
|---|---|---

| Contract_ID | DO_CTO_Number | Phase | Installation_ID | Sample_Name | CH2M_Code | Analyst | Analytical | PBC_Code | Lab_Code | Lab_Name | Leachate_Method | Sample_Basis | Extraction_ID | Result | Lab_QS | Sample_Medium | QC_Level | DateTime_Collected | Date_Received | Leachate_Date | Leachate_Time | Extraction_ID | Extraction_Analysis_Date | Analysis_Batch | Lab_Sample_ID | Dilution | Run | Percent_Moisture | Percent_Lipid | Chem_Name | Analyte_ID | Analyte_Value | Original_Value | Result_Units | Lab_Qualifier | Validator_Qualifier | QC_Column_Type | Analysis_Result_Narrative | QC_Control_Limit_Code | QC_Accuracy_Upper | QC_Accuracy_Lower | Control_Limit_Date | QC_Narrative | MDL | Detection_Limit | IQM_Version | DL | LOD | LOQ | SDG | Analysis_Batch | Validator_Name | Val_Date |
|---|---|---

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analyst	Analytical	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_Id	Result	Lab_Qual	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_ID	Extraction_Date	Analysis_Date	Analysis_Id	Batch	Run	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Id	Result_Units	Lab_Q	Validator_Qualifier	QC_Column_Type	Analyst	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			1,1,1-Trichloroethane	71-55-6	117	117	PCT		MS	TRG		LSA		130	65	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			1,1-Dichloroethene	75-35-4	90.9	90.9	PCT		MS	TRG		LSA		130	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			1,2-Dichloroethene	107-06-2	106	106	PCT		MS	TRG		LSA		130	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			trans-1,2-Dichloroethene-d4	17060-07-0	95.6	95.6	PCT REC		MS	SURR		LSA		120	80	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Benzene	71-43-2	95.8	95.8	PCT		MS	TRG		LSA		120	80	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Bromofluorobenzene	460-00-4	109	109	PCT REC		MS	SURR		LSA		125	75	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			cis-1,2-Dichloroethene	156-59-2	96.8	96.8	PCT		MS	TRG		LSA		125	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Dibromofluoromethane	1868-53-7	103	103	PCT REC		MS	SURR		LSA		115	85	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Ethylbenzene	100-41-4	100	100	PCT		MS	TRG		LSA		125	75	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			m- and p-Xylene	m&pXylene	105	105	PCT		MS	TRG		LSA		130	75	20081007		4.1	0.500	1.00	2.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			o-Xylene	95-47-6	102	102	PCT		MS	TRG		LSA		120	80	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Tetrachloroethene	127-18-4	108	108	PCT		MS	TRG		LSA		150	45	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Toluene	108-88-3	102	102	PCT		MS	TRG		LSA		120	75	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Toluene-d8	2037-26-5	99.8	99.8	PCT REC		MS	SURR		LSA		120	85	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			trans-1,2-Dichloroethene	156-60-5	93.7	93.7	PCT		MS	TRG		LSA		140	60	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Trichloroethene	79-01-6	112	112	PCT		MS	TRG		LSA		120	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			Vinyl chloride	75-01-4	124	124	PCT		MS	TRG		LSA		145	50	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS51	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140915	20:43:00	20140915	20:43:00	NBS01-A-MW15	1			1,4-Dioxane	123-91-1	23.0	23.0	PCT		MS	TRG		LSA		150	60	20081007		4.1	0.120	0.240	0.481	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS52	NONS	SVOA	8270D	SVOA	ELABT	EMPHERICAL LABS		WET	SW3510C	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140917	11:38:00	20140917	18:33:00	NBS01-A-MW15	1			2,4,6-Tribromophenol	118-79-6	88.6	88.6	PCT REC		MS	SURR		LSA		125	40	20081007		4.1	0.0481	0.192	0.385	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS52	NONS	SVOA	8270D	SVOA	ELABT	EMPHERICAL LABS		WET	SW3510C	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140917	11:38:00	20140917	18:33:00	NBS01-A-MW15	1			2-Fluorobiphenyl	321-60-8	77.1	77.1	PCT REC		MS	SURR		LSA		110	50	20081007		4.1	0.0481	0.0962	0.192	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS52	NONS	SVOA	8270D	SVOA	ELABT	EMPHERICAL LABS		WET	SW3510C	000	MS	W	4	09/10/2014 15:00	09/11/2014			20140917	11:38:00	20140917	18:33:00	NBS01-A-MW15	1			Terphenyl-d14	1718-51-0	81.8	81.8	PCT REC		MS	SURR		LSA		135	50	20081007		4.1	0.0481	0.0962	0.192	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			1,1,1-Trichloroethane	71-55-6	113	113	PCT		MS	TRG		LSA		130	65	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			1,1-Dichloroethene	75-35-4	90.4	90.4	PCT		MS	TRG		LSA		130	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			1,2-Dichloroethene	107-06-2	105	105	PCT		MS	TRG		LSA		130	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			trans-1,2-Dichloroethene-d4	17060-07-0	98.3	98.3	PCT REC		MS	SURR		LSA		120	70	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Benzene	71-43-2	93.8	93.8	PCT		MS	TRG		LSA		120	80	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Bromofluorobenzene	460-00-4	107	107	PCT REC		MS	SURR		LSA		120	75	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			cis-1,2-Dichloroethene	156-59-2	94.7	94.7	PCT		MS	TRG		LSA		125	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Dibromofluoromethane	1868-53-7	106	106	PCT REC		MS	SURR		LSA		115	85	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Ethylbenzene	100-41-4	95.4	95.4	PCT		MS	TRG		LSA		125	75	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			m- and p-Xylene	m&pXylene	98.6	98.6	PCT		MS	TRG		LSA		130	75	20081007		4.1	0.500	1.00	2.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			o-Xylene	95-47-6	97.7	97.7	PCT		MS	TRG		LSA		120	80	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Tetrachloroethene	127-18-4	94.0	94.0	PCT		MS	TRG		LSA		150	45	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Toluene	108-88-3	93.4	93.4	PCT		MS	TRG		LSA		120	75	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Toluene-d8	2037-26-5	101	101	PCT REC		MS	SURR		LSA		120	85	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			trans-1,2-Dichloroethene	156-60-5	99.4	99.4	PCT		MS	TRG		LSA		140	60	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Trichloroethene	79-01-6	101	101	PCT		MS	TRG		LSA		120	70	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS01	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140915	21:10:00	20140915	21:10:00	NBS01-A-MW15	1			Vinyl chloride	75-01-4	103	103	PCT		MS	TRG		LSA		145	50	20081007		4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS02	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW3510C	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140917	11:38:00	20140917	19:01:00	NBS01-A-MW15	1			1,4-Dioxane	123-91-1	24.7	24.7	PCT		MS	TRG		LSA		110	5	20081007		4.1	0.123	0.245	0.490	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS02	NONS	SVOA	8270D	SVOA	ELABT	EMPHERICAL LABS		WET	SW3510C	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140917	11:38:00	20140917	19:01:00	NBS01-A-MW15	1			2,4,6-Tribromophenol	118-79-6	89.5	89.5	PCT REC		MS	SURR		LSA		125	40	20081007		4.1	0.0481	0.192	0.385	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS02	NONS	SVOA	8270D	SVOA	ELABT	EMPHERICAL LABS		WET	SW3510C	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140917	11:38:00	20140917	19:01:00	NBS01-A-MW15	1			2-Fluorobiphenyl	321-60-8	78.7	78.7	PCT REC		MS	SURR		LSA		110	50	20081007		4.1	0.0481	0.0962	0.192	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15-MS02	NONS	SVOA	8270D	SVOA	ELABT	EMPHERICAL LABS		WET	SW3510C	000	MSD	W	4	09/10/2014 15:00	09/11/2014			20140917	11:38:00	20140917	19:01:00	NBS01-A-MW15	1			Terphenyl-d14	1718-51-0	82.7	82.7	PCT REC		MS	SURR		LSA		135	50	20081007		4.1	0.0490	0.0980	0.196	1409059	4126109		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 08:00	09/11/2014			20140915	11:23:00	20140915	11:23:00	NBS09-09-01	1			Dibromofluoromethane	1868-53-7	107	107	PCT REC		MS	SURR		LSA		115	85	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 08:00	09/11/2014			20140915	12:56:00	20140915	12:56:00	NBS09-09-02	1			Dibromofluoromethane	1868-53-7	105	105	PCT REC		MS	SURR		LSA		115	85	20081007		4.1	0.250	0.500	30.0	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-15WB-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 09:40	09/11/2014			20140916	11:25:00	20140916	11:25:00	NBS09-09-05	1			Dibromofluoromethane	1868-53-7	113	113	PCT REC		MS	SURR		LSA		115	85	20081007		4.1	0.250	0.500	30.0	1409059	4126001		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 17:00	09/11/2014			20140915	13:23:00	20140915	13:23:00	NBS09-09-01	1			m- and p-Xylene	m&pXylene	1.00	1.00	UG_L	U	U	MS	TRG							4.1	0.500	1.00	2.00	1409059	4126002		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 17:00	09/11/2014			20140915	13:23:00	20140915	13:23:00	NBS09-09-01	1			o-Xylene	95-47-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 17:00	09/11/2014			20140915	13:23:00	20140915	13:23:00	NBS09-09-01	1			Tetrachloroethene	127-18-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 17:00	09/11/2014			20140915	13:23:00	20140915	13:23:00	NBS09-09-01	1			Tetrachloroethene	127-18-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 08:00	09/11/2014			20140915	12:56:00	20140915	12:56:00	NBS09-09-02	1			Tetrachloroethene	127-18-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 08:00	09/11/2014			20140915	12:56:00	20140915	12:56:00	NBS09-09-02	1			Toluene	108-88-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 08:00	09/11/2014			20140915	12:56:00	20140915	12:56:00	NBS09-09-02	1			Trichloroethene	79-01-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 08:00	09/11/2014			20140915	12:56:00	20140915	12:56:00	NBS09-09-02	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 17:00	09/11/2014			20140915	13:23:00	20140915	13:23:00	NBS09-09-01	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091014	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 08:00	09/11/2014			20140915	12:56:00	20140915	12:56:00	NBS09-09-02	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409059	4125908		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW15B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 13:00	09/11/2014			20140916	13:51:00	20140915	13:51:00	NBS09-09-03	1			Toluene-d8	2037-26-5	103	103	PCT REC		MS	SURR		LSA		120	85	20081007		4.1	0.250	0.500	30.0	1409059	4126001		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW16B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/10/2014 11:10	09/11/2014			20140916	10:58:00	20140916	10:58:00	NBS09-09-04	1			Toluene-d8	2037-26-5	102	102	PCT REC		MS	SURR		LSA		120	85	20081007		4.1	0.250	0.500	30.0	1409059	4126001		
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-MW19B-R15	NONE	VOA	8260B	VOA

