CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

DATA PACKAGE

GENERAL CHEMISTRY

PROJECT NAME : NYCDPR BUSH TERMINAL LANDFILL PIERS 1-4

TRC COMPANIES, INC.

1430 Broadway

10th Floor Suite # 1000

New York, NY - 10018

Phone No: 212-221-7822

ORDER ID : K5154

ATTENTION : Jim Peronto

CHEMTECH

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Cover Page

Order ID : K5154

Project ID : NYCDPR Bush Terminal LandFill Piers 1-4

Client : TRC Companies, Inc.

Lab Sample Number	Client Sample Number
K5154-01	TB-10012019
K5154-02	FB-10012019
K5154-03	MW-106S
K5154-04	MW-106I
K5154-05	MW-106D
K5154-06	MW-107
K5154-09	TB-10022019
K5154-10	MW-103S
K5154-11	MW-103I
K5154-12	MW-103IMS
K5154-13	MW-103IMSD
K5154-14	MW-103D
K5154-15	MW-105S
K5154-16	MW-105I
K5154-17	MW-105D
K5154-18	MW-104I
K5154-19	MW-104D
K5154-20	TB-10032019
K5154-21	MW-102S
K5154-22	MW-102I
K5154-23	MW-102D
K5154-24	MW-101S
K5154-25	MW-101I
K5154-26	MW-101D

I certify that the data package is in compliance with the terms and conditions of the contract,both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the laboratory manager or his designee, as verified by the following signature.

Signature : N. N. Pandya

APPROVED
Date: 10/22/2019
By Nimisha Pandya, QA QC Supervisor at 3:35 pm, Oct 22, 2019

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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CASE NARRATIVE

TRC Companies, Inc.
Project Name: NYCDPR Bush Terminal LandFill Piers 1-4
Project # N/A
Chemtech Project # K5154
Test Name: Anions Group1

A. Number of Samples and Date of Receipt:
6 Water samples were received on 10/01/2019.
11 Water samples were received on 10/02/2019.
7 Water samples were received on 10/03/2019.

B. Parameters:
According to the Chain of Custody document, the following analyses were requested: Anions Group1, Mercury, Metals ICP-TAL, METALS-TAL, SVOCMS Group1 and VOCMS Group1. This data package contains results for Anions Group1.

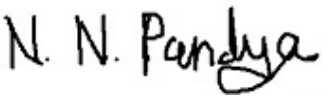
C. Analytical Techniques:
The analysis of Anions Group1 was based on method 300.0.

D. QA/ QC Samples:
The Holding Times were met for all analysis.
Sample MW-106S was diluted due to high concentrations for Chloride & Sample MW-106I was diluted due to high concentrations for Chloride & Sample MW-106D was diluted due to high concentrations for Chloride & Sample MW-107 was diluted due to high concentrations for Chloride & Sample MW-103S was diluted due to high concentrations for Chloride & Sample MW-103I was diluted due to high concentrations for Chloride & Sample MW-103D was diluted due to high concentrations for Chloride & Sample MW-105S was diluted due to high concentrations for Chloride & Sample MW-105I was diluted due to high concentrations for Chloride & Sample MW-105D was diluted due to high concentrations for Chloride & Sample MW-104I was diluted due to high concentrations for Chloride & Sample MW-104D was diluted due to high concentrations for Chloride & Sample MW-102I was diluted due to high concentrations for Chloride & Sample MW-102D was diluted due to high concentrations for Chloride & Sample MW-101S was diluted due to high concentrations for Chloride & Sample MW-101I was diluted due to high concentrations for Chloride & Sample MW-101D was diluted due to high concentrations for Chloride.
The Blank Spike met requirements for all samples.
The Duplicate analysis met criteria for all samples.
The Matrix Spike (MW-107MS) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-103IMS) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-101DMS) analysis met criteria for all samples except for Chloride. The Matrix Spike (20190770-SS-COMPOSITE-10MS) analysis met criteria for all samples except for Chloride.

The Matrix Spike (MW-107MSD) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-103IMSD) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-101DMSD) analysis met criteria for all samples except for Chloride. The Matrix Spike (20190770-SS-COMPOSITE-10MSD) analysis met criteria for all samples except for Chloride.
The Blank analysis did not indicate the presence of lab contamination.
The Calibration met the requirements.

E. Additional Comments:

I certify that the data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. The laboratory manager or his designee, as verified by the following signature has authorized release of the data contained in this hard copy data package.

Signature__ 

APPROVED
By Nimisha Pandya, QA QC Supervisor at 3:35 pm, Oct 22, 20

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

J	Indicates the reported value was obtained from a reading that was less than the Contract Required Detection Limit (CRDL), but greater than or equal to the Instrument Detection Limit (IDL).
U	Indicates the analyte was analyzed for, but not detected.
ND	Indicates the analyte was analyzed for, but not detected
E	Indicates the reported value is estimated because of the presence of interference
M	Indicates Duplicate injection precision not met.
N	Indicates the spiked sample recovery is not within control limits.
S	Indicates the reported value was determined by the Method of Standard Addition (MSA).
*	Indicates that the duplicate analysis is not within control limits.
+	Indicates the correlation coefficient for the MSA is less than 0.995.
D	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
M	Method qualifiers **"P"** for ICP instrument **"PM"** for ICP when Microwave Digestion is used **"CV"** for Manual Cold Vapor AA **"AV"** for automated Cold Vapor AA **"CA"** for MIDI-Distillation Spectrophotometric **"AS"** for Semi –Automated Spectrophotometric **"C"** for Manual Spectrophotometric **"T"** for Titrimetric **"NR"** for analyte not required to be analyzed
OR	Indicates the analyte's concentration exceeds the calibrated range of the instrument for that specific analysis.
Q	Indicates the LCS did not meet the control limits requirements
H	Sample Analysis Out Of Hold Time

QA Control # A3040961

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GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: K5154 MATRIX: Water

METHOD: 300.0

		NA	NO	YES
1.	Blank Contamination - If yes, list compounds and concentrations in each blank:		✓	
2.	Matrix Spike Duplicate Recoveries Met Criteria		✓	
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
	The Blank Spike met requirements for all samples.The Matrix Spike (MW-107MS) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-103IMS) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-101DMS) analysis met criteria for all samples except for Chloride. The Matrix Spike (20190770-SS-COMPOSITE-10MS) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-107MSD) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-103IMSD) analysis met criteria for all samples except for Chloride. The Matrix Spike (MW-101DMSD) analysis met criteria for all samples except for Chloride. The Matrix Spike (20190770-SS-COMPOSITE-10MSD) analysis met criteria for all samples except for Chloride.			
3.	Sample Duplicate Analysis Met QC Criteria			✓
	If not met, list those compounds and their recoveries which fall outside the acceptable range.			
8.	Digestion Holding Time Met			✓
	If not met, list number of days exceeded for each sample:			

ADDITIONAL COMMENTS:

QA REVIEW

REVIEWED
By Aparana Soni at 1:12 pm, Oct 22, 2019

Date

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: K5154

	Completed
For thorough review, the report must have the following:	
GENERAL:	
Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)	✓
Check chain-of-custody for proper relinquish/return of samples	✓
Is the chain of custody signed and complete	✓
Check internal chain-of-custody for proper relinquish/return of samples /sample extracts	✓
Collect information for each project id from server. Were all requirements followed	✓
COVER PAGE:	
Do numbers of samples correspond to the number of samples in the Chain of Custody on login page	✓
Do lab numbers and client Ids on cover page agree with the Chain of Custody	✓
CHAIN OF CUSTODY:	
Do requested analyses on Chain of Custody agree with form I results	✓
Do requested analyses on Chain of Custody agree with the log-in page	✓
Were the correct method log-in for analysis according to the Analytical Request and Chain of Castody	✓
Were the samples received within hold time	✓
Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle	✓
ANALYTICAL:	
Was method requirement followed?	✓
Was client requirement followed?	✓
Does the case narrative summarize all QC failure?	✓
All runlogs and manual integration are reviewed for requirements	✓
All manual calculations and /or hand notations verified	✓

1st Level QA Review Signature: AYUL BHAVSAR **Date:** 10/22/2019

2nd Level QA Review Signature: _____ **Date:** _____

REVIEWED
By Aparana Soni at 1:12 pm, Oct 22, 2019

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284 Sheffield Street, Mountainside, New Jersey - 07092

Phone: (908) 789 8900 Fax: (908) 789 8922

LAB CHRONICLE

OrderID:	K5154	**OrderDate:**	10/1/2019 2:37:56 PM
Client:	TRC Companies, Inc.	**Project:**	NYCDPR Bush Terminal LandFill Piers 1-4
Contact:	Jim Peronto	**Location:**	M12

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
K5154-02	**FB-10012019**	**WATER**			**10/01/19 08:30**			**10/01/19**
			Anions Group1	300.0			10/02/19 17:16	
K5154-03	**MW-106S**	**WATER**			**10/01/19 10:50**			**10/01/19**
			Anions Group1	300.0			10/02/19 13:43	
K5154-03DL	**MW-106SDL**	**WATER**			**10/01/19 10:50**			**10/01/19**
			Anions Group1	300.0			10/02/19 19:48	
K5154-04	**MW-106I**	**WATER**			**10/01/19 11:45**			**10/01/19**
			Anions Group1	300.0			10/02/19 14:13	
K5154-04DL	**MW-106IDL**	**WATER**			**10/01/19 11:45**			**10/01/19**
			Anions Group1	300.0			10/02/19 20:18	
K5154-05	**MW-106D**	**WATER**			**10/01/19 12:50**			**10/01/19**
			Anions Group1	300.0			10/02/19 14:44	
K5154-05DL	**MW-106DDL**	**WATER**			**10/01/19 12:50**			**10/01/19**
			Anions Group1	300.0			10/02/19 20:49	
K5154-06	**MW-107**	**WATER**			**10/01/19 13:50**			**10/01/19**

LAB CHRONICLE

			Anions Group1	300.0		10/02/19 15:14	
K5154-06DL	**MW-107DL**	**WATER**			**10/01/19 13:50**		**10/01/19**
			Anions Group1	300.0		10/02/19 21:19	
K5154-10	**MW-103S**	**WATER**			**10/02/19 09:15**		**10/02/19**
			Anions Group1	300.0		10/03/19 11:22	
K5154-10DL	**MW-103SDL**	**WATER**			**10/02/19 09:15**		**10/02/19**
			Anions Group1	300.0		10/03/19 22:01	
K5154-11	**MW-103I**	**WATER**			**10/02/19 10:25**		**10/02/19**
			Anions Group1	300.0		10/03/19 11:52	
K5154-11DL	**MW-103IDL**	**WATER**			**10/02/19 10:25**		**10/02/19**
			Anions Group1	300.0		10/04/19 00:33	
K5154-14	**MW-103D**	**WATER**			**10/02/19 11:40**		**10/02/19**
			Anions Group1	300.0		10/03/19 12:23	
K5154-14DL	**MW-103DDL**	**WATER**			**10/02/19 11:40**		**10/02/19**
			Anions Group1	300.0		10/04/19 01:04	
K5154-15	**MW-105S**	**WATER**			**10/02/19 10:27**		**10/02/19**
			Anions Group1	300.0		10/03/19 12:53	
K5154-15DL	**MW-105SDL**	**WATER**			**10/02/19 10:27**		**10/02/19**
			Anions Group1	300.0		10/04/19 01:34	

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K5154-16	**MW-105I**	**WATER**			**10/02/19 10:58**		**10/02/19**
			Anions Group1	300.0		10/03/19 13:24	
K5154-16DL	**MW-105IDL**	**WATER**			**10/02/19 10:58**		**10/02/19**
			Anions Group1	300.0		10/04/19 02:05	
K5154-17	**MW-105D**	**WATER**			**10/02/19 11:40**		**10/02/19**
			Anions Group1	300.0		10/03/19 13:54	
K5154-17DL	**MW-105DDL**	**WATER**			**10/02/19 11:40**		**10/02/19**
			Anions Group1	300.0		10/04/19 02:35	
K5154-18	**MW-104I**	**WATER**			**10/02/19 14:25**		**10/02/19**
			Anions Group1	300.0		10/03/19 14:24	
K5154-18DL	**MW-104IDL**	**WATER**			**10/02/19 14:25**		**10/02/19**
			Anions Group1	300.0		10/04/19 03:05	
K5154-19	**MW-104D**	**WATER**			**10/02/19 14:30**		**10/02/19**
			Anions Group1	300.0		10/03/19 14:55	
K5154-19DL	**MW-104DDL**	**WATER**			**10/02/19 14:30**		**10/02/19**
			Anions Group1	300.0		10/04/19 03:36	
K5154-21	**MW-102S**	**WATER**			**10/03/19 08:45**		**10/03/19**
			Anions Group1	300.0		10/04/19 10:52	

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LAB CHRONICLE

K5154-22	**MW-102I**	**WATER**			**10/03/19 09:05**		**10/03/19**
			Anions Group1	300.0		10/04/19 11:23	
K5154-22DL	**MW-102IDL**	**WATER**			**10/03/19 09:05**		**10/03/19**
			Anions Group1	300.0		10/04/19 23:33	
K5154-23	**MW-102D**	**WATER**			**10/03/19 10:25**		**10/03/19**
			Anions Group1	300.0		10/04/19 11:53	
K5154-23DL	**MW-102DDL**	**WATER**			**10/03/19 10:25**		**10/03/19**
			Anions Group1	300.0		10/05/19 00:03	
K5154-24	**MW-101S**	**WATER**			**10/03/19 11:00**		**10/03/19**
			Anions Group1	300.0		10/04/19 12:23	
K5154-24DL	**MW-101SDL**	**WATER**			**10/03/19 11:00**		**10/03/19**
			Anions Group1	300.0		10/05/19 00:34	
K5154-25	**MW-101I**	**WATER**			**10/03/19 11:15**		**10/03/19**
			Anions Group1	300.0		10/04/19 12:54	
K5154-25DL	**MW-101IDL**	**WATER**			**10/03/19 11:15**		**10/03/19**
			Anions Group1	300.0		10/05/19 01:04	
K5154-26	**MW-101D**	**WATER**			**10/03/19 12:25**		**10/03/19**
			Anions Group1	300.0		10/04/19 13:24	
K5154-26DL	**MW-101DDL**	**WATER**			**10/03/19 12:25**		**10/03/19**

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LAB CHRONICLE

Anions Group1	300.0	10/05/19 01:34

SAMPLE DATA

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 08:30
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	FB-10012019	SDG No.:	K5154
Lab Sample ID:	K5154-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	0.60	U	1	0.075	0.60	mg/L		10/02/19 17:16	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 10:50
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-106S	SDG No.:	K5154
Lab Sample ID:	K5154-03	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	858	OR	1	0.075	0.60	mg/L		10/02/19 13:43	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 10:50
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-106SDL	SDG No.:	K5154
Lab Sample ID:	K5154-03DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	573	D	200	15.0	120	mg/L		10/02/19 19:48	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 11:45
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-106I	SDG No.:	K5154
Lab Sample ID:	K5154-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	999	OR	1	0.075	0.60	mg/L		10/02/19 14:13	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 11:45
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-106IDL	SDG No.:	K5154
Lab Sample ID:	K5154-04DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	665	D	200	15.0	120	mg/L		10/02/19 20:18	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 12:50
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-106D	SDG No.:	K5154
Lab Sample ID:	K5154-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	4670	OR	1	0.075	0.60	mg/L		10/02/19 14:44	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 12:50
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-106DDL	SDG No.:	K5154
Lab Sample ID:	K5154-05DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	3120	D	500	37.4	300	mg/L		10/02/19 20:49	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 13:50
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-107	SDG No.:	K5154
Lab Sample ID:	K5154-06	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	4680	OR	1	0.075	0.60	mg/L		10/02/19 15:14	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/01/19 13:50
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/01/19
Client Sample ID:	MW-107DL	SDG No.:	K5154
Lab Sample ID:	K5154-06DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	3000	D	500	37.4	300	mg/L		10/02/19 21:19	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 09:15
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-103S	SDG No.:	K5154
Lab Sample ID:	K5154-10	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	4480	OR	1	0.075	0.60	mg/L		10/03/19 11:22	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 09:15
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-103SDL	SDG No.:	K5154
Lab Sample ID:	K5154-10DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	3100	D	500	37.4	300	mg/L		10/03/19 22:01	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 10:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-103I	SDG No.:	K5154
Lab Sample ID:	K5154-11	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	672	OR	1	0.075	0.60	mg/L		10/03/19 11:52	300.0

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 10:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-103IDL	SDG No.:	K5154
Lab Sample ID:	K5154-11DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	458	D	100	7.50	60.0	mg/L		10/04/19 00:33	300.0

Comments:

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LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 11:40
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-103D	SDG No.:	K5154
Lab Sample ID:	K5154-14	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	16.5	OR	1	0.075	0.60	mg/L		10/03/19 12:23	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 11:40
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-103DDL	SDG No.:	K5154
Lab Sample ID:	K5154-14DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	15.7	D	5	0.37	3.00	mg/L		10/04/19 01:04	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 10:27
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-105S	SDG No.:	K5154
Lab Sample ID:	K5154-15	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	821	OR	1	0.075	0.60	mg/L		10/03/19 12:53	300.0

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
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H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 10:27
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-105SDL	SDG No.:	K5154
Lab Sample ID:	K5154-15DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	565	D	200	15.0	120	mg/L		10/04/19 01:34	300.0

Comments:

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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 10:58
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-105I	SDG No.:	K5154
Lab Sample ID:	K5154-16	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	642	OR	1	0.075	0.60	mg/L		10/03/19 13:24	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 10:58
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-105IDL	SDG No.:	K5154
Lab Sample ID:	K5154-16DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	443	D	100	7.50	60.0	mg/L		10/04/19 02:05	300.0

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
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H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
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N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 11:40
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-105D	SDG No.:	K5154
Lab Sample ID:	K5154-17	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	16.9	OR	1	0.075	0.60	mg/L		10/03/19 13:54	300.0

Comments:

U = Not Detected
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LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 11:40
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-105DDL	SDG No.:	K5154
Lab Sample ID:	K5154-17DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	15.6	D	5	0.37	3.00	mg/L		10/04/19 02:35	300.0

Comments:

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LOD = Limit of Detection
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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 14:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-104I	SDG No.:	K5154
Lab Sample ID:	K5154-18	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	385	OR	1	0.075	0.60	mg/L		10/03/19 14:24	300.0

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
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Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 14:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-104IDL	SDG No.:	K5154
Lab Sample ID:	K5154-18DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	269	D	50	3.70	30.0	mg/L		10/04/19 03:05	300.0

Comments:

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LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 14:30
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-104D	SDG No.:	K5154
Lab Sample ID:	K5154-19	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	14100	OR	1	0.075	0.60	mg/L		10/03/19 14:55	300.0

Comments:

U = Not Detected
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LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/02/19 14:30
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/02/19
Client Sample ID:	MW-104DDL	SDG No.:	K5154
Lab Sample ID:	K5154-19DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	9370	D	2000	150	1200	mg/L		10/04/19 03:36	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 08:45
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-102S	SDG No.:	K5154
Lab Sample ID:	K5154-21	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	5.60		1	0.075	0.60	mg/L		10/04/19 10:52	300.0

Comments:

U = Not Detected
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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 09:05
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-102I	SDG No.:	K5154
Lab Sample ID:	K5154-22	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	302	OR	1	0.075	0.60	mg/L		10/04/19 11:23	300.0

Comments:

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MDL = Method Detection Limit
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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 09:05
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-102IDL	SDG No.:	K5154
Lab Sample ID:	K5154-22DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	207	D	50	3.70	30.0	mg/L		10/04/19 23:33	300.0

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 10:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-102D	SDG No.:	K5154
Lab Sample ID:	K5154-23	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	533	OR	1	0.075	0.60	mg/L		10/04/19 11:53	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
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H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
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E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 10:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-102DDL	SDG No.:	K5154
Lab Sample ID:	K5154-23DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	365	D	100	7.50	60.0	mg/L		10/05/19 00:03	300.0

Comments:

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MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time

J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 11:00
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-101S	SDG No.:	K5154
Lab Sample ID:	K5154-24	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	286	OR	1	0.075	0.60	mg/L		10/04/19 12:23	300.0

Comments:

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D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 11:00
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-101SDL	SDG No.:	K5154
Lab Sample ID:	K5154-24DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	197	D	50	3.70	30.0	mg/L		10/05/19 00:34	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 11:15
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-101I	SDG No.:	K5154
Lab Sample ID:	K5154-25	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	428	OR	1	0.075	0.60	mg/L		10/04/19 12:54	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 11:15
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-101IDL	SDG No.:	K5154
Lab Sample ID:	K5154-25DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	290	D	100	7.50	60.0	mg/L		10/05/19 01:04	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 12:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-101D	SDG No.:	K5154
Lab Sample ID:	K5154-26	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	625	OR	1	0.075	0.60	mg/L		10/04/19 13:24	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

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Report of Analysis

Client:	TRC Companies, Inc.	Date Collected:	10/03/19 12:25
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	Date Received:	10/03/19
Client Sample ID:	MW-101DDL	SDG No.:	K5154
Lab Sample ID:	K5154-26DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	438	D	100	7.50	60.0	mg/L		10/05/19 01:34	300.0

Comments:

U = Not Detected
LOQ = Limit of Quantitation
MDL = Method Detection Limit
LOD = Limit of Detection
D = Dilution
Q = indicates LCS control criteria did not meet requirements
H = Sample Analysis Out Of Hold Time
J = Estimated Value
B = Analyte Found in Associated Method Blank
* = indicates the duplicate analysis is not within control limits.
E = Indicates the reported value is estimated because of the presence of interference.
OR = Over Range
N =Spiked sample recovery not within control limits

QC RESULT SUMMARY

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Initial and Continuing Calibration Verification

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **RunNo.:** LB105422

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	9.5	10	95	90-110	09/11/2019
Chloride	mg/L	2.9	3	97	90-110	09/11/2019
Fluoride	mg/L	2	2	100	90-110	09/11/2019
Nitrite	mg/L	2.9	3	97	90-110	09/11/2019
Nitrate	mg/L	2.4	2.5	96	90-110	09/11/2019
Sulfate	mg/L	14.6	15	97	90-110	09/11/2019
Orthophosphate as P	mg/L	5.2	5	104	90-110	09/11/2019
Sample ID: CCV1						
Bromide	mg/L	9.6	10	96	90-110	10/02/2019
Chloride	mg/L	3	3	100	90-110	10/02/2019
Fluoride	mg/L	1.9	2	95	90-110	10/02/2019
Nitrite	mg/L	2.9	3	97	90-110	10/02/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/02/2019
Sulfate	mg/L	14.4	15	96	90-110	10/02/2019
Orthophosphate as P	mg/L	4.8	5	96	90-110	10/02/2019
Sample ID: CCV2						
Bromide	mg/L	9.6	10	96	90-110	10/02/2019
Chloride	mg/L	3.1	3	103	90-110	10/02/2019
Fluoride	mg/L	1.7	2	85	90-110	10/02/2019
Nitrite	mg/L	2.9	3	97	90-110	10/02/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/02/2019
Sulfate	mg/L	14.4	15	96	90-110	10/02/2019
Orthophosphate as P	mg/L	4.8	5	96	90-110	10/02/2019
Sample ID: CCV3						
Bromide	mg/L	9.7	10	97	90-110	10/02/2019
Chloride	mg/L	3	3	100	90-110	10/02/2019
Fluoride	mg/L	2	2	100	90-110	10/02/2019
Nitrite	mg/L	3	3	100	90-110	10/02/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/02/2019
Sulfate	mg/L	14.5	15	97	90-110	10/02/2019
Orthophosphate as P	mg/L	4.8	5	96	90-110	10/02/2019

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Initial and Continuing Calibration Verification

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **RunNo.:** LB105455

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	9.5	10	95	90-110	09/11/2019
Chloride	mg/L	2.9	3	97	90-110	09/11/2019
Fluoride	mg/L	2	2	100	90-110	09/11/2019
Nitrite	mg/L	2.9	3	97	90-110	09/11/2019
Nitrate	mg/L	2.4	2.5	96	90-110	09/11/2019
Sulfate	mg/L	14.6	15	97	90-110	09/11/2019
Orthophosphate as P	mg/L	5.2	5	104	90-110	09/11/2019
Sample ID: CCV1						
Bromide	mg/L	9.7	10	97	90-110	10/03/2019
Chloride	mg/L	3	3	100	90-110	10/03/2019
Fluoride	mg/L	2	2	100	90-110	10/03/2019
Nitrite	mg/L	2.9	3	97	90-110	10/03/2019
Nitrate	mg/L	2.5	2.5	100	90-110	10/03/2019
Sulfate	mg/L	14.5	15	97	90-110	10/03/2019
Orthophosphate as P	mg/L	5	5	100	90-110	10/03/2019
Sample ID: CCV2						
Bromide	mg/L	9.6	10	96	90-110	10/03/2019
Chloride	mg/L	3	3	100	90-110	10/03/2019
Fluoride	mg/L	1.9	2	95	90-110	10/03/2019
Nitrite	mg/L	2.9	3	97	90-110	10/03/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/03/2019
Sulfate	mg/L	14.1	15	94	90-110	10/03/2019
Orthophosphate as P	mg/L	5.1	5	102	90-110	10/03/2019
Sample ID: CCV3						
Bromide	mg/L	9.5	10	95	90-110	10/03/2019
Chloride	mg/L	3	3	100	90-110	10/03/2019
Fluoride	mg/L	1.9	2	95	90-110	10/03/2019
Nitrite	mg/L	2.9	3	97	90-110	10/03/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/03/2019
Sulfate	mg/L	14	15	93	90-110	10/03/2019
Orthophosphate as P	mg/L	5	5	100	90-110	10/03/2019
Sample ID: CCV4						
Bromide	mg/L	9.9	10	99	90-110	10/04/2019
Chloride	mg/L	3	3	100	90-110	10/04/2019
Fluoride	mg/L	1.7	2	85	90-110	10/04/2019
Nitrite	mg/L	3	3	100	90-110	10/04/2019
Nitrate	mg/L	2.5	2.5	100	90-110	10/04/2019
Sulfate	mg/L	14.4	15	96	90-110	10/04/2019
Orthophosphate as P	mg/L	5.1	5	102	90-110	10/04/2019
Sample ID: CCV5						
Bromide	mg/L	9.7	10	97	90-110	10/04/2019
Chloride	mg/L	3	3	100	90-110	10/04/2019
Fluoride	mg/L	1.7	2	85	90-110	10/04/2019

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Initial and Continuing Calibration Verification

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **RunNo.:** LB105455

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Nitrite	mg/L	3	3	100	90-110	10/04/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/04/2019
Sulfate	mg/L	14.3	15	95	90-110	10/04/2019
Orthophosphate as P	mg/L	4.6	5	92	90-110	10/04/2019
Sample ID: CCV6						
Bromide	mg/L	9.7	10	97	90-110	10/04/2019
Chloride	mg/L	3	3	100	90-110	10/04/2019
Fluoride	mg/L	2.3	2	115	90-110	10/04/2019
Nitrite	mg/L	2.9	3	97	90-110	10/04/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/04/2019
Sulfate	mg/L	14.7	15	98	90-110	10/04/2019
Orthophosphate as P	mg/L	5.2	5	104	90-110	10/04/2019
Sample ID: CCV7						
Bromide	mg/L	9.7	10	97	90-110	10/04/2019
Chloride	mg/L	3	3	100	90-110	10/04/2019
Fluoride	mg/L	1.8	2	90	90-110	10/04/2019
Nitrite	mg/L	3	3	100	90-110	10/04/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/04/2019
Sulfate	mg/L	14.7	15	98	90-110	10/04/2019
Orthophosphate as P	mg/L	5.2	5	104	90-110	10/04/2019
Sample ID: CCV8						
Bromide	mg/L	9.7	10	97	90-110	10/05/2019
Chloride	mg/L	3	3	100	90-110	10/05/2019
Fluoride	mg/L	1.8	2	90	90-110	10/05/2019
Nitrite	mg/L	3.1	3	103	90-110	10/05/2019
Nitrate	mg/L	2.4	2.5	96	90-110	10/05/2019
Sulfate	mg/L	14.8	15	99	90-110	10/05/2019
Orthophosphate as P	mg/L	5	5	100	90-110	10/05/2019

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Initial and Continuing Calibration Blank Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **RunNo.:** LB105422

Analyte	Units	Result	Acceptance Limits	MDL	RDL	Analysis Date
Sample ID: ICB1						
Bromide	mg/L	< 1	+/-1	0.28	1	09/11/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	09/11/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	09/11/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	09/11/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	09/11/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	09/11/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	09/11/2019
Sample ID: CCB1						
Bromide	mg/L	< 1	+/-1	0.28	1	10/02/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/02/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/02/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/02/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/02/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/02/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/02/2019
Sample ID: CCB2						
Bromide	mg/L	< 1	+/-1	0.28	1	10/02/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/02/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/02/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/02/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/02/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/02/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/02/2019
Sample ID: CCB3						
Bromide	mg/L	< 1	+/-1	0.28	1	10/02/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/02/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/02/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/02/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/02/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/02/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/02/2019

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Initial and Continuing Calibration Blank Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **RunNo.:** LB105455

Analyte	Units	Result	Acceptance Limits	MDL	RDL	Analysis Date
Sample ID: ICB1						
Bromide	mg/L	< 1	+/-1	0.28	1	09/11/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	09/11/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	09/11/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	09/11/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	09/11/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	09/11/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	09/11/2019
Sample ID: CCB1						
Bromide	mg/L	< 1	+/-1	0.28	1	10/03/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/03/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/03/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/03/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/03/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/03/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/03/2019
Sample ID: CCB2						
Bromide	mg/L	< 1	+/-1	0.28	1	10/03/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/03/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/03/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/03/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/03/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/03/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/03/2019
Sample ID: CCB3						
Bromide	mg/L	< 1	+/-1	0.28	1	10/03/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/03/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/03/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/03/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/03/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/03/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/03/2019
Sample ID: CCB4						
Bromide	mg/L	< 1	+/-1	0.28	1	10/04/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/04/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/04/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/04/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/04/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/04/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/04/2019
Sample ID: CCB5						
Bromide	mg/L	< 1	+/-1	0.28	1	10/04/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/04/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/04/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/04/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/04/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/04/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/04/2019
Sample ID: CCB6						

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Initial and Continuing Calibration Blank Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **RunNo.:** LB105455

Analyte	Units	Result	Acceptance Limits	MDL	RDL	Analysis Date
Bromide	mg/L	< 1	+/-1	0.28	1	10/04/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/04/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/04/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/04/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/04/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/04/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/04/2019
Sample ID: CCB7						
Bromide	mg/L	< 1	+/-1	0.28	1	10/04/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/04/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/04/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/04/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/04/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/04/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/04/2019
Sample ID: CCB8						
Bromide	mg/L	< 1	+/-1	0.28	1	10/05/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/05/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/05/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/05/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/05/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/05/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/05/2019

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Preparation Blank Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4

Analyte	Units	Result	Acceptance Limits	MDL	RDL	Analysis Date
Sample ID: LB105422BLW						
Bromide	mg/L	< 1	+/-1	0.28	1	10/02/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/02/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/02/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/02/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/02/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/02/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/02/2019
Sample ID: LB105455BLW						
Bromide	mg/L	< 1	+/-1	0.28	1	10/03/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/03/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/03/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/03/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/03/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/03/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/03/2019
Sample ID: LB105455BLW2						
Bromide	mg/L	< 1	+/-1	0.28	1	10/03/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/03/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/03/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/03/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/03/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/03/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/03/2019
Sample ID: LB105455BLW3						
Bromide	mg/L	< 1	+/-1	0.28	1	10/04/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/04/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/04/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/04/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/04/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/04/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/04/2019
Sample ID: LB105455BLW4						
Bromide	mg/L	< 1	+/-1	0.28	1	10/04/2019
Chloride	mg/L	< 0.6	+/-0.6	0.075	0.6	10/04/2019
Fluoride	mg/L	< 0.4	+/-0.4	0.15	0.4	10/04/2019
Nitrite	mg/L	< 0.3	+/-0.3	0.11	0.3	10/04/2019
Nitrate	mg/L	< 0.5	+/-0.5	0.099	0.5	10/04/2019
Sulfate	mg/L	< 3	+/-3	0.56	3	10/04/2019
Orthophosphate as P	mg/L	< 0.5	+/-0.5	0.14	0.5	10/04/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5154-06

Client ID: MW-107MS **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	19.5		10.0		10	1	95		10/02/2019
Chloride	mg/L	80-120	4190	OR	4680	OR	3	1	-16333	*	10/02/2019
Fluoride	mg/L	80-120	2.40		0.15	U	2	1	120		10/02/2019
Nitrite	mg/L	80-120	0.67		0.11	U	3	1	22	*	10/02/2019
Nitrate	mg/L	80-120	2.60		0.099	U	2.5	1	104		10/02/2019
Sulfate	mg/L	80-120	438	OR	461	OR	15	1	-153	*	10/02/2019
Orthophosphate as P	mg/L	80-120	5.00		0.14	U	5	1	100		10/02/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5154-06

Client ID: MW-107MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	19.4		10.0		10	1	94		10/02/2019
Chloride	mg/L	80-120	4250	OR	4680	OR	3	1	-14333	*	10/02/2019
Fluoride	mg/L	80-120	2.30		0.15	U	2	1	115		10/02/2019
Nitrite	mg/L	80-120	0.47		0.11	U	3	1	16	*	10/02/2019
Nitrate	mg/L	80-120	2.50		0.099	U	2.5	1	100		10/02/2019
Sulfate	mg/L	80-120	437	OR	461	OR	15	1	-160	*	10/02/2019
Orthophosphate as P	mg/L	80-120	5.10		0.14	U	5	1	102		10/02/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5154-11

Client ID: MW-103IMS **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	10.8		1.60		10	1	92		10/03/2019
Chloride	mg/L	80-120	612	OR	672	OR	3	1	-2000	*	10/03/2019
Fluoride	mg/L	80-120	2.20		0.30	J	2	1	95		10/03/2019
Nitrite	mg/L	80-120	2.50		0.11	U	3	1	83		10/03/2019
Nitrate	mg/L	80-120	2.50		0.099	U	2.5	1	100		10/03/2019
Sulfate	mg/L	80-120	31.4		18.8		15	1	84		10/03/2019
Orthophosphate as P	mg/L	80-120	6.60		1.20		5	1	108		10/03/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5154-11

Client ID: MW-103IMSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	11.1		1.60		10	1	95		10/03/2019
Chloride	mg/L	80-120	605	OR	672	OR	3	1	-2233	*	10/03/2019
Fluoride	mg/L	80-120	2.40		0.30	J	2	1	105		10/03/2019
Nitrite	mg/L	80-120	2.50		0.11	U	3	1	83		10/03/2019
Nitrate	mg/L	80-120	2.50		0.099	U	2.5	1	100		10/03/2019
Sulfate	mg/L	80-120	31.9		18.8		15	1	87		10/03/2019
Orthophosphate as P	mg/L	80-120	6.80		1.20		5	1	112		10/03/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5154-26

Client ID: MW-101DMS **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	9.90		0.28	U	10	1	99		10/04/2019
Chloride	mg/L	80-120	584	OR	625	OR	3	1	-1367	*	10/04/2019
Fluoride	mg/L	80-120	4.10		0.15	U	2	1	205	*	10/04/2019
Nitrite	mg/L	80-120	1.50		0.11	U	3	1	50	*	10/04/2019
Nitrate	mg/L	80-120	13.3	OR	11.4	OR	2.5	1	76	*	10/04/2019
Sulfate	mg/L	80-120	107	OR	99.5	OR	15	1	50	*	10/04/2019
Orthophosphate as P	mg/L	80-120	5.70		0.14	U	5	1	114		10/04/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5154-26

Client ID: MW-101DMSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	10.2		0.28	U	10	1	102		10/04/2019
Chloride	mg/L	80-120	593	OR	625	OR	3	1	-1067	*	10/04/2019
Fluoride	mg/L	80-120	4.10		0.15	U	2	1	205	*	10/04/2019
Nitrite	mg/L	80-120	1.60		0.11	U	3	1	53	*	10/04/2019
Nitrate	mg/L	80-120	13.3	OR	11.4	OR	2.5	1	76	*	10/04/2019
Sulfate	mg/L	80-120	106	OR	99.5	OR	15	1	43	*	10/04/2019
Orthophosphate as P	mg/L	80-120	6.10		0.14	U	5	1	122	*	10/04/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5168-12

Client ID: 20190770-SS-COMPOSITE-10MS **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	11.3		1.80		10	1	95		10/04/2019
Chloride	mg/L	80-120	640	OR	707	OR	3	1	-2233	*	10/04/2019
Fluoride	mg/L	80-120	4.80		0.15	U	2	1	240	*	10/04/2019
Nitrite	mg/L	80-120	2.80		0.11	U	3	1	93		10/04/2019
Nitrate	mg/L	80-120	2.60		0.099	U	2.5	1	104		10/04/2019
Sulfate	mg/L	80-120	34.7		20.1		15	1	97		10/04/2019
Orthophosphate as P	mg/L	80-120	5.80		0.14	U	5	1	116		10/04/2019

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Matrix Spike Summary

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4 **Sample ID:** K5168-12

Client ID: 20190770-SS-COMPOSITE-10MSD **Percent Solids for Spike Sample:** 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	11.2		1.80		10	1	94		10/04/2019
Chloride	mg/L	80-120	639	OR	707	OR	3	1	-2267	*	10/04/2019
Fluoride	mg/L	80-120	4.50		0.15	U	2	1	225	*	10/04/2019
Nitrite	mg/L	80-120	2.80		0.11	U	3	1	93		10/04/2019
Nitrate	mg/L	80-120	2.50		0.099	U	2.5	1	100		10/04/2019
Sulfate	mg/L	80-120	34.7		20.1		15	1	97		10/04/2019
Orthophosphate as P	mg/L	80-120	5.80		0.14	U	5	1	116		10/04/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5154-06
Client ID: MW-107DUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Sulfate	mg/L	+/-20	461	OR	461	OR	1	0		10/02/2019
Fluoride	mg/L	+/-20	0.15	U	0.15	U	1	0		10/02/2019
Nitrate	mg/L	+/-20	0.099	U	0.099	U	1	0		10/02/2019
Nitrite	mg/L	+/-20	0.11	U	0.11	U	1	0		10/02/2019
Orthophosphate as P	mg/L	+/-20	0.14	U	0.14	U	1	0		10/02/2019
Bromide	mg/L	+/-20	10.0		10.1		1	1		10/02/2019
Chloride	mg/L	+/-20	4680	OR	4630	OR	1	1		10/02/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5154-06
Client ID: MW-107MSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Sulfate	mg/L	+/-20	438	OR	437	OR	1	0		10/02/2019
Bromide	mg/L	+/-20	19.5		19.4		1	1		10/02/2019
Chloride	mg/L	+/-20	4190	OR	4250	OR	1	1		10/02/2019
Orthophosphate as P	mg/L	+/-20	5.00		5.10		1	2		10/02/2019
Fluoride	mg/L	+/-20	2.40		2.30		1	4		10/02/2019
Nitrate	mg/L	+/-20	2.60		2.50		1	4		10/02/2019
Nitrite	mg/L	+/-20	0.67		0.47		1	35	*	10/02/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5154-11
Client ID: MW-103IDUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Orthophosphate as P	mg/L	+/-20	1.20		1.20		1	0		10/03/2019
Nitrate	mg/L	+/-20	0.099	U	0.099	U	1	0		10/03/2019
Nitrite	mg/L	+/-20	0.11	U	0.11	U	1	0		10/03/2019
Sulfate	mg/L	+/-20	18.8		18.6		1	1		10/03/2019
Chloride	mg/L	+/-20	672	OR	687	OR	1	2		10/03/2019
Bromide	mg/L	+/-20	1.60		1.50		1	6		10/03/2019
Fluoride	mg/L	+/-20	0.30	J	0.15	U	1	200	*	10/03/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5154-11
Client ID: MW-103IMSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Nitrate	mg/L	+/-20	2.50		2.50		1	0		10/03/2019
Nitrite	mg/L	+/-20	2.50		2.50		1	0		10/03/2019
Chloride	mg/L	+/-20	612	OR	605	OR	1	1		10/03/2019
Sulfate	mg/L	+/-20	31.4		31.9		1	2		10/03/2019
Bromide	mg/L	+/-20	10.8		11.1		1	3		10/03/2019
Orthophosphate as P	mg/L	+/-20	6.60		6.80		1	3		10/03/2019
Fluoride	mg/L	+/-20	2.20		2.40		1	9		10/03/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5154-26
Client ID: MW-101DDUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Bromide	mg/L	+/-20	0.28	U	0.28	U	1	0		10/04/2019
Fluoride	mg/L	+/-20	0.15	U	0.15	U	1	0		10/04/2019
Nitrite	mg/L	+/-20	0.11	U	0.11	U	1	0		10/04/2019
Orthophosphate as P	mg/L	+/-20	0.14	U	0.14	U	1	0		10/04/2019
Chloride	mg/L	+/-20	625	OR	629	OR	1	1		10/04/2019
Sulfate	mg/L	+/-20	99.5	OR	98.0	OR	1	2		10/04/2019
Nitrate	mg/L	+/-20	11.4	OR	11.7	OR	1	3		10/04/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5154-26
Client ID: MW-101DMSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Fluoride	mg/L	+/-20	4.10		4.10		1	0		10/04/2019
Nitrate	mg/L	+/-20	13.3	OR	13.3	OR	1	0		10/04/2019
Sulfate	mg/L	+/-20	107	OR	106	OR	1	1		10/04/2019
Chloride	mg/L	+/-20	584	OR	593	OR	1	2		10/04/2019
Bromide	mg/L	+/-20	9.90		10.2		1	3		10/04/2019
Nitrite	mg/L	+/-20	1.50		1.60		1	6		10/04/2019
Orthophosphate as P	mg/L	+/-20	5.70		6.10		1	7		10/04/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5168-12
Client ID: 20190770-SS-COMPOSITE-10
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Bromide	mg/L	+/-20	1.80		1.80		1	0		10/04/2019
Fluoride	mg/L	+/-20	0.15	U	0.15	U	1	0		10/04/2019
Nitrate	mg/L	+/-20	0.099	U	0.099	U	1	0		10/04/2019
Nitrite	mg/L	+/-20	0.11	U	0.11	U	1	0		10/04/2019
Orthophosphate as P	mg/L	+/-20	0.14	U	0.14	U	1	0		10/04/2019
Chloride	mg/L	+/-20	707	OR	712	OR	1	1		10/04/2019
Sulfate	mg/L	+/-20	20.1		20.8		1	3		10/04/2019

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Duplicate Sample Summary

Client: TRC Companies, Inc.
SDG No.: K5154
Project: NYCDPR Bush Terminal LandFill Piers 1-4
Sample ID: K5168-12
Client ID: 20190770-SS-COMPOSITE-10MSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifie	Duplicate Result	Conc. Qualifie	Dilution Factor	RPD/ AD	Qual	Analysis Date
Nitrite	mg/L	+/-20	2.80		2.80		1	0		10/04/2019
Orthophosphate as P	mg/L	+/-20	5.80		5.80		1	0		10/04/2019
Sulfate	mg/L	+/-20	34.7		34.7		1	0		10/04/2019
Chloride	mg/L	+/-20	640	OR	639	OR	1	0		10/04/2019
Bromide	mg/L	+/-20	11.3		11.2		1	1		10/04/2019
Nitrate	mg/L	+/-20	2.60		2.50		1	4		10/04/2019
Fluoride	mg/L	+/-20	4.80		4.50		1	6		10/04/2019

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Laboratory Control Sample Summary

Client:	TRC Companies, Inc.	**SDG No.:**	K5154
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	**Run No.:**	LB105422

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB105422BSW								
Bromide	mg/L	10	9.60		96	1	90-110	10/02/2019
Chloride	mg/L	3	2.90		97	1	90-110	10/02/2019
Fluoride	mg/L	2	1.90		95	1	90-110	10/02/2019
Nitrite	mg/L	3	2.90		97	1	90-110	10/02/2019
Nitrate	mg/L	2.5	2.40		96	1	90-110	10/02/2019
Sulfate	mg/L	15	14.3		95	1	90-110	10/02/2019
Orthophosphate as P	mg/L	5	4.90		98	1	90-110	10/02/2019

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Laboratory Control Sample Summary

Client:	TRC Companies, Inc.	**SDG No.:**	K5154
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	**Run No.:**	LB105455

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB105455BSW								
Bromide	mg/L	10	10.0		100	1	90-110	10/03/2019
Chloride	mg/L	3	3.00		100	1	90-110	10/03/2019
Fluoride	mg/L	2	2.00		100	1	90-110	10/03/2019
Nitrite	mg/L	3	3.00		100	1	90-110	10/03/2019
Nitrate	mg/L	2.5	2.50		100	1	90-110	10/03/2019
Sulfate	mg/L	15	15.2		101	1	90-110	10/03/2019
Orthophosphate as P	mg/L	5	5.20		104	1	90-110	10/03/2019

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Laboratory Control Sample Summary

Client:	TRC Companies, Inc.	**SDG No.:**	K5154
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	**Run No.:**	LB105455

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB105455BSW2								
Bromide	mg/L	10	10.1		101	1	90-110	10/04/2019
Chloride	mg/L	3	3.00		100	1	90-110	10/04/2019
Fluoride	mg/L	2	2.10		105	1	90-110	10/04/2019
Nitrite	mg/L	3	3.00		100	1	90-110	10/04/2019
Nitrate	mg/L	2.5	2.60		104	1	90-110	10/04/2019
Sulfate	mg/L	15	14.4		96	1	90-110	10/04/2019
Orthophosphate as P	mg/L	5	5.40		108	1	90-110	10/04/2019

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Laboratory Control Sample Summary

Client:	TRC Companies, Inc.	**SDG No.:**	K5154
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	**Run No.:**	LB105455

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB105455BSW3								
Bromide	mg/L	10	9.50		95	1	90-110	10/04/2019
Chloride	mg/L	3	2.90		97	1	90-110	10/04/2019
Fluoride	mg/L	2	2.00		100	1	90-110	10/04/2019
Nitrite	mg/L	3	3.00		100	1	90-110	10/04/2019
Nitrate	mg/L	2.5	2.50		100	1	90-110	10/04/2019
Sulfate	mg/L	15	14.6		97	1	90-110	10/04/2019
Orthophosphate as P	mg/L	5	4.90		98	1	90-110	10/04/2019

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Laboratory Control Sample Summary

Client:	TRC Companies, Inc.	**SDG No.:**	K5154
Project:	NYCDPR Bush Terminal LandFill Piers 1-4	**Run No.:**	LB105455

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB105455BSW4								
Bromide	mg/L	10	9.70		97	1	90-110	10/04/2019
Chloride	mg/L	3	3.00		100	1	90-110	10/04/2019
Fluoride	mg/L	2	2.10		105	1	90-110	10/04/2019
Nitrite	mg/L	3	3.00		100	1	90-110	10/04/2019
Nitrate	mg/L	2.5	2.50		100	1	90-110	10/04/2019
Sulfate	mg/L	15	14.3		95	1	90-110	10/04/2019
Orthophosphate as P	mg/L	5	5.20		104	1	90-110	10/04/2019

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Method Detection Limits

Client: TRC Companies, Inc. **SDG No.:** K5154

Project: NYCDPR Bush Terminal LandFill Piers 1-4

Analyte	Units	MDL	RDL
Method: 300.0		**MDL Date:** 01/15/2006	
Matrix Category: WATER			
Chloride	mg/L	0.075	0.60

RAW DATA

IC-1 300.0
10-03-19 AR

Clear table

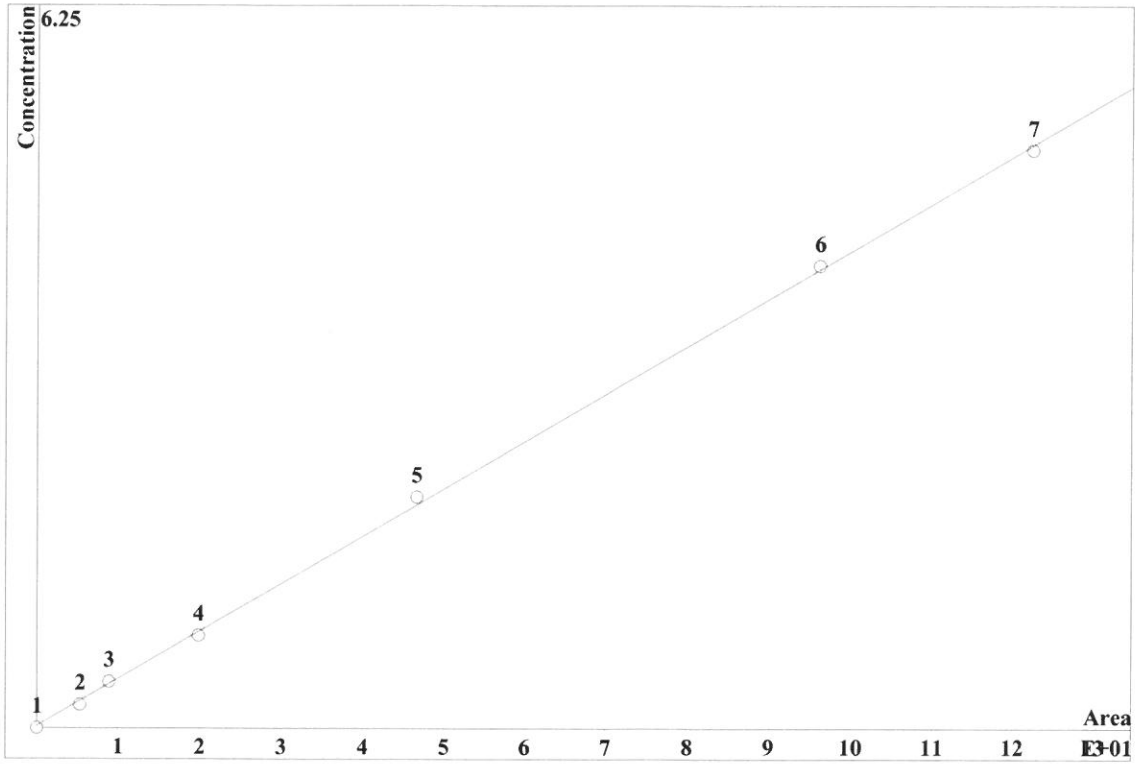
ident	concentration F-	concentration CL-	concentration NO2	concentration BR-	concentration NO3	concentration HPO4	concentration SO4	file name	date time	Initial wt/ Final Vol	Analyst
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-09-11_	9/11/19 11:54		AK/AP
STD2	0.2370	0.3870	0.3840	1.3120	0.3250	0.3970	2.0250	_2019-09-11_	9/11/19 12:24		AK/AP
STD3	0.3840	0.6650	0.6490	2.1980	0.5430	1.0120	3.2650	_2019-09-11_	9/11/19 12:55		AK/AP
STD4	0.8350	1.1990	1.1920	3.9850	0.9960	2.1480	5.9770	_2019-09-11_	9/11/19 13:26		AK/AP
STD5	1.9310	2.8310	2.8440	9.3900	2.3630	5.0000	14.1360	_2019-09-11_	9/11/19 13:57		AK/AP
STD6	3.9680	5.8520	5.9090	19.6520	4.9100	9.8450	29.2610	_2019-09-11_	9/11/19 14:28		AK/AP
STD7	5.0450	7.6660	7.6210	25.4620	6.3640	12.5980	38.3360	_2019-09-11_	9/11/19 14:59		AK/AP
ICV	2.0100	2.8810	2.8880	9.5180	2.4230	5.1840	14.6160	_2019-09-11_	9/11/19 15:30		AK/AP
ICB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-09-11_	9/11/19 16:01		AK/AP
CCV	1.9410	3.0000	2.8950	9.6160	2.4100	4.7590	14.3710	_2019-10-02_	10/2/19 9:58		AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 10:40		AK/AP
LB105422BLW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 11:11		AK/AP
LB105422BSW	1.9360	2.9250	2.9080	9.5950	2.4020	4.9000	14.3470	_2019-10-02_	10/2/19 11:41		AK/AP
K5127-03	0.2270	919.0960	0.0000	2.2700	0.0000	0.0000	41.0660	_2019-10-02_	10/2/19 12:12		AK/AP
K5127-04	0.0000	914.6100	0.0000	2.2470	0.0000	0.0000	39.7580	_2019-10-02_	10/2/19 12:42		AK/AP
K5154-03	0.5600	857.7170	0.0000	1.7270	0.0000	0.0000	103.0350	_2019-10-02_	10/2/19 13:43		AK/AP
K5154-04	0.9200	998.5420	0.0000	2.3410	1.8710	0.0000	106.8370	_2019-10-02_	10/2/19 14:13		AK/AP
K5154-05	0.0000	4666.2210	0.0000	10.0730	0.0000	0.0000	462.7720	_2019-10-02_	10/2/19 14:44		AK/AP
K5154-06	0.0000	4677.3880	0.0000	10.0040	0.0000	0.0000	460.6940	_2019-10-02_	10/2/19 15:14		AK/AP
K5154-06DUP	0.0000	4628.3420	0.0000	10.0670	0.0000	0.0000	460.5000	_2019-10-02_	10/2/19 15:45		AK/AP
CCV	1.7080	3.1070	2.8880	9.6260	2.4210	4.8440	14.4440	_2019-10-02_	10/2/19 16:15		AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 16:45		AK/AP
K5154-02	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 17:16		AK/AP
K5154-06MS	2.3510	4189.9830	0.6680	19.4540	2.5510	5.0450	437.8080	_2019-10-02_	10/2/19 17:46		AK/AP
K5154-06MSD	2.2610	4247.3270	0.4690	19.3700	2.4760	5.0830	437.1850	_2019-10-02_	10/2/19 18:17		AK/AP
K5127-03DLX200	0.0000	3.2710	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 18:47		AK/AP
K5127-04DLX200	0.0000	3.1870	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 19:17		AK/AP
K5154-03DLX200	0.0000	2.8640	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 19:48		AK/AP
K5154-04DLX200	0.0000	3.3260	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 20:18		AK/AP
K5154-05DLX500	0.0000	6.2400	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 20:49		AK/AP
K5154-06DLX500	0.0000	5.9940	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 21:19		AK/AP
CCV	1.9790	3.0120	2.9550	9.6710	2.4370	4.8390	14.5160	_2019-10-02_	10/2/19 21:50		AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-02_	10/2/19 22:20		AK/AP

IC-1 Cal

9-11-19 AR

CALIBRATION OF COMPONENT F-

Method: ANIONS 09-11-19.mtw
Equation: Q = 0.821033·A + 0.364372
RSD: 2.494 %
Correlation coefficient: 0.999737

