

DATA PACKAGE GENERAL CHEMISTRY

PROJECT NAME : FORMER SCHLUMBERGER STC PTC SITE D3868221

JACOBS ENGINEERING GROUP, INC.

412 Mt. Kemble Ave

Downtown Building

Morristown, NJ - 07960

Phone No: 9732670555

ORDER ID : Q1731

ATTENTION : John Ynfante



Laboratory Certification ID # 20012



1) GENERAL CHEMISTRY DATA	2
2) Signature Page	3
3) Case Narrative	4
4) Qualifier Page	5
5) Conformance/Non Conformance	6
6) QA Checklist	7
7) Chronicle	8
8) Sample Data	9
8.1) EB01-040325	10
9) QC Data Summary For Genchem	11
9.1) Initial and Continuing Calibration Verification	12
9.2) Initial and Continuing Calibration Blank Summary	13
9.3) Preparation Blank Summary	14
9.4) Matrix Spike Summary	15
9.5) Duplicate Sample Summary	17
9.6) Laboratory Control Sample Summary	19
10) GENCHEM RAW DATA	22
10.1) GENCHEM RAW DATA - ANALYTICAL	23
10.1.1) LB135303	23
10.1.2) LB135310	25
10.1.3) LB135314	27
11) Analytical Runlogs	55
12) Standard Prep Logs	59
13) Shipping Document	83
13.1) Chain Of Custody	84
13.2) Lab Certificate	85
13.3) Internal COC	86

Cover Page

Order ID : Q1731

Project ID : Former Schlumberger STC PTC Site D3868221

Client : JACOBS Engineering Group, Inc.

Lab Sample Number

Q1731-01
Q1731-02
Q1731-03
Q1731-04
Q1731-05
Q1731-06
Q1731-07

Client Sample Number

RMW-01B-82-040325
RMW-04B-91-040325
RMW-01B-82-040325-FD
RMW-03B-90-040325
EB01-040325
EB01-040325
TB01-040325

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 : _____

Date: 4/11/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012



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

CASE NARRATIVE

JACOBS Engineering Group, Inc.

Project Name: Former Schlumberger STC PTC Site D3868221

Project # N/A

Chemtech Project # Q1731

Test Name: Alkalinity,TDS,Anions Group1

A. Number of Samples and Date of Receipt:

7 Water samples were received on 04/03/2025.

B. Parameters:

According to the Chain of Custody document, the following analyses were requested: Alkalinity, Anions Group1, Dissolved ICP-Group2, Dissolved Metals Group3, Metals Group4, SVOC-SIMGroup1, TDS and VOCMS Group3. This data package contains results for Alkalinity,TDS,Anions Group1.

C. Analytical Techniques:

The analysis of Anions Group1 was based on method 9056A, The analysis of Alkalinity was based on method SM2320 B and The analysis of TDS was based on method SM2540 C.

D. QA/ QC Samples:

The Holding Times were met for all analysis.

The Blank Spike met requirements for all samples.

The Duplicate analysis met criteria for all samples.

The Matrix Spike (MOD-FOR-LRSAMS) analysis met criteria for all samples except for Chloride due to matrix interference .

The Matrix Spike Duplicate (MOD-FOR-LRSAMSD) analysis met criteria for all samples except for Chloride due to matrix interference.

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_____

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

GENERAL CHEMISTRY CONFORMANCE/NON-CONFORMANCE SUMMARY

CHEMTECH PROJECT NUMBER: Q1731

MATRIX: Water

METHOD: 9056A,SM2320 B,SM2540 C

	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 (MOD-FOR-LRSAMS) analysis met criteria for all samples except for Chloride due to matrix interference . The Matrix Spike Duplicate (MOD-FOR-LRSAMSD) analysis met criteria for all samples except for Chloride due to matrix interference.		✓	
3. Sample Duplicate Analysis Met QC Criteria If not met, list those compounds and their recoveries which fall outside the acceptable range.			✓
4. Digestion Holding Time Met If not met, list number of days exceeded for each sample:			✓

ADDITIONAL COMMENTS:

QA REVIEW

Date

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1731

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 Custody

✓

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

✓

QA Review Signature: SOHIL JODHANI

Date: 04/11/2025

LAB CHRONICLE

OrderID:	Q1731	OrderDate:	4/4/2025 10:52:00 AM
Client:	JACOBS Engineering Group, Inc.	Project:	Former Schlumberger STC PTC Site D3868221
Contact:	John Ynfante	Location:	L31,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1731-05	EB01-040325	Water			04/03/25 15:45			04/03/25
			Alkalinity	SM2320 B			04/04/25 13:40	
			Anions Group1	9056A			04/04/25 14:17	
			TDS	SM2540 C			04/04/25 13:00	



SAMPLE DATA

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Report of Analysis

Client:	JACOBS Engineering Group, Inc.	Date Collected:	04/03/25 15:45
Project:	Former Schlumberger STC PTC Site D3868221	Date Received:	04/03/25
Client Sample ID:	EB01-040325	SDG No.:	Q1731
Lab Sample ID:	Q1731-05	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Alkalinity	1.00	U	1	1.00	2.00	mg/L		04/04/25 13:40	SM 2320 B-11
Chloride	0.19	U	1	0.19	0.60	mg/L		04/04/25 14:17	9056A
Nitrate	0.095	U	1	0.095	0.50	mg/L		04/04/25 14:17	9056A
Sulfate	0.46	U	1	0.46	3.00	mg/L		04/04/25 14:17	9056A
TDS	1.00	J	1	1.00	10.0	mg/L		04/04/25 13:00	SM 2540 C-15

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Initial and Continuing Calibration Verification

Client: JACOBS Engineering Group, Inc.	SDG No.: Q1731
Project: Former Schlumberger STC PTC Site D3868221	RunNo.: LB135314

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	10.4	10	104	90-110	03/21/2025
Chloride	mg/L	3	3	100	90-110	03/21/2025
Fluoride	mg/L	2	2	100	90-110	03/21/2025
Nitrite	mg/L	3.1	3	103	90-110	03/21/2025
Nitrate	mg/L	2.6	2.5	104	90-110	03/21/2025
Sulfate	mg/L	15.3	15	102	90-110	03/21/2025
Orthophosphate as P	mg/L	5.2	5	104	90-110	03/21/2025
Sample ID: CCV1						
Bromide	mg/L	10.4	10	104	90-110	04/04/2025
Chloride	mg/L	3.1	3	103	90-110	04/04/2025
Fluoride	mg/L	1.9	2	95	90-110	04/04/2025
Nitrite	mg/L	3.1	3	103	90-110	04/04/2025
Nitrate	mg/L	2.6	2.5	104	90-110	04/04/2025
Sulfate	mg/L	15.3	15	102	90-110	04/04/2025
Orthophosphate as P	mg/L	5	5	100	90-110	04/04/2025
Sample ID: CCV2						
Bromide	mg/L	10.4	10	104	90-110	04/04/2025
Chloride	mg/L	3.1	3	103	90-110	04/04/2025
Fluoride	mg/L	2	2	100	90-110	04/04/2025
Nitrite	mg/L	3.1	3	103	90-110	04/04/2025
Nitrate	mg/L	2.6	2.5	104	90-110	04/04/2025
Sulfate	mg/L	15.4	15	103	90-110	04/04/2025
Orthophosphate as P	mg/L	5.3	5	106	90-110	04/04/2025

Initial and Continuing Calibration Blank Summary

Client: JACOBS Engineering Group, Inc.

SDG No.: Q1731

Project: Former Schlumberger STC PTC Site D3868221

RunNo.: LB135314

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	03/21/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	03/21/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	03/21/2025
Nitrite	mg/L	0.08	0.3000	J	0.074	0.6	03/21/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	03/21/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	03/21/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	03/21/2025
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	04/04/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	04/04/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	04/04/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	04/04/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	04/04/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	04/04/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	04/04/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	04/04/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	04/04/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	04/04/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	04/04/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	04/04/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	04/04/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	04/04/2025

Preparation Blank Summary

Client: JACOBS Engineering Group, Inc.