| Contract_ID | DO_CTO_Number | Phase | Installation_ID | Sample_Name | CH2M_Code | Analyst | Analytical_PBC | Code | Lab_Code | Lab_Name | Leachate_Method | Sample_Basis | Extraction_ID | Result | Lab_QS | Sample_Medium | QC_Level | DateTime_Collected | Date_Received | Leachate_Date | Leachate_Time | Extraction_ID | Extraction | Analysis_Date | Analysis_ID | Analysis_Batch | Run | Percent_Moisture | Percent_Lipid | Chem_Name | Analyte_ID | Analyte_Value | Original_Result | Result_Units | Lab_QS | Validator_Qualifier | QC_Column_Type | Analyte | Result_Narrative | QC_Control_Limit_Code | QC_Accuracy_Upper | QC_Accuracy_Lower | Control_Limit_Date | QC_Narrative | MDL | Detection_Limit | QSM_Version | DL | LOD | LOQ | SDG | Analysis_Batch | Validator_Name | Val_Date |
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| Contract_ID | DO_CTO_Number | Phase | Installation_ID | Sample_Name | CH2M_Code | Analyst | Analytical | PRC_Code | Lab_Code | Lab_Name | Leachate_Method | Sample_Basis | Extraction_N | Result | Lab_QS | Sample_Medium | QC_Level | DateTime_Collected | Date_Received | Leachate_Date | Leachate_Time | Extraction_DT | Extraction | Analysis_Dat | Analysis_TI | Lab_Sample_ID | Dilut | Run | Percent_Moisture | Percent_Lipid | Chem_Name | Analyte_ID | Analyte_Value | Original_ | Result_Units | Lab_Q | Validator_Qualifier | QC_Column_Type | Analyte | Result_Narrative | QC_Control_Limit_Code | QC_Accuracy_Upper | QC_Accuracy_Lower | Control_Limit_Date | QC_Narrative | MDL | Detection_Limit | QSM_Version | DL | LOD | LOQ | SDG | Analysis_Batch | Validator_Name | Val_Date |
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| Contract_ID | DO_CTO_Number | Phase | Installation_ID | Sample_Name | CH2M_Code | Analyst | Analytical_Method | CRC_Code | Lab_Code | Lab_Name | Leachate_Method | Sample_Basis | Extraction_ID | Result | Lab_QS | Sample_Medium | QC_Level | DateTime_Collected | Date_Received | Leachate_Date | Leachate_Time | Extraction_ID | Extraction_Date | Analysis_ID | Analysis_Date | Lab_Sample_ID | Dilution | Run | Percent_Moisture | Percent_Lipid | Chem_Name | Analyte_ID | Analyte_Value | Original_Result | Result_Units | Lab_Qualifier | Validator_Qualifier | QC_Column_Type | Analysis_Result_Narrative | QC_Control_Limit_Code | QC_Accuracy_Upper | QC_Accuracy_Lower | Control_Limit_Date | QC_Narrative | MDL | Detection_Limit | QSM_Version | DL | LOD | LOQ | SDG | Analysis_Batch | Validator_Name | Val_Date |
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| Contract_ID | DO_CTO_Number | Phase | Installation_ID | Sample_Name | CH2M_Code | Analyst | Analytical_Method | PRC_Code | Lab_Code | Lab_Name | Leachate_Method | Sample_Basis | Extraction_Id | Result | Lab_Qualifier | Sample_Medium | QC_Level | DateTime_Collected | Date_Received | Leachate_Date | Leachate_Time | Extraction_Date | Extraction_Time | Extraction_Id | Abstraction_Date | Analysis_Date | Analysis_Time | Lab_Sample_ID | Dilution | Run | Percent_Moisture | Percent_Lipid | Chem_Name | Analyte_ID | Analyte_Value | Original_Result | Result_Units | Lab_Qualifier | Validator_Qualifier | QC_Column_Type | Analysis_Method | Result_Narrative | QC_Control_Limit_Code | QC_Accuracy_Upper | QC_Accuracy_Lower | Control_Limit_Date | QC_Narrative | MDL | Detection_Limit | QSM_Version | DL | LOD | LOQ | SDG | Analysis_Batch | Validator_Name | Val_Date |
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Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analyst	Analytical_Proc	PRC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_ID	Result	Lab_QC	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_ID	Extraction_Analyst	Analysis_Date	Analysis_ID	Dilution	Run	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Result	Result_Units	Lab_Qualifier	Validator_Qualifier	QC_Column_Type	Analysis_Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
%6247011D8012	WE79		NORFOLK_NB	4123005-851	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	BS	W	4	09/23/2014 08:32	09/23/2014			20140923	08:32:00	20140923	08:32:00	4123005-851	1	1			Toluene-d8	2037-26-5	94.6	94.6	PCT_REC			MS	SURR	LSA	LSA	120	85	20081007				4.1	0.250	0.500	50.0	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	4123005-851	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	BS	W	4	09/23/2014 08:32	09/23/2014			20140923	08:32:00	20140923	08:32:00	4123005-851	1	1			trans-1,2-Dichloroethene	156-60-5	93.6	93.6	PCT_REC			MS	TRG	LSA	LSA	125	70	20081007				4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	4123005-851	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	BS	W	4	09/23/2014 08:32	09/23/2014			20140923	08:32:00	20140923	08:32:00	4123005-851	1	1			Trichloroethene	79-01-6	91.2	91.2	PCT			MS	TRG	LSA	LSA	125	70	20081007				4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	4123005-851	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	BS	W	4	09/23/2014 08:32	09/23/2014			20140923	08:32:00	20140923	08:32:00	4123005-851	1	1			Vinyl chloride	75-01-4	103	103	PCT			MS	TRG	LSA	LSA	145	50	20081007				4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			1,1,1-Trichloroethane	71-55-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			1,1,1-Trichloroethane	71-55-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140927	10:53:00	1409077-06	1	1			1,1-Dichloroethene	75-35-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140927	11:21:00	1409077-07	1	1			1,1-Dichloroethene	75-35-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140927	10:53:00	1409077-06	1	1			cis-1,2-Dichloroethene	156-59-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140927	11:21:00	1409077-07	1	1			cis-1,2-Dichloroethene	156-59-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Ethylbenzene	100-41-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Ethylbenzene	100-41-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Methylene chloride	75-09-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Methylene chloride	75-09-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Naphthalene	91-20-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Naphthalene	91-20-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			o-Xylene	95-47-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			o-Xylene	95-47-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Tetrachloroethene	127-18-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Tetrachloroethene	127-18-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Toluene	108-88-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Toluene	108-88-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Xylenes, total	1330-20-7	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB091214	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Xylenes, total	1330-20-7	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW17B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			1,1,1-Trichloroethane	71-55-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW17B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			1,1,1-Trichloroethane	71-55-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			1,1-Dichloroethene	75-35-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			1,1-Dichloroethene	75-35-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			cis-1,2-Dichloroethene	156-59-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			cis-1,2-Dichloroethene	156-59-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Ethylbenzene	100-41-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Ethylbenzene	100-41-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Methylene chloride	75-09-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Methylene chloride	75-09-2	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Naphthalene	91-20-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Naphthalene	91-20-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			o-Xylene	95-47-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			o-Xylene	95-47-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Tetrachloroethene	127-18-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Tetrachloroethene	127-18-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Toluene	108-88-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Toluene	108-88-3	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Xylenes, total	1330-20-7	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Xylenes, total	1330-20-7	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Trichloroethene	79-01-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW18B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Trichloroethene	79-01-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Trichloroethene	79-01-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Trichloroethene	79-01-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Xylenes, total	1330-20-7	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Xylenes, total	1330-20-7	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Trichloroethene	79-01-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Trichloroethene	79-01-6	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	10:53:00	20140923	10:53:00	1409077-06	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VOA	8260B	VOA	ELABT	EMPHERICAL LABS		WET	SW5030B	000	REG	W	4	09/12/2014 10:00	09/13/2014			20140923	11:21:00	20140923	11:21:00	1409077-07	1	1			Vinyl chloride	75-01-4	0.500	0.500	UG_L	U	U	MS	TRG							4.1	0.250	0.500	1.00	1409077	4126702		
%6247011D8012	WE79		NORFOLK_NB	NBS01-MW19B-R15	NONE	VO

