

## Atmospheric Analysis & Consulting, Inc.

Client : SWAPE.  
Client Project Name : Bridgeton Sanitary Landfill Air Quality Assessment  
Client Project No. : NA  
AAC Project No. : 130559  
Reporting Date : 05/14/2013

On May 9, 2013, Atmospheric Analysis & Consulting, Inc. received eight (8) Tubes for Sulfur Dioxide analysis by OSHA Method ID-200. Upon receipt each sample was assigned a unique Laboratory ID number as follows:

Client Sample ID	AAC Sample ID
Trip Blank-SO2	130559-62847
BZ-2-SO2	130559-62857
U1-SO2	130559-62866
U2-SO2	130559-62875
U3-SO2	130559-62884
D1-SO2	130559-62893
D2-SO2	130559-62902
D3-SO2	130559-62911

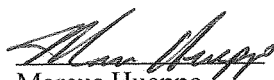
OSHA ID-200 Analysis – Up to a 5mL aliquot of the sample was injected into the DIONEX IC for analysis following OSHA ID-200 as specified in the SOW.

All sample values were blank corrected using the Trip Blank value for Sulfur Dioxide. The Trip Blank value was calculated using a sample volume of 12.0 Liters.

No other problems were encountered during receiving, preparation, and/or analysis of these samples. The test results included in this report meet all requirements of the NELAC Standards and/or AAC SOP OSHAID200.01.

I certify that this data is technically accurate, complete and in compliance with the terms and conditions of the contract. The Laboratory Director or his designee, as verified by the following signature, has authorized the release of the data contained in this hardcopy data package.

If you have any questions or require further explanation of data results, please contact the undersigned.

  
Marcus Hueppe  
Laboratory Director

This report consists of 46 pages.



AA 130559

**CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM**

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE  
 Project Manager: PAUL ROSENFELD, PH.D.  
 Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401  
 Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT  
 Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011  
 Date: \_\_\_\_\_ Page of \_\_\_\_\_

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	Requested Tests / Analyses	Special Instructions / Conditions of Receipt
02843	TRAIL BLANK - WPH				<input type="checkbox"/> VOCs - EPA TO-15 <input type="checkbox"/> Reduced Sulfur Compounds - ASTM D5504 <input checked="" type="checkbox"/> Aldehydes - EPA TO-11A <input type="checkbox"/> Carboxylic Acids - Tube GC-MS <input type="checkbox"/> HCL - NIOSH 7903 <input type="checkbox"/> Ammonia - OSHA ID-188 <input type="checkbox"/> SO2 - OSHA ID-200 <input type="checkbox"/> HCN - NIOSH 6010 <input type="checkbox"/> Amines - NIOSH 2010M <input type="checkbox"/> Fixed Gases - EPA 3C <input type="checkbox"/> PAHs / Dioxins EPA TO-13A / 9A <input type="checkbox"/> Mercury - NIOSH 6009 <input type="checkbox"/> Odor Evaluation	
02844	- ACIDS				<input checked="" type="checkbox"/>	
02845	- HCL				<input checked="" type="checkbox"/>	
02846	- AMMONIA				<input checked="" type="checkbox"/>	
02847	- SO2				<input checked="" type="checkbox"/>	
02848	- HCN				<input checked="" type="checkbox"/>	
02849	- AMINES				<input checked="" type="checkbox"/>	
02850	- MERCURY				<input checked="" type="checkbox"/>	
02851	- CANISTER				<input checked="" type="checkbox"/>	

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.  
 OC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: *[Signature]* Date: 5/8/13 Time: 15:00  
 Received By: *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished By: *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: *[Signature]* Date: 5/9/13 Time: 0935

SOIL / WATER / AIR PROTECTION ENTERPRISE

- F27) EX

**CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM**

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE  
 Project Manager: PAUL ROSENFELD, PH.D.  
 Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401  
 Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT  
 Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011  
 Date: 5/8/13 Page 1 of 1

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.

Requested Tests / Analyses

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Aldehydes - EPA TO-11A	Carboxylic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation	Special Instructions / Conditions of Receipt
62852	BZ-Z-Container	Canister	5/8/13	13:32	X	X								X				
62853	-DMPH	TUBE	5/8/13	13:23			X											
62854	-ACIDS		5/8/13	13:26			X											
62855	-HCL		5/8/13	13:24				X										
62856	-AMMONIA		5/8/13	13:30					X									
62857	-SO2		5/8/13	13:22						X								
62858	-HCN		5/8/13	13:29							X							
62859	-AMINES		5/8/13	13:31								X						
62860	-MERCURY		5/8/13	13:28												X		

QC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: [Signature] Date: 5/8/13 Time: 18:00  
 Received By: [Signature] Date: 5/8/13 Time: 09:35

Relinquished By: [Signature] Date: [ ] Time: [ ]  
 Received By: [Signature] Date: [ ] Time: [ ]

Relinquished By: [Signature] Date: [ ] Time: [ ]  
 Received By: [Signature] Date: [ ] Time: [ ]

SOIL / WATER / AIR PROTECTION ENTERPRISE  
 -RECEIVED

# CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE  
 Project Manager: PAUL ROSENFELD, PH.D.  
 Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401  
 Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT  
 Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011

Requested Tests / Analyses

VOCS - EPA TO-15	
Reduced Sulfur Compounds - ASTM D5504	
Aldehydes - EPA TO-11A	
Carboxylic Acids - Tube GC-MS	
HCL - NIOSH 7903	
Ammonia - OSHA ID-188	
SO2 - OSHA ID-200	
HCN - NIOSH 6010	
Amines - NIOSH 2010M	
Fixed Gases - EPA 3C	
PAHs / Dioxins EPA TO-13A / 9A	
Mercury - NIOSH 6009	
Odor Evaluation	

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.

QC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: *Paul Rosenfeld* Date: *5/8/13* Time: *10:00*  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: *Paul Rosenfeld* Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Aldehydes - EPA TO-11A	Carboxylic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation	Special Instructions / Conditions of Receipt
VOID	U-1-Canister	Canister	5/7/13	11:17	X	X												NO ANALYSES
62862	-DNPH	Tube		12:17														
62863	-ACIDS			12:46			X											
62864	-HCL			12:49				X										
62865	-AMMONIA			12:54						X								
62866	-SO2			12:51							X							
62867	-HCN			12:52								X						
62868	-AMINES			12:53									X					
62869	-MERCURY			12:50														
62861	U-1B-Canister	Can			X	X												

Relinquished By: *Paul Rosenfeld* Date: *5/8/13* Time: *10:00*  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Relinquished By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received By: *Paul Rosenfeld* Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received By: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

SOIL / WATER / AIR PROTECTION ENTERPRISE

- FedEx

# CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: <b>SOIL / WATER AIR PROTECTION ENTERPRISE</b>		Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011				
Project Manager: <b>PAUL ROSENFELD, PH.D.</b>		<b>REQUESTED TESTS / ANALYSES</b>				
Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401						
Project Name and Location: <b>BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT</b>		<b>Special Instructions / Conditions of Receipt</b>				
Sampled By: <i>Paul Rosenfeld</i>	Sampler Signature: <i>Paul Rosenfeld</i>					
LAB ID	SAMPLE ID NUMBER			Type	Date	Time
02870	U-2-Camister			PM	5/7/13	13:25
02871	-DMPH			TYPE		
02872	-ACIDS					
02873	-HCL					
02874	-AMMONIA					
02875	-SO2					
02876	-HCN					
02877	-AMINES					
02878	-MERCURY					
Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.						
QC Requirements: Provide Level IV QC Package for all Analyses.						
Relinquished By: <i>Paul Rosenfeld</i>	Date: 5/6/13	Time: 18:00	Received By: <i>Paul Rosenfeld</i>	Date: 5/9/13		
Relinquished By:	Date:	Time:	Received By:	Date:		
Relinquished By:	Date:	Time:	Received By:	Date:		

- FE726X

# CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE  
 Project Manager: PAUL ROSENFELD, PH.D.  
 Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401  
 Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT  
 Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011  
 Date: 5/8/13 Page 1 of 1

Requested Tests / Analyses:  
 VOCs - EPA TO-15  
 Reduced Sulfur Compounds - ASTM D5504  
 Aldehydes - EPA TO-11A  
 Carboxylic Acids - Tube GC-MS  
 HCL - NIOSH 7903  
 Ammonia - OSHA ID-188  
 SO2 - OSHA ID-200  
 HCN - NIOSH 6010  
 Amines - NIOSH 2010M  
 Fixed Gases - EPA 3C  
 PAHs / Dioxins EPA TO-13A / 9A  
 Mercury - NIOSH 6009  
 Odor Evaluation

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	VOCs - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Aldehydes - EPA TO-11A	Carboxylic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation
62879	D-3-CAMSTER	CAN	5/8/13	12:14	X	X								X			
62880	-ANPH	TBC		12:03			X										
62881	-ACIDS			12:06			X										
62882	-HCL			12:09				X									
62883	-AMMONIA			12:07					X								
62884	-SO2			12:11						X							
62885	-HCN			12:12							X						
62886	-AMINES			12:05								X					
62887	-MERCURY		09	11:22												X	

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.  
 QC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: [Signature] Date: 5/8/13 Time: 18:00  
 Relinquished By: [Signature] Date: [ ] Time: [ ]  
 Relinquished By: [Signature] Date: [ ] Time: [ ]

Received By: [Signature] Date: [ ] Time: [ ]  
 Received By: [Signature] Date: 5/9/13 Time: 0935

SOIL / WATER / AIR PROTECTION ENTERPRISE  
 - FEDI

Special Instructions / Conditions of Receipt

# CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE  
 Project Manager: PAUL ROSENFELD, PH.D.  
 Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401  
 Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT

Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011

Date: 5/8/12 Page 1 of 1

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.

QC Requirements: Provide Level IV QC Package for all Analyses.