SDG No.: Q1731

Project: Former Schlumberger STC PTC Site D3868221

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB135303BL							
TDS	mg/L	< 5.0000	5.0000	U	1.0	10	04/04/2025
Sample ID: LB135310BL							
Alkalinity	mg/L	< 1.0000	1.0000	U	1	2	04/04/2025
Sample ID: LB135314BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	04/04/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	04/04/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	04/04/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	04/04/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	04/04/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	04/04/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	04/04/2025

Matrix Spike Summary

Client:	JACOBS Engineering Group, Inc.	SDG No.:	Q1731
Project:	Former Schlumberger STC PTC Site D3868221	Sample ID:	Q1716-01
Client ID:	MOD-FOR-LRSAMS	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	10.4		0.64	J	10	1	98		04/04/2025
Chloride	mg/L	80-120	410	OR	431	OR	3	1	-700	*	04/04/2025
Fluoride	mg/L	80-120	2.40		0.47		2	1	97		04/04/2025
Nitrite	mg/L	80-120	2.90		0.074	U	3	1	97		04/04/2025
Nitrate	mg/L	80-120	2.70		0.30	J	2.5	1	96		04/04/2025
Sulfate	mg/L	80-120	68.2	OR	54.8	OR	15	1	89		04/04/2025
Orthophosphate as P	mg/L	80-120	4.90		0.34	U	5	1	98		04/04/2025

Matrix Spike Summary

Client:	JACOBS Engineering Group, Inc.	SDG No.:	Q1731
Project:	Former Schlumberger STC PTC Site D3868221	Sample ID:	Q1716-01
Client ID:	MOD-FOR-LRSAMSD	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		0.64	J	10	1	102		04/04/2025
Chloride	mg/L	80-120	409	OR	431	OR	3	1	-733	*	04/04/2025
Fluoride	mg/L	80-120	2.40		0.47		2	1	97		04/04/2025
Nitrite	mg/L	80-120	3.10		0.074	U	3	1	103		04/04/2025
Nitrate	mg/L	80-120	2.80		0.30	J	2.5	1	100		04/04/2025
Sulfate	mg/L	80-120	68.8	OR	54.8	OR	15	1	93		04/04/2025
Orthophosphate as P	mg/L	80-120	5.10		0.34	U	5	1	102		04/04/2025

Duplicate Sample Summary

Client: JACOBS Engineering Group, Inc.	SDG No.: Q1731
Project: Former Schlumberger STC PTC Site D3868221	Sample ID: Q1716-01
Client ID: MOD-FOR-LRSAMSD	Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Fluoride	mg/L	+/-15	2.40		2.40		1	0		04/04/2025
Chloride	mg/L	+/-15	410	OR	409	OR	1	0		04/04/2025
Sulfate	mg/L	+/-15	68.2	OR	68.8	OR	1	1		04/04/2025
Bromide	mg/L	+/-15	10.4		10.8		1	4		04/04/2025
Nitrate	mg/L	+/-15	2.70		2.80		1	4		04/04/2025
Orthophosphate as P	mg/L	+/-15	4.90		5.10		1	4		04/04/2025
Nitrite	mg/L	+/-15	2.90		3.10		1	7		04/04/2025

Duplicate Sample Summary

Client:	JACOBS Engineering Group, Inc.	SDG No.:	Q1731
Project:	Former Schlumberger STC PTC Site D3868221	Sample ID:	Q1731-05
Client ID:	EB01-040325DUP	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
TDS	mg/L	+/-5	1.00	J	1.00	J	1	0		04/04/2025

Laboratory Control Sample Summary

Client:	JACOBS Engineering Group, Inc.	SDG No.:	Q1731
Project:	Former Schlumberger STC PTC Site D3868221	Run No.:	LB135303

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135303BS							
TDS	mg/L	100	94.0		94	1	90-110	04/04/2025

Laboratory Control Sample Summary

Client:	JACOBS Engineering Group, Inc.	SDG No.:	Q1731
Project:	Former Schlumberger STC PTC Site D3868221	Run No.:	LB135310

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135310BS							
Alkalinity	mg/L	50	46.8		94	1	80-120	04/04/2025

Laboratory Control Sample Summary

Client:	JACOBS Engineering Group, Inc.	SDG No.:	Q1731
Project:	Former Schlumberger STC PTC Site D3868221	Run No.:	LB135314

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135314BSW							
Bromide	mg/L	10	10.4		104	1	90-110	04/04/2025
Chloride	mg/L	3	3.10		103	1	90-110	04/04/2025
Fluoride	mg/L	2	2.10		105	1	90-110	04/04/2025
Nitrite	mg/L	3	3.10		103	1	90-110	04/04/2025
Nitrate	mg/L	2.5	2.60		104	1	90-110	04/04/2025
Sulfate	mg/L	15	15.3		102	1	90-110	04/04/2025
Orthophosphate as P	mg/L	5	5.10		102	1	90-110	04/04/2025



RAW DATA

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

TOTAL Dissolved Solids - SM2540C

Run Number: LB135303

Date: 04/05/2025

SUPERVISOR: Iwona

ANALYST: jignesh

BalanceID: WC SC-5

Filter ID: 17416528

EMPTY DISH				EMPTY DISH				OvenID:	WC OVEN-1	Thermo ID:	WET OVNE#1
TEMP IN:	104 °C	04/04/2025	11:00	TEMP OUT:	103 °C	04/04/2025	12:30				
TEMP1 IN:	104 °C	04/04/2025	13:00	TEMP1 OUT:	104 °C	04/04/2025	14:00	OvenID1:	WC OVEN-1	Thermo ID1:	WET OVEN#1
TEMP2 IN:	104 °C	04/04/2025	15:30	TEMP2 OUT:	103 °C	04/05/2025	07:30	OvenID2:	WC OVEN-2	Thermo ID2:	WET OVEN#2
TEMP3 IN:	180 °C	04/05/2025	07:33	TEMP3 OUT:	182 °C	04/05/2025	10:00	OvenID3:	WC OVEN#2	Thermo ID3:	WET OVEN#2

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @180(±2) °C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @180(±2) °C (g)	Final Empty Dish+Sample weight after 1.5hr drying @180(±2) °C (g)	Weight (g)	Result mg/L
1	LB135303BL	LB135303BL	896.3173	896.3173	100	896.3173	896.3173	896.3173	0.0000	0
2	LB135303BS	LB135303BS	147.8631	147.8631	100	147.8725	147.8725	147.8725	0.0094	94
3	Q1731-05	EB01-040325	110.2011	110.2011	100	110.2012	110.2012	110.2012	0.0001	1
4	Q1731-05DUP	EB01-040325DUP	152.7476	152.7476	100	152.7477	152.7477	152.7477	0.0001	1

A = Sample Volume (ml)

B = Empty Dish Weight (g)

C = 2nd Empty Dish + Sample weight after 1.5 hr drying @180(±2) °C(g)

D = Weight (g)

$$\text{Weight (g)} = C - B$$

$$\text{Result mg/L} = \frac{D}{A} * 1000 * 1000$$

WORKLIST(Hardcopy Internal Chain)

UB135303

WorkList Name : tds q1731

WorkList ID : 188745

Department : Wet-Chemistry

Date : 04-04-2025 11:54:21

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1731-05	EB01-040325	Water	TDS	Cool 4 deg C	JACO05	L31	04/03/2025	SM2540 C

Date/Time 04/04/15 12:30

Raw Sample Received by: JH WDC

Raw Sample Relinquished by: JH WDC

Date/Time 04/04/15

Raw Sample Received by: JH WDC

Raw Sample Relinquished by: JH WDC



Analytical Summary Report

Analysis Method: SM2320 B
Parameter: Alkalinity
Run Number: LB135310
Constant: 50,000

Reviewed By: Niha
Supervisor Review By: Iwona
Normality: 0.02
pH Meter ID: WC pH meter-1

Reagent/Standard	Lot/Log #
alkalinity LCSW 50 ppm	WP112573
SULFURIC ACID, 0.02N, 4L	W3150

Seq	LabID	ClientID	TV (mg/L)	DL	Sample Vol (mL)	Initial pH	pH(4.3- 4.7)	Final pH	0.02N H2SO4				Alkalinity	Anal Date	Anal Time
									A	B	C	D			
									Initial(ml)	ml at pH(4.3-4.7)	Final(ml)	Diff(ml)			
1	LB135310BL	LB135310BL		1	100	5.08	4.47	4.17	0.0	0.04	0.08	0.00	0.00	04/04/2025	13:30
2	LB135310BS	LB135310BS	50	1	100	9.49	4.61	4.31	0.0	5.26	5.84	4.68	46.80	04/04/2025	13:35
3	Q1731-05	EB01-040325		1	100	4.36	4.36	4.06	0.0	0	0.00	0.00	0.00	04/04/2025	13:40

D = 2 (B-A) - (C-A)

Alkalinity = (D * Normality * Constant) / Sample Volume (ml)

WORKLIST(Hardcopy Internal Chain)

LB135310

WorkList Name : ALK-040425 WorkList ID : 188750 Department : Wet-Chemistry Date : 04-04-2025 13:06:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1731-05	EB01-040325	Water	Alkalinity	Cool 4 deg C	JACO05	L31	04/03/2025	SM2320 B

Date/Time 04/04/25 13:10
Raw Sample Received by: 12(-C)
Raw Sample Relinquished by: 20(00)

Date/Time 04/04/25 14:00
Raw Sample Received by: 20(00)
Raw Sample Relinquished by: 12(-C)