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	CH2M_Code	Analyst	Analytical_PEC	Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_N	Result	Lab_Q	Sample_Medium	QC_Level	DateTime_Collected	Date_Received	Leachate_Date	Leachate_Time	Extraction_ID	Extraction_Analysis_Date	Lab_Sample_ID	Dilution	Run	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Q	Result_Units	Lab_Q	Validator_Qualifier	QC_Column_Type	Analyst	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	QSM_Version	DL	LOD	LOQ	Analysis_Batch	Validator_Name	Val_Date
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV8A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/11/2014 13:00	09/12/2014			20140918	10:00:00	20140924	10:56:00	FA18247-3	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.016	0.016	UG_L	U	U	PR	TRG										4.1	0.008	0.016	0.02	1409100	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4B-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 10:55	09/10/2014			20140916	11:30:00	20140918	15:48:00	FA18133-2	1	1			13C2-PFDA		118	118	PCT			PR	SURR	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4B-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 10:55	09/10/2014			20140916	11:30:00	20140918	15:48:00	FA18133-2	1	1			13C2-PFHxA		118	118	PCT			PR	SURR	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV8A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/11/2014 13:00	09/12/2014			20140918	10:00:00	20140924	10:56:00	FA18247-3	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0255	0.0255	UG_L			PR	TRG								4.1	0.008	0.016	0.02	1409100	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV8A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/11/2014 13:00	09/12/2014			20140918	10:00:00	20140924	10:56:00	FA18247-3	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.0179	0.0179	UG_L	J	J	PR	TRG								4.1	0.016	0.032	0.04	1409100	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV9A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/11/2014 11:15	09/12/2014			20140918	11:30:00	20140918	20:49:00	1409069-07	1	1			1,4-Dioxane	123-91-1	0.250	0.250	UG_L	U	U	MS	TRG								4.1	0.125	0.250	0.500	1409069	162608	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV9B-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/11/2014 11:25	09/12/2014			20140918	11:19:00	20140918	21:16:00	1409069-08	1	1			1,4-Dioxane	123-91-1	0.231	0.231	UG_L	U	U	MS	TRG								4.1	0.116	0.231	0.463	1409069	162608	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-EW3B-R15	NONS	SVOA	82700	SVOA	ELABT	EMPHERICAL LABS	WET	SWS100	000	REG	W	4	09/08/2014 13:15	09/10/2014			20140915	11:32:00	20140916	16:08:00	1409048-03	1	1			1,4-Dioxane	123-91-1	0.305	0.305	UG_L	J	J	MS	TRG								4.1	0.118	0.236	0.472	1409048	162606	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-EW3B-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 13:15	09/10/2014			20140918	10:00:00	20140923	13:38:00	FA18133-12	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.016	0.016	UG_L	U	U	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4AP-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:20	09/10/2014			20140916	11:30:00	20140918	17:24:00	FA18133-5	1	1			13C2-PFDA		112	112	PCT			PR	SURR	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4AP-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:20	09/10/2014			20140916	11:30:00	20140918	17:24:00	FA18133-5	1	1			13C2-PFHxA		93	93	PCT			PR	SURR	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-EB090914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/05/2014 16:00	09/10/2014			20140918	10:00:00	20140923	14:41:00	FA18133-15	1	1			13C2-PFHxA		114	114	PCT			PR	SURR	SLSA		130	70	20131112								1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-EW3B-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 13:15	09/10/2014			20140918	10:00:00	20140923	13:38:00	FA18133-12	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.016	0.016	UG_L	U	U	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-EW3B-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 13:15	09/10/2014			20140918	10:00:00	20140923	13:38:00	FA18133-12	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.0497	0.0497	UG_L	J	J	PR	TRG								4.1	0.016	0.032	0.04	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	OPS1121-B5	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	BS	W	UNK	09/16/2014 11:30				20140916	11:30:00	20140918	14:01:00	OPS1121-B5	1	1			Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	0.8333	0.83	UG_L	U	U	PR	TRG	MSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	BS	W	UNK	09/18/2014 10:00				20140916	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			Perfluorooctanesulfonic Acid (PFOS)	375-73-5	104	104	PCT			PR	TRG	MSA		130	70	20131112								1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-4WSA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:05	09/10/2014			20140916	11:30:00	20140918	16:45:00	FA18133-3	1	1			13C2-PFDA		97	97	PCT			PR	SURR	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW5A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:05	09/10/2014			20140916	11:30:00	20140918	15:09:00	OPS1121-M8	1	1			Perfluorooctanesulfonic Acid (PFOS)	375-73-5	0.016	0.016	UG_L	U	U	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	SF1106089	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	BLK	W	UNK	09/16/2014 11:30				20140916	11:30:00	20140918	15:09:00	OPS1121-M8	1	1			13C2-PFHxA		90	90	PCT			PR	TRG	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-EW3B-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 13:15	09/10/2014			20140918	10:00:00	20140923	13:38:00	FA18133-12	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.0357	0.0357	UG_L	J	J	PR	TRG								4.1	0.016	0.032	0.04	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	SF1112911	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	BLK	W	UNK	09/18/2014 10:00				20140918	10:00:00	20140923	12:41:00	OPS1158-M8	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.016	0.016	UG_L	U	U	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV8A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	MS	W	UNK	09/18/2014 10:00				20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	90	90	PCT			PR	TRG	MSA		130	70	20131112								1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV8A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	MSD	W	UNK	09/18/2014 10:00				20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	5	5	PCT			PR	TRG	MSP		30	20	20131112								1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4B-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 10:55	09/10/2014			20140916	11:30:00	20140922	12:42:00	OPS1121-M5	1	1			13C2-PFDA		92	92	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1121	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4B-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			13C2-PFDA		99	99	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			13C2-PFHxA		87	87	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4B-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	MSD	W	UNK	09/08/2014 10:55	09/10/2014			20140916	11:30:00	20140922	12:42:00	OPS1121-M5D	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	