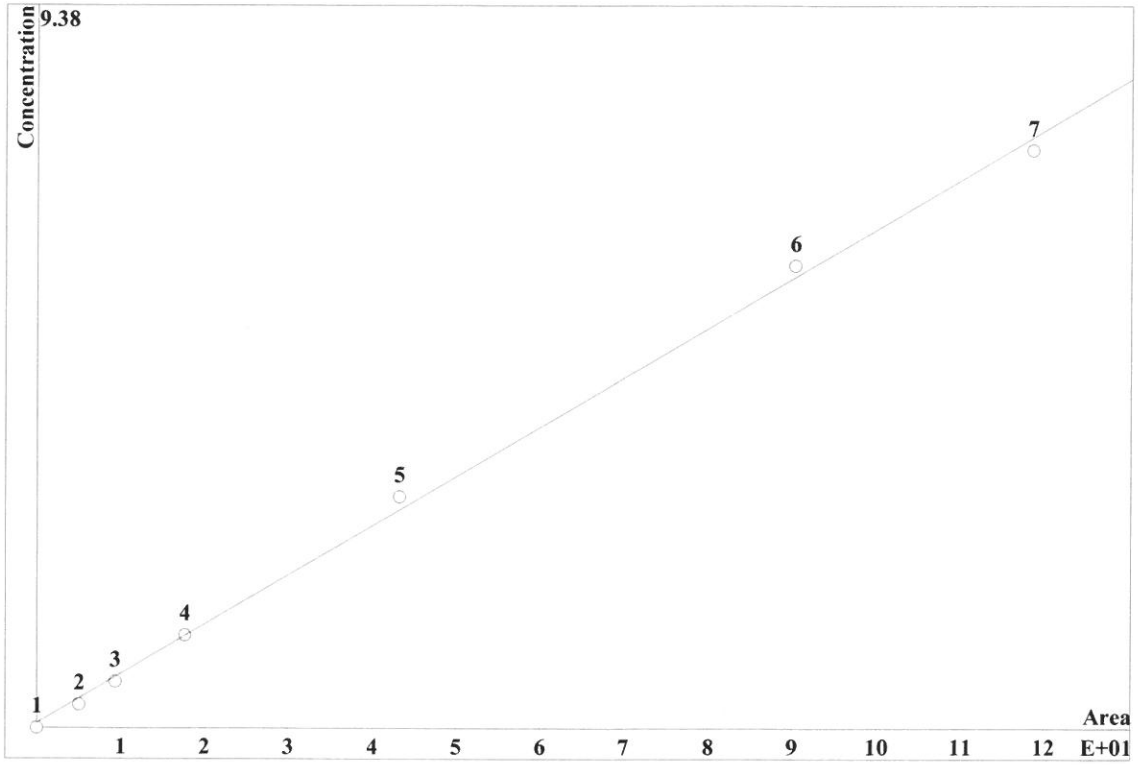


K3 = 0 K2 = 0 K1 = 0.821033 K0 = 0.364372
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0		No
2	0.2551	5.321	0.2	20	5.943		Yes
3	0.5016	8.91	0.4	20	5.943		Yes
4	1.1	19.9	0.8	20	5.943		Yes
5	3	46.6	2	20	5.943		Yes
6	6.637	96.22	4	20	5.943		Yes
7	8.822	122.5	5	20	5.943		Yes

CALIBRATION OF COMPONENT CL-

Method: ANIONS 09-11-19.mtw
Equation: Q = 1.28218·A + 1.24047
RSD: 4.831 %
Correlation coefficient: 0.999013

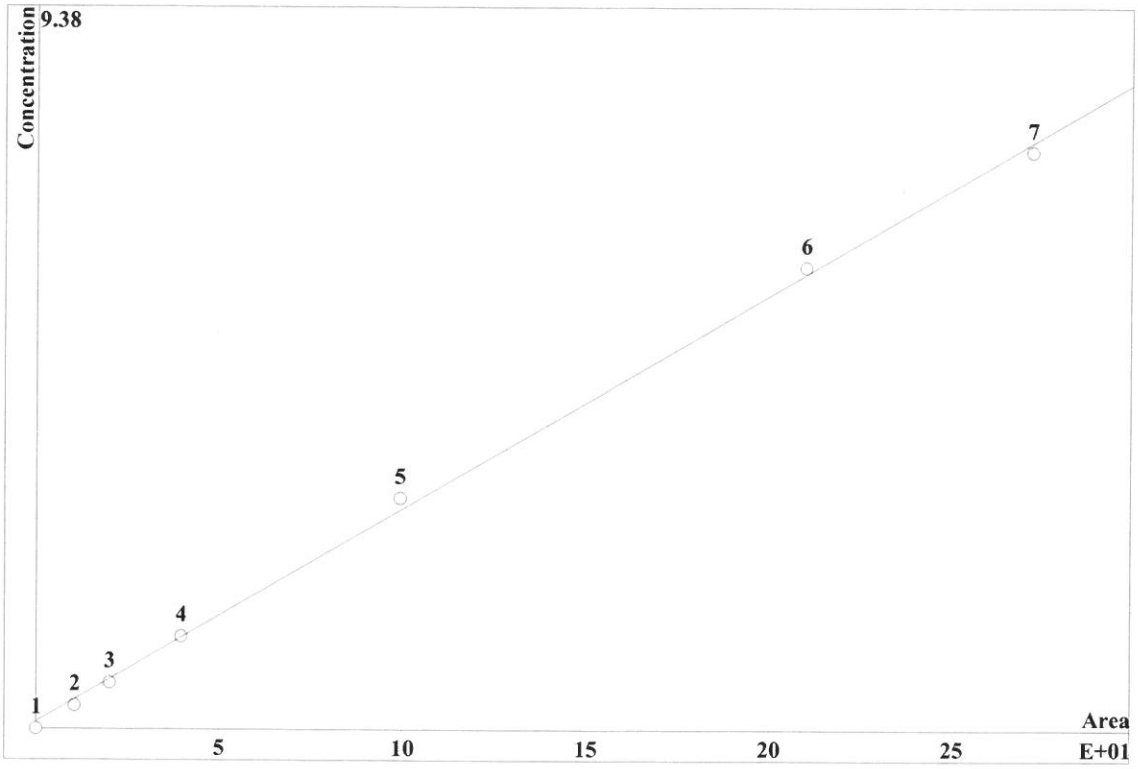


K3 = 0 K2 = 0 K1 = 1.28218 K0 = 1.24047
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.3214	5.069	0.3	20	8.829	Yes	
3	0.5935	9.405	0.6	20	8.829	Yes	
4	1.171	17.74	1.2	20	8.829	Yes	
5	2.904	43.2	3	20	8.829	Yes	
6	6.207	90.31	6	20	8.829	Yes	
7	8.164	118.6	7.5	20	8.829	Yes	

CALIBRATION OF COMPONENT NO2

Method: ANIONS 09-11-19.mtw
Equation: Q = 0.554364·A + 1.90063
RSD: 3.841 %
Correlation coefficient: 0.999376

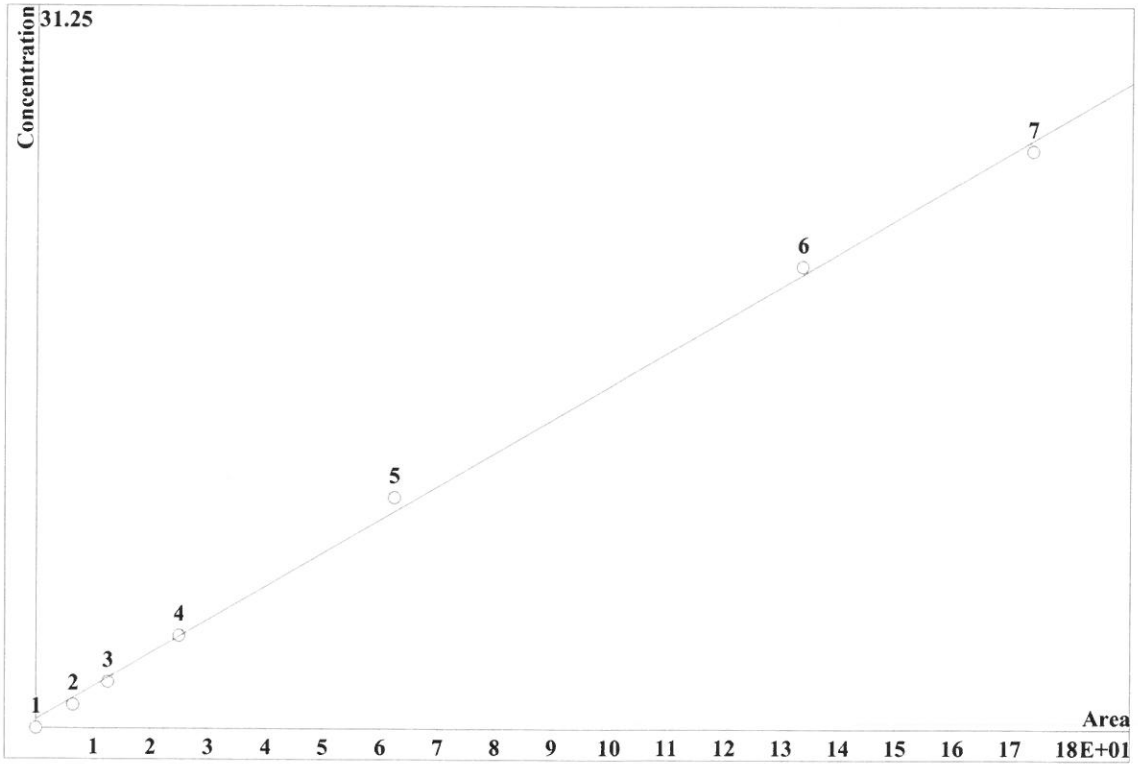


K3 = 0 K2 = 0 K1 = 0.554364 K0 = 1.90063
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.5652	10.44	0.3	20	10.66	Yes	
3	1.074	19.98	0.6	20	10.66	Yes	
4	2.165	39.57	1.2	20	10.66	Yes	
5	5.397	99.19	3	20	10.66	Yes	
6	11.17	209.8	6	20	10.66	Yes	
7	14.37	271.5	7.5	20	10.66	Yes	

CALIBRATION OF COMPONENT BR-

Method: ANIONS 09-11-19.mtw
Equation: Q = 2.88696·A + 7.64928
RSD: 4.442 %
Correlation coefficient: 0.999166

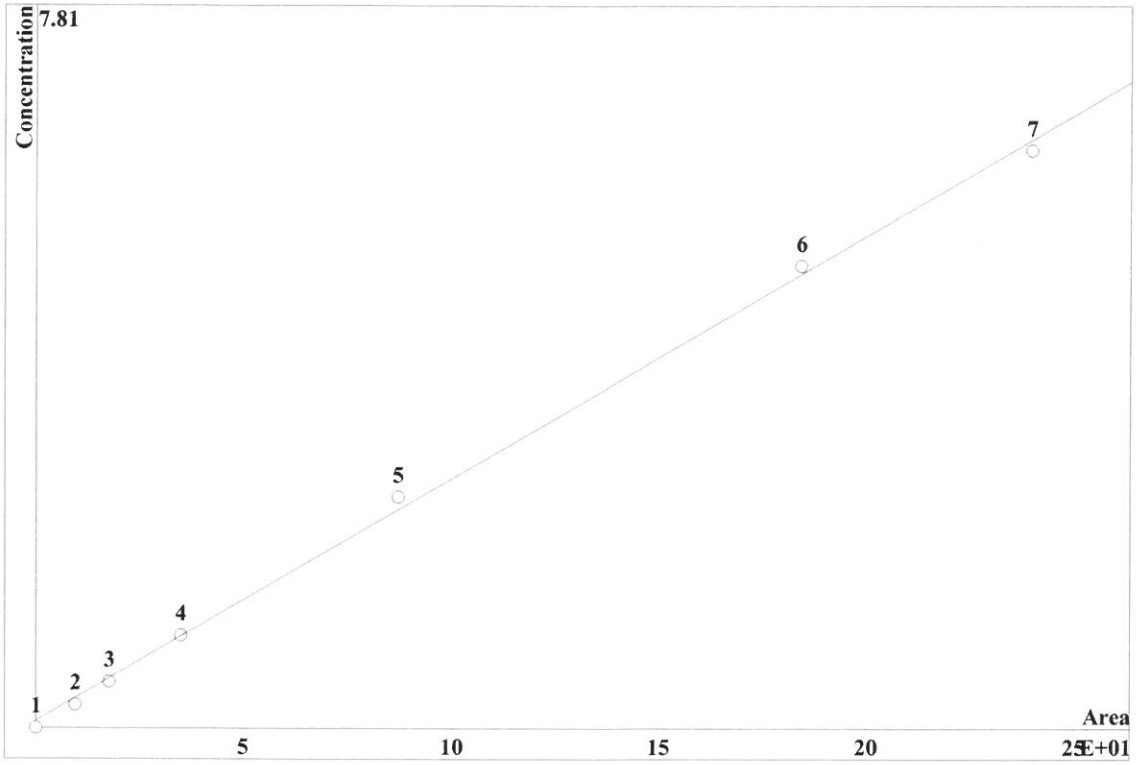


K3 = 0 K2 = 0 K1 = 2.88696 K0 = 7.64928
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.2907	6.439	1	20	13.72	Yes	
3	0.5549	12.58	2	20	13.72	Yes	
4	1.122	24.96	4	20	13.72	Yes	
5	2.84	62.4	10	20	13.72	Yes	
6	6.118	133.5	20	20	13.72	Yes	
7	8.011	173.7	25	20	13.72	Yes	

CALIBRATION OF COMPONENT NO3

Method: ANIONS 09-11-19.mtw
Equation: Q = 0.524779·A + 1.52257
RSD: 4.212 %
Correlation coefficient: 0.999250

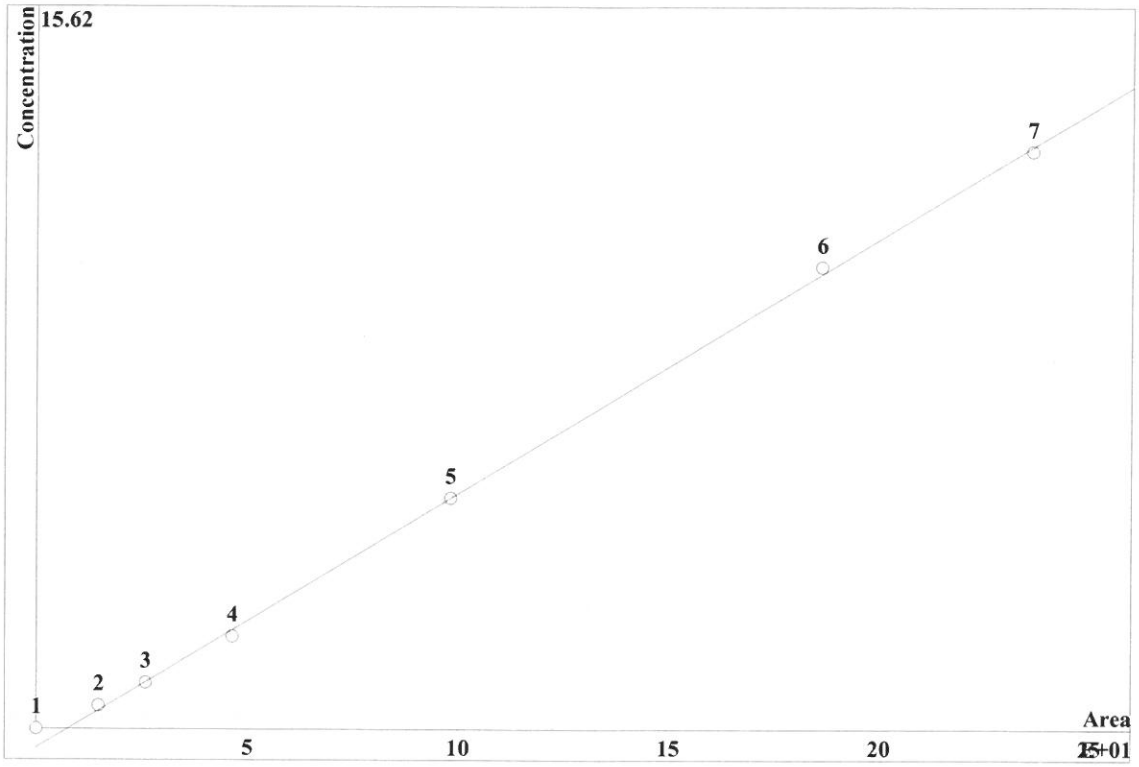


K3 = 0 K2 = 0 K1 = 0.524779 K0 = 1.52257
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.3397	9.489	0.25	20	15.85	Yes	
3	0.6435	17.78	0.5	20	15.85	Yes	
4	1.284	35.05	1	20	15.85	Yes	
5	3.191	87.15	2.5	20	15.85	Yes	
6	6.794	184.2	5	20	15.85	Yes	
7	8.907	239.6	6.25	20	15.85	Yes	

CALIBRATION OF COMPONENT HPO4

Method: ANIONS 09-11-19.mtw
Equation: Q = 1.1014·A - 8.20097
RSD: 2.490 %
Correlation coefficient: 0.999738



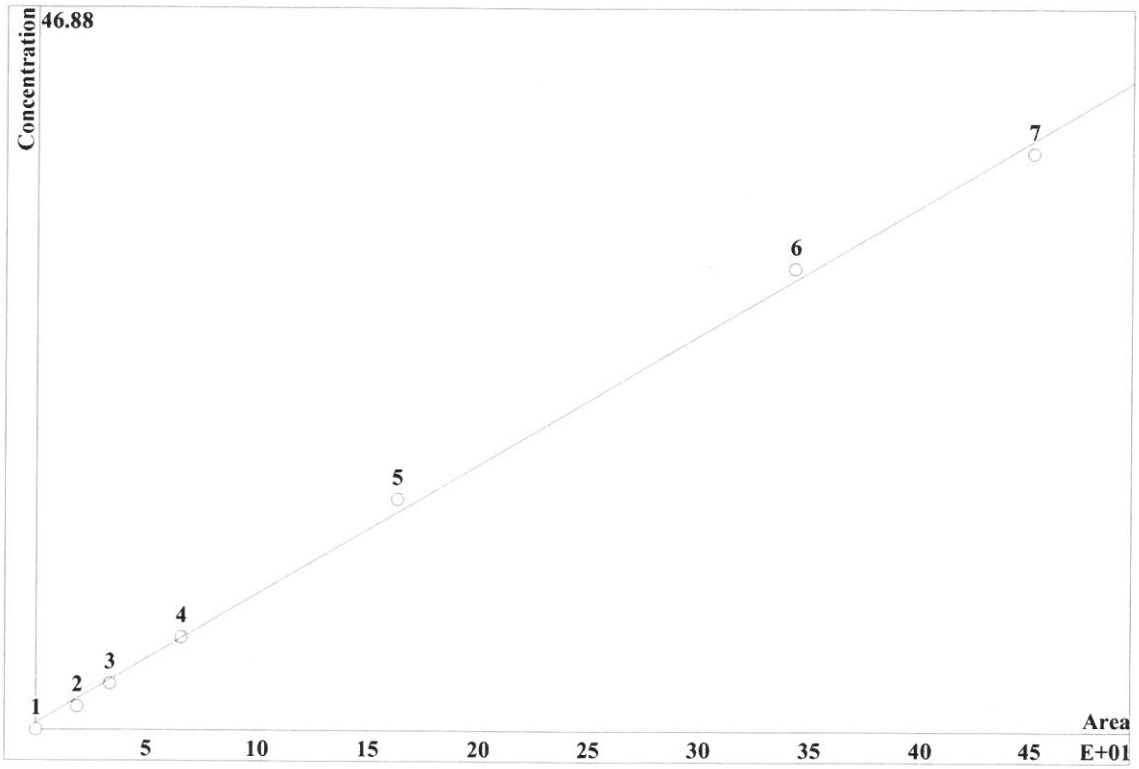
K3 = 0 K2 = 0 K1 = 1.1014 K0 = -8.20097
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0		No
2	0.3285	14.66	0.5	20	21.46		Yes
3	0.594	25.82	1	20	21.46		Yes
4	1.103	46.45	2	20	21.46		Yes
5	2.428	98.23	5	20	21.46		Yes
6	4.756	186.2	10	20	21.46		Yes
7	6.103	236.2	12.5	20	21.46		Yes

AL

CALIBRATION OF COMPONENT SO4

Method: ANIONS 09-11-19.mtw
Equation: Q = 1.68205·A + 8.86802
RSD: 4.931 %
Correlation coefficient: 0.998972



K3 = 0 K2 = 0 K1 = 1.68205 K0 = 8.86802
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

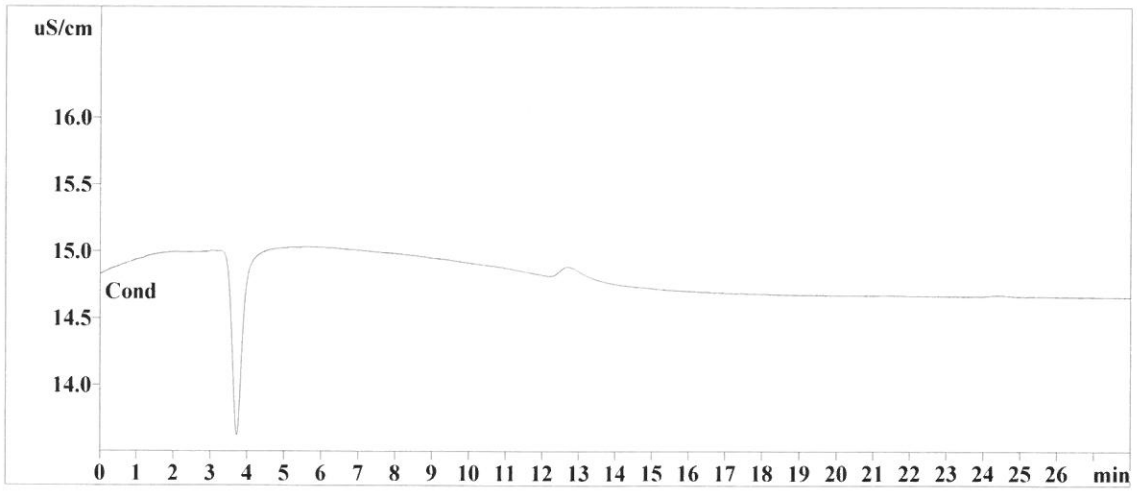
Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.5148	18.8	1.5	20	24.69	Yes	
3	0.9449	33.55	3	20	24.69	Yes	
4	1.879	65.79	6	20	24.69	Yes	
5	4.708	162.8	15	20	24.69	Yes	
6	10.1	342.7	30	20	24.69	Yes	
7	13.2	450.6	37.5	20	24.69	Yes	

Report date: 9/16/2019 10:46:39 AM
Printed by: wet

Ident: STD1
Analysis from: 9/11/2019 11:54:00 AM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68587

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

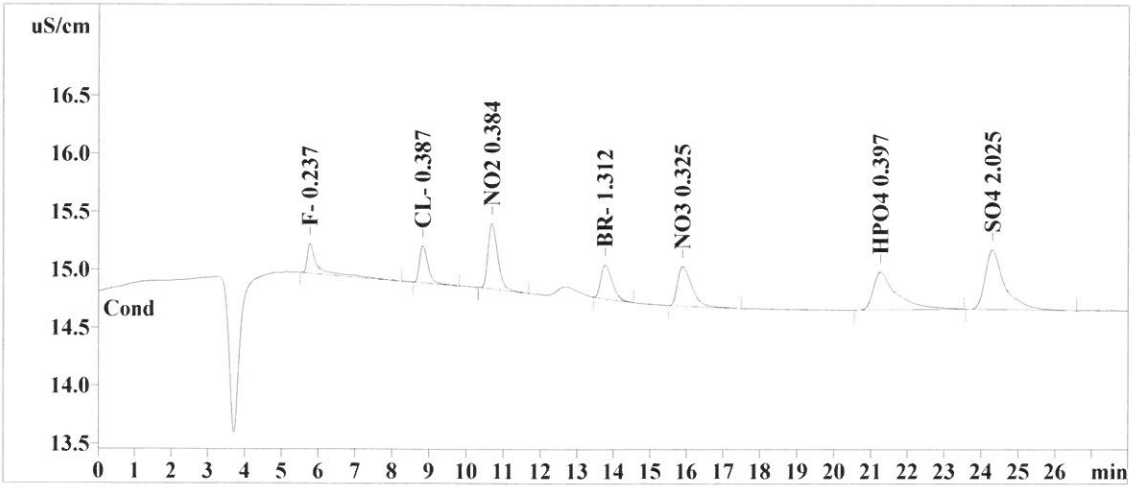
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:46:47 AM
Printed by: wet

Ident: STD2
Analysis from: 9/11/2019 12:24:55 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68588

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	0.209	0.25	9.74	5.321	7.58	0.
2	8.83	0.236	0.32	12.26	5.069	7.22	0.
3	10.68	0.277	0.56	21.60	10.439	14.87	0.
4	13.76	0.345	0.29	11.09	6.439	9.17	0.
5	15.89	0.420	0.34	12.97	9.489	13.51	0.
6	21.25	0.562	0.33	12.53	14.663	20.88	0.
7	24.30	0.481	0.51	19.67	18.804	26.78	0.
7	28.00	0.361	2.61	99.86	70.225	100.00	0.

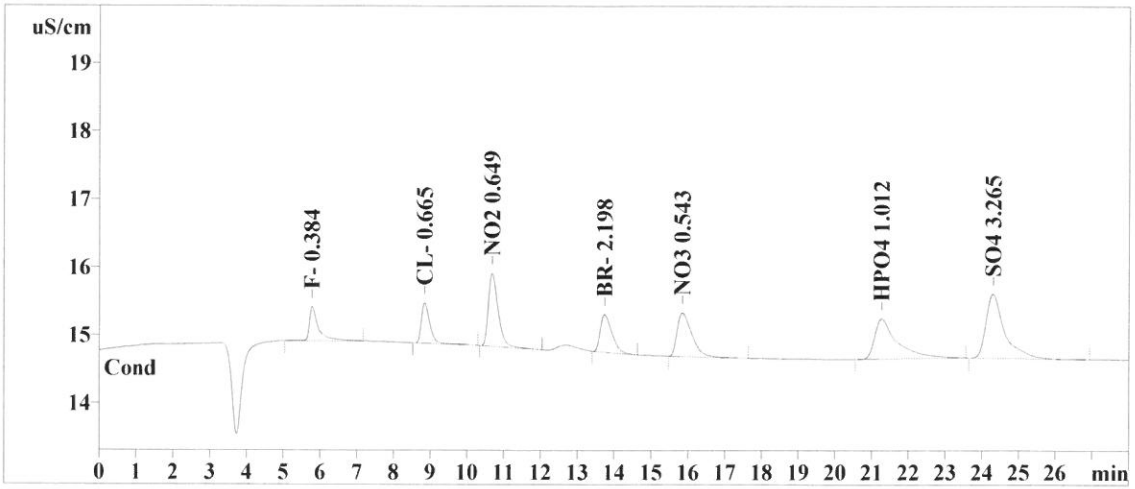
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:46:56 AM
Printed by: wet

Ident: STD3
Analysis from: 9/11/2019 12:55:50 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68589

SAMPLE:
: AK/AP
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.78	0.216	0.50	10.22	8.910	6.96	0.
2	8.85	0.230	0.59	12.08	9.405	7.35	0.
3	10.68	0.276	1.07	21.88	19.979	15.61	0.
4	13.73	0.350	0.55	11.31	12.578	9.82	0.
5	15.84	0.421	0.64	13.11	17.783	13.89	0.
6	21.27	0.542	0.59	12.09	25.819	20.17	0.
7	24.30	0.468	0.94	19.25	33.551	26.21	0.
7	28.00	0.358	4.90	99.93	128.026	100.00	0.

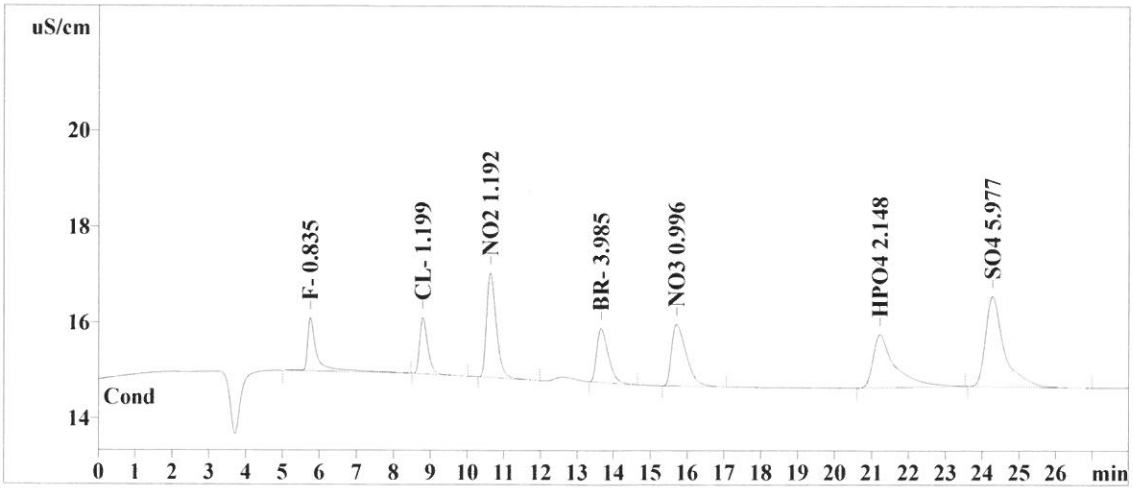
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:15 AM
Printed by: wet

Ident: STD4
Analysis from: 9/11/2019 1:26:44 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68590

SAMPLE:
: AK/AP
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.75	0.204	1.10	11.19	19.896	7.98	0.
2	8.79	0.227	1.17	11.92	17.742	7.11	0.
3	10.62	0.274	2.16	22.03	39.569	15.86	0.
4	13.64	0.342	1.12	11.42	24.957	10.00	0.
5	15.71	0.417	1.28	13.07	35.051	14.05	0.
6	21.22	0.517	1.10	11.22	46.447	18.62	0.
7	24.28	0.463	1.88	19.13	65.793	26.37	0.
7	28.00	0.349	9.82	99.97	249.455	100.00	0.

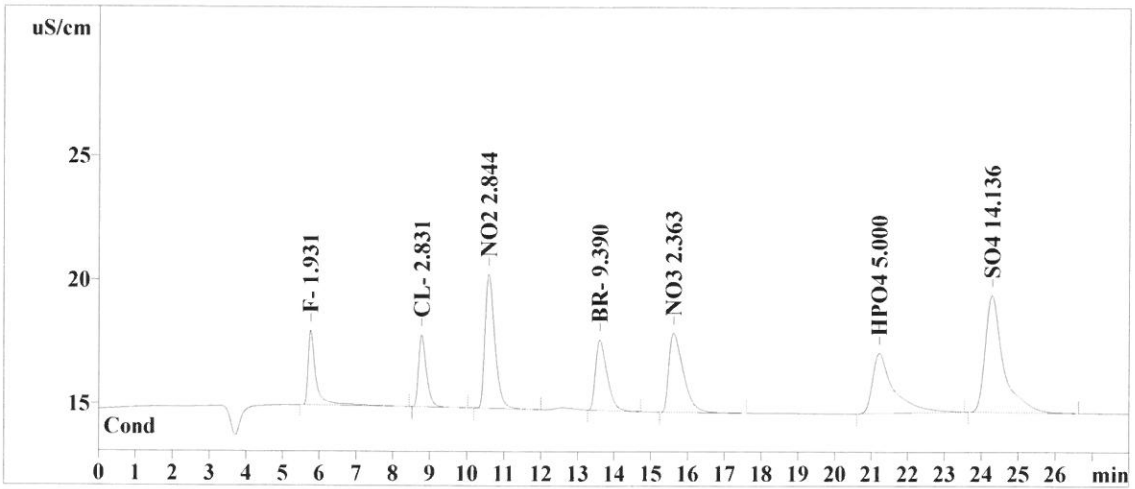
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:25 AM
Printed by: wet

Ident: STD5
Analysis from: 9/11/2019 1:57:39 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68591

SAMPLE:
: AK/AP
Vial number: 6
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	0.193	3.00	12.26	46.597	7.77	0.
2	8.78	0.222	2.90	11.87	43.198	7.20	0.
3	10.59	0.276	5.40	22.06	99.193	16.54	0.
4	13.59	0.334	2.84	11.60	62.405	10.41	0.
5	15.61	0.417	3.19	13.04	87.148	14.53	0.
6	21.21	0.496	2.43	9.92	98.231	16.38	0.
7	24.28	0.456	4.71	19.24	162.812	27.15	0.
7	28.00	0.342	24.47	100.00	599.583	100.00	0.

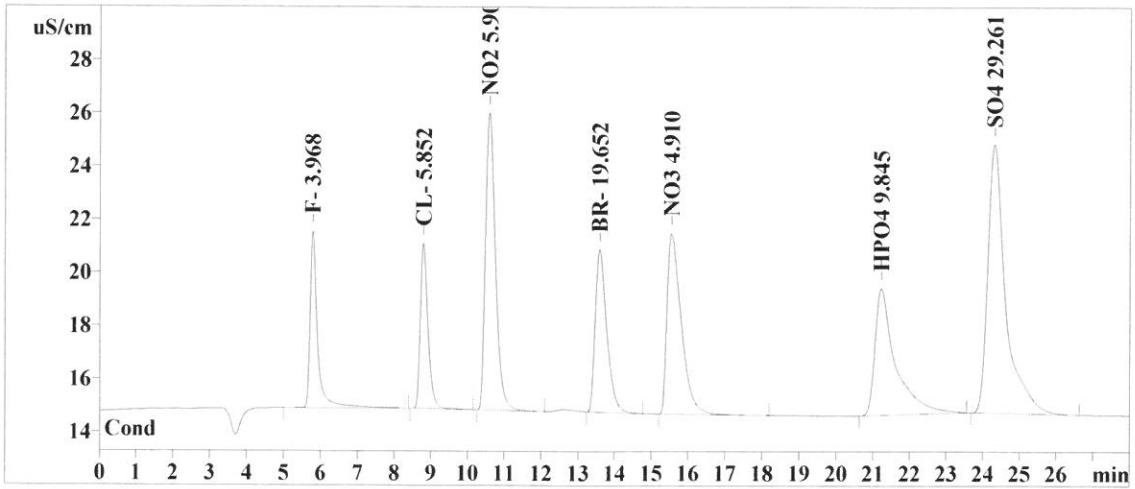
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:34 AM
Printed by: wet

Ident: STD6
Analysis from: 9/11/2019 2:28:34 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68592

SAMPLE:
: AK/AP
Vial number: 7
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.187	6.64	12.81	96.218	7.74	0.
2	8.79	0.216	6.21	11.99	90.307	7.27	0.
3	10.58	0.284	11.17	21.57	209.761	16.88	0.
4	13.58	0.328	6.12	11.81	133.496	10.74	0.
5	15.55	0.413	6.79	13.12	184.218	14.82	0.
6	21.22	0.482	4.76	9.18	186.219	14.98	0.
7	24.31	0.450	10.10	19.51	342.652	27.57	0.
7	28.00	0.337	51.78	100.00	1242.871	100.00	0.

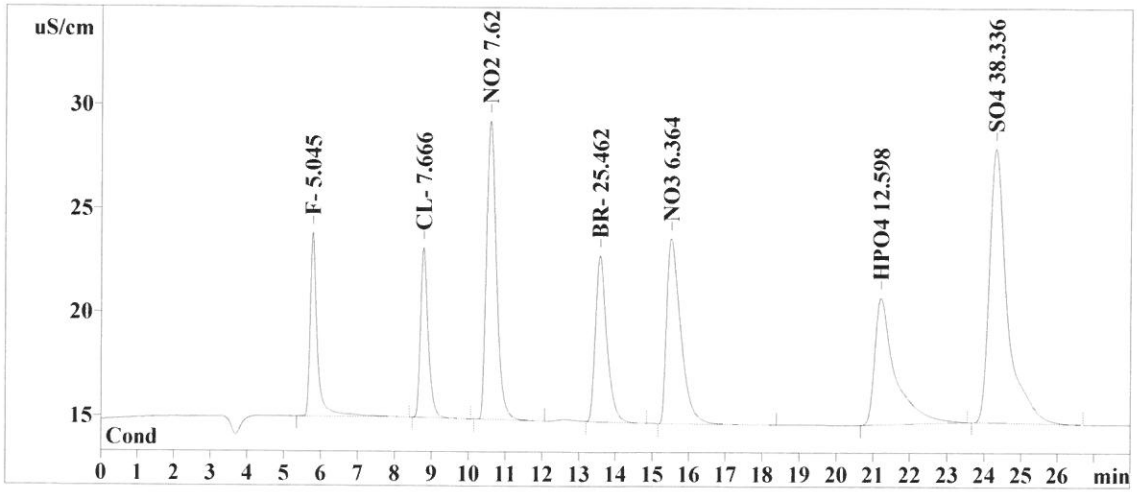
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:42 AM
Printed by: wet

Ident: STD7
Analysis from: 9/11/2019 2:59:28 PM
File: _2019-09-11_ Last save: 9/11/2019 3:40:52 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 3:40:50 PM
Run operator: wet
Analysis number: 68593

SAMPLE:
: AK/AP
Vial number: 8
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.181	8.82	13.06	122.454	7.59	0.
2	8.77	0.214	8.16	12.08	118.605	7.35	0.
3	10.57	0.287	14.37	21.26	271.528	16.84	0.
4	13.56	0.322	8.01	11.85	173.746	10.77	0.
5	15.50	0.409	8.91	13.18	239.627	14.86	0.
6	21.20	0.477	6.10	9.03	236.215	14.65	0.
7	24.30	0.455	13.20	19.53	450.551	27.94	0.
7	28.00	0.335	67.57	100.00	1612.725	100.00	0.

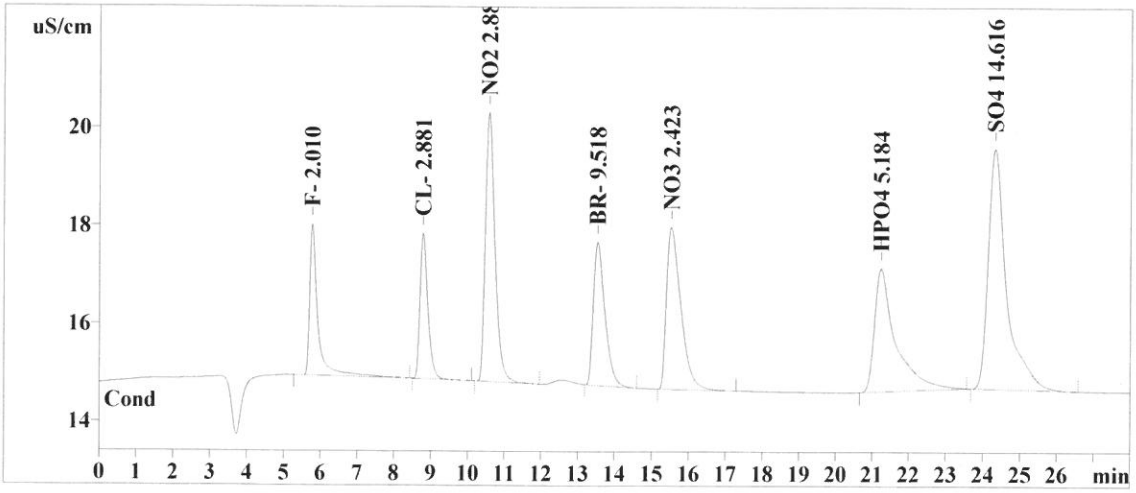
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:48:15 AM
Printed by: wet

Ident: ICV
Analysis from: 9/11/2019 3:30:23 PM
File: _2019-09-11_ Last save: 9/11/2019 3:58:12 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 3:27:18 PM
Run operator: wet
Analysis number: 68594

SAMPLE:
: AK/AP
Vial number: 9
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.195	3.08	12.25	48.519	7.88	0.
2	8.78	0.221	2.96	11.76	43.968	7.14	0.
3	10.56	0.275	5.48	21.78	100.769	16.36	0.
4	13.53	0.327	2.92	11.61	63.285	10.27	0.
5	15.51	0.412	3.31	13.14	89.452	14.52	0.
6	21.24	0.494	2.51	9.96	101.579	16.49	0.
7	24.32	0.454	4.90	19.49	168.513	27.35	0.
7	28.00	0.340	25.16	99.99	616.085	100.00	0.

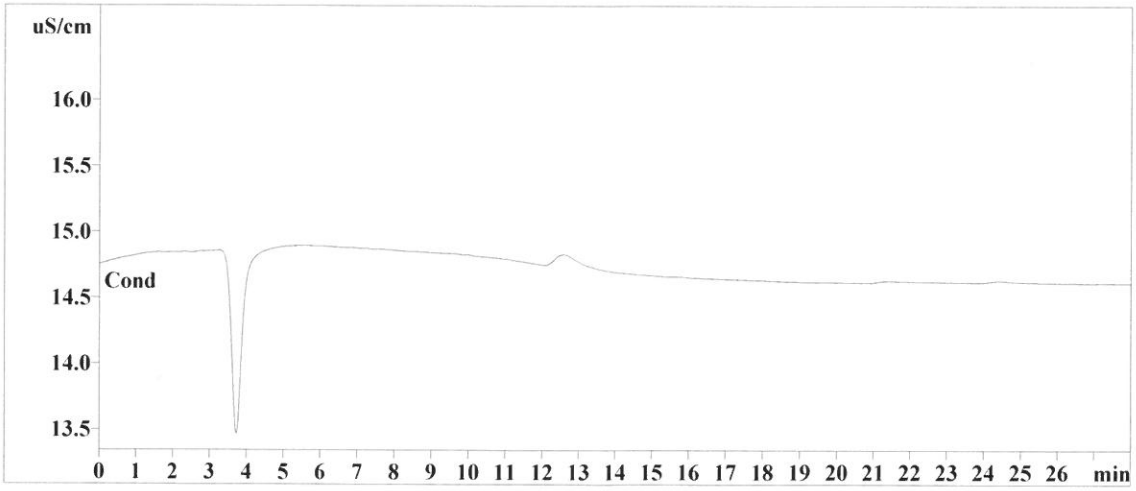
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:48:24 AM
Printed by: wet

Ident: ICB
Analysis from: 9/11/2019 4:01:17 PM
File: _2019-09-11_ Last save: 9/11/2019 4:29:06 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 3:40:50 PM
Run operator: wet
Analysis number: 68595

SAMPLE:
: AK/AP
Vial number: 10
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

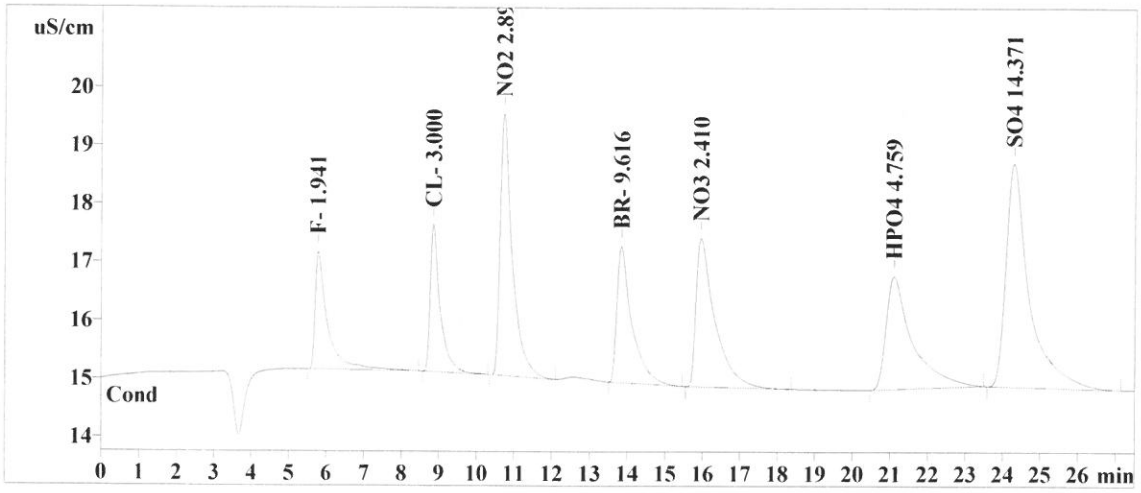
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:35:46 AM
Printed by: wet

Ident: CCV
Analysis from: 10/2/2019 9:58:51 AM
File: _2019-10-02_ Last save: 10/2/2019 10:26:10 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68822

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.288	2.00	10.22	46.849	7.73	0.
2	8.85	0.241	2.51	12.81	45.834	7.56	0.
3	10.72	0.309	4.49	22.86	101.029	16.67	0.
4	13.83	0.369	2.33	11.87	63.970	10.55	0.
5	15.95	0.477	2.54	12.93	88.943	14.67	0.
6	21.10	0.616	1.93	9.83	93.872	15.49	0.
7	24.29	0.562	3.82	19.48	165.608	27.32	0.
7	27.50	0.409	19.62	99.99	606.105	100.00	0.

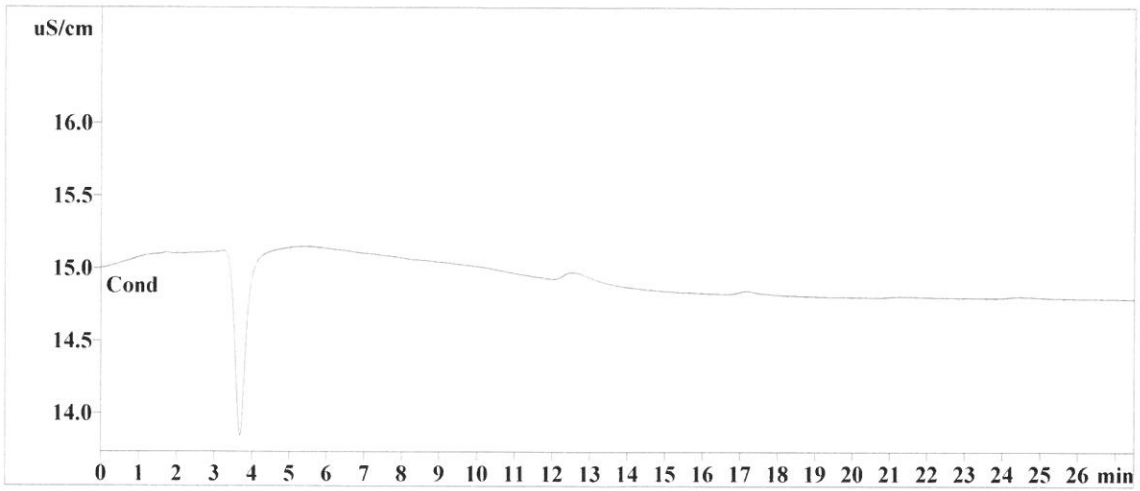
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:35:55 AM
Printed by: wet

Ident: CCB
Analysis from: 10/2/2019 10:40:55 AM
File: _2019-10-02_ Last save: 10/2/2019 11:08:14 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68825

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

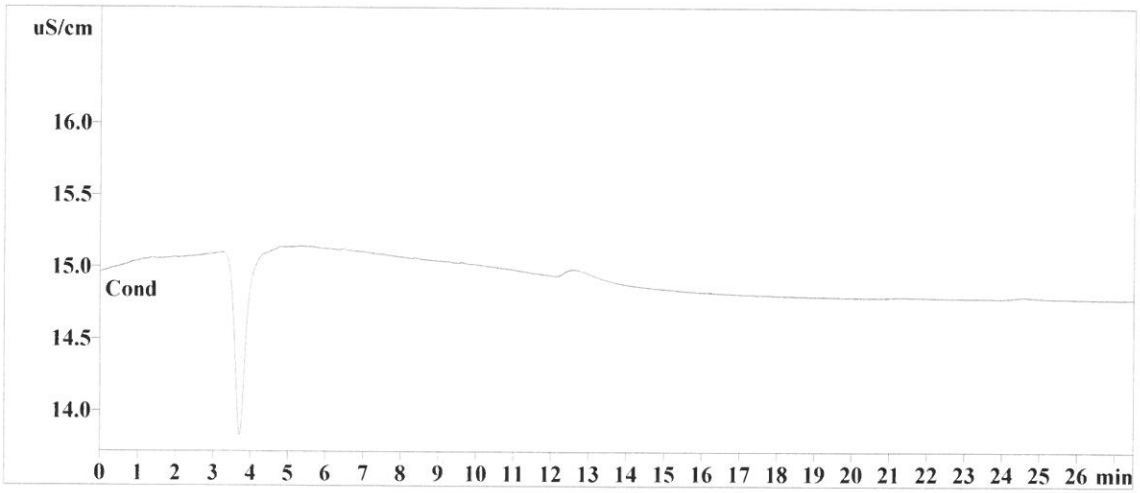
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:36:03 AM
Printed by: wet

Ident: LB105422BLW
Analysis from: 10/2/2019 11:11:20 AM
File: _2019-10-02_ Last save: 10/2/2019 12:37:14 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68826

SAMPLE:
: AK/AP
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

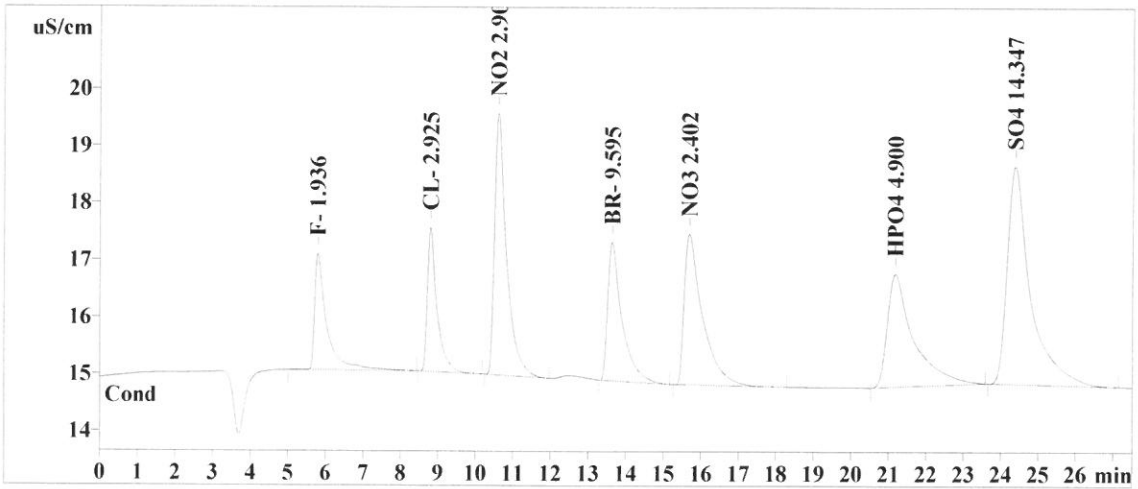
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:36:11 AM
Printed by: wet

Ident: LB105422BSW
Analysis from: 10/2/2019 11:41:45 AM
File: _2019-10-02_ Last save: 10/2/2019 12:09:04 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68827

SAMPLE:
: AK/AP
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.79	0.280	2.03	10.17	46.712	7.69	0.
2	8.80	0.240	2.51	12.57	44.665	7.36	0.
3	10.60	0.309	4.58	22.94	101.495	16.72	0.
4	13.63	0.358	2.42	12.12	63.823	10.51	0.
5	15.68	0.464	2.64	13.20	88.633	14.60	0.
6	21.17	0.620	1.98	9.90	96.424	15.88	0.
7	24.37	0.565	3.81	19.08	165.318	27.23	0.
7	27.50	0.405	19.98	99.99	607.070	100.00	0.

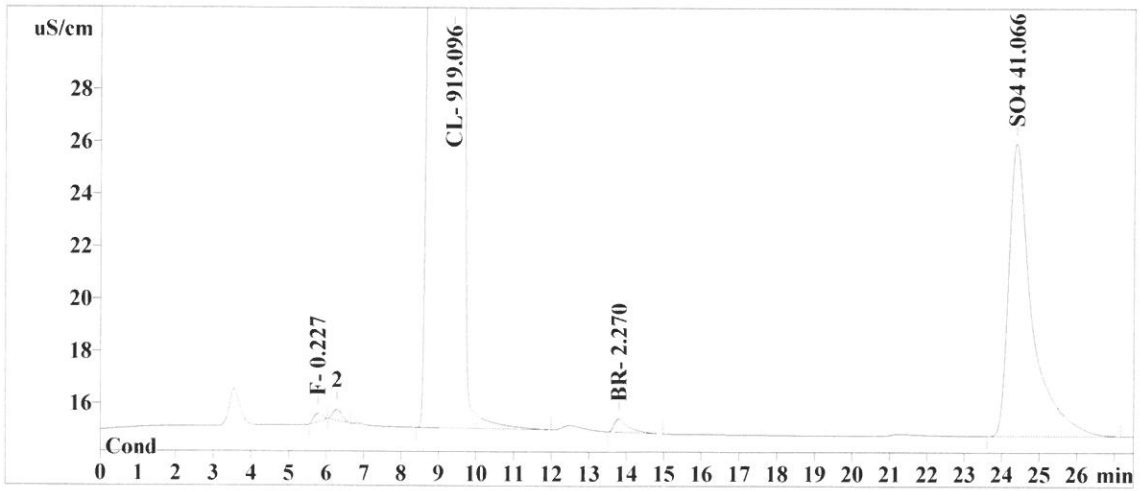
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:36:34 AM
Printed by: wet

Ident: K5127-03
Analysis from: 10/2/2019 12:12:10 PM
File: _2019-10-02_ Last save: 10/3/2019 11:36:34 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68828

SAMPLE:
: AK/AP
Vial number: 6
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	0.267	0.32	0.07	5.088	0.03	0.
2	9.37	0.506	460.70	97.33	14335.462	96.57	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.80	0.362	0.50	0.11	13.075	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.38	0.561	11.18	2.36	483.019	3.25	0.
7	27.50	0.242	472.70	99.87	14836.644	99.95	0.

