TOXICITY TEST FINAL REPORT EVENT 2

E04-0126

February 25, 2004

Exhibit
1939
State of Minnesota v. 3M Co.,
Court File No. 27-CV-10-28862

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN
HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Era Laboratories, Inc.
24 North 21st Avenue West
Duluth, MN 55806-2017 (218) 727-6380

March 9, 2004

Ms. Susan Beach
Minnesota Mining and Manufacturing
Environmental Technology and Safety
935 Bush Avenue, Building 2-3E-09
St. Paul, MN 55106

Cc: Ms. Tina Galloway
3M Cottage Grove
10746 Innovation Road
Building 145
Cottage Grove, Minnesota 55016

Ms. Beach,

The tables below summarize the chemical and toxicological results for the tests conducted with the 3M Cottage Grove facility samples received by Era on February 26, 2004. The tests were conducted as outlined in the 3M GPO dated February 9, 2004 and the LIMS number E04-0126.

Briefly, each sample was tested at 100% concentration with two replicate test chambers per sample. Ten 15 day old fish were exposed per replicate and test temperature was maintained at 25°C ± 1°C. Solutions were renewed at the 48 hour test interval using the original sample that had been stored in darkness at 1-4°C. Test duration was 96 hours, and per your guidance, the tests were conducted in darkness.

Sample Identification	Sampling Date	Sampling Time	Arrival Date	Arrival Time	Arrival Temp. (°C)	Arrival Ammonia (mg/L)	Arrival TRC (mg/L)
Influent 1/2	2/25/2004	10:46	2/26/2004	10:12	0.5	0.6	<0.02
Port 1A	2/25/2004	10:56	2/26/2004	10:12	0.5	0.5	<0.02
Port 4A	2/25/2004	11:11	2/26/2004	10:12	0.5	0.5	<0.02
Port 1B	2/25/2004	11:03	2/26/2004	10:12	0.5	0.5	<0.02
Port 4B	2/25/2004	11:25	2/26/2004	10:12	0.5	0.5	<0.02
Combined Effluent	2/25/2004	11:37	2/26/2004	10:12	0.5	0.8	<0.02

None of the samples contained total residual chlorine (TRC) concentrations above the method detection limit of 0.02 mg/L. Ammonia concentrations for the samples ranged from 0.5 mg/L to 0.8 mg/L. The measured ammonia concentrations were not anticipated to cause acute adverse effects to the fish and therefore the tests were not pH adjusted. Arrival temperature for each of the samples was 0.5°C.

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Results for the toxicity exposures are shown in the table below.

Sample Identification	24 Hour Mean Percentage Survival	48 Hour Mean Percentage Survival	72 Hour Mean Percentage Survival	96 Hour Mean Percentage Survival	pH Range (s.u.)	DO Range (mg/L)	Cond Range (µmhos/cm)
MHRW Control	100	100	100	100	7.9-8.0	7.6-8.4	330-335
Influent 1/2	0	0	0	0	7.9-8.0	5.2-7.0	1227[a]
Port 1A	95	90	85	80	7.7-8.4	6.1-7.2	1189-1196
Port 4A	90	75	65	60	7.7-8.5	6.1-7.3	1211-1260
Port 1B	95	95	95	90	7.7-8.5	6.7-8.1	1227-1258
Port 4B	95	95	95	95	7.8-8.5	6.9-8.1	1223-1253
Combined Effluent	95	95	85	75	7.9-8.5	6.7-8.1	1213[a]

[a] No Range Obtained

The moderately hard reconstituted water (MHRW) supported 100% fish survival for the duration of the test indicating the fish and test methods were acceptable for assessing toxicity. The Influent 1/2 sample was observed to cause complete (100%) fish mortality within 24 hours of test initiation. The sample identified as Port 1A was found to support mean 96 hour fish survival of 80%, and the sample identified as Port 4A was observed to support mean 96 hour fish survival of 60%. Port 1B and Port 4B samples supported mean 96 hour fish survival of 90% and 95%, respectively. The Combined Effluent sample supported mean 96 hour fish survival of 75%. Intermediate test interval mean fish survival values are shown in the table above.

None of the routine chemistry parameters (pH, dissolve oxygen, conductivity) measured during the test were abnormal for this type of study.

Please call or mail me if you have any questions.

Sincerely,

Era Laboratories, Inc.

Joe Dierkes,
Project Manager, Eco-Toxicology

C:\QE\Clients JV\Cottage Grove\2004 Carbon Study\017982_R04-0126 Results.doc

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Era Laboratories, Inc.

Client: 3M (E04-~~B120~~ 0126)

Era Project #: 017983

Test: Fathead Minnow Acute Toxicity Tests

Test Initiation Date: 2/26/04

Test Termination Date: 3/1/04

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

ENVIRONMENTAL SAMPLE TEST INFORMATION

Date: 2/26/04
Client: 3M
Era Project #: 017983
Dilution Water: Not Applicable, MHRW Control
Test Chamber: 0.8 Liter Beaker
Food: Artemia prior to 48 hour renewal
Temperature: 25°C
Test Organism(s)/Age: Fathead Minnow/ 15 day
Comments:
Test solutions renewed @ 48 hours using stored/refrigerated samples from sample receipt.
Tested in darkness

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

TOXICITY TEST RENEWAL FORM

CLIENT: 3M

ERA PROJECT #: 017983

TEST: Acute Toxicity Evaluation

TEST INITIATION DATE: 2/26/04

ORGANISM: Fathead Minnow

TEST TERMINATION DATE: 3/1/04

TEST DAY	0 Test Initiation	1	2	3	4
DATE	2-26-04	2-27-04	2-28-04	2-29-04	3-1-04
TIME OF RENEWAL	1430	1240	1515	1300	1235
TIME OF FEEDING	NA	NA	1220	NA	NA
CONTROL WATER	MHRW	MHRW	MHRW	MHRW	MHRW
INITIALS	BL	BL	AG	AG	BL

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

INITIAL CHEMISTRIES

CLIENT: 3M

ERA PROJECT #: 017983

TEST: Acute Toxicity Evaluation

TEST INITIATION DATE: 2/26/04

ORGANISM(S): Fathead Minnow

TEST TERMINATION DATE:: 3/1/04

Sample	Date/Initials 2-26-04 RC /				Date/Initials 2-28-04 RC /			
	pH (su)	Cond. (umhos/cm)	Temp. (°C)	D.O. (mg/L)	pH (su)	Cond. (umhos/cm)	Temp. (°C)	D.O. (mg/L)
MHRW	8.02	~~335~~ 335 RC	25.2	8.4	8.00	330	24.5	8.2
INF 1/2	7.89	1227	25.2	7.0	~~2-28-04 RC~~ All Dead	→	→	
Part 1A	7.82	1189	25.3	6.1	7.70	1196	24.5	7.2
Part 4A	7.84	1260	25.3	6.1	7.72	1211	24.6	7.3
Part 1B	7.87	1258	25.4	6.7	7.73	1227	24.5	8.1
Part 4B	7.89	1253	25.4	7.3	7.77	1223	24.6	8.1
Com Eff	7.97	~~728~~ likely error	25.3	6.7	7.85	1213	24.6	8.1

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

FINAL CHEMISTRIES

CLIENT: 3M

ERA PROJECT #: 017983

TEST: Acute Toxicity Evaluation

TEST INITIATION DATE: 2/26/04

ORGANISM(S): Fathead Minnow

TEST TERMINATION DATE: 3/1/04

Sample	Date/Initials			Date/Initials			Date/Initials			Date/Initials		
	2-27-04 / BC			2-28-04 AM /			2-29-04 AM /			3-1-04 BC/		
	pH (su)	Temp. (°C)	D.O. (mg/L)	pH (su)	Temp. (°C)	D.O. (mg/L)	pH (su)	Temp. (°C)	D.O. (mg/L)	pH (su)	Temp. (°C)	D.O. (mg/L)
MHRW	7.92/8.00	25.3/25.3	7.7/7.8	7.90/7.92	24.7/24.7	7.6/7.6	7.92/7.94	25.2/25.1	7.9/7.9	7.91/8.04	25.2/25.2	7.8/7.9
INF 1/2	8.04/8.02	25.2/25.3	5.6/5.2	All Dead	←	←	←	←	←	←	→	←
Port 1A	8.20/8.18	25.3/25.3	6.8/6.6	8.35/8.35	24.8/24.8	7.0/7.0	8.11/8.14	25.1/25.2	7.0/7.0	8.36/8.41	25.2/25.2	7.2/7.2
Port 4A	8.22/8.23	25.3/25.3	6.7/6.7	8.39/8.40	24.8/24.7	6.8/6.9	8.20/8.19	25.2/25.2	7.0/7.1	8.45/8.44	25.3/25.2	7.3/7.2
Port 1B	8.27/8.25	25.3/25.2	7.0/6.9	8.43/8.41	24.5/24.5	7.0/7.2	8.24/8.24	25.1/25.0	7.4/7.3	8.46/8.47	25.2/25.1	7.2/7.2
Port 4B	8.27/8.27	25.2/25.1	6.9/7.1	8.44/8.43	24.6/24.6	7.0/7.2	8.23/8.30	25.0/25.0	7.4/7.4	8.45/8.50	25.1/25.1	7.2/7.3
Comm Eff	8.32/8.32	25.1/25.1	7.0/7.1	8.48/8.48	24.5/24.5	7.1/7.3	8.32/8.33	25.0/25.0	7.6/7.5	8.53/8.54	25.1/25.0	7.5/7.5
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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

1939.0008

3M_MN01539159

ACUTE TOXICITY DATA LOG

CLIENT: 3M

ERA PROJECT #: 017983

TEST: Acute Toxicity Evaluation

TEST INITIATION DATE: 2/26/04

ORGANISM(S): Fathead Minnow

TEST TERMINATION DATE: 3/1/04

Sample	Date/Initials 2-27-04 BG		Date/Initials 2-28-04 AO		Date/Initials 2-29-04 AM		Date/Initials 3-1-04 AM	
	Replicate A	Replicate B	Replicate A	Replicate B	Replicate A	Replicate B	Replicate A	Replicate B
MHRW	10	10	10	10	10	10	10	10
INF 1/2	0	0	0	0	0	0	0	0
Port 1A	10	9	10	~~9~~ 8 2-28-04 AO	10	7	9	7
Port 4A	10	8	8	7	6	7	6	6
Port 1B	9	10	9	10	9	10	9	9
Port 4B	9	10	9	10	9	10	9	10
Com Eff	10	9	10	9	8	9	7	8

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539160

Laboratory Report - ~~In House Only~~

SUSAN BEACH
MINNESOTA MINING AND MANUFACTURING
ENVIRONMENTAL TECHNOLOGY AND SAFETY
935 BUSH AVE, BUILDING 2-3E-09
ST. PAUL MN 55106

Project Number: 017983
COC Number: 3M
Temperature (°C): 0.5
Date Received: 2/26/2004
Report Date: 3/ 8/2004

Site: INFLUENT PHASE 1/2 **Date:** 02/25/2004 **Time:** 10:46 **Matrix:** Wastewater

Parameter:	Results:	Units:	Date Analyzed:	QC Comments:
Acute, Fathead Minnow	done		3/ 7/2004	
Nitrogen, Ammonia	0.56	mg/L	2/26/2004	
Residual Chlorine	done		3/ 7/2004	

Site: UNIT 1 PORT A LEAD **Date:** 02/25/2004 **Time:** 10:56 **Matrix:** Wastewater

Parameter:	Results:	Units:	Date Analyzed:	QC Comments:
Acute, Fathead Minnow	done		3/ 7/2004	
Nitrogen, Ammonia	0.48	mg/L	2/26/2004	
Residual Chlorine	done		3/ 7/2004	

Site: UNIT 4 PORT A LEAD **Date:** 02/25/2004 **Time:** 11:11 **Matrix:** Wastewater

Parameter:	Results:	Units:	Date Analyzed:	QC Comments:
Acute, Fathead Minnow	done		3/ 7/2004	
Nitrogen, Ammonia	0.50	mg/L	2/26/2004	
Residual Chlorine	done		3/ 7/2004	

Site: UNIT 1 PORT B LEAD **Date:** 02/25/2004 **Time:** 11:03 **Matrix:** Wastewater

Parameter:	Results:	Units:	Date Analyzed:	QC Comments:
Acute, Fathead Minnow	done		3/ 7/2004	
Nitrogen, Ammonia	0.52	mg/L	2/26/2004	
Residual Chlorine	done		3/ 7/2004	

Site: UNIT 4 PORT B LEAD **Date:** 02/25/2004 **Time:** 11:25 **Matrix:** Wastewater

Parameter:	Results:	Units:	Date Analyzed:	QC Comments:
Acute, Fathead Minnow	done		3/ 7/2004	
Nitrogen, Ammonia	0.50	mg/L	2/26/2004	
Residual Chlorine	done		3/ 7/2004	

Site: COMBINED EFFLUENT PHASE 1/2 **Date:** 02/25/2004 **Time:** 11:37 **Matrix:** Wastewater

Parameter:	Results:	Units:	Date Analyzed:	QC Comments:
Acute, Fathead Minnow	done		3/ 7/2004	
Nitrogen, Ammonia	0.76	mg/L	2/26/2004	
Residual Chlorine	done		3/ 7/2004	

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

3M_MN01539162

3M Environmental Laboratory
Form 58778 - FWO

Shipping Address: 3M Bldg. 2-3E-09, 935 Bush Avenue, St. Paul, MN 55106
Telephone: Sample Receiving: (651) 778-4948, Alternate: (651) 778-5753, FAX: (651) 778-6178

Chain of Custody /Request for Laboratory Analytical

3M Env. Lab Project # For Internal Use Only: E04-01~~20~~ 0176

Project ID/Project Name: 3M Cottage Grove Activated Carbon Testing
Template #:
Project Lead: Susan Beach
Dept. # (main): 112583
Final Report Due Date:
Internal Due Date:
Class/Job/Project #:

Report Results to:
Contact Name: Susan Beach
Company: 3M Environmental Laboratory
Mailing Address: Bldg. 2-03-09 935 Bush Ave.
City, State, Zip: St. Paul, MN 55144
Telephone #: (651) 778-7452 FAX # (651) 778-6176

Date Available:
Date Due:
Contract Lab:

Special Instructions and/or Specific Regulatory Requirements: (method, limit of detection, reporting units, etc.)

Phase 1/2 Activated Carbon System

#017983

Item #	Client Sample Identification	3M LIMS#	Date Sampled	Time Sampled	Matrix/ Media	Preservatives: HNO3	H2SO4	VOCs	None	Other	Total Number of Containers	Analysis Requested: FHM 96 acute	TRC	NH3	pH	conductivity	dissolved oxygen	temp
	(Enter # of containers of each)											(Enter an "X" in the box below to indicate request)						
1.	Influent Phase 1/2 (INF 1/2) 0.6		2/25/04	10:46	ww						1 gal	X	X	X	X	X	X	X
2.	Unit 1 Port A Lead (Port 1A) 0.5			10:50	ww						1 gal							
3.	Unit 4 Port A Lead (Port 4A) 0.5			11:11	ww						1 gal							
4.	Unit 1 Port B Lead (Port 1B) 0.5			11:03	ww						1 gal							
5.	Unit 4 Port B Lead (Port 4B) 0.5			11:25	ww						1 gal							
6.	Combined Effluent Phase 1/2 (Com Eff) 0.8			11:37	ww						1 gal							
7.																		
8.																		
9.																		
10.																		

temp upon shipment

Chain of Custody

Collected by (print): MAH McDermott
Collector's signature:

Item #	Relinquished by/Affiliation	Time	Date	Shipped Via:	Received by/Affiliation	Time	Date
	J. Halloway/ Chemist 3M-CG	14:20	2/25/04				

Sample Condition Upon Receipt: O Acceptable O Other:
Temperature: 0.5 °C O Received on Ice
Other Associated CoCs:
Copies to:
Comments: P-2/26/04 1012 Sent by Fed-Ex

Page ____ Of ____ Original - Accompanying Sample Last Page - Originator See Reverse Side for Instructions

Conventional Pollutants
FINAL REPORT
EVENT 2

E04-0126

February 25, 2004

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

1085104

RP 3/4/04

3M Environmental Laboratory — Chain of Custody /Request for Laboratory Analytical

Shipping Address: 3M Bldg. 2-03-09, 935 Bush Avenue, St. Paul, MN 55106
Telephone: Sample Receiving: (651) 778-4966; Alternate: (651) 778-6753; FAX: (651) 778-6378

Project ID/Project Name	3M Cottage Grove Activated Carbon Testing
Template #	
Project Lead	Brian Mader
Dept. # (main)	112583
Final Report Due Date	
Internal Due Date	
Class/Job/Project #	

3M Env. Lab Project # For Internal Use Only: E04-01206

Report Results to:

Contact Name	Brian Mader
Company	3M Environmental Laboratory
Mailing Address	Bldg. 2-03-09 935 Bush Ave.
City, State, Zip	St. Paul, MN 55144
Telephone #	(651) 778-6750 FAX # (651) 778-4226

Date Available:
Date Due:
Contract Lab:

Special Instructions and/or Specific Regulatory Requirements: (methods and limit of detection, reporting units, etc.)

Preservatives: HNO3 | H2SO4 | VOA, HCl | None | Other

Total Number of Containers

Analysis Requested: Complete below. Attach any associated information.

- See Attached Lab Req -

Item #	Client Sample Identification	3M LIMSa	Date Sampled	Time Sampled	Matrix/ Media	Enter the number of containers (if each)				Enter an X in the box below to indicate requests
1	Influent Phase 1/2 (Inf 1/2)	67609	3/4/04	10:46	WW	2	3	1	1	1153 6745
2	Unit 1 Port A Lead (Port 1A)	67610		10:50	WW	2	3	1	1	720
3	Unit 4 Port A Lead (Port 4A)	67612		11:11	WW	2	3	1	1	768
4	Unit 1 Port B Lead (Port 1B)	67611		11:05	WW	2	3	1	1	744
5	Unit 4 Port B Lead (Port 4B)	67613		11:25	WW	2	3	1	1	792
6	Combined Effluent 1/2 (Comb Eff)	67614		11:34	WW	2	3	1	1	816
7	Field Blank	67623	✓	12:00	WW	2	3	1	1	840
8										
9										
10										

Chain of Custody

Collected by (print): MAH McDermott — Collector's signature:

Item #	Relinquished by/Affiliation	Time	Date	Shipped Via:	Received by/Affiliation	Time	Date
1		11:30	3/4/04			2:50	3/4/04
						10:00	3/5/04

Sample Condition Upon Receipt: ☒ Acceptable ☐ Other

Temperature: 2 °C ☒ Received on ice

Other Associated CoCs: Copies to:

Comments: 3.6 ℃

Page ___ of ___ Original - Accompanying Samples Last Page - Originator See Reverse Side for Instructions

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Pace Analytical

INTER-REGIONAL WORK ORDER # 1502
(To be completed by sending region)

Date Prepared

Sending Region		Sending Project No.	
Receiving Region		Sending Project Mgr.	
External Client		Client No.	

All questions should be addressed to sending project manager.

Type of Work: 1 Analytical ____ Permitting ____ Consulting ____ Other (Identify) ____

WORK REQUESTED

Quantity	O/C Def	Description	Unit Price	Amount
				175.00
			TOTAL	175.00

	Inorganic	Organic	Other (Specify)	Total
Revenue Allocation				
To Receiving Region	175.00			
To Sending Region	20.00			

Requested Completion Date: 3/09/04

Requested By:

Chain of Custody Included ☑ Yes ☐ No **Disposal of Samples:**

Number of Samples: 7 ____ Return to Sending Region ☐ Yes ☒ No

Matrix
____ Soil 5 Water ____ Air ____ Other (Identify) ____

Level Turnaround Requested: ____

Confirmation of Work Completed ____

Receiving Project Manager RE Dagg Date Completed 3/8/04

DISPOSITION

Part 1, 2, and 3: Receiving Region Part 4: Sending Region

CORPORATE ACCOUNTING

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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

COOLER RECEIPT / SAMPLE LOG-IN SHEET

COOLER RECEIPT / SAMPLE LOG-IN SHEET (115-ATT2.WB1) / SWL-GA-115 REV 5.0 / GA-115-CRLOGIN-F

Pace Analytical

LAB NAME: PACE ANALYTICAL SERVICES, INC.

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JASON SPRIGGS

RECEIVED BY (SIGNATURE):

LOGGED IN BY (SIGNATURE):

REC'D DATE 03/03/04

TIME REC'D 09:45

LOG-IN DATE 2004-03-03 12:51

PROJECT: INTER-LAB

EPISODE: 53988

SAMPLE DELIVERY GROUP:53988

Remarks

1. CUSTODY SEAL(S): Present/Absent
   Intact/ Broken
2. CUSTODY SEALS NOS.:
   N/A
3. CHAIN-OF CUSTODY: Present/Absent
   Sealed In Plastic? Yes/ No
   Taped To Lid? Yes/ No
   Properly Filled Out (Ink, Signed, ETC.)? Yes/ No
4. AIRBILL AirBill/ Sticker Present/Absent
5. AIRBILL NO:
   483891945140
6. COOLER CONDITIONS
   Enough Ice? Yes/ No
   Type of Ice? Wet
   Type of Packing? Bubble Wrap
7. SAMPLE TAGS Absent
8. SAMPLE CONDITION:
   Intact/ Present/Broken*/ Leaking
   Bottles Sealed In Separate Plastic Bags? Yes/ No
   Correct Containers Used For Tests Indicated? Yes/ No
   Correct Preservative? Yes/ No
   Sufficient Sample? Yes/ No
   Labels Complete (I.D., Date, Time, Signature, Preservative? Yes/ No
   VOA Samples Without Bubbles? Yes/ No~
9. Does Information on Custody Records,Labels,Tags Agree? Yes/ No*
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No
11. P.O. Called? Yes/ No

Client Sample #	Sample Fraction @	Assigned LAB#	Cooler I.D.	pH Check	ACID/ BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
105362743	I	53988.01	03/03/04-1	N		3.6c
105363750		53988.02	03/03/04-1	N		3.6c
105362768		53988.03	03/03/04-1	N		3.6c
105362776		53988.04	03/03/04-1	N		3.6c
105362784		53988.05	03/03/04-1	N		3.6c
105362792		53988.06	03/03/04-1	N		3.6c
105362800		53988.07	03/03/04-1	N		3.6c

* Contact PO and attach record of resolution

@ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide,H=Herbicide, D=Dioxin, A=Air, I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry

~ Note samples with bubbles under remarks section.

17

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

March 8, 2004

Roxanne Patterson
Pace Analytical Services
1700 Elm Street
Suite 200
Minneapolis, MN 55414

Project: Inter Lab/ 1085104
SDG: 53988

Dear Ms. Patterson:

Enclosed please find our standard tabular report for samples received by our laboratory on March 5, 2004. Please see the enclosed SDG Narratives for additional information regarding analysis of these samples.

If, in your review, you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

Randy Staggs
randy.staggs@pacelabs.com
Project Manager

RES/rs

Enclosures

"We certify that the following report meets all required NELAC reporting standards as specified in NELAC 5.13, July 1, 1999. Any deviation or variance is noted in the case narrative(s). Estimated uncertainties regarding these analyses are presented in the Quality Control Section of this report."

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Pace Analytical®
www.pacelabs.com

Pace Analytical Services, Inc.
1700 West Albany
Broken Arrow, OK 74012
Phone: 918.251.2858
Fax: 918.251.2599

SDG NARRATIVE

CLIENT: PACE-MN
PROJECT: INTER-LAB

DATE: March 8, 2004
EPISODE NO.: 53988

INORGANIC FRACTION:

Seven water samples were submitted for dissolved total organic carbon analysis. No major problems occurred during the analysis of these samples. The sample's analyses were completed according to the following:

SWL SOP #	Method Reference	Parameter
SWL-IN-310	SM5310B	Total Organic Carbon

Please refer to *Cooler Receipt / Sample Log-In Sheet* for details of sample conditions at receipt.

There were no hold time violations noted. Samples were filtered using a teflon filter prior to analysis.

Preparation Blank: No target analytes were detected in the preparation blank above the PQL.
Lab Control Spikes: All laboratory control spikes were within QC limits.
Matrix Spikes: No matrix spikes were submitted with this episode.
Duplicates: All LCS and matrix duplicate results were within QC limits.

No further data usability limitations exist for this Inorganic Analysis Data Package.

Explanations of the forms are the following:

Form 1 Sample results
Form 3 Blanks – Provided by the LB Quality Control Data Sheets.
Form 7 Laboratory Control Sample - Provided by the LCS/LCSD Quality Control Data Sheets.

I certify that this data is technically accurate, complete, and in compliance with the terms and conditions of the contract, for other than the conditions detailed above. Release of the data contained in this hardcopy data package has been authorized by the Laboratory Manager, or his/her designee, as verified by the following signature.

Sincerely,

Susan S. Turner
Wet Chemistry Supervisor

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Sample Results

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LAB ID : 53988.01
SAMPLE : E04-0126-67609
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	ANALYST	METHOD REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	57.0	03/04/04 19:59	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION,1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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LAB ID : 53988.02
SAMPLE : E04-0126-67610
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	ANALYST	METHOD REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	58.0	03/04/04 20:38	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION,1992/19TH EDITION, 1995
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LAB ID : 53988.03
SAMPLE : E04-0126-67611
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	ANALYST	METHOD REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	57.1	03/04/04 20:53	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION,1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
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LAB ID : 53988.04
SAMPLE : E04-0126-67612
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	ANALYST	METHOD REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	57.3	03/04/04 21:04	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION,1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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LAB ID : 53988.05
SAMPLE : E04-0126-67613
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	ANALYST	METHOD REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	58.5	03/04/04 21:18	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION,1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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Fax: 918.251.2599

LAB ID : 53988.06
SAMPLE : E04-0126-67614
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/08/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	ANALYST	METHOD REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	58.3	03/04/04 21:34	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION,1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
SW = SW 846 Rev. 4 1996

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LAB ID : 53988.07
SAMPLE : E04-0126-67622
SDG : 53988
MATRIX : W
SITE : 1085104

REPORTED : 03/10/2004
SAMPLED : 02/20/2004
SUBMITTED : 03/03/2004

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL ORGANIC CARBON	1.0	U	mg/l		03/04/04 21:42	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED

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QC Results

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Phone: 918.251.2858
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LAB ID : PBW0403040451 LB1
QAQC : 0403040451
MATRIX : W

REPORTED : 03/08/2004
ANALYZED : 03/04/2004 14:34
DILUTION : 1

PARAMETER	REPORTING LIMIT	UNITS	RESULTS	DATE/TIME ANALYZED	ANALYST	METHOD REFERENCE
TOTAL ORGANIC CARBON	1.0	mg/l	ND	03/04/04 14:34	KAL	SW9060

COMPOUND* = RESULTS REPORTED AS RECEIVED
ND = NOT DETECTED ABOVE QUANTITATION LIMIT
* = SURROGATE RECOVERY OUTSIDE OF QC LIMITS
N/A = NOT APPLICABLE
METHODOLOGY: SM = STANDARD METHODS, 18TH EDITION,1992/19TH EDITION, 1995
EPA = #EPA600/4-79-020, MARCH 1985
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LABORATORY CONTROL SPIKE/SPIKE DUPLICATE RECOVERY

MATRIX : W REPORTED : 03/08/2004

LAB ID	QC BATCH	ANALYZED
LCW0403040451	0403040451	2004-03-04 14:50
LDW0403040451	0403040451	2004-03-04 15:05

Parameter	mg/l	SPIKED AMOUNT	SPIKE CONC.	SPIKE %Rec	DUP CONC.	DUP %Rec	RPD---	MAX RPD	LIMITS %Rec.
TOTAL ORGANIC CARBON		50	49.8	100	49.3	99	1	20	90-110

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Chain of Custody / Cooler Receipt

REPORT OF LABORATORY ANALYSIS

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3M Environmental Laboratory — Chain of Custody /Request for Laboratory Analytical

Form 30-1176 - (rev.)

Shipping Address: 3M Bldg. 2-03-09 935 Bush Ave. St. Paul, MN 55106

Telephone: Sample Receiving: (651) 778-4848 Alternate: (651) 778-6753 FAX: (651) 778-6178

Project ID/Project Name: 3M Cottage Grove Activated Carbon Testing

Template #:

Project Lead: Brian Mader

Dept. # (main) 112583

Final Report Due Date:

Internal Due Date:

Client Job/Project #:

3M Env. Lab Project # (For Internal Use Only): E04-0120

Report Results to:

Contact Name: Brian Mader

Company: 3M Environmental Laboratory

Mailing Address: Bldg. 2-03-09 935 Bush Ave.

City, State, Zip: St. Paul, MN 55144

Telephone #: (651) 778-6750 FAX # (651) 778-4226

Date Available:

Date Due:

Contract Lab:

Special Instructions and/or Specific Regulatory Requirements: (method, limit of detection, reporting units, etc.)

Preservatives: HNO3, H2SO4, VOA HCl VOCs, None, Other

Analysis Requested: Complete below. Attach any associated information

See Attached Lab Req

Item #	Client Sample Identification	3M LIMS #	Date Sampled	Time Sampled	Matrix/ Media	Total Number of Containers	HNO3	H2SO4	VOA HCl VOCs	None	Other	(Enter by # or for list below to right)
1	Influent Phase 1/2 (Inf 1/2)	676022	10/4/04	10:40	WW	2	3	1	1			1052627723
2	Unit 1 Port A Lead (Port 1A)	67601		10:50	WW	2	3	1	1			1
3	Unit 4 Port A Lead (Port 4A)	67602		11:11	WW	2	3	1	1			1
4	Unit 1 Port B Lead (Port 1B)	67611		11:08	WW	2	3	1	1			1
5	Unit 4 Port B Lead (Port 4B)	67613		11:25	WW	2	3	1	1			1
6	Combined Effluent 1/2 (Comb Eff)	67614		11:32	WW	2	3	1	1			1
7	Field Blank	676023	V	R100	WW	2	3	1	1			1
8												
9												
10												

Chain of Custody

Collected by (print): MAH MCDERMOTT — Collector's signature:

Item #: 1 — Relinquished by/Affiliation: — Date: — Time: — Received by/Affiliation: — Date: 10/4/04 — Time: 4:30 — Shipped Via:

Sample Condition Upon Receipt: Acceptable / Other

Temperature: 2 °C — Received on Ice

Other Associated COCs:

Comments:

Pages: 01 — Original - Accompanying Samples — Last Page: Orig+copy — Send Reverse Side for Instructions

1085104

RP 3/10/11

3.6 8

Pace Analytical

INTER-REGIONAL WORK ORDER # 1602
(To be completed by sending region)

Date Prepared 2/26/04

Sending Region	[illegible]	Sending Project No.	[illegible]
Receiving Region	[illegible]	Sending Project Mgr.	[illegible]
External Client	[illegible]	Client No.	

All questions should be addressed to sending project manager.

Type of Work X Analytical ____ Permitting ____ Consulting ____ Other (Identify) ____

WORK REQUESTED

Quantity	QC Del	Description	Unit Price	Amount
[illegible]				175.00
			TOTAL	175.00

Revenue Allocation	Inorganic	Organic	Other (Specify)	Total
To Receiving Region	150.00			
To Sending Region	25.00			

Requested Completion Date: 3/09/04

Requested By: ____

Chain of Custody Included ☑ Yes ☐ No

Disposal of Samples:

Number of Samples: 7

____ Return to Sending Region ☐ Yes ☒ No

Matrix

____ Soil ___X___ Water ____ Air ____ Other (Identify) ____

Level Turnaround Requested: ____

Confirmation of Work Completed ____

Receiving Project Manager R E Dagg Date Completed 3/3/04

DISPOSITION

Part 1, 2, and 3: Receiving Region

Part 4: Sending Region

CORPORATE ACCOUNTING 16

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Pace Analytical

COOLER RECEIPT / SAMPLE LOG-IN SHEET (115-ATT2.WB1) / SWL-GA-115 REV 5.0 / GA-115-CRLOGIN-F

LAB NAME: PACE ANALYTICAL SERVICES, INC.

PAGE 1 OF 1

RECEIVED BY (PRINT NAME): JASON SPRIGGS

REC'D DATE 03/03/04

RECEIVED BY (SIGNATURE):

TIME REC'D 09:45

LOGGED IN BY (SIGNATURE):

LOG-IN DATE 2004-03-03 12:51

PROJECT: INTER-LAB

EPISODE: 53988

SAMPLE DELIVERY GROUP: 53988

Remarks

1. CUSTODY SEAL(S): Present/Absent
   Intact/ Broken
2. CUSTODY SEALS NOS.:
   N/A
3. CHAIN-OF CUSTODY. Present/Absent
   Sealed In Plastic? Yes/ No
   Taped To Lid? Yes/ No
   Properly Filled Out (Ink, Signed, ETC.)? Yes/ No
4. AIRBILL AirBill/ Sticker Present/Absent
5. AIRBILL NO:
   483891945140
6. COOLER CONDITIONS
   Enough Ice? Yes/ No
   Type of Ice? Wet
   Type of Packing? Bubble Wrap
7. SAMPLE TAGS Absent
8. SAMPLE CONDITION:
   Intact/ Present/Broken*/ Leaking
   Bottles Sealed In Separate Plastic Bags? Yes/ No
   Correct Containers Used For Tests Indicated? Yes/ No
   Correct Preservative? Yes/ No
   Sufficient Sample? Yes/ No
   Labels Complete (I.D., Date, Time, Signature, Preservative? Yes/ No
   VOA Samples Without Bubbles? Yes/ No~
9. Does Information on Custody Records, Labels, Tags Agree? Yes/ No*
10. RAD SCREEN WITH GIEGER COUNTER? Yes/ No
11. P.O. Called? Yes/ No

Client Sample #	Sample Fraction @	Assigned LAB#	Cooler I.D.	pH Check	ACID/ BASE LOT#	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
105362743	I	53988.01	03/03/04-1	N		3.6c
105362750		53988.02	03/03/04-1	N		3.6c
105362768		53988.03	03/03/04-1	N		3.6c
105362776		53988.04	03/03/04-1	N		3.6c
105362784		53988.05	03/03/04-1	N		3.6c
105362792		53988.06	03/03/04-1	N		3.6c
105362800		53988.07	03/03/04-1	N		3.6c

* Contact PC and attach record of resolution

@ Sample Fractions: B=SV GC/MS, V= VOA GC/MS or GC, P=Pesticide, H=Herbicide, D=Dioxin, A=Air, I=Inorganics, C=Cyanide, M=Metals, R=Radiochemistry

~ Note samples with bubbles under remarks section.

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Fax: 612.607.6444

March 11, 2004

Mr. Brian Mader
3M Environmental Laboratory
935 Bush Avenue
Bldg. 2-3E-09
St. Paul, MN 55144

RE: Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Dear Mr. Mader:

Enclosed are the analytical results for sample(s) received by the laboratory on February 25, 2004. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

If you have any questions concerning this report please feel free to contact me.

Sincerely,

Roxanne Patterson

Roxanne Patterson
Roxanne.Patterson@pacelabs.com
Project Manager

Minnesota Certification #: 027-053-137
Wisconsin Certification #: 9999407970

Enclosures

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Pace Analytical Services, Inc.
1700 Elm Street, Suite 200
Minneapolis, MN 55414
Phone: 612.607.1700
Fax: 612.607.6444

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362743 Project Sample Number: 1085104-001 Date Collected: 02/25/04 10:46
Client Sample ID: E04-0126-67609 Influent Phase 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	14	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 19:12	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 19:12	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 19:12	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 19:12	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 19:12	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 19:12	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 19:12	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 19:12	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 19:12	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 19:12	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 19:12	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 19:12	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 19:12	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 19:12	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 19:12	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 19:12	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 19:12	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 19:12	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	55.	03/03/04 19:12	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	55.	03/03/04 19:12	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 19:12	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	84-66-2		

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3M_MN01539185

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Phone: 612.607.1700
Fax: 612.607.6444

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362743 Project Sample Number: 1085104-001 Date Collected: 02/25/04 10:46
Client Sample ID: E04-0126-67609 Influent Phase 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 19:12	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 19:12	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	55.	03/03/04 19:12	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 19:12	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 19:12	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	25.	03/03/04 19:12	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 19:12	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 19:12	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 19:12	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 19:12	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/03/04 19:12	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 19:12	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 19:12	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 19:12	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 19:12	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 19:12	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 19:12	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 19:12	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 19:12	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 19:12	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 19:12	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 19:12	KSK	67-72-1		
Nitrobenzene-d5 (S)	85	%		03/03/04 19:12	KSK	4165-60-0		
2-Fluorobiphenyl (S)	91	%		03/03/04 19:12	KSK	321-60-8		
Terphenyl-d14 (S)	92	%		03/03/04 19:12	KSK	1718-51-0		
Phenol-d6 (S)	1	%		03/03/04 19:12	KSK	13127-88-3	2	
2-Fluorophenol (S)	0	%		03/03/04 19:12	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	7	%		03/03/04 19:12	KSK		2	
Date Extracted	03/01/04			03/01/04				
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Chloromethane	10.	ug/l	1.0	02/27/04 03:08	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 03:08	RJS	75-01-4		
Bromomethane	7.8	ug/l	1.0	02/27/04 03:08	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-69-4		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362743 Project Sample Number: 1085104-001 Date Collected: 02/25/04 10:46
Client Sample ID: E04-0126-67609 Influent Phase 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	ND	ug/l	1.0	02/27/04 03:08	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 03:08	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 03:08	RJS	56-23-5		
Benzene	2.0	ug/l	1.0	02/27/04 03:08	RJS	71-43-2		
1,2-Dichloroethane	11.	ug/l	1.0	02/27/04 03:08	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 03:08	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 03:08	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:08	RJS	10061-02-6		
Toluene	4.2	ug/l	1.0	02/27/04 03:08	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:08	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 03:08	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 03:08	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 03:08	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 03:08	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 03:08	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:08	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 03:08	RJS	110-75-8		
Dibromofluoromethane (S)	129	%		02/27/04 03:08	RJS	1868-53-7		
Toluene-d8 (S)	104	%		02/27/04 03:08	RJS	2037-26-5		
4-Bromofluorobenzene (S)	105	%		02/27/04 03:08	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	120	%		02/27/04 03:08	RJS	17060-07-0		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362750 Project Sample Number: 1085104-002 Date Collected: 02/25/04 10:56
Client Sample ID: E04-0126-67610 Sample Port Lead 1A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	6	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 20:05	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 20:05	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 20:05	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 20:05	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 20:05	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 20:05	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 20:05	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 20:05	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 20:05	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 20:05	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 20:05	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 20:05	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 20:05	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 20:05	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 20:05	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 20:05	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:05	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 20:05	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	54.	03/03/04 20:05	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	54.	03/03/04 20:05	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:05	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	84-66-2		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362750 Project Sample Number: 1085104-002 Date Collected: 02/25/04 10:56
Client Sample ID: E04-0126-67610 Sample Port Lead 1A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 20:05	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 20:05	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	54.	03/03/04 20:05	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 20:05	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 20:05	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	25.	03/03/04 20:05	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 20:05	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 20:05	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 20:05	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 20:05	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/03/04 20:05	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 20:05	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 20:05	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 20:05	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 20:05	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 20:05	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 20:05	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 20:05	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 20:05	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 20:05	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 20:05	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 20:05	KSK	67-72-1		
Nitrobenzene-d5 (S)	88	%		03/03/04 20:05	KSK	4165-60-0		
2-Fluorobiphenyl (S)	89	%		03/03/04 20:05	KSK	321-60-8		
Terphenyl-d14 (S)	89	%		03/03/04 20:05	KSK	1718-51-0		
Phenol-d6 (S)	0	%		03/03/04 20:05	KSK	13127-88-3	2	
2-Fluorophenol (S)	0	%		03/03/04 20:05	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	36	%		03/03/04 20:05	KSK		2	
Date Extracted	03/01/04			03/01/04				
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Chloromethane	8.4	ug/l	1.0	02/27/04 03:35	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 03:35	RJS	75-01-4		
Bromomethane	8.5	ug/l	1.0	02/27/04 03:35	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-69-4		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362750 Project Sample Number: 1085104-002 Date Collected: 02/25/04 10:56
Client Sample ID: E04-0126-67610 Sample Port Lead 1A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	2.1	ug/l	1.0	02/27/04 03:35	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 03:35	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 03:35	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 03:35	RJS	71-43-2		
1,2-Dichloroethane	5.3	ug/l	1.0	02/27/04 03:35	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 03:35	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 03:35	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:35	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 03:35	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 03:35	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 03:35	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 03:35	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 03:35	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 03:35	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 03:35	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 03:35	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 03:35	RJS	110-75-8		
Dibromofluoromethane (S)	114	%		02/27/04 03:35	RJS	1868-53-7		
Toluene-d8 (S)	104	%		02/27/04 03:35	RJS	2037-26-5		
4-Bromofluorobenzene (S)	106	%		02/27/04 03:35	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	110	%		02/27/04 03:35	RJS	17060-07-0		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362768 Project Sample Number: 1085104-003 Date Collected: 02/25/04 11:03
Client Sample ID: E04-0126-67611 Sample Port Lead 1B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	7	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 20:58	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 20:58	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 20:58	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 20:58	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 20:58	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 20:58	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 20:58	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 20:58	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 20:58	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 20:58	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 20:58	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 20:58	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 20:58	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 20:58	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 20:58	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 20:58	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:58	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 20:58	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	56.	03/03/04 20:58	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	56.	03/03/04 20:58	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 20:58	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	84-66-2		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362768 Project Sample Number: 1085104-003 Date Collected: 02/25/04 11:03
Client Sample ID: E04-0126-67611 Sample Port Lead 1B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 20:58	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 20:58	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	56.	03/03/04 20:58	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 20:58	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 20:58	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	26.	03/03/04 20:58	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 20:58	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 20:58	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 20:58	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 20:58	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/03/04 20:58	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 20:58	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 20:58	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 20:58	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 20:58	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 20:58	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 20:58	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 20:58	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 20:58	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 20:58	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 20:58	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 20:58	KSK	67-72-1		
Nitrobenzene-d5 (S)	83	%		03/03/04 20:58	KSK	4165-60-0		
2-Fluorobiphenyl (S)	84	%		03/03/04 20:58	KSK	321-60-8		
Terphenyl-d14 (S)	86	%		03/03/04 20:58	KSK	1718-51-0		
Phenol-d6 (S)	1	%		03/03/04 20:58	KSK	13127-88-3	2	
2-Fluorophenol (S)	6	%		03/03/04 20:58	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	24	%		03/03/04 20:58	KSK		2	
Date Extracted	03/01/04			03/01/04				
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Chloromethane	7.8	ug/l	1.0	02/27/04 04:03	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 04:03	RJS	75-01-4		
Bromomethane	4.1	ug/l	1.0	02/27/04 04:03	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-69-4		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362768 Project Sample Number: 1085104-003 Date Collected: 02/25/04 11:03
Client Sample ID: E04-0126-67611 Sample Port Lead 1B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	2.6	ug/l	1.0	02/27/04 04:03	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 04:03	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 04:03	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 04:03	RJS	71-43-2		
1,2-Dichloroethane	3.6	ug/l	1.0	02/27/04 04:03	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 04:03	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 04:03	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:03	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 04:03	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:03	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 04:03	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 04:03	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 04:03	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 04:03	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 04:03	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:03	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 04:03	RJS	110-75-8		
Dibromofluoromethane (S)	123	%		02/27/04 04:03	RJS	1868-53-7		
Toluene-d8 (S)	77	%		02/27/04 04:03	RJS	2037-26-5		
4-Bromofluorobenzene (S)	105	%		02/27/04 04:03	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	117	%		02/27/04 04:03	RJS	17060-07-0		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362776 Project Sample Number: 1085104-004 Date Collected: 02/25/04 11:11
Client Sample ID: E04-0126-67612 Sample Port Lead 4A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	7	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	10.	03/03/04 21:51	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	10.	03/03/04 21:51	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	10.	03/03/04 21:51	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	10.	03/03/04 21:51	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	10.	03/03/04 21:51	KSK	621-64-7		
Nitrobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	98-95-3		
Isophorone	ND	ug/l	10.	03/03/04 21:51	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	10.	03/03/04 21:51	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	10.	03/03/04 21:51	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	10.	03/03/04 21:51	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	10.	03/03/04 21:51	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	120-82-1		
Naphthalene	ND	ug/l	10.	03/03/04 21:51	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	10.	03/03/04 21:51	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	10.	03/03/04 21:51	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	10.	03/03/04 21:51	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	10.	03/03/04 21:51	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	131-11-3		
Acenaphthylene	ND	ug/l	10.	03/03/04 21:51	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	10.	03/03/04 21:51	KSK	606-20-2		
Acenaphthene	ND	ug/l	10.	03/03/04 21:51	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	51.	03/03/04 21:51	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	51.	03/03/04 21:51	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	10.	03/03/04 21:51	KSK	121-14-2		
Diethylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	84-66-2		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362776 Project Sample Number: 1085104-004 Date Collected: 02/25/04 11:11
Client Sample ID: E04-0126-67612 Sample Port Lead 4A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	10.	03/03/04 21:51	KSK	7005-72-3		
Fluorene	ND	ug/l	10.	03/03/04 21:51	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	51.	03/03/04 21:51	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	10.	03/03/04 21:51	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	10.	03/03/04 21:51	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	23.	03/03/04 21:51	KSK	87-86-5		
Phenanthrene	ND	ug/l	10.	03/03/04 21:51	KSK	85-01-8		
Anthracene	ND	ug/l	10.	03/03/04 21:51	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	84-74-2		
Fluoranthene	ND	ug/l	10.	03/03/04 21:51	KSK	206-44-0		
Pyrene	ND	ug/l	10.	03/03/04 21:51	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	20.	03/03/04 21:51	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	10.	03/03/04 21:51	KSK	56-55-3		
Chrysene	ND	ug/l	10.	03/03/04 21:51	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	10.	03/03/04 21:51	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	10.	03/03/04 21:51	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	10.	03/03/04 21:51	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	10.	03/03/04 21:51	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	10.	03/03/04 21:51	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.	03/03/04 21:51	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	10.	03/03/04 21:51	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	10.	03/03/04 21:51	KSK	191-24-2		
Hexachloroethane	ND	ug/l	10.	03/03/04 21:51	KSK	67-72-1		
Nitrobenzene-d5 (S)	90	%		03/03/04 21:51	KSK	4165-60-0		
2-Fluorobiphenyl (S)	94	%		03/03/04 21:51	KSK	321-60-8		
Terphenyl-d14 (S)	93	%		03/03/04 21:51	KSK	1718-51-0		
Phenol-d6 (S)	0	%		03/03/04 21:51	KSK	13127-88-3	2	
2-Fluorophenol (S)	0	%		03/03/04 21:51	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	0	%		03/03/04 21:51	KSK		2	
Date Extracted	03/01/04			03/01/04				
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Chloromethane	7.1	ug/l	1.0	02/27/04 04:30	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 04:30	RJS	75-01-4		
Bromomethane	3.9	ug/l	1.0	02/27/04 04:30	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-69-4		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362776 Project Sample Number: 1085104-004 Date Collected: 02/25/04 11:11
Client Sample ID: E04-0126-67612 Sample Port Lead 4A Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	3.0	ug/l	1.0	02/27/04 04:30	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 04:30	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 04:30	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 04:30	RJS	71-43-2		
1,2-Dichloroethane	3.9	ug/l	1.0	02/27/04 04:30	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 04:30	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 04:30	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:30	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 04:30	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:30	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 04:30	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 04:30	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 04:30	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 04:30	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 04:30	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:30	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 04:30	RJS	110-75-8		
Dibromofluoromethane (S)	124	%		02/27/04 04:30	RJS	1868-53-7		
Toluene-d8 (S)	78	%		02/27/04 04:30	RJS	2037-26-5		
4-Bromofluorobenzene (S)	107	%		02/27/04 04:30	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	117	%		02/27/04 04:30	RJS	17060-07-0		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362784 Project Sample Number: 1085104-005 Date Collected: 02/25/04 11:25
Client Sample ID: E04-0126-67613 Sample Port Lead 4B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	6	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/03/04 22:44	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/03/04 22:44	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/03/04 22:44	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/03/04 22:44	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/03/04 22:44	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/03/04 22:44	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/03/04 22:44	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/03/04 22:44	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/03/04 22:44	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/03/04 22:44	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/03/04 22:44	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/03/04 22:44	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/03/04 22:44	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/03/04 22:44	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/03/04 22:44	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/03/04 22:44	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/03/04 22:44	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/03/04 22:44	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	53.	03/03/04 22:44	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	53.	03/03/04 22:44	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/03/04 22:44	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	84-66-2		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362784 Project Sample Number: 1085104-005 Date Collected: 02/25/04 11:25
Client Sample ID: E04-0126-67613 Sample Port Lead 4B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/03/04 22:44	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/03/04 22:44	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	53.	03/03/04 22:44	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/03/04 22:44	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/03/04 22:44	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	24.	03/03/04 22:44	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/03/04 22:44	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/03/04 22:44	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/03/04 22:44	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/03/04 22:44	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	21.	03/03/04 22:44	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/03/04 22:44	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/03/04 22:44	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/03/04 22:44	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/03/04 22:44	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/03/04 22:44	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/03/04 22:44	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/03/04 22:44	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/03/04 22:44	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/03/04 22:44	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/03/04 22:44	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/03/04 22:44	KSK	67-72-1		
Nitrobenzene-d5 (S)	90	%		03/03/04 22:44	KSK	4165-60-0		
2-Fluorobiphenyl (S)	91	%		03/03/04 22:44	KSK	321-60-8		
Terphenyl-d14 (S)	92	%		03/03/04 22:44	KSK	1718-51-0		
Phenol-d6 (S)	0	%		03/03/04 22:44	KSK	13127-88-3	2	
2-Fluorophenol (S)	1	%		03/03/04 22:44	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	19	%		03/03/04 22:44	KSK		2	
Date Extracted	03/01/04			03/01/04				
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Chloromethane	5.7	ug/l	1.0	02/27/04 04:57	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 04:57	RJS	75-01-4		
Bromomethane	1.9	ug/l	1.0	02/27/04 04:57	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-69-4		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362784 Project Sample Number: 1085104-005 Date Collected: 02/25/04 11:25
Client Sample ID: E04-0126-67613 Sample Port Lead 4B Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	3.1	ug/l	1.0	02/27/04 04:57	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 04:57	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 04:57	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 04:57	RJS	71-43-2		
1,2-Dichloroethane	2.3	ug/l	1.0	02/27/04 04:57	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 04:57	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 04:57	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:57	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 04:57	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 04:57	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 04:57	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 04:57	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 04:57	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 04:57	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 04:57	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 04:57	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 04:57	RJS	110-75-8		
Dibromofluoromethane (S)	129	%		02/27/04 04:57	RJS	1868-53-7		
Toluene-d8 (S)	78	%		02/27/04 04:57	RJS	2037-26-5		
4-Bromofluorobenzene (S)	106	%		02/27/04 04:57	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	119	%		02/27/04 04:57	RJS	17060-07-0		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362792 Project Sample Number: 1085104-006 Date Collected: 02/25/04 11:37
Client Sample ID: E04-0126-67614 Comb Effluent 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	ND	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	10.	03/03/04 23:37	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	10.	03/03/04 23:37	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	10.	03/03/04 23:37	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	10.	03/03/04 23:37	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	10.	03/03/04 23:37	KSK	621-64-7		
Nitrobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	98-95-3		
Isophorone	ND	ug/l	10.	03/03/04 23:37	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	10.	03/03/04 23:37	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	10.	03/03/04 23:37	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	10.	03/03/04 23:37	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	10.	03/03/04 23:37	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	120-82-1		
Naphthalene	ND	ug/l	10.	03/03/04 23:37	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	10.	03/03/04 23:37	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	10.	03/03/04 23:37	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	10.	03/03/04 23:37	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	10.	03/03/04 23:37	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	131-11-3		
Acenaphthylene	ND	ug/l	10.	03/03/04 23:37	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	10.	03/03/04 23:37	KSK	606-20-2		
Acenaphthene	ND	ug/l	10.	03/03/04 23:37	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	51.	03/03/04 23:37	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	51.	03/03/04 23:37	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	10.	03/03/04 23:37	KSK	121-14-2		
Diethylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	84-66-2		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362792 Project Sample Number: 1085104-006 Date Collected: 02/25/04 11:37
Client Sample ID: E04-0126-67614 Comb Effluent 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	10.	03/03/04 23:37	KSK	7005-72-3		
Fluorene	ND	ug/l	10.	03/03/04 23:37	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	51.	03/03/04 23:37	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	10.	03/03/04 23:37	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	10.	03/03/04 23:37	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	23.	03/03/04 23:37	KSK	87-86-5		
Phenanthrene	ND	ug/l	10.	03/03/04 23:37	KSK	85-01-8		
Anthracene	ND	ug/l	10.	03/03/04 23:37	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	84-74-2		
Fluoranthene	ND	ug/l	10.	03/03/04 23:37	KSK	206-44-0		
Pyrene	ND	ug/l	10.	03/03/04 23:37	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	20.	03/03/04 23:37	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	10.	03/03/04 23:37	KSK	56-55-3		
Chrysene	ND	ug/l	10.	03/03/04 23:37	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	10.	03/03/04 23:37	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	10.	03/03/04 23:37	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	10.	03/03/04 23:37	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	10.	03/03/04 23:37	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	10.	03/03/04 23:37	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	10.	03/03/04 23:37	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	10.	03/03/04 23:37	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	10.	03/03/04 23:37	KSK	191-24-2		
Hexachloroethane	ND	ug/l	10.	03/03/04 23:37	KSK	67-72-1		
Nitrobenzene-d5 (S)	79	%		03/03/04 23:37	KSK	4165-60-0		
2-Fluorobiphenyl (S)	82	%		03/03/04 23:37	KSK	321-60-8		
Terphenyl-d14 (S)	84	%		03/03/04 23:37	KSK	1718-51-0		
Phenol-d6 (S)	5	%		03/03/04 23:37	KSK	13127-88-3	2	
2-Fluorophenol (S)	19	%		03/03/04 23:37	KSK	367-12-4	2	
2,4,6-Tribromophenol (S)	47	%		03/03/04 23:37	KSK		2	
Date Extracted	03/01/04			03/01/04				
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Chloromethane	2.7	ug/l	1.0	02/27/04 05:24	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 05:24	RJS	75-01-4		
Bromomethane	1.4	ug/l	1.0	02/27/04 05:24	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-69-4		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362792 Project Sample Number: 1085104-006 Date Collected: 02/25/04 11:37
Client Sample ID: E04-0126-67614 Comb Effluent 1/2 Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	ND	ug/l	1.0	02/27/04 05:24	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 05:24	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 05:24	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 05:24	RJS	71-43-2		
1,2-Dichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 05:24	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 05:24	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:24	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 05:24	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:24	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 05:24	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 05:24	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 05:24	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 05:24	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 05:24	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:24	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 05:24	RJS	110-75-8		
Dibromofluoromethane (S)	127	%		02/27/04 05:24	RJS	1868-53-7		
Toluene-d8 (S)	73	%		02/27/04 05:24	RJS	2037-26-5		
4-Bromofluorobenzene (S)	103	%		02/27/04 05:24	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	117	%		02/27/04 05:24	RJS	17060-07-0		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362800 Project Sample Number: 1085104-007 Date Collected: 02/25/04 12:00
Client Sample ID: E04-0126-67622 Field Blank Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Microbiology								
Biochemical Oxygen Demand, 5 d	Prep/Method: / SM 5210B							
BOD, 5 day	ND	mg/l	6	03/02/04	JPH1		1	
Date Prepared	02/26/04 10:30			02/26/04 10:30				
Wet Chemistry								
Phenolics Total. in Water	Method: EPA 420.4							
Phenol	ND	ug/l	25.0	03/05/04 08:41	VAF	108-95-2		
GC/MS Semivolatiles								
625 Wastewater GC/MS SVOA	Prep/Method: EPA 625 / EPA 625							
Phenol	ND	ug/l	11.	03/09/04 20:36	KSK	108-95-2		
bis(2-Chloroethyl) ether	ND	ug/l	11.	03/09/04 20:36	KSK	111-44-4		
2-Chlorophenol	ND	ug/l	11.	03/09/04 20:36	KSK	95-57-8		
1,3-Dichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	95-50-1		
bis(2-Chloroisopropyl) ether	ND	ug/l	11.	03/09/04 20:36	KSK	39638-32-9		
N-Nitroso-di-n-propylamine	ND	ug/l	11.	03/09/04 20:36	KSK	621-64-7		
Nitrobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	98-95-3		
Isophorone	ND	ug/l	11.	03/09/04 20:36	KSK	78-59-1		
2-Nitrophenol	ND	ug/l	11.	03/09/04 20:36	KSK	88-75-5		
2,4-Dimethylphenol	ND	ug/l	11.	03/09/04 20:36	KSK	105-67-9		
bis(2-Chloroethoxy)methane	ND	ug/l	11.	03/09/04 20:36	KSK	111-91-1		
2,4-Dichlorophenol	ND	ug/l	11.	03/09/04 20:36	KSK	120-83-2		
1,2,4-Trichlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	120-82-1		
Naphthalene	ND	ug/l	11.	03/09/04 20:36	KSK	91-20-3		
Hexachloro-1,3-butadiene	ND	ug/l	11.	03/09/04 20:36	KSK	87-68-3		
4-Chloro-3-methylphenol	ND	ug/l	11.	03/09/04 20:36	KSK	59-50-7		
2,4,6-Trichlorophenol	ND	ug/l	11.	03/09/04 20:36	KSK	88-06-2		
2-Chloronaphthalene	ND	ug/l	11.	03/09/04 20:36	KSK	91-58-7		
Dimethylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	131-11-3		
Acenaphthylene	ND	ug/l	11.	03/09/04 20:36	KSK	208-96-8		
2,6-Dinitrotoluene	ND	ug/l	11.	03/09/04 20:36	KSK	606-20-2		
Acenaphthene	ND	ug/l	11.	03/09/04 20:36	KSK	83-32-9		
2,4-Dinitrophenol	ND	ug/l	55.	03/09/04 20:36	KSK	51-28-5		
4-Nitrophenol	ND	ug/l	55.	03/09/04 20:36	KSK	100-02-7		
2,4-Dinitrotoluene	ND	ug/l	11.	03/09/04 20:36	KSK	121-14-2		
Diethylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	84-66-2		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362800 Project Sample Number: 1085104-007 Date Collected: 02/25/04 12:00
Client Sample ID: E04-0126-67622 Field Blank Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
4-Chlorophenylphenyl ether	ND	ug/l	11.	03/09/04 20:36	KSK	7005-72-3		
Fluorene	ND	ug/l	11.	03/09/04 20:36	KSK	86-73-7		
4,6-Dinitro-2-methylphenol	ND	ug/l	55.	03/09/04 20:36	KSK	534-52-1		
4-Bromophenylphenyl ether	ND	ug/l	11.	03/09/04 20:36	KSK	101-55-3		
Hexachlorobenzene	ND	ug/l	11.	03/09/04 20:36	KSK	118-74-1		
Pentachlorophenol	ND	ug/l	25.	03/09/04 20:36	KSK	87-86-5		
Phenanthrene	ND	ug/l	11.	03/09/04 20:36	KSK	85-01-8		
Anthracene	ND	ug/l	11.	03/09/04 20:36	KSK	120-12-7		
Di-n-butylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	84-74-2		
Fluoranthene	ND	ug/l	11.	03/09/04 20:36	KSK	206-44-0		
Pyrene	ND	ug/l	11.	03/09/04 20:36	KSK	129-00-0		
Butylbenzylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	85-68-7		
3,3'-Dichlorobenzidine	ND	ug/l	22.	03/09/04 20:36	KSK	91-94-1		
Benzo(a)anthracene	ND	ug/l	11.	03/09/04 20:36	KSK	56-55-3		
Chrysene	ND	ug/l	11.	03/09/04 20:36	KSK	218-01-9		
bis(2-Ethylhexyl)phthalate	ND	ug/l	11.	03/09/04 20:36	KSK	117-81-7		
Di-n-octylphthalate	ND	ug/l	11.	03/09/04 20:36	KSK	117-84-0		
Benzo(b)fluoranthene	ND	ug/l	11.	03/09/04 20:36	KSK	205-99-2		
Benzo(k)fluoranthene	ND	ug/l	11.	03/09/04 20:36	KSK	207-08-9		
Benzo(a)pyrene	ND	ug/l	11.	03/09/04 20:36	KSK	50-32-8		
Indeno(1,2,3-cd)pyrene	ND	ug/l	11.	03/09/04 20:36	KSK	193-39-5		
Dibenz(a,h)anthracene	ND	ug/l	11.	03/09/04 20:36	KSK	53-70-3		
Benzo(g,h,i)perylene	ND	ug/l	11.	03/09/04 20:36	KSK	191-24-2		
Hexachloroethane	ND	ug/l	11.	03/09/04 20:36	KSK	67-72-1		
Nitrobenzene-d5 (S)	73	%		03/09/04 20:36	KSK	4165-60-0		
2-Fluorobiphenyl (S)	82	%		03/09/04 20:36	KSK	321-60-8		
Terphenyl-d14 (S)	95	%		03/09/04 20:36	KSK	1718-51-0		
Phenol-d6 (S)	77	%		03/09/04 20:36	KSK	13127-88-3		
2-Fluorophenol (S)	73	%		03/09/04 20:36	KSK	367-12-4		
2,4,6-Tribromophenol (S)	80	%		03/09/04 20:36	KSK			
Date Extracted	03/01/04			03/01/04				
GC/MS Volatiles								
Volatile GC/MS by 624	Method: EPA 624							
Chloromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	74-87-3		
Vinyl chloride	ND	ug/l	1.0	02/27/04 05:51	RJS	75-01-4		
Bromomethane	ND	ug/l	1.0	02/27/04 05:51	RJS	74-83-9		
Chloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-00-3		
Trichlorofluoromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-69-4		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

Lab Sample No: 105362800 Project Sample Number: 1085104-007 Date Collected: 02/25/04 12:00
Client Sample ID: E04-0126-67622 Field Blank Matrix: Water Date Received: 02/25/04 18:00

Parameters	Results	Units	Report Limit	Analyzed	By	CAS No.	Qual	RegLmt
Methylene chloride	ND	ug/l	1.0	02/27/04 05:51	RJS	75-09-2		
1,1-Dichloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	75-35-4		
trans-1,2-Dichloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	156-60-5		
1,1-Dichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-34-3		
Chloroform	ND	ug/l	1.0	02/27/04 05:51	RJS	67-66-3		
1,1,1-Trichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	71-55-6		
Carbon tetrachloride	ND	ug/l	1.0	02/27/04 05:51	RJS	56-23-5		
Benzene	ND	ug/l	1.0	02/27/04 05:51	RJS	71-43-2		
1,2-Dichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	107-06-2		
Trichloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	79-01-6		
1,2-Dichloropropane	ND	ug/l	1.0	02/27/04 05:51	RJS	78-87-5		
Bromodichloromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	75-27-4		
trans-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:51	RJS	10061-02-6		
Toluene	ND	ug/l	1.0	02/27/04 05:51	RJS	108-88-3		
cis-1,3-Dichloropropene	ND	ug/l	1.0	02/27/04 05:51	RJS	10061-01-5		
1,1,2-Trichloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	79-00-5		
Tetrachloroethene	ND	ug/l	1.0	02/27/04 05:51	RJS	127-18-4		
Dibromochloromethane	ND	ug/l	1.0	02/27/04 05:51	RJS	124-48-1		
Chlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	108-90-7		
Ethylbenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	100-41-4		
Xylene (Total)	ND	ug/l	3.0	02/27/04 05:51	RJS	1330-20-7		
Bromoform	ND	ug/l	1.0	02/27/04 05:51	RJS	75-25-2		
1,1,2,2-Tetrachloroethane	ND	ug/l	1.0	02/27/04 05:51	RJS	79-34-5		
1,3-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	541-73-1		
1,4-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	106-46-7		
1,2-Dichlorobenzene	ND	ug/l	1.0	02/27/04 05:51	RJS	95-50-1		
2-Chloroethylvinyl ether	ND	ug/l	5.0	02/27/04 05:51	RJS	110-75-8		
Dibromofluoromethane (S)	119	%		02/27/04 05:51	RJS	1868-53-7		
Toluene-d8 (S)	106	%		02/27/04 05:51	RJS	2037-26-5		
4-Bromofluorobenzene (S)	105	%		02/27/04 05:51	RJS	460-00-4		
1,2-Dichloroethane-d4 (S)	114	%		02/27/04 05:51	RJS	17060-07-0		

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

PARAMETER FOOTNOTES

ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
(S)	Surrogate
[1]	The BOD dilution blank QC criterion was not met. Acceptable method performance is based upon the remaining batch QC.
[2]	The surrogate recovery was outside of acceptance limits.

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

QC Batch: 104879 Analysis Method: EPA 625
QC Batch Method: EPA 625 Analysis Description: 625 Wastewater GC/MS SVOA
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

METHOD BLANK: 105373757
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Phenol	ug/l	ND	10.	
bis(2-Chloroethyl) ether	ug/l	ND	10.	
2-Chlorophenol	ug/l	ND	10.	
1,3-Dichlorobenzene	ug/l	ND	10.	
1,4-Dichlorobenzene	ug/l	ND	10.	
1,2-Dichlorobenzene	ug/l	ND	10.	
bis(2-Chloroisopropyl) ether	ug/l	ND	10.	
N-Nitroso-di-n-propylamine	ug/l	ND	10.	
Nitrobenzene	ug/l	ND	10.	
Isophorone	ug/l	ND	10.	
2-Nitrophenol	ug/l	ND	10.	
2,4-Dimethylphenol	ug/l	ND	10.	
bis(2-Chloroethoxy)methane	ug/l	ND	10.	
2,4-Dichlorophenol	ug/l	ND	10.	
1,2,4-Trichlorobenzene	ug/l	ND	10.	
Naphthalene	ug/l	ND	10.	
Hexachloro-1,3-butadiene	ug/l	ND	10.	
4-Chloro-3-methylphenol	ug/l	ND	10.	
2,4,6-Trichlorophenol	ug/l	ND	10.	
2-Chloronaphthalene	ug/l	ND	10.	
Dimethylphthalate	ug/l	ND	10.	
Acenaphthylene	ug/l	ND	10.	
2,6-Dinitrotoluene	ug/l	ND	10.	
Acenaphthene	ug/l	ND	10.	
2,4-Dinitrophenol	ug/l	ND	50.	
4-Nitrophenol	ug/l	ND	50.	
2,4-Dinitrotoluene	ug/l	ND	10.	
Diethylphthalate	ug/l	ND	10.	
4-Chlorophenylphenyl ether	ug/l	ND	10.	
Fluorene	ug/l	ND	10.	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

METHOD BLANK: 105373757
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

Parameter	Units	Blank Result	Reporting Limit	Footnotes
4,6-Dinitro-2-methylphenol	ug/l	ND	50.	
4-Bromophenylphenyl ether	ug/l	ND	10.	
Hexachlorobenzene	ug/l	ND	10.	
Pentachlorophenol	ug/l	ND	23.	
Phenanthrene	ug/l	ND	10.	
Anthracene	ug/l	ND	10.	
Di-n-butylphthalate	ug/l	ND	10.	
Fluoranthene	ug/l	ND	10.	
Pyrene	ug/l	ND	10.	
Butylbenzylphthalate	ug/l	ND	10.	
3,3'-Dichlorobenzidine	ug/l	ND	20.	
Benzo(a)anthracene	ug/l	ND	10.	
Chrysene	ug/l	ND	10.	
bis(2-Ethylhexyl)phthalate	ug/l	ND	10.	
Di-n-octylphthalate	ug/l	ND	10.	
Benzo(b)fluoranthene	ug/l	ND	10.	
Benzo(k)fluoranthene	ug/l	ND	10.	
Benzo(a)pyrene	ug/l	ND	10.	
Indeno(1,2,3-cd)pyrene	ug/l	ND	10.	
Dibenz(a,h)anthracene	ug/l	ND	10.	
Benzo(g,h,i)perylene	ug/l	ND	10.	
Hexachloroethane	ug/l	ND	10.	
Nitrobenzene-d5 (S)	%	79		
2-Fluorobiphenyl (S)	%	81		
Terphenyl-d14 (S)	%	91		
Phenol-d6 (S)	%	82		
2-Fluorophenol (S)	%	78		
2,4,6-Tribromophenol (S)	%	84		

LABORATORY CONTROL SAMPLE: 105373765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Phenol	ug/l	50.00	42.51	85	
bis(2-Chloroethyl) ether	ug/l	50.00	41.58	83	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

LABORATORY CONTROL SAMPLE: 105373765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
2-Chlorophenol	ug/l	50.00	41.34	83	
1,3-Dichlorobenzene	ug/l	50.00	39.64	79	
1,4-Dichlorobenzene	ug/l	50.00	40.08	80	
1,2-Dichlorobenzene	ug/l	50.00	40.57	81	
bis(2-Chloroisopropyl) ether	ug/l	50.00	43.03	86	
N-Nitroso-di-n-propylamine	ug/l	50.00	43.87	88	
Nitrobenzene	ug/l	50.00	45.23	90	
Isophorone	ug/l	50.00	44.35	89	
2-Nitrophenol	ug/l	50.00	40.51	81	
2,4-Dimethylphenol	ug/l	50.00	16.12	32	1
bis(2-Chloroethoxy)methane	ug/l	50.00	42.95	86	
2,4-Dichlorophenol	ug/l	50.00	39.87	80	
1,2,4-Trichlorobenzene	ug/l	50.00	39.98	80	
Naphthalene	ug/l	50.00	41.60	83	
Hexachloro-1,3-butadiene	ug/l	50.00	42.62	85	
4-Chloro-3-methylphenol	ug/l	50.00	43.14	86	
2,4,6-Trichlorophenol	ug/l	50.00	41.26	82	
2-Chloronaphthalene	ug/l	50.00	44.07	88	
Dimethylphthalate	ug/l	50.00	45.04	90	
Acenaphthylene	ug/l	50.00	44.17	88	
2,6-Dinitrotoluene	ug/l	50.00	44.25	88	
Acenaphthene	ug/l	50.00	43.78	88	
2,4-Dinitrophenol	ug/l	50.00	30.01	60	
4-Nitrophenol	ug/l	50.00	39.86	80	
2,4-Dinitrotoluene	ug/l	50.00	41.91	84	
Diethylphthalate	ug/l	50.00	42.08	84	
4-Chlorophenylphenyl ether	ug/l	50.00	44.50	89	
Fluorene	ug/l	50.00	45.01	90	
4,6-Dinitro-2-methylphenol	ug/l	50.00	34.83	70	
4-Bromophenylphenyl ether	ug/l	50.00	46.48	93	
Hexachlorobenzene	ug/l	50.00	47.58	95	
Pentachlorophenol	ug/l	50.00	25.06	50	1
Phenanthrene	ug/l	50.00	43.99	88	
Anthracene	ug/l	50.00	45.12	90	
Di-n-butylphthalate	ug/l	50.00	46.00	92	
Fluoranthene	ug/l	50.00	46.88	94	
Pyrene	ug/l	50.00	42.96	86	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

LABORATORY CONTROL SAMPLE: 105373765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Butylbenzylphthalate	ug/l	50.00	43.22	86	
3,3'-Dichlorobenzidine	ug/l	50.00	27.07	54	
Benzo(a)anthracene	ug/l	50.00	44.03	88	
Chrysene	ug/l	50.00	44.37	89	
bis(2-Ethylhexyl)phthalate	ug/l	50.00	43.75	88	
Di-n-octylphthalate	ug/l	50.00	41.74	84	
Benzo(b)fluoranthene	ug/l	50.00	42.91	86	
Benzo(k)fluoranthene	ug/l	50.00	45.12	90	
Benzo(a)pyrene	ug/l	50.00	42.59	85	
Indeno(1,2,3-cd)pyrene	ug/l	50.00	44.18	88	
Dibenz(a,h)anthracene	ug/l	50.00	44.76	90	
Benzo(g,h,i)perylene	ug/l	50.00	44.21	88	
Hexachloroethane	ug/l	50.00	41.51	83	
Nitrobenzene-d5 (S)				86	
2-Fluorobiphenyl (S)				86	
Terphenyl-d14 (S)				89	
Phenol-d6 (S)				86	
2-Fluorophenol (S)				80	
2,4,6-Tribromophenol (S)				88	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

QC Batch: 104706 Analysis Method: EPA 624
QC Batch Method: EPA 624 Analysis Description: Volatile GC/MS by 624
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

METHOD BLANK: 105362867
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Chloromethane	ug/l	ND	1.0	
Vinyl chloride	ug/l	ND	1.0	
Bromomethane	ug/l	ND	1.0	
Chloroethane	ug/l	ND	1.0	
Trichlorofluoromethane	ug/l	ND	1.0	
Methylene chloride	ug/l	ND	1.0	
1,1-Dichloroethene	ug/l	ND	1.0	
trans-1,2-Dichloroethene	ug/l	ND	1.0	
1,1-Dichloroethane	ug/l	ND	1.0	
Chloroform	ug/l	ND	1.0	
1,1,1-Trichloroethane	ug/l	ND	1.0	
Carbon tetrachloride	ug/l	ND	1.0	
Benzene	ug/l	ND	1.0	
1,2-Dichloroethane	ug/l	ND	1.0	
Trichloroethene	ug/l	ND	1.0	
1,2-Dichloropropane	ug/l	ND	1.0	
Bromodichloromethane	ug/l	ND	1.0	
trans-1,3-Dichloropropene	ug/l	ND	1.0	
Toluene	ug/l	ND	1.0	
cis-1,3-Dichloropropene	ug/l	ND	1.0	
1,1,2-Trichloroethane	ug/l	ND	1.0	
Tetrachloroethene	ug/l	ND	1.0	
Dibromochloromethane	ug/l	ND	1.0	
Chlorobenzene	ug/l	ND	1.0	
Ethylbenzene	ug/l	ND	1.0	
Xylene (Total)	ug/l	ND	3.0	
Bromoform	ug/l	ND	1.0	
1,1,2,2-Tetrachloroethane	ug/l	ND	1.0	
1,3-Dichlorobenzene	ug/l	ND	1.0	
1,4-Dichlorobenzene	ug/l	ND	1.0	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

METHOD BLANK: 105362867
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

Parameter	Units	Blank Result	Reporting Limit	Footnotes
1,2-Dichlorobenzene	ug/l	ND	1.0	
2-Chloroethylvinyl ether	ug/l	ND	5.0	
Dibromofluoromethane (S)	%	107		
Toluene-d8 (S)	%	104		
4-Bromofluorobenzene (S)	%	106		
1,2-Dichloroethane-d4 (S)	%	106		

LABORATORY CONTROL SAMPLE: 105362875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Chloromethane	ug/l	20.00	21.65	108	
Vinyl chloride	ug/l	20.00	20.88	104	
Bromomethane	ug/l	20.00	27.46	137	
Chloroethane	ug/l	20.00	23.23	116	
Trichlorofluoromethane	ug/l	20.00	20.62	103	
Methylene chloride	ug/l	20.00	21.55	108	
1,1-Dichloroethene	ug/l	20.00	20.16	101	
trans-1,2-Dichloroethene	ug/l	20.00	22.50	113	
1,1-Dichloroethane	ug/l	20.00	20.02	100	
Chloroform	ug/l	20.00	20.88	104	
1,1,1-Trichloroethane	ug/l	20.00	20.65	103	
Carbon tetrachloride	ug/l	20.00	20.71	104	
Benzene	ug/l	20.00	20.39	102	
1,2-Dichloroethane	ug/l	20.00	20.79	104	
Trichloroethene	ug/l	20.00	20.53	103	
1,2-Dichloropropane	ug/l	20.00	20.59	103	
Bromodichloromethane	ug/l	20.00	20.55	103	
trans-1,3-Dichloropropene	ug/l	20.00	20.99	105	
Toluene	ug/l	20.00	20.32	102	
cis-1,3-Dichloropropene	ug/l	20.00	20.24	101	
1,1,2-Trichloroethane	ug/l	20.00	21.08	105	
Tetrachloroethene	ug/l	20.00	19.99	100	
Dibromochloromethane	ug/l	20.00	21.29	106	
Chlorobenzene	ug/l	20.00	19.88	99	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

LABORATORY CONTROL SAMPLE: 105362875

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Ethylbenzene	ug/l	20.00	20.32	102	
Xylene (Total)	ug/l	60.00	61.60	103	
Bromoform	ug/l	20.00	19.80	99	
1,1,2,2-Tetrachloroethane	ug/l	20.00	23.73	119	
1,3-Dichlorobenzene	ug/l	20.00	20.16	101	
1,4-Dichlorobenzene	ug/l	20.00	20.25	101	
1,2-Dichlorobenzene	ug/l	20.00	20.70	104	
2-Chloroethylvinyl ether	ug/l	20.00	22.99	115	
Dibromofluoromethane (S)				104	
Toluene-d8 (S)				96	
4-Bromofluorobenzene (S)				97	
1,2-Dichloroethane-d4 (S)				100	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

QC Batch: 104728 Analysis Method: SM 5210B
QC Batch Method: Analysis Description: Biochemical Oxygen Demand, 5 d
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

METHOD BLANK: 105364194
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792 105362800

Parameter	Units	Blank Result	Reporting Limit	Footnotes
BOD, 5 day	mg/l	ND	6	2

LABORATORY CONTROL SAMPLE: 105364202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
BOD, 5 day	mg/l	198.00	201.0	102	2

SAMPLE DUPLICATE: 105364210

Parameter	Units	105360739 Result	DUP Result	RPD	Footnotes
BOD, 5 day	mg/l	3385	3181	6	2

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

QC Batch: 105063 Analysis Method: EPA 420.4
QC Batch Method: EPA 420.4 Analysis Description: Phenolics Total. in Water
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792

METHOD BLANK: 105384945
Associated Lab Samples: 105362743 105362750 105362768 105362776 105362784 105362792

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Phenol	ug/l	ND	25.0	

LABORATORY CONTROL SAMPLE: 105384952

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Phenol	ug/l	1000.00	1116	112	

MATRIX SPIKE: 105384960

Parameter	Units	105362743 Result	Spike Conc.	MS Result	MS % Rec	Footnotes
Phenol	ug/l	0	1000.00	598.5	60	1

SAMPLE DUPLICATE: 105384978

Parameter	Units	105362750 Result	DUP Result	RPD	Footnotes
Phenol	ug/l	ND	ND	NC	

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QUALITY CONTROL DATA

Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

QC Batch: 105064 Analysis Method: EPA 420.4
QC Batch Method: EPA 420.4 Analysis Description: Phenolics Total. in Water
Associated Lab Samples: 105362800

METHOD BLANK: 105384986
Associated Lab Samples: 105362800

Parameter	Units	Blank Result	Reporting Limit	Footnotes
Phenol	ug/l	ND	25.0	

LABORATORY CONTROL SAMPLE: 105384994

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	Footnotes
Phenol	ug/l	1000.00	1017	102	

MATRIX SPIKE: 105385009

Parameter	Units	105362800 Result	Spike Conc.	MS Result	MS % Rec	Footnotes
Phenol	ug/l	0	1000.00	1087	109	

SAMPLE DUPLICATE: 105385017

Parameter	Units	105364046 Result	DUP Result	RPD	Footnotes
Phenol	ug/l	ND	ND	NC	

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Lab Project Number: 1085104
Client Project ID: E04-0126 CG Carbon System Test

QUALITY CONTROL DATA PARAMETER FOOTNOTES

Consistent with EPA guidelines, unrounded concentrations are displayed and have been used to calculate % Rec and RPD values.

LCS(D)	Laboratory Control Sample (Duplicate)
MS(D)	Matrix Spike (Duplicate)
DUP	Sample Duplicate
ND	Not detected at or above adjusted reporting limit
NC	Not Calculable
J	Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit
MDL	Adjusted Method Detection Limit
RPD	Relative Percent Difference
(S)	Surrogate
[1]	The spike recovery was outside of acceptance limits.
[2]	The BOD dilution blank QC criterion was not met. Acceptable method performance is based upon the remaining batch QC.

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Fluorochemicals
FINAL REPORT
EVENT 2

E04-0126
February 25, 2004

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Analytical Report

Fluorochemical Characterization of Aqueous Samples

Cottage Grove Activated Carbon System FC Monitoring (E04-0126)

Exygen Research Laboratory Report No. L0001958

Testing Laboratory

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State College, PA 16801

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1 Introduction

Results are reported for the analysis of aqueous samples received by Exygen Research (Exygen) from the 3M Cottage Grove facility. The Exygen study number assigned to the project is L0001958.

Specific fluorochemical characterization by liquid chromatography / tandem mass spectrometry (LC/MS/MS) was requested for all samples. A total of 23 samples (including field duplicates, blanks, and spikes) were received for analysis.

The samples were prepared and analyzed by LC/MS/MS for the following list of fluorochemicals:

- Table 1: Target Analysis

Compound Name	Acronym
Perfluorobutanesulfonate	C4 Sulfonate (PFBS)
Perfluorohexanesulfonate	C6 Sulfonate (PFHS)
Perfluorooctanesulfonate	C8 Sulfonate (PFOS)
Perfluorohexanoic Acid	C6 Acid (PFHA)
Perfluorooctanoic Acid	C8 Acid (PFOA)

The analytical methods used were originally developed for groundwater samples and were validated by Exygen. The validation protocol and results are on file with Exygen. Only the C8 Sulfonate and C8 Acid were included in the original method validation. It should be noted that the quality control elements included in this analysis demonstrate the applicability of the method to the additional analytes.

2 Sample Receipt

The water samples were submitted in plastic containers. Samples were received on wet ice at a temperature of 0.1°C. Samples were stored at 4°C from receipt until analysis. Twenty-three individual containers were received. Field samples were collected on 2/25/04. Samples were received on 2/26/04. Chain-of-custody information is presented in Attachment C.

3 Holding Times

Field and laboratory spikes of these fluorochemicals have shown stability for periods greater than 90 days. Samples were analyzed within 30 days of collection.

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4 Methods - Analytical and Preparatory

4.1 LC/MS/MS

4.1.1 Sample Preparation for LC/MS/MS Analysis

Water samples were initially treated with 200 uL of 250 mg/L sodium thiosulfate solution to remove residual chlorine. Solid phase extraction (SPE) was used to prepare the samples for LC/MS/MS analysis. A portion of sample was diluted to forty-milliliters with Type I water. The dilution was performed prior to extraction in order to lessen the effects of matrix enhancement. This matrix enhancement was observed in earlier samples from this location and from screening runs performed on these samples. The diluted samples were transferred to a C_{18} SPE cartridge. The cartridge was eluted with 5 mL of 100% methanol. This treatment resulted in an eight-fold concentration of the diluted samples prior to analysis.

4.1.2 Sample Analysis by LC/MS/MS

In HPLC, an aliquot of extract is injected and passed through a liquid-phase chromatographic column. Based on the affinity of the analyte for the stationary phase in the column relative to the liquid mobile phase, the analyte is retained for a characteristic amount of time. Following HPLC separation, ES/MS provides a rapid and accurate means for analyzing a wide range of organic compounds, including fluorochemicals. Electrospray is generally operated at relatively mild temperatures; molecules are ionized, fragmented, and detected. Ions characteristic of known fluorochemicals are observed and quantitated against standards.

A Hewlett-Packard HP1100 HPLC system coupled to a Micromass Ultima MS/MS was used to analyze the sample extracts. Analysis was performed using selected reaction monitoring (SRM). Samples were extracted on 3/5/04. Additional matrix spikes were extracted on 3/17/04. Samples were analyzed between 3/12/04 and 3/18/04. Raw analytical data is provided in Attachment D.

5 Analysis

5.1 Calibration

A 7-point calibration curve was analyzed at the beginning and end of the analytical sequence for the compounds of interest. The calibration points were prepared at 0, 25, 50, 100, 250, 500, and 1000 ng/L (ppt) for LC/MS/MS analysis. The instrument response versus the concentration was plotted for each point. Using linear regression with 1/x weighting, the slope, y-intercept and correlation coefficient (r) and coefficient of determination (r^2) were determined. A calibration curve is acceptable if $r \geq 0.985$ ($r^2 \geq 0.970$).

Calibration standards are prepared using the same SPE procedure used for samples.

Calibration check standards were analyzed periodically (every three to five sample injections) throughout the analysis sequence. Compliance is obtained if the standard analyte concentrations are within +/-20% of the actual value.

All calibration criteria were met for this analysis.

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5.2 Blanks

Extraction blanks were prepared and analyzed with every extraction batch of samples. The extraction blanks should not have any target analytes present at or above the concentration of the low-level calibration standard. For these samples, the extraction blanks were compliant.

Instrument blanks in the form of clean methanol solvent were also analyzed after every high-level calibration standard, and after known high-level samples. Again, the blanks should not have any target analytes present at or above the low-level calibration standard. For the samples presented here the instrument blanks are compliant.

5.3 Surrogates

Surrogate spikes are not a component of the LC/MS/MS analytical methods.

5.4 Matrix Spikes

Field and laboratory spikes were prepared using all compounds of interest. Field spikes were prepared by adding a measured volume of field sample to a container spiked with the target analytes by the laboratory prior to shipping containers for sample collection. Laboratory spikes consisted of aliquots of un-spiked field samples that were fortified at the laboratory at the time of extraction. Field blank spikes consisted of laboratory water fortified at the laboratory and shipped with the sample containers to the field and back to the laboratory for analysis. Laboratory control spikes (see section 5.6) are samples of laboratory water spiked at the time of extraction. Each type of spike provides information needed to assess analyte stability, extraction efficiency, and matrix effects that may impact analytical results. Matrix spike recoveries are given in Attachment B. Please see Section 5.7 for additional discussion of matrix spike recoveries.

5.5 Duplicates

Field and laboratory duplicates were prepared for each field sample. Duplicate results are given along with the sample results in Attachment A.

5.6 Laboratory Control Samples

For LC/MS/MS analyses, Milliq water was spiked with all compounds of interest at 100 and 500 ng/mL during each extraction set. All recoveries for all compounds were between 70-130% in each LCS. Results are given along with the raw data in Attachment D.

5.7 Statement of Accuracy

Based on results of field spikes, laboratory fortified field samples, field blank spikes, and laboratory control spikes, the analytical accuracy of all compounds is ± 30%, with the exception of PFBS, which has a statement of accuracy of ± 50%. Several other compounds showed either laboratory or field spike recoveries outside of these ranges. The statement of accuracy is based on an overall assessment of all spike recovery data (field, lab, and control spikes) used for the project. Spike recovery data is included in Attachment B.

6 Data Summary

Please see Attachment A for a detailed listing of the analytical results. Results are reported in parts per billion (ppb) (ng/mL).

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7 Data/Sample Retention

Samples are disposed of one month after the report is issued unless otherwise specified. All electronic data is archived on retrievable media and hard copy reports are stored in data folders maintained by Exygen.

8 Attachments

8.1 Attachment A: Results

8.2 Attachment B: Matrix Spike Recoveries

8.3 Attachment C: Chain of Custody

8.4 Attachment D: Raw Analytical Data

9 Signatures

Paul Connolly, Team Leader - LCMS — Date 3/22/04

John M. Flaherty, Vice President — Date 3/19/04

Other Lab Members Contributing to Data

Karen Smith

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SECTION A

Exygen™ RESEARCH
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Analytical Report

Summary of C6 and C8 Acids and C4, C6 and C8 Sulfonates in Water Samples

	Analyte Found (ng/mL)	
	C6 Acid PFHA	C8 Acid PFOA
Sample ID	Perfluorohexanoic Acid	Perfluorooctanoic Acid
Influent 3	45.9	301
Influent 3*	47.3	298
Influent 3 Dup	44.3	319
Comb Effluent 1/2	0.462	0.0835
Comb Effluent 1/2*	0.398	0.114
Comb Effluent 1/2 Dup	0.387	0.111
Port 4A	13.4	5.59
Port 4A*	12.6	5.41
Port 4A Dup	11.9	6.91
Port 4B	15.6	4.42
Port 4B*	15.3	4.64
Port 4B Dup	15.7	4.72
Influent 1/2	3.90	11.6
Influent 1/2*	3.73	13.4
Influent 1/2 Dup	3.77	14.5
Trip Blank	ND	NQ

	Analyte Found (ng/mL)		
	C4 Sulfonate PFBS	C6 Sulfonate PFHS	C8 Sulfonate PFOS
Sample ID	Perfluorobutanesulfonate	Perfluorohexanesulfonate	Perfluorooctanesulfonate
Influent 3	36.9	6.20	37.7
Influent 3*	40.0	6.12	40.5
Influent 3 Dup	32.9	6.34	36.9
Comb Effluent 1/2	0.476	ND	ND
Comb Effluent 1/2*	0.449	ND	ND
Comb Effluent 1/2 Dup	0.482	ND	ND
Port 4A	30.1	1.97	3.44
Port 4A*	29.3	1.96	3.34
Port 4A Dup	23.3	1.95	3.27
Port 4B	21.9	1.48	2.61
Port 4B*	22.7	1.54	2.73
Port 4B Dup	25.2	1.65	2.90
Influent 1/2	42.1	4.63	13.4
Influent 1/2*	45.0	4.55	11.3
Influent 1/2 Dup	46.1	4.56	11.1
Trip Blank	ND	ND	ND

ND = Not detected = Response between 0 and 0.025 ng/mL.
NQ = Not quantifiable = Response between 0.025 ng/mL and LOQ (0.050 ng/mL)
*Laboratory Duplicate

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STANDARD TERMS AND CONDITIONS

Services provided by Exygen Research are limited to the terms and conditions stated herein, unless otherwise agreed to in a formal contract.

CONFIDENTIALITY—Exygen Research ("Exygen," "us," or "we") maintains the strictest confidentiality in all of our client interactions. If a signed confidentiality agreement is required, we will provide one. If a regulatory or legal body subpoenas information, the client will be notified promptly. The client agrees not to use Exygen's name and/or data in any manner that might cause harm to Exygen's reputation or business. Approval must be obtained, in writing, before Exygen's name can be published in any way.

CONTRACTS—All contracts are subject to review and approval by Exygen's legal council and must be signed by a corporate officer.

PAYMENT TERMS—Unless otherwise set forth in this Purchase Order, terms of payment are "Net 30 Days." The time allowable for payment shall begin after both: (a) client's receipt of Exygen's invoice; and (b) the satisfactory performance of the services contemplated hereunder. A 1.5% monthly service charge shall be added to all past due balances. Notwithstanding any payment terms to the contrary set forth in this Purchase Order, Exygen, in its sole discretion, reserves the right to request payment in advance from client. In the event of default in payment for services rendered, Exygen shall be entitled to reasonable costs of collection, including, but not limited to, attorneys' fees.

BILLING—All fees and charges are billed directly to the client requesting services. Exygen will not bill a third party without prior notification in writing, via a signed statement acknowledging and accepting responsibility for payment. Exygen will assume that the paperwork submitted with a sample describes the desired testing protocol. Any changes to the protocol must be submitted in writing. Please fax changes to Exygen marked, "URGENT" to your assigned representative. If changes are made after the originally requested testing has been initiated or completed, the client accepts responsibility for payment. Exygen will not be responsible for hold times that are missed due to such changes.

RUSH SERVICE—Exygen routinely offers expedited turnaround times on critical analyses. Rush analysis services are contingent upon availability and prearrangement with an authorized Exygen representative. A surcharge is usually added to the list fee if rush analysis is requested.

MINIMUM FEE—The minimum fee for commercial services is one hundred dollars ($100).

SAMPLE COLLECTION/SUBMISSION—Client shall be responsible for proper collection, preservation, packing and packaging, and shipment of the sample(s) in accordance with applicable law and good commercial practice. Title and risk of loss with respect to submitted samples shall at all times remain with client prior to acceptance by an Exygen sample custodian. Exygen will initiate a chain-of-custody upon sample receipt unless the client includes one with the sample(s). By request, Exygen will provide chain-of-custody forms for client's use.

All samples submitted must be accompanied by: purchase order, or signed quotation; sample description, including sample type, source, time and date of collection; specific analyses requested; estimated concentration levels; requested report date; current billing address; and other relevant information.

Upon request, Exygen will provide and ship appropriate sample containers to clients. These containers will include the appropriate preservative if particular analyses require one. It is the responsibility of the client to handle these preserved containers safely, and using all appropriate safety precautions. Clients requesting overnight delivery of sample containers will be invoiced for freight. Exygen reserves the right to charge a fee for sample containers.

SAMPLE DISPOSAL—Exygen retains samples for one month after reporting results, then disposes of or returns the sample. Unless the client requests that the sample(s) be returned, or prior arrangements have been made for long-term storage, Exygen shall dispose of the sample(s). Exygen shall charge a monthly fee for long-term storage. Samples found or suspected to contain hazardous waste, according to definitions in state and /or federal guidelines, will be returned to the client upon completion of the analysis. The cost of returning the sample(s) will be invoiced to the client. Exygen reserves the right to charge a disposal fee for the disposal of any and all samples unless returned by Exygen to client. Exygen shall, unless the nature and character of the sample dictates otherwise, store all samples under locked, temperature-controlled conditions. An internal chain-of-custody is maintained for each lot of samples received.

HAZARD COMMUNICATION—The client has the responsibility to inform the laboratory of any known or suspected hazardous characteristics of the sample, and to provide information on hazard prevention and personal protection as necessary or otherwise required by applicable law.

QUALITY ASSURANCE—Exygen will perform services consistent with its Quality Assurance Standard Operating Procedures (SOPs), the terms of which are expressly incorporated herein by reference; provided, however, it shall be the exclusive responsibility of the client to confirm that Exygen's standard practices will meet the client's needs prior to placing an order for work. In the event client desires an alternative to these SOPs, such requests must be made in writing prior to sample submission and acceptance by Exygen.

ETHICS POLICY—Exygen Research strives to provide its clients with the highest quality data in the fastest realistic turnaround time. We balance the high standards of this goal by insisting that each employee also perform within the guidelines of the highest possible professional ethics. Each Exygen employee is required to sign a statement of personal and professional integrity.

SPECIAL REPORTS—Additional charges may be necessary for custom report formats.

LITIGATION—All costs associated with compliance to any subpoena for documents, for testimony in a court of law, or for any other purpose relating to work performed by Exygen Research shall be invoiced by Exygen and paid by client. These costs shall include, but are not limited to, hourly charges for the persons involved, travel, mileage, and accommodations, and for any and all other expenses associated with said litigation.

INDEMNIFICATION, LIABILITY, AND INSURANCE—Exygen agrees to indemnify, defend, and save the client, its officers, directors, employees, agents, and representatives harmless from all losses, expenses, demands, and claims made against the client, its officers, directors, employees, agents and representatives because of any personal injuries, death, or property damage to the extent caused by the negligence or willful misconduct of Exygen, its employees, agents, or representatives in connection with the performance of services under this agreement, except to the extent such losses, expenses, demands, or claims, occur as a result of the negligent or willful acts or omissions of the client, its officers, directors, employees, agents, and representatives; however, such indemnification and damages shall, in the aggregate, be limited to the amount equal to the lesser of (a) damages suffered by the client as the direct result thereof, or (b) the total amount paid to Exygen for the work herein covered. Exygen will, if requested by the client, furnish certificates of insurance from its carrier evidencing appropriate insurance coverage.

WARRANTY AND LIMITS OF LIABILITY—In accepting analytical work, Exygen guarantees the accuracy of the test results for the sample as submitted within the tolerances set forth in the SOPs. We disclaim any other warranties, expressed or implied by law. Exygen does not accept any legal responsibility for the purposes for which client uses the test results. Exygen will not accept any purchase order or any other order for work that includes conditions that vary from these Standard Conditions.

ACCEPTANCE OF PURCHASE ORDER—This Purchase Order becomes a binding agreement, subject to the specific terms and conditions stated herein, upon Exygen's commencement of work.

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SECTION B

Exygen™ RESEARCH
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Recovery Summary for C6 and C8 Acids and C4, C6 and C8 Sulfonates in Water

Sample Description	C4 Sulfonate PFBS				C6 Sulfonate PFHS			C8 Sulfonate PFOS		
	Amount Spiked (ng/mL)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)	Amt Found in Sample (ng/mL)	Amount Recovered (ng/mL)	Recovery (%)
Influent 3 Low Spk 10 ppb Spike	10	36.9	ND	0	6.20	17.2	110	37.7	46.1	84
Influent 3 High Spk 100 ppb Spike	100	36.9	163	126	6.20	91.9	86	37.7	123	85
Influent 3 Spk C Laboratory Spike	500	36.9	529	98	6.20	488	96	37.7	577	108
Comb Effluent 1/2 Low Spk 10 ppb Spike	10	0.476	8.17	77	ND	8.58	86	ND	8.24	82
Comb Effluent 1/2 High Spk 100 ppb Spike	100	0.476	77.5	77	ND	82.3	82	ND	85.9	86
Comb Effluent 1/2 Spk D Laboratory Spike	10	0.476	10.1	96	ND	10.1	101	ND	9.44	94
Port 4A Low Spk 10 ppb Spike	10	30.1	31.1	10	1.97	10.7	87	3.44	10.9	75
Port 4A High Spk 100 ppb Spike	100	30.1	86.7	57	1.97	76.1	74	3.44	72.1	69
Port 4A Spk E Laboratory Spike	25	30.1	57.2	108	1.97	26.8	99	3.44	27.5	96
Port 4B Low Spk 10 ppb Spike	10	21.9	31.5	96	1.48	10.2	87	2.61	11.0	84
Port 4B High Spk 100 ppb Spike	100	21.9	145	123	1.48	107	106	2.61	111	108
Port 4B Spk F Laboratory Spike	25	21.9	46.8	100	1.48	25.0	94	2.61	25.2	90
Influent 1/2 Low Spk 10 ppb Spike	10	42.1	170	*	4.63	14.6	100	13.4	23.2	98
Influent 1/2 High Spk 100 ppb Spike	100	42.1	191	149	4.63	99.9	95	13.4	112	99
Influent 1/2 Spk G Laboratory Spike	10	42.1	137	*	4.63	12.9	83	13.4	28.3	149
Trip Blank Low Spk 10 ppb Spike	10	ND	8.05	81	NQ	10.1	101	ND	10.9	109
Trip Blank High Spk 100 ppb	100	ND	70.7	71	NQ	95.6	96	ND	104	104

ND = Not detected = Response between 0 and 0.025 ng/mL.
NQ = Not quantifiable = Response between 0.025 ng/mL and LOQ (0.050 ng/mL)
*Sample residue exceeds spiking level significantly; therefore, an accurate recovery cannot be calculated.

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Recovery Summary for C6 and C8 Acids and C4, C6 and C8 Sulfonates in Water

Sample Description	Amount Spiked (ng/mL)	C6 Acid PFHA Amt Found in Sample (ng/mL)	C6 Acid PFHA Amount Recovered (ng/mL)	C6 Acid PFHA Recovery (%)	C8 Acid PFOA Amt Found in Sample (ng/mL)	C8 Acid PFOA Amount Recovered (ng/mL)	C8 Acid PFOA Recovery (%)
Influent 3 Low Spk 10 ppb Spike	10	45.9	51.5	*	301	318	*
Influent 3 High Spk 100 ppb Spike	100	45.9	129	83	301	363	62
Influent 3 Spk C Laboratory Spike	250	45.9	516	188	301	572	108
Comb Effluent 1/2 Low Spk 10 ppb Spike	10	0.462	7.84	74	0.0835	13.1	130
Comb Effluent 1/2 High Spk 100 ppb Spike	100	0.462	74.7	74	0.0835	130	130
Comb Effluent 1/2 Spk D Laboratory Spike	10	0.462	19.0	185	0.0835	12.0	119
Port 4A Low Spk 10 ppb Spike	10	13.4	20.7	73	5.59	15.2	96
Port 4A High Spk 100 ppb Spike	100	13.4	84.1	71	5.59	107	101
Port 4A Spk E Laboratory Spike	25	13.4	53.6	161	5.59	36.1	122
Port 4B Low Spk 10 ppb Spike	10	15.6	23.8	82	4.42	15.3	109
Port 4B High Spk 100 ppb Spike	100	15.6	107	91	4.42	109	105
Port 4B Spk F Laboratory Spike	25	15.6	56.6	164	4.42	33.6	117
Influent 1/2 Low Spk 10 ppb Spike	10	3.90	14.9	110	11.6	16.4	68
Influent 1/2 High Spk 100 ppb Spike	100	3.90	93.5	90	11.6	120	108
Influent 1/2 Spk G Laboratory Spike	10	3.90	55.1	512	11.6	29.1	175
Trip Blank Low Spk 10 ppb Spike	10	ND	12.5	125	ND	11.6	116
Trip Blank High Spk 100 ppb	100	ND	77.7	78	ND	105	105

ND = Not detected = Response between 0 and 0.025 ng/mL.
NQ = Not quantifiable = Response between 0.025 ng/mL and LOQ (0.050 ng/mL)
*Sample residue exceeds spiking level significantly; therefore, an accurate recovery cannot be calculated.

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SECTION C

Exygen® RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

Login

Login Group: L0001958

Login #: 2069
Project: P0000644

Company Name: 3M
Submitted By: KENT LINDSTROM
Login Type: Immediate Receipt of Samples
Started: T
Date Start: 02/26/2004
Due Date: 03/11/2004
Received Date: 02/26/2004
Received By: AMMERMAN, MARK
Spread Sample:
Label:
Project Title/Type: Cottage Grove Activated Carbon System Fluorochemical Monitoring / ROUTINE
Exygen SD/PI: RISHA, KAREN
Login Notes:
Conform Notes: Client send only 2 of 3 pages of the chain--waiting for the third to finish the login. MSA 02/26/04

Conform COC Sample: True
Conform COC: False
Conform Sample: True
Conform Request: True

Packages / Containers

Package	Carton	Mail Date / Condition	Shipper / ID	Temp. Control/Temp.	Direction / Handled By
PK0002581		2/26/2004 3:15:26PM Package & Contents Uncompromised	FEDEX 316801571100000179257 9 510193201	Wet Ice 0.1	RECEIVED AMMERMAN, MARK

Container #	Gross Weight	pH	Container Type	Preservative	Mfg. Lot	Mfg. ID
C0028072	580.2 g		500 ml Clear Plastic Narrow	NONE		
C0028073	579.0 g		500 ml Clear Plastic Narrow	NONE		
C0028074	258.6 g		500 ml Clear Plastic Narrow	NONE		
C0028075	258.2 g		500 ml Clear Plastic Narrow	NONE		
C0028076	612.1 g		500 ml Clear Plastic Narrow	NONE		
C0028077	601.0 g		500 ml Clear Plastic Narrow	NONE		
C0028078	257.6 g		500 ml Clear Plastic Narrow	NONE		
C0028079	254.9 g		500 ml Clear Plastic Narrow	NONE		
C0028080	611.3 g		500 ml Clear Plastic Narrow	NONE		
C0028081	614.4 g		500 ml Clear Plastic Narrow	NONE		
C0028082	256.4 g		500 ml Clear Plastic Narrow	NONE		
C0028083	255.7 g		500 ml Clear Plastic Narrow	NONE		
C0028084	584.0 g		500 ml Clear Plastic Narrow	NONE		
C0028085	582.2 g		500 ml Clear Plastic Narrow	NONE		
C0028086	253.2 g		500 ml Clear Plastic Narrow	NONE		
C0028087	254.3 g		500 ml Clear Plastic Narrow	NONE		

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Login

Login Group: L0001958

Login #: 2069
Project: P0000644

Company Name: 3M
Submitted By: KENT LINDSTROM
Login Type: Immediate Receipt of Samples
Started: T
Date Start: 02/26/2004
Due Date: 03/11/2004
Received Date: 02/26/2004
Received By: AMMERMAN, MARK
Spread Sample:
Label:
Project Title/Type: Cottage Grove Activated Carbon System Fluorochemical Monitoring / ROUTINE
Exygen SD/PI: RISHA, KAREN
Login Notes:
Conform Notes: Client send only 2 of 3 pages of the chain--waiting for the third to finish the login. MSA 02/26/04

Conform COC Sample: True
Conform COC: False
Conform Sample: True
Conform Request: True

Packages / Containers

Package	Carton	Mail Date / Condition	Shipper / ID	Temp. Control/Temp.	Direction / Handled By
PK0002581		2/26/2004 3:15:26PM Package & Contents Uncompromised	FEDEX 316801571100000179257 9 510193201	Wet Ice 0.1	RECEIVED AMMERMAN, MARK

Container #	Gross Weight	pH	Container Type	Preservative	Mfg. Lot	Mfg. ID
C0028102	580.3 g		500 ml Clear Plastic Narrow	NONE		
C0028103	593.1 g		500 ml Clear Plastic Narrow	NONE		
C0028104	266.7 g		500 ml Clear Plastic Narrow	NONE		
C0028105	251.6 g		500 ml Clear Plastic Narrow	NONE		
C0028106	258.5 g		500 ml Clear Plastic Narrow	NONE		
C0028107	257.3 g		500 ml Clear Plastic Narrow	NONE		
C0028108	256.9 g		500 ml Clear Plastic Narrow	NONE		

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Login

Samples

Sample ID	Container	Matrix	Fraction	Sample	Date Sampled	Date Received	Date Due
L0001958-0001	C0028072	LIQUID	Water	Influent Phase 1/2 (Inf 1/2)	02/25/2004	02/26/2004	03/11/2004
L0001958-0002	C0028073	LIQUID	Water	Influent Phase 1/2 (Inf 1/2) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0003	C0028074	LIQUID	Water	Influent Phase 1/2 (Inf 1/2) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0004	C0028075	LIQUID	Water	Influent Phase 1/2 (Inf 1/2) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0005	C0028076	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2)	02/25/2004	02/26/2004	03/11/2004
L0001958-0006	C0028077	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0007	C0028078	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0008	C0028079	LIQUID	Water	Comb Effluent 1/2 (Eff 1/2) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0009	C0028080	LIQUID	Water	Unit 4 Port A Lead (Port 4A)	02/25/2004	02/26/2004	03/11/2004
L0001958-0010	C0028081	LIQUID	Water	Unit 4 Port A Lead (Port 4A) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0011	C0028082	LIQUID	Water	Unit 4 Port A Lead (Port 4A) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0012	C0028083	LIQUID	Water	Unit 4 Port A Lead (Port 4A) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0013	C0028084	LIQUID	Water	Unit 4 Port B Lead (Port 4B)	02/25/2004	02/26/2004	03/11/2004
L0001958-0014	C0028085	LIQUID	Water	Unit 4 Port B Lead (Port 4B) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0015	C0028086	LIQUID	Water	Unit 4 Port B Lead (Port 4B) Low	02/25/2004	02/26/2004	03/11/2004
L0001958-0016	C0028087	LIQUID	Water	Unit 4 Port B Lead (Port 4B) High	02/25/2004	02/26/2004	03/11/2004
L0001958-0017	C0028102	LIQUID	Water	Influent 3 (Inf 3)	02/25/2004	02/26/2004	03/11/2004
L0001958-0018	C0028103	LIQUID	Water	Influent 3 (Inf 3) Dup	02/25/2004	02/26/2004	03/11/2004
L0001958-0019	C0028104	LIQUID	Water	Influent 3 (Inf 3) High Spike	02/25/2004	02/26/2004	03/11/2004
L0001958-0020	C0028105	LIQUID	Water	Influent 3 (Inf 3) Low Spike	02/25/2004	02/26/2004	03/11/2004

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3M_MN01539233

1939.0082

Login

L0001958-0021	C0028106	LIQUID	Water	Trip Blank	02/26/2004	03/11/2004
L0001958-0022	C0028107	LIQUID	Water	Trip Blank Low Spike	02/26/2004	03/11/2004
L0001958-0023	C0028108	LIQUID	Water	Trip Blank High Spike	02/26/2004	03/11/2004



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Exygen RESEARCH — CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

Exygen Research Sample Receiving · 3117 Research Drive · State College, PA 16801, USA
T: 814.231.8032 · F: 814.231.1580 · exygenresearch.com

Page ____ of ____

PROJECT INFORMATION

Client (name & address):
3M Cottage Grove
10746 Innovation Road
Cottage Grove, MN 55016
Phone: 651-768-1206
Fax: 651-458-2029
Sampler:

Project Manager (Name & E-mail Address):
Kent Lindstrom
krlindstrom@mmm.com
Project Name:
Cottage Grove Activated Carbon Testing
P.O. #: E04-0126 0126
Quotation #:

Please fill out this form *completely* to ensure correct analysis and proper handling of your samples.

ANALYSES REQUESTED

FC's (PFBS, PFHS, PFOS, PFHA, PFOA)

SAMPLE ANALYSIS

ExyLIMS#	Client Sample Identification	Collection Date	Collection Time	Grab	Composite	Number of Containers	Specify Matrix	Comments
	Influent Phase 1/2 (Inf 1/2)	2/5/24	10:46	X		1	ww	
	Influent Phase 1/2 (Inf 1/2) Dup		10:46				ww	
	Influent Phase1/2 (Inf 1/2) Low S		10:46				ww	
	Influent Phase 1/2 (Inf 1/2) High		10:46				ww	
	Comb Effluent 1/2 (Eff 1/2)		11:37				ww	
	Comb Effluent 1/2 (Eff 1/2) Dup						ww	
	Comb Effluent 1/2 (Eff 1/2) Low						ww	
	Comb Effluent 1/2 (Eff 1/2) High						ww	

LAB USE ONLY

CHAIN OF CUSTODY

Cooler ID # CECC0122 Cooler Temp. (°C) 0.1

Relinquished by	Date	Time
	2/8/24	14:29

Received by	Date	Time
	2/8/24	1135

LAB USE ONLY

OTHER INFORMATION

PROJECT REQUIREMENTS

Results Deadline:

Laboratory Report Options:
- ☐ Sample results only
- ☐ Add case narrative
- ☐ Add quality control summary
- ☐ Add calibration summary
- ☐ Add raw data
- ☐ Other

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CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

Exygen Research

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Page ____ of ____

PROJECT INFORMATION

Client (name & address):
3M Cottage Grove
10746 Innovation Road
Cottage Grove, MN 55016
Phone: 651-768-1206
Fax: 651-458-2029
Sampler:

Project Manager (Name & E-mail Address):
Kent Lindstrom
krlindstrom@mmm.com
Project Name:
Cottage Grove Activated Carbon Testing
P.O. #: E04-0420 8/26
Quotation #:

Please fill out this form *completely* to ensure correct analysis and proper handling of your samples.

ANALYSES REQUESTED

FC's (PFBS, PFHS, PFOS, PFHA, PFOA)

SAMPLE ANALYSIS

ExyLIMS#	Client Sample Identification	Collection Date	Collection Time	Grab	Composite	Number of Containers	Specify Matrix	Comments
	Unit 4 Port A Lead (Port 4A)	2/25/14	11:11	X		1	WW	
	Unit 4 Port A Lead (Port 4A) Dup							
	Unit 4 Port A Lead (Port 4A) Low							
	Unit 4 Port A Lead (Port 4A) High							
	Unit 4 Port B Lead (Port 4B)		11:25					
	Unit 4 Port B Lead (Port 4B) Dup							
	Unit 4 Port B Lead (Port 4B) Low							
	Unit 4 Port B Lead(Port 4B) High							

LAB USE ONLY

CHAIN OF CUSTODY

Relinquished by	Date	Time
	2/25/14	14:30

Cooler ID # CCoun122 Cooler Temp. (°C) 0.1

Received by	Date	Time
	2/26/14	1135

LAB USE ONLY

PROJECT REQUIREMENTS

Results Deadline:

Laboratory Report Options:
- ☐ Sample results only
- ☐ Add case narrative
- ☐ Add quality control summary
- ☐ Add calibration summary
- ☐ Add raw data
- ☐ Other

OTHER INFORMATION

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Exygen RESEARCH — CHAIN OF CUSTODY/ANALYSIS REQUEST FORM

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Page ____ of ____

PROJECT INFORMATION

Client (name & address):
3M Cottage Grove
10746 Innovation Road
Cottage Grove, MN 55016
Phone: 651-768-1206
Fax: 651-458-2029
Sampler: MAH McDermoH

Project Manager (Name & E-mail Address):
Kent Lindstrom
krlindstrom@mmm.com
Project Name:
Cottage Grove Activated Carbon Testing
P.O. #: E04-0320 C/PL
Quotation #:

Please fill out this form *completely* to ensure correct analysis and proper handling of your samples.

SAMPLE ANALYSIS

ExyLIMS#	Client Sample Identification	Collection Date	Collection Time	Grab	Composite	Number of Containers	Specify Matrix	Comments
	Influent 3 (Inf 3)	2/25/21	10:00	X		1	WW	
	Influent 3 (Inf 3) Dup	↓	↓	↓		↓	↓	
	Influent 3 (Inf 3) High Spike							
	Influent 3 (Inf 3) Low Spike							

LAB USE ONLY

ANALYSES REQUESTED

PFCs (PFBS, PFHS, PFOS, PFHA, PFOA)

CHAIN OF CUSTODY

Cooler ID # Cooler012 2 Cooler Temp. (°C) 0.1

Relinquished by	Date	Time
	2/26/21	14:30

Received by	Date	Time
	2/26/21	17:31

LAB USE ONLY

PROJECT REQUIREMENTS

Results Deadline:

Laboratory Report Options:
- ☐ Sample results only
- ☐ Add case narrative
- ☐ Add quality control summary
- ☐ Add calibration summary
- ☐ Add raw data
- ☐ Other

OTHER INFORMATION

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Mark Ammerman

From: tmgalloway1@mmm.com
Sent: Friday, February 27, 2004 10:12 AM
To: mark.ammerman@exygen.com
Cc: bmader@mmm.com; krlindstrom@mmm.com; plferretti@mmm.com
Subject: CoC 2/25/04



oC Influent Phase 3 2.25.04...

Mark - attached is the CoC for the influent phase 3 sample. Sorry about any confusion this may have caused.

(See attached file: CoC Influent Phase 3 2.25.04 .pdf)

The travel blank was not listed in LIMS, and therefore did not get a CoC created. I spoke with Brian Mader this morning, and the travel blank will be added to the LIMS system. A CoC will be created and enclosed with the next scheduled sampling event (3/8/04).

Once again, sorry for any confusion this may have caused. Thank you for bringing this matter to our attention.

Tina M. Galloway
3M Cottage Grove
145-1 US-MNCG05
Tel: 651-768-1206
Fax: 651-458-2029
email: tmgalloway1@mmm.com

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Exygen RESEARCH
Precise Research. Proven Results.