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

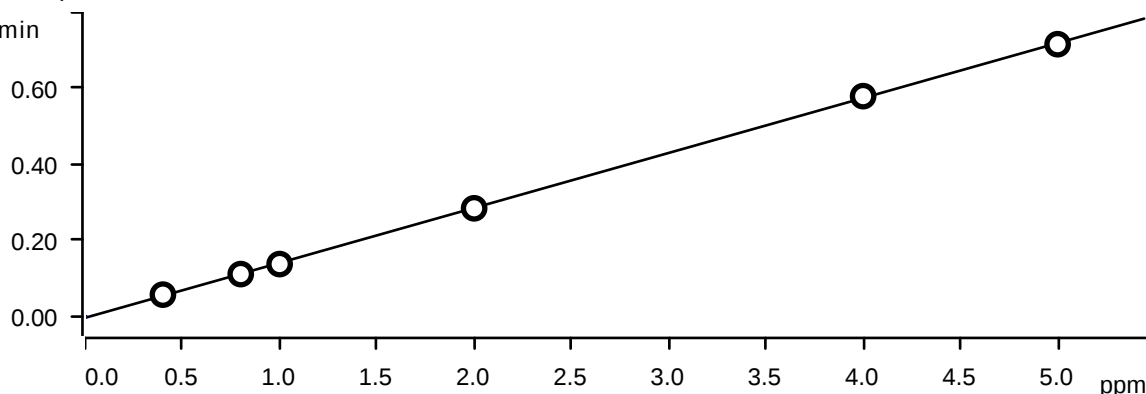
Ident	Instrument I			IC-1	Analyst:	NF	Method: :00.0 / 9056A			date time	il wt/Fin	Analyst
	Con F-	Con CL-	Con NO2				Con BR-	Con NO3	Con HPO4			
STD1	0	0	0	0	0	0	0	0	IC1-032125	3/21/2025 10:45	10	NF/IZ
STD2	0.421	0.619	0.631	2.075	0.523	1.052	3.247	0	IC1-032125	3/21/2025 11:07	10	NF/IZ
STD3	0.795	1.199	1.203	3.994	1.001	1.993	5.998	0	IC1-032125	3/21/2025 11:28	10	NF/IZ
STD4	0.977	1.475	1.468	4.904	1.226	2.407	7.216	0	IC1-032125	3/21/2025 11:50	10	NF/IZ
STD5	1.993	3.009	2.995	10.03	2.493	4.968	14.842	0	IC1-032125	3/21/2025 12:11	10	NF/IZ
STD6	4.034	5.988	5.986	19.975	5.011	10.256	30.502	0	IC1-032125	3/21/2025 12:32	10	NF/IZ
STD7	4.979	7.51	7.517	25.022	6.247	12.323	36.695	0	IC1-032125	3/21/2025 12:54	10	NF/IZ
ICV	2.031	3.038	3.08	10.364	2.568	5.199	15.269	0	IC1-032125	3/21/2025 13:37	10	NF/IZ
ICB	0	0.122	0.08	0	0	0	0	0	IC1-032125	3/21/2025 13:58	10	NF/IZ
CCV	1.897	3.102	3.104	10.396	2.584	4.95	15.262	0	IC1-032125	4/4/2025 12:51	10	NF/IZ
CCB	0	0	0	0	0	0	0	0	IC1-032125	4/4/2025 13:12	10	NF/IZ
LB135314BLW	0	0	0	0	0	0	0	0	IC1-032125	4/4/2025 13:34	10	NF/IZ
LB135314BSW	2.051	3.107	3.114	10.436	2.589	5.112	15.297	0	IC1-032125	4/4/2025 13:55	10	NF/IZ
Q1731-05	0	0.051	0	0	0	0	0	0	IC1-032125	4/4/2025 14:17	10	NF/IZ
Q1716-01	0.465	430.987	0	0.635	0.298	0	54.797	0	IC1-032125	4/4/2025 15:43	10	NF/IZ
Q1716-01DLX100	0	2.853	0	0	0	0	0.939	0	IC1-032125	4/4/2025 16:05	10	NF/IZ
Q1716-01MS	2.353	410.471	2.937	10.405	2.715	4.883	68.249	0	IC1-032125	4/4/2025 17:45	10	NF/IZ
Q1716-01MSD	2.447	409.478	3.064	10.827	2.822	5.058	68.77	0	IC1-032125	4/4/2025 18:06	10	NF/IZ
CCV	2.045	3.12	3.122	10.443	2.588	5.289	15.35	0	IC1-032125	4/4/2025 18:28	10	NF/IZ
CCB	0	0	0	0	0	0	0	0	IC1-032125	4/4/2025 18:49	10	NF/IZ

Clear table

Instrument ID: IC-2 Analyst : IZ Method: 300.0 / 9056A											
ident	concentra tion F-	concentratio n CL-	concentrati on NO2	concentrati on BR-	concentrati on NO3	concentrati on HPO4	concentrati on SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0	0	0	0	0	0	0	0 IC1-032125	3/21/2025 10:45	10	NF/IZ
STD2	0.421	0.619	0.631	2.075	0.523	1.052	3.247	IC1-032125	3/21/2025 11:07	10	NF/IZ
STD3	0.795	1.199	1.203	3.994	1.001	1.993	5.998	IC1-032125	3/21/2025 11:28	10	NF/IZ
STD4	0.977	1.475	1.468	4.904	1.226	2.407	7.216	IC1-032125	3/21/2025 11:50	10	NF/IZ
STD5	1.993	3.009	2.995	10.03	2.493	4.968	14.842	IC1-032125	3/21/2025 12:11	10	NF/IZ
STD6	4.034	5.988	5.986	19.975	5.011	10.256	30.502	IC1-032125	3/21/2025 12:32	10	NF/IZ
STD7	4.979	7.51	7.517	25.022	6.247	12.323	36.695	IC1-032125	3/21/2025 12:54	10	NF/IZ
ident	True Value F-	True Value CL-	True Value NO2	True Value BR-	True Value NO3	True Value HPO4	True Value SO4				
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000				
STD2	0.4000	0.6000	0.6000	2.0000	0.5000	1.0000	3.0000				
STD3	0.8000	1.2000	1.2000	4.0000	1.0000	2.0000	6.0000				
STD4	1.0000	1.5000	1.5000	5.0000	1.2500	2.5000	7.5000				
STD5	2.0000	3.0000	3.0000	10.0000	2.5000	5.0000	15.0000				
STD6	4.0000	6.0000	6.0000	20.0000	5.0000	10.0000	30.0000				
STD7	5.0000	7.5000	7.5000	25.0000	6.2500	12.5000	37.0000				
ident	Relative Error F-	Relative Error CL-	Relative Error NO2	Relative Error BR-	Relative Error NO3	Relative Error HPO4	Relative Error SO4				
STD1											
STD2	5.2500	3.1667	5.1667	3.7500	4.6000	5.2000	8.2333				
STD3	-0.6250	-0.0833	0.2500	-0.1500	0.1000	-0.3500	-0.0333				
STD4	-2.3000	-1.6667	-2.1333	-1.9200	-1.9200	-3.7200	-3.7867				
STD5	-0.3500	0.3000	-0.1667	0.3000	-0.2800	-0.6400	-1.0533				
STD6	0.8500	-0.2000	-0.2333	-0.1250	0.2200	2.5600	1.6733				
STD7	-0.4200	0.1333	0.2267	0.0880	-0.0480	-1.4160	-0.8243				

Fluoride (Anions)

($\mu\text{S}/\text{cm}$) x min



Function: $A = -4.00269E-3 + 0.0144679 \times Q$

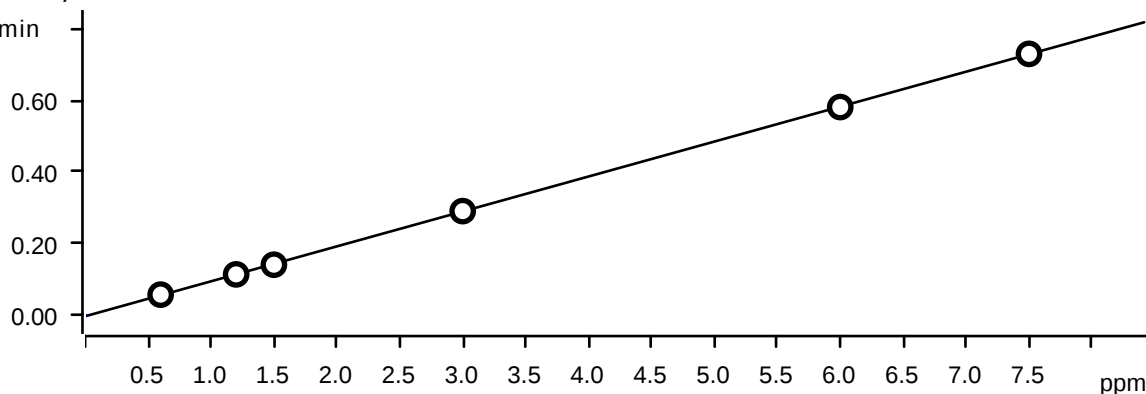
Relative standard deviation 1.180947 %

Correlation coefficient 0.999926

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-03-21 10:45:52 UTC-4	used
Standard 2	1	0.400	10.0	1.0	1.0	0.057	STD2	2025-03-21 11:07:15 UTC-4	used
Standard 3	1	0.800	10.0	1.0	1.0	0.111	STD3	2025-03-21 11:28:39 UTC-4	used
Standard 4	1	1.000	10.0	1.0	1.0	0.137	STD4	2025-03-21 11:50:04 UTC-4	used
Standard 5	1	2.000	10.0	1.0	1.0	0.284	STD5	2025-03-21 12:11:30 UTC-4	used
Standard 6	1	4.000	10.0	1.0	1.0	0.580	STD6	2025-03-21 12:32:57 UTC-4	used
Standard 7	1	5.000	10.0	1.0	1.0	0.716	STD7	2025-03-21 12:54:24 UTC-4	used

Chloride (Anions)