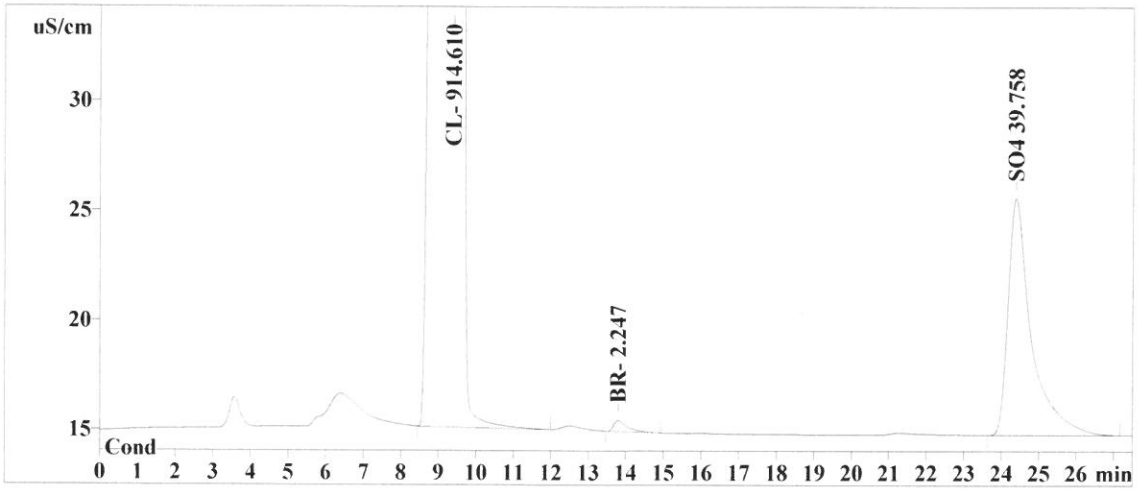
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:37:07 AM
Printed by: wet

Ident: K5127-04
Analysis from: 10/2/2019 12:42:35 PM
File: _2019-10-02_ Last save: 10/3/2019 11:37:06 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68829

SAMPLE:
: AK/AP
Vial number: 7
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	9.38	0.505	459.66	97.55	14265.485	96.74	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.80	0.359	0.50	0.11	12.914	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.37	0.566	10.78	2.29	467.464	3.17	0.
7	27.50	0.204	470.94	99.95	14745.863	100.00	0.

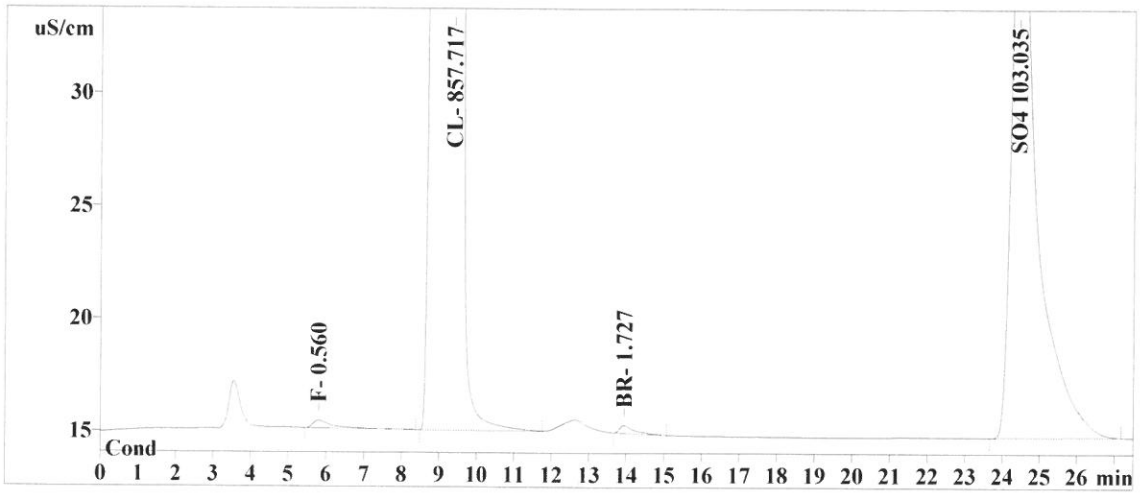
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:39:18 AM
Printed by: wet

Ident: K5154-03
Analysis from: 10/2/2019 1:43:25 PM
File: _2019-10-02_ Last save: 10/2/2019 2:10:44 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68831

SAMPLE:
: AK/AP
Vial number: 9
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.80	0.469	0.34	0.07	13.195	0.09	0.
2	9.38	0.492	447.79	94.05	13378.048	91.50	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.95	0.347	0.35	0.07	9.316	0.06	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.42	0.578	27.33	5.74	1219.846	8.34	0.
7	27.50	0.269	475.81	99.94	14620.405	100.00	0.

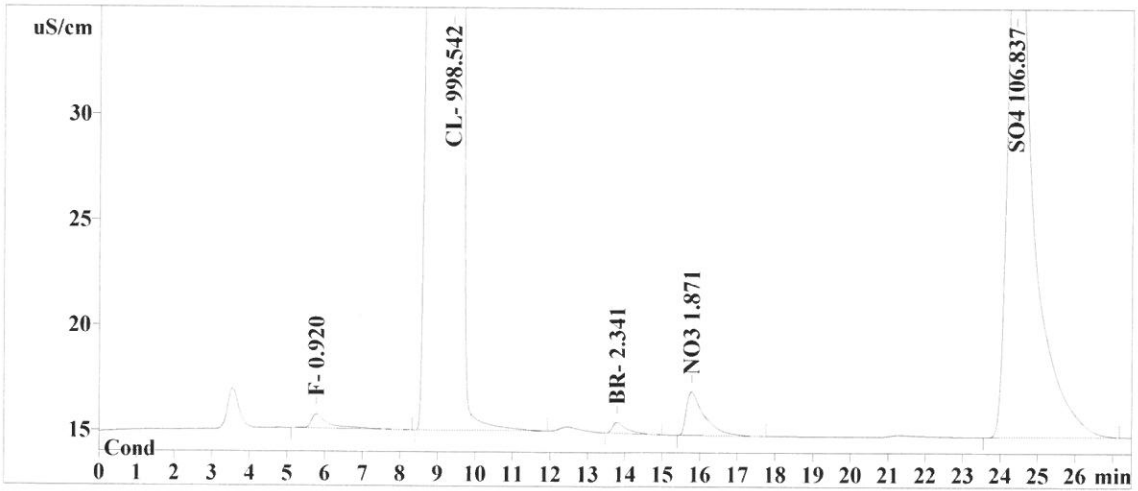
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:39:37 AM
Printed by: wet

Ident: K5154-04
Analysis from: 10/2/2019 2:13:50 PM
File: _2019-10-02_ Last save: 10/3/2019 11:39:38 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68832

SAMPLE:
: AK/AP
Vial number: 10
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.373	0.66	0.13	21.973	0.13	0.
2	9.38	0.532	479.13	93.70	15574.692	91.92	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.79	0.364	0.52	0.10	13.570	0.08	0.
5	15.78	0.456	2.06	0.40	68.391	0.40	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.38	0.582	28.82	5.64	1265.049	7.47	0.
7	27.50	0.329	511.20	99.97	16943.675	100.00	0.

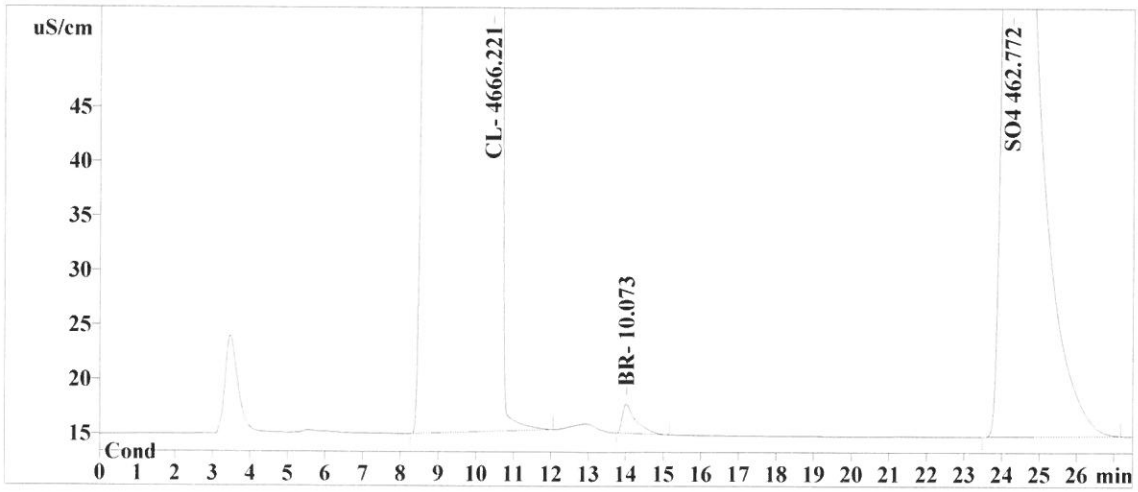
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:40:01 AM
Printed by: wet

Ident: K5154-05
Analysis from: 10/2/2019 2:44:15 PM
File: _2019-10-02_ Last save: 10/3/2019 11:40:02 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68833

SAMPLE:
: AK/AP
Vial number: 11
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	10.43	1.414	915.88	89.36	72784.639	92.90	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	14.02	0.329	2.71	0.26	67.134	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.25	0.730	106.31	10.37	5497.223	7.02	0.
7	27.50	0.353	1024.90	100.00	78348.996	100.00	0.

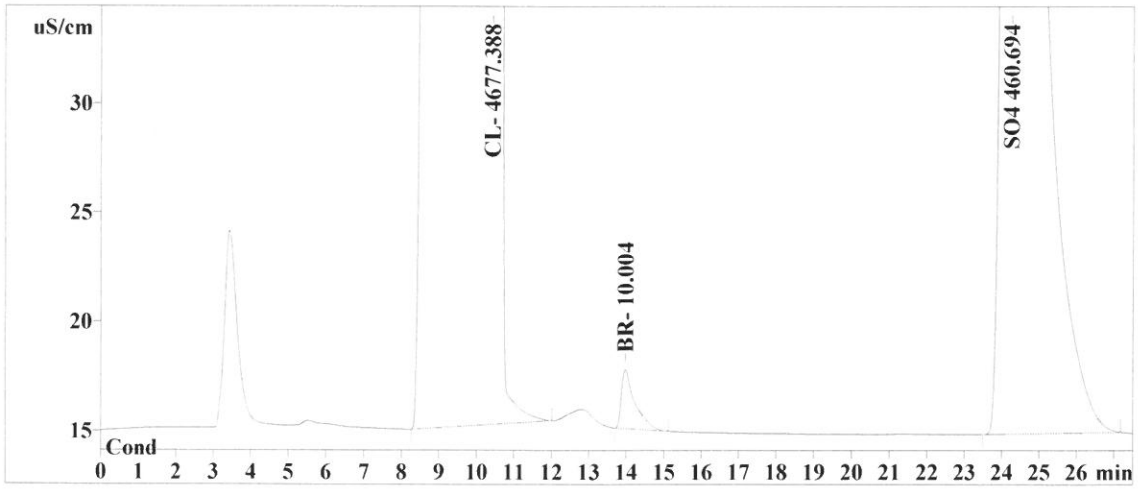
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:40:29 AM
Printed by: wet

Ident: K5154-06
Analysis from: 10/2/2019 3:14:40 PM
File: _2019-10-02_ Last save: 10/3/2019 11:40:26 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68834

SAMPLE:
: AK/AP
Vial number: 12
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	10.40	1.428	912.39	89.40	72958.823	92.94	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.98	0.329	2.70	0.26	66.655	0.08	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.25	0.736	105.27	10.32	5472.509	6.97	0.
7	27.50	0.356	1020.36	99.98	78497.987	100.00	0.

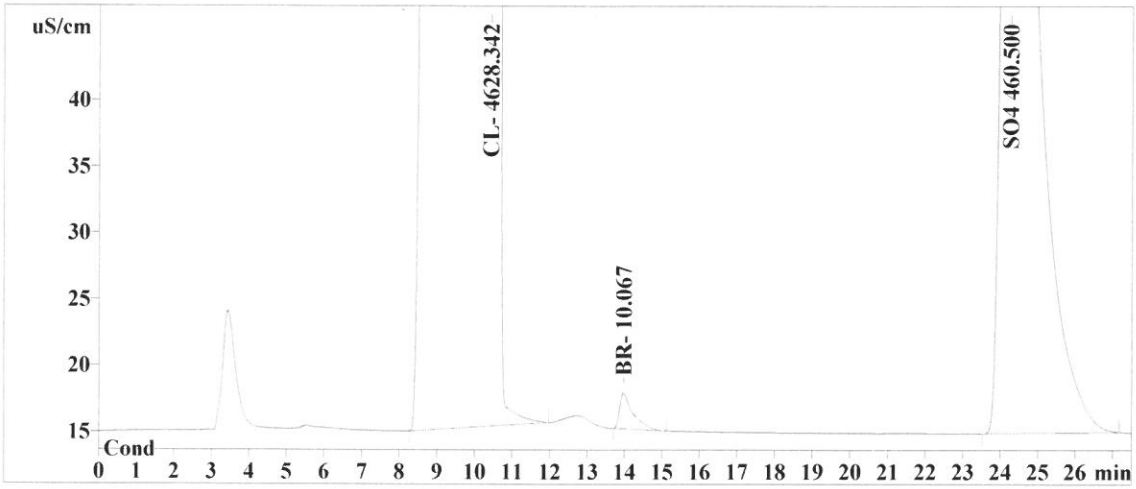
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:41:15 AM
Printed by: wet

Ident: K5154-06DUP
Analysis from: 10/2/2019 3:45:05 PM
File: _2019-10-02_ Last save: 10/3/2019 11:41:14 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68835

SAMPLE:
: AK/AP
Vial number: 13
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	10.40	1.415	909.76	89.40	72193.794	92.88	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.98	0.329	2.70	0.27	67.089	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.26	0.739	104.95	10.31	5470.203	7.04	0.
7	27.50	0.355	1017.41	99.98	77731.086	100.00	0.

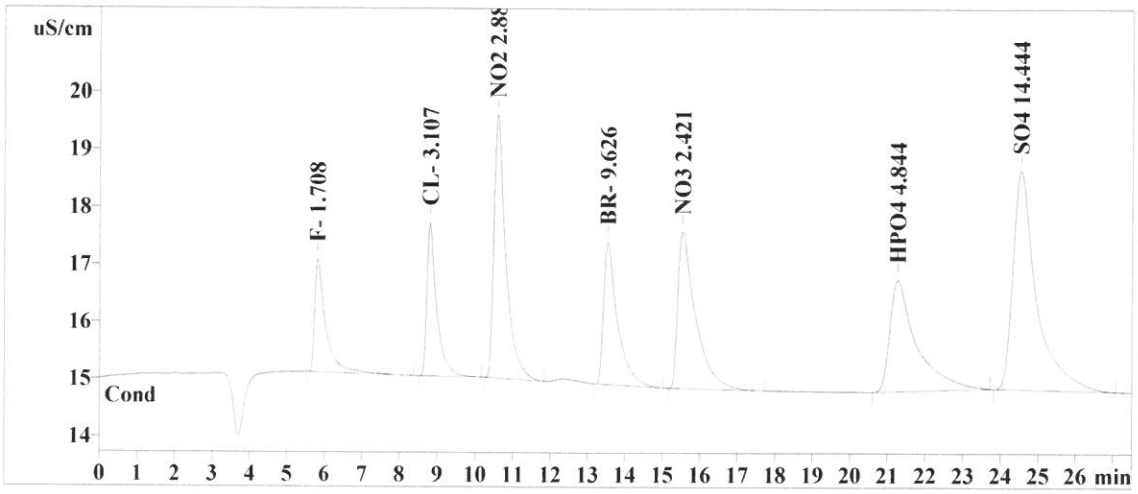
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:41:31 AM
Printed by: wet

Ident: CCV
Analysis from: 10/2/2019 4:15:30 PM
File: _2019-10-02_ Last save: 10/2/2019 4:42:50 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68836

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.81	0.270	1.96	9.72	41.169	6.81	0.
2	8.80	0.241	2.66	13.22	47.501	7.85	0.
3	10.58	0.310	4.58	22.72	100.767	16.66	0.
4	13.53	0.355	2.48	12.29	64.034	10.59	0.
5	15.53	0.454	2.73	13.54	89.373	14.78	0.
6	21.26	0.625	1.94	9.61	95.415	15.78	0.
7	24.52	0.571	3.81	18.89	166.473	27.53	0.
7	27.50	0.404	20.16	100.00	604.732	100.00	0.

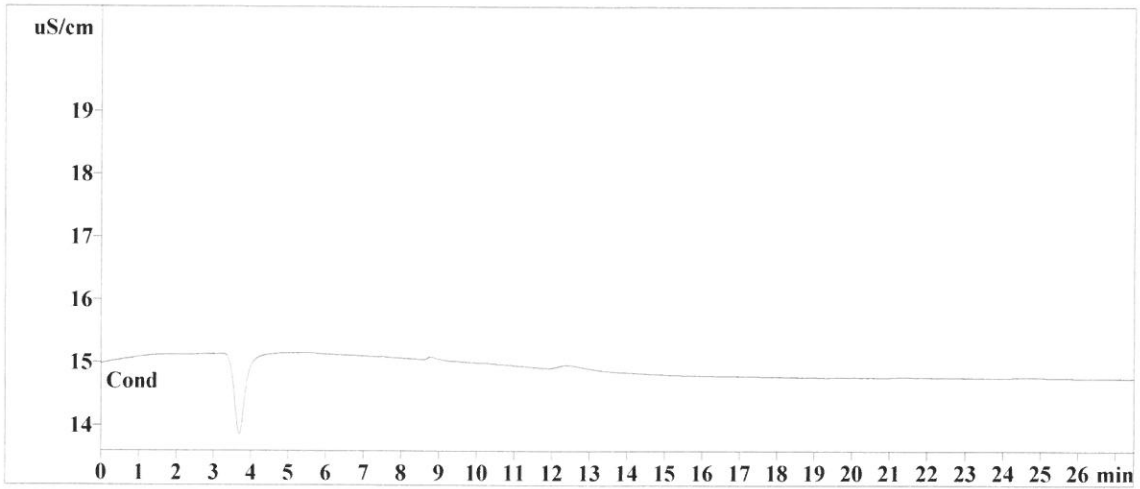
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:41:49 AM
Printed by: wet

Ident: CCB
Analysis from: 10/2/2019 4:45:55 PM
File: _2019-10-02_ Last save: 10/3/2019 11:41:48 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68837

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

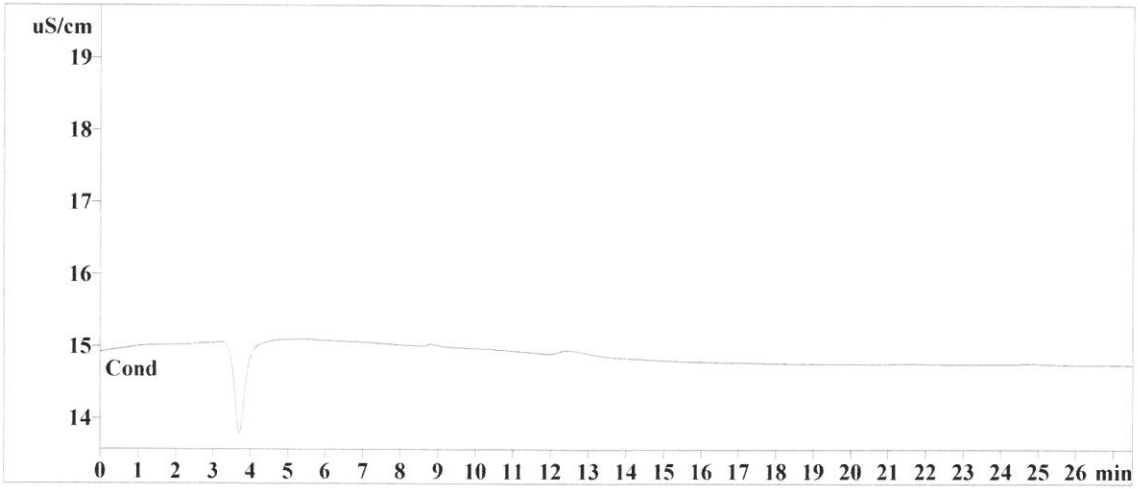
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:41:58 AM
Printed by: wet

Ident: K5154-02
Analysis from: 10/2/2019 5:16:20 PM
File: _2019-10-02_ Last save: 10/2/2019 5:43:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68838

SAMPLE:
: AK/AP
Vial number: 8
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

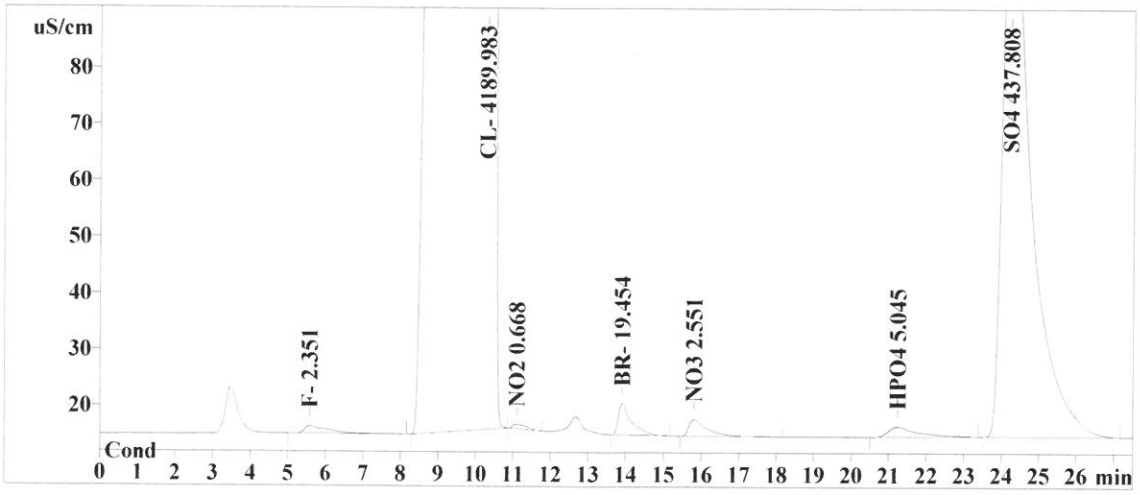
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:42:24 AM
Printed by: wet

Ident: K5154-06MS
Analysis from: 10/2/2019 5:46:45 PM
File: _2019-10-02_ Last save: 10/3/2019 11:42:24 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68839

SAMPLE:
: AK/AP
Vial number: 14
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.58	0.704	1.32	0.13	56.837	0.08	0.
2	10.28	1.319	879.57	88.45	65356.085	92.10	0.
3	11.11	0.431	0.82	0.08	20.678	0.03	0.
4	13.91	0.307	5.53	0.56	132.120	0.19	0.
5	15.81	0.437	2.94	0.30	94.314	0.13	0.
6	21.23	0.700	1.83	0.18	99.060	0.14	0.
7	24.22	0.713	102.20	10.28	5200.385	7.33	0.
7	27.50	0.659	994.21	99.98	70959.479	100.00	0.

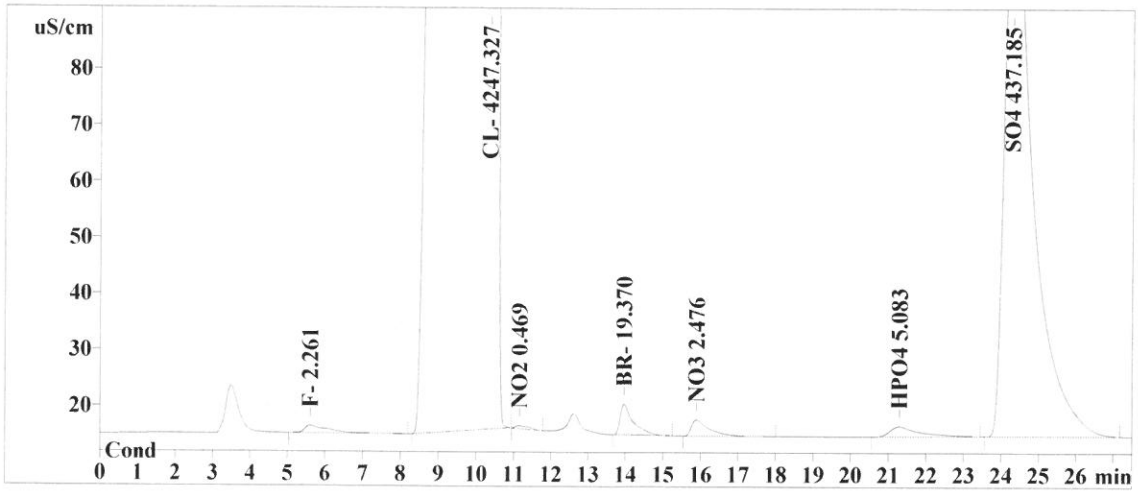
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:42:45 AM
Printed by: wet

Ident: K5154-06MSD
Analysis from: 10/2/2019 6:17:10 PM
File: _2019-10-02_ Last save: 10/3/2019 11:42:42 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68840

SAMPLE:
: AK/AP
Vial number: 15
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.60	0.687	1.30	0.13	54.638	0.08	0.
2	10.34	1.333	881.98	88.56	66250.553	92.23	0.
3	11.17	0.455	0.50	0.05	13.503	0.02	0.
4	13.97	0.315	5.43	0.55	131.539	0.18	0.
5	15.89	0.440	2.83	0.28	91.477	0.13	0.
6	21.29	0.716	1.81	0.18	99.750	0.14	0.
7	24.28	0.712	102.03	10.24	5192.982	7.23	0.
7	27.50	0.665	995.89	100.00	71834.441	100.00	0.

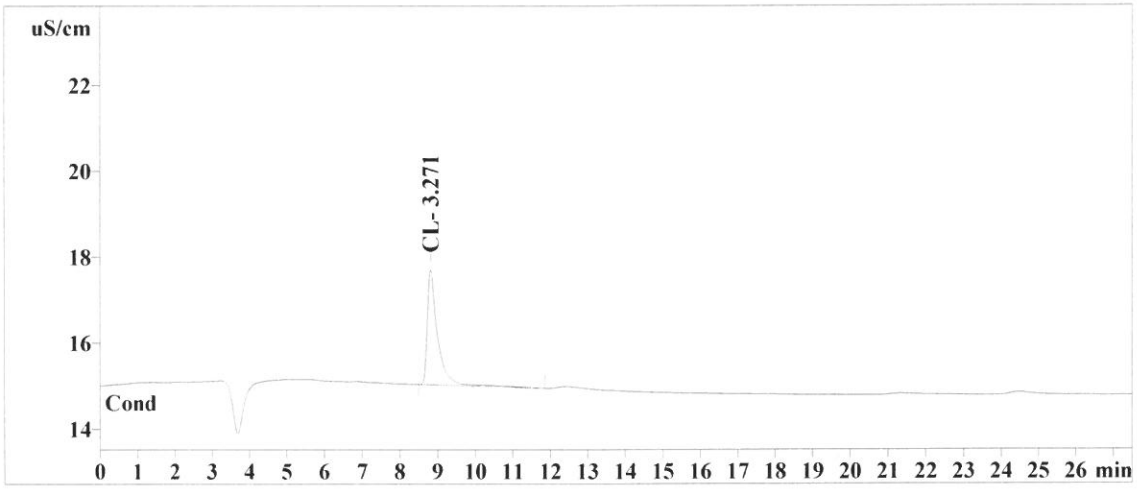
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:46:16 AM
Printed by: wet

Ident: K5127-03DLX200
Analysis from: 10/2/2019 6:47:34 PM
File: _2019-10-02_ Last save: 10/3/2019 11:46:16 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68841

SAMPLE:
: AK/AP
Vial number: 16
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.82	0.239	2.67	100.01	50.055	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.034	2.67	100.01	50.055	100.00	0.

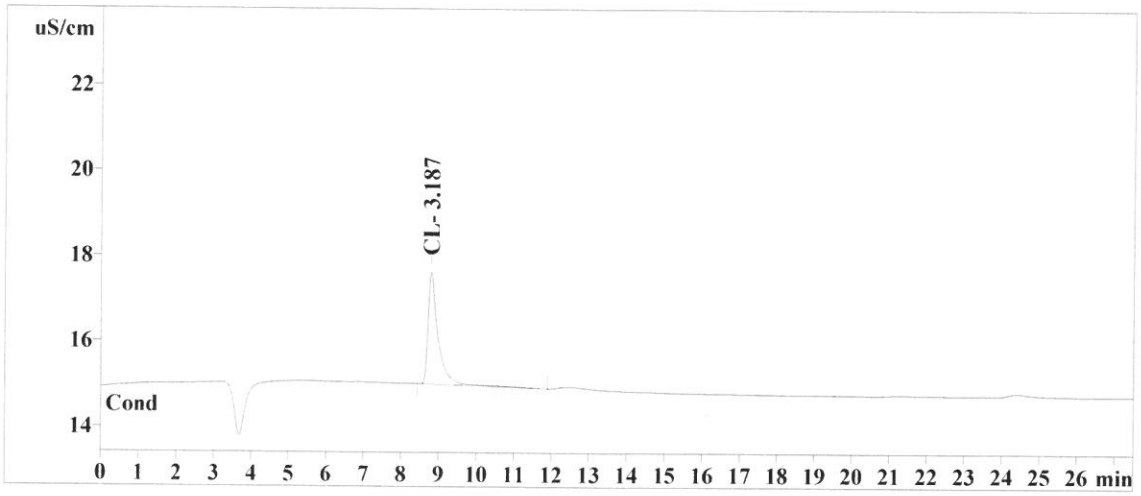
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:46:31 AM
Printed by: wet

Ident: K5127-04DLX200
Analysis from: 10/2/2019 7:17:59 PM
File: _2019-10-02_ Last save: 10/3/2019 11:46:30 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68842

SAMPLE:
: AK/AP
Vial number: 17
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.80	0.237	2.61	100.01	48.745	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.034	2.61	100.01	48.745	100.00	0.

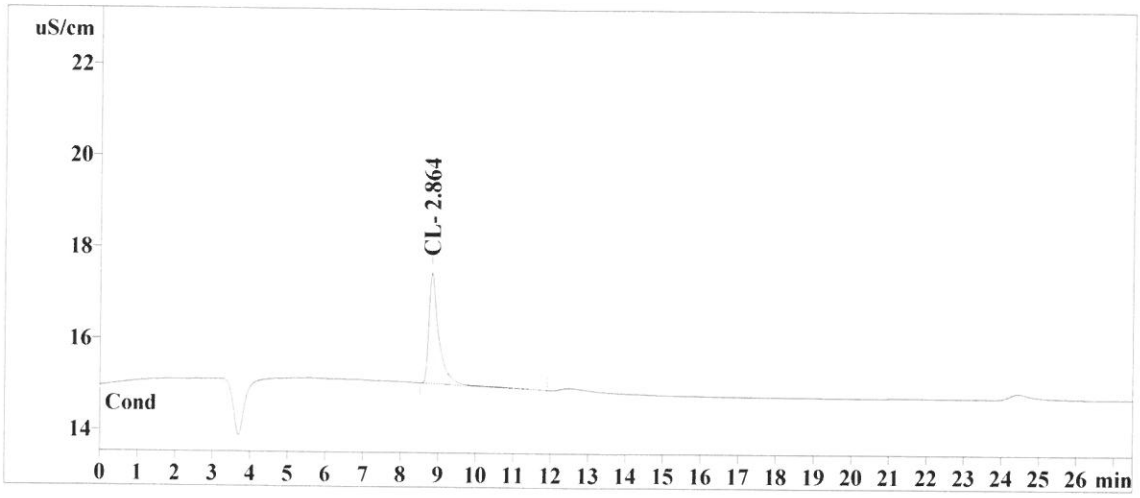
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:47:01 AM
Printed by: wet

Ident: K5154-03DLX200
Analysis from: 10/2/2019 7:48:24 PM
File: _2019-10-02_ Last save: 10/3/2019 11:47:00 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68843

SAMPLE:
: AK/AP
Vial number: 18
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.82	0.237	2.41	99.99	43.705	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.034	2.41	99.99	43.705	100.00	0.

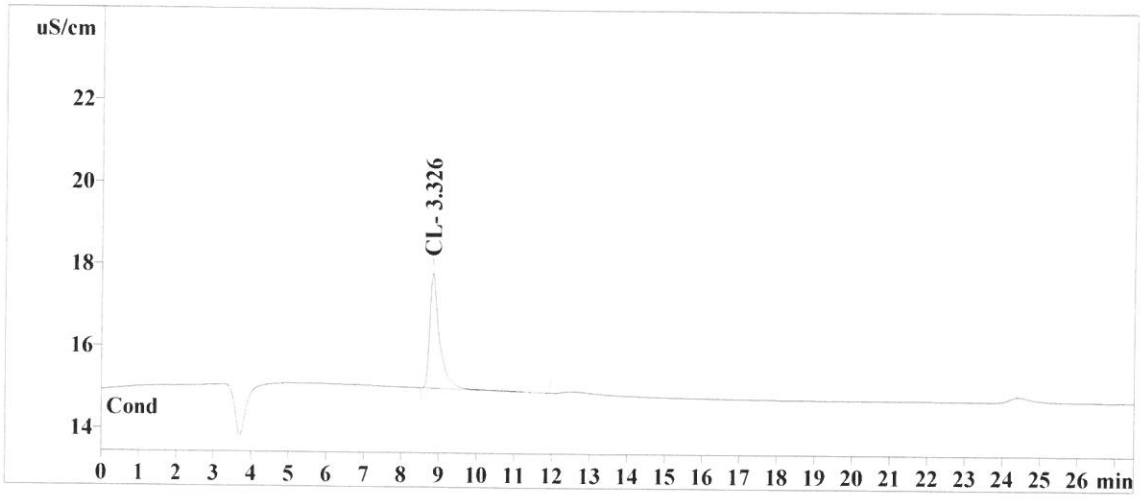
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:47:21 AM
Printed by: wet

Ident: K5154-04DLX200
Analysis from: 10/2/2019 8:18:49 PM
File: _2019-10-02_ Last save: 10/3/2019 11:47:18 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68844

SAMPLE:
: AK/AP
Vial number: 19
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.83	0.237	2.79	100.00	50.906	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.034	2.79	100.00	50.906	100.00	0.

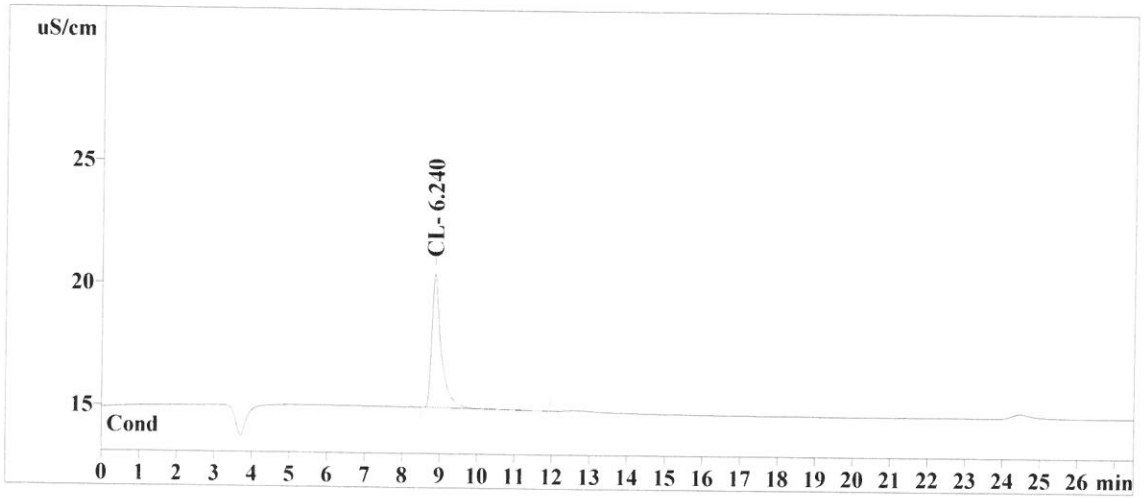
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:47:40 AM
Printed by: wet

Ident: K5154-05DLX500
Analysis from: 10/2/2019 8:49:14 PM
File: _2019-10-02_ Last save: 10/3/2019 11:47:40 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68845

SAMPLE:
: AK/AP
Vial number: 20
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.86	0.230	5.44	100.00	96.368	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.033	5.44	100.00	96.368	100.00	0.

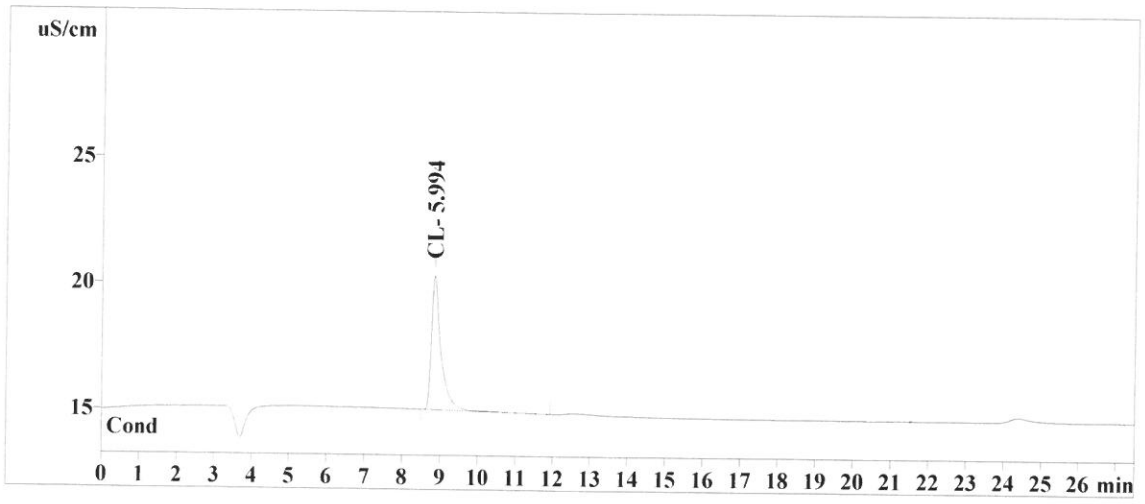
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:48:22 AM
Printed by: wet

Ident: K5154-06DLX500
Analysis from: 10/2/2019 9:19:39 PM
File: _2019-10-02_ Last save: 10/3/2019 11:48:22 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68846

SAMPLE:
: AK/AP
Vial number: 21
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.84	0.230	5.30	100.00	92.536	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.033	5.30	100.00	92.536	100.00	0.

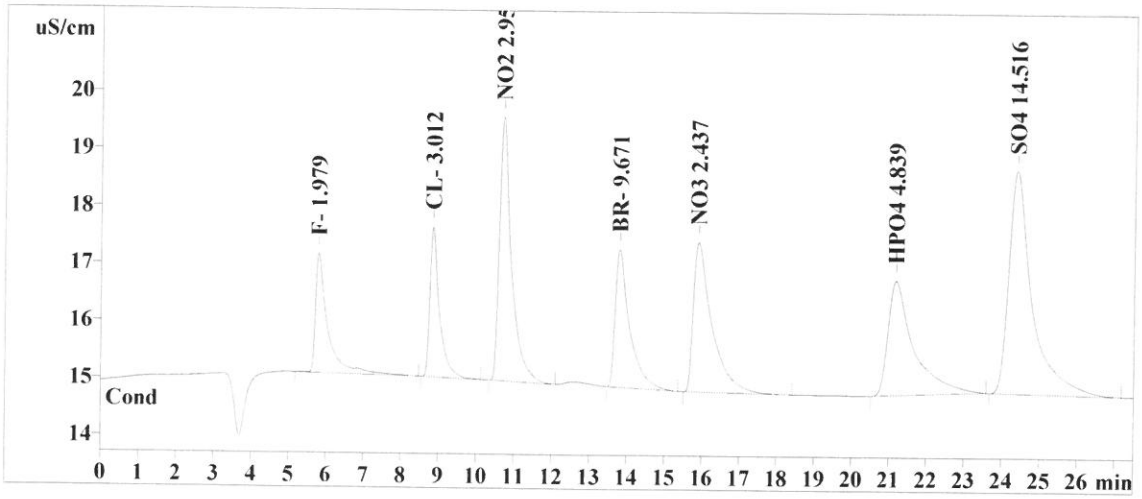
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:48:32 AM
Printed by: wet

Ident: CCV
Analysis from: 10/2/2019 9:50:04 PM
File: _2019-10-02_ Last save: 10/2/2019 10:17:22 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68847

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.79	0.278	2.08	10.30	47.758	7.78	0.
2	8.84	0.236	2.61	12.95	46.016	7.50	0.
3	10.68	0.309	4.59	22.78	103.171	16.81	0.
4	13.79	0.363	2.40	11.90	64.347	10.48	0.
5	15.89	0.471	2.61	12.93	89.966	14.65	0.
6	21.17	0.605	1.99	9.89	95.320	15.53	0.
7	24.38	0.565	3.88	19.25	167.323	27.26	0.
7	27.50	0.404	20.16	99.99	613.902	100.00	0.

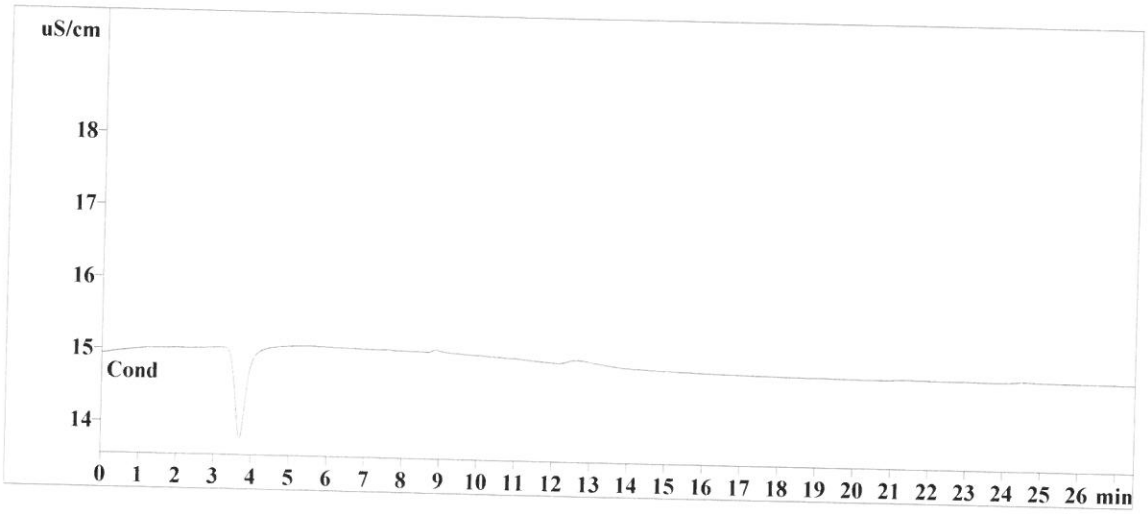
This report has been created by IC Net
METROHM LTD

Report date: 10/3/2019 11:48:42 AM
Printed by: wet

Ident: CCB
Analysis from: 10/2/2019 10:20:29 PM
File: _2019-10-02_ Last save: 10/2/2019 10:47:48 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68848

SAMPLE: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

This report has been created by IC Net
METROHM LTD

Clear table

IC-1 300.0

10/07/19 AK

ident	concentration F-	concentration CL-	concentration NO2	concentration BR-	concentration NO3	concentration HPO4	concentration SO4	file name	date time	Initial wt/ Final Vol	Analyst
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-09-11_	9/11/19 11:54		AK/AP
STD2	0.2370	0.3870	0.3840	1.3120	0.3250	0.3970	2.0250	_2019-09-11_	9/11/19 12:24		AK/AP
STD3	0.3840	0.6650	0.6490	2.1980	0.5430	1.0120	3.2650	_2019-09-11_	9/11/19 12:55		AK/AP
STD4	0.8350	1.1990	1.1920	3.9850	0.9960	2.1480	5.9770	_2019-09-11_	9/11/19 13:26		AK/AP
STD5	1.9310	2.8310	2.8440	9.3900	2.3630	5.0000	14.1360	_2019-09-11_	9/11/19 13:57		AK/AP
STD6	3.9680	5.8520	5.9090	19.6520	4.9100	9.8450	29.2610	_2019-09-11_	9/11/19 14:28		AK/AP
STD7	5.0450	7.6660	7.6210	25.4620	6.3640	12.5980	38.3360	_2019-09-11_	9/11/19 14:59		AK/AP
ICV	2.0100	2.8810	2.8880	9.5180	2.4230	5.1840	14.6160	_2019-09-11_	9/11/19 15:30		AK/AP
ICB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-09-11_	9/11/19 16:01		AK/AP
CCV	1.9820	2.9750	2.9470	9.6880	2.4810	4.9940	14.5230	_2019-10-03_	10/3/19 9:18		AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-03_	10/3/19 9:48		AK/AP
LB105455BLW	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-03_	10/3/19 10:19		AK/AP
LB105455BSW	2.0460	3.0350	3.0220	9.9680	2.5270	5.1810	15.2350	_2019-10-03_	10/3/19 10:49		AK/AP
K5154-10	0.0000	4478.5730	0.0000	10.7250	0.0000	0.0000	0.0000	_2019-10-03_	10/3/19 11:22		AK/AP
K5154-11	0.2980	672.2000	0.0000	1.5690	0.0000	1.2460	18.8410	_2019-10-03_	10/3/19 11:52		AK/AP
K5154-14	0.0000	16.4930	0.0000	0.0000	0.0000	0.3800	2.0100	_2019-10-03_	10/3/19 12:23		AK/AP
K5154-15	0.9110	820.8160	0.0000	1.8350	0.0000	0.0610	50.7370	_2019-10-03_	10/3/19 12:53		AK/AP
K5154-16	0.6470	641.5310	0.0000	1.6490	0.9020	0.1580	41.5490	_2019-10-03_	10/3/19 13:24		AK/AP
K5154-17	0.0000	16.9110	0.1980	0.0000	0.2900	0.0000	4.4560	_2019-10-03_	10/3/19 13:54		AK/AP
K5154-18	0.9370	384.6030	0.0000	1.0700	0.0000	0.0000	38.5170	_2019-10-03_	10/3/19 14:24		AK/AP
K5154-19	0.0000	14059.7710	0.0000	0.0000	5.8980	0.0000	907.6040	_2019-10-03_	10/3/19 14:55		AK/AP
CCV	1.9130	3.0060	2.8790	9.5520	2.4380	5.1400	14.1380	_2019-10-03_	10/3/19 16:27		AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-03_	10/3/19 16:57		AK/AP
K5168-07	0.3230	640.2170	0.0000	1.6820	0.0000	0.1710	22.7010	_2019-10-03_	10/3/19 17:28		AK/AP
K5168-08	0.1080	615.3370	0.0000	1.6220	0.0000	0.0190	17.8960	_2019-10-03_	10/3/19 17:58		AK/AP
K5168-09	0.1190	657.2260	0.0000	1.7060	0.0000	0.1270	13.6780	_2019-10-03_	10/3/19 18:28		AK/AP
K5168-10	0.0000	636.0960	0.0000	1.6840	0.0000	0.0000	16.6150	_2019-10-03_	10/3/19 18:59		AK/AP
K5168-11	0.1110	675.7460	0.0000	1.7520	0.0000	0.0470	14.6870	_2019-10-03_	10/3/19 19:29		AK/AP
K5168-12	0.0000	706.5880	0.0000	1.8240	0.0000	0.0000	20.0760	_2019-10-03_	10/3/19 20:00		AK/AP
K5154-11DUP	0.1210	686.8050	0.0000	1.5270	0.0000	1.2380	18.6010	_2019-10-03_	10/3/19 20:30		AK/AP
K5154-12MS	2.1510	611.7250	2.4540	10.8050	2.4500	6.5980	31.3560	_2019-10-03_	10/3/19 21:01		AK/AP
K5154-13MSD	2.3990	605.3490	2.5310	11.1070	2.5380	6.8120	31.9140	_2019-10-03_	10/3/19 21:31		AK/AP
K5154-10DLX500	0.0000	6.1900	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-03_	10/3/19 22:01		AK/AP
CCV	1.9010	2.9620	2.8710	9.5460	2.4080	4.9990	13.9500	_2019-10-03_	10/3/19 22:32		AK/AP

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CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-03_	10/3/19 23:02	AK/AP
LB105455BLW2	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-03_	10/3/19 23:33	AK/AP
LB105455BSW2	2.1320	3.0220	3.0060	10.1000	2.5870	5.3720	14.4150	_2019-10-04_	10/4/19 0:03	AK/AP
K5154-11DLX100	0.0000	4.5760	0.0000	0.0000	0.0000	0.0000	1.3660	_2019-10-04_	10/4/19 0:33	AK/AP
K5154-14DLX5	0.0000	3.1390	0.0000	0.0000	0.0000	0.0000	1.3580	_2019-10-04_	10/4/19 1:04	AK/AP
K5154-15DLX200	0.0000	2.8260	0.0000	0.0000	0.0000	0.0000	0.9940	_2019-10-04_	10/4/19 1:34	AK/AP
K5154-16DLX100	0.0000	4.4290	0.0000	0.0000	0.0000	0.0000	1.1480	_2019-10-04_	10/4/19 2:05	AK/AP
K5154-17DLX5	0.0000	3.1240	0.0000	0.0000	0.0000	0.0000	1.2910	_2019-10-04_	10/4/19 2:35	AK/AP
K5154-18DLX50	0.0000	5.3700	0.0000	0.0000	0.0000	0.0000	1.2210	_2019-10-04_	10/4/19 3:05	AK/AP
K5154-19DLX2000	0.0000	4.6850	0.0000	0.0000	0.0000	0.0000	0.8580	_2019-10-04_	10/4/19 3:36	AK/AP
CCV	1.7140	2.9870	2.9600	9.9090	2.4840	5.1160	14.4290	_2019-10-04_	10/4/19 4:06	AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 4:37	AK/AP
CCV	1.7410	3.0030	2.9730	9.7250	2.4420	4.5980	14.3370	_2019-10-04_	10/4/19 8:41	AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 9:21	AK/AP
LB105455BLW3	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 9:51	AK/AP
LB105455BSW3	2.0120	2.9180	2.9730	9.5120	2.4660	4.8730	14.5520	_2019-10-04_	10/4/19 10:22	AK/AP
K5154-21	0.1520	5.5960	0.0000	0.0000	1.2300	0.0000	5.6930	_2019-10-04_	10/4/19 10:52	AK/AP
K5154-22	0.2160	302.1040	0.0000	0.0000	11.8440	0.0000	77.3710	_2019-10-04_	10/4/19 11:23	AK/AP
K5154-23	0.3450	532.5350	0.0000	1.2810	5.9160	0.0000	88.7880	_2019-10-04_	10/4/19 11:53	AK/AP
K5154-24	0.3230	286.2080	0.0000	0.0000	4.9730	0.0000	51.8650	_2019-10-04_	10/4/19 12:23	AK/AP
K5154-25	0.2610	428.2110	0.0000	0.0000	11.9300	0.0000	80.9740	_2019-10-04_	10/4/19 12:54	AK/AP
K5154-26	0.0000	624.7400	0.0000	0.0000	11.4220	0.0000	99.5070	_2019-10-04_	10/4/19 13:24	AK/AP
K5154-26DUP	0.0000	629.2450	0.0000	0.0000	11.6830	0.0000	98.0270	_2019-10-04_	10/4/19 13:55	AK/AP
K5154-26MS	4.1300	584.1650	1.4730	9.9460	13.2500	5.6750	106.5830	_2019-10-04_	10/4/19 14:25	AK/AP
CCV	2.2590	3.0180	2.9330	9.6680	2.4430	5.1890	14.6770	_2019-10-04_	10/4/19 14:56	AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 15:26	AK/AP
K5154-26MSD	4.1470	593.3980	1.6330	10.2410	13.3340	6.1220	106.1250	_2019-10-04_	10/4/19 15:56	AK/AP
K5168-12DUP	0.0000	711.9010	0.0000	1.7600	0.0000	0.0000	20.8460	_2019-10-04_	10/4/19 16:27	AK/AP
K5168-12MS	4.8120	639.9990	2.7990	11.2670	2.5590	5.7920	34.6770	_2019-10-04_	10/4/19 16:57	AK/AP
K5168-12MSD	4.4740	638.9920	2.7950	11.2390	2.5360	5.7890	34.6880	_2019-10-04_	10/4/19 17:28	AK/AP
K5168-07DLX100	0.0000	4.4090	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 18:28	AK/AP
K5168-08DLX100	0.0000	4.3820	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 18:59	AK/AP
K5168-09DLX100	0.0000	4.6460	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 19:29	AK/AP
K5168-10DLX100	0.0000	4.4850	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 20:00	AK/AP
K5168-11DLX100	0.0000	4.6640	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 20:30	AK/AP
CCV	1.7960	3.0470	3.0440	9.6590	2.4360	5.1620	14.6740	_2019-10-04_	10/4/19 21:01	AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 21:31	AK/AP
LB105455BLW4	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 22:01	AK/AP
LB105455BSW4	2.1100	2.9520	2.9780	9.7390	2.5350	5.1650	14.3470	_2019-10-04_	10/4/19 22:32	AK/AP
K5168-12DLX100	0.0000	4.9260	0.0000	0.0000	0.0000	0.0000	0.0000	_2019-10-04_	10/4/19 23:02	AK/AP
K5154-22DLX50	0.0000	4.1410	0.0000	0.0000	0.2360	0.0000	1.8140	_2019-10-04_	10/4/19 23:33	AK/AP
K5154-23DLX100	0.0000	3.6500	0.0000	0.0000	0.0000	0.0000	1.2520	_2019-10-05_	10/5/19 0:03	AK/AP
K5154-24DLX50	0.0000	3.9440	0.0000	0.0000	0.0000	0.0000	1.3880	_2019-10-05_	10/5/19 0:34	AK/AP

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IC-1
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K5154-25DLX100	0.0000	2.9010	0.0000	0.0000	0.0000	0.0000	1.1570 _2019-10-05_	10/5/19 1:04	AK/AP
K5154-26DLX100	0.0000	4.3790	0.0000	0.0000	0.0000	0.0000	1.2500 _2019-10-05_	10/5/19 1:34	AK/AP
CCV	1.7570	3.0310	3.0600	9.7230	2.4480	4.9600	14.8130 _2019-10-05_	10/5/19 2:05	AK/AP
CCB	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000 _2019-10-05_	10/5/19 2:35	AK/AP

