

Atmospheric Analysis & Consulting, Inc.

Client : SWAPE.
Client Project Name : Bridgeton Sanitary Landfill Air Quality Assessment
Client Project No. : NA
AAC Project No. : 130650
Reporting Date : 06/05/2013

On May 30, 2013, Atmospheric Analysis & Consulting, Inc. received seven (7) sorbent tube samples for Ammonia Analysis by OSHA ID-188. Upon receipt the samples were assigned unique Laboratory ID numbers as follows:

Client Sample ID	AAC Sample ID
BZ-1-Ammonia	130650-63204
BZ-2-Ammonia	130650-63213
U-1-Ammonia	130650-63222
U-2-Ammonia	130650-63231
D-1-Ammonia	130650-63240
D-2-Ammonia	130650-63249
Trip Blank-Ammonia	130650-63257


IC Analysis - Up to a 4 ml aliquot of the sample is injected into the DIONEX IC for Ammonia analysis.

All sample values were blank corrected using the Trip Blank value for Ammonia. The Trip Blank value was calculated using a sample volume of 25.0 Liter.

No 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# OSHAID188.01.

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 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 40 pages.



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

Sampled By:

Paul Rosenfeld

Signature:

Paul Rosenfeld

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

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
63200	BZ-1 - CAUSTIC	AM	5/21/13	12:09	X	X								X			
63201	-DNPH	TUBE		11:57			X										
63202	-APDS			12:08			X										
63203	-HCL			11:59				X									
63204	-AMMONIA			12:02					X								
63205	-SO2			12:05						X							
63206	-HCN			12:01							X						
63207	-AMINES			12:04								X					
63208	-MERCURY			12:07											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:	<i>Paul Rosenfeld</i>	Date:	5/21/13	Time:	18:30	Received By:		Date:		Time:	
Relinquished By:	<i>Paul Rosenfeld</i>	Date:		Time:		Received By:	<i>Paul Rosenfeld</i>	Date:	5/21/13	Time:	14:15

SOIL / WATER / AIR PROTECTION ENTERPRISE

Special Instructions / Conditions of Receipt

Date: 5/21/13 Page 1 of 1

100000
ARCH 13/11/13

ACC # 130650

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

Requested Tests / Analyses

Date: 5/29/13 Page 1 of 1

Sampled By: Paul Rosenfeld
 Sample Signature: Paul Rosenfeld

Special Instructions / Conditions of Receipt

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
63209	BZ-2-CANISTER	Can	5/29/13	16:23	X	X								X			
63210	-DNPH	Tube		16:16			X										
63211	-ACIDS			16:19			X										
63212	-HCL			16:19				X									
63213	-AMMONIA			16:19					X								
63214	-SO2			16:21						X							
63215	-HEN			16:22							X						
63216	-AMINES			16:17								X					
63217	-MERURY			16:18									X				
63217	-MERURY			16:21											X		

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

Relinquished By: [Signature]	Date: 5/29/13	Time: 18:30	Received By: [Signature]	Date: 5/29/13	Time: 17:15
Relinquished By: [Signature]	Date:	Time:	Received By: [Signature]	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

SOIL / WATER / AIR PROTECTION ENTERPRISE

AAE#130650

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

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
63218	U-1 - Gasisker	Can	5/29/13	12:42	X	X											
63219	-DNPH	Tube		12:42			X										
63220	-Acridos			12:47			X										
63221	-HEL			12:49				X									
63222	-AMMONIA			12:50				X									
63223	-SO2			12:46					X								
63224	-HCN			12:51						X							
63225	-AMINES			12:45							X						
63226	-MERCURY			12:48								X					

Special Instructions / Conditions of Receipt

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: 5/29/13	Time: 18:30	Received By: <i>Paul Rosenfeld</i>	Date: 5/29/13	Time: 14:15
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

SOIL / WATER / AIR PROTECTION ENTERPRISE

SAMPLES RECEIVED 5/30/13

AAE # 130650

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: 5/29/13 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
63227	0-2 - CANISTER	CAN	5/21/13	16:46	X	X								X			
63228	- DUMP	DUMP		16:43			X										
63229	- ACINS			16:41			X										
63230	- HEL			16:40				X									
63231	- AMMONIA			16:44				X									
63232	- SO2			16:45					X								
63233	- HCN			16:42						X							
63234	- AMINES			16:42							X						
63235	- MERCURY			16:39								X					

Special Instructions / Conditions of Receipt

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>Rob Hesse</i>	Date: 5/21/13	Time: 18:30	Received By: <i>[Signature]</i>	Date: 5/29/13	Time: 17:15
Relinquished By: <i>[Signature]</i>	Date:	Time:	Received By: <i>[Signature]</i>	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

SOIL / WATER / AIR PROTECTION ENTERPRISE

AAE # 130650

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 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.

Date: 5/29/13 Page 1 of 1

Sampled By: Paul Rosenfeld
 Sample Designation: Paul Rosenfeld

Special Instructions / Conditions of Receipt

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
632340	D-1 - CANISTER	CAN	5/29/13	13:28	X	X								X			
63237	- DNPH	TUBE		13:24			X										
63238	- ACID			13:26			X										
63239	- HEL			13:23				X									
63240	- AMMONIA			13:18					X								
63241	- SO2			13:20						X							
63242	- HCN			13:22							X						
63243	- AMINES			13:25								X					
63244	- MERCURY		5/29	13:21												X	

Relinquished By: KAL HESSE / [Signature] Date: 5/29/13 Time: 18:30

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

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

Received By: [Signature] Date: 5/29/13 Time: 14:15

SOIL / WATER / AIR PROTECTION ENTERPRISE

ACC# 130650

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

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

Sampled By:

Paul Rosenfeld

Sample Signature:

Paul Rosenfeld

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
63245	D-2 - CANISTER	Can	5/29/13	17:20	X	X								X			
63246	- DUMP	ROB		17:20			X										
63247	- ACIDS			17:21			X										
63248	- HEL			17:24				X									
63249	- AMMONIA			17:25					X								
63250	- SO2			17:22						X							
63251	- HCN			17:26							X						
63252	- AMINES			17:29								X					
63253	- MERCURY	Y	9	17:23												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:	Date:	Time:	Received By:	Date:	Time:
ROB HESE	5/29/13	18:30			
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

Special Instructions / Conditions of Receipt

Date: 5/29/13 Page 1 of 1

SOIL / WATER / AIR PROTECTION ENTERPRISE

AAE # 130650

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.

Telephone No. / Fax No.: (310) 434-0110 / (310) 434-0014

Address: 1640 FIFTH STREET, SUITE 204, SANTA MONICA, CA 90401

PROJECTED TESTS / ANALYSES

Date: 5/29/12 Page 1 of 1

Project Name and Location: BRIDGETON SANITARY LANDFILL AIR QUALITY ASSESSMENT

Sampled By: Paul Rosenfeld
 Sampler Signature: Paul Rosenfeld

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
03254	TRIP BLANK	-DIRT	5/29/12	15:00			X										
03255		-ACIDS					X										
03256		-HCL						X									
03257		-AMMONIA							X								
03258		-SO2								X							
03259		-HCN									X						
03260		-AMINES										X					
03261		-Mercury														X	

Special Instructions / Conditions of Receipt

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

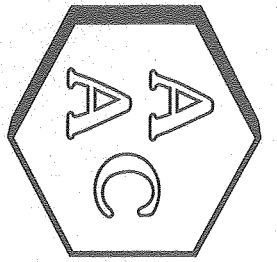
QC Requirements: Provide Level IV QC Package for all Analyses.