($\mu\text{S}/\text{cm}$) x min



Function: $A = -2.25189E-3 + 9.74103E-3 \times Q$

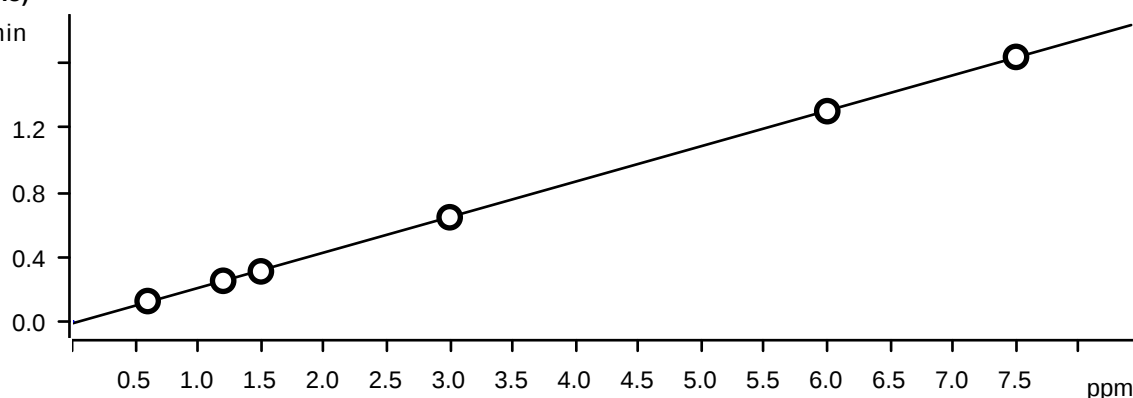
Relative standard deviation 0.547466 %

Correlation coefficient 0.999984

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-03-21 10:45:52 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.058	STD2	2025-03-21 11:07:15 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.115	STD3	2025-03-21 11:28:39 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.141	STD4	2025-03-21 11:50:04 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.291	STD5	2025-03-21 12:11:30 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	0.581	STD6	2025-03-21 12:32:57 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	0.729	STD7	2025-03-21 12:54:24 UTC-4	used

Nitrite (Anions)

(μS/cm) x min

Function: $A = -0.0127504 + 0.0219707 \times Q$

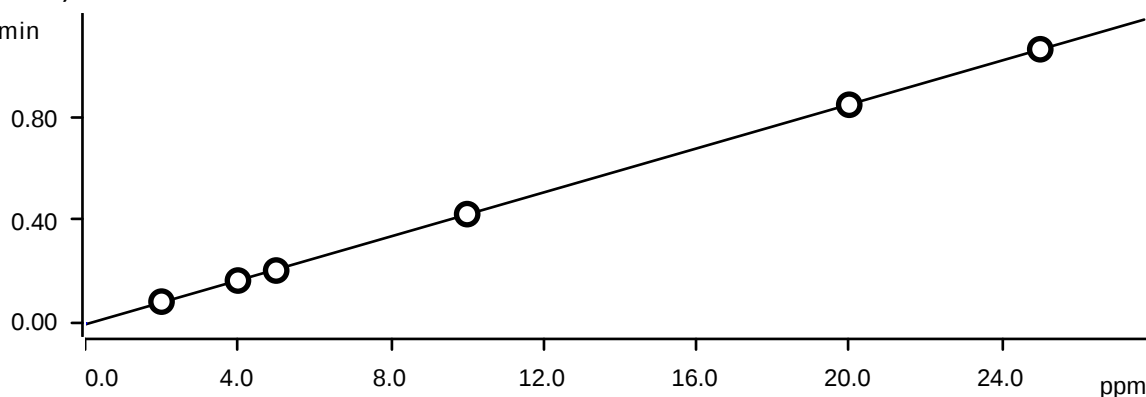
Relative standard deviation 0.767970 %

Correlation coefficient 0.999969

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-03-21 10:45:52 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.126	STD2	2025-03-21 11:07:15 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.252	STD3	2025-03-21 11:28:39 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.310	STD4	2025-03-21 11:50:04 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.645	STD5	2025-03-21 12:11:30 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	1.302	STD6	2025-03-21 12:32:57 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	1.639	STD7	2025-03-21 12:54:24 UTC-4	used

Bromide (Anions)

($\mu\text{S/cm}$) $\times$ min



Function: $A = -4.26620E-3 + 4.25885E-3 \times Q$

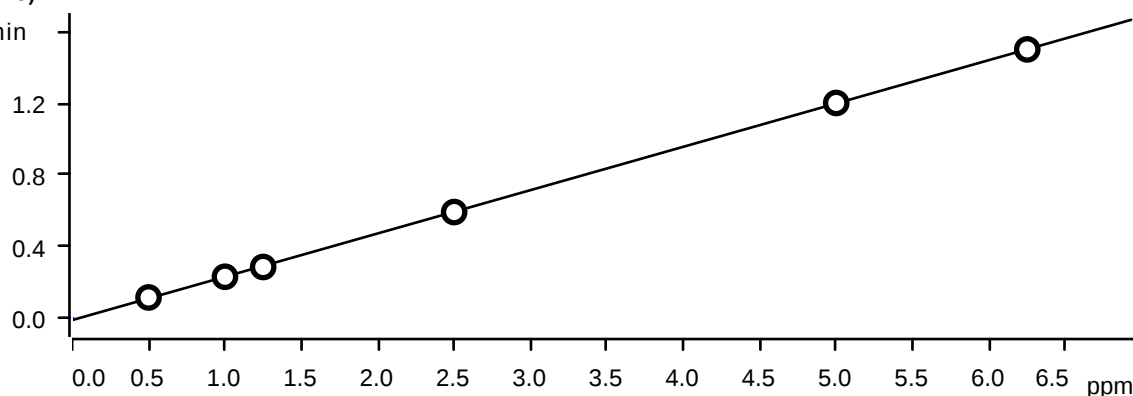
Relative standard deviation: 0.597348 %

Correlation coefficient: 0.999981

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-03-21 10:45:52 UTC-4	used
Standard 2	1	2.000	10.0	1.0	1.0	0.084	STD2	2025-03-21 11:07:15 UTC-4	used
Standard 3	1	4.000	10.0	1.0	1.0	0.166	STD3	2025-03-21 11:28:39 UTC-4	used
Standard 4	1	5.000	10.0	1.0	1.0	0.205	STD4	2025-03-21 11:50:04 UTC-4	used
Standard 5	1	10.000	10.0	1.0	1.0	0.423	STD5	2025-03-21 12:11:30 UTC-4	used
Standard 6	1	20.000	10.0	1.0	1.0	0.846	STD6	2025-03-21 12:32:57 UTC-4	used
Standard 7	1	25.000	10.0	1.0	1.0	1.061	STD7	2025-03-21 12:54:24 UTC-4	used

Nitrate (Anions)

($\mu\text{S/cm}$) $\times$ min

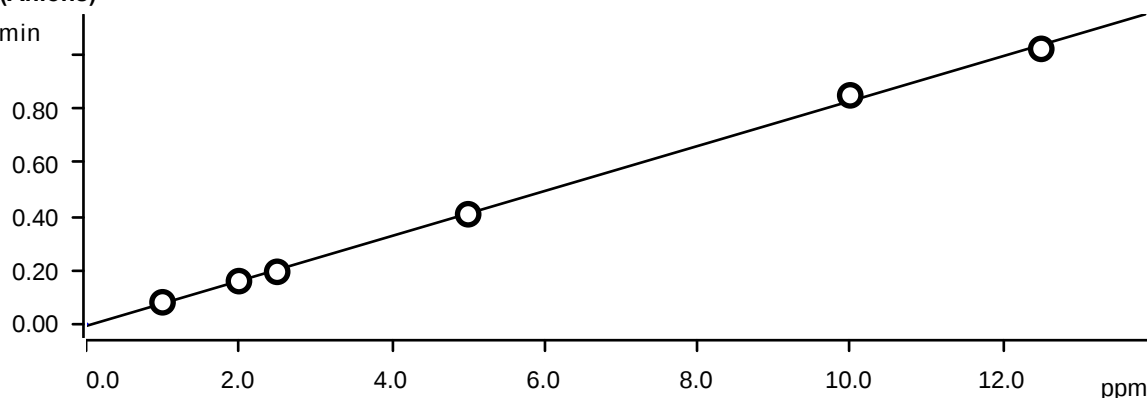


Function: $A = -9.20754E-3 + 0.0241631 \times Q$

Relative standard deviation: 0.659338 %

Correlation coefficient 0.999977

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-03-21 10:45:52 UTC-4	used
Standard 2	1	0.500	10.0	1.0	1.0	0.117	STD2	2025-03-21 11:07:15 UTC-4	used
Standard 3	1	1.000	10.0	1.0	1.0	0.233	STD3	2025-03-21 11:28:39 UTC-4	used
Standard 4	1	1.250	10.0	1.0	1.0	0.287	STD4	2025-03-21 11:50:04 UTC-4	used
Standard 5	1	2.500	10.0	1.0	1.0	0.593	STD5	2025-03-21 12:11:30 UTC-4	used
Standard 6	1	5.000	10.0	1.0	1.0	1.202	STD6	2025-03-21 12:32:57 UTC-4	used
Standard 7	1	6.250	10.0	1.0	1.0	1.500	STD7	2025-03-21 12:54:24 UTC-4	used