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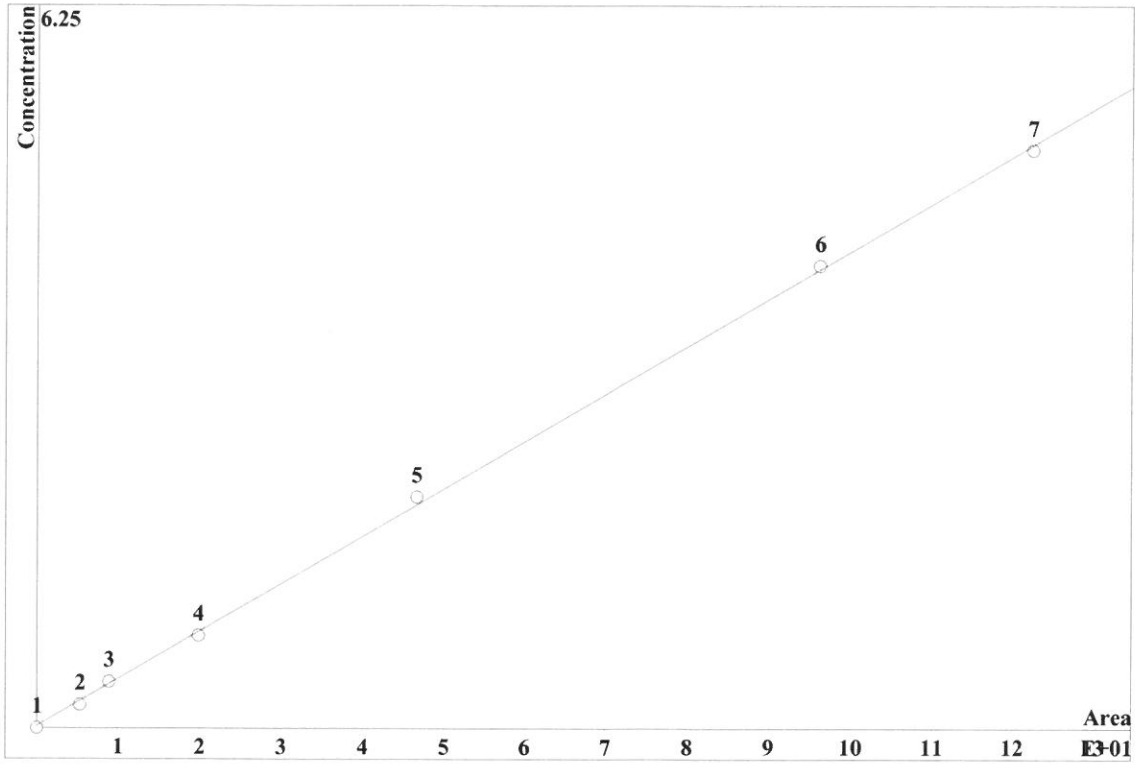
IC-1 Cal

9-11-19 AR

CALIBRATION OF COMPONENT F-

Method: ANIONS 09-11-19.mtw
Equation: Q = 0.821033·A + 0.364372
RSD: 2.494 %
Correlation coefficient: 0.999737

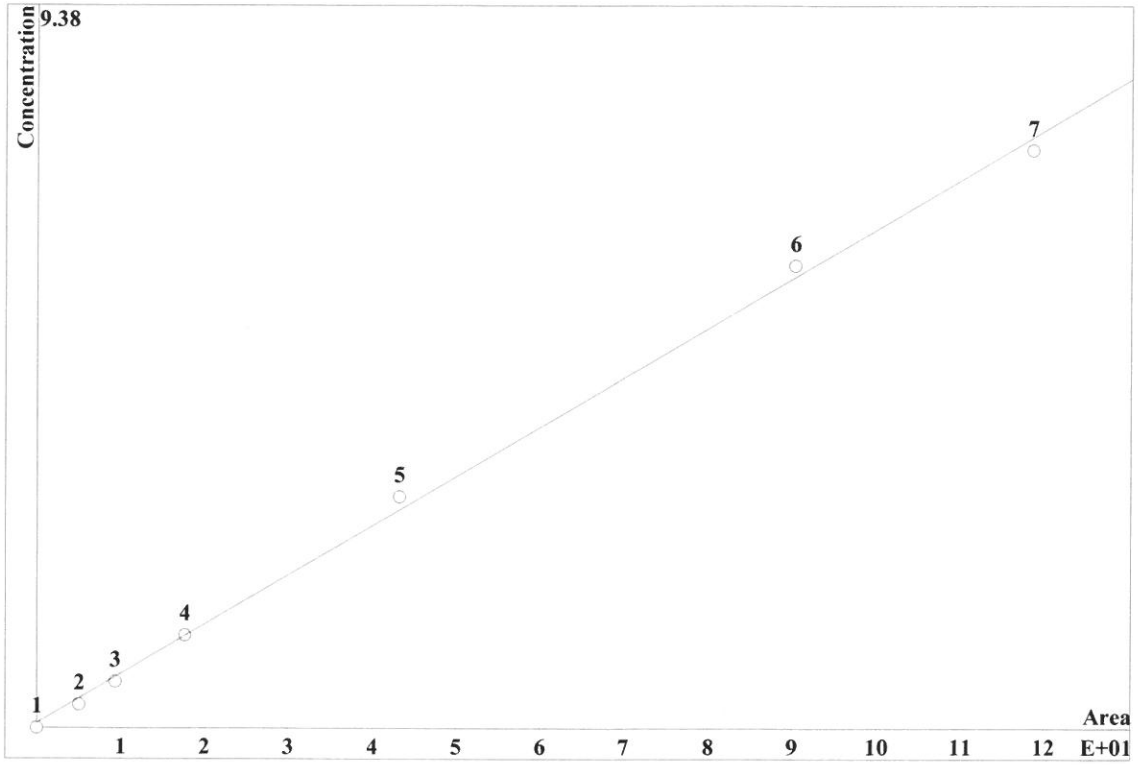


K3 = 0 K2 = 0 K1 = 0.821033 K0 = 0.364372
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.2551	5.321	0.2	20	5.943	Yes	
3	0.5016	8.91	0.4	20	5.943	Yes	
4	1.1	19.9	0.8	20	5.943	Yes	
5	3	46.6	2	20	5.943	Yes	
6	6.637	96.22	4	20	5.943	Yes	
7	8.822	122.5	5	20	5.943	Yes	

CALIBRATION OF COMPONENT CL-

Method: ANIONS 09-11-19.mtw
Equation: Q = 1.28218·A + 1.24047
RSD: 4.831 %
Correlation coefficient: 0.999013

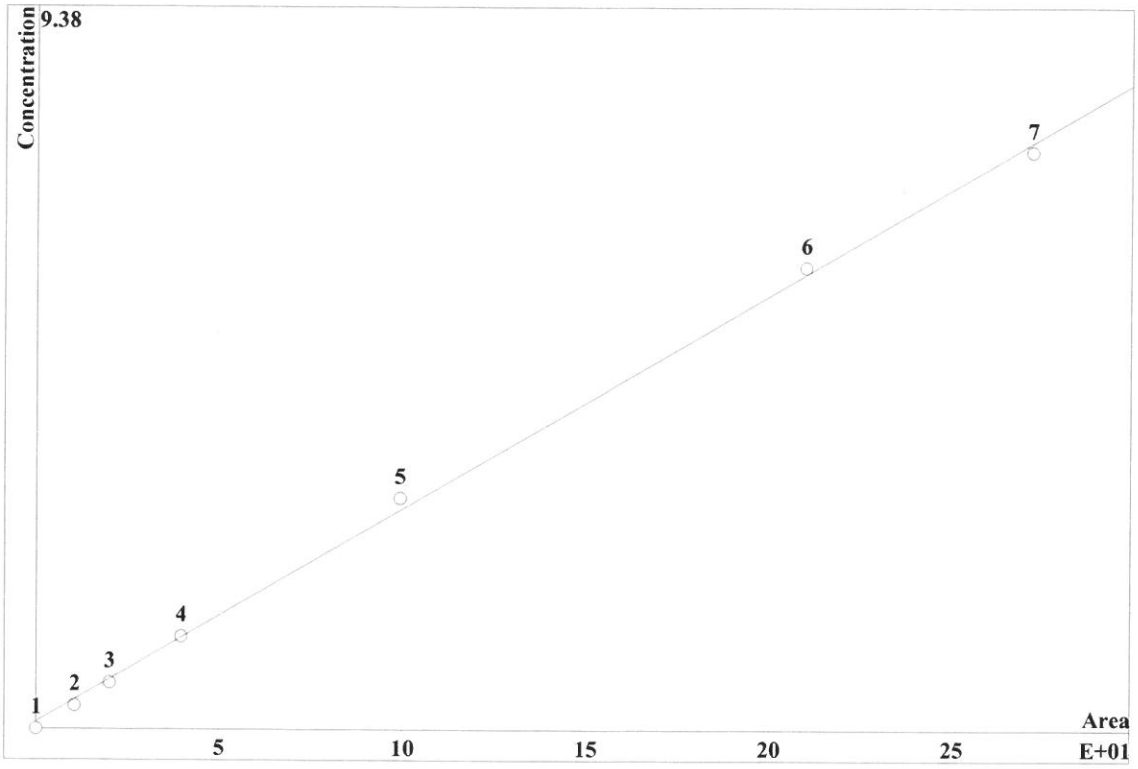


K3 = 0 K2 = 0 K1 = 1.28218 K0 = 1.24047
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.3214	5.069	0.3	20	8.829	Yes	
3	0.5935	9.405	0.6	20	8.829	Yes	
4	1.171	17.74	1.2	20	8.829	Yes	
5	2.904	43.2	3	20	8.829	Yes	
6	6.207	90.31	6	20	8.829	Yes	
7	8.164	118.6	7.5	20	8.829	Yes	

CALIBRATION OF COMPONENT NO2

Method: ANIONS 09-11-19.mtw
Equation: Q = 0.554364·A + 1.90063
RSD: 3.841 %
Correlation coefficient: 0.999376

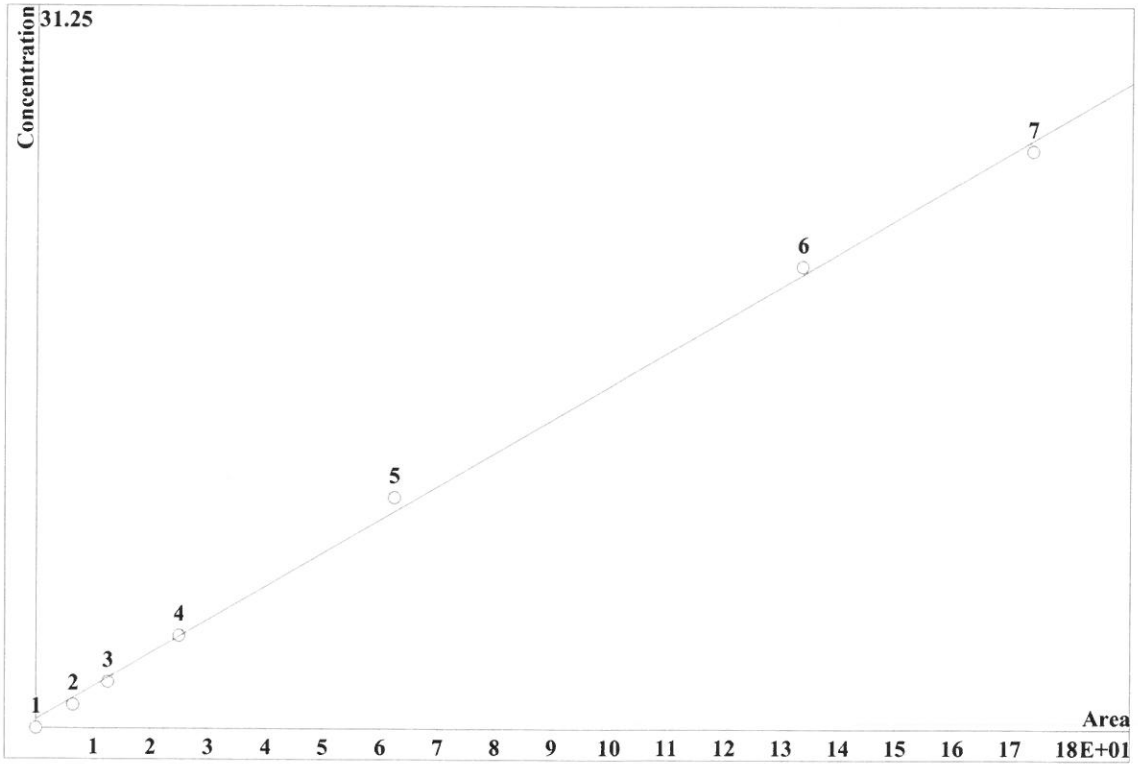


K3 = 0 K2 = 0 K1 = 0.554364 K0 = 1.90063
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.5652	10.44	0.3	20	10.66	Yes	
3	1.074	19.98	0.6	20	10.66	Yes	
4	2.165	39.57	1.2	20	10.66	Yes	
5	5.397	99.19	3	20	10.66	Yes	
6	11.17	209.8	6	20	10.66	Yes	
7	14.37	271.5	7.5	20	10.66	Yes	

CALIBRATION OF COMPONENT BR-

Method: ANIONS 09-11-19.mtw
Equation: Q = 2.88696·A + 7.64928
RSD: 4.442 %
Correlation coefficient: 0.999166

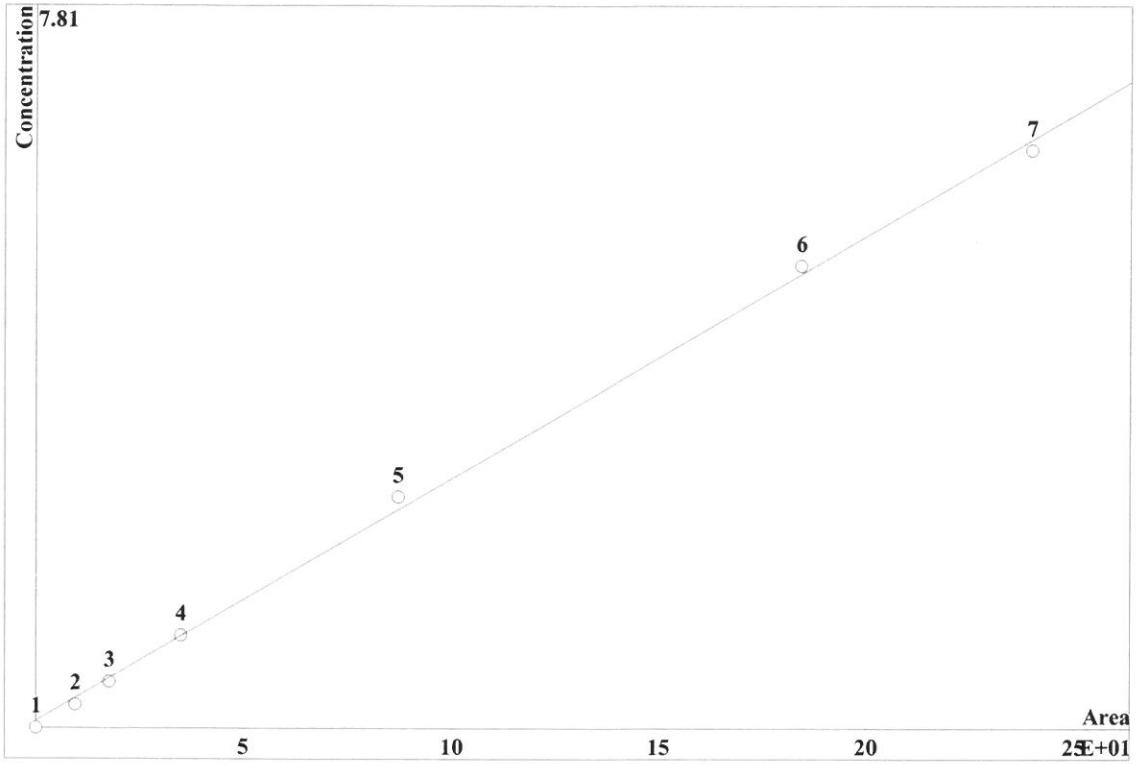


K3 = 0 K2 = 0 K1 = 2.88696 K0 = 7.64928
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.2907	6.439	1	20	13.72	Yes	
3	0.5549	12.58	2	20	13.72	Yes	
4	1.122	24.96	4	20	13.72	Yes	
5	2.84	62.4	10	20	13.72	Yes	
6	6.118	133.5	20	20	13.72	Yes	
7	8.011	173.7	25	20	13.72	Yes	

CALIBRATION OF COMPONENT NO3

Method: ANIONS 09-11-19.mtw
Equation: Q = 0.524779·A + 1.52257
RSD: 4.212 %
Correlation coefficient: 0.999250

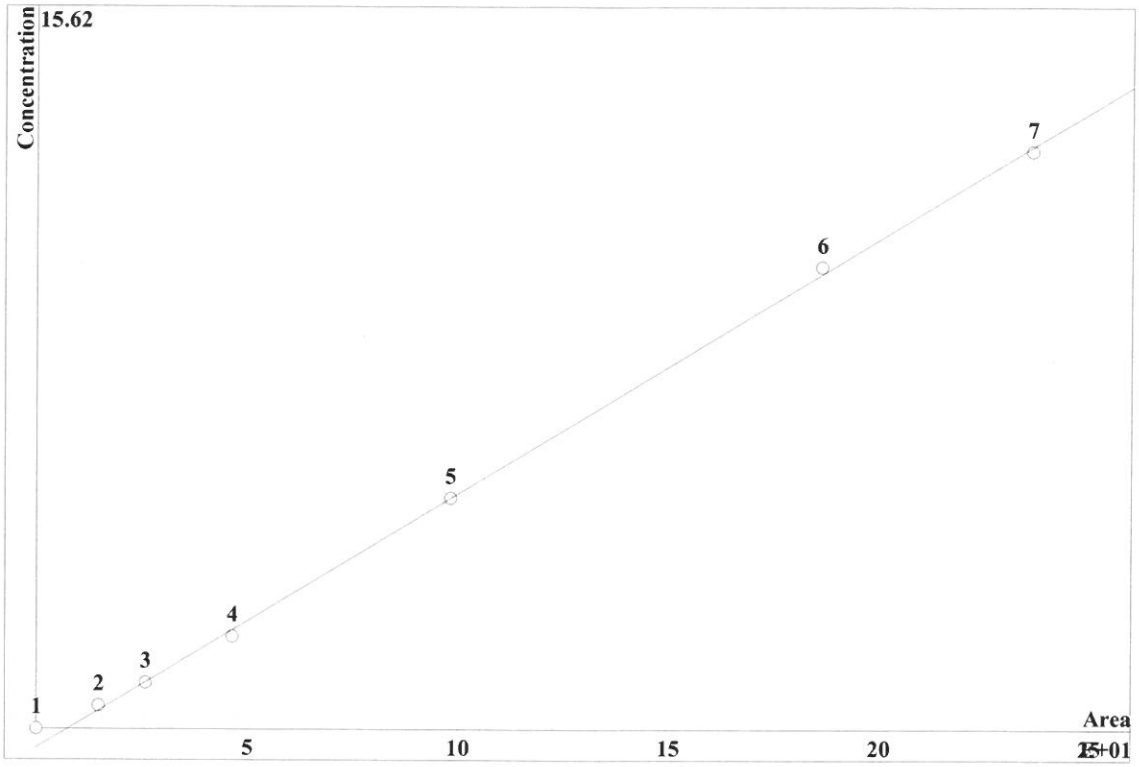


K3 = 0 K2 = 0 K1 = 0.524779 K0 = 1.52257
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.3397	9.489	0.25	20	15.85	Yes	
3	0.6435	17.78	0.5	20	15.85	Yes	
4	1.284	35.05	1	20	15.85	Yes	
5	3.191	87.15	2.5	20	15.85	Yes	
6	6.794	184.2	5	20	15.85	Yes	
7	8.907	239.6	6.25	20	15.85	Yes	

CALIBRATION OF COMPONENT HPO4

Method: ANIONS 09-11-19.mtw
Equation: Q = 1.1014·A - 8.20097
RSD: 2.490 %
Correlation coefficient: 0.999738



K3 = 0 K2 = 0 K1 = 1.1014 K0 = -8.20097
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.3285	14.66	0.5	20	21.46	Yes	
3	0.594	25.82	1	20	21.46	Yes	
4	1.103	46.45	2	20	21.46	Yes	
5	2.428	98.23	5	20	21.46	Yes	
6	4.756	186.2	10	20	21.46	Yes	
7	6.103	236.2	12.5	20	21.46	Yes	

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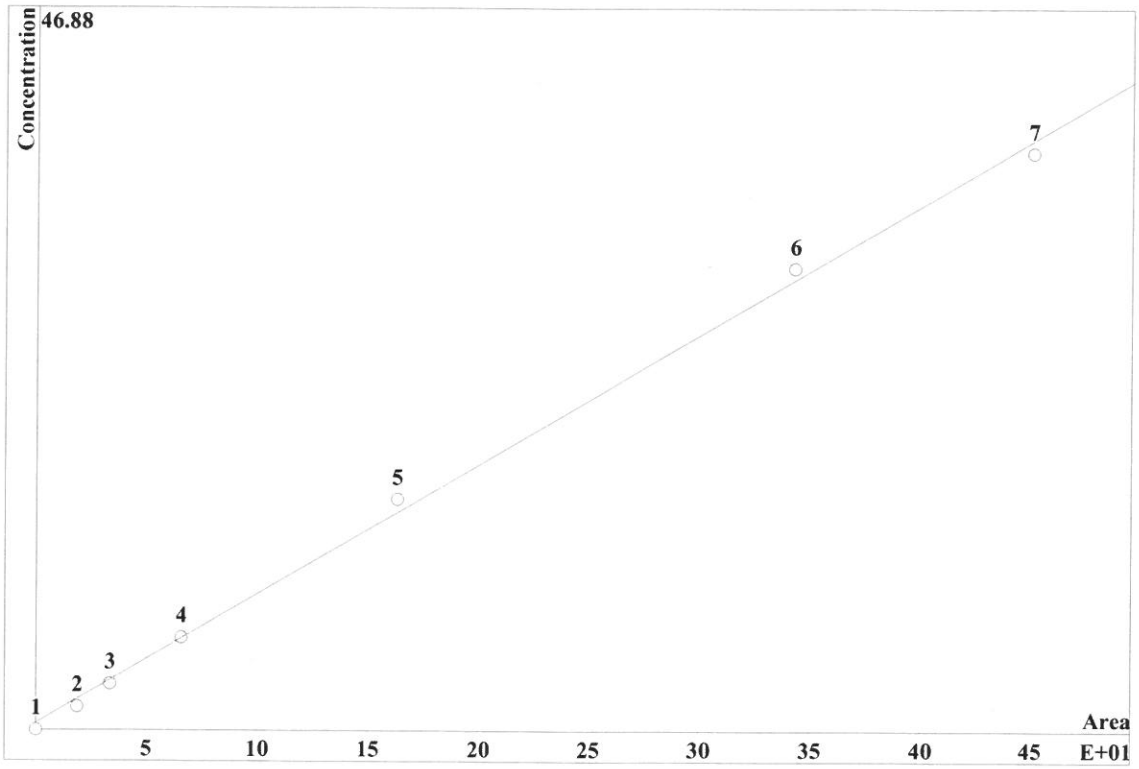
CALIBRATION OF COMPONENT SO4

Method: ANIONS 09-11-19.mtw
Equation: Q = 1.68205·A + 8.86802
RSD: 4.931 %
Correlation coefficient: 0.998972



K3 = 0 K2 = 0 K1 = 1.68205 K0 = 8.86802
Base: Area
Ref.channel: Cond
ISTD:
Formula: Linear
Weight: 1

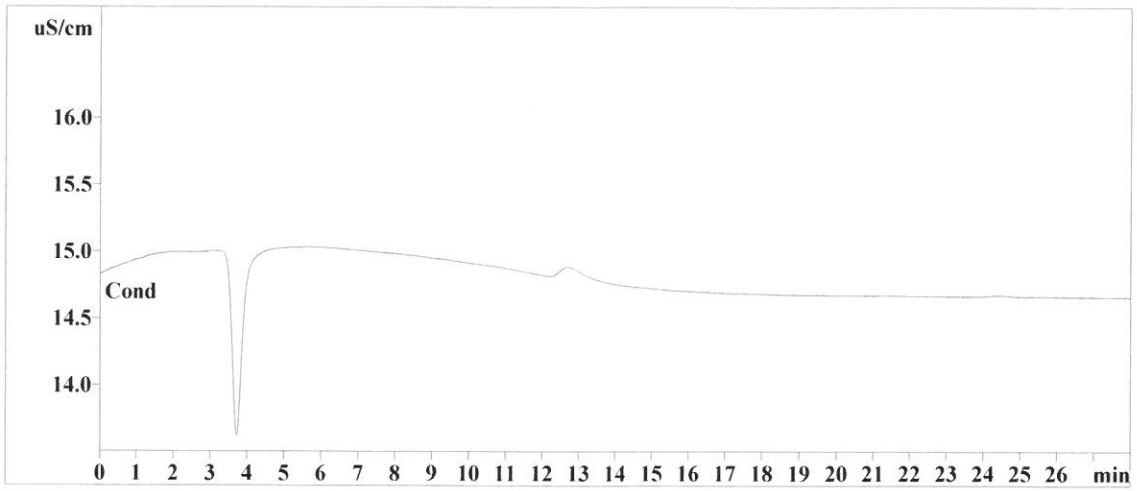
Level	Height	Area	Conc.	Vol/Dil	Retention	Used	File
1	0	0	0	0	0	No	
2	0.5148	18.8	1.5	20	24.69	Yes	
3	0.9449	33.55	3	20	24.69	Yes	
4	1.879	65.79	6	20	24.69	Yes	
5	4.708	162.8	15	20	24.69	Yes	
6	10.1	342.7	30	20	24.69	Yes	
7	13.2	450.6	37.5	20	24.69	Yes	

Report date: 9/16/2019 10:46:39 AM
Printed by: wet

Ident: STD1
Analysis from: 9/11/2019 11:54:00 AM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68587

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

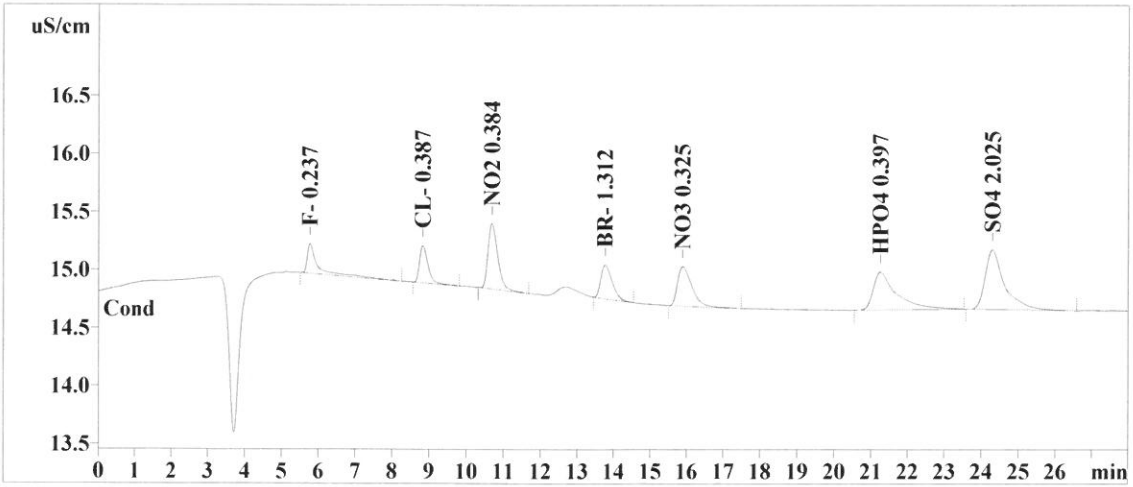
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:46:47 AM
Printed by: wet

Ident: STD2
Analysis from: 9/11/2019 12:24:55 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68588

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	0.209	0.25	9.74	5.321	7.58	0.
2	8.83	0.236	0.32	12.26	5.069	7.22	0.
3	10.68	0.277	0.56	21.60	10.439	14.87	0.
4	13.76	0.345	0.29	11.09	6.439	9.17	0.
5	15.89	0.420	0.34	12.97	9.489	13.51	0.
6	21.25	0.562	0.33	12.53	14.663	20.88	0.
7	24.30	0.481	0.51	19.67	18.804	26.78	0.
7	28.00	0.361	2.61	99.86	70.225	100.00	0.

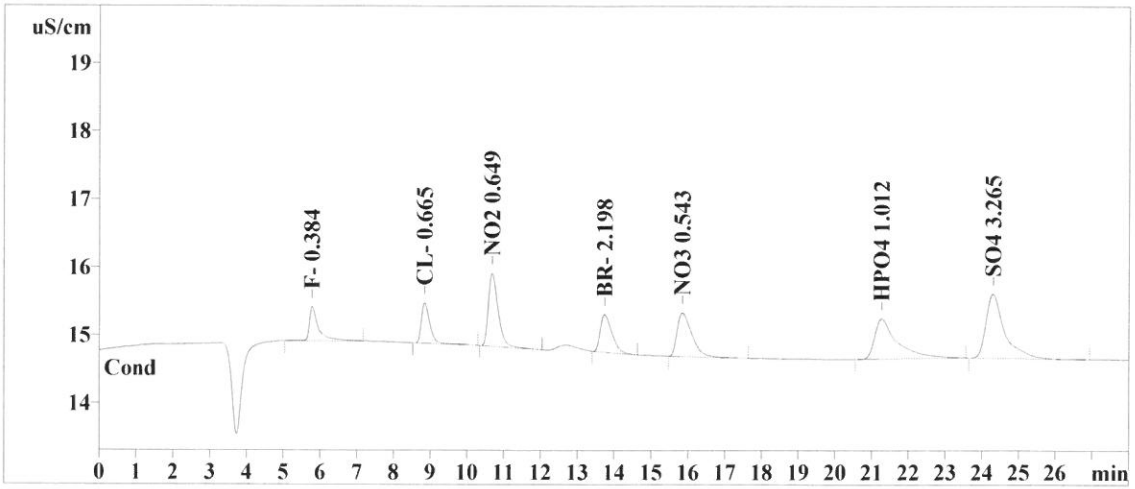
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:46:56 AM
Printed by: wet

Ident: STD3
Analysis from: 9/11/2019 12:55:50 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68589

SAMPLE:
: AK/AP
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.78	0.216	0.50	10.22	8.910	6.96	0.
2	8.85	0.230	0.59	12.08	9.405	7.35	0.
3	10.68	0.276	1.07	21.88	19.979	15.61	0.
4	13.73	0.350	0.55	11.31	12.578	9.82	0.
5	15.84	0.421	0.64	13.11	17.783	13.89	0.
6	21.27	0.542	0.59	12.09	25.819	20.17	0.
7	24.30	0.468	0.94	19.25	33.551	26.21	0.
7	28.00	0.358	4.90	99.93	128.026	100.00	0.

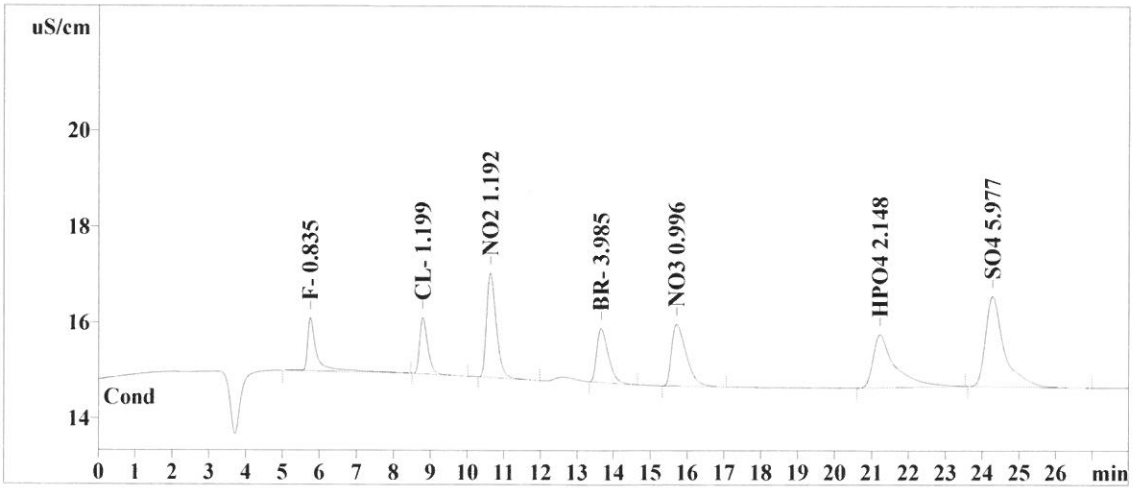
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:15 AM
Printed by: wet

Ident: STD4
Analysis from: 9/11/2019 1:26:44 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68590

SAMPLE:
: AK/AP
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.75	0.204	1.10	11.19	19.896	7.98	0.
2	8.79	0.227	1.17	11.92	17.742	7.11	0.
3	10.62	0.274	2.16	22.03	39.569	15.86	0.
4	13.64	0.342	1.12	11.42	24.957	10.00	0.
5	15.71	0.417	1.28	13.07	35.051	14.05	0.
6	21.22	0.517	1.10	11.22	46.447	18.62	0.
7	24.28	0.463	1.88	19.13	65.793	26.37	0.
7	28.00	0.349	9.82	99.97	249.455	100.00	0.

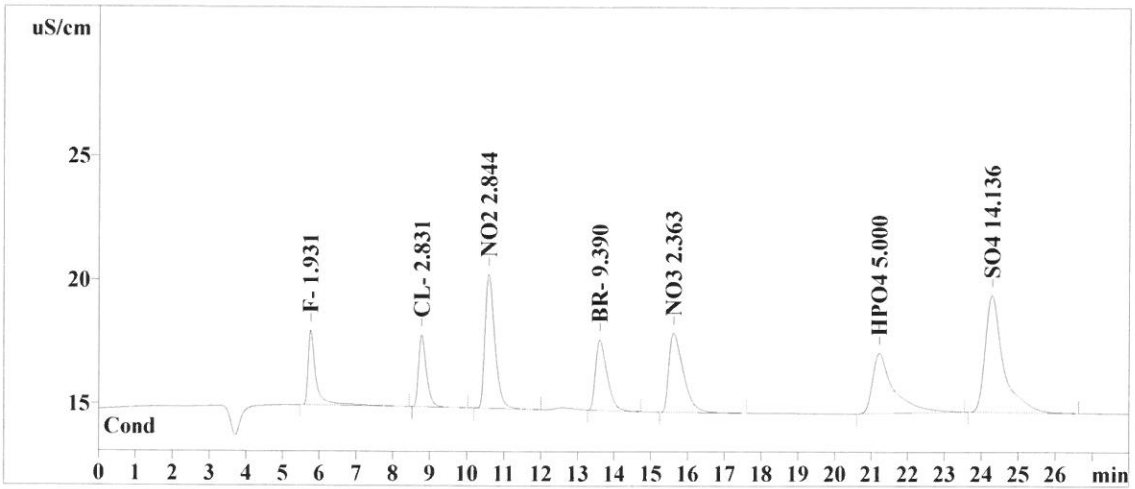
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:25 AM
Printed by: wet

Ident: STD5
Analysis from: 9/11/2019 1:57:39 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68591

SAMPLE:
: AK/AP
Vial number: 6
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	0.193	3.00	12.26	46.597	7.77	0.
2	8.78	0.222	2.90	11.87	43.198	7.20	0.
3	10.59	0.276	5.40	22.06	99.193	16.54	0.
4	13.59	0.334	2.84	11.60	62.405	10.41	0.
5	15.61	0.417	3.19	13.04	87.148	14.53	0.
6	21.21	0.496	2.43	9.92	98.231	16.38	0.
7	24.28	0.456	4.71	19.24	162.812	27.15	0.
7	28.00	0.342	24.47	100.00	599.583	100.00	0.

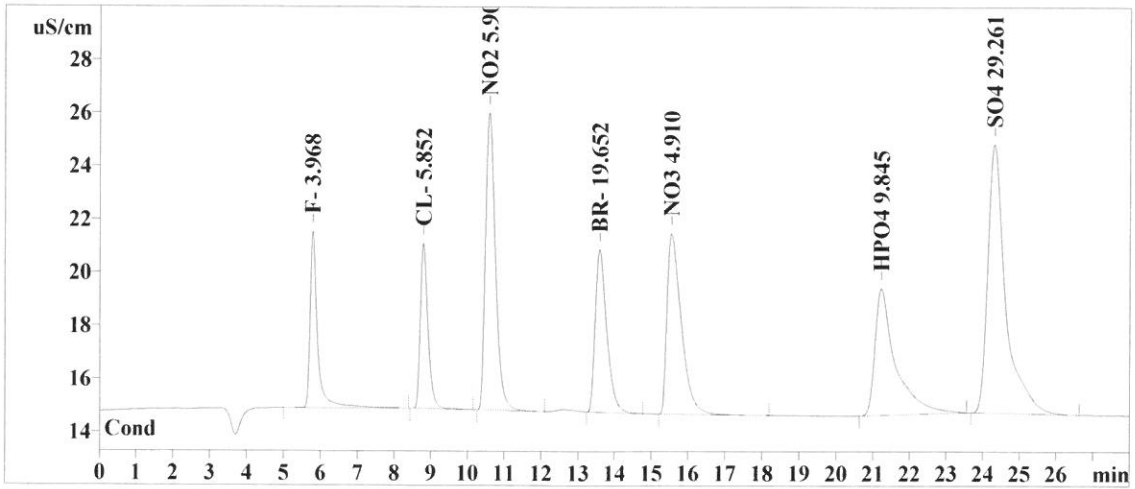
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:34 AM
Printed by: wet

Ident: STD6
Analysis from: 9/11/2019 2:28:34 PM
File: _2019-09-11_ Last save: 9/11/2019 3:39:40 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 12:31:40 PM
Run operator: wet
Analysis number: 68592

SAMPLE:
: AK/AP
Vial number: 7
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.187	6.64	12.81	96.218	7.74	0.
2	8.79	0.216	6.21	11.99	90.307	7.27	0.
3	10.58	0.284	11.17	21.57	209.761	16.88	0.
4	13.58	0.328	6.12	11.81	133.496	10.74	0.
5	15.55	0.413	6.79	13.12	184.218	14.82	0.
6	21.22	0.482	4.76	9.18	186.219	14.98	0.
7	24.31	0.450	10.10	19.51	342.652	27.57	0.
7	28.00	0.337	51.78	100.00	1242.871	100.00	0.

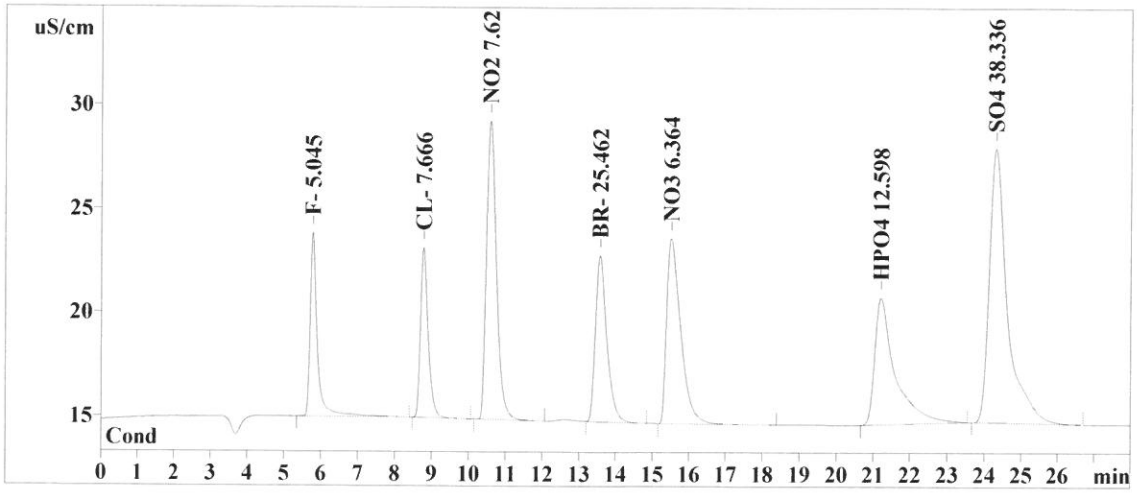
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:47:42 AM
Printed by: wet

Ident: STD7
Analysis from: 9/11/2019 2:59:28 PM
File: _2019-09-11_ Last save: 9/11/2019 3:40:52 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 3:40:50 PM
Run operator: wet
Analysis number: 68593

SAMPLE:
: AK/AP
Vial number: 8
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.181	8.82	13.06	122.454	7.59	0.
2	8.77	0.214	8.16	12.08	118.605	7.35	0.
3	10.57	0.287	14.37	21.26	271.528	16.84	0.
4	13.56	0.322	8.01	11.85	173.746	10.77	0.
5	15.50	0.409	8.91	13.18	239.627	14.86	0.
6	21.20	0.477	6.10	9.03	236.215	14.65	0.
7	24.30	0.455	13.20	19.53	450.551	27.94	0.
7	28.00	0.335	67.57	100.00	1612.725	100.00	0.

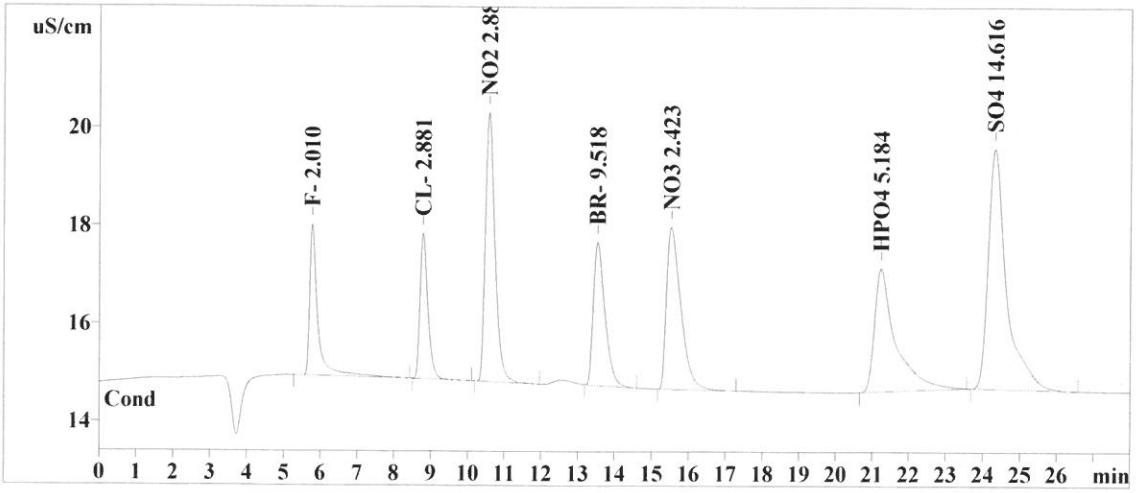
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:48:15 AM
Printed by: wet

Ident: ICV
Analysis from: 9/11/2019 3:30:23 PM
File: _2019-09-11_ Last save: 9/11/2019 3:58:12 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 3:27:18 PM
Run operator: wet
Analysis number: 68594

SAMPLE:
: AK/AP
Vial number: 9
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.195	3.08	12.25	48.519	7.88	0.
2	8.78	0.221	2.96	11.76	43.968	7.14	0.
3	10.56	0.275	5.48	21.78	100.769	16.36	0.
4	13.53	0.327	2.92	11.61	63.285	10.27	0.
5	15.51	0.412	3.31	13.14	89.452	14.52	0.
6	21.24	0.494	2.51	9.96	101.579	16.49	0.
7	24.32	0.454	4.90	19.49	168.513	27.35	0.
7	28.00	0.340	25.16	99.99	616.085	100.00	0.

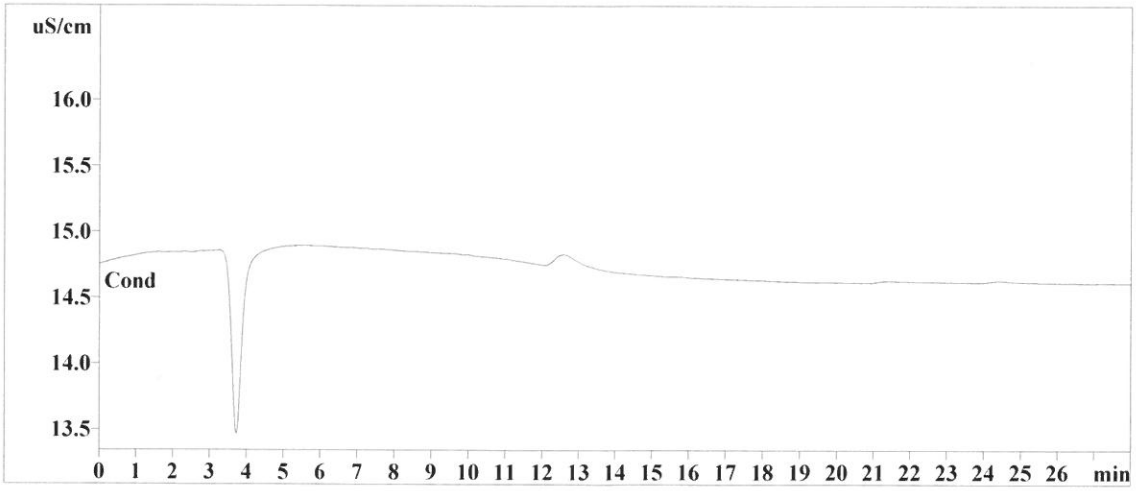
This report has been created by IC Net
METROHM LTD

Report date: 9/16/2019 10:48:24 AM
Printed by: wet

Ident: ICB
Analysis from: 9/11/2019 4:01:17 PM
File: _2019-09-11_ Last save: 9/11/2019 4:29:06 PM

Method: ANIONS 09-11-19.mtw Last save: 9/11/2019 3:40:50 PM
Run operator: wet
Analysis number: 68595

SAMPLE:
: AK/AP
Vial number: 10
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

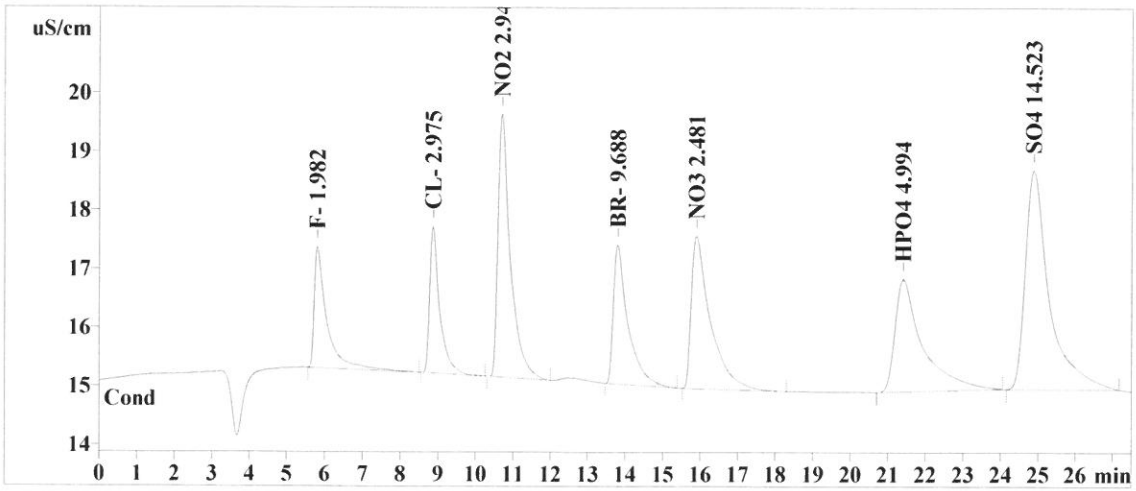
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:14:33 AM
Printed by: wet

Ident: CCV
Analysis from: 10/3/2019 9:18:31 AM
File: _2019-10-03_ Last save: 10/3/2019 9:45:50 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68851

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.80	0.288	2.06	10.48	47.841	7.74	0.
2	8.86	0.241	2.49	12.70	45.432	7.35	0.
3	10.69	0.313	4.48	22.81	102.901	16.66	0.
4	13.80	0.363	2.37	12.05	64.469	10.43	0.
5	15.89	0.475	2.59	13.21	91.652	14.83	0.
6	21.40	0.641	1.92	9.75	98.121	15.88	0.
7	24.87	0.591	3.73	18.98	167.405	27.10	0.
7	27.50	0.416	19.64	99.98	617.821	100.00	0.

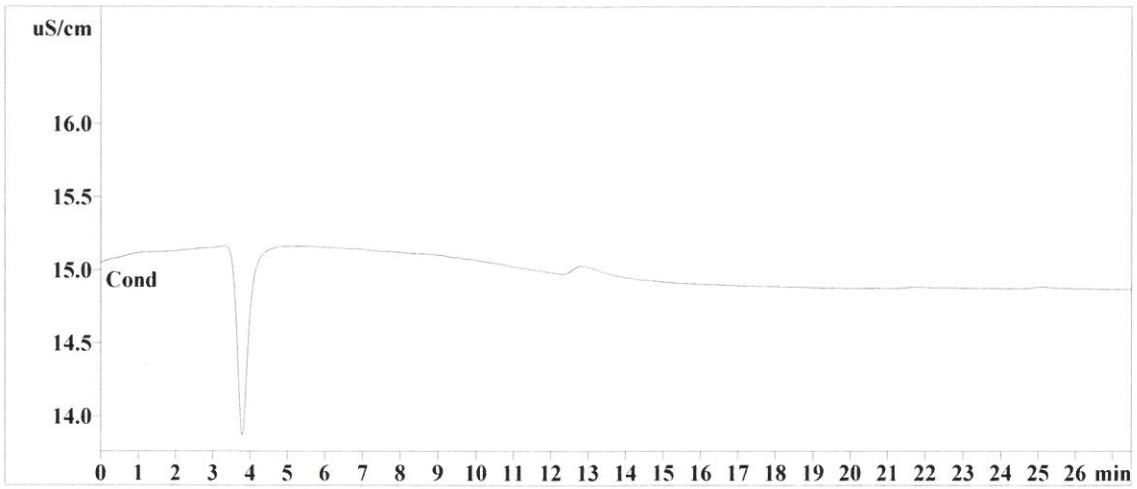
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:14:43 AM
Printed by: wet

Ident: CCB
Analysis from: 10/3/2019 9:48:57 AM
File: _2019-10-03_ Last save: 10/3/2019 10:16:16 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68852

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

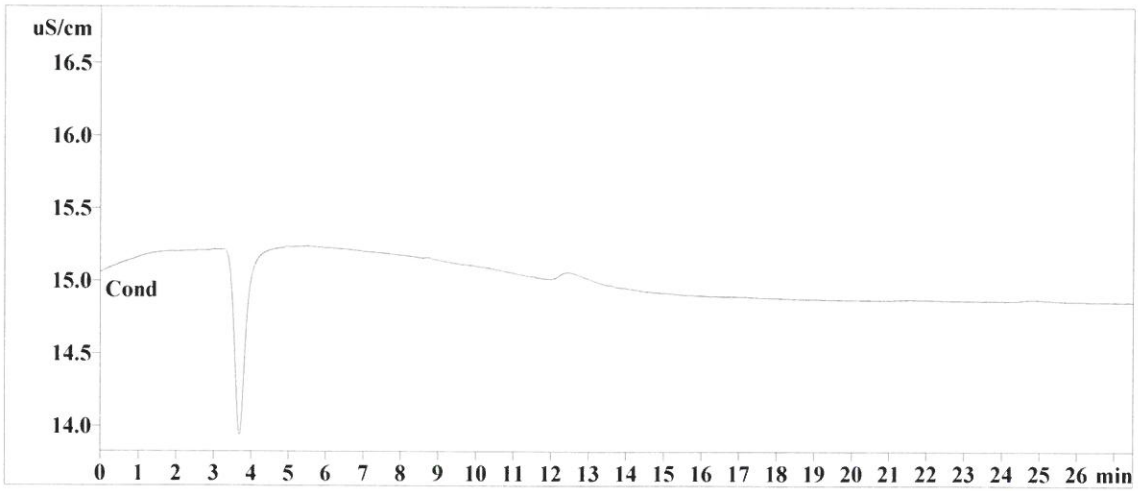
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:14:52 AM
Printed by: wet

Ident: LB105455BLW
Analysis from: 10/3/2019 10:19:22 AM
File: _2019-10-03_ Last save: 10/3/2019 10:46:42 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68853

SAMPLE:
: AK/AP
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

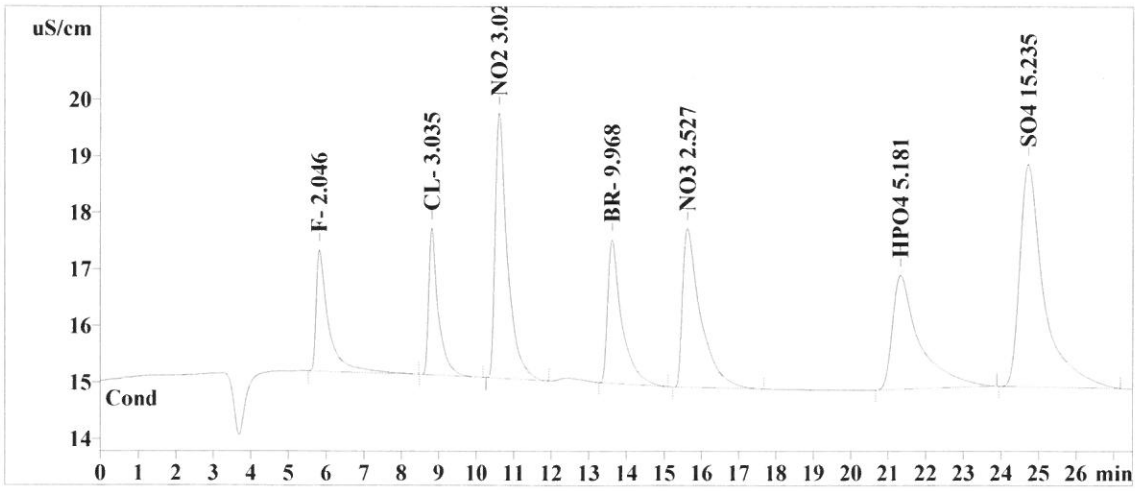
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:15:03 AM
Printed by: wet

Ident: LB105455BSW
Analysis from: 10/3/2019 10:49:48 AM
File: _2019-10-03_ Last save: 10/3/2019 11:17:08 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68854

SAMPLE:
: AK/AP
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.81	0.286	2.14	10.33	49.402	7.74	0.
2	8.81	0.237	2.59	12.53	46.377	7.26	0.
3	10.60	0.311	4.68	22.61	105.596	16.54	0.
4	13.61	0.350	2.53	12.24	66.403	10.40	0.
5	15.62	0.448	2.81	13.56	93.419	14.63	0.
6	21.32	0.633	2.01	9.73	101.532	15.90	0.
7	24.71	0.586	3.93	18.98	175.874	27.54	0.
7	27.50	0.407	20.69	99.98	638.602	100.00	0.