Relinquished By: Rob Hess	Date: 5/29/12	Time: 18:30	Received By: [Signature]	Date: 5/30/12	Time: 14:15
Relinquished By: [Signature]	Date:	Time:	Received By: [Signature]	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

SOIL / WATER / AIR PROTECTION ENTERPRISE

Sample Name	Date	Parameter	Tube	Description	Location	Volume (Liters)
D-1-DNPH Total	5/29/2013	Aldehydes	226-120	Off-site Ambient	Downwind; Virbac Front Lawn, North Corner	397
D-2-DNPH	5/29/2013	Aldehydes	226-120	Off-site Ambient	Downwind; Northwest Auto Body; NW Corner	161
U-1-DNPH	5/29/2013	Aldehydes	226-120	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	278
U-2-DNPH	5/29/2013	Aldehydes	226-120	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	238
BZ-1-DNPH	5/29/2013	Aldehydes	226-120	ONSITE Ambient	North of Flares; West of Parking Lot; Downwind	259
BZ-2-DNPH	5/29/2013	Aldehydes	226-120	ONSITE Ambient	Adjacent to Flares; Downwind of RCP Removal	249
D-1-Ammonia	5/29/2013	Ammonia	226-29	Off-site Ambient	Downwind; Virbac Front Lawn, North Corner	28.2
D-2-Ammonia	5/29/2013	Ammonia	226-29	Off-site Ambient	Downwind; Northwest Auto Body; NW Corner	23.3
U-1-Ammonia	5/29/2013	Ammonia	226-29	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	29.2
U-2-Ammonia	5/29/2013	Ammonia	226-29	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	24.1
BZ-1-Ammonia	5/29/2013	Ammonia	226-29	ONSITE Ambient	North of Flares; West of Parking Lot; Downwind	25.5
BZ-2-Ammonia	5/29/2013	Ammonia	226-29	ONSITE Ambient	Adjacent to Flares; Downwind of RCP Removal	23.7
D-1-HCL	5/29/2013	Hydrogen Chloride	226-10-03	Off-site Ambient	Downwind; Virbac Front Lawn, North Corner	100
D-2-HCL	5/29/2013	Hydrogen Chloride	226-10-03	Off-site Ambient	Downwind; Northwest Auto Body; NW Corner	78.8
U-1-HCL	5/29/2013	Hydrogen Chloride	226-10-03	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	103
U-2-HCL	5/29/2013	Hydrogen Chloride	226-10-03	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	81.8
BZ-1-HCL	5/29/2013	Hydrogen Chloride	226-10-03	ONSITE Ambient	North of Flares; West of Parking Lot; Downwind	96.7
BZ-2-HCL	5/29/2013	Hydrogen Chloride	226-10-03	ONSITE Ambient	Adjacent to Flares; Downwind of RCP Removal	91.4
D-1-SO2	5/29/2013	Sulfur Dioxide	226-80	Off-site Ambient	Downwind; Virbac Front Lawn, North Corner	15.3
D-2-SO2	5/29/2013	Sulfur Dioxide	226-80	Off-site Ambient	Downwind; Northwest Auto Body; NW Corner	11.9
U-1-SO2	5/29/2013	Sulfur Dioxide	226-80	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	14.9
U-2-SO2	5/29/2013	Sulfur Dioxide	226-80	Off-site Ambient	Upwind; FR Service Co., Front Lawn NW Corner	12.6
BZ-1-SO2	5/29/2013	Sulfur Dioxide	226-80	ONSITE Ambient	North of Flares; West of Parking Lot; Downwind	13.2
BZ-2-SO2	5/29/2013	Sulfur Dioxide	226-80	ONSITE Ambient	Adjacent to Flares; Downwind of RCP Removal	13.0

Results



Atmospheric Analysis & Consulting, Inc.


Laboratory Analysis Report Cation Analysis by IC

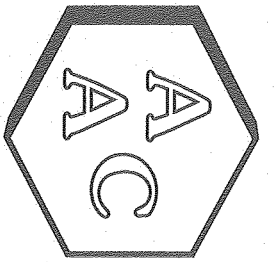
Client : SWAPE
Client Project Name : Bridgeton Sanitary Landfill Air Quality Assessment
AAC Project No. : 130650
Analyst : EG/HP
Units : ppbv
Reporting Date : 06/05/2013
Sampling Date : 05/29/2013
Receiving Date : 05/30/2013
Analysis Date : 06/04/2013

Ammonia Analysis by OSHA Method ID-188

Client Sample ID	AAC Sample ID	Sample Volume (mL)	Analysis DF	Ammonia (ppbv)	Sample Reporting Limit (ppbv)
BZ-1-Ammonia	130650-63204	10.0	5	<SRL	266
BZ-2-Ammonia	130650-63213	10.0	5	<SRL	286
U-1-Ammonia	130650-63222	10.0	5	<SRL	232
U-2-Ammonia	130650-63231	10.0	5	<SRL	281
D-1-Ammonia	130650-63240	10.0	5	<SRL	240
D-2-Ammonia	130650-63249	10.0	5	<SRL	291
Trip Blank-Ammonia	130650-63257	10.0	5	<SRL	271

<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 Ammonia
The Trip Blank value was calculated using a sample volume of 25 Liters


Marcus Hueppe
Laboratory Director



Atmospheric Analysis & Consulting, Inc.

Laboratory Analysis Report Cation Analysis by IC

Client : SWAPE
 Client Project Name : Bridgeton Sanitary Landfill Air Quality Assessment
 AAC Project No. : 130650
 Analyst : EG/HP
 Units : ug/sample and ug/m³

Sampling Date : 05/29/2013
 Receiving Date : 05/30/2013
 Analysis Date : 06/04/2013
 Reporting Date : 06/05/2013


Ammonia Analysis by OSHA Method ID-188

Client Sample ID	AAC Sample ID	Sample Volume (mL)	Analysis DF	Ammonia (ug/sample)	Sample Reporting Limit (ug/sample)	Ammonia (ug/m ³)	Sample Reporting Limit (ug/m ³)
BZ-1-Ammonia	130650-63204	10.0	5	<SRL	4.72	<SRL	185
BZ-2-Ammonia	130650-63213	10.0	5	<SRL	4.72	<SRL	199
U-1-Ammonia	130650-63222	10.0	5	<SRL	4.72	<SRL	162
U-2-Ammonia	130650-63231	10.0	5	<SRL	4.72	<SRL	196
D-1-Ammonia	130650-63240	10.0	5	<SRL	4.72	<SRL	167
D-2-Ammonia	130650-63249	10.0	5	<SRL	4.72	<SRL	203
Trip Blank-Ammonia	130650-63257	10.0	5	<SRL	4.72	<SRL	189

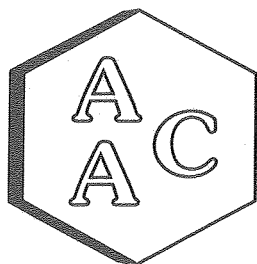
<SRL-compound was analyzed for but not detected at or above the SRL (Sample Reporting Limit)

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

The Trip Blank value was calculated using a sample volume of 25 Liters


 Marcus Hueppe
 Laboratory Director

QA/QC Summary



Atmospheric Analysis & Consulting, Inc.

Quality Control/Quality Assurance Report OSHA Method ID-188

Analysis Date : 06/04/2013
Analyst : EG/HP

Instrument ID : DIONEX IC #1

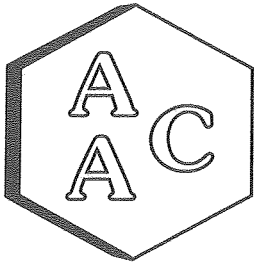
Calibration Verification of the 04/16/2013 Calibration

Sample ID	Analyte	Theoretical Concentration (ug/mL)	Practical Concentration (ug/mL)	Percent Recovery (%)*
Opening CV	Ammonium	25.0	25.2	101
Continuing CV	Ammonium	25.0	25.5	102
Closing CV	Ammonium	25.0	25.6	102
Second Source	Ammonium	25.0	24.9	100

* Must be 85-115%

Marcus Hueppe
Laboratory Director





Atmospheric Analysis & Consulting, Inc.

QUALITY CONTROL/ASSURANCE REPORT

OSHA Method ID-188

Analysis Date : 06/04/2013
 Analyst : EG/HP

Instrument ID : DIONEX IC #1

Method Blank Analysis

Analyte	Concentration (ug/mL)	Reporting Limit (ug/mL)
Ammonium	<RL	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****
Ammonium	0.000	12.5	12.6	12.7	101	101	0.3


Matrix Spike Analysis [Sample 130650-63257x5]

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****
Ammonium	0.000	12.5	12.7	12.5	101	100	1.6

Duplicate Sample Analysis

Sample ID	Analyte	Result (ug/mL)	Duplicate Result (ug/mL)	%RPD *	DF
130650-63257x5	Ammonium	<SRL	<SRL	NA	5
130650-63231x5	Ammonium	<SRL	<SRL	NA	5