Sample "Condition Upon Receipt" Form

Protocol # NA

Exygen Study # 0000644

Date & Time Received MM 02/26/04 1135

Condition of Samples Leftover - active

Temporary Storage Location D0000538

Initials & Date MM 02/26/04

Waybill # 7925 7951 0193

Comments: v client did not send the third page of the chain of custody - waiting to receive the final page to complete the login. MM 02/26/04

May 24, 2002 3

Q: WORD process-login SampleConditiononReceipt.doc

3058 Research Drive
State College, PA 16801, USA
T: 800.281.3219

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

SECTION D

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	030504A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorohexanoic Acid**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	313 -> 269	Sample Volume:	40.0 mL	Extraction Date:	03/05/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/12-13/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	2645	-	-	-
XC030504-1	-	CS	030504A-402	25	-	7367	-	-	-
XC030504-2	-	CS	030504A-403	50	-	11606	-	-	-
XC030504-3	-	CS	030504A-404	100	-	19540	-	-	-
XC030504-4	-	CS	030504A-405	250	-	41297	-	-	-
XC030504-5	-	CS	030504A-406	500	-	85647	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	151617	-	-	-
Methanol Wash	-	C	030504A-408	-	-	1035	-	-	-
0106020 Control	na	C	030504A-409	-	1	1330	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	9427	43.9	50	88
0106020 Spk B	na	LCS	030504A-411	-	1	83674	532	500	106
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	16739	919000	500000	175^
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	142778	*	500000	-
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	30351	18100	10000	176^
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	84823	53900	25000	162^
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	82943	52700	25000	148^
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	33284	20100	10000	162^
XC030504-1	-	CS	030504A-418	25	-	5549	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	4260	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	4466	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	3898	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	7658	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	8090	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	8014	*	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	62038	3900	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	59541	3730	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	60149	3770	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	2761	*	10000	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	3272	344	10000	-36^
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	16978	93500	100000	90
XC030504-2	-	CS	030504A-431	50	-	9474	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	73122	462	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	63351	398	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	61672	387	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	14680	7840	10000	74
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	14120	74700	100000	74
XC030504-3	-	CS	030504A-437	100	-	17416	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	23099	13400	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	21902	12600	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	20937	11900	-	-
L1958-9	Port 4A	S	030504A-441	-	10	192855	*	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	187432	*	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	192329	*	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	34290	20700	10000	73
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	15553	84100	100000	71
XC030504-3	-	CS	030504A-446	100	-	16806	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	26553	15600	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	26093	15300	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	26658	15700	-	-
L1958-13	Port 4B	S	030504A-450	-	10	249624	*	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	256171	*	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	240487	*	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	39009	23800	10000	82
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	19054	107000	100000	91
XC030504-4	-	CS	030504A-455	250	-	41764	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	9049	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	9611	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	10208	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	72613	45900	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	74708	47300	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	70131	44300	-	-
L1958-17	Influent 3	S	030504A-462	-	10	590826	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	598295	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	598614	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	22428	129000	100000	83
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	181689	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	10596	51500	10000	56
XC030504-5	-	CS	030504A-468	500	-	73963	-	-	-
Methanol Wash	-	C	030504A-469	-	-	2030	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	2165	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	21838	12500	10000	125
L1958-23	Trip BlankHigh Spk	FF	030504A-472	-	1000	14584	77700	100000	78
XC030504-6	-	CS	030504A-473	1000	-	129797	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[analyte found (ppt)-analyte found in control (ppt)]} \times 100}{\text{amount added (ppt)}}$

Standard Curve: Linear (1/x weighted)
Intercept = 2749.08
Slope = 152.223
Coef. Of Det. = 0.995965

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: KR 03/19/04

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
^See data set 031704A for re-extraction.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	030504A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorooctanoic Acid**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	413 -> 369	Sample Volume:	40.0 mL	Extraction Date:	03/05/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/12-13/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	1738	-	-	-
XC030504-1	-	CS	030504A-402	25	-	13789	-	-	-
XC030504-2	-	CS	030504A-403	50	-	23558	-	-	-
XC030504-3	-	CS	030504A-404	100	-	42736	-	-	-
XC030504-4	-	CS	030504A-405	250	-	85438	-	-	-
XC030504-5	-	CS	030504A-406	500	-	183327	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	342142	-	-	-
Methanol Wash	-	C	030504A-408	-	-	57617	-	-	-
0106020 Control	na	C	030504A-409	-	1	2290	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	19908	48.2	50	96
0106020 Spk B	na	LCS	030504A-411	-	1	241653	716	500	143
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	85028	2440000	500000	428^
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	375441	*	500000	-
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	58932	16600	10000	165^
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	123658	36100	25000	122
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	115423	33600	25000	117
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	109917	31900	10000	203^
XC030504-1	-	CS	030504A-418	25	-	10181	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	29298	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	31322	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	24224	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	42512	11600	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	48556	13400	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	52029	14500	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	322432	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	297100	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	298313	*	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	13232	28100	10000	165
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	16338	*	10000	-
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	43898	120000	100000	108
XC030504-2	-	CS	030504A-431	50	-	21925	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	31624	83.5	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	41830	114	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	40608	111	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	47456	13100	10000	130
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	47234	130000	100000	130
XC030504-3	-	CS	030504A-437	100	-	38144	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	38028	*	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	40521	*	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	44693	*	-	-
L1958-9	Port 4A	S	030504A-441	-	10	189379	5590	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	183585	5410	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	233473	6910	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	54279	15200	10000	96
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	39560	107000	100000	101
XC030504-3	-	CS	030504A-446	100	-	33768		-	-
L1958-13	Port 4B	S	030504A-447	-	100	30355	*	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	30518	*	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	27973	*	-	-
L1958-13	Port 4B	S	030504A-450	-	10	150817	4420	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	157839	4640	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	160551	4720	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	54634	15300	10000	109
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	40009	109000	100000	105
XC030504-4	-	CS	030504A-455	250	-	81448	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	103773	301000	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	102853	298000	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	109832	319000	-	-
L1958-17	Influent 3	S	030504A-459	-	100	819321	*	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	855949	*	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	795459	*	-	-
L1958-17	Influent 3	S	030504A-462	-	10	6807451	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	7057470	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	6932879	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	124346	363000	100000	62^
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	963913	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	109658	318000	10000	170
XC030504-5	-	CS	030504A-468	500	-	165996	-	-	-
Methanol Wash	-	C	030504A-469	-	-	52543	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	20182	NQ	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	42479	11600	10000	116
L1958-23	Trip BlankHigh Spk	FF	030504A-472	-	1000	48475	134000	100000	134^
XC030504-6	-	CS	030504A-473	1000	-	319976	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = [analyte found (ppt)-analyte found in control (ppt)] x 100 / amount added (ppt)

Standard Curve : Linear (1/x weighted)
Intercept = 3900.44
Slope = 332.081
Coef. Of Det. = 0.996490

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: KR 03/19/04

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
^See data set 031704A for re-extraction.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	030504A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorobutanesulfonate**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	299 -> 99	Sample Volume:	40.0 mL	Extraction Date:	03/05/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/12-13/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	0	-	-	-
XC030504-1	-	CS	030504A-402	25	-	0	-	-	-
XC030504-2	-	CS	030504A-403	50	-	0	-	-	-
XC030504-3	-	CS	030504A-404	100	-	444	-	-	-
XC030504-4	-	CS	030504A-405	250	-	1279	-	-	-
XC030504-5	-	CS	030504A-406	500	-	2511	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	4733	-	-	-
Methanol Wash	-	C	030504A-408	-	-	0	-	-	-
0106020 Control	na	C	030504A-409	-	1	0	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	316	73.3	50	147
0106020 Spk B	na	LCS	030504A-411	-	1	2288	485	500	97
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	272	*	500000	-
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	2500	529000	500000	98
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	450	10100	10000	96
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	2705	57200	25000	108
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	2207	46800	25000	100
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	1960	41700	10000	-4^
XC030504-1	-	CS	030504A-418	25	-	0	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	861	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	874	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	937	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	1982	42100	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	2119	45000	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	2172	46100	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	37158	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	23235	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	21405	*	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	0	ND	10000	0^
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	0	-	10000	-
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	880	191000	100000	149
XC030504-2	-	CS	030504A-431	50	-	223	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	2244	476	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	2114	449	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	2275	482	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	356	8170	10000	77
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	336	77500	100000	77
XC030504-3	-	CS	030504A-437	100	-	372	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	1405	30100	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	1370	29300	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	1081	23300	-	-
L1958-9	Port 4A	S	030504A-441	-	10	13380	*	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	12420	*	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	13765	*	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	1454	31100	10000	10
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	380	86700	100000	57
XC030504-3	-	CS	030504A-446	100	-	0	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	1013	21900	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	1050	22700	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	1170	25200	-	-
L1958-13	Port 4B	S	030504A-450	-	10	12069	*	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	14649	*	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	13698	*	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	1474	31500	10000	96
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	661	145000	100000	123
XC030504-4	-	CS	030504A-455	250	-	1150	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	0	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	0	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	0	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	1732	36900	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	1880	40000	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	1541	32900	-	-
L1958-17	Influent 3	S	030504A-462	-	10	17768	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	17424	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	16181	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	745	163000	100000	126
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	5676	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	0	ND	10000	0
XC030504-5	-	CS	030504A-468	500	-	2174	-	-	-
Methanol Wash	-	C	030504A-469	-	-	0	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	0	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	228	5500	10000	55^
L1958-23	Trip BlankHigh Spk	FF	030504A-472	-	1000	186	46200	100000	46^
XC030504-6	-	CS	030504A-473	1000	-	3509	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = [analyte found (ppt)-analyte found in control (ppt)] x 100 / amount added (ppt)

Standard Curve : Linear (1/x weighted)
Intercept = -35.1105
Slope = 4.78826
Coef. Of Det. = 0.995207

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: KR 03/14/04

*Sample was analyzed with several dilution factors in the same run. The appropriate results are reported.
^See data set 031704A for re-extraction.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	030504A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorohexanesulfonate**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	399 -> 80	Sample Volume:	40.0 mL	Extraction Date:	03/05/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/12-13/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	0	-	-	-
XC030504-1	-	CS	030504A-402	25	-	1379	-	-	-
XC030504-2	-	CS	030504A-403	50	-	2696	-	-	-
XC030504-3	-	CS	030504A-404	100	-	4914	-	-	-
XC030504-4	-	CS	030504A-405	250	-	11625	-	-	-
XC030504-5	-	CS	030504A-406	500	-	23810	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	48232	-	-	-
Methanol Wash	-	C	030504A-408	-	-	0	-	-	-
0105020 Control	na	C	030504A-409	-	1	0	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	2344	47.2	50	94
0106020 Spk B	na	LCS	030504A-411	-	1	23709	515	500	103
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	2476	*	500000	-
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	22471	488000	500000	96
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	4803	10100	10000	101
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	12414	26800	25000	99
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	11586	25000	25000	94
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	6090	12900	10000	83
XC030504-1	-	CS	030504A-418	25	-	1160	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	1018	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	1095	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	966	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	2035	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	2137	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	2284	*	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	21343	4630	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	20984	4550	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	21008	4560	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	0	*	10000	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	0	ND	10000	0^
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	4751	99900	100000	95
XC030504-2	-	CS	030504A-431	50	-	2479	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	0	ND	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	0	ND	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	0	ND	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	4105	8580	10000	86
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	3946	82300	100000	82
XC030504-3	-	CS	030504A-437	100	-	5062	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	1082	*	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	1104	*	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	1046	*	-	-
L1958-9	Port 4A	S	030504A-441	-	10	9161	1970	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	9142	1960	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	9089	1950	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	5091	10700	10000	87
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	3662	76100	100000	74
XC030504-3	-	CS	030504A-446	100	-	4039	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	712	*	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	714	*	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	735	*	-	-
L1958-13	Port 4B	S	030504A-450	-	10	6945	1480	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	7235	1540	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	7703	1650	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	4864	10200	10000	87
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	5090	107000	100000	106
XC030504-4	-	CS	030504A-455	250	-	12417	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	339	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	376	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	307	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	2783	*	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	3481	*	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	3366	*	-	-
L1958-17	Influent 3	S	030504A-462	-	10	28503	6200	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	28142	6120	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	29153	6340	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	4429	*	100000	-
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	42130	91900	100000	86
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	975	17200	10000	110
XC030504-5	-	CS	030504A-468	500	-	22123	-	-	-
Methanol Wash	-	C	030504A-469	-	-	0	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	0	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	4781	10100	10000	101
L1958-23	Trip BlankHigh Spk	FF	030504A-472	-	1000	4507	95600	100000	96
XC030504-6	-	CS	030504A-473	1000	-	42865	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = [analyte found (ppt)-analyte found in control (ppt)] x 100 / amount added (ppt)

Standard Curve : Linear (1/x weighted)
Intercept = 187.490
Slope = 45.6617
Coef. Of Det. = 0.994244

CS = Calibration standard
C = Control sample
S = Sample

LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike

Spreadsheet prepared by: BF 03/19/04

CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
^See data set 031704A for re-extraction.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	030504A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorooctanesulfonate**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	499 -> 99	Sample Volume:	40.0 mL	Extraction Date:	03/05/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/12-13/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	030504A-401	0	-	0	-	-	-
XC030504-1	-	CS	030504A-402	25	-	728	-	-	-
XC030504-2	-	CS	030504A-403	50	-	1469	-	-	-
XC030504-3	-	CS	030504A-404	100	-	2529	-	-	-
XC030504-4	-	CS	030504A-405	250	-	5985	-	-	-
XC030504-5	-	CS	030504A-406	500	-	12744	-	-	-
XC030504-6	-	CS	030504A-407	1000	-	24695	-	-	-
Methanol Wash	-	C	030504A-408	-	-	0	-	-	-
0106020 Control	na	C	030504A-409	-	1	0	ND	-	-
0106020 Spk A	na	LCS	030504A-410	-	1	1365	53.8	50	108
0106020 Spk B	na	LCS	030504A-411	-	1	12725	524	500	105
L1958-17 Spk C	Influent 3	LF	030504A-412	-	10000	1533	*	500000	-
L1958-17 Spk C	Influent 3	LF	030504A-413	-	1000	13993	577000	500000	108
L1958-5 Spk D	Comb Effluent 1/2	LF	030504A-414	-	100	2345	9440	10000	94
L1958-9 Spk E	Port 4A	LF	030504A-415	-	100	6696	27500	25000	96
L1958-13 Spk F	Port 4B	LF	030504A-416	-	100	6142	25200	25000	98
L1958-1 Spk G	Influent 1/2	LF	030504A-417	-	100	4454	18200	10000	48^
XC030504-1	-	CS	030504A-418	25	-	512	-	-	-
L1958-1	Influent 1/2	S	030504A-419	-	200	1332	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-420	-	200	1109	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-421	-	200	1109	*	-	-
L1958-1	Influent 1/2	S	030504A-422	-	100	3293	13400	-	-
L1958-1 Rep	Influent 1/2	S	030504A-423	-	100	2802	11300	-	-
L1958-2	Influent 1/2 Dup	S	030504A-424	-	100	2730	11100	-	-
L1958-1	Influent 1/2	S	030504A-425	-	10	26603	*	-	-
L1958-1 Rep	Influent 1/2	S	030504A-426	-	10	24060	*	-	-
L1958-2	Influent 1/2 Dup	S	030504A-427	-	10	24785	*	-	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-428	-	1000	0	*	10000	-
L1958-3	Influent 1/2 Low Spk	FF	030504A-429	-	100	0	ND	10000	0^
L1958-4	Influent 1/2 High Spk	FF	030504A-430	-	1000	2778	112000	100000	99
XC030504-2	-	CS	030504A-431	50	-	1331	-	-	-
L1958-5	Comb Effluent 1/2	S	030504A-432	-	1	186	ND	-	-
L1958-5 Rep	Comb Effluent 1/2	S	030504A-433	-	1	165	ND	-	-
L1958-6	Comb Effluent 1/2 Dup	S	030504A-434	-	1	142	ND	-	-
L1958-7	Comb Effluent 1/2 Low Spk	FF	030504A-435	-	100	2055	8240	10000	82
L1958-8	Comb Effluent 1/2 High Spk	FF	030504A-436	-	1000	2139	85900	100000	86
XC030504-3	-	CS	030504A-437	100	-	2354	-	-	-
L1958-9	Port 4A	S	030504A-438	-	100	917	*	-	-
L1958-9 Rep	Port 4A	S	030504A-439	-	100	898	*	-	-
L1958-10	Port 4A Dup	S	030504A-440	-	100	1100	*	-	-
L1958-9	Port 4A	S	030504A-441	-	10	8371	3440	-	-
L1958-9 Rep	Port 4A	S	030504A-442	-	10	8132	3340	-	-
L1958-10	Port 4A Dup	S	030504A-443	-	10	7946	3270	-	-
L1958-11	Port 4A Low Spk	FF	030504A-444	-	100	2697	10900	10000	75
L1958-12	Port 4A High Spk	FF	030504A-445	-	1000	1808	72100	100000	69
XC030504-3	-	CS	030504A-446	100	-	2512	-	-	-
L1958-13	Port 4B	S	030504A-447	-	100	653	*	-	-
L1958-13 Rep	Port 4B	S	030504A-448	-	100	653	*	-	-
L1958-14	Port 4B Dup	S	030504A-449	-	100	639	*	-	-
L1958-13	Port 4B	S	030504A-450	-	10	6368	2610	-	-
L1958-13 Rep	Port 4B	S	030504A-451	-	10	6657	2730	-	-
L1958-14	Port 4B Dup	S	030504A-452	-	10	7076	2900	-	-
L1958-15	Port 4B Low Spk	FF	030504A-453	-	100	2731	11000	10000	84
L1958-16	Port 4B High Spk	FF	030504A-454	-	1000	2746	111000	100000	108
XC030504-4	-	CS	030504A-455	250	-	5998	-	-	-
L1958-17	Influent 3	S	030504A-456	-	1000	1343	*	-	-
L1958-17 Rep	Influent 3	S	030504A-457	-	1000	986	*	-	-
L1958-18	Influent 3 Dup	S	030504A-458	-	1000	1028	*	-	-
L1958-17	Influent 3	S	030504A-459	-	100	9171	37700	-	-
L1958-17 Rep	Influent 3	S	030504A-460	-	100	9837	40500	-	-
L1958-18	Influent 3 Dup	S	030504A-461	-	100	8968	36900	-	-
L1958-17	Influent 3	S	030504A-462	-	10	83246	*	-	-
L1958-17 Rep	Influent 3	S	030504A-463	-	10	87362	*	-	-
L1958-18	Influent 3 Dup	S	030504A-464	-	10	79712	*	-	-
L1958-20	Influent 3 High Spk	FF	030504A-465	-	1000	3033	123000	100000	85
L1958-20	Influent 3 High Spk	FF	030504A-466	-	100	28897	*	100000	-
L1958-19	Influent 3 Low Spk	FF	030504A-467	-	1000	1179	46100	10000	84
XC030504-5	-	CS	030504A-468	500	-	11691	-	-	-
Methanol Wash	-	C	030504A-469	-	-	0	-	-	-
L1958-21	Trip Blank	S	030504A-470	-	1	0	ND	-	-
L1958-22	Trip Blank Low Spk	FF	030504A-471	-	100	2691	10900	10000	109
L1958-23	Trip BlankHigh Spk	FF	030504A-472	-	1000	2573	104000	100000	104
XC030504-6	-	CS	030504A-473	1000	-	23653	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = [analyte found (ppt)-analyte found in control (ppt)] x 100 / amount added (ppt)

Standard Curve : Linear (1/x weighted)
Intercept = 66.8162
Slope = 24.1350
Coef. Of Det. = 0.998559

CS = Calibration standard
C = Control sample
S = Sample

LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard

Spreadsheet prepared by: KR 03/19/04

ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

*Sample was analyzed with several dilution factors in the same run. The appropriate dilution is reported.
^See data set 031704A for re-extraction.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Exygen RESEARCH
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Fax: 814-231-1580

Internal Chain of Custody/Fortification Sheet

Exygen Study Number: L1958 Matrix: Water
Sponsor Study/Protocol No: NA
The samples listed below were removed from refrigerator No. 32
Time 0850 Date 3/5/04 Initials EH

CLIENT SAMPLE ID	EXYGEN ID NUMBER	VOLUME (mL)	FORTIFICATION (ng)
na	0106020 Control	40.0	-
na	0106020 Spk A	40.0	2.0
na	0106020 Spk B	40.0	20.0
Influent 3	L1958-17 Spk C	40.0	① 20000.0
Comb Effluent 1/2	L1958-5 Spk D	40.0	400.0
Port 4A	L1958-9 Spk E	40.0	1000.0
Port 4B	L1958-13 Spk F	40.0	1000.0
Influent 1/2	L1958-1 Spk G	40.0	400.0
Influent 3	L1958-17	40.0	-
Influent 3	L1958-17 Rep	40.0	-
Influent 3 Dup	L1958-18	40.0	-
Influent 3 Low Spk	L1958-19	40.0	-
Influent 3 High Spk	L1958-20	40.0	-
Comb Effluent 1/2	L1958-5	40.0	-
Comb Effluent 1/2	L1958-5 Rep	40.0	-
Comb Effluent 1/2 Dup	L1958-6	40.0	-
Comb Effluent 1/2 Low Spk	L1958-7	40.0	-
Comb Effluent 1/2 High Spk	L1958-8	40.0	-
Port 4A	L1958-9	40.0	-
Port 4A	L1958-9 Rep	40.0	-
Port 4A Dup	L1958-10	40.0	-
Port 4A Low Spk	L1958-11	40.0	-
Port 4A High Spk	L1958-12	40.0	-

	Spiking Solution Used	Volume Used for Spiking	Initial/Date
0106020 Spk A	F012004-10 (10 ng/mL)	200 µL (200 µL micropipet)	KQ / 03/05/04
0106020 Spk B	F012004-9 (100 ng/mL)	200 µL (200 µL micropipet)	KQ / 03/05/04
L1958-17 Spk C	F012004-6 (100000 ng/mL)	① 200 µL (200 µL micropipet)	KQ 03/05/04
L1958-5 Spk D	F012004-8 (1000 ng/mL)	400 µL (200 µL micropipet)	KQ 03/05/04
L1958-9 Spk E	F012004-7 (10000 ng/mL)	100 µL (200 µL micropipet)	KQ 03/05/04
L1958-13 Spk F	F012004-7 (10000 ng/mL)	100 µL (200 µL micropipet)	KQ 03/05/04
L1958-1 Spk G	F012004-8 (1000 ng/mL)	400 µL (200 µL micropipet)	KQ 03/05/04

All samples were measured:
Time 1000 Date 3/5/04 Initials EH

After measuring samples were returned to refrigerator No. 32
Time 1300 Date 3/5/04 Initials EH

Comments: 200 µL of 250 mg/mL sodium thiosulfate was added to all samples before spiking. Initials/Date: KQ 03/05/04

Analysis Summary:
Data Set: 030504A Initials/Date: KQ / 03/12/04
Data Set: — Initials/Date: — / —
Data Set: — Initials/Date: — / —

Set extraction/analysis data verified by: JMF Date: 3/19/04

① 200µL was added. KQ 03/05/04

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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SAMPLE EXTRACTION AND ANALYSIS TRACKING SHEET

EXYGEN STUDY NUMBER: L1958 METHOD: $$ PROTOCOL NUMBER: NA
MATRIX: Water ANALYTES: C4, C6, C7 & C8 Acids, C4, C6 & C8 sulfonates

Client ID	Exygen ID	STEP 1	STEP 2	Dilutions (mL/mL)	STEP 3	Dilutions (mL/mL)	STEP 4	Reagents/ Materials	Lot #
na	0106020 Control			-		-	-	Methanol	43393348
na	0106020 Spk A			-		-	-	C18 SPE	W3317B1
na	0106020 Spk B			-		-	-	Type I Water	NA
Influent 3	L1958-17 Spk C			④ 0.1/10, 0.1/1.0, 0.1/1.0		-	-	-	-
Comb Effluent 1/2	L1958-5 Spk D			0.1/10		-	-	-	-
Port 4A	L1958-9 Spk E			0.1/10		-	-	-	-
Port 4B	L1958-13 Spk F			0.1/10		-	-	*Initials/Date*	EH 3/5/04
Influent 1/2	L1958-1 Spk G			0.1/10		-	-	-	-
Influent 3	L1958-17			② 0.1/10, 0.1/1.0, 0.1/1.0		-	-	-	-
Influent 3	L1958-17 Rep			② 0.1/10, 0.1/1.0, 0.1/1.0		-	-	-	-
Influent 3 Dup	L1958-18			② 0.1/10, 0.1/1.0, 0.1/1.0		-	-	-	-
Influent 3 Low Spk	L1958-19			③ 0.1/10, 0.1/1.0 ← ⑥		-	-	-	-
Influent 3 High Spk	L1958-20			③ 0.1/10, 0.1/1.0 ← ⑥		-	-	-	-
Comb Effluent 1/2	L1958-5			-		-	-	-	-
Comb Effluent 1/2	L1958-5 Rep			-		-	-	-	-
Comb Effluent 1/2 Dup	L1958-6			-		-	-	-	-
Comb Effluent 1/2 Low Spk	L1958-7			0.1/10		-	-	-	-
Comb Effluent 1/2 High Spk	L1958-8			④ 0.1/10, 0.1/1.0		-	-	-	-
Port 4A	L1958-9			⑤ 0.1/1.0, 0.1/1.0		-	-	HPLC	
Port 4A	L1958-9 Rep			⑤ 0.1/1.0, 0.1/1.0		-	-	Methanol	43308345
Port 4A Dup	L1958-10			⑤ 0.1/1.0, 0.1/1.0		-	-	Ammonium Acetate	V36159
Port 4A Low Spk	L1958-11			0.1/10		-	-	Type I water	NA
Port 4A High Spk	L1958-12	↓	↓	④ 0.1/10, 0.1/1.0	↓	-	-	-	-
Initials/Date	-	EH 3/5/04	EH 3/5/04	KK 03/05/04	KK 03/12/04	-	-	*Initials/Date*	KK 03/12/04

STEP 1: SPE column clean-up (omitting 40% wash)
STEP 2: Final volume to 5 mL collected in 15 mL polypropolene tubes
STEP 3: LC/MS/MS analysis
STEP 4: LC/MS/MS reanalysis.

①DF = 1000 and 10,000
②DF = 10, 100 and 1000
③DF = 100 and 1000
④DF = 1000
⑤DF = 10 and 100
KK 03/05/04

⑥SAMPLES WERE INADVERTENTLY SWITCHED DURING DILUTION. L1958-19 WAS DILUTED 1000X WHILE L1958-20 WAS DILUTED 100+1000X. KK 03/16/04

*Initials and date under each step indicates the personnel that performed this step.
$$ Method of Analysis for the Determination of Perfluorooctane sulfonate (PFOS), Perfluorooctane sulfonylamide (PFOSA), and Perfluorooctanoate (POAA) in Water

COMMENTS:

Final extracts stored in refrigerator 32 Initials: EH Date: 3/5/04

July 19, 2001/4

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Exygen RESEARCH
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Internal Chain of Custody/Fortification Sheet

Exygen Study Number: L1958 Matrix: Water
Sponsor Study/Protocol No: NA
The samples listed below were removed from refrigerator No. 37
Time 0850 Date 3/5/04 Initials EH

CLIENT SAMPLE ID	EXYGEN ID NUMBER	VOLUME (mL)	FORTIFICATION (ng)
Port 4B	L1958-13	40.0	-
Port 4B	L1958-13 Rep	40.0	-
Port 4B Dup	L1958-14	40.0	-
Port 4B Low Spk	L1958-15	40.0	-
Port 4B High Spk	L1958-16	40.0	-
Influent 1/2	L1958-1	40.0	-
Influent 1/2	L1958-1 Rep	40.0	-
Influent 1/2 Dup	L1958-2	40.0	-
Influent 1/2 Low Spk	L1958-3	40.0	-
Influent 1/2 High Spk	L1958-4	40.0	-
Trip Blank	L1958-21	40.0	-
Trip Blank Low Spike	L1958-22	40.0	-
Trip Blank High Spike	L1958-23	40.0	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

	Spiking Solution Used	Volume Used for Spiking	Initial/Date
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

All samples were measured:
Time 1000 Date 3/5/04 Initials EH

After measuring samples were returned to refrigerator No. 37
Time 1300 Date 3/5/04 Initials EH

Comments: 200 µL of 250 mg/mL sodium thiosulfate was added to all samples before spiking. Initials/Date: bf 03/05/04

Analysis Summary:
Data Set: 030504A Initials/Date: bf / 03/12/04
Data Set: - Initials/Date: - / -
Data Set: - Initials/Date: - / -

Set extraction/analysis data verified by: JMF Date: 3/19/04

July 26, 2001/6

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Exygen RESEARCH
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SAMPLE EXTRACTION AND ANALYSIS TRACKING SHEET

EXYGEN STUDY NUMBER: L1958 METHOD: $$ PROTOCOL NUMBER: NA
MATRIX: Water ANALYTES: C4, C6, C7 & C8 Acids, C4, C6 & C8 sulfonates

Client ID	Exygen ID	STEP 1	STEP 2	Dilutions (mL/mL)	STEP 3	Dilutions (mL/mL)	STEP 4	Reagents/ Materials	Lot #
Port 4B	L1958-13			①0.1/1.0, 0.1/1.0		-	-	Methanol	43323348
Port 4B	L1958-13 Rep			①0.1/1.0, 0.1/1.0		-	-	C18 SPE	W3317B1
Port 4B Dup	L1958-14			①0.1/1.0, 0.1/1.0		-	-	Type I Water	NA
Port 4B Low Spk	L1958-15			0.1/10		-	-	-	-
Port 4B High Spk	L1958-16			②0.1/10, 0.1/1.0		-	-	-	-
Influent 1/2	L1958-1			③0.1/10, 0.1/10, 0.5/1.0		-	-	-	-
Influent 1/2	L1958-1 Rep			③0.1/10, 0.1/10, 0.5/1.0		-	-	*Initials/Date*	EH 3/5/04
Influent 1/2 Dup	L1958-2			③0.1/10, 0.1/10, 0.5/1.0		-	-	-	-
Influent 1/2 Low Spk	L1958-3			①0.1/10, 0.1/1.0		-	-	-	-
Influent 1/2 High Spk	L1958-4			②0.1/10, 0.1/1.0		-	-	-	-
Trip Blank	L1958-21			-		-	-	-	-
Trip Blank Low Spike	L1958-22			0.1/10		-	-	-	-
Trip Blank High Spike	L1958-23			②0.1/10, 0.1/1.0		-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	HPLC	
-	-	-	-	-	-	-	-	Methanol	43308345
-	-	-	-	-	-	-	-	Ammonium Acetate	V3615Y
-	-	-	-	-	-	-	-	Type I water	NA
-	-	-	-	-	-	-	-	-	-
Initials/Date	-	3/5/04 EH	3/5/04 EH	03/05/04	03/12/04	-	-	*Initials/Date*	03/12/04

STEP 1: SPE column clean-up (omitting 40% wash)
STEP 2: Final volume to 5 mL collected in 15 mL polypropolene tubes
STEP 3: LC/MS/MS analysis
STEP 4: LC/MS/MS reanalysis.

①DF = 10 and 100
②DF = 1000
③DF = 10, 100 and 200
④DF = 100 and 1000
KR 03/05/04

C0027262
$$ Method of Analysis for the Determination of Perfluorooctane sulfonate (PFOS), Perfluorooctane sulfonylamide (PFOSA), and Perfluorooctanoate (POAA) in Water

COMMENTS:

Final extracts stored in refrigerator 32 Initials: EH Date: 3/5/04

July 19, 2001/4

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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PREPARATION OF EXTRACTED CALIBRATION STANDARDS

Protocol No.: None | Exygen Study No.: NA | Matrix: Type I Water^
Method No.: $$ | Analytes: C4,C5,C6,C7 and C8 Acids; C4, C6 & C8 Sulfonates | Sample Vol: 40 mL

Sponsor Sample ID	Exygen Sample ID	Sample Description	Fort. Solution ID	Fort. Soln. Conc. (ng/mL)	Fort. Volume (µL)	Micropipet used (µL)	Fort. Level (ppt)	Final Solution ID # **	Reagents/ Materials	Lot #
NA	0106020	Type I Water^	-	-	-	-	-	XC030504-0	Methanol	43323348
NA	0106020	Type I Water^	F012004-10	10	100	200	25	XC030504-1	C18 SPE	W331761
NA	0106020	Type I Water^	F012004-10	10	200	200	50	XC030504-2	Type I Water	NA
NA	0106020	Type I Water^	F012004-10	10	400	200	100	XC030504-3	-	-
NA	0106020	Type I Water^	F012004-9	100	100	200	250	XC030504-4	-	-
NA	0106020	Type I Water^	F012004-9	100	200	200	500	XC030504-5	-	-
NA	0106020	Type I Water^	F012004-9	100	400	200	1000	XC030504-6	-	-
-	-	-	-	-	-	-	-	-	Initials/Date:	EH 3/5/04
-	-	-	-	-	-	-	-	-		

Vertical arrows in a column indicate identical values.

***This must be a unique number. Use this system: Extracted Calibration Soln ID #: XCMMDDYY-0,1,2,3. etc.*

Samples removed from (refrigerator) / freezer # 32 Time: 0850 Initials/Date: EH / 3/5/04

40 mL of each sample measured using a 50 mL graduated cylinder. Initials/Date: EH / 3/5/04

After measuring, samples returned to (refrigerator) / freezer # 32 Time: 1300 Initials/Date: EH / 3/5/04

Samples fortified: Initials/Date: DL / 03/05/04

SPE clean-up (omitting 40% Wash): Initials/Date: EH / 3/5/04

Final volume adjusted to 5 mL: Initials/Date: EH / 3/5/04

Extracts placed in refrigerator # 32 Initials/Date: EH / 3/5/04

STANDARD EXPIRATION DATE: 3/19/04

Comments: ^This type I water has been filtered through a hypercarb filter

$$ Method of Analysis for the Determination of Perfluorooctane sulfonate (PFOS), Perfluorooctane sulfonylamide (PFOSA), and Perfluorooctanoate (POAA) in Water

July 10, 2001/0

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM.SPL
Printed: Fri Mar 12 15:42:23 2004 KJ 03/12/04

Exygen STUDY NO. L1958

Page Position: (1, 1)

	Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/L)	Conc B	Conc C	Test ID	DF
1	1	030504A-401	---	---	XC030504-0, 0 ng/L Standard	---	Standard	0	---	---	0	1
2	2	030504A-402	---	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
3	3	030504A-403	---	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
4	4	030504A-404	---	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
5	5	030504A-405	---	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
6	6	030504A-406	---	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
7	7	030504A-407	---	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1
8	92	030504A-408	---	---	Methanol Wash	---	Blank	---	---	---	0	1
9	11	030504A-409	---	---	0106020 Control	---	Blank	---	---	---	0	1
10	12	030504A-410	---	---	0106020 Spk A, 50 ng/L	---	QC	50	---	---	0	1
11	13	030504A-411	---	---	0106020 Spk B, 500 ng/L	---	QC	500	---	---	0	1
12	14	030504A-412	---	---	L1958-1 Spk C, ~~250000~~ ng/L, DF=10000	---	QC	~~250000~~ (1)	---	---	0	10000
13	15	030504A-413	---	---	L1958-11 Spk C, ~~250000~~ ng/L, DF=1000 (1)	---	QC	~~250000~~ (1)	---	---	0	1000
14	16	030504A-414	---	---	L1958-5 Spk D, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
15	17	030504A-415	---	---	L1958-9 Spk E, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
16	18	030504A-416	---	---	L1958-13 Spk F, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
17	19	030504A-417	---	---	L1958-1 Spk G, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
18	2	030504A-418	---	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
19	20	030504A-419	---	---	L1958-1, DF=200	---	Analyte	---	---	---	0	200
20	21	030504A-420	---	---	L1958-1 Rep, DF=200	---	Analyte	---	---	---	0	200
21	22	030504A-421	---	---	L1958-2, DF=200	---	Analyte	---	---	---	0	200
22	23	030504A-422	---	---	L1958-1, DF=100	---	Analyte	---	---	---	0	100
23	24	030504A-423	---	---	L1958-1 Rep, DF=100	---	Analyte	---	---	---	0	100
24	25	030504A-424	---	---	~~L0584-2~~, DF=100 L1958-2 (re) KJ 03/15/04	---	Analyte	---	---	---	0	100
25	26	030504A-425	---	---	L1958-1, DF=10	---	Analyte	---	---	---	0	10
26	27	030504A-426	---	---	L1958-1 Rep, DF=10	---	Analyte	---	---	---	0	10
27	28	030504A-427	---	---	L1958-2, DF=10	---	Analyte	---	---	---	0	10
28	29	030504A-428	---	---	L1958-3, DF=1000	---	QC	10000	---	---	0	1000
29	30	030504A-429	---	---	L1958-3, DF=100	---	QC	10000	---	---	0	100
30	31	030504A-430	---	---	L1958-4, DF=1000	---	QC	100000	---	---	0	1000
31	3	030504A-431	---	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
32	32	030504A-432	---	---	L1958-5	---	Analyte	---	---	---	0	1
33	33	030504A-433	---	---	L1958-5 Rep	---	Analyte	---	---	---	0	1
34	34	030504A-434	---	---	L1958-6	---	Analyte	---	---	---	0	1
35	35	030504A-435	---	---	L1958-7, DF=100	---	QC	10000	---	---	0	100
36	36	030504A-436	---	---	L1958-8, DF=1000	---	QC	100000	---	---	0	1000
37	4	030504A-437	---	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
38	37	030504A-438	---	---	L1958-9, DF=100	---	Analyte	---	---	---	0	100
39	38	030504A-439	---	---	~~L1874-9~~ Rep, DF=100 L1958-9 (re) KJ 03/15/04	---	Analyte	---	---	---	0	100
40	39	030504A-440	---	---	L1958-10, DF=100	---	Analyte	---	---	---	0	100
41	40	030504A-441	---	---	L1958-9, DF=10	---	Analyte	---	---	---	0	10
42	41	030504A-442	---	---	L1958-9 Rep, DF=10	---	Analyte	---	---	---	0	10
43	42	030504A-443	---	---	L1958-10, DF=10	---	Analyte	---	---	---	0	10
44	43	030504A-444	---	---	L1958-11, DF=100	---	QC	10000	---	---	0	100

(1) 500,000 ng/L (re) KJ 03/15/04

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM.SPL
Printed: Fri Mar 12 15:42:23 2004

Exygen STUDY NO. L1958

Page Position: (2, 1)

03/12/04

	MS Method	HPLC Method	MS Tune File	Inj.Volume
1	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
2	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
3	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
4	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
5	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
6	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
7	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
8	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
9	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
10	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
11	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
12	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
13	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
14	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
15	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
16	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
17	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
18	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
19	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
20	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
21	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
22	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
23	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
24	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
25	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
26	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
27	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
28	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
29	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
30	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
31	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
32	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
33	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
34	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
35	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
36	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
37	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
38	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
39	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
40	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
41	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
42	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
43	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
44	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

	Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/L)	Conc B	Conc C	Test ID	DF
45	44	030504A-445	---	---	L1958-12, DF=1000	---	QC	100000	---	---	0	1000
46	4	030504A-446	---	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
47	45	030504A-447	---	---	L1958-13, DF=100	---	Analyte	---	---	---	0	100
48	46	030504A-448	---	---	L1958-13 Rep, DF=100	---	Analyte	---	---	---	0	100
49	47	030504A-449	---	---	L1958-14, DF=100	---	Analyte	---	---	---	0	100
50	48	030504A-450	---	---	L1958-13, DF=10	---	Analyte	---	---	---	0	10
51	49	030504A-451	---	---	L1958-13 Rep, DF=10	---	Analyte	---	---	---	0	10
52	50	030504A-452	---	---	L1958-14, DF=10	---	Analyte	---	---	---	0	10
53	51	030504A-453	---	---	L1958-15, DF=100	---	QC	10000	---	---	0	100
54	52	030504A-454	---	---	L1958-16, DF=1000	---	QC	100000	---	---	0	1000
55	5	030504A-455	---	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
56	53	030504A-456	---	---	L1958-17, DF=1000	---	Analyte	---	---	---	0	1000
57	54	030504A-457	---	---	L1958-17 Rep, DF=1000	---	Analyte	---	---	---	0	1000
58	55	030504A-458	---	---	L1958-18, DF=1000	---	Analyte	---	---	---	0	1000
59	56	030504A-459	---	---	L1958-17, DF=100	---	Analyte	---	---	---	0	100
60	57	030504A-460	---	---	L1958-17 Rep, DF=100	---	Analyte	---	---	---	0	100
61	58	030504A-461	---	---	L1958-18, DF=100	---	Analyte	---	---	---	0	100
62	59	030504A-462	---	---	L1958-17, DF=10	---	Analyte	---	---	---	0	10
63	60	030504A-463	---	---	L1958-17 Rep, DF=10	---	Analyte	---	---	---	0	10
64	61	030504A-464	---	---	L1958-18, DF=10	---	Analyte	---	---	---	0	10
65	62	030504A-465	---	---	① L1958-19, DF=1000	---	QC	10000	---	---	0	1000
66	63	030504A-466	---	---	① L1958-19, DF=100	---	QC	10000	---	---	0	100
67	64	030504A-467	---	---	② L1958-20, DF=1000	---	QC	100000	---	---	0	1000
68	6	030504A-468	---	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
69	92	030504A-469	---	---	Methanol Wash	---	Blank	---	---	---	0	1
70	65	030504A-470	---	---	L1958-21	---	Analyte	---	---	---	0	1
71	66	030504A-471	---	---	L1958-22, DF=100	---	QC	10000	---	---	0	100
72	67	030504A-472	---	---	L1958-23, DF=1000	---	QC	100000	---	---	0	1000
73	7	030504A-473	---	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1

① - 20 ⑫ KJ 03/15/04
② - 19

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM.SPL Exygen STUDY NO. 4958 Page Position: (2, 2)
Printed: Fri Mar 12 15:42:23 2004 KJ 03/12/04

	MS Method	HPLC Method	MS Tune File	Inj.Volume
45	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
46	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
47	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
48	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
49	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
50	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
51	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
52	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
53	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
54	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
55	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
56	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
57	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
58	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
59	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
60	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
61	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
62	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
63	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
64	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
65	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
66	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
67	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
68	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
69	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
70	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
71	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
72	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
73	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA Exygen Study No: L1958

Instrument:	Micromass Quattro Ultima (LC/MS/MS Unit #6)
Computer:	COMPAQ Professional Workstation AP200
Software:	Microsoft Windows NT: Version 4 Build 1381: Service Pack 5 Micromass Limited: MassLynx 3.4 Build 004
HPLC Equipment:	Hewlett Packard (HP) Series 1100 HP Bin Pump HP Vacuum Degasser HP Autosampler HP Column Oven
HPLC Column:	Genesis C-8, 5 cm x 2.1 mm i.d. x 4 µ (Exygen ID: 74A) (**JONES**CHROMATOGRAPHY: Part No. FK5962E)
Mobile Phase (A) :	2 mM Ammonium Acetate in Type I Water
Mobile Phase (B) :	Methanol
Analyst:	Karen Risha Exygen Research 3058 Research Drive, State College, PA 16801 Phone: (814) 272-1039 FAX: (814) 231-1580

KR 03/12/04

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: KR 03/16/04

Scanning Method Report

Method: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQUDB\C6 8 ACIDS C4 6 8 SULF
Last Modified: Mon Jan 20 15:32:38 2003

Printed: Fri Mar 12 15:44:59 2004

KR 03/12/04

Solvent Delay (mins) : 0.00

Analog Channel 4 : Unused
Function : 1 MRM of 5 Mass Pairs (ESP-)

Inter Channel Delay (Secs) : 0.03
Span (Daltons) : 0.00
Start Time (Mins) : 0.00
End Time (Mins) : 12.00
Repeats : 1

Channel	Parent	Daughter	Dwell (Secs)	Coll Energy (eV)	Cone (V)
1	299.00	99.00	0.20	40	49
2	313.00	269.00	0.20	10	20
3	399.00	80.00	0.20	35	50
4	413.00	369.00	0.20	10	10
5	499.00	99.00	0.20	40	30

Method Report

Method File: c:\masslynx\fluorochemicals.pro\acqudb\pfbs water
Last Modified: Friday, March 12, 2004 15:38:56

Printed: Friday, March 12, 2004 15:45:09 KB 03/12/04

HP1100 LC Pump Initial Conditions

Solvents	
A%	90.0
B%	10.0
C%	0.0
D%	0.0
Flow (ml/min)	0.300
Stop Time (mins)	20.0
Min Pressure (bar)	0
Max Pressure (bar)	400
Oven Temperature Left(°C)	35.0
Oven Temperature Right(°C)	35.0

HP1100 LC Pump Gradient Timetable

The gradient Timetable contains 8 entries which are :

Time	A%	B%	C%	D%	Flow	Pressure
0.00	90.0	10.0	0.0	0.0	0.300	400
2.00	90.0	10.0	0.0	0.0	0.300	400
5.00	10.0	90.0	0.0	0.0	0.300	400
9.00	10.0	90.0	0.0	0.0	0.300	400
9.50	0.0	100.0	0.0	0.0	0.300	400
14.00	0.0	100.0	0.0	0.0	0.300	400
14.50	90.0	10.0	0.0	0.0	0.300	400
20.00	90.0	10.0	0.0	0.0	0.300	400

HP1100 LC Pump External Event Timetable

The Timetable contains 6 entries which are :

Time	Column Switch	Contact1	Contact2	Contact3	Contact4
Initial	Off	Off	Off	Off	Off
0.00	Off	On	Off	Off	Off
0.05	Off	Off	Off	Off	Off
0.10	Off	Off	On	Off	Off
11.90	Off	Off	Off	On	Off
12.00	Off	Off	Off	Off	Off

HP1100 Autosampler Initial Conditions

Draw Speed	200.0
Eject Speed (µl/min)	200
Draw Position (mm)	0.00
Stop Time (mins)	20.00
Injection Volume(µl)	15.0
Vial Number	2

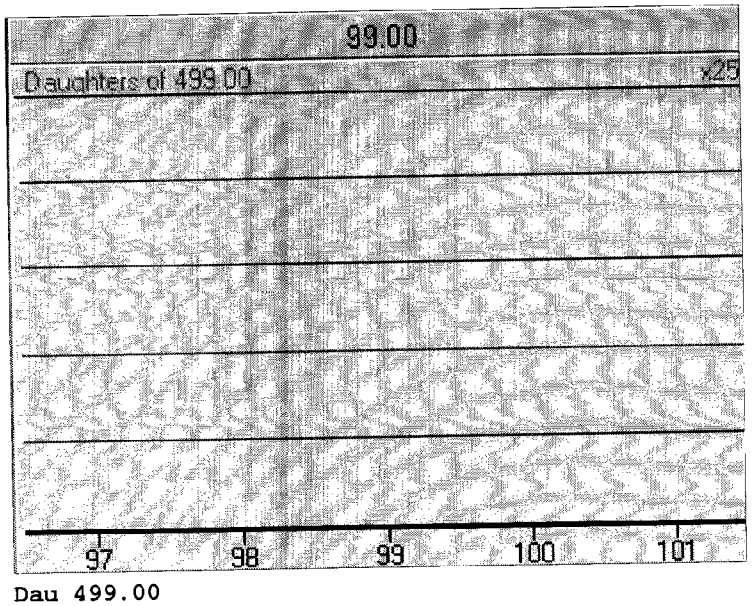
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Tuning Method Report

Method: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQUDB\FLUOROCHEMS

Printed: Fri Mar 12 15:45:22 2004

KBG 03/12/04



Dau 499.00

SOURCE (ESP-)	Set	Rdbk
Capillary	3.00	-2.93
Cone	20	-20
Hexapole 1	0.0	
Aperture 1	0.0	
Hexapole 2	0.0	
Source Block Temp.	100	100
Desolvation Temp.	300	299

Analyser	Set	Rdbk
LM Res 1	14.0	
HM Res 1	14.0	
IEnergy 1	1.0	
Entrance	-2	12
Collision	15	14
Exit	2	16
LM Res 2	14.0	
HM Res 2	14.0	
IEnergy 2	2.0	
Multiplier	650	-648

Pressures	Rdbk
Analyser Vacuum	OFF
Gas Cell	3.0e-3

Gas Flows	Rdbk
Cone Gas	129.9
Desolvation	751.3

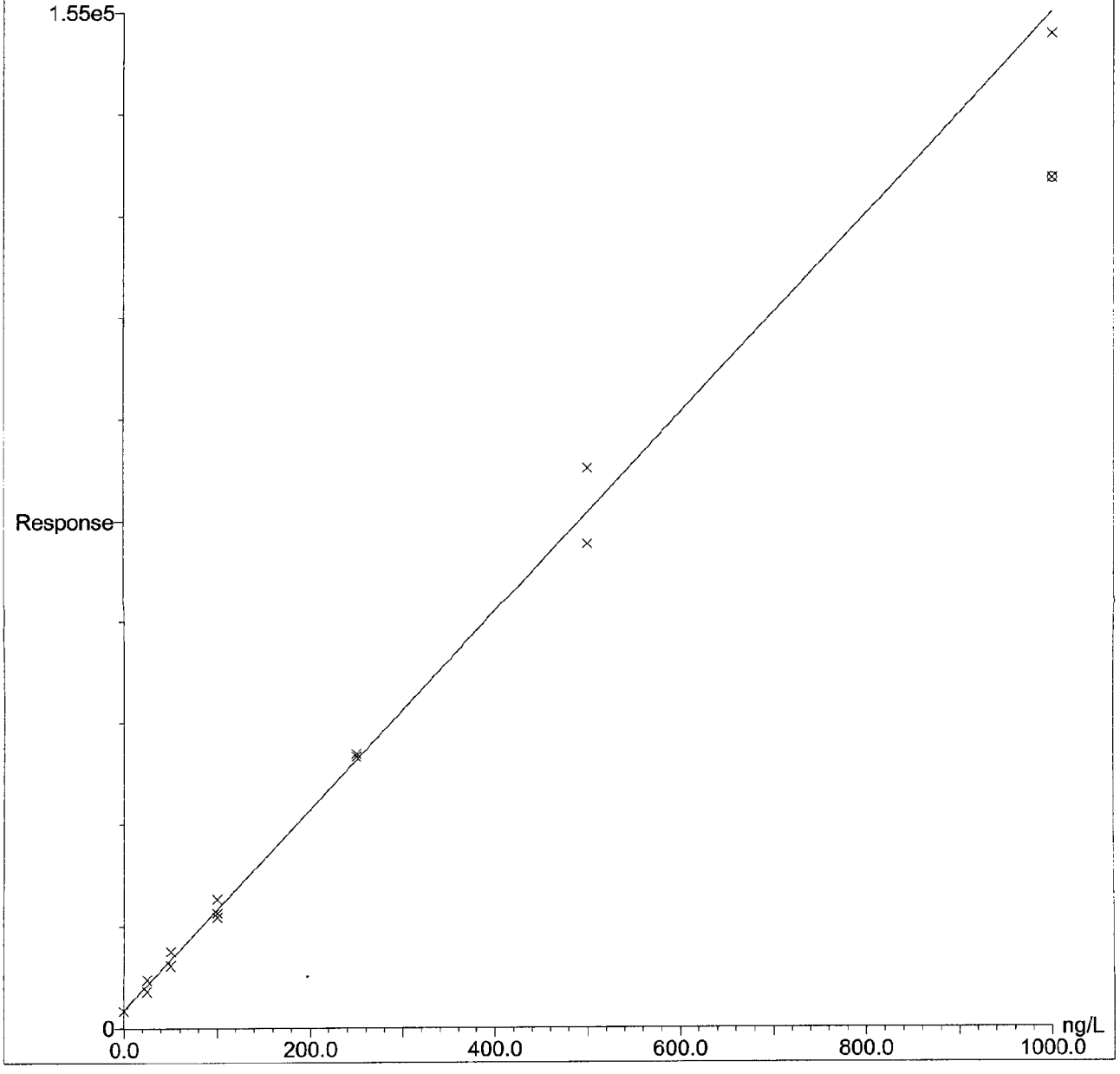
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Quantify Calibration Report
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:56:39 2004
Printed: Tue Mar 16 07:26:23 2004

kf 03/16/04 pages 1-5

Compound 1 name: C6 Acid PFHA
Coefficient of Determination: 0.995965
Calibration curve: 152.223 * x + 2749.08
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

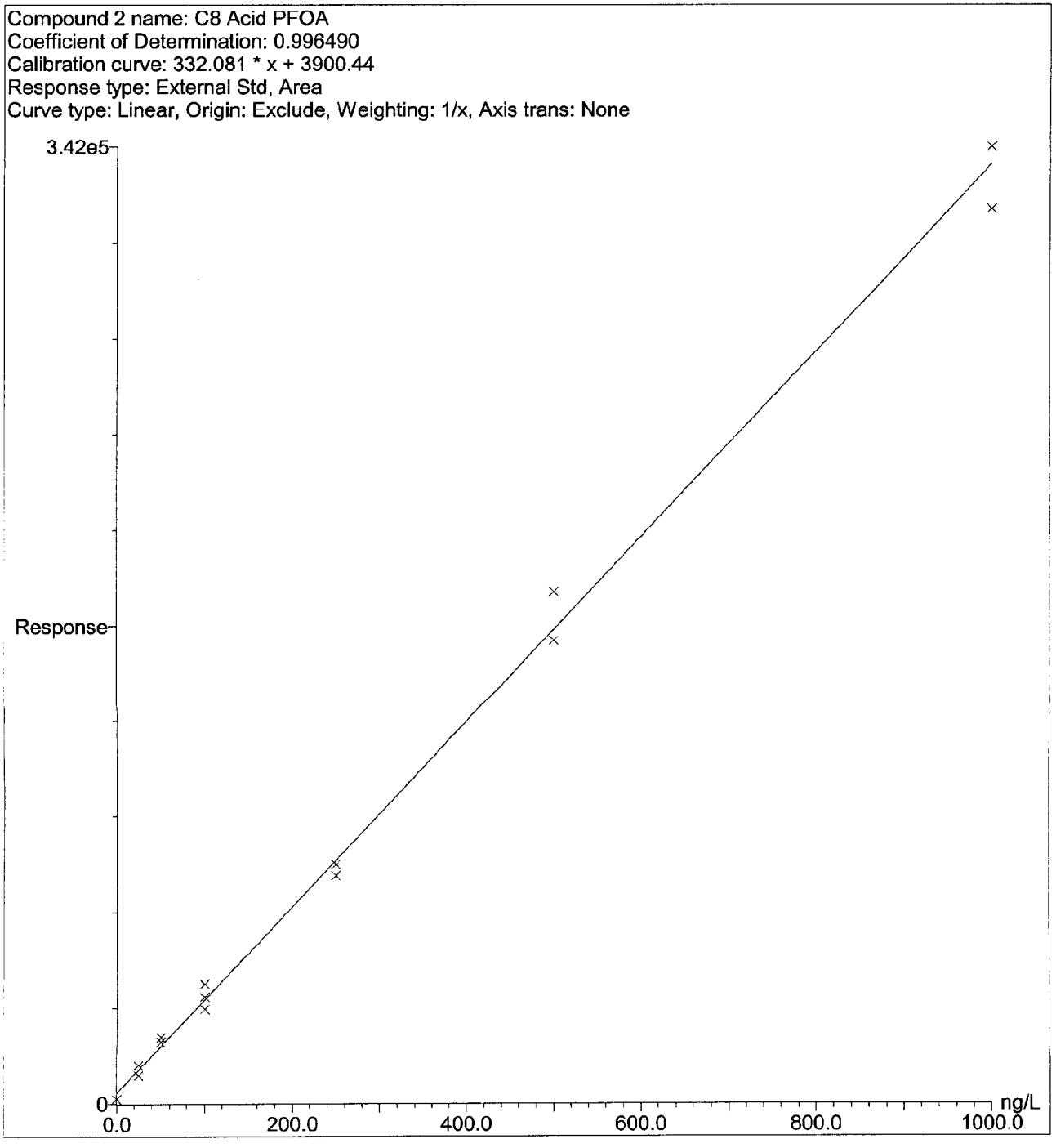


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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:56:39 2004
Printed: Tue Mar 16 07:26:23 2004

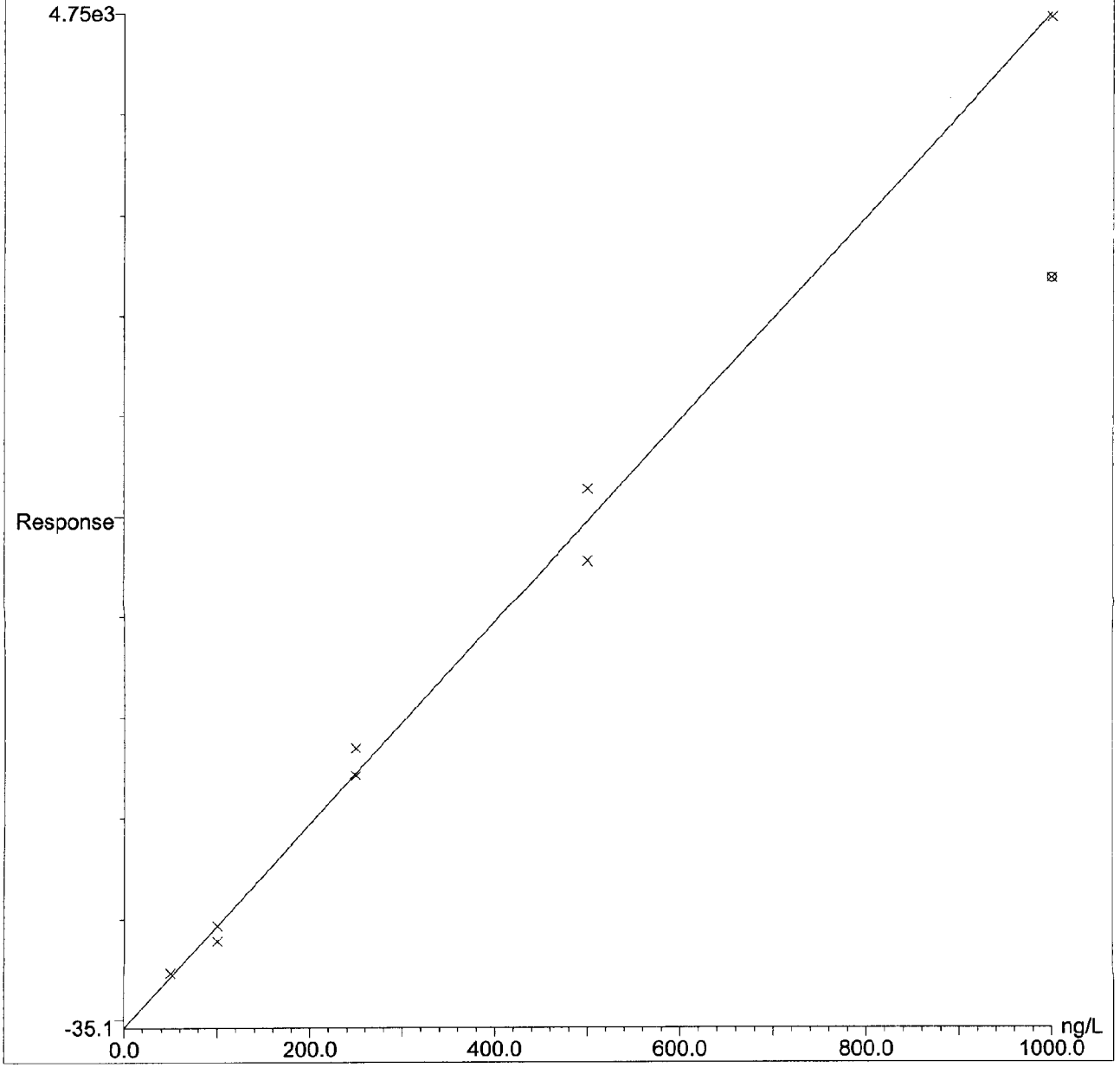


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Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:56:39 2004
Printed: Tue Mar 16 07:26:23 2004

Compound 3 name: C4 Sulfonate PFBS
Coefficient of Determination: 0.995207
Calibration curve: 4.78826 * x + -35.1105
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

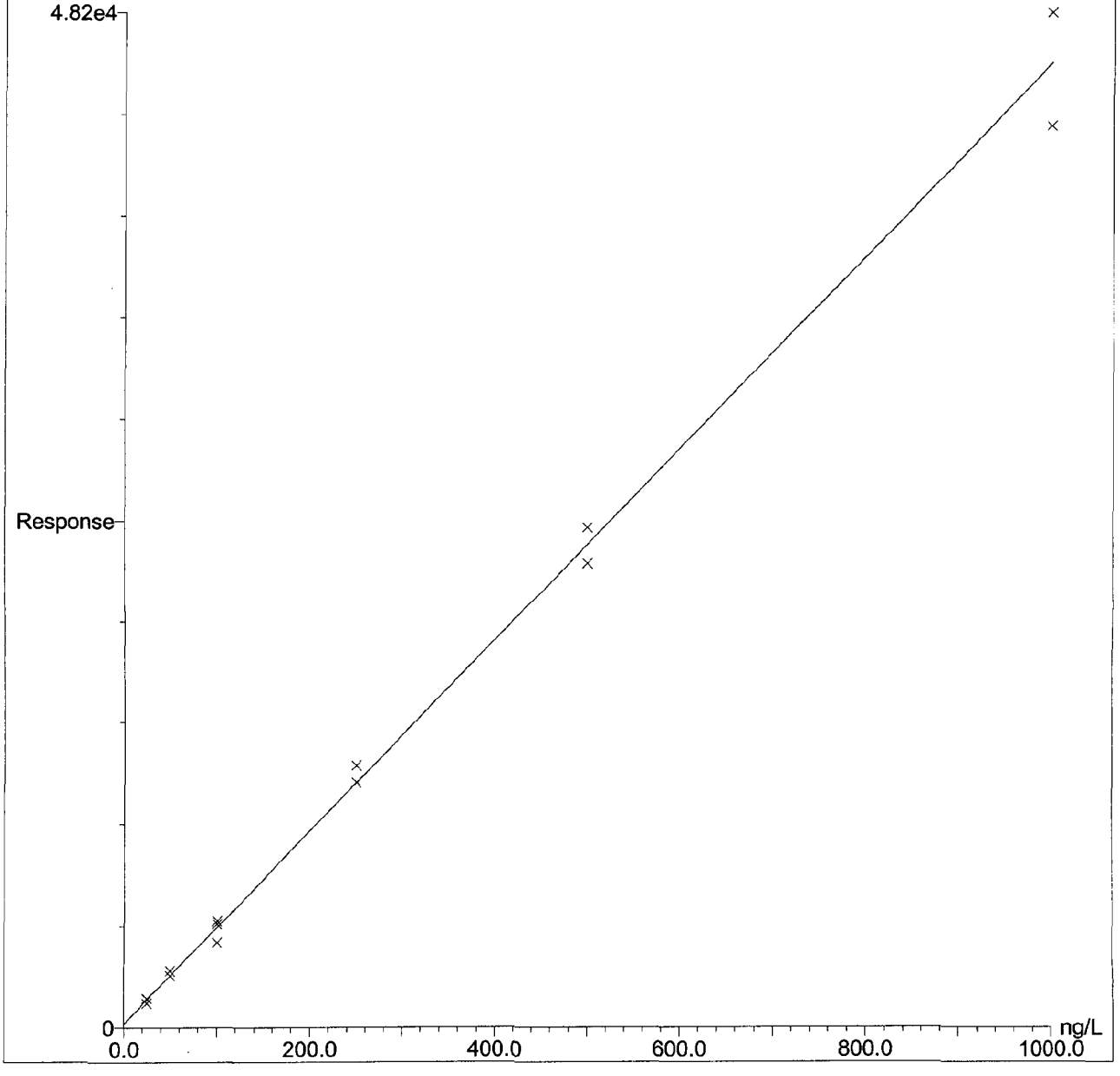


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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:56:39 2004
Printed: Tue Mar 16 07:26:23 2004

Compound 4 name: C6 Sulfonate PFHS
Coefficient of Determination: 0.994244
Calibration curve: 45.6617 * x + 187.490
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

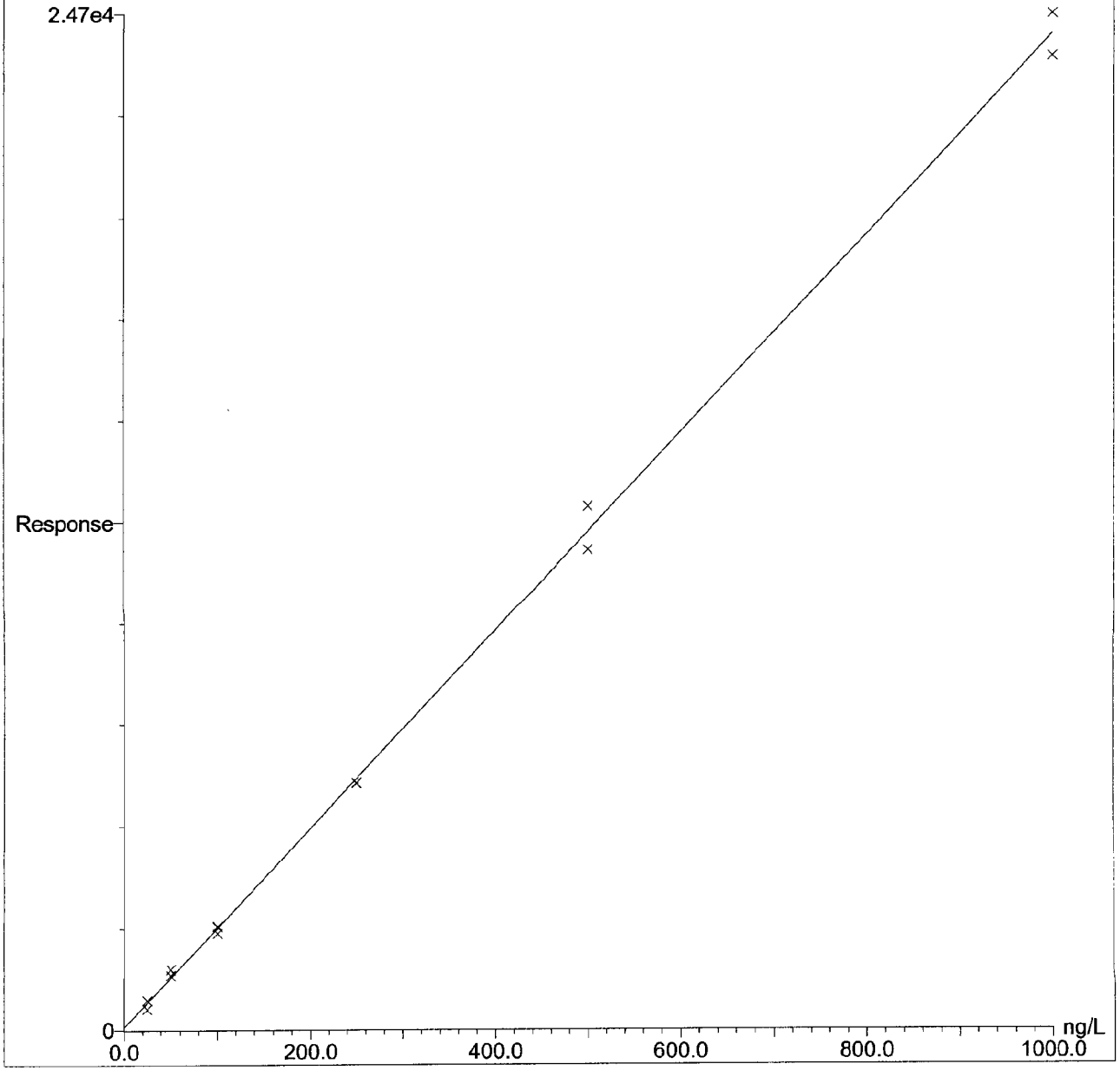


Exygen Research, 3058 Research Drive, State College, PA 16801

Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\030504A CG ACSFM
Last modified: Mon Mar 15 13:56:39 2004
Printed: Tue Mar 16 07:26:23 2004

Compound 5 name: C8 Sulfonate PFOS
Coefficient of Determination: 0.998559
Calibration curve: 24.1350 * x + 66.8162
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Quantify Sample Report
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

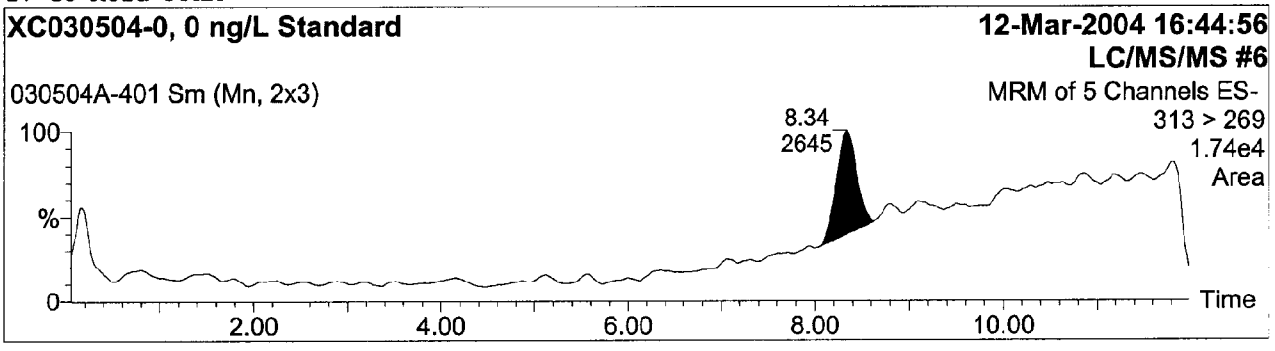
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Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031504
Last modified: Mon Mar 15 13:25:12 2004
Job Code:

Printed: Tue Mar 16 07:26:27 2004

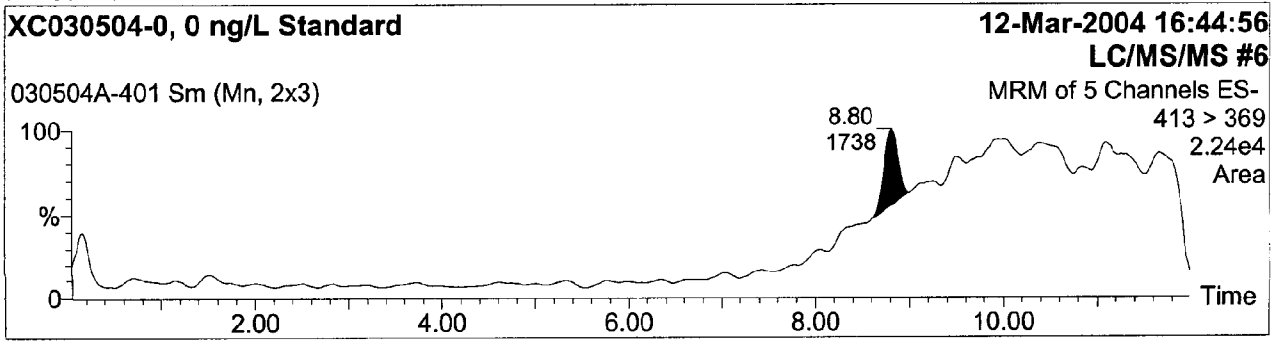
Initials KC
Date 03/16/04
Run# 030504A-401 To 030504A-473

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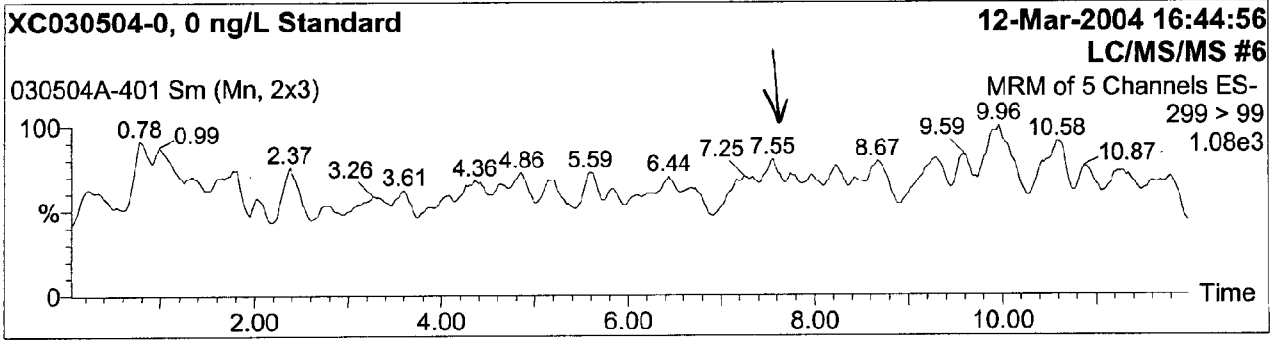
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

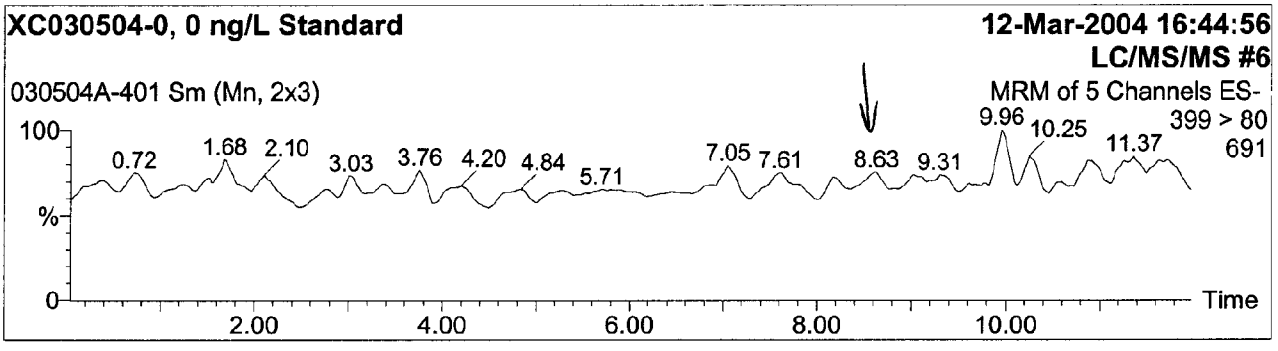
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Last modified: Mon Mar 15 13:22:46 2004
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Job Code:

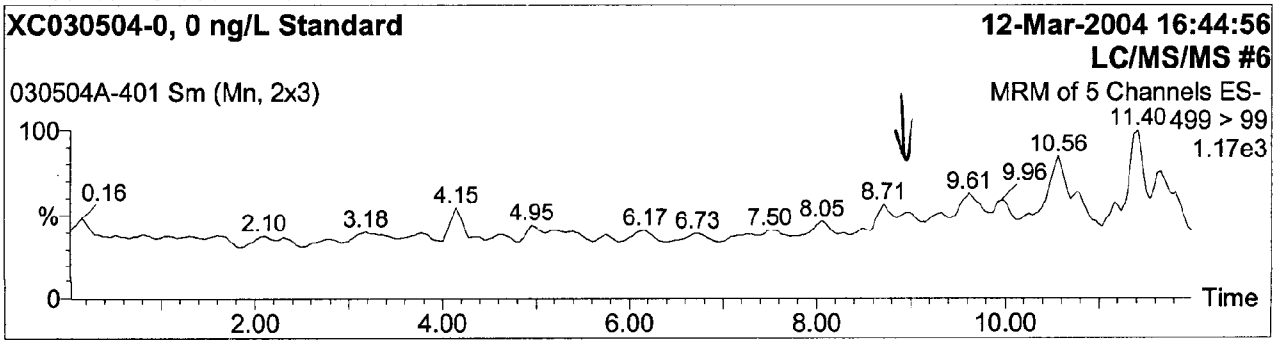
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Name: 030504A-401
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



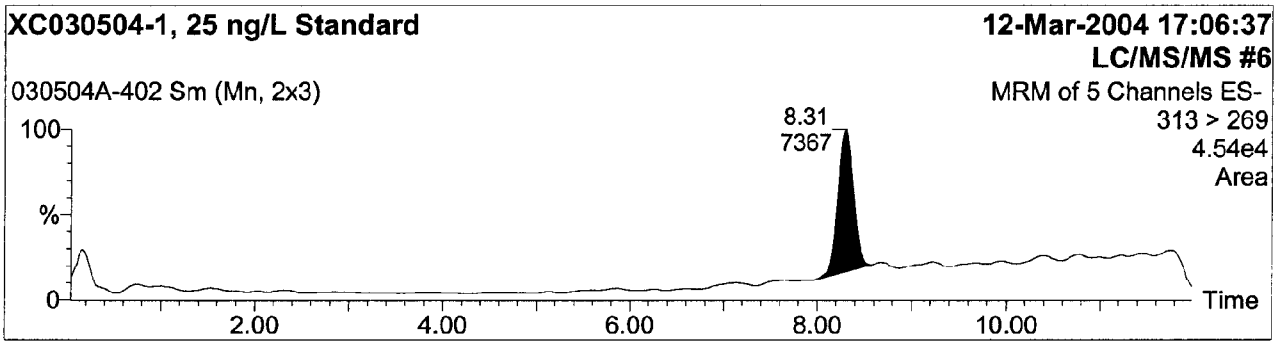
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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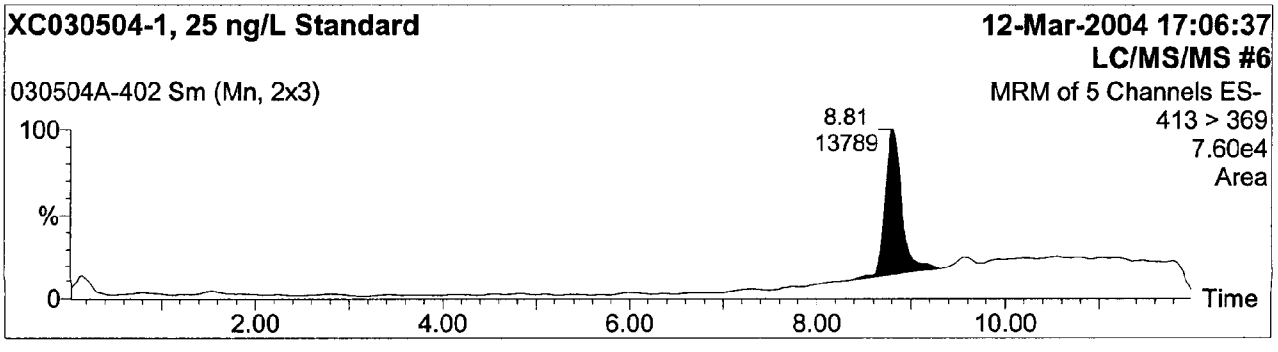
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-402
Text:

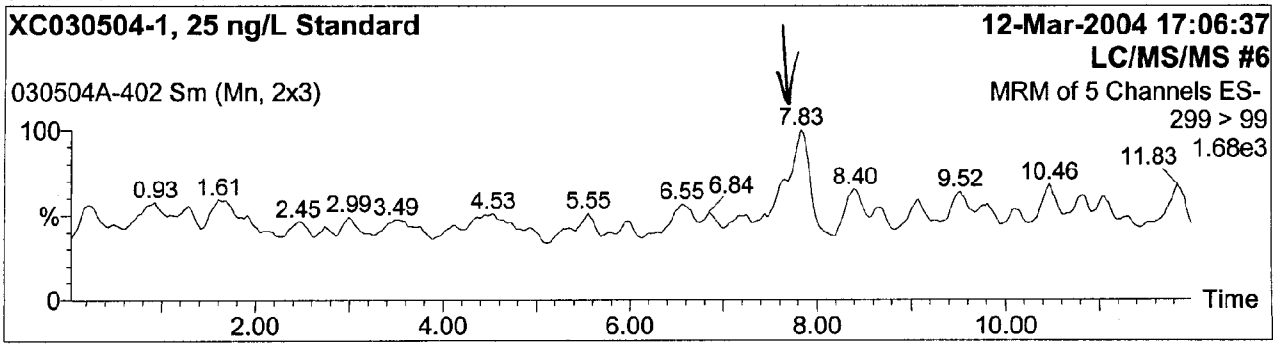
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



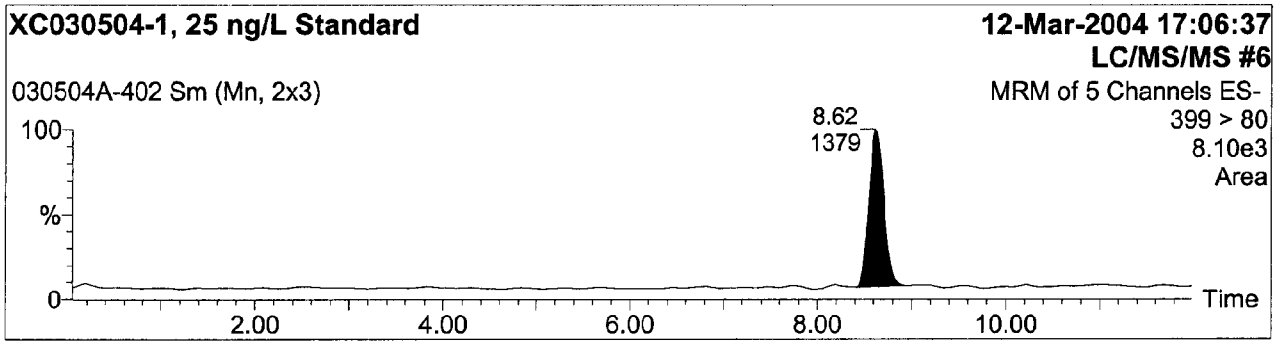
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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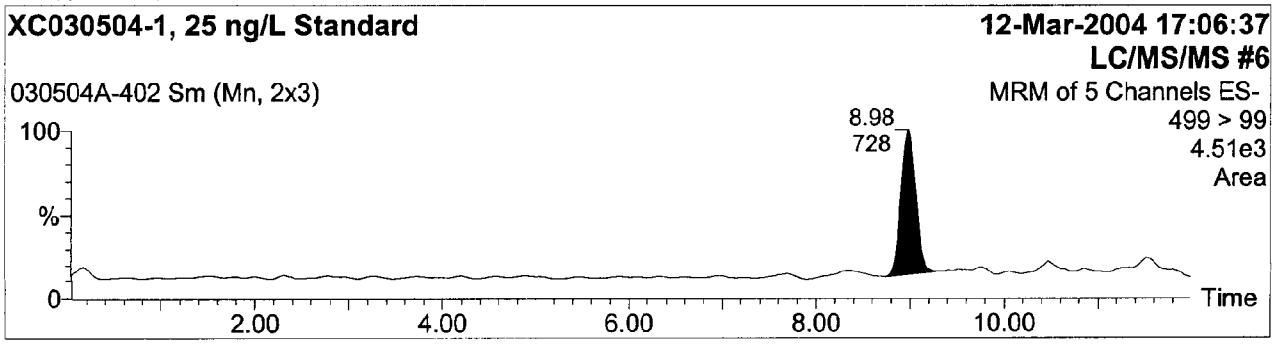
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Name: 030504A-402
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



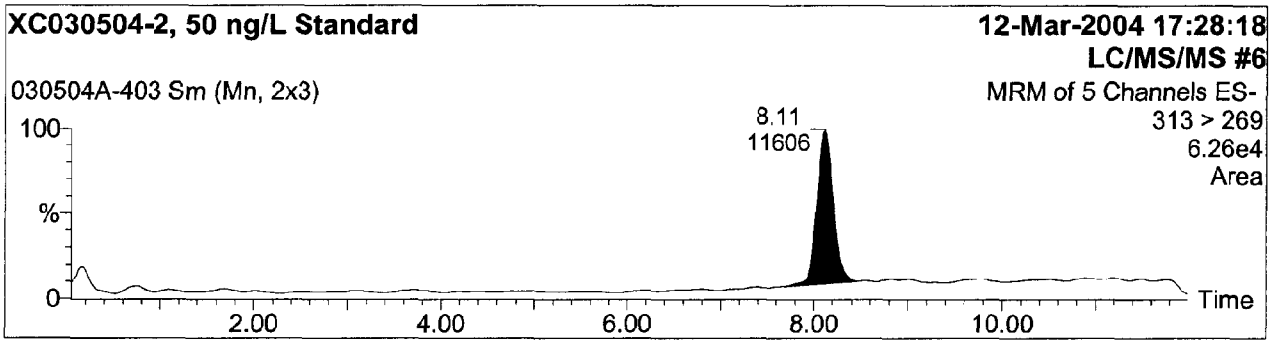
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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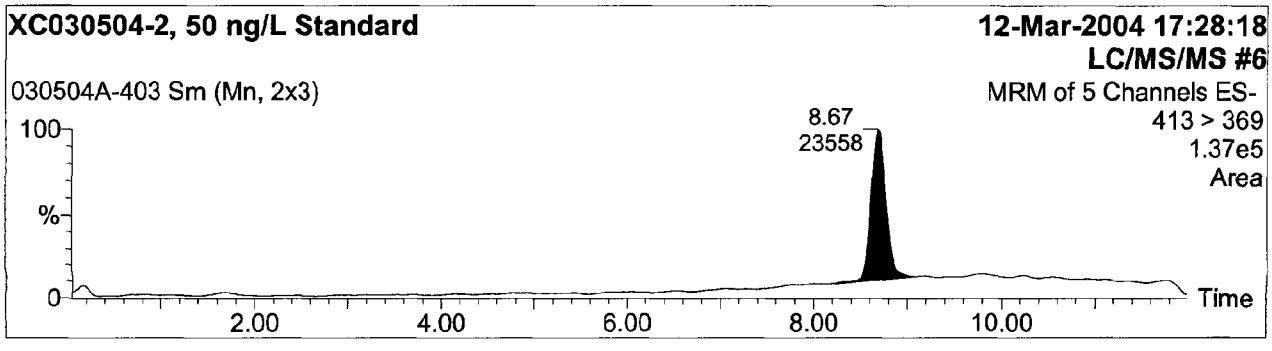
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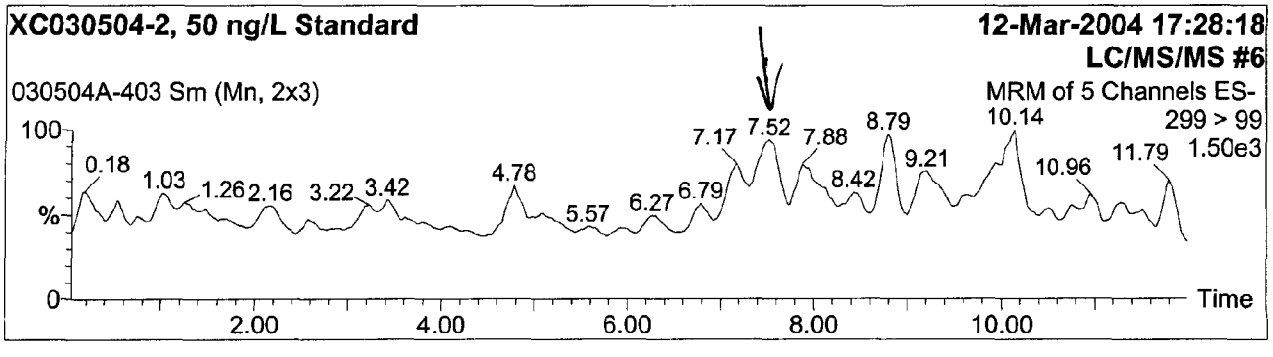
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



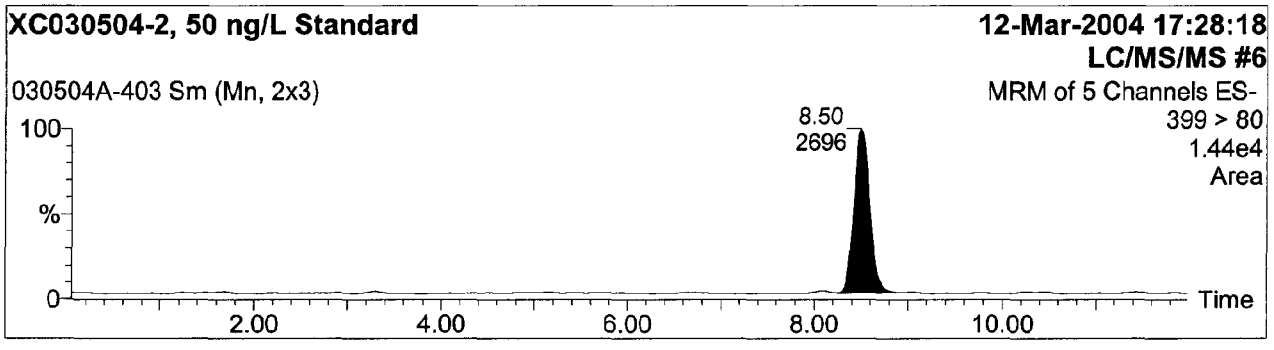
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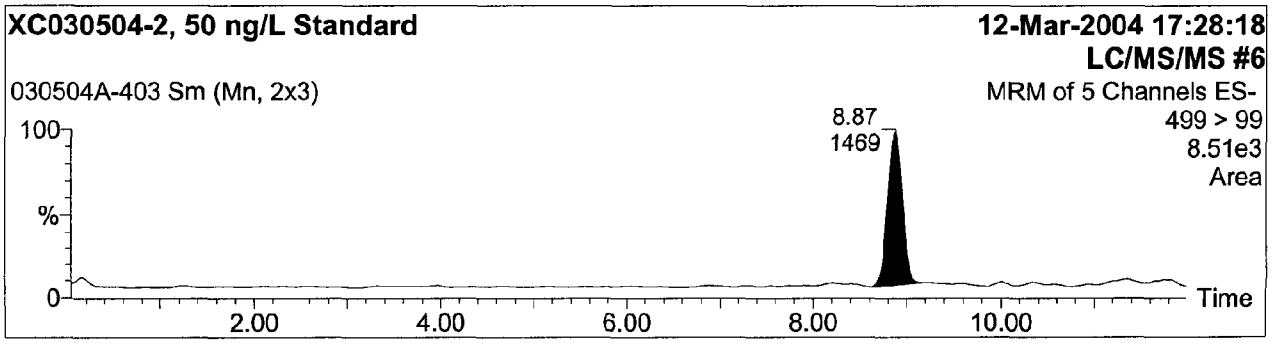
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Name: 030504A-403
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



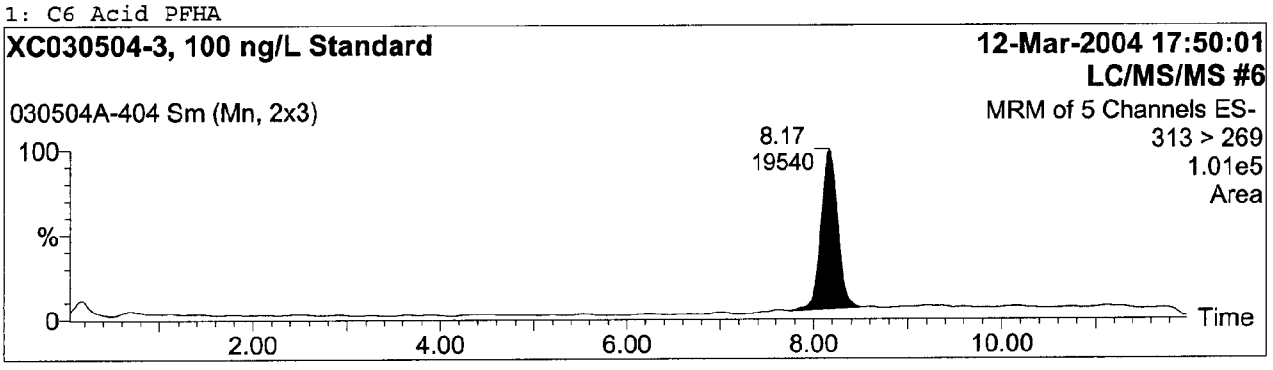
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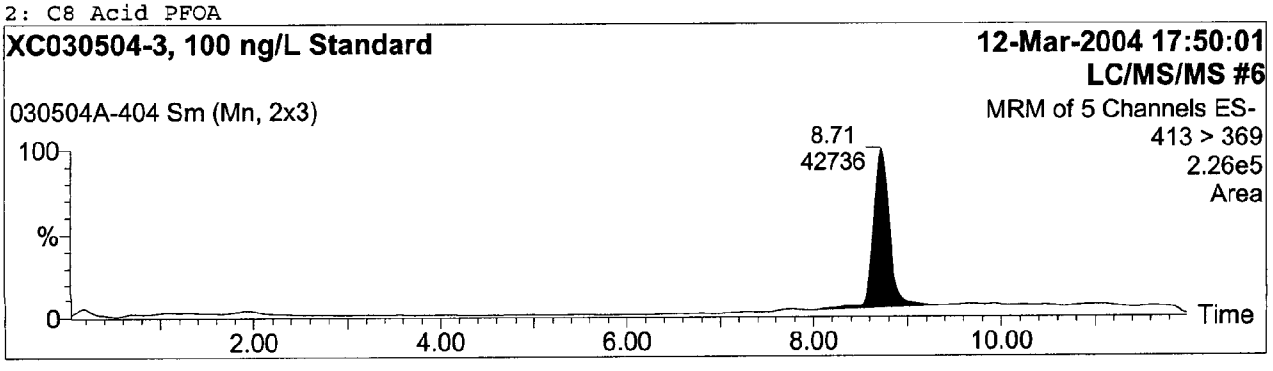
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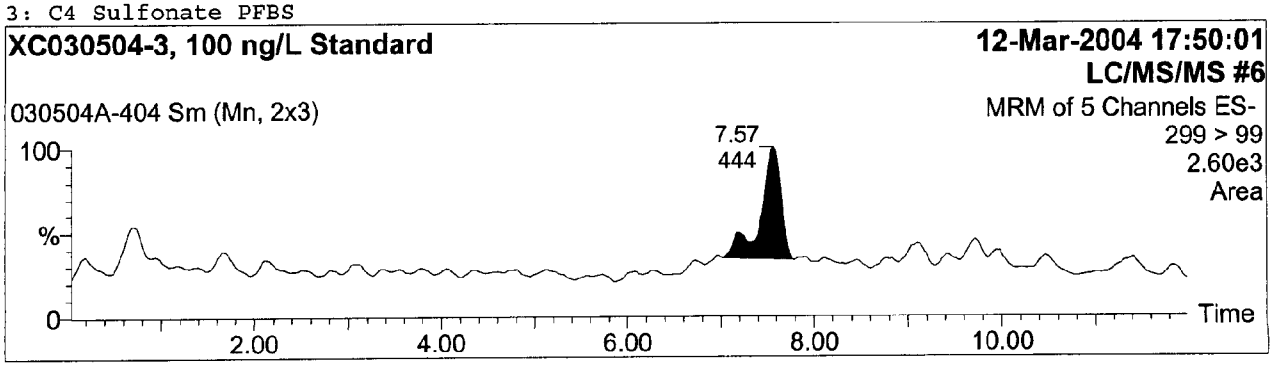
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



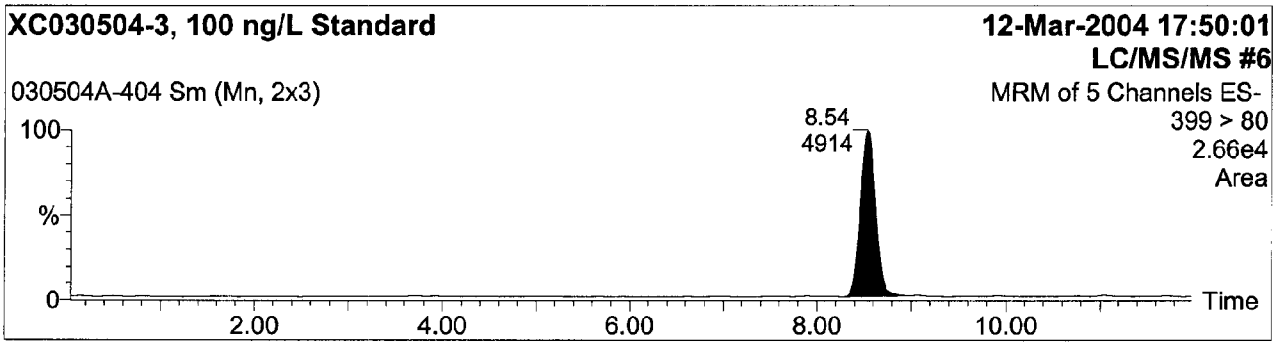
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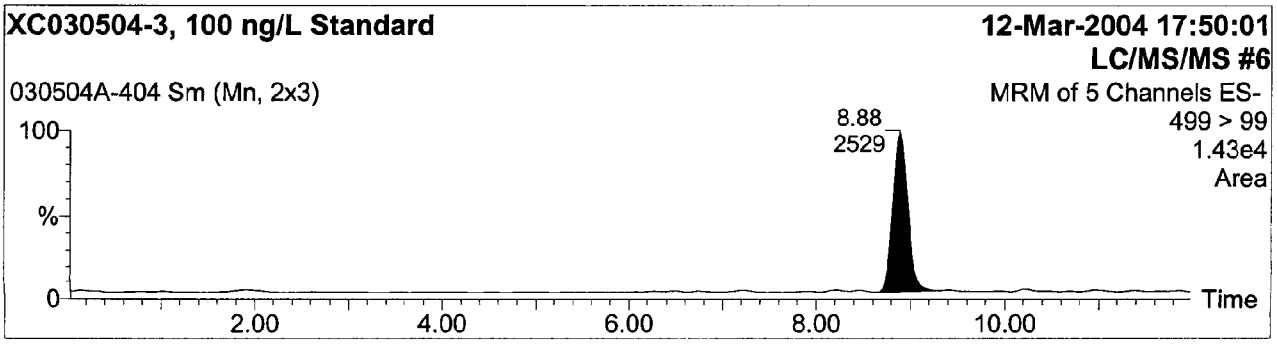
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



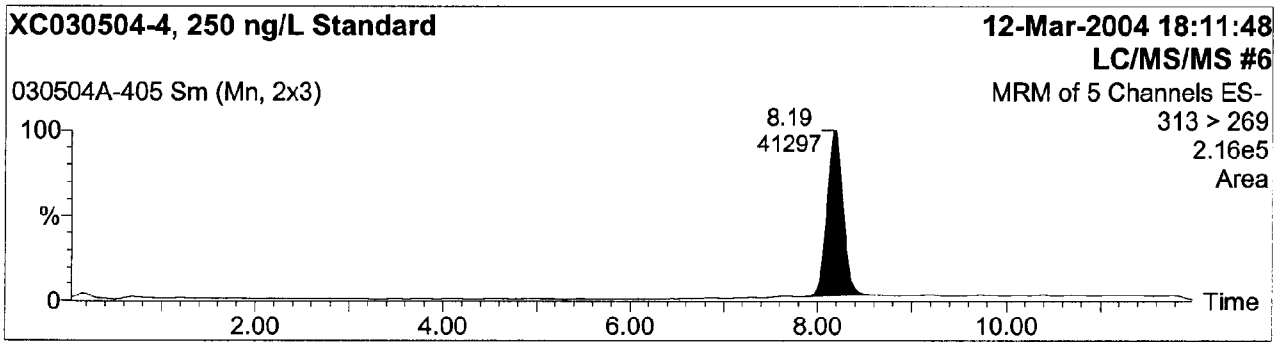
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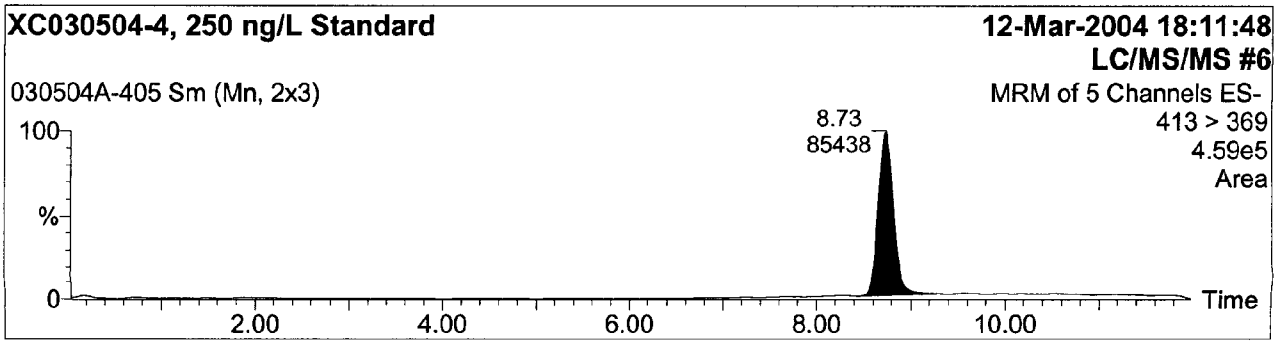
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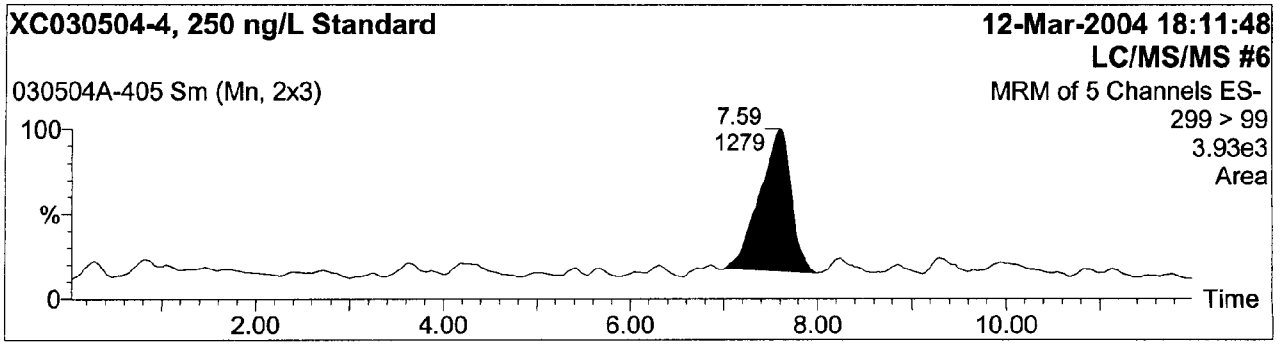
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



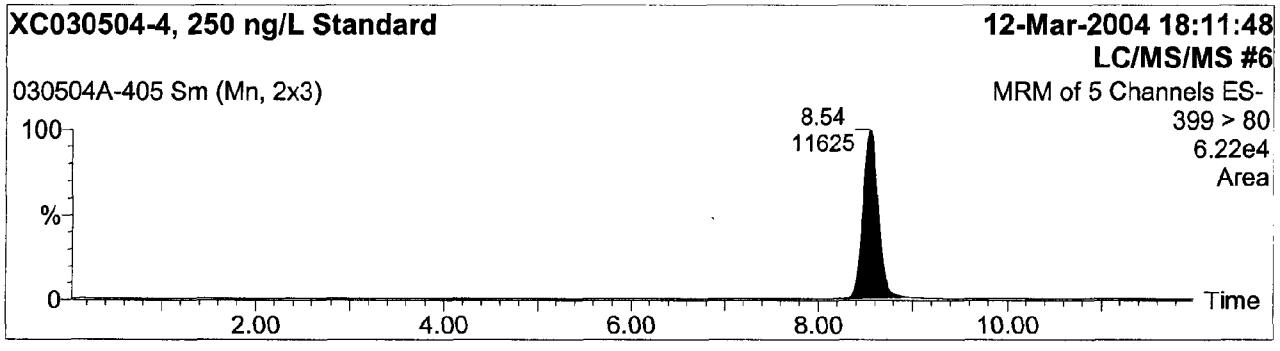
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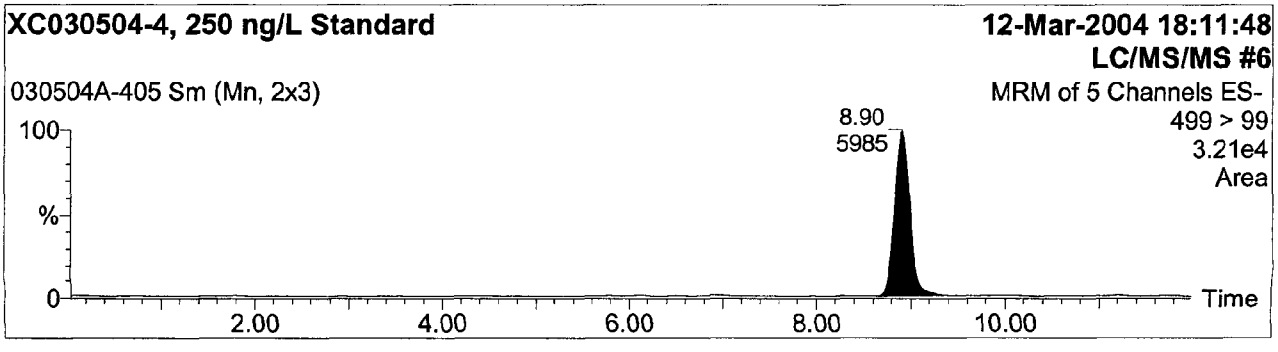
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Name: 030504A-405
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

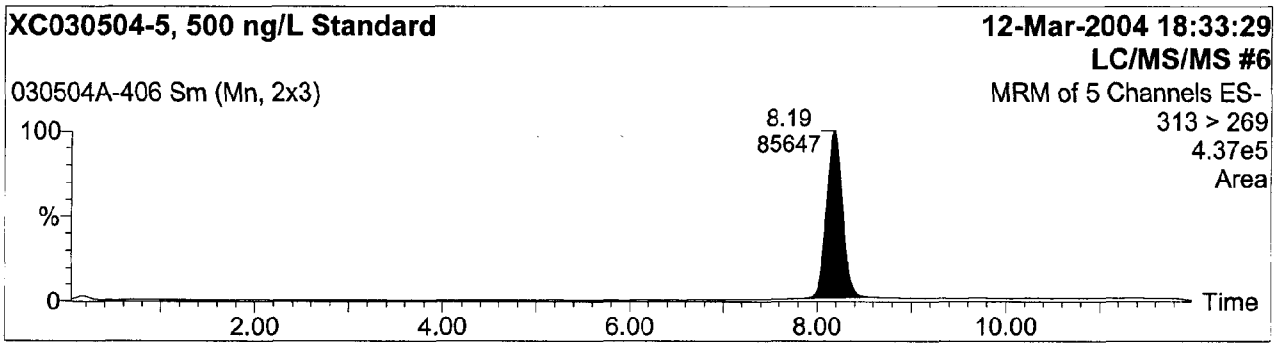
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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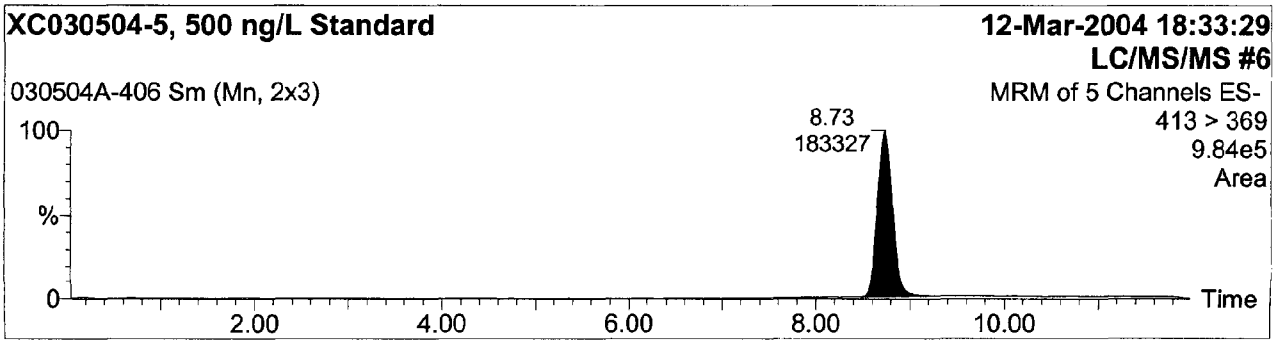
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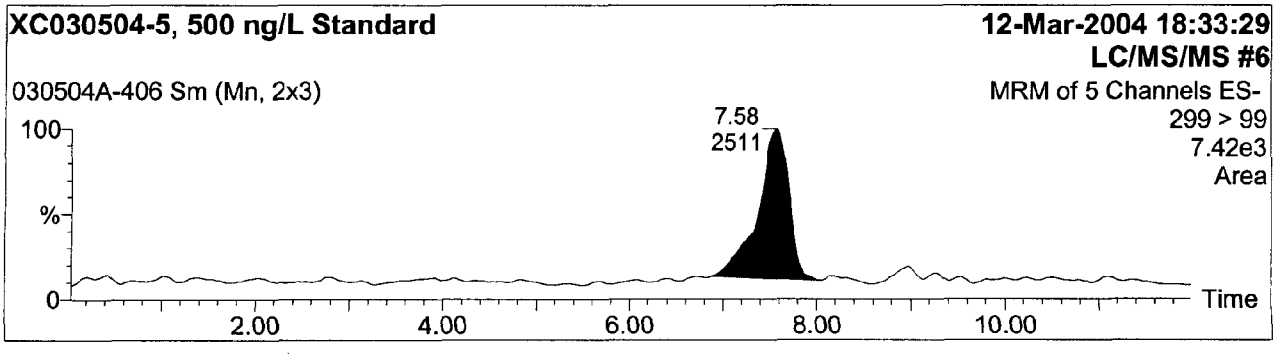
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



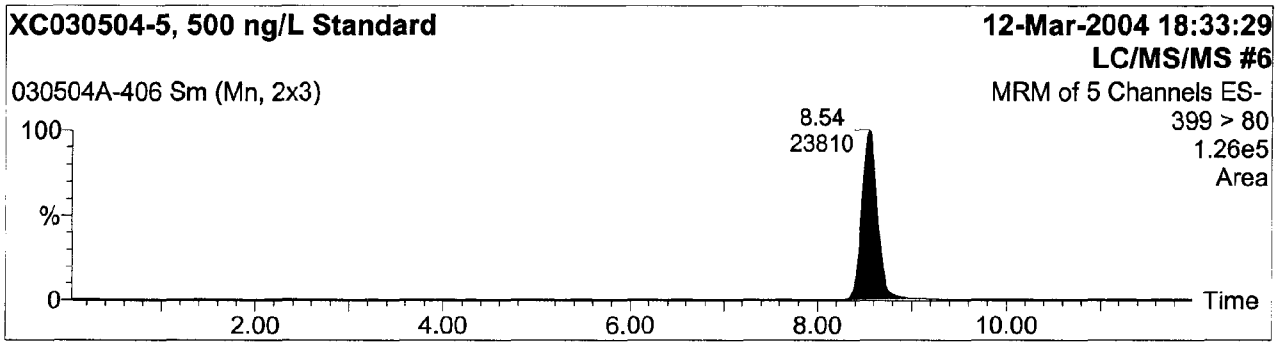
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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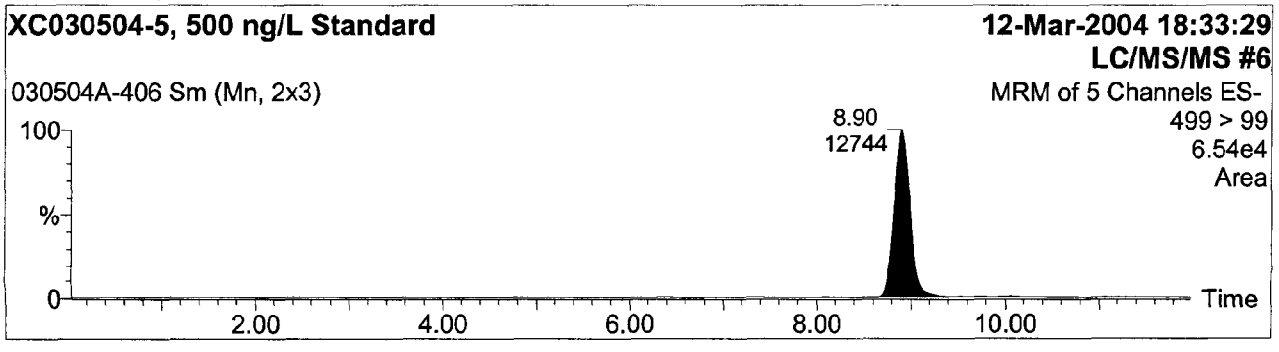
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



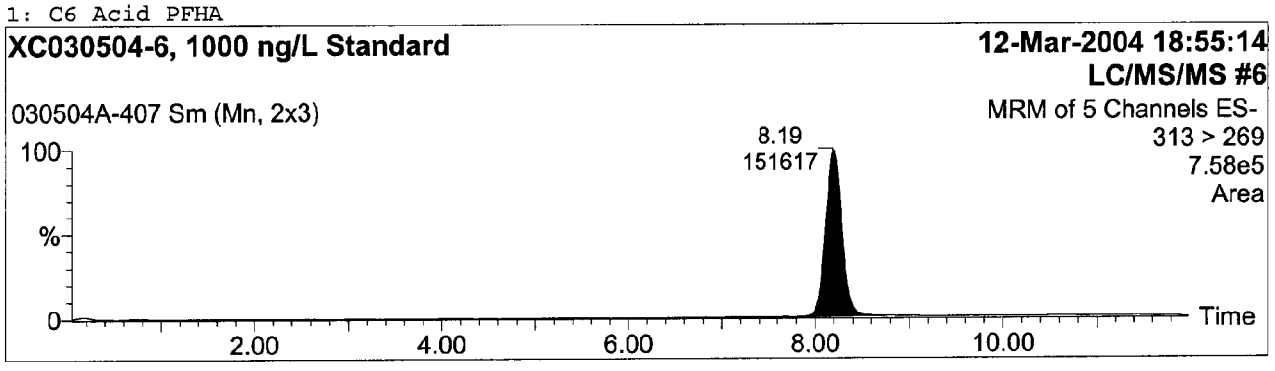
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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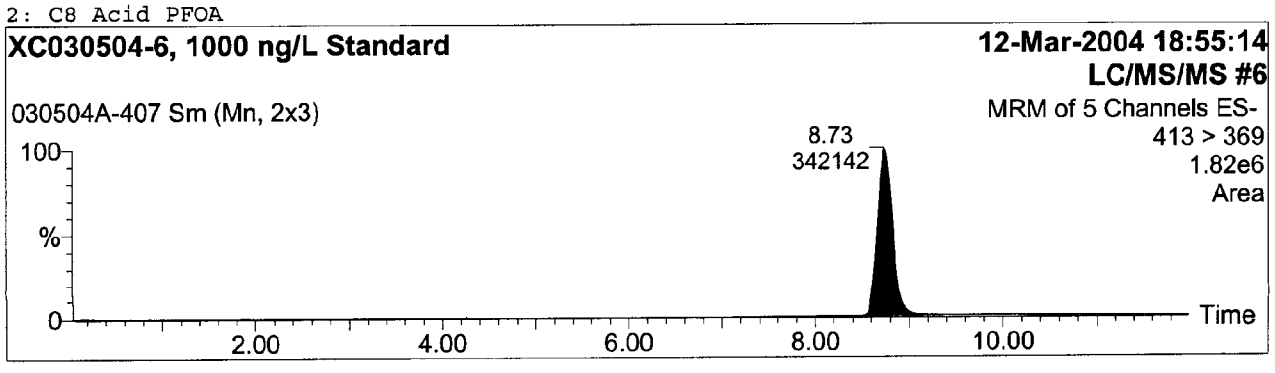
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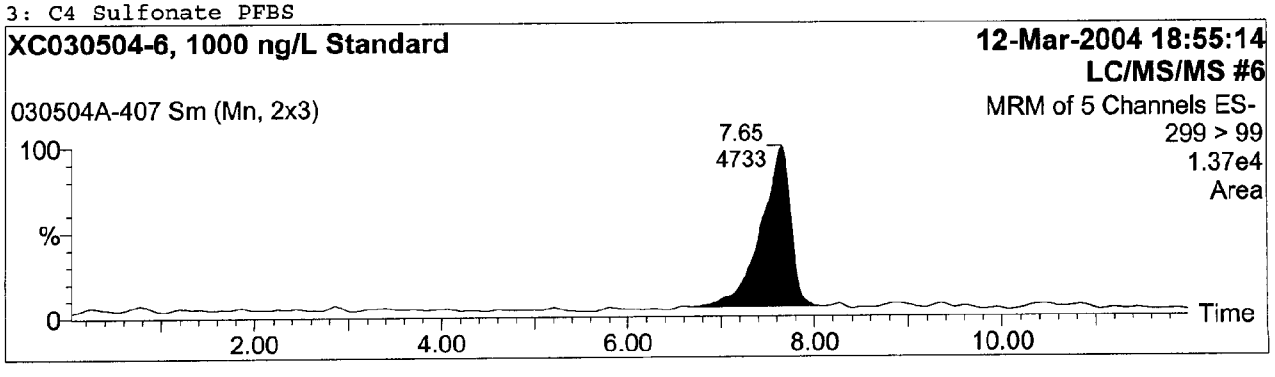
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



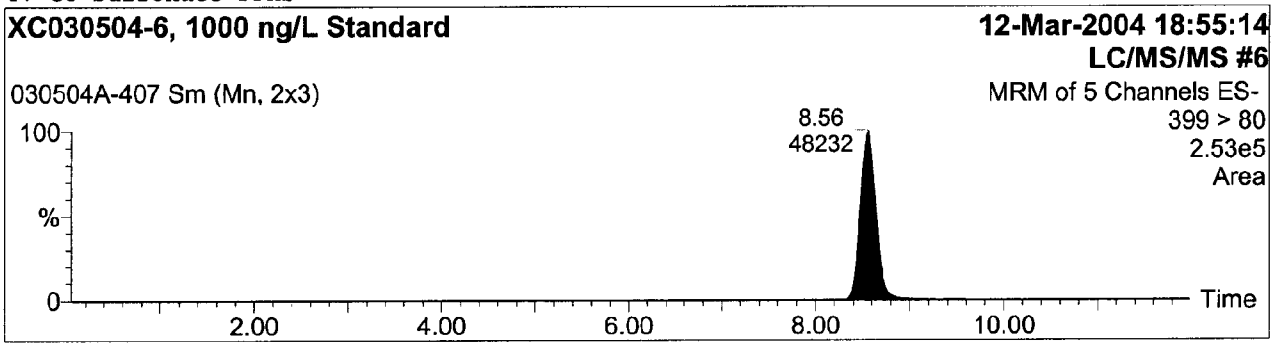
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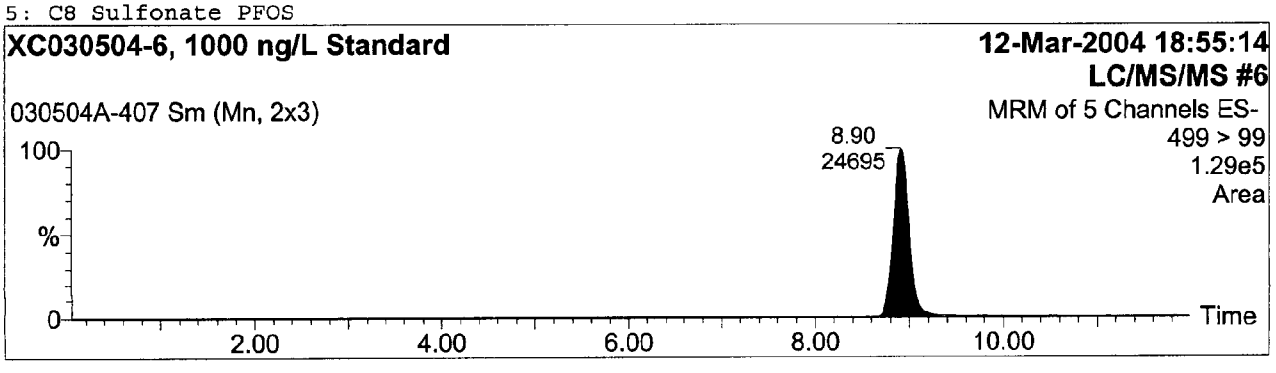
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Name: 030504A-407
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



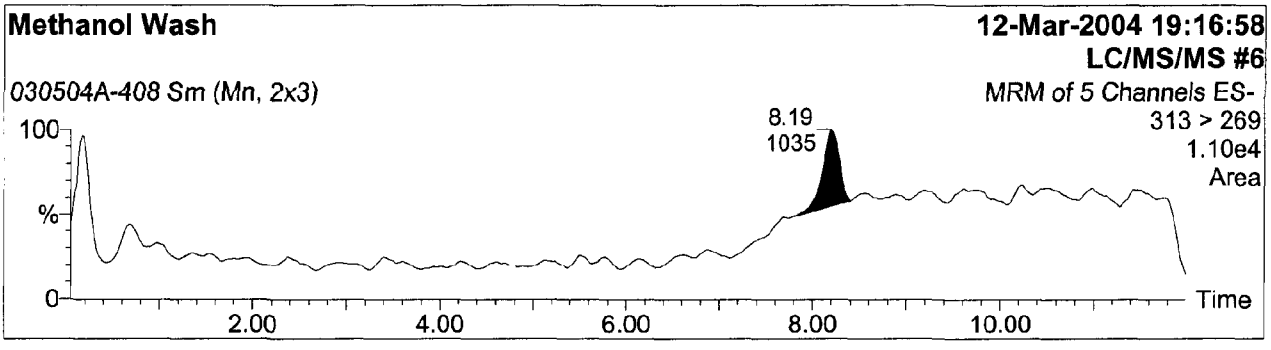
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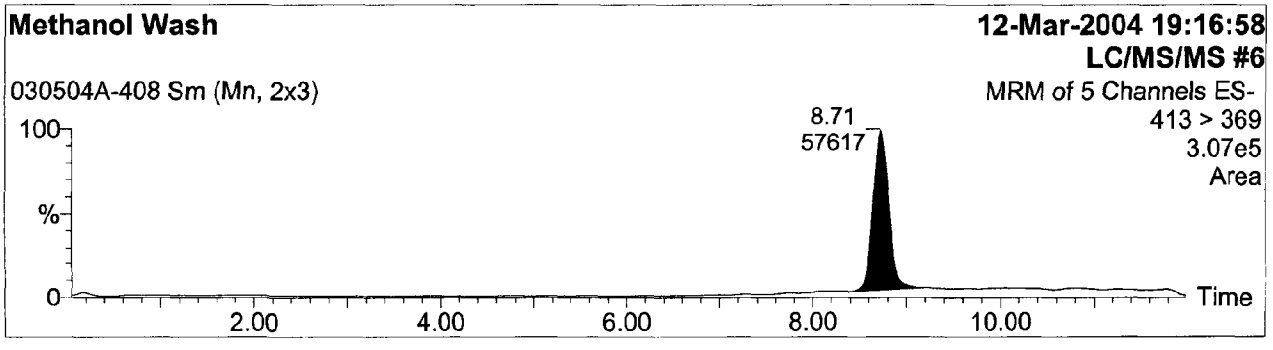
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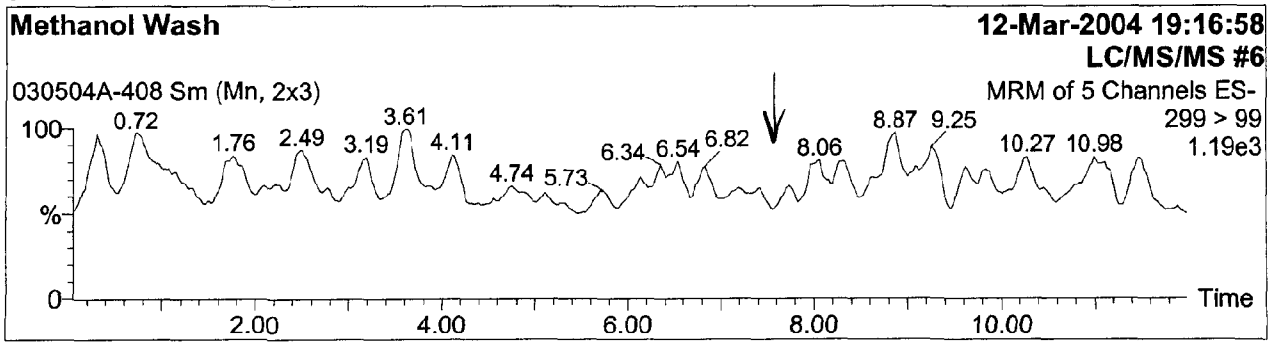
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

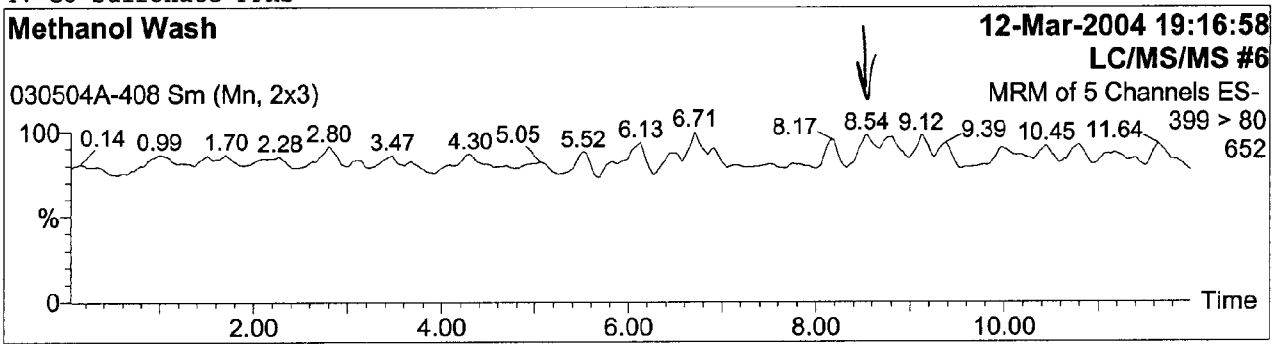
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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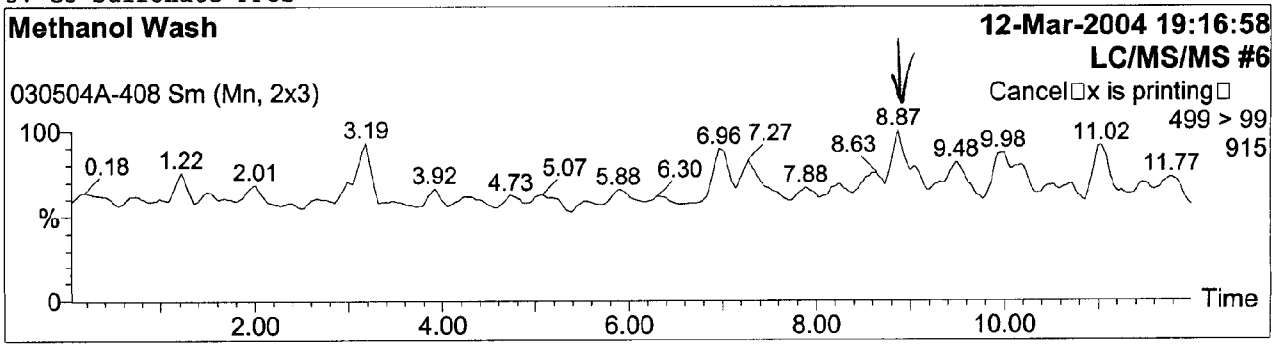
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



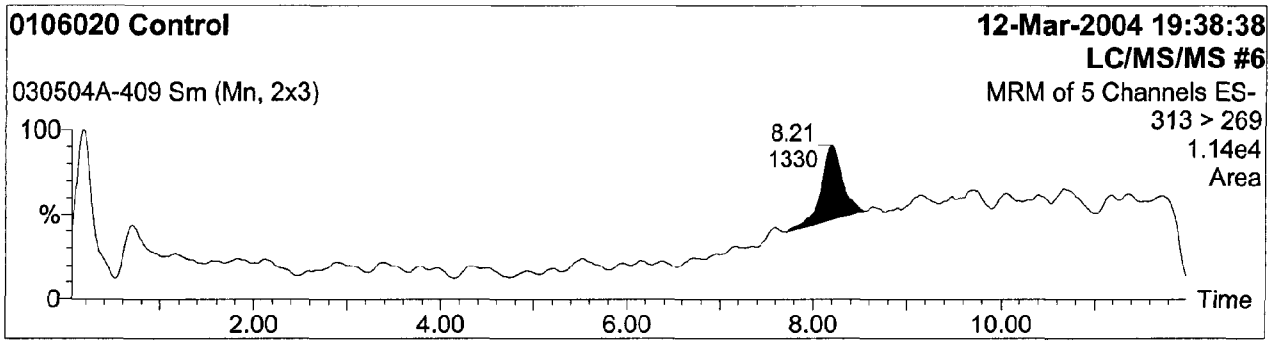
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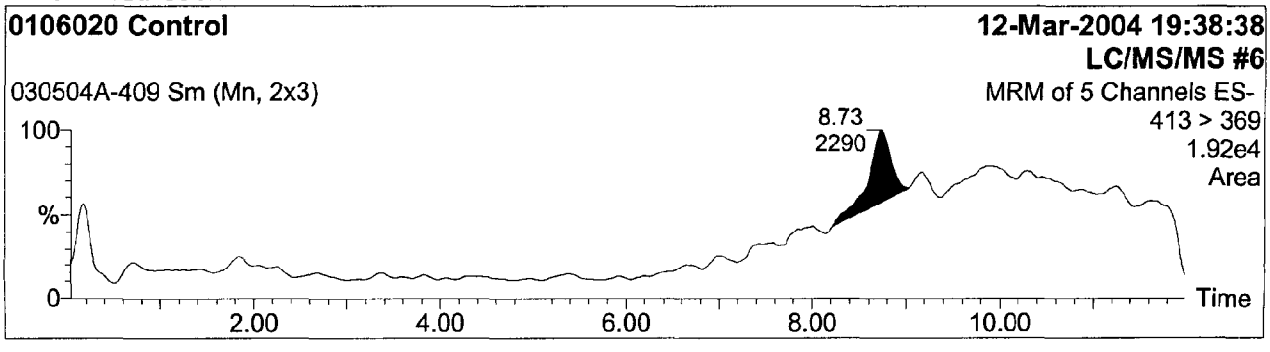
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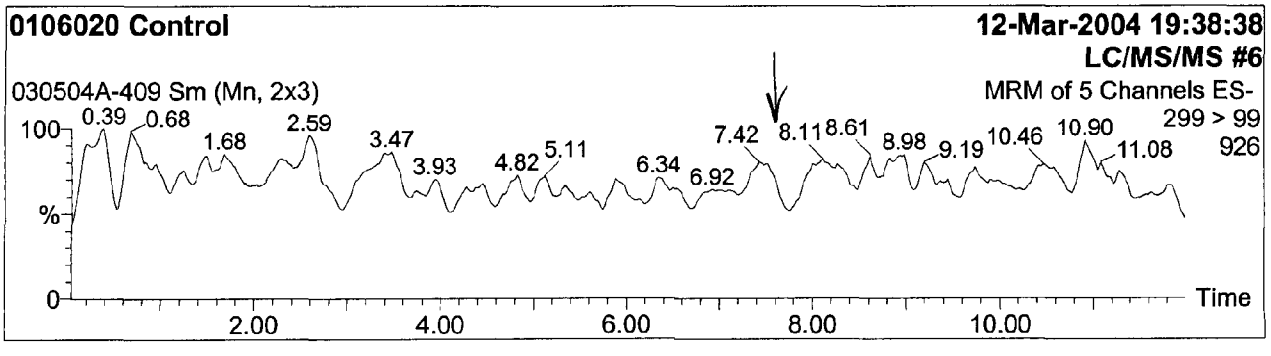
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



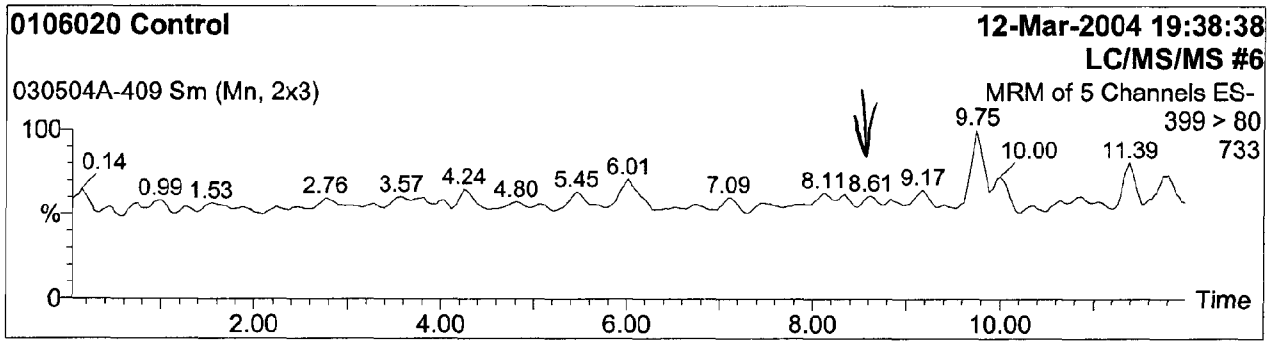
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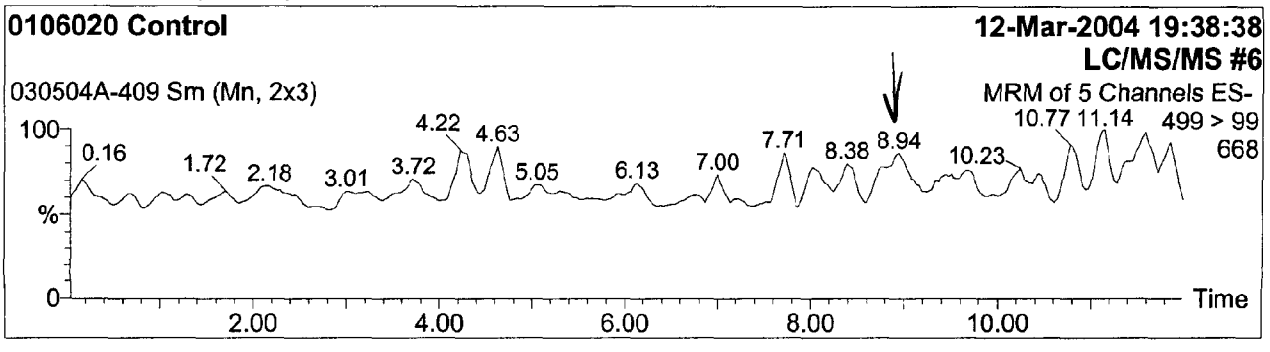
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Name: 030504A-409
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