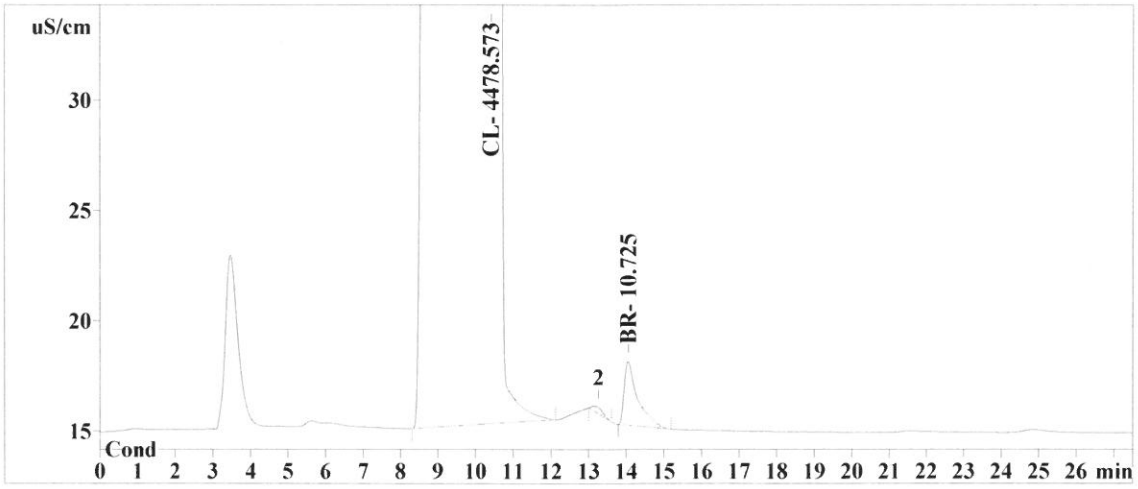
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:16:27 AM
Printed by: wet

Ident: K5154-10
Analysis from: 10/3/2019 11:22:27 AM
File: _2019-10-03_ Last save: 10/7/2019 9:16:28 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68855

SAMPLE:
: AK/AP
Vial number: 6
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	10.40	1.383	899.07	99.62	69857.622	99.89	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	14.05	0.317	2.89	0.32	71.649	0.10	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.243	901.97	99.94	69929.270	99.99	0.

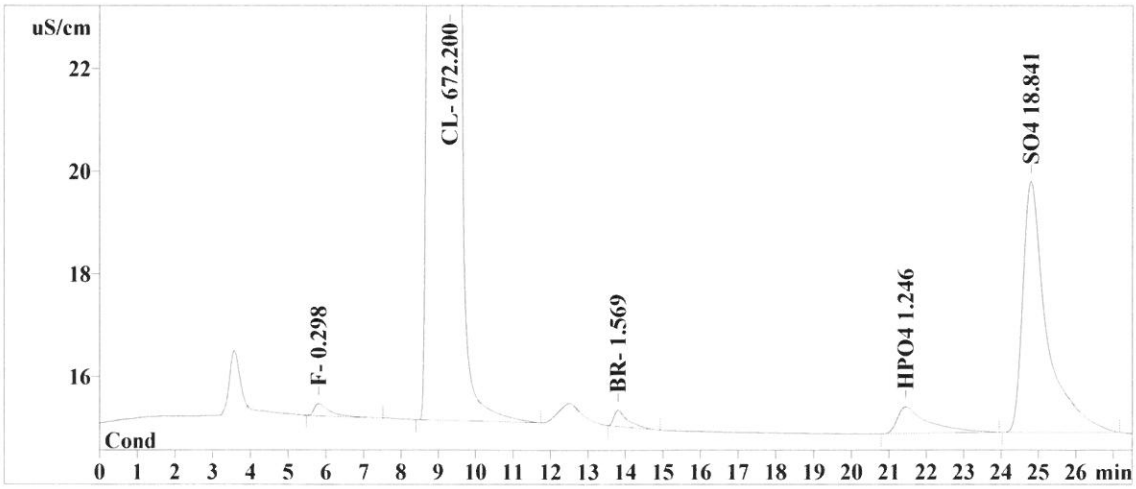
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:16:48 AM
Printed by: wet

Ident: K5154-11
Analysis from: 10/3/2019 11:52:52 AM
File: _2019-10-03_ Last save: 10/3/2019 12:20:12 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68856

SAMPLE:
: AK/AP
Vial number: 7
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.81	0.388	0.24	0.06	6.814	0.06	0.
2	9.29	0.429	393.38	98.43	10484.276	97.55	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.81	0.347	0.32	0.08	8.222	0.08	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.44	0.738	0.52	0.13	30.074	0.28	0.
7	24.79	0.572	4.88	1.22	218.754	2.04	0.
7	27.50	0.353	399.34	99.92	10748.141	100.00	0.

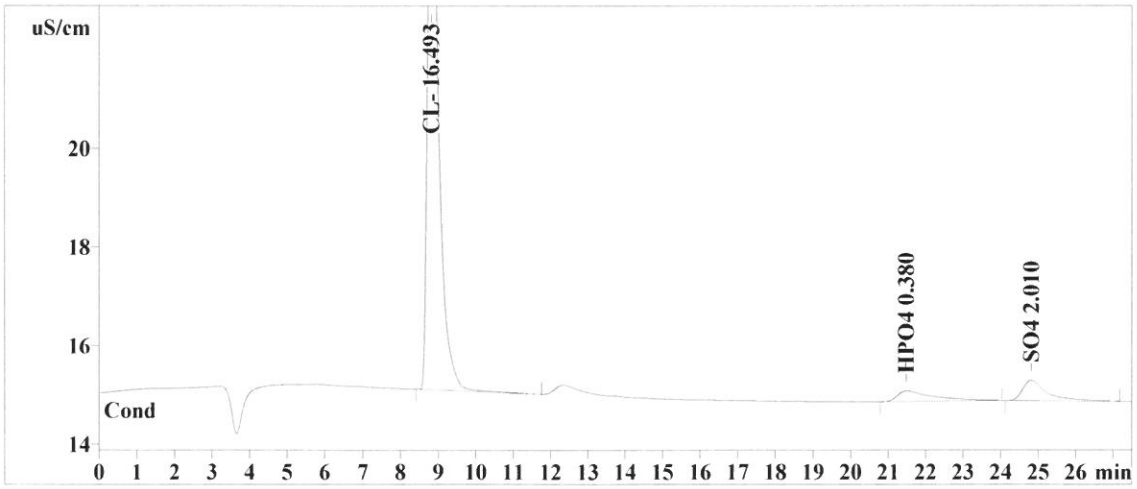
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:17:01 AM
Printed by: wet

Ident: K5154-14
Analysis from: 10/3/2019 12:23:17 PM
File: _2019-10-03_ Last save: 10/3/2019 12:50:36 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68857

SAMPLE:
: AK/AP
Vial number: 11
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.80	0.242	14.42	95.79	256.299	88.60	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.50	0.893	0.22	1.44	14.347	4.96	0.
7	24.80	0.583	0.42	2.76	18.630	6.44	0.
7	27.50	0.245	15.06	99.99	289.276	100.00	0.

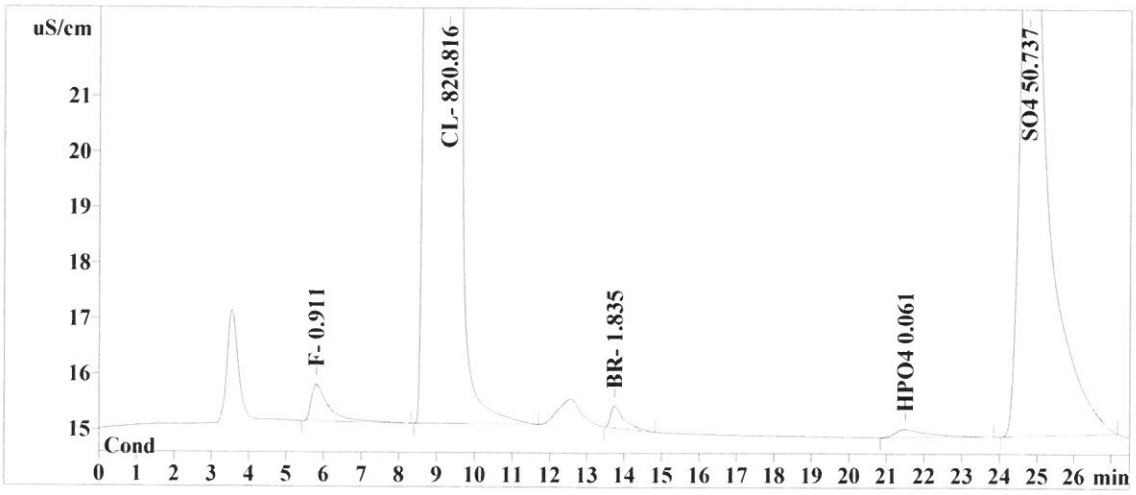
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:17:12 AM
Printed by: wet

Ident: K5154-15
Analysis from: 10/3/2019 12:53:42 PM
File: _2019-10-03_ Last save: 10/3/2019 1:21:02 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68858

SAMPLE:
: AK/AP
Vial number: 12
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.81	0.428	0.66	0.15	21.755	0.16	0.
2	9.30	0.479	434.68	96.71	12802.453	95.25	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.75	0.337	0.40	0.09	10.062	0.07	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.49	0.812	0.14	0.03	8.552	0.06	0.
7	24.75	0.576	13.36	2.97	598.001	4.45	0.
7	27.50	0.376	449.24	99.94	13440.823	100.00	0.

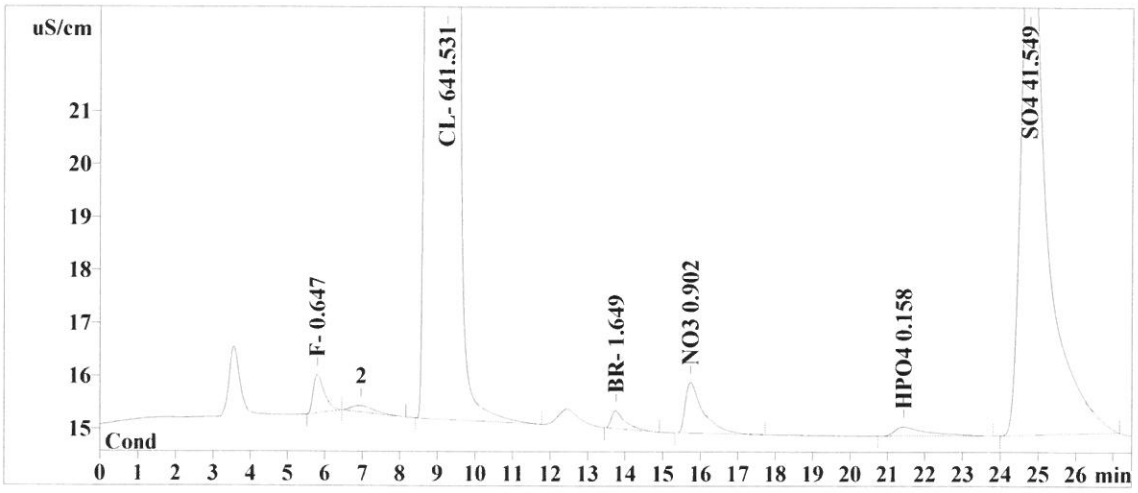
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:17:27 AM
Printed by: wet

Ident: K5154-16
Analysis from: 10/3/2019 1:24:07 PM
File: _2019-10-03_ Last save: 10/3/2019 1:51:26 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68859

SAMPLE:
: AK/AP
Vial number: 13
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.79	0.324	0.72	0.18	15.328	0.15	0.
2	9.22	0.416	381.54	96.57	10005.901	94.70	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.75	0.353	0.34	0.09	8.774	0.08	0.
5	15.73	0.430	0.96	0.24	31.488	0.30	0.
6	21.44	0.790	0.17	0.04	10.307	0.10	0.
7	24.75	0.570	11.06	2.80	488.753	4.63	0.
7	27.50	0.412	394.79	99.92	10560.552	99.95	0.

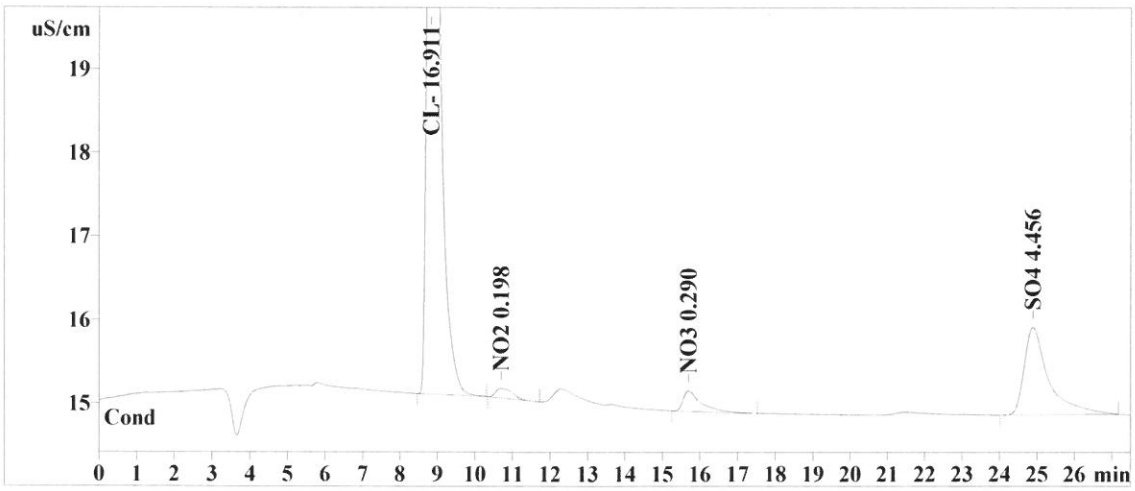
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:17:42 AM
Printed by: wet

Ident: K5154-17
Analysis from: 10/3/2019 1:54:32 PM
File: _2019-10-03_ Last save: 10/3/2019 2:21:52 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68860

SAMPLE:
: AK/AP
Vial number: 14
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.82	0.239	14.90	91.36	262.812	81.52	0.
3	10.70	0.523	0.11	0.70	3.712	1.15	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.70	0.431	0.25	1.51	8.142	2.53	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.88	0.594	1.05	6.42	47.712	14.80	0.
7	27.50	0.255	16.31	99.99	322.378	100.00	0.

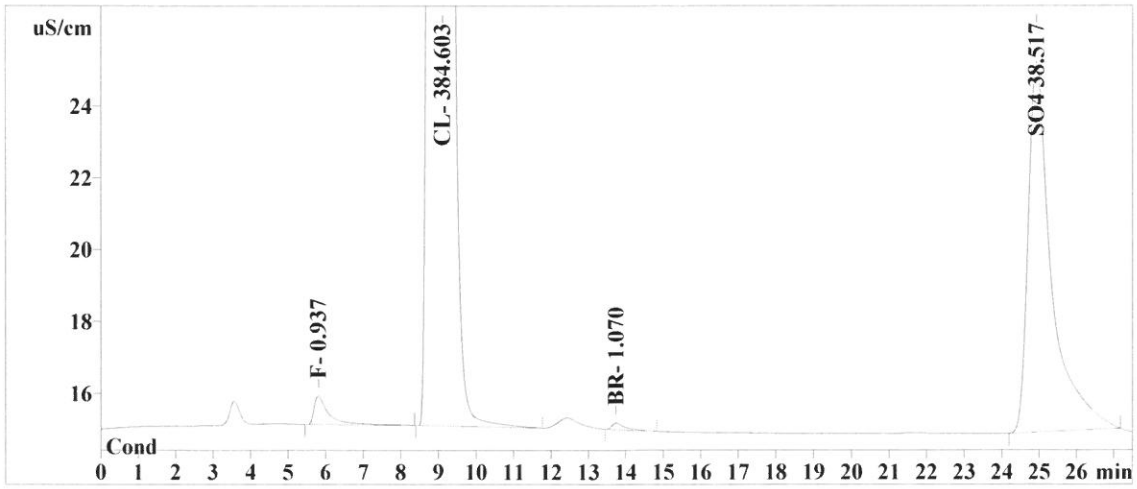
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:17:55 AM
Printed by: wet

Ident: K5154-18
Analysis from: 10/3/2019 2:24:57 PM
File: _2019-10-03_ Last save: 10/3/2019 2:52:16 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68861

SAMPLE:
: AK/AP
Vial number: 15
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.80	0.347	0.79	0.27	22.387	0.35	0.
2	9.09	0.324	280.99	96.09	5998.219	92.59	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.74	0.345	0.19	0.06	4.764	0.07	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.91	0.572	10.30	3.52	452.708	6.99	0.
7	27.50	0.227	292.28	99.95	6478.078	100.00	0.

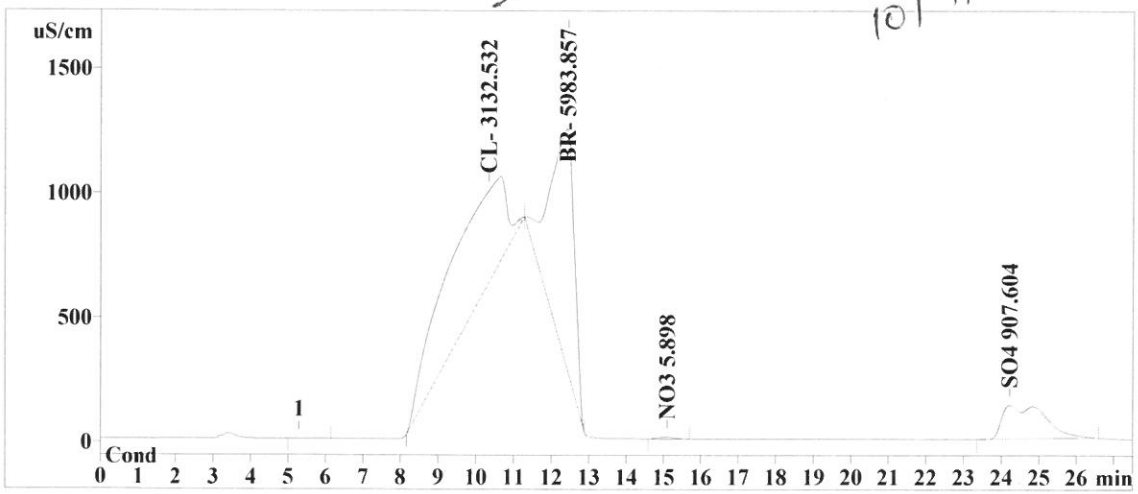
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:19:49 AM
Printed by: wet

Ident: K5154-19
Analysis from: 10/3/2019 2:55:22 PM
File: _2019-10-03_ Last save: 10/3/2019 4:45:18 PM
Modified!
Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68862

SAMPLE:
: AK/AP
Vial number: 16
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000

Before CL ^ Peak was not integrated by software.
10/7/19



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	10.33	2.234	367.71	24.91	48861.536	48.22	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	12.42	0.688	967.19	65.51	41451.688	40.91	0.
5	15.09	0.497	7.39	0.50	221.880	0.22	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.21	1.324	134.72	9.13	10786.393	10.65	0.
7	27.50	0.678	1477.01	100.05	101321.497	100.00	0.

This report has been created by IC Net
METROHM LTD

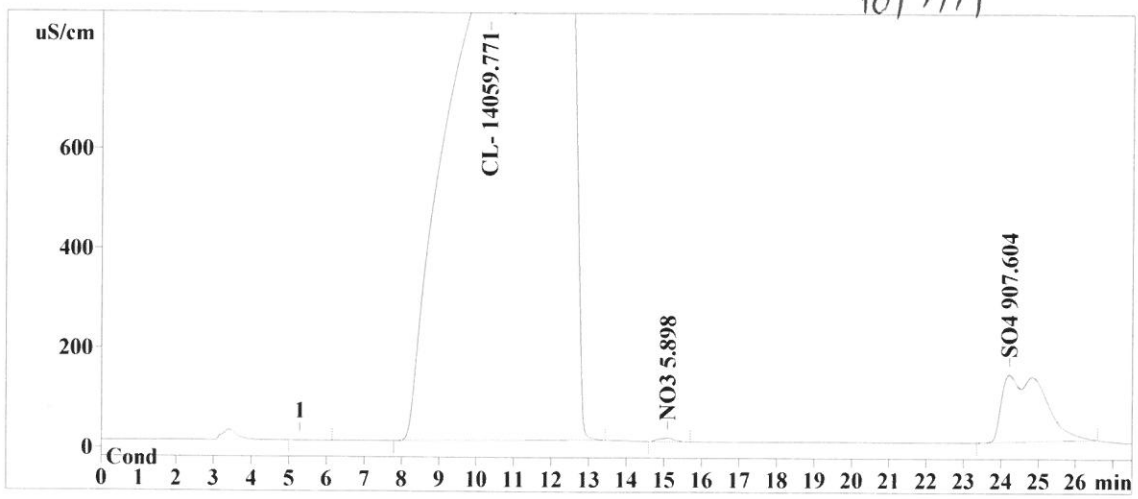
Report date: 10/7/2019 9:23:11 AM
Printed by: wet

Ident: K5154-19
Analysis from: 10/3/2019 2:55:22 PM
File: _2019-10-03_ Last save: 10/3/2019 4:45:18 PM
Modified! Manual peaks!
Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68862

SAMPLE:
: AK/AP
Vial number: 16
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000

After

AK
10/7/19



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	10.33	3.823	994.69	87.49	219309.037	95.22	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.09	0.497	7.39	0.65	221.880	0.10	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.21	1.324	134.72	11.85	10786.393	4.68	0.
7	27.50	0.806	1136.80	99.99	230317.310	100.00	0.

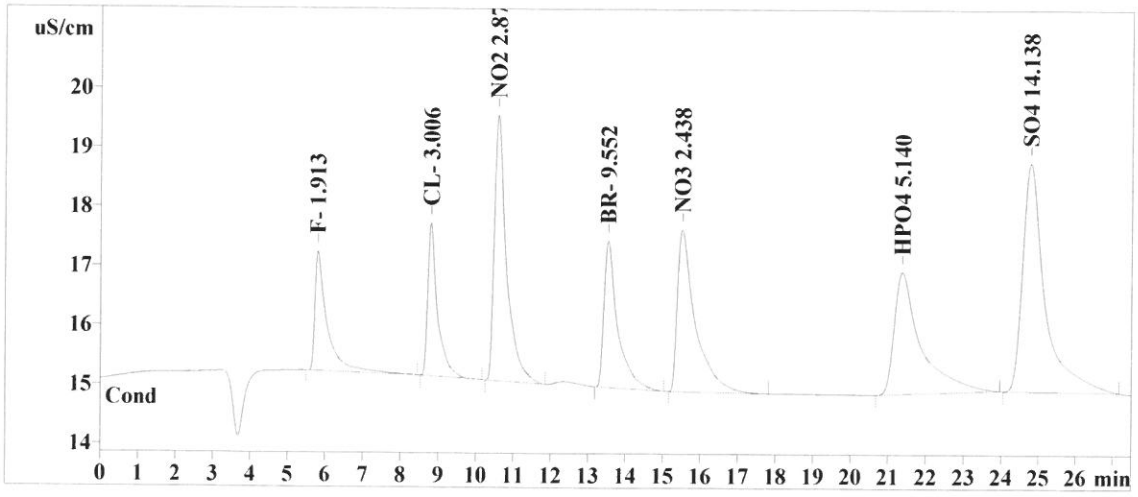
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:23:51 AM
Printed by: wet

Ident: CCV
Analysis from: 10/3/2019 4:27:17 PM
File: _2019-10-03_ Last save: 10/3/2019 4:54:36 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68865

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.80	0.286	2.01	9.97	46.158	7.57	0.
2	8.79	0.230	2.58	12.78	45.921	7.53	0.
3	10.58	0.301	4.47	22.20	100.442	16.48	0.
4	13.52	0.334	2.47	12.24	63.523	10.42	0.
5	15.51	0.429	2.73	13.52	89.999	14.76	0.
6	21.37	0.600	2.05	10.19	100.773	16.53	0.
7	24.76	0.549	3.85	19.08	162.832	26.71	0.
7	27.50	0.390	20.15	99.98	609.647	100.00	0.

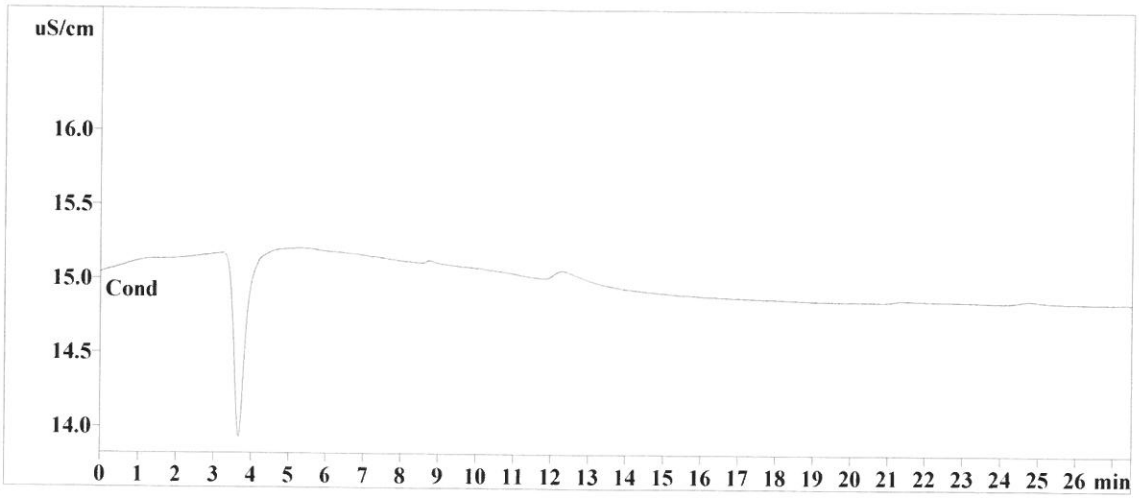
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:23:59 AM
Printed by: wet

Ident: CCB
Analysis from: 10/3/2019 4:57:42 PM
File: _2019-10-03_ Last save: 10/3/2019 5:25:02 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68866

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

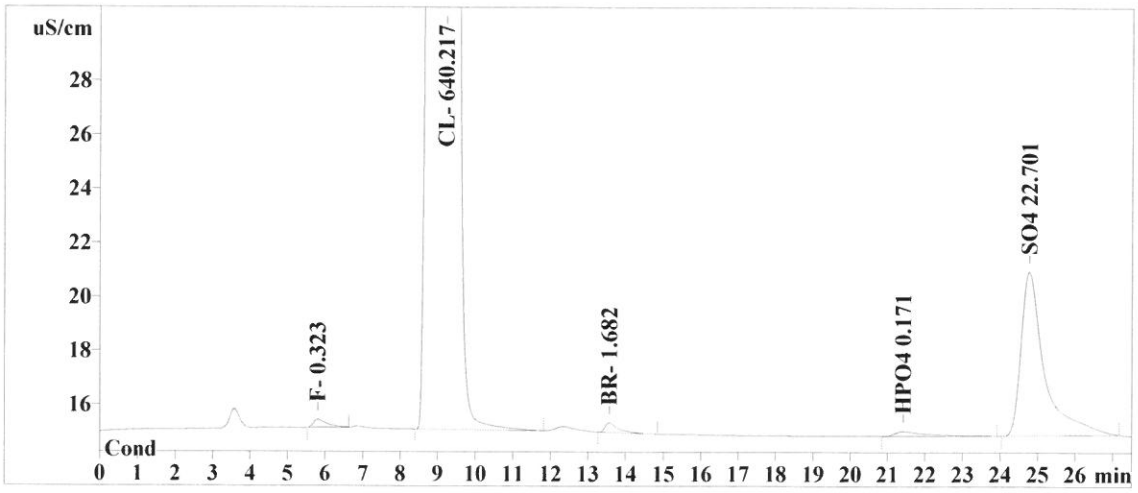
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:30:31 AM
Printed by: wet

Ident: K5168-07
Analysis from: 10/3/2019 5:28:07 PM
File: _2019-10-03_ Last save: 10/3/2019 5:55:26 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68867

SAMPLE:
: AK/AP
Vial number: 17
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.80	0.373	0.29	0.08	7.426	0.07	0.
2	9.20	0.417	373.96	98.12	9985.399	97.16	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.57	0.331	0.36	0.09	9.006	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.43	0.746	0.18	0.05	10.557	0.10	0.
7	24.77	0.554	6.07	1.59	264.646	2.58	0.
7	27.50	0.346	380.87	99.93	10277.033	100.00	0.

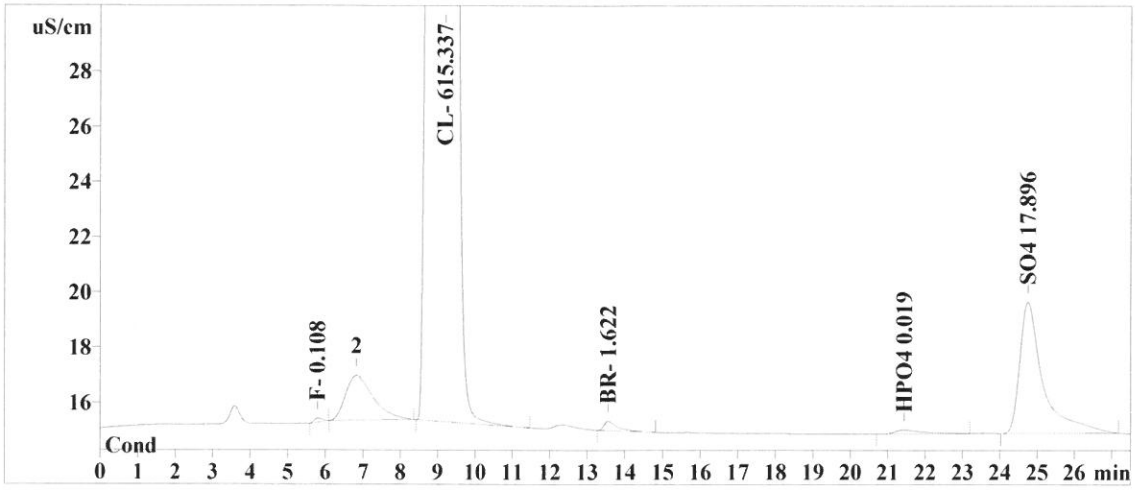
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:31:03 AM
Printed by: wet

Ident: K5168-08
Analysis from: 10/3/2019 5:58:32 PM
File: _2019-10-03_ Last save: 10/7/2019 9:31:04 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68868

SAMPLE:
: AK/AP
Vial number: 18
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.78	0.249	0.15	0.04	2.195	0.02	0.
2	9.18	0.408	365.74	98.03	9597.313	96.88	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.56	0.333	0.34	0.09	8.590	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.43	0.712	0.15	0.04	7.795	0.08	0.
7	24.74	0.552	4.76	1.28	207.513	2.09	0.
7	27.50	0.322	371.14	99.48	9823.407	99.16	0.

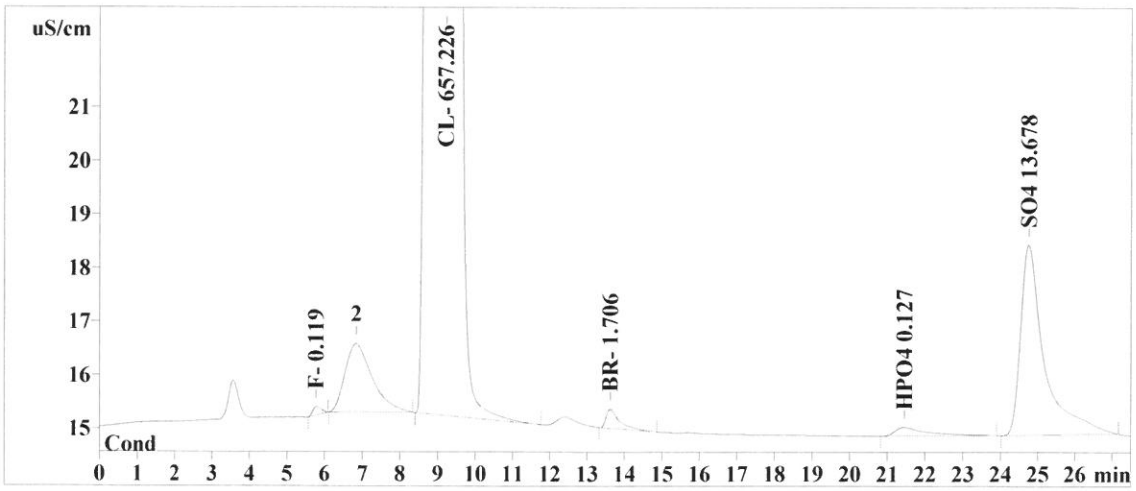
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:31:17 AM
Printed by: wet

Ident: K5168-09
Analysis from: 10/3/2019 6:28:56 PM
File: _2019-10-03_ Last save: 10/3/2019 6:56:16 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68869

SAMPLE:
: AK/AP
Vial number: 19
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.78	0.261	0.16	0.04	2.460	0.02	0.
2	9.20	0.423	377.17	98.52	10250.707	97.69	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.62	0.336	0.36	0.09	9.171	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.44	0.762	0.16	0.04	9.756	0.09	0.
7	24.74	0.553	3.55	0.93	157.363	1.50	0.
7	27.50	0.334	381.40	99.63	10429.457	99.39	0.

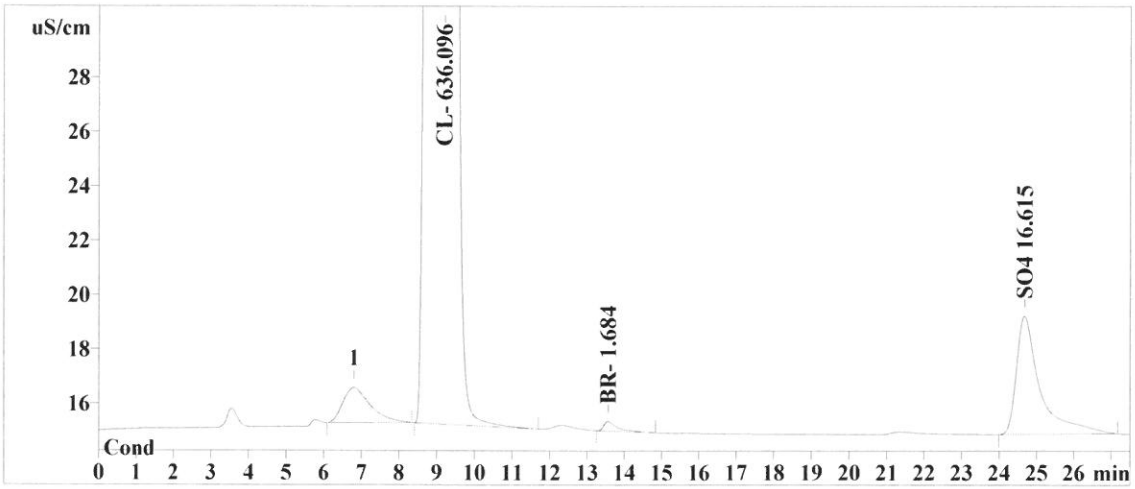
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:31:43 AM
Printed by: wet

Ident: K5168-10
Analysis from: 10/3/2019 6:59:21 PM
File: _2019-10-03_ Last save: 10/7/2019 9:31:42 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68870

SAMPLE:
: AK/AP
Vial number: 20
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	9.18	0.415	371.48	98.36	9921.112	97.38	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.56	0.331	0.36	0.09	9.015	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.67	0.552	4.35	1.15	192.287	1.89	0.
7	27.50	0.186	376.19	99.60	10122.414	99.35	0.

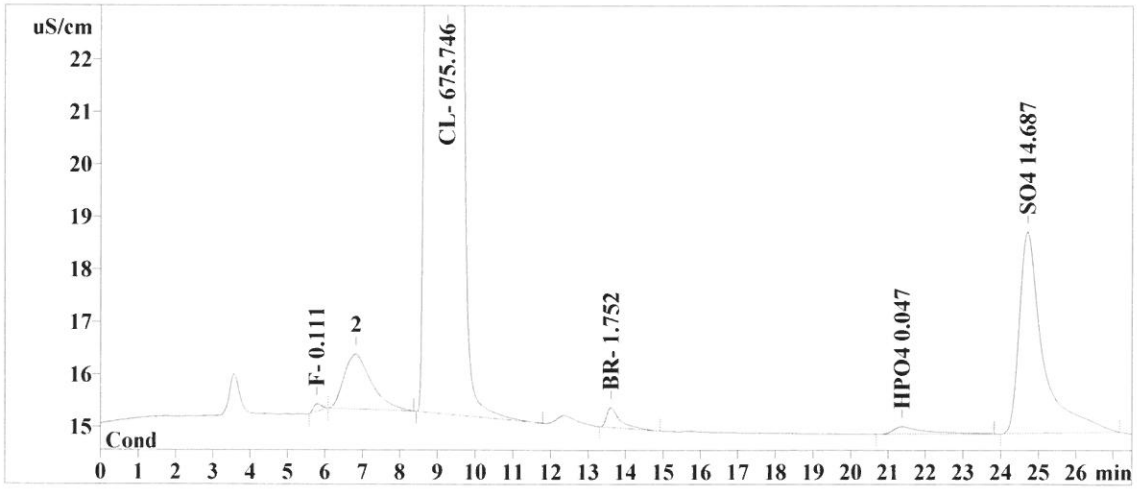
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:31:58 AM
Printed by: wet

Ident: K5168-11
Analysis from: 10/3/2019 7:29:46 PM
File: _2019-10-03_ Last save: 10/3/2019 7:57:04 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68871

SAMPLE:
: AK/AP
Vial number: 21
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.78	0.254	0.15	0.04	2.261	0.02	0.
2	9.23	0.429	384.52	98.51	10539.590	97.75	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.61	0.330	0.38	0.10	9.489	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.38	0.750	0.14	0.04	8.296	0.08	0.
7	24.69	0.554	3.83	0.98	169.366	1.57	0.
7	27.50	0.331	389.02	99.66	10729.002	99.51	0.

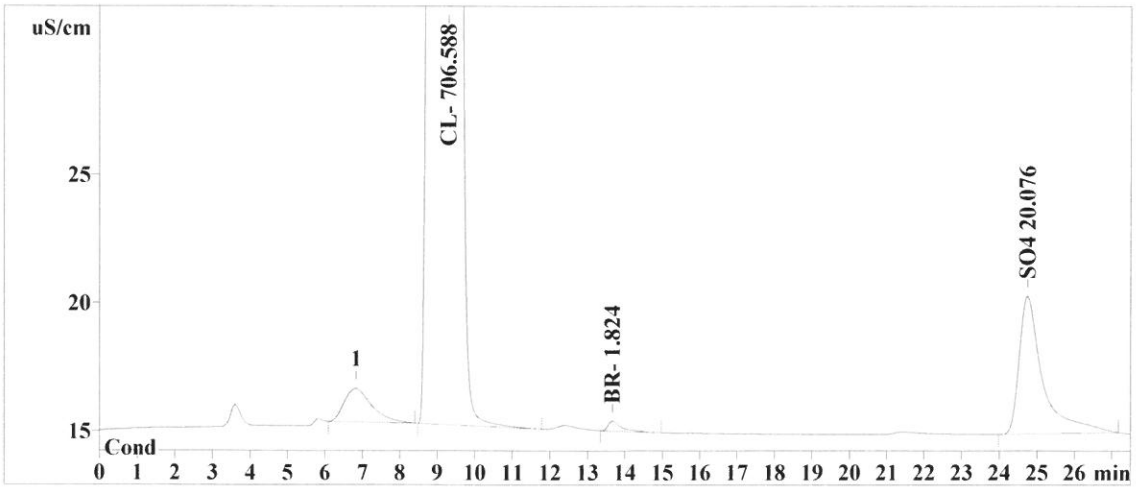
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:32:18 AM
Printed by: wet

Ident: K5168-12
Analysis from: 10/3/2019 8:00:11 PM
File: _2019-10-03_ Last save: 10/7/2019 9:32:18 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68872

SAMPLE:
: AK/AP
Vial number: 22
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	9.28	0.439	393.53	98.20	11020.684	97.26	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.66	0.332	0.39	0.10	9.987	0.09	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.74	0.550	5.36	1.34	233.431	2.06	0.
7	27.50	0.189	399.29	99.64	11264.102	99.41	0.

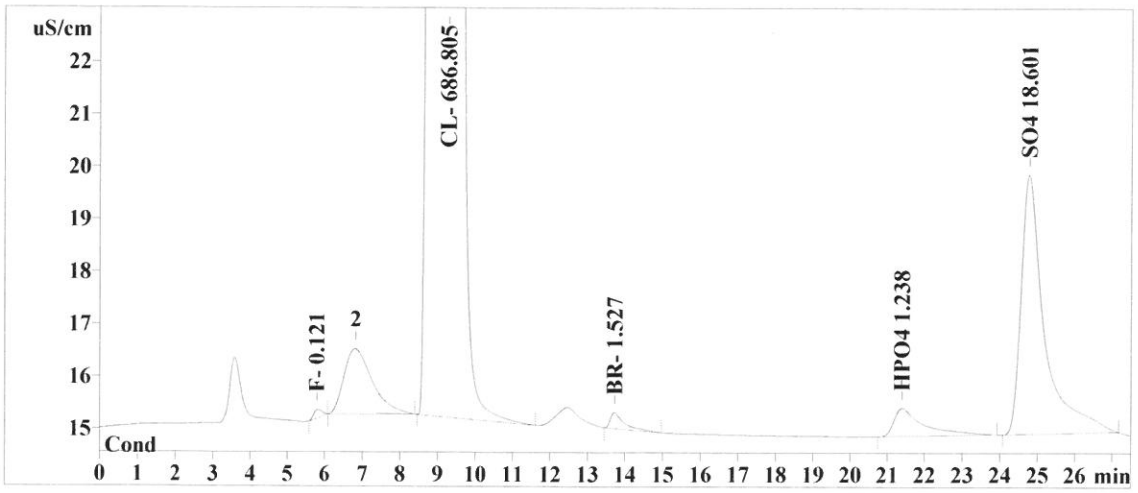
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:32:41 AM
Printed by: wet

Ident: K5154-11DUP
Analysis from: 10/3/2019 8:30:36 PM
File: _2019-10-03_ Last save: 10/3/2019 8:57:54 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68873

SAMPLE:
: AK/AP
Vial number: 8
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.79	0.263	0.16	0.04	2.505	0.02	0.
2	9.26	0.441	385.01	98.11	10712.093	97.09	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.72	0.335	0.31	0.08	7.930	0.07	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	21.40	0.687	0.53	0.14	29.924	0.27	0.
7	24.76	0.554	4.94	1.26	215.895	1.96	0.
7	27.50	0.326	390.95	99.62	10968.345	99.41	0.

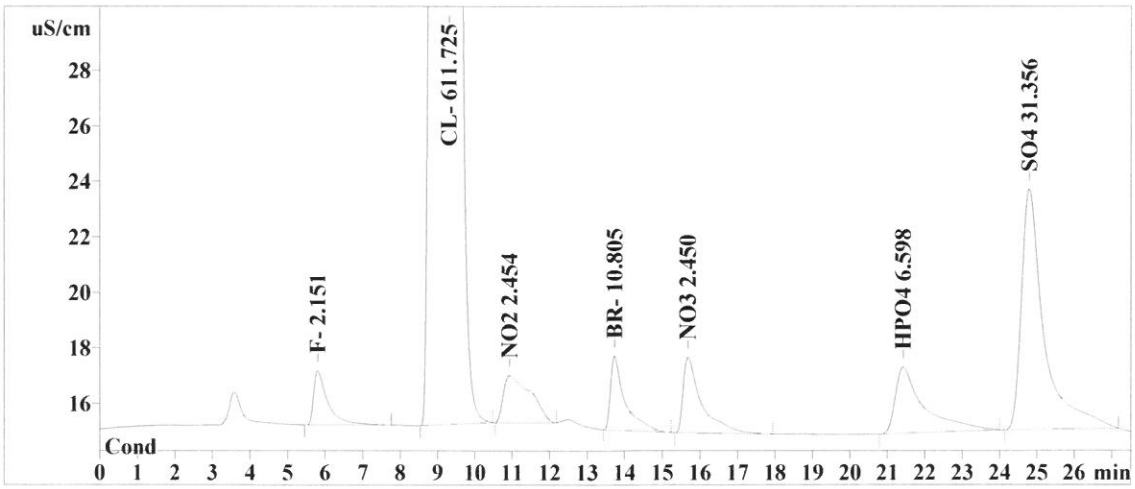
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:32:52 AM
Printed by: wet

Ident: K5154-12MS
Analysis from: 10/3/2019 9:01:00 PM
File: _2019-10-03_ Last save: 10/3/2019 9:28:20 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68874

SAMPLE:
: AK/AP
Vial number: 9
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.80	0.354	1.95	0.51	51.945	0.50	0.
2	9.29	0.411	363.73	94.74	9540.968	92.31	0.
3	10.93	0.913	1.69	0.44	85.117	0.82	0.
4	13.73	0.334	2.66	0.69	72.204	0.70	0.
5	15.69	0.411	2.72	0.71	90.468	0.88	0.
6	21.42	0.629	2.39	0.62	127.249	1.23	0.
7	24.78	0.540	8.67	2.26	367.555	3.56	0.
7	27.50	0.513	383.82	99.97	10335.505	100.00	0.

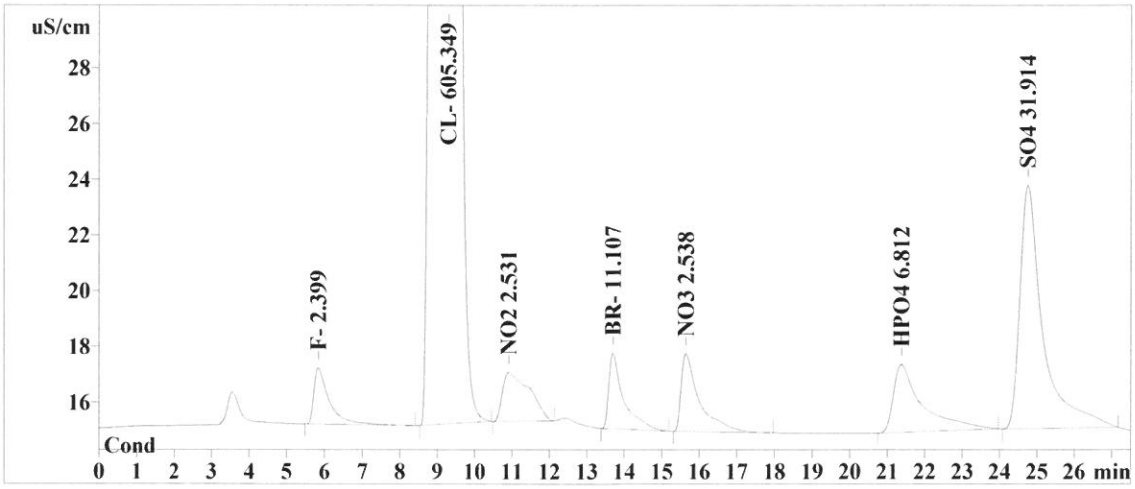
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:33:03 AM
Printed by: wet

Ident: K5154-13MSD
Analysis from: 10/3/2019 9:31:25 PM
File: _2019-10-03_ Last save: 10/3/2019 9:58:44 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68875

SAMPLE:
: AK/AP
Vial number: 10
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.83	0.378	2.02	0.53	57.991	0.57	0.
2	9.28	0.407	362.49	94.61	9441.520	92.01	0.
3	10.91	0.900	1.75	0.46	87.882	0.86	0.
4	13.70	0.337	2.71	0.71	74.298	0.72	0.
5	15.65	0.416	2.79	0.73	93.828	0.91	0.
6	21.37	0.635	2.44	0.64	131.140	1.28	0.
7	24.75	0.545	8.73	2.28	374.191	3.65	0.
7	27.50	0.517	382.93	99.95	10260.849	100.00	0.

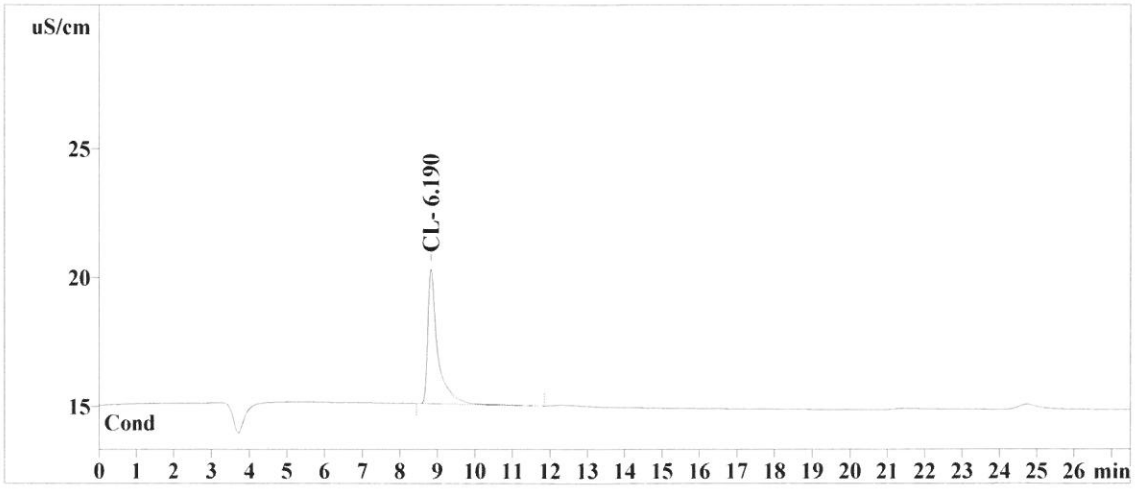
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:33:38 AM
Printed by: wet

Ident: K5154-10DLX500
Analysis from: 10/3/2019 10:01:50 PM
File: _2019-10-03_ Last save: 10/7/2019 9:33:38 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68876

SAMPLE:
: AK/AP
Vial number: 23
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.83	0.224	5.20	100.00	95.579	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.032	5.20	100.00	95.579	100.00	0.

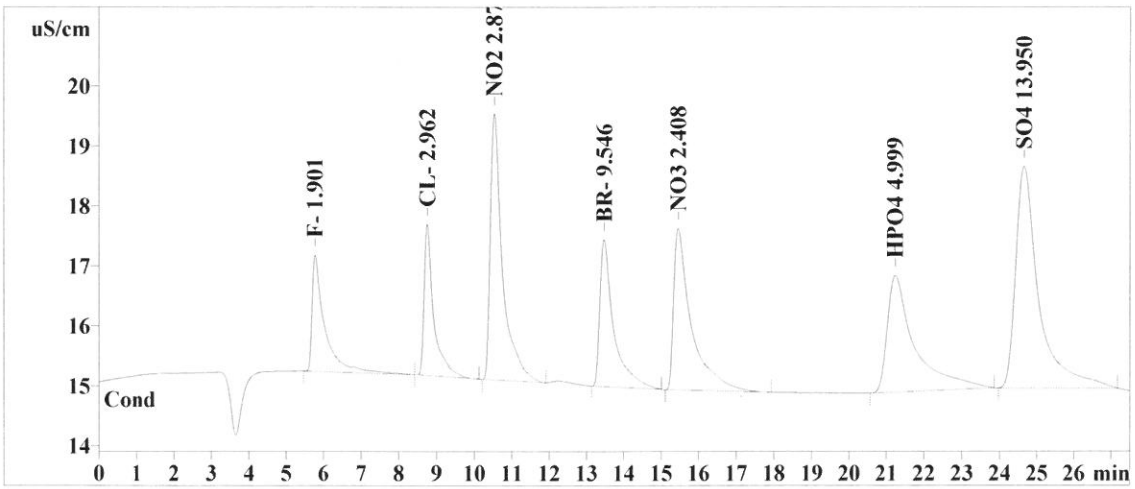
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:33:51 AM
Printed by: wet

Ident: CCV
Analysis from: 10/3/2019 10:32:15 PM
File: _2019-10-03_ Last save: 10/3/2019 10:59:34 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68877

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.278	1.94	9.85	45.866	7.61	0.
2	8.75	0.224	2.52	12.81	45.242	7.51	0.
3	10.52	0.293	4.44	22.55	100.153	16.62	0.
4	13.47	0.327	2.45	12.45	63.483	10.54	0.
5	15.46	0.412	2.69	13.68	88.882	14.75	0.
6	21.23	0.609	1.94	9.88	98.216	16.30	0.
7	24.64	0.563	3.70	18.77	160.593	26.66	0.
7	27.50	0.387	19.69	100.00	602.434	100.00	0.