- * Must be <10%
- ** Must be 85-115%
- *** Must be 75-125%
- **** Must be < 25%



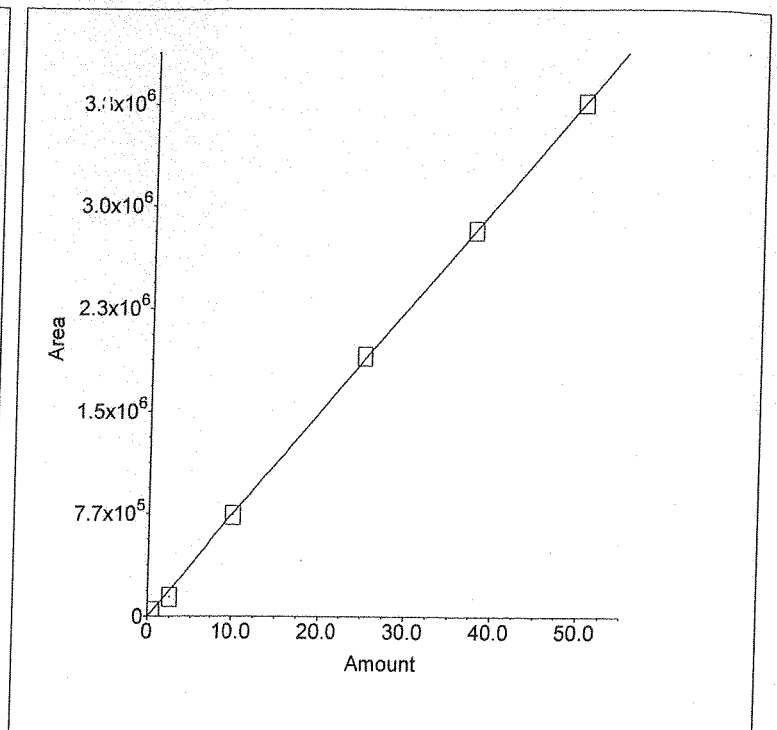
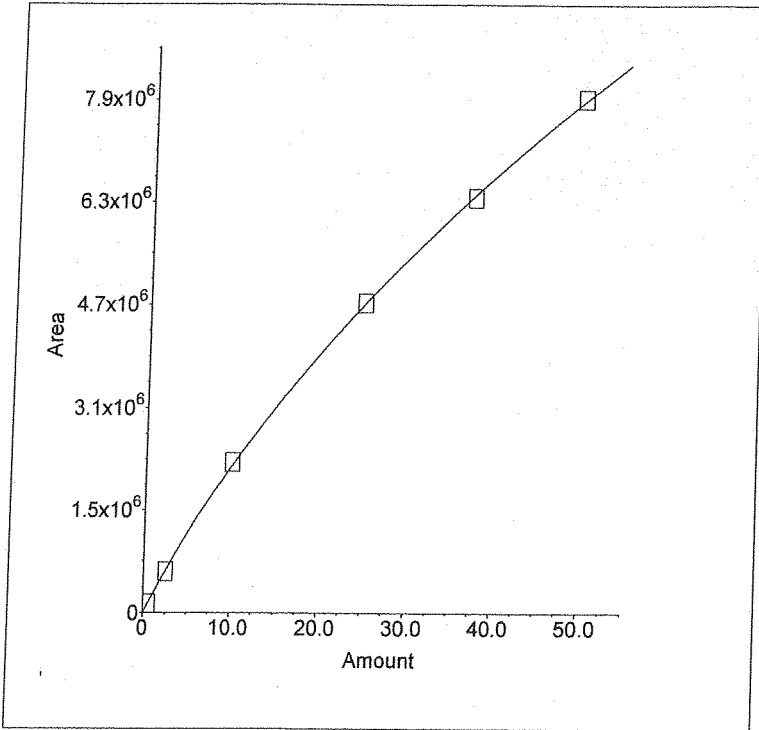
 Marcus Hueppe
 Laboratory Director



Calibration Summary

1. Component: Ammonium
Standard: External Fit Type: Quadratic
Origin: Force Calibration: Area
 $r^2=0.999891$
 $Amt=3.425992e-013*Resp^2+$
 $3.614102e-006*Resp+0$

2. Component: Trimethylamine
Standard: External Fit Type: Linear
Origin: Force Calibration: Area
 $r^2=0.999769$
 $Amt=1.297e-005*Resp+0$



6.3e10

Raw Data

Sample Analysis Report

Sample Name : DI Water Blank

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_A001.DXD

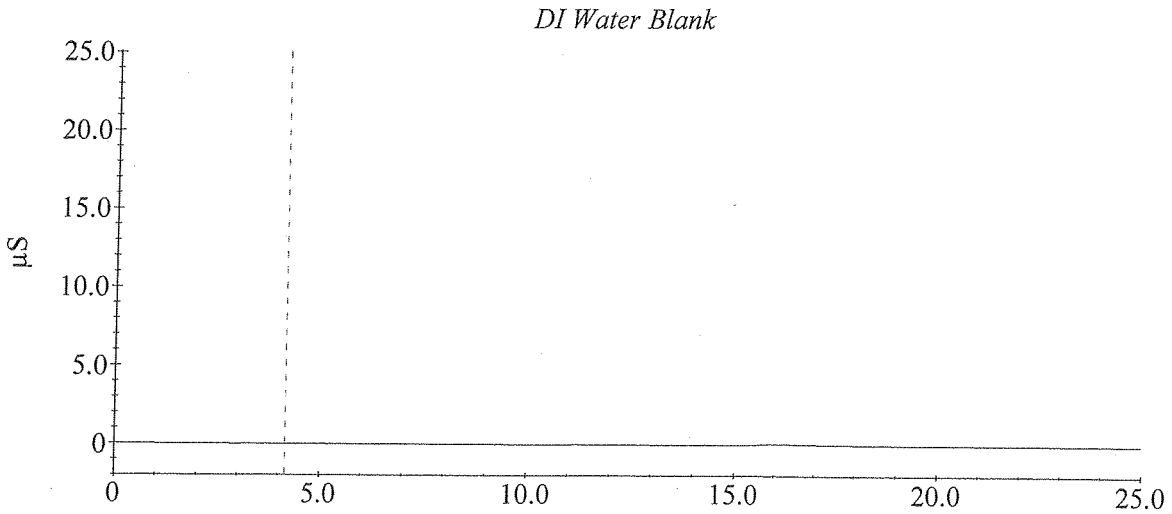
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 2:10:08 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
06/04/13

Sample Analysis Report

Sample Name : CCV 25ug/mL SS0619x16

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_002.DXD

Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

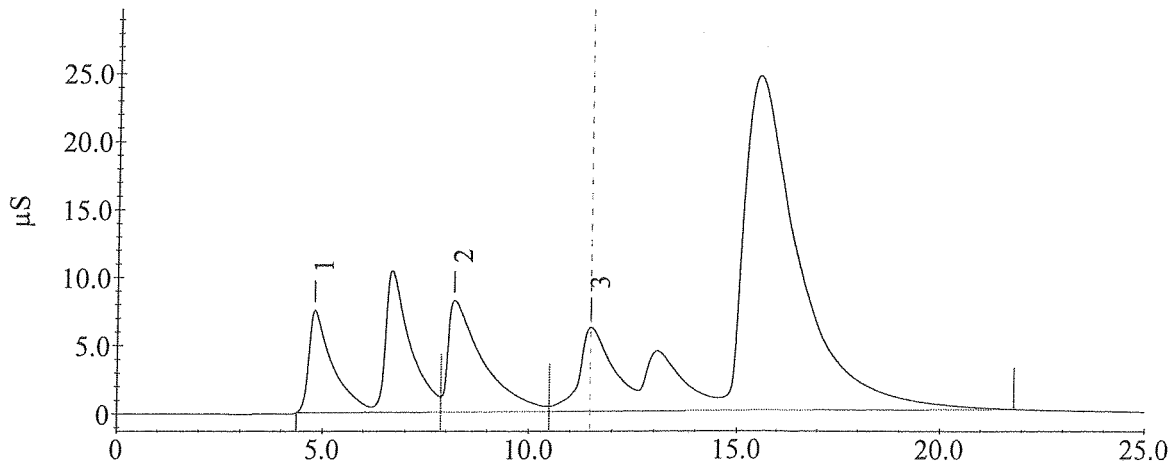
Date Time Collected : 6/4/2013 2:35:29 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	4.78	0.00	7309117	74713
2	Ammonium	8.17	25.18	4791852	81326
3	Unknown 2	11.47	0.00	29708648	61367

CCV 25ug/mL SS0619x16



Sample Analysis Report

Sample Name : SS 25ug/ml SS0646x40

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_003.DXD

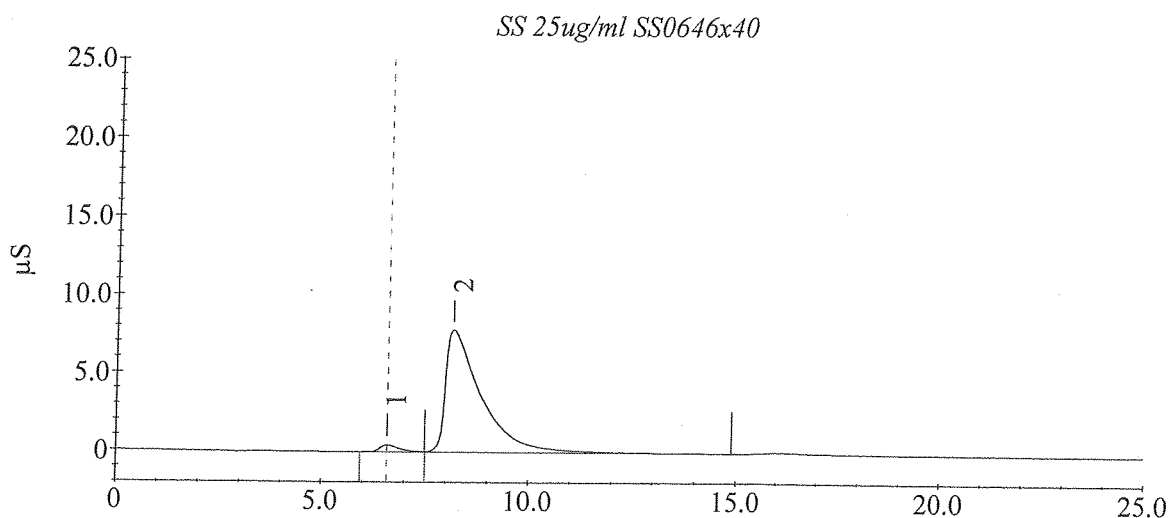
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 3:00:46 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	6.58	0.00	152836	4575
2	Ammonium	8.15	24.89	4748632	78270