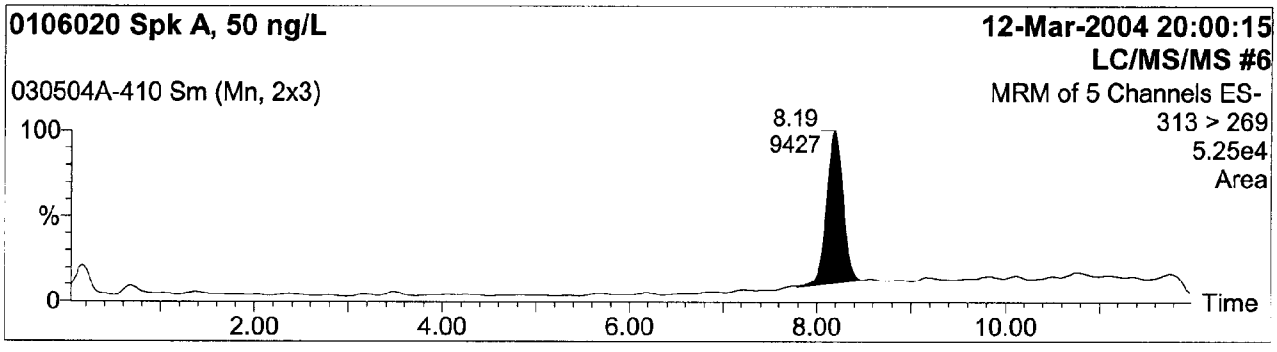
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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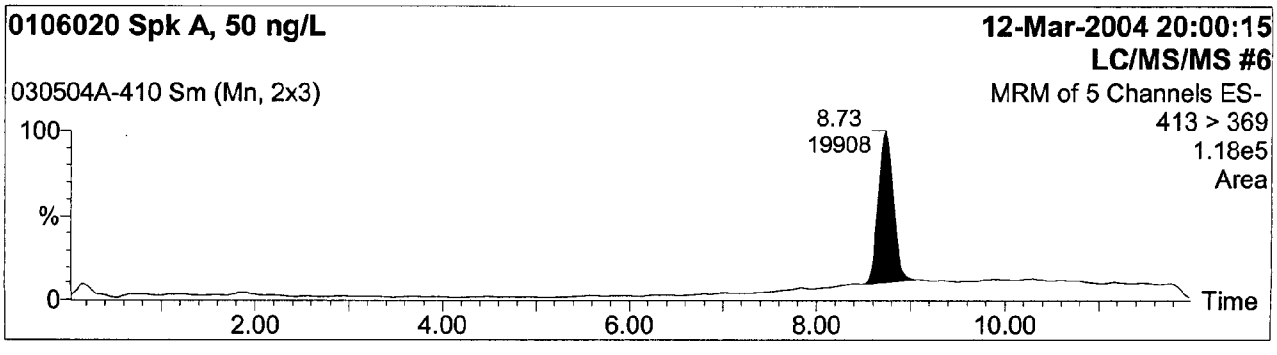
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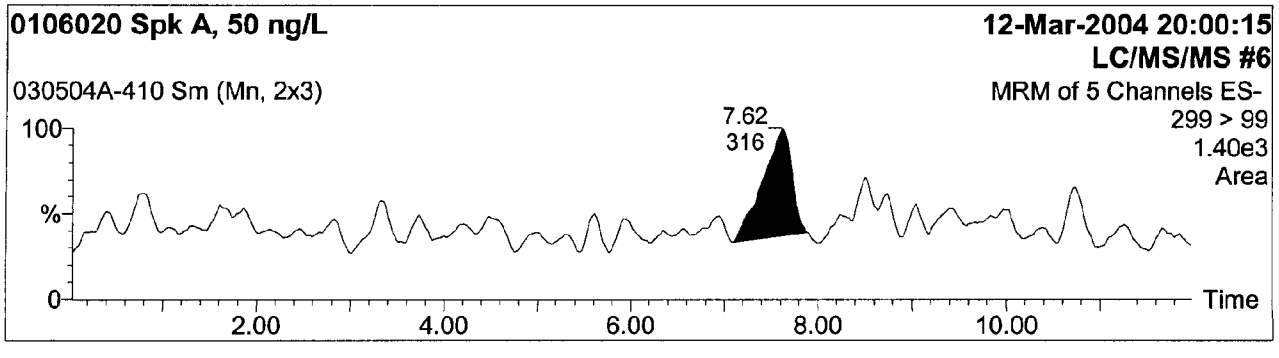
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



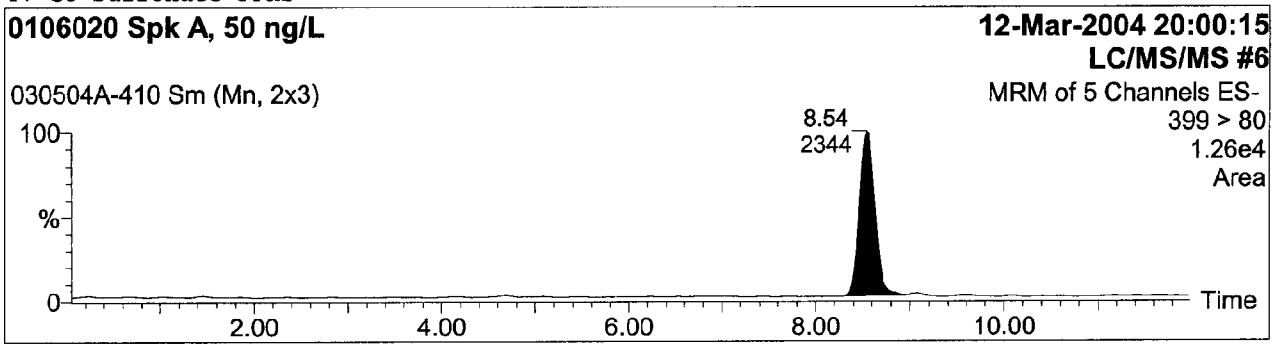
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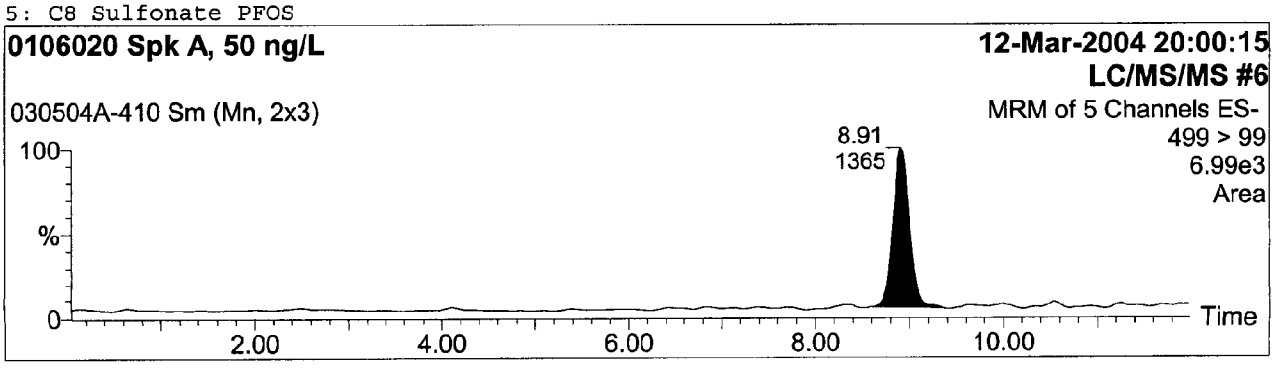
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

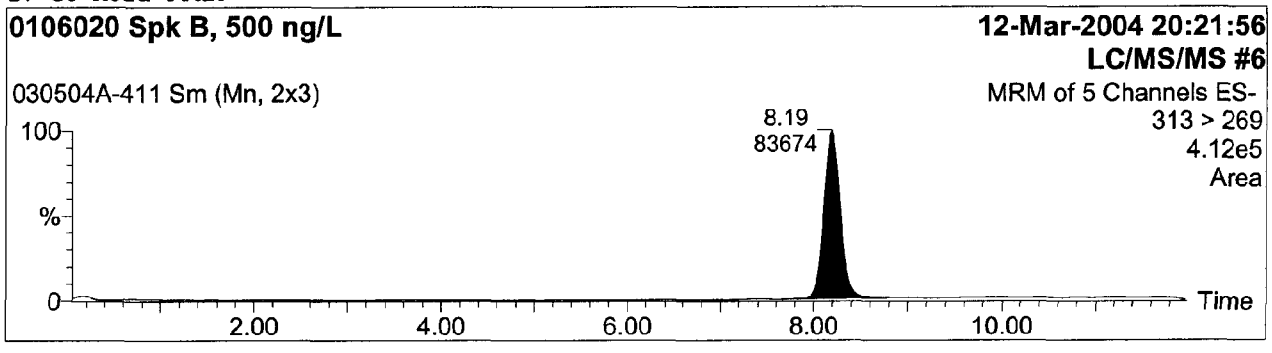
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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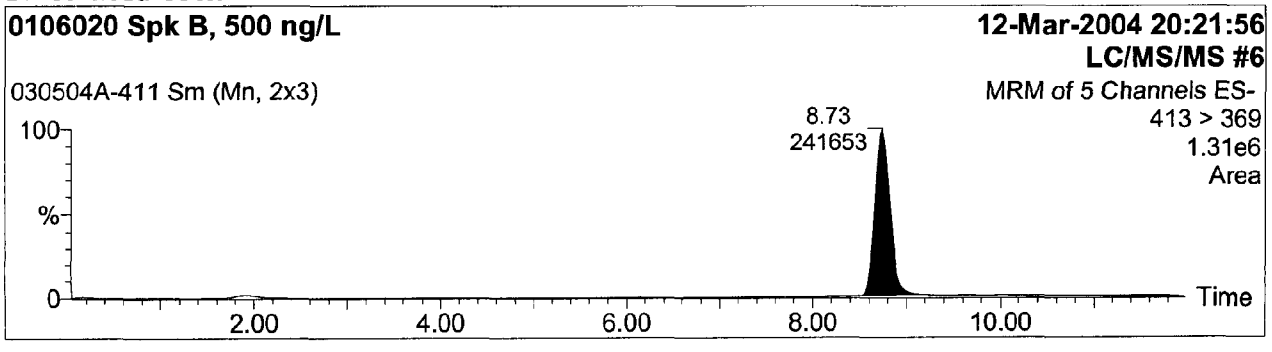
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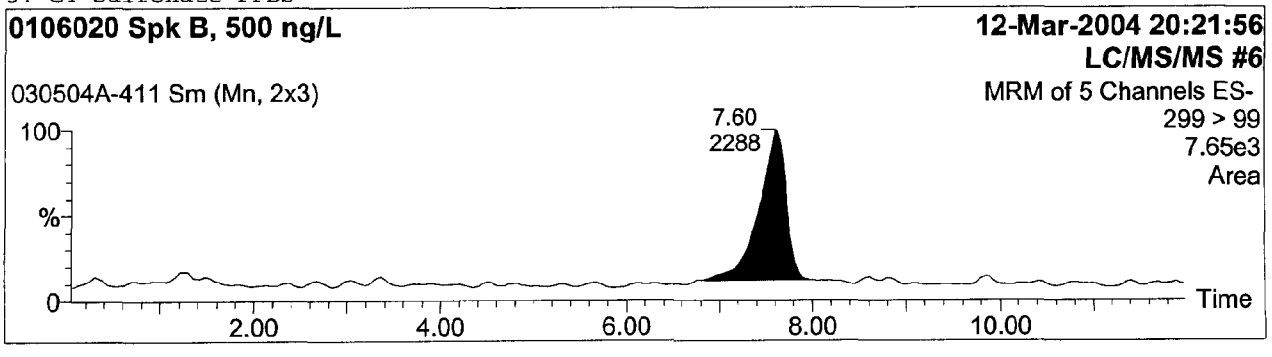
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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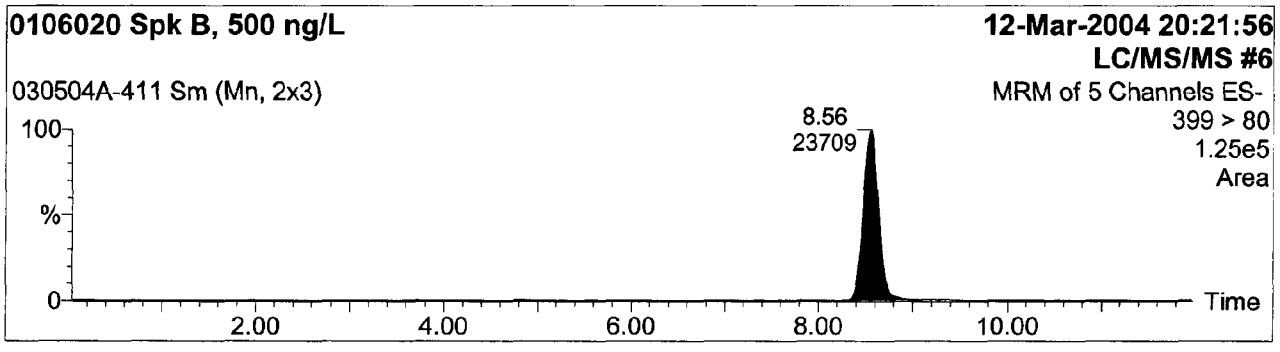
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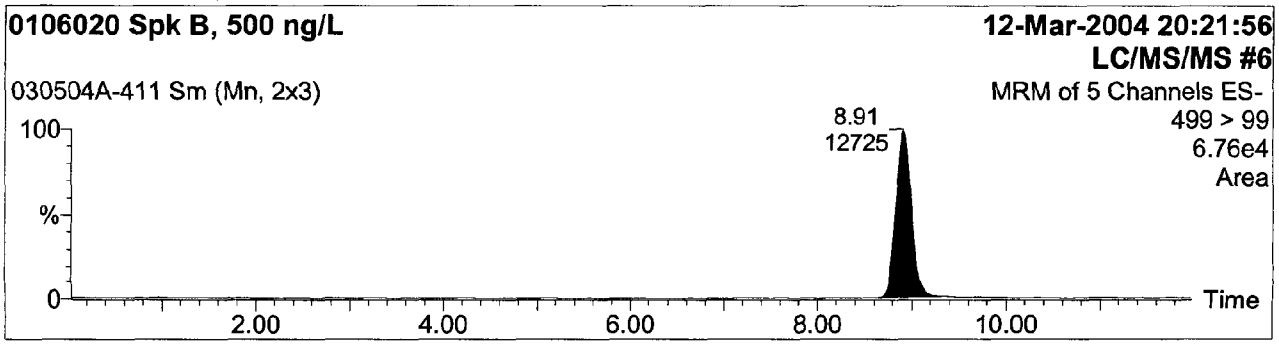
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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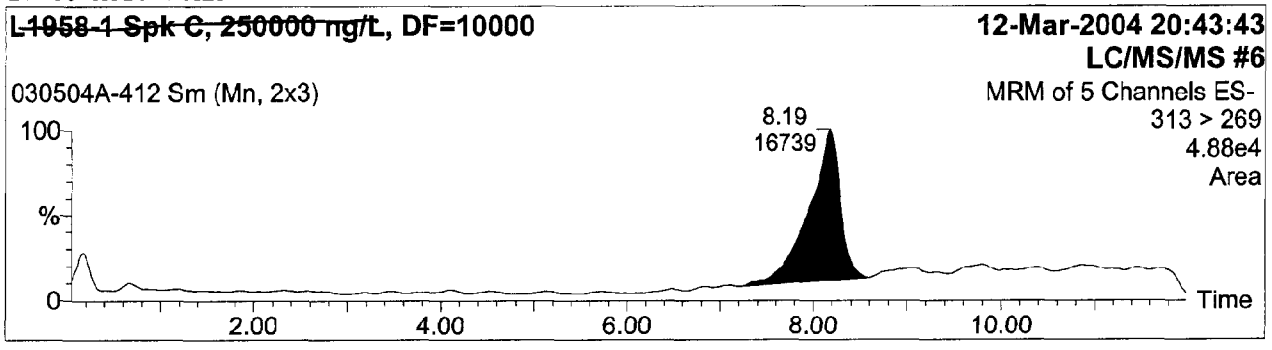
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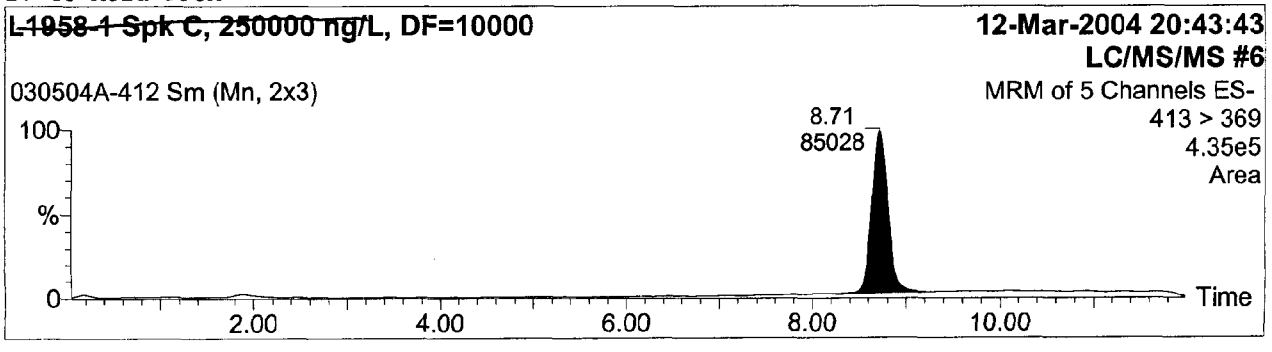
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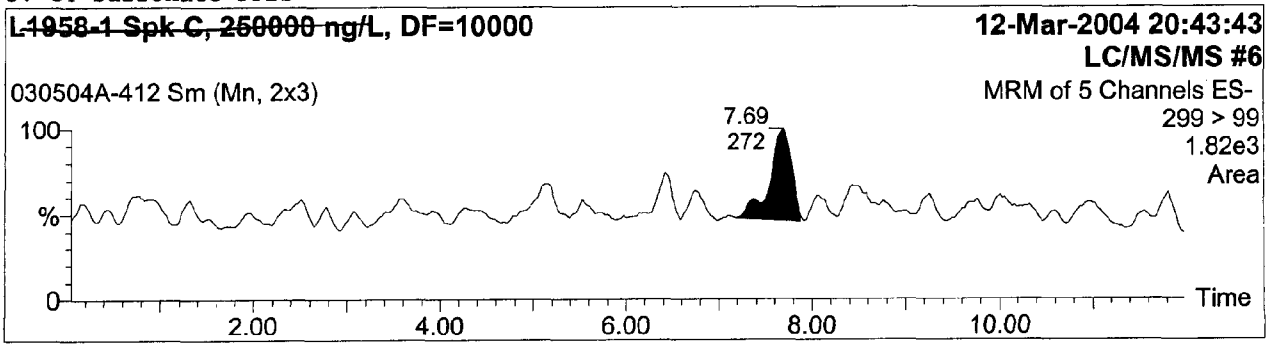
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-17 Spk C, 500,000 ng/L (re) KBJ 03/16/04

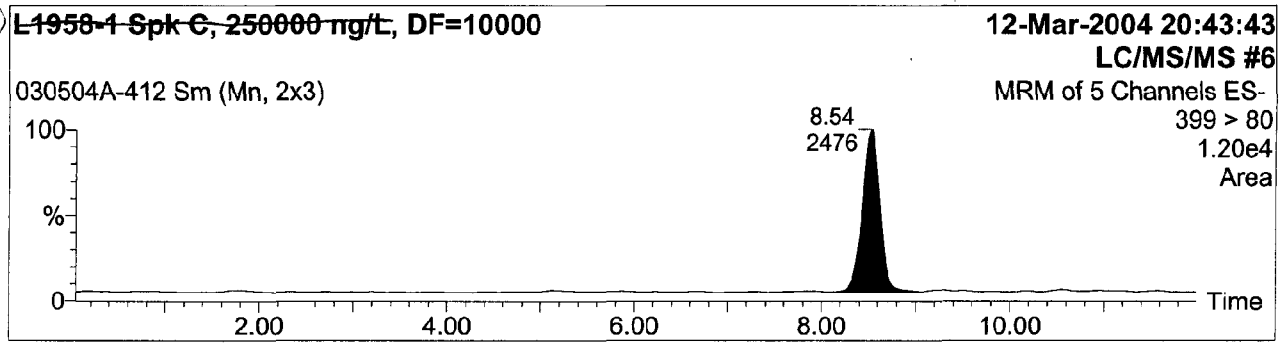
Exygen Research, 3058 Research Drive, State College, PA 16801

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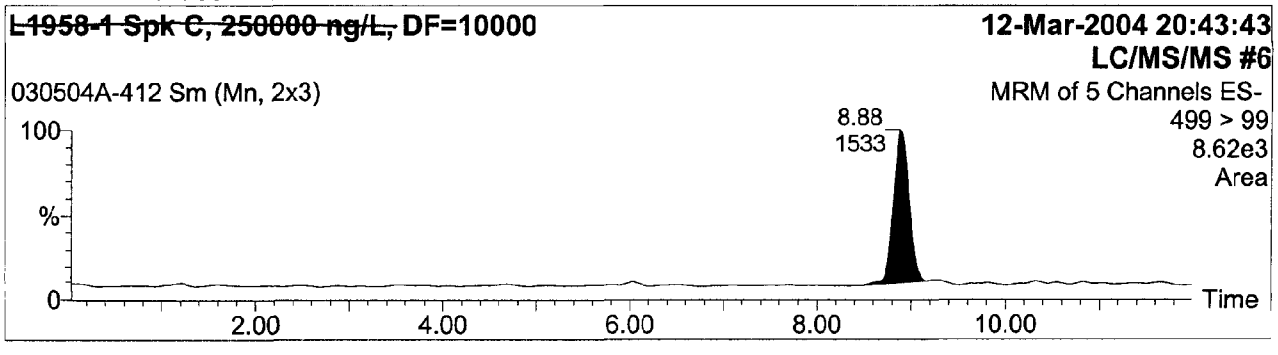
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-412
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L195B-17SpkC, 500,000 ng/L (re) KJ 03/16/04

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

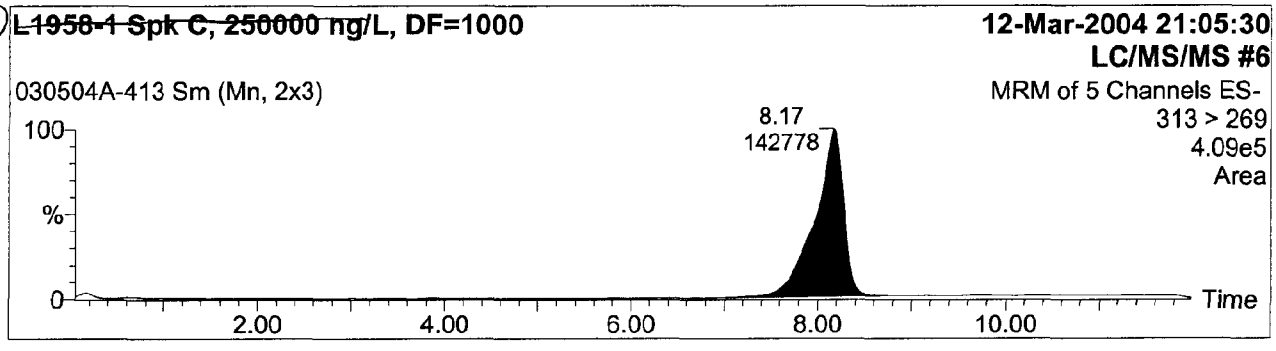
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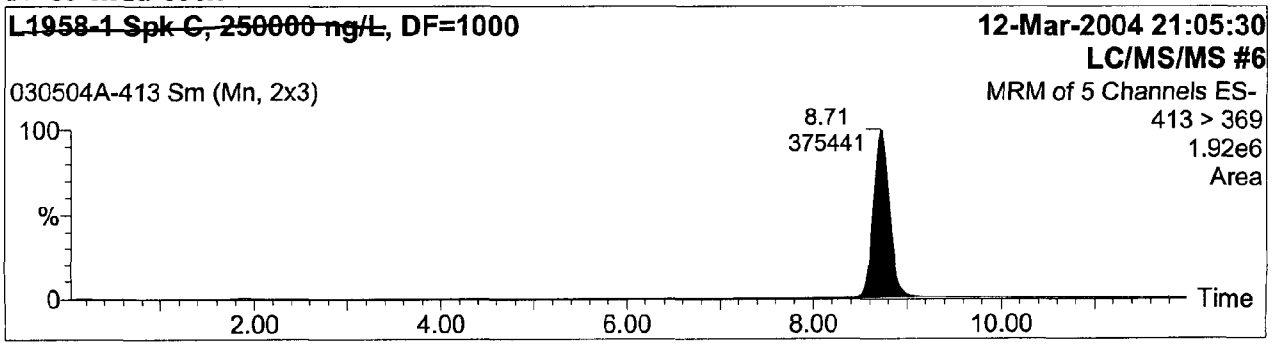
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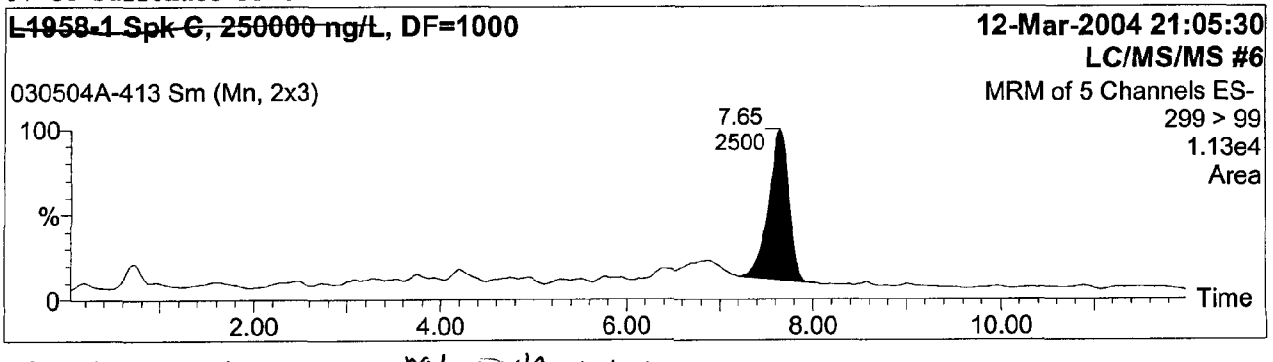
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-17 SpkC, 500,000 ng/L ⑫ KF 03/16/04

Exygen Research, 3058 Research Drive, State College, PA 16801

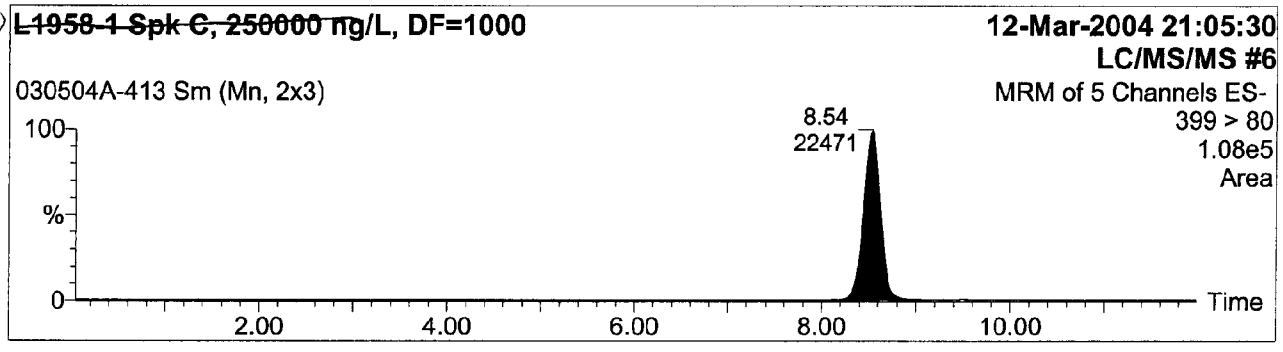
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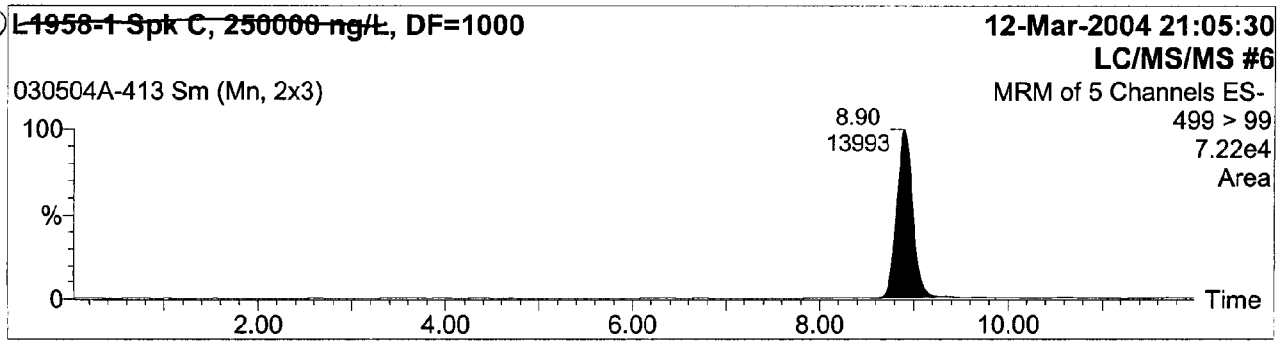
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-17 SpkC, 500,000 ng/L @ KJ 03/16/04

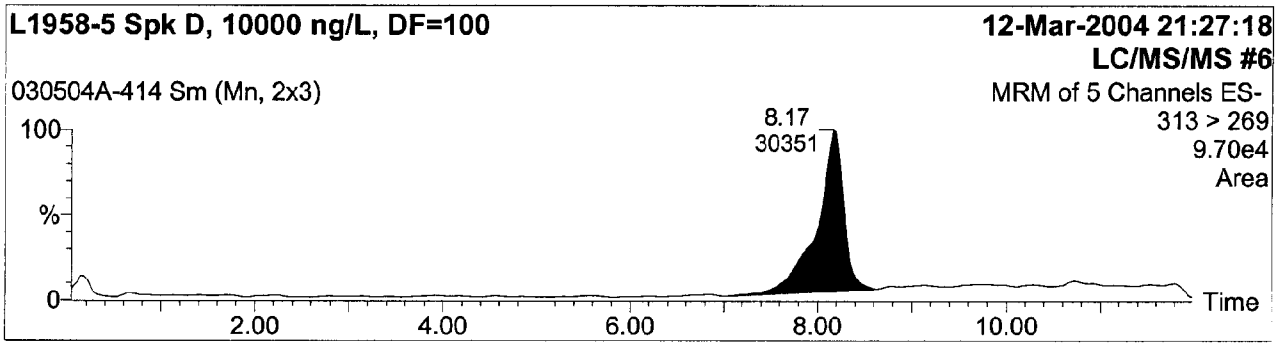
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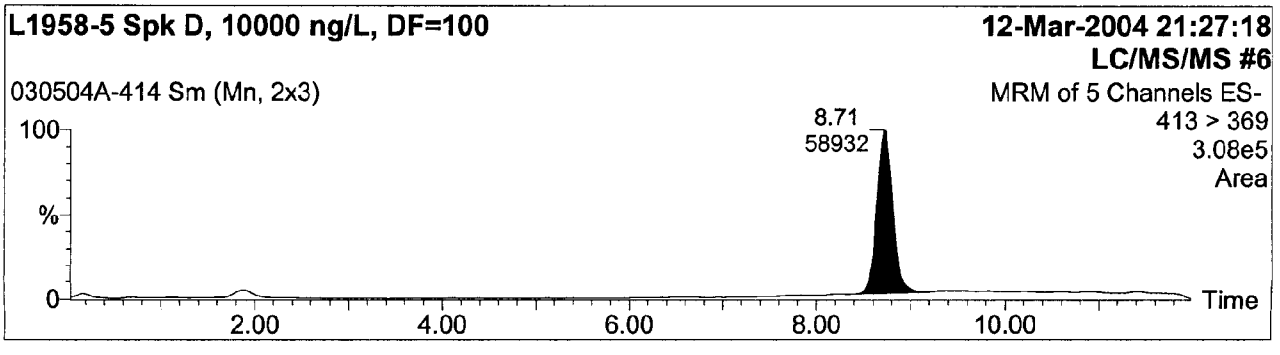
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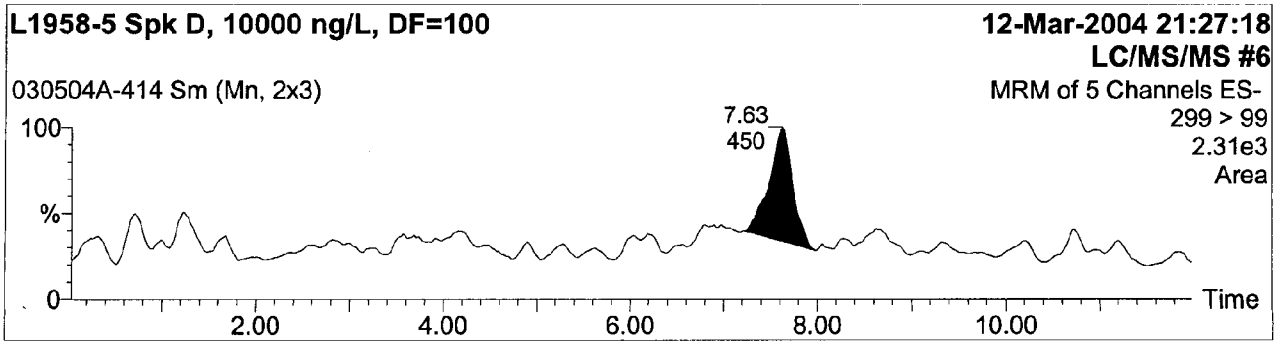
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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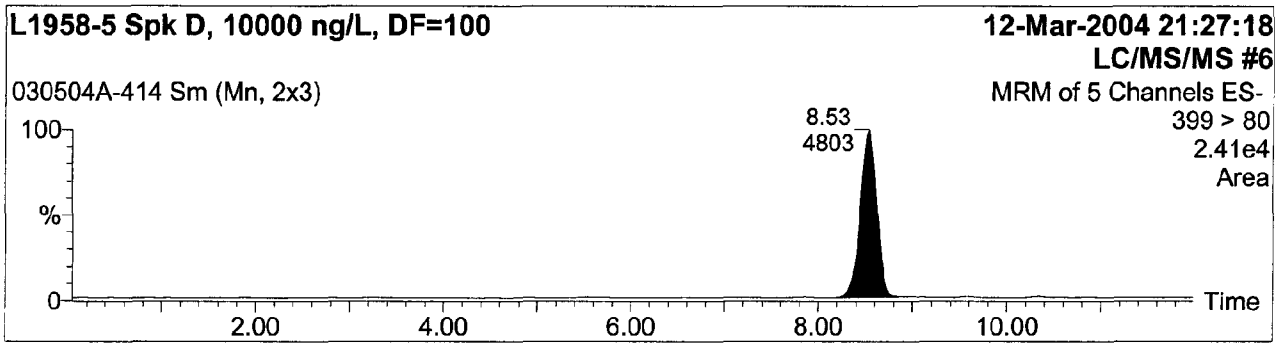
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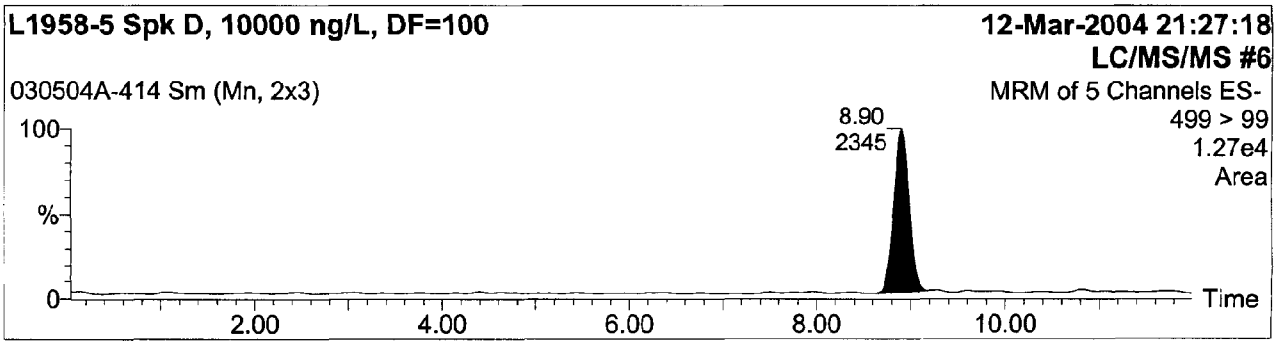
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



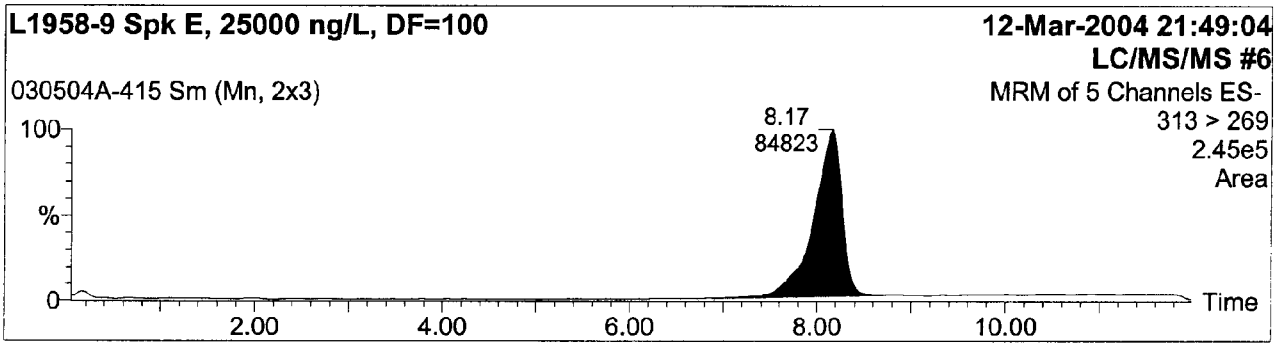
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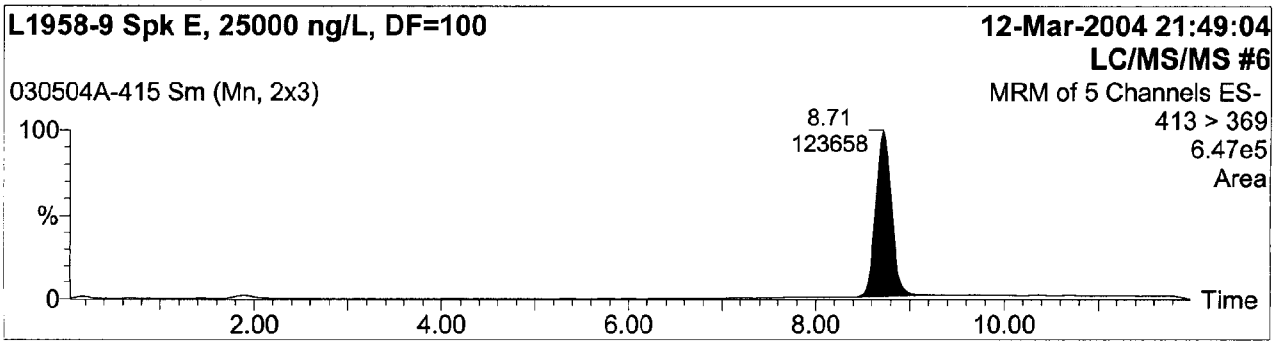
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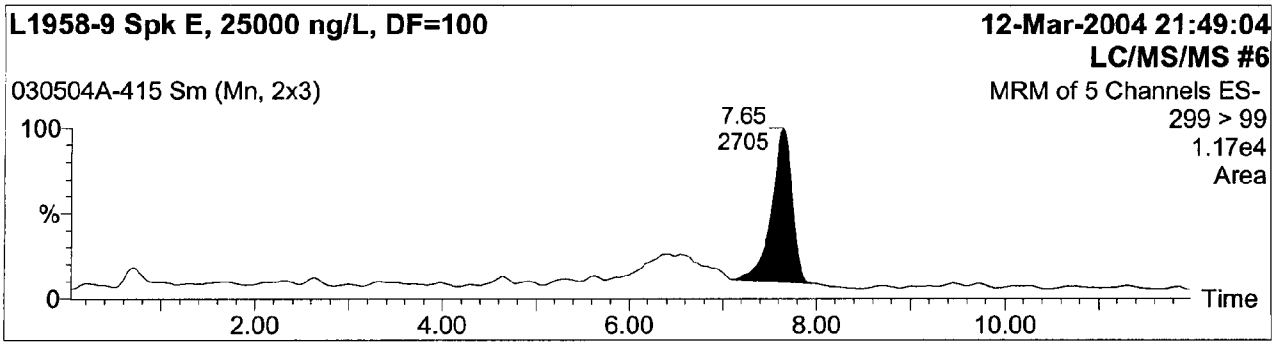
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



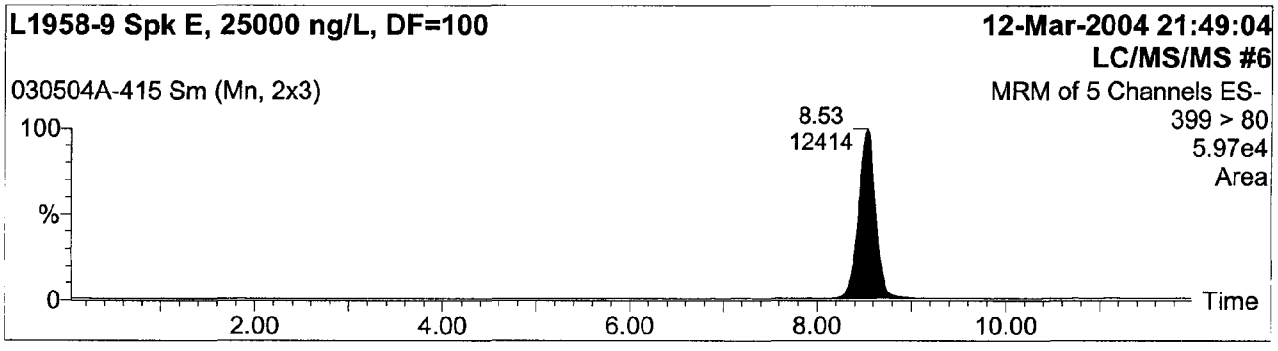
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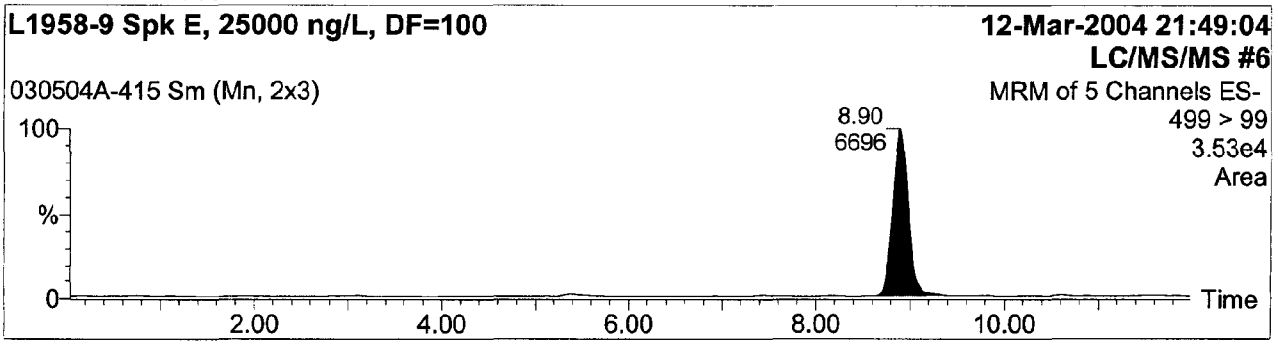
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

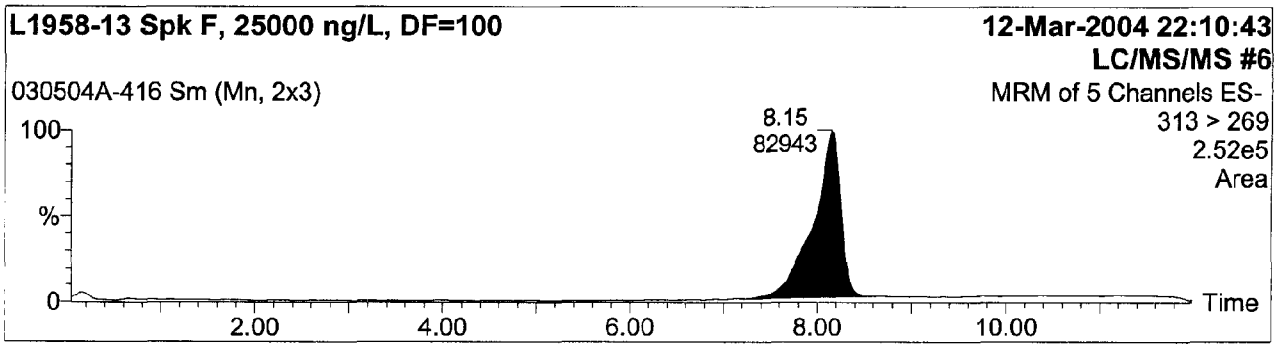
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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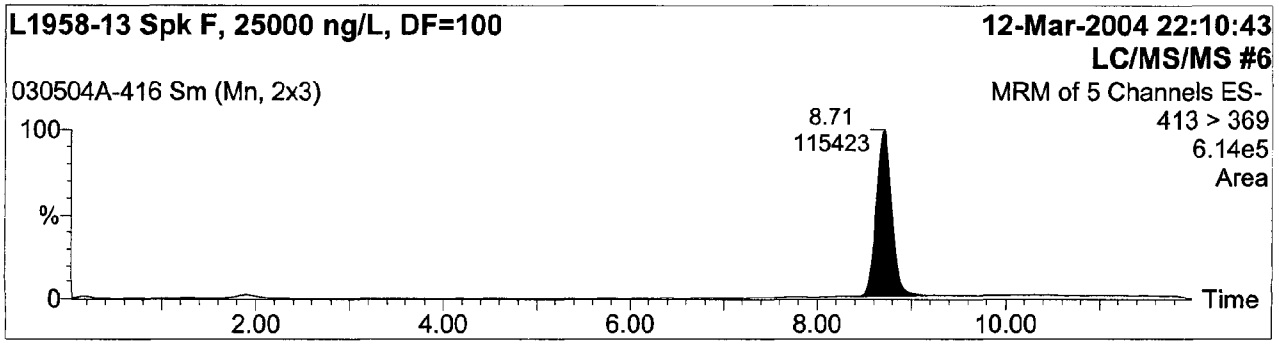
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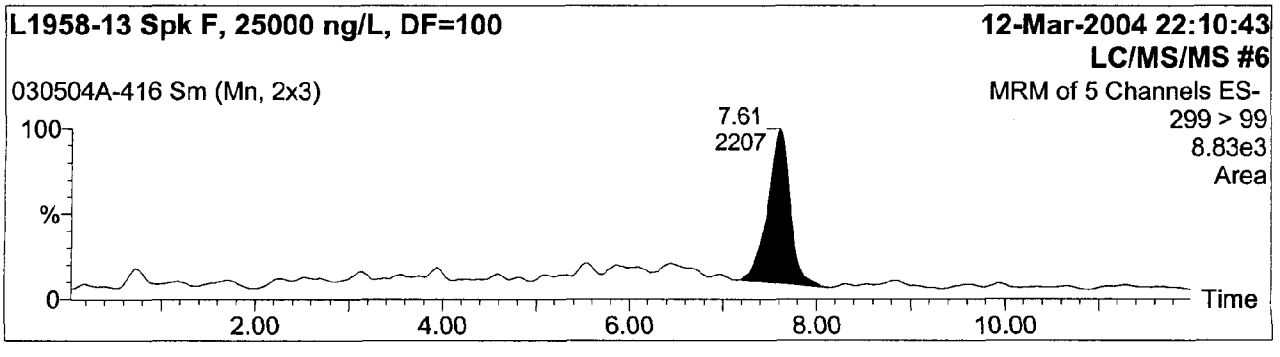
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



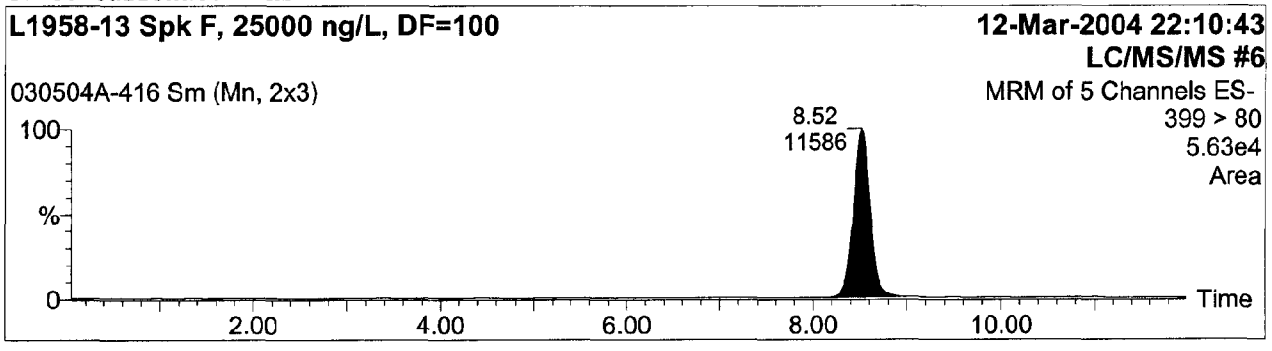
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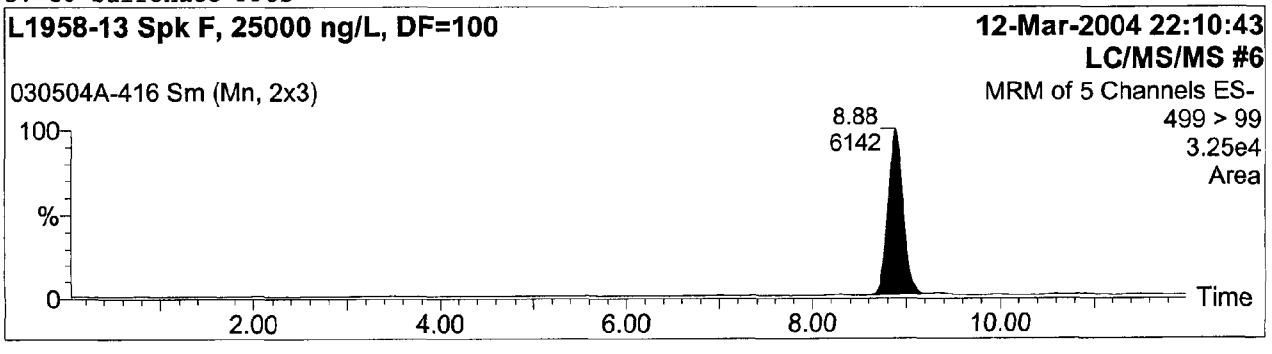
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



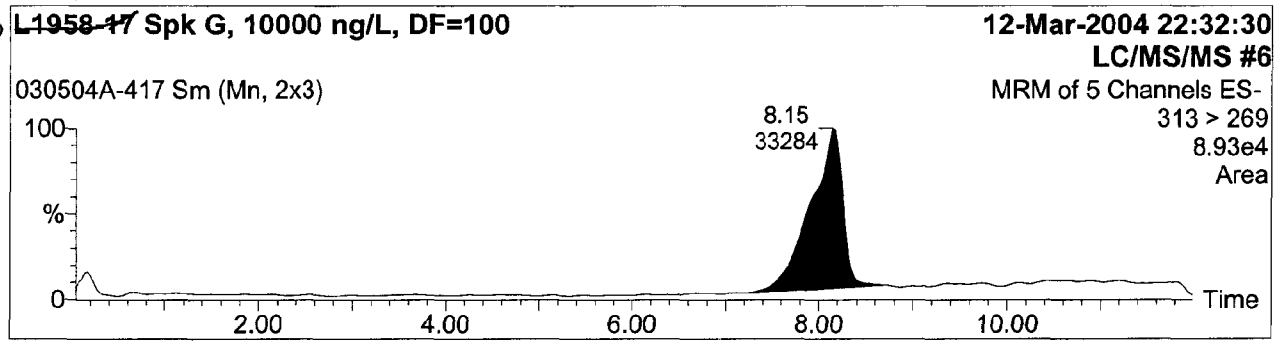
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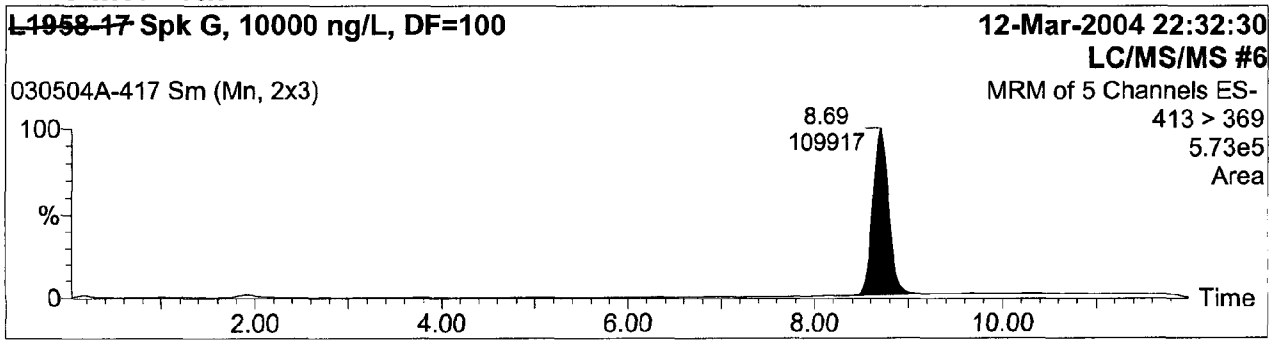
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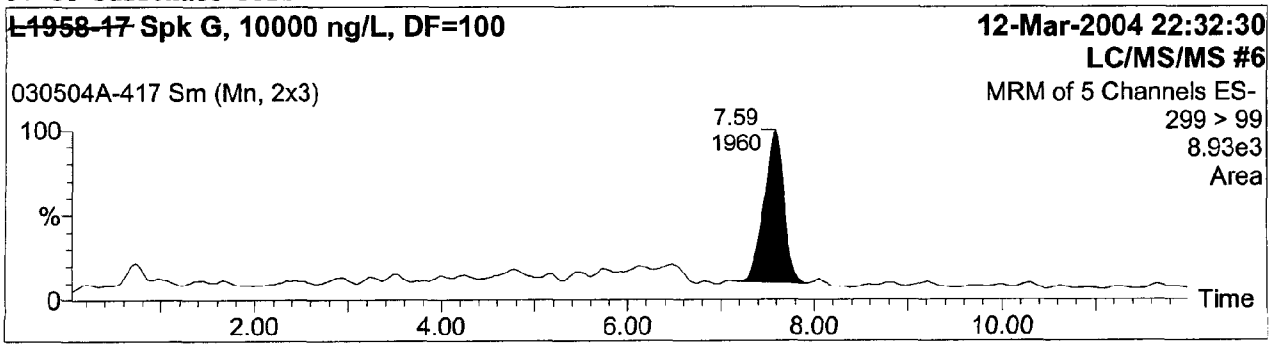
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-1 (re) KF 03/16/04

Exygen Research, 3058 Research Drive, State College, PA 16801

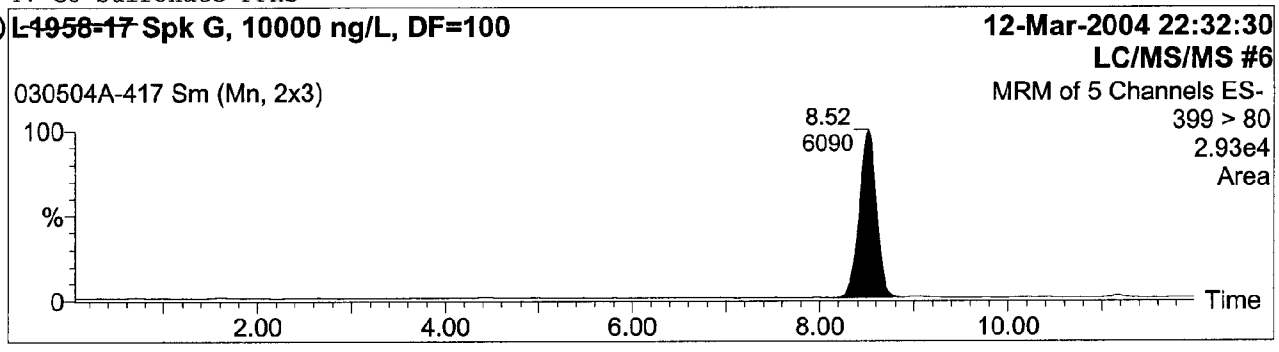
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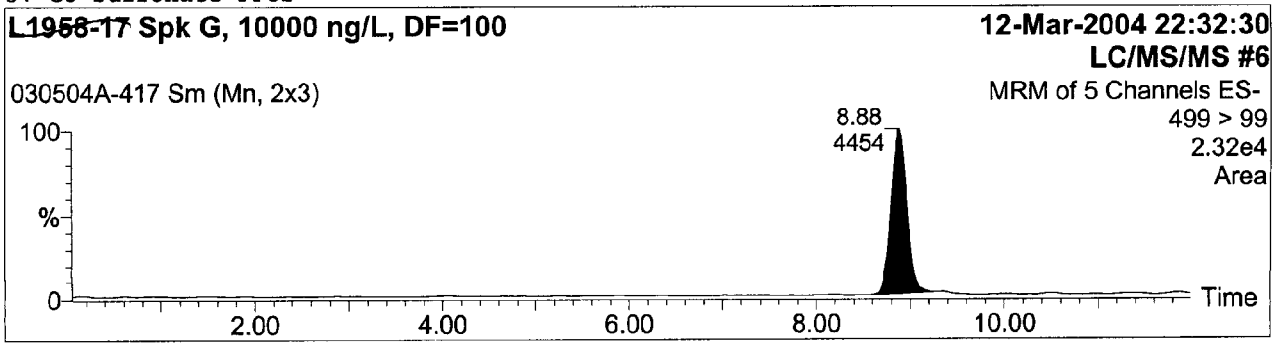
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-1 ② KR 03/16/04

Exygen Research, 3058 Research Drive, State College, PA 16801

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

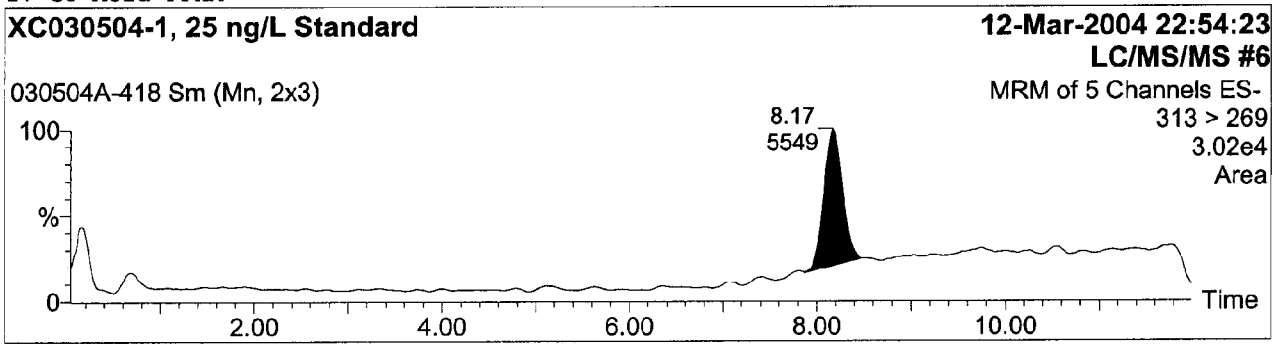
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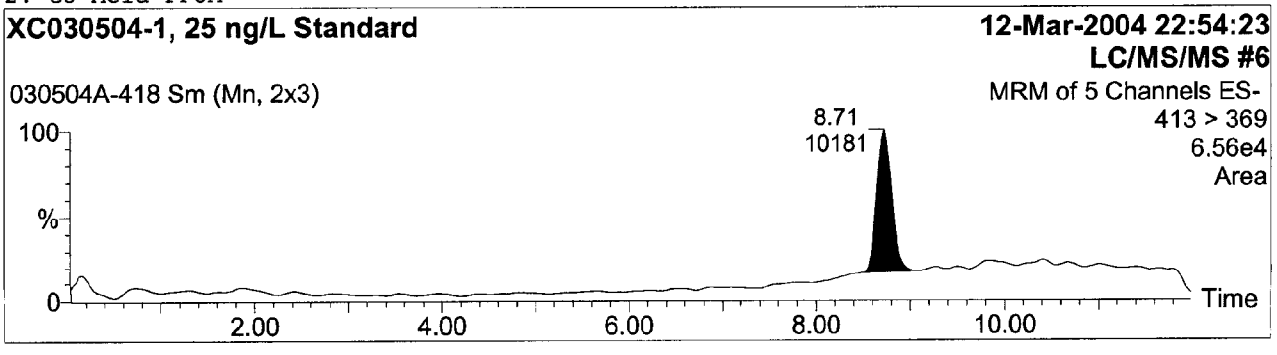
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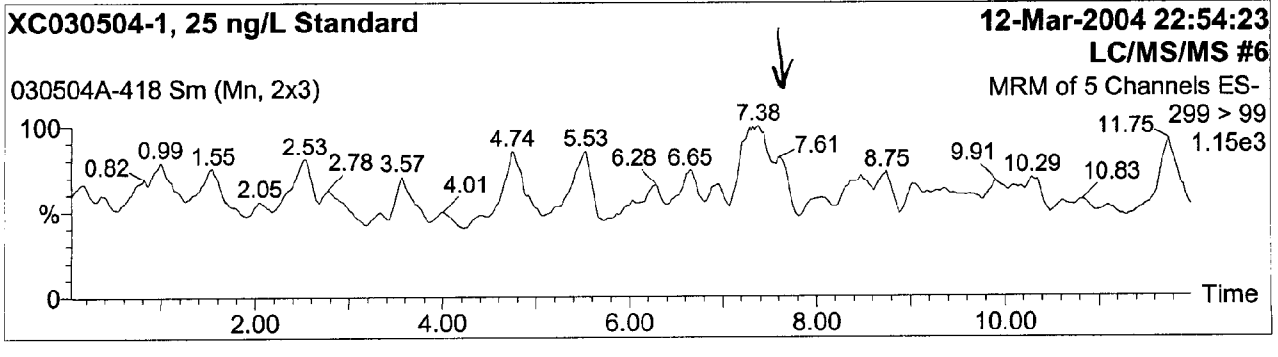
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



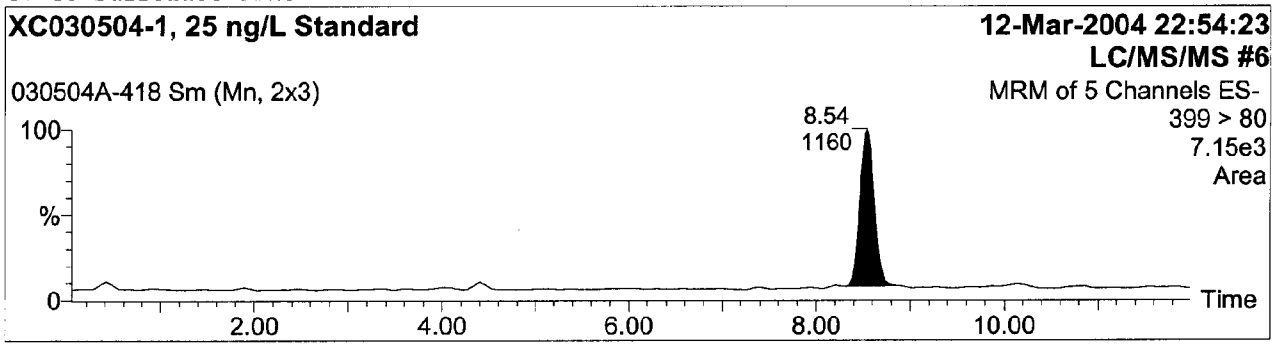
Exygen Research, 3058 Research Drive, State College, PA 16801

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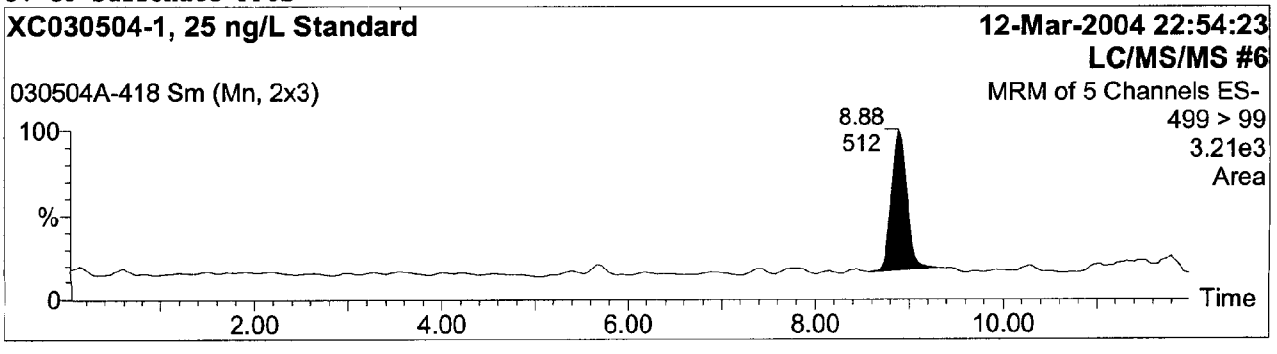
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



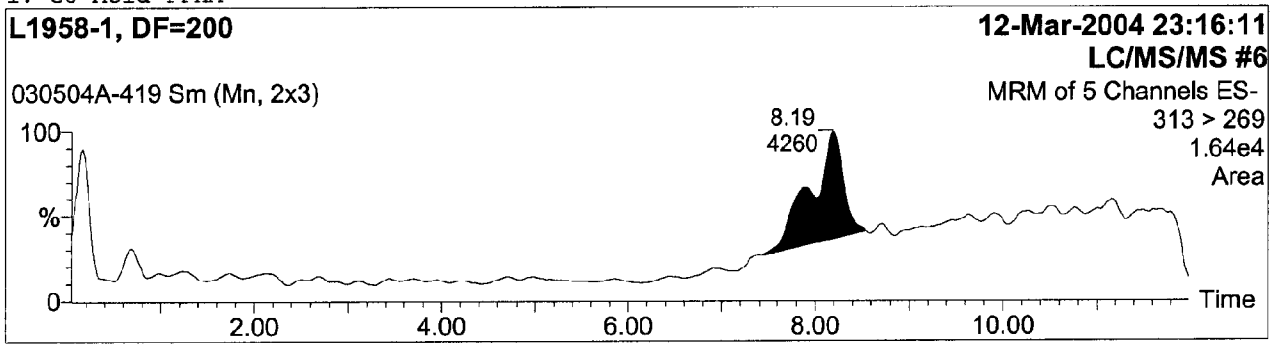
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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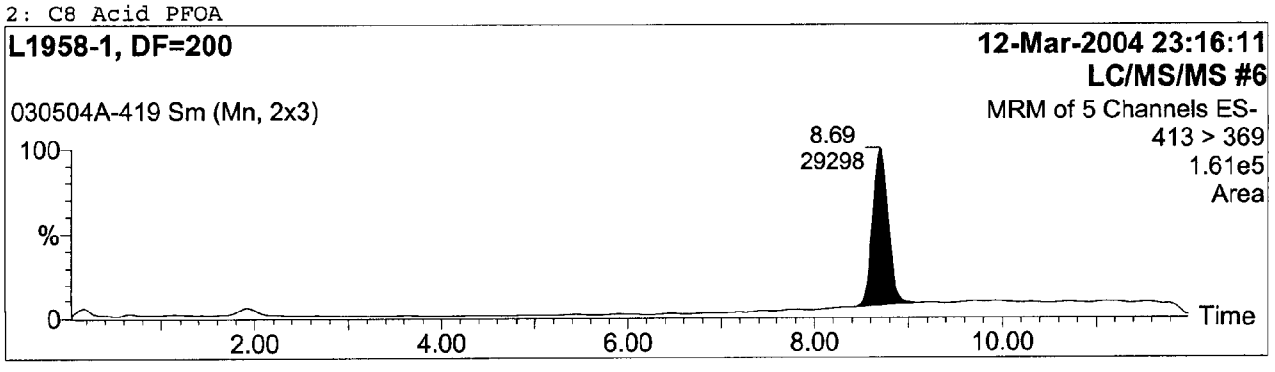
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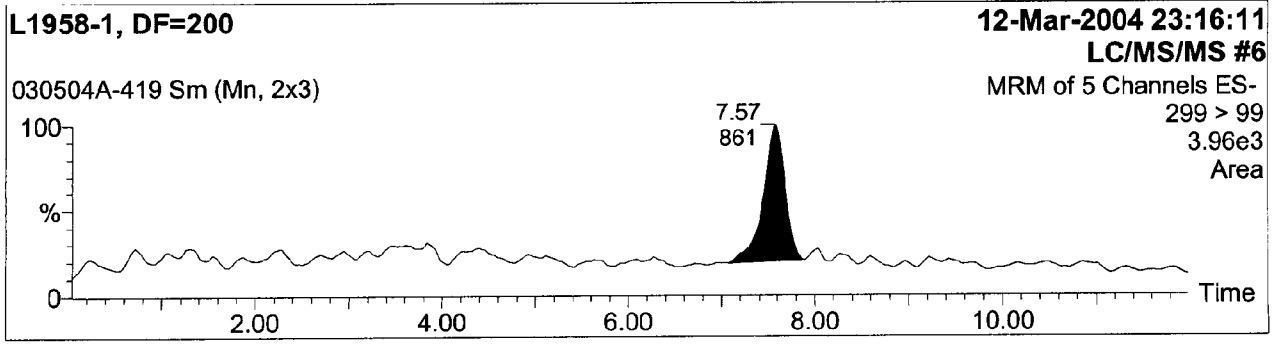
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



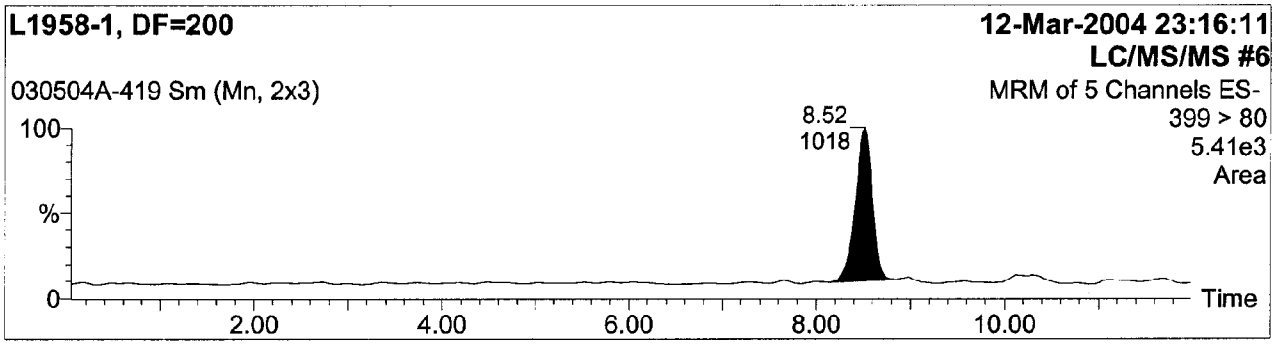
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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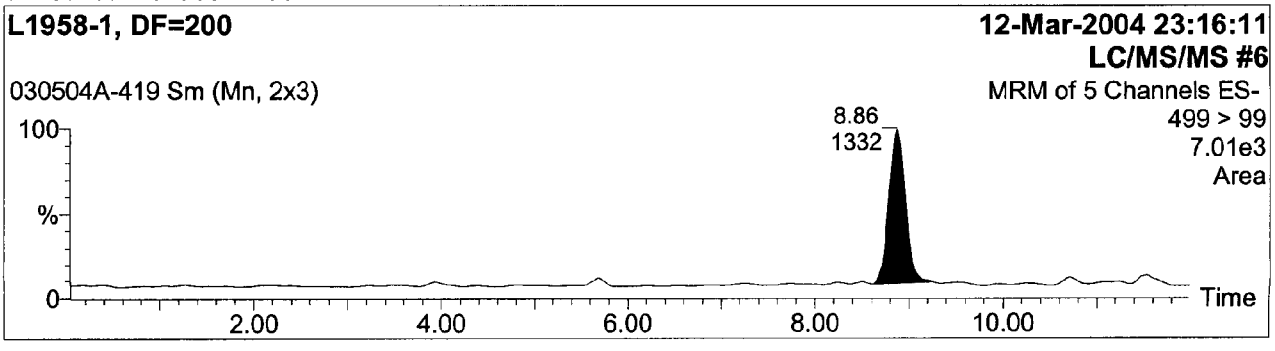
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

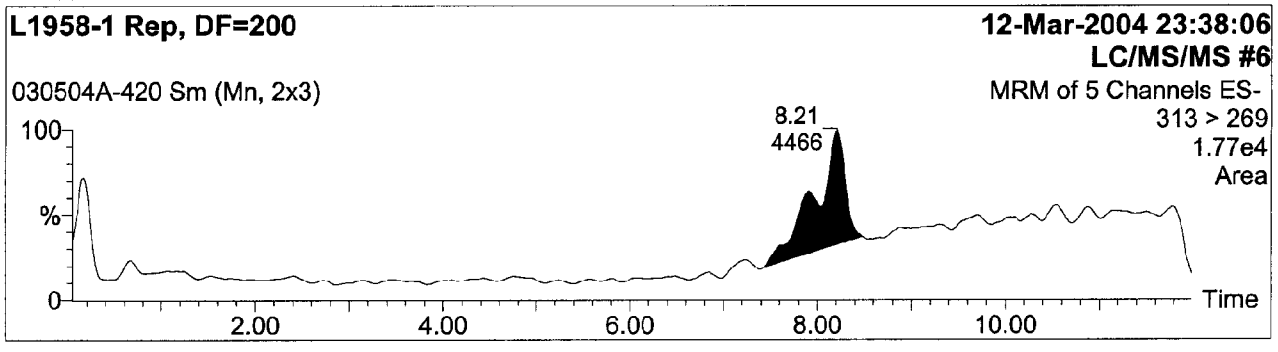
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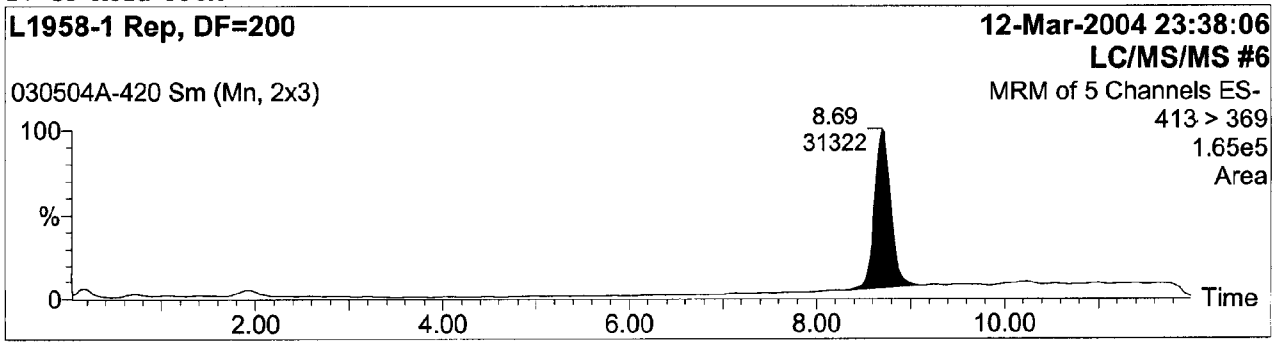
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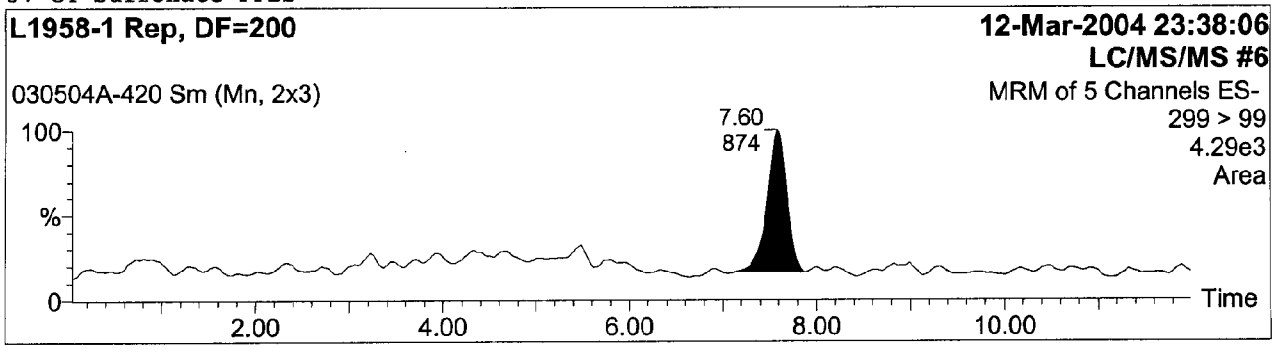
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



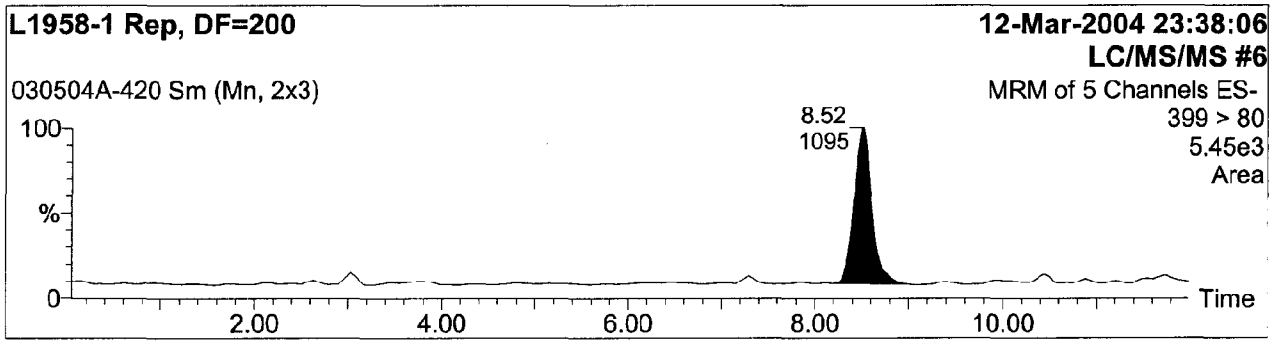
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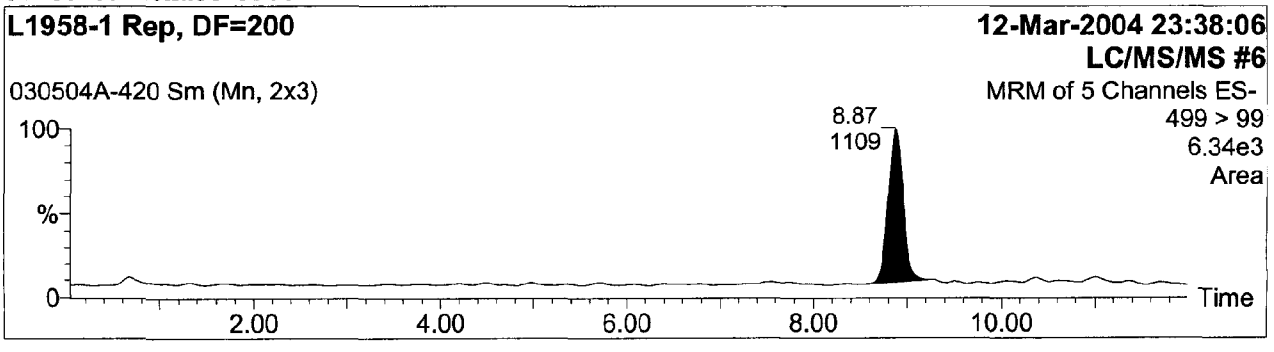
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



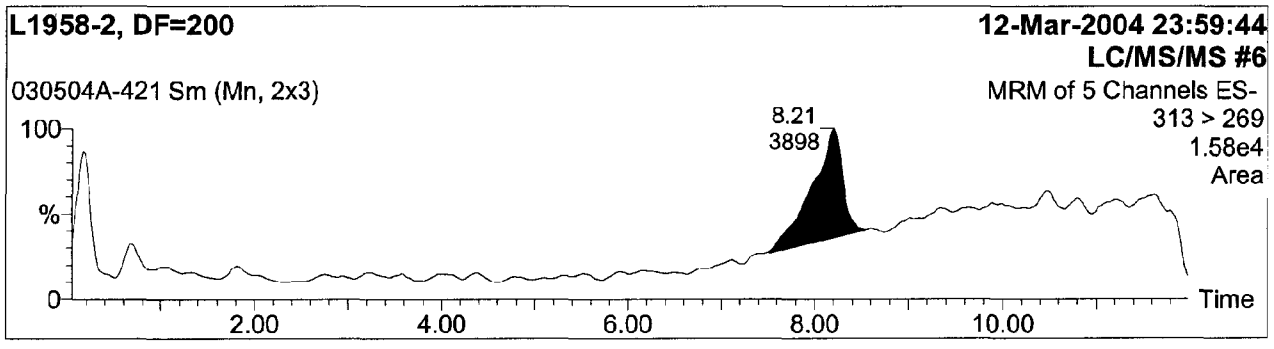
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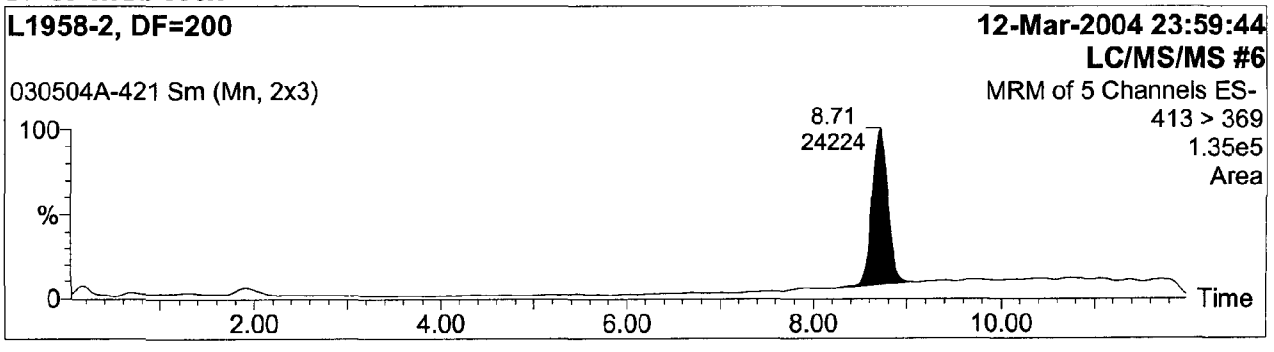
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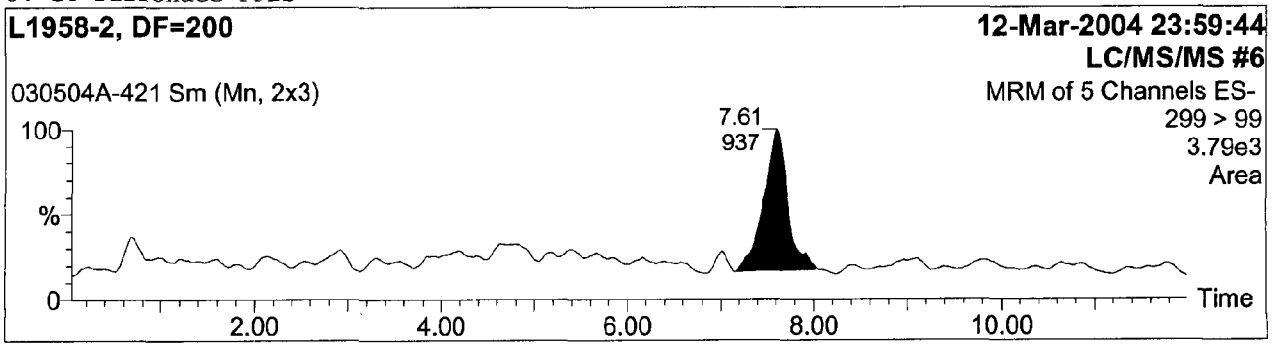
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



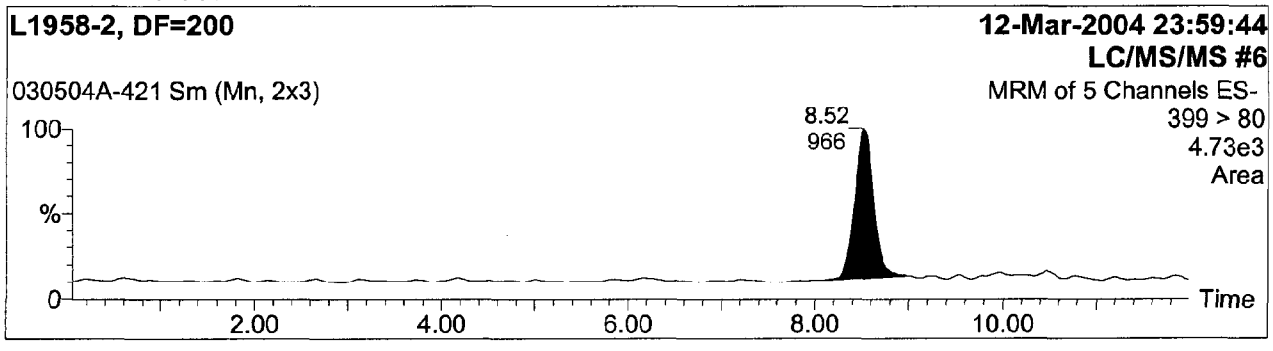
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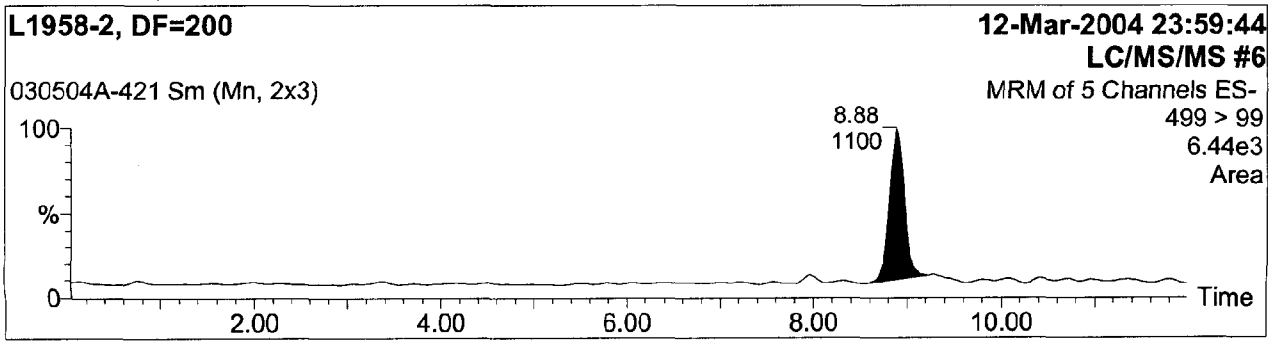
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



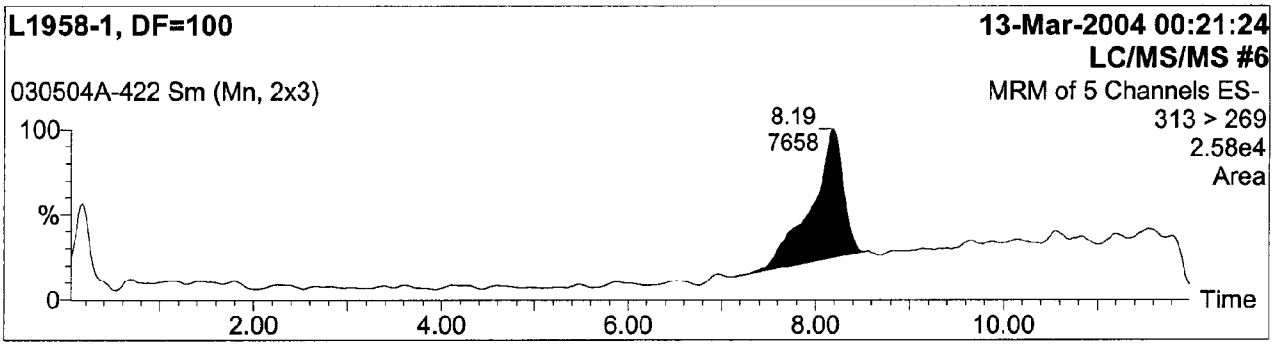
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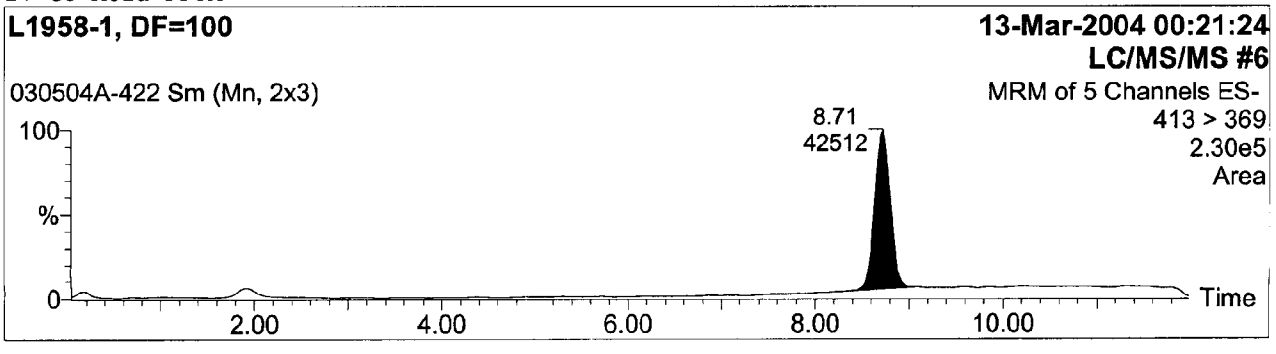
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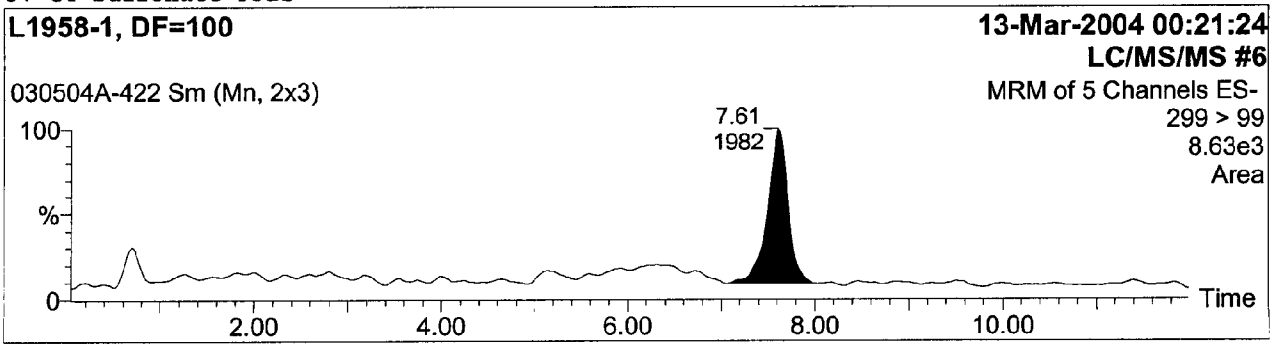
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



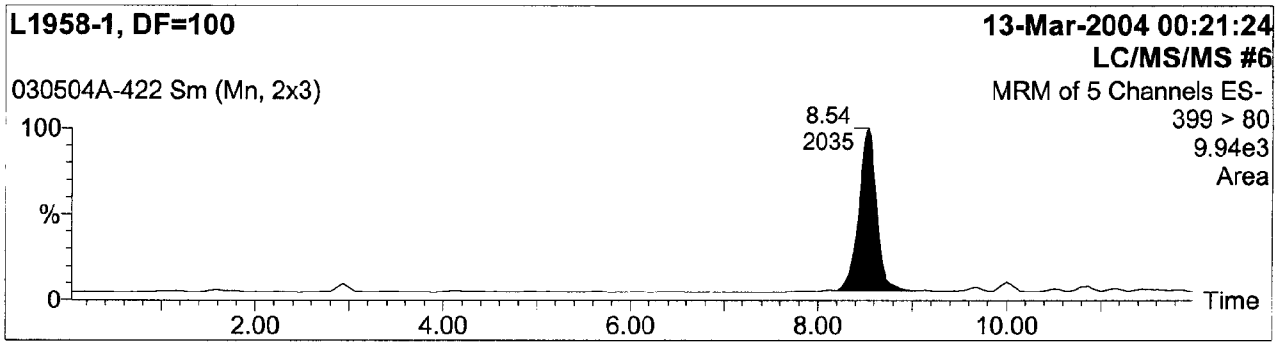
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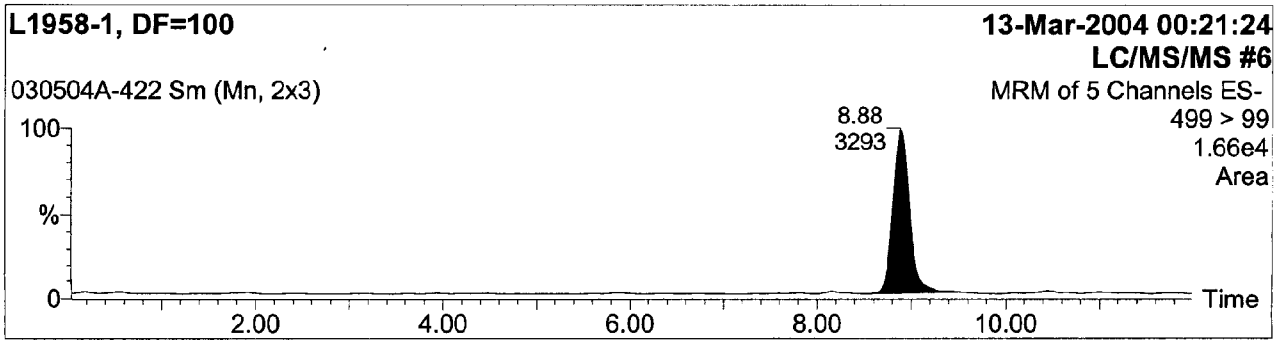
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



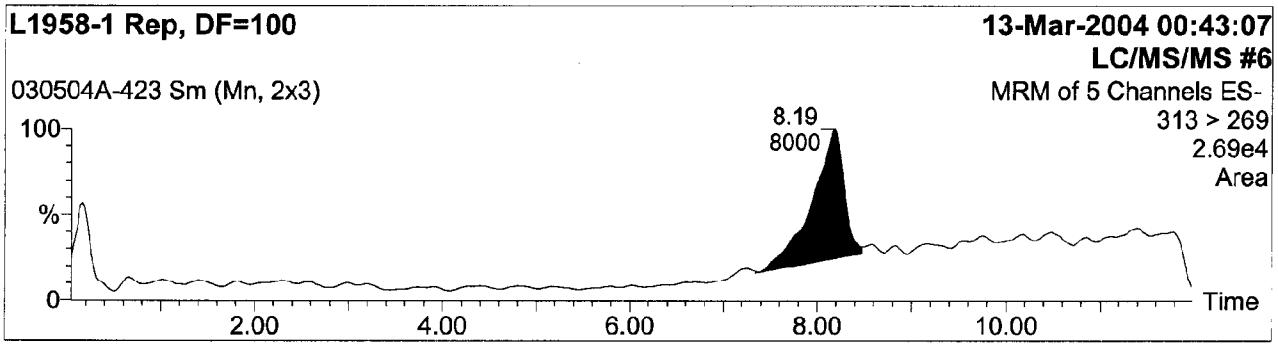
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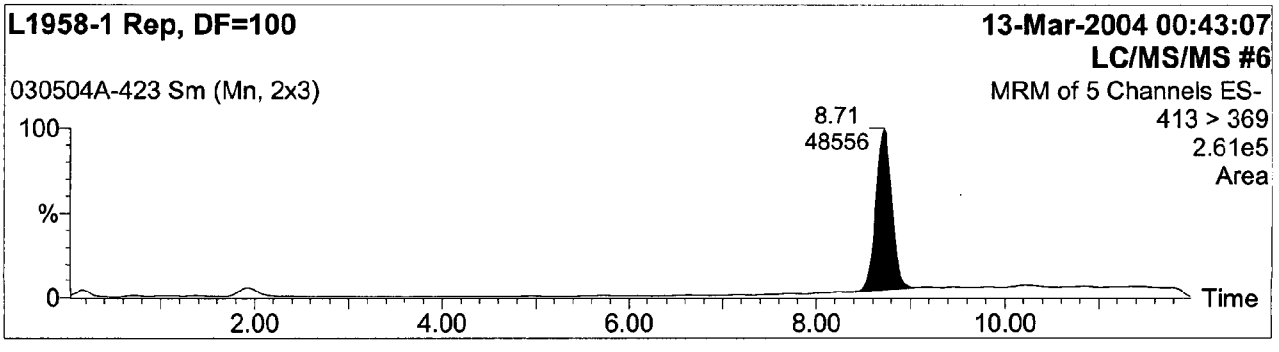
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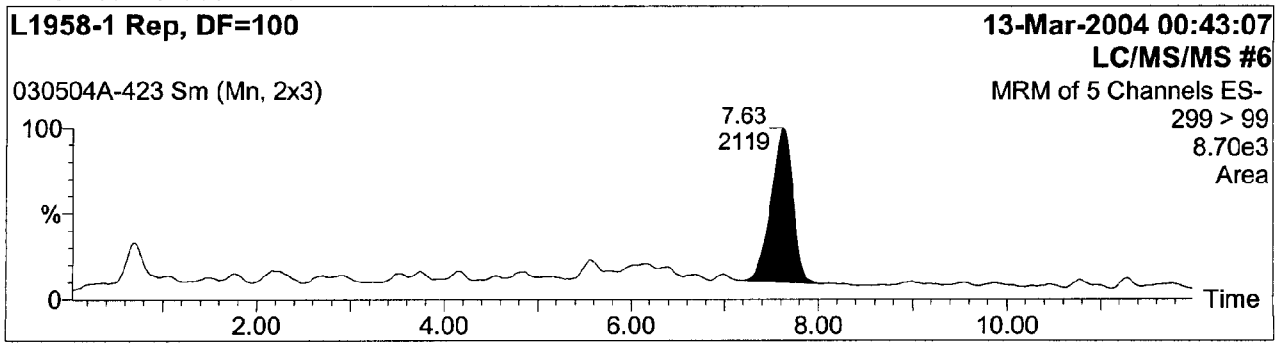
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



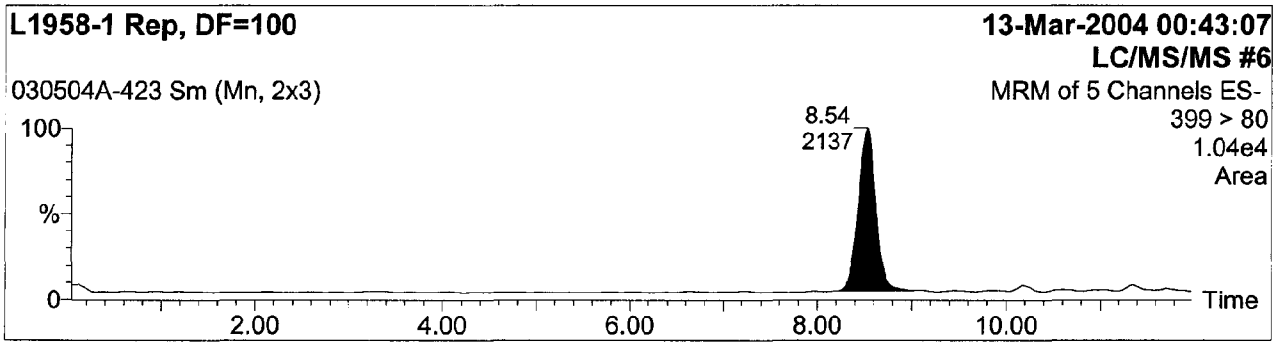
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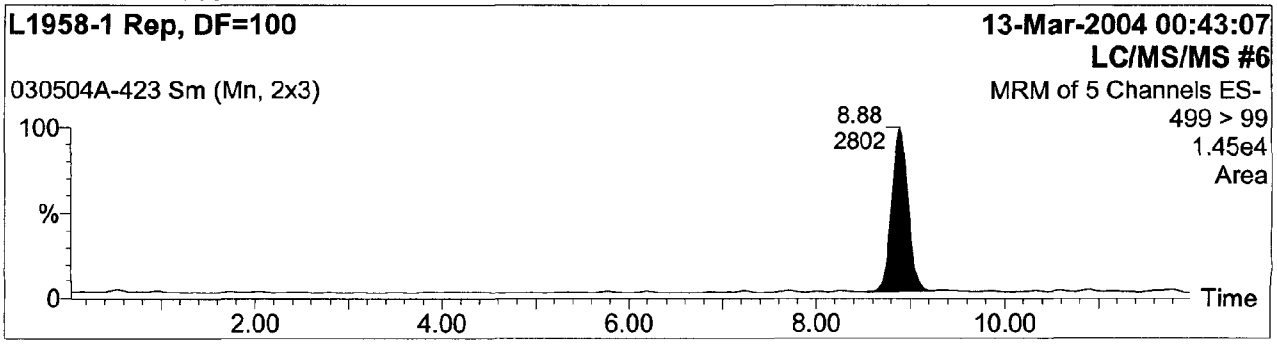
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

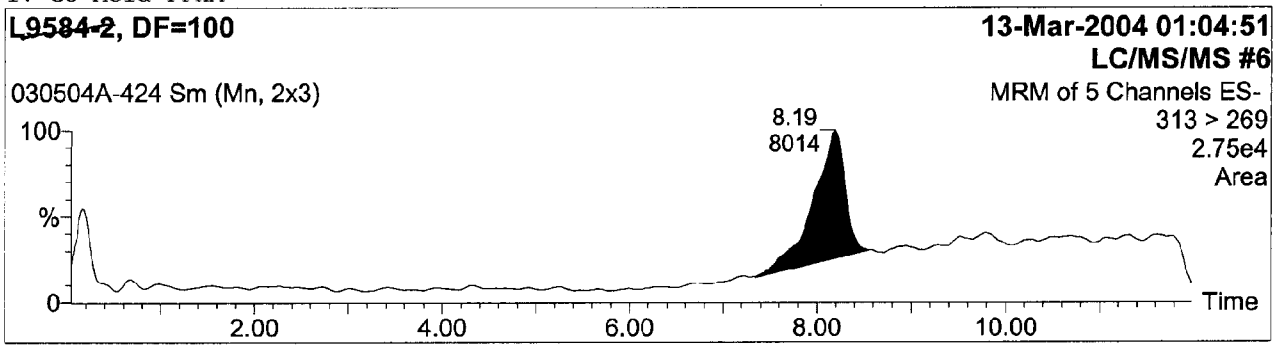
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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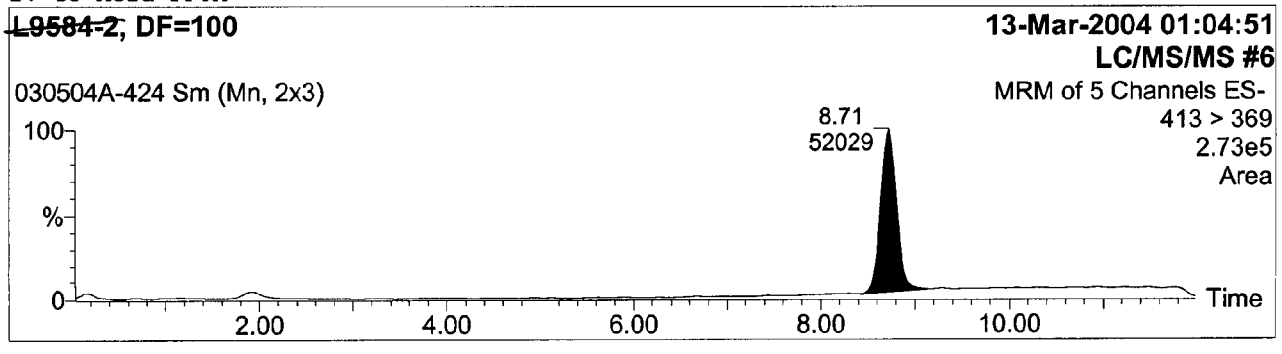
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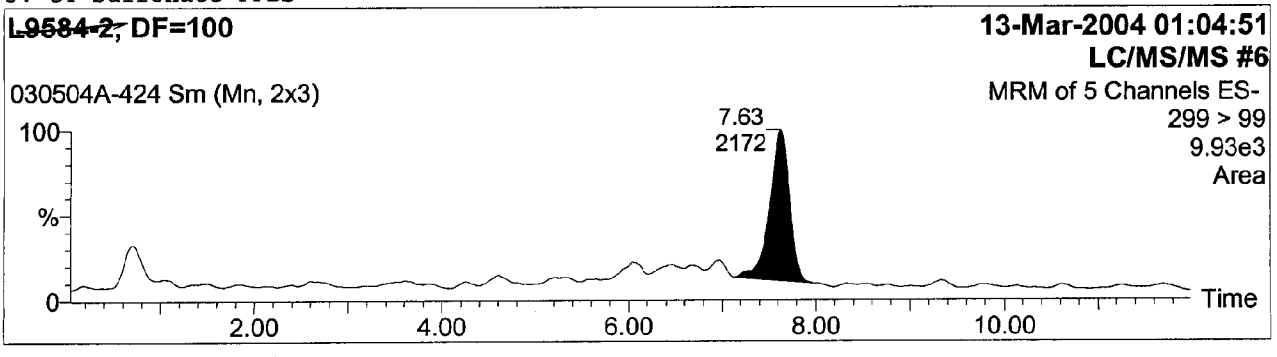
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L9584-2 @ KR 03/16/04

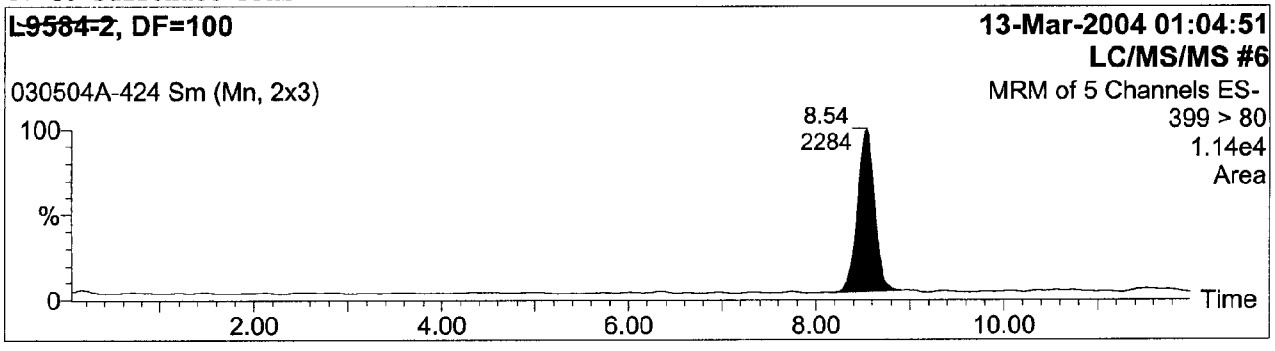
Exygen Research, 3058 Research Drive, State College, PA 16801

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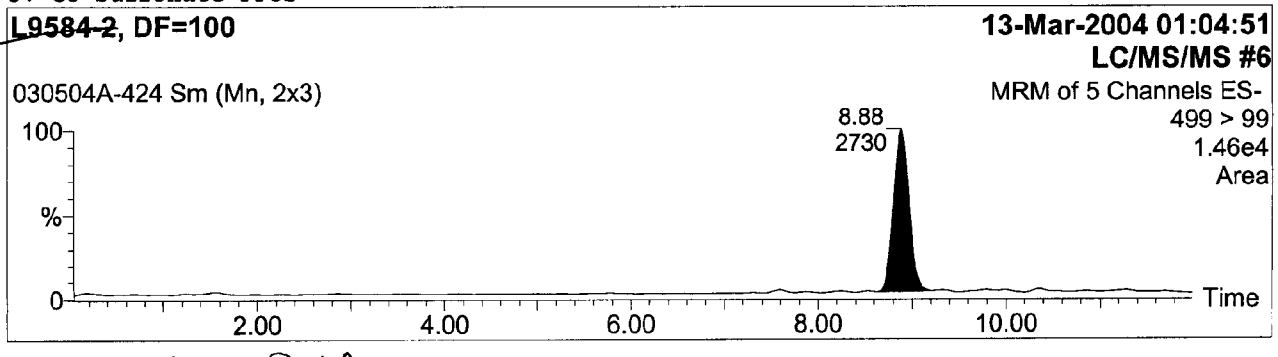
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-424
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-2 ② KR 03/16/04

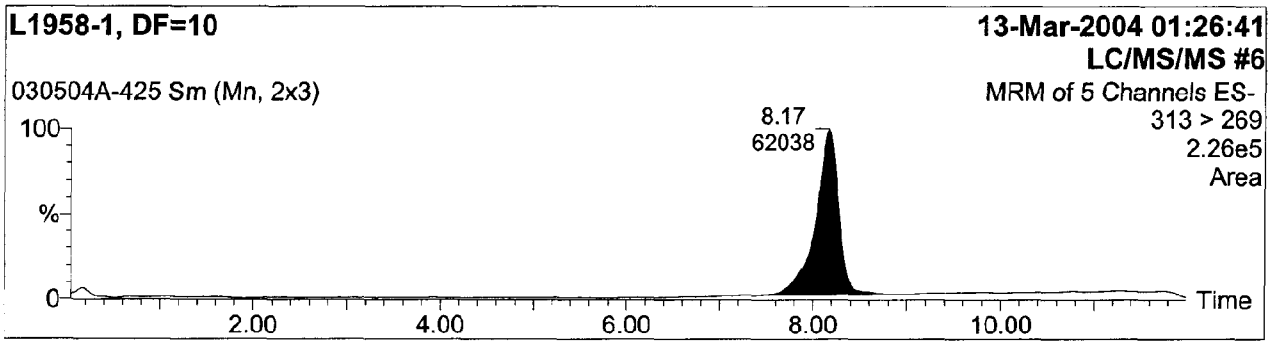
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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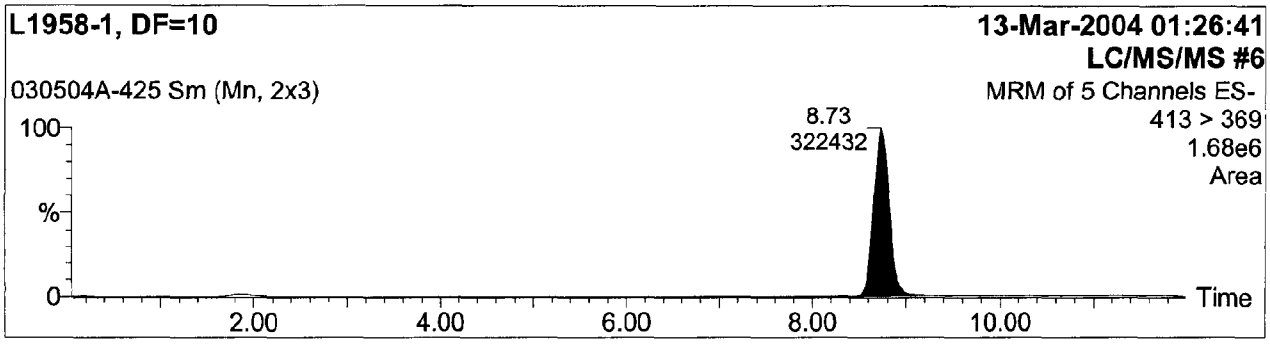
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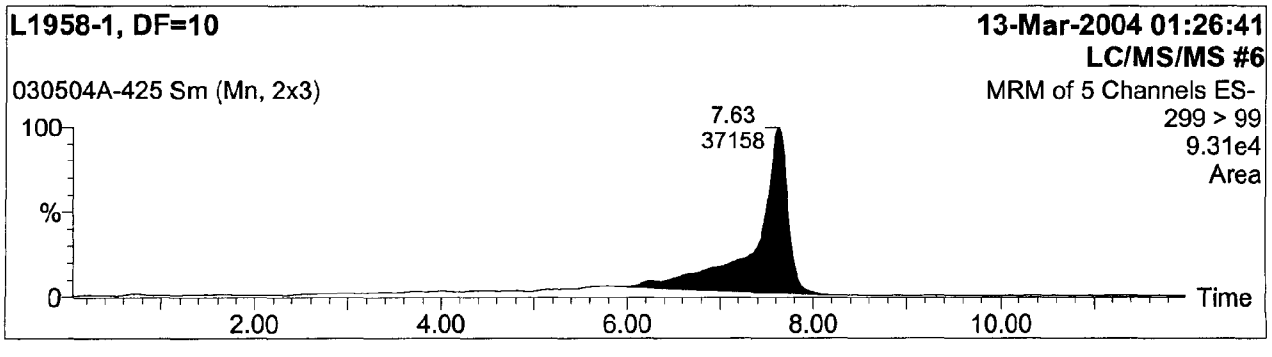
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



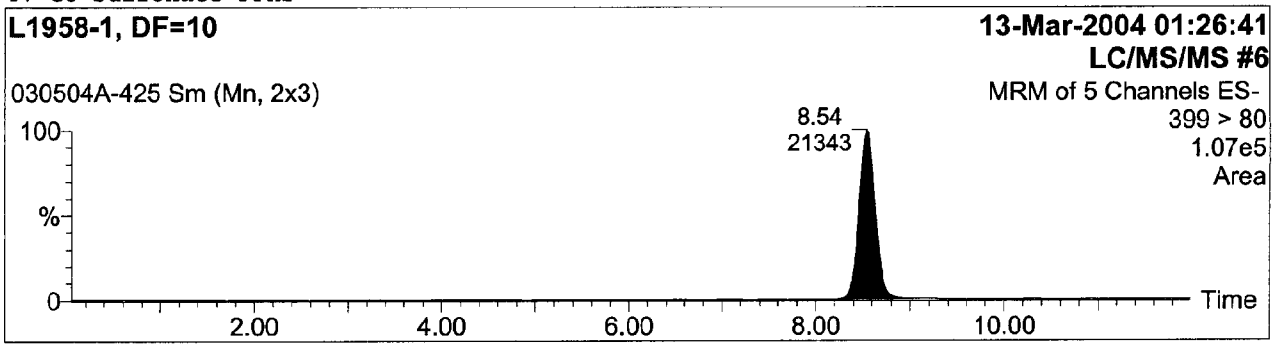
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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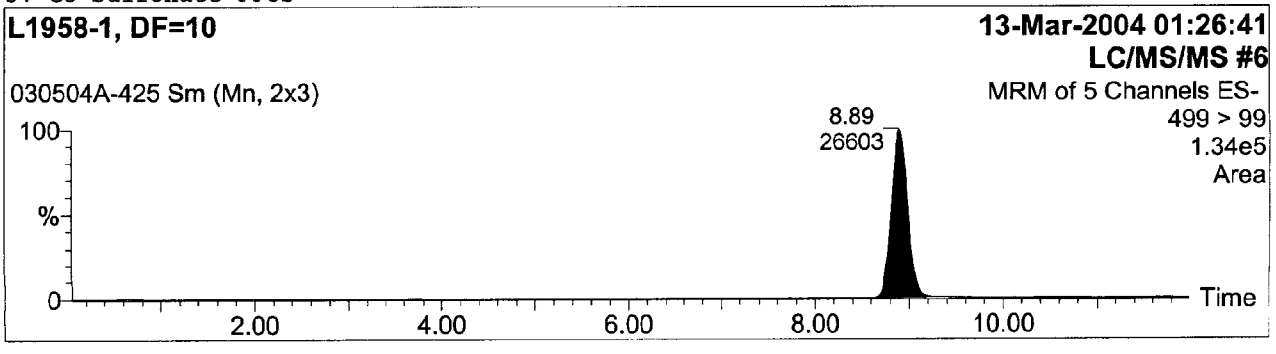
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



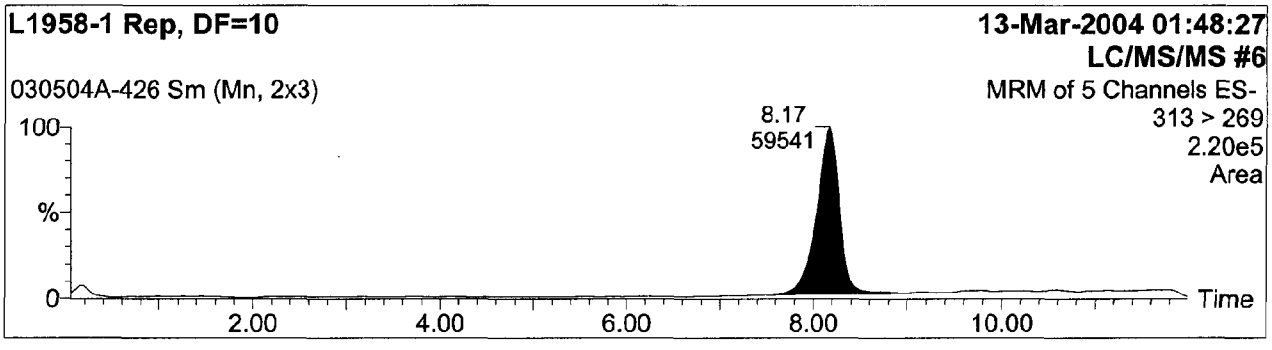
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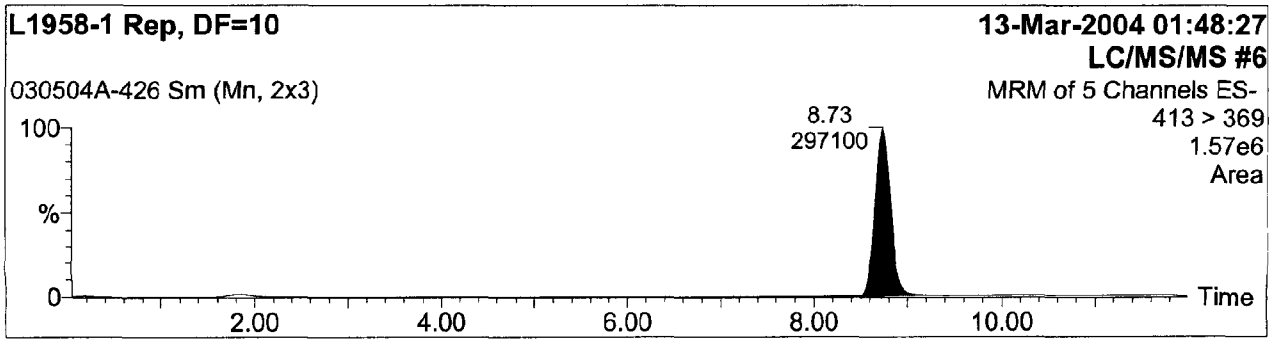
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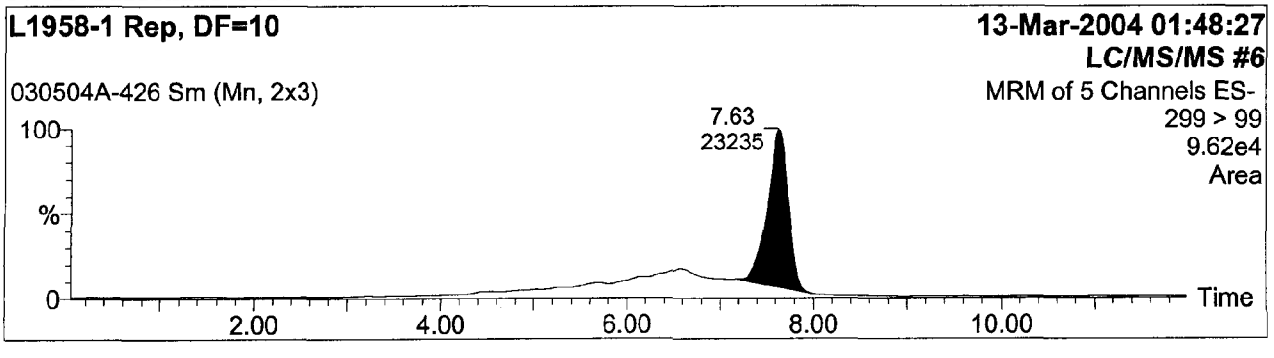
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

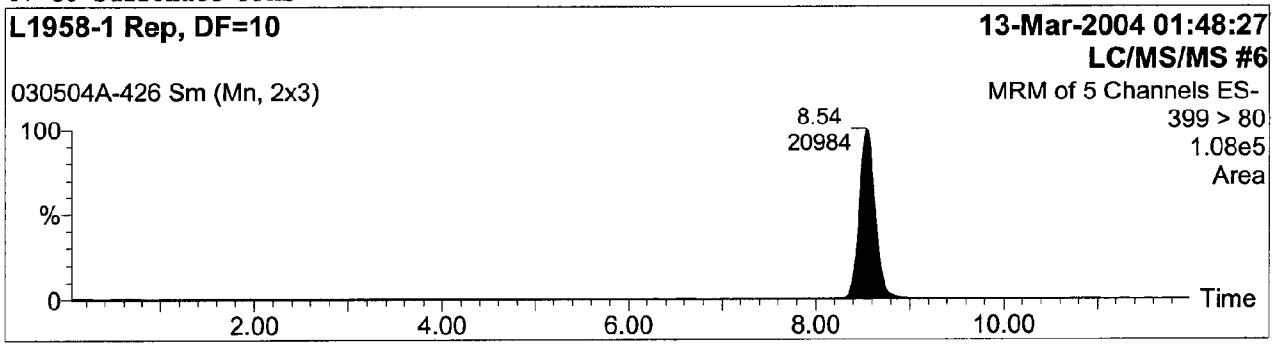
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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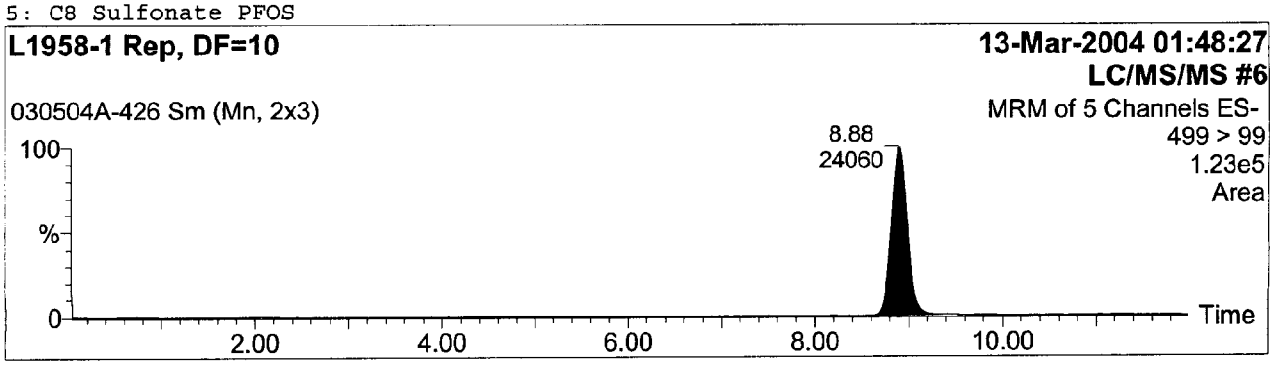
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Name: 030504A-426
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

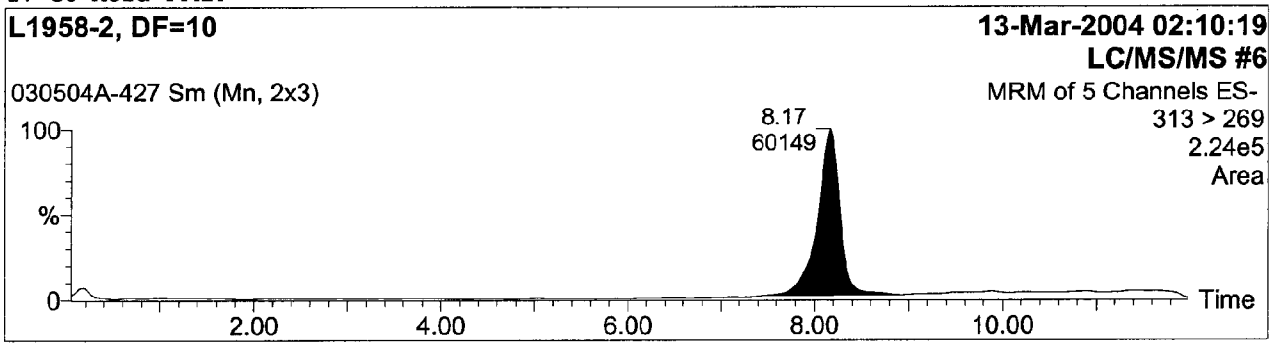
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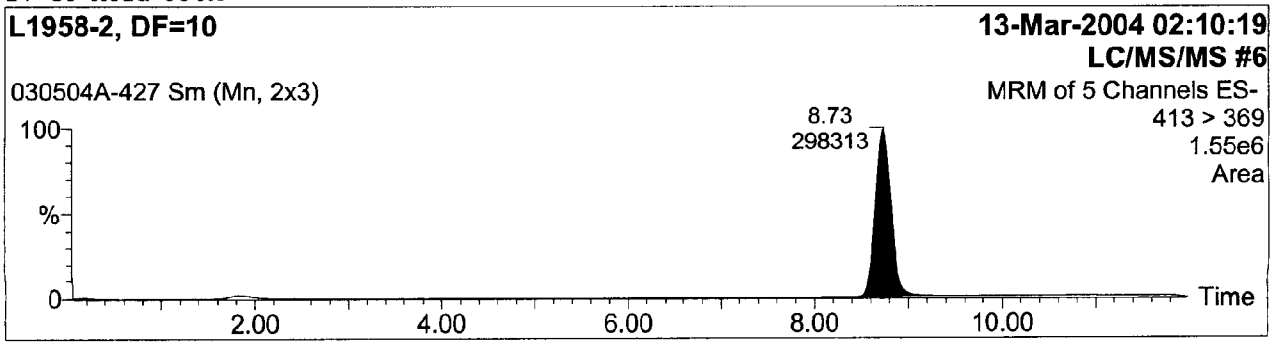
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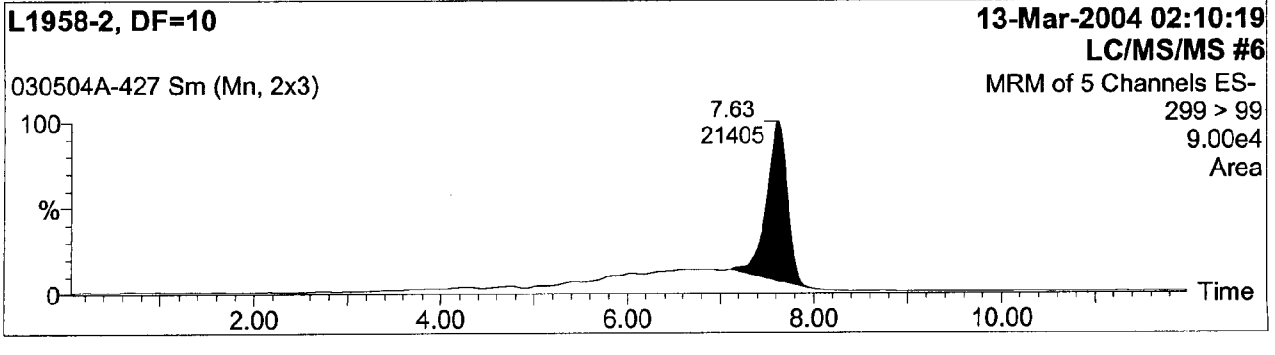
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