2	2	PCT			PR	TRG	MSP		30	20	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV11A-R15	NONS	SVOA	82700	SVOA	ELABT	EMPHERICAL LABS	WET	SWS100	000	REG	W	4	09/09/2014 13:30	09/10/2014			20140915	11:32:00	20140916	18:51:00	1409048-09	1	1			1,4-Dioxane	123-91-1	0.273	0.273	UG_L	J	J	MS	TRG								4.1	0.116	0.231	0.463	1409048	162606	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW3B-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:30	09/10/2014			20140916	11:30:00	20140918	18:21:00	FA18133-6	1	1			13C2-PFDA		117	117	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW3B-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:30	09/10/2014			20140916	11:30:00	20140918	18:21:00	FA18133-6	1	1			13C2-PFHxA		96	96	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV11A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 13:30	09/10/2014			20140918	10:00:00	20140923	14:17:00	FA18133-14	10	1			Perfluorooctanesulfonic Acid (PFOS)	375-73-5	0.2222	0.2222	UG_L	J	J	PR	TRG								4.1	0.083	0.17	0.21	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW7A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:40	09/10/2014			20140916	11:30:00	20140922	13:01:00	FA18133-7	10	2			13C2-PFDA		85	85	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW7A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:40	09/10/2014			20140916	11:30:00	20140922	13:01:00	FA18133-7	10	2			13C2-PFHxA		106	106	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV11A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 13:30	09/10/2014			20140918	10:00:00	20140923	14:17:00	FA18133-14	10	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.292	0.292	UG_L			PR	TRG								4.1	0.083	0.17	0.21	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV11A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 13:30	09/10/2014			20140918	10:00:00	20140923	14:17:00	FA18133-14	10	1			Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	2	2	UG_L			PR	TRG								4.1	0.083	0.17	0.21	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW7A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:40	09/10/2014			20140916	11:30:00	20140918	18:41:00	FA18133-7	1	1			13C2-PFHxA		118	118	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW7A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:40	09/10/2014			20140916	11:30:00	20140918	18:41:00	FA18133-7	1	1			13C2-PFHxA		97	97	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV11A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	MSD	W	UNK	09/09/2014 13:30	09/10/2014			20140918	10:00:00	20140923	14:17:00	FA18133-14	10	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.17	0.17	UG_L	U	U	PR	TRG								4.1	0.083	0.17	0.21	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV11A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 13:30	09/10/2014			20140918	10:00:00	20140923	14:17:00	FA18133-14	10	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	1.29	1.29	UG_L			PR	TRG								4.1	0.083	0.17	0.21	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV11A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 13:30	09/10/2014			20140918	10:00:00	20140923	14:17:00	FA18133-14	10	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.746	0.746	UG_L			PR	TRG								4.1	0.17	0.33	0.42	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV11B-R15	NONS	SVOA	82700	SVOA	ELABT	EMPHERICAL LABS	WET	SWS100	000	REG	W	4	09/09/2014 12:45	09/10/2014			20140915	11:32:00	20140916	19:28:00	1409048-10	1	1			1,4-Dioxane	123-91-1	0.231	0.231	UG_L	J	J	MS	TRG								4.1	0.116	0.231	0.463	1409048	162606	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW3A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:55	09/10/2014			20140916	11:30:00	20140922	13:20:00	FA18133-8	20	2			13C2-PFDA		70	70	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW3A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:55	09/10/2014			20140916	11:30:00	20140922	13:20:00	FA18133-8	20	2			13C2-PFHxA		99	99	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV23B-R15	NONS	SVOA	82700	SVOA	ELABT	EMPHERICAL LABS	WET	SWS100	000	REG	W	4	09/11/2014 14:55	09/12/2014			20140918	11:19:00	20140919	22:38:00	1409069-11	1	1			1,4-Dioxane	123-91-1	0.229	0.229	UG_L	J	J	MS	TRG								4.1	0.125	0.250	0.500	1409069	162608	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A2-WV23B-R15	NONS	SVOA	82700	SVOA	ELABT	EMPHERICAL LABS	WET	SWS100	000	REG	W	4	09/11/2014 14:50	09/12/2014			20140918	11:19:00	20140919	21:40:00	1409069-09	1	1			1,4-Dioxane	123-91-1	0.238	0.238	UG_L	J	J	MS	TRG								4.1	0.116	0.231	0.463	1409069	162608	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW3A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:55	09/10/2014			20140916	11:30:00	20140918	19:00:00	FA18133-8	1	1			13C2-PFHxA		105	105	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW3A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:55	09/10/2014			20140916	11:30:00	20140918	19:00:00	FA18133-8	1	1			13C2-PFDA		87	87	PCT			PR	SURF	SLSA		130	70	20131112								1409070	OPS1321	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-GW-3-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 11:45	09/10/2014			20140918	11:32:00	20140924	16:30:00	1409048-04	1	1			1,4-Dioxane	123-91-1	0.250	0.250	UG_L	U	U	MS	TRG								4.1	0.125	0.250	0.500	1409048	162606	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-GW-3-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 11:45	09/10/2014			20140918	10:00:00	20140923	13:57:00	FA18133-13	1	1			Perfluorooctanesulfonic Acid (PFOS)	375-73-5	0.016	0.016	UG_L	U	U	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-GW-3-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/09/2014 11:45	09/10/2014			20140918	10:00:00	20140923	13:57:00	FA18133-13	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.0257	0.0257	UG_L	J	J	PR	TRG								4.1	0.016	0.032	0.04	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-4WSA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:05	09/10/2014			20140916	11:30:00	20140918	16:45:00	FA18133-3	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.0125	0.0125	UG_L	J	J	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.016	0.016	UG_L	U	U	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0255	0.0255	UG_L	J	J	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.0391	0.0391	UG_L	J	J	PR	TRG								4.1	0.016	0.032	0.04	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.0201	0.0201	UG_L			PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	0.208	0.208	UG_L	J	J	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-B-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.016	0.016	UG_L	U	U	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A-EW4A-0914	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	REG	W	UNK	09/08/2014 11:15	09/10/2014			20140916	11:30:00	20140918	17:04:00	FA18133-4	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.285	0.285	UG_L	J	J	PR	TRG								4.1	0.008	0.016	0.02	1409070	OPS1158	
%6247011D8012	WE79		NORFOLK_NB	NBS01-A1-WV9A-R15	NONS	SVOA	EPA 537 MOD	ACCUT_Q	Accutest, Orlando, FL		N	METHOD	000	MS	W	UNK	09/18/2014 10:00				20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1	