Requested By: *Paul Rosenfeld* Date: 5/8/12 Time: 10:00  
 Relinquished By: *Paul Rosenfeld* Date: Date: Time: Time:

Requested By: *Paul Rosenfeld* Date: 5/9/12 Time: 0935  
 Relinquished By: *Paul Rosenfeld* Date: Date: Time: Time:

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Aldehydes - EPA TO-11A	Carboxylic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation
62888	D-1 - Camister	CAN	5/7/12	11:57	X	X	X							X			
62889	- DNPH	TUBE		11:55			X										
62890	- ACIDS			11:54			X										
62891	- HCL			11:46				X									
62892	- AMMONIA			11:49					X								
62893	- SO2			11:48				X									
62894	- HCN			11:42				X									
62895	- AMINES			11:52					X								
62896	- MERCURY			11:43									X				

Special Instructions / Conditions of Receipt

**CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM**

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE		Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011		Date: 5/2/13	Page 1 of 1		
Project Manager: PAUL ROSENFELD, PH.D.		<b>REQUESTED TESTS / ANALYSES</b>					
Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401							
Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT							
Sampled By: Paul Rosenfeld		Sample Signature: <i>Paul Rosenfeld</i>		<b>Special Instructions / Conditions of Receipt</b>			
LAB ID	SAMPLE ID NUMBER	Type	Date			Time	
62897	D-2-Causter		04/27/13			12:22	
62898	-DNPH	TUBE				12:19	
62899	-AC105					12:21	
62900	-HCL					12:12	
62901	-AMMONIA					12:17	
62902	-SO2					12:15	
62903	-HCN					12:10	
62904	-AMINES					12:08	
62905	-MERCURY					12:10	
Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.							
QC Requirements: Provide Level IV QC Package for all Analyses.							
Relinquished By: <i>Paul Rosenfeld</i>		Date: 3/0/13	Time: 18:00	Received By:	Date: 5/2/13		
Relinquished By:		Date:	Time:	Received By:	Date:		
Relinquished By:		Date:	Time:	Received By: <i>Paul Rosenfeld</i>	Date: 5/9/13		
Time:		Time:	Time:	Time: 0935	Time:		

SOIL / WATER / AIR PROTECTION ENTERPRISE

- END EX



# CHAIN OF CUSTODY RECORD / ANALYTICAL REQUEST FORM

Bridgeton Sanitary Landfill Air Quality Assessment

Client Name: SOIL / WATER AIR PROTECTION ENTERPRISE  
 Project Manager: PAUL ROSENFELD, PH.D.  
 Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401  
 Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT  
 Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0011  
 Date: 5/8/13 Page 1 of 1

Requested Tests / Analyses

LAB ID	SAMPLE ID NUMBER	Type	Date	Time	VOCS - EPA TO-15	Reduced Sulfur Compounds - ASTM D5504	Aldehydes - EPA TO-11A	Carboxylic Acids - Tube GC-MS	HCL - NIOSH 7903	Ammonia - OSHA ID-188	SO2 - OSHA ID-200	HCN - NIOSH 6010	Amines - NIOSH 2010M	Fixed Gases - EPA 3C	PAHs / Dioxins EPA TO-13A / 9A	Mercury - NIOSH 6009	Odor Evaluation	Special Instructions / Conditions of Receipt
62906	D-3-Renister	Can	5/8/13	15:00	X	X								X				
62907	-DMP4	Tube		12:47			X											
62908	-ACIDS			12:58			X											
62909	-HCL			12:51				X										
62910	-AMMONIA			12:55					X									
62911	-SO2			12:57						X								
62912	-HCN			12:50							X							
62913	-AMINES			12:54								X						
62914	-MERCURY			12:48											X			

Requested Turnaround Time: Standard turn-around for all analyses. If possible deliver report within 2 weeks.  
 QC Requirements: Provide Level IV QC Package for all Analyses.

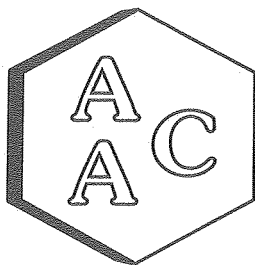
Relinquished By: [Signature] Date: 5/8/13 Time: 16:00  
 Received By: [Signature] Date: [ ] Time: [ ]

Relinquished By: [Signature] Date: [ ] Time: [ ]  
 Received By: [Signature] Date: 5/8/13 Time: 09:35

SOIL / WATER / AIR PROTECTION ENTERPRISE

- FERRY

# Results



# Atmospheric Analysis & Consulting, Inc.

## Laboratory Analysis Report

Anion Analysis by IC

Client: : Swape  
Client Project Name: : Bridgeton Sanitary Landfill Air Quality Assessment  
AAC Project No. : 130559  
Analyst : EG/HP  
Units : ppbv  
Sampling Date : 05/07-8/2013  
Receiving Date : 05/09/2013  
Analysis Date : 05/13/2013  
Reporting Date : 05/14/2013

### Sulfur Dioxide Analysis by OSHA Method ID-200

Client Sample ID	AAC Sample ID	Sample Volume (mL)	Analysis DF	Sulfur Dioxide Concentration (ppbv)	Sample Reporting Limit (ppbv)
Trip Blank-SO2	130559-62847	10	1	<SRL	17.0
BZ-2-SO2	130559-62857	10	1	<SRL	16.2
U1-SO2	130559-62866	10	1	<SRL	16.7
U2-SO2	130559-62875	10	1	<SRL	16.2
U3-SO2	130559-62884	10	1	<SRL	16.8
D1-SO2	130559-62893	10	1	<SRL	16.2
D2-SO2	130559-62902	10	1	<SRL	17.7
D3-SO2	130559-62911	10	1	<SRL	17.7

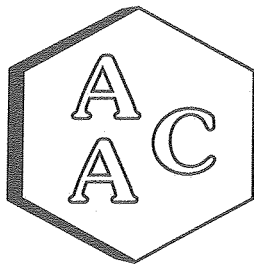
<SRL-compound was analyzed for but not detected at or above the SRL (Sample Reporting Limit)

All sample values were blank corrected using the Trip Blank value for Sulfur Dioxide

The Trip Blank value was calculated using a sample volume of 12 Liters

Marcus Hueppe  
Laboratory Director





# Atmospheric Analysis & Consulting, Inc.

## Laboratory Analysis Report

Anion Analysis by IC

Client: : Swape  
Client Project Name: : Bridgeton Sanitary Landfill Air Quality Assessment  
AAC Project No. : 130559  
Analyst : EG/HP  
Units : ug/sample and ug/m<sup>3</sup>

Sampling Date : 05/07-8/2013  
Receiving Date : 05/09/2013  
Analysis Date : 05/13/2013  
Reporting Date : 05/14/2013


### Sulfur Dioxide Analysis by OSHA Method ID-200

Client Sample ID	AAC Sample ID	Sample Volume (mL)	Analysis DF	Sulfur Dioxide Concentration (ug/sample)	Sample Reporting Limit (ug/sample)	Sulfur Dioxide Concentration (ug/m <sup>3</sup> )	Sample Reporting Limit (ug/m <sup>3</sup> )
Trip Blank-SO2	130559-62847	10	1	<SRL	0.534	<SRL	44.5
BZ-2-SO2	130559-62857	10	1	<SRL	0.534	<SRL	42.3
U1-SO2	130559-62866	10	1	<SRL	0.534	<SRL	43.7
U2-SO2	130559-62875	10	1	<SRL	0.534	<SRL	42.3
U3-SO2	130559-62884	10	1	<SRL	0.534	<SRL	44.1
D1-SO2	130559-62893	10	1	<SRL	0.534	<SRL	42.3
D2-SO2	130559-62902	10	1	<SRL	0.534	<SRL	46.4
D3-SO2	130559-62911	10	1	<SRL	0.534	<SRL	46.4

<SRL-compound was analyzed for but not detected at or above the SRL (Sample Reporting Limit)

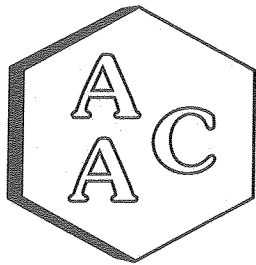
All sample values were blank corrected using the Trip Blank value for Sulfur Dioxide

The Trip Blank value was calculated using a sample volume of 12 Liters

  
Marcus Hueppe  
Laboratory Director



# **QA/QC Summary**



# Atmospheric Analysis & Consulting, Inc.

## Quality Control/Quality Assurance Report OSHA Method ID-200

Analysis Date : 05/13/2013  
Analyst : EG/HP

Instrument ID : DIONEX IC #1

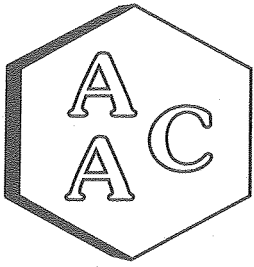
### Calibration Verification of the 04/25/2013 Calibration

Sample ID	Analyte	Theoretical Concentration (ug/mL)	Practical Concentration (ug/mL)	Percent Recovery (%)*
Opening CV	Sulfate	25.0	24.1	96.3
Continuing CV	Sulfate	25.0	24.1	96.4
Continuing CV	Sulfate	25.0	24.2	96.8
Closing CV	Sulfate	25.0	24.3	97.2
Second Source	Sulfate	25.0	24.1	96.4

\* Must be 85-115%

  
\_\_\_\_\_  
Marcus Hueppe  
Laboratory Director





# Atmospheric Analysis & Consulting, Inc.

## QUALITY CONTROL/ASSURANCE REPORT

OSHA Method ID-200

Analysis Date : 05/13/2013  
 Analyst : EG/HP

Instrument ID : DIONEX IC #1

### Method Blank Analysis

Analyte	Concentration (ug/mL)	SRL (ug/mL)
Sulfate	0.000	0.100

### Laboratory Control Spike Analysis

Analyte	Theoretical Sample Concentration (ug/mL)	Theoretical Spike Concentration (ug/mL)	Lab Spike Concentration (ug/mL)	Duplicate Lab Spike Concentration (ug/mL)	Spike Recovery (%)**	Duplicate Spike Recovery (%)**	% RPD****
Sulfate	0.000	12.5	11.6	11.5	93.0	92.3	0.7

### Matrix Spike Analysis (Sample ID 130559-62847)

Analyte	Theoretical Sample Concentration (ug/mL)	Theoretical Spike Concentration (ug/mL)	Matrix Spike Concentration (ug/mL)	Duplicate Matrix Spike Concentration (ug/mL)	Spike Recovery (%)***	Duplicate Spike Recovery (%)***	% RPD****
Sulfate	0.000	12.5	11.5	11.5	91.6	92.2	0.6

### Duplicate Sample Analysis

Sample ID	Analyte	Result (ug/mL)	Duplicate Result (ug/mL)	%RPD *	DF
130559-62845	Sulfate	0.190	0.190	0.0	1
130559-62864	Sulfate	0.250	0.240	4.1	1
130559-62847	Sulfate	0.000	0.000	NA	1