Sample Analysis Report

Sample Name : Method Blank

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_004.DXD

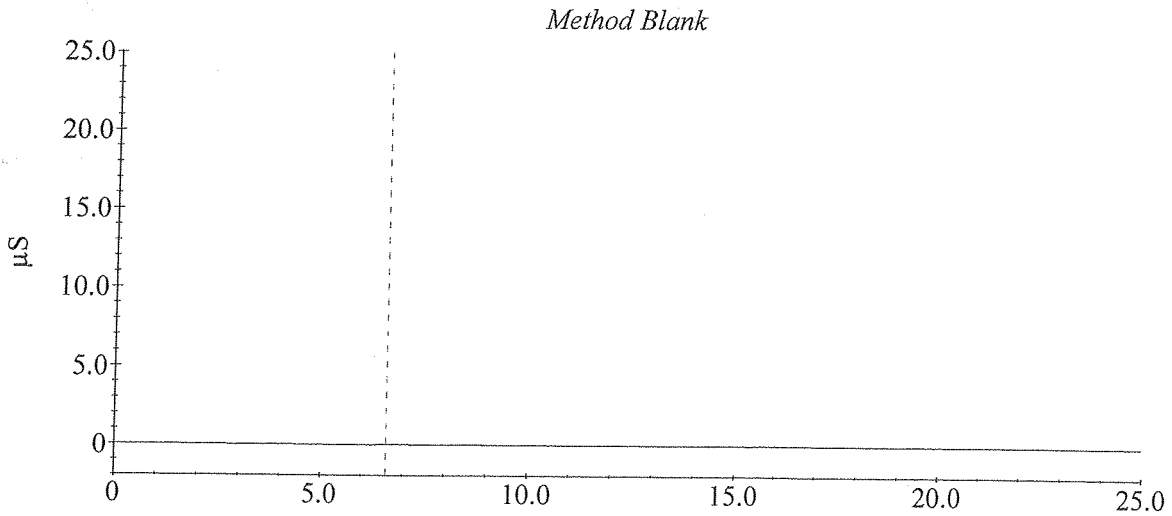
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 3:26:05 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
06/04/13

Sample Analysis Report

Sample Name : LCS 12.5ug/ml SS0619x32

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_005.DXD

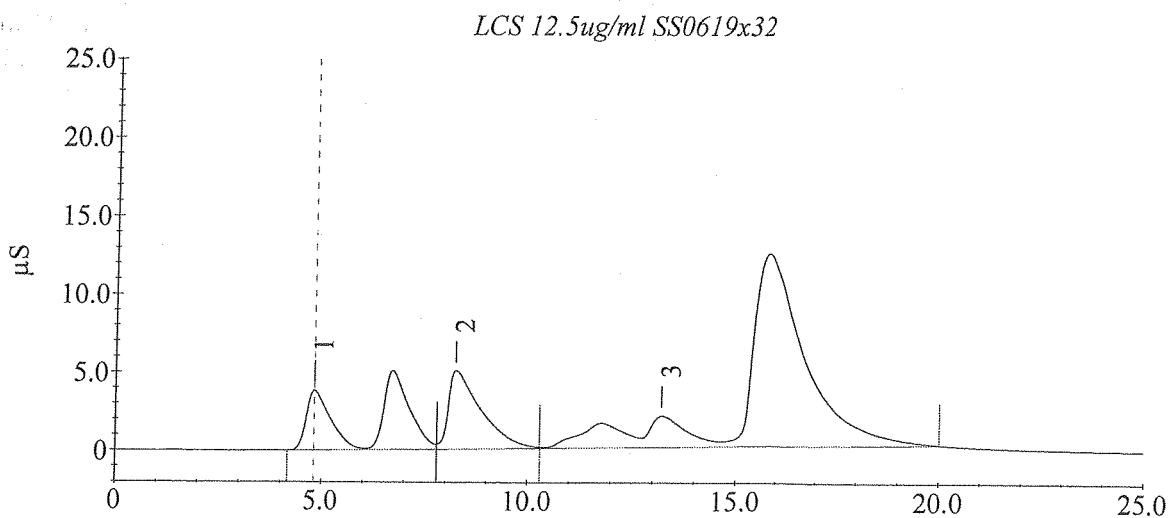
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 3:51:22 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	4.82	0.00	3700214	38093
2	Ammonium	8.23	12.64	2770860	49915
3	Unknown 2	13.20	0.00	13411083	19953



06
06/04/13

Sample Analysis Report

Sample Name : LCSD 12.5ug/ml SS0619x32

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_006.DXD

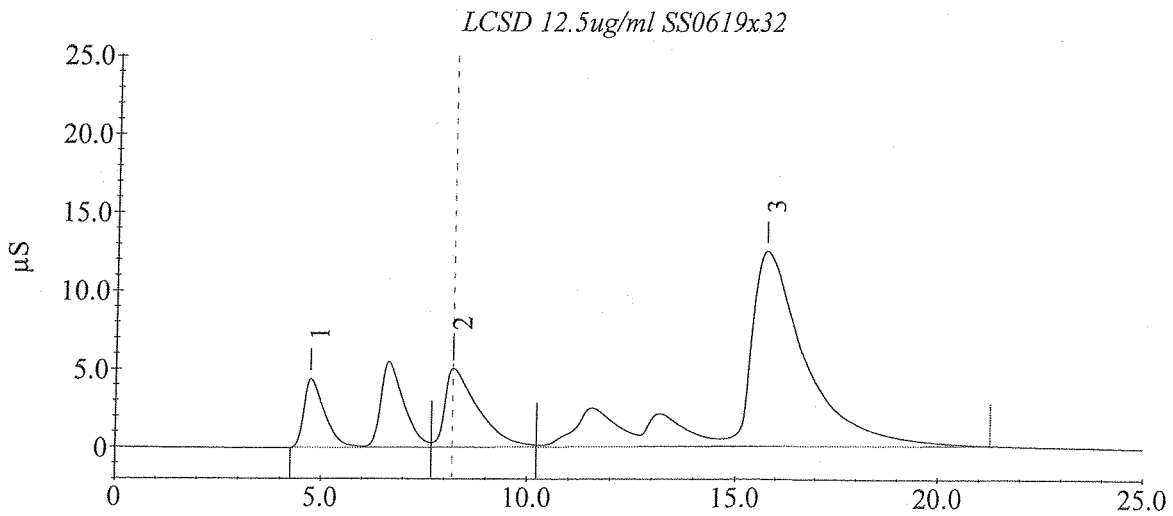
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 4:16:41 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	4.73	0.00	3644651	43853
2	Ammonium	8.20	12.68	2777449	50133
3	Unknown 2	15.73	0.00	14751925	124281



06/04/13

Sample Analysis Report

Sample Name : MS 12.5 ug/ml (130650-63257x5)

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_007.DXD

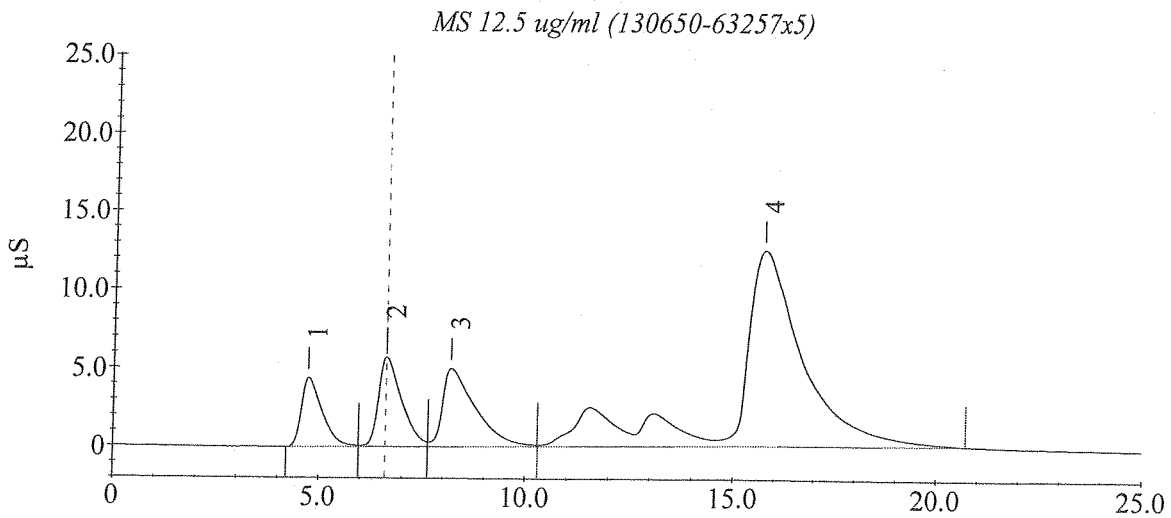
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 4:41:59 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	4.72	0.00	1539325	44036
2	Unknown 2	6.60	0.00	2192250	57103
3	Ammonium	8.17	12.68	2777771	49904
4	Unknown 3	15.70	0.00	14568760	124384