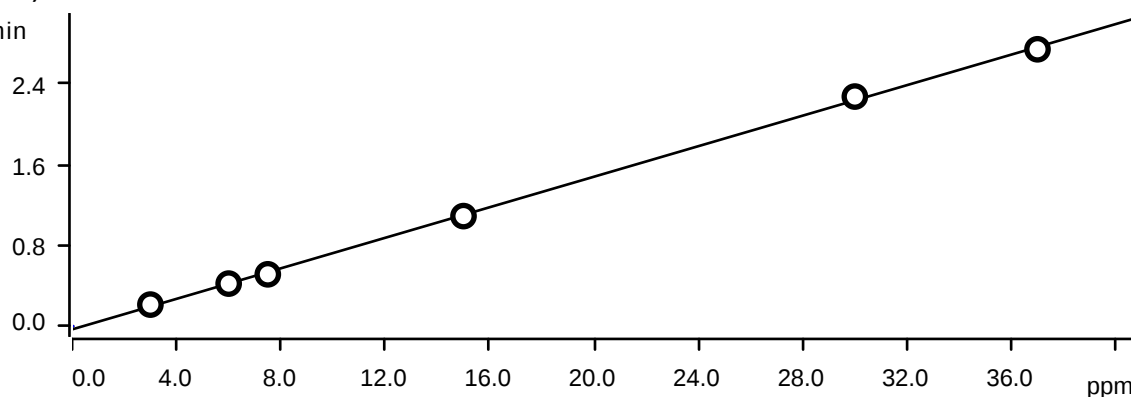
Phosphate (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -6.92112E-3 + 8.35786E-3 \times Q$

Relative standard deviation 3.051728 %

Correlation coefficient 0.999508

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-03-21 10:45:52 UTC-4	used
Standard 2	1	1.000	10.0	1.0	1.0	0.081	STD2	2025-03-21 11:07:15 UTC-4	used
Standard 3	1	2.000	10.0	1.0	1.0	0.160	STD3	2025-03-21 11:28:39 UTC-4	used
Standard 4	1	2.500	10.0	1.0	1.0	0.194	STD4	2025-03-21 11:50:04 UTC-4	used
Standard 5	1	5.000	10.0	1.0	1.0	0.408	STD5	2025-03-21 12:11:30 UTC-4	used
Standard 6	1	10.000	10.0	1.0	1.0	0.850	STD6	2025-03-21 12:32:57 UTC-4	used
Standard 7	1	12.500	10.0	1.0	1.0	1.023	STD7	2025-03-21 12:54:24 UTC-4	used

Sulfate (Anions)

 $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0318458 + 7.56676E-3 \times Q$

Relative standard deviation 2.235653 %

Correlation coefficient 0.999739

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-03-21 10:45:52 UTC-4	used
Standard 2	1	3.000	10.0	1.0	1.0	0.214	STD2	2025-03-21 11:07:15 UTC-4	used
Standard 3	1	6.000	10.0	1.0	1.0	0.422	STD3	2025-03-21 11:28:39 UTC-4	used
Standard 4	1	7.500	10.0	1.0	1.0	0.514	STD4	2025-03-21 11:50:04 UTC-4	used
Standard 5	1	15.000	10.0	1.0	1.0	1.091	STD5	2025-03-21 12:11:30 UTC-4	used
Standard 6	1	30.000	10.0	1.0	1.0	2.276	STD6	2025-03-21 12:32:57 UTC-4	used
Standard 7	1	37.000	10.0	1.0	1.0	2.745	STD7	2025-03-21 12:54:24 UTC-4	used

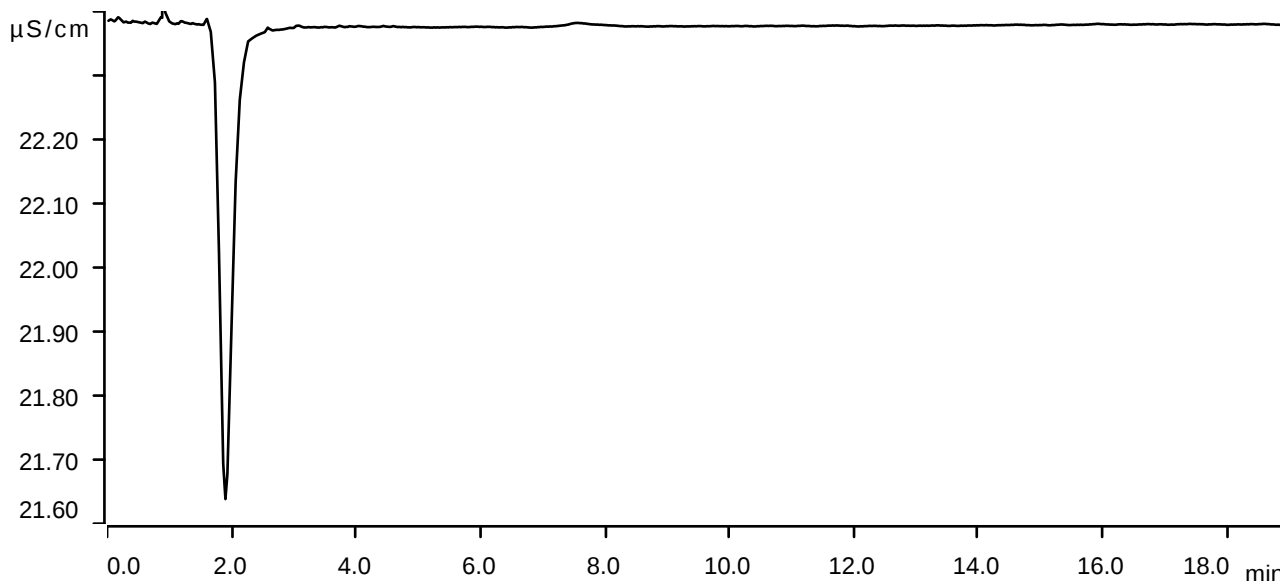
Sample data

Ident STD1
Sample type Standard 1
Determination start 2025-03-21 10:45:52 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.66 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



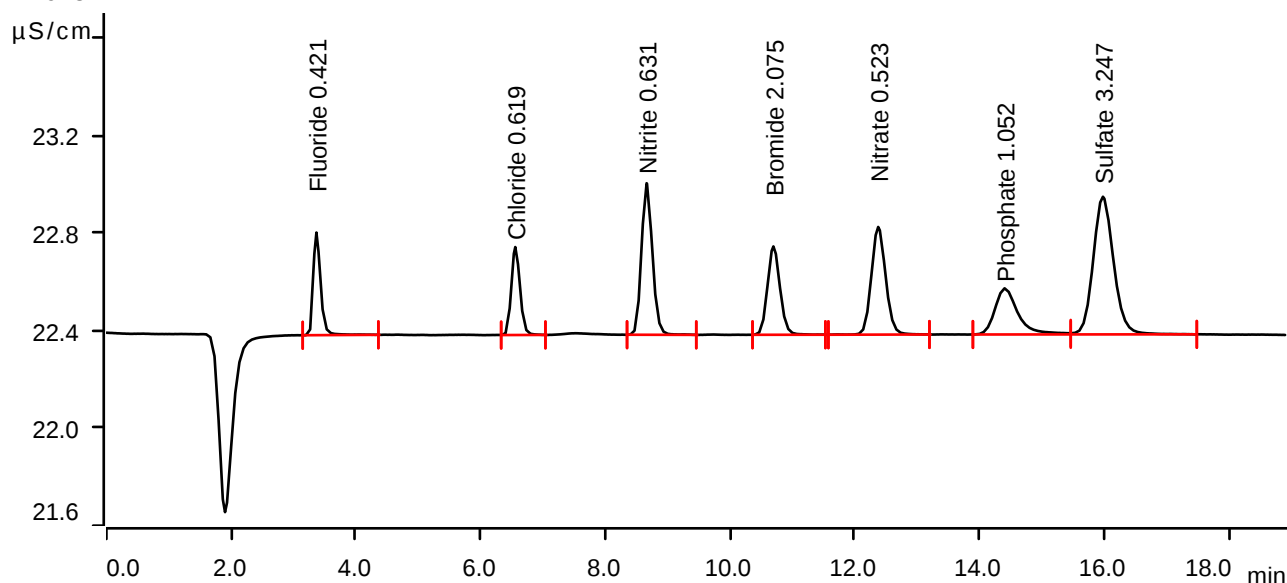
Sample data

Ident STD2
Sample type Standard 2
Determination start 2025-03-21 11:07:15 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.49 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.368	0.0570	0.420	0.421	Fluoride
2	6.557	0.0580	0.361	0.619	Chloride
3	8.662	0.1260	0.621	0.631	Nitrite
4	10.695	0.0841	0.362	2.075	Bromide
5	12.375	0.1171	0.441	0.523	Nitrate
6	14.403	0.0810	0.189	1.052	Phosphate
7	15.978	0.2139	0.564	3.247	Sulfate