\* Must be <5%

\*\* Must be 85-115%

\*\*\* Must be 75-125%

\*\*\*\* Must be < 25%

SRL - Sample Reporting Limit

  
 \_\_\_\_\_  
 Marcus Hueppe  
 Laboratory Director



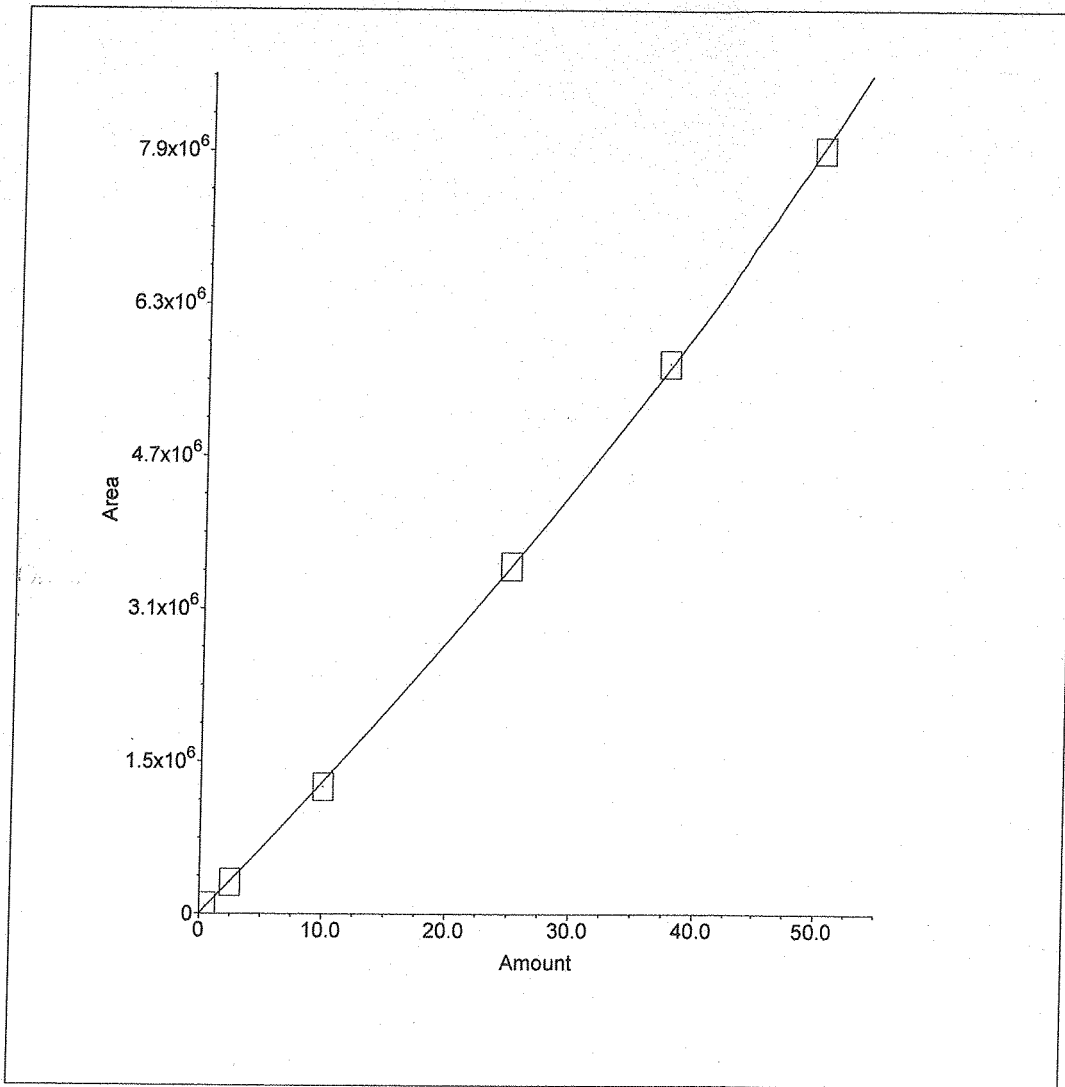
# Calibration Summary



6. Component:Sulfate  
Standard:External Fit Type:Quadratic  
Origin:Force Calibration:Area  
 $r^2=0.999890$   
Amt= $-1.492280e-013*Resp^2+$   
 $7.479232e-006*Resp+0$

PeakNet 5.21

Method:V1.1



# Raw Data

# Sample Analysis Report

Sample Name : DI Water Blank

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_001.DXD

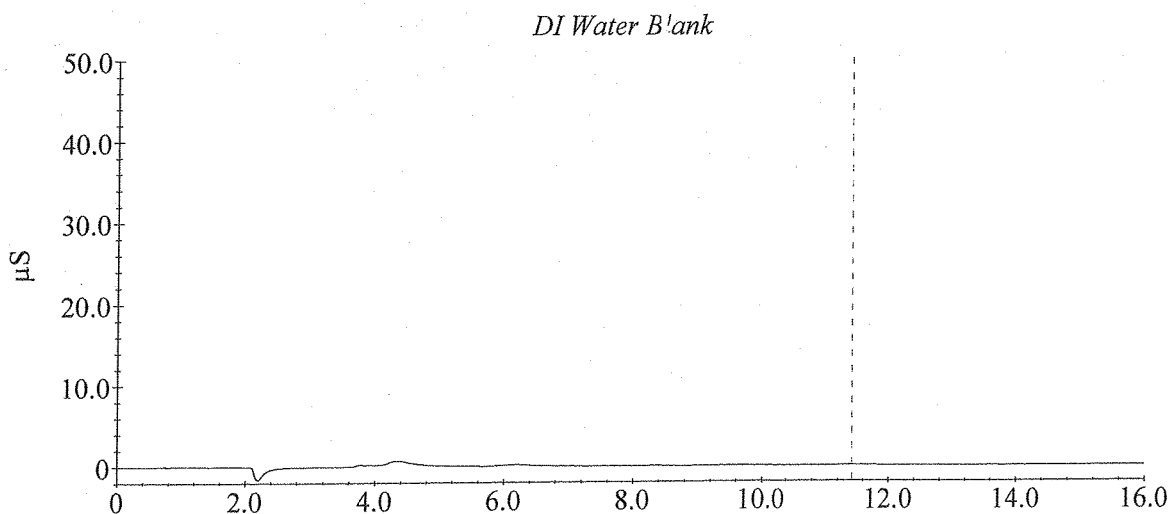
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 8:45:37 AM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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06  
CS1313

# Sample Analysis Report

Sample Name : CCV 25ug/mL SS0746x4

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_002.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

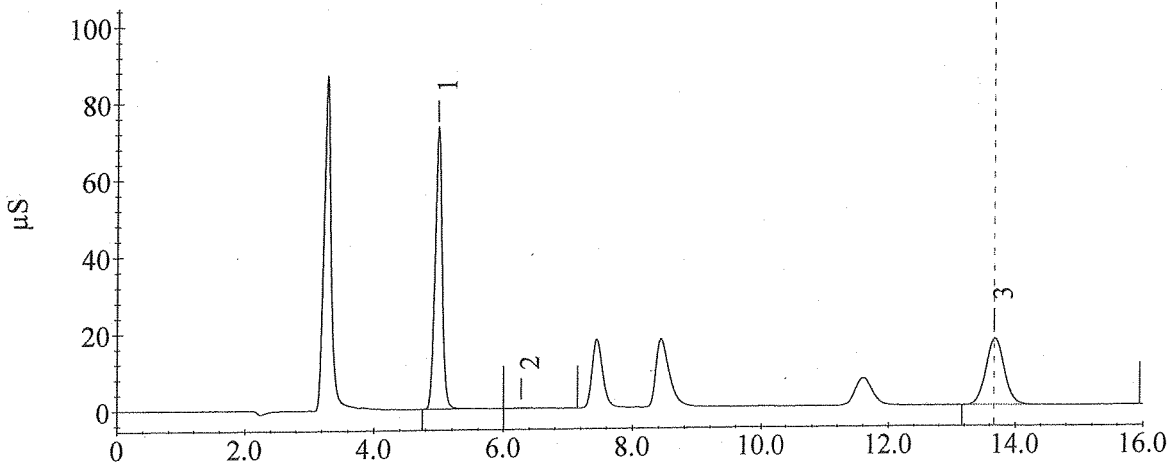
Date Time Collected : 5/13/2013 9:01:56 AM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.98	24.34	5543171	725247
2	Unknown 1	6.27	0.00	34066	1136
3	Sulfate	13.67	24.07	3456735	172175

CCV 25ug/mL SS0746x4



EG  
051313

# Sample Analysis Report

Sample Name : SS 25ug/ml SS0664x4

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_003.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

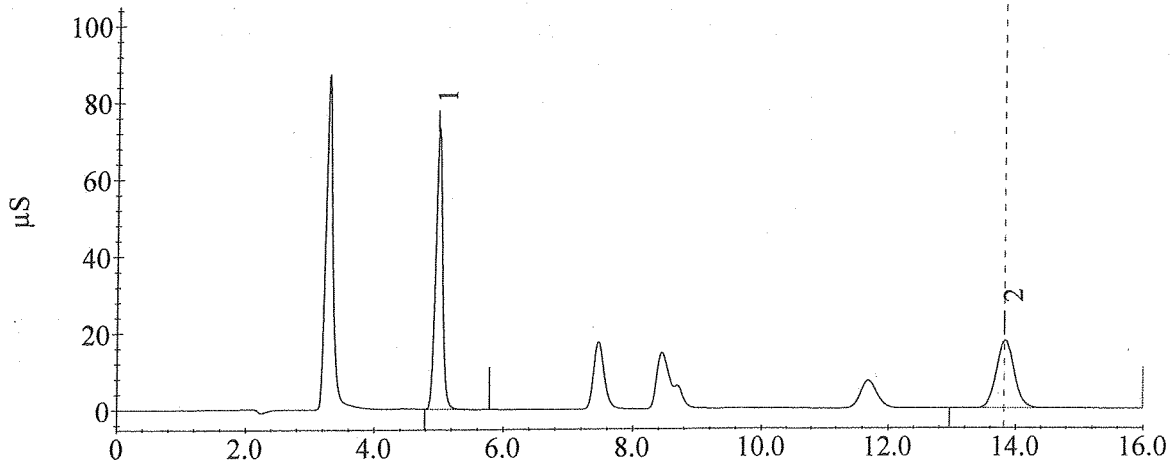
Date Time Collected : 5/13/2013 9:40:31 AM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.98	24.16	5497944	697597
2	Sulfate	13.82	24.11	3463446	174507

SS 25ug/ml SS0664x4



EG  
05/13/13

# Sample Analysis Report

Sample Name : Method Blank

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_004.DXD

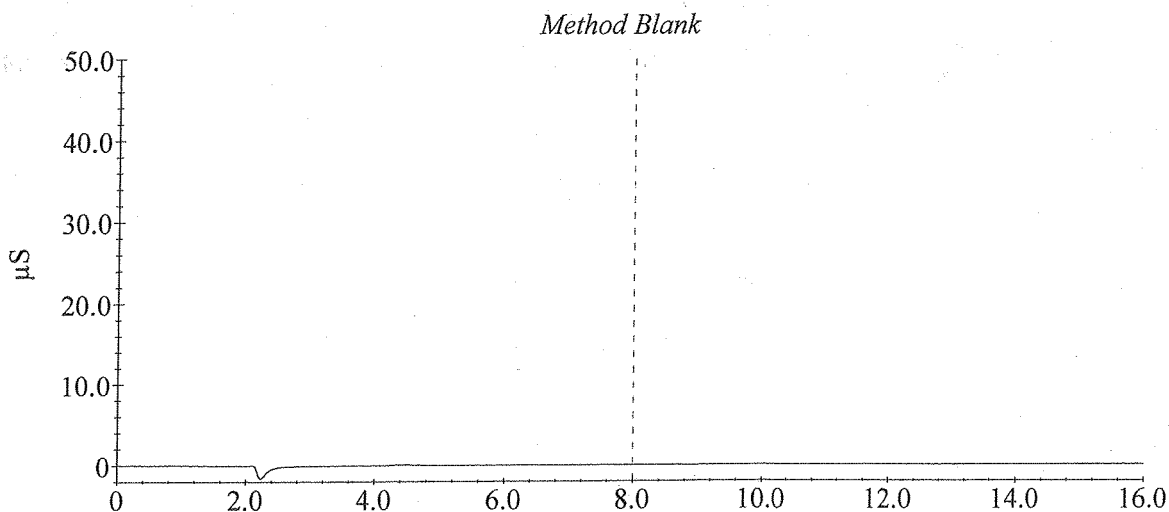
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 9:56:50 AM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
051313