EG
06/04/13

Sample Analysis Report

Sample Name : MSD 12.5 ug/ml (130650-63257x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIAA_008.DXD

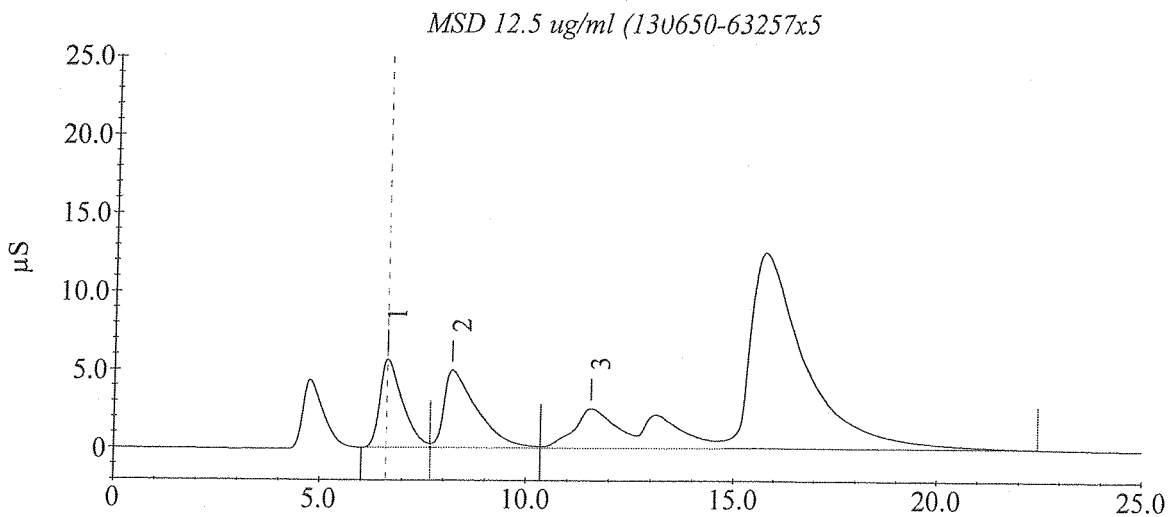
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 5:07:17 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	6.62	0.00	2137586	56266
2	Ammonium	8.18	12.48	2741662	49424
3	Unknown 2	11.55	0.00	15083507	25187



Sample Analysis Report

Sample Name : 130650-63257x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_009.DXD

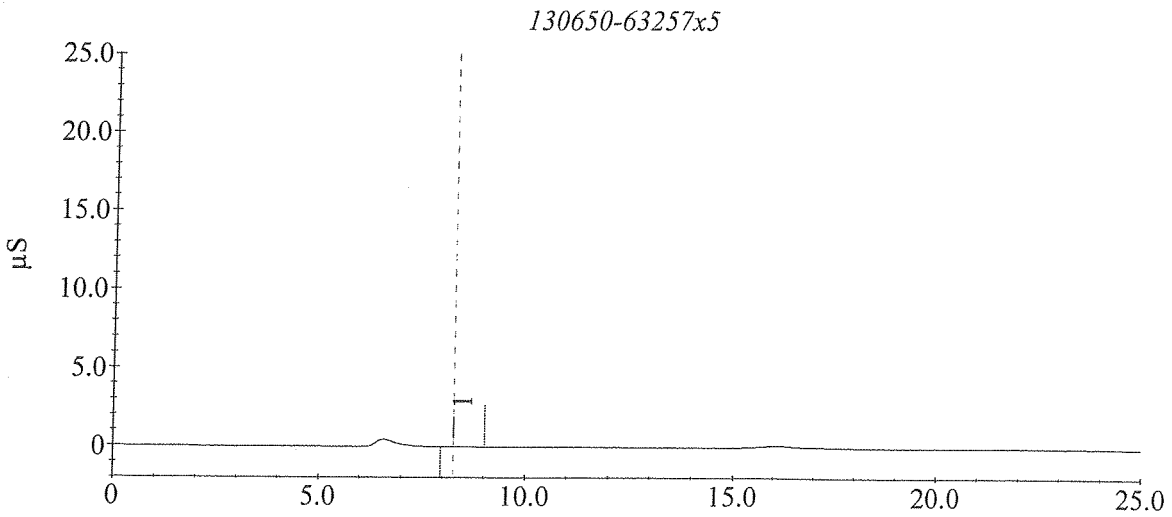
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 5:32:35 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.27	0.08	4572	151



MP
06/05/13

Sample Analysis Report

Sample Name : 130650-63257x5 dup

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_010.DXD

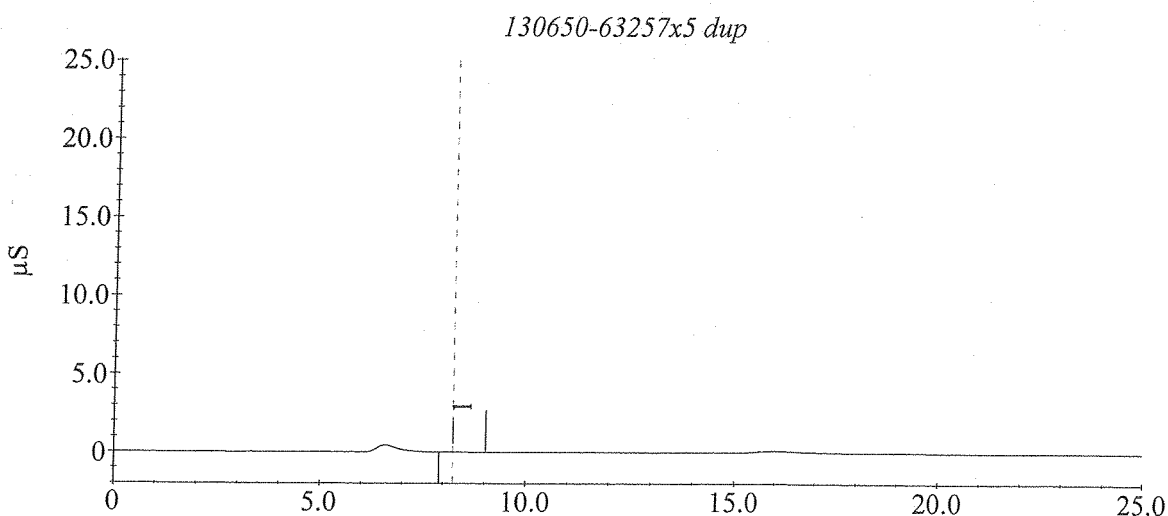
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 5:57:53 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.23	0.08	4466	134



Sample Analysis Report

Sample Name : 130650-63222x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_011.DXD

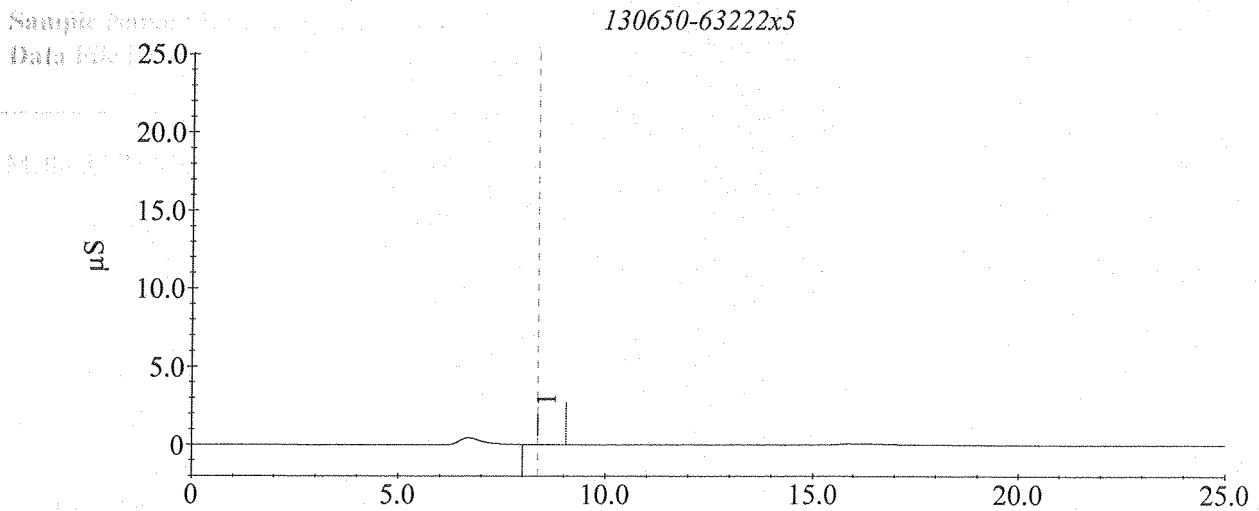
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 6:23:11 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.37	0.08	4515	141