Contract_ID	DO_CTO_Number	Phase	Installation_ID	Sample_Name	OH2M_Code	Analysis_Cat	Analysis_Type	PBC_Code	Lab_Code	Lab_Name	Leachate_Method	Sample_Basis	Extraction_M	Result_Lab_Q	Lab_Q	Sample_Medium	QC_Level	DateTime_Collected	Extraction_Dt	Extraction_Time	Analysis_Dt	Analysis_Time	Lab_Sample_ID	Dilution	Run_	Percent_Moisture	Percent_Lipid	Chem_Name	Analyte_ID	Analyte_Value	Original_Val	Result_Units	Lab_Q	Validator_Qualifier	QC_Column_Type	Analysis	Result_Narrative	QC_Control_Limit_Code	QC_Accuracy_Upper	QC_Accuracy_Lower	QC_Control_Limit_Date	QC_Narrative	MDL	Detection_Limit	IQSM_Version	DL	LOD	LOQ	SDG	Analysis_Batch	Validator_Name	Val_Date
N62470110D8012	WE79		NORFOLK_NB	OPS1121-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/16/2014 11:30			20140916	11:30:00	20140918	14:01:00	OPS1121-B5	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	99	99	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.008		0.02	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	86	86	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.008		0.02	1409070	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	SFS106589	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	BLK	W	UNK	09/16/2014 11:30			20140916	11:30:00	20140918	15:09:00	OPS1121-MB	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.016	0.016	UG_L	U		PR	TRG										4.1	0.008	0.016	0.02	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	SFS112911	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	BLK	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:41:00	OPS1158-MB	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.016	0.016	UG_L	U		PR	TRG										4.1	0.008	0.016	0.02	1409070	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/16/2014 10:00			20140916	10:00:00	20140922	16:37:00	OPS1158-MS	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	81	81	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.017		0.042	1409070	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	12	12	PCT			PR	TRG		MSP		30		20131112				4.1	0.017		0.042	1409070	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWBA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/08/2014 10:55	09/10/2014		20140916	11:30:00	20140922	12:42:00	OPS1121-MS	5	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	86	86	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.083		0.21	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWBA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/08/2014 10:55	09/10/2014		20140916	11:30:00	20140922	12:42:00	OPS1121-MSD	5	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	6	6	PCT			PR	TRG		MSP		30		20131112				4.1	0.083		0.21	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-WSA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/08/2014 10:55	09/10/2014		20140916	11:30:00	20140922	12:42:00	OPS1121-MS	5	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	86	86	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.083	0.21	0.21	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWSA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 11:05	09/10/2014		20140916	11:30:00	20140918	16:45:00	OPS1121-MS	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0380	0.0380	UG_L			PR	TRG										4.1	0.0083	0.017	0.021	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWSA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 11:05	09/10/2014		20140916	11:30:00	20140918	16:45:00	OPS1121-MSD	1	1			Perfluorooctanesulfonic Acid (PFOS)	1763-23-1	0.0094	0.0094	UG_L	J		PR	TRG										4.1	0.0083	0.017	0.021	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	104	104	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.008		0.02	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	OPS1112911	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	BLK	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:41:00	OPS1158-MB	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.016	0.016	UG_L	U	U	PR	TRG										4.1	0.008	0.016	0.02	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	90	90	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.017		0.042	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	30	30	PCT			PR	TRG		MSP		30		20131112				4.1	0.017		0.042	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWSA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 11:05	09/10/2014		20140916	11:30:00	20140918	16:45:00	OPS1121-MS	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.0791	0.0791	UG_L			PR	TRG										4.1	0.0083	0.017	0.021	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWSA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 11:05	09/10/2014		20140916	11:30:00	20140918	16:45:00	OPS1121-MSD	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.18	0.18	UG_L			PR	TRG										4.1	0.033	0.042	0.085	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWTA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 11:40	09/10/2014		20140916	11:30:00	20140918	18:41:00	PA18133-7	1	1			Perfluorooctanoic Acid (PFOA)	375-73-5	0.0486	0.0486	UG_L			PR	TRG										4.1	0.008	0.016	0.02	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	89	89	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.008		0.02	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	SFS1112911	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	BLK	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:41:00	OPS1158-MB	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.016	0.016	UG_L	U	U	PR	TRG										4.1	0.008	0.016	0.02	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	89	89	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.017		0.042	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	30	30	PCT			PR	TRG		MSP		30		20131112				4.1	0.017		0.042	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWTA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 11:40	09/10/2014		20140916	11:30:00	20140922	13:01:00	PA18133-7	10	2			Perfluorooctanoic Acid (PFOA)	1763-23-1	0.901	0.901	UG_L			PR	TRG										4.1	0.08	0.16	0.2	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWTA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 11:40	09/10/2014		20140916	11:30:00	20140918	18:41:00	PA18133-7	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.16	0.16	UG_L			PR	TRG										4.1	0.016	0.032	0.04	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWDAP-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/11/2014 16:40	09/12/2014		20140918	10:00:00	20140923	13:58:00	PA18247-2	1	1			13C2-PFDA		123	123	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWDAP-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/11/2014 16:40	09/12/2014		20140918	10:00:00	20140923	13:58:00	PA18247-2	1	1			13C2-PFHxA		111	111	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWDAP-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/11/2014 16:35	09/12/2014		20140918	10:00:00	20140923	13:39:00	PA18247-1	1	1			13C2-PFDA		117	117	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWDAP-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/11/2014 16:35	09/12/2014		20140918	10:00:00	20140923	13:39:00	PA18247-1	1	1			13C2-PFHxA		105	105	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWBA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 10:40	09/10/2014		20140916	11:30:00	20140918	15:28:00	PA18133-1	1	1			Perfluorobutanesulfonic Acid (PFBS)	375-73-5	0.0342	0.0342	UG_L			PR	TRG										4.1	0.011	0.022	0.028	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-EBO90914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/09/2014 16:00	09/10/2014		20140918	10:00:00	20140923	14:41:00	PA18133-15	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.033	0.033	UG_L	U	U	PR	TRG										4.1	0.017	0.033	0.042	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.008	0.008	UG_L			PR	TRG										4.1	0.008		0.02	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	SFS112911	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	BLK	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:41:00	OPS1158-MB	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	0.016	0.016	UG_L	U	U	PR	TRG										4.1	0.008	0.016	0.02	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	113	113	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.017		0.042	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			Perfluorononanoic Acid (PFNA)	375-95-1	12	12	PCT			PR	TRG		MSP		30		20131112				4.1	0.017		0.042	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWBA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/08/2014 10:40	09/10/2014		20140916	11:30:00	20140918	15:28:00	PA18133-1	1	1			Perfluoroheptanoic Acid (PFHpA)	375-85-9	0.0224	0.0224	UG_L	J	J	PR	TRG										4.1	0.011	0.022	0.028	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	REG	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	13:58:00	PA18247-3	1	1			13C2-PFDA		122	122	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140924	10:56:00	PA18247-3	1	1			13C2-PFHxA		86	86	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-B-EWBA-0914	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/08/2014 10:40	09/10/2014		20140916	11:30:00	20140918	15:28:00	PA18133-1	1	1			Perfluorohexanesulfonic Acid (PFHxS)	355-46-4	0.157	0.157	UG_L			PR	TRG										4.1	0.011	0.022	0.028	1409070	OPS1121		
N62470110D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			13C2-PFDA		125	125	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			13C2-PFHxA		127	127	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	SFS1112911	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	BLK	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:41:00	OPS1158-MB	1	1			13C2-PFDA		108	108	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1			13C2-PFHxA		104	104	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			13C2-PFDA		118	118	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1			13C2-PFHxA		101	101	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			13C2-PFDA		115	115	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			13C2-PFHxA		94	94	PCT			PR	SURR		SLSA		130	70	20131112				4.1				1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	OPS1158-B5	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	B5	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:21:00	OPS1158-B5	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	89	89	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.016		0.04	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	SFS1112911	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	BLK	W	UNK	09/18/2014 10:00			20140918	10:00:00	20140923	12:41:00	OPS1158-MB	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	0.032	0.032	UG_L	U	U	PR	TRG										4.1	0.016	0.032	0.04	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MS	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:37:00	OPS1158-MS	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	94	94	PCT			PR	TRG		MSA		130	70	20131112				4.1	0.033		0.083	1409100	OPS1158		
N62470110D8012	WE79		NORFOLK_NB	NBS01-A1-WWBA-R15	NONS	SVOA	EPA 537 MOD	ACCUT_O	Accutest, Orlando, FL			N	METHOD	000	MSD	W	UNK	09/11/2014 13:00	09/12/2014		20140918	10:00:00	20140923	16:56:00	OPS1158-MSD	1	1			Perfluorooctanoic Acid (PFOA)	335-67-1	9	9	PCT			PR	TRG		MSP		30		20131112				4.1	0.033		0.083	1409100	OPS1158		