# Sample Analysis Report

Sample Name : LCS 12.5ug/ml SS0746x8

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_005.DXD

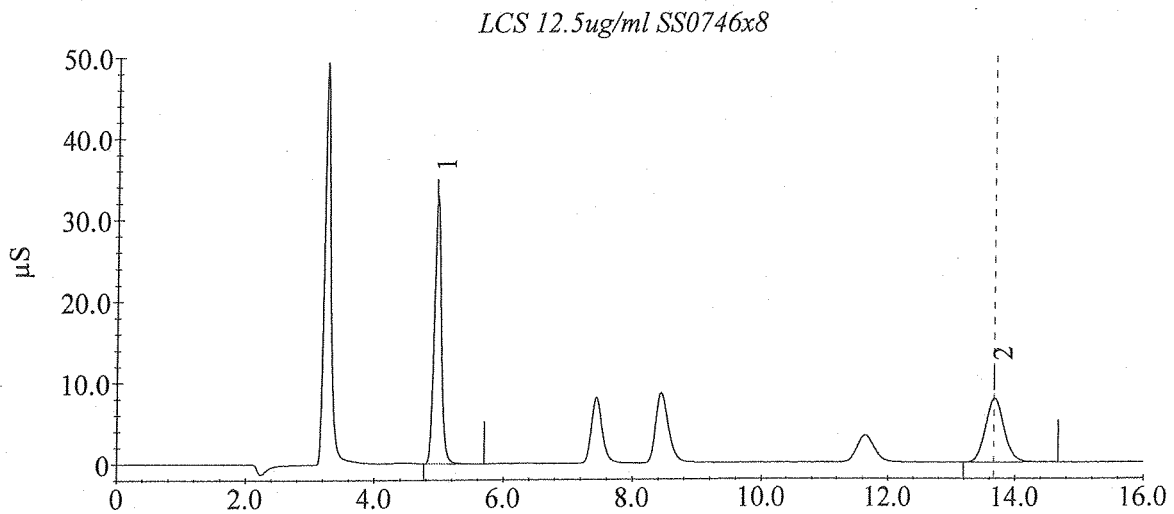
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 10:13:07 AM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.95	11.34	2490913	312346
2	Sulfate	13.67	11.62	1604801	78523



EG  
CSA 3/13

# Sample Analysis Report

Sample Name : LCSD 12.5ug/ml SS0746x8

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_006.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

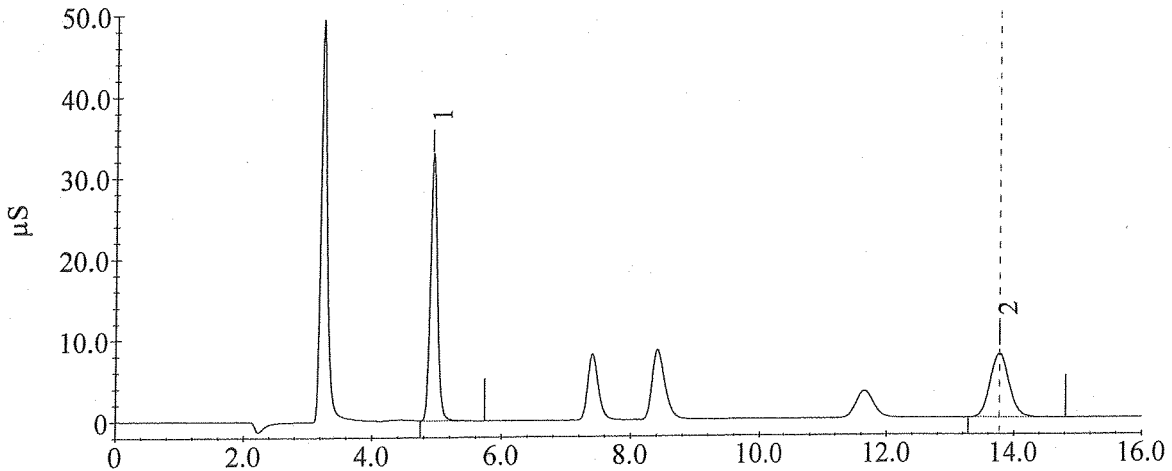
Date Time Collected : 5/13/2013 10:29:24 AM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.93	11.31	2484324	321213
2	Sulfate	13.77	11.54	1593166	77786

LCSD 12.5ug/ml SS0746x8



EG  
5/13/13



# Sample Analysis Report

Sample Name : 130559-62845

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_009.DXD

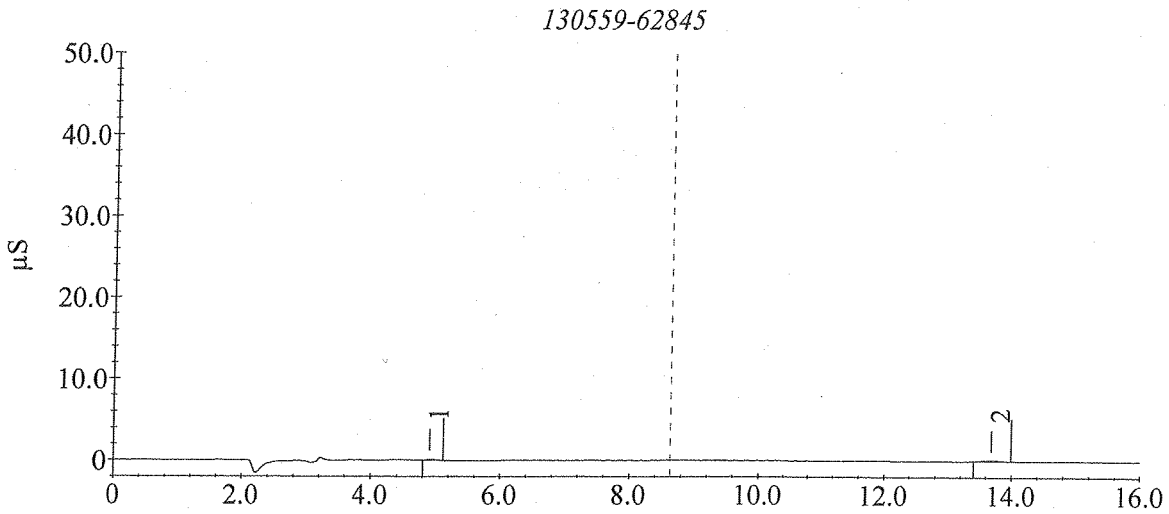
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 11:18:13 AM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.92	0.06	11952	1436
2	Sulfate	13.68	0.19	24850	1383



# Sample Analysis Report

Sample Name : 130559-62845 dup

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_010.DXD

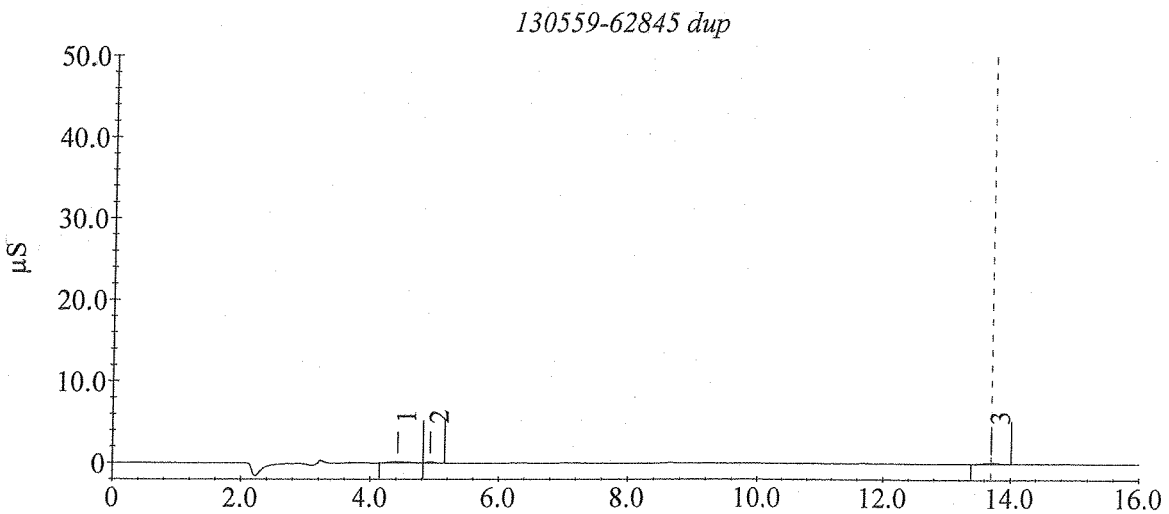
Method File Name : c:\peaknet\method\2013\anions-042513.mel

Date Time Collected : 5/13/2013 11:34:30 AM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	4.42	0.00	32028	1441
2	Chloride	4.93	0.06	12502	1487
3	Sulfate	13.70	0.19	25635	1394



HP  
05/13/13

# Sample Analysis Report

Sample Name : DI Water Blank

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_012.DXD

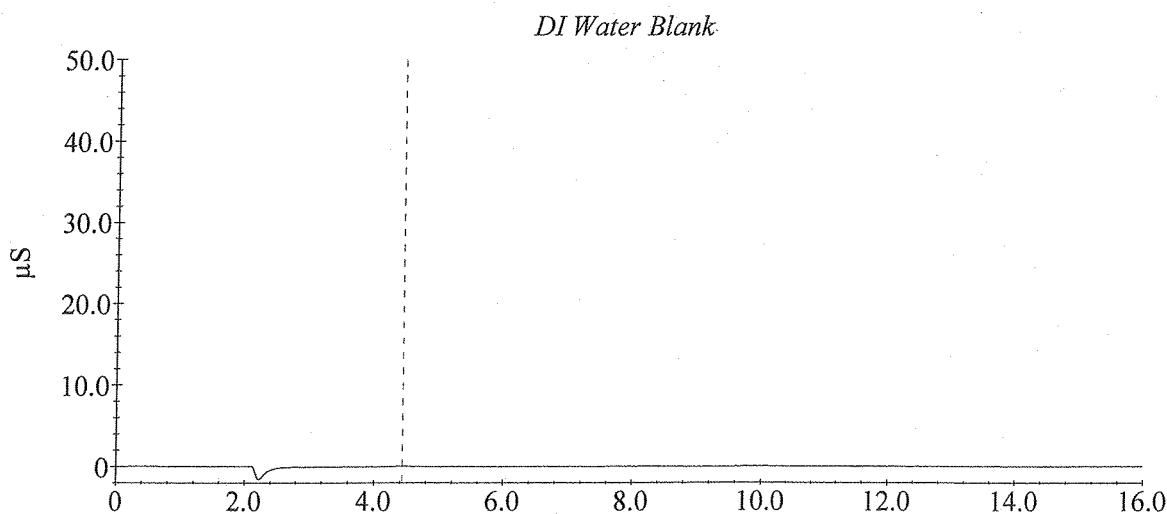
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 12:07:03 PM