HP
06/05/13

Sample Analysis Report

Sample Name : DI Water Blank

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIAA_012.DXD

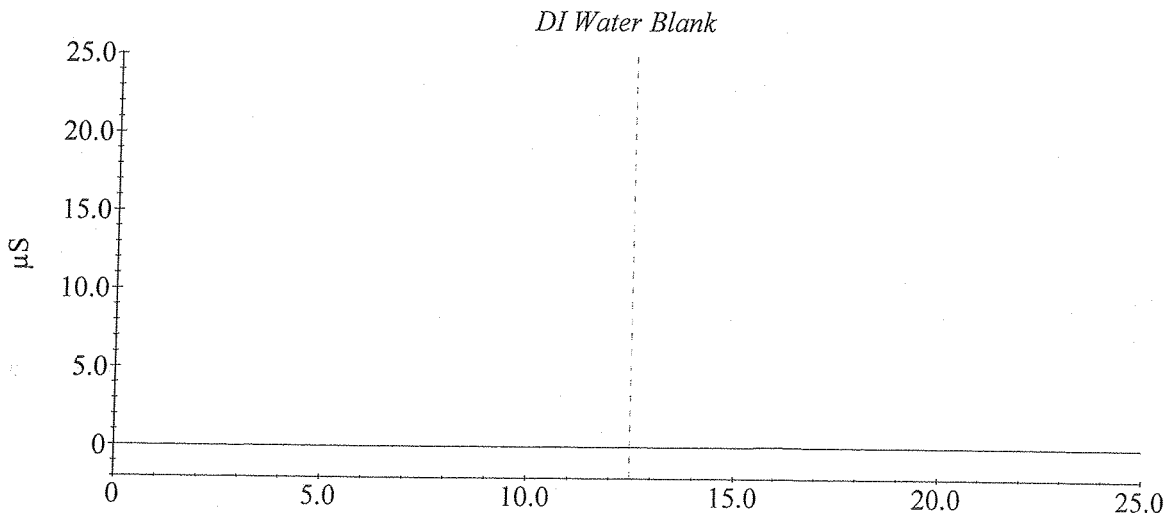
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 6:48:30 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
06/05/13

Sample Analysis Report

Sample Name : CCV 25ug/mL SS0619x16

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_013.DXD

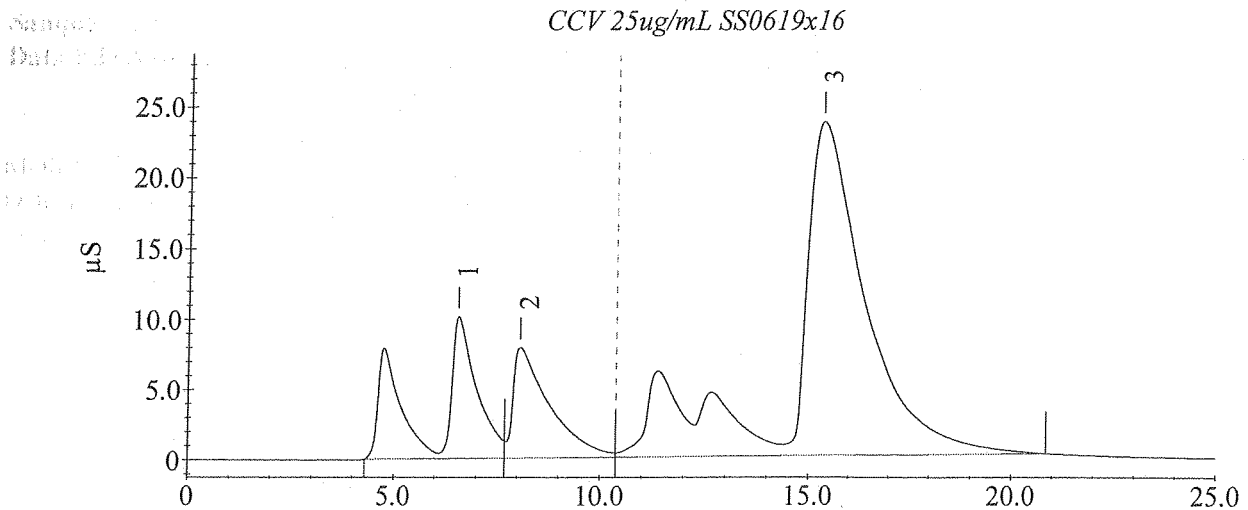
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 7:13:48 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	6.55	0.00	7235440	100774
2	Ammonium	8.05	25.51	4838456	78521
3	Unknown 2	15.32	0.00	29551988	235559



Sample Analysis Report

Sample Name : 130650-63231x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_014.DXD

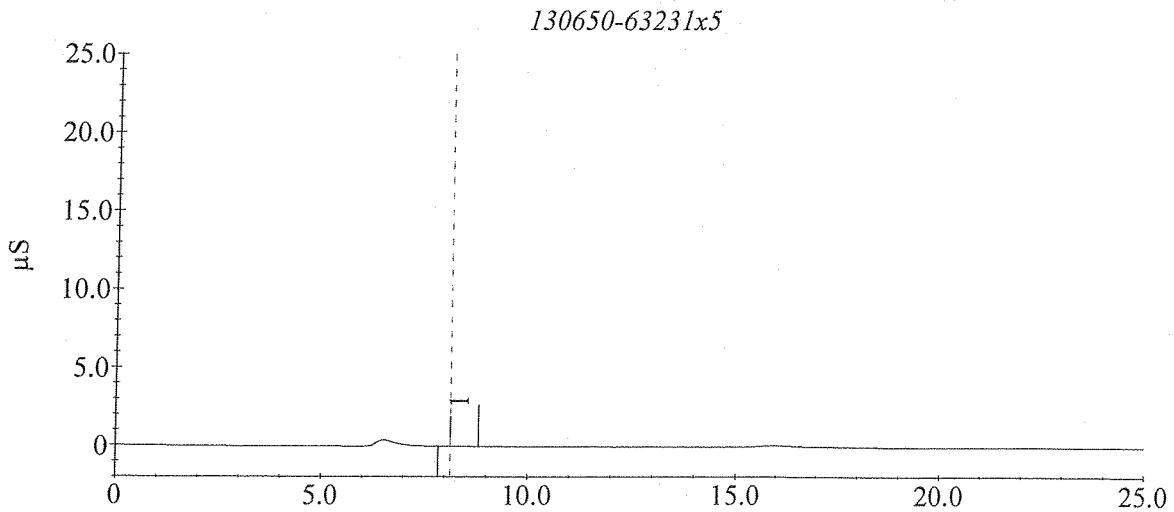
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 7:39:06 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.13	0.08	4269	137



Sample Analysis Report

Sample Name : 130650-63231x5 dup

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_015.DXD

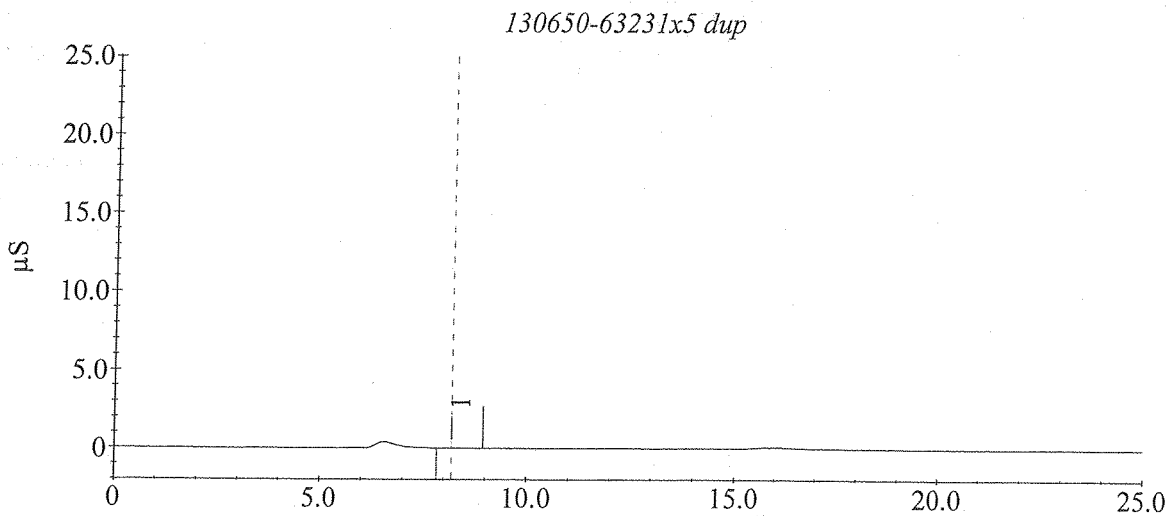
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 8:04:24 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.20	0.09	4996	154