Data Validation Summary

Naval Station, Norfolk, Site 1

TO: Juliana Dean/VBO

Anita Dodson/VBO

FROM: Tiffany McGlynn/GNV

CC: Herb Kelly/GNV

DATE: November 25, 2014

Introduction

The following data validation report discusses the data validation process and findings for Empirical Laboratories, for SDG 1409070.

Samples were analyzed using the analytical methods below.

- EPA 537 MOD Semivolatiles (subbed out to Accutest Orlando)

The samples included in this SDG are listed in the table below.

Sample Name	Matrix
NBS01-B-EW8A-0914	Water
NBS01-A1-EW4B-R15	Water
NBS01-A1-EW3B-R15	Water
NBS01-A2-EW3B-R15	Water
NBS01-A-GW-3-R15	Water
NBS01-A2-MW11A-R15	Water
NBS01-EB090914	Water
NBS01-B-EW4B-0914	Water
NBS01-B-EW5A-0914	Water
NBS01-B-EW4A-0914	Water
NBS01-B-EW4AP-0914	Water
NBS01-B-EW3B-0914	Water
NBS01-B-EW7A-0914	Water
NBS01-B-EW3A-0914	Water
NBS01-B-EW2B-0914	Water

Data Evaluation

Data was evaluated in accordance with the analytical methods and with the criteria found in the following guidance documents: Sampling and Analysis Plan Long-Term Monitoring Plan for Groundwater Sites 1,2,3,6,18, and 20 Naval Station Norfolk, Norfolk, Virginia Contract Task Order WE79 (October 2014) and Region III Modifications for Organic Data Review (EPA 1994) as applicable. The samples were evaluated based on the following criteria:

- Data Completeness
- Technical Holding Times
- Instrument Tuning
- Initial/Continuing Calibrations
- Blanks
- Internal Standards
- Laboratory Control Samples
- Matrix Spike Recoveries
- Surrogates
- Field Duplicates
- Identification/Quantitation
- Reporting Limits

Overall Evaluation of Data/Potential Usability Issues

Specific details regarding qualification of the data are addressed in the sections below. If an issue is not addressed there were no actions required based on unmet quality criteria. When more than one qualifier is associated with a compound/analyte, the validator has chosen the qualifier that best indicates possible bias in the results and qualified these data accordingly.

Data Completeness

The SDG was received complete and intact.

Technical Holding Times

According to the chain of custody records, sampling was performed on 9/8/14 and 9/9/14. Samples were received at the laboratory on 9/10/14. All sample preparation and analyses were performed within holding time requirements.

Matrix Spike/Spike Duplicate

For spiked sample NBS01-B-EW4B-0914, perfluorooctanoic acid (PFOA) exhibited low recoveries in the MS/MSD. Affected data are summarized below.

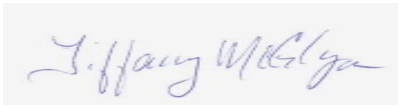
Sample ID	Compound	Q Flag	Qual Code
NBS01-B-EW4B-0914	perfluorooctanoic acid (PFOA)	L	MSL

Conclusion

These data can be used in the project decision-making process as qualified by the data quality evaluation process.