System Operator : EG

## Peak Information . All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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HP  
5/13/13

# Sample Analysis Report

Sample Name : CCV 25ug/mL SS0746x4

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_013.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

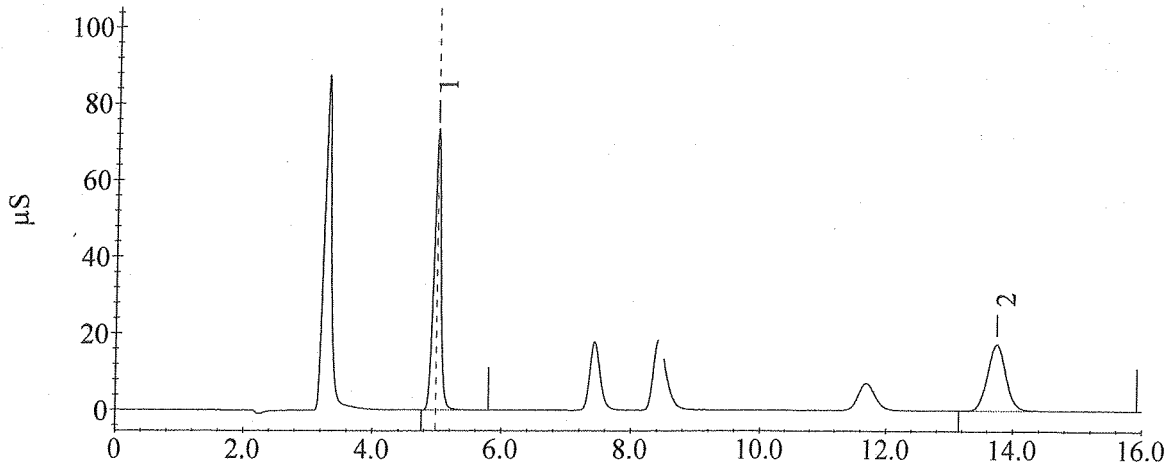
Date Time Collected : 5/13/2013 12:23:20 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.98	24.27	5525840	729988
2	Sulfate	13.73	24.09	3459115	172896

CCV 25ug/mL SS0746x4



# Sample Analysis Report

Sample Name : 130559-62864

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_014.DXD

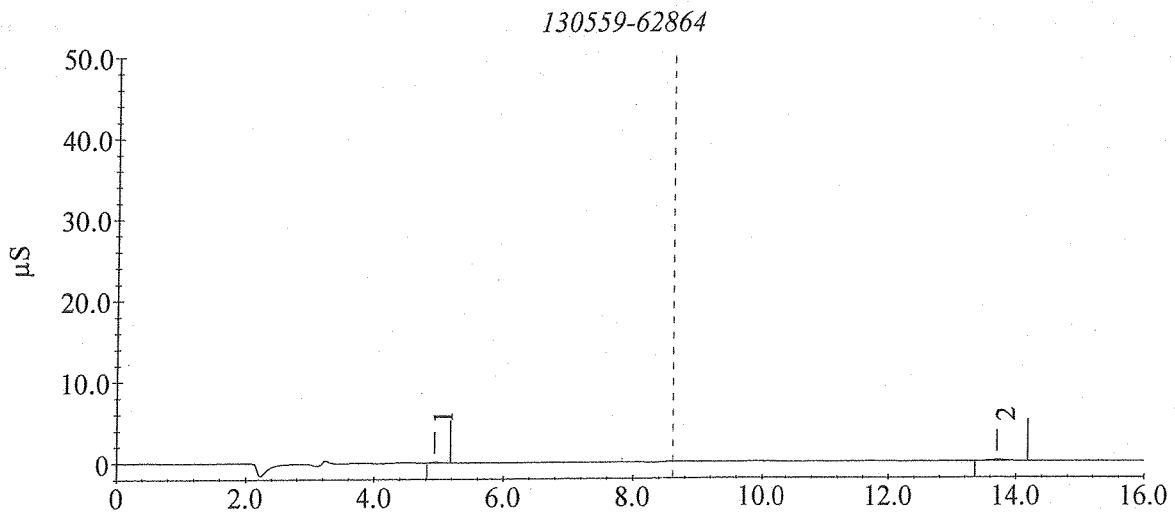
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 12:39:36 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.93	0.05	11618	1347
2	Sulfate	13.70	0.25	32875	1635



# Sample Analysis Report

Sample Name : 130559-62864 dup

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_015.DXD

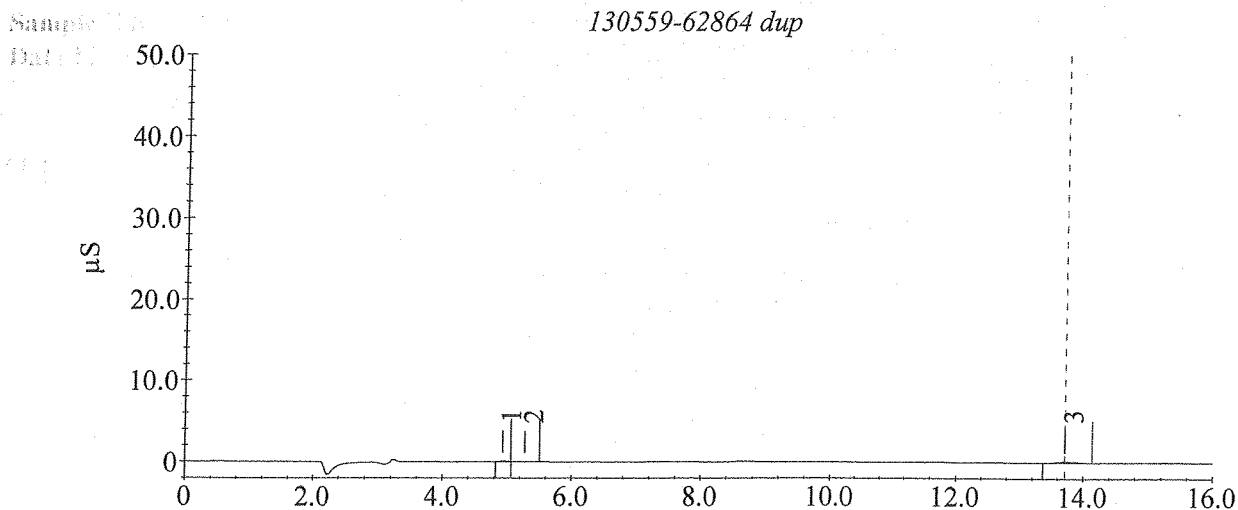
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 12:55:52 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.93	0.05	10064	1227
2	Unknown 1	5.28	0.00	5886	294
3	Sulfate	13.72	0.24	31659	1568



# Sample Analysis Report

Sample Name : MS 12.5 ug/ml (130559-62847)

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_021.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

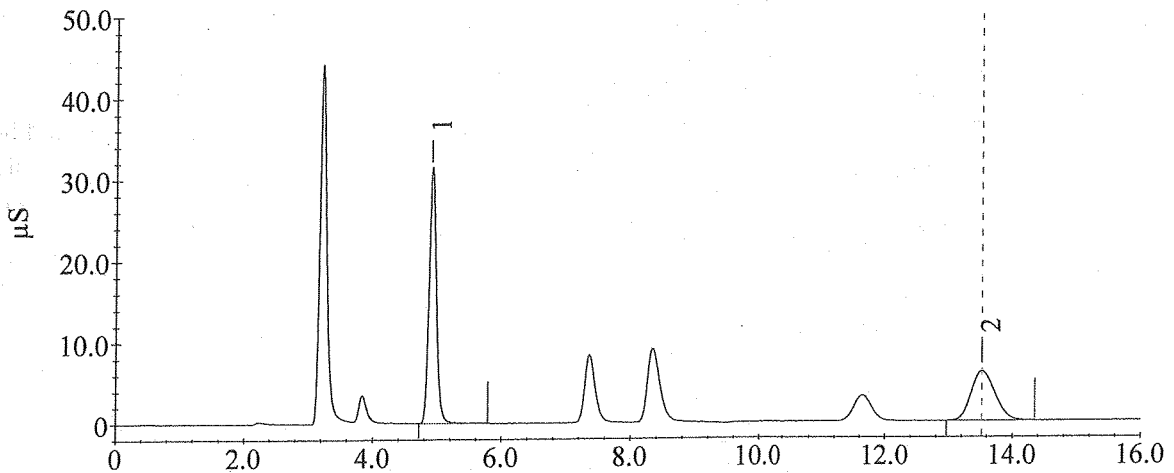
Date Time Collected : 5/13/2013 2:33:31 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.92	11.33	2489516	311027
2	Sulfate	13.52	11.45	1581042	61047

MS 12.5 ug/ml (130559-62847)



# Sample Analysis Report

Sample Name : MSD 12.5 ug/ml (130559-62847)

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_022.DXD

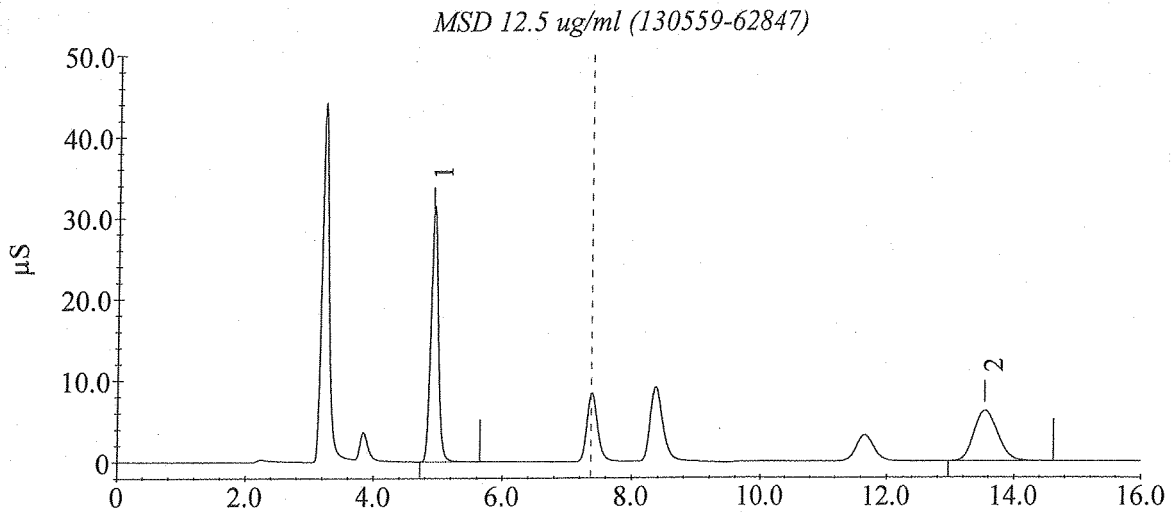
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 2:49:49 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.92	11.37	2498014	300603
2	Sulfate	13.53	11.52	1590469	61394