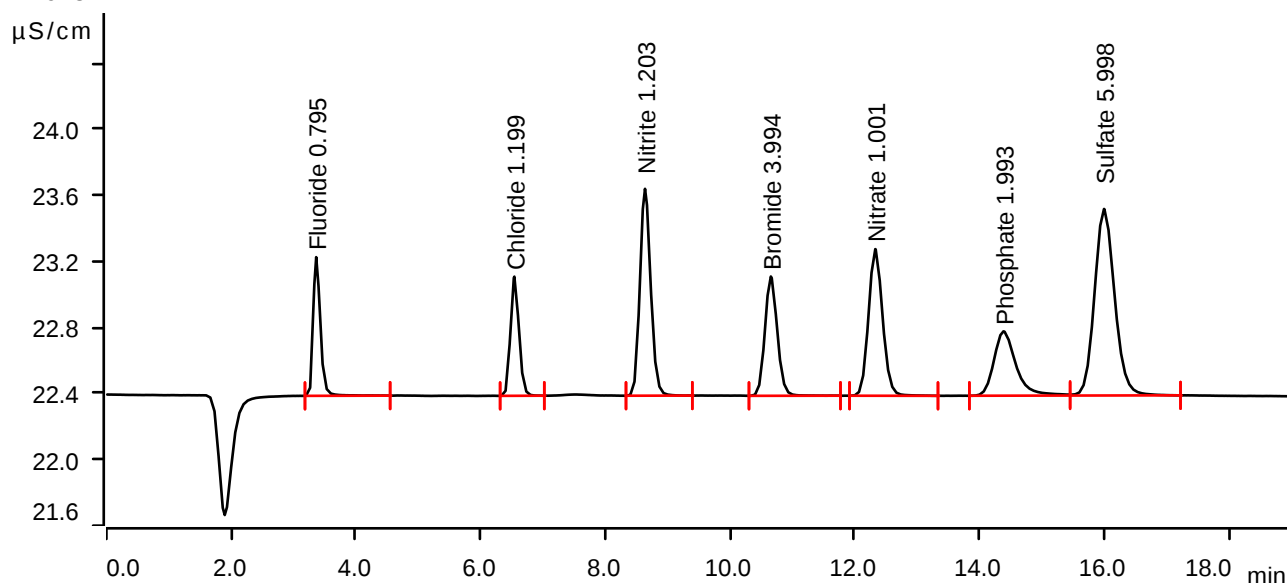
Sample data

Ident STD3
Sample type Standard 3
Determination start 2025-03-21 11:28:39 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.60 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.365	0.1110	0.839	0.795	Fluoride
2	6.542	0.1146	0.721	1.199	Chloride
3	8.637	0.2515	1.252	1.203	Nitrite
4	10.653	0.1658	0.722	3.994	Bromide
5	12.328	0.2325	0.888	1.001	Nitrate
6	14.383	0.1597	0.389	1.993	Phosphate
7	15.995	0.4220	1.129	5.998	Sulfate

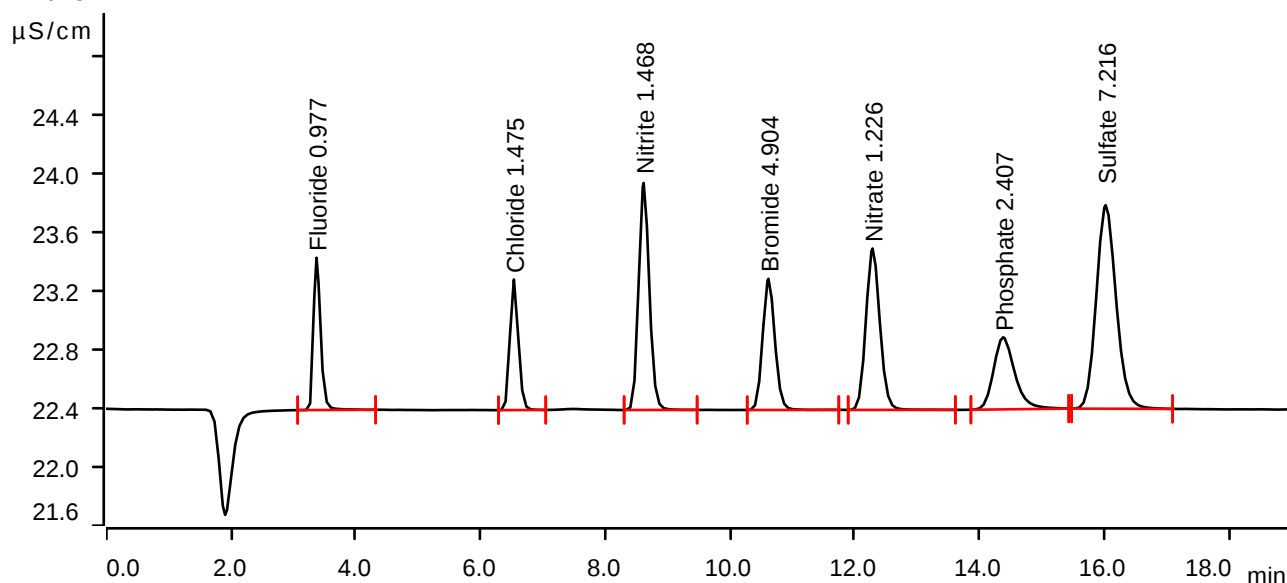
Sample data

Ident STD4
Sample type Standard 4
Determination start 2025-03-21 11:50:04 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.49 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.370	0.1374	1.040	0.977	Fluoride
2	6.533	0.1415	0.892	1.475	Chloride
3	8.615	0.3099	1.551	1.468	Nitrite
4	10.615	0.2046	0.896	4.904	Bromide
5	12.285	0.2869	1.103	1.226	Nitrate
6	14.378	0.1943	0.492	2.407	Phosphate
7	16.022	0.5142	1.391	7.216	Sulfate

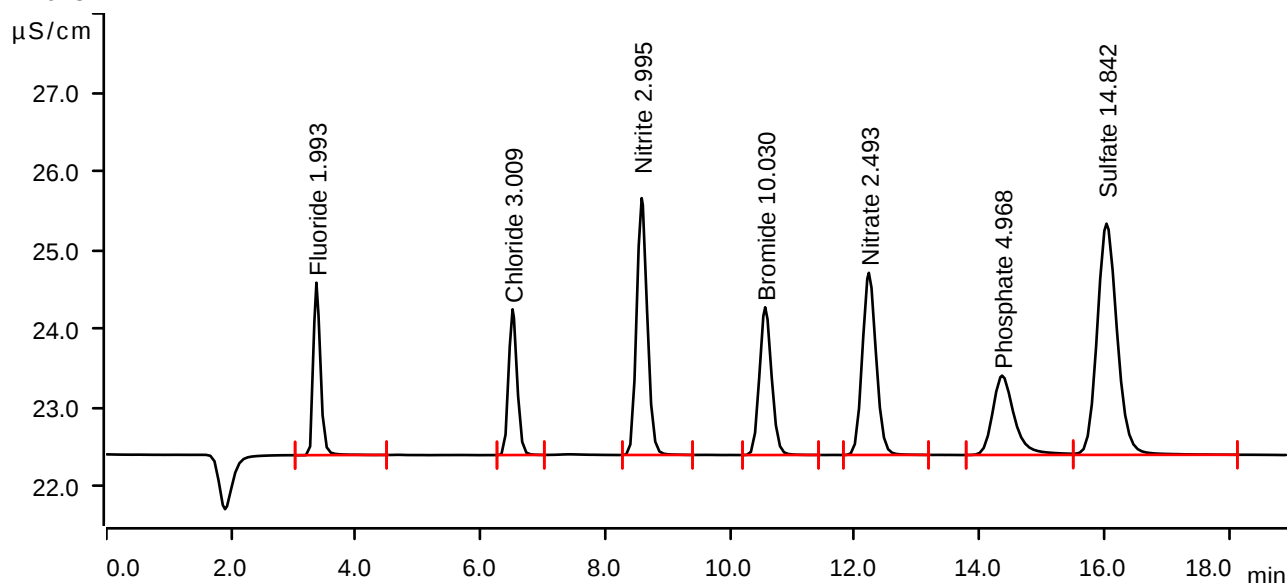
Sample data

Ident STD5
Sample type Standard 5
Determination start 2025-03-21 12:11:30 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.20 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.368	0.2843	2.188	1.993	Fluoride
2	6.513	0.2909	1.849	3.009	Chloride
3	8.583	0.6452	3.260	2.995	Nitrite
4	10.563	0.4229	1.875	10.030	Bromide
5	12.225	0.5933	2.311	2.493	Nitrate
6	14.362	0.4083	1.007	4.968	Phosphate
7	16.035	1.0913	2.934	14.842	Sulfate