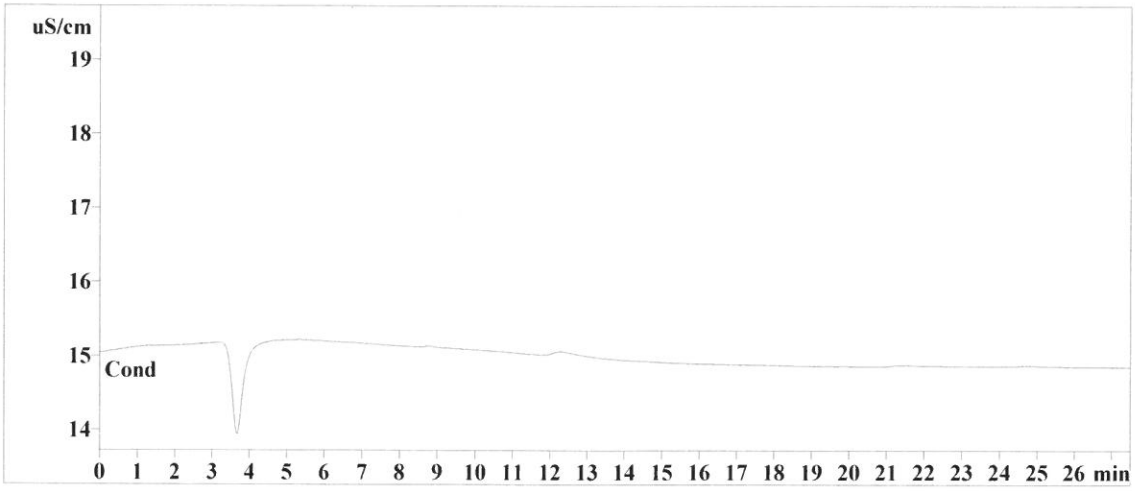
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:33:59 AM
Printed by: wet

Ident: CCB
Analysis from: 10/3/2019 11:02:40 PM
File: _2019-10-03_ Last save: 10/3/2019 11:29:58 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68878

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

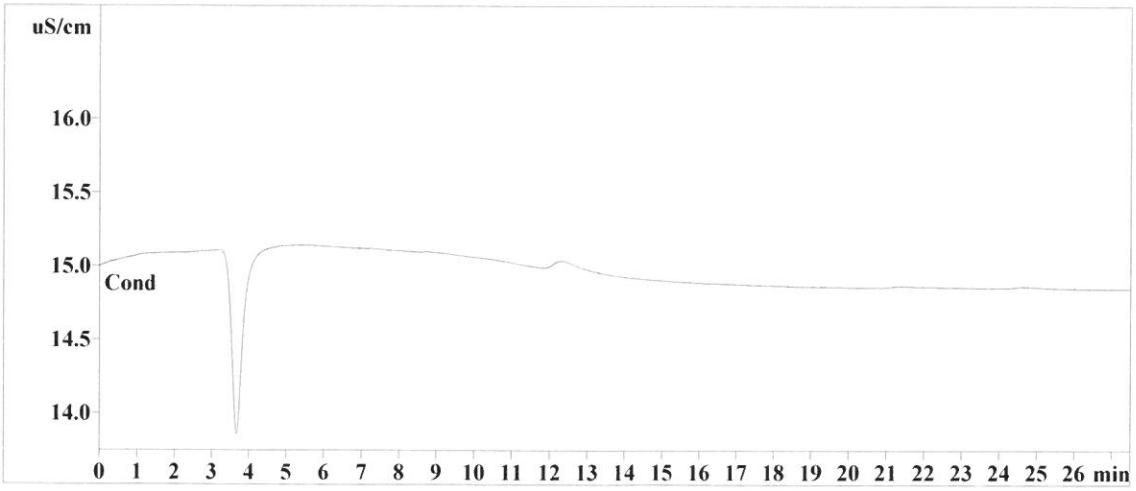
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:34:08 AM
Printed by: wet

Ident: LB105455BLW2
Analysis from: 10/3/2019 11:33:04 PM
File: _2019-10-03_ Last save: 10/4/2019 12:00:24 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68879

SAMPLE:
: AK/AP
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

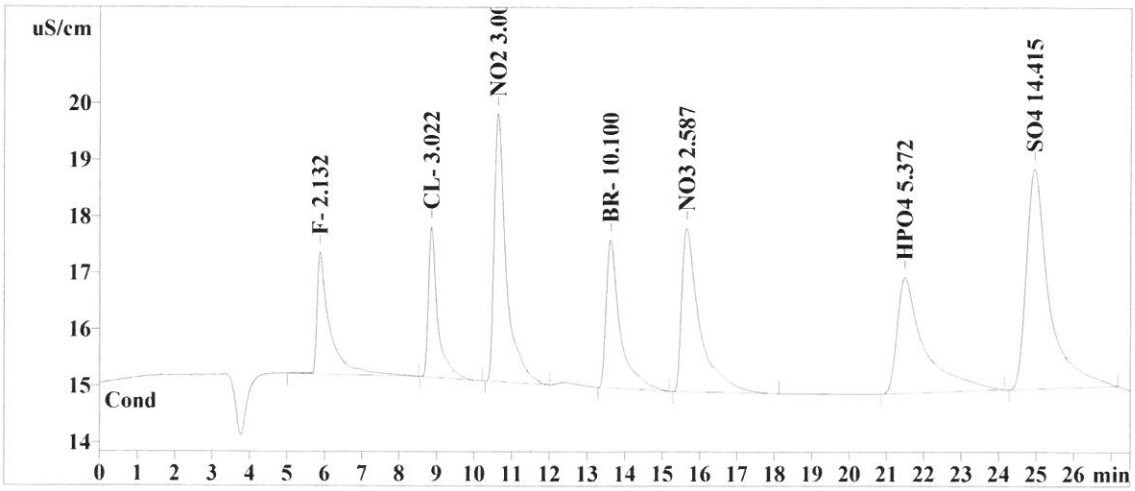
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:34:20 AM
Printed by: wet

Ident: LB105455BSW2
Analysis from: 10/4/2019 12:03:29 AM
File: _2019-10-04_ Last save: 10/4/2019 12:30:48 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68880

SAMPLE:
: AK/AP
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.88	0.276	2.15	10.24	51.498	8.09	0.
2	8.86	0.221	2.66	12.68	46.170	7.25	0.
3	10.63	0.292	4.73	22.55	105.015	16.49	0.
4	13.61	0.331	2.62	12.47	67.323	10.57	0.
5	15.65	0.424	2.89	13.76	95.683	15.03	0.
6	21.48	0.612	2.05	9.77	104.999	16.49	0.
7	24.94	0.558	3.89	18.53	166.124	26.09	0.
7	27.50	0.388	20.98	99.99	636.813	100.00	0.

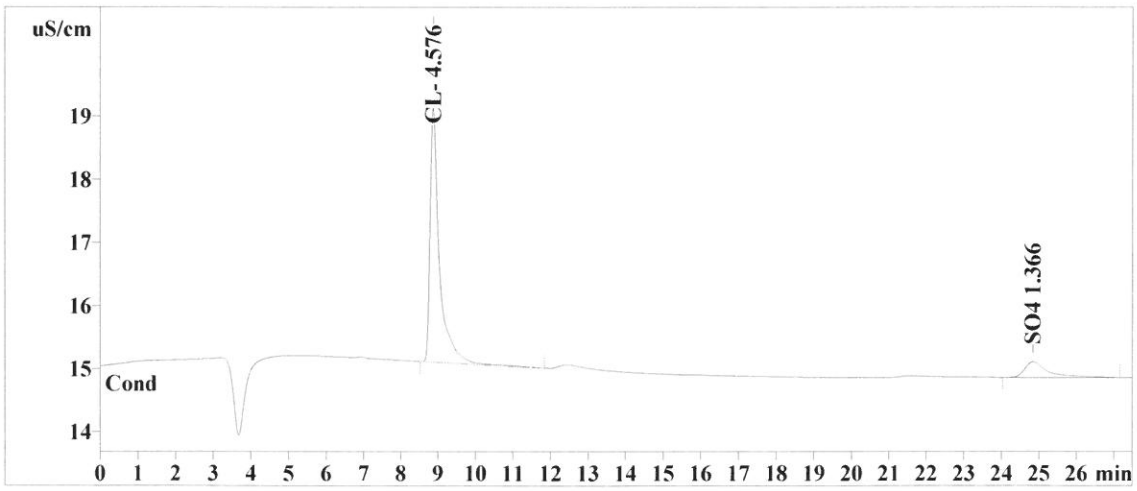
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:34:38 AM
Printed by: wet

Ident: K5154-11DLX100
Analysis from: 10/4/2019 12:33:54 AM
File: _2019-10-04_ Last save: 10/4/2019 1:01:12 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68881

SAMPLE:
: AK/AP
Vial number: 24
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.86	0.218	4.02	94.18	70.415	86.53	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.85	0.553	0.25	5.80	10.964	13.47	0.
7	27.50	0.110	4.27	99.98	81.379	100.00	0.

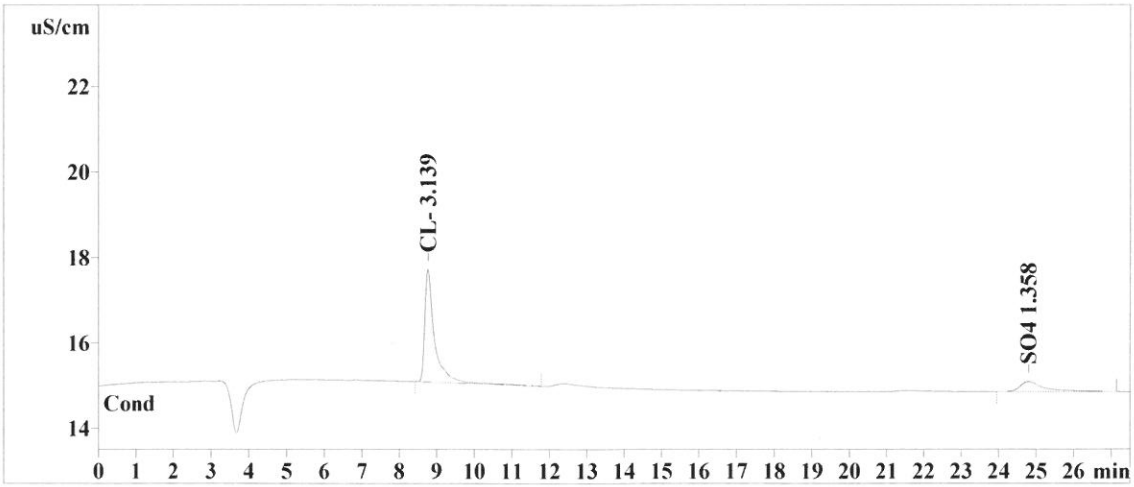
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:34:57 AM
Printed by: wet

Ident: K5154-14DLX5
Analysis from: 10/4/2019 1:04:19 AM
File: _2019-10-04_ Last save: 10/4/2019 1:31:38 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68882

SAMPLE:
: AK/AP
Vial number: 25
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.77	0.224	2.63	91.66	47.999	81.53	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.79	0.570	0.24	8.32	10.872	18.47	0.
7	27.50	0.114	2.87	99.98	58.872	100.00	0.

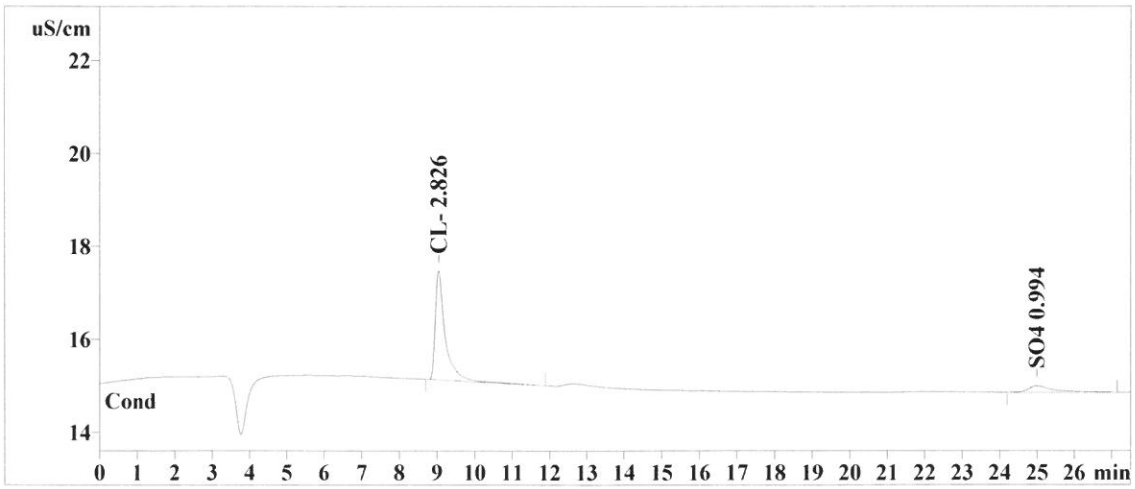
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:35:27 AM
Printed by: wet

Ident: K5154-15DLX200
Analysis from: 10/4/2019 1:34:44 AM
File: _2019-10-04_ Last save: 10/4/2019 2:02:02 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68883

SAMPLE:
: AK/AP
Vial number: 26
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	9.04	0.231	2.34	94.36	43.118	86.82	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.99	0.586	0.14	5.59	6.547	13.18	0.
7	27.50	0.117	2.48	99.95	49.665	100.00	0.

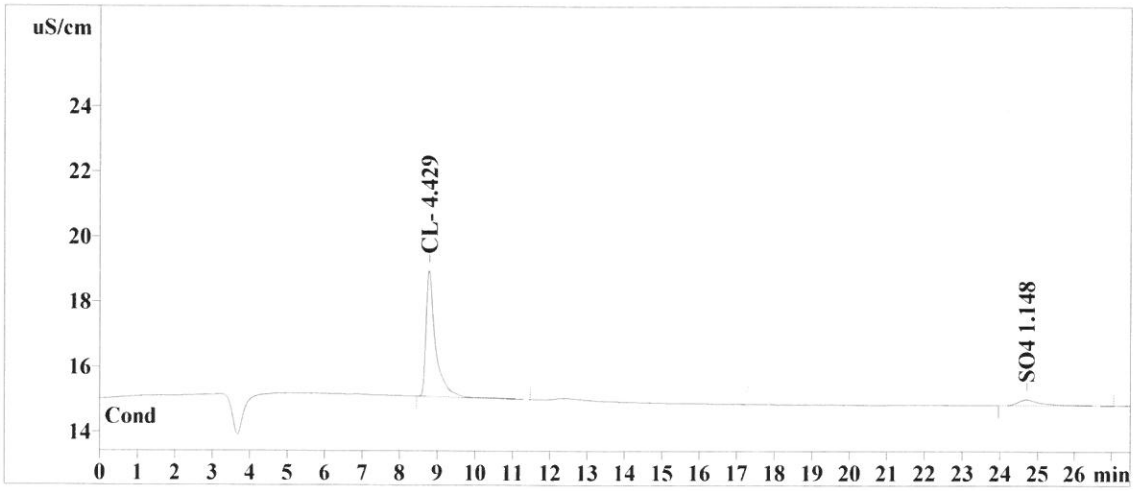
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:35:44 AM
Printed by: wet

Ident: K5154-16DLX100
Analysis from: 10/4/2019 2:05:09 AM
File: _2019-10-04_ Last save: 10/4/2019 2:32:28 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68884

SAMPLE:
: AK/AP
Vial number: 27
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.78	0.227	3.85	95.61	68.112	89.04	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.69	0.586	0.18	4.36	8.382	10.96	0.
7	27.50	0.116	4.02	99.97	76.495	100.00	0.

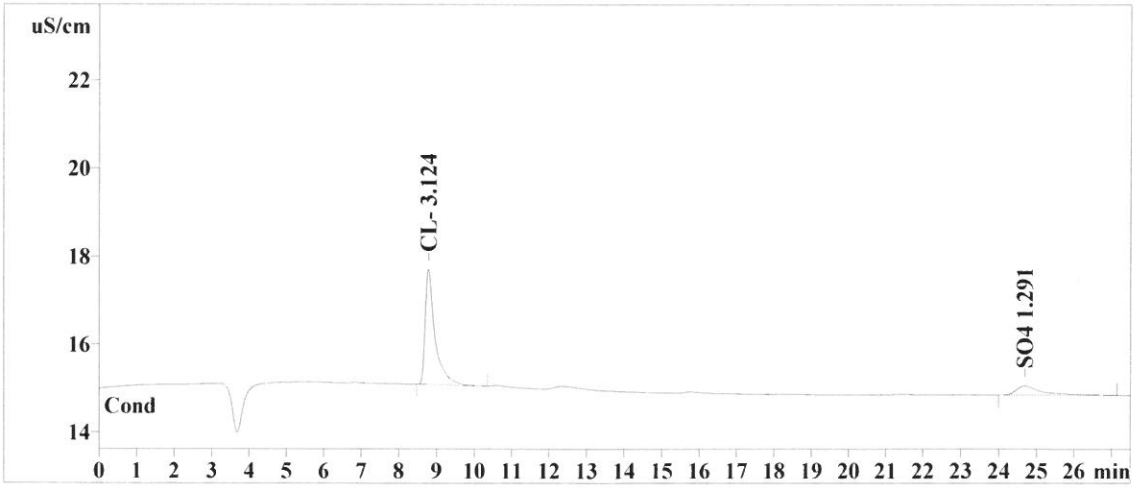
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:35:55 AM
Printed by: wet

Ident: K5154-17DLX5
Analysis from: 10/4/2019 2:35:33 AM
File: _2019-10-04_ Last save: 10/4/2019 3:02:52 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68885

SAMPLE:
: AK/AP
Vial number: 28
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.78	0.238	2.62	92.61	47.755	82.57	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.68	0.590	0.21	7.38	10.079	17.43	0.
7	27.50	0.118	2.83	99.98	57.834	100.00	0.

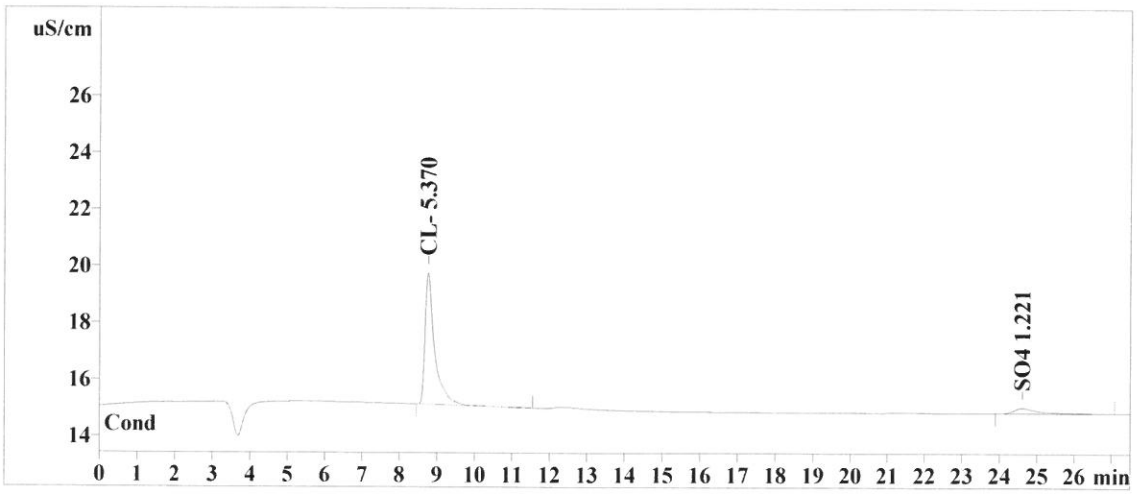
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:36:08 AM
Printed by: wet

Ident: K5154-18DLX50
Analysis from: 10/4/2019 3:05:58 AM
File: _2019-10-04_ Last save: 10/4/2019 3:33:18 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68886

SAMPLE:
: AK/AP
Vial number: 29
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.76	0.228	4.64	95.99	82.795	89.95	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.60	0.587	0.19	3.99	9.246	10.05	0.
7	27.50	0.116	4.83	99.98	92.041	100.00	0.

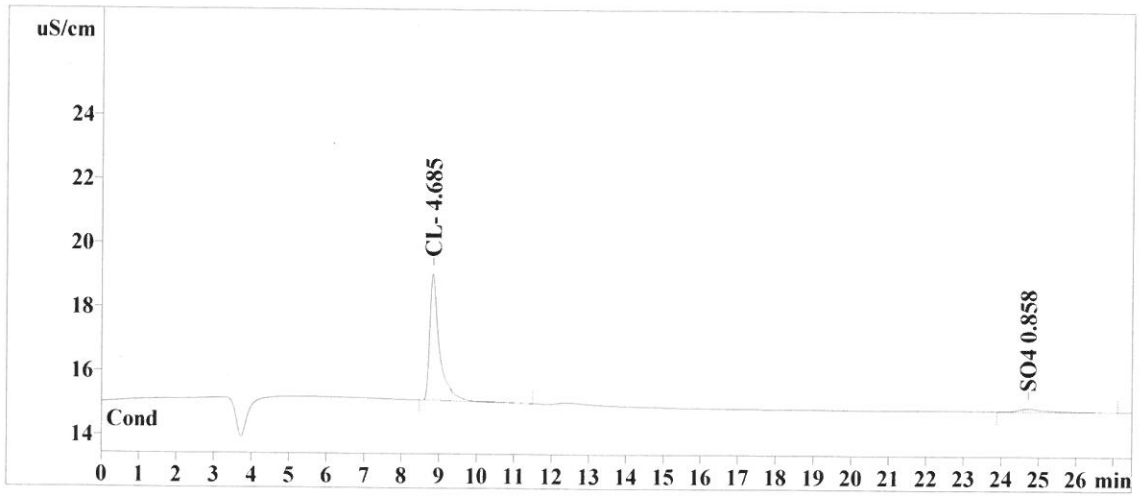
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:36:26 AM
Printed by: wet

Ident: K5154-19DLX2000
Analysis from: 10/4/2019 3:36:23 AM
File: _2019-10-04_ Last save: 10/4/2019 4:03:42 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68887

SAMPLE:
: AK/AP
Vial number: 30
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.82	0.232	3.95	97.55	72.118	93.60	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.71	0.608	0.10	2.43	4.932	6.40	0.
7	27.50	0.120	4.05	99.98	77.051	100.00	0.

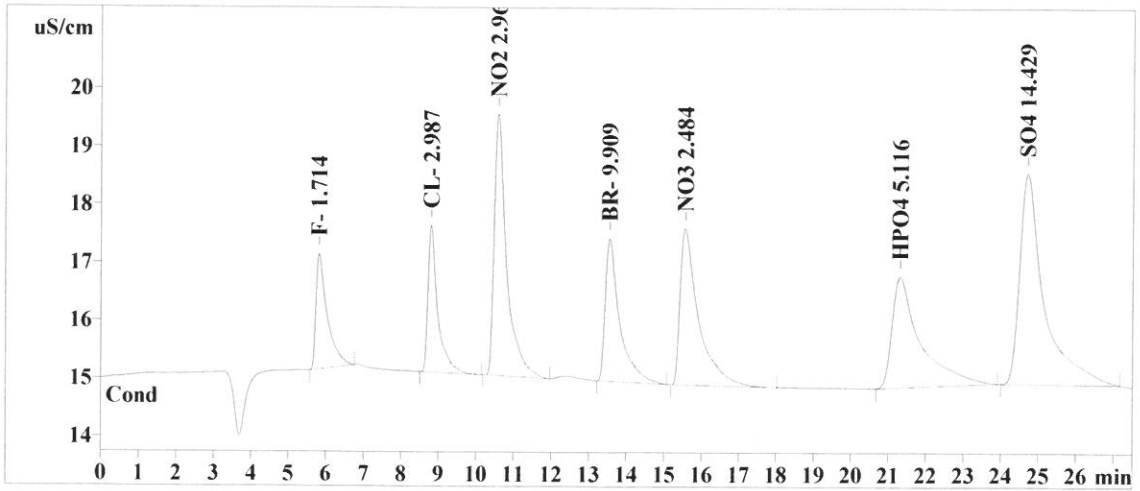
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:36:54 AM
Printed by: wet

Ident: CCV
Analysis from: 10/4/2019 4:06:48 AM
File: _2019-10-04_ Last save: 10/4/2019 4:34:08 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68888

SAMPLE:
: AK/AP
Vial number: 35
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.81	0.287	1.98	10.08	41.310	6.72	0.
2	8.79	0.235	2.52	12.80	45.630	7.42	0.
3	10.57	0.308	4.50	22.86	103.366	16.82	0.
4	13.54	0.355	2.46	12.48	65.996	10.74	0.
5	15.55	0.450	2.69	13.67	91.770	14.93	0.
6	21.31	0.639	1.91	9.68	100.350	16.32	0.
7	24.70	0.571	3.63	18.43	166.298	27.05	0.
7	27.50	0.407	19.69	99.99	614.720	100.00	0.

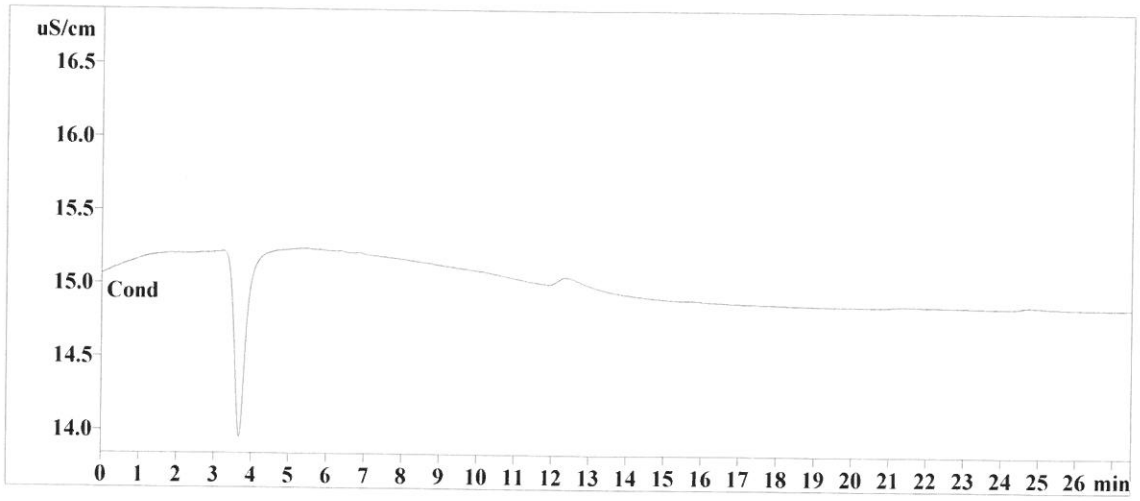
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:37:01 AM
Printed by: wet

Ident: CCB
Analysis from: 10/4/2019 4:37:13 AM
File: _2019-10-04_ Last save: 10/4/2019 5:04:32 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68889

SAMPLE:
: AK/AP
Vial number: 36
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

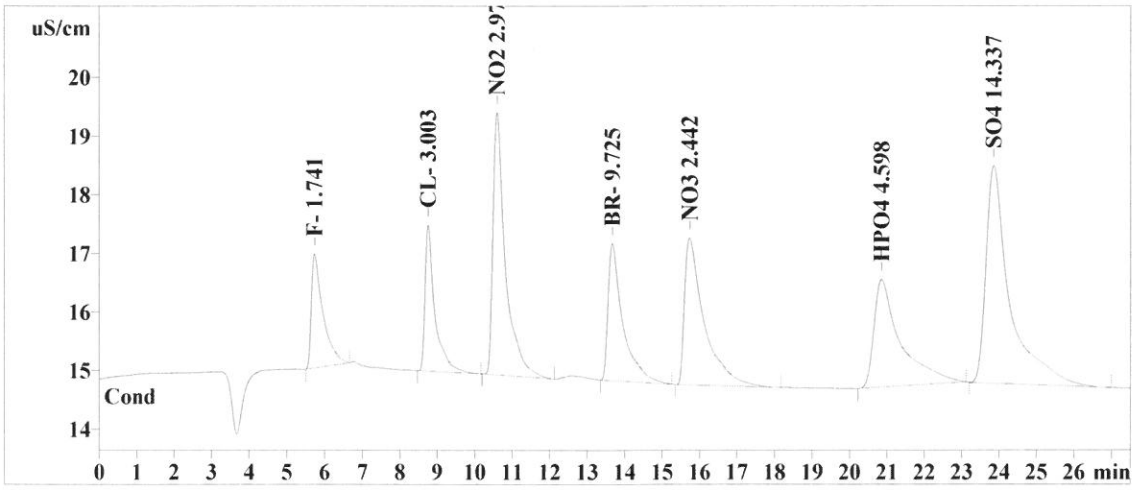
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:26:23 AM
Printed by: wet

Ident: CCV
Analysis from: 10/4/2019 8:41:38 AM
File: _2019-10-04_ Last save: 10/4/2019 9:08:58 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68892

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.73	0.304	1.94	10.05	41.960	6.96	0.
2	8.76	0.233	2.49	12.90	45.881	7.61	0.
3	10.58	0.304	4.47	23.19	103.816	17.23	0.
4	13.67	0.361	2.33	12.10	64.720	10.74	0.
5	15.74	0.471	2.51	12.99	90.175	14.96	0.
6	20.85	0.606	1.83	9.51	90.934	15.09	0.
7	23.85	0.541	3.71	19.24	165.203	27.41	0.
7	27.50	0.403	19.28	99.99	602.690	100.00	0.

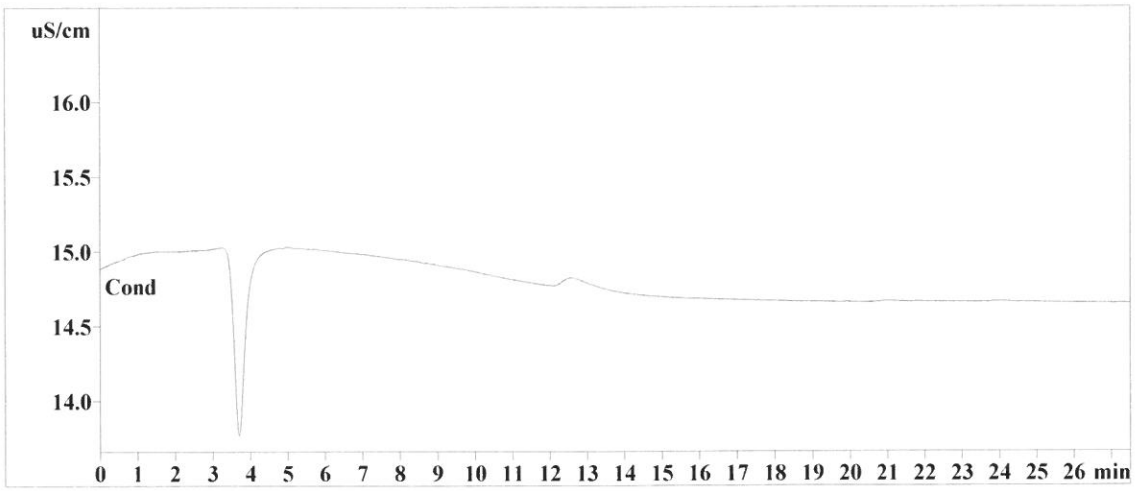
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:26:35 AM
Printed by: wet

Ident: CCB
Analysis from: 10/4/2019 9:21:26 AM
File: _2019-10-04_ Last save: 10/4/2019 9:48:46 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68893

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

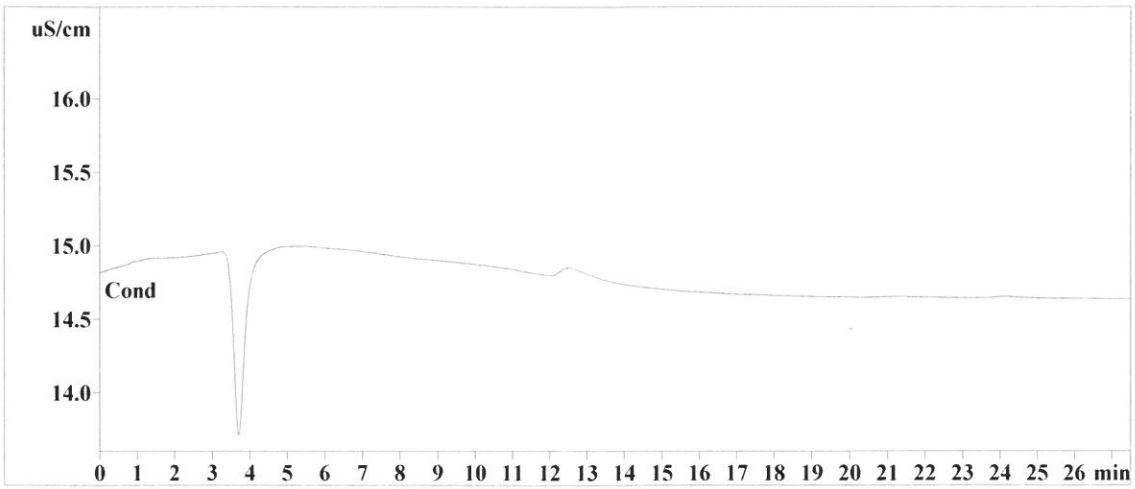
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:26:44 AM
Printed by: wet

Ident: LB105455BLW3
Analysis from: 10/4/2019 9:51:51 AM
File: _2019-10-04_ Last save: 10/4/2019 10:19:10 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68894

SAMPLE:
: AK/AP
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

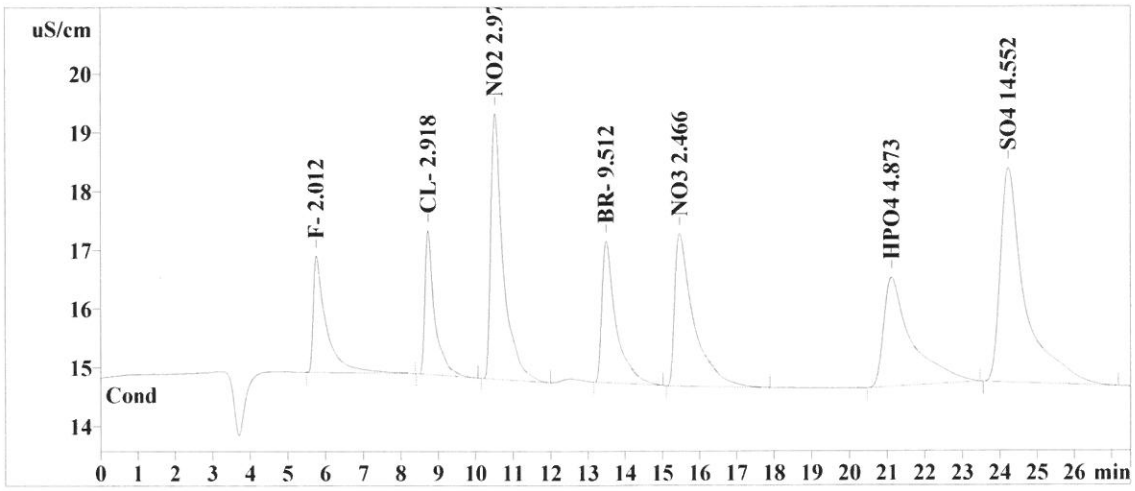
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:26:53 AM
Printed by: wet

Ident: LB105455BSW3
Analysis from: 10/4/2019 10:22:16 AM
File: _2019-10-04_ Last save: 10/4/2019 10:49:36 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68895

SAMPLE:
: AK/AP
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	0.305	1.98	10.17	48.568	7.90	0.
2	8.73	0.232	2.45	12.58	44.554	7.25	0.
3	10.51	0.302	4.52	23.22	103.819	16.88	0.
4	13.48	0.342	2.41	12.40	63.248	10.29	0.
5	15.47	0.458	2.59	13.34	91.078	14.81	0.
6	21.11	0.631	1.86	9.55	95.924	15.60	0.
7	24.22	0.559	3.65	18.75	167.761	27.28	0.
7	27.50	0.404	19.45	100.00	614.952	100.00	0.

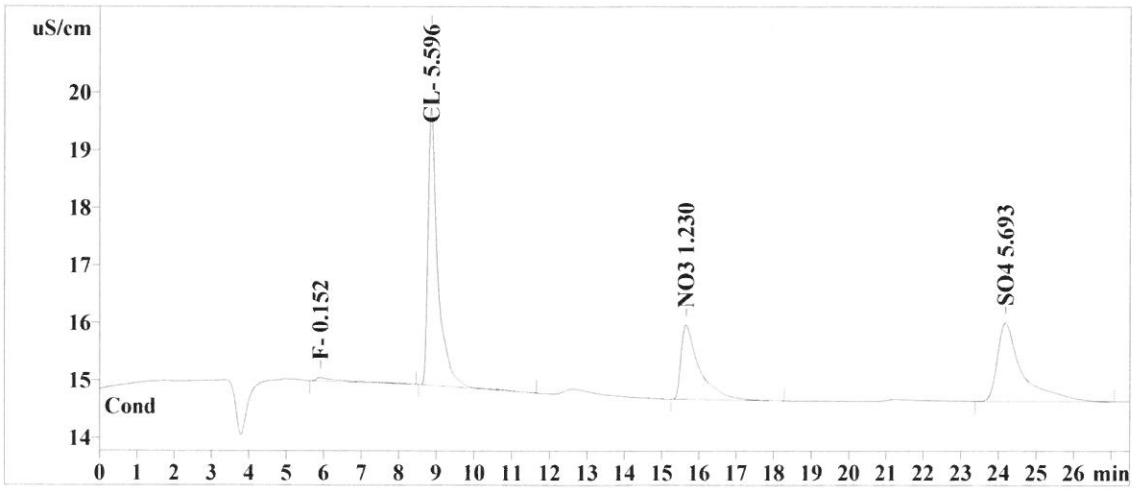
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:27:08 AM
Printed by: wet

Ident: K5154-21
Analysis from: 10/4/2019 10:52:42 AM
File: _2019-10-04_ Last save: 10/4/2019 11:20:00 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68896

SAMPLE:
: AK/AP
Vial number: 31
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.90	0.509	0.06	0.79	3.266	1.67	0.
2	8.86	0.228	4.83	63.99	86.315	44.05	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.65	0.441	1.29	17.12	43.958	22.43	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.18	0.553	1.36	18.07	62.416	31.85	0.
7	27.50	0.247	7.54	99.96	195.956	100.00	0.

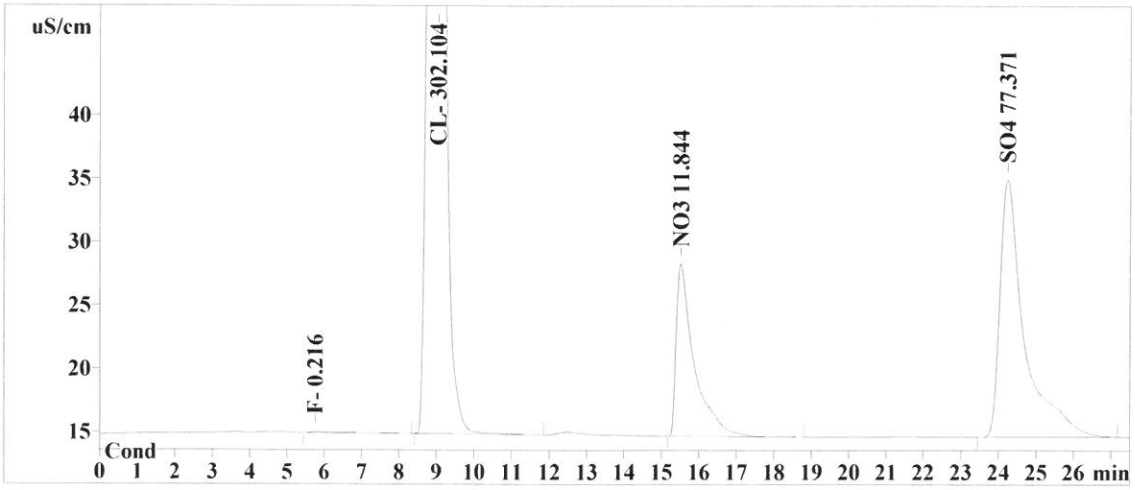
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:27:19 AM
Printed by: wet

Ident: K5154-22
Analysis from: 10/4/2019 11:23:07 AM
File: _2019-10-04_ Last save: 10/4/2019 11:50:26 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68897

SAMPLE:
: AK/AP
Vial number: 32
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	1.020	0.07	0.03	4.814	0.08	0.
2	9.03	0.295	238.30	87.53	4711.370	77.50	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.52	0.420	13.58	4.99	448.488	7.38	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.23	0.556	20.28	7.45	914.692	15.05	0.
7	27.50	0.327	272.23	99.99	6079.364	100.00	0.

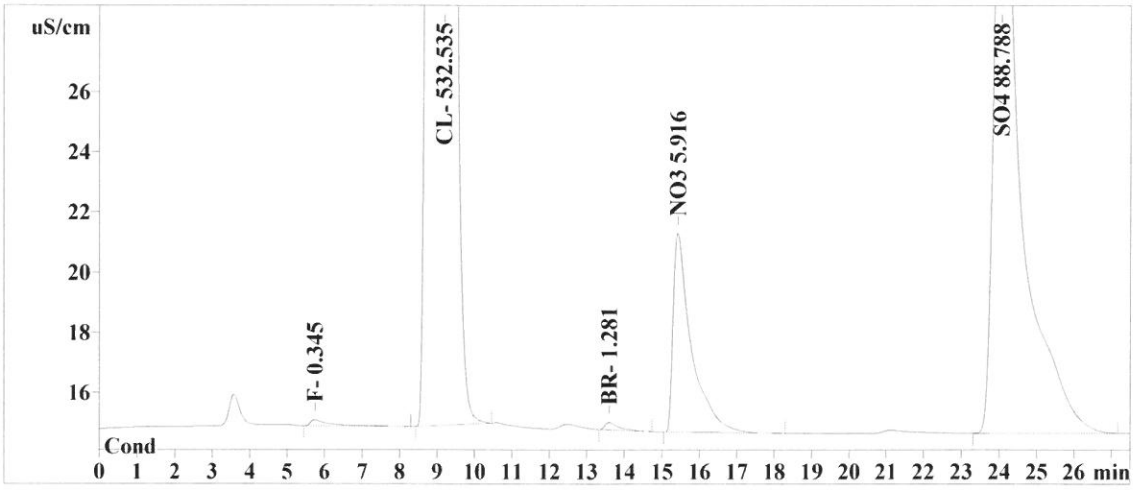
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:27:40 AM
Printed by: wet

Ident: K5154-23
Analysis from: 10/4/2019 11:53:32 AM
File: _2019-10-04_ Last save: 10/7/2019 9:27:38 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68898

SAMPLE:
: AK/AP
Vial number: 33
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.73	0.407	0.21	0.06	7.955	0.08	0.
2	9.17	0.382	335.29	91.76	8305.735	86.58	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.60	0.346	0.25	0.07	6.225	0.06	0.
5	15.42	0.436	6.60	1.81	222.584	2.32	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.05	0.565	22.83	6.25	1050.441	10.95	0.
7	27.50	0.305	365.18	99.94	9592.941	100.00	0.

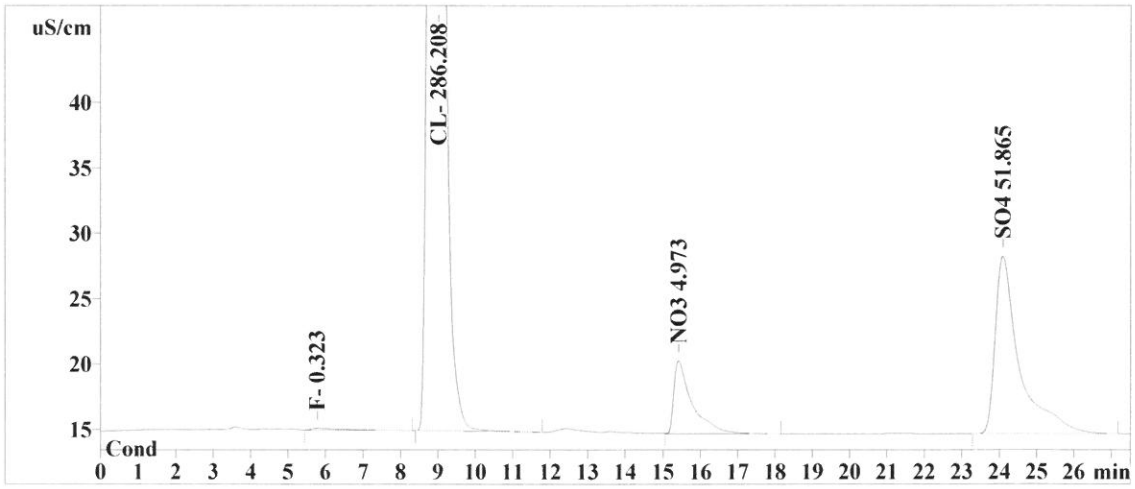
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:27:49 AM
Printed by: wet

Ident: K5154-24
Analysis from: 10/4/2019 12:23:57 PM
File: _2019-10-04_ Last save: 10/4/2019 12:51:16 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68899

SAMPLE:
: AK/AP
Vial number: 34
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.79	0.545	0.14	0.06	7.426	0.14	0.
2	9.00	0.286	230.73	92.26	4463.416	84.71	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.42	0.432	5.55	2.22	186.645	3.54	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.09	0.551	13.57	5.43	611.416	11.60	0.
7	27.50	0.259	250.00	99.96	5268.902	100.00	0.

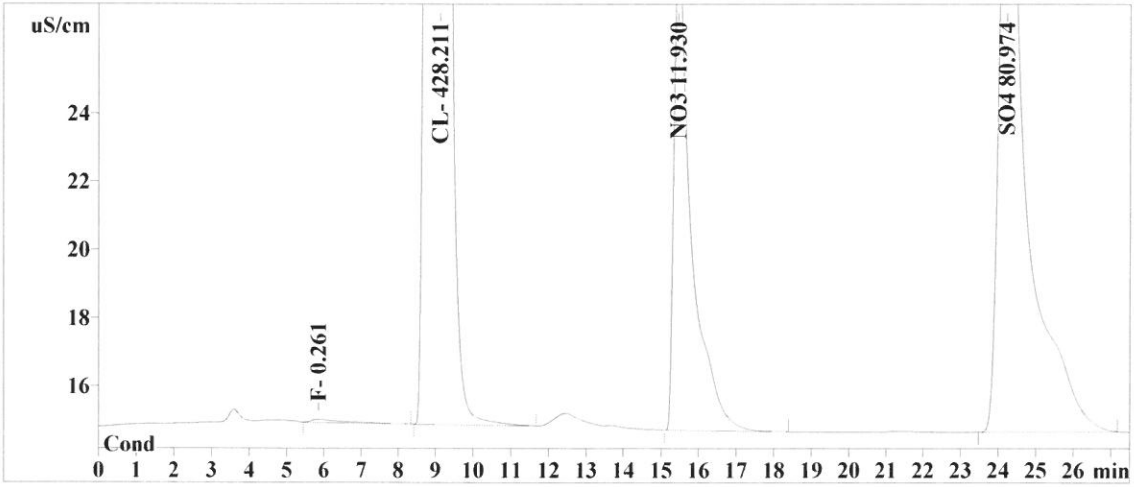
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:28:02 AM
Printed by: wet

Ident: K5154-25
Analysis from: 10/4/2019 12:54:23 PM
File: _2019-10-04_ Last save: 10/4/2019 1:21:42 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68900

SAMPLE:
: AK/AP
Vial number: 35
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.85	0.745	0.10	0.03	5.911	0.07	0.
2	9.11	0.348	296.13	89.45	6678.448	82.51	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.45	0.400	14.15	4.27	451.776	5.58	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.21	0.570	20.51	6.19	957.531	11.83	0.
7	27.50	0.295	330.88	99.94	8093.667	100.00	0.

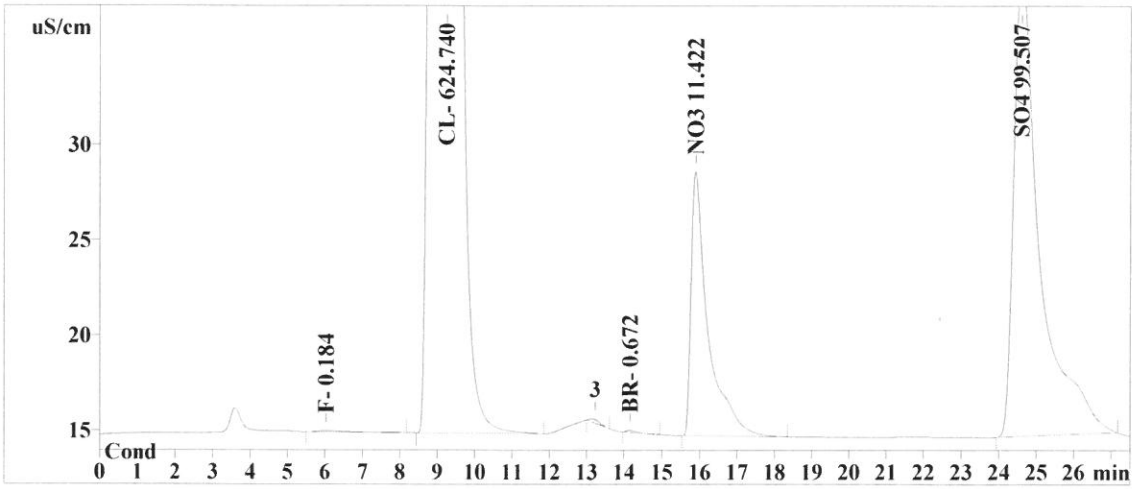
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:28:14 AM
Printed by: wet

Ident: K5154-26
Analysis from: 10/4/2019 1:24:48 PM
File: _2019-10-04_ Last save: 10/4/2019 1:52:08 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68901

SAMPLE:
: AK/AP
Vial number: 36
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	6.04	0.844	0.07	0.02	4.036	0.04	0.
2	9.23	0.468	317.02	89.08	9743.976	85.75	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	14.17	0.272	0.11	0.03	2.006	0.02	0.
5	15.88	0.385	13.84	3.89	432.401	3.81	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.59	0.601	24.55	6.90	1177.896	10.37	0.
7	27.50	0.367	355.59	99.92	11360.316	99.97	0.

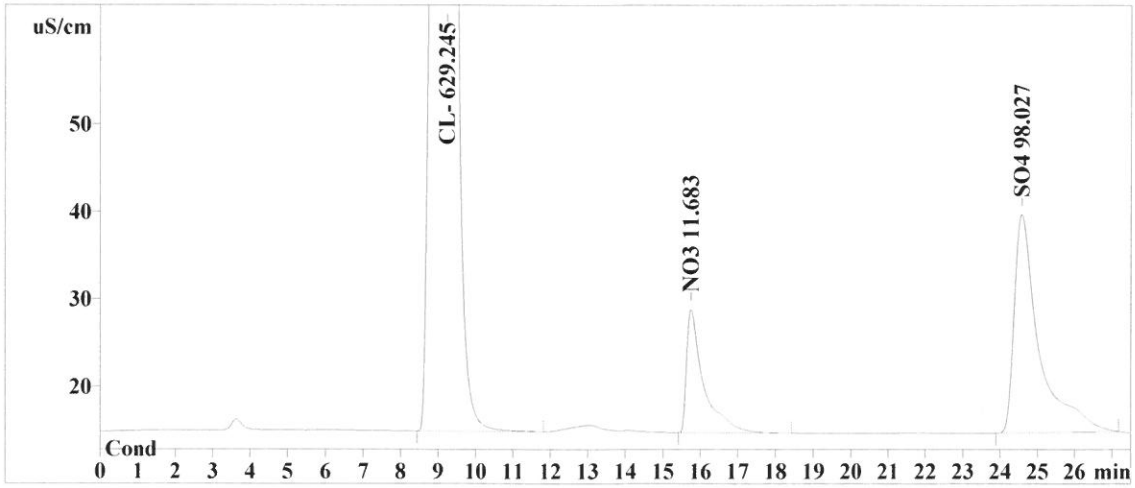
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:28:36 AM
Printed by: wet

Ident: K5154-26DUP
Analysis from: 10/4/2019 1:55:13 PM
File: _2019-10-04_ Last save: 10/7/2019 9:28:36 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68902

SAMPLE:
: AK/AP
Vial number: 37
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	9.22	0.433	344.70	89.81	9814.245	85.96	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.75	0.386	14.05	3.66	442.340	3.87	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.56	0.575	24.94	6.50	1160.294	10.16	0.
7	27.50	0.199	383.69	99.97	11416.879	100.00	0.

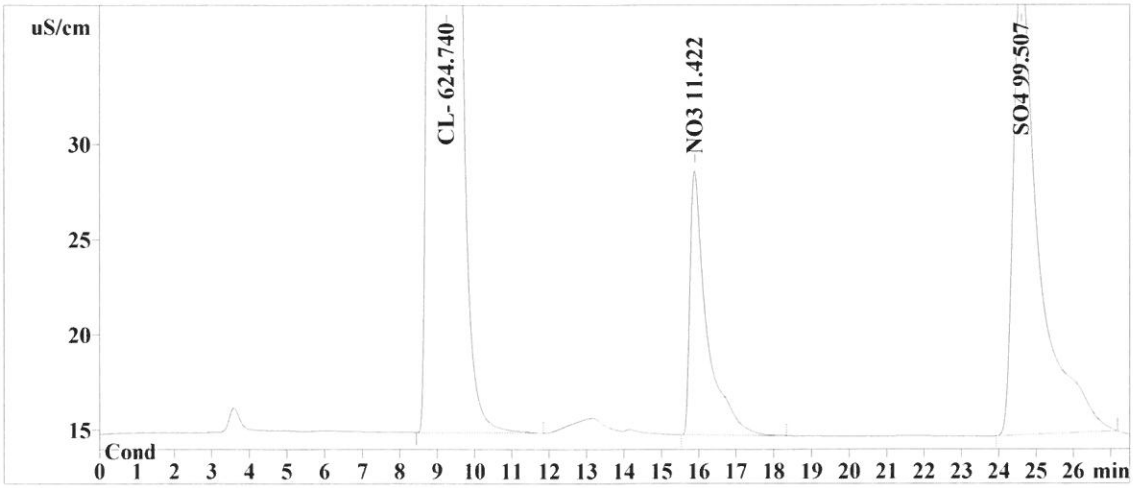
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:28:53 AM
Printed by: wet

Ident: K5154-26
Analysis from: 10/4/2019 1:24:48 PM
File: _2019-10-04_ Last save: 10/7/2019 9:28:54 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68901

SAMPLE:
: AK/AP
Vial number: 36
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	9.23	0.468	317.02	89.17	9743.976	85.82	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.88	0.385	13.84	3.89	432.401	3.81	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.59	0.601	24.55	6.90	1177.896	10.37	0.
7	27.50	0.208	355.41	99.97	11354.273	100.00	0.