HP  
05/13/13



# Sample Analysis Report

Sample Name : DI Water Blank

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_023.DXD

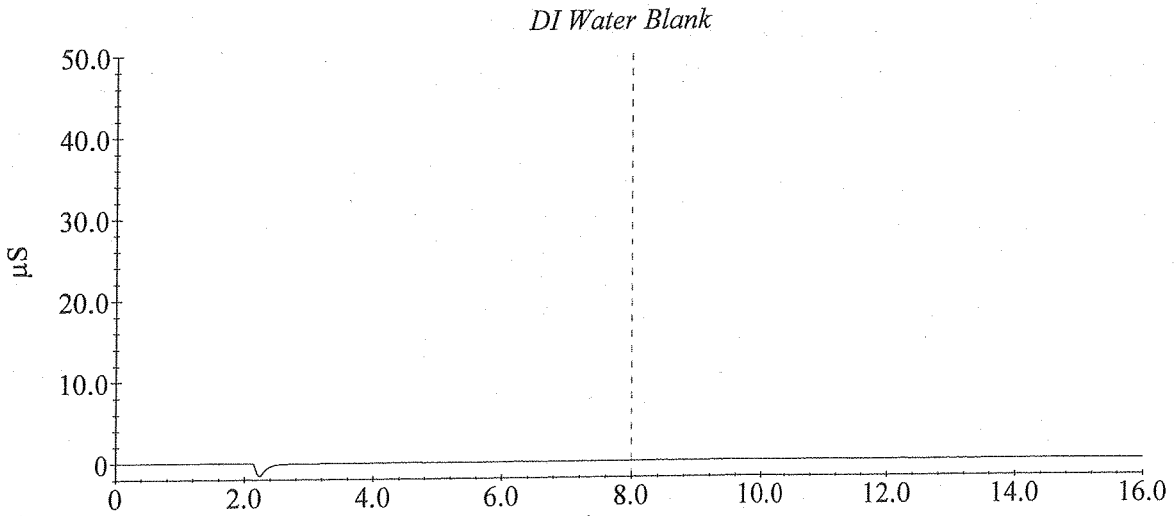
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 3:06:04 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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# Sample Analysis Report

Sample Name : CCV 25ug/mL SS0746x4

Data File Name : C:\PEAKNET\DATA\2013\051313ANION 5\A\_024.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

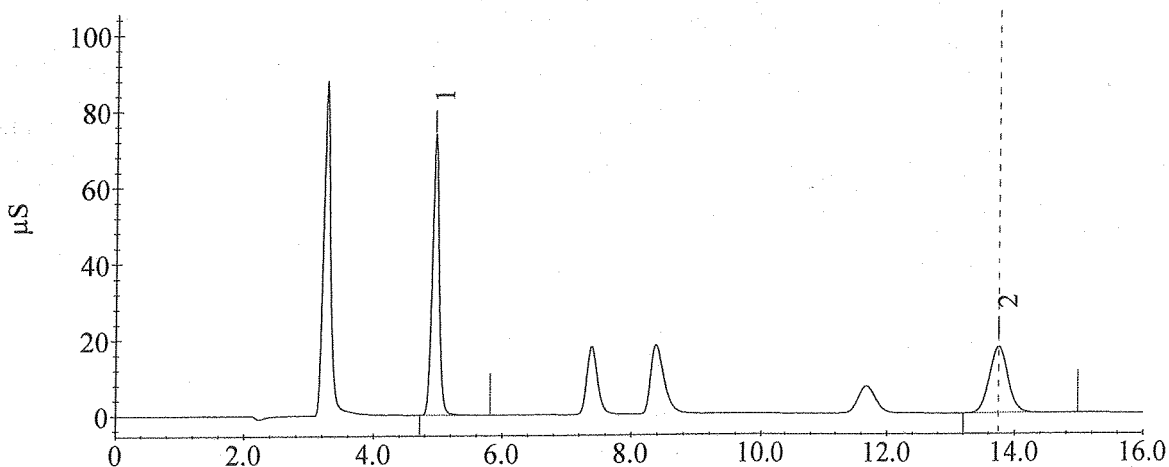
Date Time Collected : 5/13/2013 3:22:21 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.95	24.30	5532626	720987
2	Sulfate	13.75	24.20	3477130	174261

CCV 25ug/mL SS0746x4



EG  
05/13/13

# Sample Analysis Report

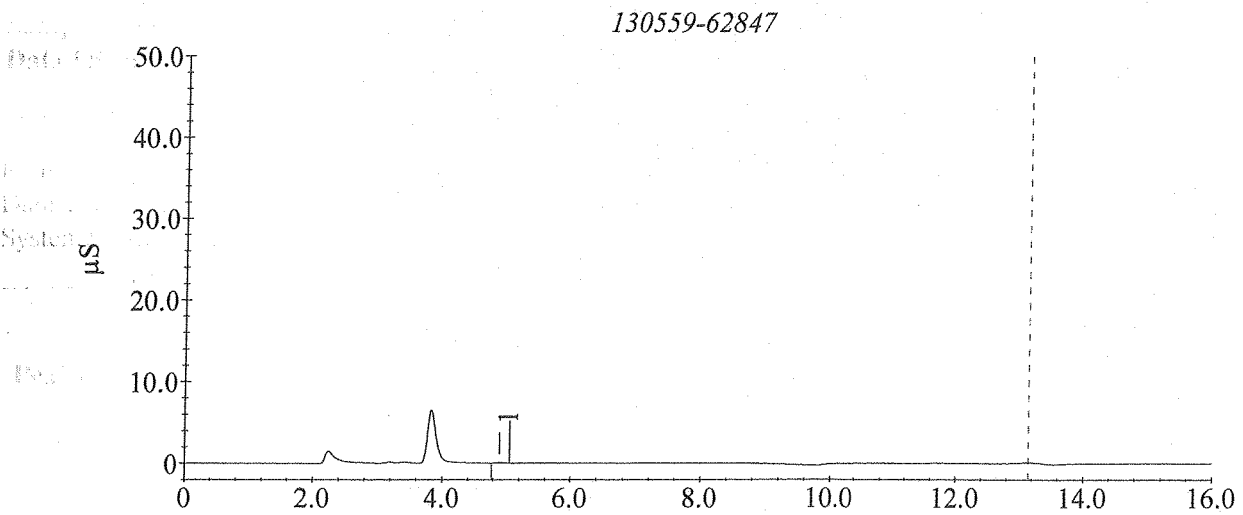
Sample Name : 130559-62847

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_025.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met  
Date Time Collected : 5/13/2013 3:38:37 PM  
System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.90	0.02	4944	621



EG  
05/13/13

# Sample Analysis Report

Sample Name : 130559-62847 dup

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_026.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

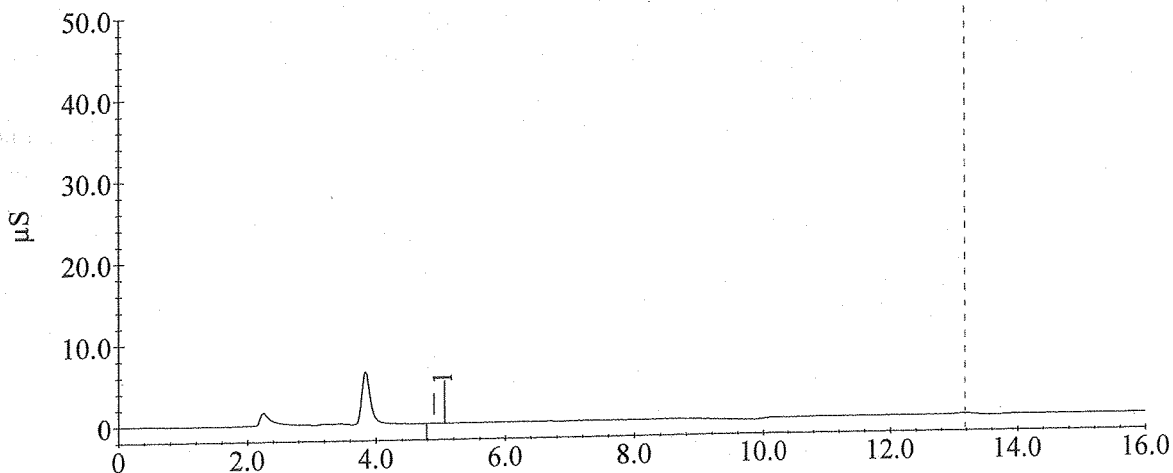
Date Time Collected : 5/13/2013 3:54:54 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.90	0.02	3825	480

130559-62847 dup



EG  
5/13/13

# Sample Analysis Report

Sample Name : 130559-62857

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONSIA\_027.DXD

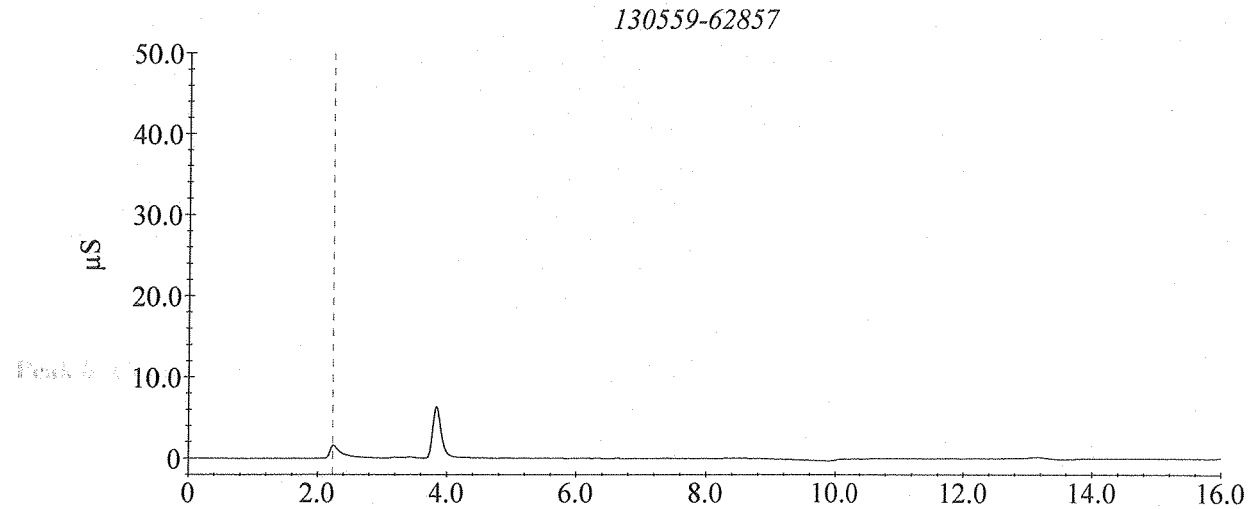
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 4:11:10 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
05/13/13