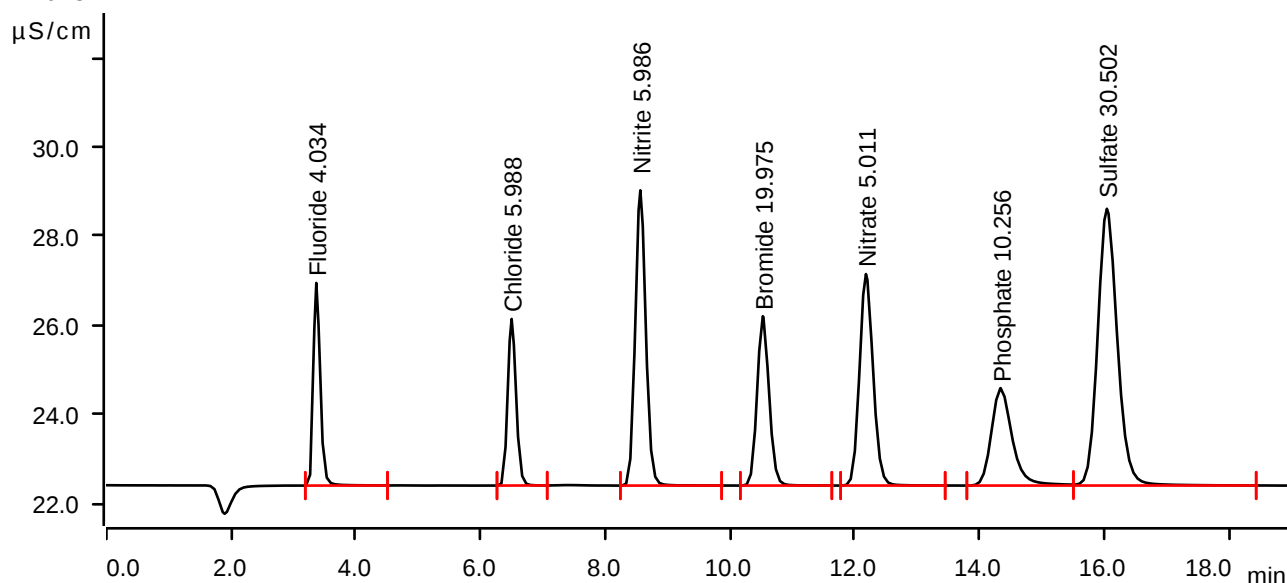
Sample data

Ident STD6
Sample type Standard 6
Determination start 2025-03-21 12:32:57 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.09 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.367	0.5796	4.549	4.034	Fluoride
2	6.498	0.5810	3.740	5.988	Chloride
3	8.562	1.3025	6.628	5.986	Nitrite
4	10.525	0.8465	3.803	19.975	Bromide
5	12.178	1.2015	4.749	5.011	Nitrate
6	14.338	0.8503	2.187	10.256	Phosphate
7	16.042	2.2762	6.214	30.502	Sulfate

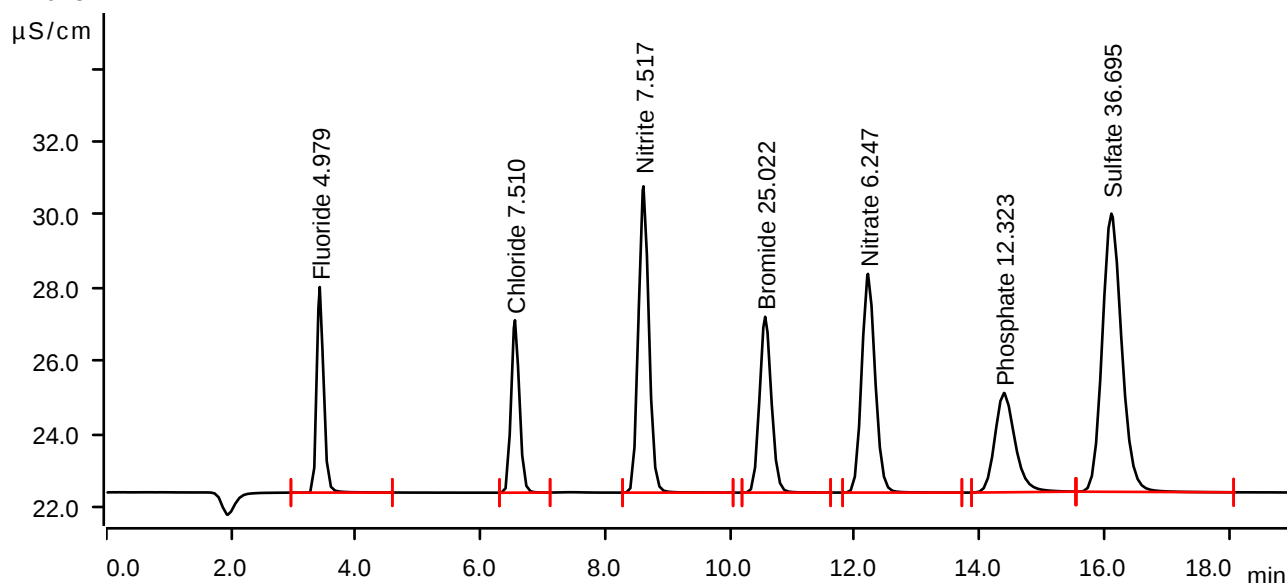
Sample data

Ident STD7
Sample type Standard 7
Determination start 2025-03-21 12:54:24 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.37 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.422	0.7164	5.617	4.979	Fluoride
2	6.552	0.7293	4.712	7.510	Chloride
3	8.612	1.6387	8.371	7.517	Nitrite
4	10.563	1.0614	4.806	25.022	Bromide
5	12.212	1.5003	5.978	6.247	Nitrate
6	14.392	1.0231	2.714	12.323	Phosphate
7	16.113	2.7448	7.604	36.695	Sulfate

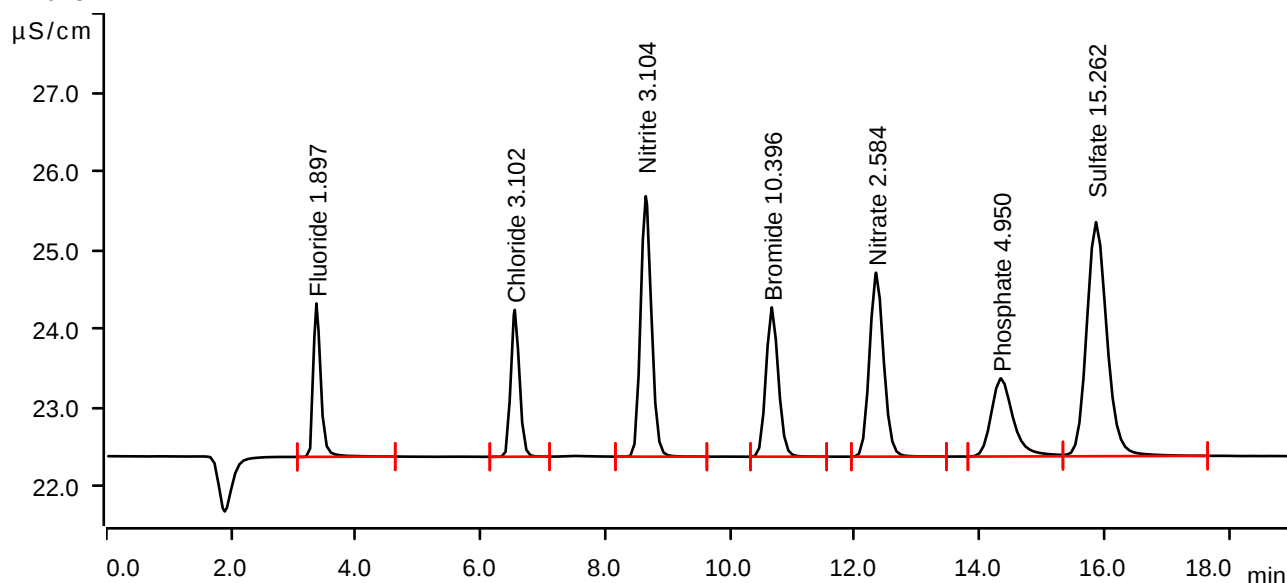
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-04-04 12:51:16 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.37 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.368	0.2705	1.945	1.897	Fluoride
2	6.548	0.2999	1.863	3.102	Chloride
3	8.648	0.6693	3.305	3.104	Nitrite
4	10.670	0.4385	1.895	10.396	Bromide
5	12.342	0.6151	2.334	2.584	Nitrate
6	14.343	0.4068	0.991	4.950	Phosphate
7	15.868	1.1230	2.970	15.262	Sulfate

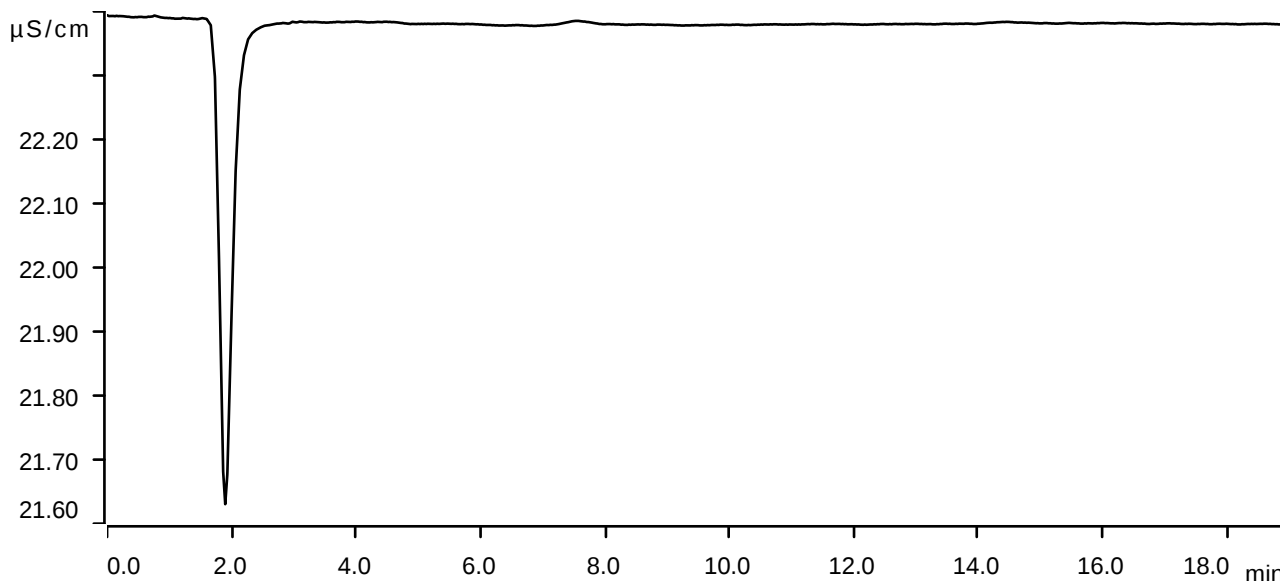
Sample data

Ident CCB
Sample type Sample
Determination start 2025-04-04 13:12:46 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.26 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