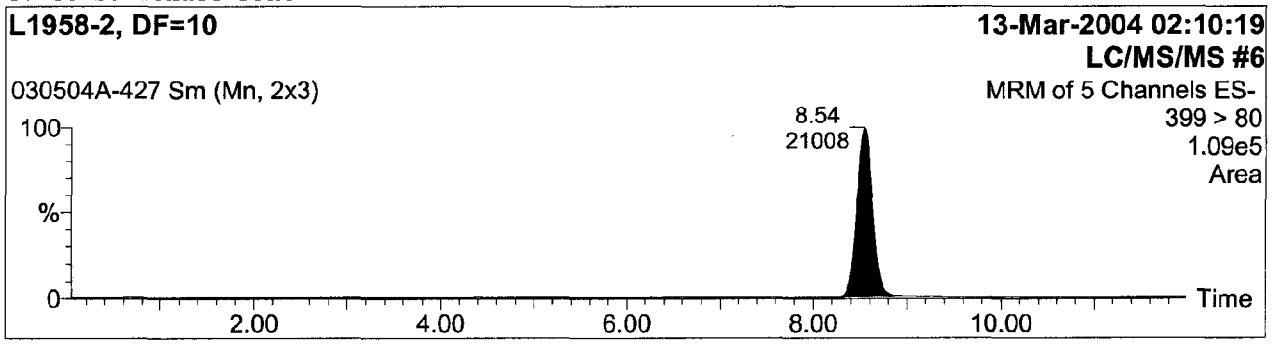
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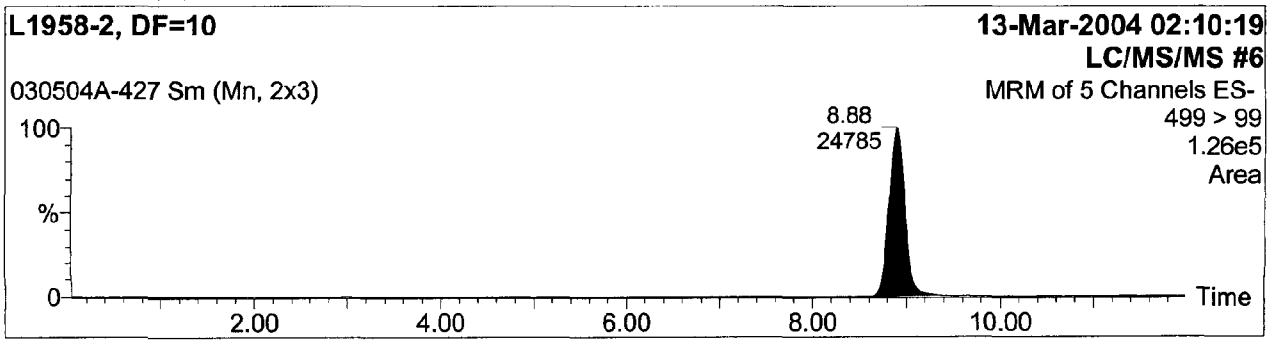
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



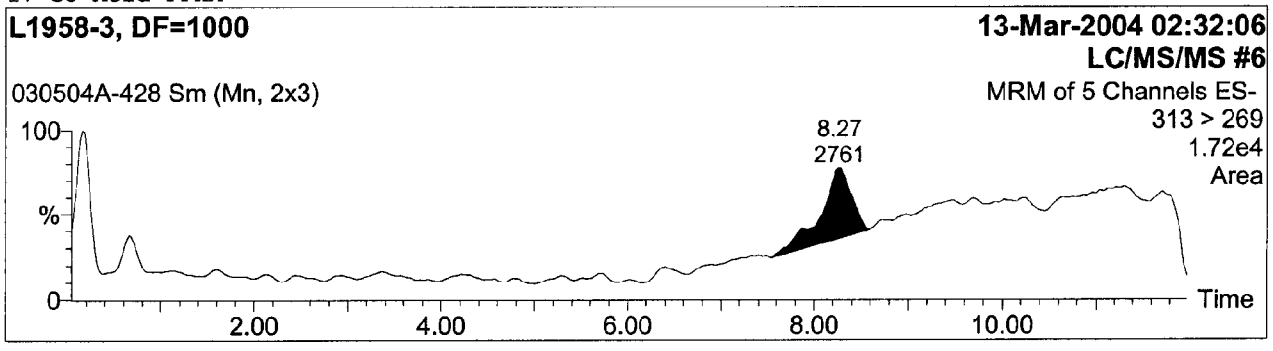
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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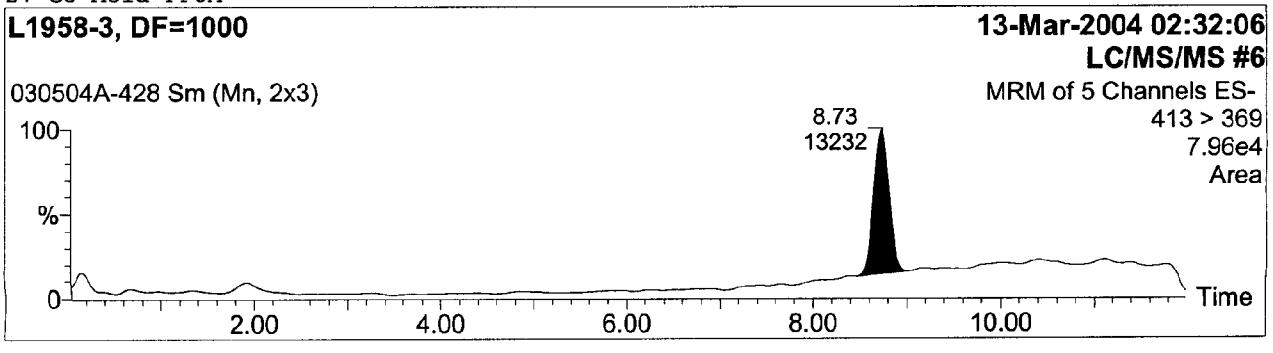
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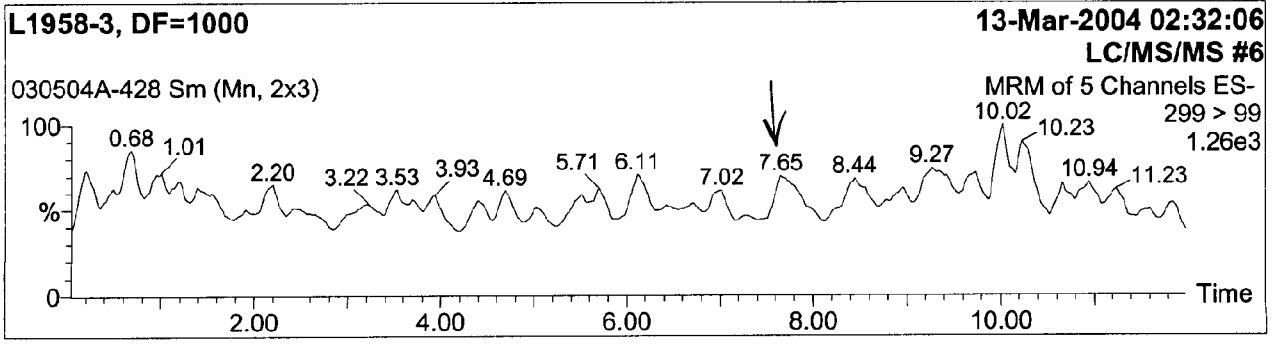
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



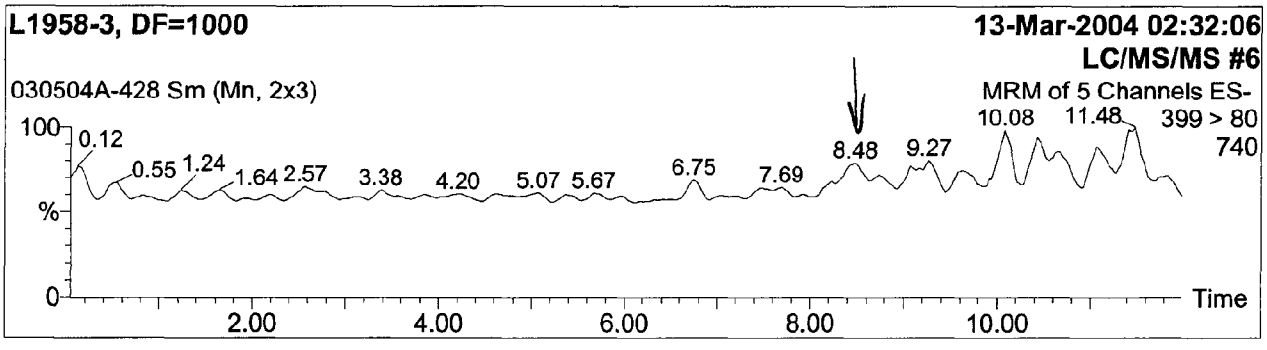
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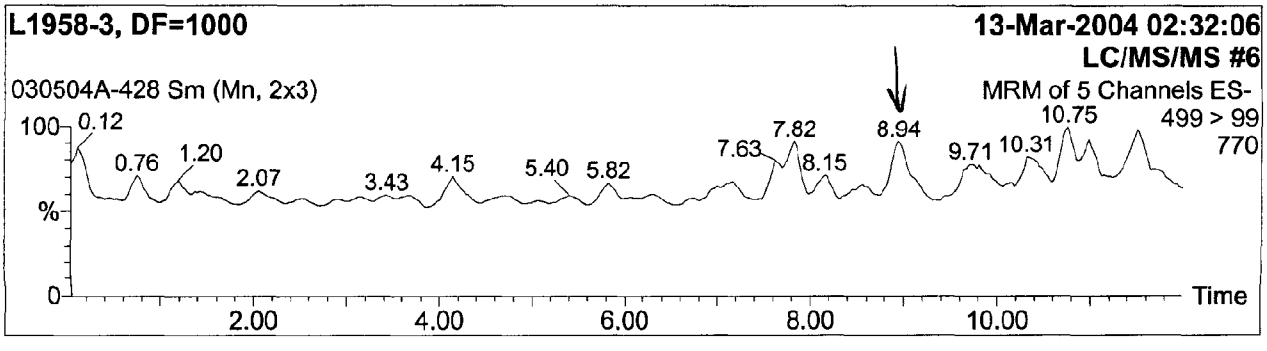
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-428
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

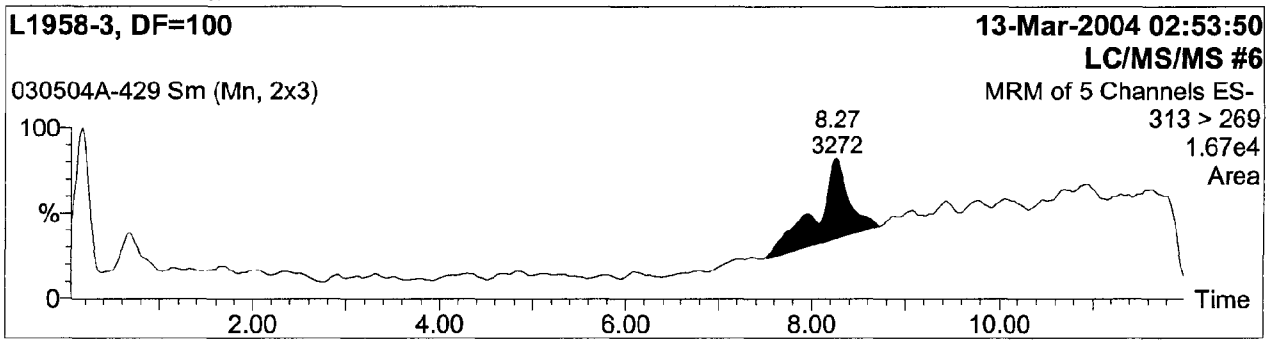
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\030504A CG ACSFM
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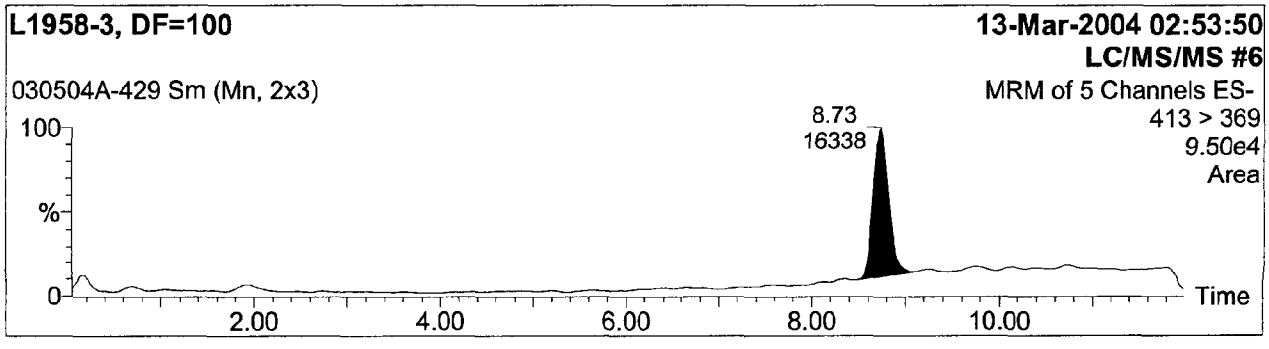
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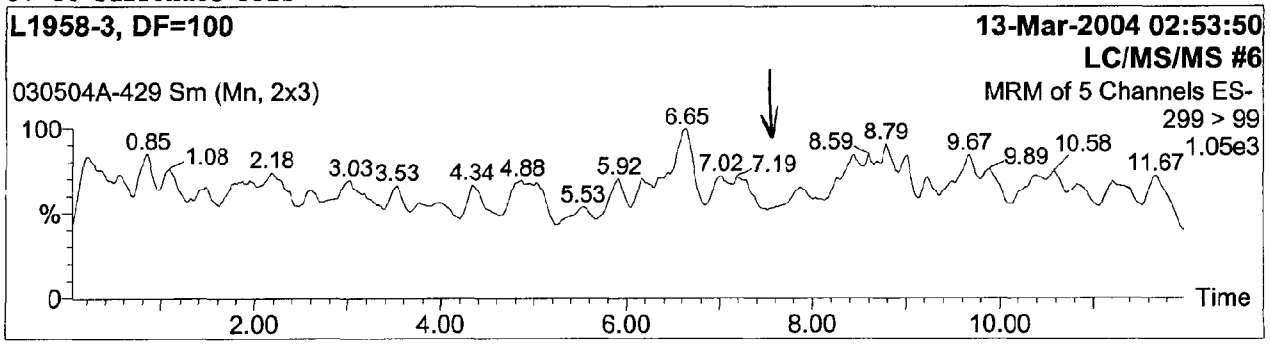
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

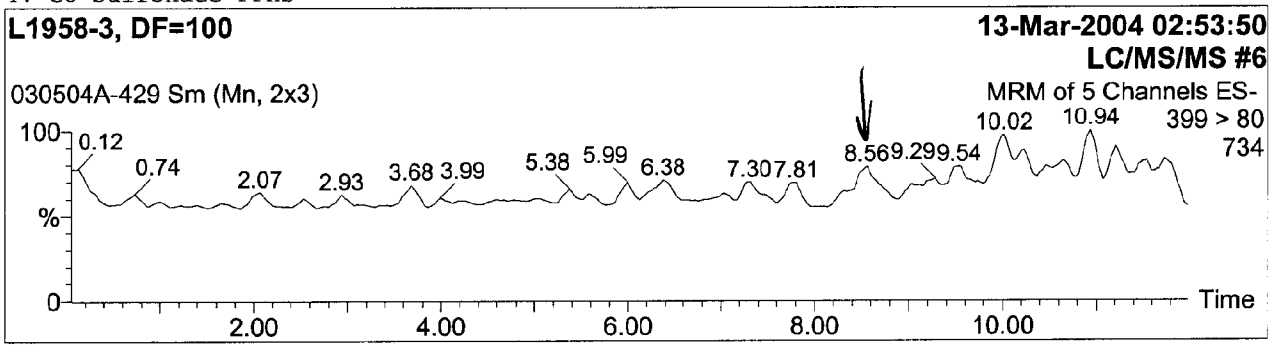
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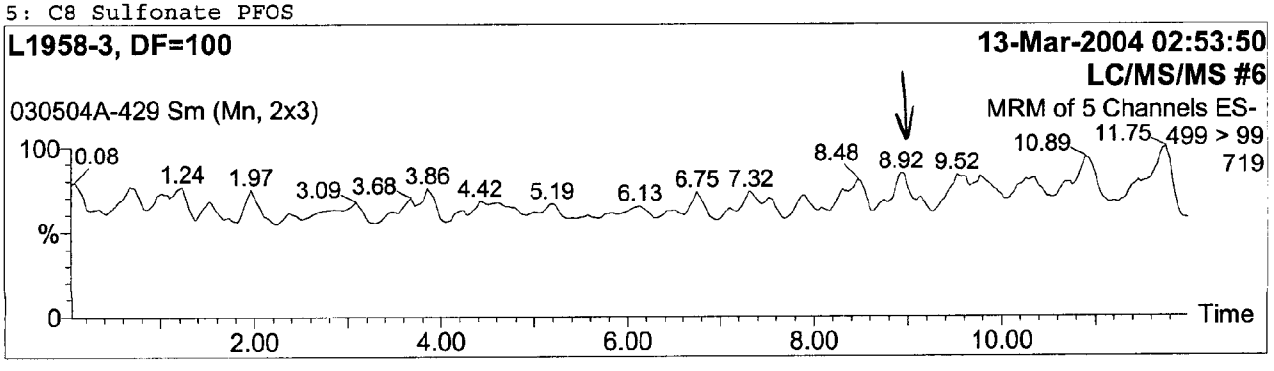
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



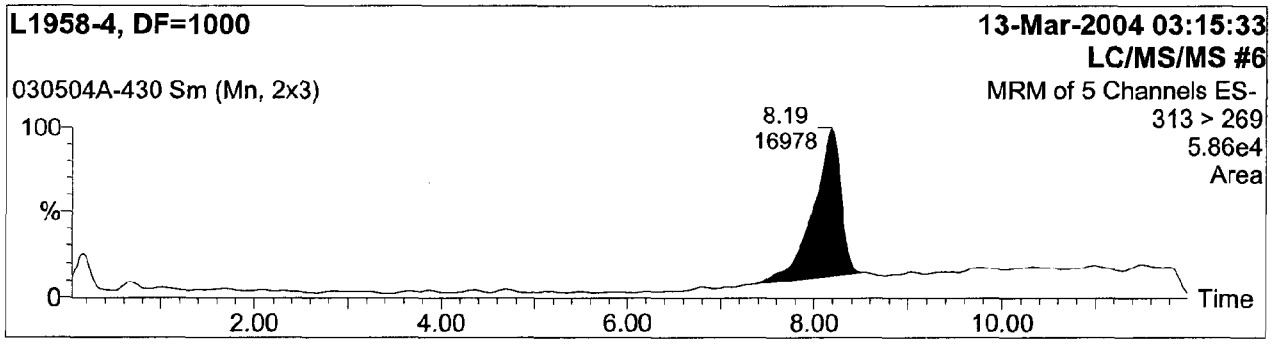
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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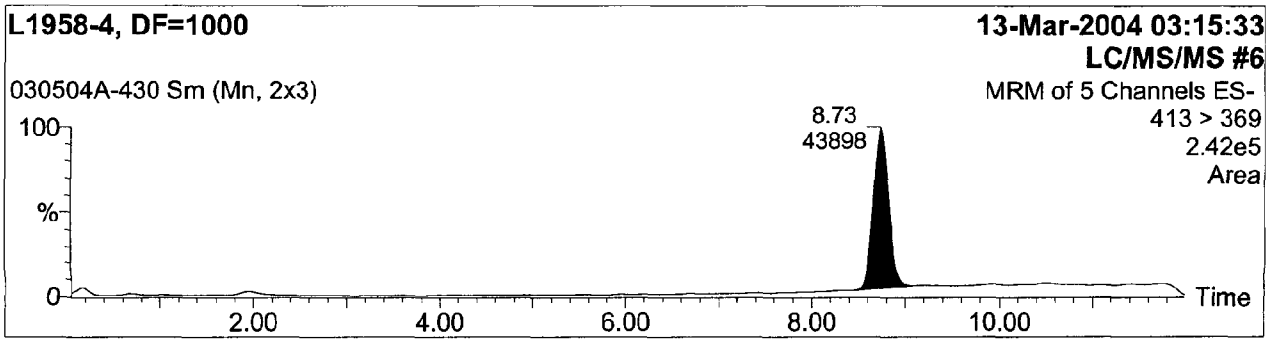
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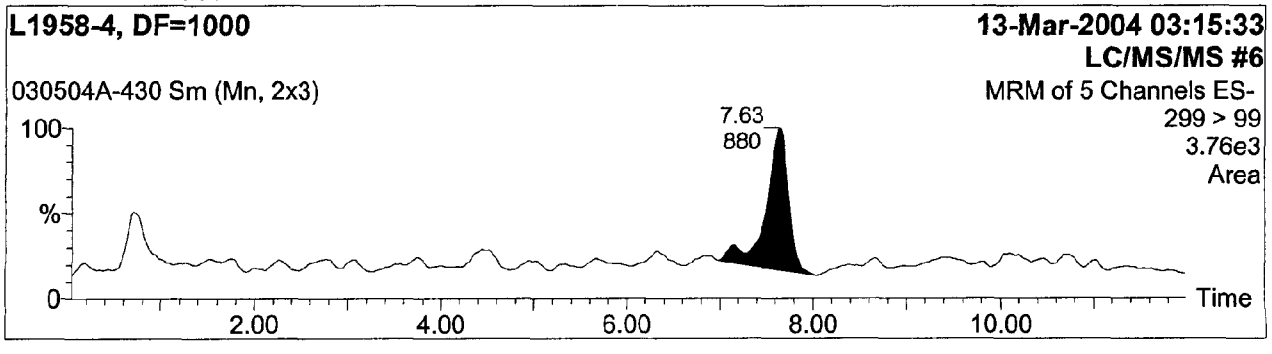
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



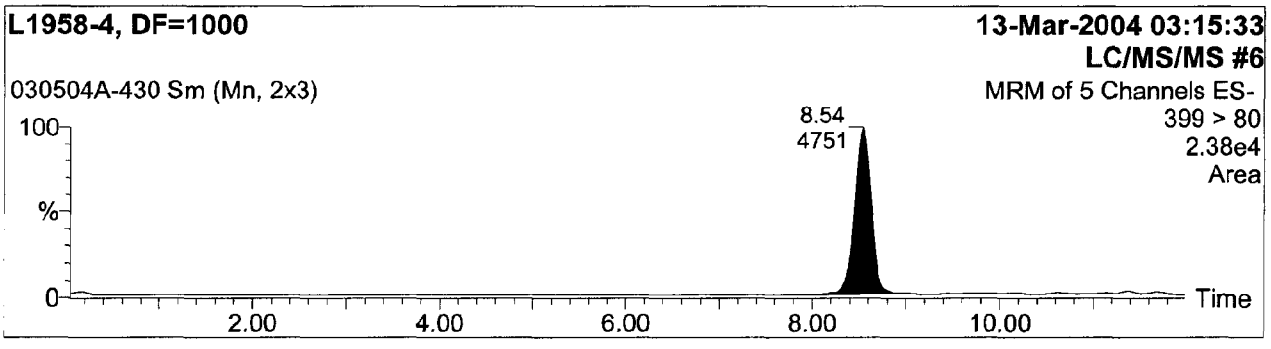
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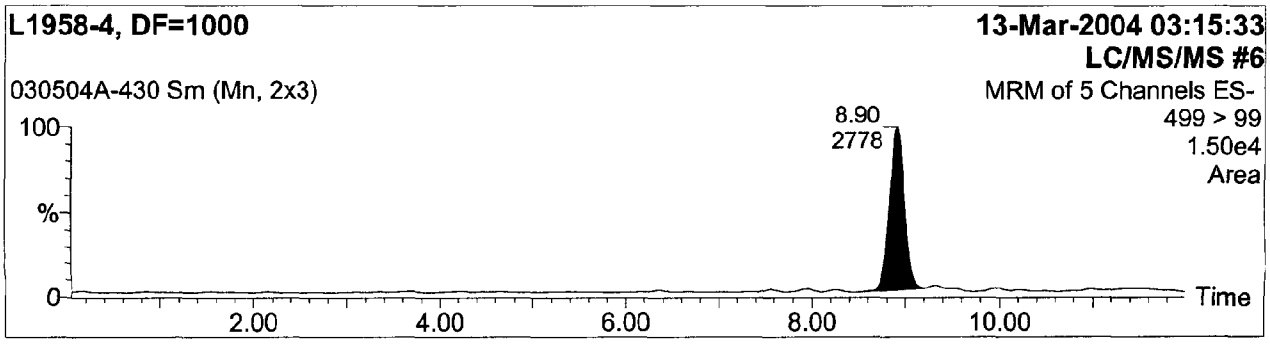
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-430
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

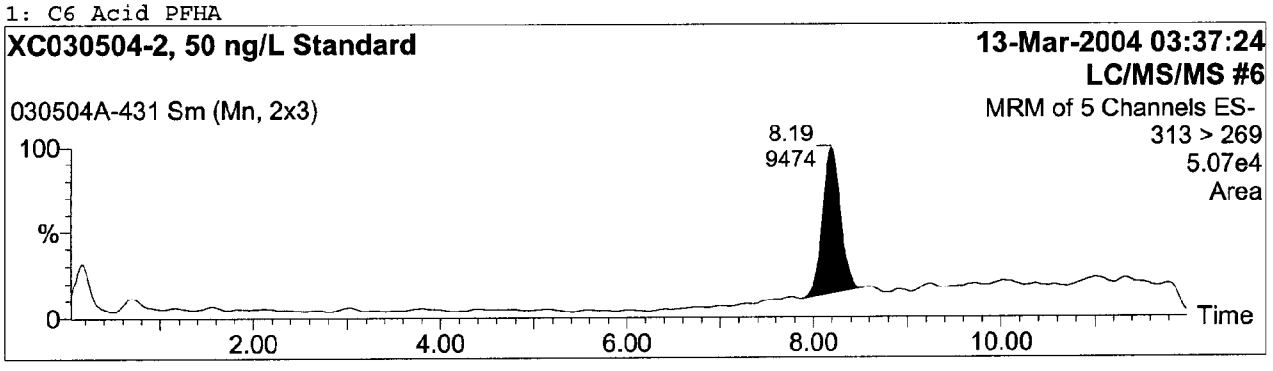
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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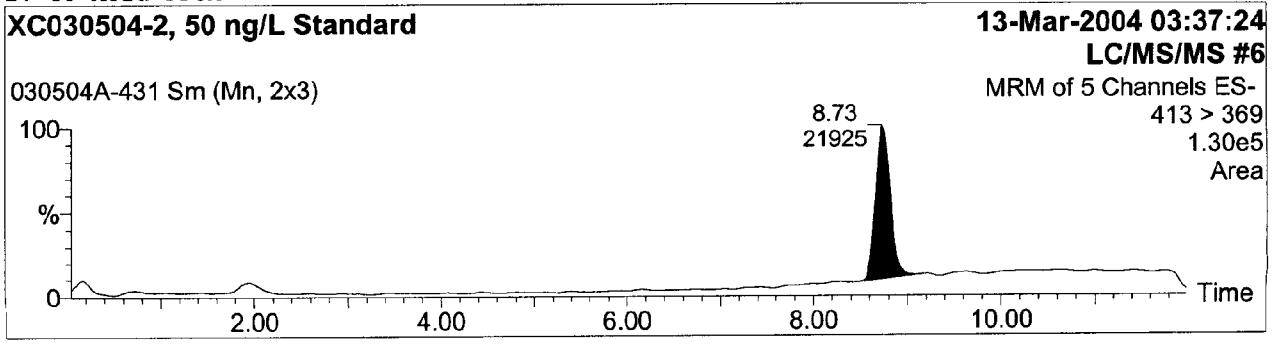
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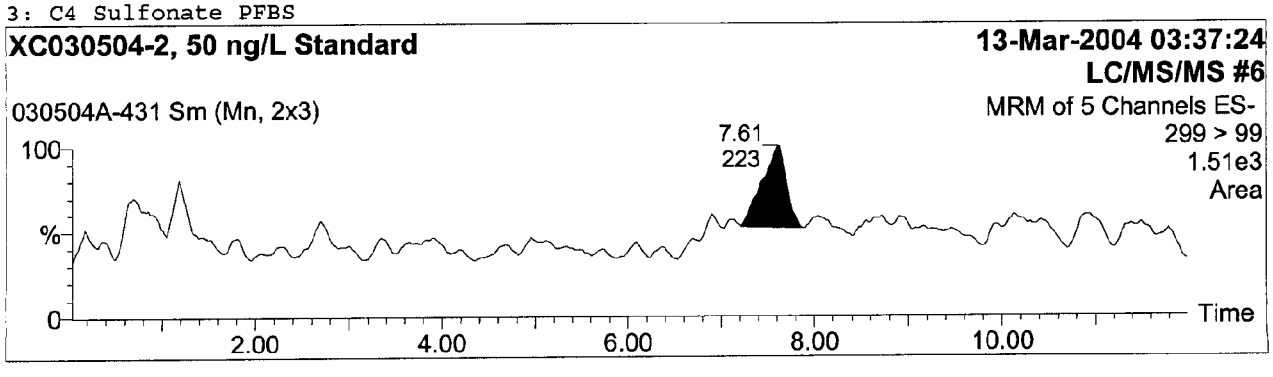
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



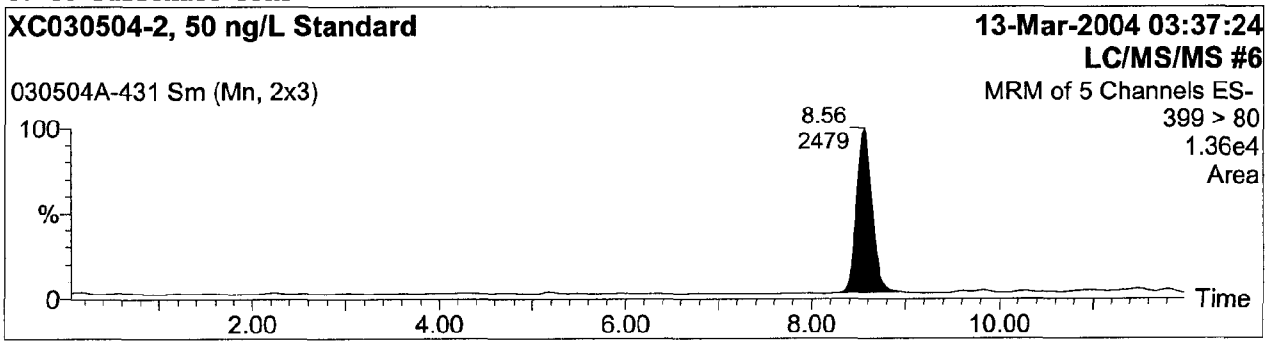
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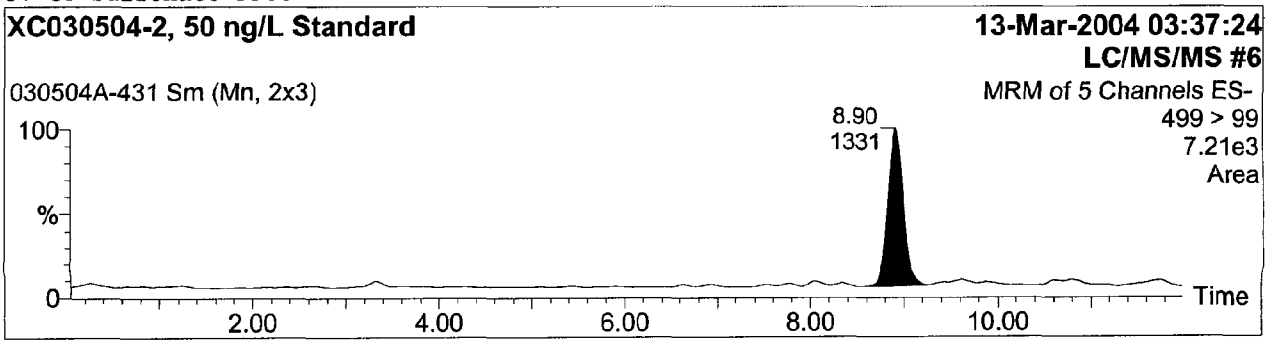
Printed: Tue Mar 16 07:26:27 2004

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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



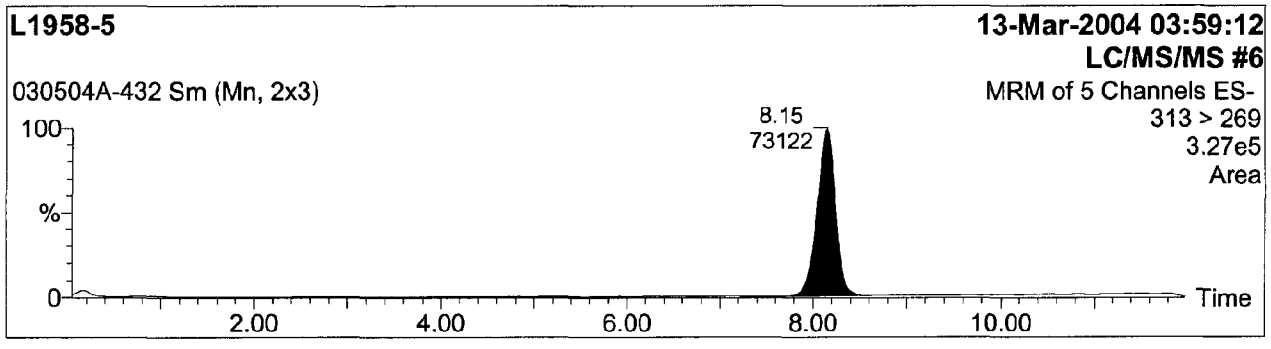
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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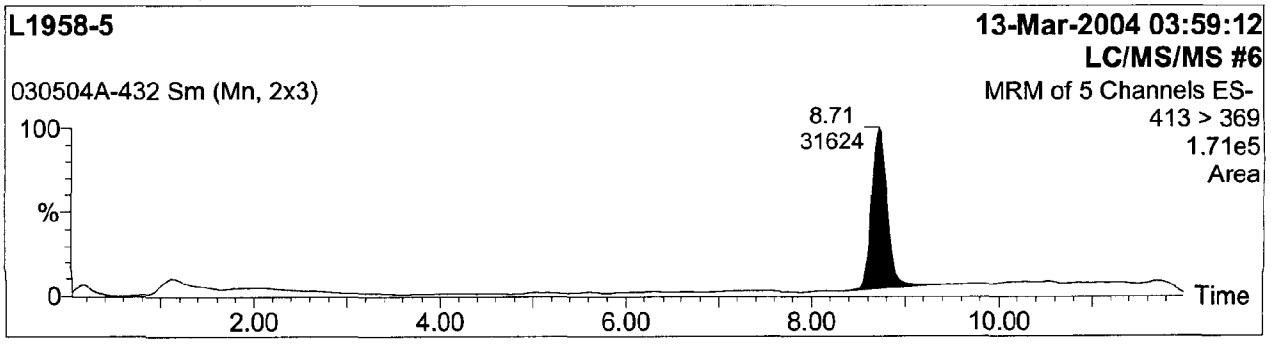
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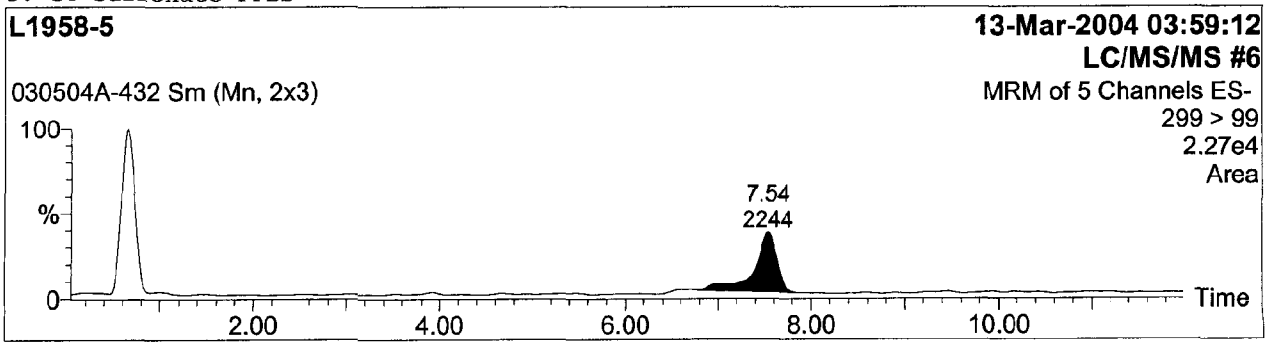
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

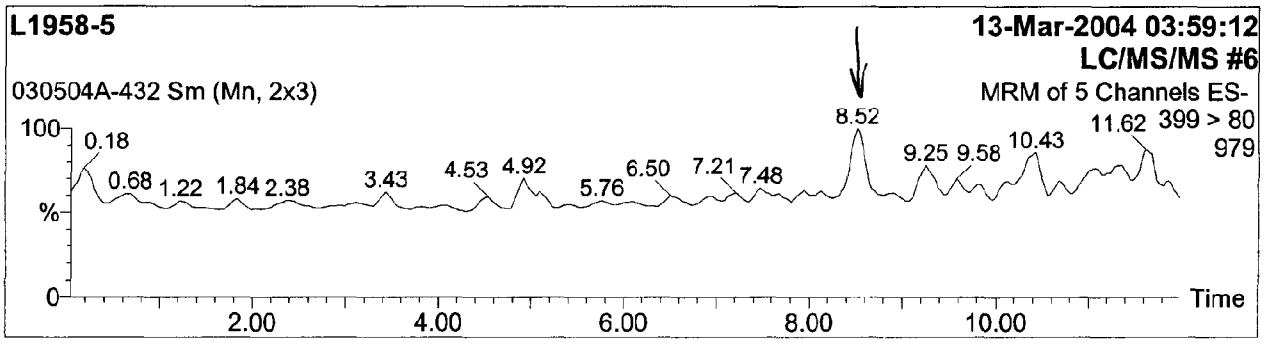
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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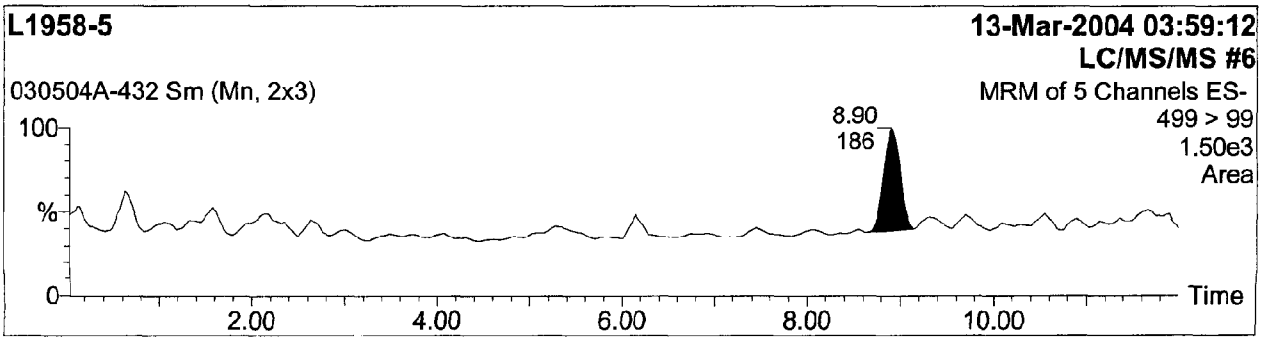
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



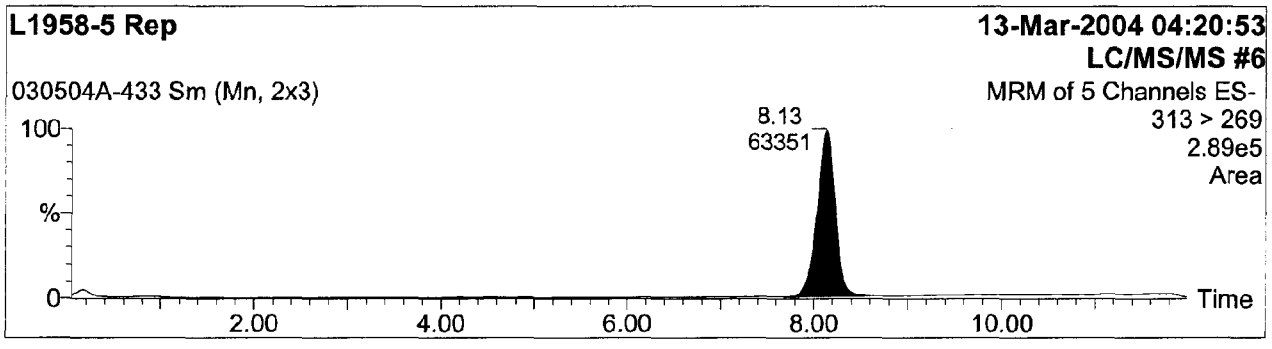
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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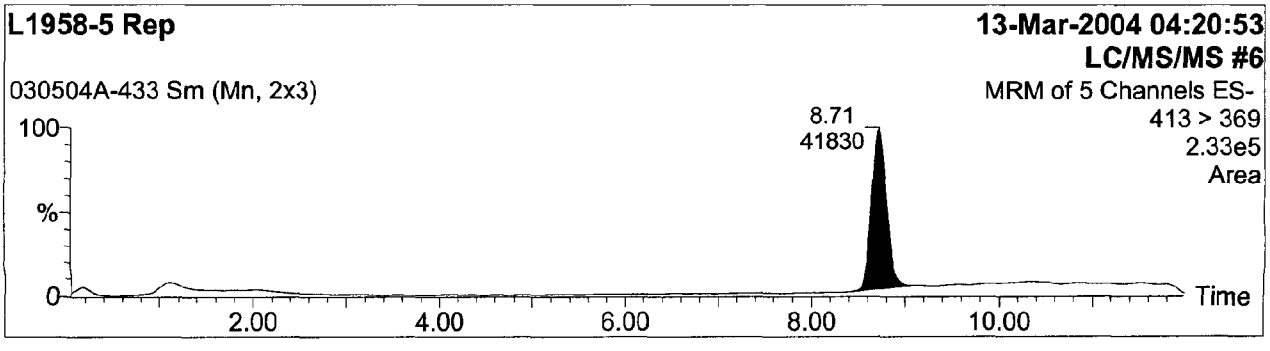
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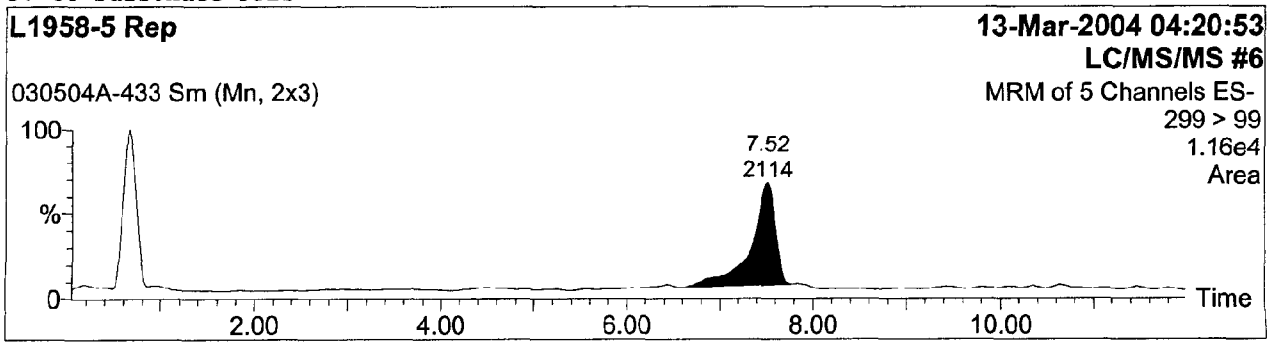
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

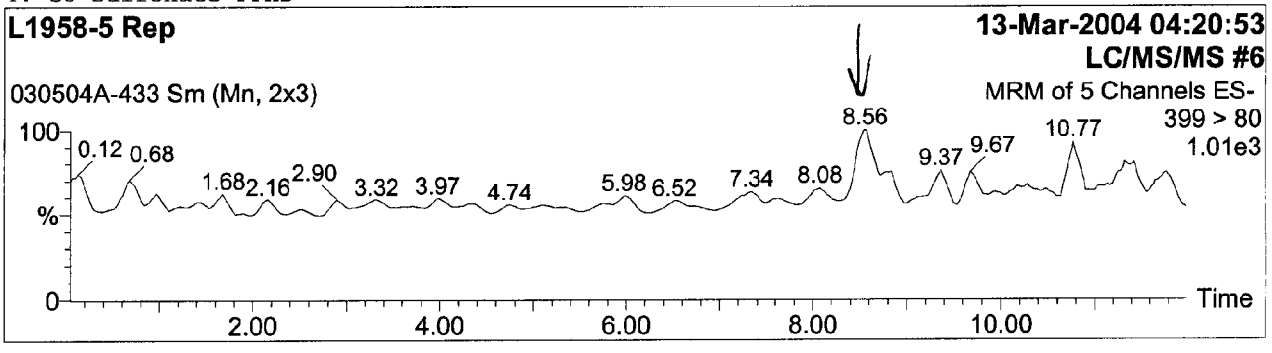
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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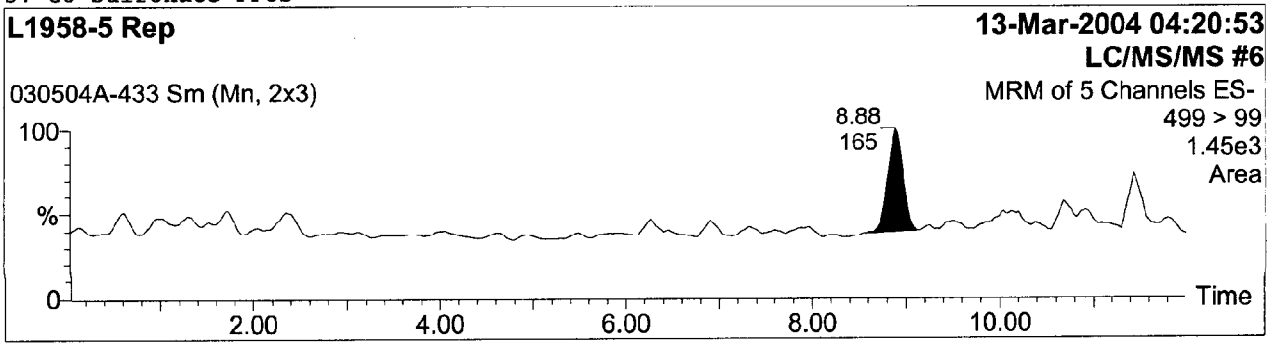
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



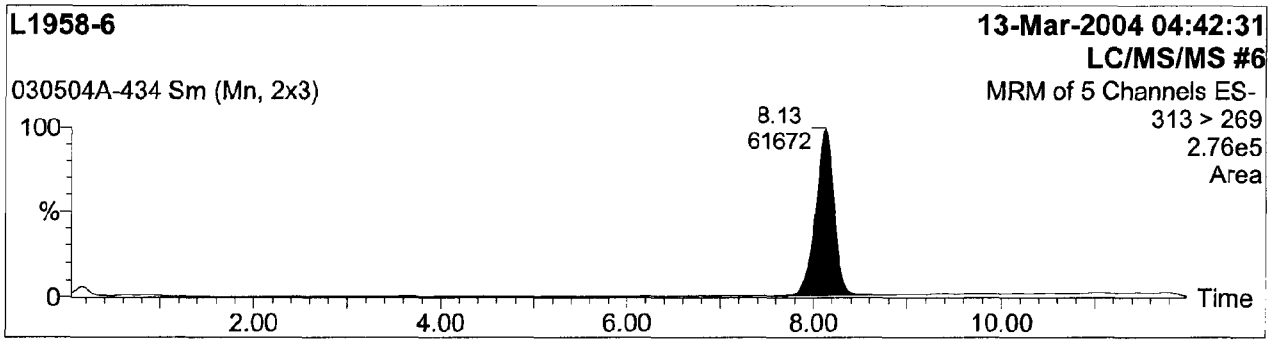
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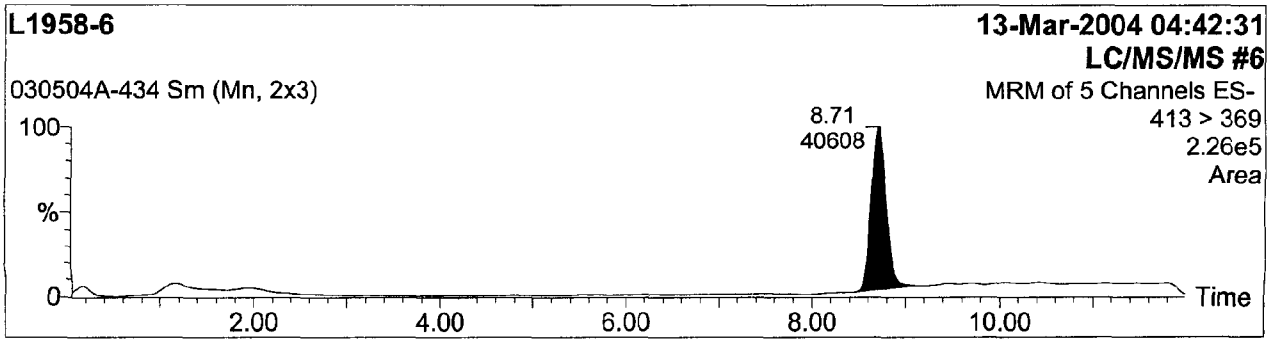
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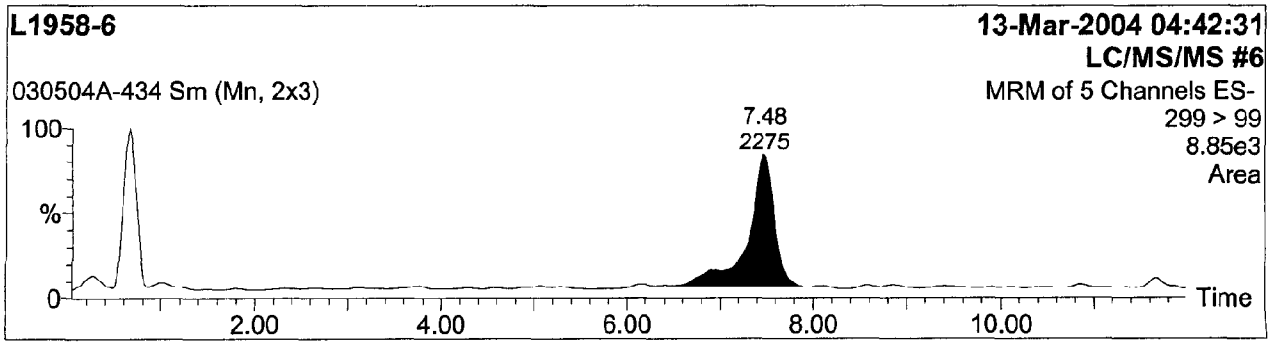
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

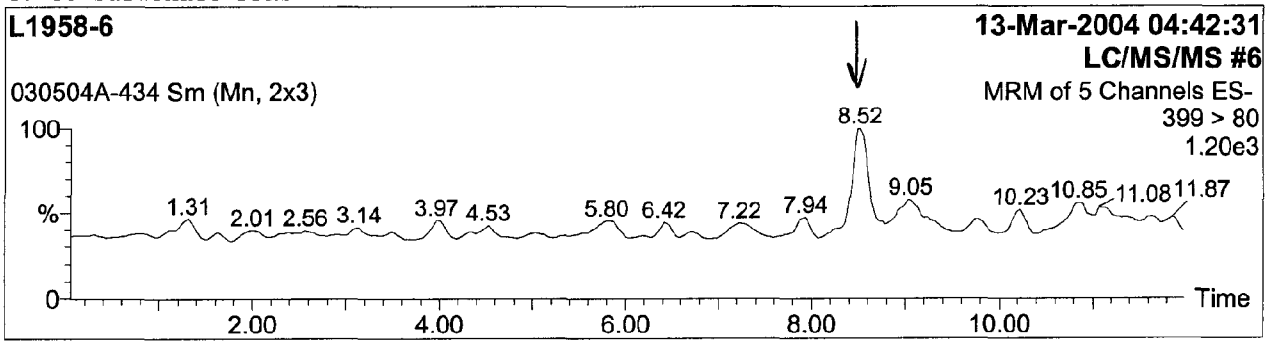
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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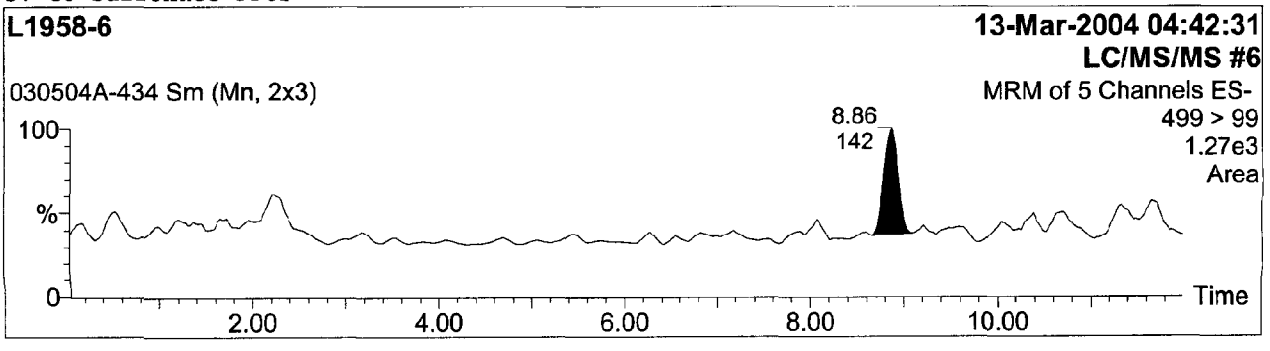
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Name: 030504A-434
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

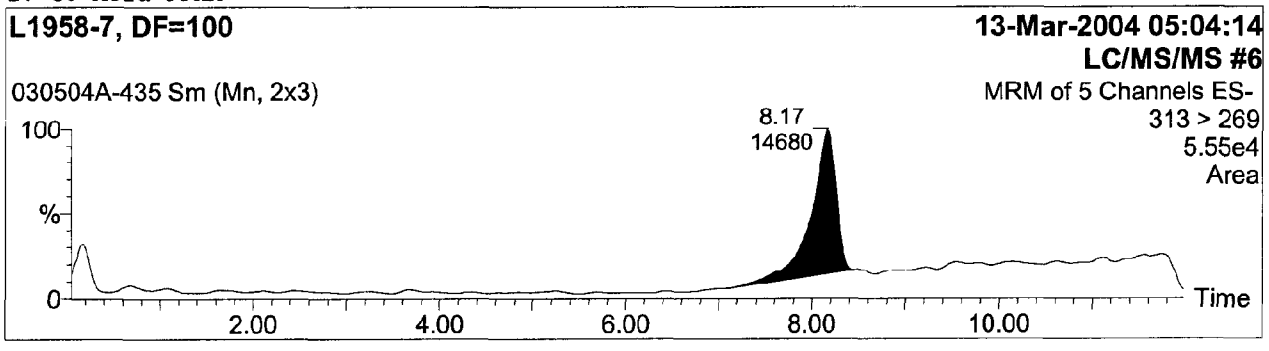
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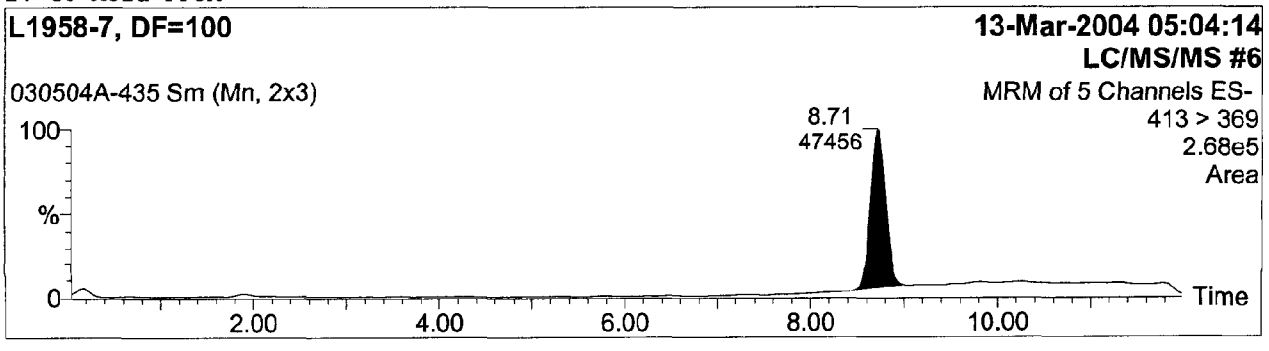
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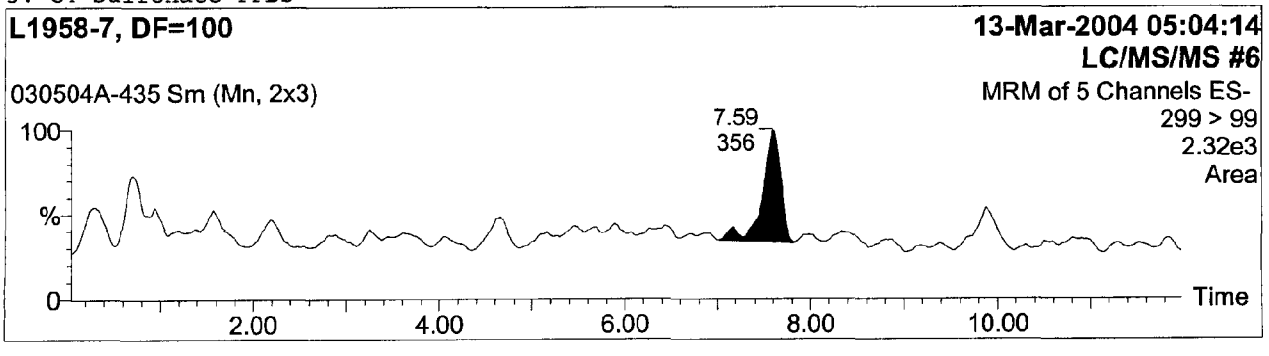
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

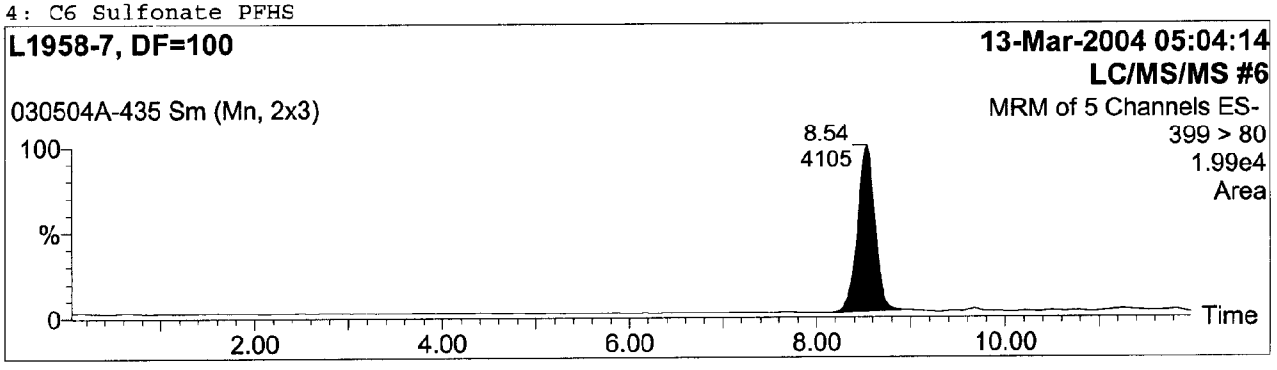
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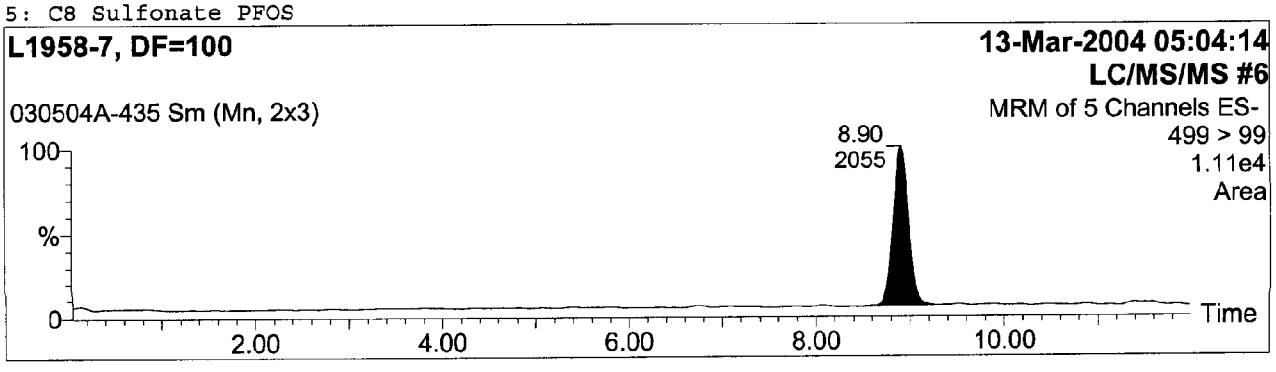
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

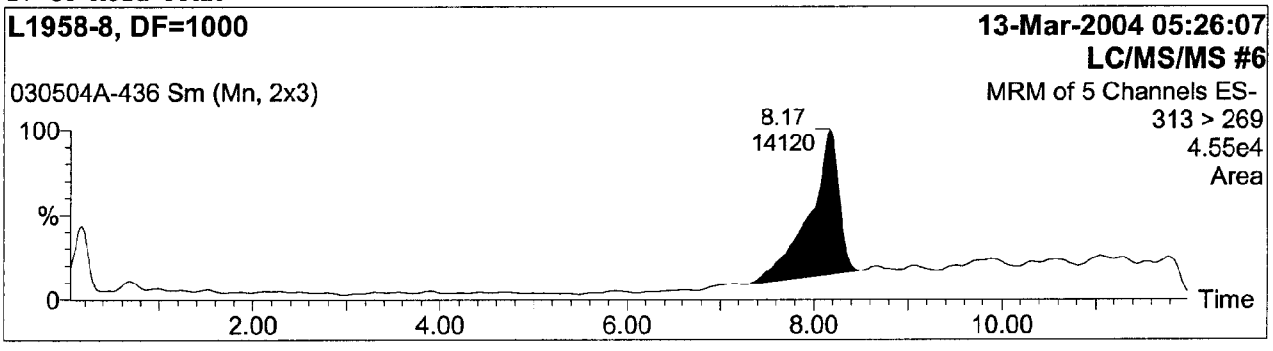
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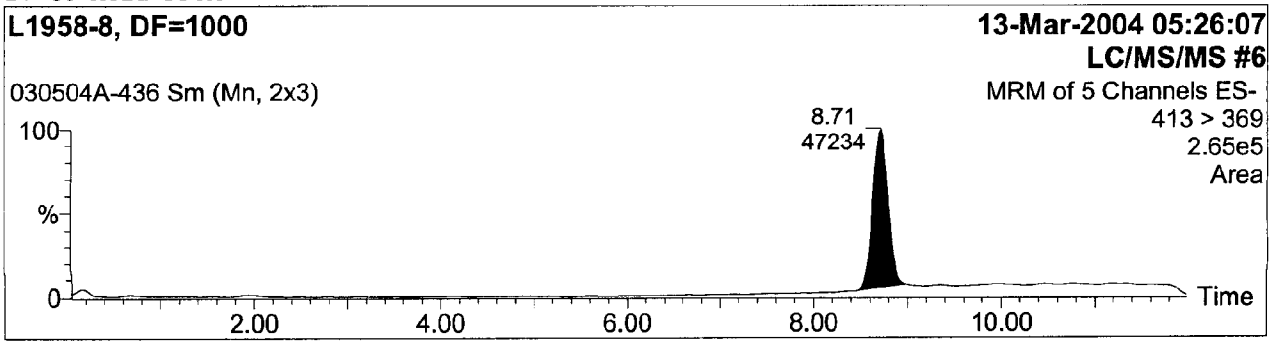
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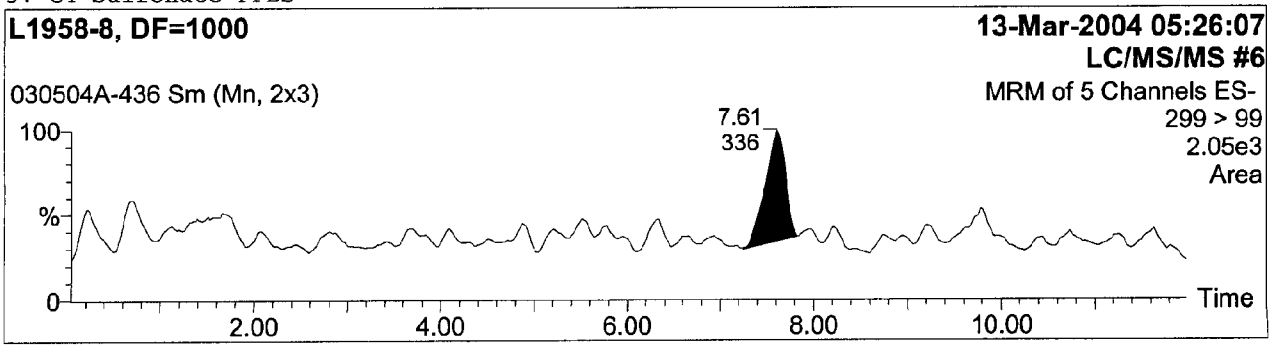
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



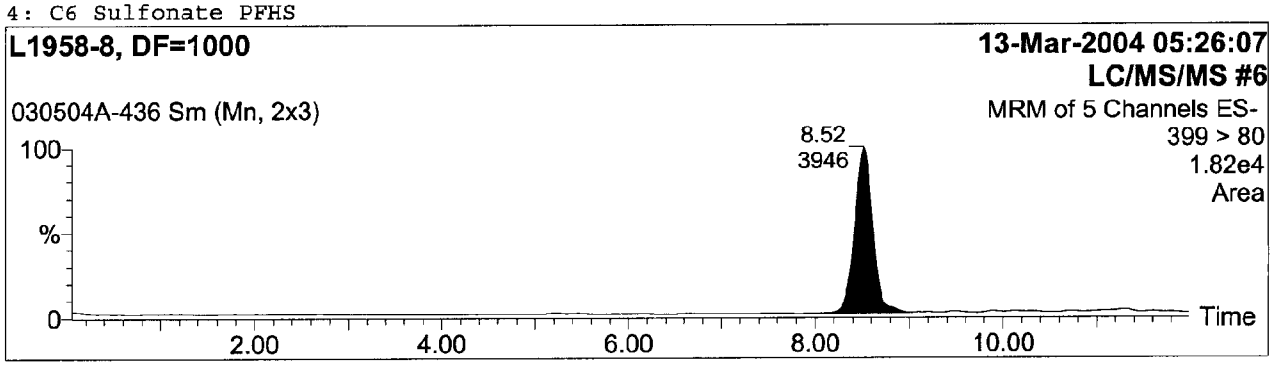
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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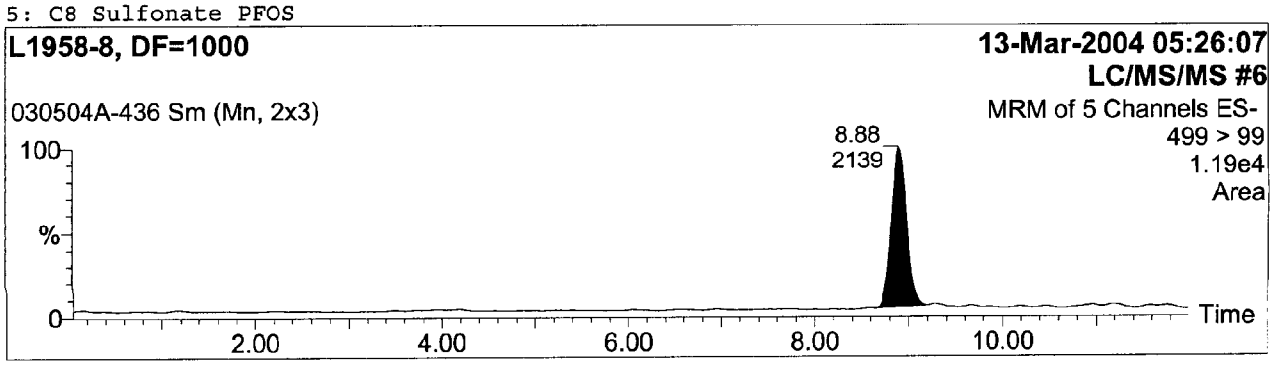
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

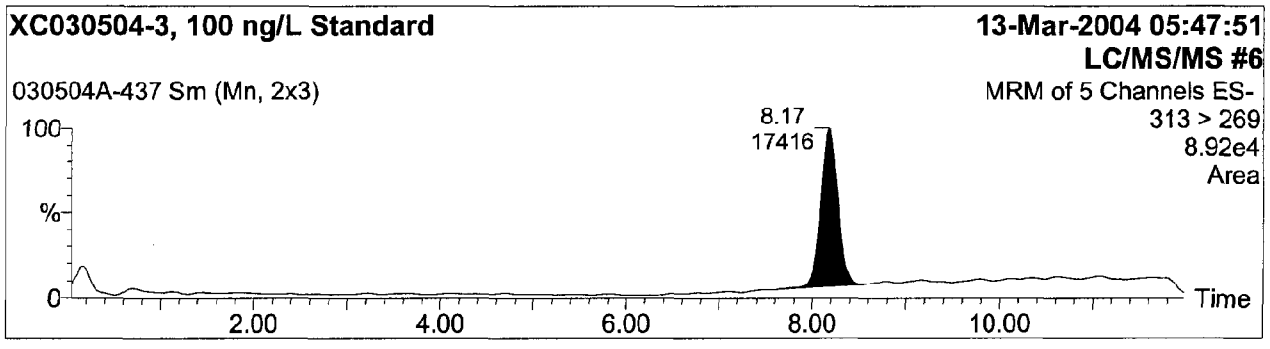
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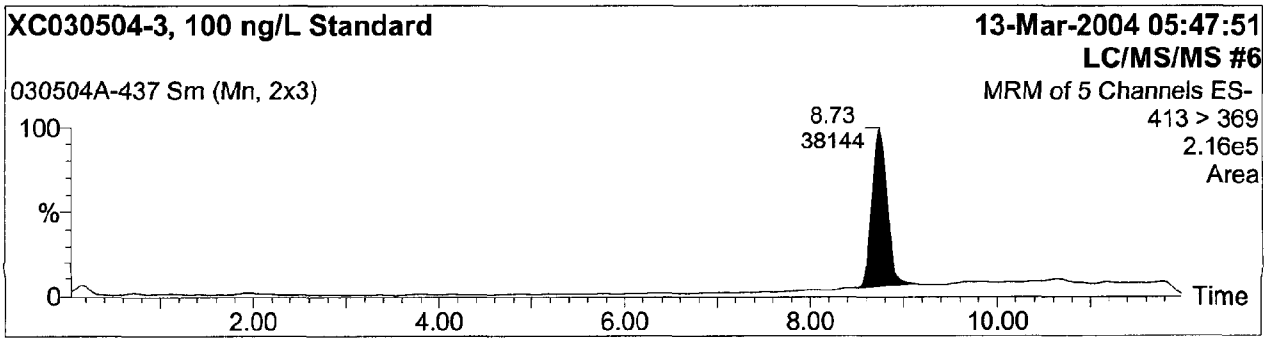
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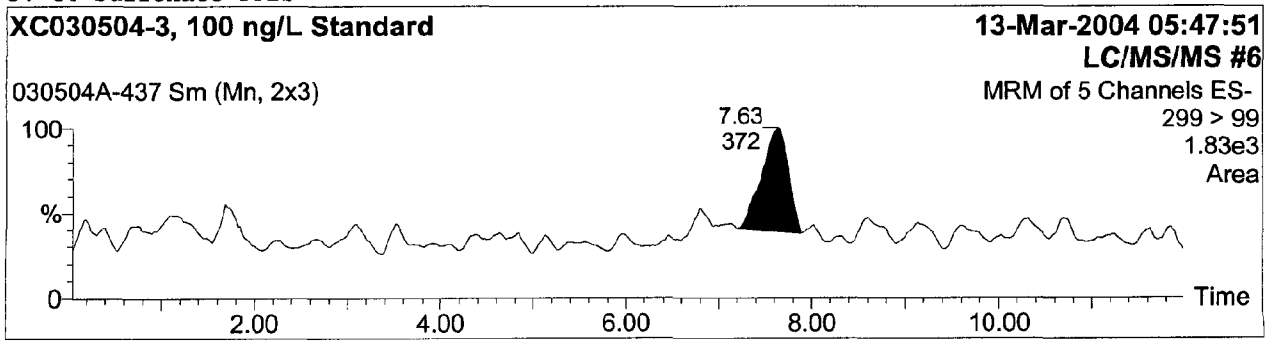
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



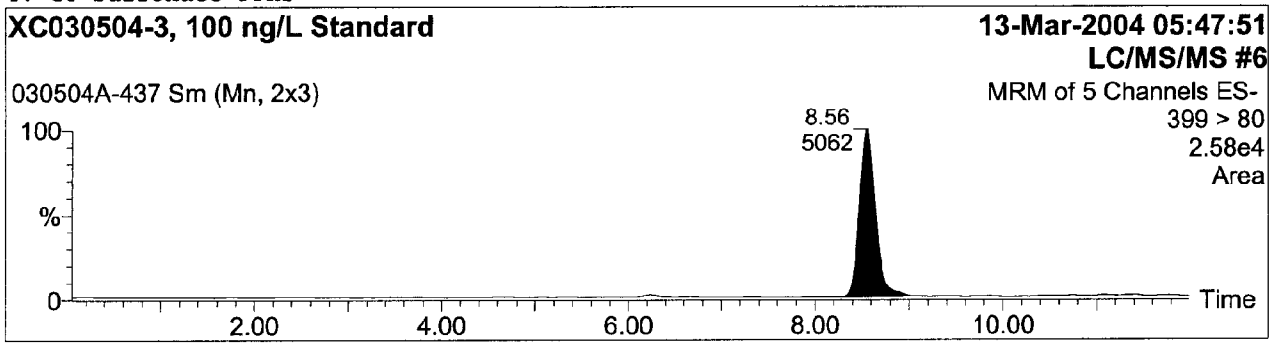
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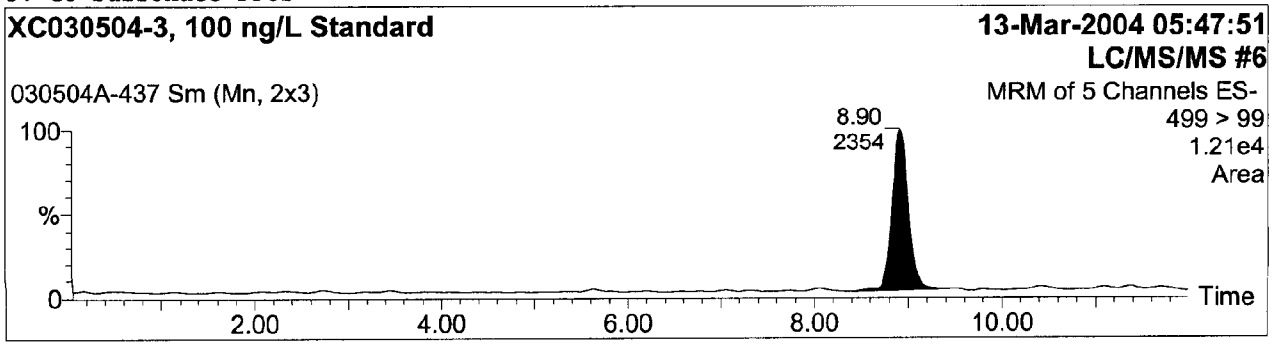
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



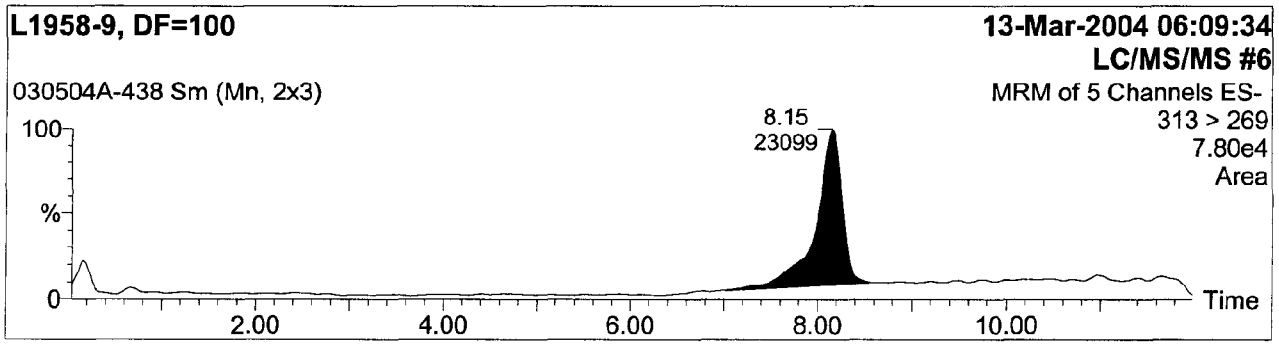
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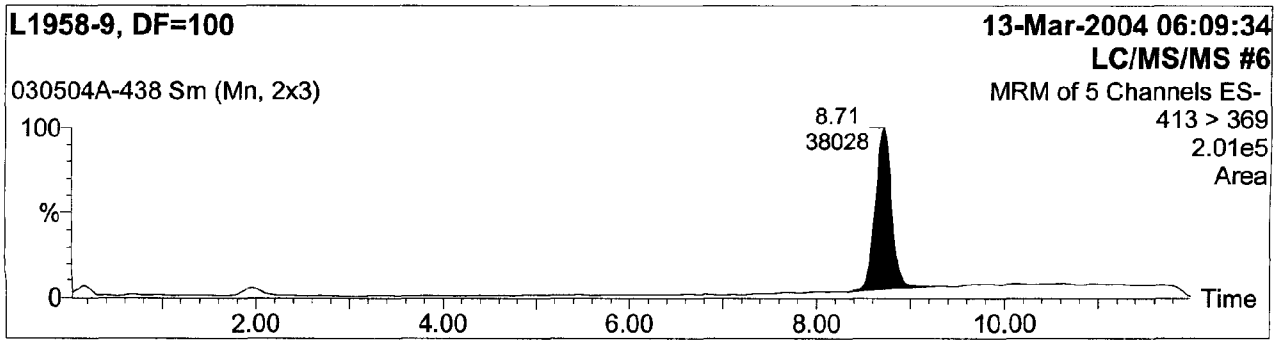
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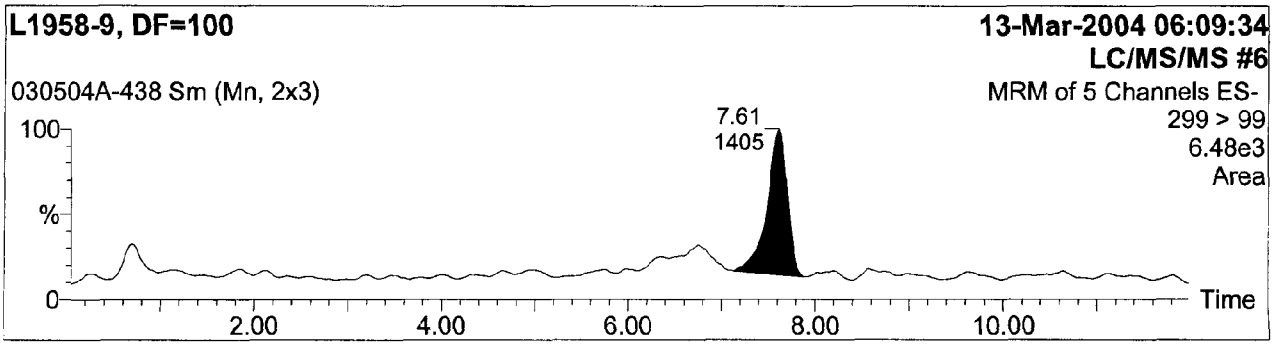
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



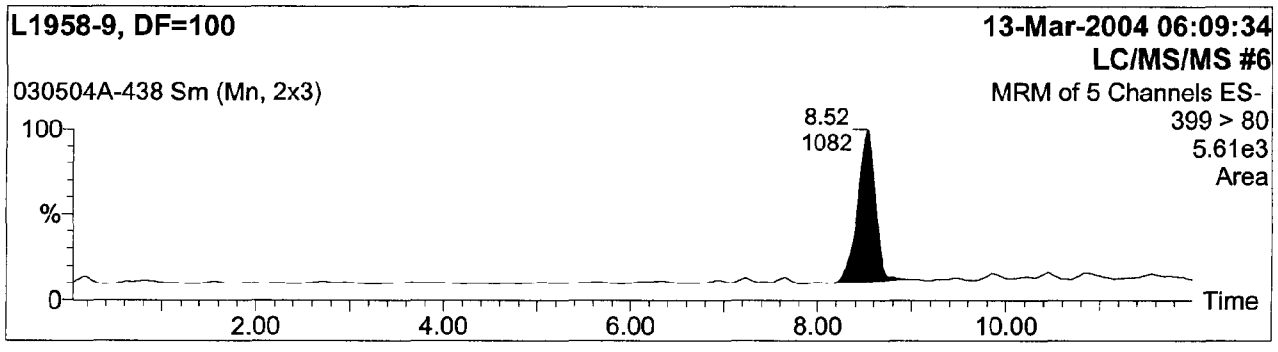
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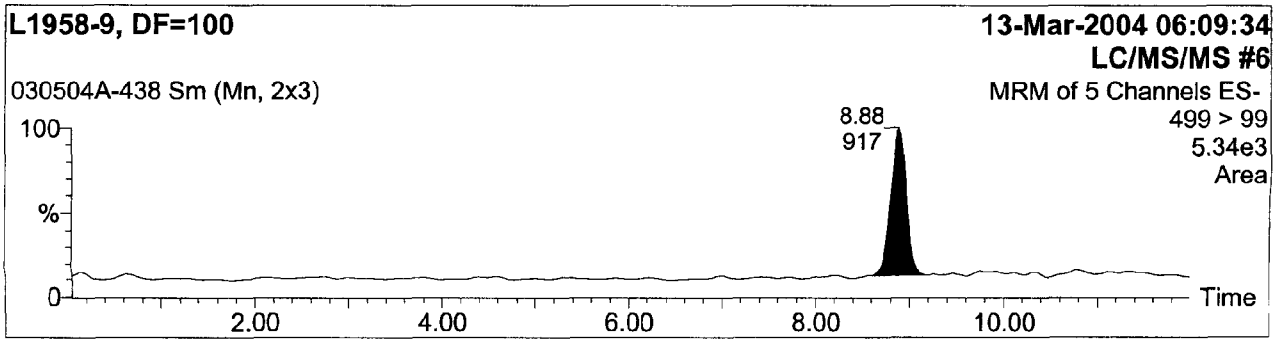
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-438
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

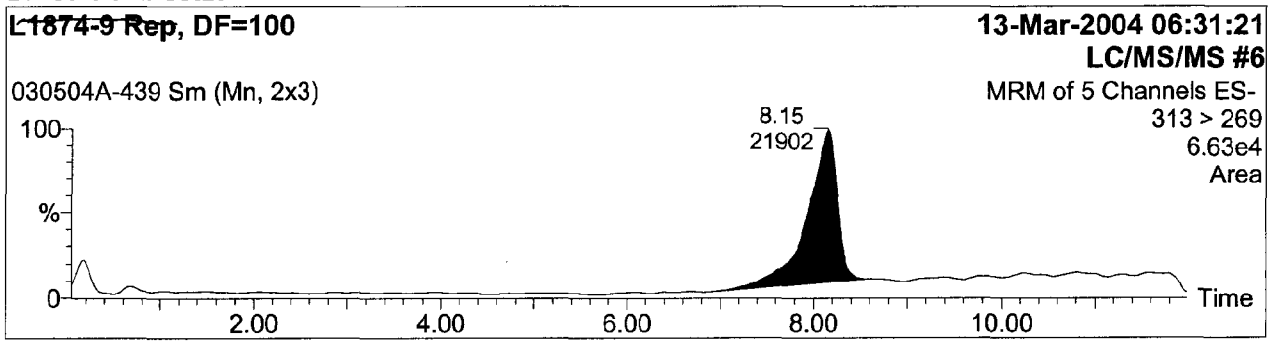
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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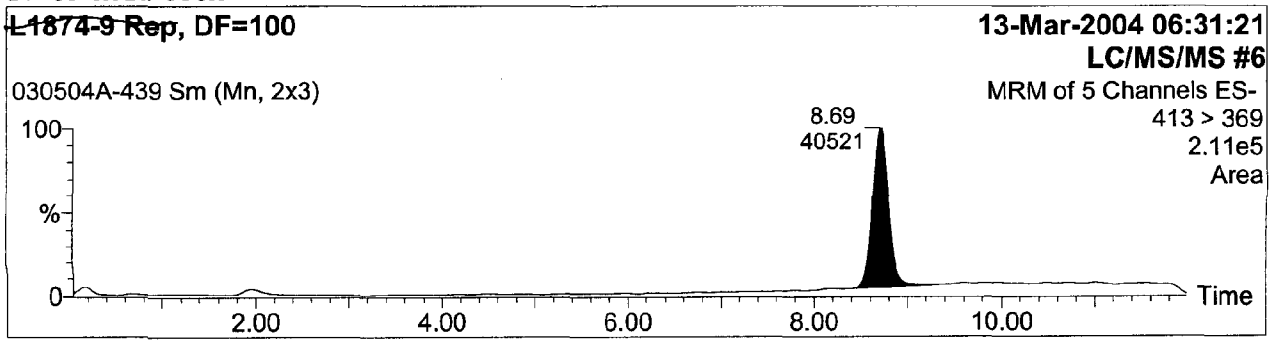
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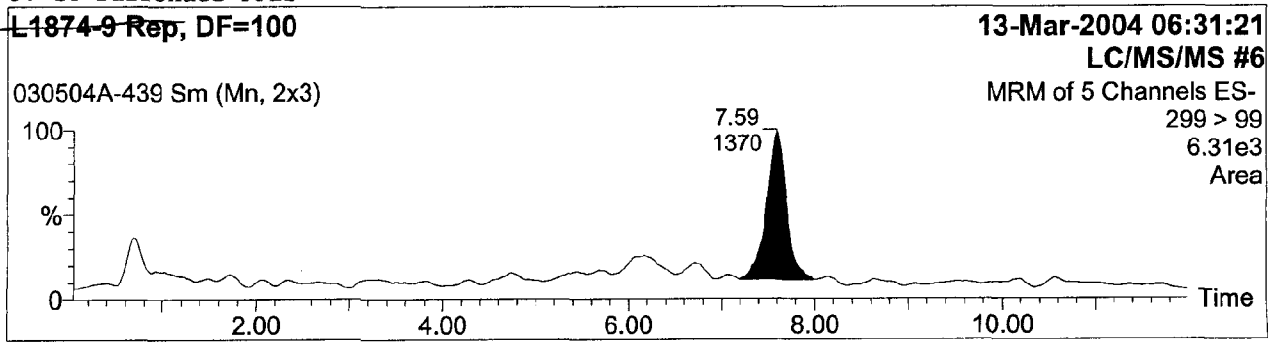
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-9 Rep. ② KJ 03/16/04

Exygen Research, 3058 Research Drive, State College, PA 16801

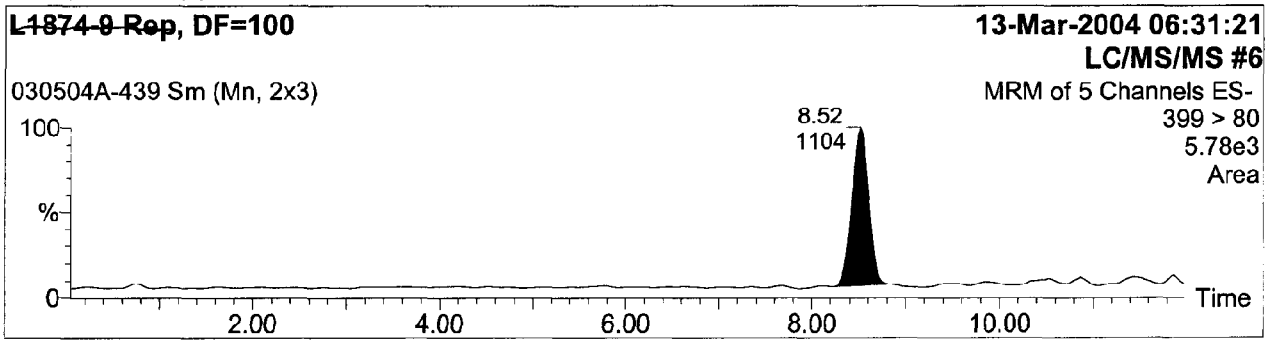
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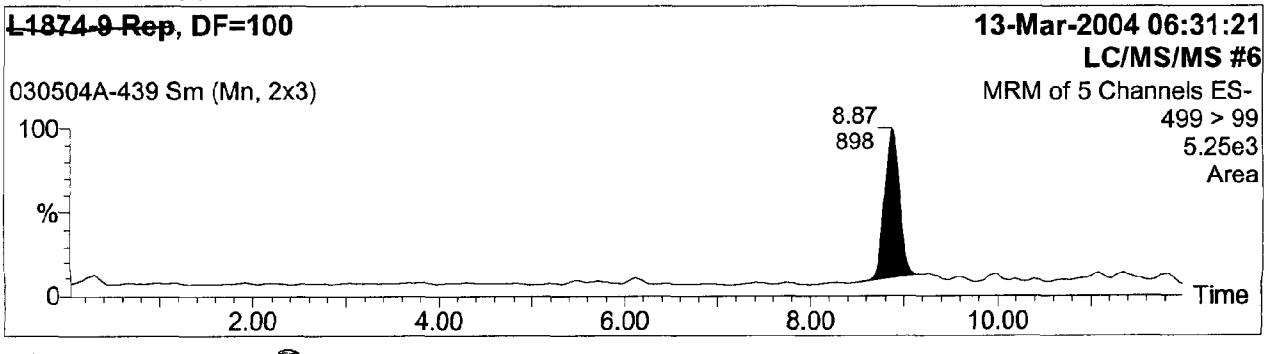
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-9 Rep ⓡⓔ kbf 03/16/04

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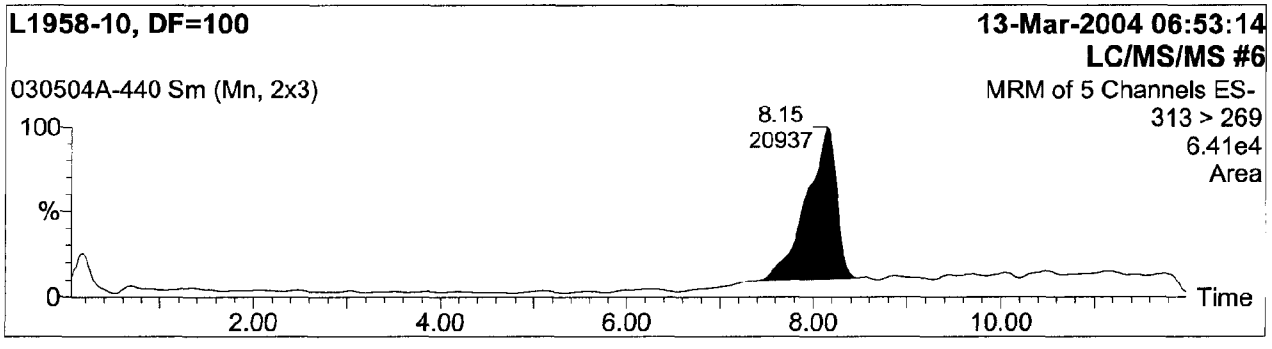
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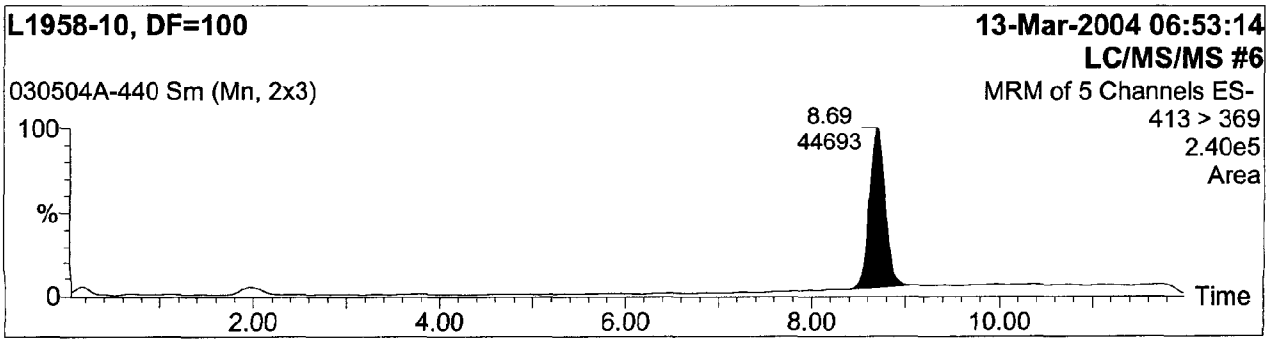
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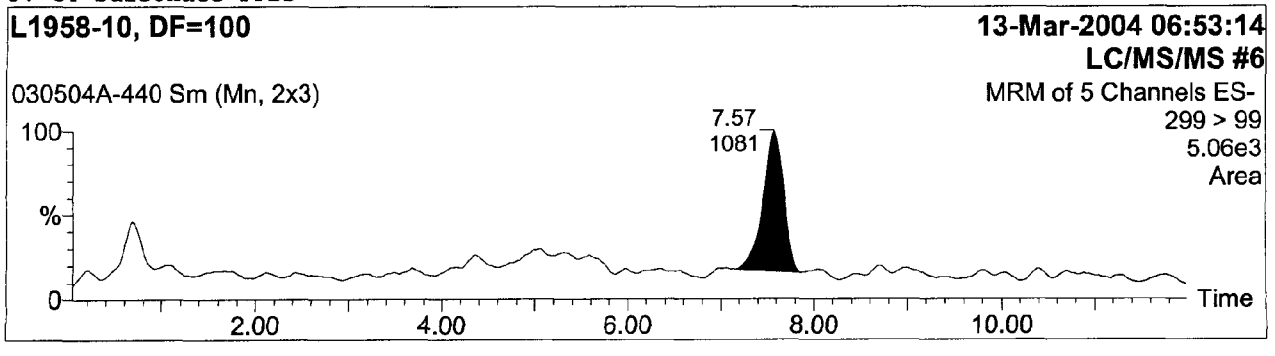
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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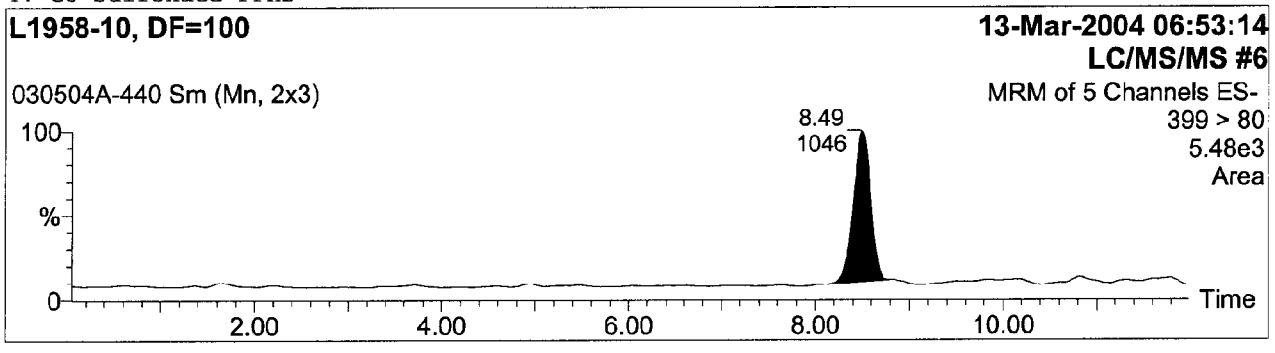
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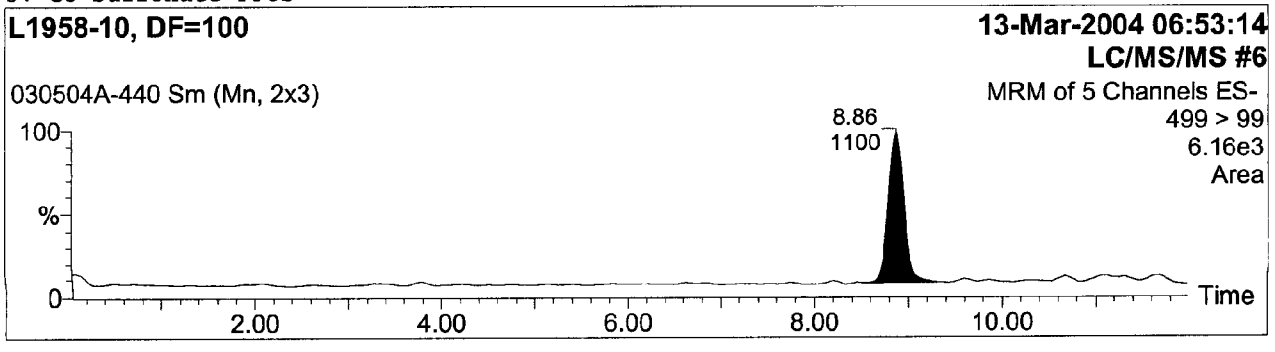
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



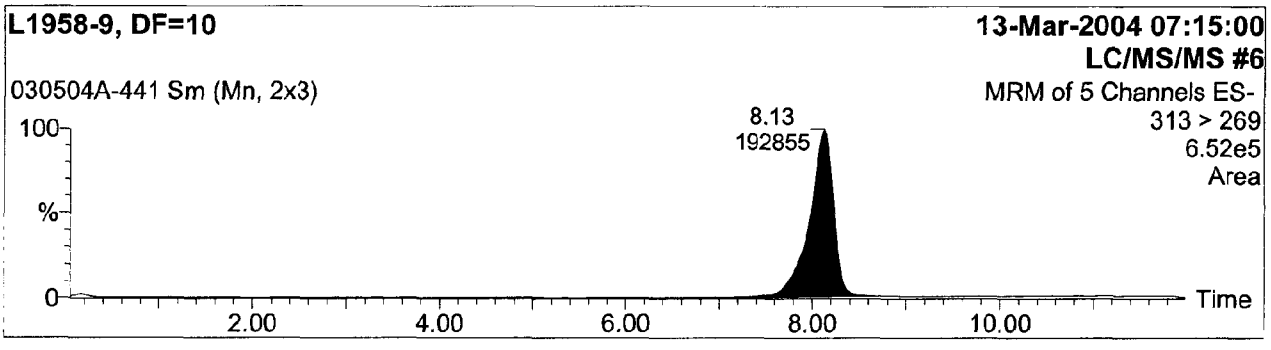
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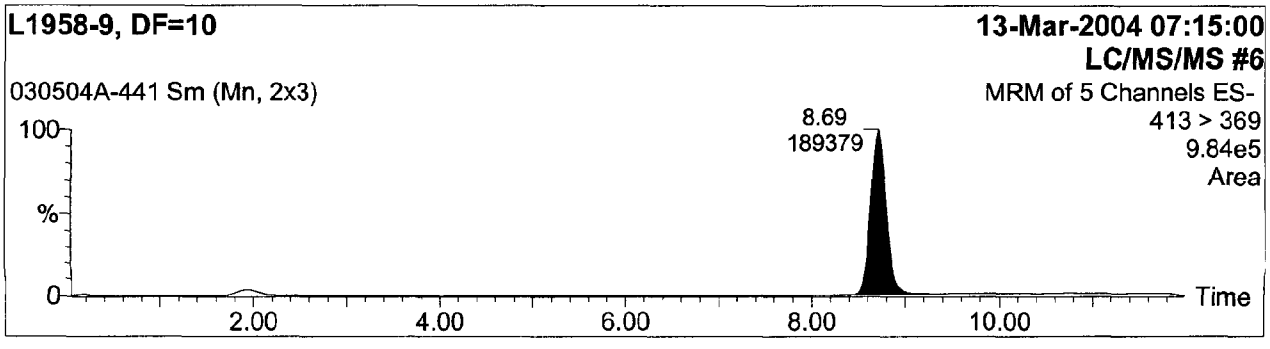
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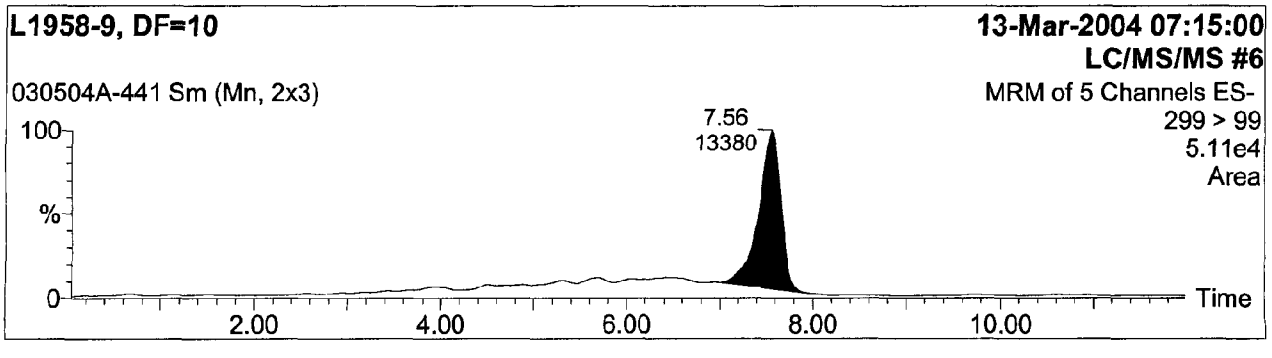
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



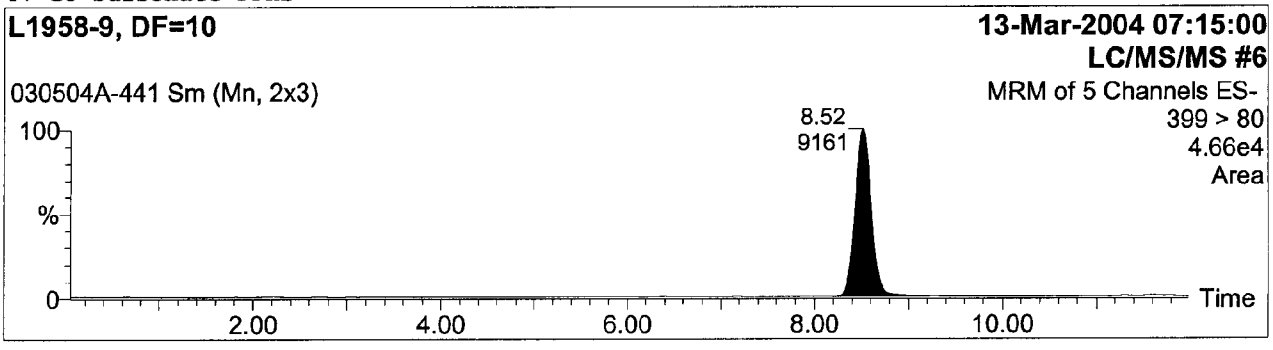
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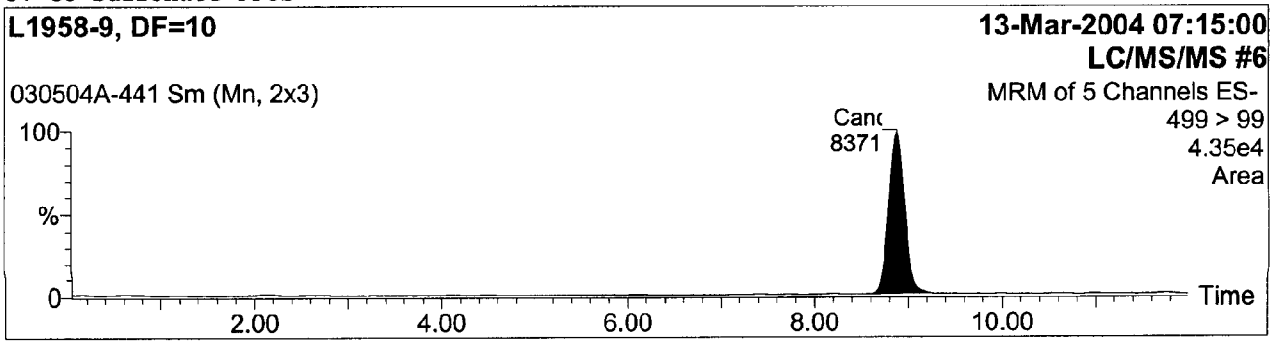
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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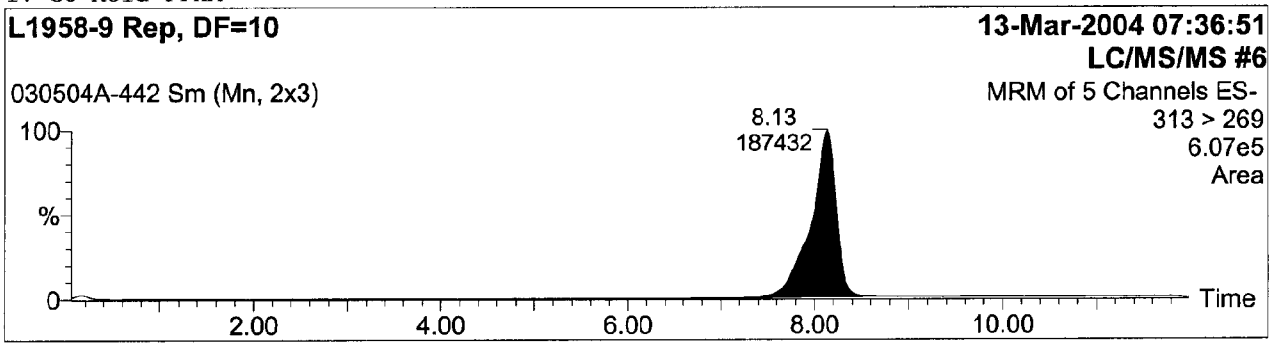
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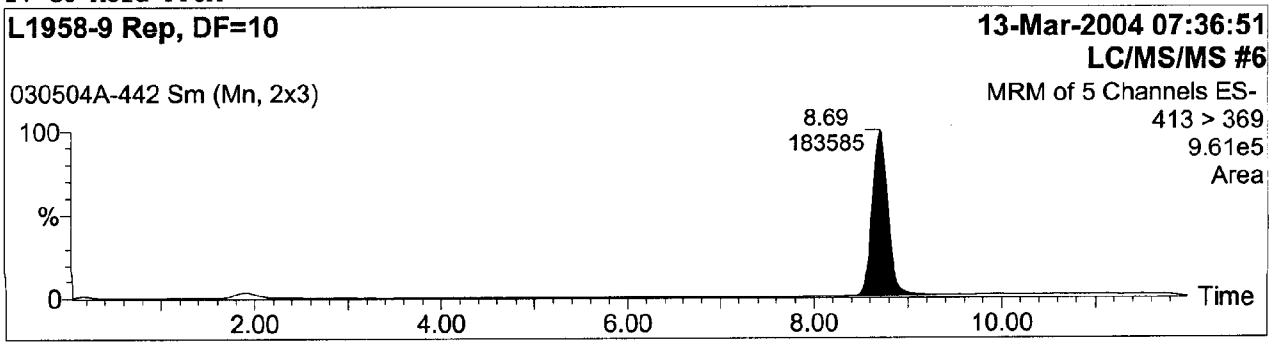
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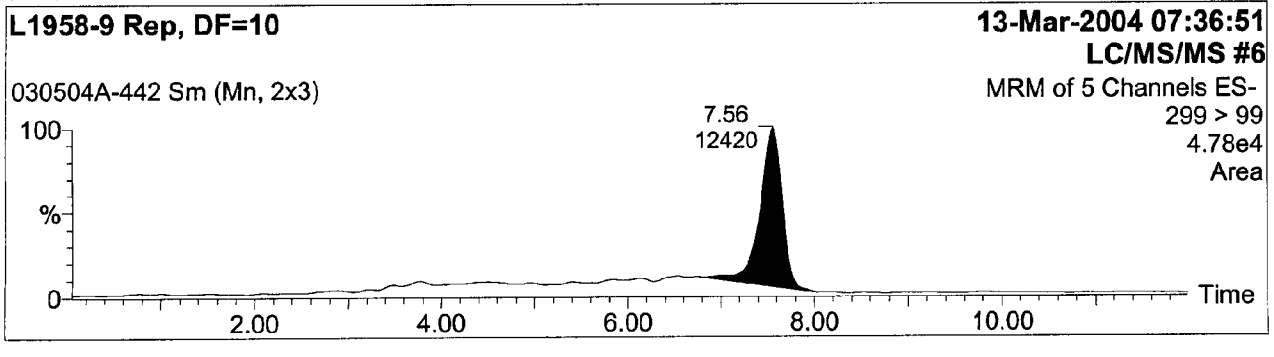
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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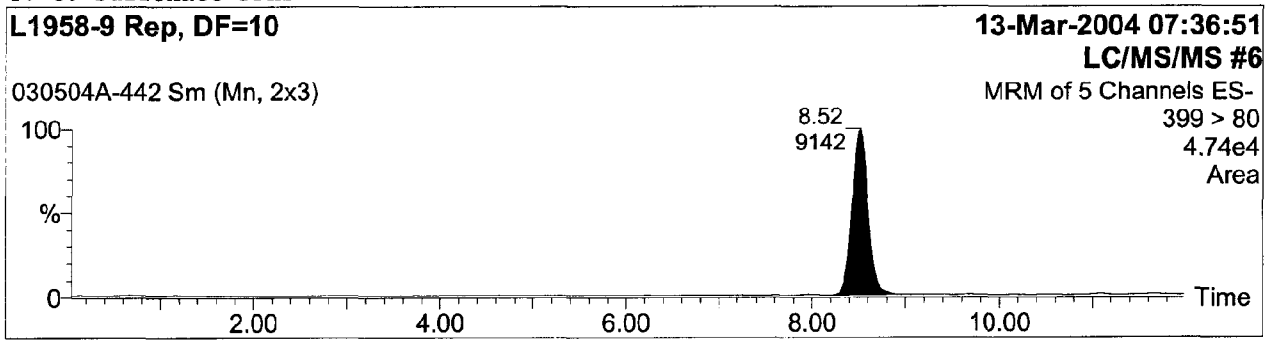
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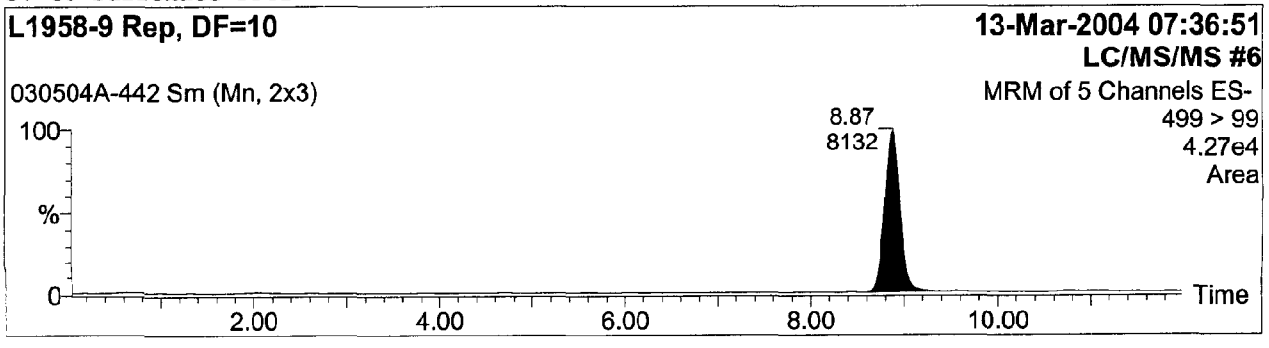
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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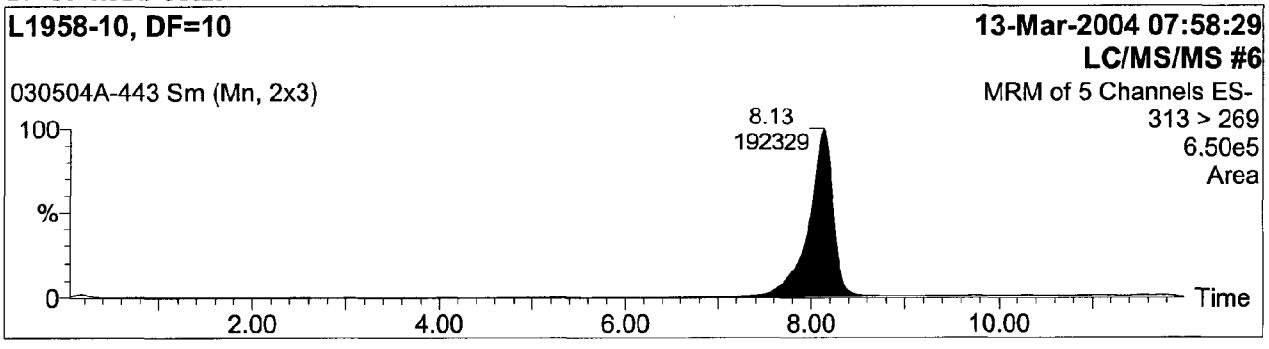
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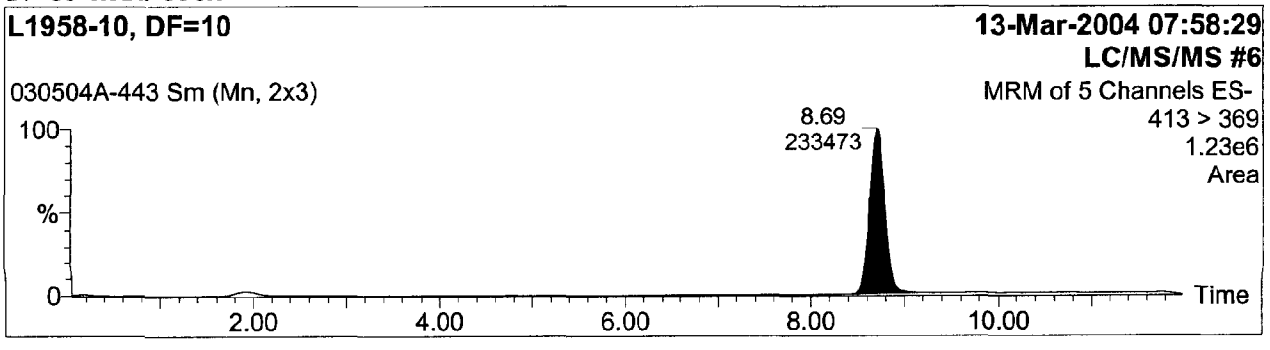
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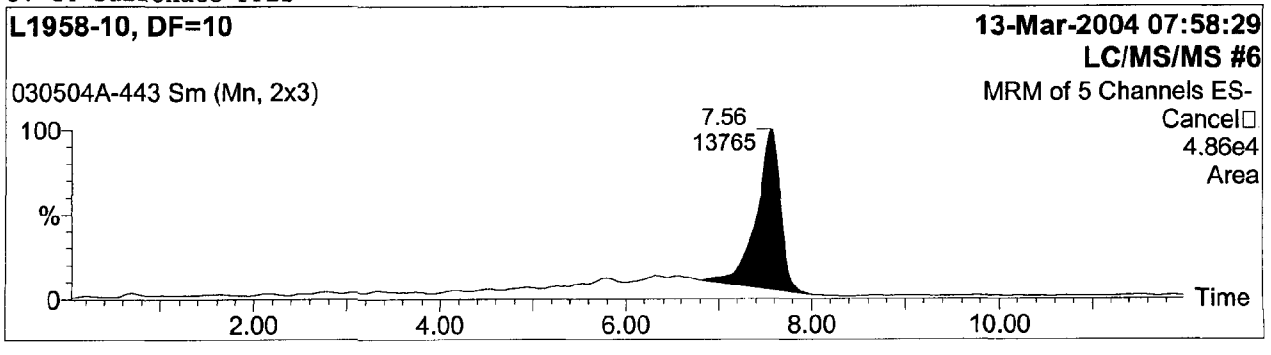
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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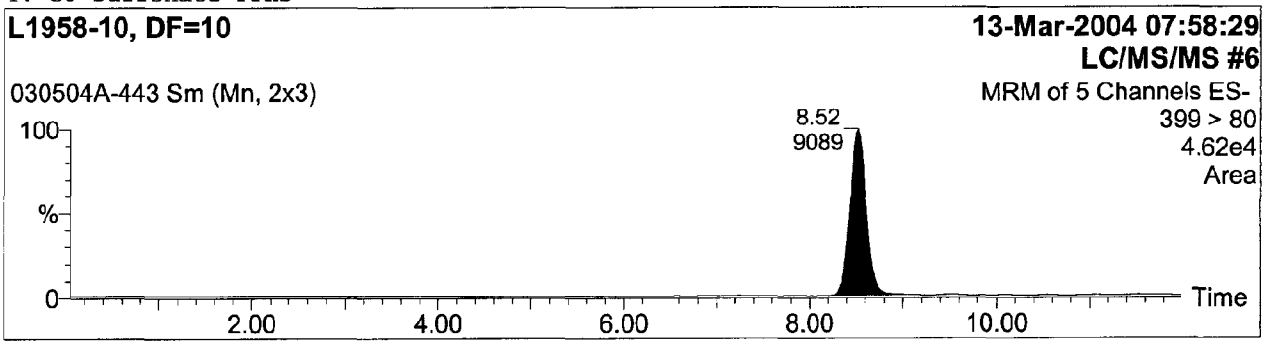
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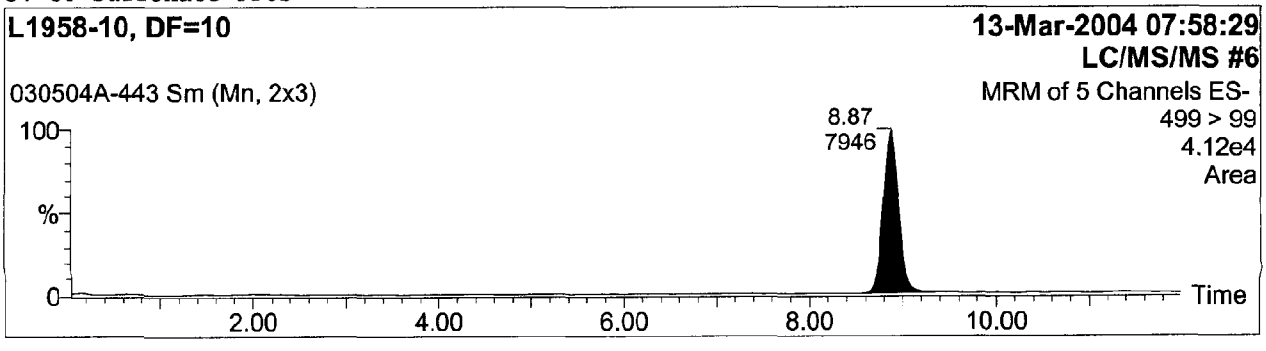
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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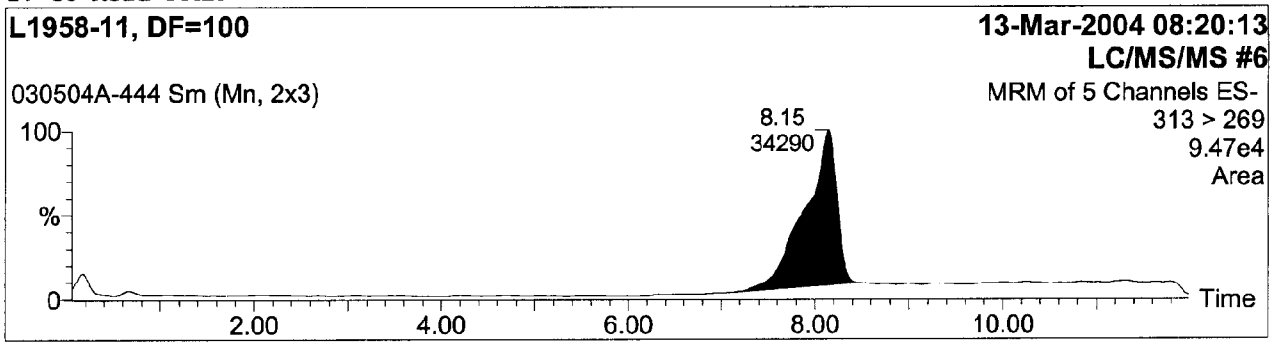
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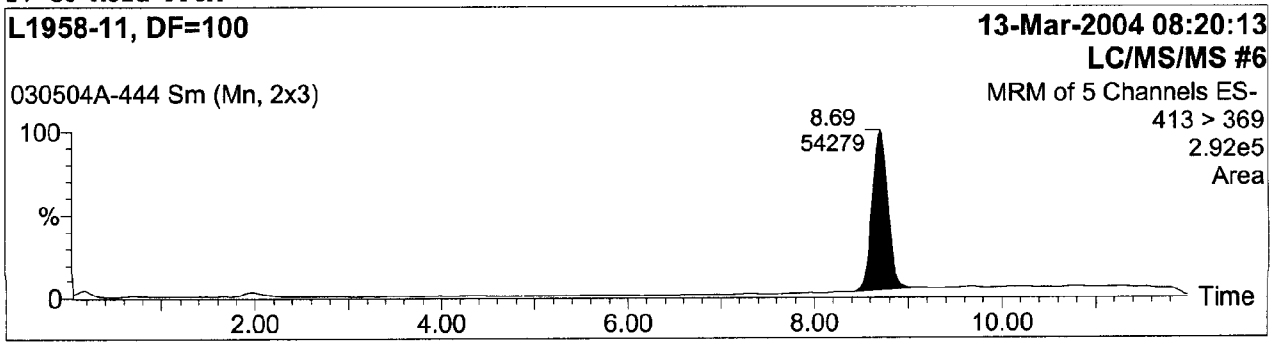
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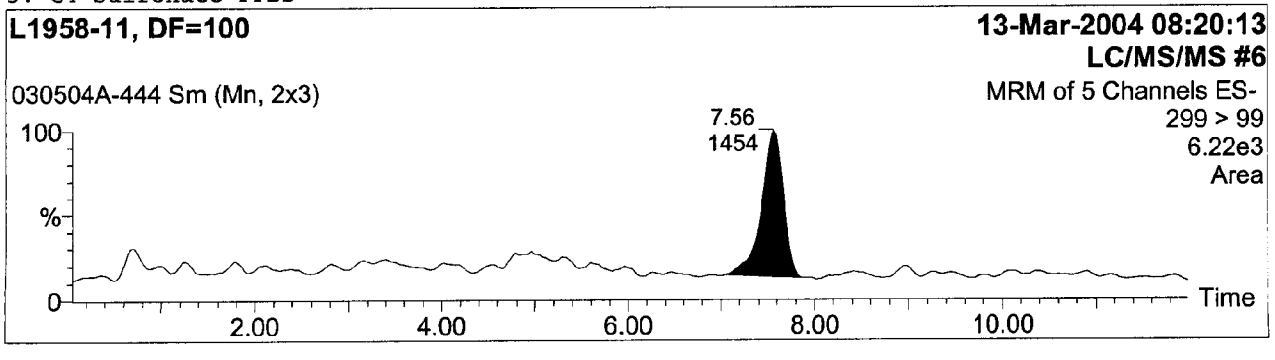
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