# Sample Analysis Report

Sample Name : 130559-62866

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_028.DXD

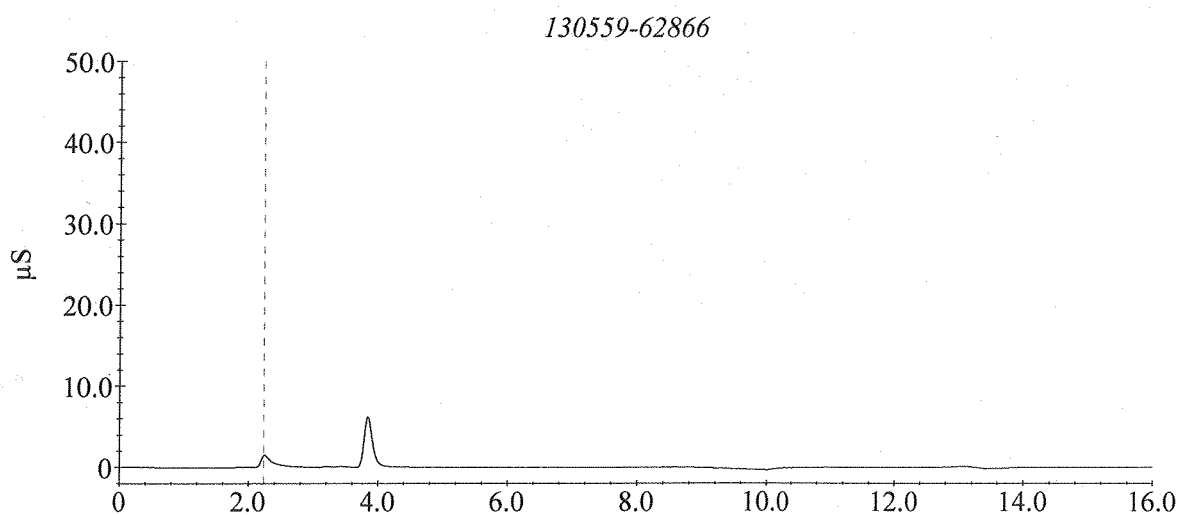
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 4:27:27 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
05/13/13

# Sample Analysis Report

Sample Name : 130559-62875

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_029.DXD

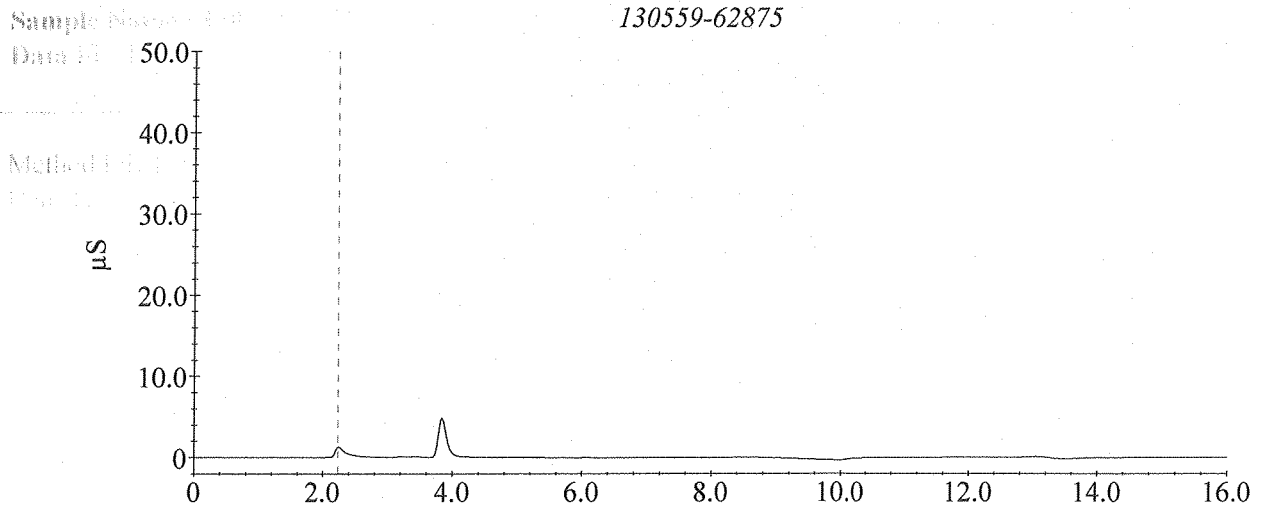
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 4:43:44 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
05/13/13

# Sample Analysis Report

Sample Name : 130559-62884

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_030.DXD

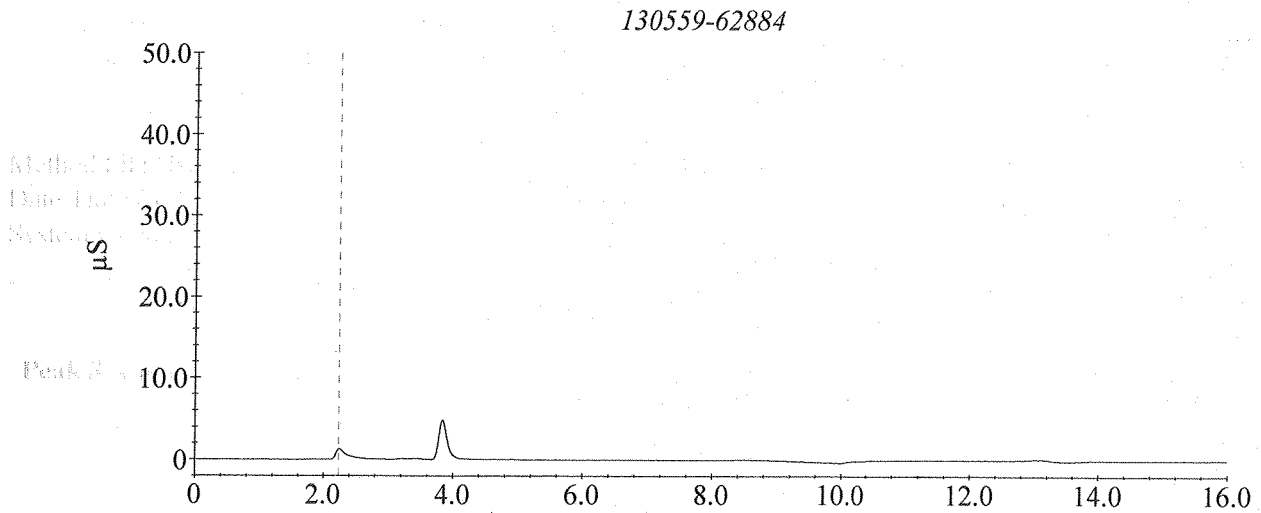
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 5:00:00 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
5/14/13



# Sample Analysis Report

Sample Name : 130559-62893

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_031.DXD

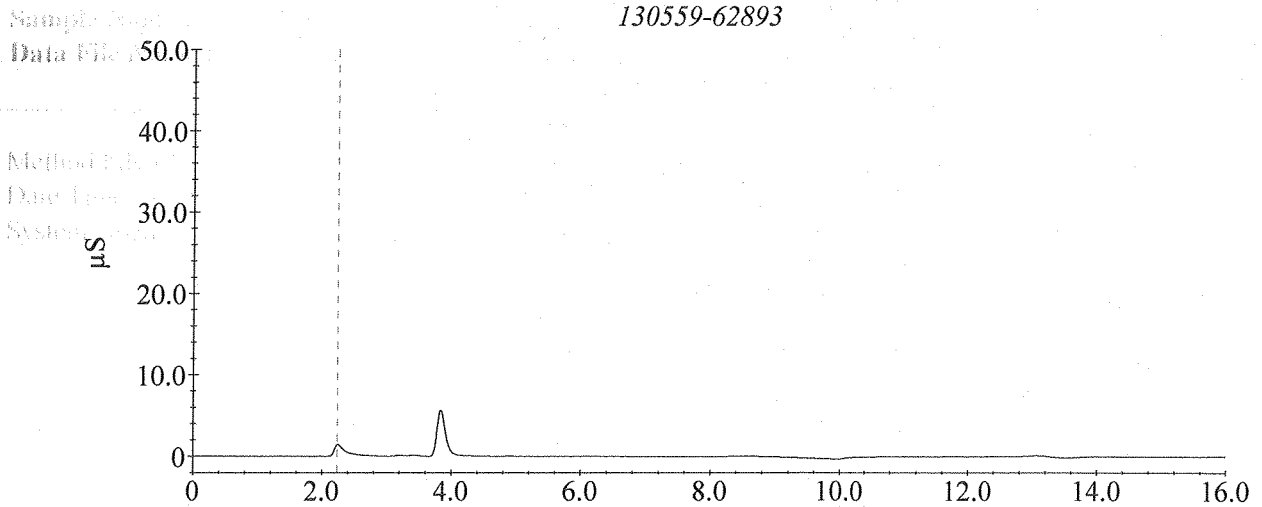
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 5:16:17 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
5/14/13

# Sample Analysis Report

Sample Name : 130559-62902

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_032.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

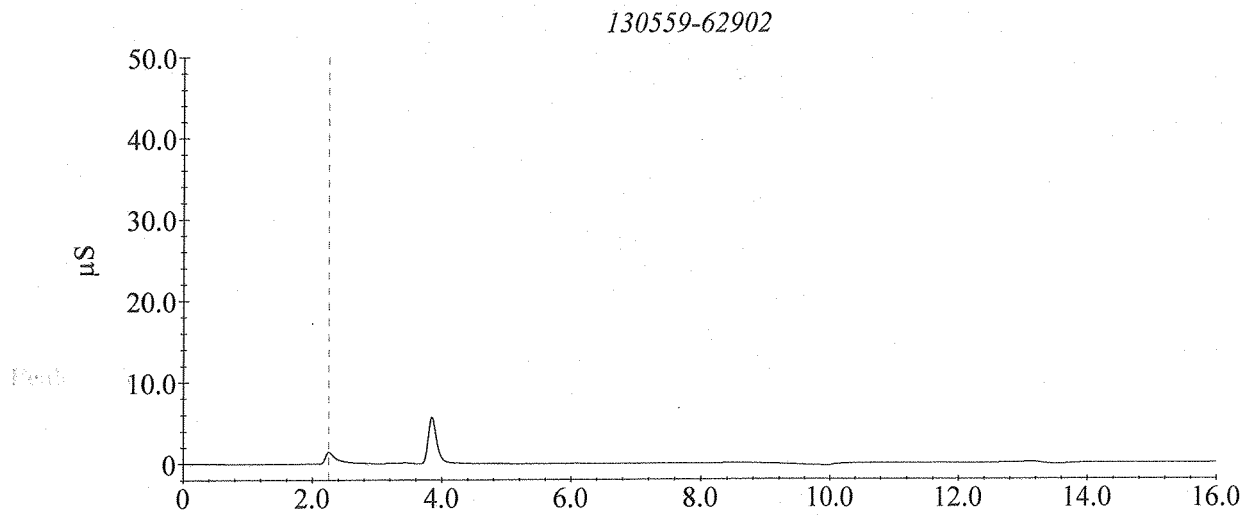
Date Time Collected : 5/13/2013 5:32:33 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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CS  
C5A412