Please do not hesitate to contact us about this validation report.

Sincerely,



Tiffany McGlynn

Qualification Flags

Exclude	More appropriate data exist for this analyte.
R	Data were rejected for use.
UL	Analyte not detected, quantitation limit is potentially biased low.
UJ	Analyte not detected, estimated quantitation limit.
U	Analyte not detected.
B	Not detected substantially above the level reported in laboratory or field blanks.
L	Analyte present, estimated value potentially biased low.
K	Analyte present, estimated value potentially biased high.
N	Analyte identification presumptive; no second column analysis performed or GC/MS tentative identification.
J	Analyte present, estimated value.
NJ	Analysis indicates the presence of an analyte that was "tentatively identified" and the associated value represents its approximate concentration.
None	Placeholder for calculating quality control issues that do not require flagging.
=	Analyte was detected at a concentration greater than the quantitation limit.

Qualifier Code Reference

Value	Description
%SOL	High Moisture content
2C	Second Column – Poor Dual Column Reproducibility
2S	Second Source – Bad reproducibility between tandem detectors
BD	Blank Spike/Blank Spike Duplicate(LCS/LCSD) Precision
BRL	Below Reporting Limit
BSH	Blank Spike/LCS – High Recovery
BSL	Blank Spike/LCS – Low Recovery
CC	Continuing Calibration
CCBL	Continuing Calibration Blank Contamination
CCH	Continuing Calibration Verification – High Recovery
CCL	Continuing Calibration Verification – Low Recovery
DL	Redundant Result – due to Dilution
EBL	Equipment Blank Contamination
EMPC	Estimated Possible Maximum Concentration
ESH	Extraction Standard - High Recovery
ESL	Extraction Standard - Low Recovery
FBL	Field Blank Contamination
FD	Field Duplicate
HT	Holding Time
ICB	Initial Calibration – Bad Linearity or Curve Function
ICH	Initial Calibration – High Relative Response Factors
ICL	Initial Calibration – Low Relative Response Factors
IR15	Ion ratio exceeds +/- 15% difference
ISH	Internal Standard – High Recovery
ISL	Internal Standard – Low Recovery
LD	Lab Duplicate Reproducibility
LR	Concentration Exceeds Linear Range
MBL	Method Blank Contamination
MDP	Matrix Spike/Matrix Spike Duplicate Precision
MI	Matrix interference obscuring the raw data

MSH	Matrix Spike and/or Matrix Spike Duplicate – High Recovery
MSL	Matrix Spike and/or Matrix Spike Duplicate – Low Recovery
OT	Other
PD	Pesticide Degradation
RE	Redundant Result - due to Reanalysis or Re-extraction
SD	Serial Dilution Reproducibility
SSH	Spiked Surrogate – High Recovery
SSL	Spiked Surrogate – Low Recovery
TBL	Trip Blank Contamination
TN	Tune

LOCATION_NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESC	SDG	COORD_X	COORD_Y	ANALYTICAL_METHOD_GRP_DESC	SAMPLE_NAME	SAMPLE_MATRIX	SAMPLE_MATRIX_DESC	COLLECT_DATE
NBS01-A1-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124204.25	3505502.489	Perfluoroalkyl Compounds	NBS01-A1-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-A1-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124263.02	3504906.626	Perfluoroalkyl Compounds	NBS01-A1-EW4B-R15	WG	Ground water	08-Sep-14
NBS01-A2-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-A2-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW2B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126405.77	3505209.91	Perfluoroalkyl Compounds	NBS01-B-EW2B-0914	WG	Ground water	08-Sep-14
NBS01-A2-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-A2-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-A2-EW3B	SITE 00002	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-EB090914	WQ	Water for QC samples	09-Sep-14
NBS01-A2-EW3B	SITE 00003	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-EB090914	WQ	Water for QC samples	09-Sep-14
NBS01-B-EW3A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126528.26	3505368.58	Perfluoroalkyl Compounds	NBS01-B-EW3A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4A-0914	WG	Ground water	08-Sep-14
NBS01-A2-MW11A	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126025	3506320.5	Perfluoroalkyl Compounds	NBS01-A2-MW11A-R15	WG	Ground water	09-Sep-14
NBS01-B-EW8A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126828.43	3504605.862	Perfluoroalkyl Compounds	NBS01-B-EW8A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126791.02	3505581.975	Perfluoroalkyl Compounds	NBS01-B-EW3B-0914	WG	Ground water	08-Sep-14
NBS01-A1-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124263.02	3504906.626	Perfluoroalkyl Compounds	NBS01-A1-EW4B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12127063.24	3505939.502	Perfluoroalkyl Compounds	NBS01-B-EW4B-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4A-0914	WG	Ground water	08-Sep-14
NBS01-A1-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124204.25	3505502.489	Perfluoroalkyl Compounds	NBS01-A1-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4A-0914	WG	Ground water	08-Sep-14
NBS01-A2-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-A2-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW7A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126772	3505364	Perfluoroalkyl Compounds	NBS01-B-EW7A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW8A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126828.43	3504605.862	Perfluoroalkyl Compounds	NBS01-B-EW8A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW3A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126528.26	3505368.58	Perfluoroalkyl Compounds	NBS01-B-EW3A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW2B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126405.77	3505209.91	Perfluoroalkyl Compounds	NBS01-B-EW2B-0914	WG	Ground water	08-Sep-14
NBS01-A-GW-3	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126380	3506820	Perfluoroalkyl Compounds	NBS01-A-GW-3-R15	WG	Ground water	09-Sep-14
NBS01-A-GW-3	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126380	3506820	Perfluoroalkyl Compounds	NBS01-A-GW-3-R15	WG	Ground water	09-Sep-14
NBS01-B-EW5A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126930.01	3505779.091	Perfluoroalkyl Compounds	NBS01-B-EW5A-0914	WG	Ground water	08-Sep-14
NBS01-A2-MW11A	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126025	3506320.5	Perfluoroalkyl Compounds	NBS01-A2-MW11A-R15	WG	Ground water	09-Sep-14
NBS01-B-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126791.02	3505581.975	Perfluoroalkyl Compounds	NBS01-B-EW3B-0914	WG	Ground water	08-Sep-14
NBS01-A2-MW11A	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126025	3506320.5	Perfluoroalkyl Compounds	NBS01-A2-MW11A-R15	WG	Ground water	09-Sep-14
NBS01-A2-MW11A	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126025	3506320.5	Perfluoroalkyl Compounds	NBS01-A2-MW11A-R15	WG	Ground water	09-Sep-14
NBS01-B-EW3A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126528.26	3505368.58	Perfluoroalkyl Compounds	NBS01-B-EW3A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12127063.24	3505939.502	Perfluoroalkyl Compounds	NBS01-B-EW4B-0914	WG	Ground water	08-Sep-14
NBS01-A1-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124204.25	3505502.489	Perfluoroalkyl Compounds	NBS01-A1-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-A1-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124263.02	3504906.626	Perfluoroalkyl Compounds	NBS01-A1-EW4B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4AP-0914	WG	Ground water	08-Sep-14
NBS01-A-GW-3	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126380	3506820	Perfluoroalkyl Compounds	NBS01-A-GW-3-R15	WG	Ground water	09-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4AP-0914	WG	Ground water	08-Sep-14
NBS01-B-EW2B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126405.77	3505209.91	Perfluoroalkyl Compounds	NBS01-B-EW2B-0914	WG	Ground water	08-Sep-14
"	"	NORFOLK_NB	"	"	1409070			Perfluoroalkyl Compounds	NBS01-EB090914	WQ	Water for QC samples	09-Sep-14
NBS01-A1-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124263.02	3504906.626	Perfluoroalkyl Compounds	NBS01-A1-EW4B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126791.02	3505581.975	Perfluoroalkyl Compounds	NBS01-B-EW3B-0914	WG	Ground water	08-Sep-14
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NBS01-A1-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124263.02	3504906.626	Perfluoroalkyl Compounds	NBS01-A1-EW4B-R15	WG	Ground water	08-Sep-14
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NBS01-A1-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124204.25	3505502.489	Perfluoroalkyl Compounds	NBS01-A1-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW8A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126828.43	3504605.862	Perfluoroalkyl Compounds	NBS01-B-EW8A-0914	WG	Ground water	08-Sep-14
NBS01-A2-MW11A	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126025	3506320.5	Perfluoroalkyl Compounds	NBS01-A2-MW11A-R15	WG	Ground water	09-Sep-14
NBS01-A-GW-3	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126380	3506820	Perfluoroalkyl Compounds	NBS01-A-GW-3-R15	WG	Ground water	09-Sep-14
NBS01-B-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126791.02	3505581.975	Perfluoroalkyl Compounds	NBS01-B-EW3B-0914	WG	Ground water	08-Sep-14
NBS01-B-EW5A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126930.01	3505779.091	Perfluoroalkyl Compounds	NBS01-B-EW5A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12127063.24	3505939.502	Perfluoroalkyl Compounds	NBS01-B-EW4B-0914	WG	Ground water	08-Sep-14
NBS01-A2-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-A2-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-A-GW-3	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126380	3506820	Perfluoroalkyl Compounds	NBS01-A-GW-3-R15	WG	Ground water	09-Sep-14
NBS01-B-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126791.02	3505581.975	Perfluoroalkyl Compounds	NBS01-B-EW3B-0914	WG	Ground water	08-Sep-14
"	"	NORFOLK_NB	"	"	1409070			Perfluoroalkyl Compounds	NBS01-EB090914	WQ	Water for QC samples	09-Sep-14
NBS01-B-EW7A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126772	3505364	Perfluoroalkyl Compounds	NBS01-B-EW7A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12127063.24	3505939.502	Perfluoroalkyl Compounds	NBS01-B-EW4B-0914	WG	Ground water	08-Sep-14
NBS01-B-EW8A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126828.43	3504605.862	Perfluoroalkyl Compounds	NBS01-B-EW8A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12127063.24	3505939.502	Perfluoroalkyl Compounds	NBS01-B-EW4B-0914	WG	Ground water	08-Sep-14
NBS01-B-EW5A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126930.01	3505779.091	Perfluoroalkyl Compounds	NBS01-B-EW5A-0914	WG	Ground water	08-Sep-14
NBS01-A2-MW11A	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126025	3506320.5	Perfluoroalkyl Compounds	NBS01-A2-MW11A-R15	WG	Ground water	09-Sep-14
NBS01-B-EW7A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126772	3505364	Perfluoroalkyl Compounds	NBS01-B-EW7A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4AP-0914	WG	Ground water	08-Sep-14
NBS01-B-EW8A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126828.43	3504605.862	Perfluoroalkyl Compounds	NBS01-B-EW8A-0914	WG	Ground water	08-Sep-14
NBS01-A-GW-3	SITE 00001	NORFOLK_NB	WLM	Monitoring well	1409070	12126380	3506820	Perfluoroalkyl Compounds	NBS01-A-GW-3-R15	WG	Ground water	09-Sep-14
NBS01-B-EW5A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126930.01	3505779.091	Perfluoroalkyl Compounds	NBS01-B-EW5A-0914	WG	Ground water	08-Sep-14