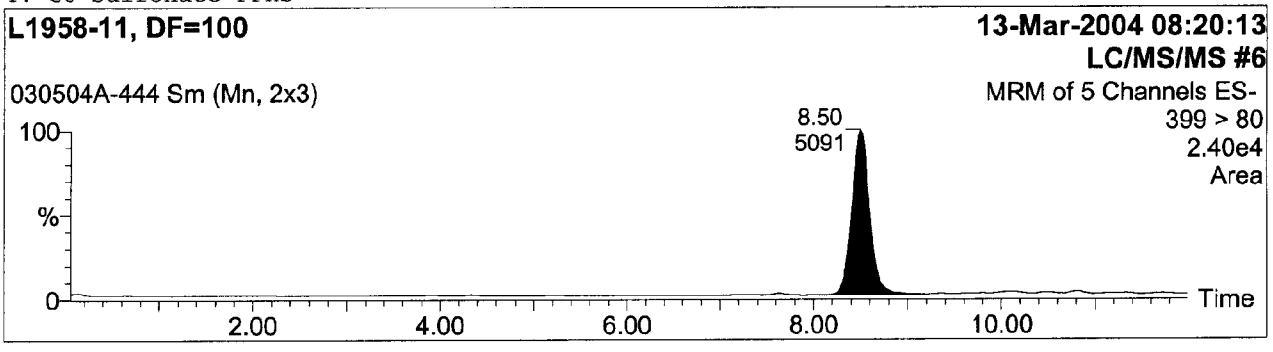
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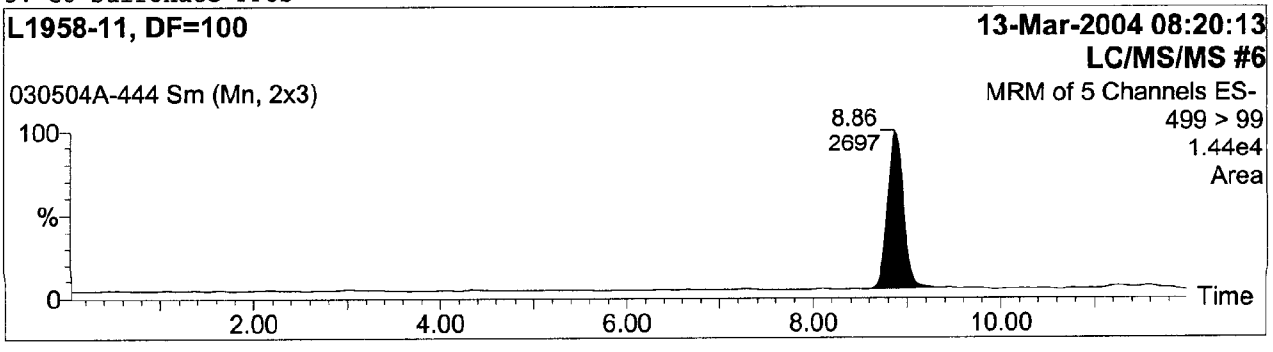
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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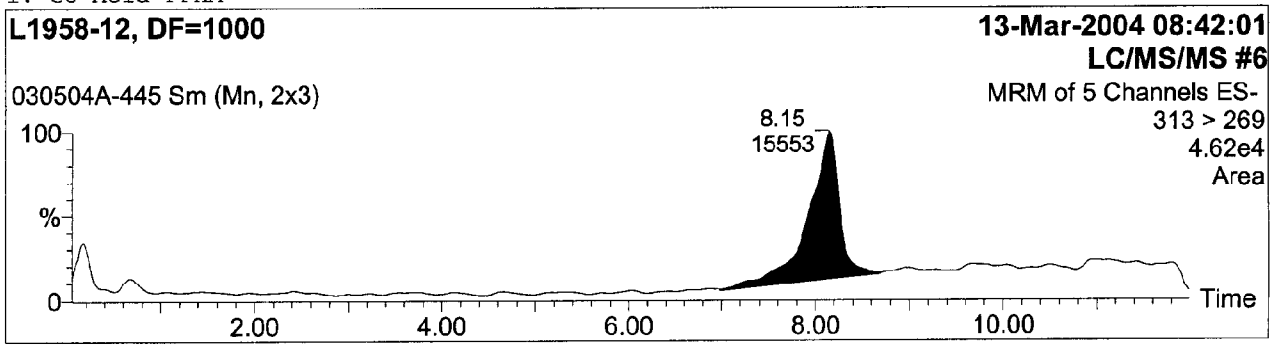
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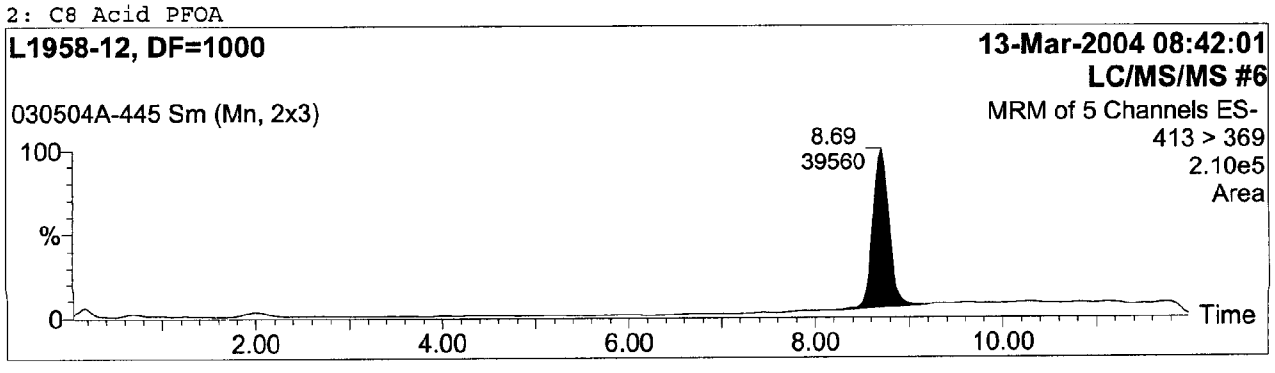
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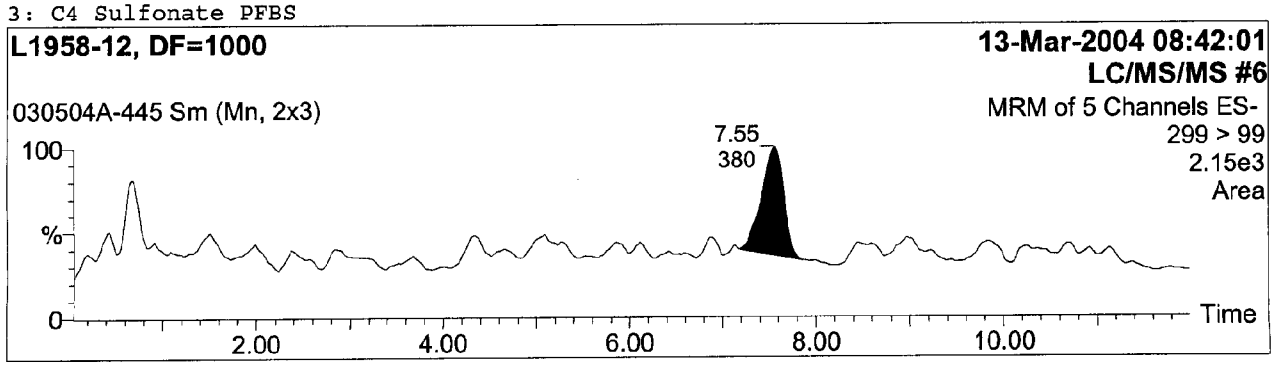
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



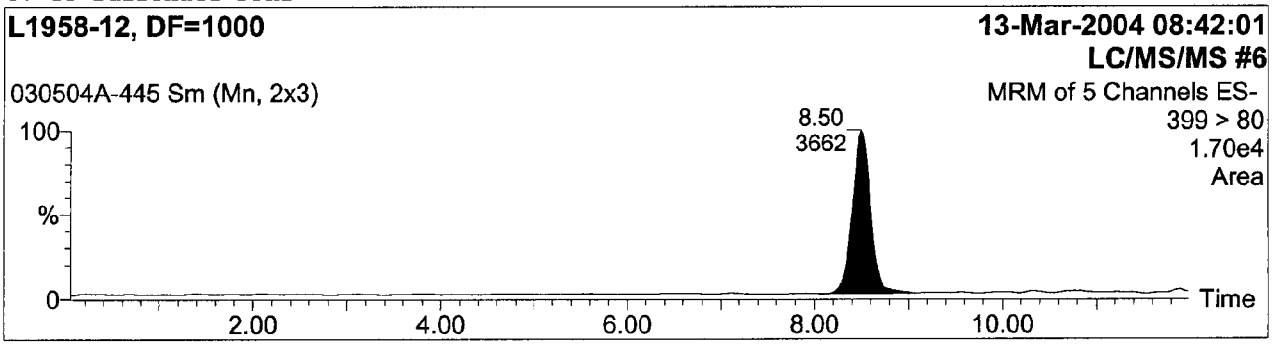
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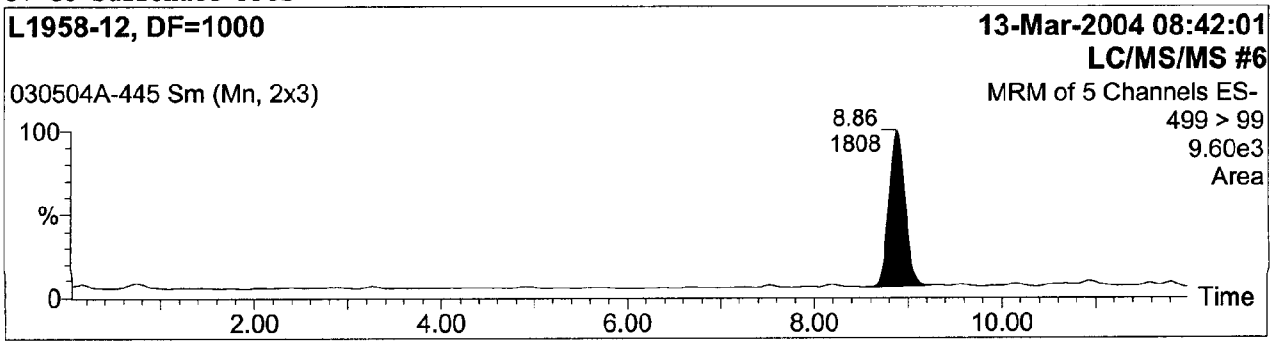
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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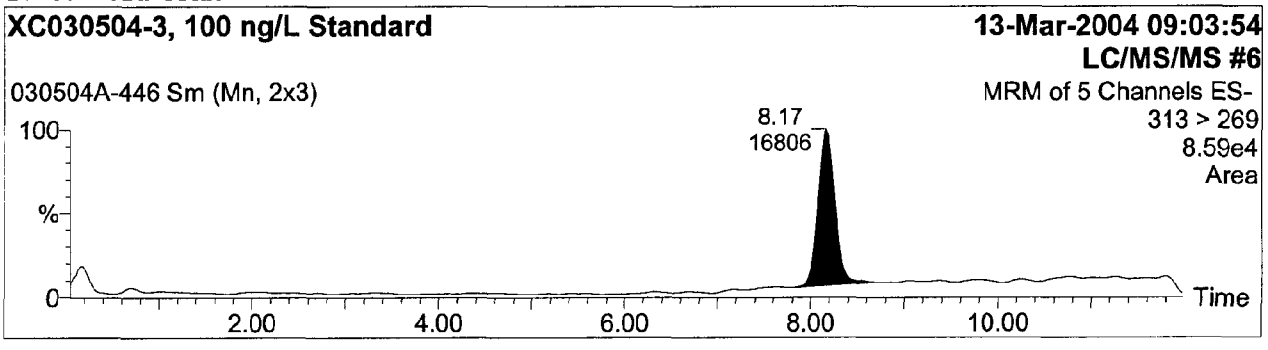
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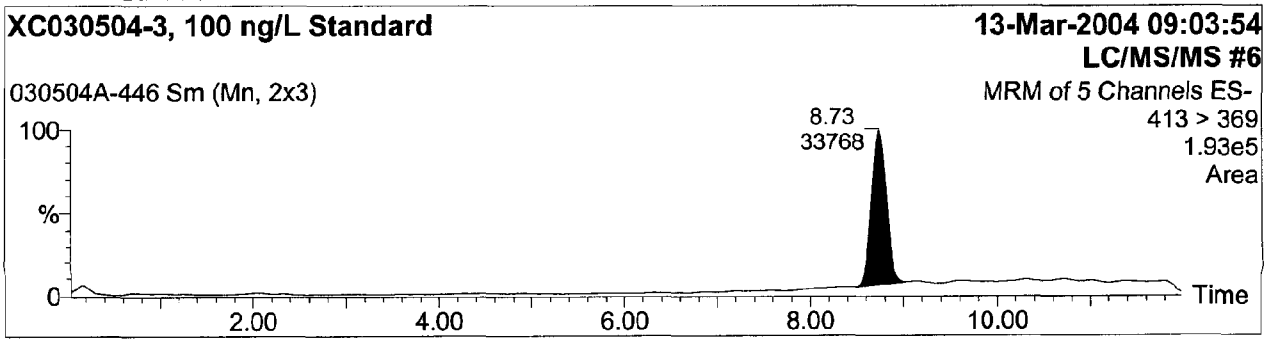
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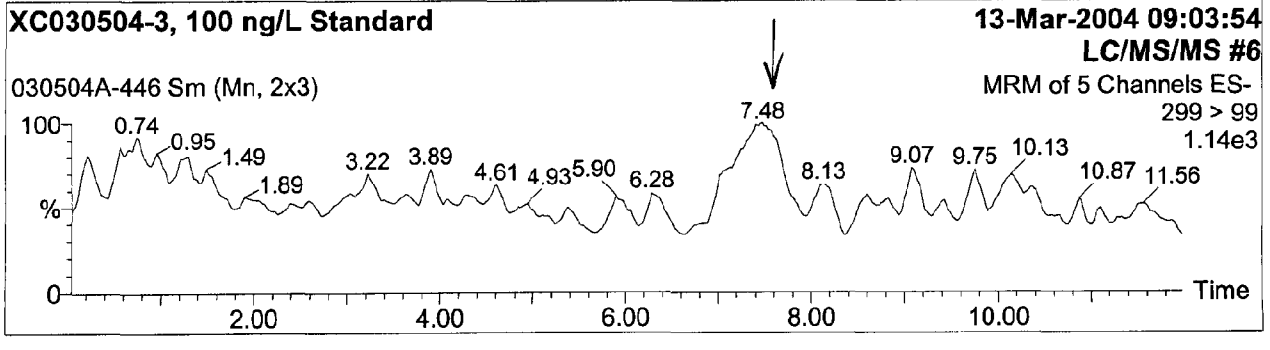
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



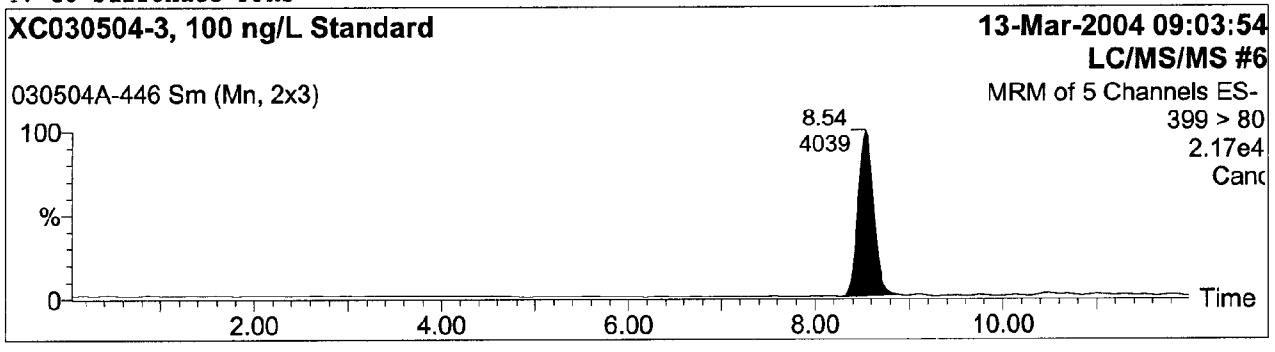
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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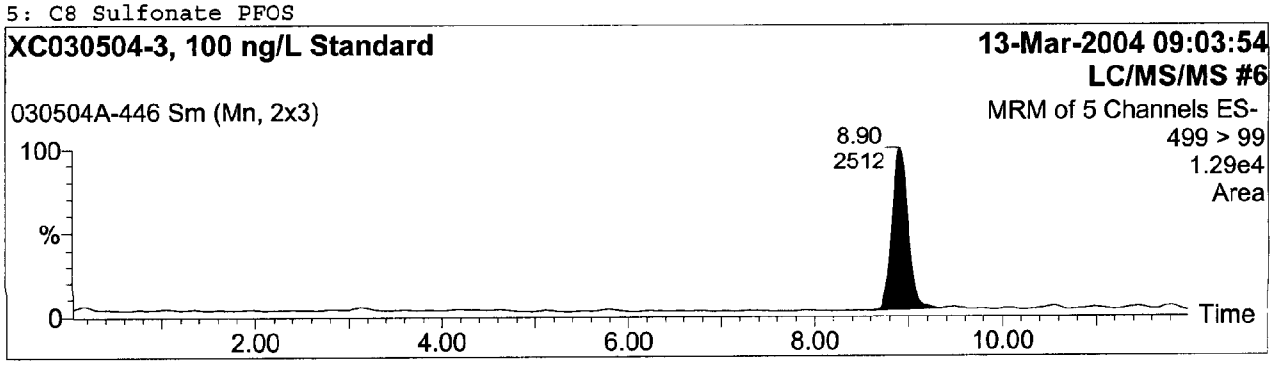
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

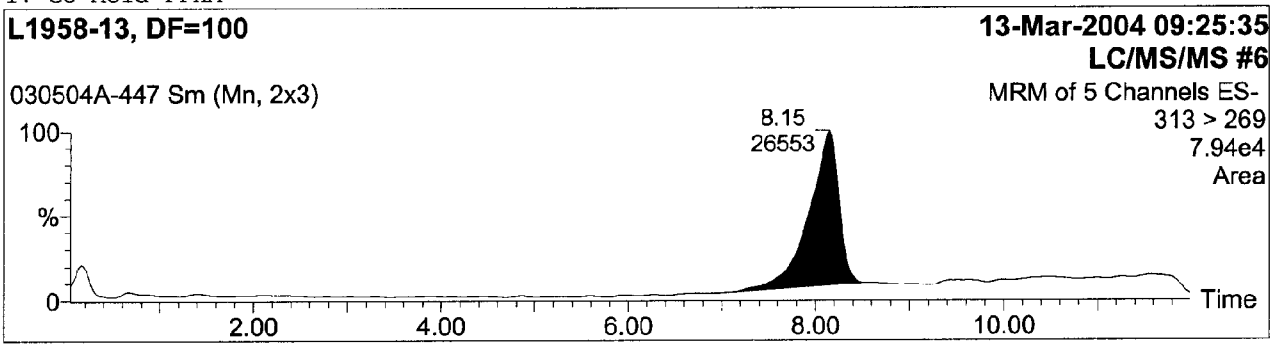
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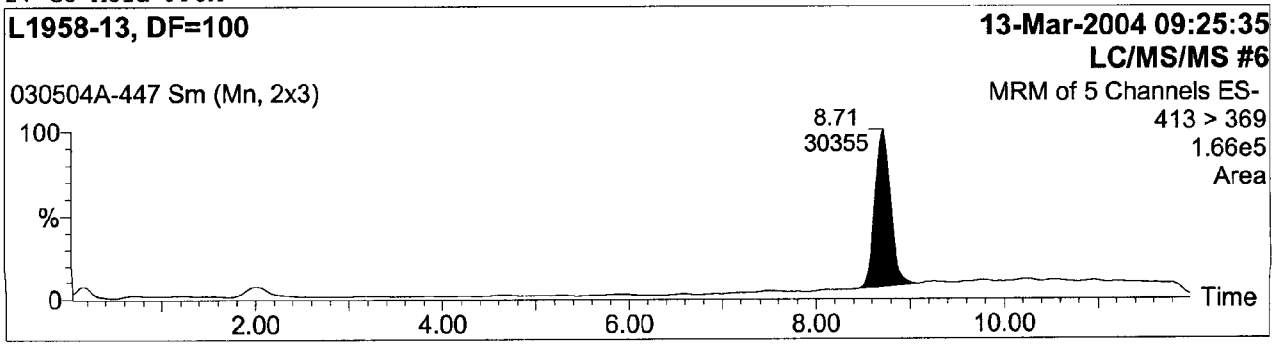
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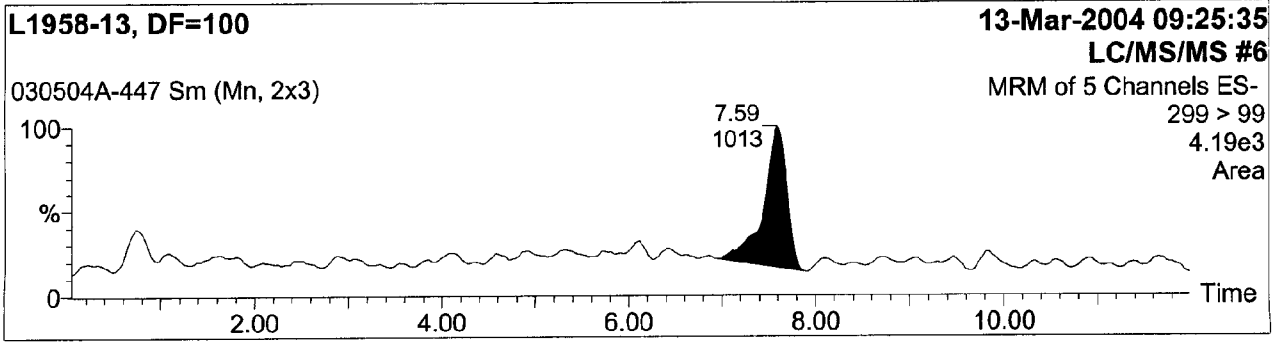
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

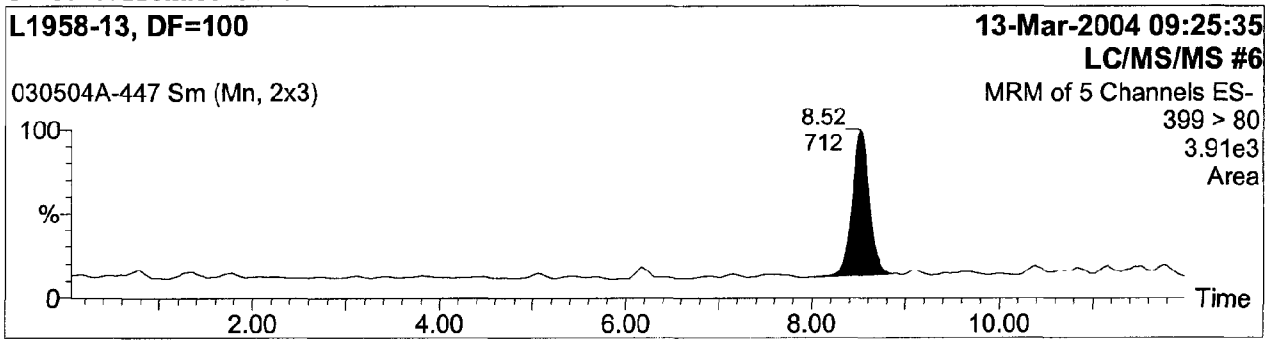
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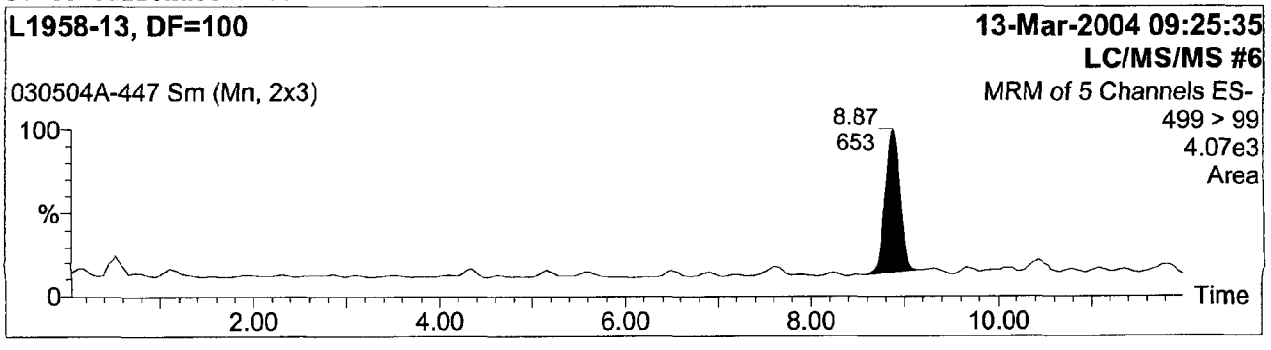
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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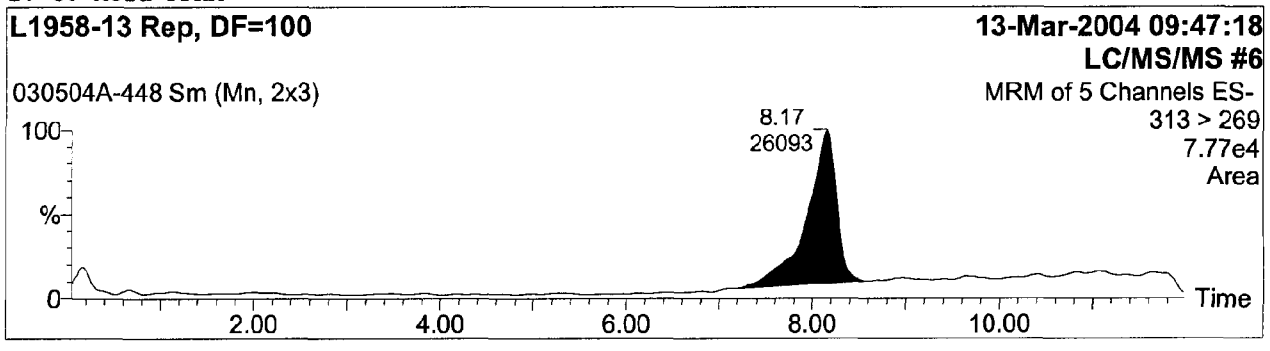
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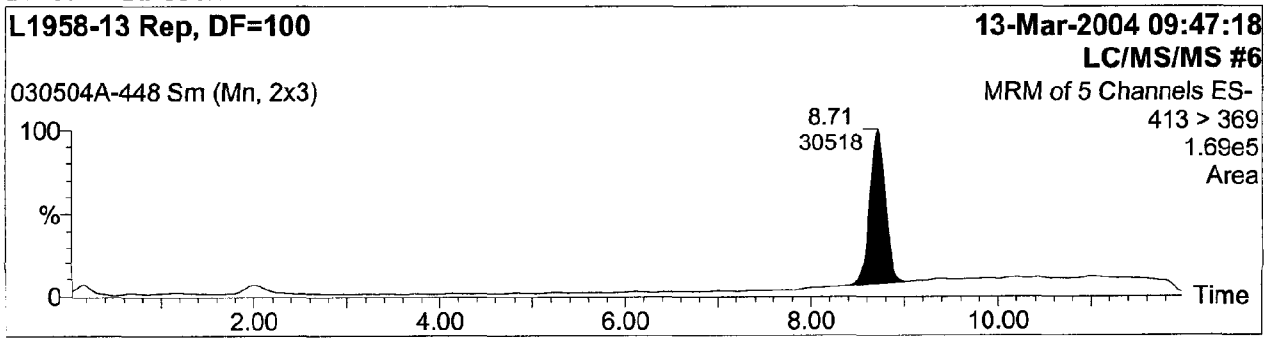
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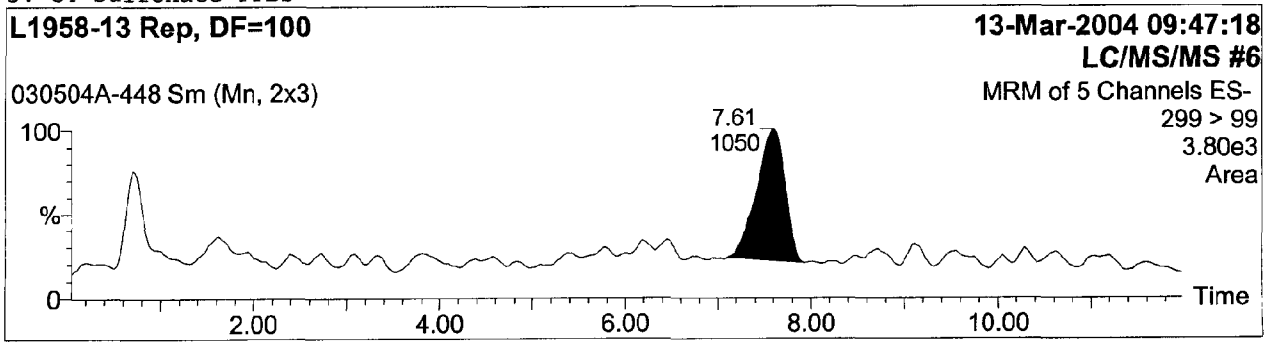
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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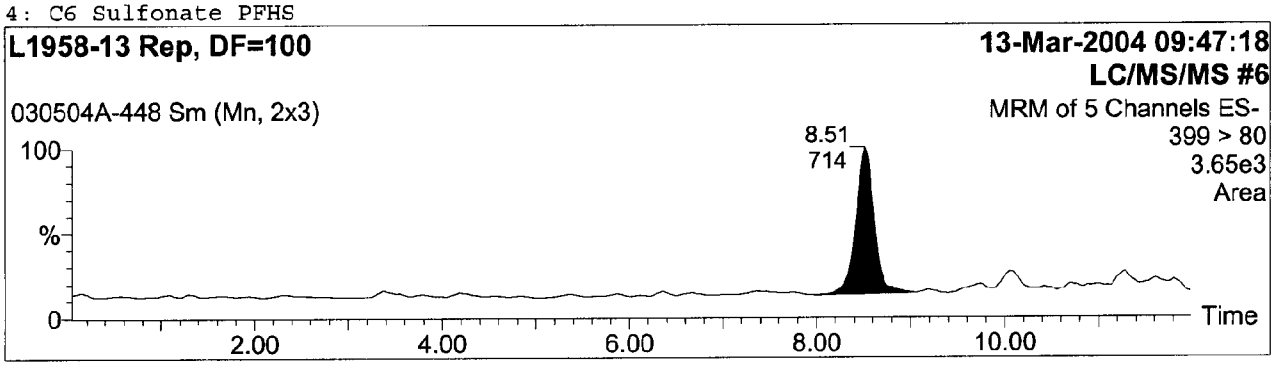
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Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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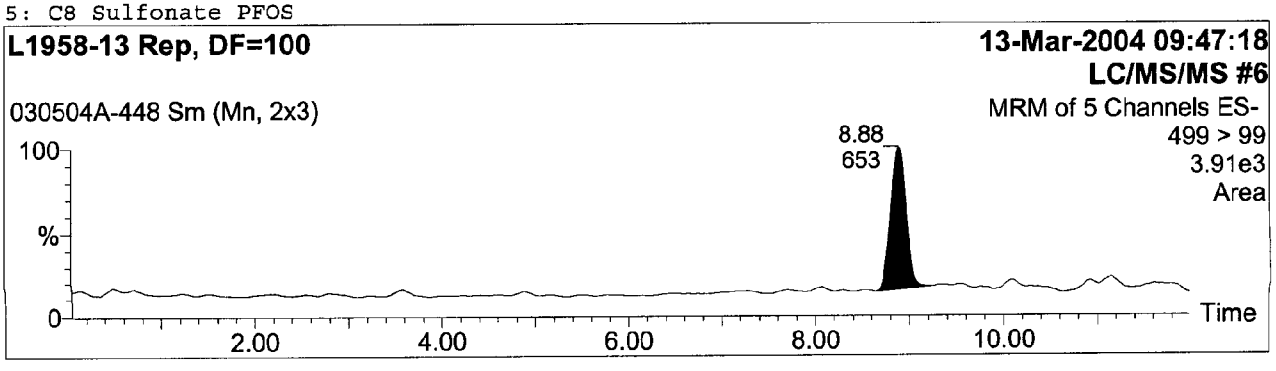
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



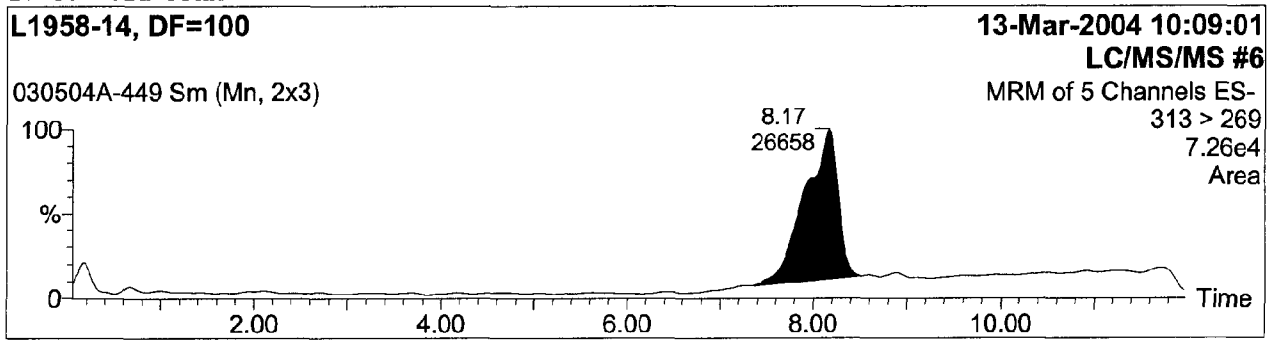
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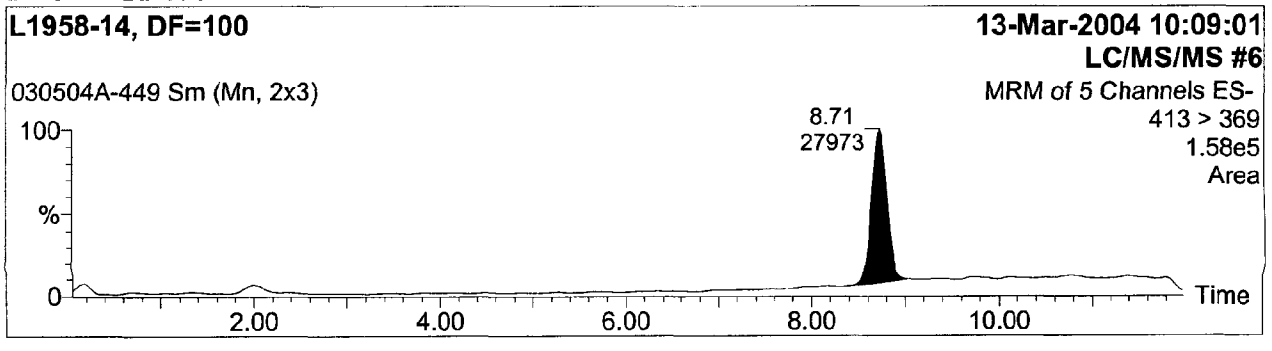
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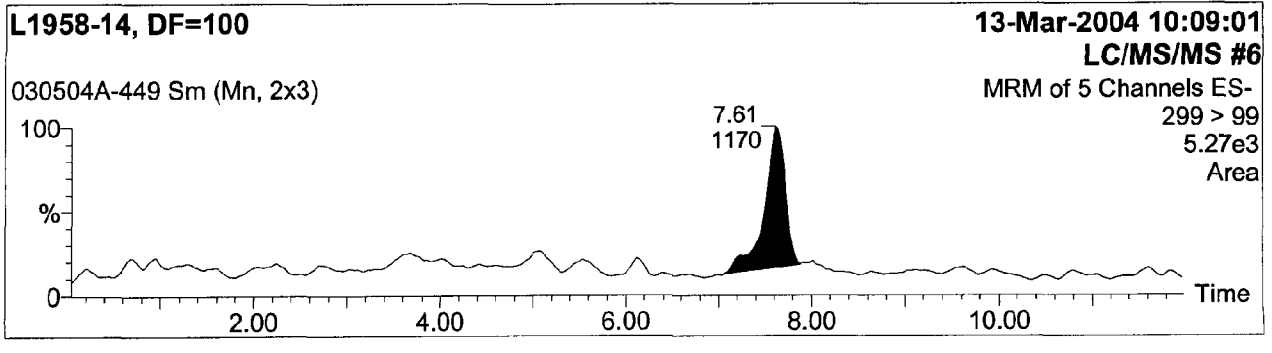
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



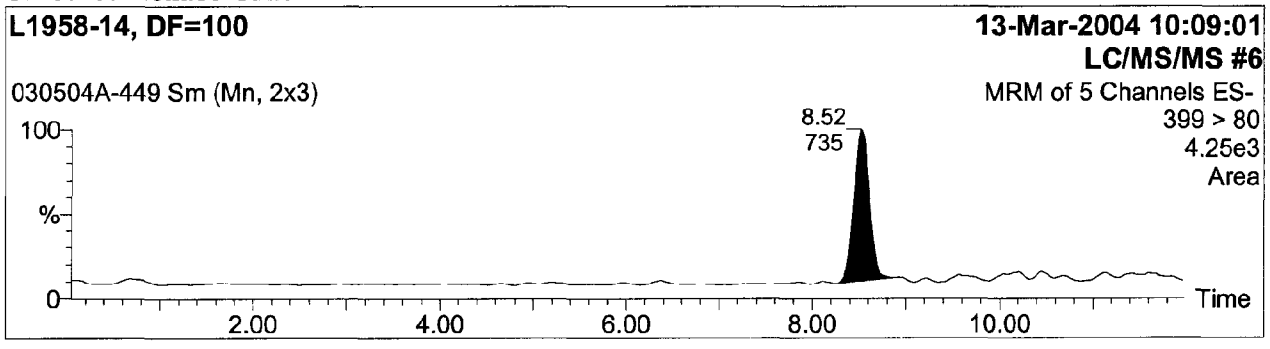
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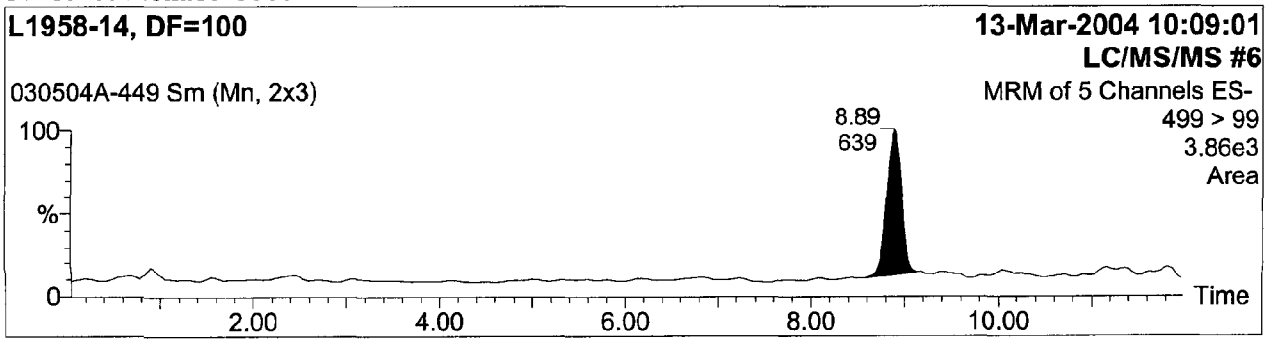
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



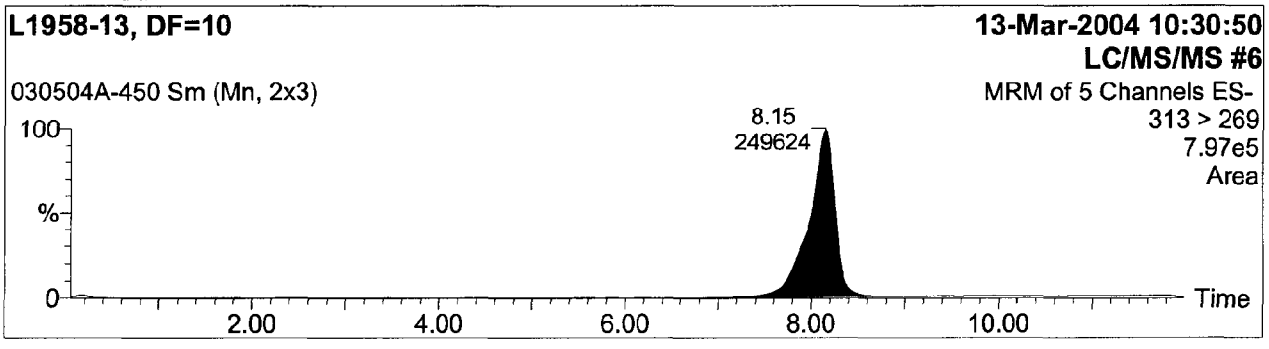
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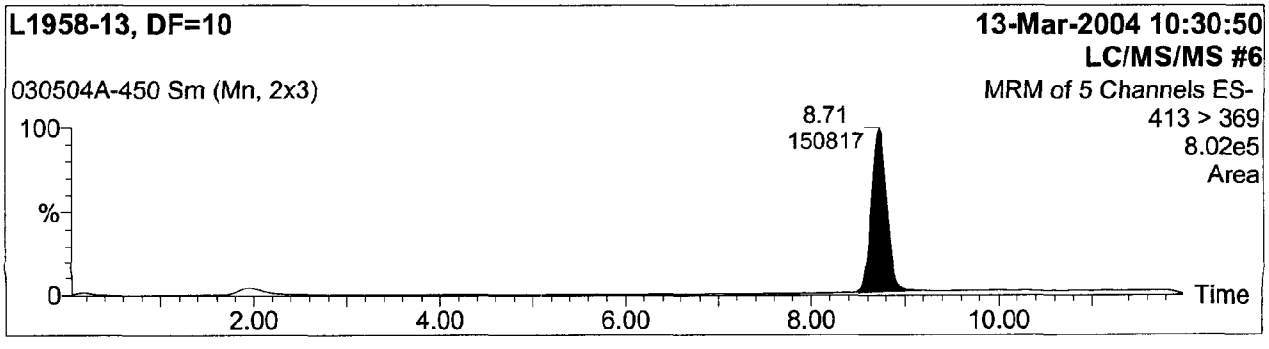
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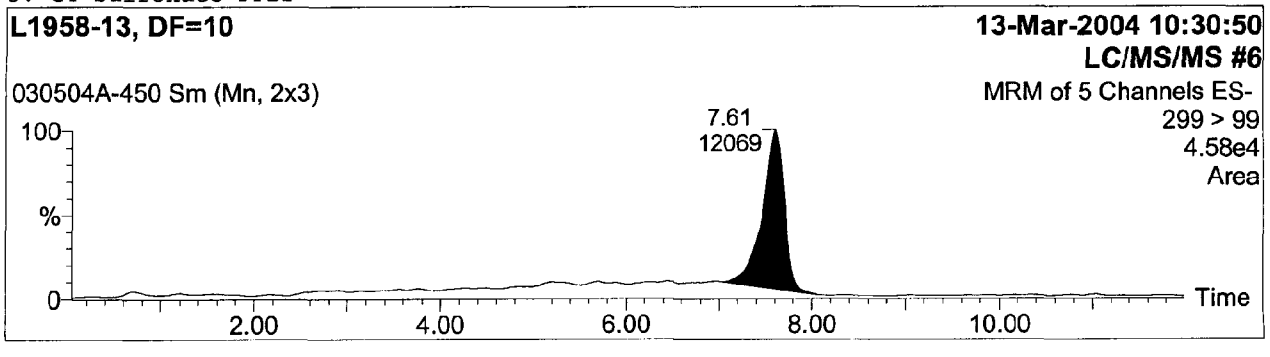
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



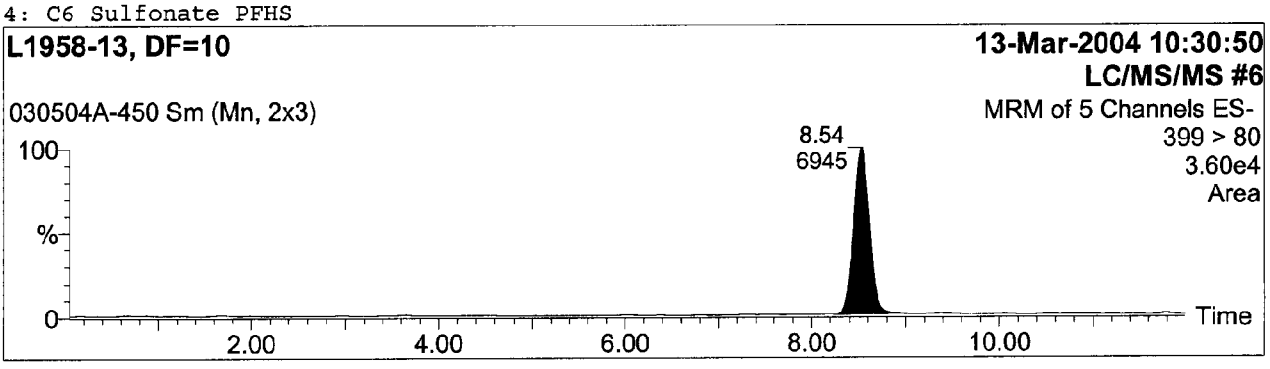
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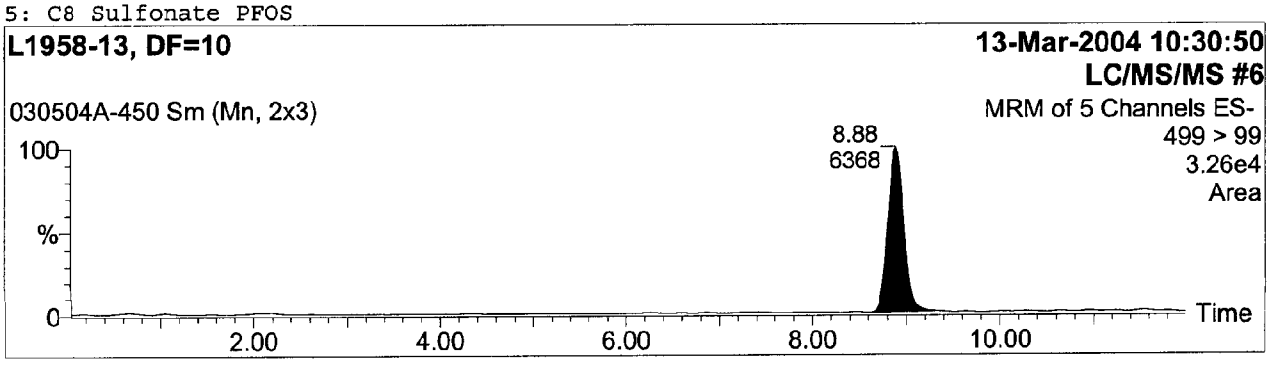
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

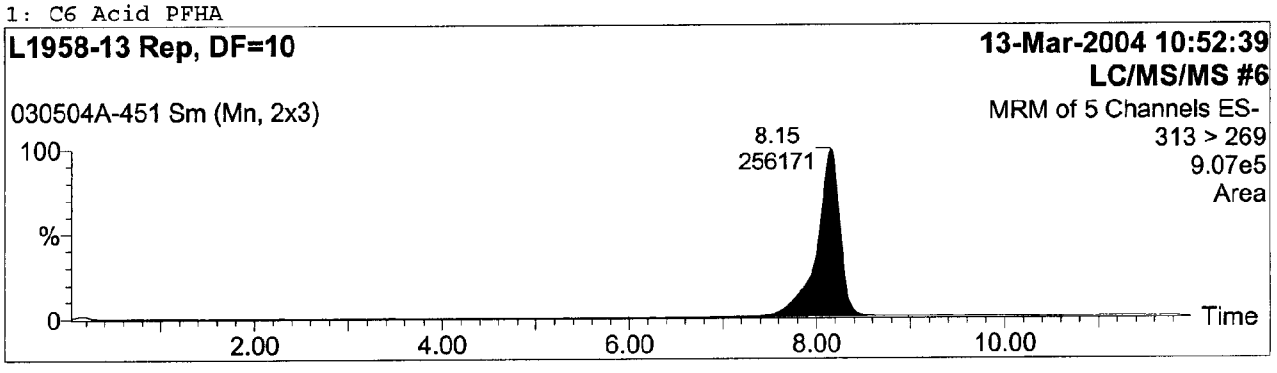
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Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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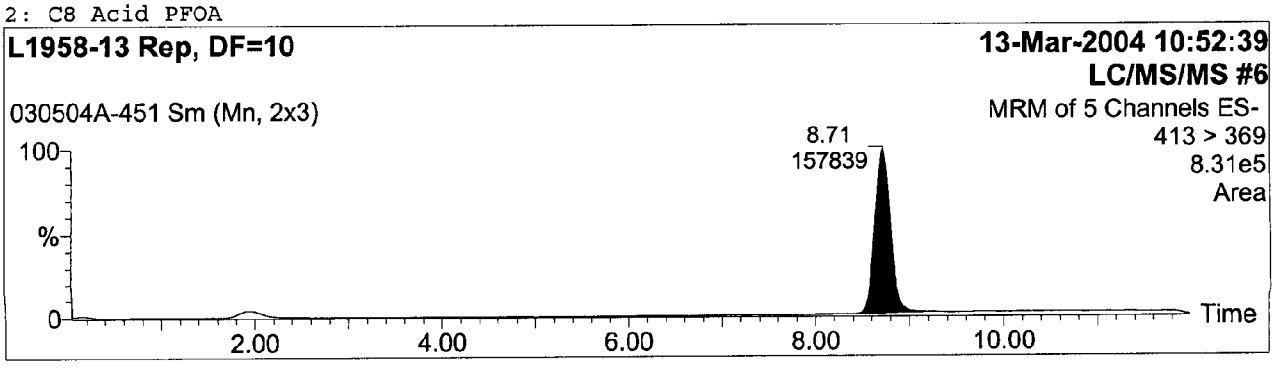
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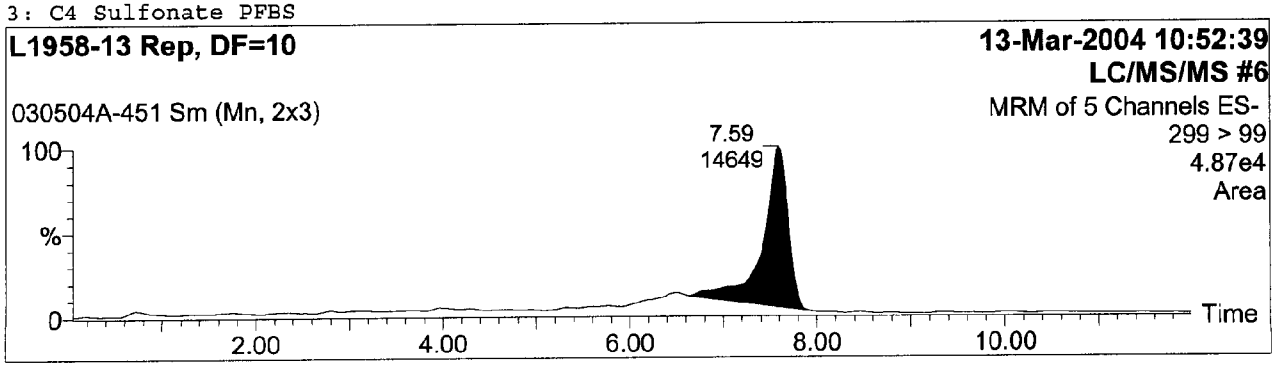
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

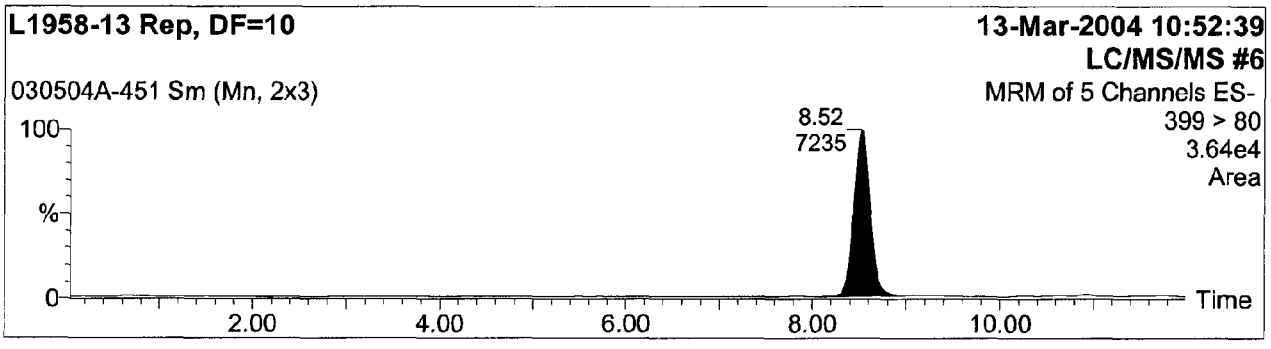
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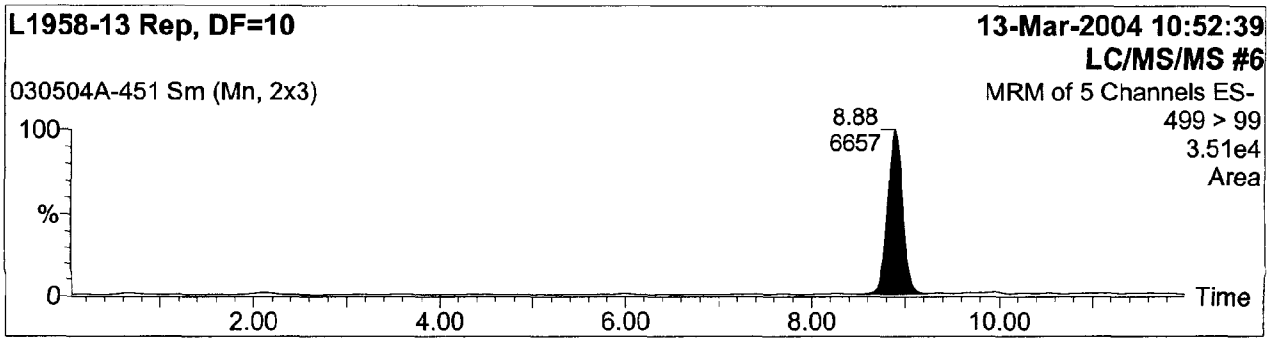
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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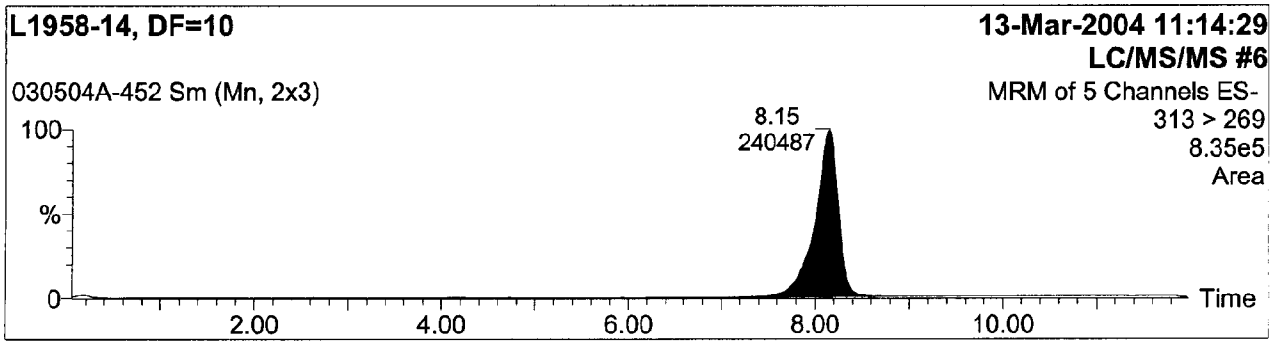
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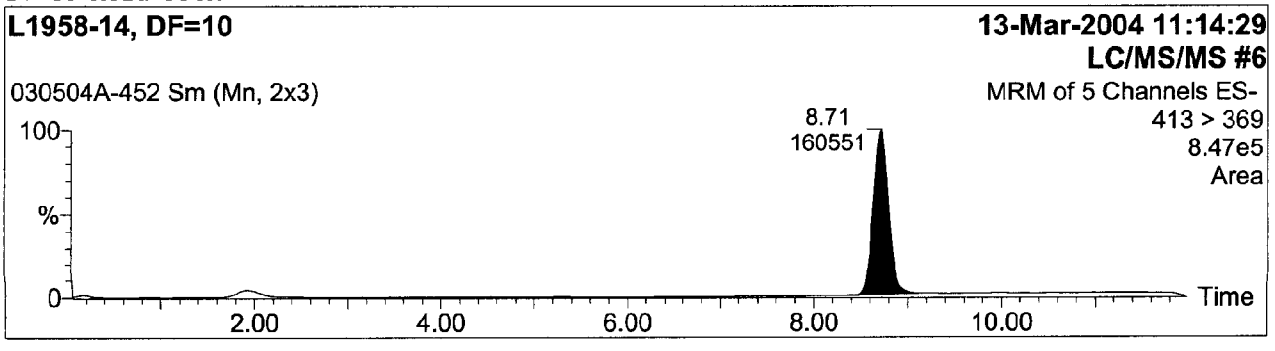
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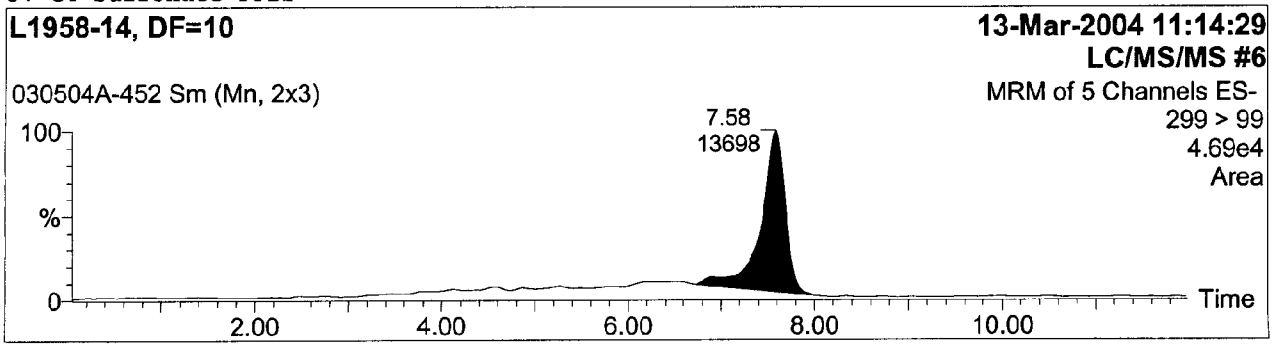
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



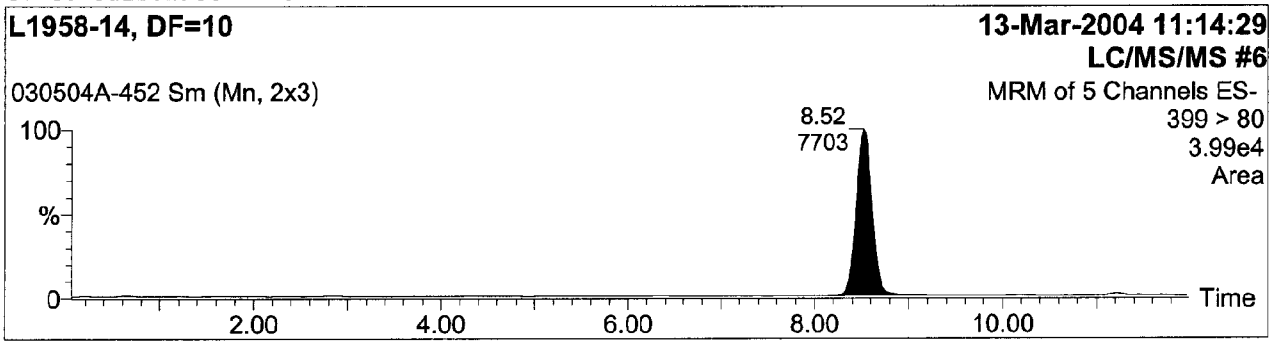
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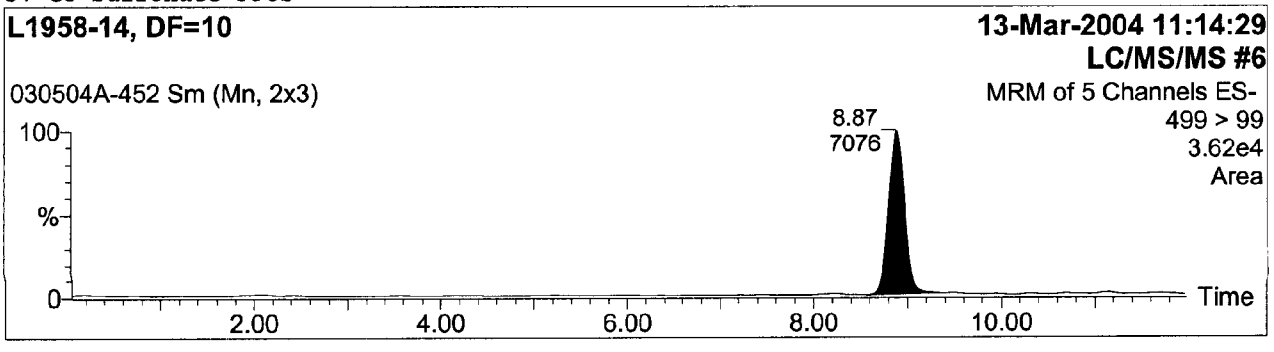
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



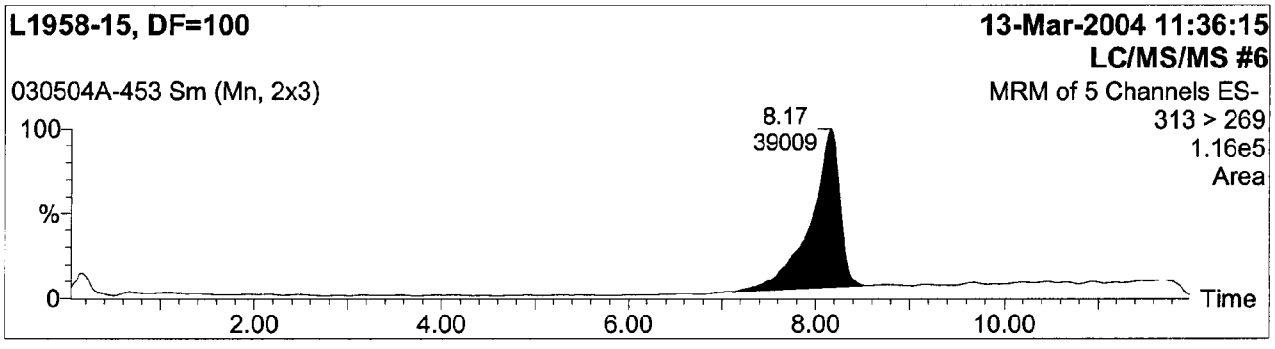
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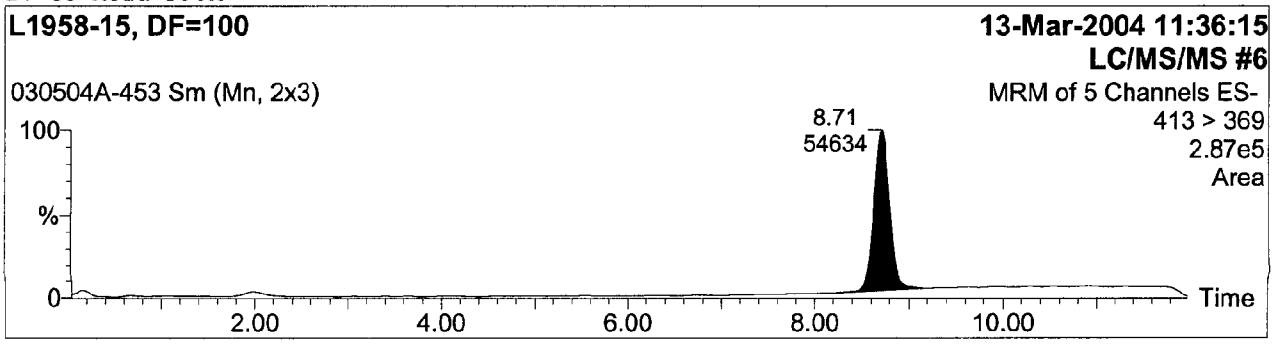
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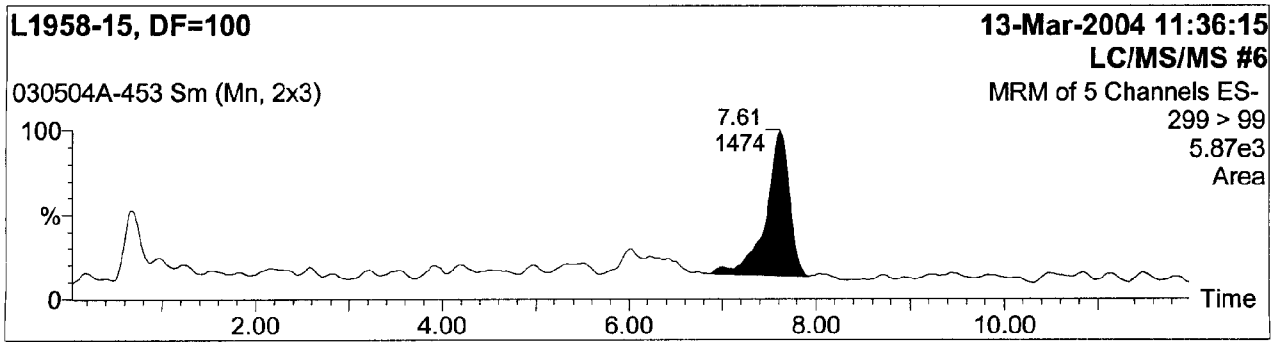
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

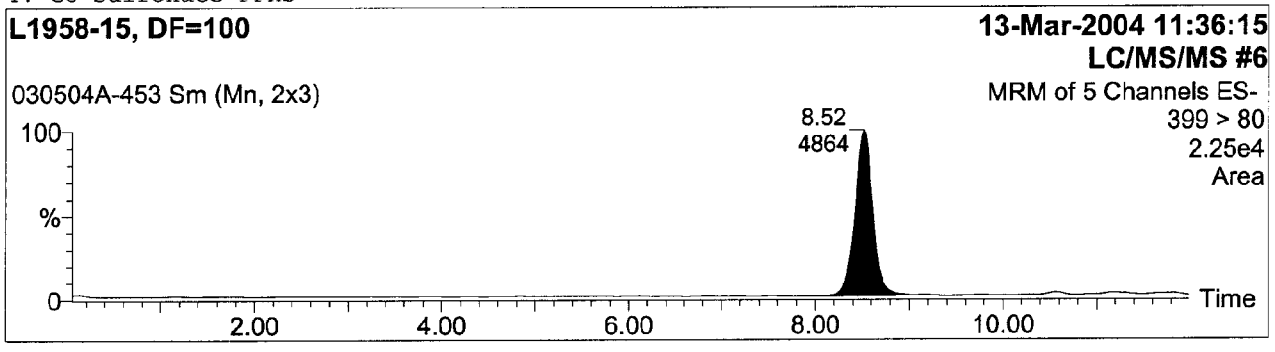
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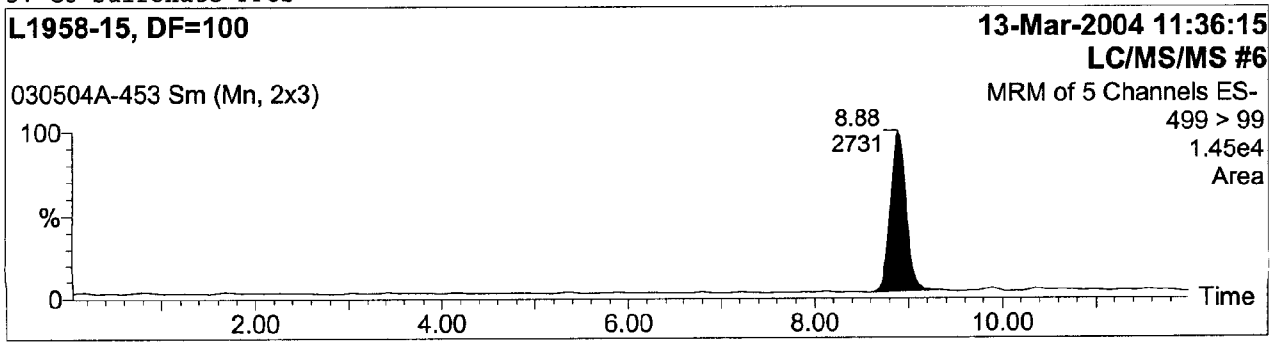
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

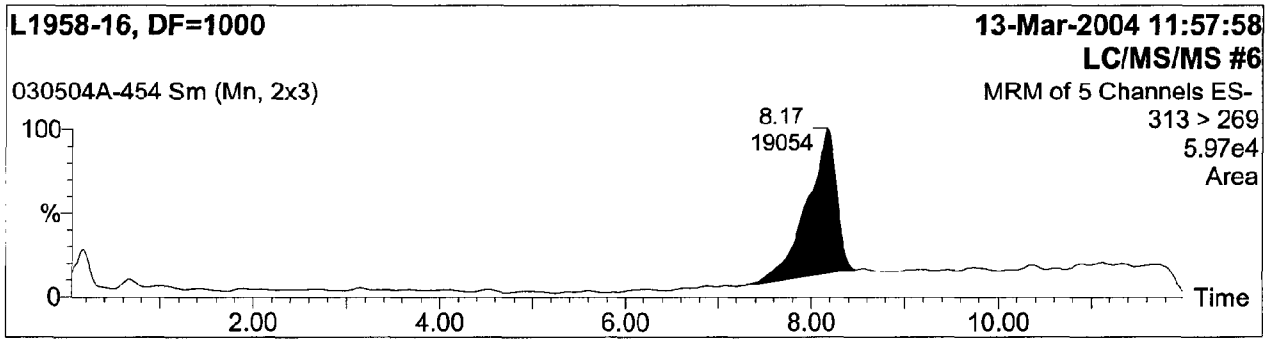
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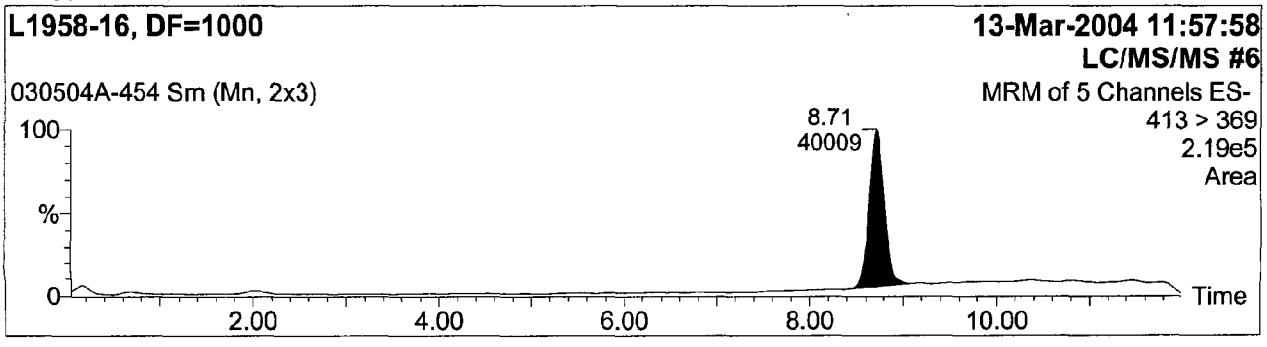
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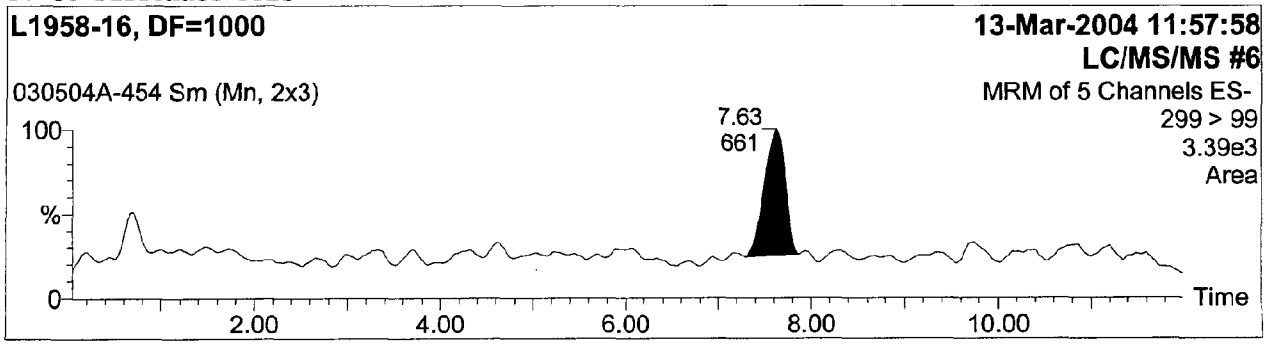
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



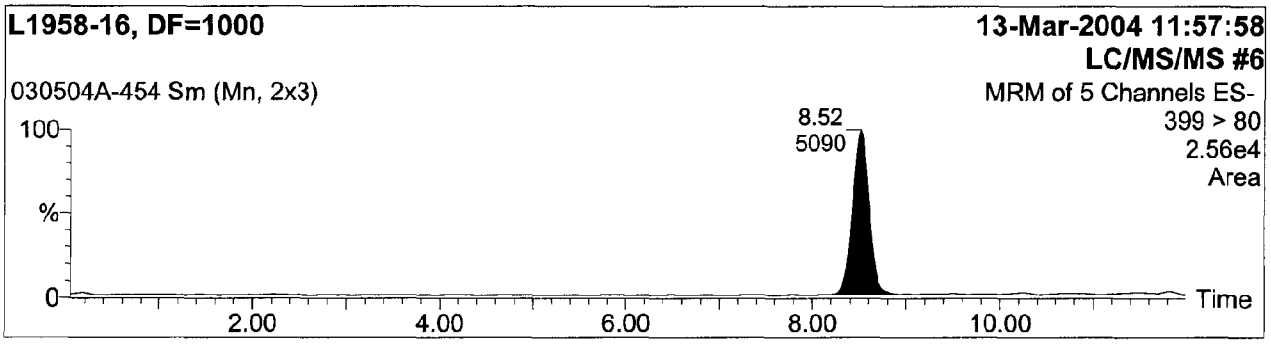
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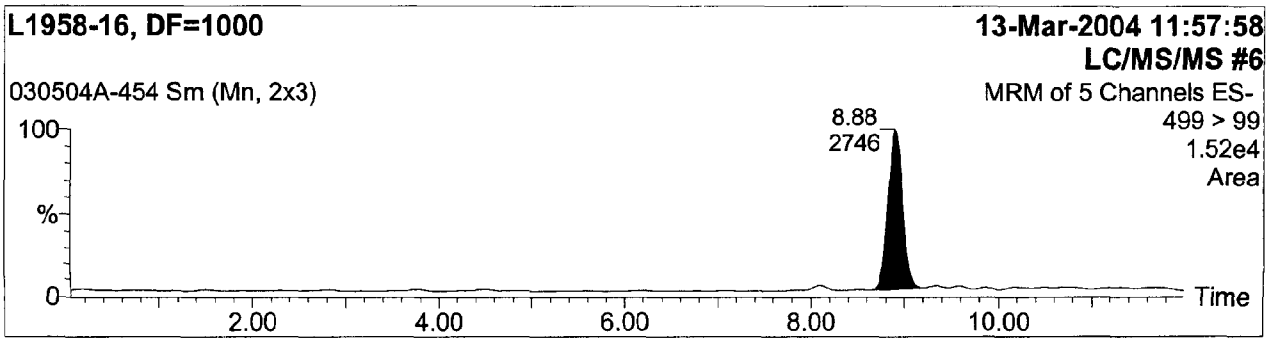
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



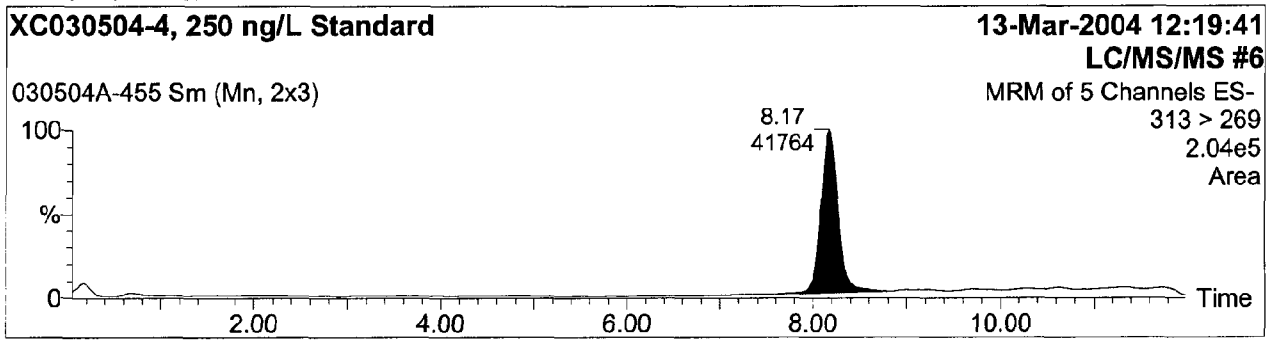
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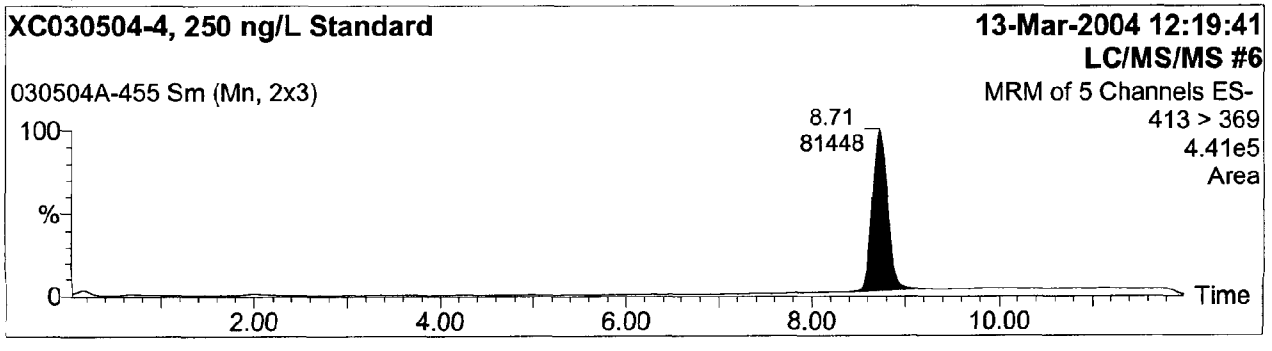
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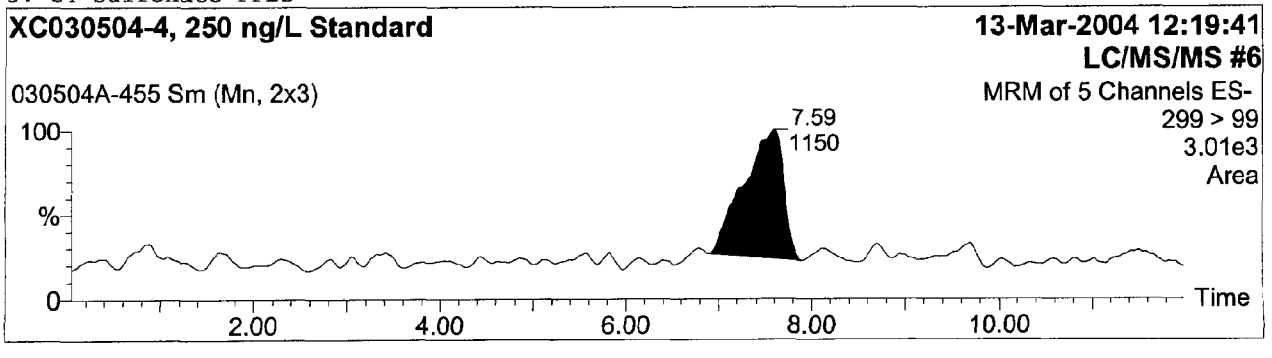
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



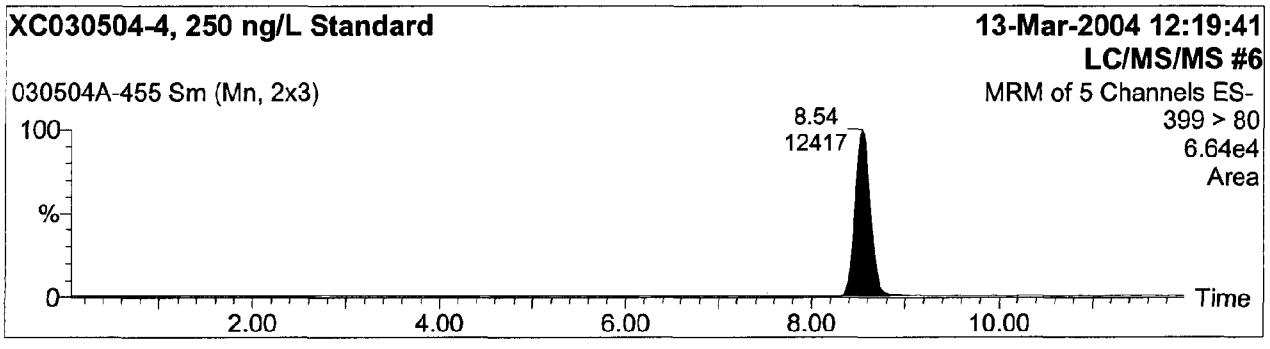
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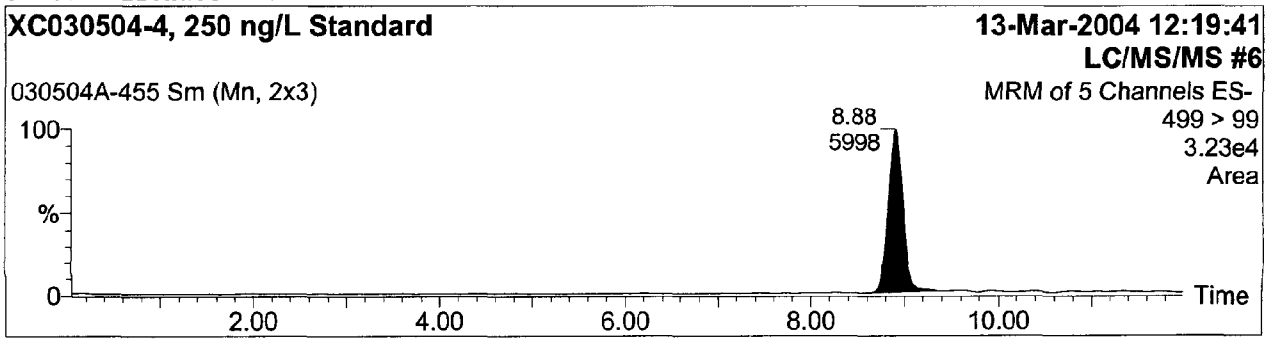
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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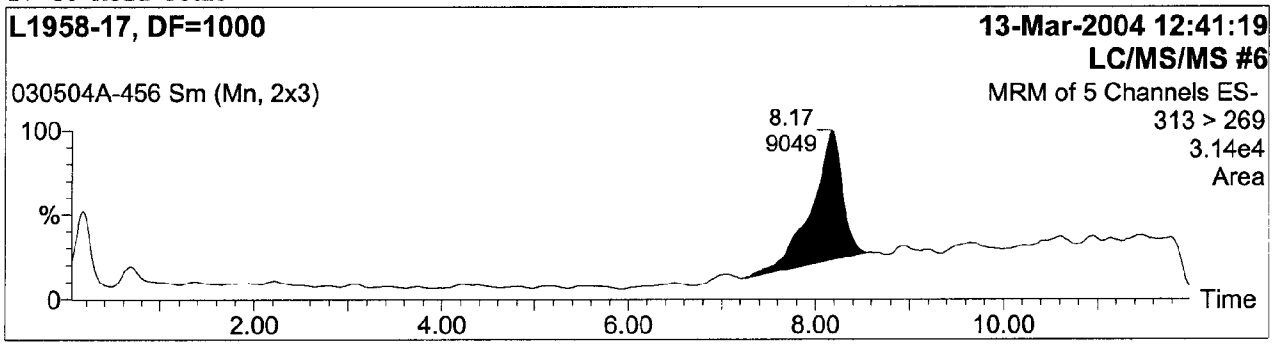
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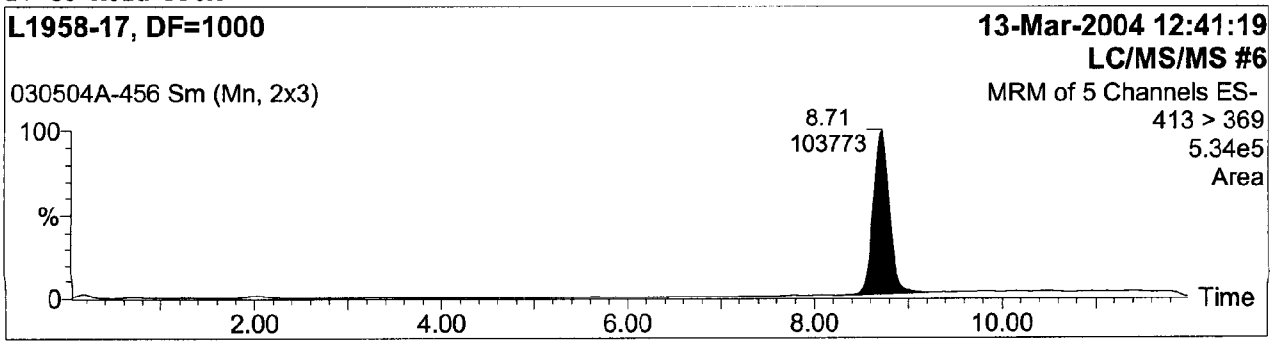
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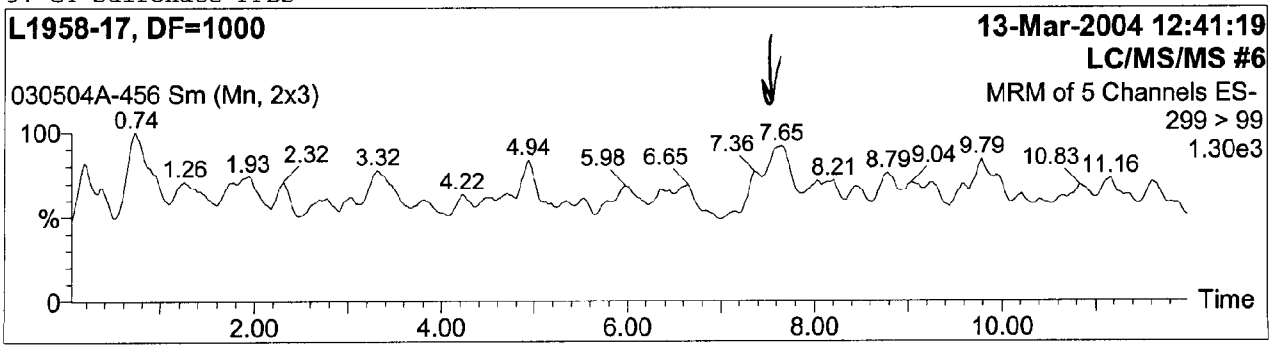
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



Exygen Research, 3058 Research Drive, State College, PA 16801

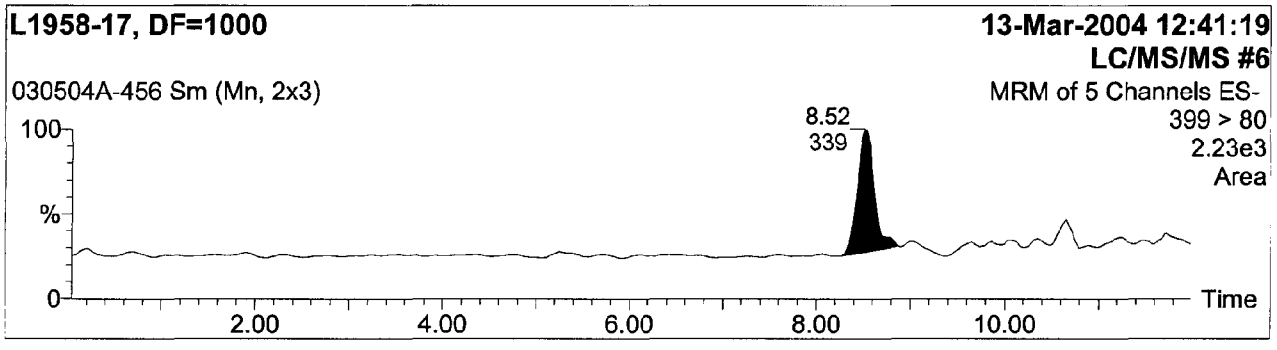
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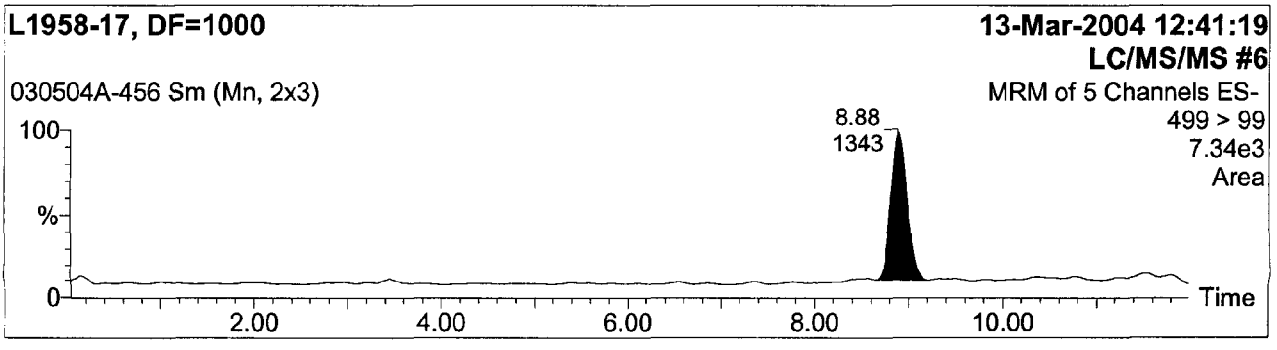
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



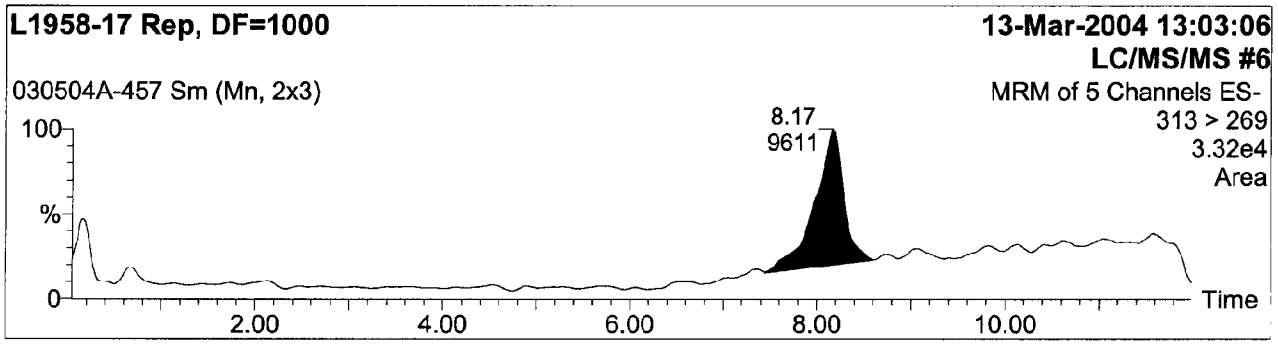
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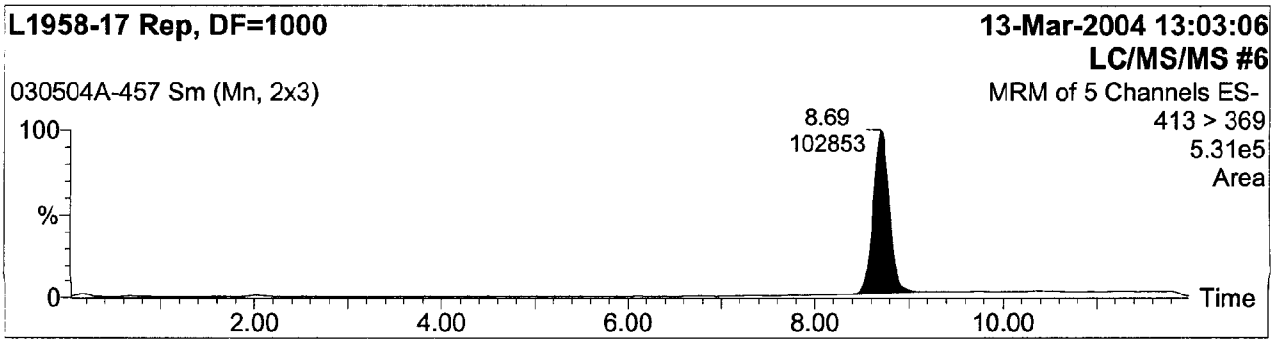
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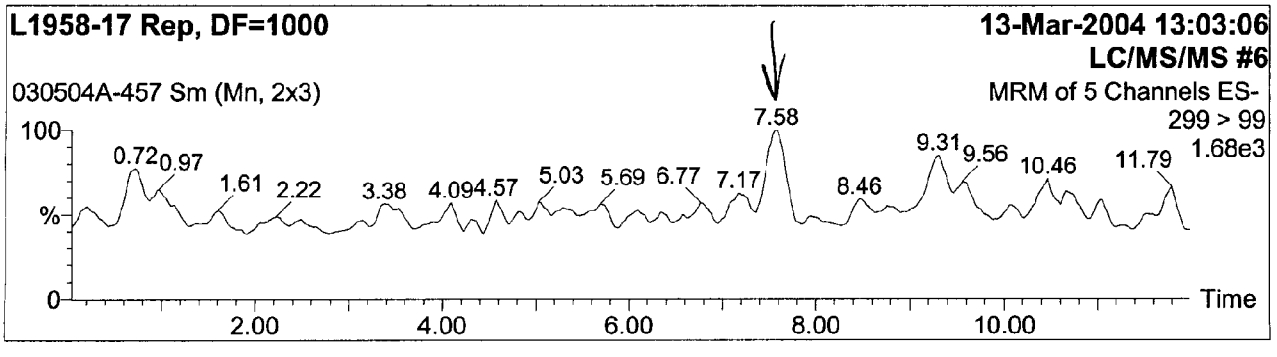
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

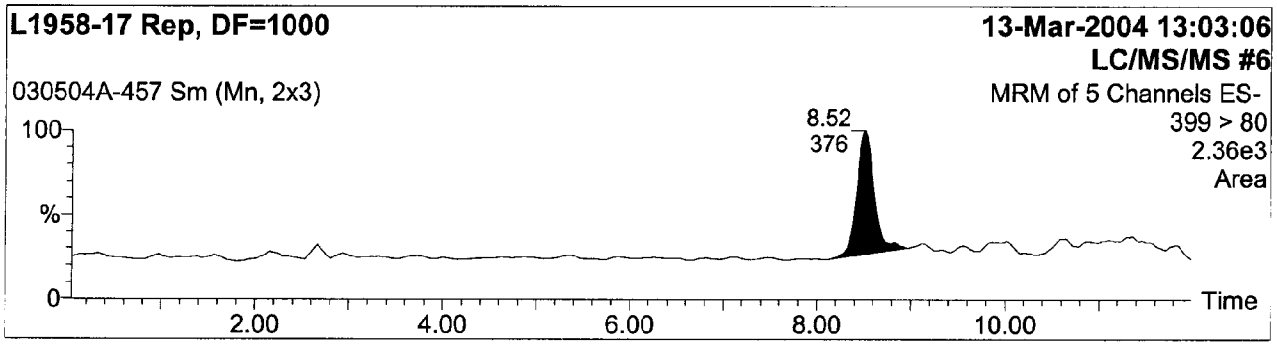
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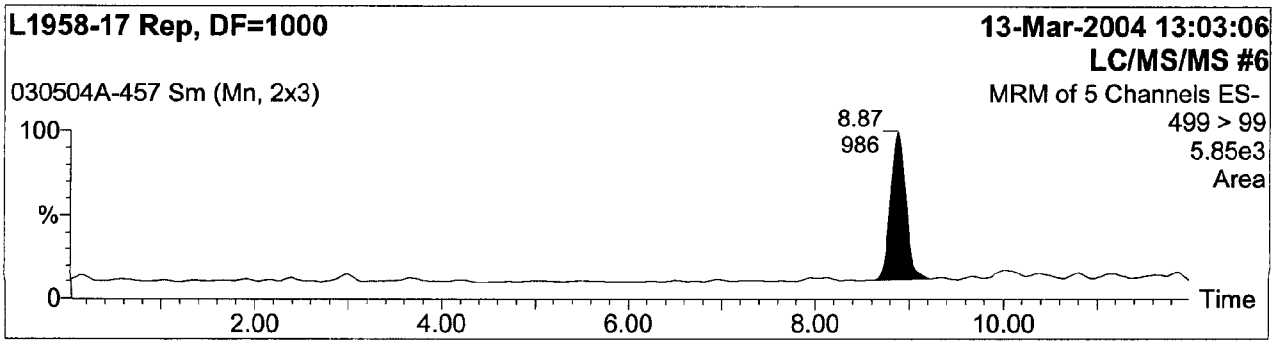
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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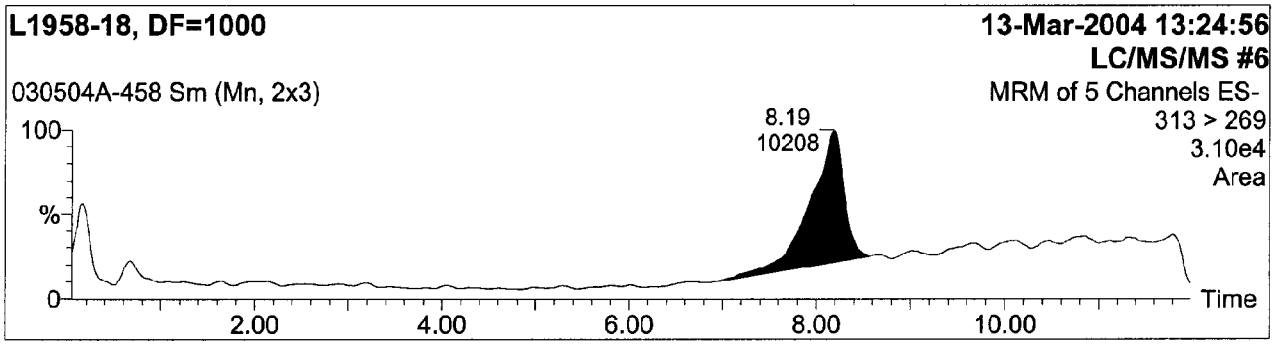
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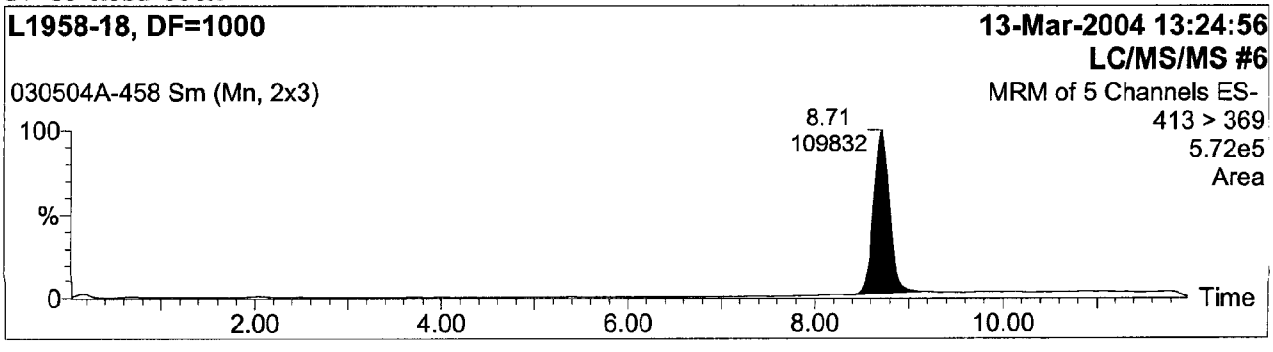
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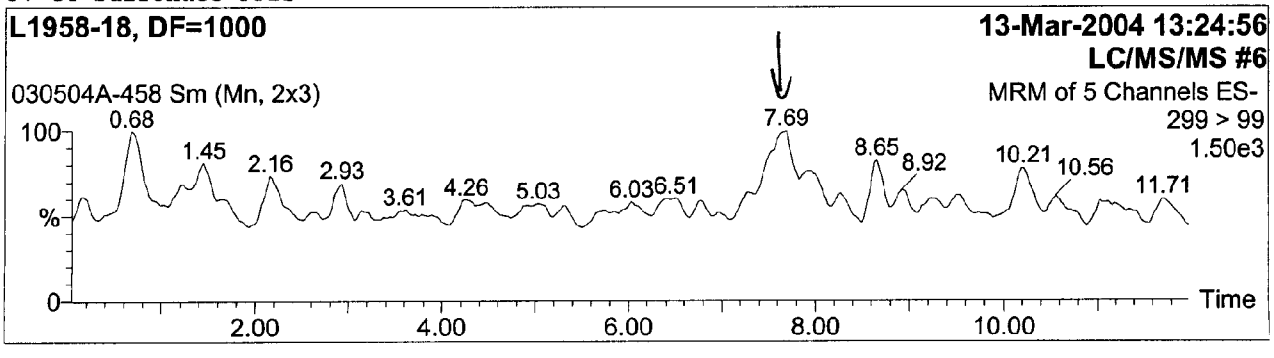
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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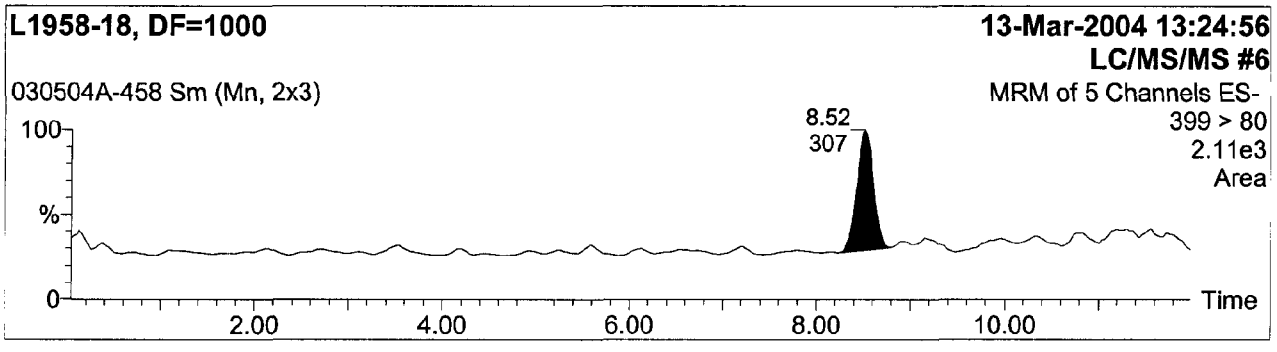
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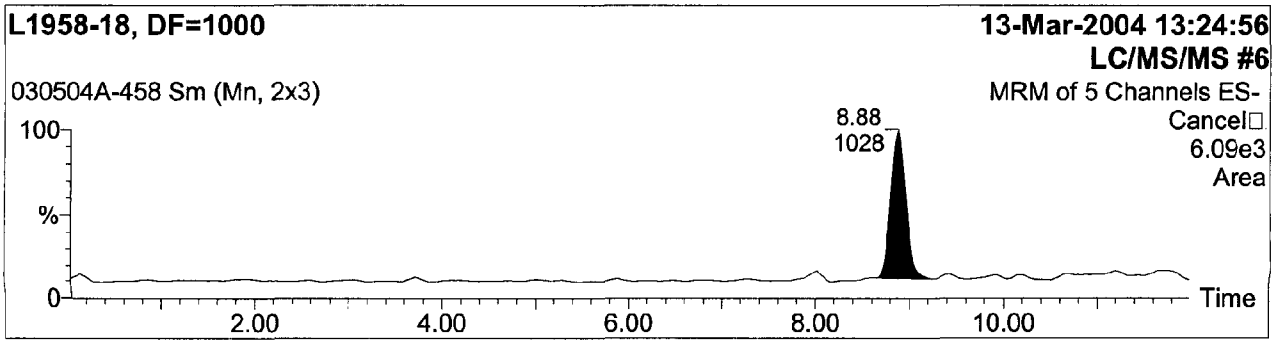
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



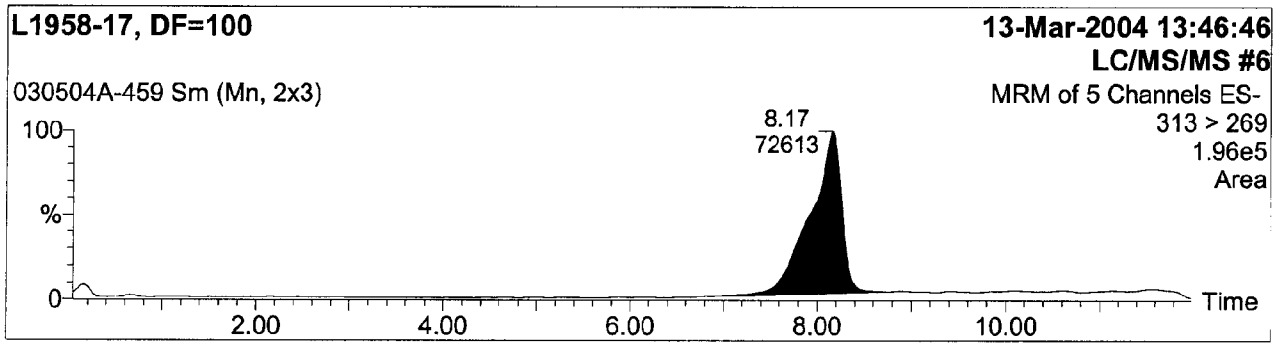
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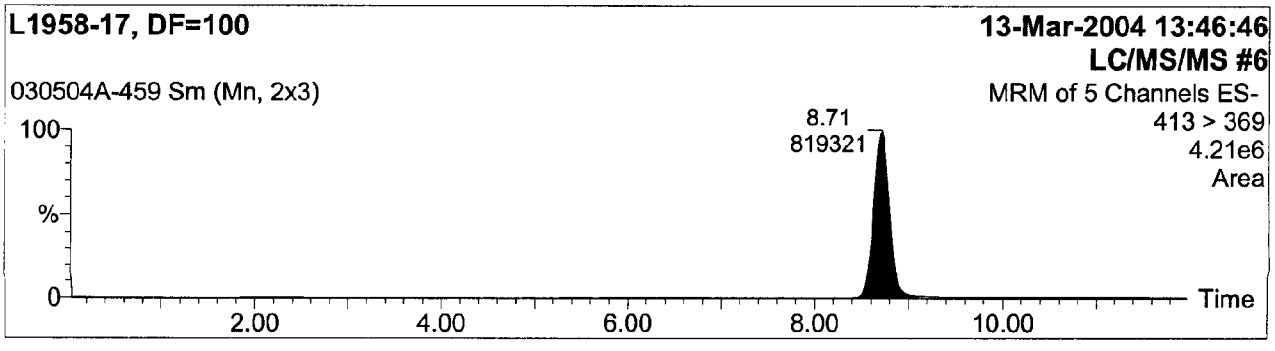
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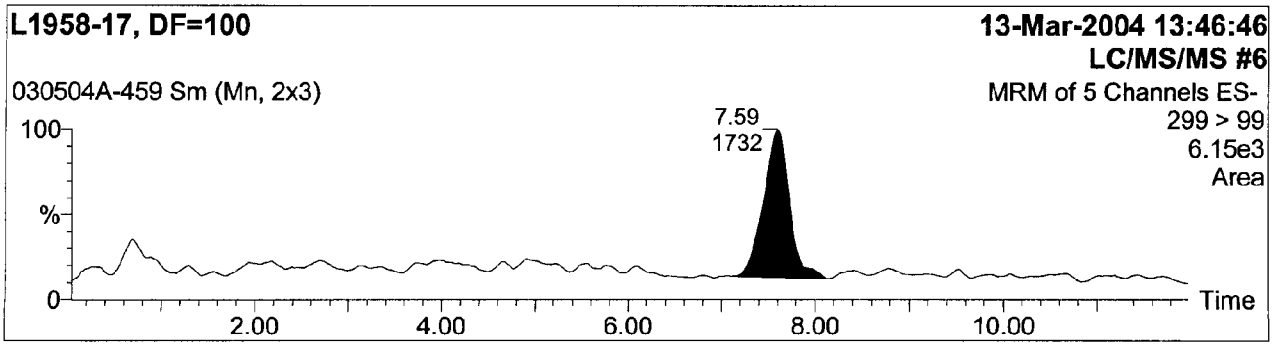
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



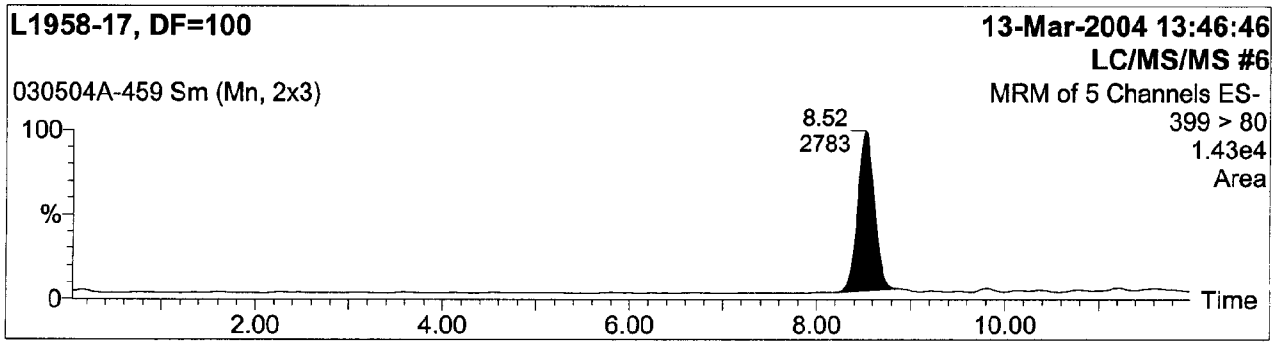
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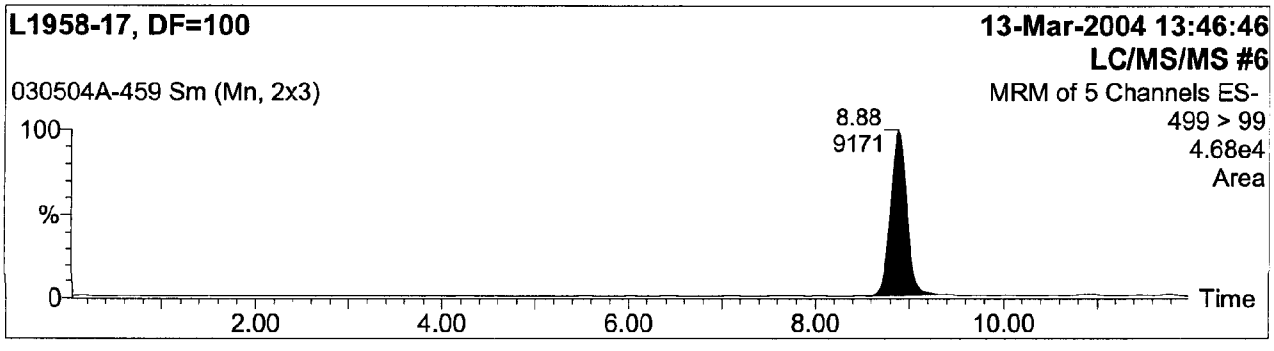
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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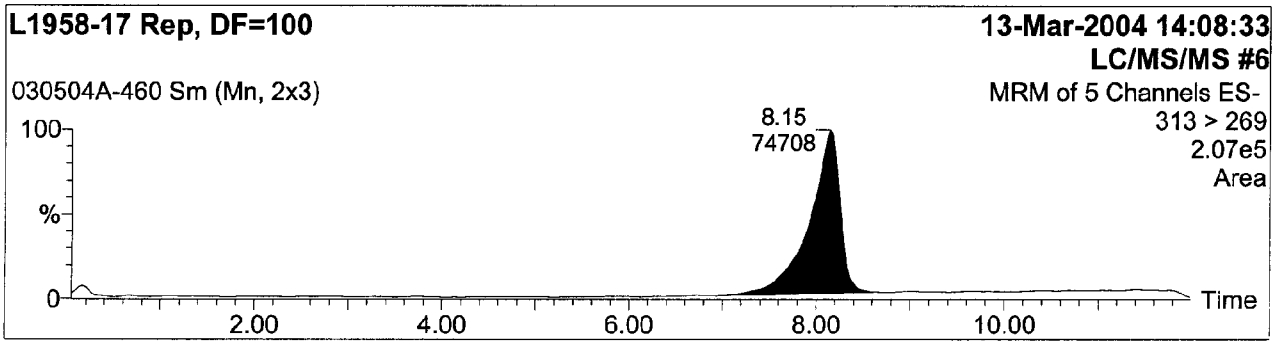
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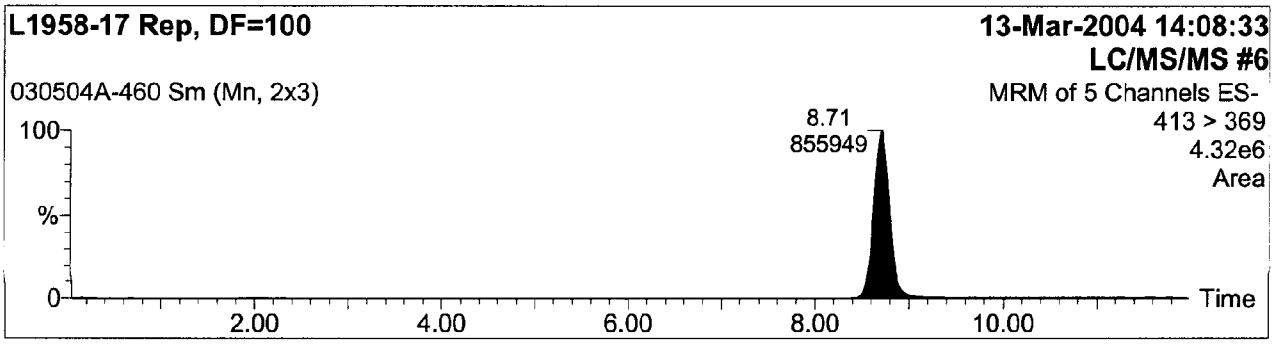
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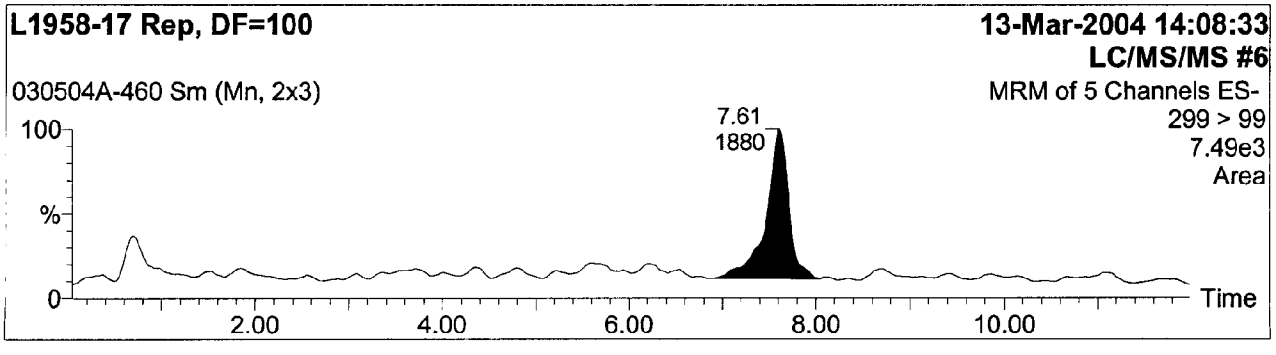
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

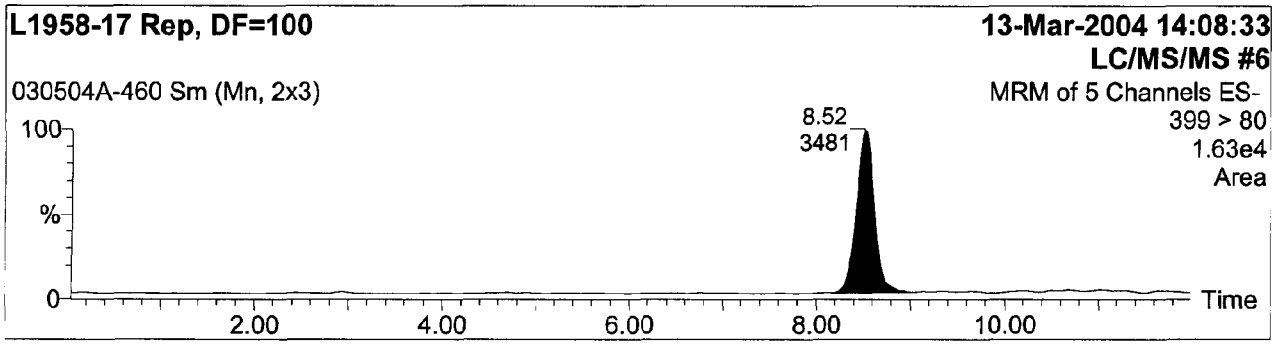
Study No.:L1958, Set No.:030504A, Ext.Date:03/05/04, Analyst:K.Risha

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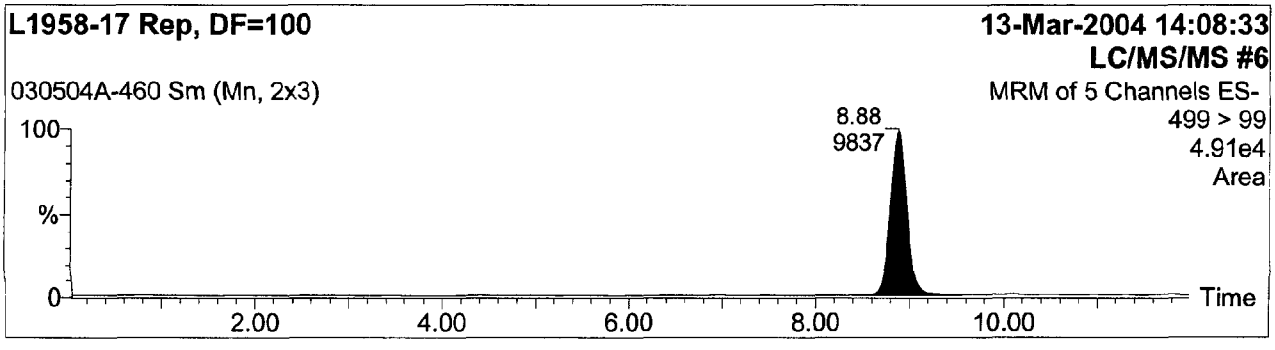
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Name: 030504A-460
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

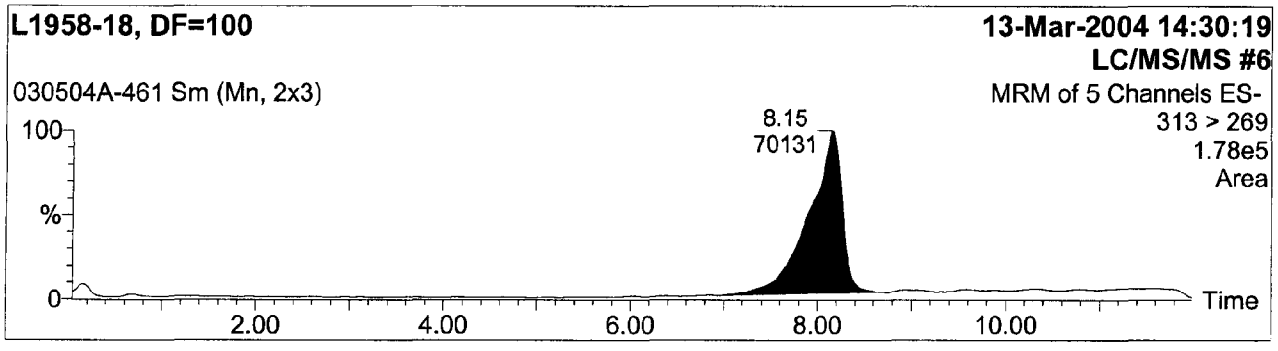
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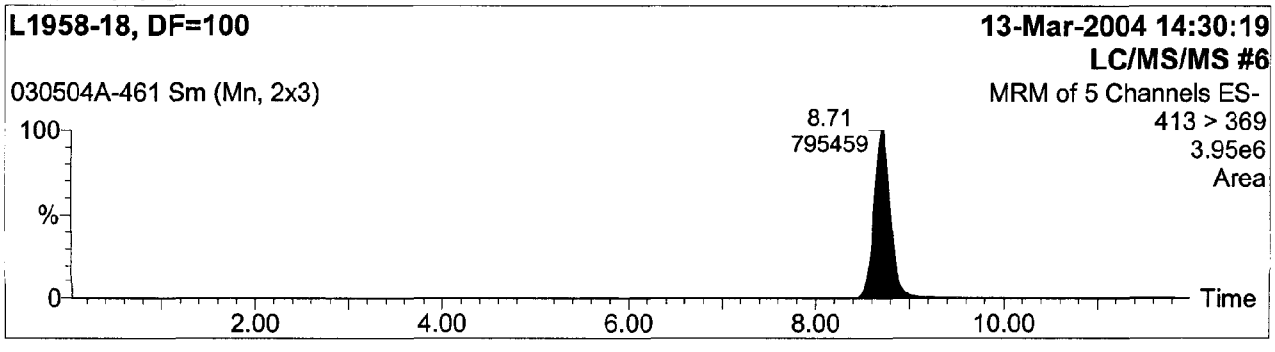
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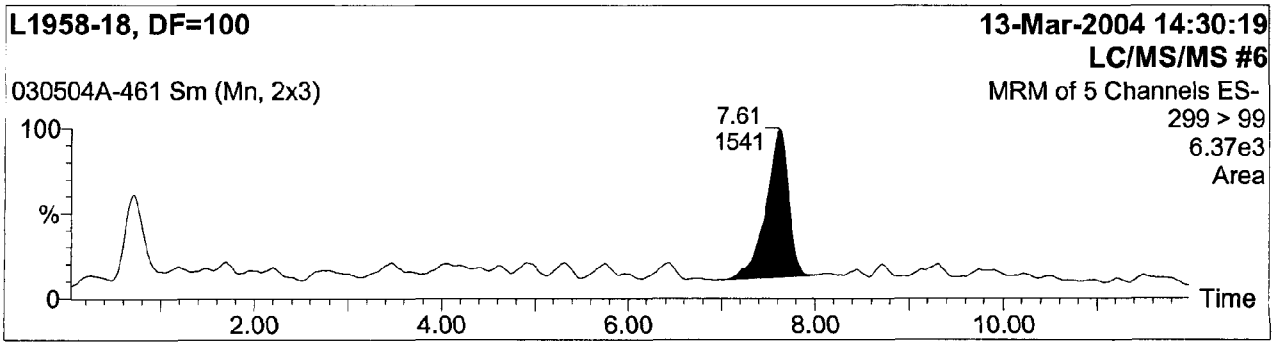
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