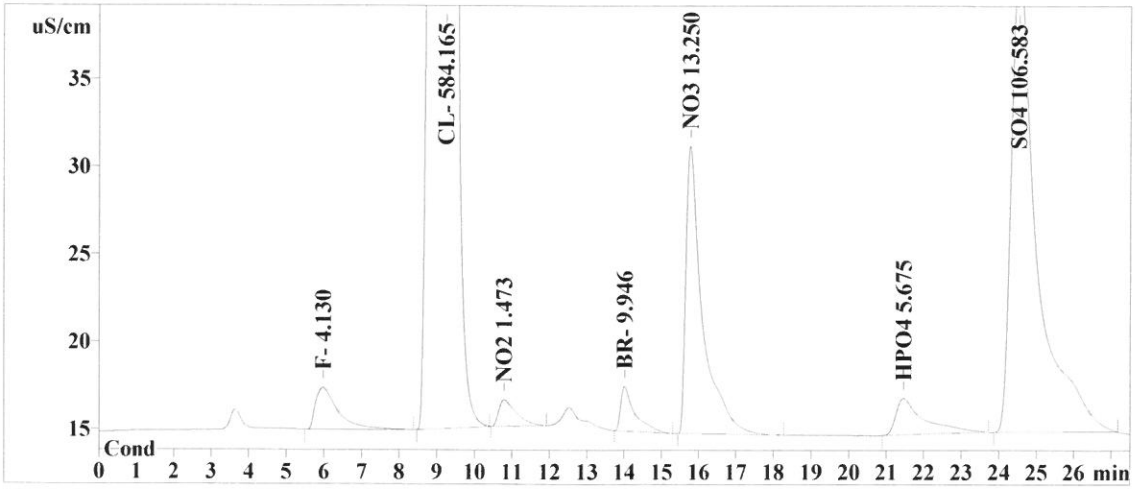
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:29:10 AM
Printed by: wet

Ident: K5154-26MS
Analysis from: 10/4/2019 2:25:38 PM
File: _2019-10-04_ Last save: 10/4/2019 2:52:56 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68903

SAMPLE:
: AK/AP
Vial number: 38
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.98	0.586	2.40	0.60	100.165	0.89	0.
2	9.22	0.409	344.32	86.88	9111.068	81.34	0.
3	10.79	0.507	1.52	0.38	49.716	0.44	0.
4	14.01	0.328	2.54	0.64	66.254	0.59	0.
5	15.76	0.379	16.40	4.14	502.076	4.48	0.
6	21.46	0.633	2.08	0.53	110.495	0.99	0.
7	24.51	0.586	26.83	6.77	1262.027	11.27	0.
7	27.50	0.490	396.07	99.94	11201.801	100.00	0.

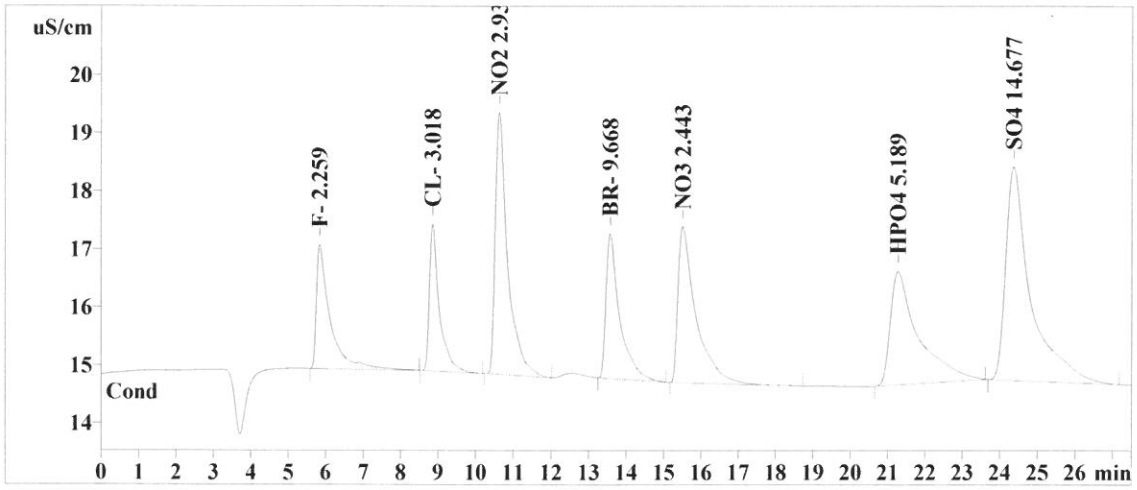
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:29:19 AM
Printed by: wet

Ident: CCV
Analysis from: 10/4/2019 2:56:03 PM
File: _2019-10-04_ Last save: 10/4/2019 3:23:22 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68904

SAMPLE:
: AK/AP
Vial number: 2
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.84	0.321	2.13	10.67	54.584	8.69	0.
2	8.85	0.236	2.53	12.65	46.102	7.34	0.
3	10.62	0.304	4.51	22.55	102.369	16.29	0.
4	13.56	0.341	2.49	12.48	64.330	10.24	0.
5	15.51	0.440	2.69	13.48	90.188	14.35	0.
6	21.27	0.644	1.95	9.76	101.666	16.18	0.
7	24.36	0.566	3.68	18.40	169.242	26.93	0.
7	27.50	0.407	19.97	99.99	628.482	100.00	0.

This report has been created by IC Net
METROHM LTD

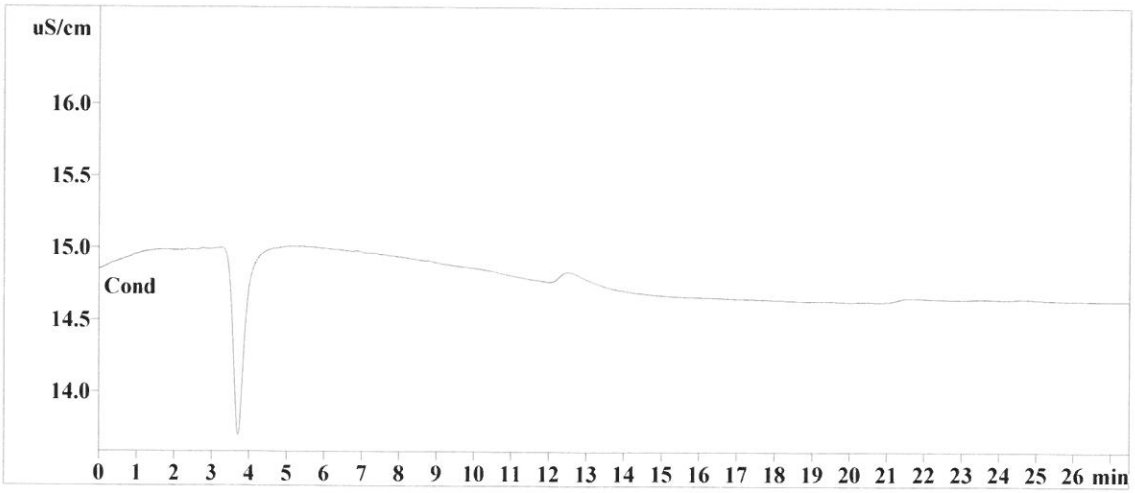
Reviewed By:apatel
On:10/7/2019 4:07:04 PM
Inst Id :IC-1
LB :LB105455

Report date: 10/7/2019 9:29:27 AM
Printed by: wet

Ident: CCB
Analysis from: 10/4/2019 3:26:28 PM
File: _2019-10-04_ Last save: 10/4/2019 3:53:46 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68905

SAMPLE:
: AK/AP
Vial number: 3
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

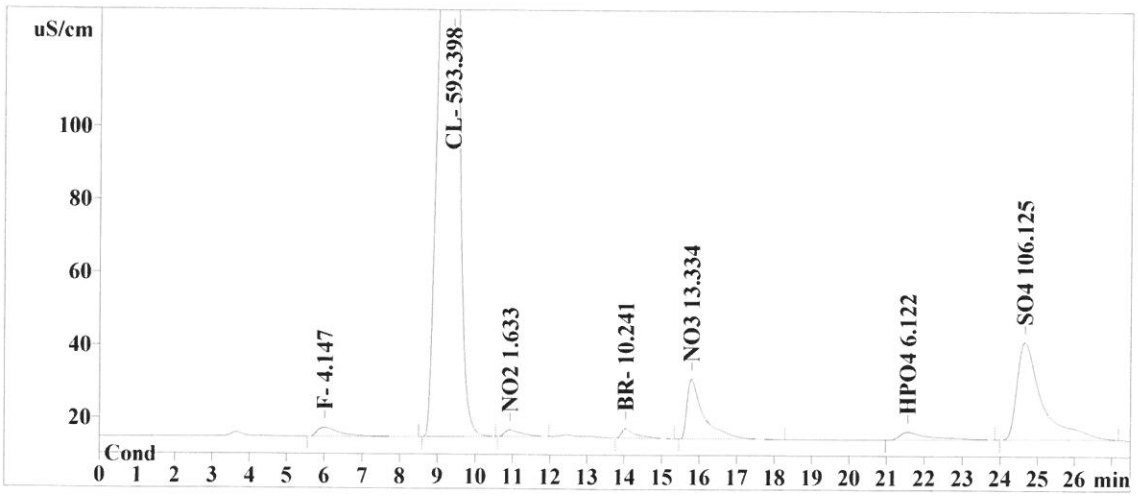
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:29:37 AM
Printed by: wet

Ident: K5154-26MSD
Analysis from: 10/4/2019 3:56:52 PM
File: _2019-10-04_ Last save: 10/4/2019 4:24:12 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68906

SAMPLE:
: AK/AP
Vial number: 39
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	6.01	0.587	2.39	0.60	100.566	0.89	0.
2	9.38	0.415	346.19	86.92	9255.091	81.47	0.
3	10.93	0.476	1.80	0.45	55.502	0.49	0.
4	14.04	0.333	2.58	0.65	68.295	0.60	0.
5	15.79	0.381	16.37	4.11	505.274	4.45	0.
6	21.56	0.665	2.15	0.54	118.620	1.04	0.
7	24.65	0.597	26.69	6.70	1256.583	11.06	0.
7	27.50	0.493	398.17	99.97	11359.932	100.00	0.

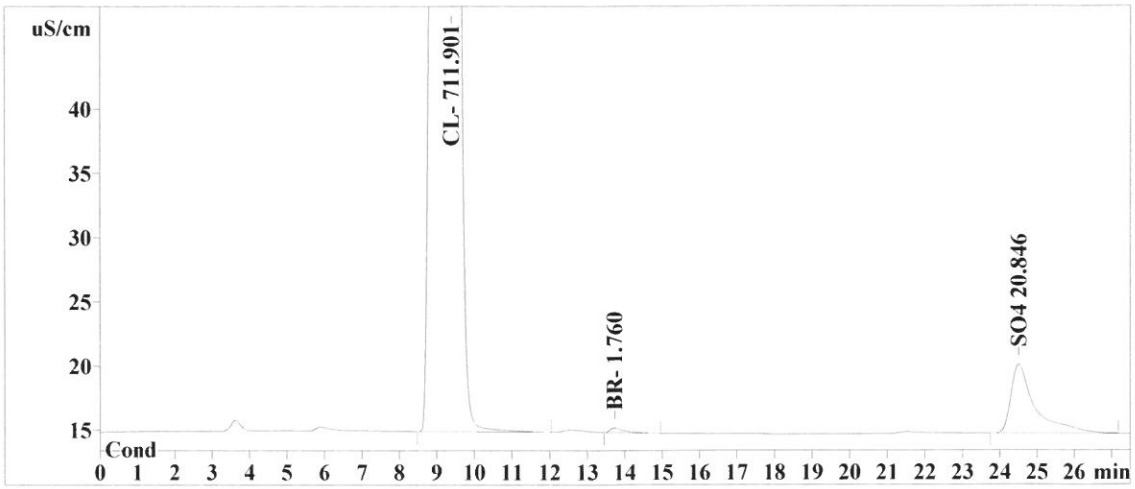
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:40:55 AM
Printed by: wet

Ident: K5168-12DUP
Analysis from: 10/4/2019 4:27:17 PM
File: _2019-10-04_ Last save: 10/7/2019 9:40:54 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68907

SAMPLE:
: AK/AP
Vial number: 46
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	9.37	0.448	393.14	98.51	11103.560	97.78	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	13.73	0.345	0.38	0.09	9.542	0.08	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.50	0.551	5.36	1.34	242.595	2.14	0.
7	27.50	0.192	398.87	99.95	11355.697	100.00	0.

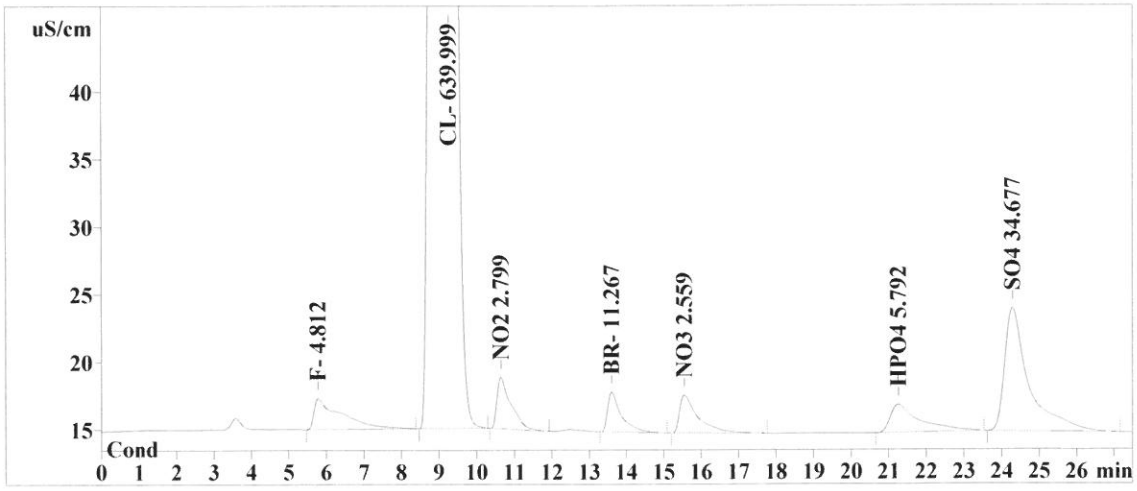
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:41:13 AM
Printed by: wet

Ident: K5168-12MS
Analysis from: 10/4/2019 4:57:42 PM
File: _2019-10-04_ Last save: 10/4/2019 5:25:00 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68908

SAMPLE:
: AK/AP
Vial number: 47
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.78	0.795	2.29	0.58	116.762	1.07	0.
2	9.25	0.421	373.25	94.14	9981.998	91.70	0.
3	10.64	0.369	3.81	0.96	97.555	0.90	0.
4	13.60	0.337	2.94	0.74	75.405	0.69	0.
5	15.56	0.439	2.79	0.70	94.630	0.87	0.
6	21.25	0.677	2.08	0.52	112.615	1.03	0.
7	24.28	0.551	9.10	2.30	407.051	3.74	0.
7	27.50	0.513	396.26	99.95	10886.016	100.00	0.

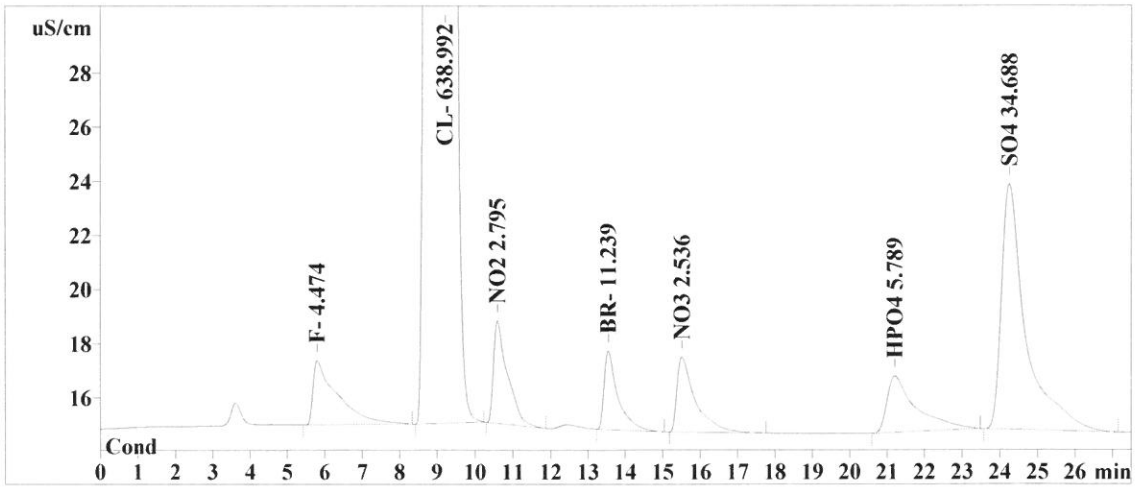
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:41:22 AM
Printed by: wet

Ident: K5168-12MSD
Analysis from: 10/4/2019 5:28:07 PM
File: _2019-10-04_ Last save: 10/4/2019 5:55:26 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68909

SAMPLE:
: AK/AP
Vial number: 48
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.80	0.640	2.37	0.60	108.531	1.00	0.
2	9.20	0.421	372.82	94.12	9966.297	91.76	0.
3	10.59	0.375	3.79	0.96	97.392	0.90	0.
4	13.54	0.339	2.91	0.74	75.210	0.69	0.
5	15.51	0.441	2.77	0.70	93.735	0.86	0.
6	21.21	0.672	2.09	0.53	112.561	1.04	0.
7	24.25	0.555	9.07	2.29	407.177	3.75	0.
7	27.50	0.492	395.82	99.93	10860.904	100.00	0.

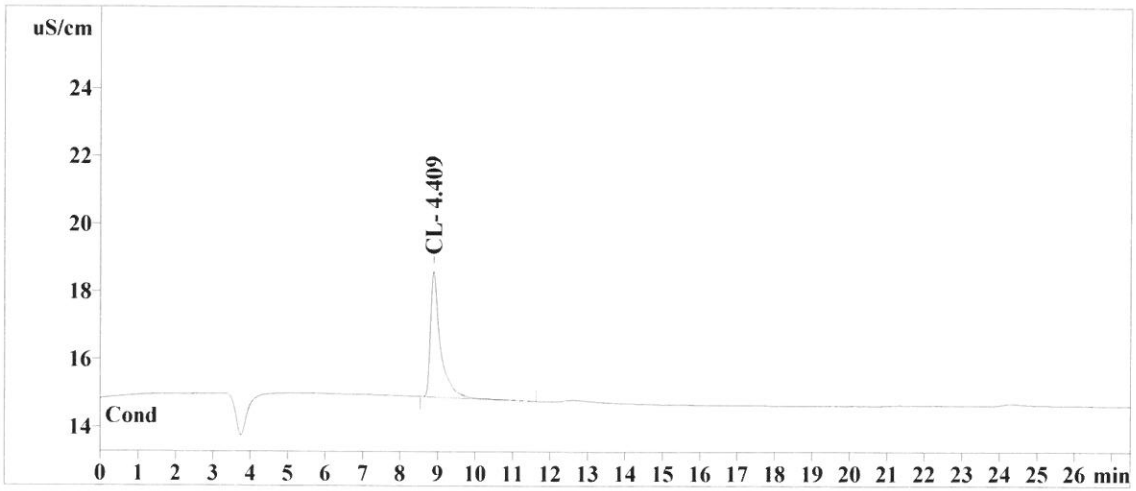
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:42:17 AM
Printed by: wet

Ident: K5168-07DLX100
Analysis from: 10/4/2019 6:28:57 PM
File: _2019-10-04_ Last save: 10/7/2019 9:42:18 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68911

SAMPLE:
: AK/AP
Vial number: 40
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.89	0.230	3.70	99.98	67.810	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.033	3.70	99.98	67.810	100.00	0.

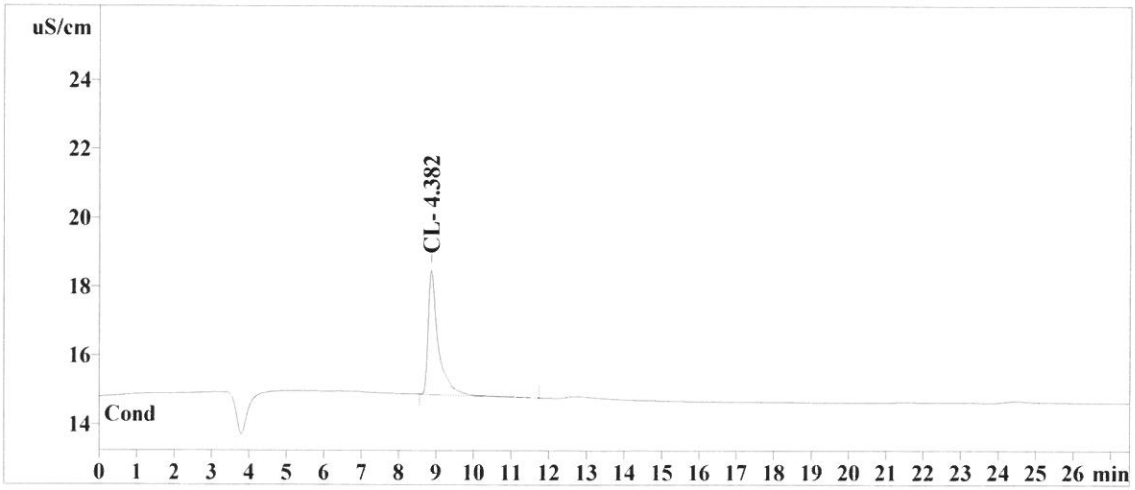
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:42:32 AM
Printed by: wet

Ident: K5168-08DLX100
Analysis from: 10/4/2019 6:59:22 PM
File: _2019-10-04_ Last save: 10/7/2019 9:42:32 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68912

SAMPLE:
: AK/AP
Vial number: 41
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.87	0.234	3.59	100.00	67.388	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.033	3.59	100.00	67.388	100.00	0.

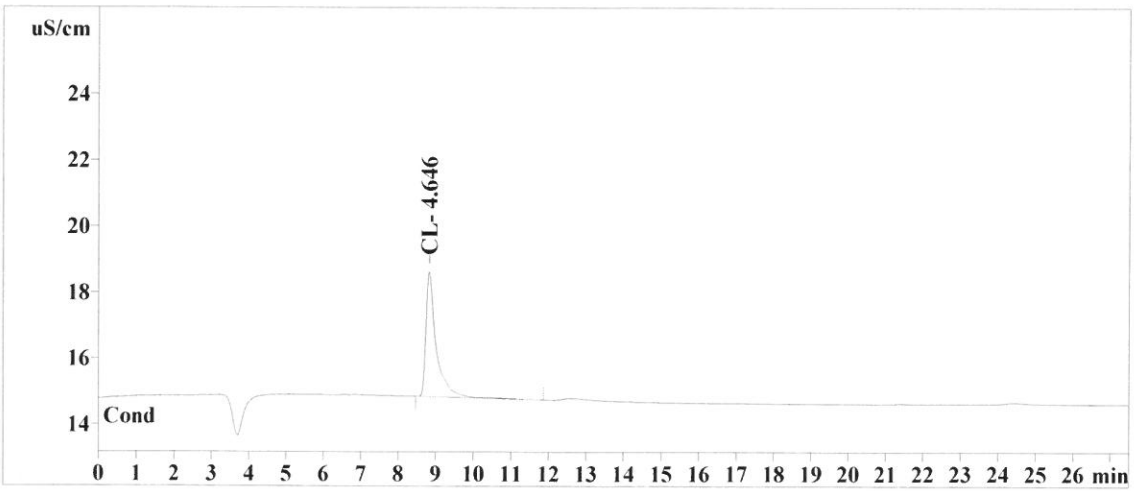
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:42:39 AM
Printed by: wet

Ident: K5168-09DLX100
Analysis from: 10/4/2019 7:29:47 PM
File: _2019-10-04_ Last save: 10/4/2019 7:57:06 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68913

SAMPLE:
: AK/AP
Vial number: 42
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.83	0.237	3.76	99.99	71.504	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.034	3.76	99.99	71.504	100.00	0.

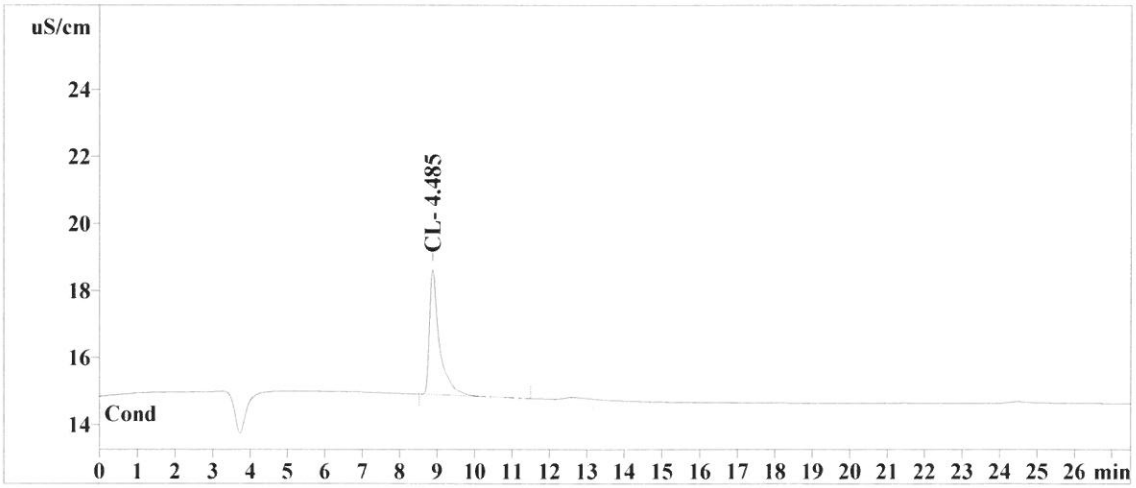
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:42:57 AM
Printed by: wet

Ident: K5168-10DLX100
Analysis from: 10/4/2019 8:00:12 PM
File: _2019-10-04_ Last save: 10/7/2019 9:42:56 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68914

SAMPLE:
: AK/AP
Vial number: 43
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.88	0.235	3.72	99.99	68.985	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.034	3.72	99.99	68.985	100.00	0.

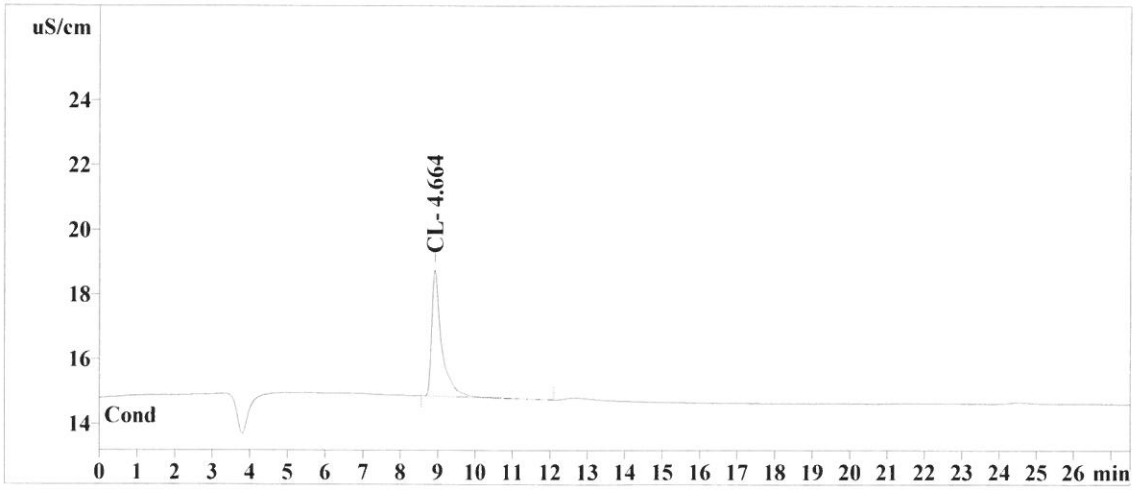
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:43:05 AM
Printed by: wet

Ident: K5168-11DLX100
Analysis from: 10/4/2019 8:30:36 PM
File: _2019-10-04_ Last save: 10/4/2019 8:57:56 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68915

SAMPLE:
: AK/AP
Vial number: 44
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.92	0.231	3.88	100.00	71.786	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.033	3.88	100.00	71.786	100.00	0.

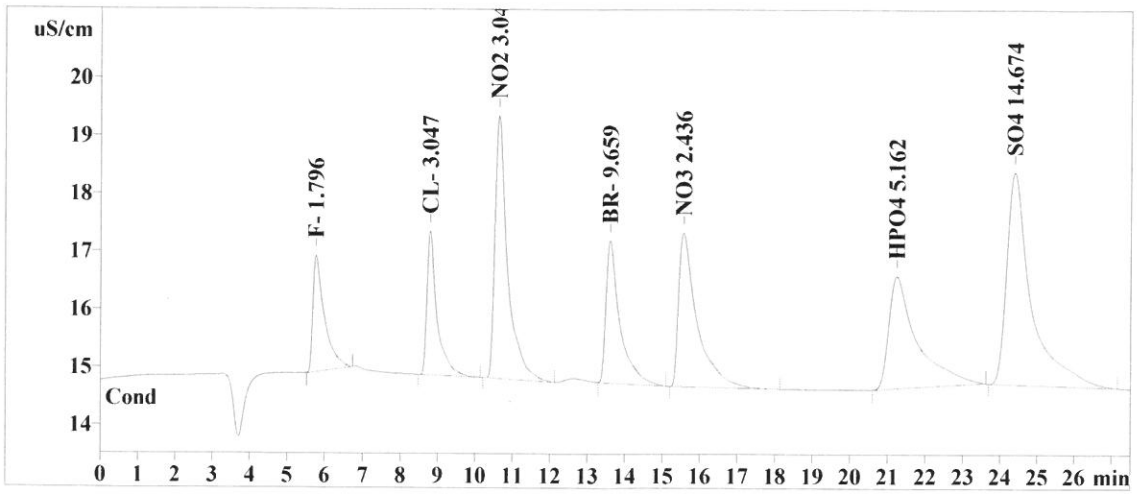
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:43:20 AM
Printed by: wet

Ident: CCV
Analysis from: 10/4/2019 9:01:01 PM
File: _2019-10-04_ Last save: 10/4/2019 9:28:20 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68916

SAMPLE:
: AK/AP
Vial number: 126
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.77	0.305	2.00	10.15	43.316	6.98	0.
2	8.79	0.239	2.48	12.59	46.564	7.50	0.
3	10.62	0.311	4.54	22.99	106.392	17.14	0.
4	13.60	0.343	2.46	12.44	64.265	10.35	0.
5	15.56	0.443	2.65	13.44	89.939	14.49	0.
6	21.23	0.647	1.94	9.82	101.182	16.30	0.
7	24.38	0.572	3.66	18.56	169.209	27.25	0.
7	27.50	0.409	19.73	99.99	620.868	100.00	0.

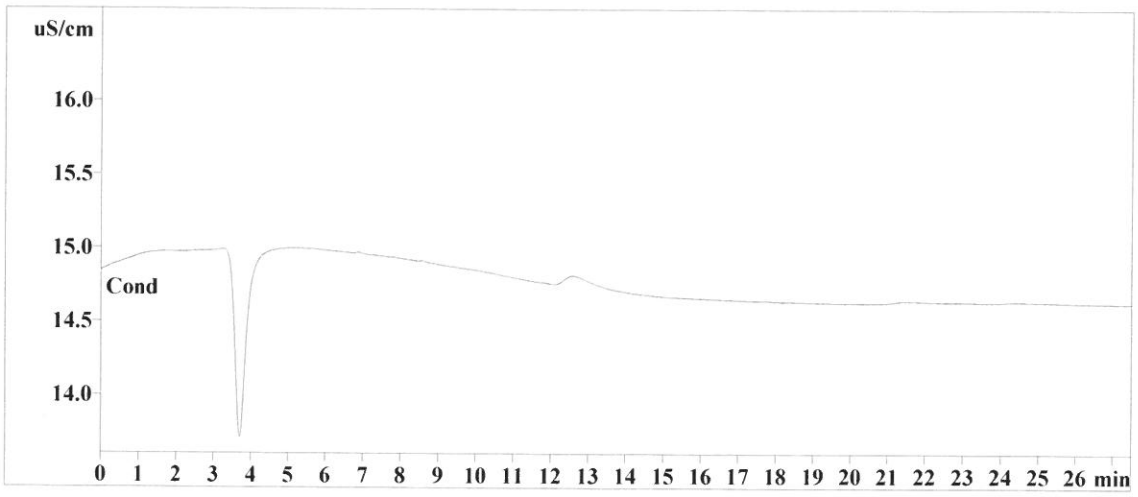
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:43:28 AM
Printed by: wet

Ident: CCB
Analysis from: 10/4/2019 9:31:26 PM
File: _2019-10-04_ Last save: 10/4/2019 9:58:46 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68917

SAMPLE:
: AK/AP
Vial number: 127
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

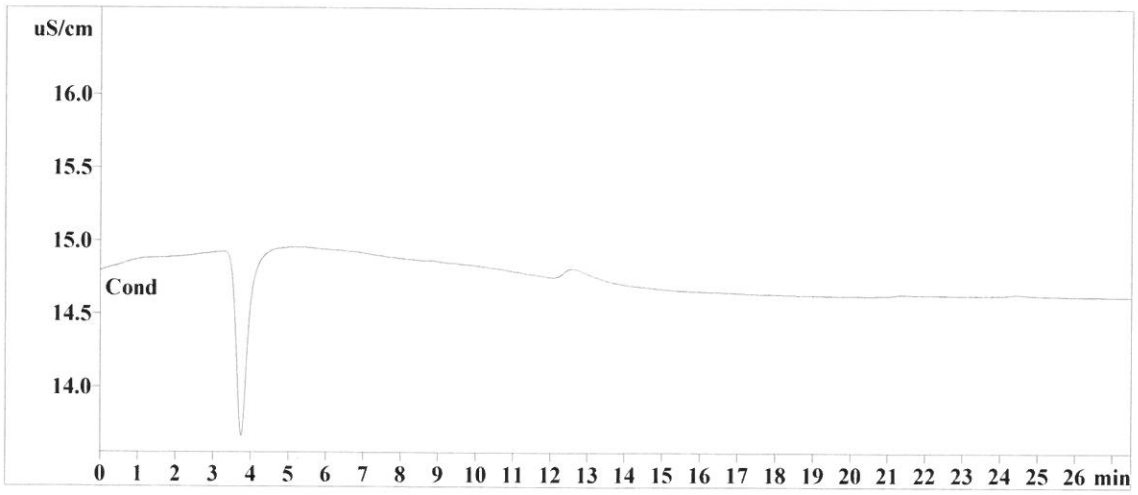
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:43:37 AM
Printed by: wet

Ident: LB105455BLW4
Analysis from: 10/4/2019 10:01:51 PM
File: _2019-10-04_ Last save: 10/4/2019 10:29:10 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68918

SAMPLE:
: AK/AP
Vial number: 4
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

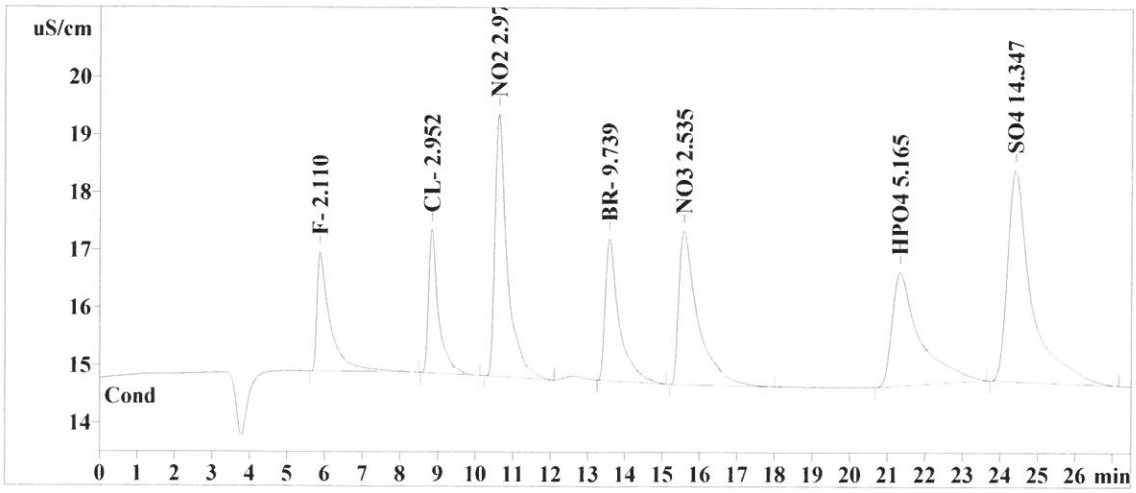
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:43:45 AM
Printed by: wet

Ident: LB105455BSW4
Analysis from: 10/4/2019 10:32:15 PM
File: _2019-10-04_ Last save: 10/4/2019 10:59:34 PM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68919

SAMPLE:
: AK/AP
Vial number: 5
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.88	0.308	2.06	10.37	50.952	8.15	0.
2	8.83	0.233	2.49	12.53	45.079	7.21	0.
3	10.60	0.303	4.55	22.90	104.024	16.64	0.
4	13.57	0.344	2.46	12.39	64.822	10.37	0.
5	15.58	0.464	2.66	13.41	93.716	14.99	0.
6	21.32	0.637	1.97	9.92	101.239	16.19	0.
7	24.39	0.558	3.67	18.47	165.317	26.44	0.
7	27.50	0.407	19.85	99.99	625.149	100.00	0.

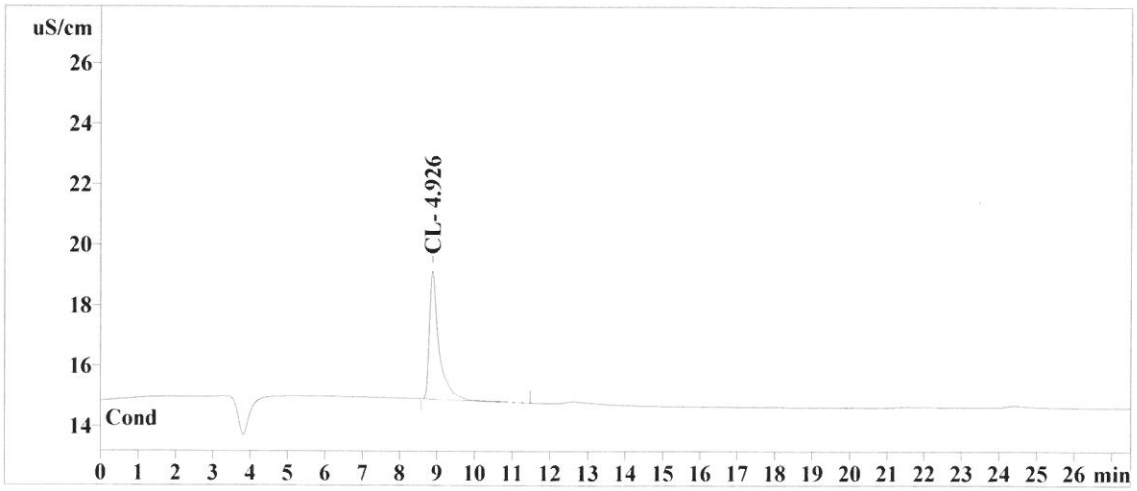
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:44:04 AM
Printed by: wet

Ident: K5168-12DLX100
Analysis from: 10/4/2019 11:02:40 PM
File: _2019-10-04_ Last save: 10/7/2019 9:44:04 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68920

SAMPLE:
: AK/AP
Vial number: 45
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.88	0.228	4.23	99.99	75.875	100.00	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	27.50	0.033	4.23	99.99	75.875	100.00	0.

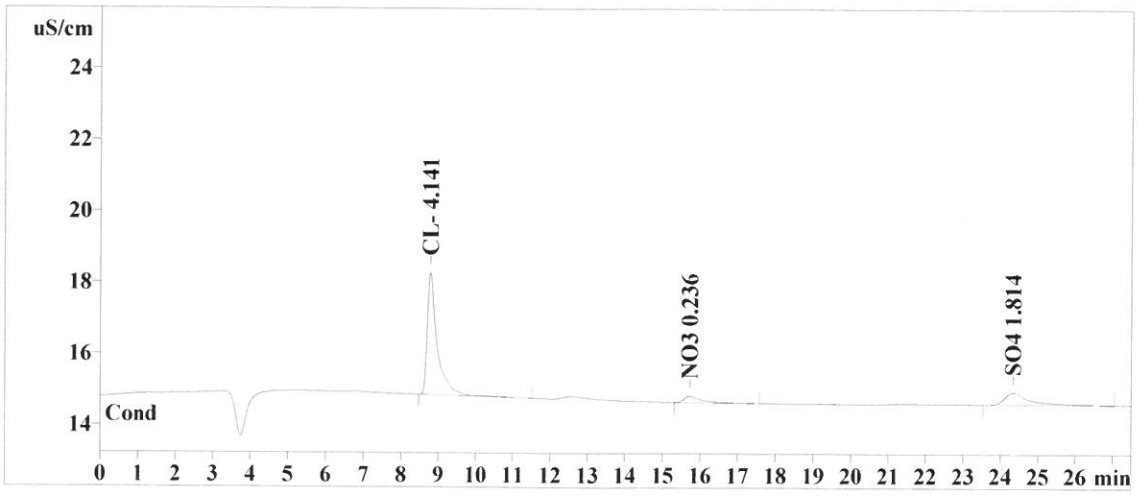
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:44:14 AM
Printed by: wet

Ident: K5154-22DLX50
Analysis from: 10/4/2019 11:33:05 PM
File: _2019-10-04_ Last save: 10/5/2019 12:00:24 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68921

SAMPLE:
: AK/AP
Vial number: 50
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.78	0.234	3.41	86.67	63.622	73.98	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	15.72	0.444	0.18	4.54	6.084	7.07	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.33	0.578	0.34	8.74	16.294	18.95	0.
7	27.50	0.179	3.94	99.96	86.000	100.00	0.

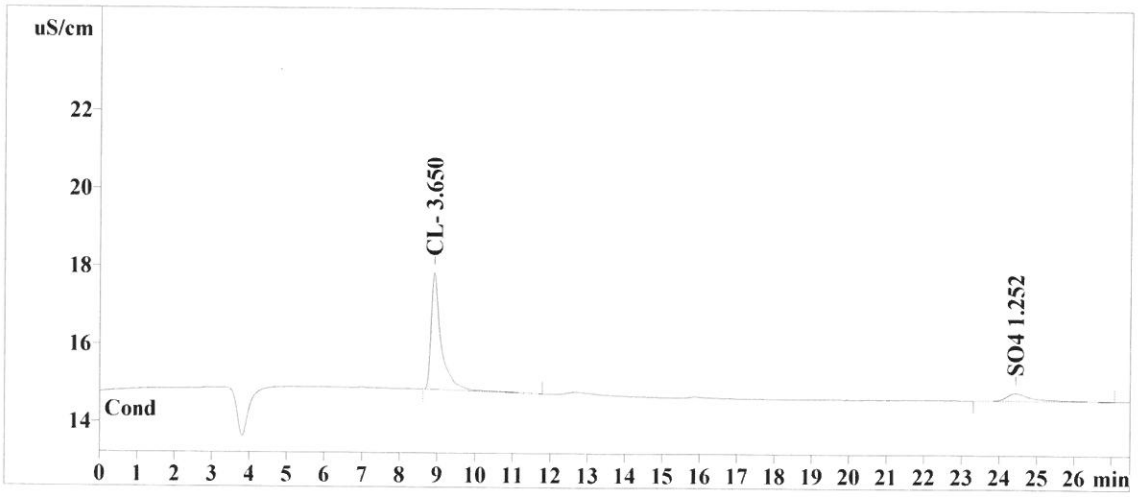
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:44:25 AM
Printed by: wet

Ident: K5154-23DLX100
Analysis from: 10/5/2019 12:03:30 AM
File: _2019-10-05_ Last save: 10/5/2019 12:30:48 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68922

SAMPLE:
: AK/AP
Vial number: 51
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.91	0.232	2.99	93.72	55.974	85.35	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.42	0.581	0.20	6.24	9.610	14.65	0.
7	27.50	0.116	3.19	99.96	65.584	100.00	0.

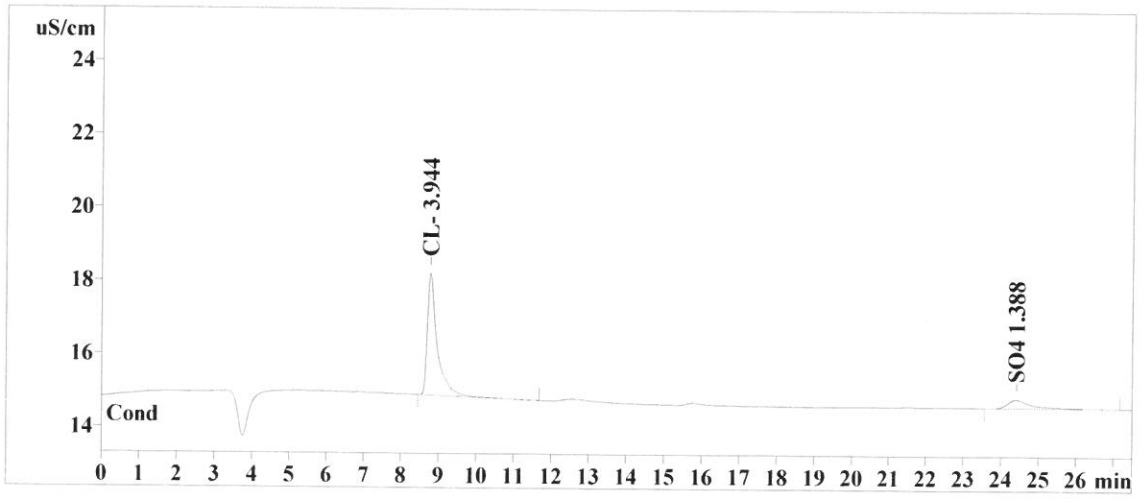
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:44:34 AM
Printed by: wet

Ident: K5154-24DLX50
Analysis from: 10/5/2019 12:34:01 AM
File: _2019-10-05_ Last save: 10/5/2019 1:01:20 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68923

SAMPLE:
: AK/AP
Vial number: 52
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.78	0.230	3.32	93.31	60.551	84.36	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.40	0.581	0.24	6.64	11.230	15.64	0.
7	27.50	0.116	3.55	99.94	71.781	100.00	0.

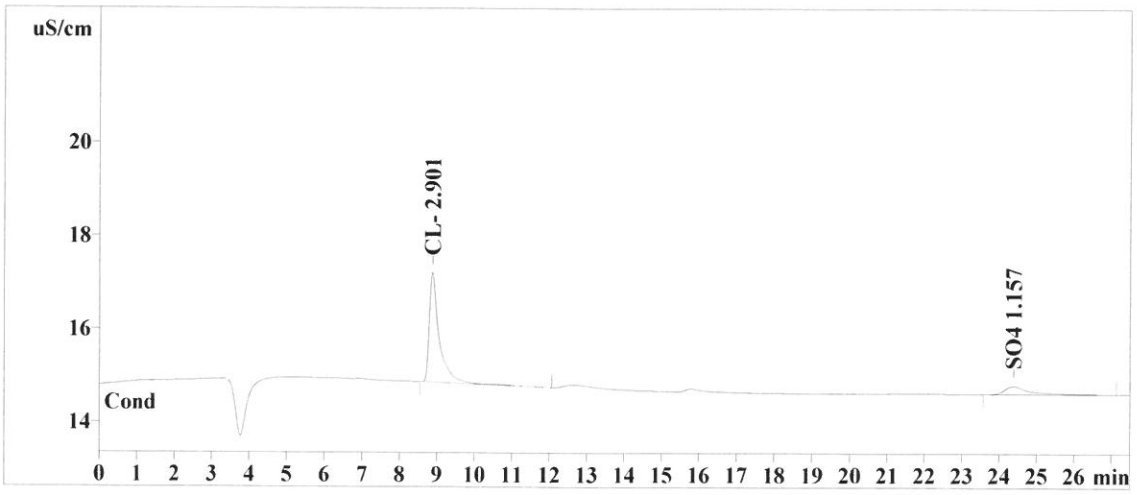
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:44:44 AM
Printed by: wet

Ident: K5154-25DLX100
Analysis from: 10/5/2019 1:04:26 AM
File: _2019-10-05_ Last save: 10/5/2019 1:31:44 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68924

SAMPLE:
: AK/AP
Vial number: 53
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.88	0.234	2.35	93.06	44.278	83.92	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.37	0.579	0.17	6.89	8.487	16.08	0.
7	27.50	0.116	2.52	99.95	52.764	100.00	0.

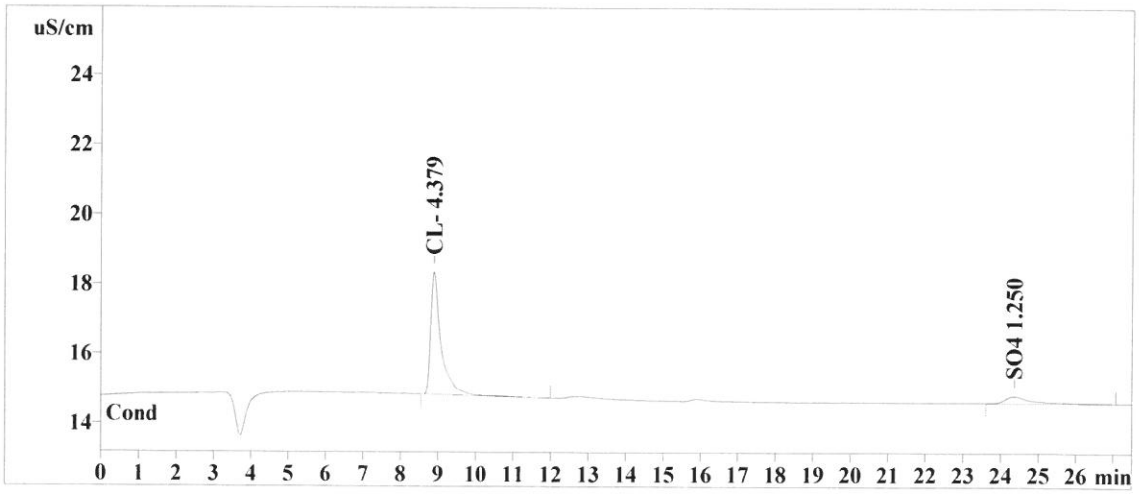
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:44:52 AM
Printed by: wet

Ident: K5154-26DLX100
Analysis from: 10/5/2019 1:34:50 AM
File: _2019-10-05_ Last save: 10/5/2019 2:02:10 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68925

SAMPLE:
: AK/AP
Vial number: 54
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	0.00	0.000	0.00	0.00	0.000	0.00	0.
2	8.89	0.241	3.50	94.51	67.341	87.54	0.
3	0.00	0.000	0.00	0.00	0.000	0.00	0.
4	0.00	0.000	0.00	0.00	0.000	0.00	0.
5	0.00	0.000	0.00	0.00	0.000	0.00	0.
6	0.00	0.000	0.00	0.00	0.000	0.00	0.
7	24.35	0.586	0.20	5.46	9.588	12.46	0.
7	27.50	0.118	3.70	99.97	76.929	100.00	0.

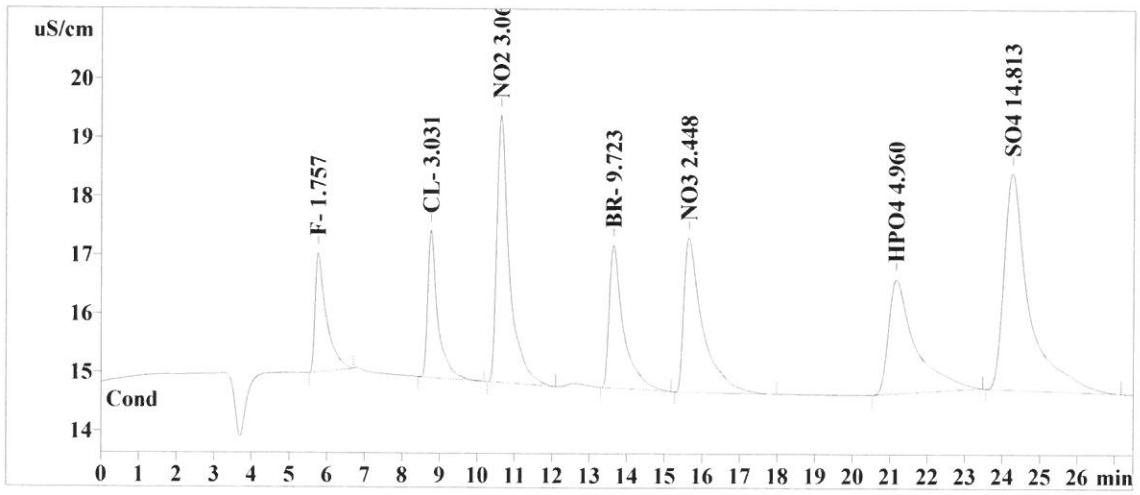
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:45:01 AM
Printed by: wet

Ident: CCV
Analysis from: 10/5/2019 2:05:15 AM
File: _2019-10-05_ Last save: 10/5/2019 2:32:34 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68926

SAMPLE:
: AK/AP
Vial number: 126
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No	Retention min	Width/2 min	Height uS/cm	Height %	Area uS/cm*sec	Area %	
1	5.76	0.292	2.02	10.21	42.354	6.84	0.
2	8.76	0.237	2.50	12.68	46.314	7.48	0.
3	10.61	0.312	4.55	23.01	106.979	17.28	0.
4	13.64	0.349	2.43	12.31	64.709	10.45	0.
5	15.64	0.450	2.63	13.30	90.406	14.60	0.
6	21.16	0.623	1.94	9.84	97.519	15.75	0.
7	24.25	0.575	3.68	18.65	170.863	27.60	0.
7	27.50	0.405	19.75	99.99	619.145	100.00	0.