# Sample Analysis Report

Sample Name : 130559-62911

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_033.DXD

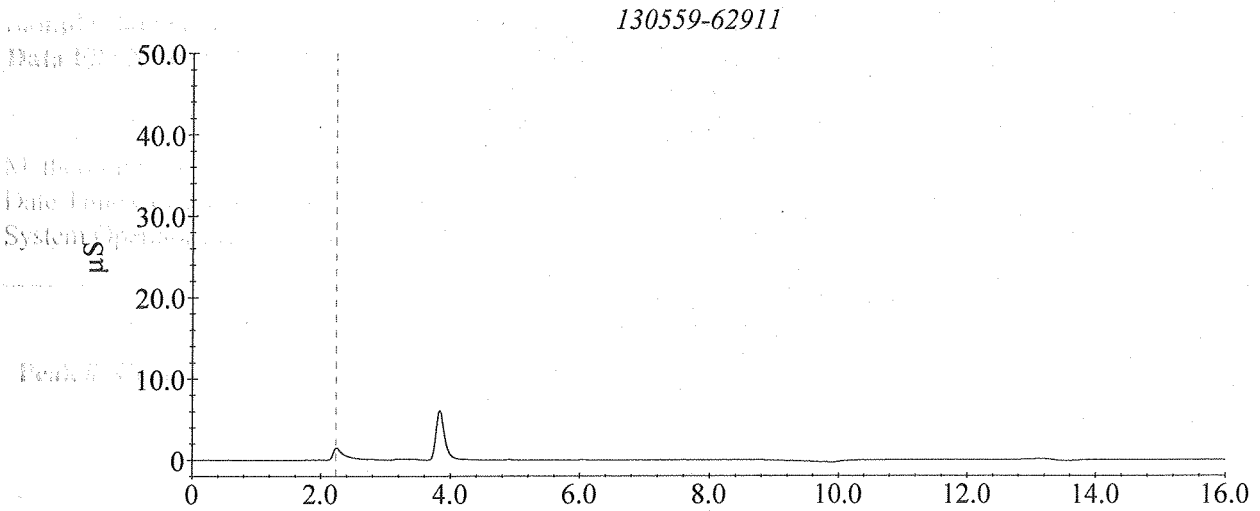
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 5:48:50 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
5/14/13

# Sample Analysis Report

Sample Name : DI Water Blank

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_034.DXD

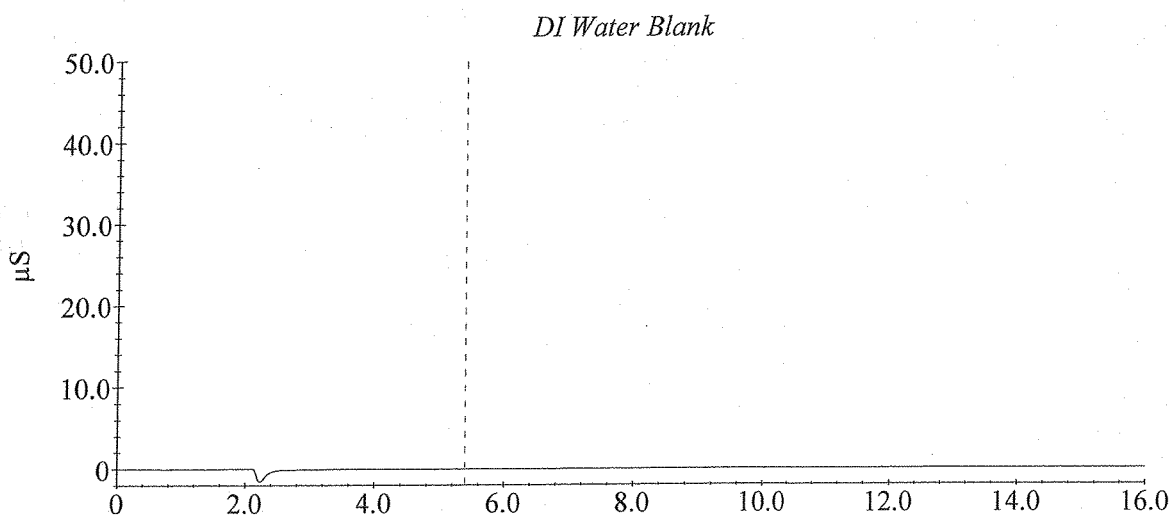
Method File Name : c:\peaknet\method\2013\anions-042513.met

Date Time Collected : 5/13/2013 6:05:06 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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EG  
5/14/13

# Sample Analysis Report

Sample Name : CCV 25ug/mL SS0746x4

Data File Name : C:\PEAKNET\DATA\2013\051313ANIONS\A\_035.DXD

Method File Name : c:\peaknet\method\2013\anions-042513.met

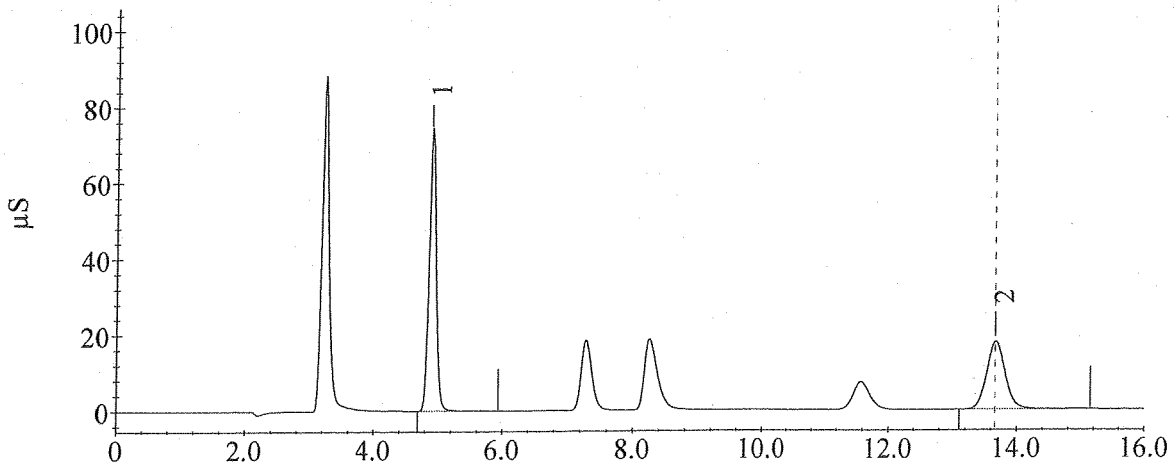
Date Time Collected : 5/13/2013 6:21:22 PM

System Operator : EG

## Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Chloride	4.90	24.27	5526492	726634
2	Sulfate	13.67	24.29	3490249	176111

CCV 25ug/mL SS0746x4



CS  
5/14/13

Line	Sample	Sample Type	Level	Method	Data File
1	DI Water Blank	Sample		antions-042513.met	2013\0513\3antions\001.dxd
2	CCV 25ug/ml SS0746x4	Sample		antions-042513.met	2013\0513\3antions\002.dxd
3	SS 25ug/ml SS0664x4	Sample		antions-042513.met	2013\0513\3antions\003.dxd
4	Method Blank	Sample		antions-042513.met	2013\0513\3antions\004.dxd
5	LCS 12.5ug/ml SS0746x8	Sample		antions-042513.met	2013\0513\3antions\005.dxd
6	LCS 12.5ug/ml SS0746x8	Sample		antions-042513.met	2013\0513\3antions\006.dxd
7	MS 12.5 ug/ml (130559-62845)	Sample		antions-042513.met	2013\0513\3antions\007.dxd
8	MSD 12.5 ug/ml (130559-62845)	Sample		antions-042513.met	2013\0513\3antions\008.dxd
9	130559-62845	Sample		antions-042513.met	2013\0513\3antions\009.dxd
10	130559-62845 dup	Sample		antions-042513.met	2013\0513\3antions\010.dxd
11	130559-62855	Sample		antions-042513.met	2013\0513\3antions\011.dxd
12	DI Water Blank	Sample		antions-042513.met	2013\0513\3antions\012.dxd
13	CCV 25ug/ml SS0746x4	Sample		antions-042513.met	2013\0513\3antions\013.dxd
14	130559-62864	Sample		antions-042513.met	2013\0513\3antions\014.dxd
15	130559-62864 dup	Sample		antions-042513.met	2013\0513\3antions\015.dxd
16	130559-62873	Sample		antions-042513.met	2013\0513\3antions\016.dxd
17	130559-62882	Sample		antions-042513.met	2013\0513\3antions\017.dxd
18	130559-62881	Sample		antions-042513.met	2013\0513\3antions\018.dxd
19	130559-62900	Sample		antions-042513.met	2013\0513\3antions\019.dxd
20	130559-62909	Sample		antions-042513.met	2013\0513\3antions\020.dxd
21	MS 12.5 ug/ml (130559-62947)	Sample		antions-042513.met	2013\0513\3antions\021.dxd
22	MSD 12.5 ug/ml (130559-62947)	Sample		antions-042513.met	2013\0513\3antions\022.dxd
23	DI Water Blank	Sample		antions-042513.met	2013\0513\3antions\023.dxd
24	CCV 25ug/ml SS0746x4	Sample		antions-042513.met	2013\0513\3antions\024.dxd
25	130559-62847	Sample		antions-042513.met	2013\0513\3antions\025.dxd
26	130559-62847 dup	Sample		antions-042513.met	2013\0513\3antions\026.dxd
27	130559-62857	Sample		antions-042513.met	2013\0513\3antions\027.dxd
28	130559-62866	Sample		antions-042513.met	2013\0513\3antions\028.dxd
29	130559-62875	Sample		antions-042513.met	2013\0513\3antions\029.dxd
30	130559-62884	Sample		antions-042513.met	2013\0513\3antions\030.dxd
31	130559-62893	Sample		antions-042513.met	2013\0513\3antions\031.dxd
32	130559-62902	Sample		antions-042513.met	2013\0513\3antions\032.dxd
33	130559-62911	Sample		antions-042513.met	2013\0513\3antions\033.dxd
34	DI Water Blank	Sample		antions-042513.met	2013\0513\3antions\034.dxd
35	CCV 25ug/ml SS0746x4	Sample		antions-042513.met	2013\0513\3antions\035.dxd
36	End	Sample		stopgp40.met	a

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