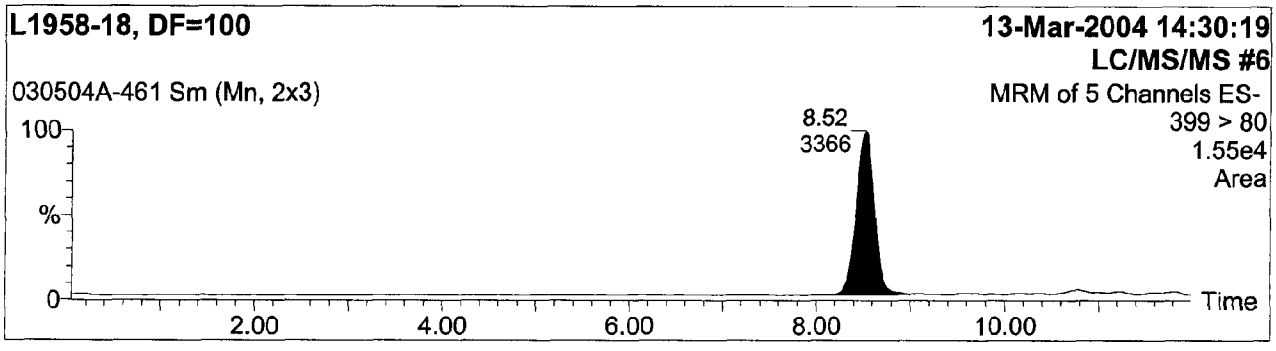
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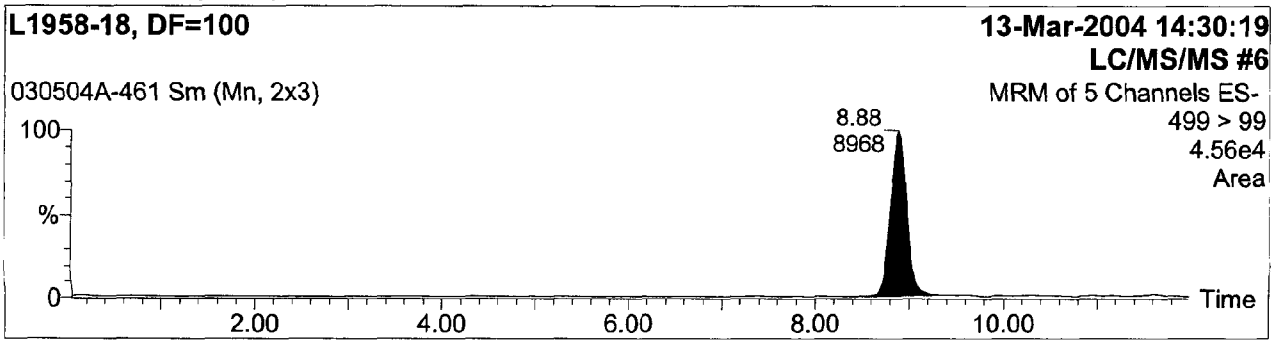
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

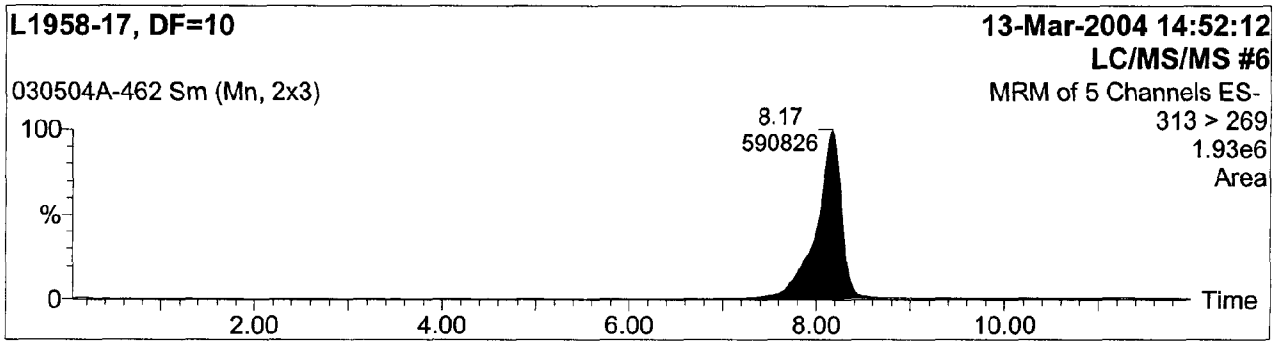
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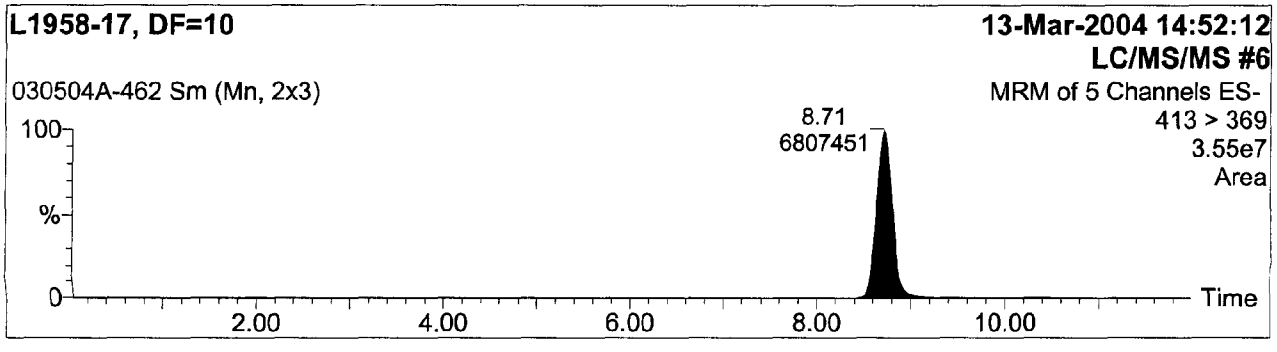
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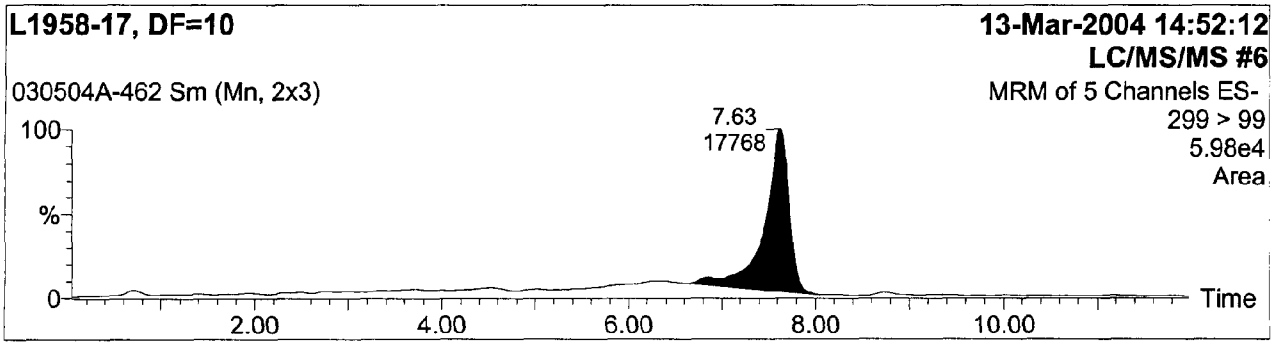
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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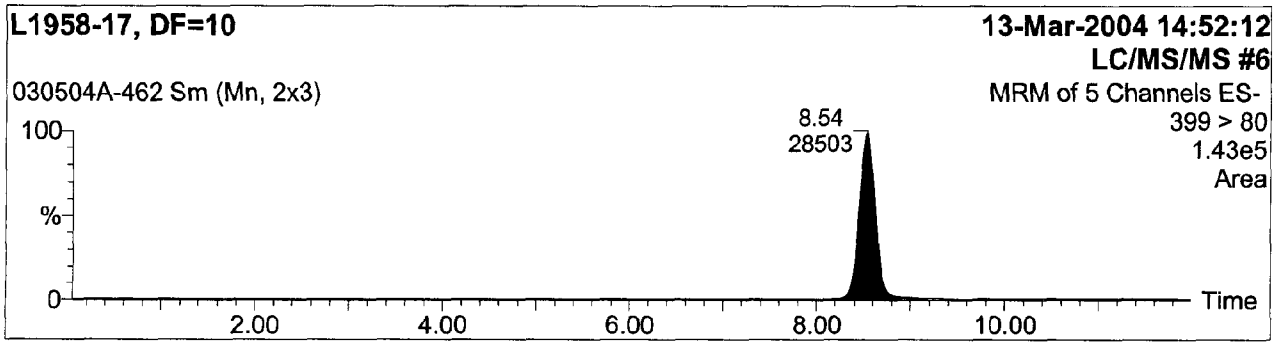
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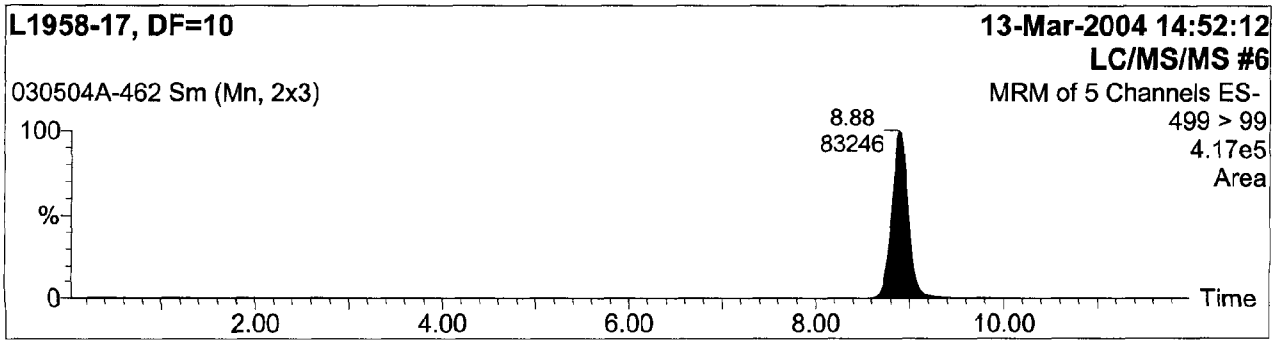
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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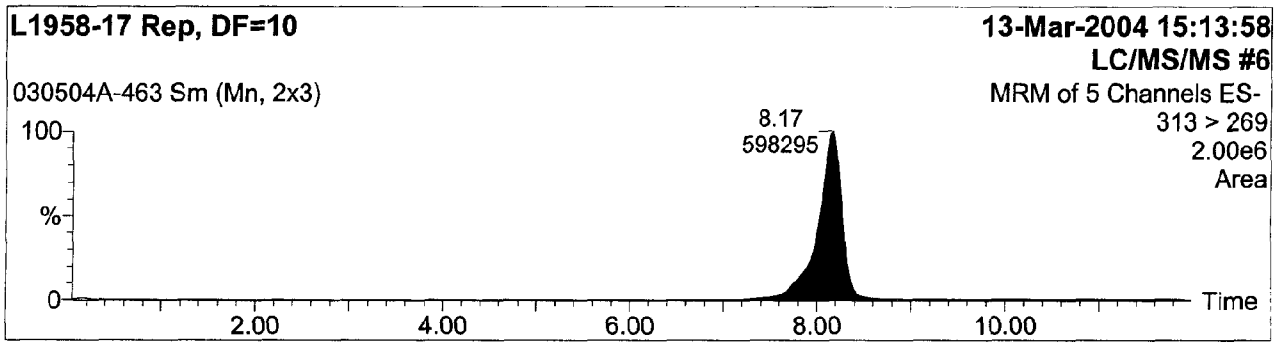
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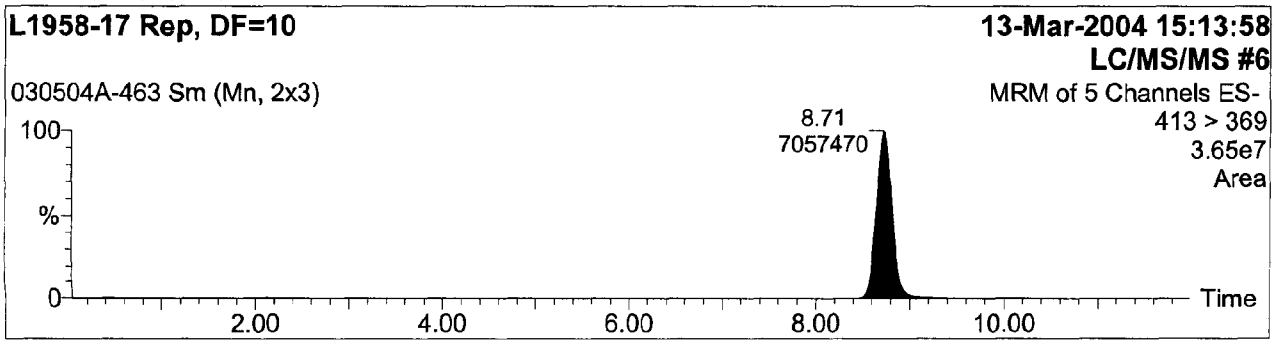
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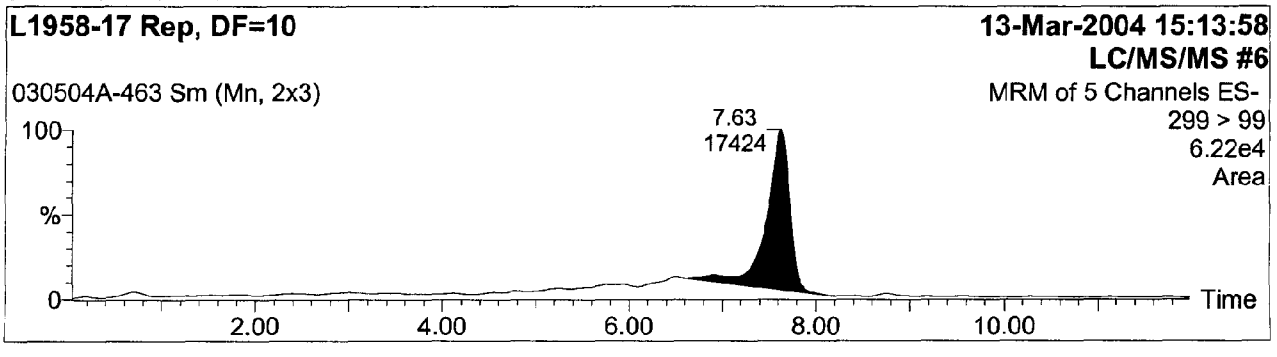
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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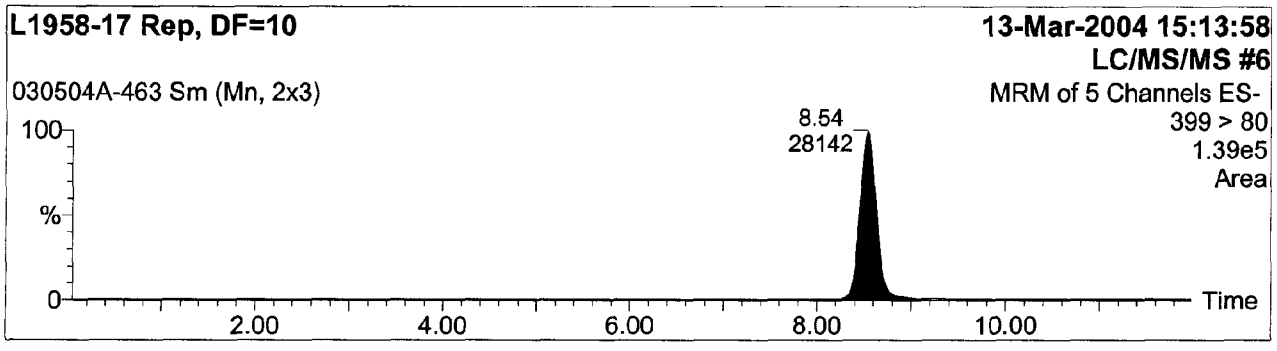
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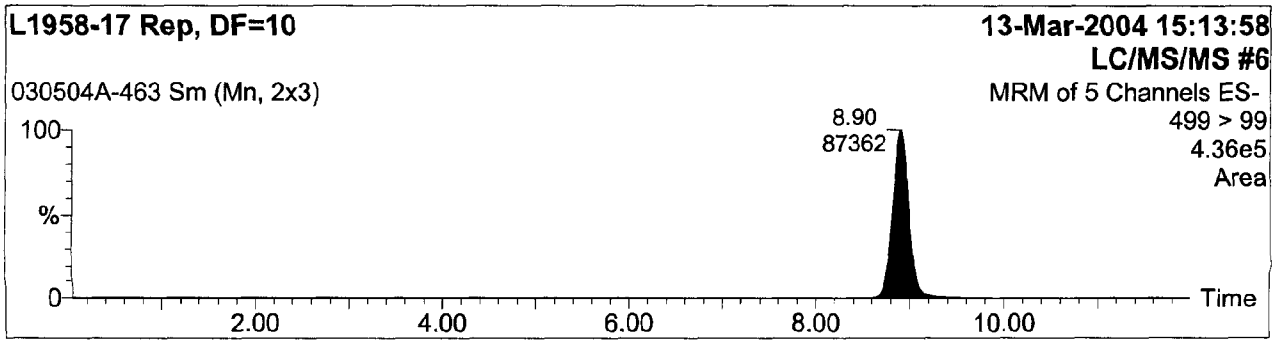
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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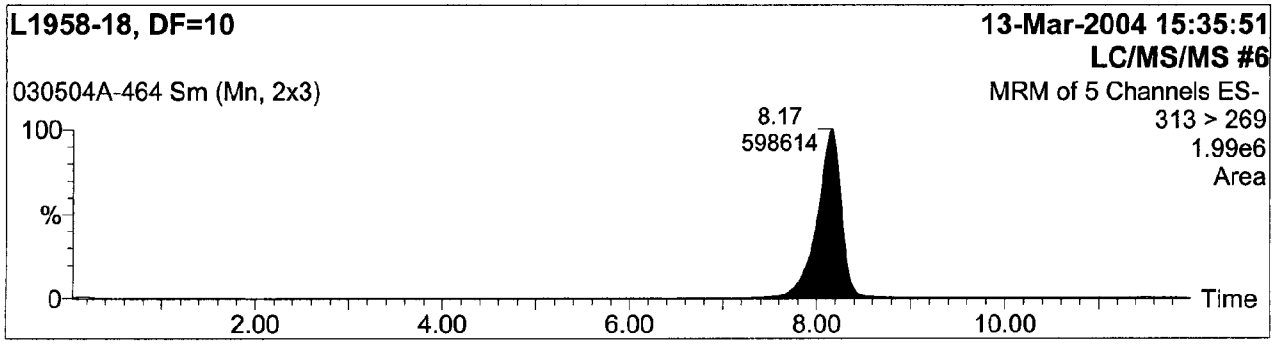
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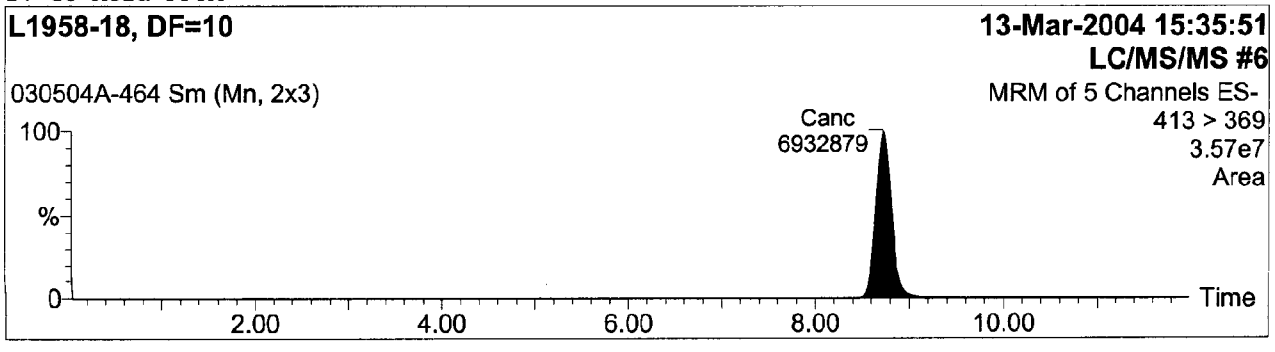
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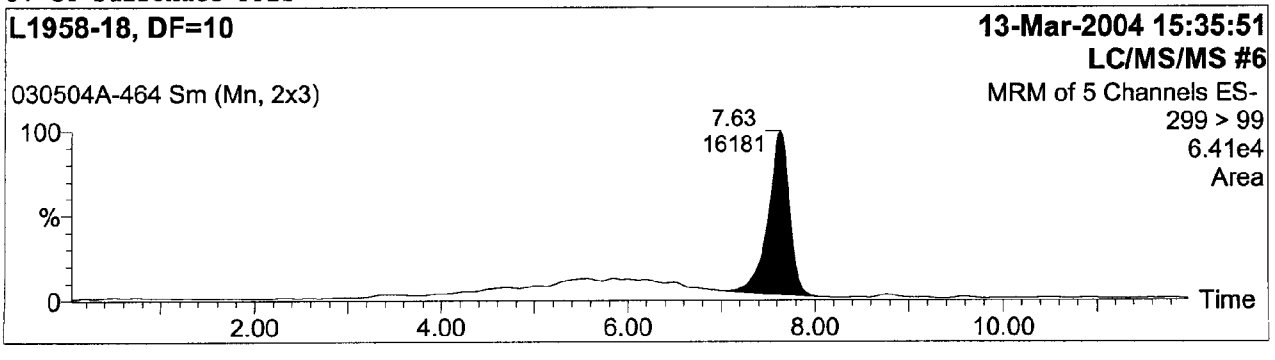
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



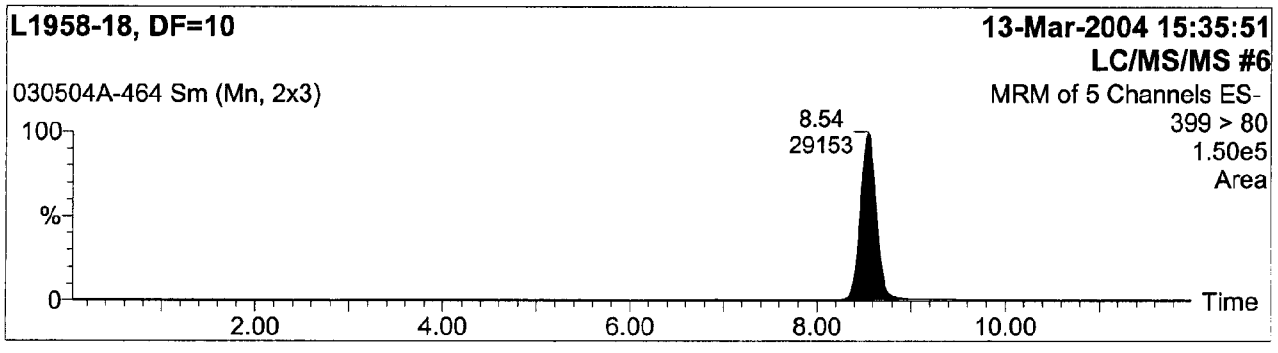
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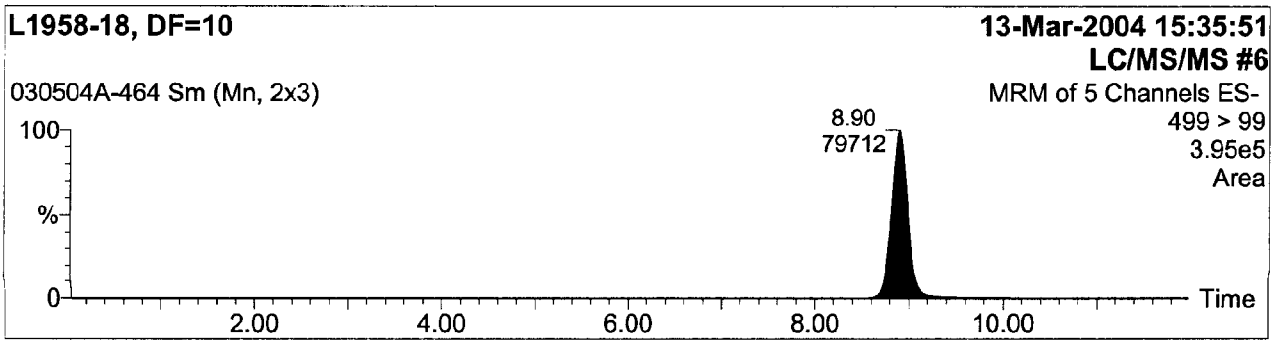
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



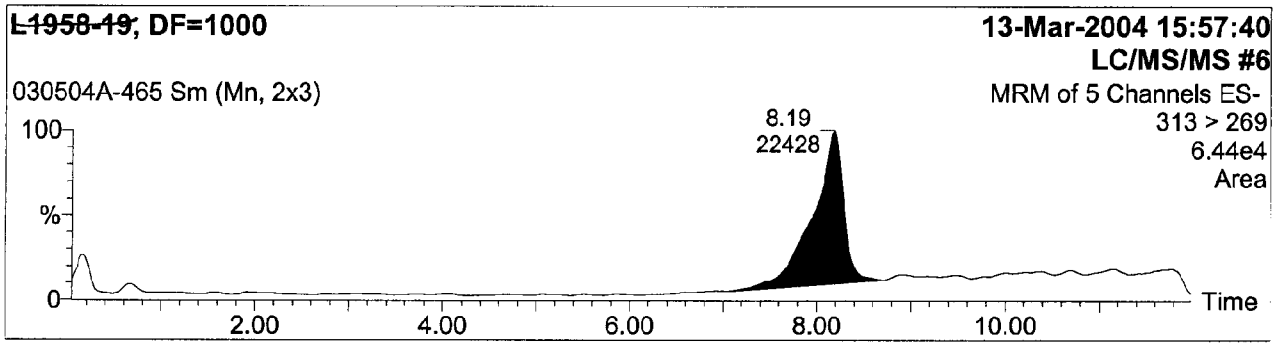
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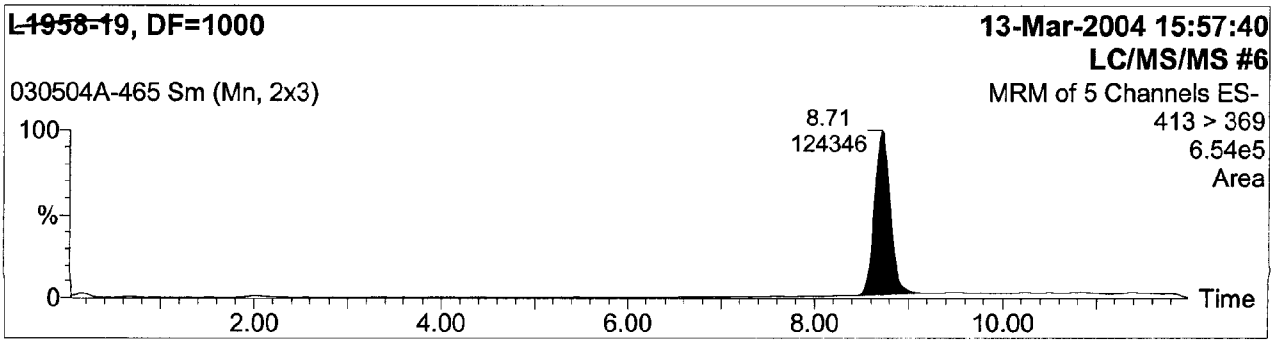
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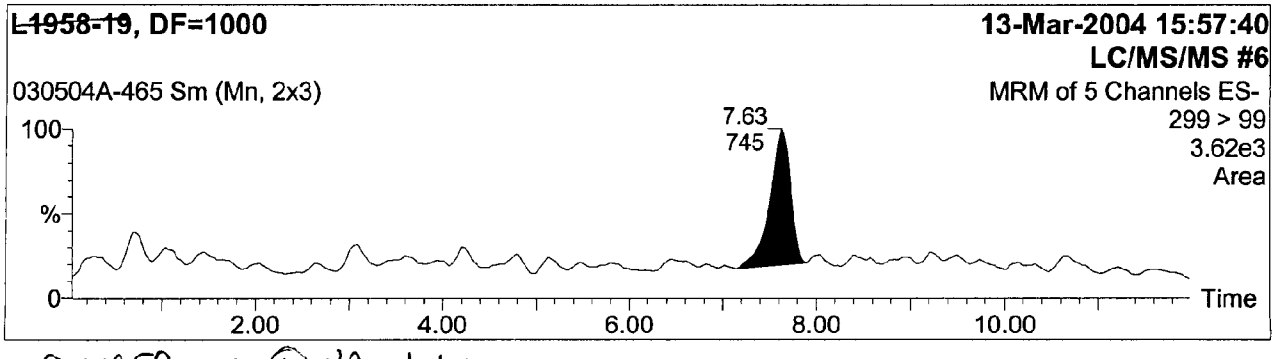
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-20 (1e) KJF 03/16/04

Exygen Research, 3058 Research Drive, State College, PA 16801

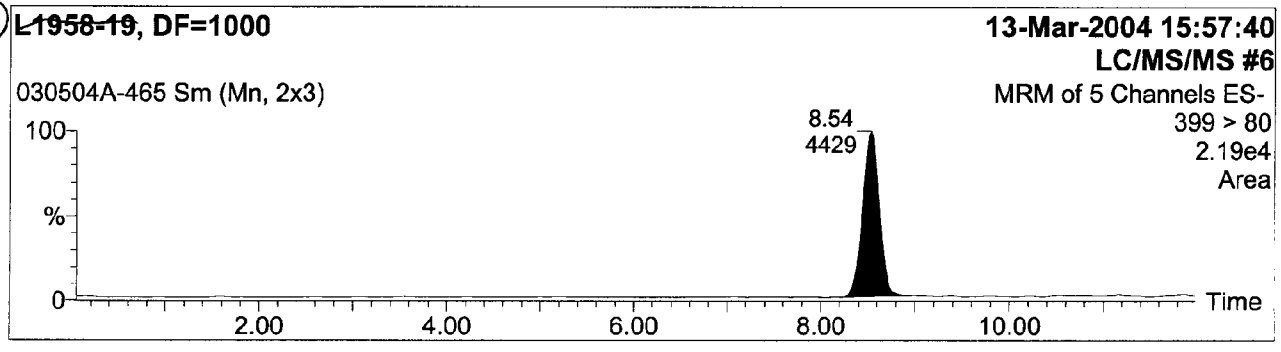
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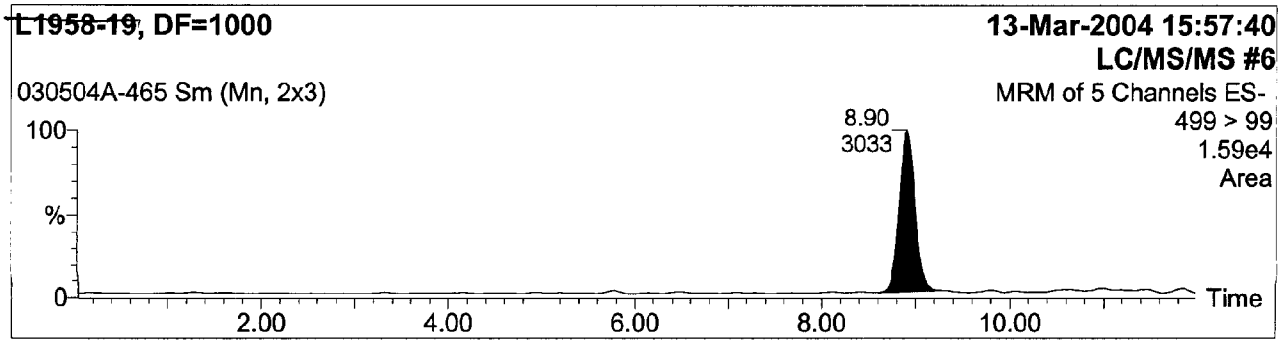
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



OL1958-20 ⓒ 03/16/04

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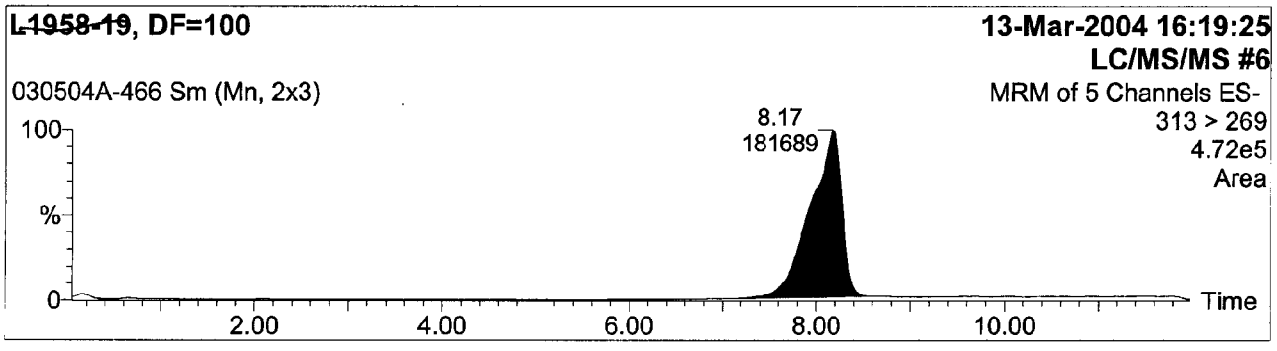
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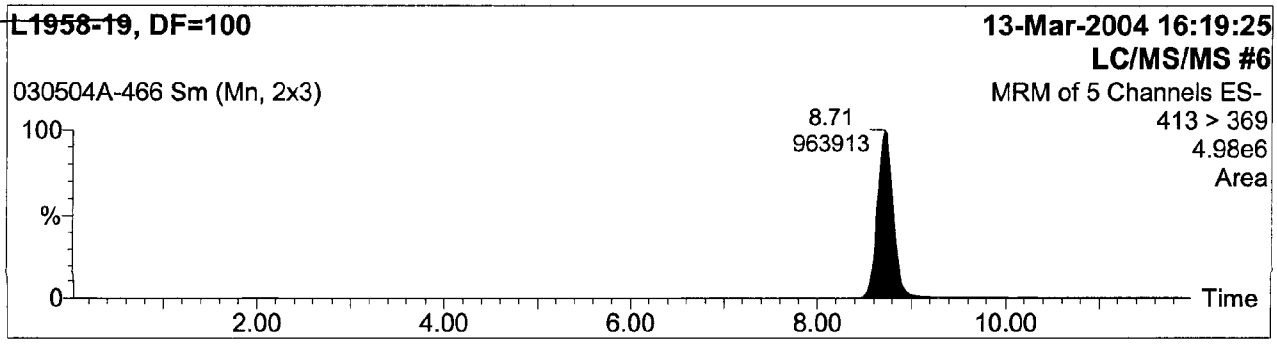
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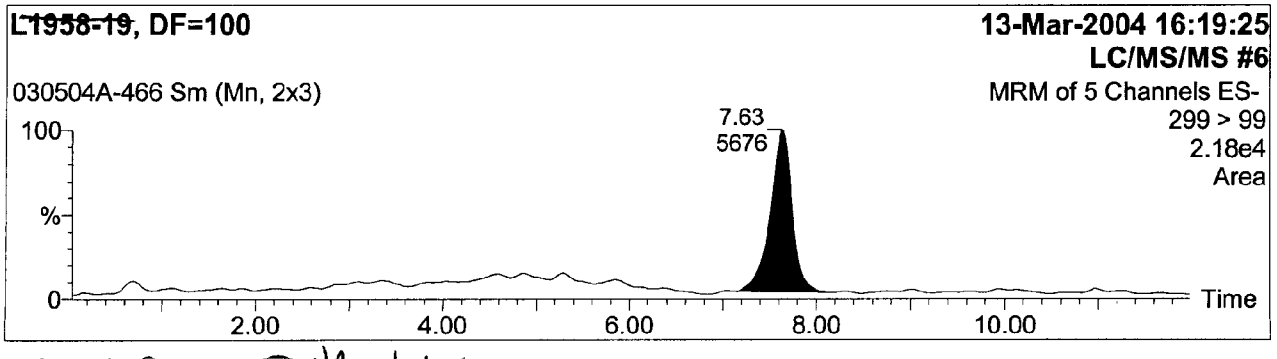
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-20 ⓡⓔ KR 03/16/04

Exygen Research, 3058 Research Drive, State College, PA 16801

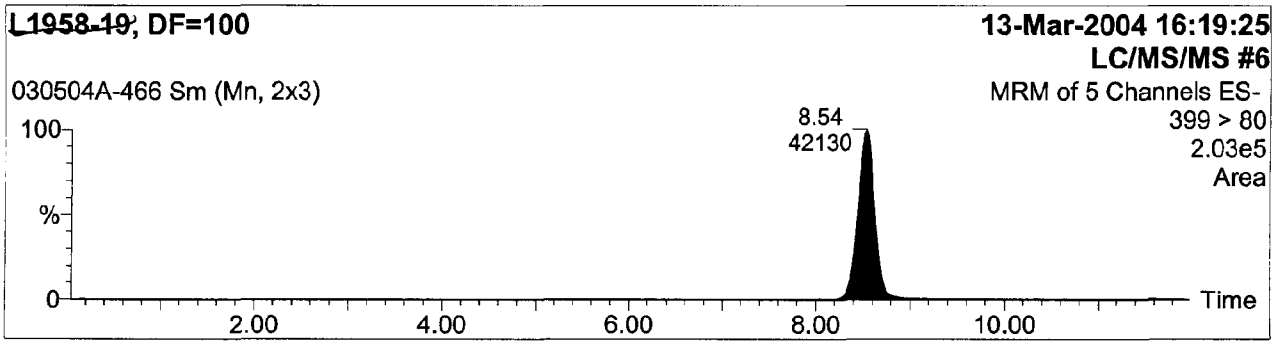
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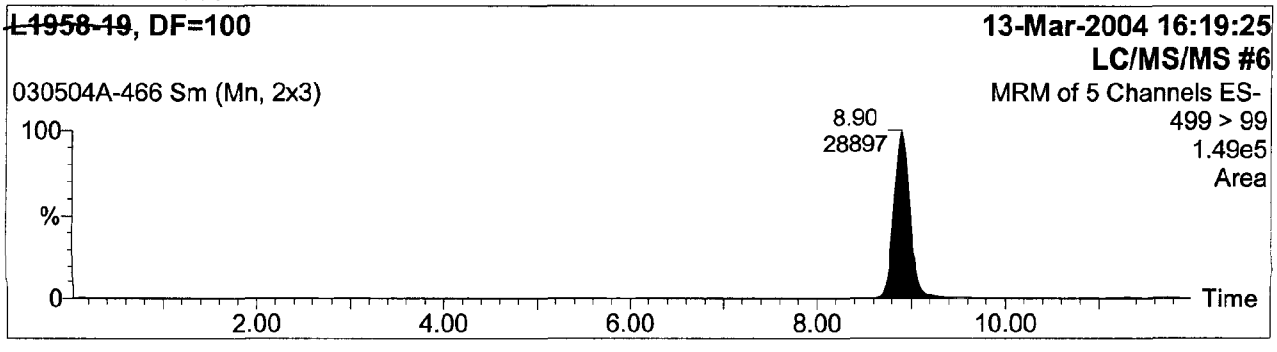
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Name: 030504A-466
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-20 ⑫ 03/16/04

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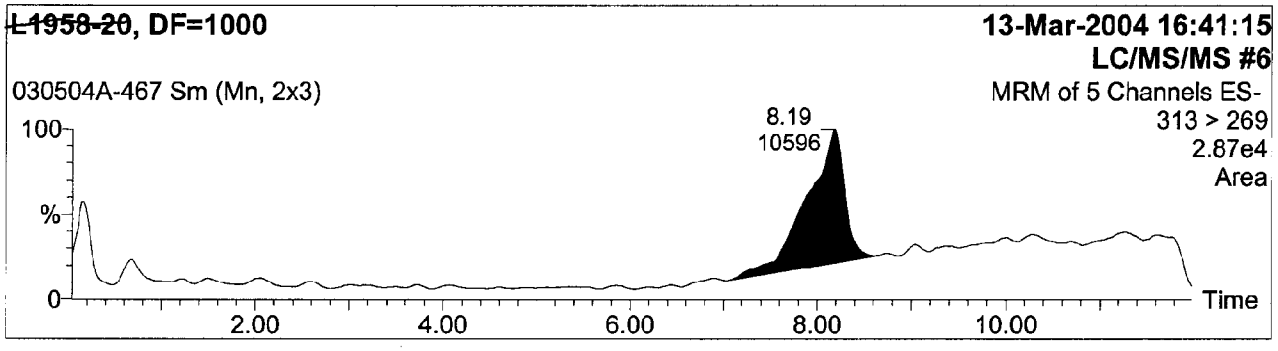
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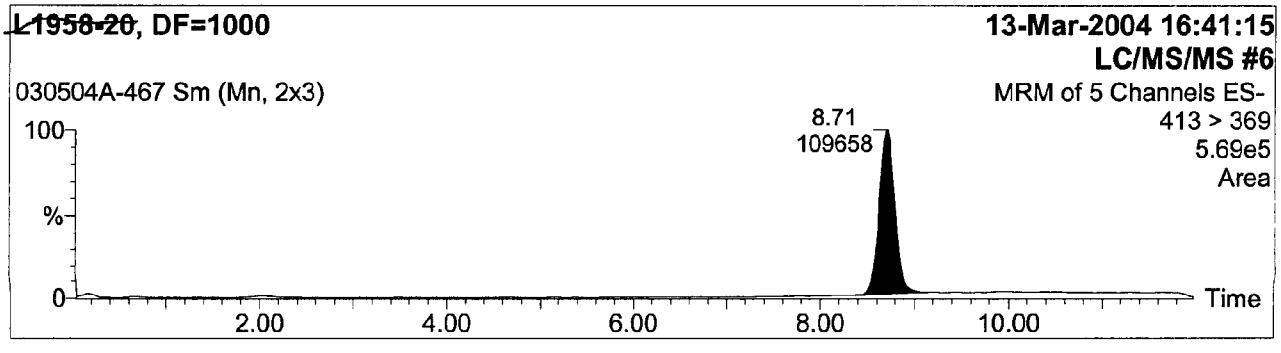
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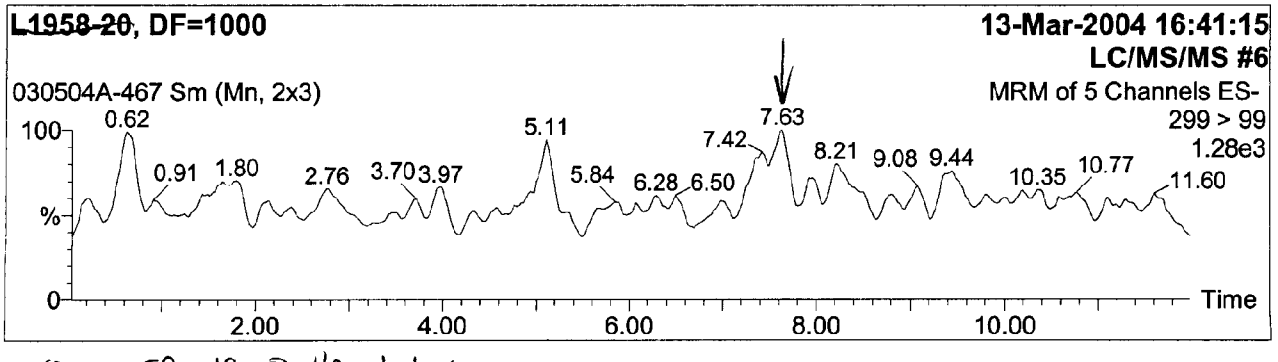
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



① L1958-19 ⑫ KR 03/16/04

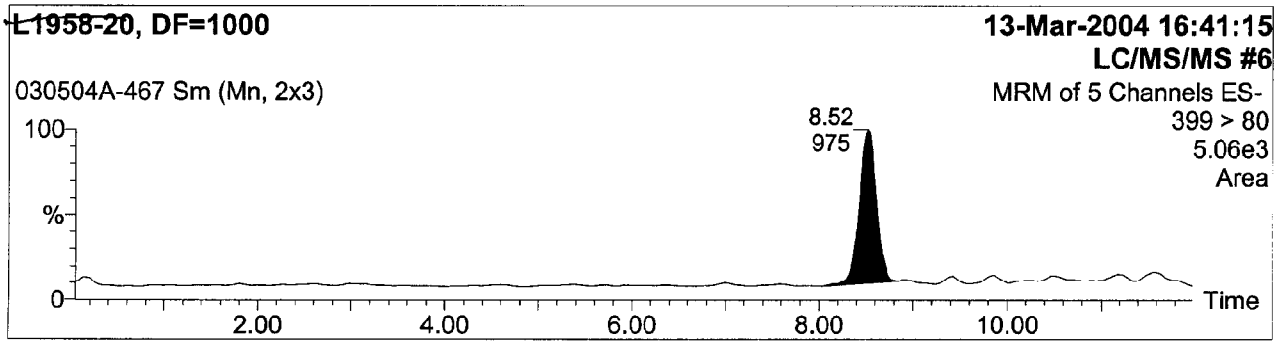
Exygen Research, 3058 Research Drive, State College, PA 16801

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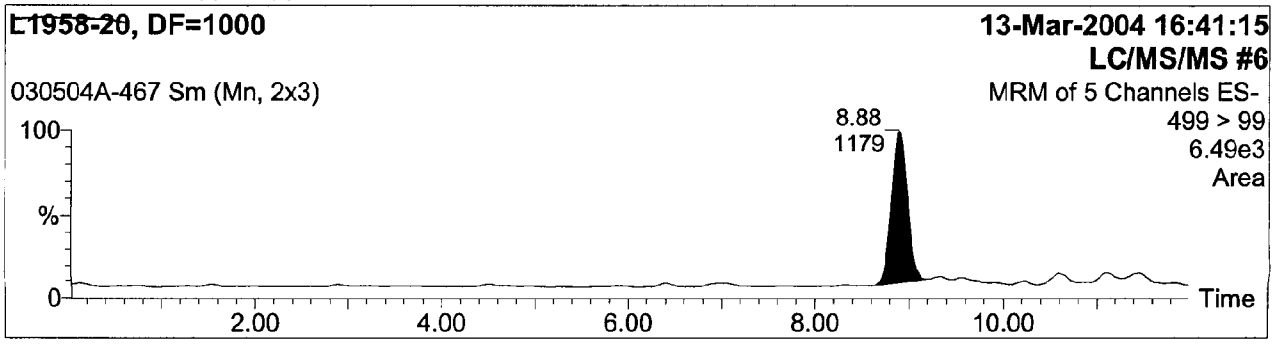
Printed: Tue Mar 16 07:26:27 2004

Name: 030504A-467
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



① L1958-19 @ 03/16/04

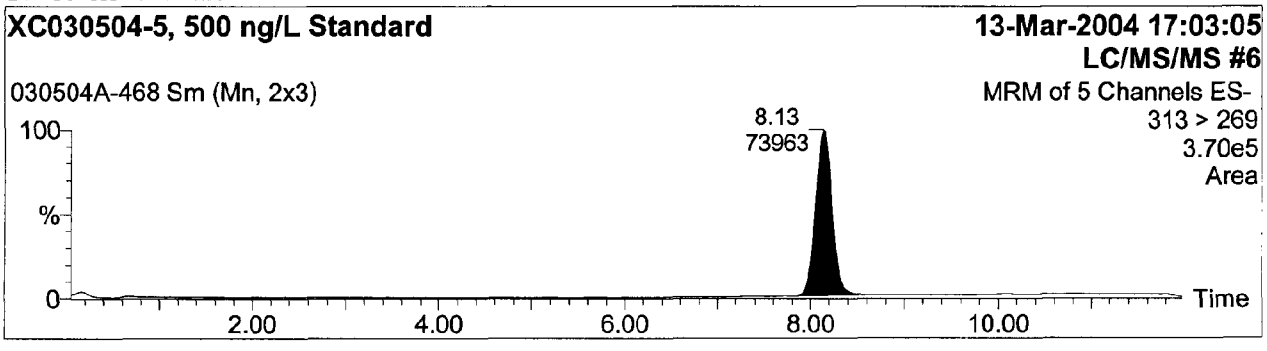
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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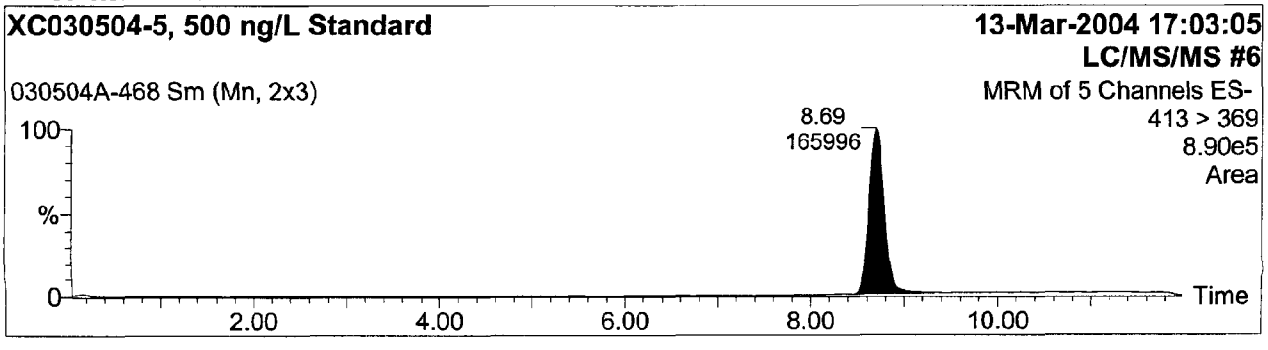
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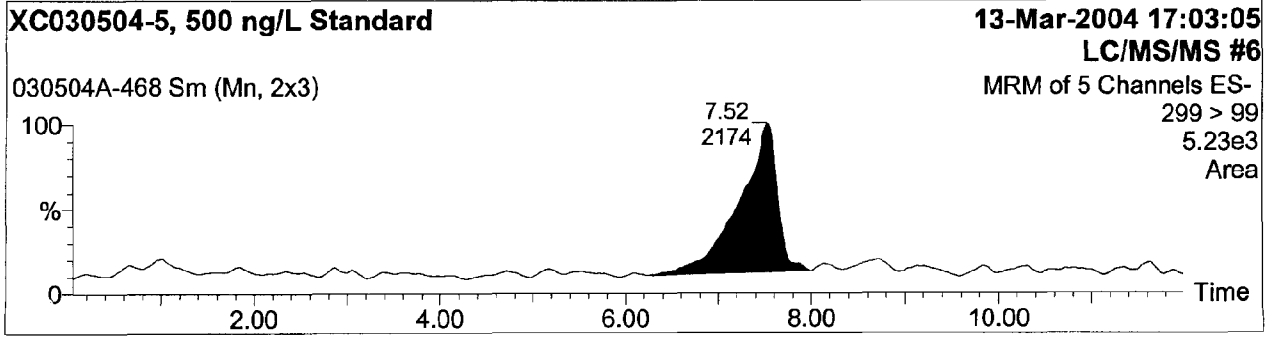
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



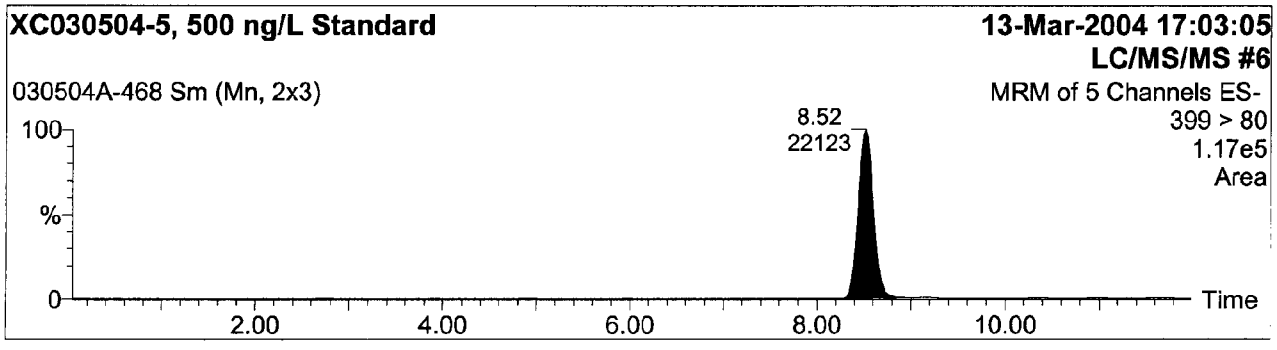
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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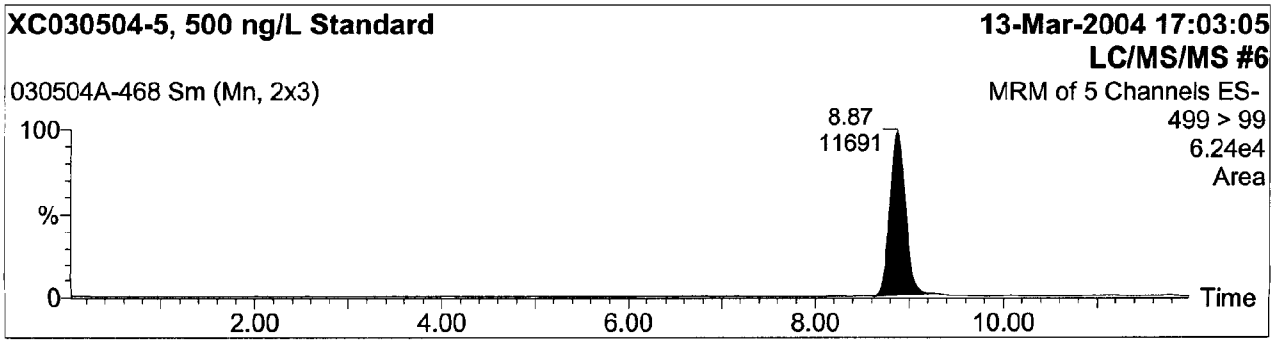
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

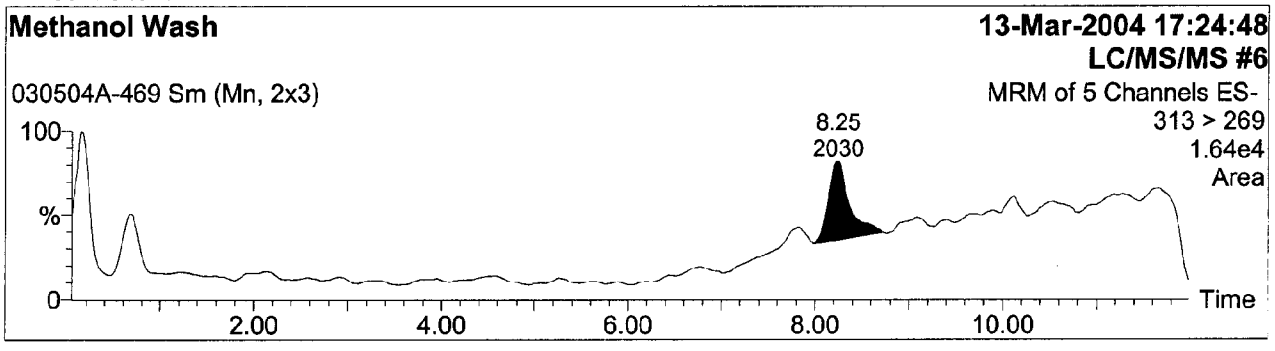
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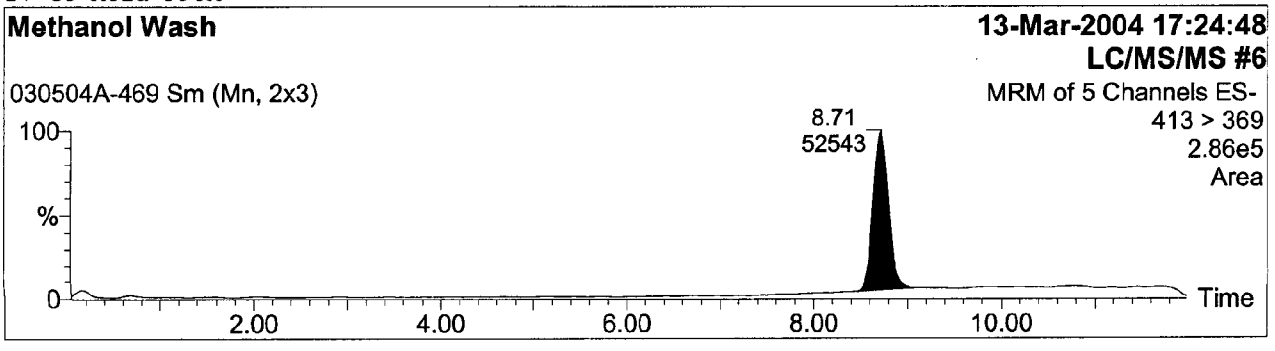
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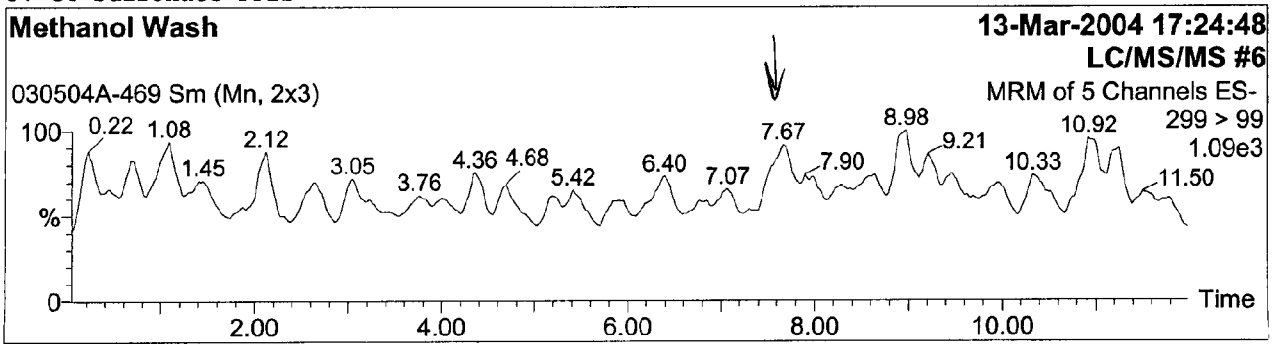
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

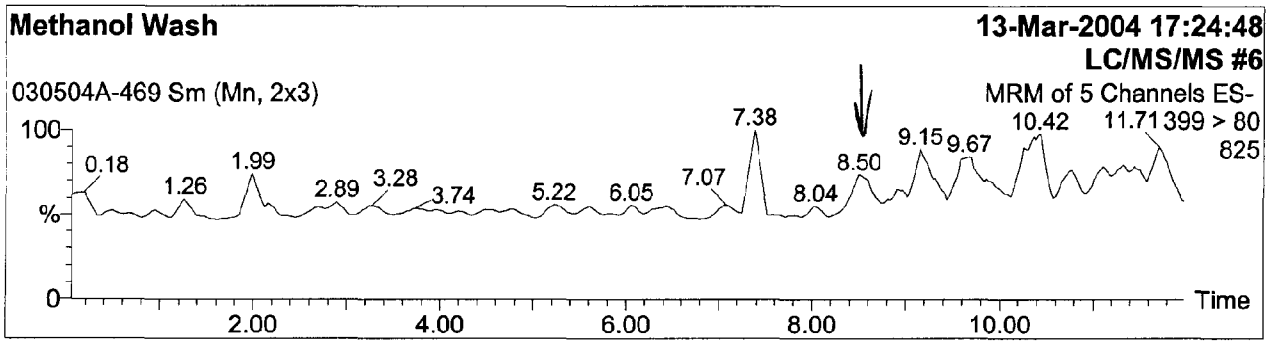
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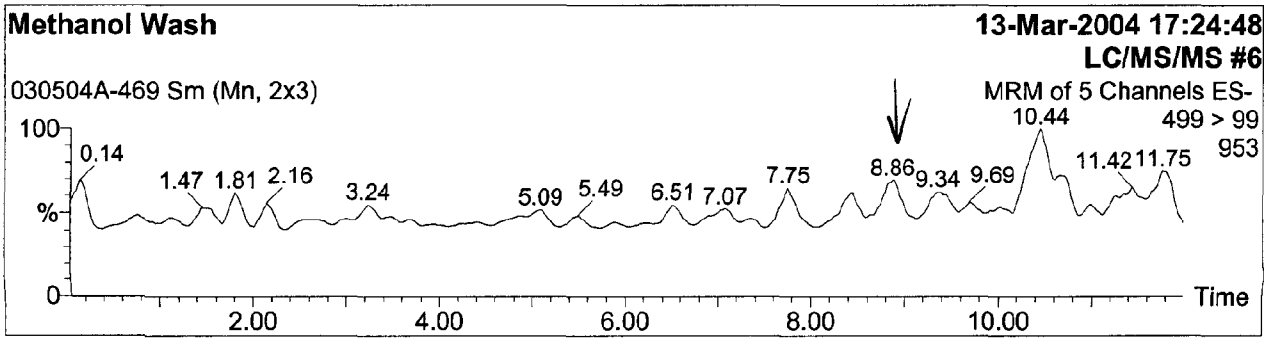
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Name: 030504A-469
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

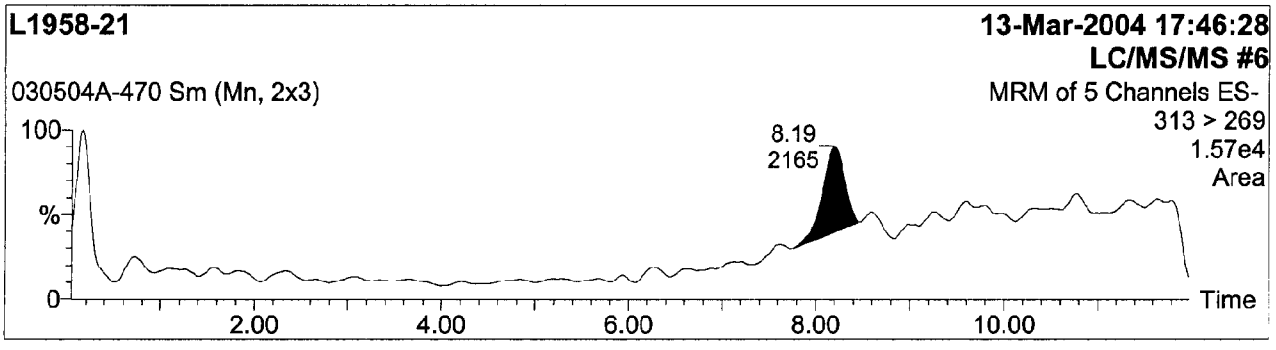
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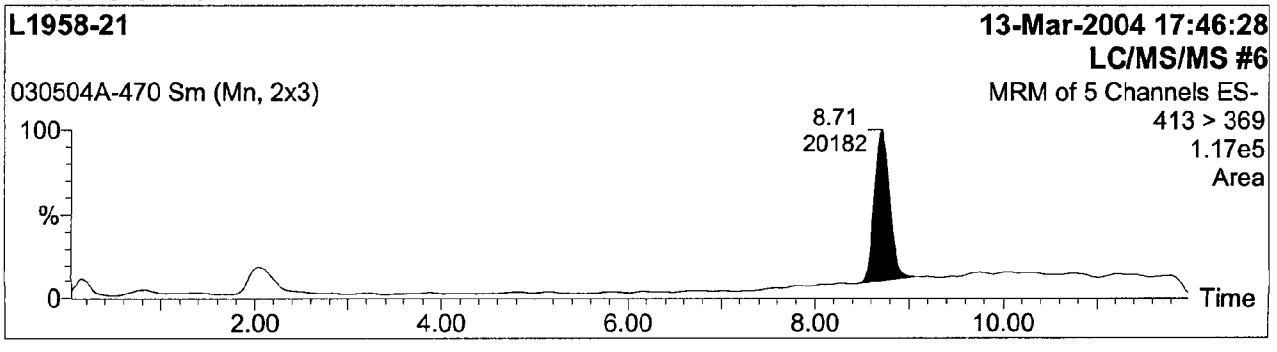
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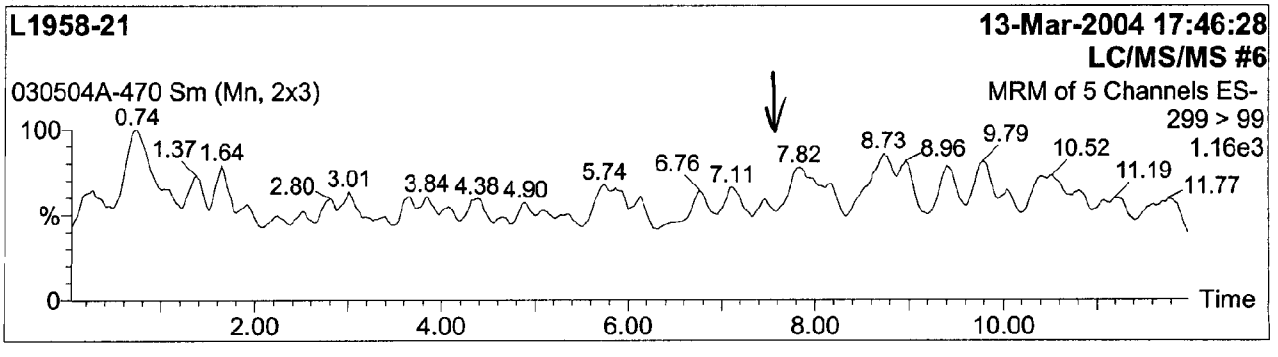
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

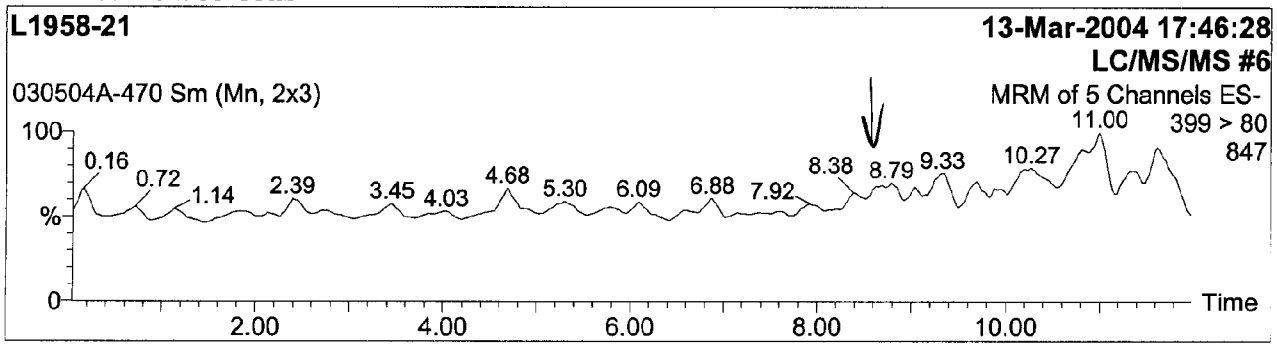
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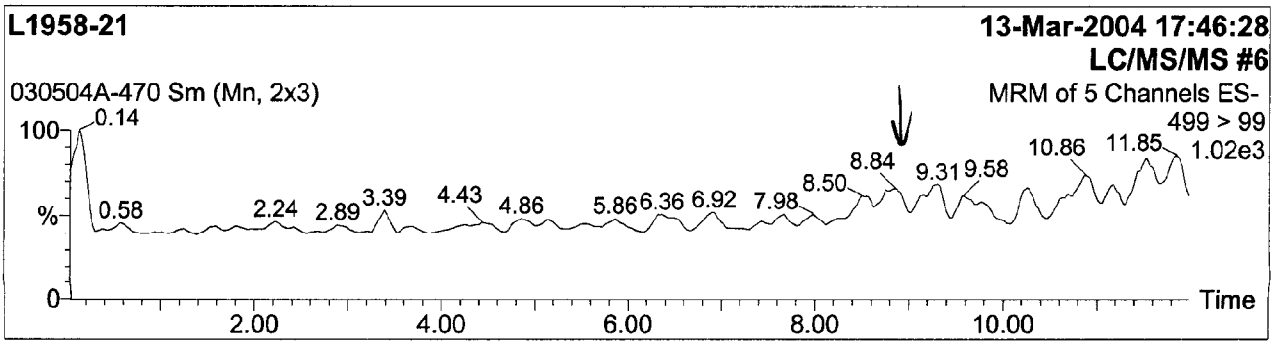
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



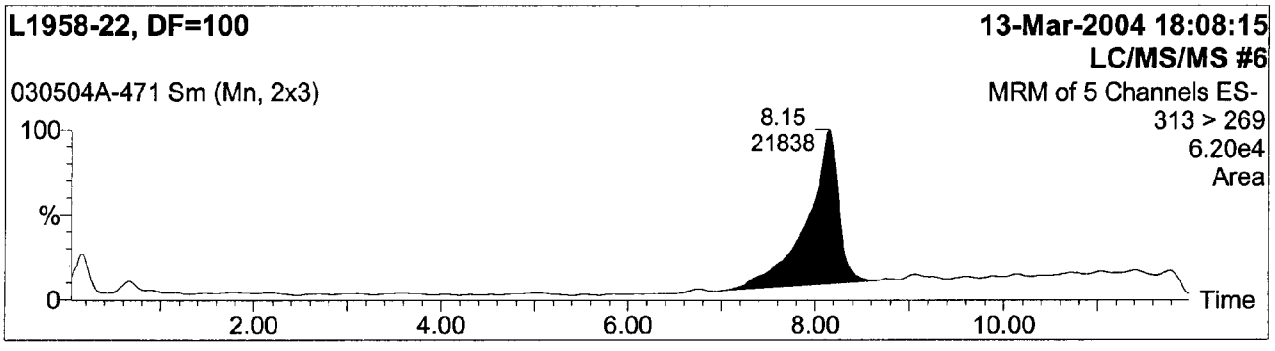
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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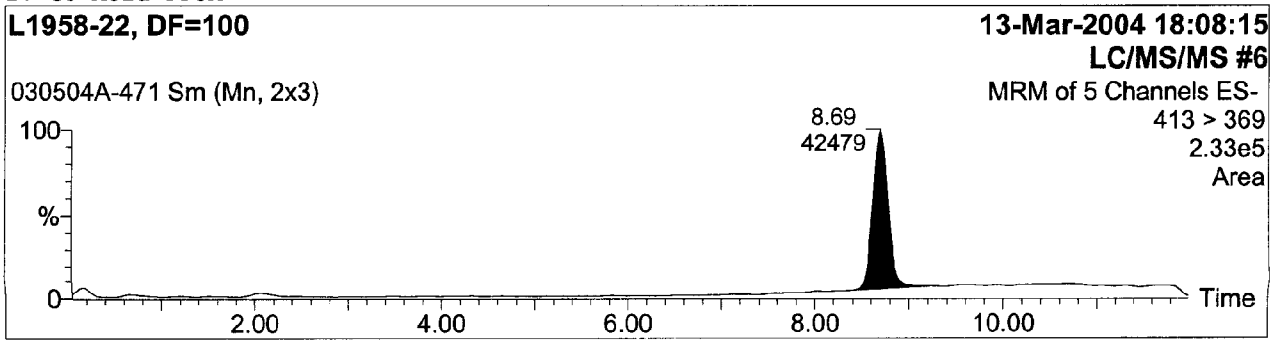
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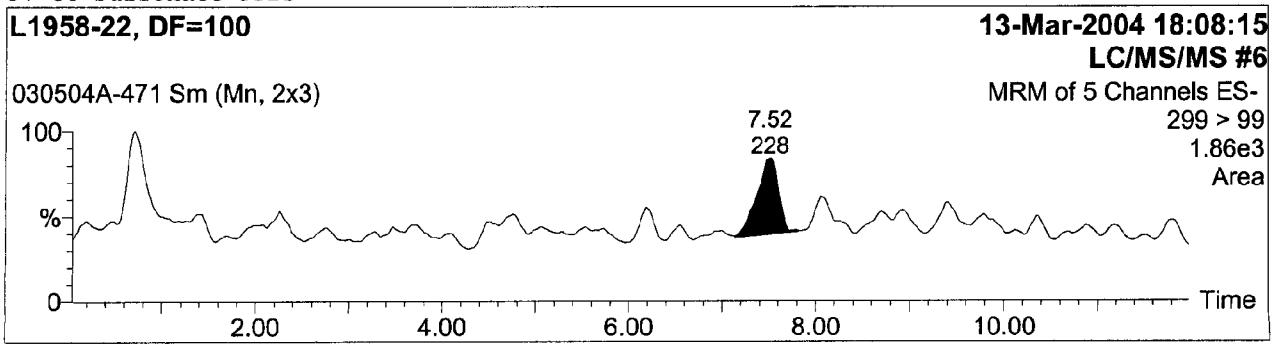
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



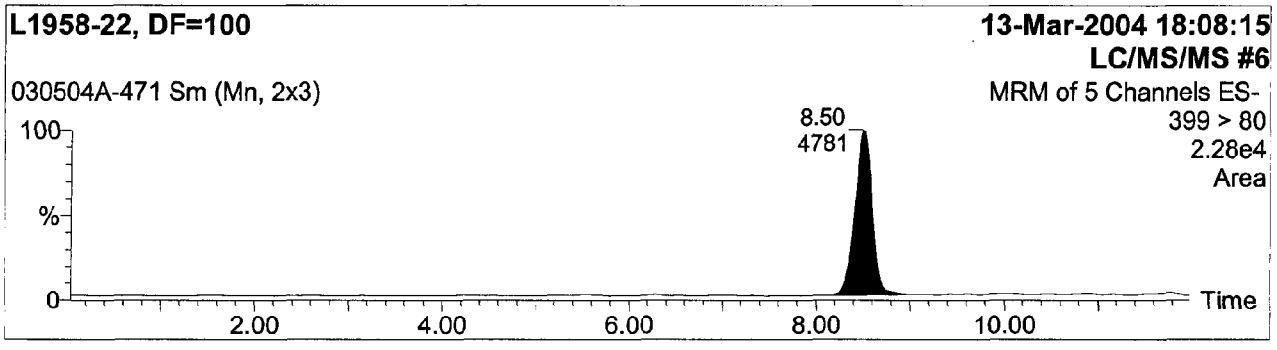
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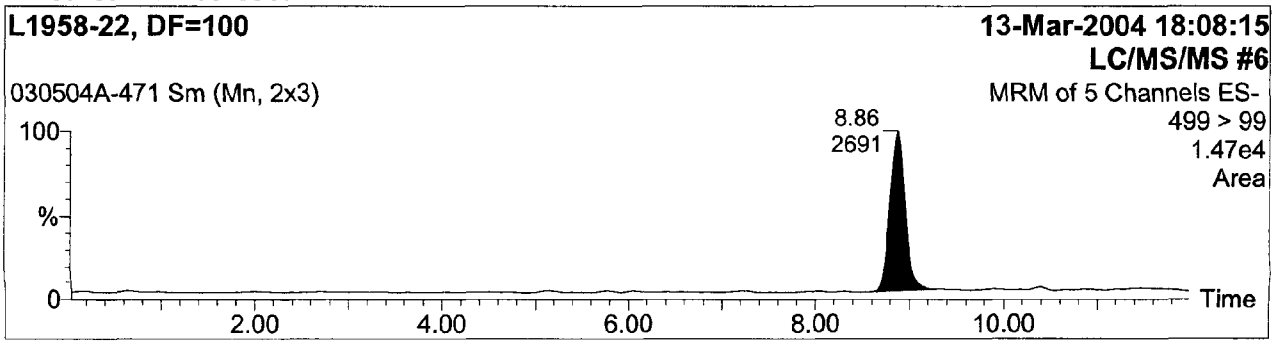
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

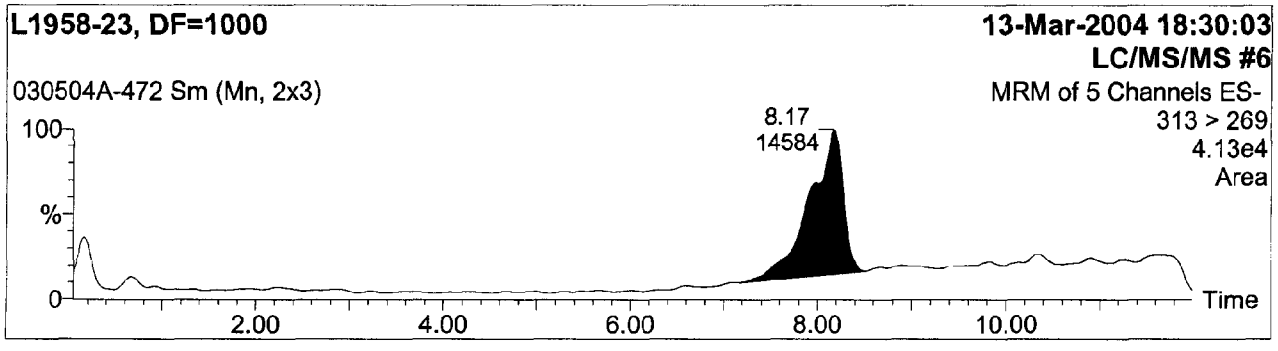
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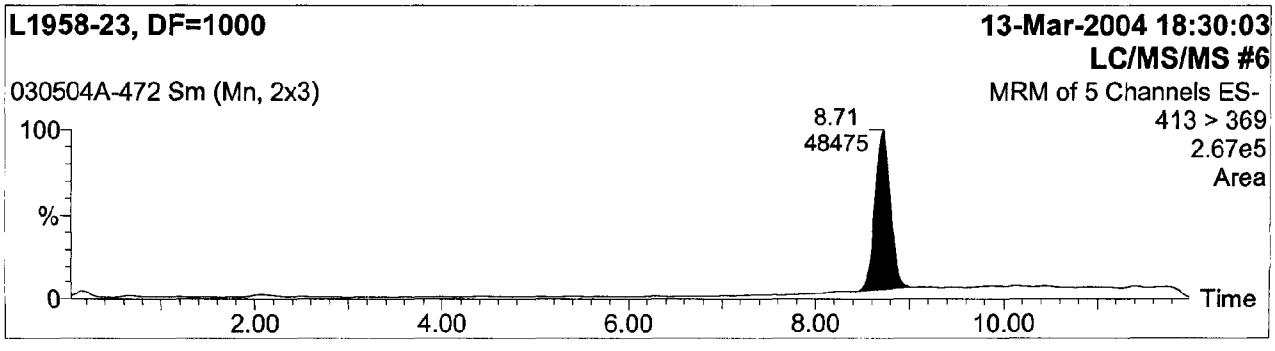
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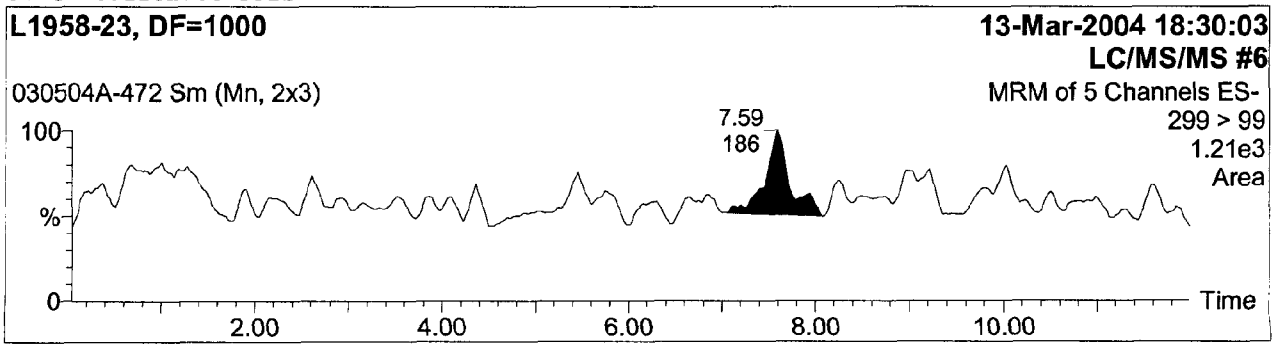
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

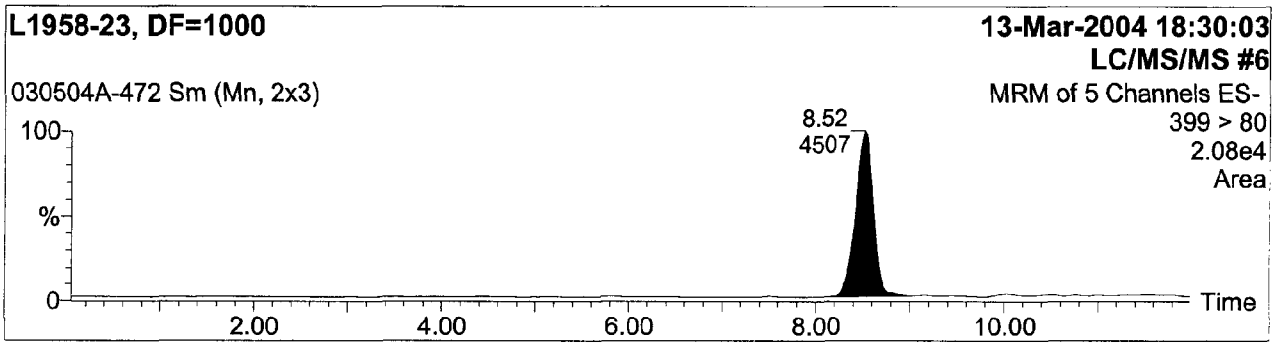
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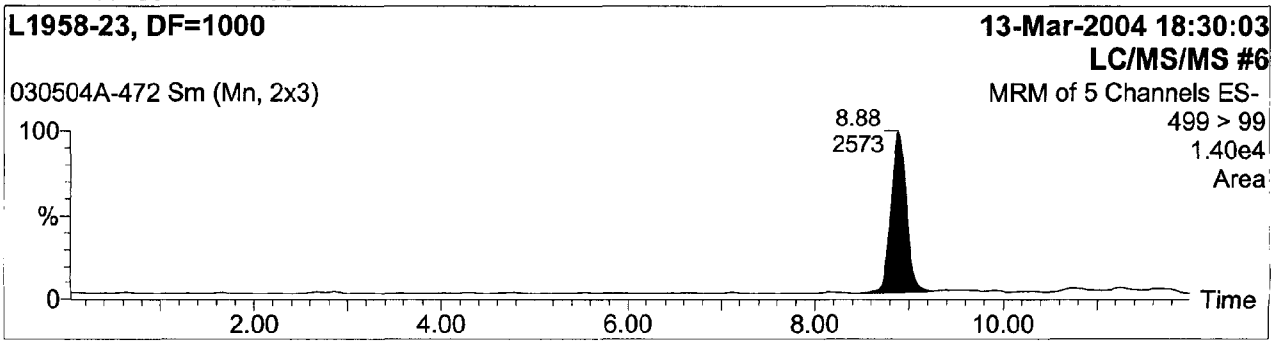
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

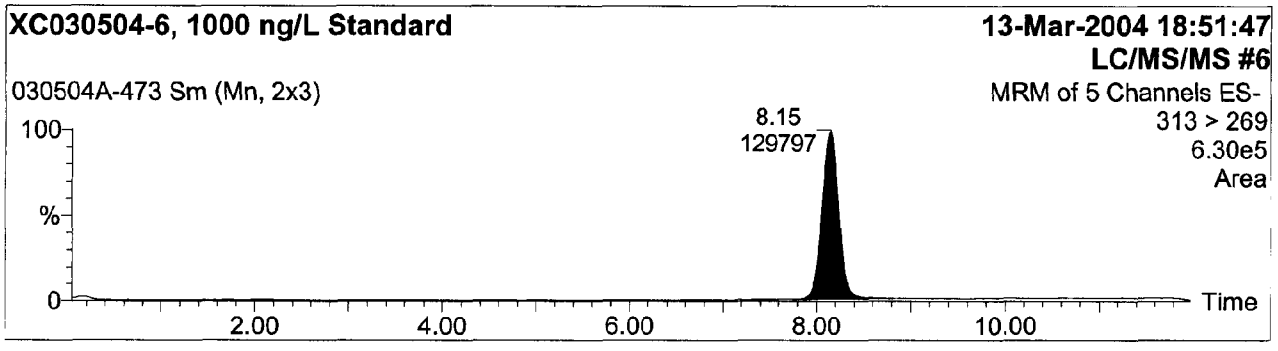
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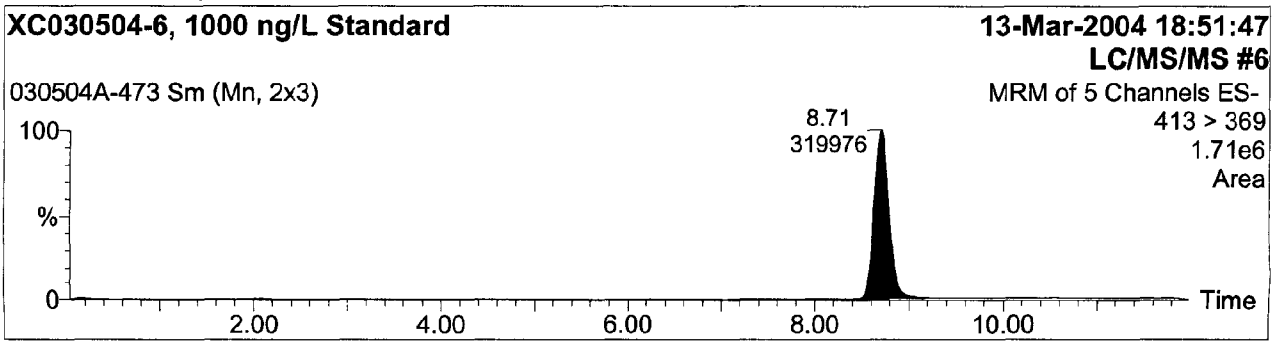
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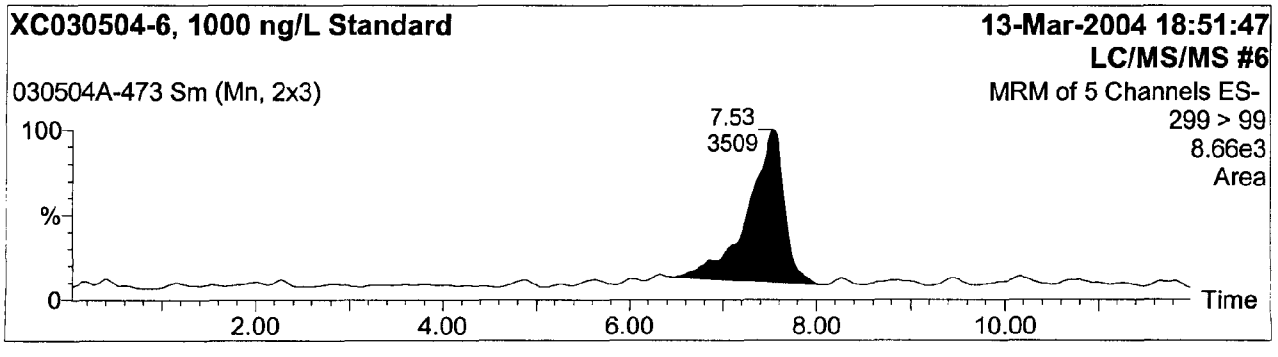
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

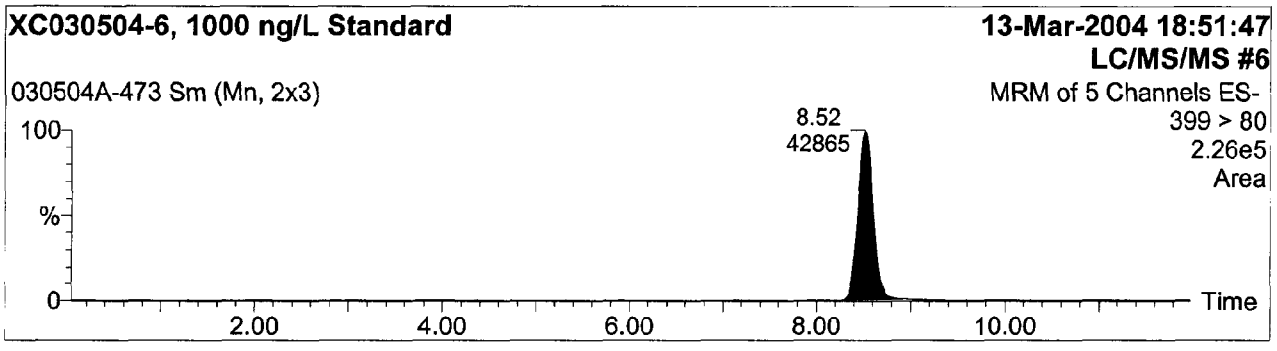
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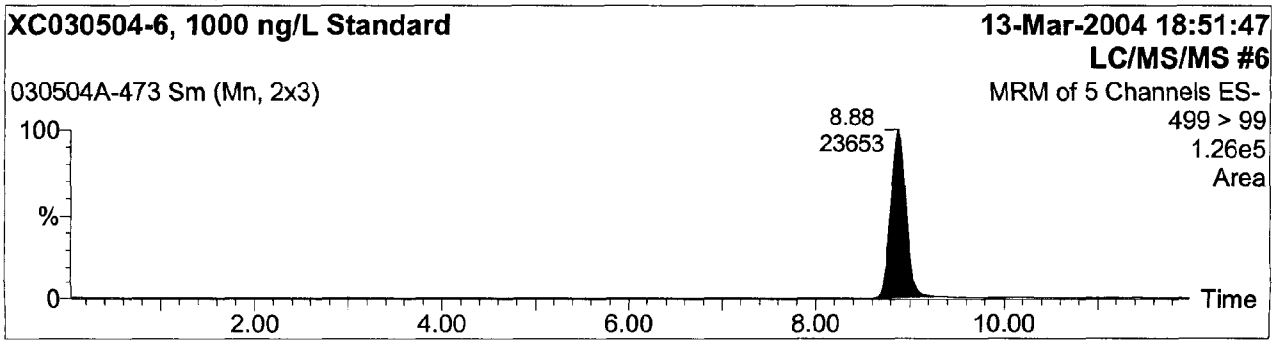
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Name: 030504A-473
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorohexanoic Acid**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	313 -> 269	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	1384	-	-	-
XC030504-1	-	CS	031704A-602	25	-	5637	-	-	-
XC030504-2	-	CS	031704A-603	50	-	9780	-	-	-
XC030504-3	-	CS	031704A-604	100	-	19409	-	-	-
XC030504-4	-	CS	031704A-605	250	-	41045	-	-	-
XC030504-5	-	CS	031704A-606	500	-	86735	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	151544	-	-	-
Methanol Wash	-	C	031704A-608	-	-	1188	-	-	-
0106020 Control	na	C	031704A-609	-	1	1243	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	9223	48.8	50	98
0106020 Spk B	na	LCS	031704A-611	-	1	81477	524	500	105
XC030504-1	-	CS	031704A-612	25	-	5205	-	-	-
XC030504-2	-	CS	031704A-613	50	-	8898	-	-	-
L1958-17 Spk C	Influent 3	LF	031704A-615	-	1000	80237	516000	250000	188
L1958-5 Spk D	Comb Effluent 1/2	LF	031704A-616	-	100	30659	19000	10000	185
L1958-9 Spk E	Port 4A	LF	031704A-617	-	100	83217	53600	25000	161
L1958-13 Spk F	Port 4B	LF	031704A-618	-	100	87895	56600	25000	164
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	85567	55100	10000	512
XC030504-3	-	CS	031704A-620	100	-	17312	-	-	-
XC030504-4	-	CS	031704A-621	250	-	38557	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	24434	14900	10000	110
XC030504-5	-	CS	031704A-626	500	-	79456	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	143391	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[analyte found (ppt)-analyte found in control (ppt)] x 100}}{\text{amount added (ppt)}}$

Standard Curve : Linear (1/x weighted)
Intercept = 1811.49
Slope = 152.008
Coef. Of Det. = 0.993757

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: KF / 03/19/04

Samples were corrected using the data found in set 030504A.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorooctanoic Acid**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	413 -> 369	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	1296	-	-	-
XC030504-1	-	CS	031704A-602	25	-	7657	-	-	-
XC030504-2	-	CS	031704A-603	50	-	14896	-	-	-
XC030504-3	-	CS	031704A-604	100	-	27966	-	-	-
XC030504-4	-	CS	031704A-605	250	-	58208	-	-	-
XC030504-5	-	CS	031704A-606	500	-	119459	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	236685	-	-	-
Methanol Wash	-	C	031704A-608	-	-	40977	-	-	-
0106020 Control	na	C	031704A-609	-	1	1515	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	14001	50.6	50	101
0106020 Spk B	na	LCS	031704A-611	-	1	121791	511	500	102
XC030504-1	-	CS	031704A-612	25	-	7709	-	-	-
XC030504-2	-	CS	031704A-613	50	-	14377	-	-	-
L1958-17 Spk C	Influent 3	LF	031704A-615	-	1000	136155	572000	250000	108
L1958-5 Spk D	Comb Effluent 1/2	LF	031704A-616	-	100	30247	12000	10000	119
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	70266	29100	10000	175
XC030504-3	-	CS	031704A-620	100	-	26988		-	-
XC030504-4	-	CS	031704A-621	250	-	60720	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	45237	18400	10000	68
L1958-23	Trip BlankHigh Spk	FF	031704A-625	-	1000	26721	105000	100000	105
XC030504-5	-	CS	031704A-626	500	-	120185	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	232929	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = [analyte found (ppt)-analyte found in control (ppt)] x 100 / amount added (ppt)

Standard Curve : Linear (1/x weighted)
Intercept = 2135.08
Slope = 234.327
Coef. Of Det. = 0.999637

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: BJ / 03/19/04

Samples were corrected using the data found in set 030504A.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorobutanesulfonate**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	299 -> 99	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	0	-	-	-
XC030504-1	-	CS	031704A-602	25	-	0	-	-	-
XC030504-2	-	CS	031704A-603	50	-	384	-	-	-
XC030504-3	-	CS	031704A-604	100	-	611	-	-	-
XC030504-4	-	CS	031704A-605	250	-	1589	-	-	-
XC030504-5	-	CS	031704A-606	500	-	3300	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	5524	-	-	-
Methanol Wash	-	C	031704A-608	-	-	0	-	-	-
0106020 Control	na	C	031704A-609	-	1	0	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	281	39.0	50	78
0106020 Spk B	na	LCS	031704A-611	-	1	3262	553	500	111
XC030504-1	-	CS	031704A-612	25	-	0	-	-	-
XC030504-2	-	CS	031704A-613	50	-	278	-	-	-
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	8001	137000	10000	949
XC030504-3	-	CS	031704A-620	100	-	657	-	-	-
XC030504-4	-	CS	031704A-621	250	-	1501	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-622	-	1000	1042	170000	10000	1279
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	9328	-	10000	-
L1958-22	Trip Blank Low Spk	FF	031704A-624	-	100	522	8050	10000	81
L1958-23	Trip BlankHigh Spk	FF	031704A-625	-	1000	465	70700	100000	71
XC030504-5	-	CS	031704A-626	500	-	2945	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	5816	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[analyte found (ppt)-analyte found in control (ppt)] x 100}}{\text{amount added (ppt)}}$

Standard Curve : Linear (1/x weighted)
Intercept = 54.7291
Slope = 5.80467
Coef. Of Det. = 0.993620

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: KK 03/19/04

Samples were corrected using the data found in set 030504A.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorhexanesulfonate**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	399 -> 80	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	0	-	-	-
XC030504-1	-	CS	031704A-602	25	-	873	-	-	-
XC030504-2	-	CS	031704A-603	50	-	1918	-	-	-
XC030504-3	-	CS	031704A-604	100	-	3759	-	-	-
XC030504-4	-	CS	031704A-605	250	-	8576	-	-	-
XC030504-5	-	CS	031704A-606	500	-	17829	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	35559	-	-	-
Methanol Wash	-	C	031704A-608	-	-	0	-	-	-
0106020 Control	na	C	031704A-609	-	1	0	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	1858	52.3	50	105
0106020 Spk B	na	LCS	031704A-611	-	1	17060	484	500	97
XC030504-1	-	CS	031704A-612	25	-	906	-	-	-
XC030504-2	-	CS	031704A-613	50	-	1733	-	-	-
XC030504-3	-	CS	031704A-620	100	-	3370	-	-	-
XC030504-4	-	CS	031704A-621	250	-	8581	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	5147	14600	10000	100
XC030504-5	-	CS	031704A-626	500	-	17277	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	35458	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[analyte found (ppt)-analyte found in control (ppt)]} \times 100}{\text{amount added (ppt)}}$

Standard Curve : Linear (1/x weighted)
Intercept = 16.7342
Slope = 35.2308
Coef. Of Det. = 0.999704

CS = Calibration standard
C = Control sample
S = Sample

LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike

CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: KJC 03/19/04

Samples were corrected using the data found in set 030504A.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

RAW DATA REPORT

Sponsor Study No:	NA	Limit of Quantitation:	50 ppt	Set No:	031704A
Exygen Study No:	L1958	Injection Volume:	15 µL	Analyst:	Karen Risha
Analyte:	**Perfluorooctanesulfonate**	Matrix:	Water	Instrument Type:	LC/MS/MS Unit # 6
Ions Monitored:	499 -> 99	Sample Volume:	40.0 mL	Extraction Date:	03/17/04
Site:	NA	Final Volume:	5.0 mL	Analyzed on:	03/18/04

Exygen ID	Sponsor ID	Sample Code	Run No.	Std. Conc. (ppt)	Dilution Factor	Peak Area	Analyte Found (ppt)	Amount Added (ppt)	Recovery (%)
XC030504-0	-	CS	031704A-601	0	-	310	-	-	-
XC030504-1	-	CS	031704A-602	25	-	440	-	-	-
XC030504-2	-	CS	031704A-603	50	-	900	-	-	-
XC030504-3	-	CS	031704A-604	100	-	1583	-	-	-
XC030504-4	-	CS	031704A-605	250	-	3392	-	-	-
XC030504-5	-	CS	031704A-606	500	-	7489	-	-	-
XC030504-6	-	CS	031704A-607	1000	-	13775	-	-	-
Methanol Wash	-	C	031704A-608	-	-	0	-	-	-
0106020 Control	na	C	031704A-609	-	1	0	ND	-	-
0106020 Spk A	na	LCS	031704A-610	-	1	659	34.9	50	70
0106020 Spk B	na	LCS	031704A-611	-	1	7099	525	500	105
XC030504-1	-	CS	031704A-612	25	-	532	-	-	-
XC030504-2	-	CS	031704A-613	50	-	777	-	-	-
L1958-1 Spk G	Influent 1/2	LF	031704A-619	-	100	3927	28300	10000	149
XC030504-3	-	CS	031704A-620	100	-	1421	-	-	-
XC030504-4	-	CS	031704A-621	250	-	3438	-	-	-
L1958-3	Influent 1/2 Low Spk	FF	031704A-623	-	100	3246	23200	10000	98
XC030504-5	-	CS	031704A-626	500	-	6406	-	-	-
XC030504-6	-	CS	031704A-627	1000	-	12885	-	-	-

Analyte Found (ppt) = (peak area - intercept) / slope x DF

Recovery (%) = $\frac{\text{[analyte found (ppt)-analyte found in control (ppt)] x 100}}{\text{amount added (ppt)}}$

Standard Curve : Linear (1/x weighted)
Intercept = 200.030
Slope = 13.1525
Coef. Of Det. = 0.995843

CS = Calibration standard
C = Control sample
S = Sample
LF = Lab fortified sample
FF = Field fortified sample
LCS = Laboratory Control Spike
CK = Check Standard
ND = Not detected = Response between 0 and 25 ppt
NQ = Not quantifiable = Response between 25 ppt and LOQ (50 ppt)

Spreadsheet prepared by: KR 03/19/04

Samples were corrected using the data found in set 030504A.

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Exygen RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

Internal Chain of Custody/Fortification Sheet

Exygen Study Number: L1958 Matrix: Water
Sponsor Study/Protocol No: NA
The samples listed below were removed from refrigerator No. 32
Time 0915 Date 03/17/04 Initials AMB

CLIENT SAMPLE ID	EXYGEN ID NUMBER	VOLUME (mL)	FORTIFICATION (ng)
na	0106020 Control	40.0	-
na	0106020 Spk A	40.0	2.0
na	0106020 Spk B	40.0	20.0
Influent 3	L1958-17 Spk C	40.0	10000.0
Comb Effluent 1/2	L1958-5 Spk D	40.0	400.0
Port 4A	L1958-9 Spk E	40.0	1000.0
Port 4B	L1958-13 Spk F	40.0	1000.0
Influent 1/2	L1958-1 Spk G	40.0	400.0
Influent 1/2 Low Spk	L1958-3	40.0	-
Trip Blank Low Spike	L1958-22	40.0	-
Trip Blank High Spike	L1958-23	40.0	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-
-	-	-	-

	Spiking Solution Used	Volume Used for Spiking	Initial/Date
0106020 Spk A	F012004-10 (10 ng/mL)	200 µL (200 µL micropipet)	KE /03/17/04
0106020 Spk B	F012004-9 (100 ng/mL)	200 µL (200 µL micropipet)	KE /03/17/04
L1958-17 Spk C	F012004-6 (100000 ng/mL)	100 µL (200 µL micropipet)	KE /03/17/04
L1958-5 Spk D	F012004-8 (1000 ng/mL)	400 µL (200 µL micropipet)	KE /03/17/04
L1958-9 Spk E	F012004-7 (10000 ng/mL)	100 µL (200 µL micropipet)	KE /03/17/04
L1958-13 Spk F	F012004-7 (10000 ng/mL)	100 µL (200 µL micropipet)	KE /03/17/04
L1958-1 Spk G	F012004-8 (1000 ng/mL)	400 µL (200 µL micropipet)	KE /03/17/04

All samples were measured:
Time 1120 Date 03/17/04 Initials AMB

After measuring samples were returned to refrigerator No. 32
Time 1200 Date 03/17/04 Initials AMB

Comments: 200 µL of 250 mg/mL sodium thiosulfate was added to all samples before spiking. Initials/Date: AMB 03/17/04

Analysis Summary:
Data Set: 031704A Initials/Date: KE / 03/18/04
Data Set: - Initials/Date: - / -
Data Set: - Initials/Date: - / -

Set extraction/analysis data verified by: gmF Date: 3/19/04

July 26, 2001/6

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Exygen RESEARCH
3058 Research Drive
State College, PA 16801
Phone: 814-272-1039
Fax: 814-231-1580

SAMPLE EXTRACTION AND ANALYSIS TRACKING SHEET

EXYGEN STUDY NUMBER: L1958 METHOD: $$ PROTOCOL NUMBER: NA
MATRIX: Water ANALYTES: C4, C6, C7 & C8 Acids, C4, C6 & C8 sulfonates

Client ID	Exygen ID	STEP 1	STEP 2	Dilutions (mL/mL)	STEP 3	Dilutions (mL/mL)	STEP 4	Reagents/ Materials	Lot #
na	0106020 Control			-		-	-	Methanol	43195329
na	0106020 Spk A			-		-	-	C18 SPE	W3317B1
na	0106020 Spk B			-		-	-	Type I Water	NA
Influent 3	L1958-17 Spk C			①		-	-	-	-
Comb Effluent 1/2	L1958-5 Spk D			0.1/10		-	-	-	-
Port 4A	L1958-9 Spk E			0.1/10		-	-	-	-
Port 4B	L1958-13 Spk F			0.1/10		-	-	*Initials/Date*	AMB 03/17/04
Influent 1/2	L1958-1 Spk G			0.1/10		-	-	-	-
Influent 1/2 Low Spk	L1958-3			② 0.1/10, 0.1/1.0		-	-	-	-
Trip Blank Low Spike	L1958-22			0.1/10		-	-	-	-
Trip Blank High Spike	L1958-23	↓	↓	③ 0.1/10, 0.1/1.0	↓	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	HPLC	
-	-	-	-	-	-	-	-	Methanol	43308345
-	-	-	-	-	-	-	-	Ammonium Acetate	V36159
-	-	-	-	-	-	-	-	Type I water	NA
-	-	-	-	-	-	-	-	-	-
Initials/Date	-	AMB 03/17/04	AMB 03/17/04	KF 03/17/04	KF 03/18/04	—	-	*Initials/Date*	KF 03/18/04

STEP 1: SPE column clean-up (omitting 40% wash)
STEP 2: Final volume to 5 mL collected in 15 mL polypropolene tubes
STEP 3: LC/MS/MS analysis
STEP 4: LC/MS/MS reanalysis.

① 0.1/10, 0.1/10, 0.1/10 DF = 1000 and 10,000
② DF = 100 and 1000
③ DF = 1000
KF 03/17/04

*Initials and date under each step indicates the personnel that performed this step.
$$ Method of Analysis for the Determination of Perfluorooctane sulfonate (PFOS), Perfluorooctane sulfonylamide (PFOSA), and Perfluorooctanoate (POAA) in Water

COMMENTS:

Final extracts stored in refrigerator 32 Initials: AMB Date: 03/17/04

July 19, 2001/4

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM.SPL
Printed: Thu Mar 18 08:01:22 2004 kf 03/18/04

Exygen STUDY NO. L1958

Page Position: (1, 1)

	Vial	File Name	LIMS ID	Client ID	Sample Description	Matrix	Sample Type	Conc (ng/L)	Conc B	Conc C	Test ID	DF
1	1	031704A-601	---	---	XC030504-0, 0 ng/L Standard	---	Standard	0	---	---	0	1
2	2	031704A-602	---	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
3	3	031704A-603	---	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
4	4	031704A-604	---	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
5	5	031704A-605	---	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
6	6	031704A-606	---	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
7	7	031704A-607	---	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1
8	92	031704A-608	---	---	Methanol Wash	---	Blank	---	---	---	0	1
9	41	031704A-609	---	---	0106020 Control	---	Blank	---	---	---	0	1
10	42	031704A-610	---	---	0106020 Spk A, 50 ng/L	---	QC	50	---	---	0	1
11	43	031704A-611	---	---	0106020 Spk B, 500 ng/L	---	QC	500	---	---	0	1
12	2	031704A-612	---	---	XC030504-1, 25 ng/L Standard	---	Standard	25	---	---	0	1
13	3	031704A-613	---	---	XC030504-2, 50 ng/L Standard	---	Standard	50	---	---	0	1
14	44	031704A-614	---	---	L1958-17 Spk C, 250000 ng/L, DF=10000	---	QC	250000	---	---	0	10000
15	45	031704A-615	---	---	L1958-17 Spk C, 250000 ng/L, DF=1000	---	QC	250000	---	---	0	1000
16	46	031704A-616	---	---	L1958-5 Spk D, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
17	47	031704A-617	---	---	L1958-9 Spk E, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
18	48	031704A-618	---	---	L1958-13 Spk F, 25000 ng/L, DF=100	---	QC	25000	---	---	0	100
19	49	031704A-619	---	---	L1958-1 Spk G, 10000 ng/L, DF=100	---	QC	10000	---	---	0	100
20	4	031704A-620	---	---	XC030504-3, 100 ng/L Standard	---	Standard	100	---	---	0	1
21	5	031704A-621	---	---	XC030504-4, 250 ng/L Standard	---	Standard	250	---	---	0	1
22	50	031704A-622	---	---	L1958-3, DF=1000	---	QC	10000	---	---	0	1000
23	51	031704A-623	---	---	L1958-3, DF=100	---	QC	10000	---	---	0	100
24	52	031704A-624	---	---	L1958-22, DF=100	---	QC	10000	---	---	0	100
25	53	031704A-625	---	---	L1958-23, DF=1000	---	QC	100000	---	---	0	1000
26	6	031704A-626	---	---	XC030504-5, 500 ng/L Standard	---	Standard	500	---	---	0	1
27	7	031704A-627	---	---	XC030504-6, 1000 ng/L Standard	---	Standard	1000	---	---	0	1

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample List: C:\MASSLYNX\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM.SPL
Printed: Thu Mar 18 08:01:22 2004 KJ 03/18/04

Exygen STUDY NO. 41958

Page Position: (2, 1)

	MS Method	HPLC Method	MS Tune File	Inj.Volume
1	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
2	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
3	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
4	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
5	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
6	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
7	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
8	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
9	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
10	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
11	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
12	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
13	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
14	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
15	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
16	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
17	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
18	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
19	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
20	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
21	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
22	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
23	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
24	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
25	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
26	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15
27	C6 8 ACIDS C4 6 8 SULF	pfbs water	Fluorochems	15

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

LC/MS/MS SYSTEM AND OPERATING CONDITIONS

Sponsor Protocol No: NA Exygen Study No: L1958

Instrument:	Micromass Quattro Ultima (LC/MS/MS Unit #6)
Computer:	COMPAQ Professional Workstation AP200
Software:	Microsoft Windows NT: Version 4 Build 1381: Service Pack 5 Micromass Limited: MassLynx 3.4 Build 004
HPLC Equipment:	Hewlett Packard (HP) Series 1100 HP Bin Pump HP Vacuum Degasser HP Autosampler HP Column Oven
HPLC Column:	Genesis C-8, 5 cm x 2.1 mm i.d. x 4 µ (Exygen ID: MA0012842) (**JONES**CHROMATOGRAPHY: Part No. FK5962E)
Mobile Phase (A) :	2 mM Ammonium Acetate in Type I Water
Mobile Phase (B) :	Methanol
Analyst:	Karen Risha Exygen Research 3058 Research Drive, State College, PA 16801 Phone: (814) 272-1039 FAX: (814) 231-1580

KR 03/18/04

NOTE: The next 3 pages are computer generated printouts from the masslynx software program. The pages contain the instrument settings used for the analysis of this data set.