LOCATION_NAME	SITE_NAME	INSTALLATION_ID	LOCATION_TYPE	LOCATION_TYPE_DESC	SDG	COORD_X	COORD_Y	ANALYTICAL_METHOD_GRP_DESC	SAMPLE_NAME	SAMPLE_MATRIX	SAMPLE_MATRIX_DESC	COLLECT_DATE
NBS01-B-EW8A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126828.43	3504605.862	Perfluoroalkyl Compounds	NBS01-B-EW8A-0914	WG	Ground water	08-Sep-14
NBS01-A1-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124263.02	3504906.626	Perfluoroalkyl Compounds	NBS01-A1-EW4B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW3A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126528.26	3505368.58	Perfluoroalkyl Compounds	NBS01-B-EW3A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW5A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126930.01	3505779.091	Perfluoroalkyl Compounds	NBS01-B-EW5A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW3A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126528.26	3505368.58	Perfluoroalkyl Compounds	NBS01-B-EW3A-0914	WG	Ground water	08-Sep-14
"	"	NORFOLK_NB	"	"	1409070			Perfluoroalkyl Compounds	NBS01-EB090914	WQ	Water for QC samples	09-Sep-14
NBS01-B-EW4B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12127063.24	3505939.502	Perfluoroalkyl Compounds	NBS01-B-EW4B-0914	WG	Ground water	08-Sep-14
NBS01-A2-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-A2-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4AP-0914	WG	Ground water	08-Sep-14
NBS01-B-EW3A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126528.26	3505368.58	Perfluoroalkyl Compounds	NBS01-B-EW3A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW2B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126405.77	3505209.91	Perfluoroalkyl Compounds	NBS01-B-EW2B-0914	WG	Ground water	08-Sep-14
NBS01-B-EW7A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126772	3505364	Perfluoroalkyl Compounds	NBS01-B-EW7A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4AP-0914	WG	Ground water	08-Sep-14
NBS01-A1-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12124204.25	3505502.489	Perfluoroalkyl Compounds	NBS01-A1-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW2B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126405.77	3505209.91	Perfluoroalkyl Compounds	NBS01-B-EW2B-0914	WG	Ground water	08-Sep-14
"	"	NORFOLK_NB	"	"	1409070			Perfluoroalkyl Compounds	NBS01-EB090914	WQ	Water for QC samples	09-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW7A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126772	3505364	Perfluoroalkyl Compounds	NBS01-B-EW7A-0914	WG	Ground water	08-Sep-14
NBS01-A2-EW3B	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12125086.37	3506650.944	Perfluoroalkyl Compounds	NBS01-A2-EW3B-R15	WG	Ground water	08-Sep-14
NBS01-B-EW5A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126930.01	3505779.091	Perfluoroalkyl Compounds	NBS01-B-EW5A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW7A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126772	3505364	Perfluoroalkyl Compounds	NBS01-B-EW7A-0914	WG	Ground water	08-Sep-14
NBS01-B-EW4A	SITE 00001	NORFOLK_NB	WLE	Extraction well	1409070	12126750.5	3505536.598	Perfluoroalkyl Compounds	NBS01-B-EW4AP-0914	WG	Ground water	08-Sep-14