MP
06/05/13

Sample Analysis Report

Sample Name : 130650-63240x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_016.DXD

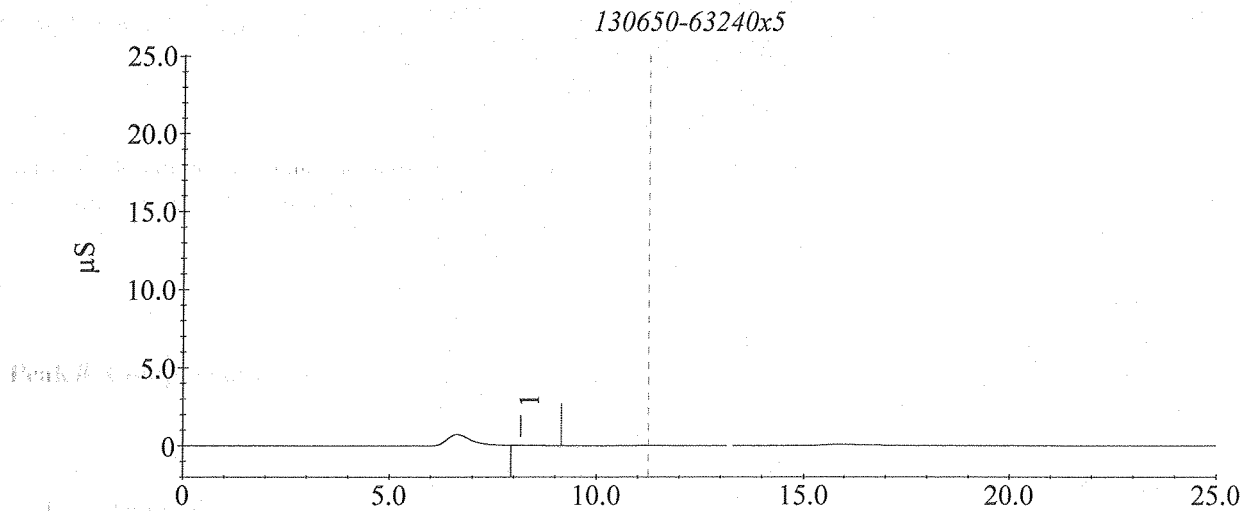
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 8:29:42 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.17	0.05	2660	97



Sample Analysis Report

Sample Name : 130650-63249x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_017.DXD

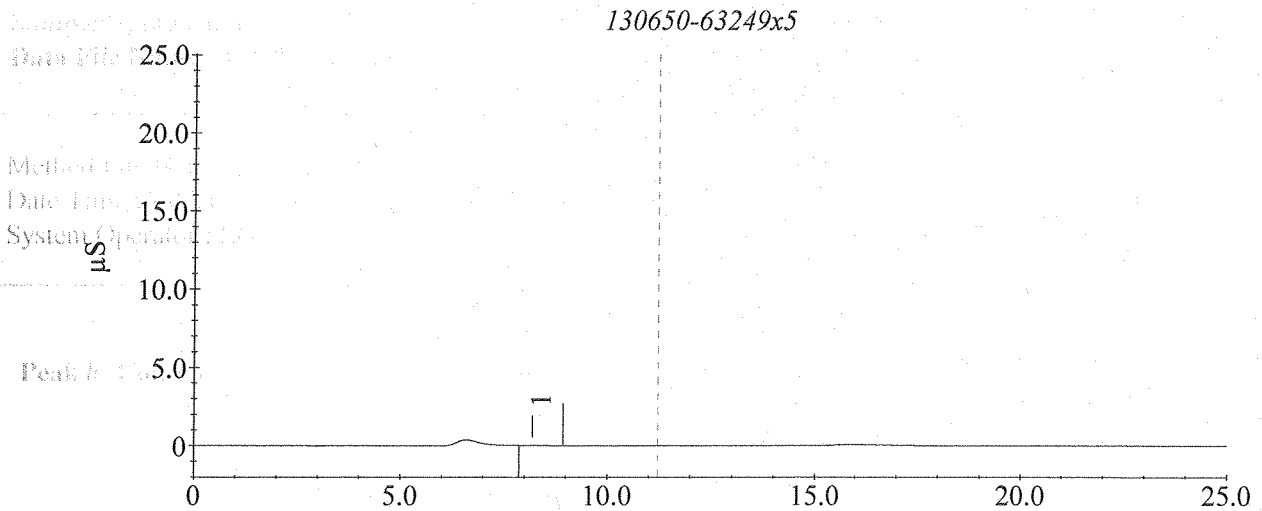
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 8:55:00 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.20	0.07	4083	125



Sample Analysis Report

Sample Name : 130650-63204x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIAA_018.DXD

Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 9:20:19 PM

System Operator : EG

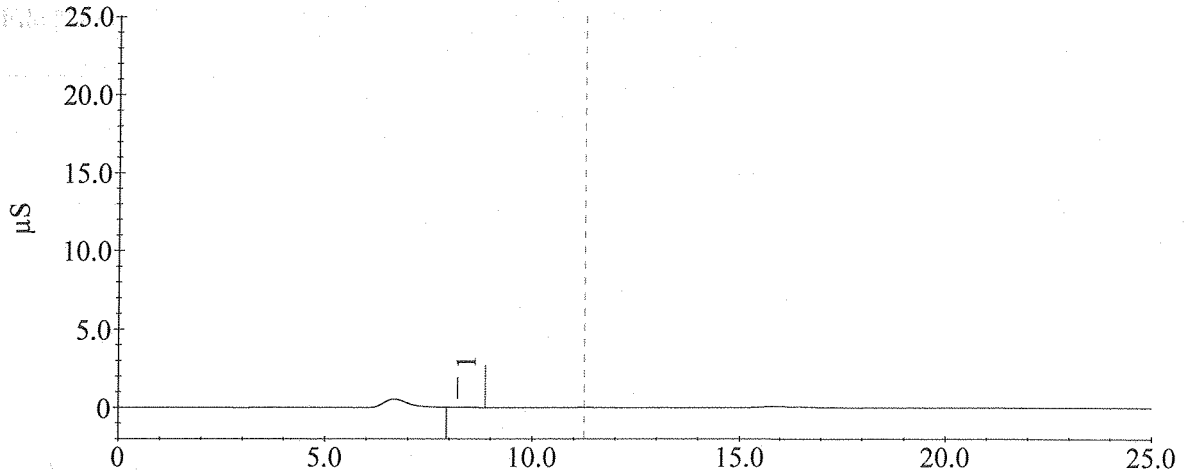
Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.20	0.05	2552	84

Sample Name:

Data File:

130650-63204x5



Sample Analysis Report

Sample Name : 130650-63213x5

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_019.DXD

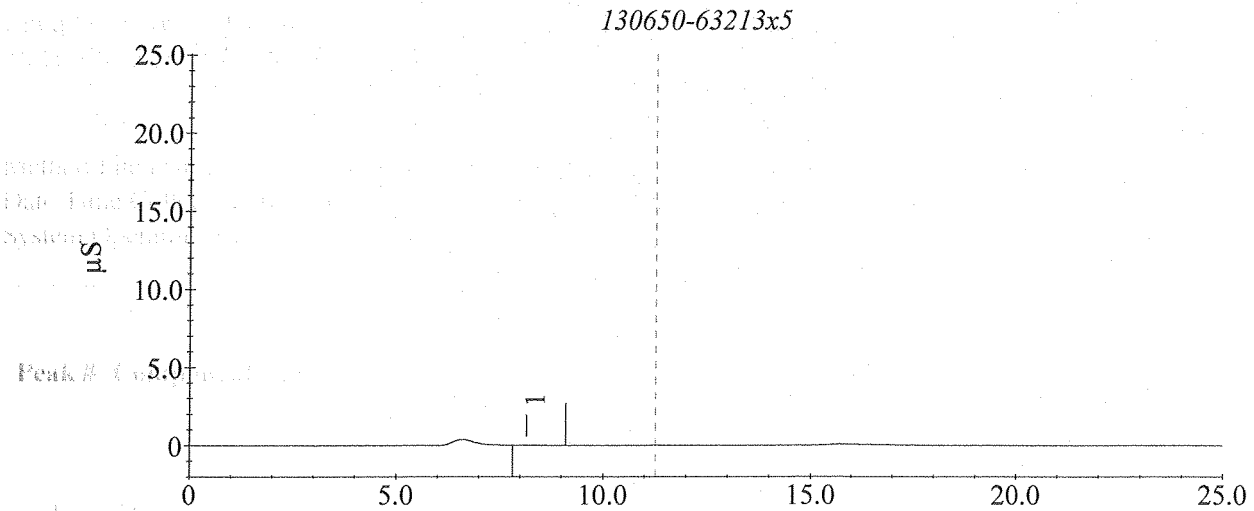
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 9:45:37 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Ammonium	8.15	0.09	4905	140