All Handwritten Peak ID's by: KR 03/19/04

Scanning Method Report

Method: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQUDB\C6 8 ACIDS C4 6 8 SULF
Last Modified: Tue Mar 16 15:06:12 2004

Printed: Thu Mar 18 08:01:49 2004 KBJ 03/18/04

Solvent Delay (mins) : 0.00

Analog Channel 4 : Unused
Function : 1 MRM of 5 Mass Pairs (ESP-)

Inter Channel Delay (Secs) : 0.03
Span (Daltons) : 0.00
Start Time (Mins) : 0.00
End Time (Mins) : 12.00
Repeats : 1

Channel	Parent	Daughter	Dwell (Secs)	Coll Energy (eV)	Cone (V)
1	299.00	99.00	0.20	40	49
2	313.00	269.00	0.20	10	20
3	399.00	80.00	0.20	35	50
4	413.00	369.00	0.20	10	10
5	499.00	99.00	0.20	30	10

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Method File: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQUDB\pfbs water
Last Modified: Thursday, March 18, 2004 07:03:06

Printed: Thursday, March 18, 2004 08:02:05 KG 03/18/04

HP1100 LC Pump Initial Conditions

Solvents	
A%	90.0
B%	10.0
C%	0.0
D%	0.0
Flow (ml/min)	0.300
Stop Time (mins)	20.0
Min Pressure (bar)	0
Max Pressure (bar)	400
Oven Temperature Left(°C)	35.0
Oven Temperature Right(°C)	35.0

HP1100 LC Pump Gradient Timetable

The gradient Timetable contains 8 entries which are :

Time	A%	B%	C%	D%	Flow	Pressure
0.00	90.0	10.0	0.0	0.0	0.300	400
2.00	90.0	10.0	0.0	0.0	0.300	400
5.00	10.0	90.0	0.0	0.0	0.300	400
9.00	10.0	90.0	0.0	0.0	0.300	400
9.50	0.0	100.0	0.0	0.0	0.300	400
14.00	0.0	100.0	0.0	0.0	0.300	400
14.50	90.0	10.0	0.0	0.0	0.300	400
20.00	90.0	10.0	0.0	0.0	0.300	400

HP1100 LC Pump External Event Timetable

The Timetable contains 6 entries which are :

Time	Column Switch	Contact1	Contact2	Contact3	Contact4
Initial	Off	Off	Off	Off	Off
0.00	Off	On	Off	Off	Off
0.05	Off	Off	Off	Off	Off
0.10	Off	Off	On	Off	Off
11.90	Off	Off	Off	On	Off
12.00	Off	Off	Off	Off	Off

HP1100 Autosampler Initial Conditions

Draw Speed	200.0
Eject Speed (µl/min)	200
Draw Position (mm)	0.00
Stop Time (mins)	20.00
Injection Volume(µl)	15.0
Vial Number	92

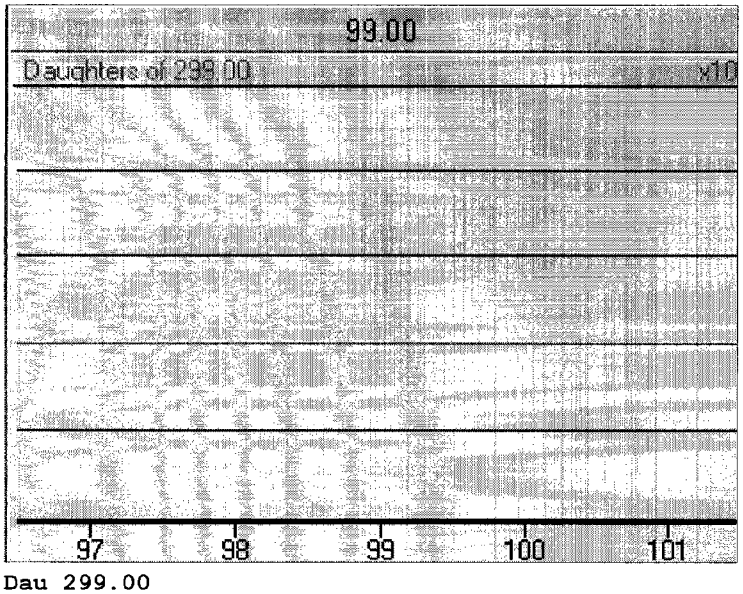
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Tuning Method Report

Method: C:\MASSLYNX\FLUOROCHEMICALS.PRO\ACQUDB\FLUOROCHEMS

Printed: Thu Mar 18 08:02:28 2004

KGF 03/18/04



Dau 299.00

SOURCE (ESP-)	Set	Rdbk	Analyser	Set	Rdbk
Capillary	3.00	-2.93	LM Res 1	14.0	
Cone	10	-11	HM Res 1	14.0	
Hexapole 1	0.0		IEnergy 1	1.0	
Aperture 1	0.0		Entrance	-2	28
Hexapole 2	0.2		Collision	30	29
Source Block Temp.	100	100	Exit	2	31
Desolvation Temp.	300	299	LM Res 2	14.0	
			HM Res 2	14.0	
			IEnergy 2	2.0	
			Multiplier	650	-648

Pressures	Rdbk	Gas Flows	Rdbk
Analyser Vacuum	OFF	Cone Gas	129.6
Gas Cell	2.8e-3	Desolvation	751.3

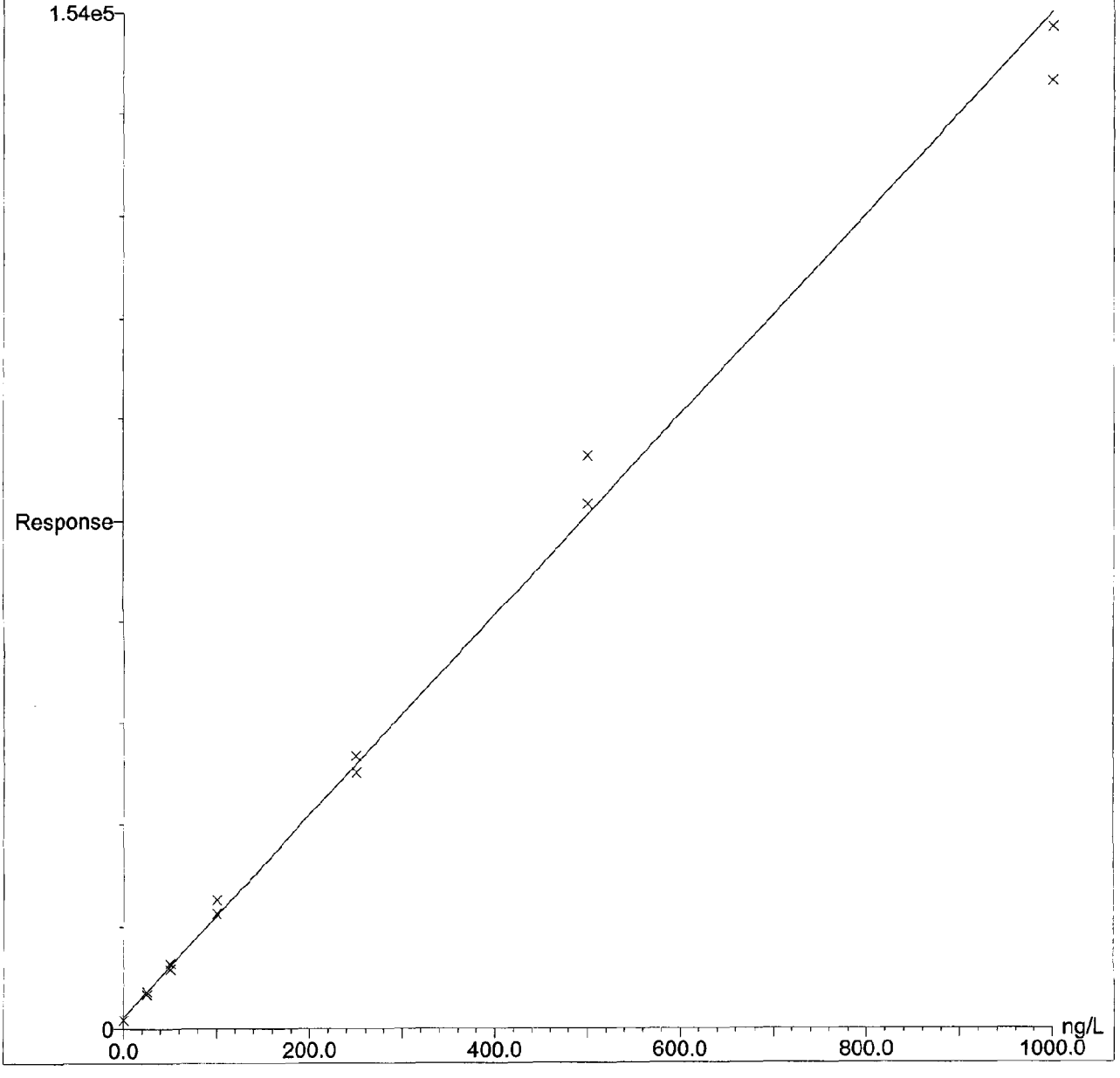
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Quantify Calibration Report
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:34:57 2004
Printed: Fri Mar 19 12:24:05 2004

KQ 03/19/04 pages 1-5

Compound 1 name: C6 Acid PFHA
Coefficient of Determination: 0.993757
Calibration curve: 152.008 * x + 1811.49
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None

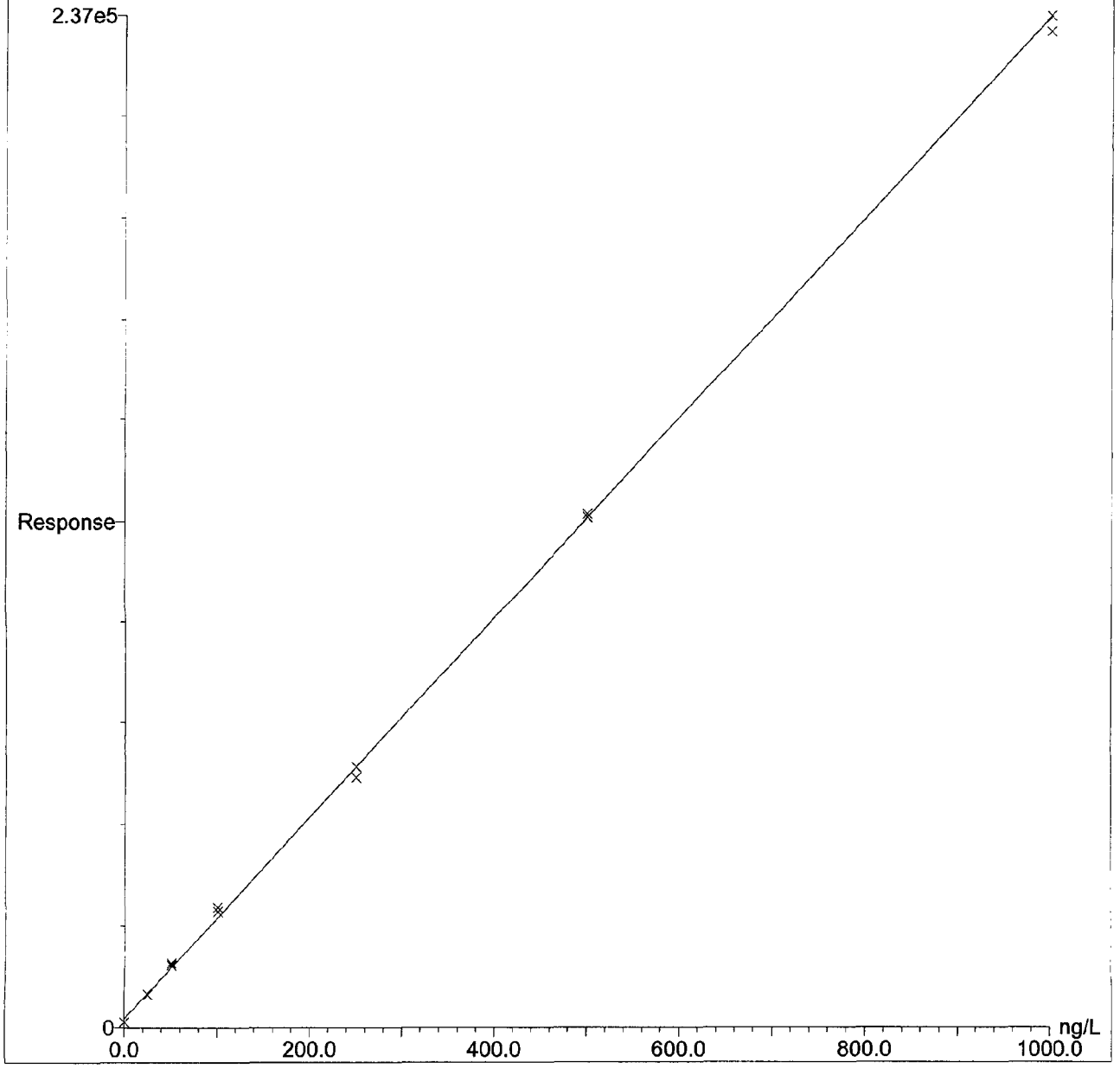


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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

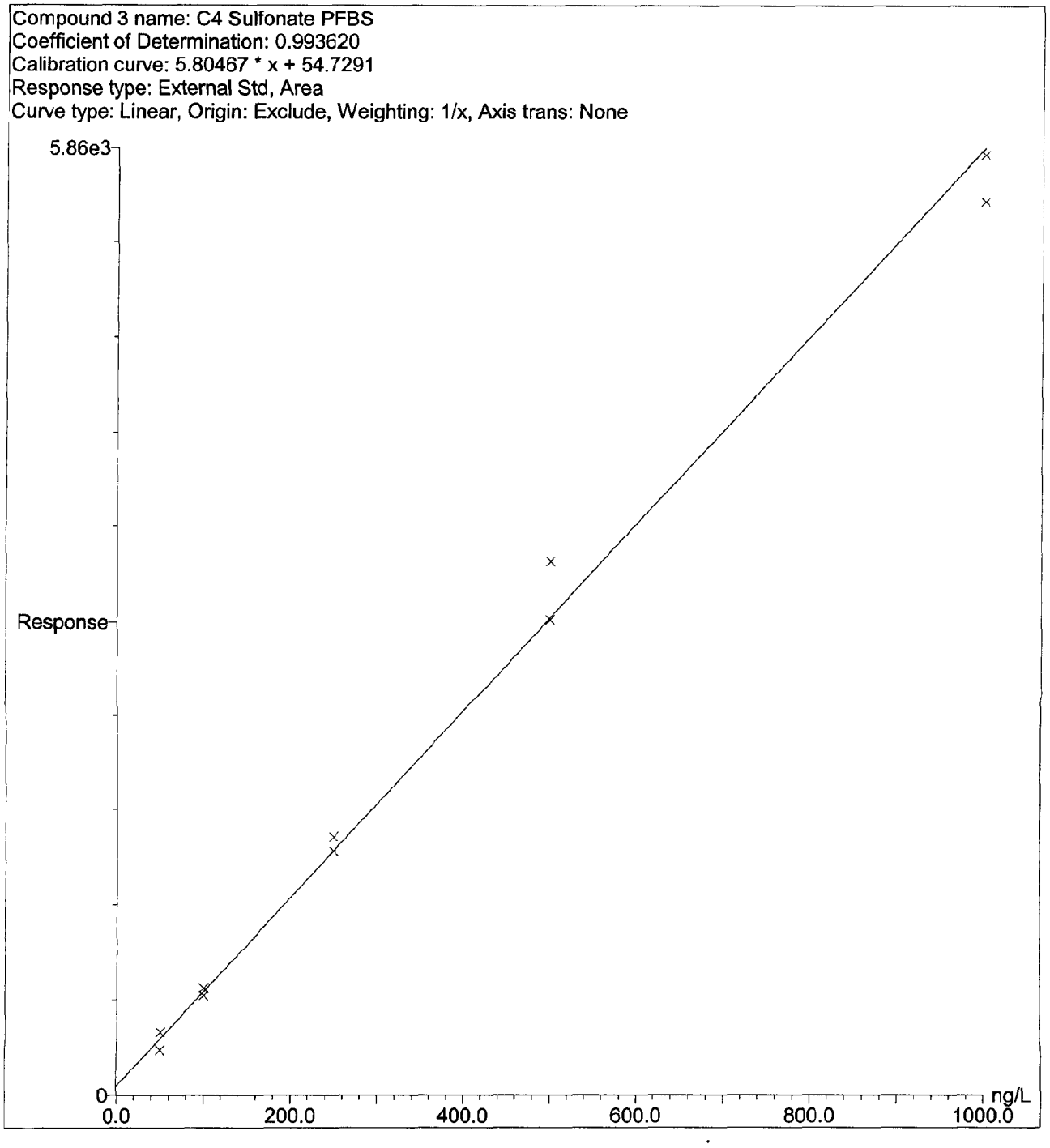
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Last modified: Fri Mar 19 11:34:57 2004
Printed: Fri Mar 19 12:24:05 2004

Compound 2 name: C8 Acid PFOA
Coefficient of Determination: 0.999637
Calibration curve: 234.327 * x + 2135.08
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



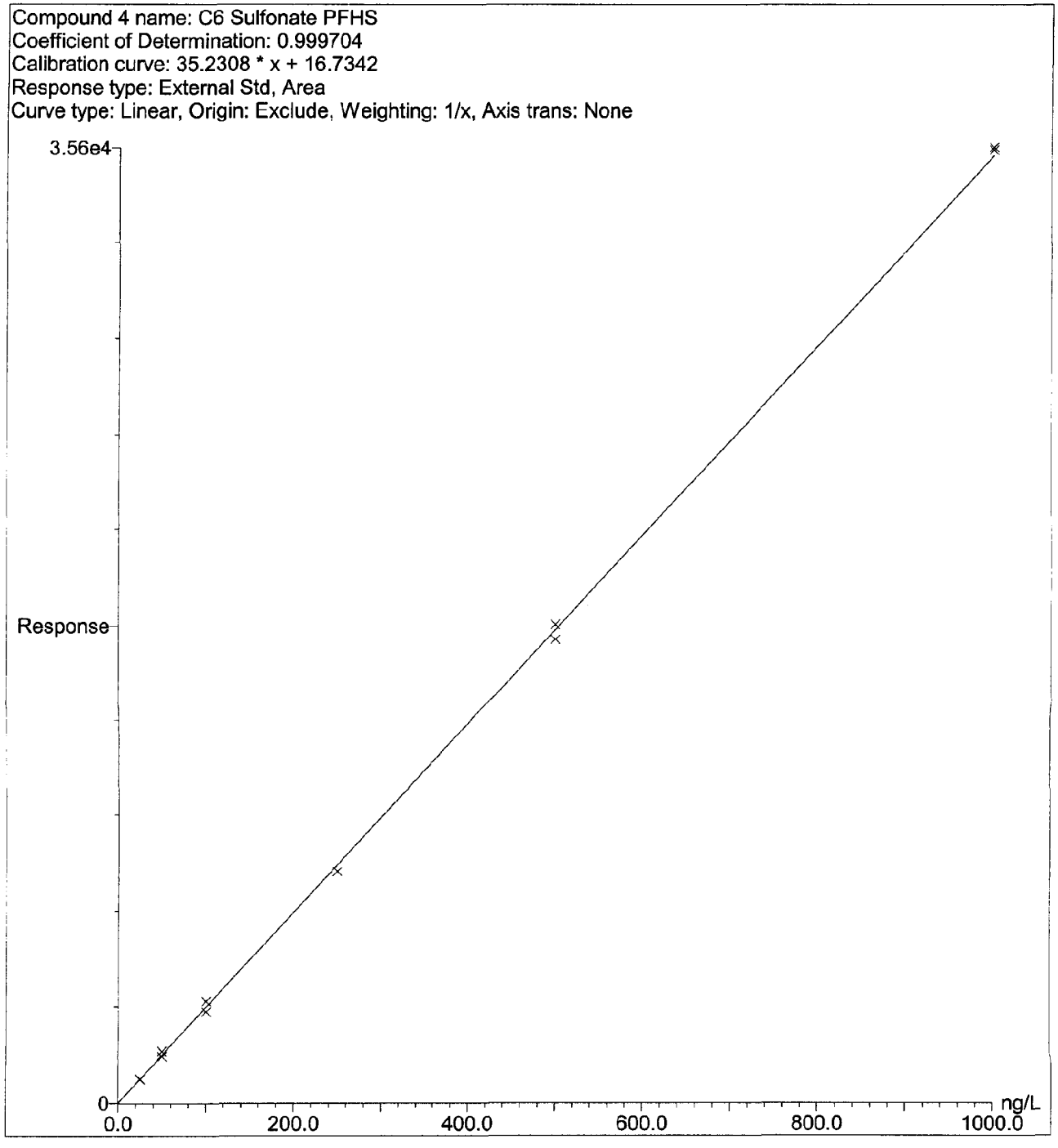
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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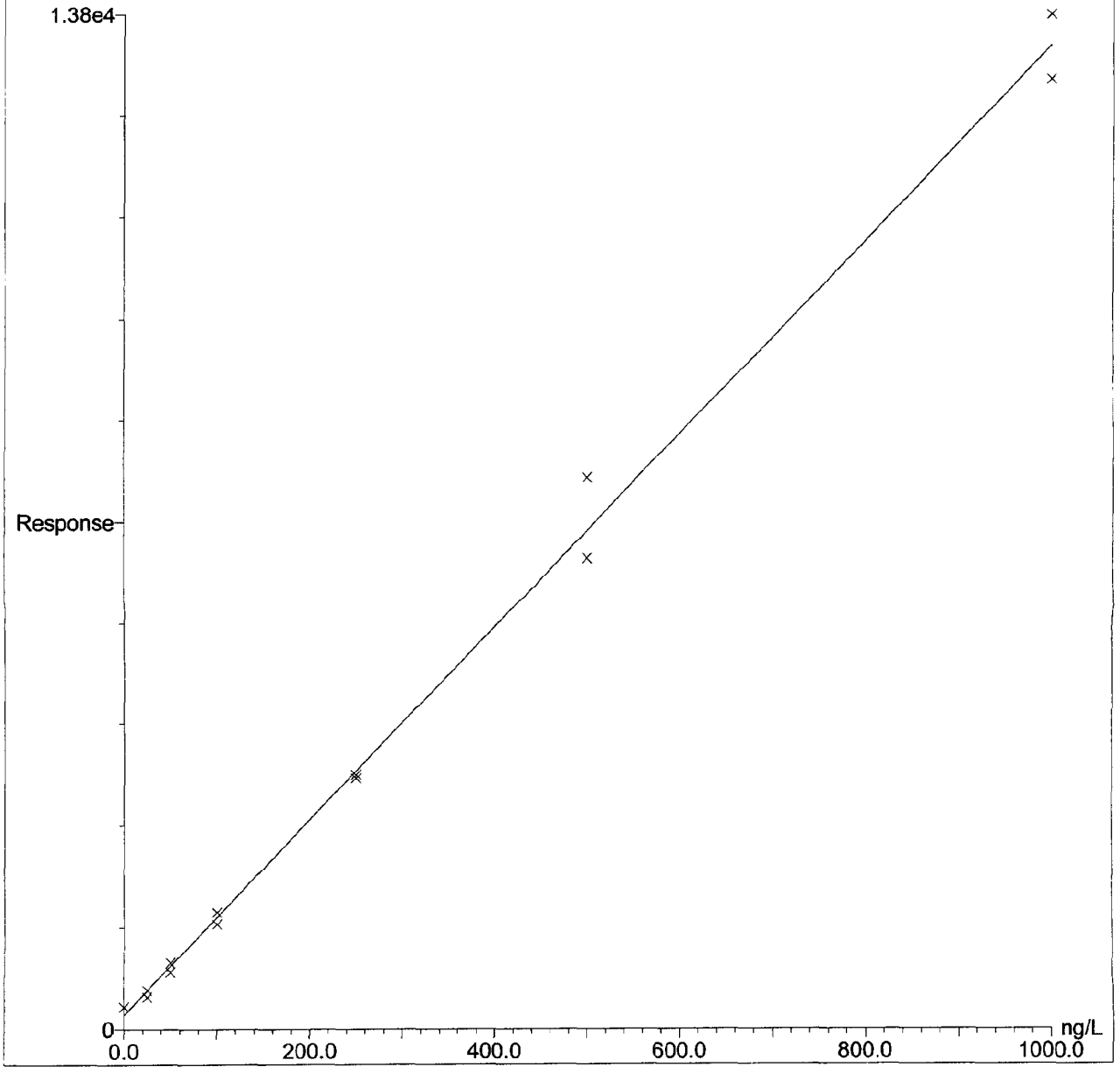
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Last modified: Fri Mar 19 11:34:57 2004
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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Calibration: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\CurveDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:34:57 2004
Printed: Fri Mar 19 12:24:05 2004

Compound 5 name: C8 Sulfonate PFOS
Coefficient of Determination: 0.995843
Calibration curve: 13.1525 * x + 200.030
Response type: External Std, Area
Curve type: Linear, Origin: Exclude, Weighting: 1/x, Axis trans: None



Exygen Research, 3058 Research Drive, State College, PA 16801

Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

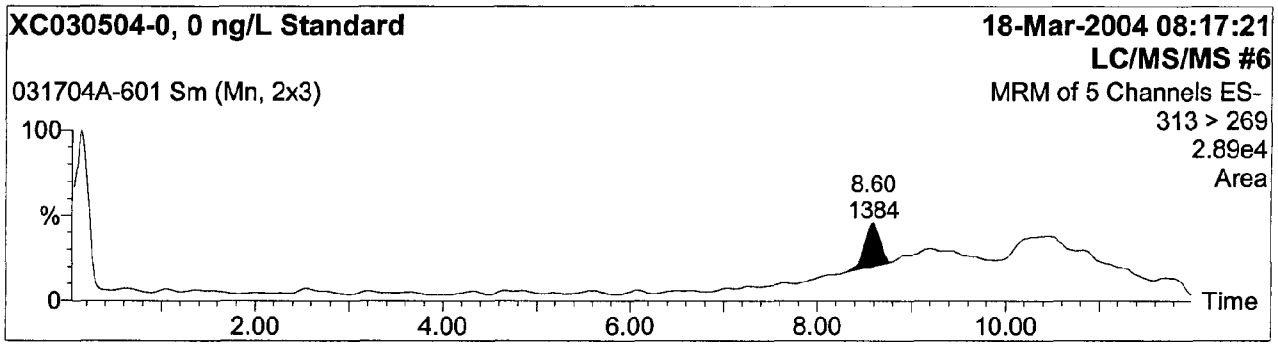
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

Printed: Fri Mar 19 12:24:08 2004

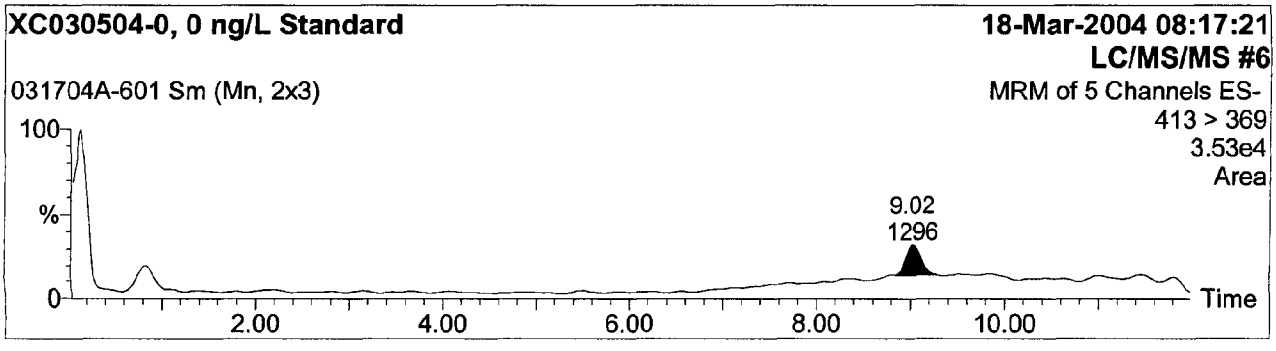
Initials KC
Date 03/19/04
Run# 031704A-601 To 031704A-627

Name: 031704A-601
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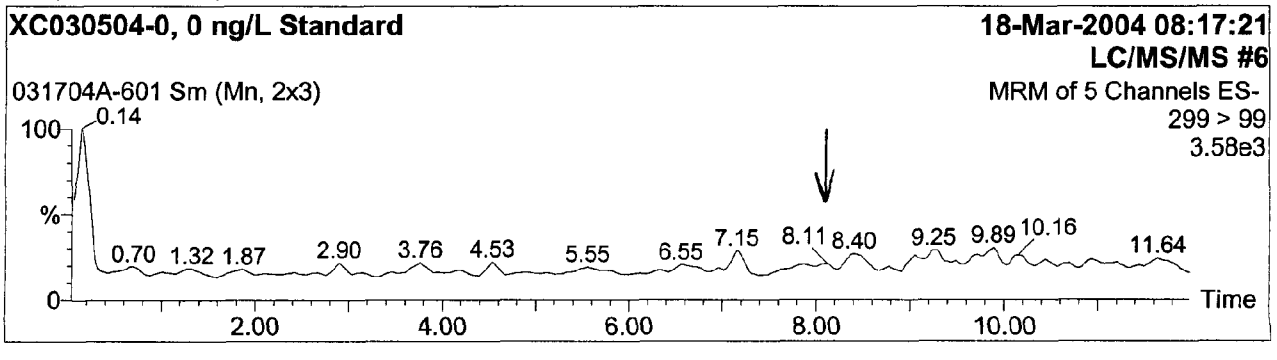
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



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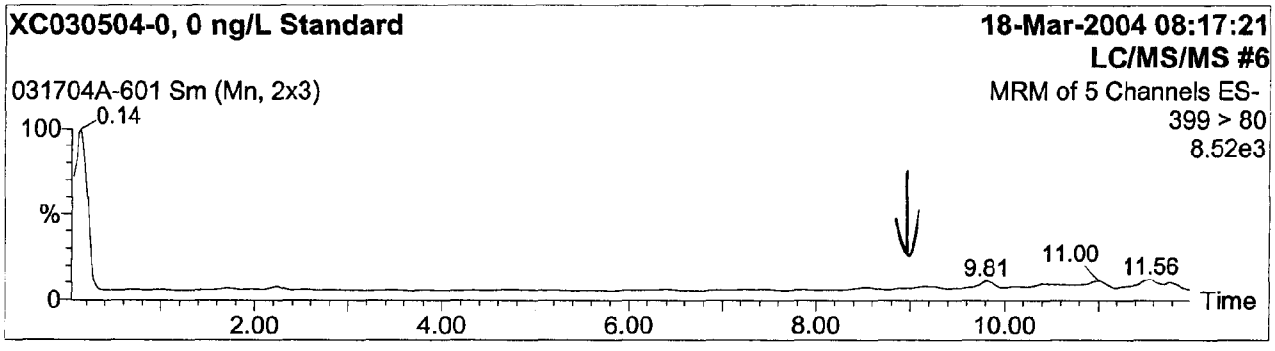
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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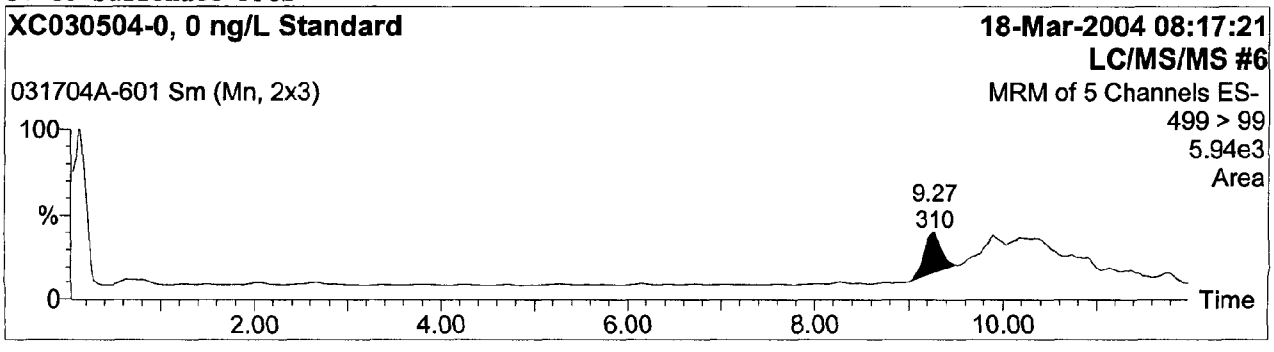
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Name: 031704A-601
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



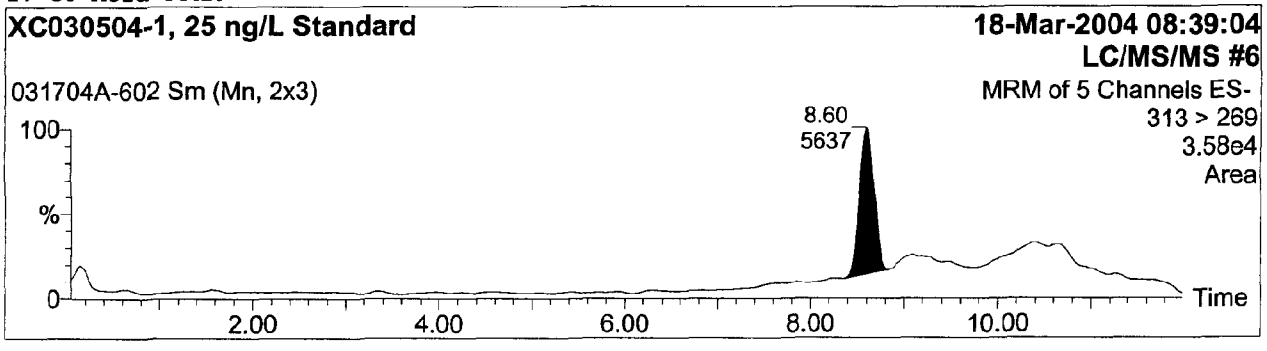
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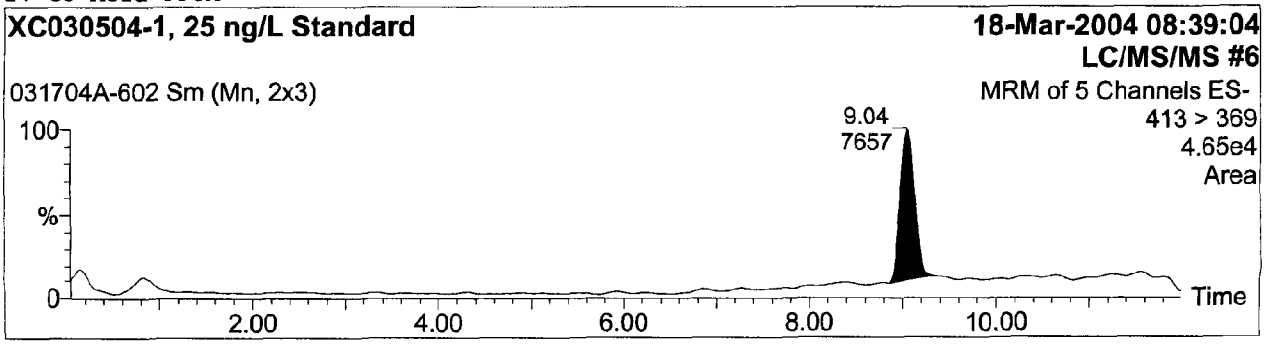
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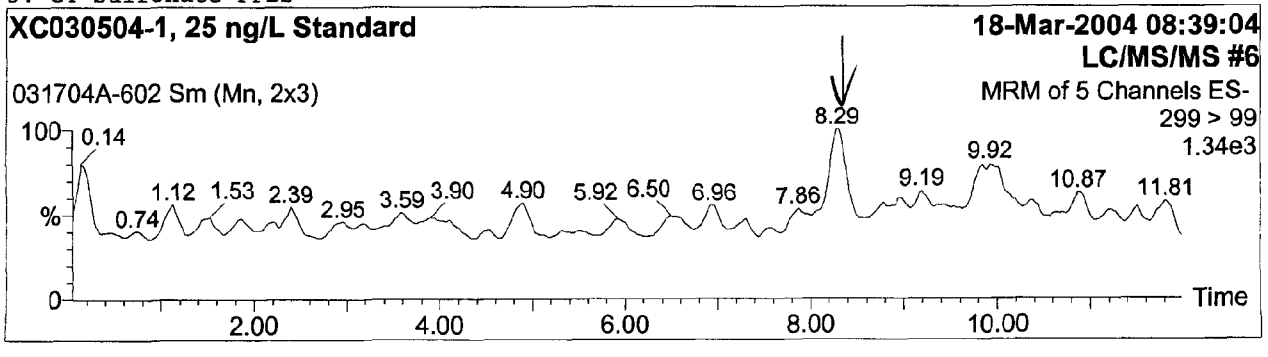
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



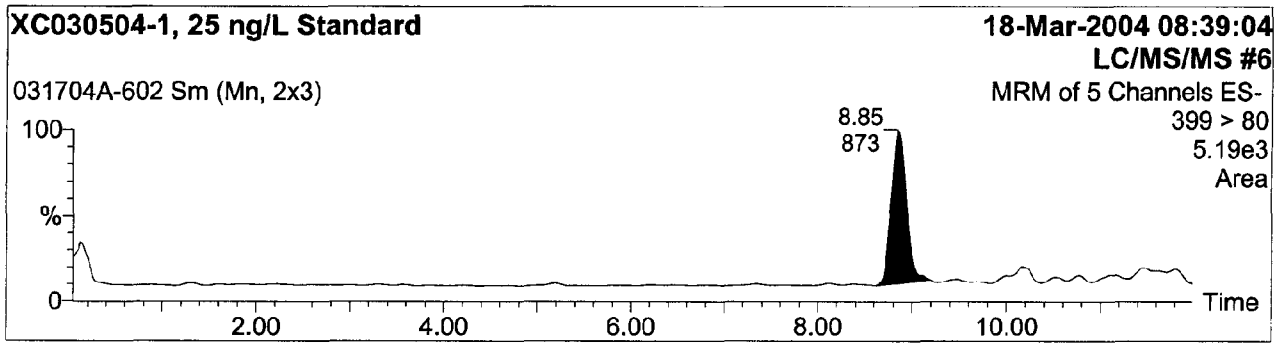
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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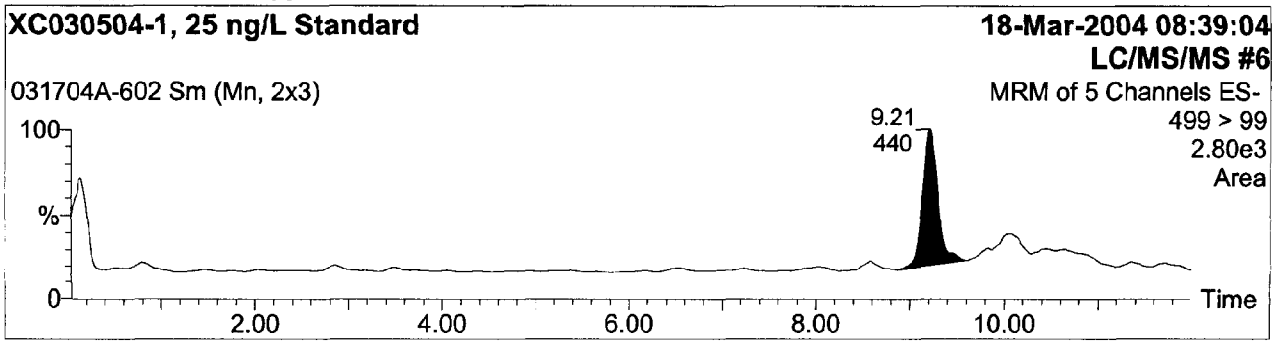
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Name: 031704A-602
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

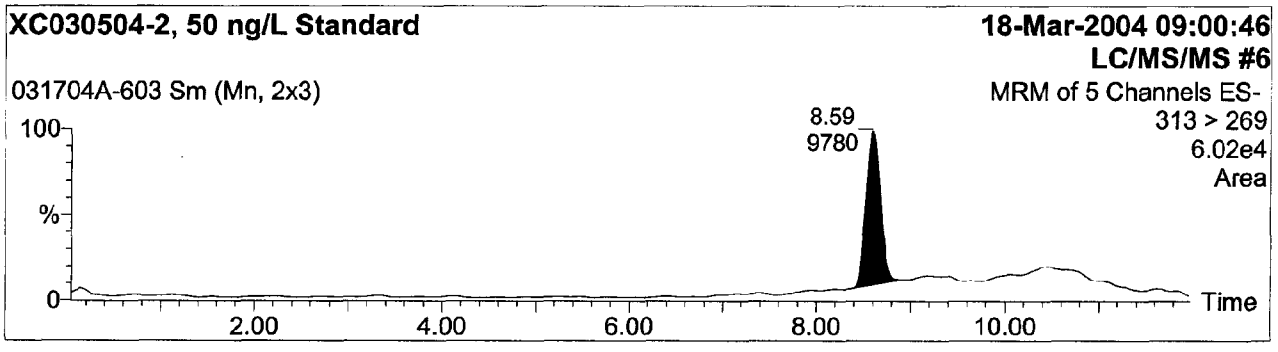
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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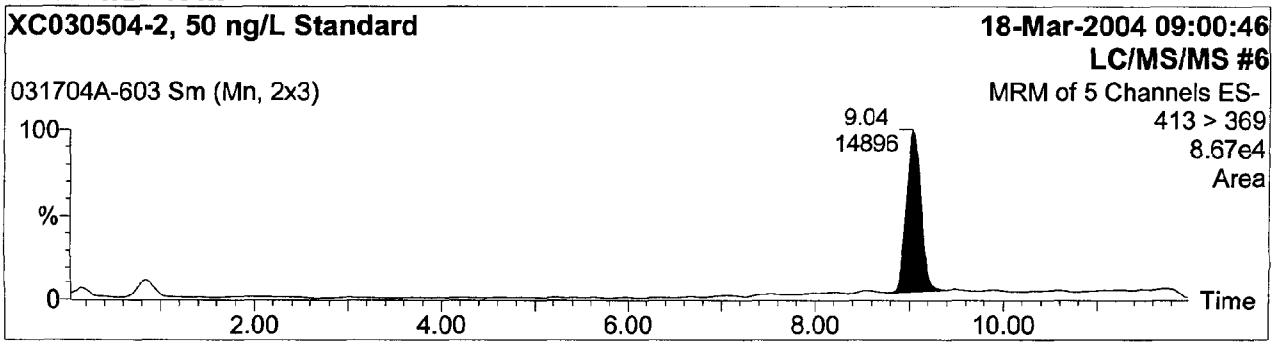
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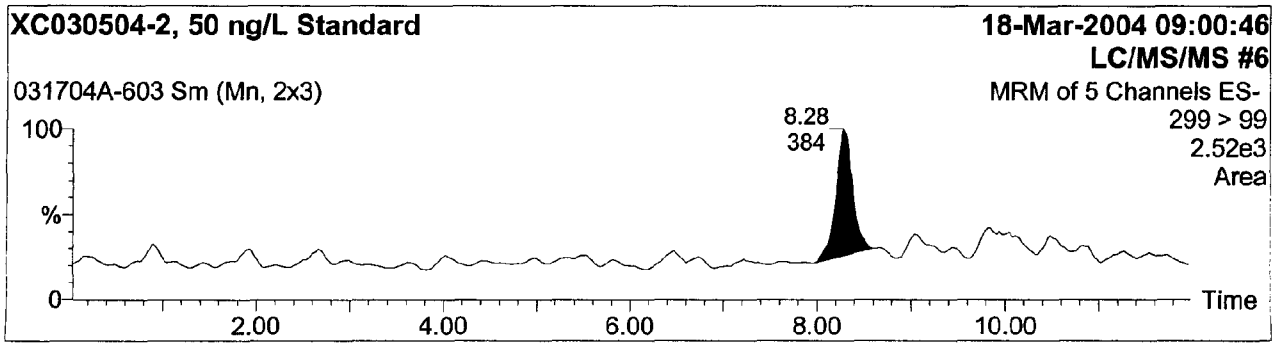
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



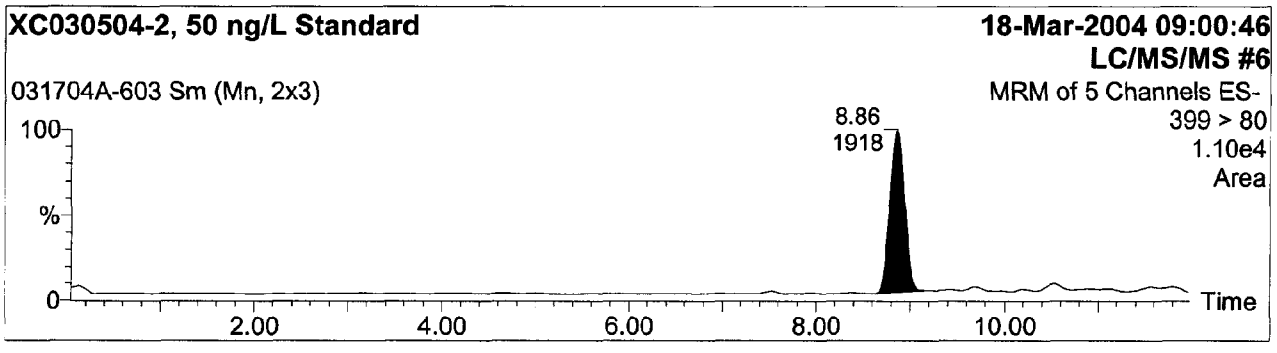
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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Last modified: Fri Mar 19 11:30:32 2004
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Job Code:

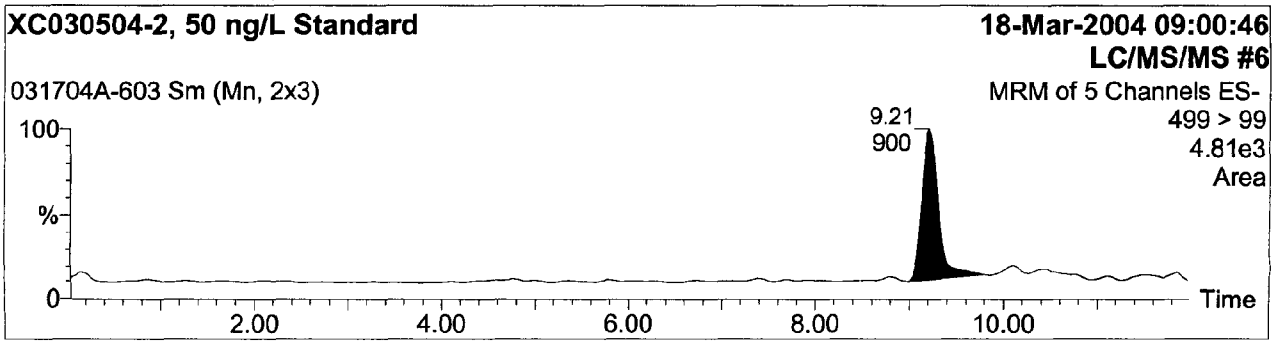
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



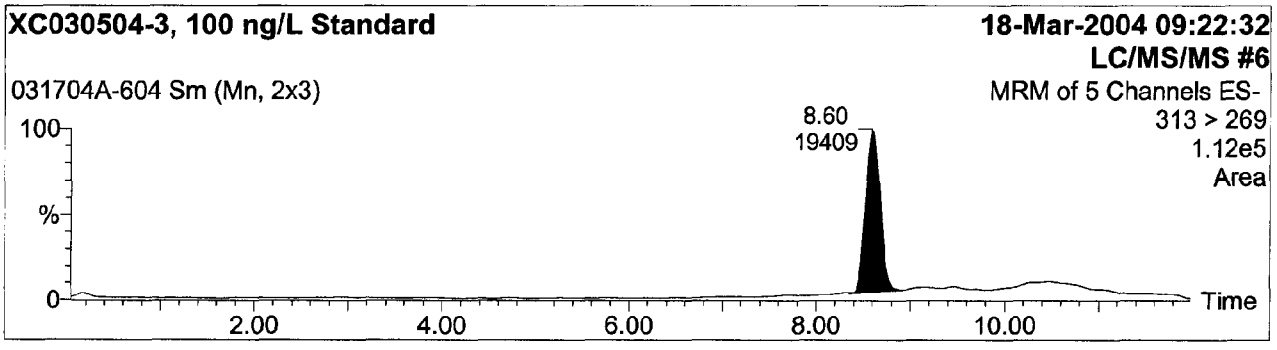
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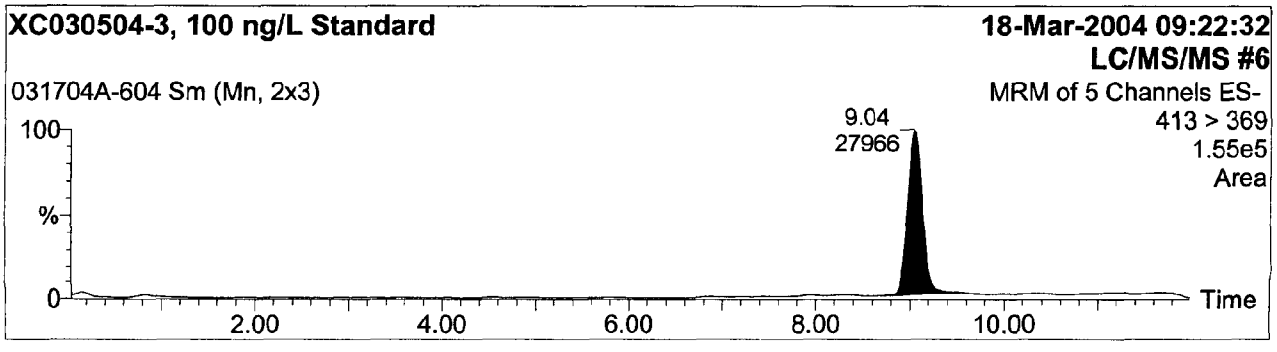
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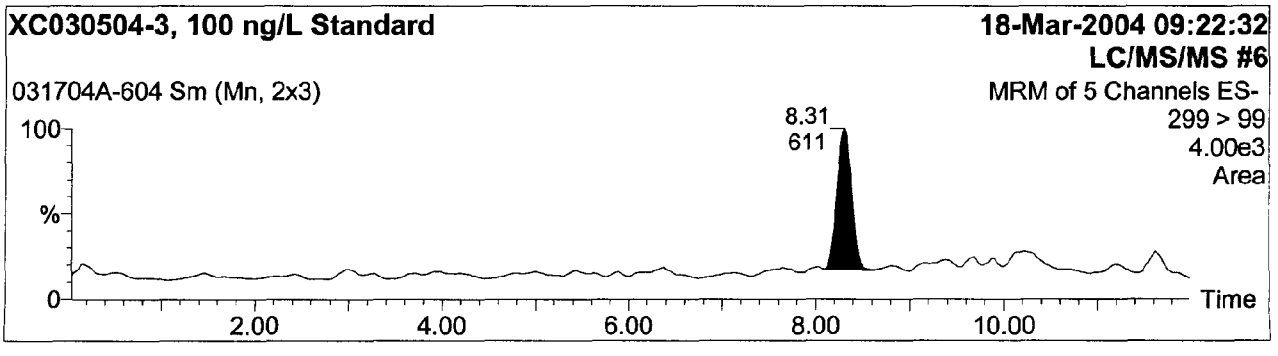
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



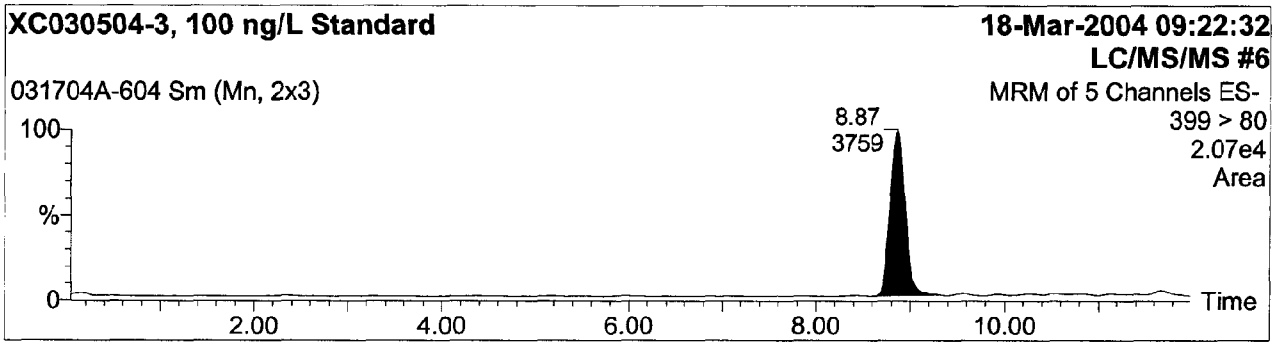
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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Last modified: Thu Mar 18 09:51:08 2004
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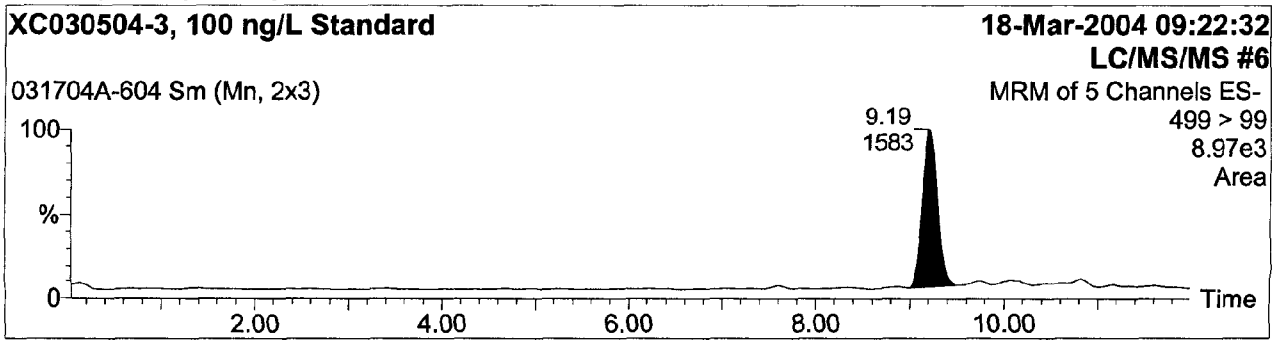
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Name: 031704A-604
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



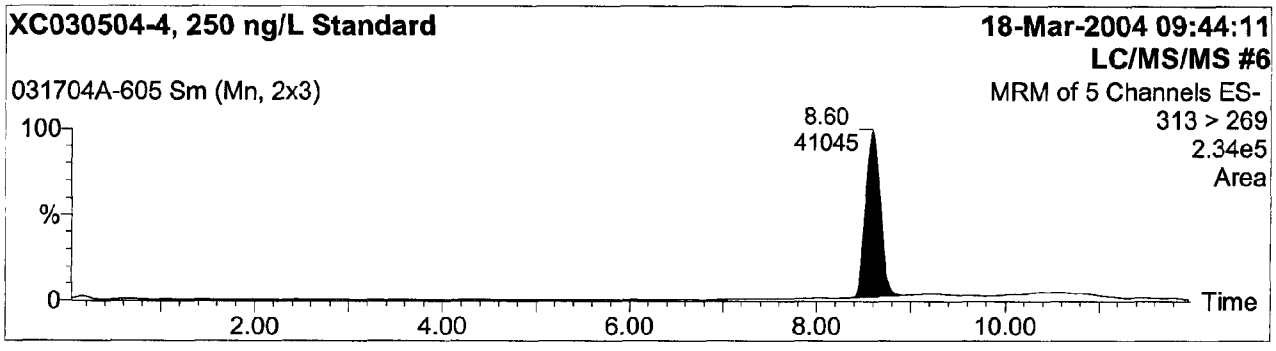
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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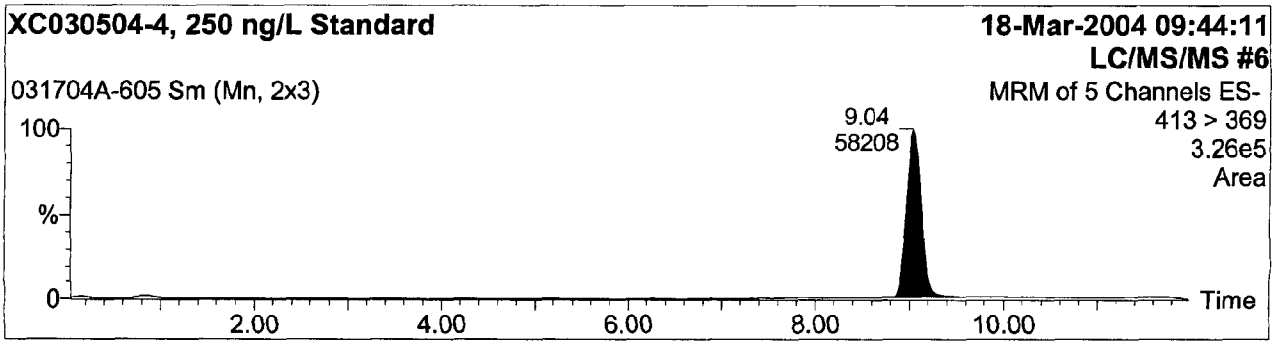
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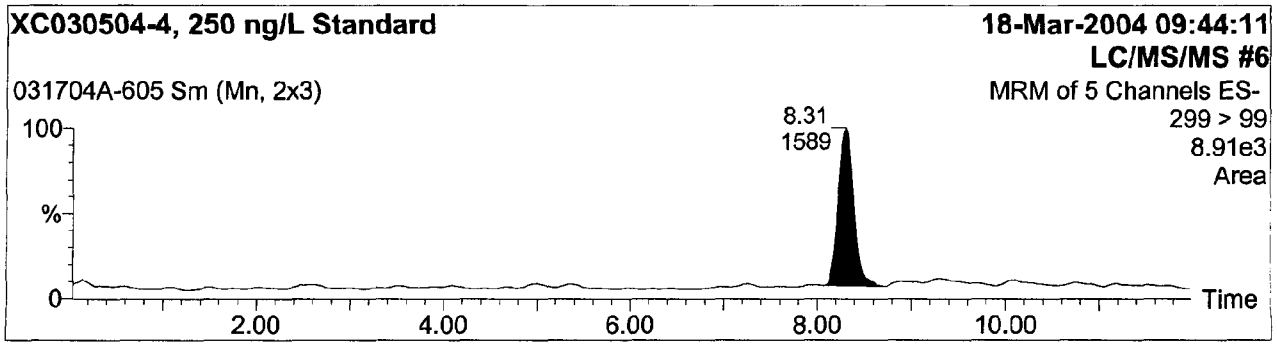
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



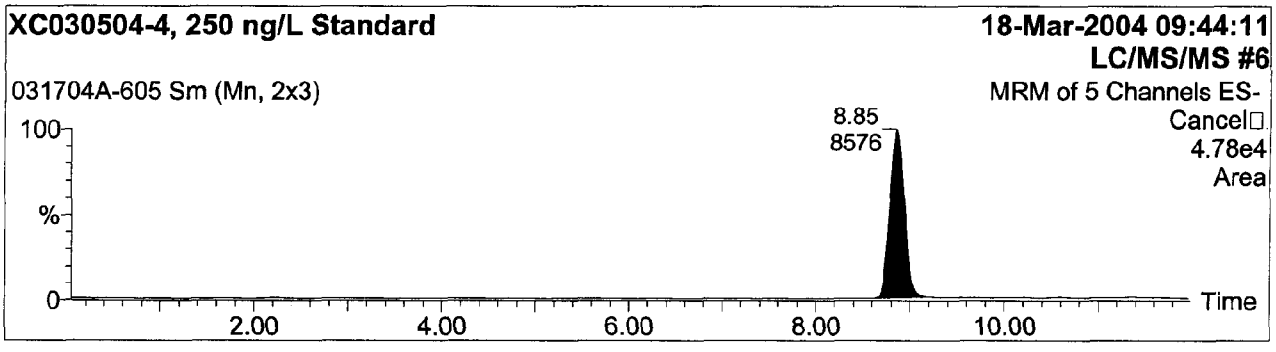
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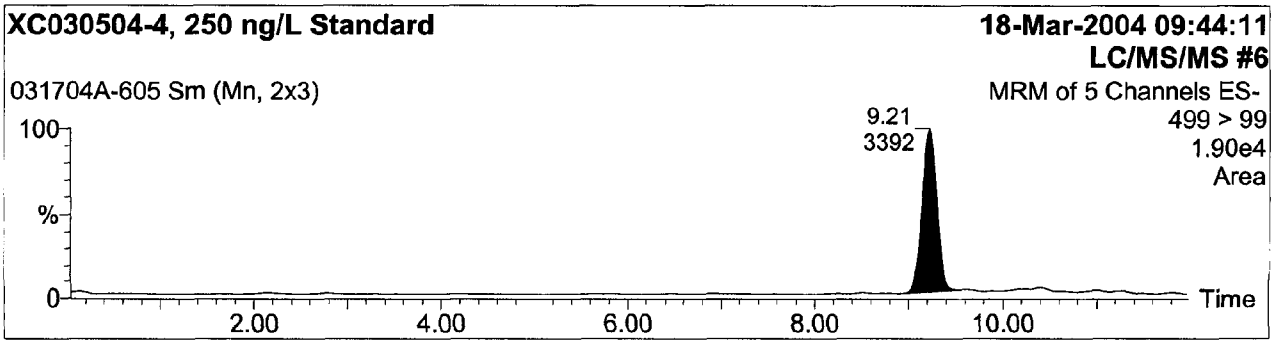
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



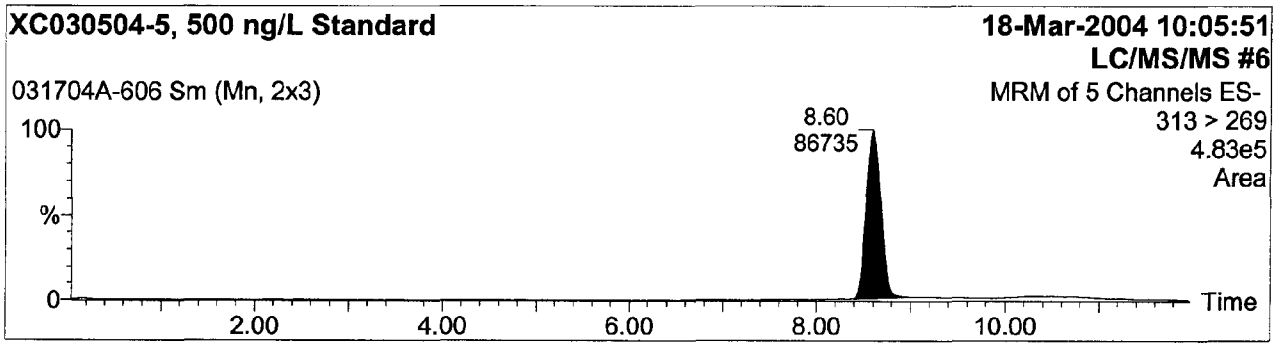
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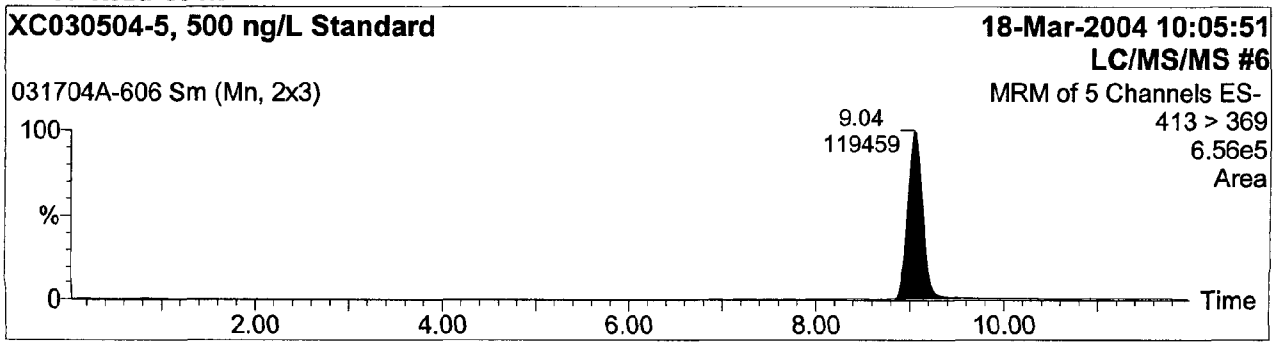
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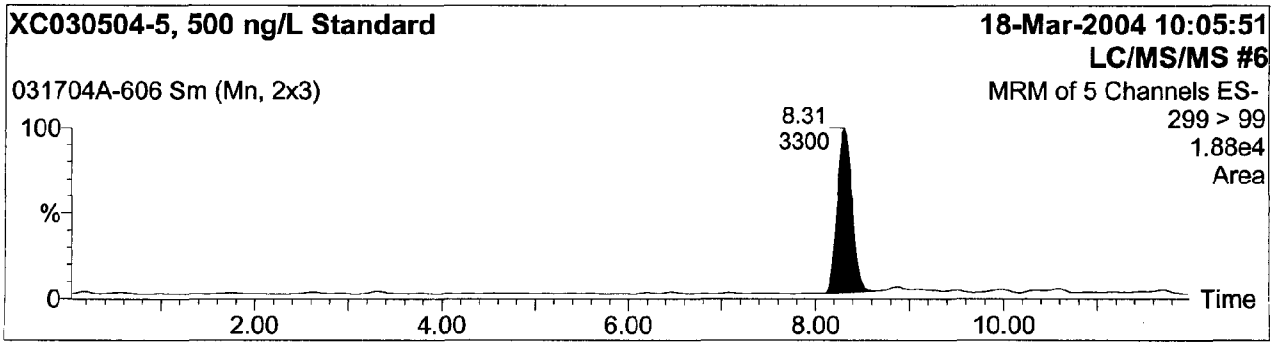
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



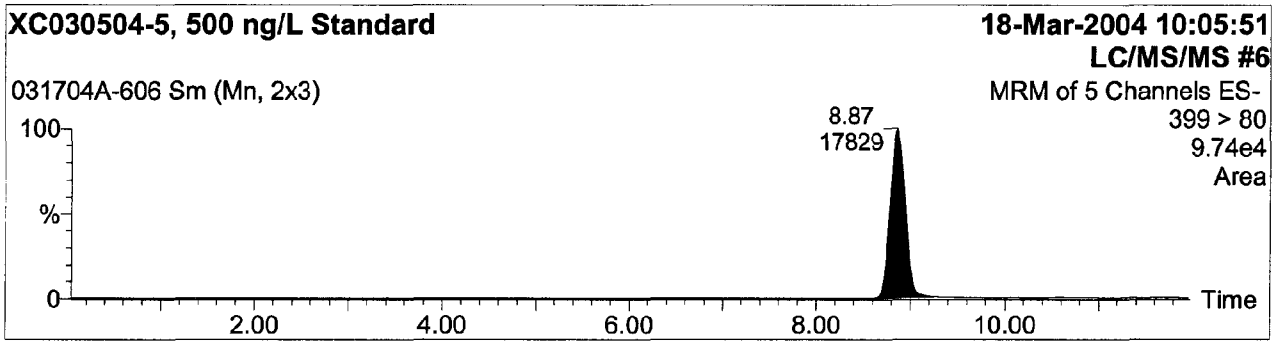
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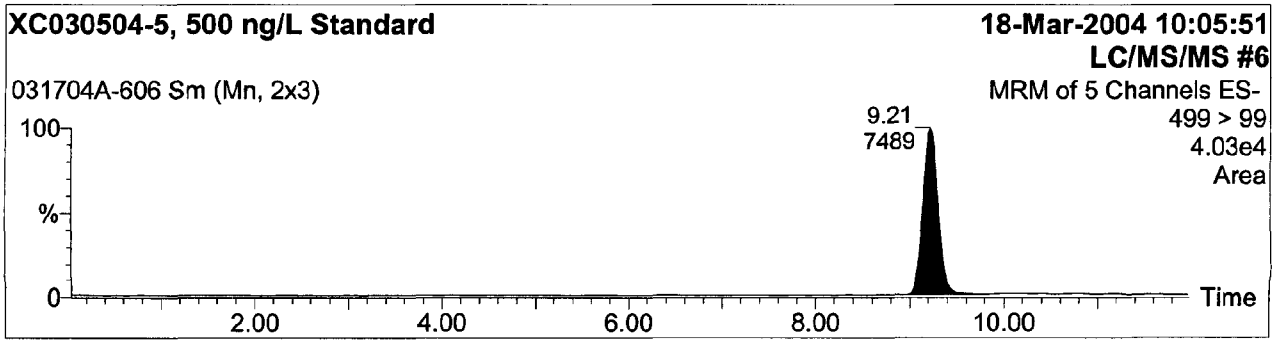
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Name: 031704A-606
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



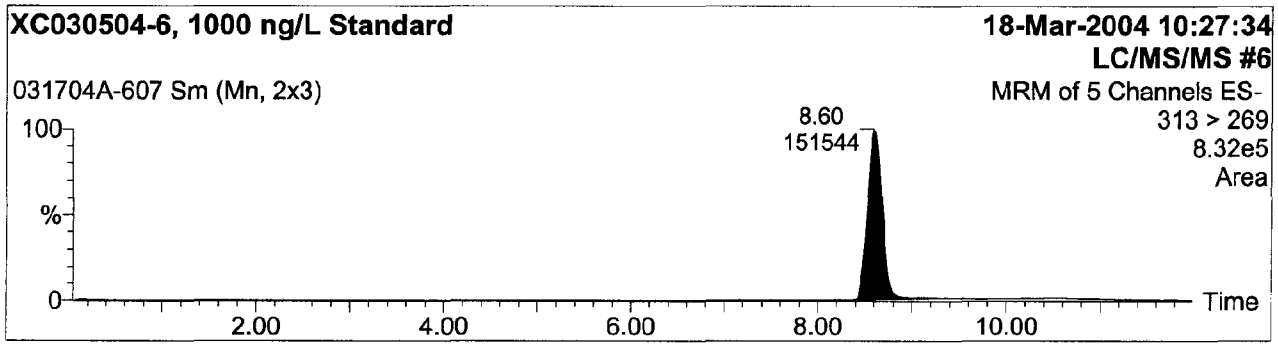
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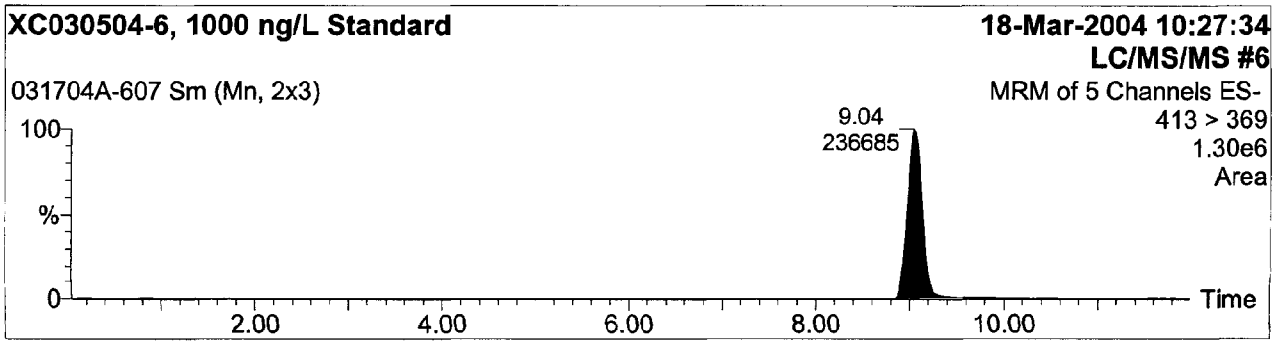
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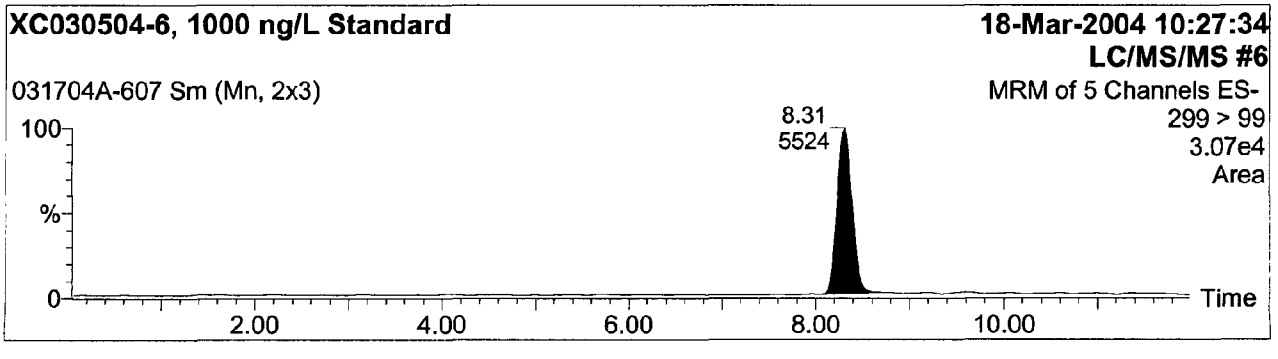
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



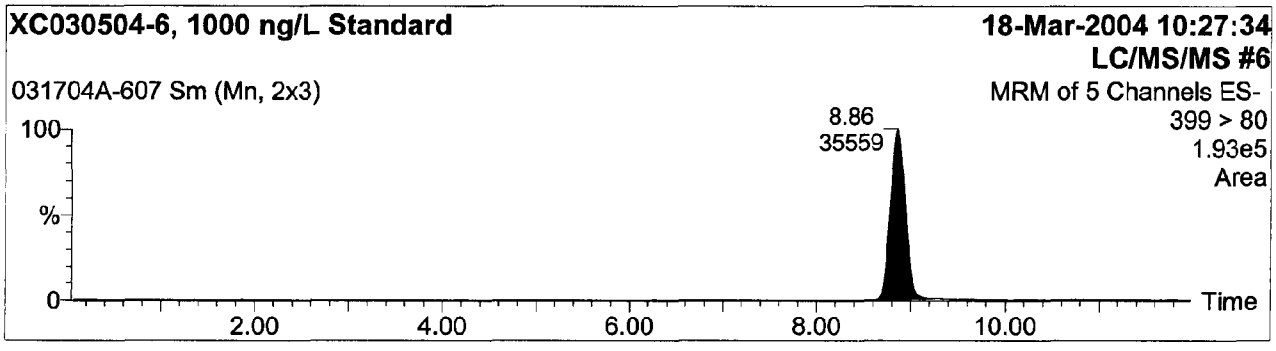
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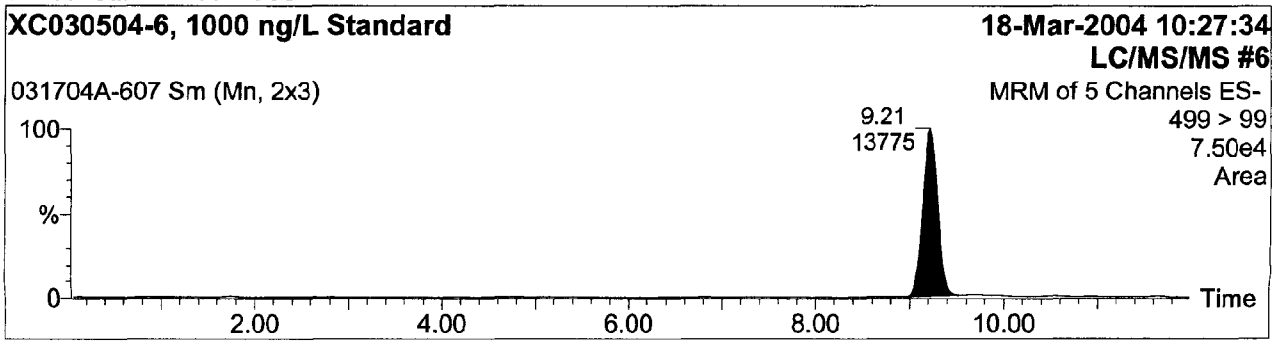
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



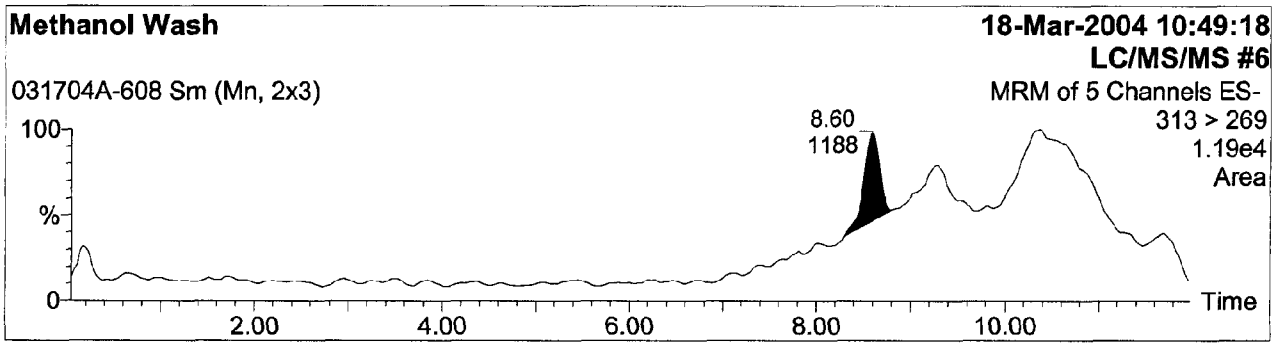
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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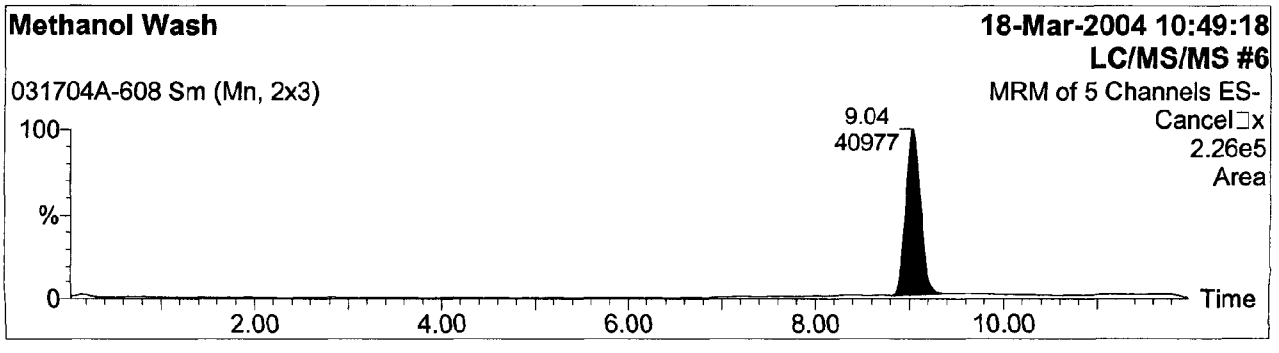
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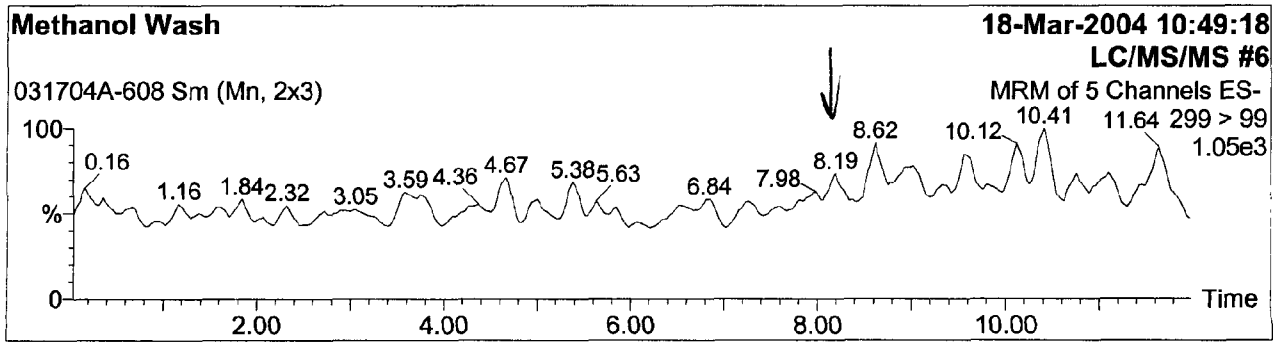
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



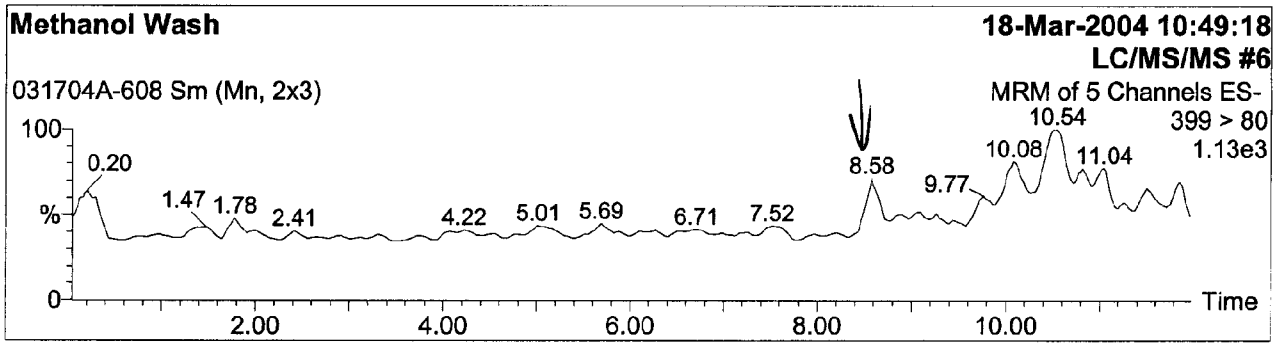
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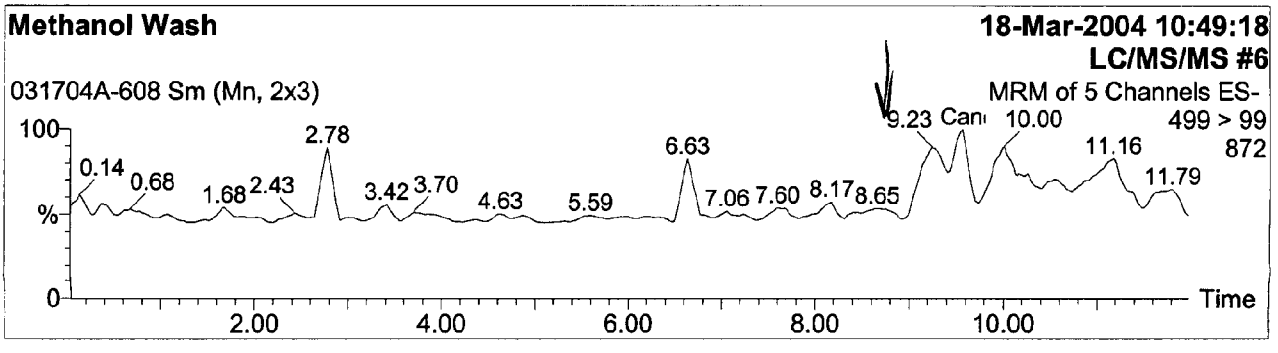
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Name: 031704A-608
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

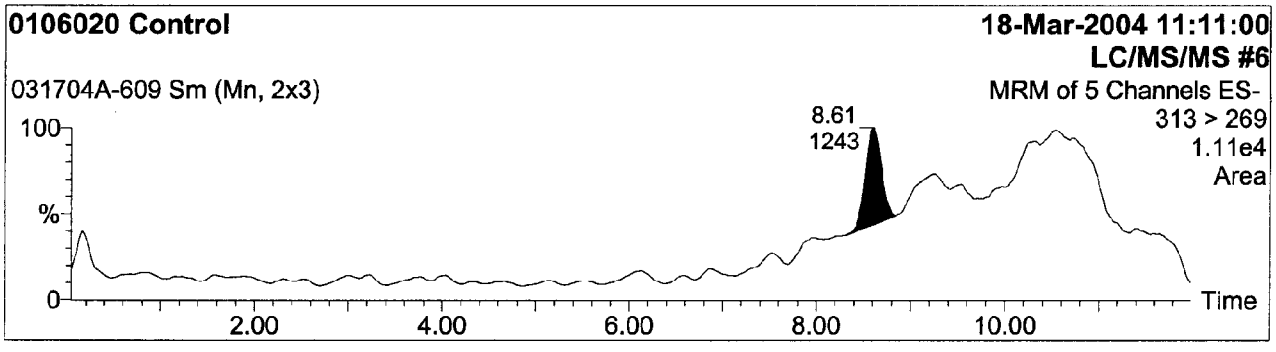
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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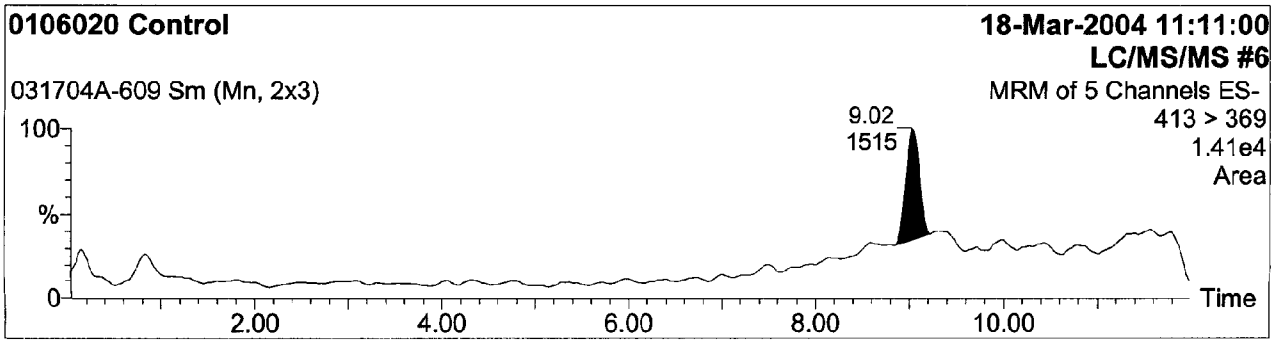
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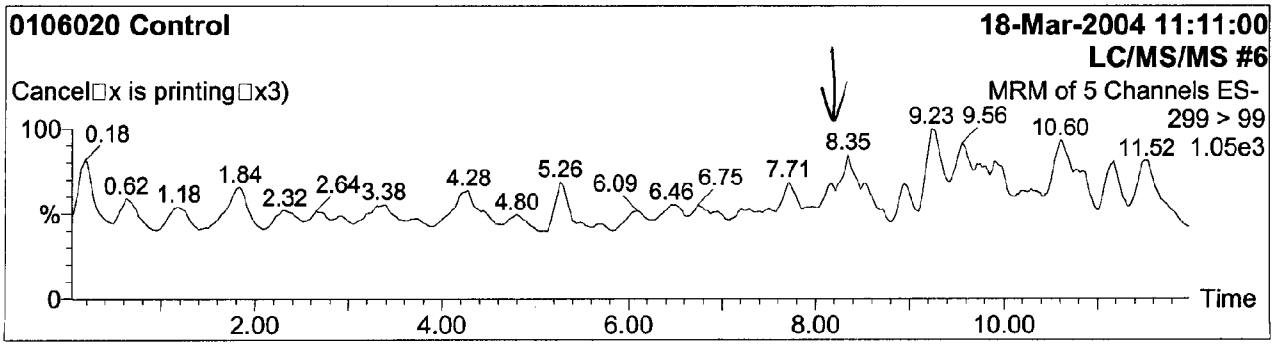
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



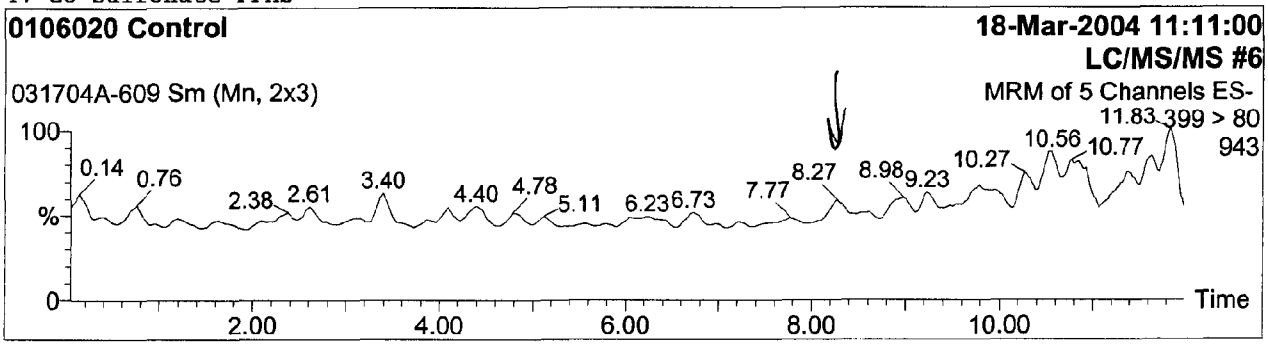
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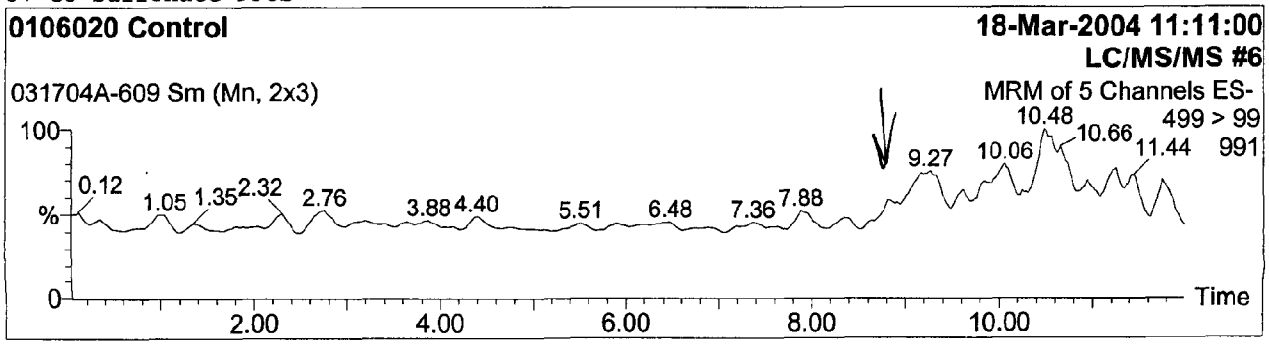
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

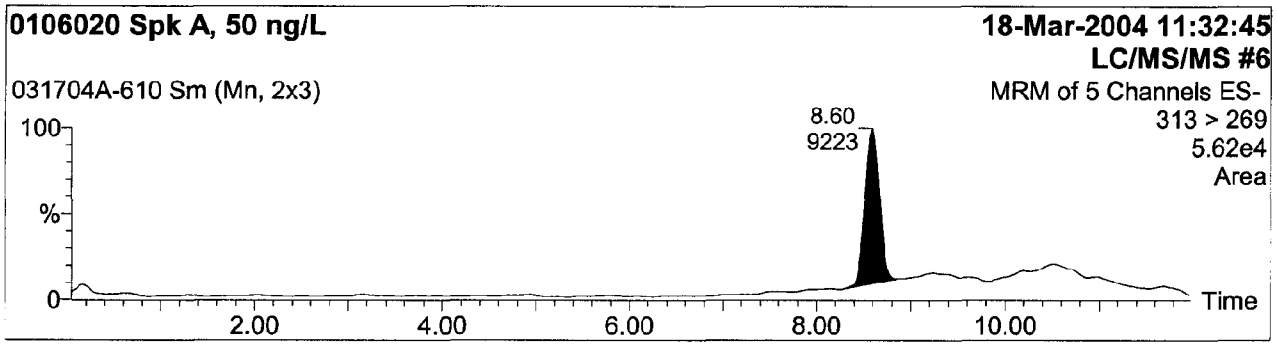
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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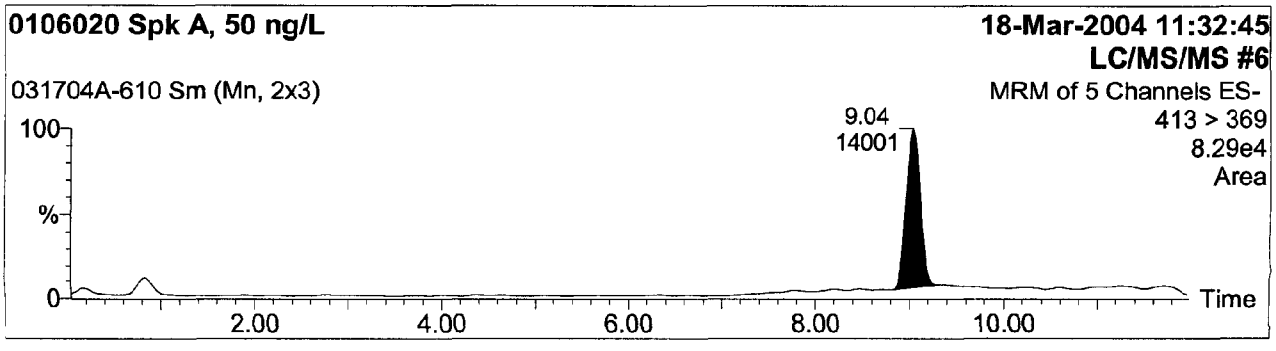
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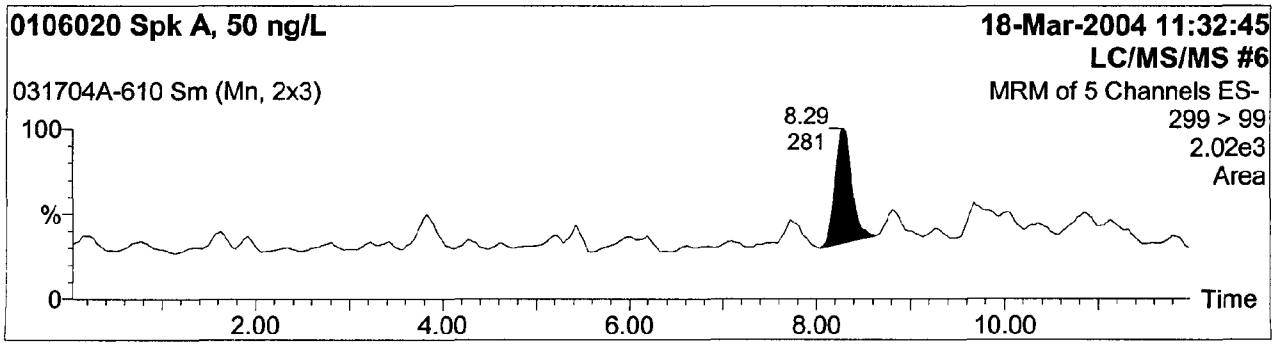
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



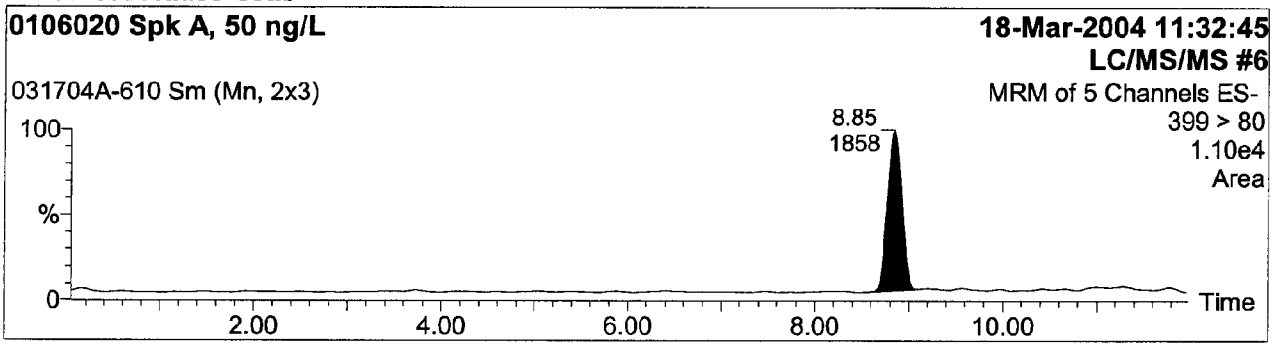
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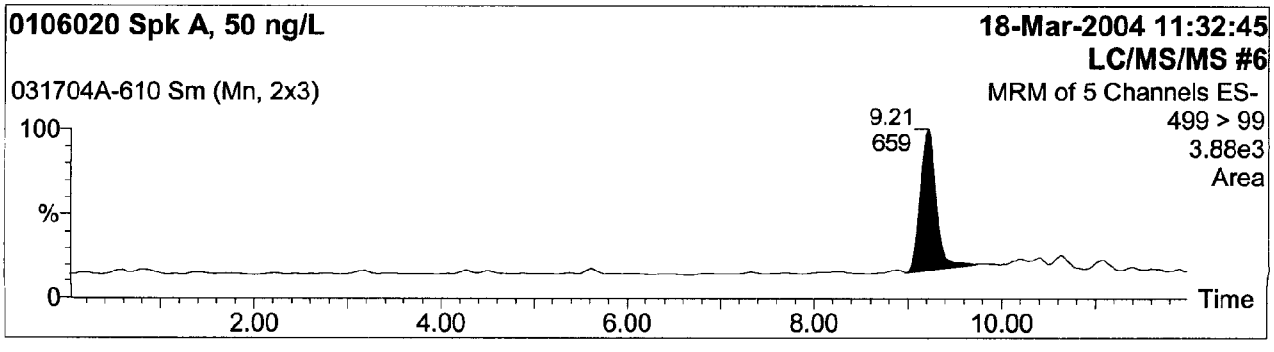
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Name: 031704A-610
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

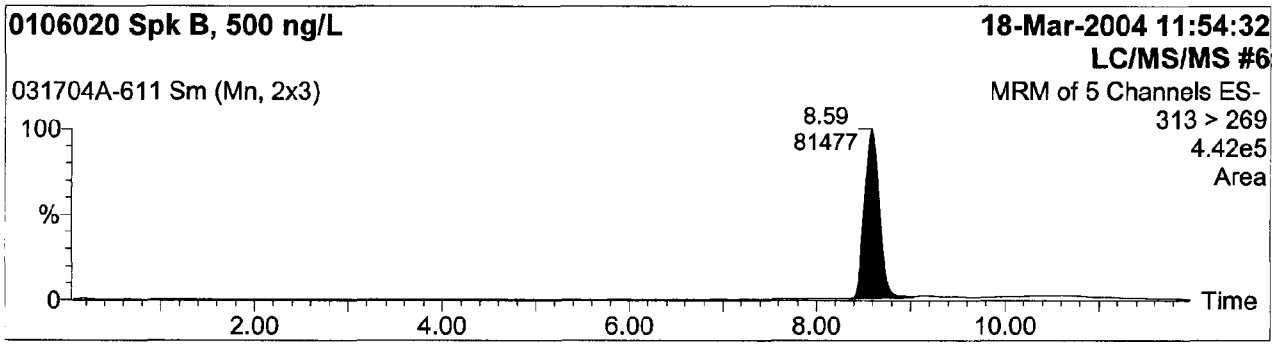
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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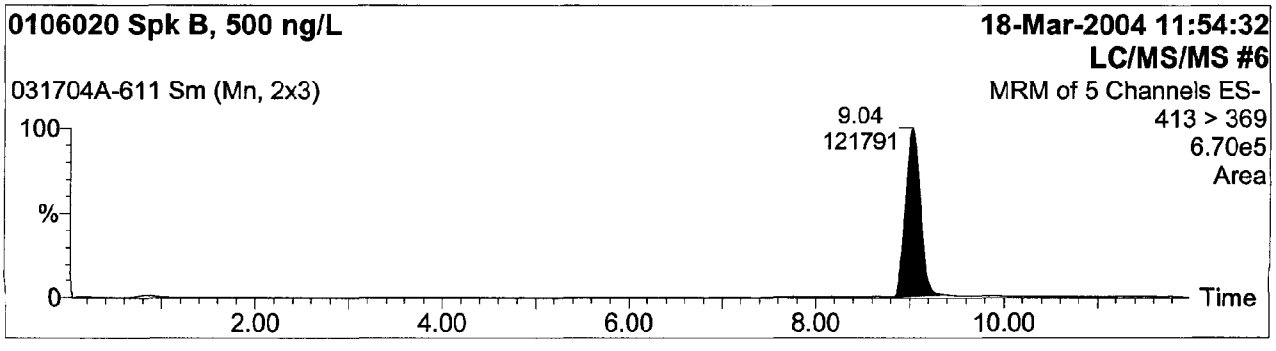
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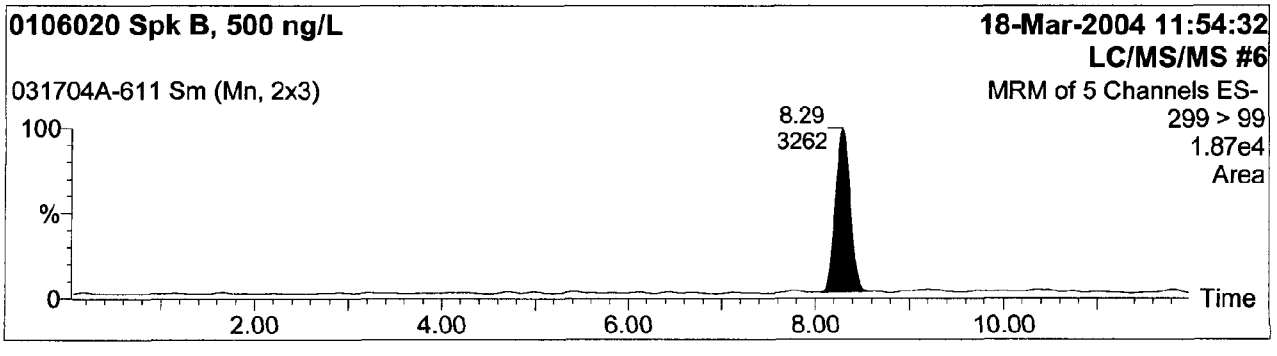
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



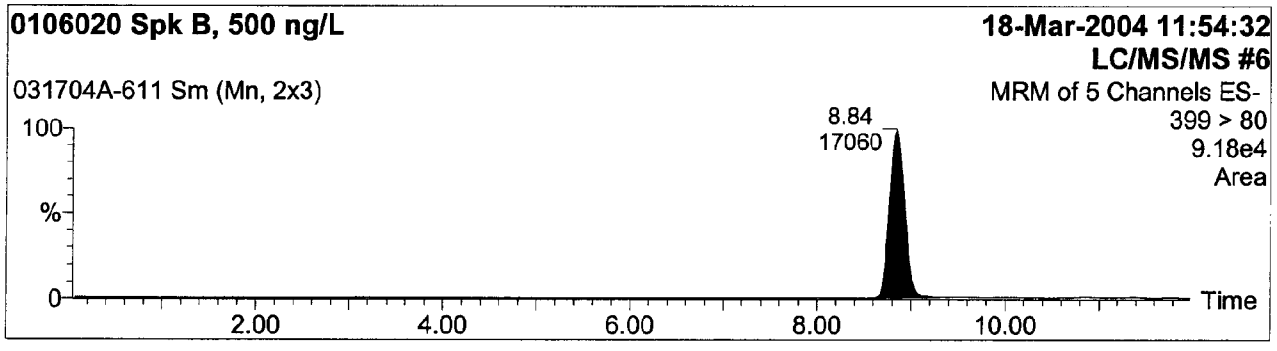
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Job Code:

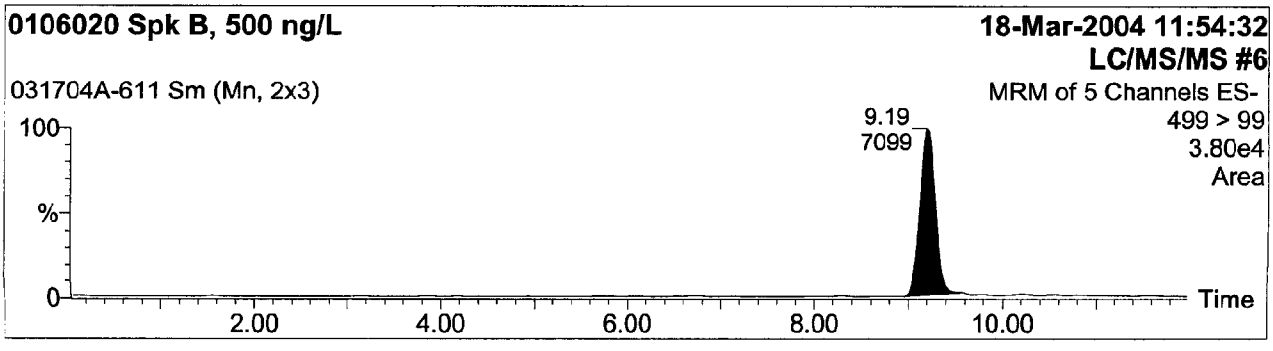
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-611
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

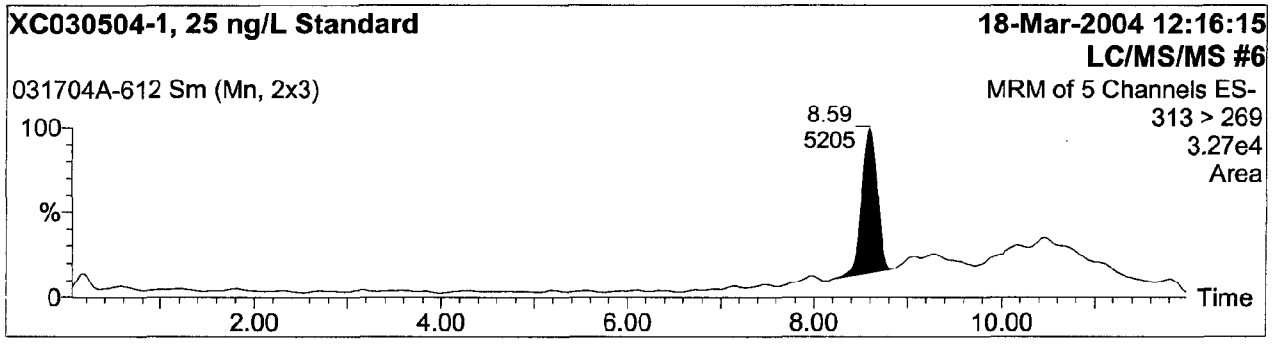
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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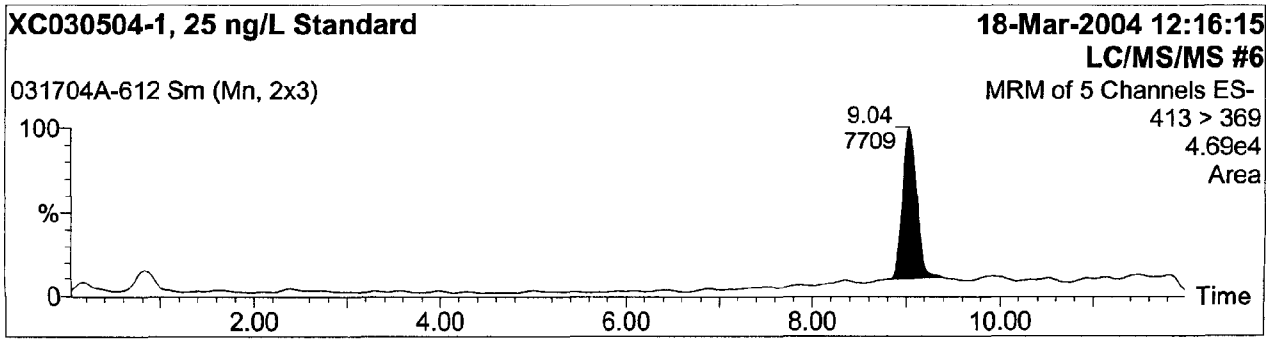
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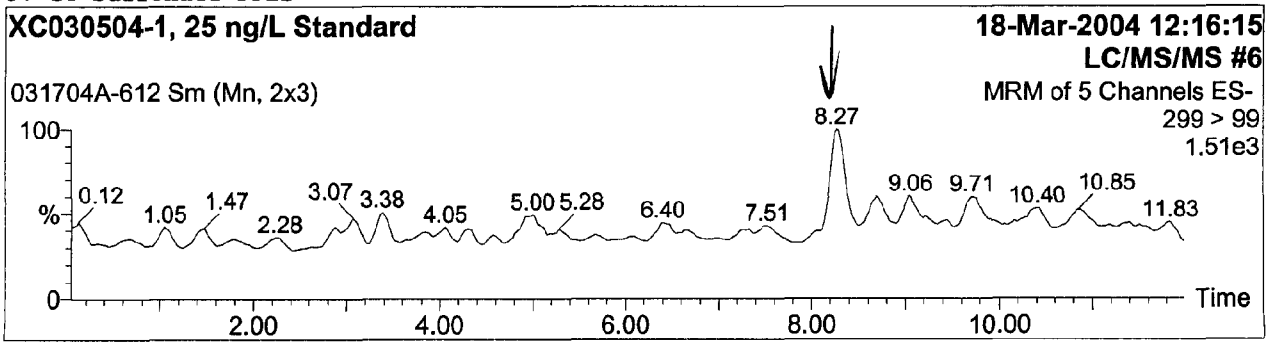
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

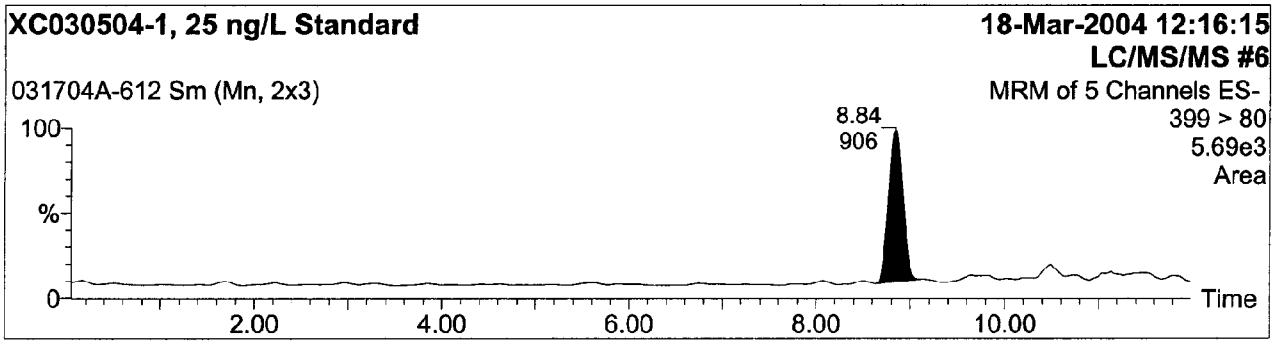
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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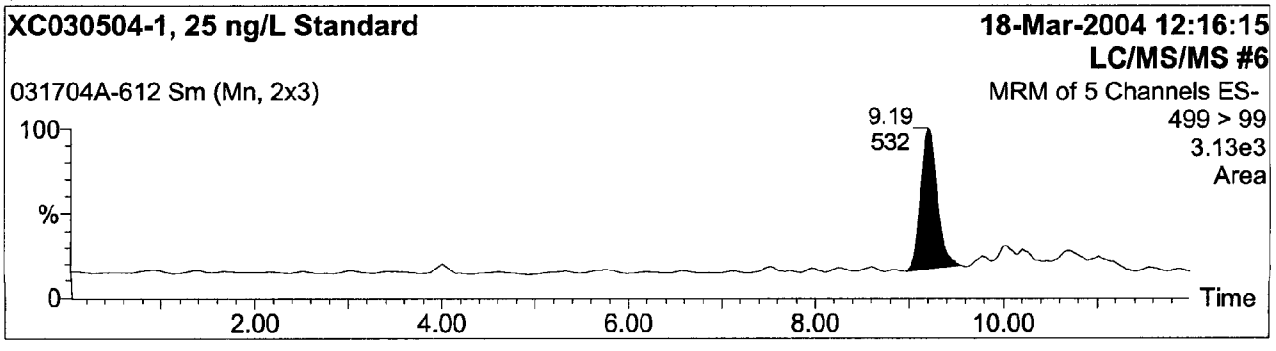
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Name: 031704A-612
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



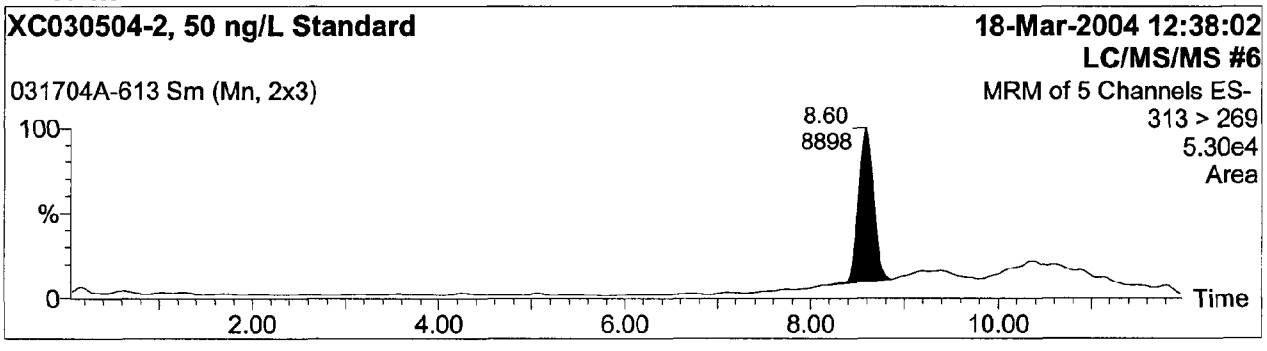
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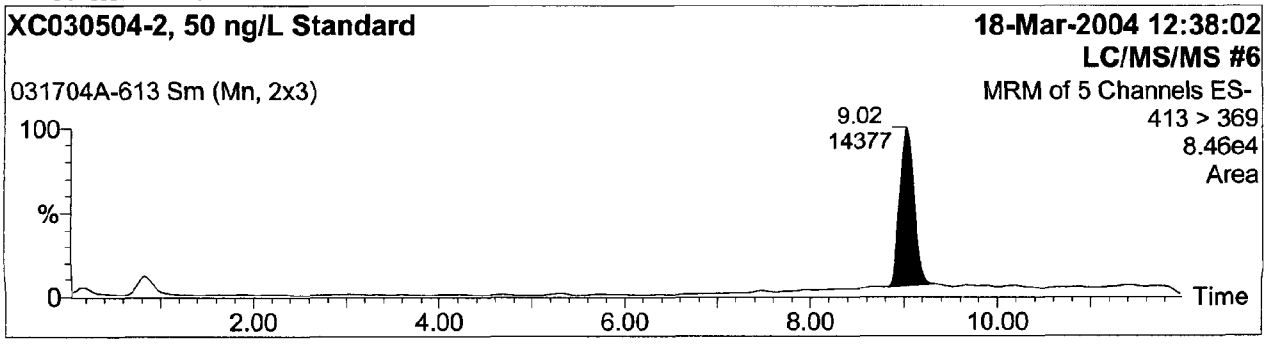
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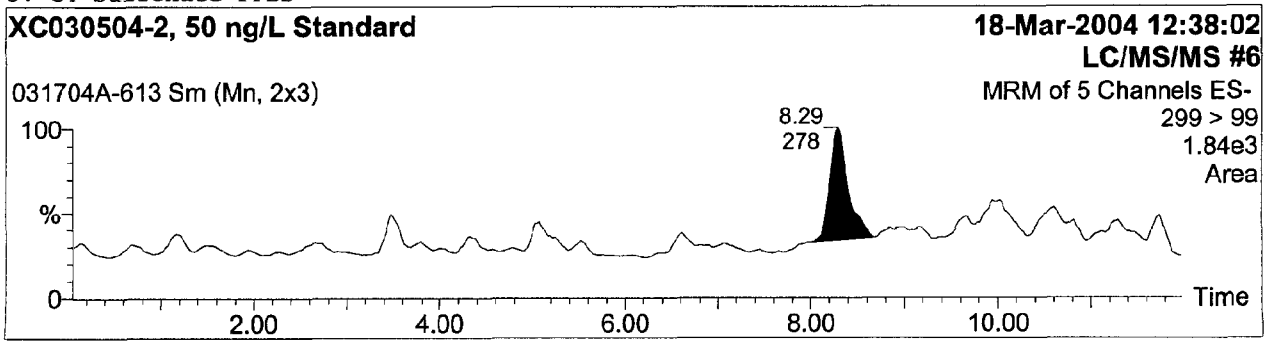
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

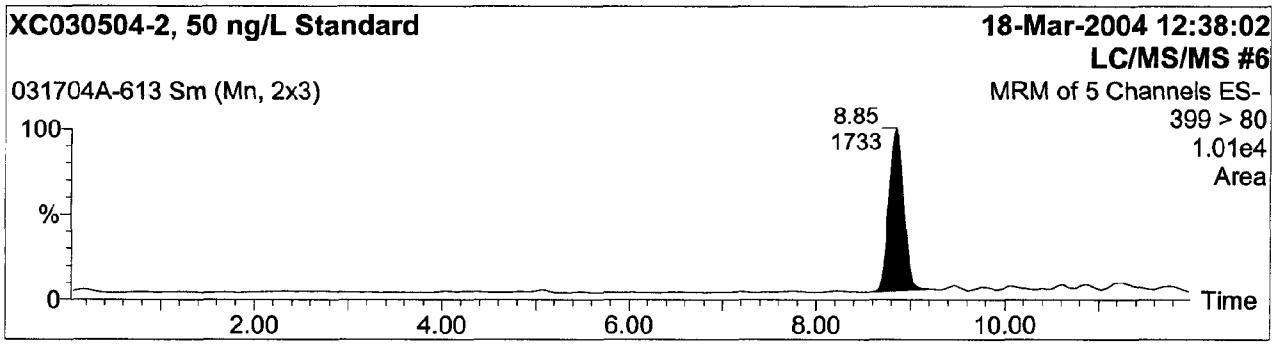
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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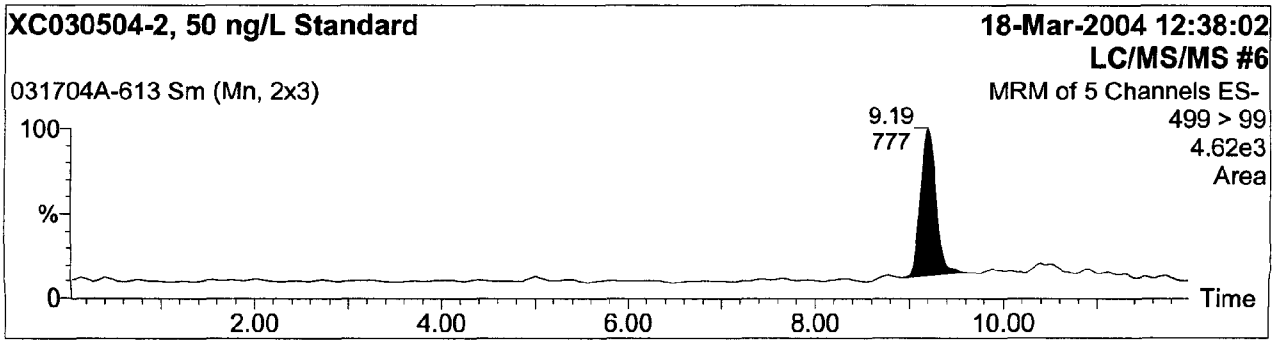
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-613
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

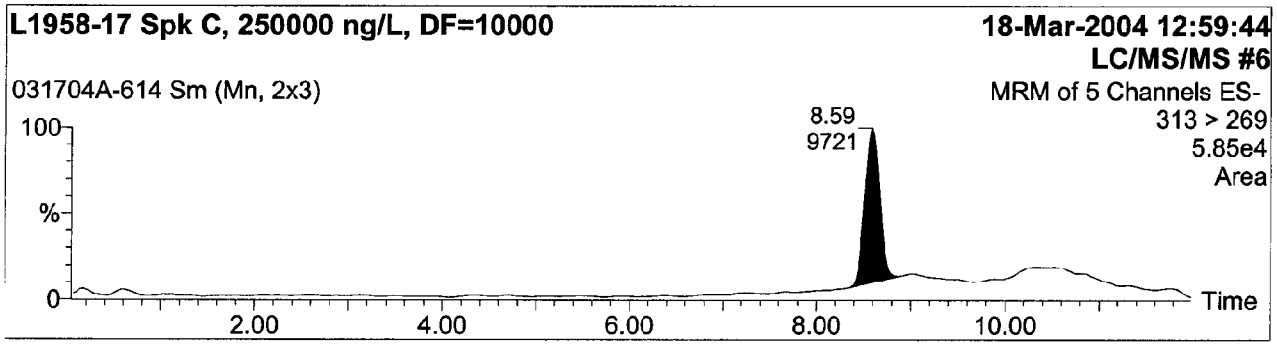
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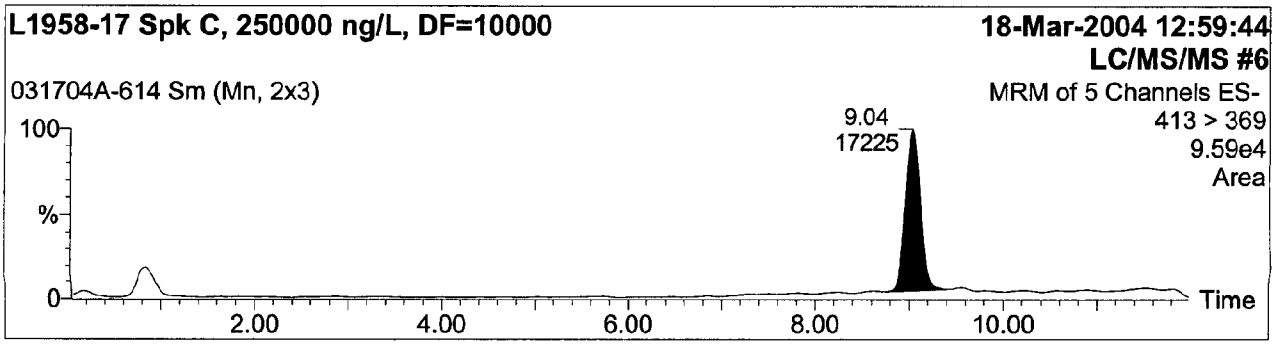
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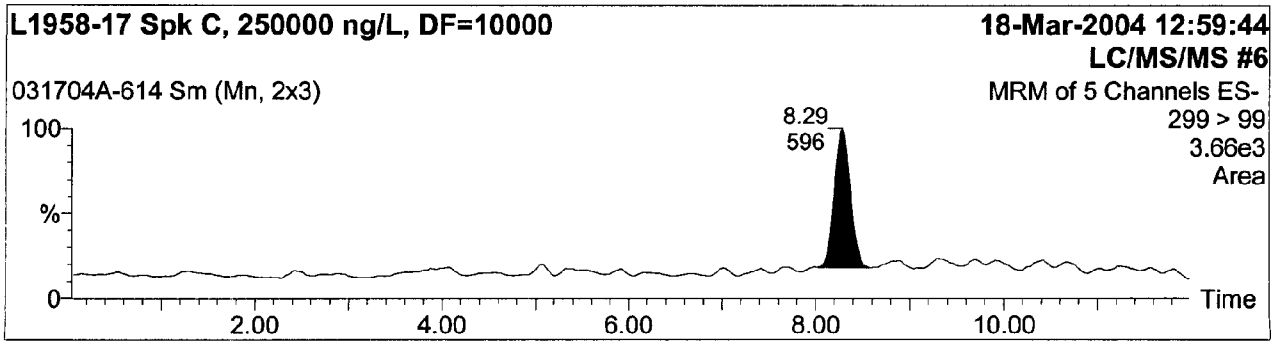
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



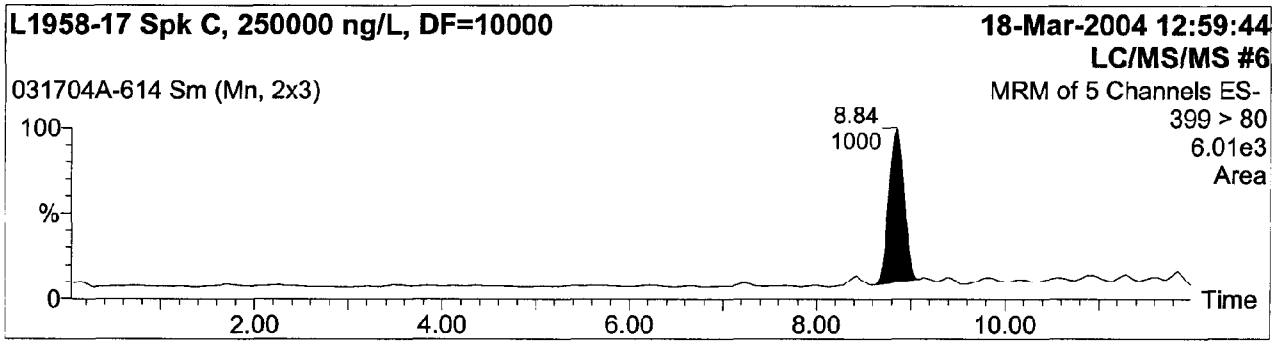
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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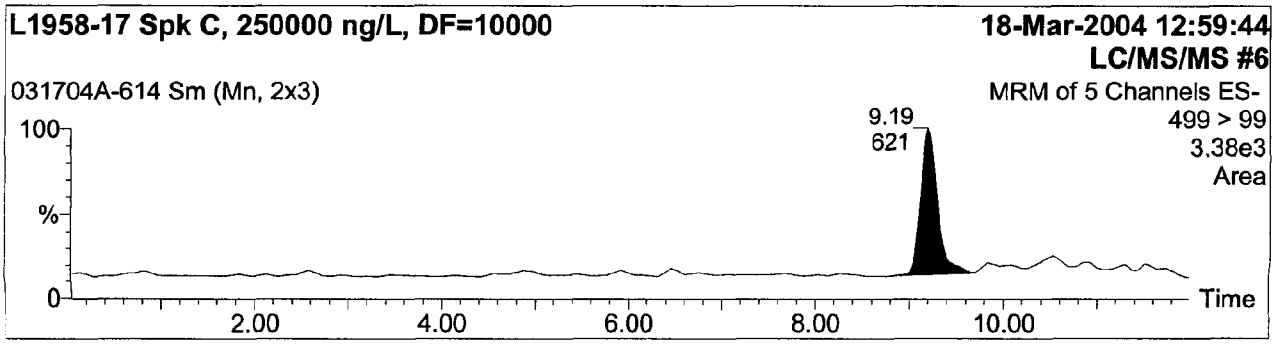
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Name: 031704A-614
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



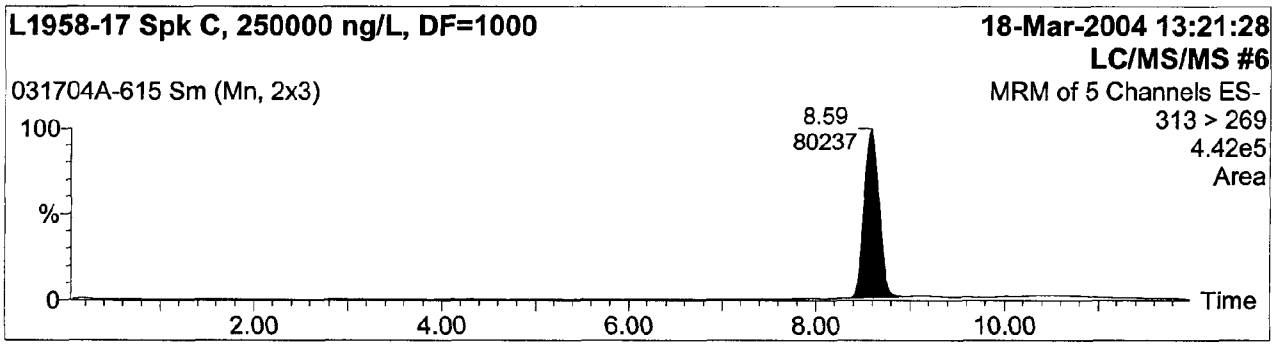
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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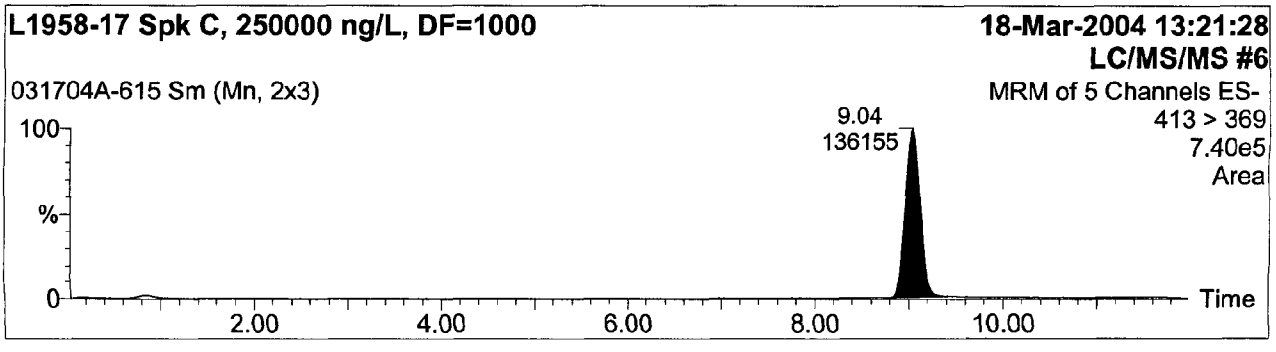
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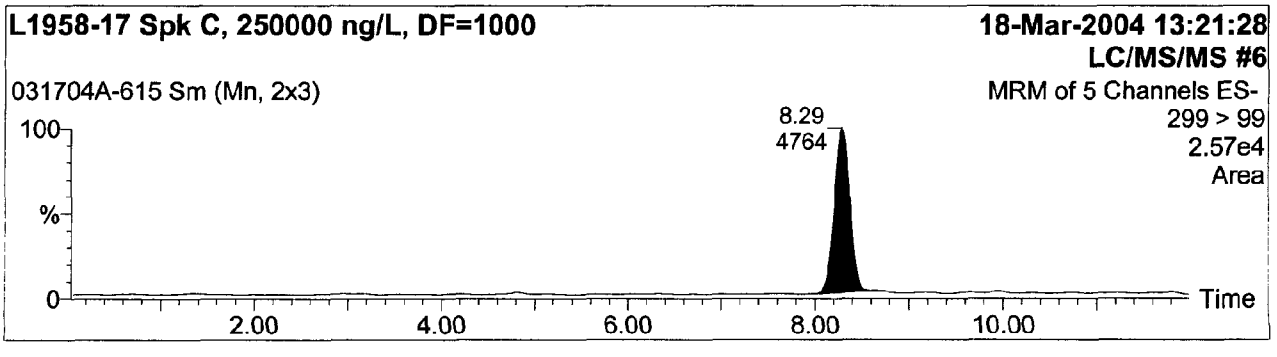
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



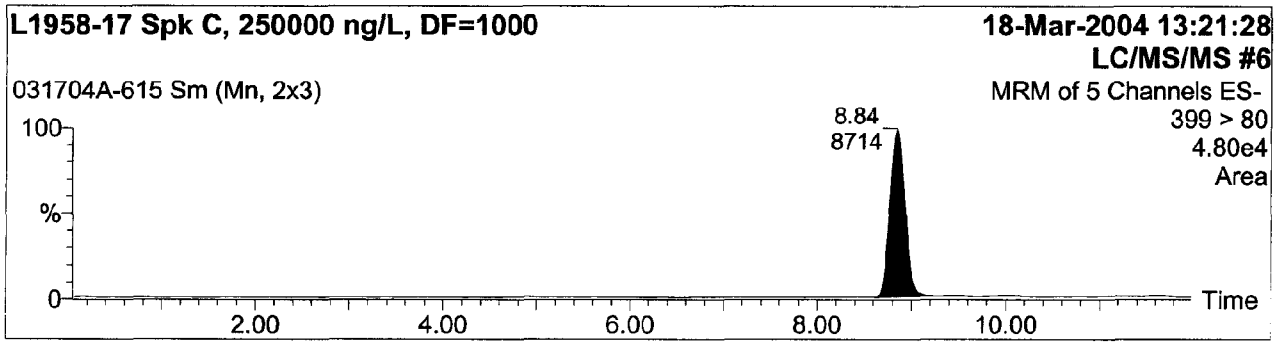
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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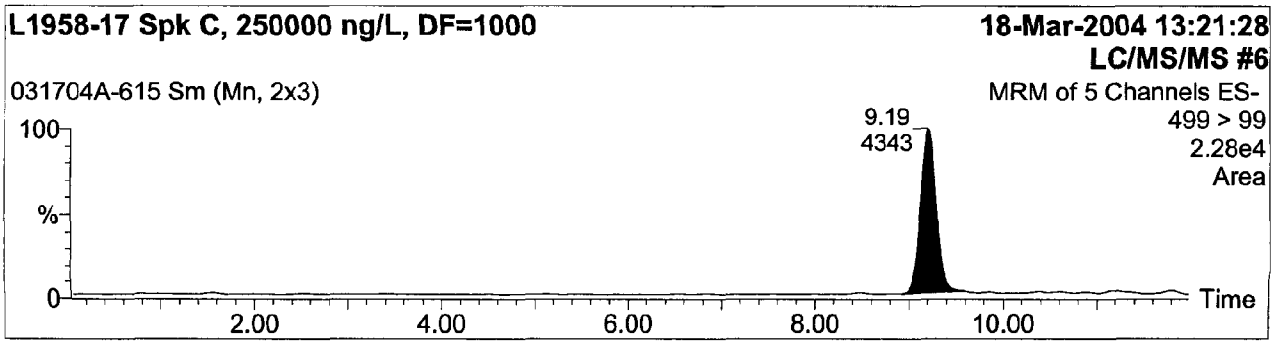
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Name: 031704A-615
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

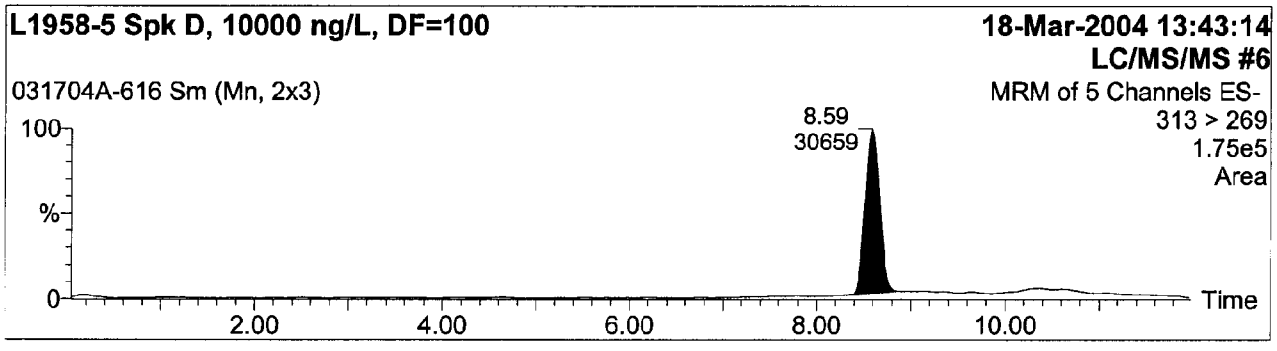
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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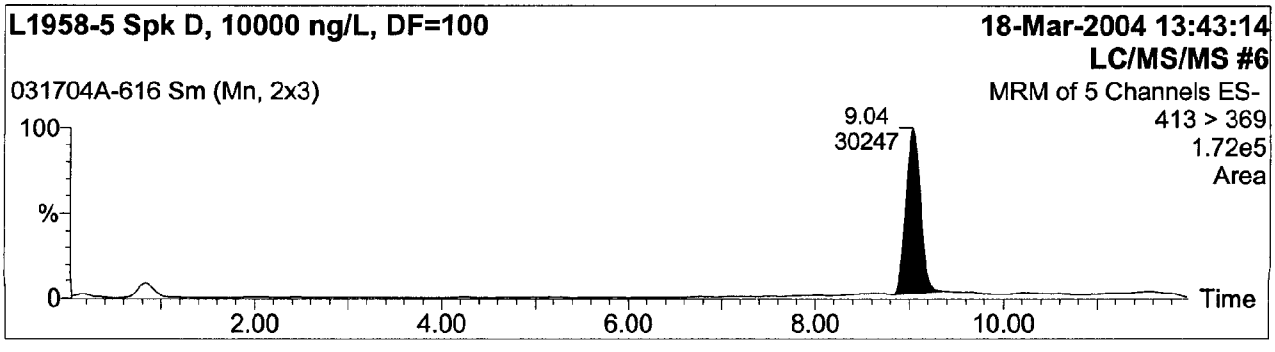
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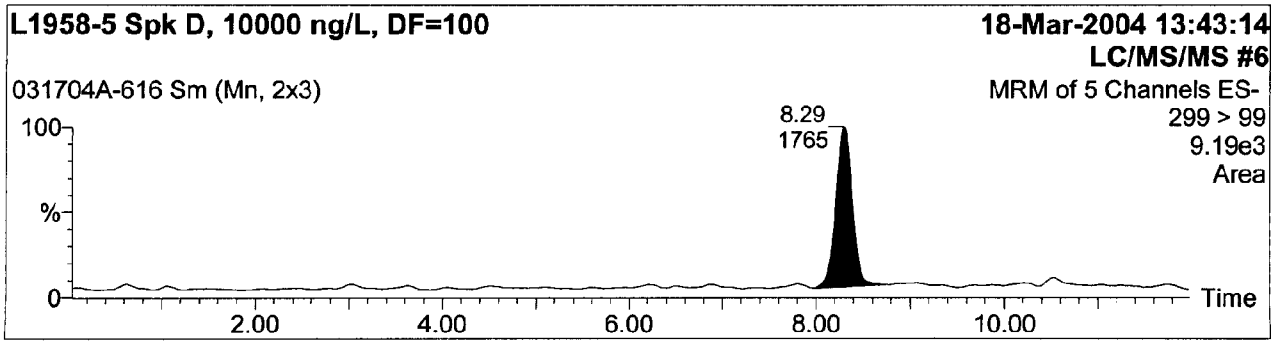
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