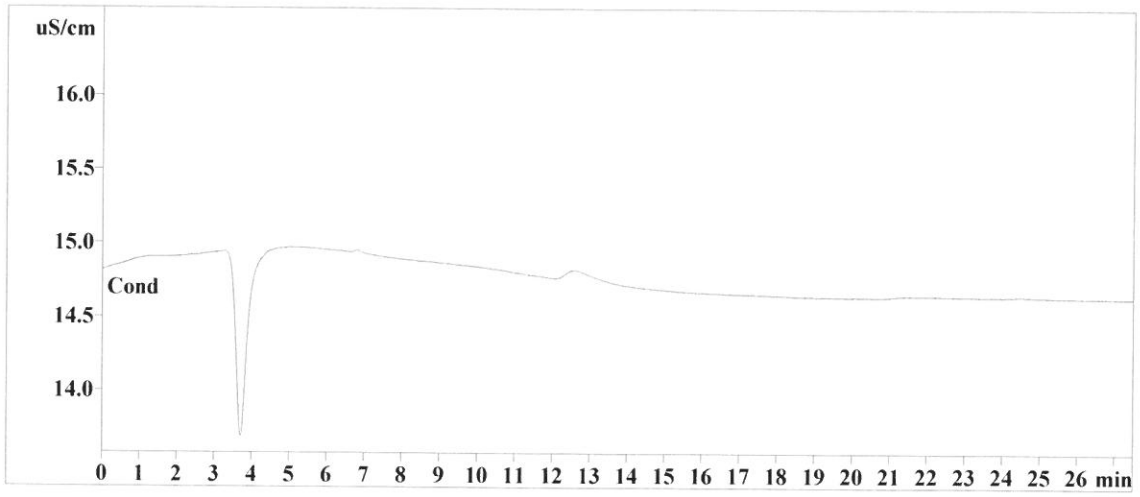
This report has been created by IC Net
METROHM LTD

Report date: 10/7/2019 9:45:12 AM
Printed by: wet

Ident: CCB
Analysis from: 10/5/2019 2:35:40 AM
File: _2019-10-05_ Last save: 10/5/2019 3:03:00 AM

Method: ANIONS 09-11-19.mtw Last save: 9/13/2019 1:05:12 PM
Run operator: wet
Analysis number: 68927

SAMPLE:
: AK/AP
Vial number: 127
Volume: 20.0 µL
Dilution: 1.00
Amount: 1.0000



Quantitation method: Custom

No peaks

This report has been created by IC Net
METROHM LTD

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB105422

Review By	AMANDEEP	Review On	10/3/2019 2:42:02 PM
Supervise By	apatel	Supervise On	10/3/2019 4:33:10 PM

STD. NAME	STD REF.#
ICAL Standard	WP77947,WP77948,WP77949,WP77950,WP77951,WP77952,WP77953
ICV Standard	WP77933
CCV Standard	WP78507
ICSA Standard	N/A
CRI Standard	N/A
Chk Standard	WP78368,WP77778

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	09/11/19 11:54	All samples,stds & qc are filte	AK/AP	OK
2	STD2	STD2	CAL2	09/11/19 12:24		AK/AP	OK
3	STD3	STD3	CAL3	09/11/19 12:55		AK/AP	OK
4	STD4	STD4	CAL4	09/11/19 13:26		AK/AP	OK
5	STD5	STD5	CAL5	09/11/19 13:57		AK/AP	OK
6	STD6	STD6	CAL6	09/11/19 14:28		AK/AP	OK
7	STD7	STD7	CAL7	09/11/19 14:59		AK/AP	OK
8	ICV1	ICV1	ICV	09/11/19 15:30		AK/AP	OK
9	ICB1	ICB1	ICB	09/11/19 16:01		AK/AP	OK
10	CCV1	CCV1	CCV	10/02/19 09:58		AK/AP	OK
11	CCB1	CCB1	CCB	10/02/19 10:40		AK/AP	OK
12	LB105422BLW	LB105422BLW	MB	10/02/19 11:11		AK/AP	OK
13	LB105422BSW	LB105422BSW	LCS	10/02/19 11:41		AK/AP	OK
14	K5127-03	20190772-SS-COMP(	SAM	10/02/19 12:12	Cl High	AK/AP	Dilution
15	K5127-04	20190762-SS-COMP(	SAM	10/02/19 12:42	Cl High	AK/AP	Dilution
16	K5154-03	MW-106S	SAM	10/02/19 13:43	Cl High	AK/AP	Dilution
17	K5154-04	MW-106I	SAM	10/02/19 14:13	Cl High	AK/AP	Dilution
18	K5154-05	MW-106D	SAM	10/02/19 14:44	Cl High	AK/AP	Dilution
19	K5154-06	MW-107	SAM	10/02/19 15:14	Cl High	AK/AP	Dilution
20	K5154-06DUP	MW-107	DUP	10/02/19 15:45		AK/AP	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB105422

Review By	AMANDEEP	Review On	10/3/2019 2:42:02 PM
Supervise By	apatel	Supervise On	10/3/2019 4:33:10 PM

STD. NAME	STD REF.#
ICAL Standard	WP77947,WP77948,WP77949,WP77950,WP77951,WP77952,WP77953
ICV Standard	WP77933
CCV Standard	WP78507
ICSA Standard	N/A
CRI Standard	N/A
Chk Standard	WP78368,WP77778

21	CCV2	CCV2	CCV	10/02/19 16:15		AK/AP	OK
22	CCB2	CCB2	CCB	10/02/19 16:45		AK/AP	OK
23	K5154-02	FB-10012019	SAM	10/02/19 17:16		AK/AP	OK
24	K5154-06MS	MW-107MS	MS	10/02/19 17:46	Added 1ml from W2510 into 9 r	AK/AP	OK
25	K5154-06MSD	MW-107MSD	MSD	10/02/19 18:17	Added 1ml from W2510 into 9 r	AK/AP	OK
26	K5127-03DL	20190772-SS-COMP(	SAM	10/02/19 18:47	Report 200x	AK/AP	Confirms
27	K5127-04DL	20190762-SS-COMP(	SAM	10/02/19 19:17	Report 200x	AK/AP	Confirms
28	K5154-03DL	MW-106SDL	SAM	10/02/19 19:48	Report 200x	AK/AP	Confirms
29	K5154-04DL	MW-106IDL	SAM	10/02/19 20:18	Report 200x	AK/AP	Confirms
30	K5154-05DL	MW-106DDL	SAM	10/02/19 20:49	Report 500x	AK/AP	Confirms
31	K5154-06DL	MW-107DL	SAM	10/02/19 21:19	Report 500x	AK/AP	Confirms
32	CCV3	CCV3	CCV	10/02/19 21:50		AK/AP	OK
33	CCB3	CCB3	CCB	10/02/19 22:20		AK/AP	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB105455

Review By	AMANDEEP	Review On	10/7/2019 3:33:04 PM
Supervise By	apatel	Supervise On	10/7/2019 4:07:04 PM

STD. NAME	STD REF.#
ICAL Standard	WP77947,WP77948,WP77949,WP77950,WP77951,WP77952,WP77953
ICV Standard	WP77933
CCV Standard	WP78528,WP78578
ICSA Standard	N/A
CRI Standard	N/A
Chk Standard	WP78368,WP77778

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	09/11/19 11:54	All samples,stds & qc are	AK/AP	OK
2	STD2	STD2	CAL2	09/11/19 12:24	filtered through 0.45um	AK/AP	OK
3	STD3	STD3	CAL3	09/11/19 12:55	filters lot#81064103	AK/AP	OK
4	STD4	STD4	CAL4	09/11/19 13:26		AK/AP	OK
5	STD5	STD5	CAL5	09/11/19 13:57		AK/AP	OK
6	STD6	STD6	CAL6	09/11/19 14:28		AK/AP	OK
7	STD7	STD7	CAL7	09/11/19 14:59		AK/AP	OK
8	ICV1	ICV1	ICV	09/11/19 15:30		AK/AP	OK
9	ICB1	ICB1	ICB	09/11/19 16:01		AK/AP	OK
10	CCV1	CCV1	CCV	10/03/19 09:18		AK/AP	OK
11	CCB1	CCB1	CCB	10/03/19 09:48		AK/AP	OK
12	LB105455BLW	LB105455BLW	MB	10/03/19 10:19		AK/AP	OK
13	LB105455BSW	LB105455BSW	LCS	10/03/19 10:49		AK/AP	OK
14	K5154-10	MW-103S	SAM	10/03/19 11:22	CL High	AK/AP	Dilution
15	K5154-11	MW-103I	SAM	10/03/19 11:52	CL High	AK/AP	Dilution
16	K5154-14	MW-103D	SAM	10/03/19 12:23	CL High	AK/AP	Dilution
17	K5154-15	MW-105S	SAM	10/03/19 12:53	CL High	AK/AP	Dilution
18	K5154-16	MW-105I	SAM	10/03/19 13:24	CL High	AK/AP	Dilution
19	K5154-17	MW-105D	SAM	10/03/19 13:54	CL High	AK/AP	Dilution
20	K5154-18	MW-104I	SAM	10/03/19 14:24	CL High	AK/AP	Dilution

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB105455

Review By	AMANDEEP	Review On	10/7/2019 3:33:04 PM
Supervise By	apatel	Supervise On	10/7/2019 4:07:04 PM

STD. NAME	STD REF.#
ICAL Standard	WP77947,WP77948,WP77949,WP77950,WP77951,WP77952,WP77953
ICV Standard	WP77933
CCV Standard	WP78528,WP78578
ICSA Standard	N/A
CRI Standard	N/A
Chk Standard	WP78368,WP77778

21	K5154-19	MW-104D	SAM	10/03/19 14:55	CL High	AK/AP	Dilution
22	CCV2	CCV2	CCV	10/03/19 16:27		AK/AP	OK
23	CCB2	CCB2	CCB	10/03/19 16:57		AK/AP	OK
24	K5168-07	20190763-SS-COMP(	SAM	10/03/19 17:28	CL High	AK/AP	Dilution
25	K5168-08	20190764-SS-COMP(	SAM	10/03/19 17:58	CL High	AK/AP	Dilution
26	K5168-09	20190769-SS-COMP(	SAM	10/03/19 18:28	CL High	AK/AP	Dilution
27	K5168-10	20190773-SS-COMP(	SAM	10/03/19 18:59	CL High	AK/AP	Dilution
28	K5168-11	20190771-SS-COMP(	SAM	10/03/19 19:29	CL High	AK/AP	Dilution
29	K5168-12	20190770-SS-COMP(	SAM	10/03/19 20:00	CL High	AK/AP	Dilution
30	K5154-11DUP	MW-103IDUP	DUP	10/03/19 20:30		AK/AP	OK
31	K5154-12MS	MW-103IMS	MS	10/03/19 21:01	Added 1ml from W2510 into 9 r	AK/AP	OK
32	K5154-13MSD	MW-103IMSD	MSD	10/03/19 21:31	Added 1ml from W2510 into 9 r	AK/AP	OK
33	K5154-10DL	MW-103SDL	SAM	10/03/19 22:01	Report 500x	AK/AP	Confirms
34	CCV3	CCV3	CCV	10/03/19 22:32		AK/AP	OK
35	CCB3	CCB3	CCB	10/03/19 23:02		AK/AP	OK
36	LB105455BLW2	LB105455BLW2	MB	10/03/19 23:33		AK/AP	OK
37	LB105455BSW2	LB105455BSW2	LCS	10/04/19 00:03		AK/AP	OK
38	K5154-11DL	MW-103IDL	SAM	10/04/19 00:33	Report 100x	AK/AP	Confirms
39	K5154-14DL	MW-103DDL	SAM	10/04/19 01:04	Report 5x	AK/AP	Confirms
40	K5154-15DL	MW-105SDL	SAM	10/04/19 01:34	Report 200x	AK/AP	Confirms
41	K5154-16DL	MW-105IDL	SAM	10/04/19 02:05	Report 100x	AK/AP	Confirms
42	K5154-17DL	MW-105DDL	SAM	10/04/19 02:35	Report 5x	AK/AP	Confirms

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB105455

Review By	AMANDEEP	Review On	10/7/2019 3:33:04 PM
Supervise By	apatel	Supervise On	10/7/2019 4:07:04 PM

STD. NAME	STD REF.#
ICAL Standard	WP77947,WP77948,WP77949,WP77950,WP77951,WP77952,WP77953
ICV Standard	WP77933
CCV Standard	WP78528,WP78578
ICSA Standard	N/A
CRI Standard	N/A
Chk Standard	WP78368,WP77778

43	K5154-18DL	MW-104IDL	SAM	10/04/19 03:05	Report 50x	AK/AP	Confirms
44	K5154-19DL	MW-104DDL	SAM	10/04/19 03:36	Report 2000x	AK/AP	Confirms
45	CCV4	CCV4	CCV	10/04/19 04:06		AK/AP	OK
46	CCB4	CCB4	CCB	10/04/19 04:37		AK/AP	OK
47	CCV5	CCV5	CCV	10/04/19 08:41		AK/AP	OK
48	CCB5	CCB5	CCB	10/04/19 09:21		AK/AP	OK
49	LB105455BLW3	LB105455BLW3	MB	10/04/19 09:51		AK/AP	OK
50	LB105455BSW3	LB105455BSW3	LCS	10/04/19 10:22		AK/AP	OK
51	K5154-21	MW-102S	SAM	10/04/19 10:52		AK/AP	OK
52	K5154-22	MW-102I	SAM	10/04/19 11:23	CL High	AK/AP	Dilution
53	K5154-23	MW-102D	SAM	10/04/19 11:53	CL High	AK/AP	Dilution
54	K5154-24	MW-101S	SAM	10/04/19 12:23	CL High	AK/AP	Dilution
55	K5154-25	MW-101I	SAM	10/04/19 12:54	CL High	AK/AP	Dilution
56	K5154-26	MW-101D	SAM	10/04/19 13:24	CL High	AK/AP	Dilution
57	K5154-26DUP	MW-101DDUP	DUP	10/04/19 13:55		AK/AP	OK
58	K5154-26MS	MW-101DMS	MS	10/04/19 14:25		AK/AP	OK
59	CCV6	CCV6	CCV	10/04/19 14:56		AK/AP	OK
60	CCB6	CCB6	CCB	10/04/19 15:26		AK/AP	OK
61	K5154-26MSD	MW-101DMSD	MSD	10/04/19 15:56		AK/AP	OK
62	K5168-12DUP	20190770-SS-COMP(	DUP	10/04/19 16:27		AK/AP	OK
63	K5168-12MS	20190770-SS-COMP(	MS	10/04/19 16:57		AK/AP	OK
64	K5168-12MSD	20190770-SS-COMP(	MSD	10/04/19 17:28		AK/AP	OK

CHEMTECH 284 Sheffield Street, Mountainside, NJ 07092 Phone: 908 789 8900 Fax: 908 789 8922

Instrument ID: IC-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB105455

Review By	AMANDEEP	Review On	10/7/2019 3:33:04 PM
Supervise By	apatel	Supervise On	10/7/2019 4:07:04 PM

STD. NAME	STD REF.#
ICAL Standard	WP77947,WP77948,WP77949,WP77950,WP77951,WP77952,WP77953
ICV Standard	WP77933
CCV Standard	WP78528,WP78578
ICSA Standard	N/A
CRI Standard	N/A
Chk Standard	WP78368,WP77778

65	K5168-07DL	20190763-SS-COMP(	SAM	10/04/19 18:28	Report 100x	AK/AP	Confirms
66	K5168-08DL	20190764-SS-COMP(	SAM	10/04/19 18:59	Report 100x	AK/AP	Confirms
67	K5168-09DL	20190769-SS-COMP(	SAM	10/04/19 19:29	Report 100x	AK/AP	Confirms
68	K5168-10DL	20190773-SS-COMP(	SAM	10/04/19 20:00	Report 100x	AK/AP	Confirms
69	K5168-11DL	20190771-SS-COMP(	SAM	10/04/19 20:30	Report 100x	AK/AP	Confirms
70	CCV7	CCV7	CCV	10/04/19 21:01		AK/AP	OK
71	CCB7	CCB7	CCB	10/04/19 21:31		AK/AP	OK
72	LB105455BLW4	LB105455BLW4	MB	10/04/19 22:01		AK/AP	OK
73	LB105455BSW4	LB105455BSW4	LCS	10/04/19 22:32		AK/AP	OK
74	K5168-12DL	20190770-SS-COMP(	SAM	10/04/19 23:02	Report 100x	AK/AP	Confirms
75	K5154-22DL	MW-102IDL	SAM	10/04/19 23:33	Report 50x	AK/AP	Confirms
76	K5154-23DL	MW-102DDL	SAM	10/05/19 00:03	Report 100x	AK/AP	Confirms
77	K5154-24DL	MW-101SDL	SAM	10/05/19 00:34	Report 50x	AK/AP	Confirms
78	K5154-25DL	MW-101IDL	SAM	10/05/19 01:04	Report 100x	AK/AP	Confirms
79	K5154-26DL	MW-101DDL	SAM	10/05/19 01:34	Report 100x	AK/AP	Confirms
80	CCV8	CCV8	CCV	10/05/19 02:05		AK/AP	OK
81	CCB8	CCB8	CCB	10/05/19 02:35		AK/AP	OK

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Prep Standard - Chemical Standard Summary

Order ID : K5154

Test : Anions Group1

Prepbatch ID :

Sequence ID/Qc Batch ID: LB105422,LB105455,

Standard ID :
WP76663,WP77778,WP77933,WP77947,WP77948,WP77949,WP77950,WP77951,WP77952,WP77953,WP78368,WP78451,WP78507,WP78528,WP78529,WP78578,WP78580,

Chemical ID :
W1152,W1237,W2438,W2482,W2510,W2514,

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
440	IC ELUENT CONCENTRATE	WP76663	07/23/2019	01/23/2020	AMANDEEP KAUR	WETCHEM_SCALE_4 (WCSC-4)	None	Amit Patel 07/23/2019

FROM 33.900gram of W2438 + 8.400gram of W1237 + 957.700ml of W1152 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
441	IC ELUENT	WP77778	09/03/2019	10/04/2019	Chirag Tailor	None	Glass Pipette-A	Amit Patel 09/03/2019

FROM 1980.000ml of W1152 + 20.000ml of WP76663 = Final Quantity: 2000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP77933	09/11/2019	09/12/2019	AMANDEEP KAUR	None	Glass Pipette-A	Amit Patel 09/11/2019

FROM 45.000ml of W1152 + 5.000ml of W2514 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP77947	09/11/2019	09/12/2019	AMANDEEP KAUR	None	None	Amit Patel 09/11/2019

FROM 45.000ml of W1152 + 5.000ml of W2514 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3681	Anions 300/9056 calibration standard 7	WP77948	09/11/2019	09/12/2019	AMANDEEP KAUR	None	WETCHEM_PIPETTE_1 (WA)	Amit Patel 09/11/2019

FROM 2.500ml of W2510 + 7.500ml of W1152 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3679	Anions 300/9056 calibration standard 6	WP77949	09/11/2019	09/12/2019	AMANDEEP KAUR	None	WETCHEM_PIPETTE_1 (WA)	Amit Patel 09/11/2019

FROM 2.000ml of W2510 + 8.000ml of W1152 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
26	Anions 300/9056 calibration standard 4	WP77950	09/11/2019	09/12/2019	AMANDEEP KAUR	None	WETCHEM_PIPETTE_1 (WA)	Amit Patel 09/11/2019

FROM 0.400ml of W2510 + 9.600ml of W1152 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
25	Anions 300/9056 calibration standard 3	WP77951	09/11/2019	09/12/2019	AMANDEEP KAUR	None	WETCHEM_PIPETTE_1 (WA)	Amit Patel 09/11/2019

FROM 0.200ml of W2510 + 9.800ml of W1152 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
24	Anions 300/9056 calibration standard 2	WP77952	09/11/2019	09/12/2019	AMANDEEP KAUR	None	WETCHEM_PIPETTE_1 (WA)	Amit Patel 09/11/2019

FROM 0.100ml of W2510 + 9.900ml of W1152 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2487	Anions 300/9056 calibration standard 1	WP77953	09/11/2019	09/12/2019	AMANDEEP KAUR	None	None	Amit Patel 09/11/2019

FROM 10.000ml of W1152 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
455	IC H2SO4	WP78368	09/26/2019	10/26/2019	AMANDEEP KAUR	None	Glass Pipette-A	Chirag Tailor 09/26/2019

FROM 2.800ml of W2482 + 3997.200ml of W1152 = Final Quantity: 4000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP78451	10/01/2019	10/02/2019	AMANDEEP KAUR	None	Glass Pipette-A	Amit Patel 10/01/2019

FROM 45.000ml of W1152 + 5.000ml of W2514 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP78507	10/02/2019	10/03/2019	AMANDEEP KAUR	None	Glass Pipette-A	Amit Patel 10/02/2019

FROM 45.000ml of W1152 + 5.000ml of W2510 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP78528	10/03/2019	10/04/2019	AMANDEEP KAUR	None	Glass Pipette-A	Amit Patel 10/04/2019

FROM 45.000ml of W1152 + 5.000ml of W2510 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP78529	10/03/2019	10/04/2019	AMANDEEP KAUR	None	Glass Pipette-A	Amit Patel 10/04/2019

FROM 45.000ml of W1152 + 5.000ml of W2514 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP78578	10/04/2019	10/05/2019	AMANDEEP KAUR	None	Glass Pipette-A	Amit Patel 10/04/2019

FROM 45.000ml of W1152 + 5.000ml of W2510 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP78580	10/04/2019	10/05/2019	AMANDEEP KAUR	None	Glass Pipette-A	Amit Patel 10/04/2019

FROM 45.000ml of W1152 + 5.000ml of W2514 = Final Quantity: 50.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Res-Kem General water	DIW / DI Water	Lab certified	02/23/2025	02/23/2010 /	02/23/2010 / divya	W1152

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3506-5 / SODIUM BICARBONATE, PWD, ACS, 2.5KG	h37595	04/29/2020	04/28/2010 / jmoore	04/28/2010 / jmoore	W1237

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-SX0395-3 / SODIUM CARBONATE ANHYDR 2.5KG	18E185207	11/09/2023	03/19/2019 / Indiana	11/09/2018 / AMANDEEP	W2438

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	0000198961	03/19/2023	01/30/2019 / jignesh	01/30/2019 / jignesh	W2482

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	M2-MEB663641	08/23/2020	08/23/2019 / apatel	03/25/2019 / apatel	W2510

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	P2-MEB678300	04/03/2020	04/03/2019 / apatel	04/03/2019 / apatel	W2514

Standard ID : W1237

Sodium Bicarbonate, Powder

`BAKER ANALYZED® A.C.S. Reagent
(sodium hydrogen carbonate)

Product No. 3506
Lot No. H37595
Release Date 10/06/2009

Certificate of Analysis

TEST	SPECIFICATION	RESULT
Meets A.C.S. Specifications		
Meets Reagent Specifications for testing USP/NF monographs		
Assay ($NaHCO_3$) (dried basis)	99.7 - 100.3 %	100.2 %
Insoluble Matter	0.015 % max.	< 0.002 %
Chloride (Cl)	0.003 % max.	< 0.002 %
Phosphate (PO_4)	0.001 % max.	< 0.0005 %
Sulfur Compounds (as SO_4)	0.003 % max.	0.003 %
Calcium (Ca)	0.02 % max.	0.007 %
Iron (Fe)	0.001 % max.	< 0.0005 %
Magnesium (Mg)	0.005 % max.	< 0.0005 %
Potassium (K)	0.005 % max.	0.002 %
Trace Impurities (in ppm):		
Ammonium (NH_4)	5 max.	< 3
Heavy Metals (as Pb)	5 max.	< 3

For Laboratory, Research or Manufacturing Use

Country of Origin: USA

ISO
Phillipsburg, NJ 9001:2008 & 14001:2004
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, Holland 9001:2008 & 14001:2004
Selangor, Malaysia 9001:2000

Mary M. Mathez
Mary M. Mathez
Director of QA & Regulatory Affairs

For questions on this Certificate of Analysis please contact Technical Services at 1-800-582-2537 or 908-859-2151
Mallinckrodt Baker, Inc. • 222 Red School Lane • Phillipsburg, NJ 08865 • Phone: 908.859.2151 • Fax: 908.859.6905

INORGANIC VENTURES™
300 Technology Drive
Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

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info@inorganicventures.com

W2510 RECEIVED ON 3/25/2019 BY AP

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO Guide 34, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Ion Chromatography Solution
Catalog Number:	300-CAL-A
Lot Number:	M2-MEB663641
Matrix:	H2O
Value / Analyte(s):	150 µg/mL ea: Sulfate, 100 µg/mL ea: Bromide, 50 µg/mL ea: o-Phosphate as P, 30 µg/mL ea: Chloride, Nitrite as N, 25 µg/mL ea: Nitrate as N, 20 µg/mL ea: Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	**100.0 ± 0.5 µg/mL**	**Chloride, Cl**	**30.00 ± 0.16 µg/mL**
Fluoride, F-	**20.00 ± 0.08 µg/mL**	**Nitrate as N, NNO3-**	**25.00 ± 0.12 µg/mL**
Nitrite as N, NNO2-	**30.00 ± 0.20 µg/mL**	**o-Phosphate as P, PPO4**	**50.00 ± 0.21 µg/mL**
Sulfate, SO4	**150.0 ± 0.7 µg/mL**		

Density: 0.999 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	020701
Br	Volhard	999c	999c
Cl	ICP Assay	3182	060925
Cl	Volhard	999c	999c
F-	IC Assay	3183	050721
NNO3-	IC Assay	3185	050517
NNO2-	Calculated	traceable to 8040	SRM 8040
NNO2-	IC Assay		traceable to 40h new
PPO4	IC Assay	3186	090723
SO4	IC Assay	3181	080603

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM by two independent methods **Characterization of CRM by one method**

Characterization of CRM/RM by Two Methods

Certified Value, $X_{CRM/RM}$, where two methods of characterization are used is the weighted mean of the two results:

$X_{CRM/RM} = [(w_a)(X_a) + (w_b)(X_b)]$

X_a = mean of Assay Method A with standard uncertainty $u_{char\ a}$

X_b = mean of Assay Method B with standard uncertainty $u_{char\ b}$

w_a and w_b = the weighting factors for each method calculated using the inverse square of the variance:

$w_a = (1/u_{char\ a})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

$w_b = (1/u_{char\ b})^2 / ((1/u_{char\ a})^2 + (1/u_{char\ b})^2))$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a\&b} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a\&b} = [(w_a)^2 (u_{char\ a})^2 + (w_b)^2 (u_{char\ b})^2]^{1/2}$ where $u_{char\ a}$ and $u_{char\ b}$ are the square root of the sum of the squares of errors from characterization which include instrument measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM}$ = mean of Assay Method A with standard uncertainty $u_{char\ a}$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2 in all cases at Inorganic Ventures

$u_{char\ a}$ = square root of the sum of the squares of the errors from characterization which include instrumental measurement, density, NIST SRM uncertainty, weighing, and volume

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 CHROMATOGRAM

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 10CFR50 Appendix B - Nuclear Regulatory Commission

- Domestic Licensing of Production and Utilization Facilities

10.2 10CFR21 - Nuclear Regulatory Commission

- Reporting defects and Non-Compliance

10.3 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.4 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.5 ISO Guide 34 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

December 01, 2017

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **December 01, 2021**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

INORGANIC VENTURES
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Christiansburg, VA 24073 · USA
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CERTIFICATE OF ANALYSIS

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Ion Chromatography Solution
Catalog Number:	300-CAL-A
Lot Number:	P2-MEB678300
Matrix:	H2O
Value / Analyte(s):	150 µg/mL ea: Sulfate, 100 µg/mL ea: Bromide, 50 µg/mL ea: o-Phosphate as P, 30 µg/mL ea: Chloride, Nitrite as N, 25 µg/mL ea: Nitrate as N, 20 µg/mL ea: Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	**100.0 ± 0.5 µg/mL**	**Chloride, Cl**	**30.01 ± 0.16 µg/mL**
Fluoride, F-	**20.01 ± 0.09 µg/mL**	**Nitrate as N, NNO3-**	**25.00 ± 0.12 µg/mL**
Nitrite as N, NNO2-	**30.00 ± 0.16 µg/mL**	**o-Phosphate as P, PPO4**	**49.99 ± 0.22 µg/mL**
Sulfate, SO4	**150.0 ± 0.7 µg/mL**		

Density: 0.999 g/mL (measured at 20 ± 4 ºC)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	060925
Cl	Fajans	999c	999c
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	050517
NNO2-	Calculated	8040	8040
NNO2-	IC Assay		traceable to 40h
PPO4	IC Assay	3186	090723
SO4	IC Assay	3181	080603
SO4	Calculated		See Sec. 4.2

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

Certified Value, $X_{CRM/RM}$, where two or more methods of characterization are used is the weighted mean of the results:

$X_{CRM/RM} = \Sigma(w_i)(X_i)$

X_i = mean of Assay Method i with standard uncertainty $u_{char\ i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

$w_i = (1/u_{char\ i})^2 / (\Sigma(1/(u_{char\ i})^2)$

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2 (u_{char\ i})^2)]^{1/2}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{CRM/RM}$, where one method of characterization is used is the mean of individual results:

$X_{CRM/RM} = (X_a)(u_{char\ a})$

X_a = mean of Assay Method A with

$u_{char\ a}$ = the standard uncertainty of characterization Method A

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

$u_{char\ a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{lts} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 CHROMATOGRAM

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 25, 2019

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- **March 25, 2023**

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Michael Booth
Supervisor, Quality Control

Certifying Officer:

Paul Gaines
CEO, Senior Technical Director

Certificate of Analysis

Date of Release: 05/17/2018

Name: Sodium carbonate anhydrous

Grade: Meets ACS Specifications. Meets Reagent Specifications for testing USP/NF monographs.

Item No: SX0395-3

Lot No.: 18E185207

Country of Origin: USA

Characteristic	Requirement	Results
Assay (calculated on dried substance)	Min. 99.5 %	100.1 %
Color	White	White
Form	Powder	Powder
Heavy metals (ICP-OES)	Max. 5 ppm	< 5 ppm
Insoluble matter	Max. 0.01 %	< 0.01 %
Loss on heating (285°C)	Max. 1.0 %	< 1.0 %
Sulphur compounds (as SO4)	Max. 0.003 %	< 0.003 %
Cl (Chloride)	Max. 0.001 %	< 0.001 %
PO4 (Phosphate)	Max. 0.001 %	< 0.001 %
SiO2 (Silica)	Max. 0.005 %	< 0.005 %
Ca (Calcium)	Max. 0.03 %	0.001 %
Fe (Iron)	Max. 5 ppm	< 5 ppm
K (Potassium)	Max. 0.005 %	< 0.005 %
Mg (Magnesium)	Max. 0.005 %	< 0.005 %

Joe Schoellkopff

Quality Control Manager

This document has been produced electronically and is valid without signature.

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation
400 Summit Drive
Burlington, MA 01803
U.S.A.

Form number: 00005624CA, Rev. 2.0

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

W2482
O.Date: .01.30.2019
Exp Date: .03.19.2023
JP

Material No.: 9673-33
Batch No.: 0000198961
Manufactured Date: 2018/03/20
Retest Date: 2023/03/19
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (H_2SO_4)	95.0 - 98.0 %	96.5
Appearance	Passes Test	PT
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	< 1
ACS - Substances Reducing Permanganate (as SO_2)	<= 2 ppm	< 2
Ammonium (NH_4)	<= 1 ppm	< 1
Chloride (Cl)	<= 0.1 ppm	< 0.1
Nitrate (NO_3)	<= 0.2 ppm	< 0.1
Phosphate (PO_4)	<= 0.5 ppm	< 0.1
Trace Impurities - Aluminum (Al)	<= 30.0 ppb	0.3
Arsenic and Antimony (as As)	<= 4 ppb	< 2
Trace Impurities - Barium (Ba)	<= 10.0 ppb	< 1.0
Trace Impurities - Beryllium (Be)	<= 10.0 ppb	< 1.0
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 10.0
Trace Impurities - Boron (B)	<= 10.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 2.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	0.9
Trace Impurities - Chromium (Cr)	<= 6.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 0.5 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 10.0 ppb	< 1.0
Trace Impurities - Germanium (Ge)	<= 10.0 ppb	< 10.0
Trace Impurities - Gold (Au)	<= 10.0 ppb	< 5.0
Heavy Metals (as Pb)	<= 500 ppb	< 100

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600
Avantor Performance Materials, LLC.
3477 Corporate Parkway. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

Material No.: 9673-33
Batch No.: 0000198961

Test	Specification	Result
Trace Impurities - Iron (Fe)	<= 50.0 ppb	2.0
Trace Impurities - Lead (Pb)	<= 0.5 ppb	< 0.5
Trace Impurities - Lithium (Li)	<= 10.0 ppb	< 1.0
Trace Impurities - Magnesium (Mg)	<= 7.0 ppb	0.2
Trace Impurities - Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities - Mercury (Hg)	<= 0.5 ppb	< 0.1
Trace Impurities - Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities - Nickel (Ni)	<= 2.0 ppb	< 0.3
Trace Impurities - Niobium (Nb)	<= 10.0 ppb	< 1.0
Trace Impurities - Potassium (K)	<= 500.0 ppb	< 2.0
Trace Impurities - Selenium (Se)	<= 50.0 ppb	20.9
Trace Impurities - Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities - Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities - Sodium (Na)	<= 500.0 ppb	6.1
Trace Impurities - Strontium (Sr)	<= 5.0 ppb	< 1.0
Trace Impurities - Tantalum (Ta)	<= 10.0 ppb	< 5.0
Trace Impurities - Thallium (Tl)	<= 20.0 ppb	< 5.0
Trace Impurities - Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities - Titanium (Ti)	<= 10.0 ppb	< 1.0
Trace Impurities - Vanadium (V)	<= 10.0 ppb	< 1.0
Trace Impurities - Zinc (Zn)	<= 5.0 ppb	< 0.3
Trace Impurities - Zirconium (Zr)	<= 10.0 ppb	< 1.0

For Laboratory, Research or Manufacturing Use

Country of Origin: US
Packaging Site: Phillipsburg Mfg Ctr & DC

ISO
Phillipsburg, NJ 9001:2008, 14001:2004, FSSC 22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Deventer, The Netherlands 9001:2008, 14001:2004, 13485:2003
Gliwice, Poland 9001:2008, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2008
Panoli, India 9001:2008

Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.573.2600

Avantor Performance Materials, LLC.
3477 Corporate Parkway. Center Valley, PA 18034. U.S.A. Phone: 610.573.2600 . Fax: 610.573.2610

SHIPPING DOCUMENTS

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

Chemtech Project Number: K5154
COC Number: 2026742

CLIENT INFORMATION

Report to be sent to:
COMPANY: TRC Engineers, Inc.
ADDRESS: 71 Griffin Road
CITY: Windsor STATE: CT ZIP: 06095
ATTENTION: Jim Perento
PHONE: 8602986233 FAX:

PROJECT INFORMATION

PROJECT NAME: Bush Term. Park
PROJECT #: 254798 LOCATION: Blyn
PROJECT MANAGER: Jim Perento
E-MAIL: JPerento@TRCcompanies.com
PHONE: 8602986233 FAX:

BILLING INFORMATION

BILL TO: Same PO#: 363822
ADDRESS:
CITY: STATE: ZIP:
ATTENTION:
PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) ______ DAYS*
HARDCOPY (DATA PACKAGE): STd DAYS*
EDD: ______ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☒ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced
- ☐ US EPA CLP
- ☐ NYS ASP A
- ☒ NYS ASP B
- ☐ Other
- ☒ EDD FORMAT

ANALYSIS

1. TCL VOCs
2. TCL SVOCs
3. TAL Metals
4. Total Chloride
5.
6.
7.
8.
9.

PRESERVATIVES

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE: COMP	SAMPLE TYPE: GRAB	COLLECTION DATE	COLLECTION TIME	# of Bottles	1 (A)	2 (E)	3 (B)	4 (E)	5	6	7	8	9	COMMENTS
1.	TB-10012019	AQ	–	–	1001	0830	2	X									
2.	FB-10012019	AQ	–	–		0830	5	X	X	X	X						
3.	MW-106S	GW	–	G		1050	5	X	X	X	X						
4.	MW-106I		–	G		1145	5	X	X	X	X						
5.	MW-106D		–	G		1250	5	X	X	X	X						
6.	MW-107	↓	–	G	↓	1350	5	X	X	X	X						
7.																	
8.																	
9.																	
10.																	

Specify Preservatives: A-HCl, B-HNO3, C-H2SO4, D-NaOH, E-ICE, F-OTHER

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY	DATE/TIME	RECEIVED BY
1. (RELINQUISHED BY SAMPLER) [signature]	10/01/19 14:45	1. Paul Czerlak
2.		2.
3. Paul Czerlak	10-1-19 3:20	3. (RECEIVED FOR LAB BY) SB

Conditions of bottles or coolers at receipt: ☒ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.4 IR Gun #1

Comments: (1) NYSDEC ASP Cat. B
(2) NYS-BCP-Part 375
(3) Please Batch All Samples for 10/1 & 10/3 in one Report.

Page 01 of 01

CLIENT: ☐ Hand Delivered ☐ Other: ______
CHEMTECH: ☒ Picked Up

Shipment Complete: ☒ YES ☐ NO

10/2018 WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

Chemtech Project Number: K5154
COC Number: 2026737

CLIENT INFORMATION

Report to be sent to:
COMPANY: TRC Engineers Inc
ADDRESS: 41 Griffen Road
CITY: Windsor STATE: CT ZIP: 06095
ATTENTION: J Comperento
PHONE: 860298 6233 FAX:

PROJECT INFORMATION

PROJECT NAME: Bush Terminal Parcel
PROJECT #: 254798 LOCATION: Brklyn
PROJECT MANAGER: J Comperento
E-MAIL: JComperento@TRCcompanies.com
PHONE: 8602986233 FAX:

BILLING INFORMATION

BILL TO: Same PO# 363822
ADDRESS:
CITY: STATE: ZIP:
ATTENTION:
PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): STD DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☑ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☑ EDD FORMAT _____
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☑ NYS ASP B
- ☐ Other _____

ANALYSIS

1 TCL VOCs
2 TCL SVOCs
3 TAL Metals
4 Tot. Cyanide
5 6 7 8 9

PRESERVATIVES

A E B E

COMMENTS

<-- Specify Preservatives
A-HCl D-NaOH
B-HNO3 E-ICE
C-H2SO4 F-OTHER

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	1	2	3	4	5	6	7	8	9
1.	TB-10022019	AQ		G	10/02	0800	2	X								
2.	MW-103S	GW				0915	5	X	X	X	X					
3.	MW-103I-MS/MSD					1025	15	X	X	X	X					
4.	MW-103D					1140	5	X	X	X	X					
5.	MW-105S					1027		X	X	X	X					
6.	MW-105I					1058		X	X	X	X					
7.	MW-105D					1140		X	X	X	X					
8.	MW-104I					1425		X	X	X	X					
9.	MW-104D					1430		X	X	X	X					
10.																

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER 1.	DATE/TIME 10/02/19	RECEIVED BY 1. Paul Gulak 10-2-19 2:58	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.1
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.	Comments: ONYSDEC-ASP Cat.B. FR Event #1 ② NYS BCP last 375 ③ Please Batch All Samples for 10/01 to 10/03
RELINQUISHED BY 3. Paul Gulak	DATE/TIME 10-2-19 4:24	RECEIVED FOR LAB BY 3. SC	Page 01 of 01

CLIENT: ☐ Hand Delivered ☐ Other: _____
CHEMTECH: ☐ Picked Up

Shipment Complete ☐ YES ☐ NO

10/2018

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT YELLOW - CHEMTECH COPY PINK - SAMPLER COPY

in One Report

CHEMTECH
CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

Chemtech Project Number: K5154
COC Number: 2026738

CLIENT INFORMATION

Report to be sent to:
COMPANY: TRC Engineers Inc
ADDRESS: 21 Griffin Rd
CITY: Windsor STATE: CT ZIP: 06095
ATTENTION: Jim Perento
PHONE: 8602986233 FAX:

PROJECT INFORMATION

PROJECT NAME: Bush Term. Park
PROJECT #: 363822 LOCATION: B'lyn
PROJECT MANAGER: Jim Perento
E-MAIL: JPerento@TRCcompanies.com
PHONE: 8602986233 FAX:

BILLING INFORMATION

BILL TO: Same PO#:
ADDRESS:
CITY: STATE: ZIP:
ATTENTION:
PHONE:

DATA TURNAROUND INFORMATION

FAX (RUSH) ______ DAYS*
HARDCOPY (DATA PACKAGE): STD DAYS*
EDD: ______ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ Level 1 (Results Only)
- ☑ Level 2 (Results + QC)
- ☐ Level 3 (Results + QC + Raw Data)
- ☐ Level 4 (QC + Full Raw Data)
- ☐ NJ Reduced ☐ US EPA CLP
- ☐ NYS ASP A ☑ NYS ASP B
- ☐ Other ______
- ☑ EDD FORMAT ______

ANALYSIS

1. TCL VOC
2. TCL SVOC
3. TAL metals
4. Tot. chloride
5.
6.
7.
8.
9.

PRESERVATIVES: 1 A, 2 E, 3 B, 4 E

COMMENTS: <—Specify Preservatives: A-HCl, B-HNO3, C-H2SO4, D-NaOH, E-ICE, F-OTHER

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	COMP	GRAB	DATE	TIME	# of Bottles	1	2	3	4	5	6	7	8	9	COMMENTS
1.	TB-10032019	AQ	–	G	10/03	0700	2	X									
2.	MW-102S	GW		↓	↓	0845	5	X	X	X	X						
3.	MW-102I	↓		↓	↓	0905	↓	X	X	X	X						
4.	MW-102D	↓		↓	↓	1025	↓	X	X	X	X						
5.	MW-101S	↓		↓	↓	1100	↓	X	X	X	X						
6.	MW-101I	↓		↓	↓	1115	↓	X	X	X	X						
7.	MW-101D	↓		↓	↓	1225	↓	X	X	X	X						
8.																	
9.																	
10.																	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE PROSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY
1. [signature]	10/03	1. Paul Czulak 2:30
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.
RELINQUISHED BY 3. Paul Czulak	DATE/TIME 10-3-19 4:56	RECEIVED FOR LAB BY 3. SC

Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 2.4 FR6 unit #1

Comments: ① NYSDEC - ASP Cat B
② NYS BCP - part 375
③ Please Batch all samples from 10/01 to 10/03 in one Report

Page 01 of 01

CLIENT: ☐ Hand Delivered ☐ Other: ______
CHEMTECH: ☑ Picked Up

Shipment Complete ☐ YES ☐ NO

10/2018

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT **YELLOW** - CHEMTECH COPY **PINK** - SAMPLER COPY

Today LAST

From: Steven Kim <steven@chemtech.net>
Sent: Tuesday, October 01, 2019 6:58 PM
To: 'Mohammad'
Cc: 'Steven Chaimowitz'; 'Samantha Beazley'
Subject: RE: K5154

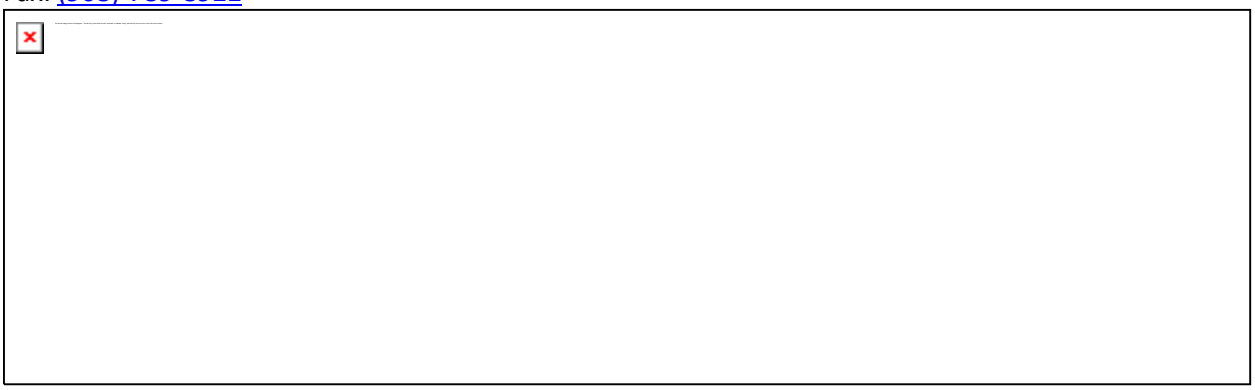
Okay, project ID has been changed.

From: Mohammad [mailto:mohammad@chemtech.net]
Sent: Tuesday, October 01, 2019 6:17 PM
To: steven@chemtech.net
Cc: Steven Chaimowitz; Samantha Beazley
Subject: Re: K5154

You can change the project ID

Thanks,

Mohammad Ahmed
Lab Manager
Direct line: (908)-728-3151
Fax: (908)-789-8922



On Oct 1, 2019, at 5:04 PM, Steven Kim <steven@chemtech.net> wrote:

> Is it okay to change the project ID for K5154 to remove the 2019 at the end and follow the same project ID as we have done in the past? Looks like this project was signed off at 4:00 PM today.

Regards,

Steven Kim
Account Executive
Direct: (908) 728-3157
Fax: (908) 789-8922
Mobile: (732) 688-2642

CHEMTECH
284 Sheffield Street,
Mountainside, New Jersey 07092
Phone: (908) 789 8900
Fax: (908) 789 8922

From: Steven Kim <steven@chemtech.net>
Sent: Tuesday, October 01, 2019 5:06 PM
To: 'Chalmers, Aine'; 'Peronto, Jim'
Cc: Steven Chaimowitz; Samantha Beazley
Subject: RE: Login Summary Details For Project NYCDPR Bush Terminal LandFill Piers 1-4 2019-K5154.

Hi Aine/Jim,

Yes, the total anions analysis listed on the login summary report is for Chloride only.

Regards,

Steven Kim
Account Executive
Direct: (908) 728-3157
Fax: (908) 789-8922
Mobile: (732) 688-2642
CHEMTECH
284 Sheffield Street,
Mountainside, New Jersey 07092
Phone: (908) 789 8900
Fax: (908) 789 8922

From: Chalmers, Aine [mailto:AChalmers@trccompanies.com]
Sent: Tuesday, October 01, 2019 4:41 PM
To: Peronto, Jim; CHEMTECH-Login@chemtech.net
Cc: DanielKelly@chemtech.net
Subject: Re: Login Summary Details For Project NYCDPR Bush Terminal LandFill Piers 1-4 2019-K5154.

Thank you for the log-in summary. I just want to confirm that total chloride is a part of the total anions analysis.

Aine Chalmers

Environmental Engineer
C: 646-939-1771
O: 212-221-7822

Sent from iPhone. Please ignore any typos.

From: Peronto, Jim <JPeronto@trccompanies.com>
Sent: Tuesday, October 1, 2019 4:08:08 PM
To: CHEMTECH-Login@chemtech.net <CHEMTECH-Login@chemtech.net>
Cc: DanielKelly@chemtech.net <DanielKelly@chemtech.net>; Chalmers, Aine <AChalmers@trccompanies.com>
Subject: RE: Login Summary Details For Project NYCDPR Bush Terminal LandFill Piers 1-4 2019-K5154.

Please copy Aine Chalmers of TRC at achalmers@trccompanies.com on all Login Summary Details for this project.

Jim Peronto
TRC
860-298-6233

From: CHEMTECH-Login@chemtech.net <CHEMTECH-Login@chemtech.net>
Sent: Tuesday, October 1, 2019 4:00 PM
To: Peronto, Jim <JPeronto@trccompanies.com>
Cc: DanielKelly@chemtech.net
Subject: Login Summary Details For Project NYCDPR Bush Terminal LandFill Piers 1-4 2019-K5154.

To Jim Peronto;

Please see the attached Login Summary for the following project, or download the file using your login credentials from the link below.

Order ID	: K5154
Project ID	: NYCDPR Bush Terminal LandFill Piers 1-4 2019
Download File	: https://client.chemtech.net
Order Date	: 10/1/2019 2:37:56 PM
CHEMTECH's Project Manager	: Daniel Kelly , DanielKelly@chemtech.net , Ext :
CHEMTECH's Sales Executive	: Steven Kim , steven@chemtech.net , 908-728-3157 Ext :

Thank you for the opportunity to provide you with our services. For any questions please feel free to contact your project manager.

Click Here for our short online customer Survey http://chemtech.net/ClientSurvey.aspx .

Thank you,

CHEMTECH

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	EP-W-14-030
Connecticut	PH-0649
DOD ELAP (L-A-B)	L2219
Florida	E87935
Maine	2012025
Maryland	296
New Hampshire	255413
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	P330-13-00380
Texas	T104704488-13-5

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID :	K5154 TRCE03	**Order Date :**	10/01/2019	**Project Mgr :**	
Client Name :	TRC Companies, Inc.	**Project Name :**	NYCDPR Bush Terminal L	**Report Type :**	NYS ASP B
Client Contact :	Jim Peronto	**Receive DateTime :**	10/1/2019 3:20:00 PM	**EDD Type :**	NYSDEC EDD V-3
Invoice Name :	TRC Companies, Inc.	**Purchase Order :**		**Hard Copy Date :**	
Invoice Contact :	Jim Peronto	**Login Tech :**	ABHISHEK	**Date Signoff :**	

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD		FAX DATE	DUE DATES
K5154-01	TB-10012019	Water	10/01/2019	08:30						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-02	FB-10012019	Water	10/01/2019	08:30						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-03	MW-106S	Water	10/01/2019	10:50						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-04	MW-106I	Water	10/01/2019	11:45						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-05	MW-106D	Water	10/01/2019	12:50						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-06	MW-107	Water	10/01/2019	13:50						
					VOCMS Group1		8260-Low	10 Bus. Days		

Relinquished By : [signature]

Date / Time : 10/1/19 1600

Received By : [signature]

Date / Time : 10/1/19 4W

Storage Area : VOA Refridgerator Room

Page 1 of 1

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID :	K5154 TRCE03	**Order Date :**	10/02/2019	**Project Mgr :**	Samantha
Client Name :	TRC Companies, Inc.	**Project Name :**	NYCDPR Bush Terminal L:	**Report Type :**	NYS ASP B
Client Contact :	Jim Peronto	**Receive DateTime :**	10/2/2019 4:24:00 PM	**EDD Type :**	NYSDEC EDD V-4
Invoice Name :	TRC Companies, Inc.	**Purchase Order :**		**Hard Copy Date :**	
Invoice Contact :	Jim Peronto	**Login Tech :**	Tyler	**Date Signoff :**	10/1/2019 3:59:28 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
~~K5154-01~~	~~TB-10012019~~	~~Water~~	~~10/01/2019~~	~~08:30~~					
					VOCMS Group1		8260-Low		10 Bus. Days
~~K5154-02~~	~~FB-10012019~~	~~Water~~	~~10/01/2019~~	~~08:30~~					
					VOCMS Group1		8260-Low		10 Bus. Days
~~K5154-03~~	~~MW-106S~~	~~Water~~	~~10/01/2019~~	~~10:50~~					
					VOCMS Group1		8260-Low		10 Bus. Days
~~K5154-04~~	~~MW-106I~~	~~Water~~	~~10/01/2019~~	~~11:45~~					
					VOCMS Group1		8260-Low		10 Bus. Days
~~K5154-05~~	~~MW-106D~~	~~Water~~	~~10/01/2019~~	~~12:50~~					
					VOCMS Group1		8260-Low		10 Bus. Days
~~K5154-06~~	~~MW-107~~	~~Water~~	~~10/01/2019~~	~~13:50~~					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-09	TB-10022019	Water	10/02/2019	08:00					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-10	MW-103-S	Water	10/02/2019	09:15					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-11	MW-103-I	Water	10/02/2019	10:25					

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID :	K5154 TRCE03	**Order Date :**	10/02/2019	**Project Mgr :**	Samantha
Client Name :	TRC Companies, Inc.	**Project Name :**	NYCDPR Bush Terminal L:	**Report Type :**	NYS ASP B
Client Contact :	Jim Peronto	**Receive DateTime :**	10/2/2019 4:24:00 PM	**EDD Type :**	NYSDEC EDD V-4
Invoice Name :	TRC Companies, Inc.	**Purchase Order :**		**Hard Copy Date :**	
Invoice Contact :	Jim Peronto	**Login Tech :**	Tyler	**Date Signoff :**	10/1/2019 3:59:28 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD		FAX DATE	DUE DATES
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-12	K5186-03MS	Water	10/02/2019	10:25						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-13	K5186-03MSD	Water	10/02/2019	10:25						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-14	MW-103-D	Water	10/02/2019	11:40						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-15	MW-105-S	Water	10/02/2019	10:27						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-16	MW-105-I	Water	10/02/2019	10:58						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-17	MW-105-D	Water	10/02/2019	11:40						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-18	MW-109-I	Water	10/02/2019	14:25						
					VOCMS Group1		8260-Low	10 Bus. Days		
K5154-19	MW-109-D	Water	10/02/2019	14:30						
					VOCMS Group1		8260-Low	10 Bus. Days		

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID :	K5154 TRCE03	**Order Date :**	10/02/2019	**Project Mgr :**	Samantha
Client Name :	TRC Companies, Inc.	**Project Name :**	NYCDPR Bush Terminal L:	**Report Type :**	NYS ASP B
Client Contact :	Jim Peronto	**Receive DateTime :**	10/2/2019 4:24:00 PM	**EDD Type :**	NYSDEC EDD V-4
Invoice Name :	TRC Companies, Inc.	**Purchase Order :**		**Hard Copy Date :**	
Invoice Contact :	Jim Peronto	**Login Tech :**	Tyler	**Date Signoff :**	10/1/2019 3:59:28 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES

Relinguished By : Paul Czerlak
Date / Time : 10-2-19 4:55 pm

Received By : Sam
Date / Time : 10/02/19 6:05 pm SM
Storage Area : VOA Refridgerator Room

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID : K5154 TRCE03
Client Name : TRC Companies, Inc.
Client Contact : Jim Peronto
Invoice Name : TRC Companies, Inc.
Invoice Contact : Jim Peronto

Order Date : 10/1/2019 2:37:56 PM
Project Name : NYCDPR Bush Terminal L
Receive DateTime : 10/3/2019 4:56:00 PM
Purchase Order :
Login Tech : Tyler

Project Mgr : Samantha
Report Type : NYS ASP B
EDD Type : NYSDEC EDD V-4
Hard Copy Date :
Date Signoff : 10/1/2019 3:59:28 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
K5154-20	TB-10032019	Water	10/03/2019	07:00					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-21	MW-102S	Water	10/03/2019	08:45					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-22	MW-102I	Water	10/03/2019	09:05					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-23	MW-102D	Water	10/03/2019	10:25					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-24	MW-101S	Water	10/03/2019	11:00					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-25	MW-101I	Water	10/03/2019	11:15					
					VOCMS Group1		8260-Low		10 Bus. Days
K5154-26	MW-101D	Water	10/03/2019	12:25					
					VOCMS Group1		8260-Low		10 Bus. Days

CHEMTECH

LOGIN REPORT/SAMPLE TRANSFER

Order ID :	K5154 TRCE03	**Order Date :**	10/1/2019 2:37:56 PM	**Project Mgr :**	Samantha
Client Name :	TRC Companies, Inc.	**Project Name :**	NYCDPR Bush Terminal L	**Report Type :**	NYS ASP B
Client Contact :	Jim Peronto	**Receive DateTime :**	10/3/2019 4:56:00 PM	**EDD Type :**	NYSDEC EDD V-4
Invoice Name :	TRC Companies, Inc.	**Purchase Order :**		**Hard Copy Date :**	
Invoice Contact :	Jim Peronto	**Login Tech :**	Tyler	**Date Signoff :**	10/1/2019 3:59:28 PM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES

Relinguished By : SC

Date / Time : 10-3-19 5:10

Received By :

Date / Time : 10.3.19 5:10

Storage Area : VOA Refridgerator Room