Sample Analysis Report

Sample Name : DI Water Blank

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIA\A_020.DXD

Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

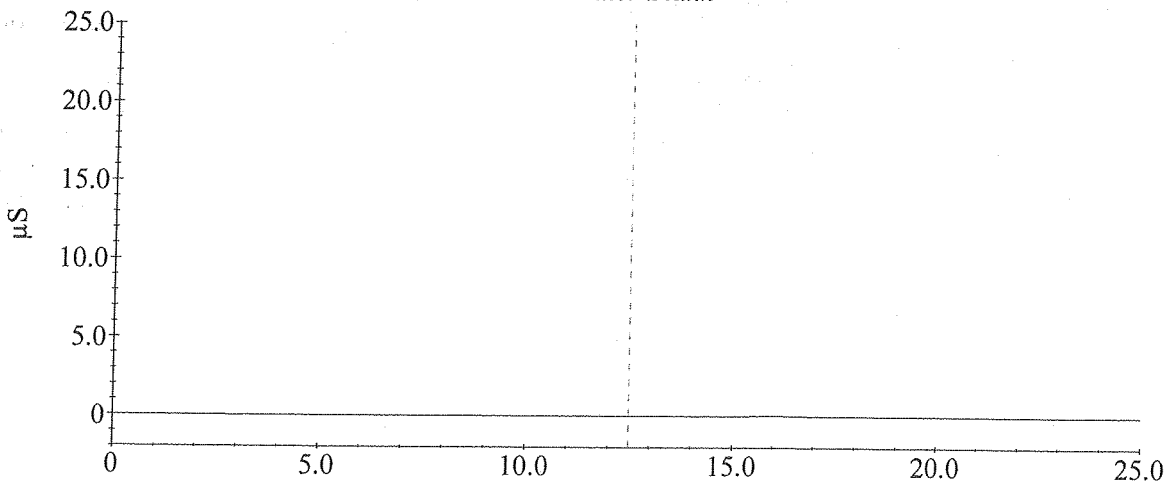
Date Time Collected : 6/4/2013 10:10:55 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
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DI Water Blank



HP
06/05/13

Sample Analysis Report

Sample Name : CCV 25ug/mL SS0619x16

Data File Name : C:\PEAKNET\DATA\2013\060413AMMONIAA_021.DXD

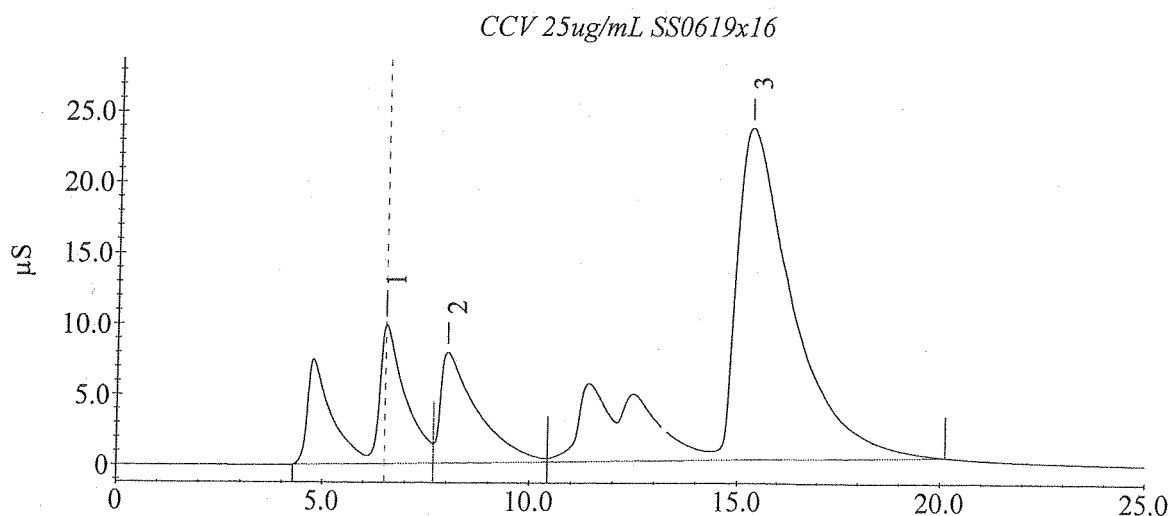
Method File Name : c:\peaknet\method\2013\ammonia 041613-1.met

Date Time Collected : 6/4/2013 10:36:13 PM

System Operator : EG

Peak Information : All Peaks

Peak #	Component Name	Retention Time	Amount (ug/ml)	Peak Area	Peak Height
1	Unknown 1	6.52	0.00	7204111	97893
2	Ammonium	8.00	25.56	4845537	78345
3	Unknown 2	15.28	0.00	28571584	234432



Line	Sample	Method	Data File	Dilution
1	DI Water Blank	ammonia 041613-1.met	a	1
2	CCV 25ug/mL SS0619x16	ammonia 041613-1.met	a	1
3	SS 25ug/ml SS0646x40	ammonia 041613-1.met	a	1
4	Method Blank	ammonia 041613-1.met	a	1
5	LCS 12.5ug/ml SS0619x32	ammonia 041613-1.met	a	1
6	LCSD 12.5ug/ml SS0619x32	ammonia 041613-1.met	a	1
7	MS 12.5 ug/ml (130650-63257x5)	ammonia 041613-1.met	a	1
8	MSD 12.5 ug/ml (130650-63257x5)	ammonia 041613-1.met	a	1
9	130650-63257x5	ammonia 041613-1.met	a	5
10	130650-63257x5 dup	ammonia 041613-1.met	a	5
11	130650-63222x5	ammonia 041613-1.met	a	5
12	DI Water Blank	ammonia 041613-1.met	a	1
13	CCV 25ug/mL SS0619x16	ammonia 041613-1.met	a	1
14	130650-63231x5	ammonia 041613-1.met	a	5
15	130650-63231x5 dup	ammonia 041613-1.met	a	5
16	130650-63240x5	ammonia 041613-1.met	a	5
17	130650-63249x5	ammonia 041613-1.met	a	5
18	130650-63204x5	ammonia 041613-1.met	a	5
19	130650-63213x5	ammonia 041613-1.met	a	5
20	DI Water Blank	ammonia 041613-1.met	a	1
21	CCV 25ug/mL SS0619x16	ammonia 041613-1.met	a	1
22	End	stopgp40.met	a	1

Default Method Path: C:\PEAKNET\METHOD\2013

Default Data Path: C:\PEAKNET\DATA

Argument: V 25ug/ml SS0619x16

4 SS 25ug/ml SS0646x40

4 Method Blank

5 LCS 12.5ug/ml SS0619x32

6 LCSD 12.5ug/ml SS0619x32

7 MS 12.5ug/ml (130650-63257x5)

8 MSD 12.5ug/ml (130650-63257x5)

9 130650-63257x5

10 130650-63257x5 dup

11 130650-63222x5

12 DI Water Blank

13 CCV 25ug/mL SS0619x16

14 130650-63231x5

15 130650-63231x5 dup

16 130650-63240x5

17 130650-63249x5

18 130650-63204x5

19 130650-63213x5

20 DI Water Blank

21 CCV 25ug/mL SS0619x16

22 End

Default Method Path: C:\PEAKNET\METHOD\2013

Default Data Path: C:\PEAKNET\DATA

Argument:

1 V 25ug/ml SS0619x16

2 SS 25ug/ml SS0646x40

3 Method Blank

4 LCS 12.5ug/ml SS0619x32

5 LCSD 12.5ug/ml SS0619x32

6 MS 12.5ug/ml (130650-63257x5)

7 MSD 12.5ug/ml (130650-63257x5)

8 130650-63257x5

9 130650-63257x5 dup

10 130650-63222x5

11 DI Water Blank

12 CCV 25ug/mL SS0619x16

13 End