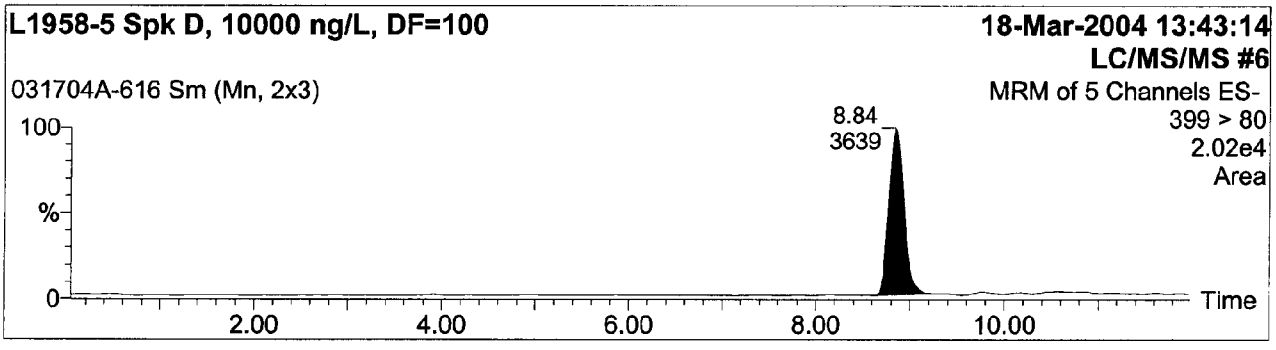
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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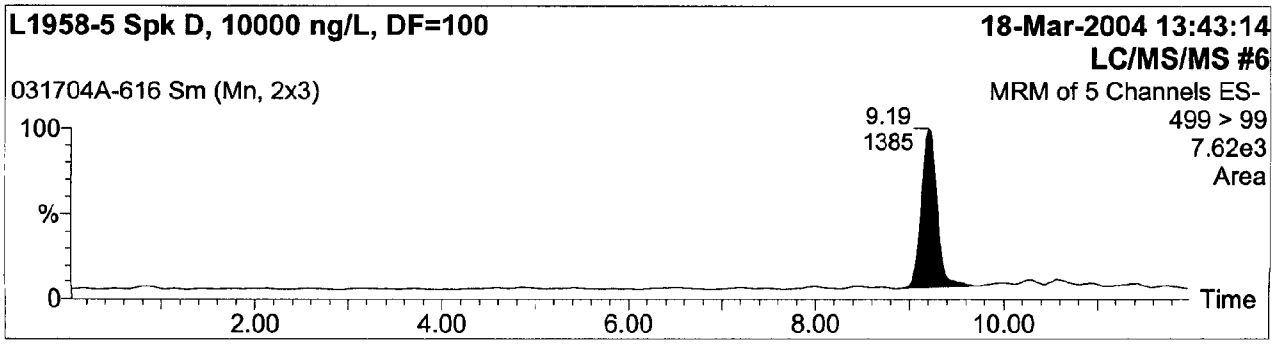
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Name: 031704A-616
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



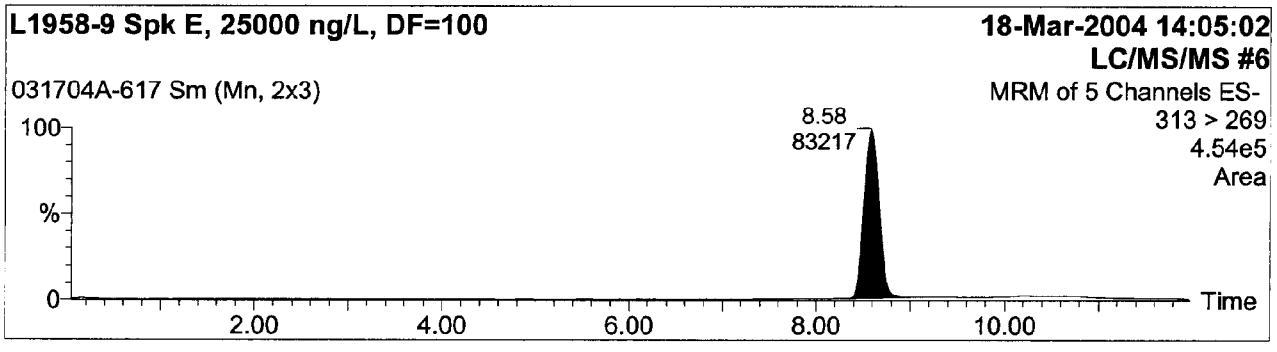
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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Last modified: Thu Mar 18 09:51:08 2004
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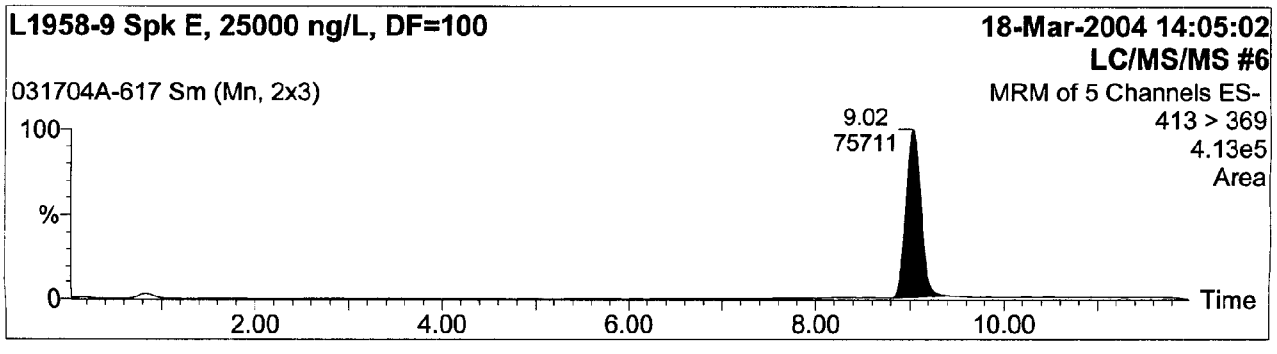
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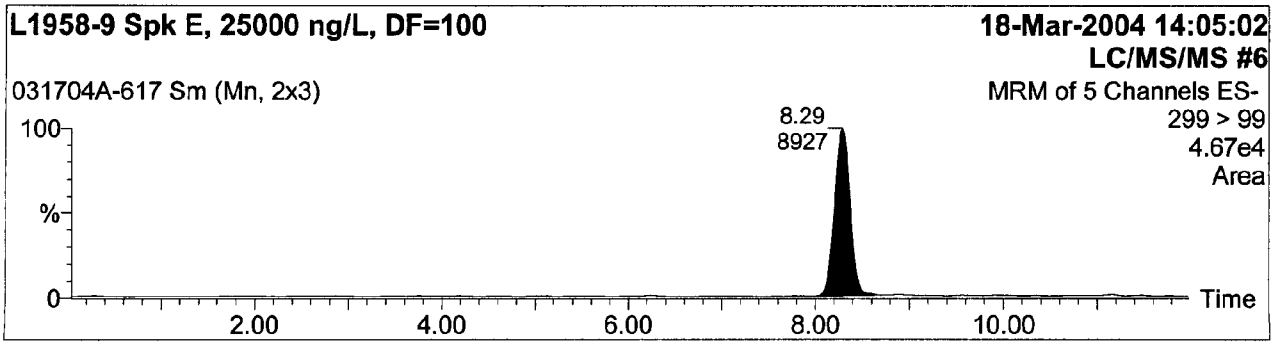
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



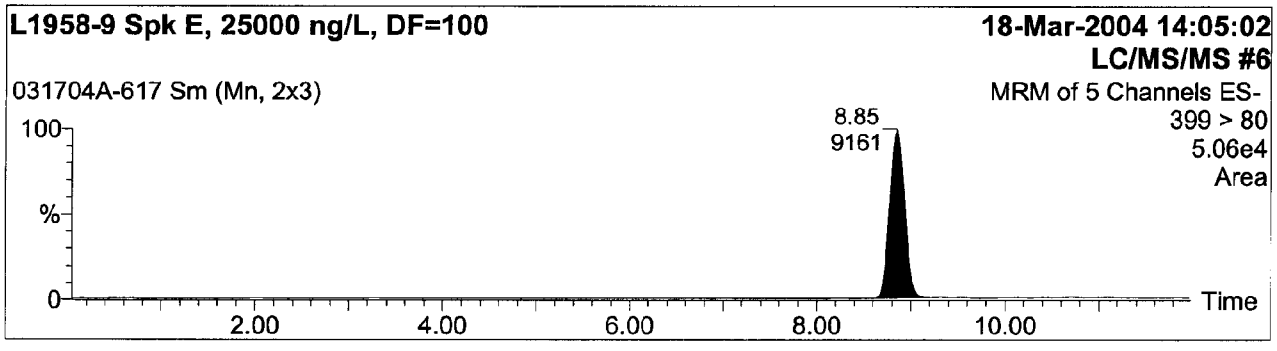
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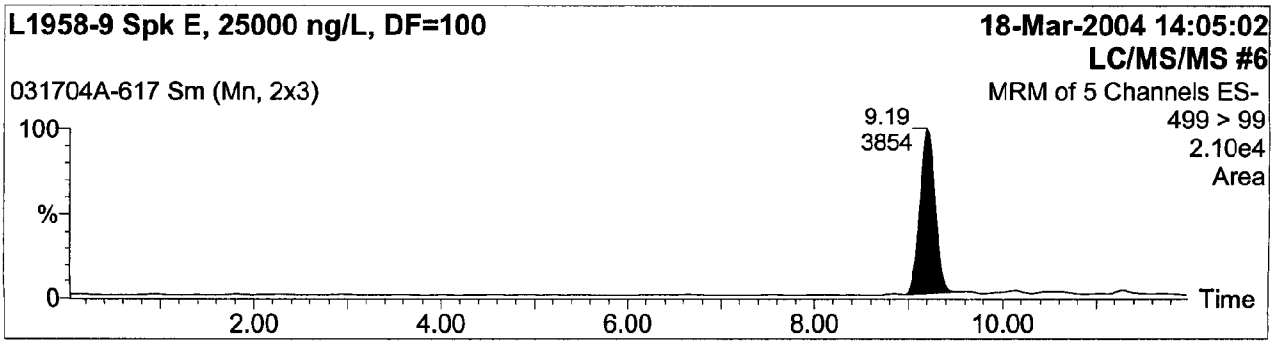
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Name: 031704A-617
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



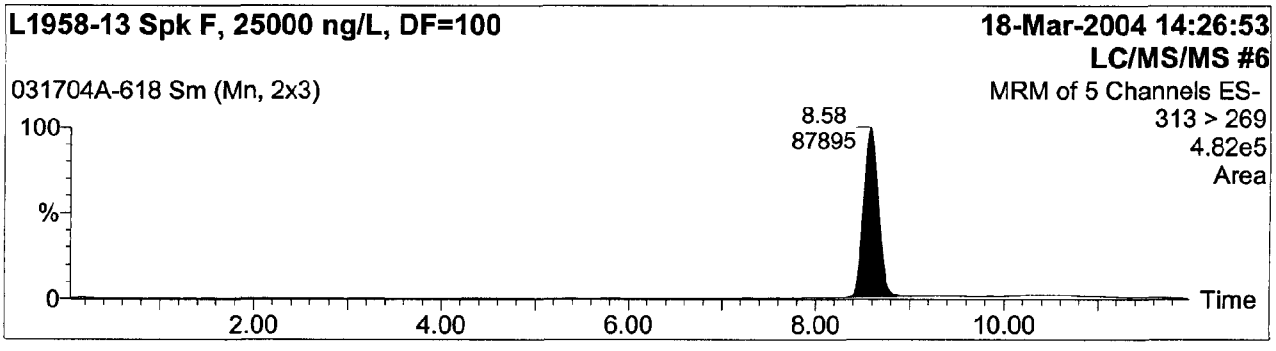
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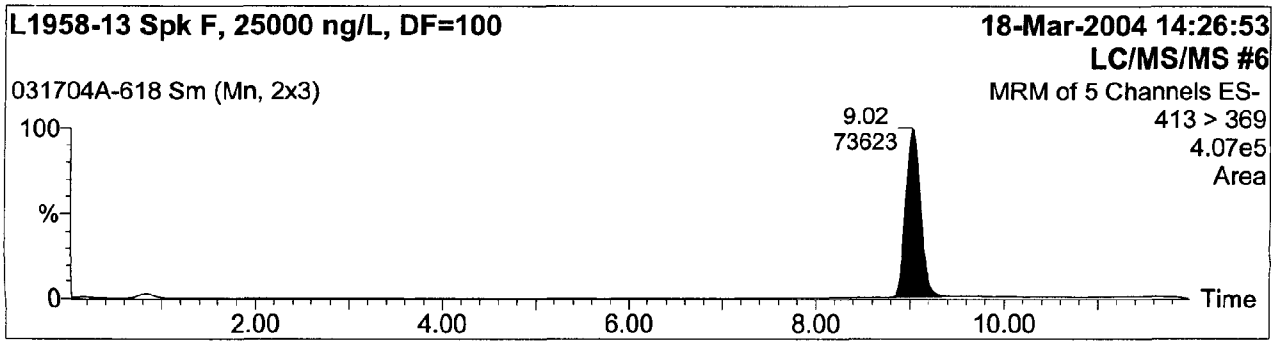
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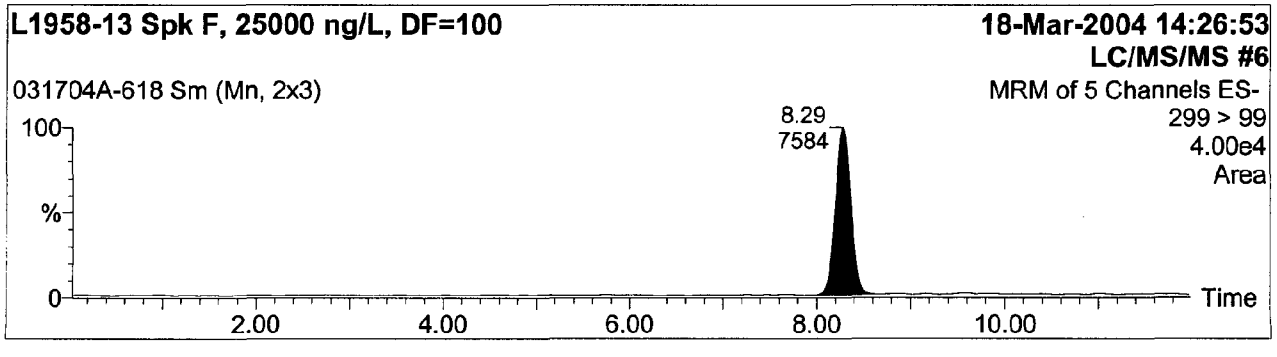
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



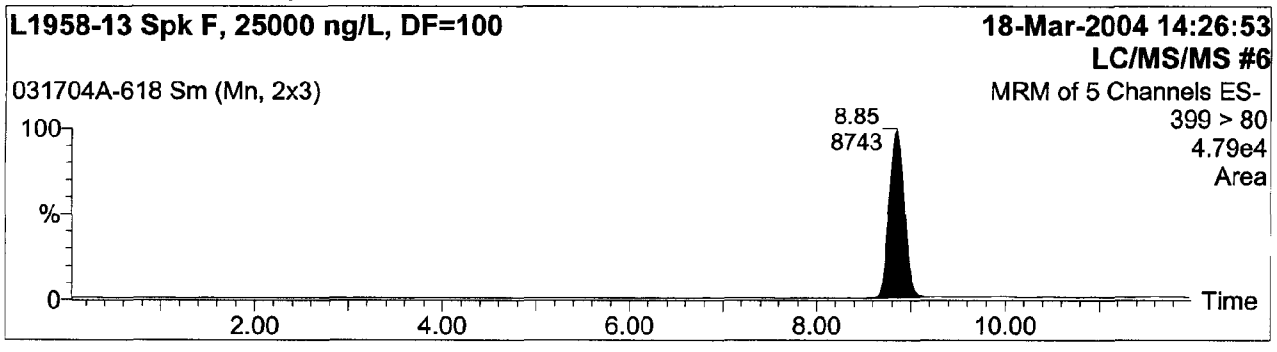
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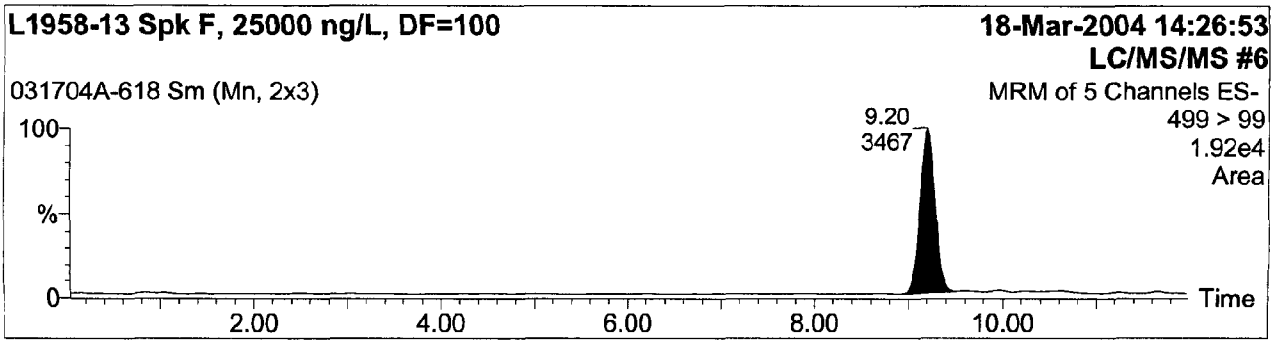
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Name: 031704A-618
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



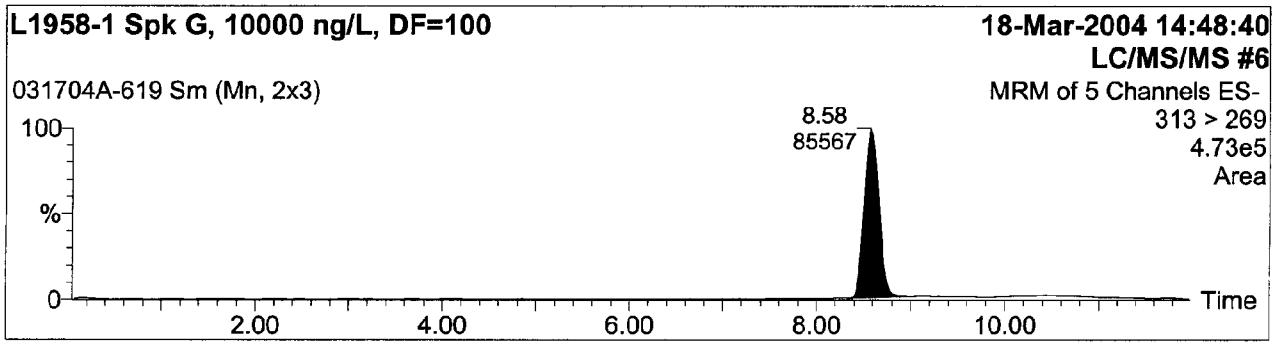
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
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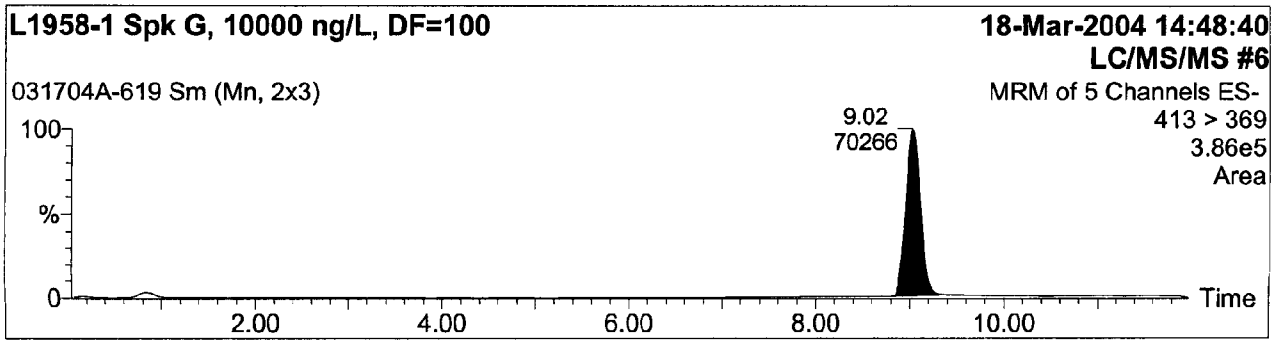
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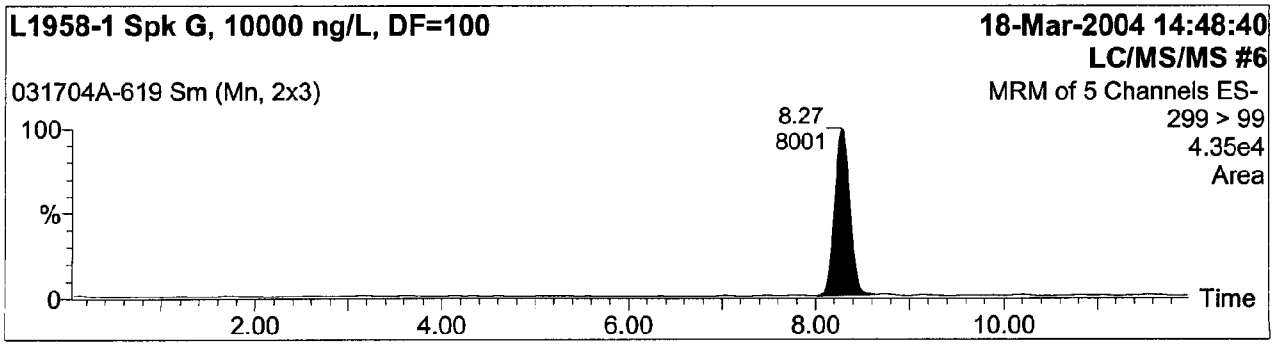
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



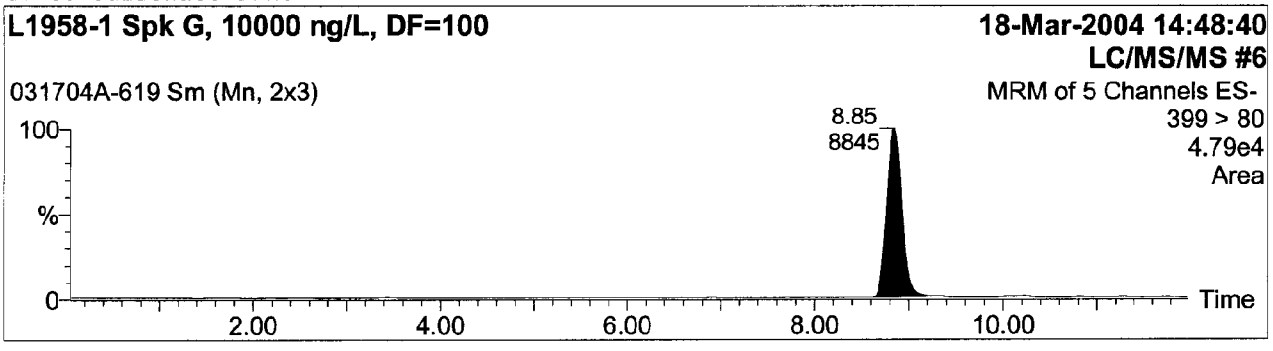
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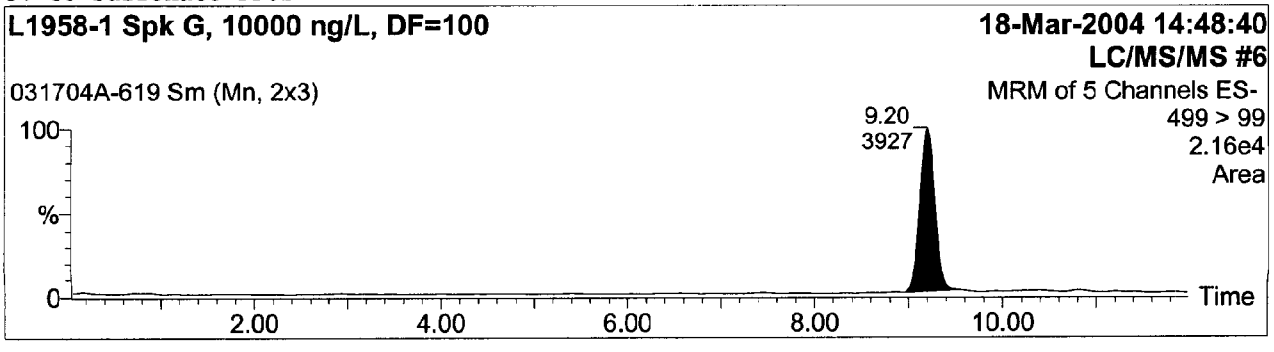
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Name: 031704A-619
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

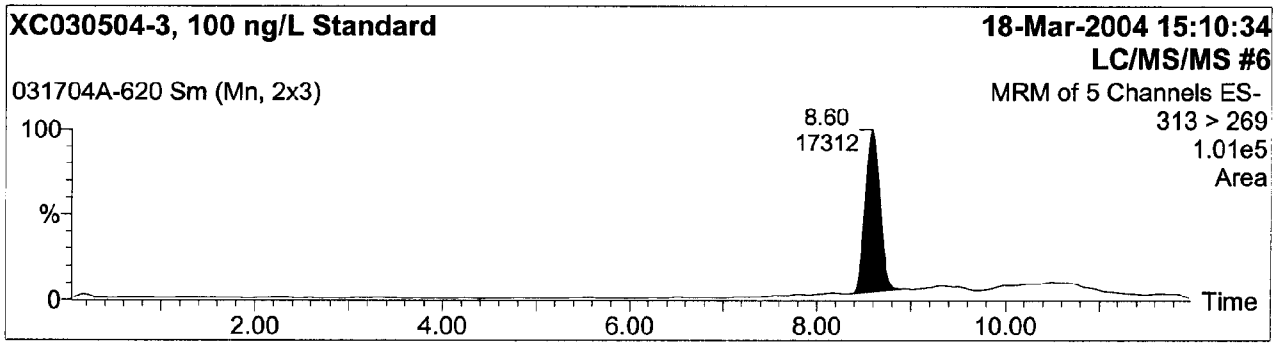
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
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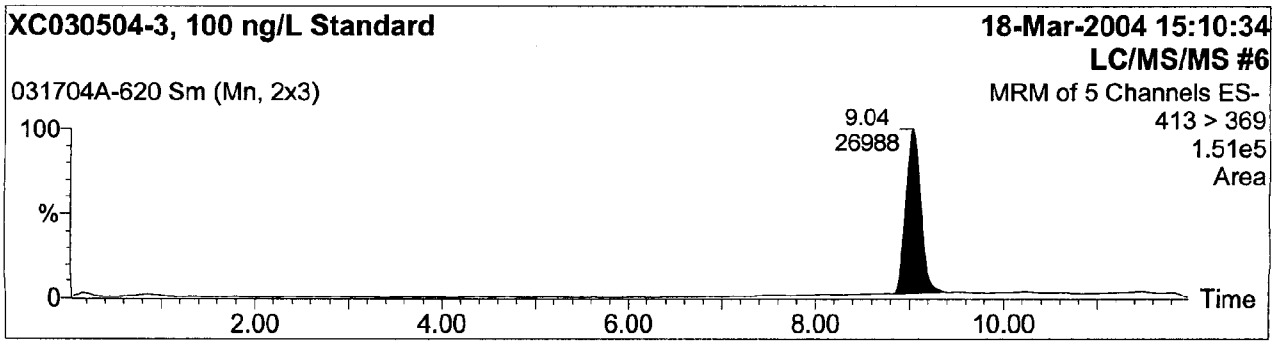
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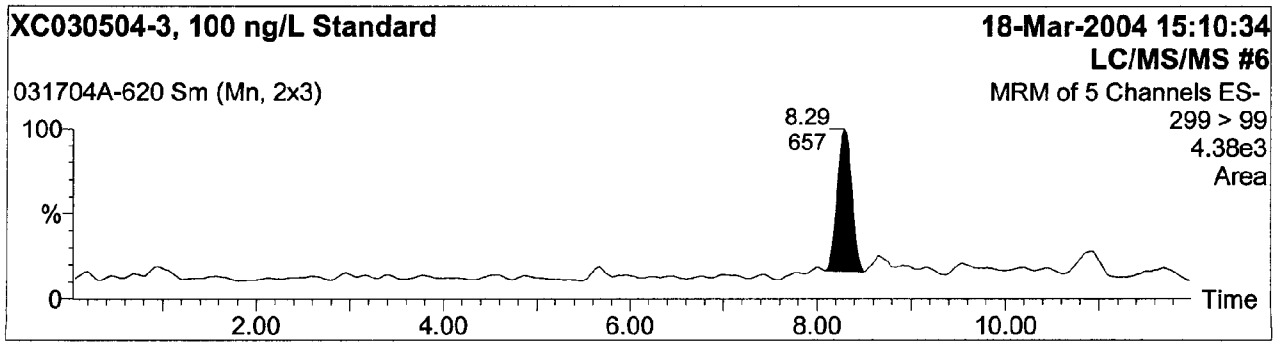
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



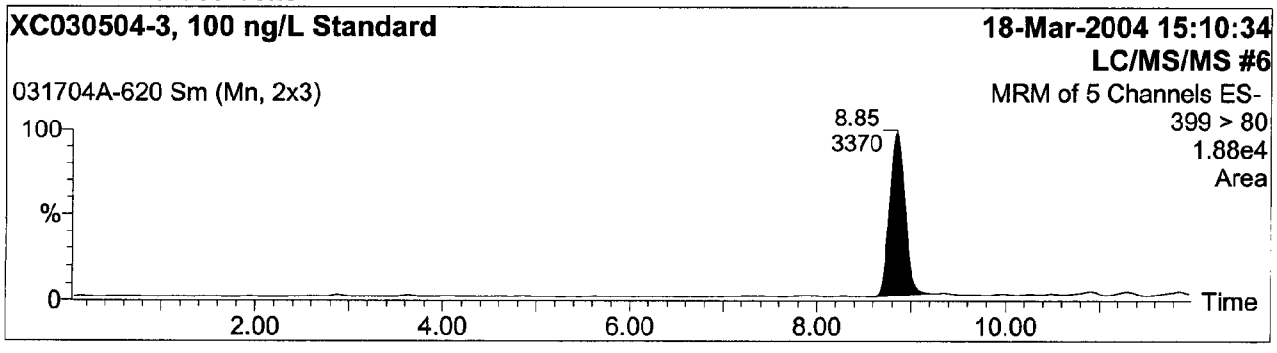
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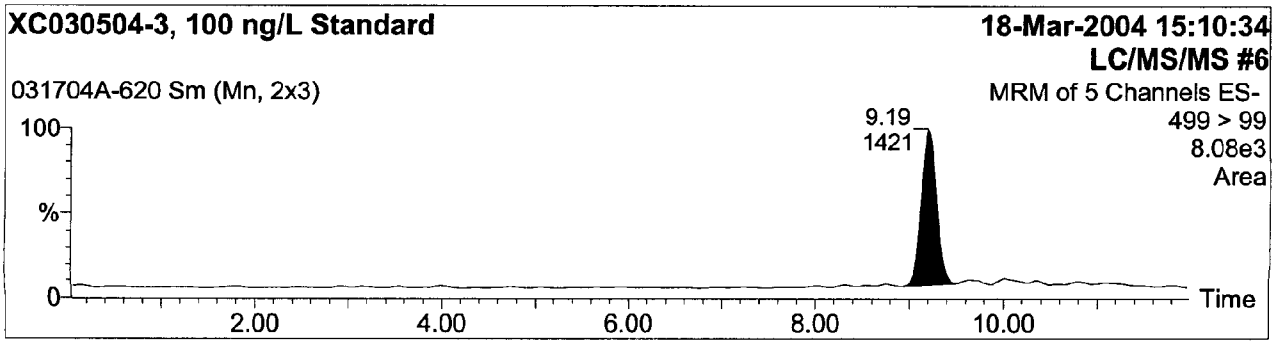
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



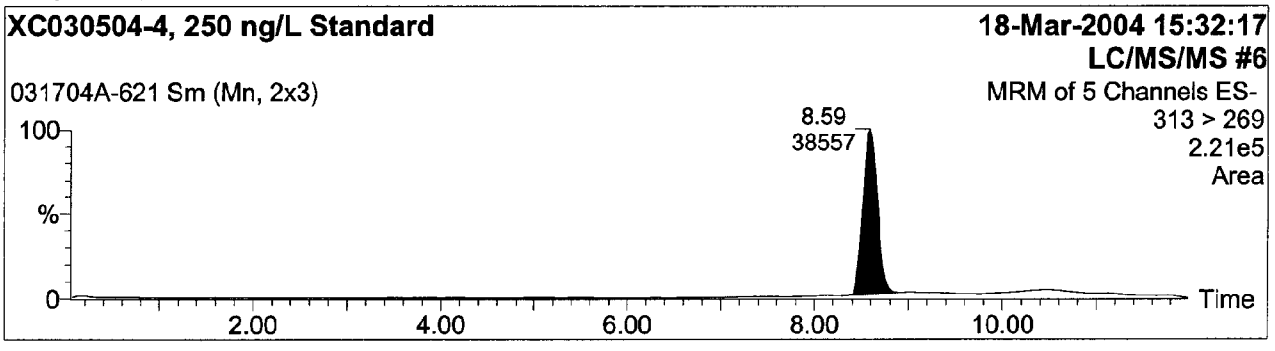
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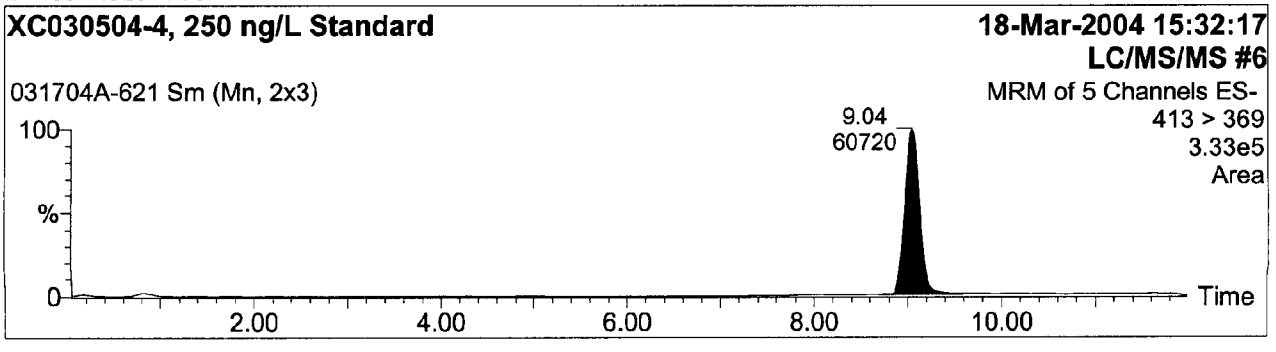
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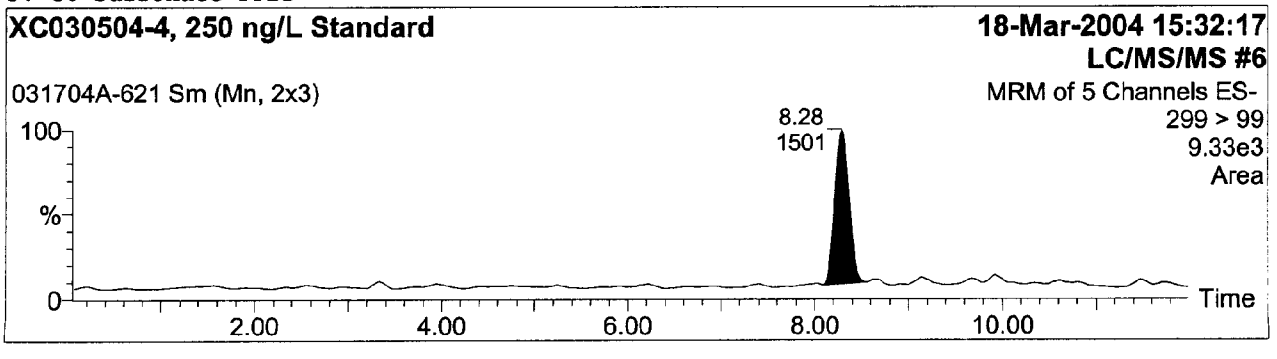
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



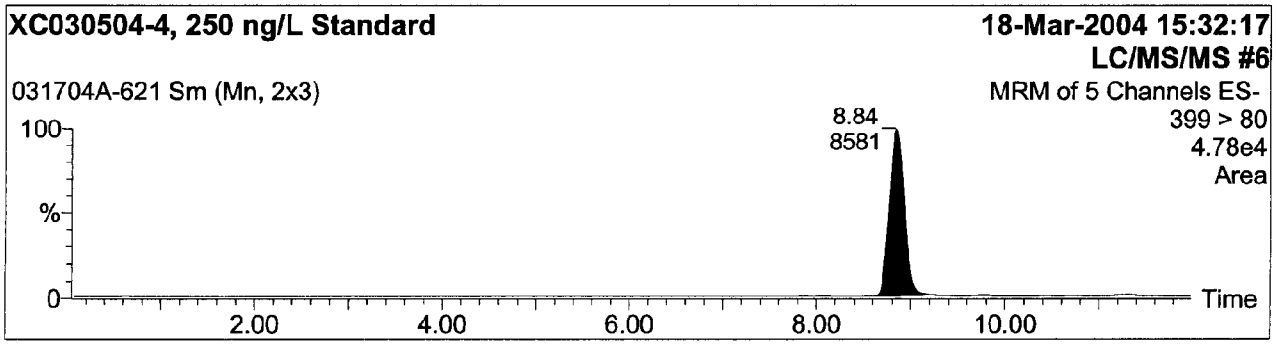
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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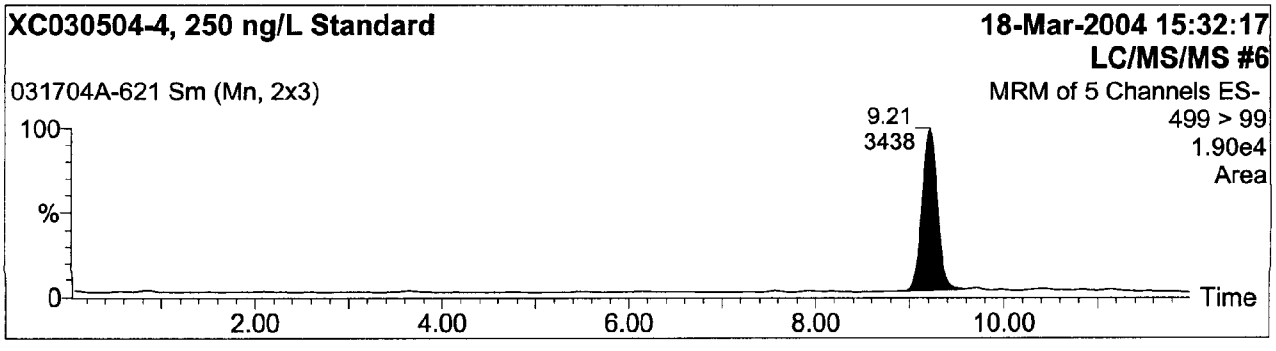
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



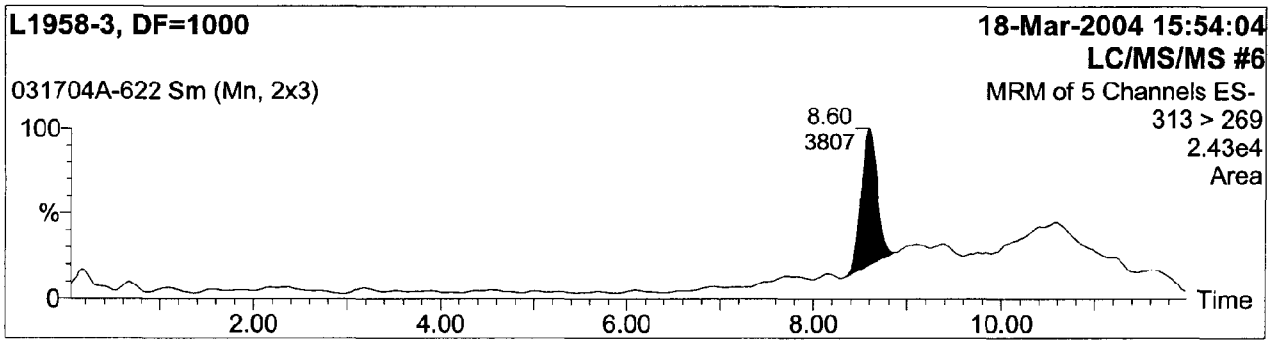
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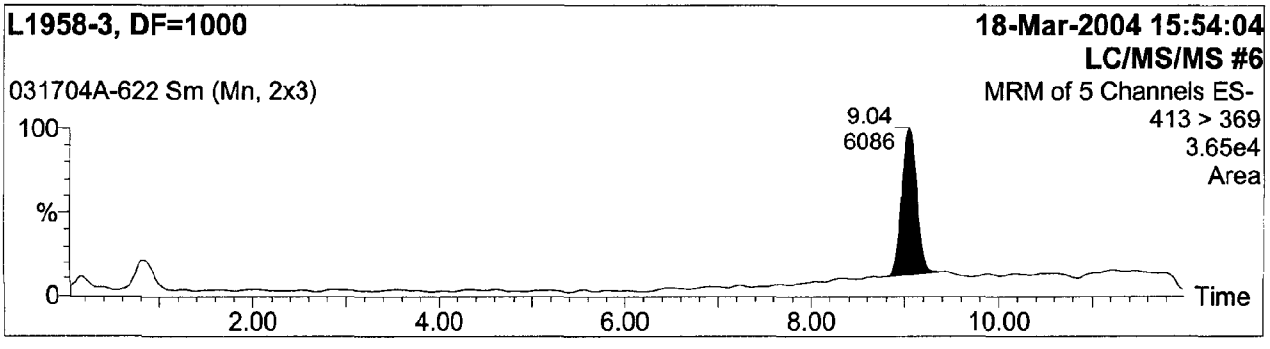
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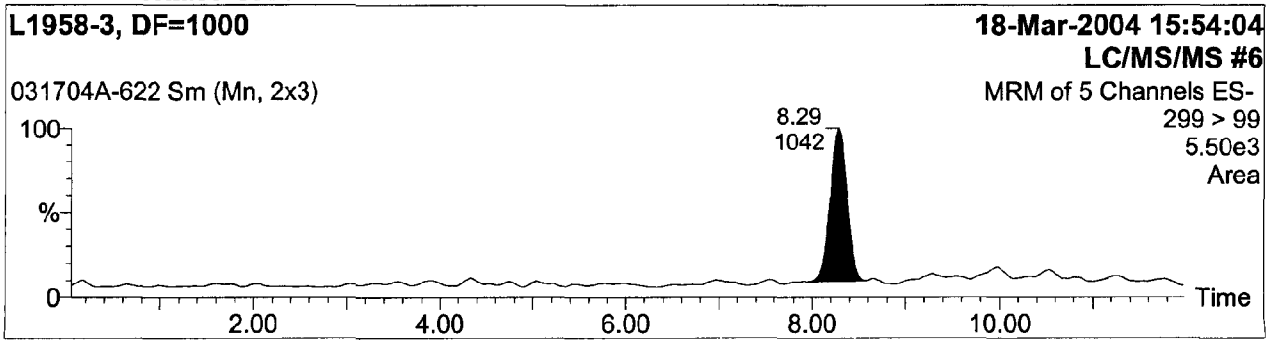
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

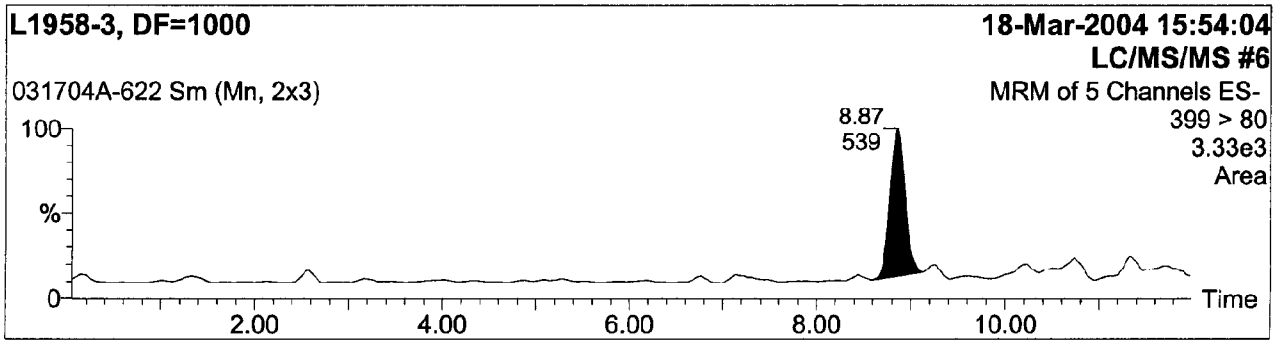
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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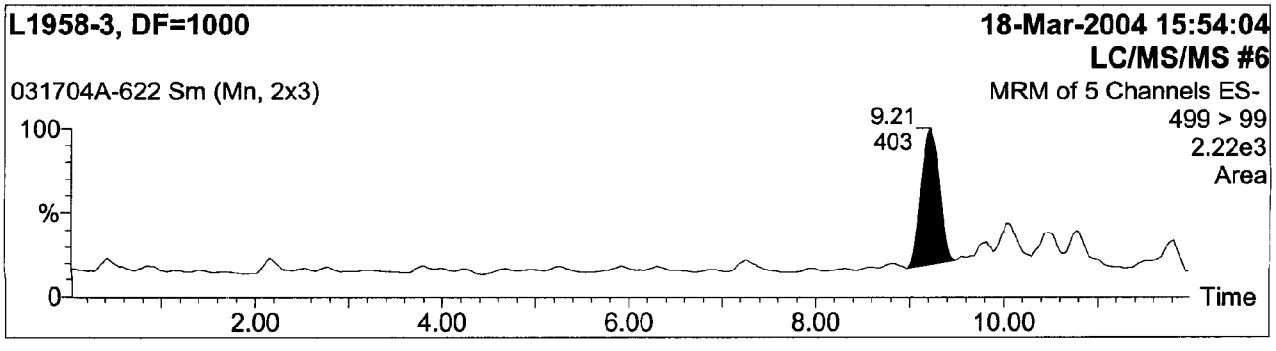
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



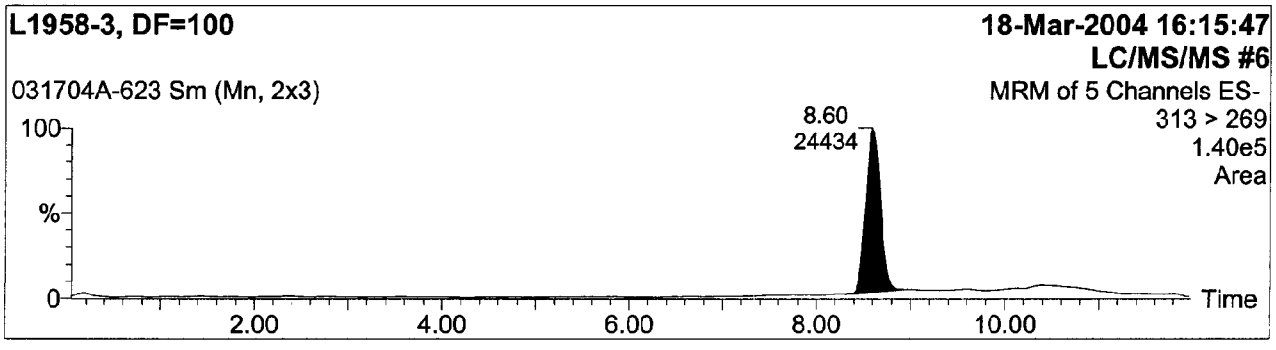
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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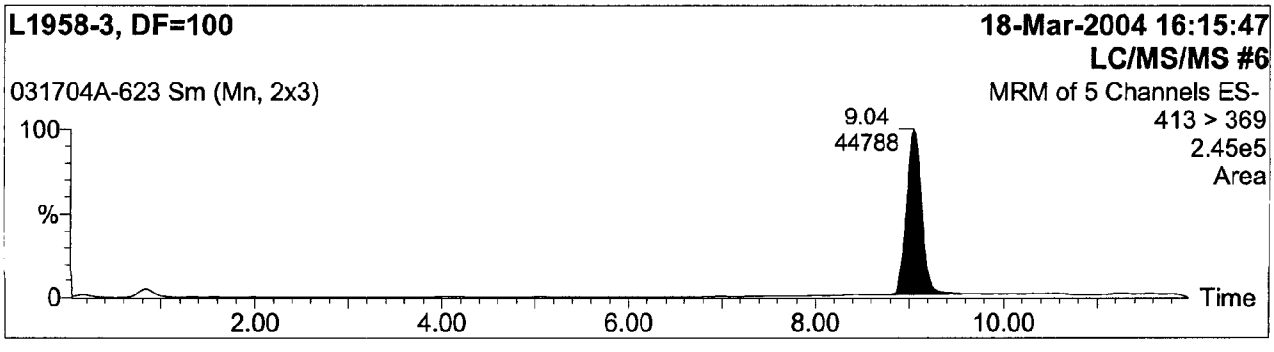
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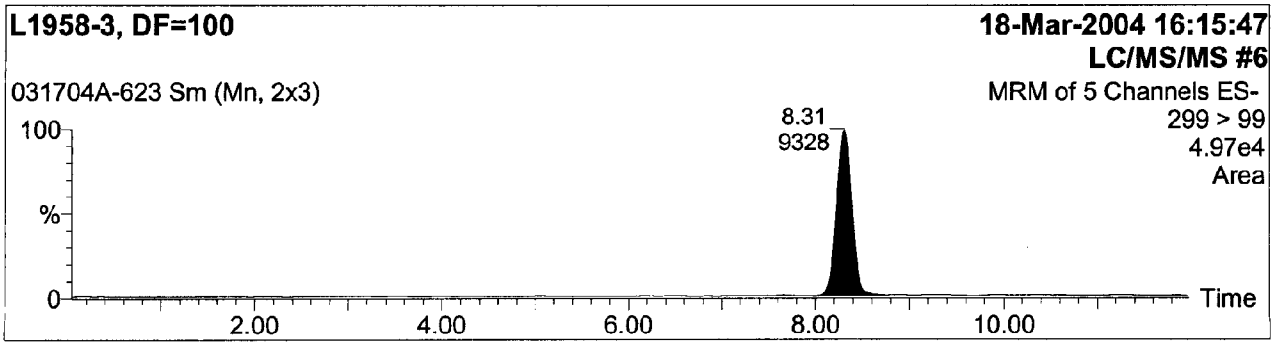
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



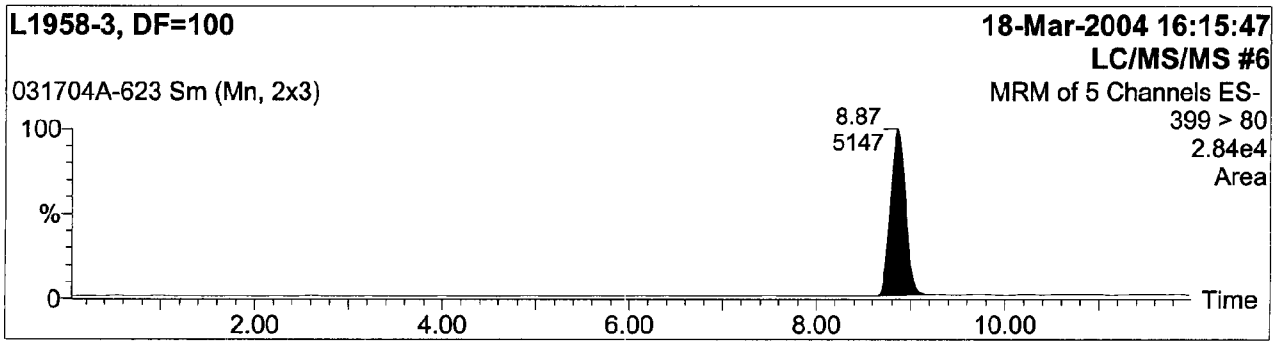
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

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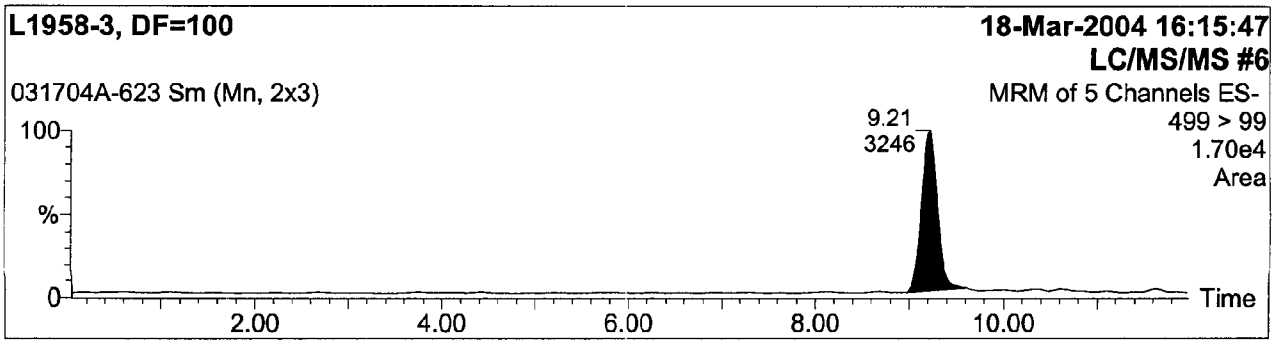
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Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



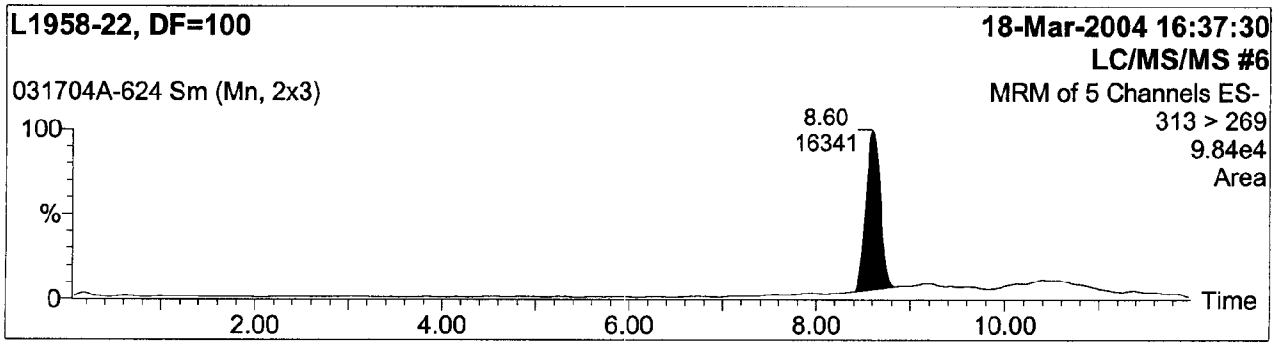
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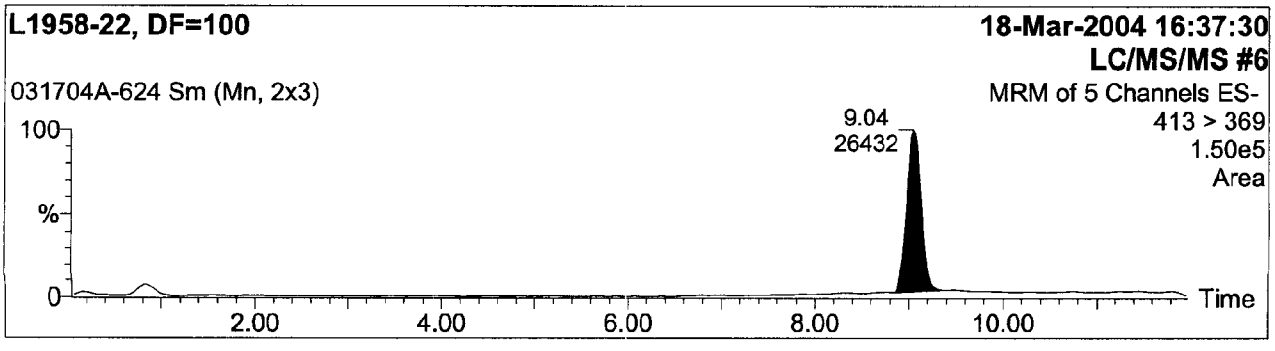
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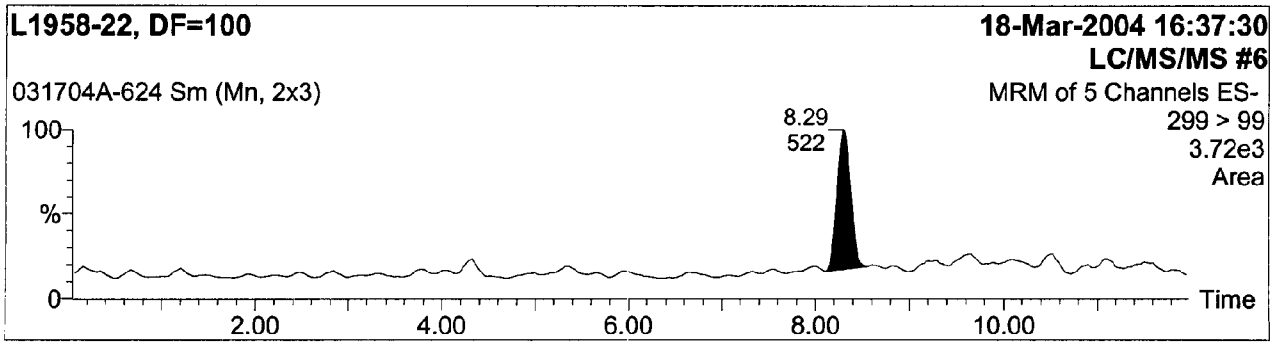
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

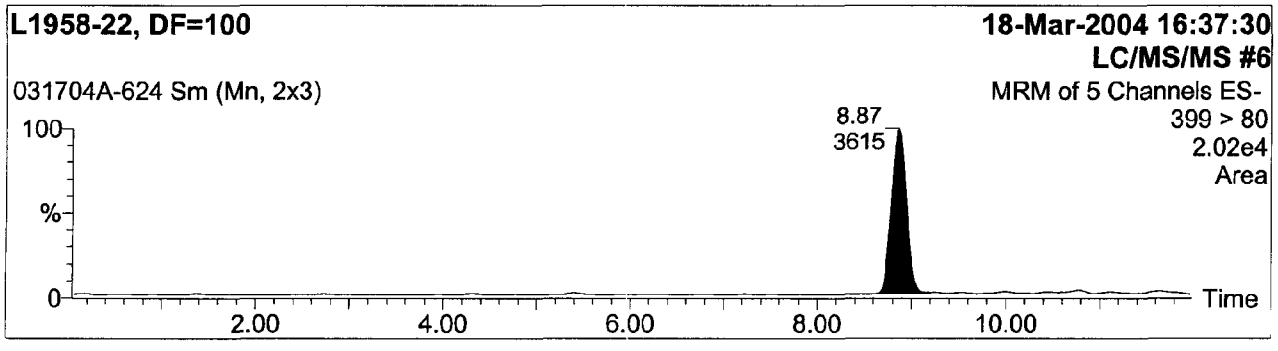
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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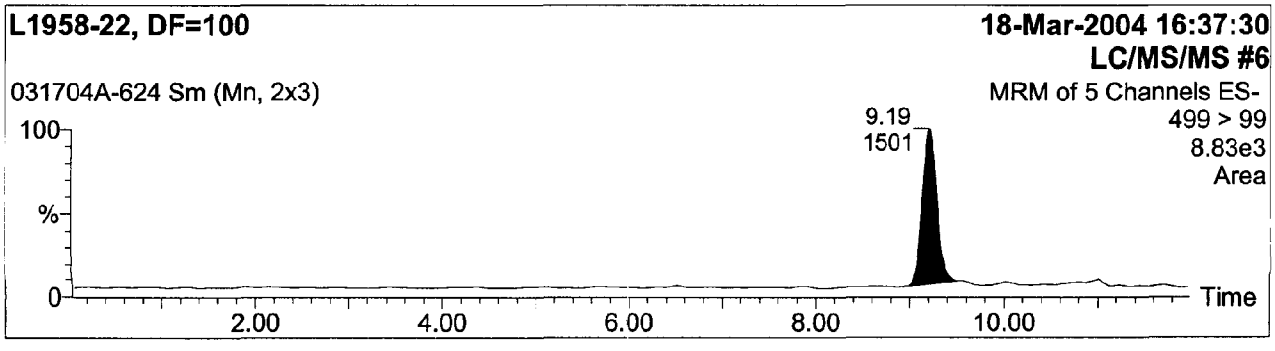
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Name: 031704A-624
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4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



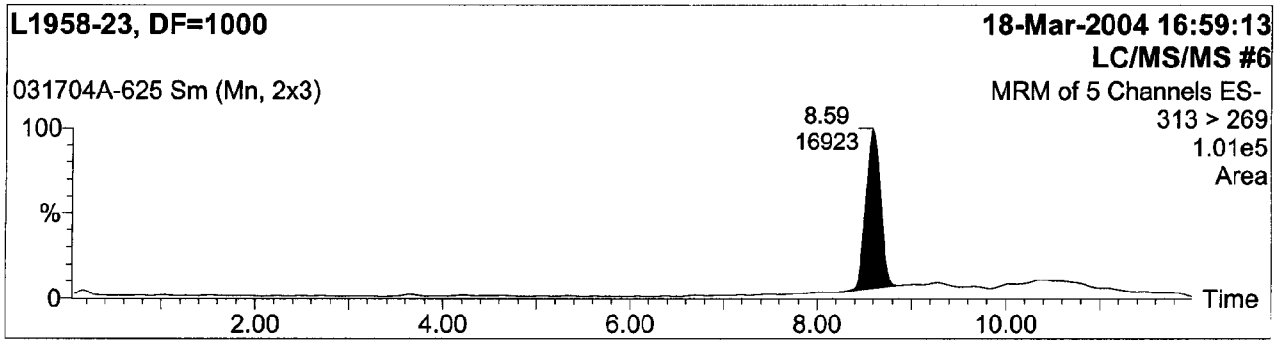
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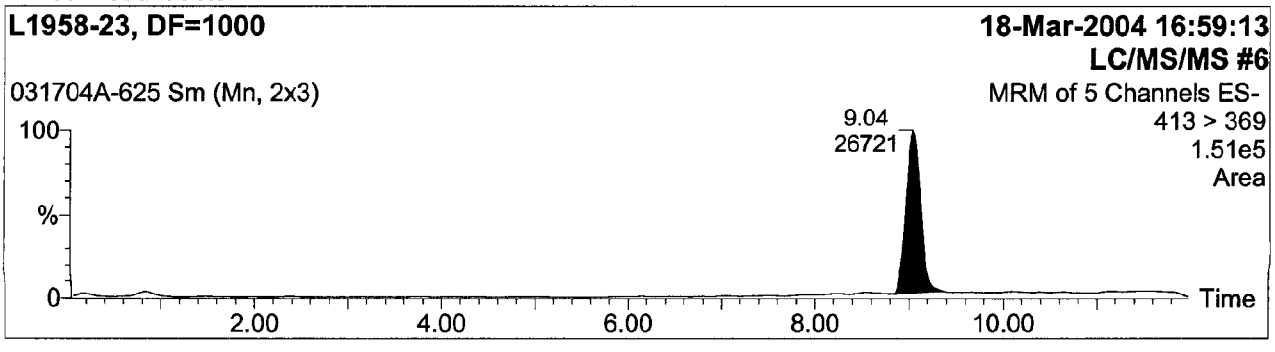
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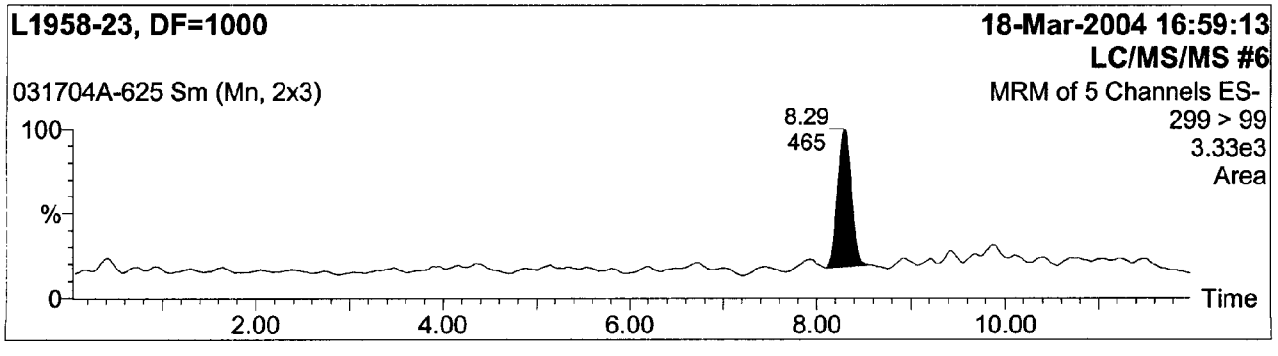
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

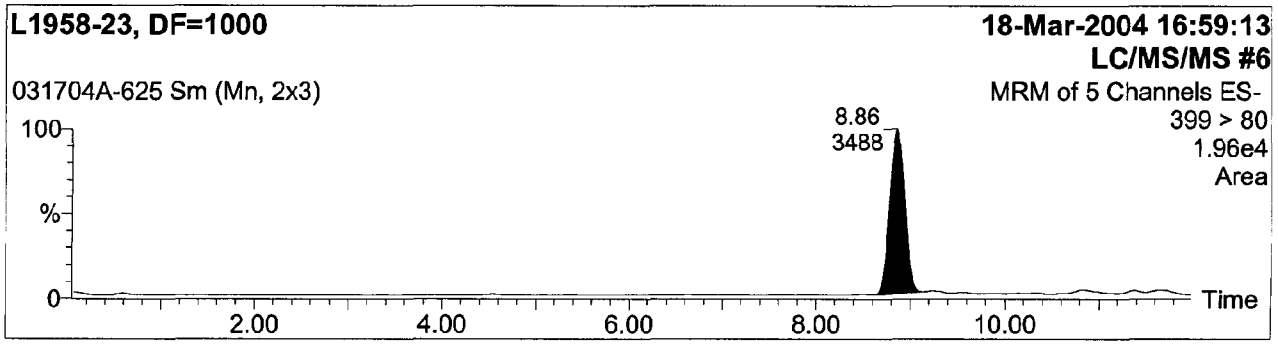
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

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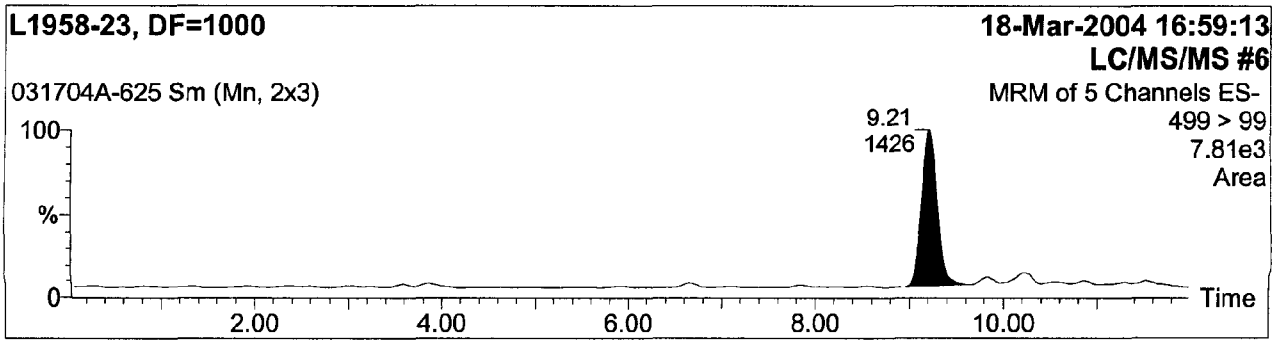
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Name: 031704A-625
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



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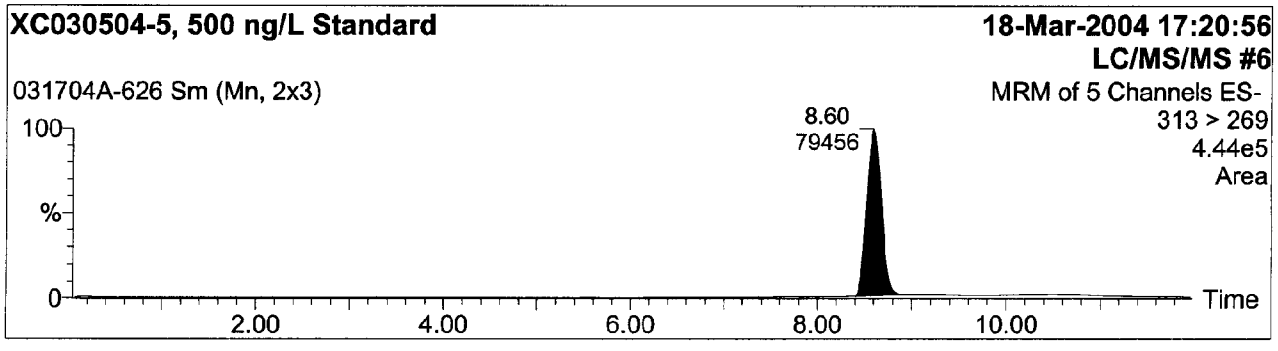
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Last modified: Thu Mar 18 09:51:08 2004
Job Code:

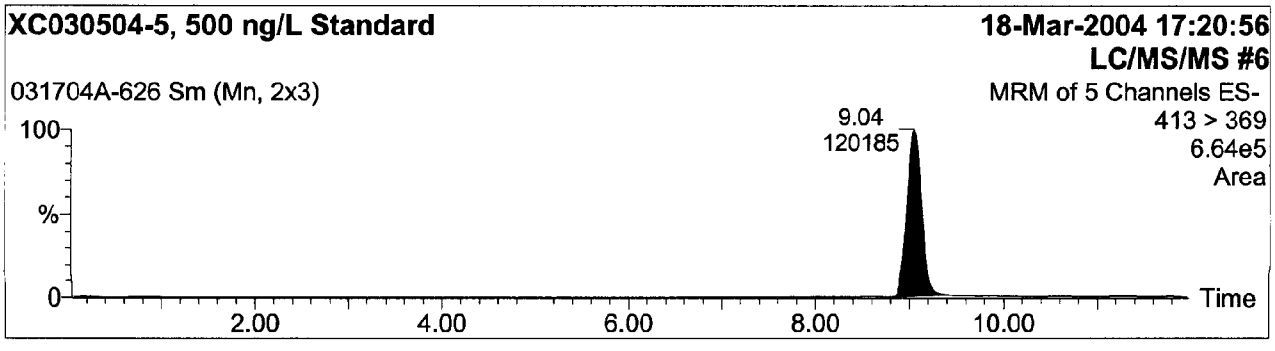
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-626
Text:

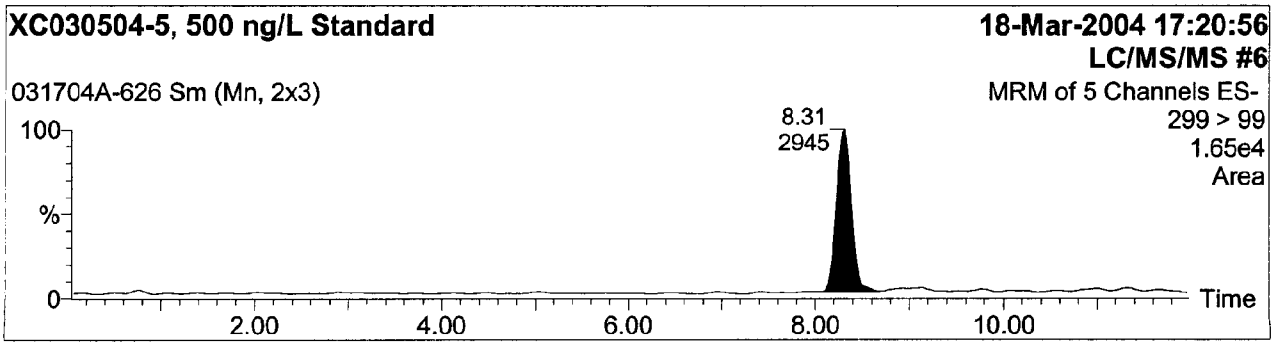
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



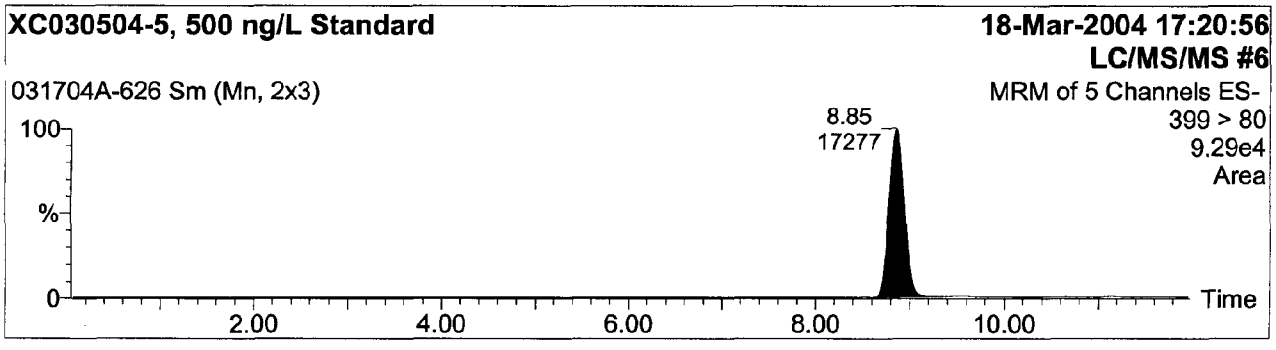
CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

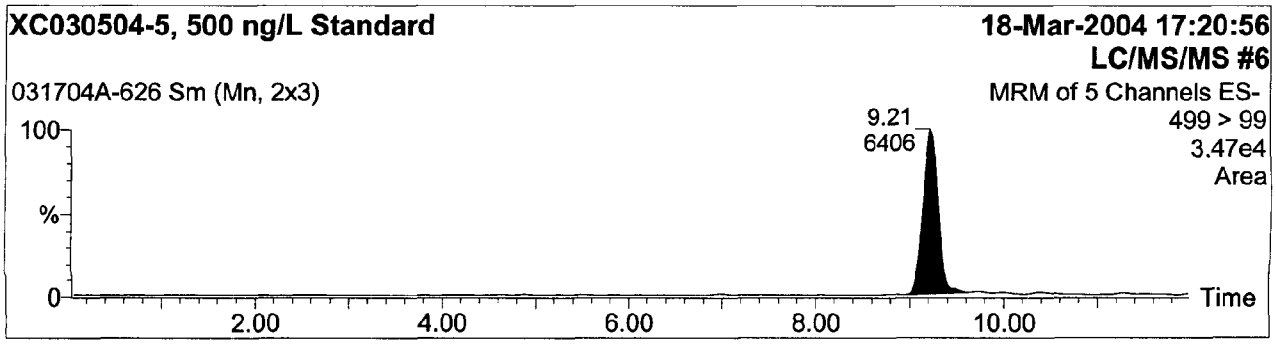
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-626
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

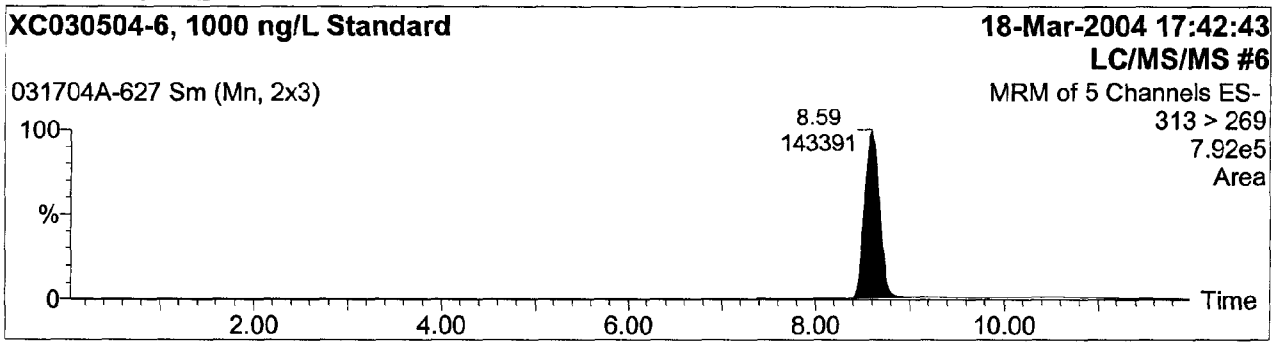
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

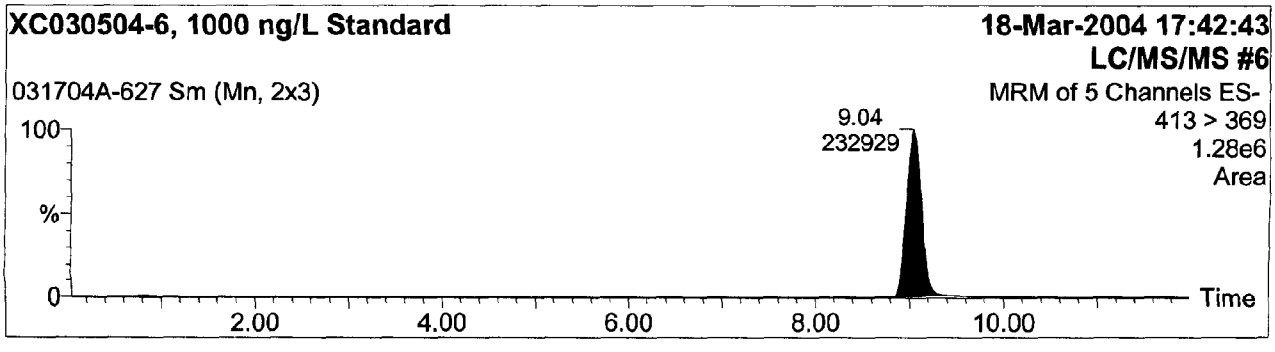
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Name: 031704A-627
Text:

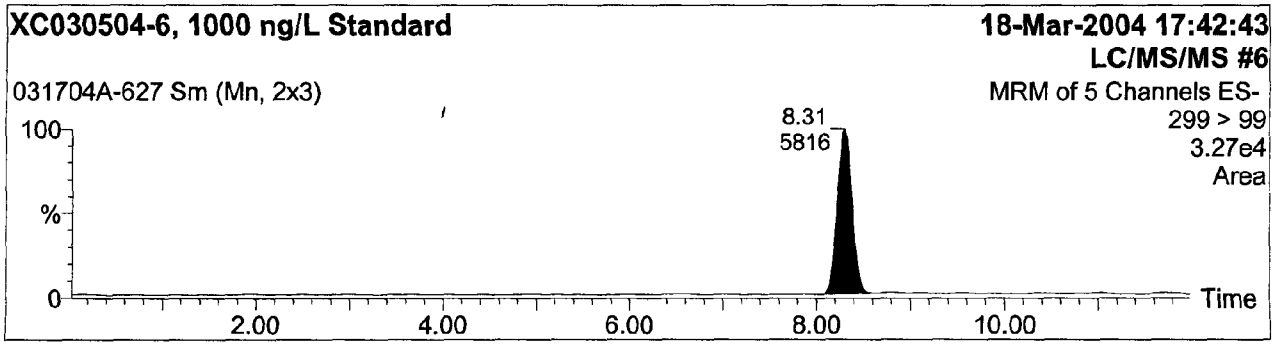
1: C6 Acid PFHA



2: C8 Acid PFOA



3: C4 Sulfonate PFBS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

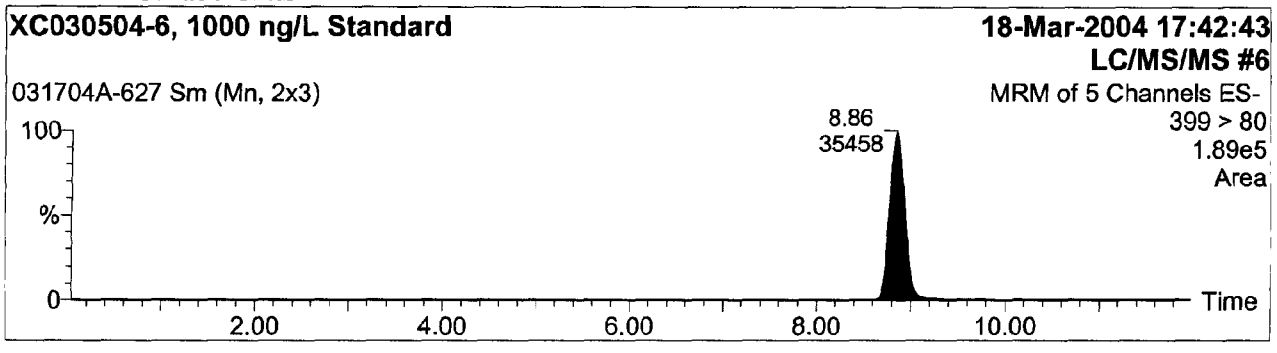
Study No.:L1958, Set No.:031704A, Ext.Date:03/17/04, Analyst:K.Risha

Sample List: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\SampleDB\031704A CG ACSFM
Last modified: Fri Mar 19 11:30:32 2004
Method: P:\Data\LCMSMS6\Masslynx\Fluorochemicals.PRO\MethDB\CotGrove NPDES 031604
Last modified: Thu Mar 18 09:51:08 2004
Job Code:

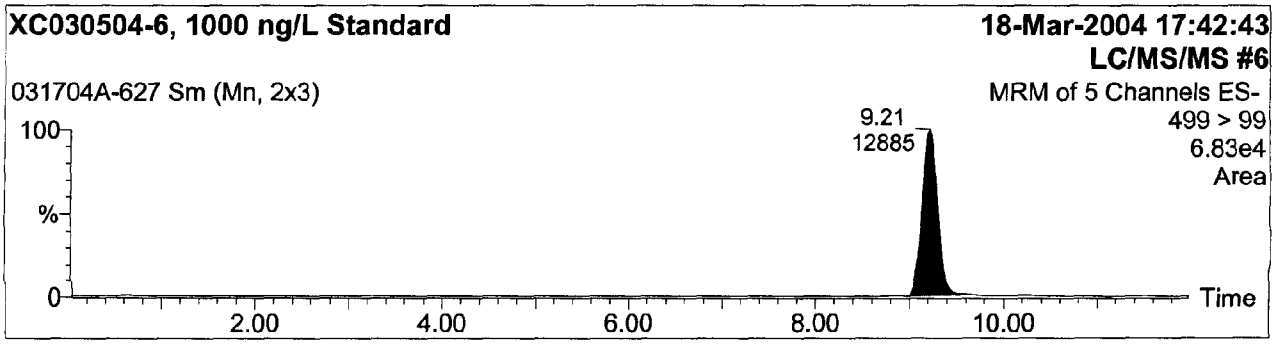
Printed: Fri Mar 19 12:24:08 2004

Name: 031704A-627
Text:

4: C6 Sulfonate PFHS



5: C8 Sulfonate PFOS



CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Metals
FINAL REPORT
EVENT 2

E04-0126
February 25, 2004

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

North Shore
Analytical, Inc.

5612 Miller Trunk Highway, Suite #1
Duluth, MN 55811
Phone: (218) 729-4658
Fax: (218) 729-4659

MDH Lab # 027-137-389
WDNR Lab # 399017190

Analytical Report

Date Reported: 3/4/04

Client:

3M Cottage Grove
Attn: Tom Baltutis
10746 Innovation Rd., Bldg. 145
Cottage Grove, MN 55016

Phone: 651-458-2032
Fax: 651-458-2596

Sample Information:

Chain of Custody: 3089
Sampled By: MAM
TMG

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
Field Blank	8094	< 0.5	2/25/2004	3/3/2004	0.1
Effluent	8095	1.0	2/25/2004	3/3/2004	0.1

Low level mercury results are reagent blank corrected.

Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

North Shore
Analytical, Inc.

5612 Miller Trunk Highway, Suite #1
Duluth, MN 55811
Phone: (218) 729-4658
Fax: (218) 729-4659

MDH Lab # 027-137-389
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Analytical Report

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3M Cottage Grove
Attn: Tom Baltutis
10746 Innovation Rd., Bldg. 145
Cottage Grove, MN 55016

Phone: 651-458-2032
Fax: 651-458-2596

Sample Information:

Chain of Custody: 3089
Sampled By: MAM
TMG

Method: EPA 1631

Sample ID	Laboratory ID #	Mercury (ng/L)	Sample Date	Analysis Date	MDL (ng/L)
Field Blank	8092	< 0.5	2/25/2004	3/3/2004	0.1
Phase 3 Effluent	8093	< 0.5	2/25/2004	3/3/2004	0.1

Low-level mercury results are reagent blank corrected.

Reviewed By: _____

If you have any questions regarding this report, please call (218) 729-4658.

Sincerely,

Linda Christensen
Chemical Engineer

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

North Shore Analytical, Inc.
5612 Miller Trunk Highway, Suite 1
Duluth, MN 55811
Phone (218) 729-4658
Fax (218) 729-4659

Record #: 3089

STF-COC-001
Revision Number: 2
Revision Date: 7/23/01

Chain of Custody

Client Name	3M Cottage Grove			Report to: Tom Baltutis		Sampled by: TMG/MAM
Address	Bldg. 145 Environmental Lab; 10746 Innovation Road			Phone: 651-768-2032		Project:
City	Cottage Grove	MN	Zip 55016	Fax: 651-768-2666		

NSA Lab #	Bottle #	Client Sample Identification	Date Collected	Time Collected	Matrix	Sample Type: Grab	Sample Type: Composite	Container/ Preservation	Analysis Requested
[illegible]	37-11	Field Blk	2/25/04	10:00	WW Blk	X		G/NA	Low Level Mercury
[illegible]	39-11	Phase B Eff	"	10:00	WW	X		"	"
[illegible]	76-11	Field Blk	2/25/04	10:10	WW Blk	X		G/NA	permit Sample
[illegible]	11-11	Effluent	"	10:10	WW	X		"	"

Transfer #	Relinquished By	Date	Time	Accepted By	Date	Time	Condition
1	[signature]	2/25/04	15:00	[signature]	2/26/04	1000	ambient
2							
3							
4							

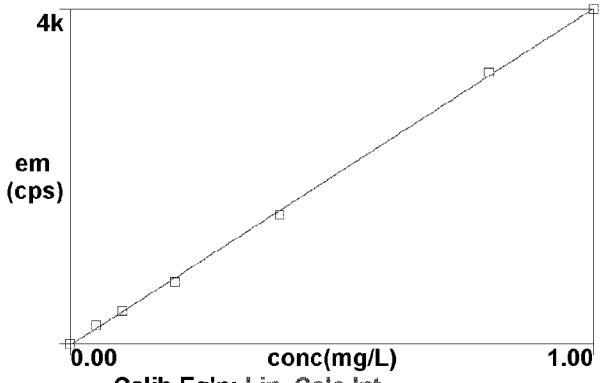
ADDITIONAL COMMENTS:

KEY: Lab use only	Matrix: SW = Surface Water; WW = Wastewater; GW = Ground Water; DW = Drinking Water	Containers: P = Plastic; G = Glass; B = Plastic Bag	Preservation: NA = None Added; H = Hydrochloric Acid; B = Bromine Monochloride

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Method: WWTP Scan
Result: CG WWTP Carbon Study Event 2 E04-0126

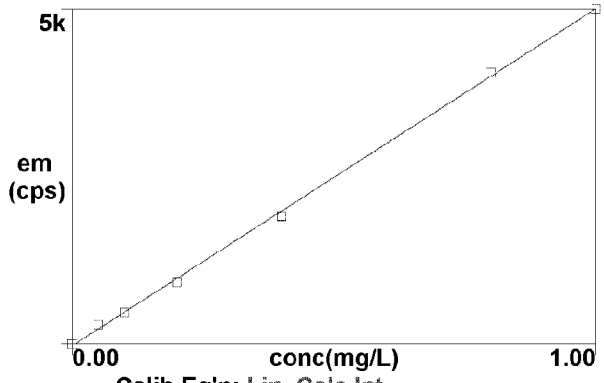
Sb 206.836



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999734

1

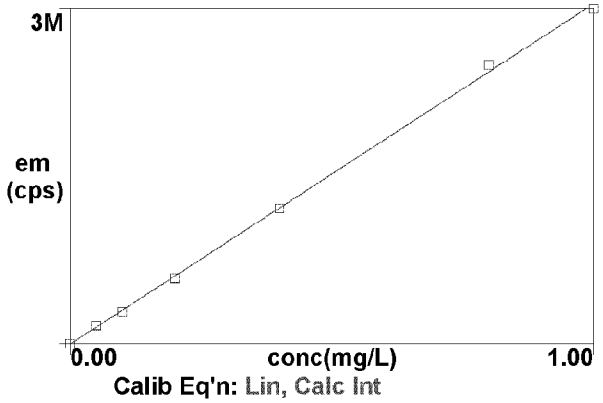
As 188.979



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999637

2

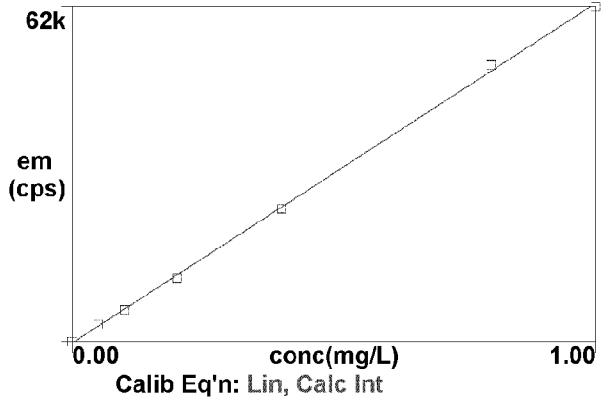
Be 313.107



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999600

3

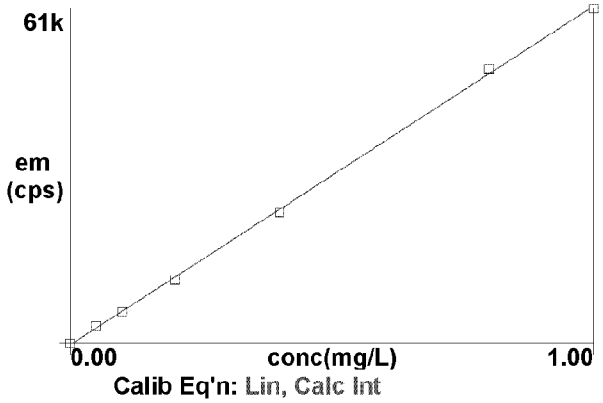
Co 228.616



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999704

4

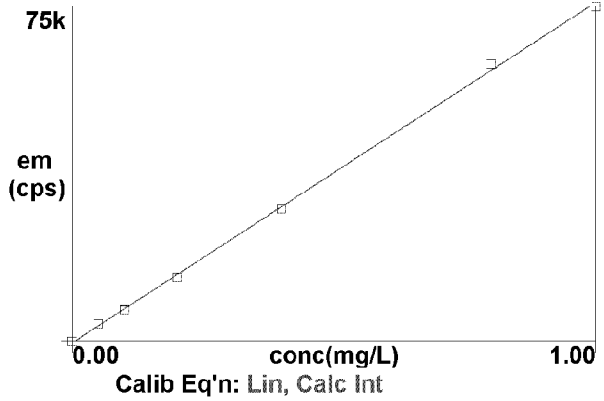
Cd 228.802



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999760

5

Cr 267.716



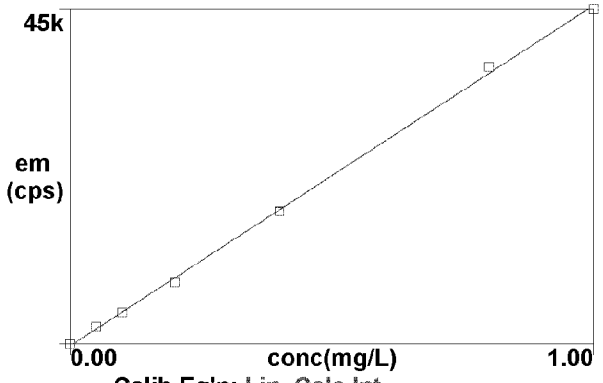
Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999639

6

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Method: WWTP Scan
Result: CG WWTP Carbon Study Event 2 E04-0126

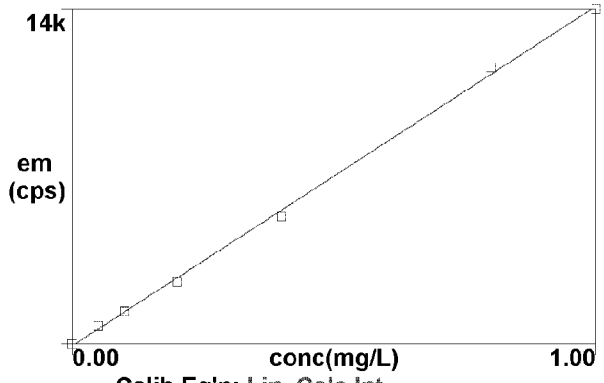
Ni 231.604



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999578

7

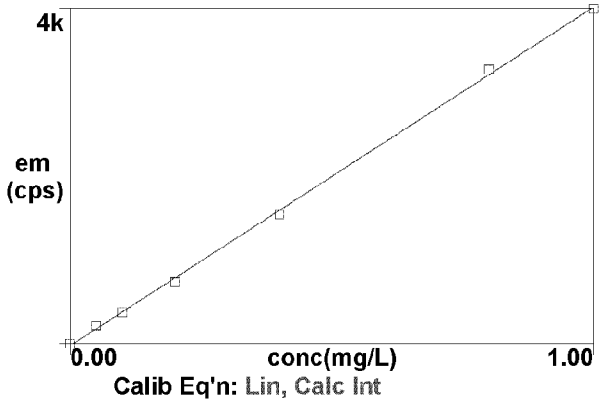
Pb 220.353



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999421

8

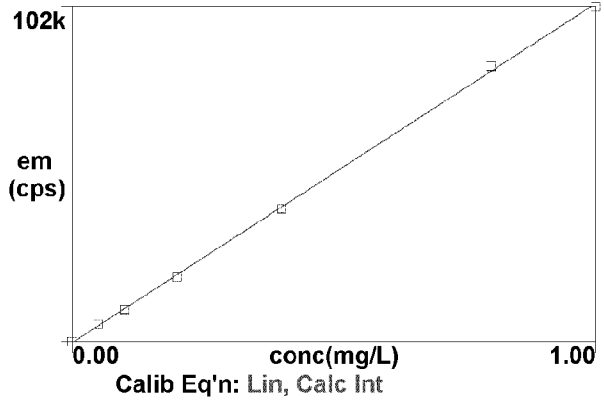
Se 196.026



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999620

9

Zn 213.857



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999755

10

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
0.8ppm	3/1/2004	12:40:44 PM				Sb 206.836	0.834	mg/L	0.834	mg/L	104.23
0.8ppm	3/1/2004	12:40:44 PM				As 188.979	0.834	mg/L	0.834	mg/L	104.28
0.8ppm	3/1/2004	12:40:44 PM				Be 313.107	0.863	mg/L	0.863	mg/L	107.86
0.8ppm	3/1/2004	12:40:44 PM				Co 228.616	0.863	mg/L	0.863	mg/L	107.86
0.8ppm	3/1/2004	12:40:44 PM				Cd 228.802	0.859	mg/L	0.859	mg/L	107.35
0.8ppm	3/1/2004	12:40:44 PM				Cr 267.716	0.861	mg/L	0.861	mg/L	107.66
0.8ppm	3/1/2004	12:40:44 PM				Ni 231.604	0.862	mg/L	0.862	mg/L	107.76
0.8ppm	3/1/2004	12:40:44 PM				Pb 220.353	0.868	mg/L	0.868	mg/L	108.47
0.8ppm	3/1/2004	12:40:44 PM				Se 196.026	0.834	mg/L	0.834	mg/L	104.27
0.8ppm	3/1/2004	12:40:44 PM				Zn 213.857	0.86	mg/L	0.86	mg/L	107.51
	3/1/2004	12:45:11 PM				Sb 206.836	0.009	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				As 188.979	0.007	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				Co 228.616	0.003	mg/L	ND	mg/kg	
MP-04-181	3/1/2004	12:45:11 PM	Field Blk	0.614	3.26	Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				Pb 220.353	0.007	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				Se 196.026	0.002	mg/L	ND	mg/kg	
	3/1/2004	12:45:11 PM				Zn 213.857	0.007	mg/L	ND	mg/kg	
	3/1/2004	12:49:35 PM				Sb 206.836	0.011	mg/L	ND	mg/kg	
	3/1/2004	12:49:35 PM				As 188.979	0.002	mg/L	ND	mg/kg	
	3/1/2004	12:49:35 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	12:49:35 PM				Co 228.616	0.003	mg/L	ND	mg/kg	
MP-04-183	3/1/2004	12:49:35 PM	Inf Phase 1/2	0.625	3.20	Cd 228.802	0.004	mg/L	ND	mg/kg	
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	3/1/2004	12:49:35 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	12:49:35 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	12:49:35 PM				Se 196.026	0.008	mg/L	ND	mg/kg	
	3/1/2004	12:49:35 PM				Zn 213.857	0.005	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Sb 206.836	0.008	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				As 188.979	0.001	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
MP-04-184	3/1/2004	12:54:00 PM	Inf Phase 1/2 D	0.721	2.77	Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Se 196.026	0.004	mg/L	ND	mg/kg	
	3/1/2004	12:54:00 PM				Zn 213.857	0.009	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Sb 206.836	0.01	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				As 188.979	0.003	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
MP-04-185	3/1/2004	12:58:26 PM	Port A Unit 1		2.77	Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Se 196.026	0.011	mg/L	ND	mg/kg	
	3/1/2004	12:58:26 PM				Zn 213.857	0.006	mg/L	ND	mg/kg	
	3/1/2004	1:02:51 PM		0.722		Sb 206.836	0.797	mg/L	55.2	mg/kg	80%
	3/1/2004	1:02:51 PM				As 188.979	0.803	mg/L	55.61	mg/kg	80%
	3/1/2004	1:02:51 PM				Be 313.107	0.818	mg/L	56.64	mg/kg	82%
	3/1/2004	1:02:51 PM				Co 228.616	0.801	mg/L	55.44	mg/kg	80%
MP-04-185 MS	3/1/2004	1:02:51 PM	Port A Unit 1		2.77	Cd 228.802	0.77	mg/L	53.33	mg/kg	77%
	3/1/2004	1:02:51 PM				Cr 267.716	0.821	mg/L	56.89	mg/kg	82%
	3/1/2004	1:02:51 PM				Ni 231.604	0.85	mg/L	58.87	mg/kg	85%
	3/1/2004	1:02:51 PM				Pb 220.353	0.846	mg/L	58.59	mg/kg	85%
	3/1/2004	1:02:51 PM				Se 196.026	0.898	mg/L	62.19	mg/kg	90%
	3/1/2004	1:02:51 PM				Zn 213.857	1.116	mg/L	77.3	mg/kg	112%

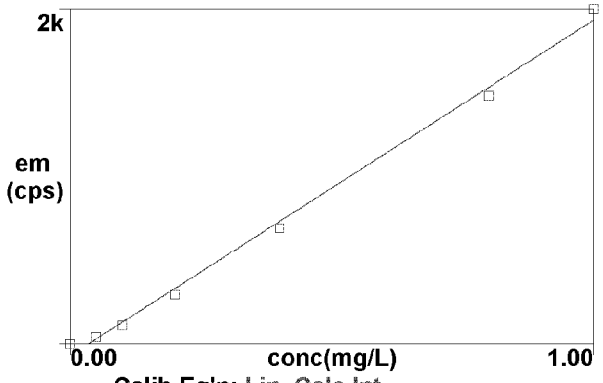
Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
MP-04-195	3/1/2004	1:07:24 PM	Lab Blk	0.723	2.77	Sb 206.836	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				As 188.979	0.002	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Cd 228.802	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Pb 220.353	0.003	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Se 196.026	0.011	mg/L	ND	mg/kg	
	3/1/2004	1:07:24 PM				Zn 213.857	0.004	mg/L	ND	mg/kg	
MP-04-186	3/1/2004	1:11:51 PM	Port A Unit 1 D	0.647	3.09	Sb 206.836	0.009	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				As 188.979	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Ni 231.604	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Se 196.026	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:11:51 PM				Zn 213.857	0.004	mg/L	ND	mg/kg	
MP-04-187	3/1/2004	1:16:18 PM	Port B Unit 1	0.65	3.08	Sb 206.836	0.006	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				As 188.979	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Se 196.026	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:16:18 PM				Zn 213.857	0.005	mg/L	ND	mg/kg	
MP-04-188	3/1/2004	1:20:45 PM	Port B Unit 1 D	0.787	2.54	Sb 206.836	0.012	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				As 188.979	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Co 228.616	0.003	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Cd 228.802	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Ni 231.604	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Se 196.026	0.011	mg/L	ND	mg/kg	
	3/1/2004	1:20:45 PM				Zn 213.857	0.005	mg/L	ND	mg/kg	
0.8ppm	3/1/2004	1:25:13 PM				Sb 206.836	0.834	mg/L	0.834	mg/L	104.20
	3/1/2004	1:25:13 PM				As 188.979	0.833	mg/L	0.833	mg/L	104.08
	3/1/2004	1:25:13 PM				Be 313.107	0.853	mg/L	0.853	mg/L	106.59
	3/1/2004	1:25:13 PM				Co 228.616	0.859	mg/L	0.859	mg/L	107.42
	3/1/2004	1:25:13 PM				Cd 228.802	0.857	mg/L	0.857	mg/L	107.12
	3/1/2004	1:25:13 PM				Cr 267.716	0.861	mg/L	0.861	mg/L	107.58
	3/1/2004	1:25:13 PM				Ni 231.604	0.859	mg/L	0.859	mg/L	107.32
	3/1/2004	1:25:13 PM				Pb 220.353	0.856	mg/L	0.856	mg/L	107.04
	3/1/2004	1:25:13 PM				Se 196.026	0.828	mg/L	0.828	mg/L	103.45
	3/1/2004	1:25:13 PM				Zn 213.857	0.857	mg/L	0.857	mg/L	107.17
MP-04-189	3/1/2004	1:29:41 PM	Port A Unit 4	0.637	3.14	Sb 206.836	0.009	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				As 188.979	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Be 313.107	0.002	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Ni 231.604	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Se 196.026	0.003	mg/L	ND	mg/kg	
	3/1/2004	1:29:41 PM				Zn 213.857	0.004	mg/L	ND	mg/kg	

Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
MP-04-190	3/1/2004	1:34:09 PM	Port A Unit 4 D	0.748	2.67	Sb 206.836	0.009	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				As 188.979	-0.001	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Be 313.107	0.002	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Cd 228.802	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Ni 231.604	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Pb 220.353	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Se 196.026	0.008	mg/L	ND	mg/kg	
	3/1/2004	1:34:09 PM				Zn 213.857	0.004	mg/L	ND	mg/kg	
MP-04-191	3/1/2004	1:38:39 PM	Port B Unit 4	0.788	2.54	Sb 206.836	0.008	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				As 188.979	0	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Cd 228.802	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Ni 231.604	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Pb 220.353	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Se 196.026	0.013	mg/L	ND	mg/kg	
	3/1/2004	1:38:39 PM				Zn 213.857	0.006	mg/L	ND	mg/kg	
MP-04-192	3/1/2004	1:43:08 PM	Port B Unit 4 D	0.623	3.21	Sb 206.836	0.009	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				As 188.979	0	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Cd 228.802	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Ni 231.604	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Pb 220.353	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Se 196.026	0.014	mg/L	ND	mg/kg	
	3/1/2004	1:43:08 PM				Zn 213.857	0.005	mg/L	ND	mg/kg	
MP-04-193	3/1/2004	1:47:37 PM	Combined Eff		3.25	Sb 206.836	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				As 188.979	-0.009	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Be 313.107	0.002	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Co 228.616	0.003	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Cd 228.802	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Cr 267.716	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Ni 231.604	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Pb 220.353	-0.001	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Se 196.026	0.011	mg/L	ND	mg/kg	
	3/1/2004	1:47:37 PM				Zn 213.857	0.002	mg/L	ND	mg/kg	
MP-04-193 MS	3/1/2004	1:52:07 PM	Combined Eff	0.615	3.25	Sb 206.836	0.909	mg/L	73.88	mg/kg	91%
	3/1/2004	1:52:07 PM				As 188.979	0.895	mg/L	72.73	mg/kg	90%
	3/1/2004	1:52:07 PM				Be 313.107	0.956	mg/L	77.74	mg/kg	96%
	3/1/2004	1:52:07 PM				Co 228.616	0.942	mg/L	76.61	mg/kg	94%
	3/1/2004	1:52:07 PM				Cd 228.802	0.924	mg/L	75.1	mg/kg	92%
	3/1/2004	1:52:07 PM				Cr 267.716	0.966	mg/L	78.51	mg/kg	97%
	3/1/2004	1:52:07 PM				Ni 231.604	1.002	mg/L	81.46	mg/kg	100%
	3/1/2004	1:52:07 PM				Pb 220.353	1.014	mg/L	82.41	mg/kg	101%
	3/1/2004	1:52:07 PM				Se 196.026	0.796	mg/L	64.73	mg/kg	80%
	3/1/2004	1:52:07 PM				Zn 213.857	1.326	mg/L	107.8	mg/kg	133%
MP-04-182	3/1/2004	1:56:37 PM	Field Blk Dup	0.72	2.78	Sb 206.836	0.011	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				As 188.979	0.003	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Pb 220.353	0.007	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Se 196.026	0.006	mg/L	ND	mg/kg	
	3/1/2004	1:56:37 PM				Zn 213.857	0.005	mg/L	ND	mg/kg	

Sample ID	Date	Time	Sample ID	Initial Sample Wt	MDL	Analyte Name	Reported Conc (Calib)	Calib Units	Reported Conc (Samp)	Samp Units	QC Recovery
MP-04-197	3/1/2004	2:01:00 PM	100 ppm Stanc	0.706	2.83	Sb 206.836	1.254	mg/L	88.82	mg/kg	89%
	3/1/2004	2:01:00 PM				As 188.979	1.229	mg/L	87.05	mg/kg	87%
	3/1/2004	2:01:00 PM				Be 313.107	1.254	mg/L	88.83	mg/kg	89%
	3/1/2004	2:01:00 PM				Co 228.616	1.274	mg/L	90.21	mg/kg	90%
	3/1/2004	2:01:00 PM				Cd 228.802	1.254	mg/L	88.83	mg/kg	89%
	3/1/2004	2:01:00 PM				Cr 267.716	1.286	mg/L	91.09	mg/kg	91%
	3/1/2004	2:01:00 PM				Ni 231.604	1.326	mg/L	93.91	mg/kg	94%
	3/1/2004	2:01:00 PM				Pb 220.353	1.301	mg/L	92.13	mg/kg	92%
	3/1/2004	2:01:00 PM				Se 196.026	1.219	mg/L	86.31	mg/kg	86%
	3/1/2004	2:01:00 PM				Zn 213.857	1.429	mg/L	101.2	mg/kg	101%
MP-04-194	3/1/2004	2:05:31 PM	Combined Eff I	0.801	2.50	Sb 206.836	0.012	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				As 188.979	0.007	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Be 313.107	0.002	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Cd 228.802	0.005	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Pb 220.353	0.005	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Se 196.026	0.01	mg/L	ND	mg/kg	
	3/1/2004	2:05:31 PM				Zn 213.857	0.005	mg/L	ND	mg/kg	
0.8ppm	3/1/2004	2:09:56 PM				Sb 206.836	0.797	mg/L	ND	mg/L	99.57
	3/1/2004	2:09:56 PM				As 188.979	0.797	mg/L	ND	mg/L	99.58
	3/1/2004	2:09:56 PM				Be 313.107	0.834	mg/L	ND	mg/L	104.19
	3/1/2004	2:09:56 PM				Co 228.616	0.821	mg/L	ND	mg/L	102.61
	3/1/2004	2:09:56 PM				Cd 228.802	0.82	mg/L	ND	mg/L	102.45
	3/1/2004	2:09:56 PM				Cr 267.716	0.822	mg/L	ND	mg/L	102.71
	3/1/2004	2:09:56 PM				Ni 231.604	0.819	mg/L	ND	mg/L	102.41
	3/1/2004	2:09:56 PM				Pb 220.353	0.824	mg/L	ND	mg/L	102.96
	3/1/2004	2:09:56 PM				Se 196.026	0.796	mg/L	ND	mg/L	99.54
	3/1/2004	2:09:56 PM				Zn 213.857	0.821	mg/L	ND	mg/L	102.64
MP-04-196	3/1/2004	2:14:23 PM	Lab Blk Dup	0.691	2.89	Sb 206.836	0.007	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				As 188.979	0	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Be 313.107	0.001	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Co 228.616	0.004	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Cd 228.802	0.004	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Cr 267.716	0.005	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Ni 231.604	0.006	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Pb 220.353	0.003	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Se 196.026	0.008	mg/L	ND	mg/kg	
	3/1/2004	2:14:23 PM				Zn 213.857	0.005	mg/L	ND	mg/kg	
MP-04-198	3/1/2004	2:18:48 PM	100 ppm Stanc	0.641	3.12	Sb 206.836	1.163	mg/L	90.73	mg/kg	91%
	3/1/2004	2:18:48 PM				As 188.979	1.142	mg/L	89.05	mg/kg	89%
	3/1/2004	2:18:48 PM				Be 313.107	1.176	mg/L	91.71	mg/kg	92%
	3/1/2004	2:18:48 PM				Co 228.616	1.185	mg/L	92.42	mg/kg	92%
	3/1/2004	2:18:48 PM				Cd 228.802	1.169	mg/L	91.17	mg/kg	91%
	3/1/2004	2:18:48 PM				Cr 267.716	1.199	mg/L	93.5	mg/kg	94%
	3/1/2004	2:18:48 PM				Ni 231.604	1.239	mg/L	96.61	mg/kg	97%
	3/1/2004	2:18:48 PM				Pb 220.353	1.206	mg/L	94.07	mg/kg	94%
	3/1/2004	2:18:48 PM				Se 196.026	1.133	mg/L	88.39	mg/kg	88%
	3/1/2004	2:18:48 PM				Zn 213.857	1.331	mg/L	103.8	mg/kg	104%
0.8ppm	3/1/2004	2:23:20 PM				Sb 206.836	0.791	mg/L	0.791	mg/L	98.89
	3/1/2004	2:23:20 PM				As 188.979	0.784	mg/L	0.784	mg/L	98.03
	3/1/2004	2:23:20 PM				Be 313.107	0.817	mg/L	0.817	mg/L	102.17
	3/1/2004	2:23:20 PM				Co 228.616	0.808	mg/L	0.808	mg/L	101.04
	3/1/2004	2:23:20 PM				Cd 228.802	0.81	mg/L	0.81	mg/L	101.23
	3/1/2004	2:23:20 PM				Cr 267.716	0.812	mg/L	0.812	mg/L	101.49
	3/1/2004	2:23:20 PM				Ni 231.604	0.81	mg/L	0.81	mg/L	101.27
	3/1/2004	2:23:20 PM				Pb 220.353	0.809	mg/L	0.809	mg/L	101.07
	3/1/2004	2:23:20 PM				Se 196.026	0.782	mg/L	0.782	mg/L	97.75
	3/1/2004	2:23:20 PM				Zn 213.857	0.81	mg/L	0.81	mg/L	101.22

Method: WWTP Scan
Result: CG WWTP Carbon Study Event 2 E04-0126 Non-Digest

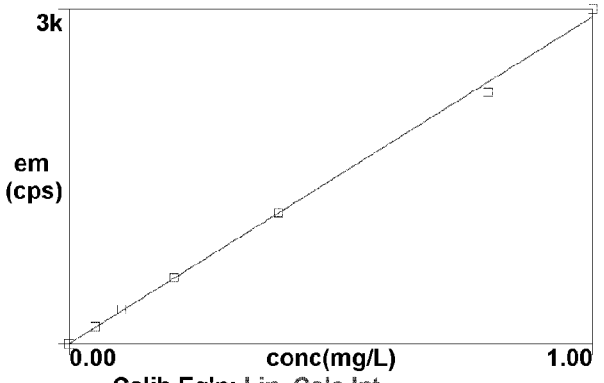
Sb 206.836



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.997935

1

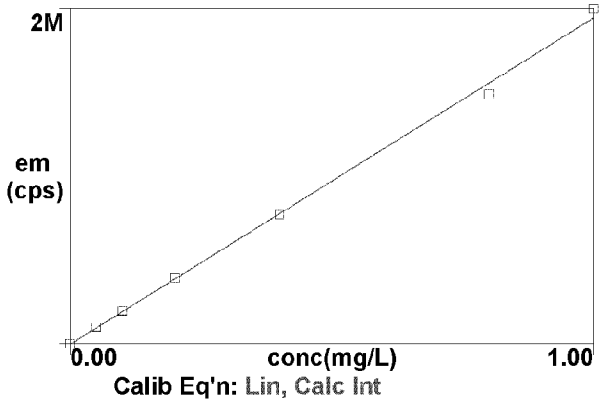
As 188.979



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999186

2

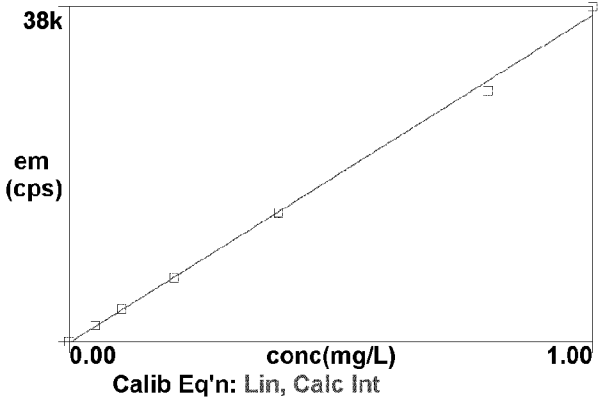
Be 313.107



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.998903

3

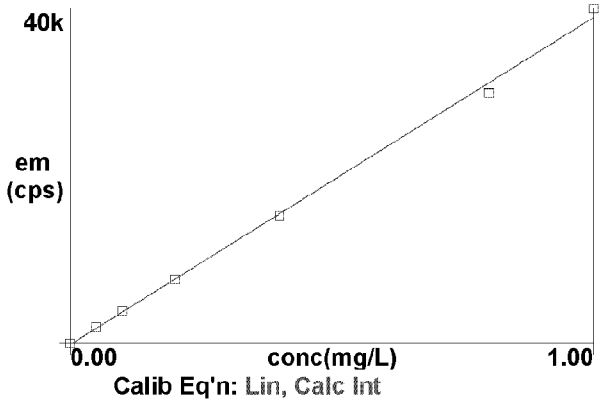
Co 228.616



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999099

4

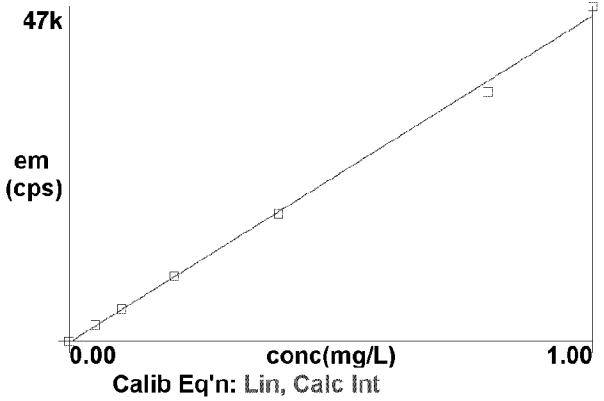
Cd 228.802



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999018

5

Cr 267.716

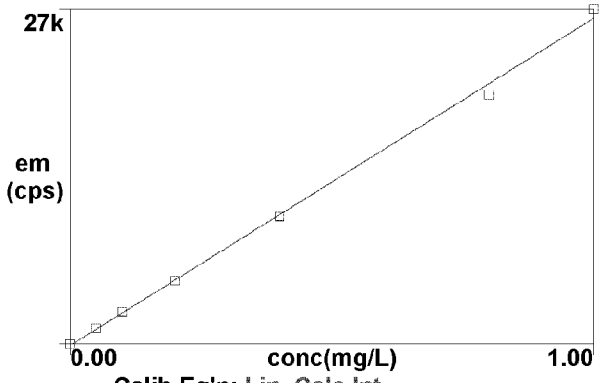


Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.998922

6

CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

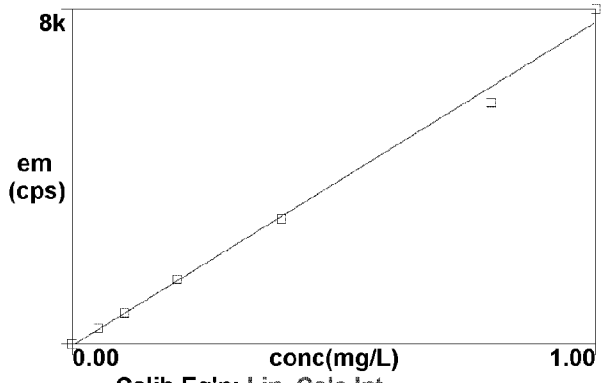
Ni 231.604



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.998930

7

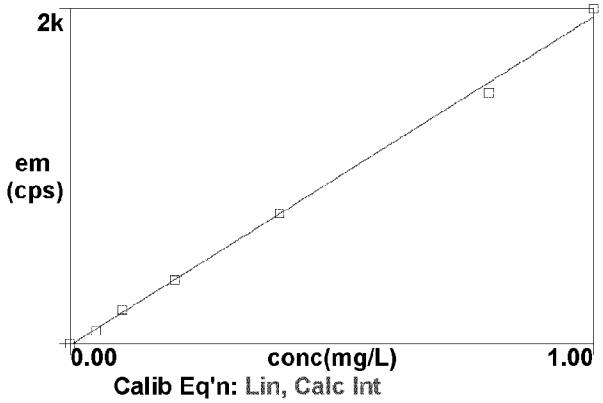
Pb 220.353



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.997747

8

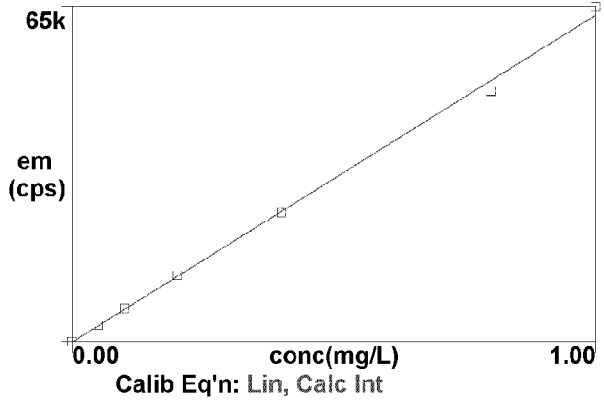
Se 196.026



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999055

9

Zn 213.857



Calib Eq'n: Lin, Calc Int
Corr Coeff: 0.999061

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CONFIDENTIAL - SUBJECT TO A PROTECTIVE ORDER ENTERED IN HENNEPIN COUNTY DISTRICT COURT, NO. 27-CV-10-28862

Sample ID	Date	Time	Concentration	Analyte Name	Reported Conc (Calib)	Calib Units	QC Recovery
0.8ppm	3/1/2004	2:31:38 PM	100%	Sb 206.836	0.744	mg/L	93.04
	3/1/2004	2:31:38 PM		As 188.979	0.743	mg/L	92.87
	3/1/2004	2:31:38 PM		Be 313.107	0.779	mg/L	97.33
	3/1/2004	2:31:38 PM		Co 228.616	0.773	mg/L	96.64
	3/1/2004	2:31:38 PM		Cd 228.802	0.774	mg/L	96.69
	3/1/2004	2:31:38 PM		Cr 267.716	0.775	mg/L	96.82
	3/1/2004	2:31:38 PM		Ni 231.604	0.774	mg/L	96.73
	3/1/2004	2:31:38 PM		Pb 220.353	0.772	mg/L	96.48
	3/1/2004	2:31:38 PM		Se 196.026	0.742	mg/L	92.81
	3/1/2004	2:31:38 PM		Zn 213.857	0.775	mg/L	96.91
Field Blank	3/1/2004	2:36:08 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:36:08 PM		As 188.979	ND	mg/L	
	3/1/2004	2:36:08 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:36:08 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:36:08 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:36:08 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:36:08 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:36:08 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:36:08 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:36:08 PM		Zn 213.857	ND	mg/L	
Influent 1/2	3/1/2004	2:40:36 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:40:36 PM		As 188.979	ND	mg/L	
	3/1/2004	2:40:36 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:40:36 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:40:36 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:40:36 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:40:36 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:40:36 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:40:36 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:40:36 PM		Zn 213.857	ND	mg/L	
Port 1A	3/1/2004	2:45:01 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:45:01 PM		As 188.979	ND	mg/L	
	3/1/2004	2:45:01 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:45:01 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:45:01 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:45:01 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:45:01 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:45:01 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:45:01 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:45:01 PM		Zn 213.857	ND	mg/L	
Port 1B	3/1/2004	2:49:26 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:49:26 PM		As 188.979	ND	mg/L	
	3/1/2004	2:49:26 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:49:26 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:49:26 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:49:26 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:49:26 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:49:26 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:49:26 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:49:26 PM		Zn 213.857	ND	mg/L	

Sample ID	Date	Time	Concentration	Analyte Name	Reported Conc (Calib)	Calib Units	QC Recovery
Port 4A	3/1/2004	2:53:51 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:53:51 PM		As 188.979	ND	mg/L	
	3/1/2004	2:53:51 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:53:51 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:53:51 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:53:51 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:53:51 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:53:51 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:53:51 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:53:51 PM		Zn 213.857	ND	mg/L	
Port 4B	3/1/2004	2:58:17 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	2:58:17 PM		As 188.979	ND	mg/L	
	3/1/2004	2:58:17 PM		Be 313.107	ND	mg/L	
	3/1/2004	2:58:17 PM		Co 228.616	ND	mg/L	
	3/1/2004	2:58:17 PM		Cd 228.802	ND	mg/L	
	3/1/2004	2:58:17 PM		Cr 267.716	ND	mg/L	
	3/1/2004	2:58:17 PM		Ni 231.604	ND	mg/L	
	3/1/2004	2:58:17 PM		Pb 220.353	ND	mg/L	
	3/1/2004	2:58:17 PM		Se 196.026	ND	mg/L	
	3/1/2004	2:58:17 PM		Zn 213.857	ND	mg/L	
Combined Eff 1/2	3/1/2004	3:02:44 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	3:02:44 PM		As 188.979	ND	mg/L	
	3/1/2004	3:02:44 PM		Be 313.107	ND	mg/L	
	3/1/2004	3:02:44 PM		Co 228.616	ND	mg/L	
	3/1/2004	3:02:44 PM		Cd 228.802	ND	mg/L	
	3/1/2004	3:02:44 PM		Cr 267.716	ND	mg/L	
	3/1/2004	3:02:44 PM		Ni 231.604	ND	mg/L	
	3/1/2004	3:02:44 PM		Pb 220.353	ND	mg/L	
	3/1/2004	3:02:44 PM		Se 196.026	ND	mg/L	
	3/1/2004	3:02:44 PM		Zn 213.857	ND	mg/L	
	3/1/2004	3:07:11 PM		Sb 206.836	1.055	mg/L	106%
	3/1/2004	3:07:11 PM		As 188.979	1.131	mg/L	113%
	3/1/2004	3:07:11 PM		Be 313.107	1.133	mg/L	113%
	3/1/2004	3:07:11 PM		Co 228.616	1.008	mg/L	101%
	3/1/2004	3:07:11 PM		Cd 228.802	1.05	mg/L	105%
	3/1/2004	3:07:11 PM		Cr 267.716	1.036	mg/L	104%
	3/1/2004	3:07:11 PM		Ni 231.604	1.071	mg/L	107%
	3/1/2004	3:07:11 PM		Pb 220.353	1.041	mg/L	104%
	3/1/2004	3:07:11 PM		Se 196.026	1.193	mg/L	119%
	3/1/2004	3:07:11 PM		Zn 213.857	1.542	mg/L	154%
Lab Blank	3/1/2004	3:11:45 PM	100%	Sb 206.836	ND	mg/L	
	3/1/2004	3:11:45 PM		As 188.979	ND	mg/L	
	3/1/2004	3:11:45 PM		Be 313.107	ND	mg/L	
	3/1/2004	3:11:45 PM		Co 228.616	ND	mg/L	
	3/1/2004	3:11:45 PM		Cd 228.802	ND	mg/L	
	3/1/2004	3:11:45 PM		Cr 267.716	ND	mg/L	
	3/1/2004	3:11:45 PM		Ni 231.604	ND	mg/L	
	3/1/2004	3:11:45 PM		Pb 220.353	ND	mg/L	
	3/1/2004	3:11:45 PM		Se 196.026	ND	mg/L	
	3/1/2004	3:11:45 PM		Zn 213.857	ND	mg/L	
0.8ppm	3/1/2004	3:16:23 PM	100%	Sb 206.836	0.696	mg/L	87.04
	3/1/2004	3:16:23 PM		As 188.979	0.691	mg/L	86.38
	3/1/2004	3:16:23 PM		Be 313.107	0.715	mg/L	89.39
	3/1/2004	3:16:23 PM		Co 228.616	0.702	mg/L	87.80
	3/1/2004	3:16:23 PM		Cd 228.802	0.704	mg/L	87.97
	3/1/2004	3:16:23 PM		Cr 267.716	0.701	mg/L	87.60
	3/1/2004	3:16:23 PM		Ni 231.604	0.702	mg/L	87.74
	3/1/2004	3:16:23 PM		Pb 220.353	0.704	mg/L	87.98
	3/1/2004	3:16:23 PM		Se 196.026	0.694	mg/L	86.77
	3/1/2004	3:16:23 PM		Zn 213.857	0.705	mg/L	88.14