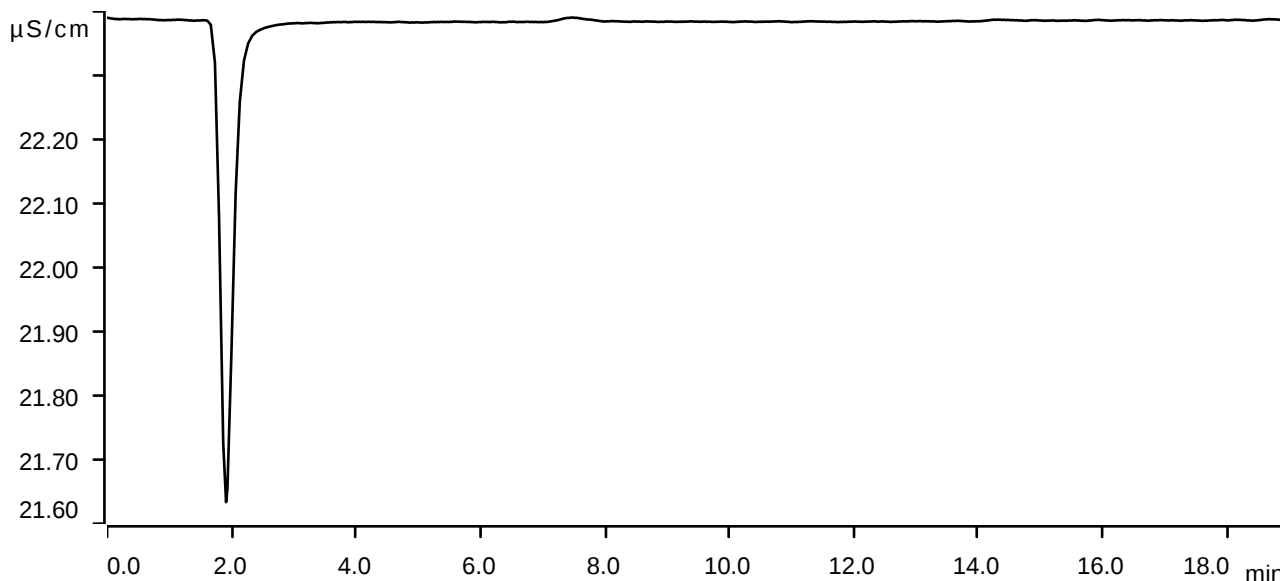
Sample data

Ident LB135314BLW
Sample type Sample
Determination start 2025-04-04 13:34:16 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 10.98 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



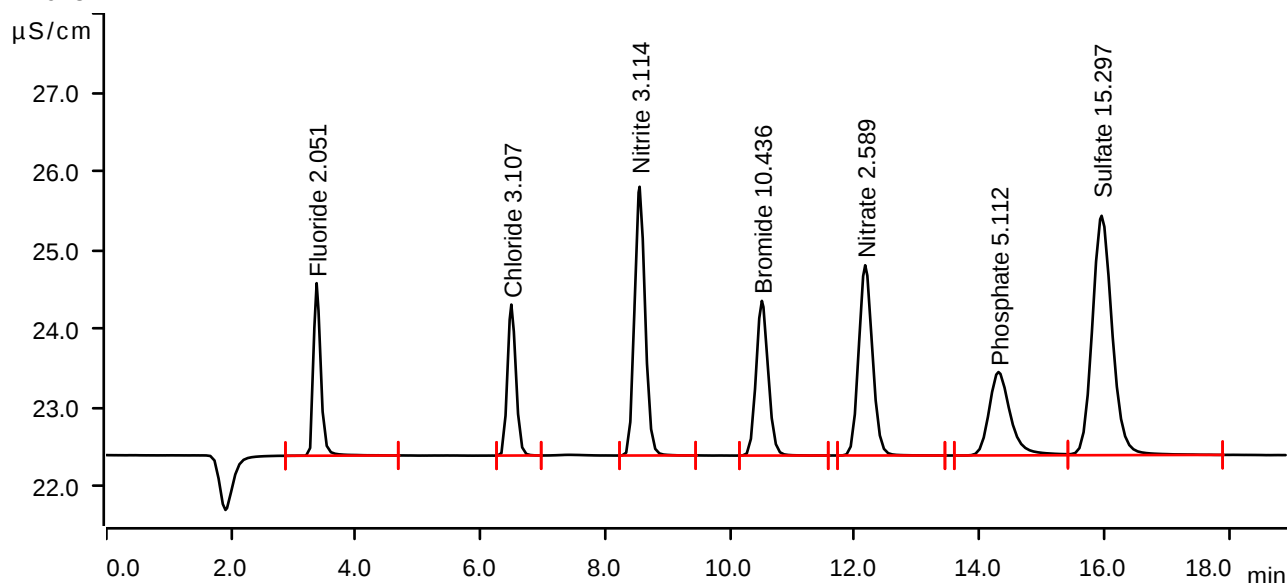
Sample data

Ident LB135314BSW
Sample type Check standard 1
Determination start 2025-04-04 13:55:48 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 10.92 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.372	0.2928	2.189	2.051	Fluoride
2	6.493	0.3004	1.916	3.107	Chloride
3	8.550	0.6714	3.410	3.114	Nitrite
4	10.510	0.4402	1.963	10.436	Bromide
5	12.167	0.6164	2.414	2.589	Nitrate
6	14.303	0.4203	1.058	5.112	Phosphate
7	15.957	1.1257	3.038	15.297	Sulfate

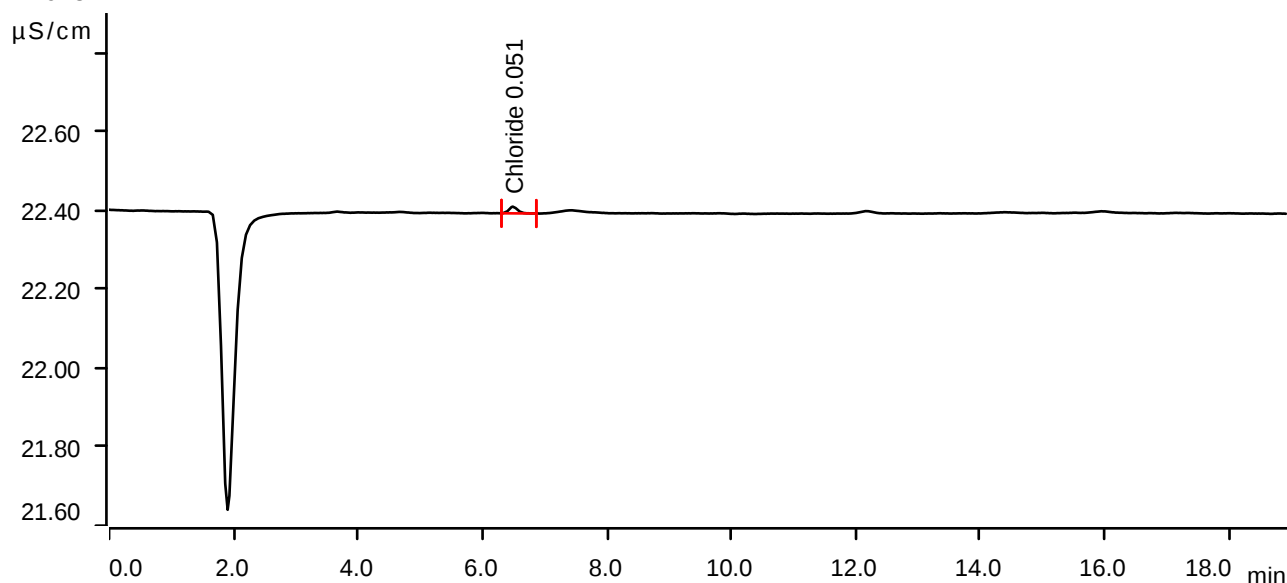
Sample data

Ident Q1731-05
Sample type Sample
Determination start 2025-04-04 14:17:20 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 10.87 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	6.487	0.0027	0.017	0.051	Chloride

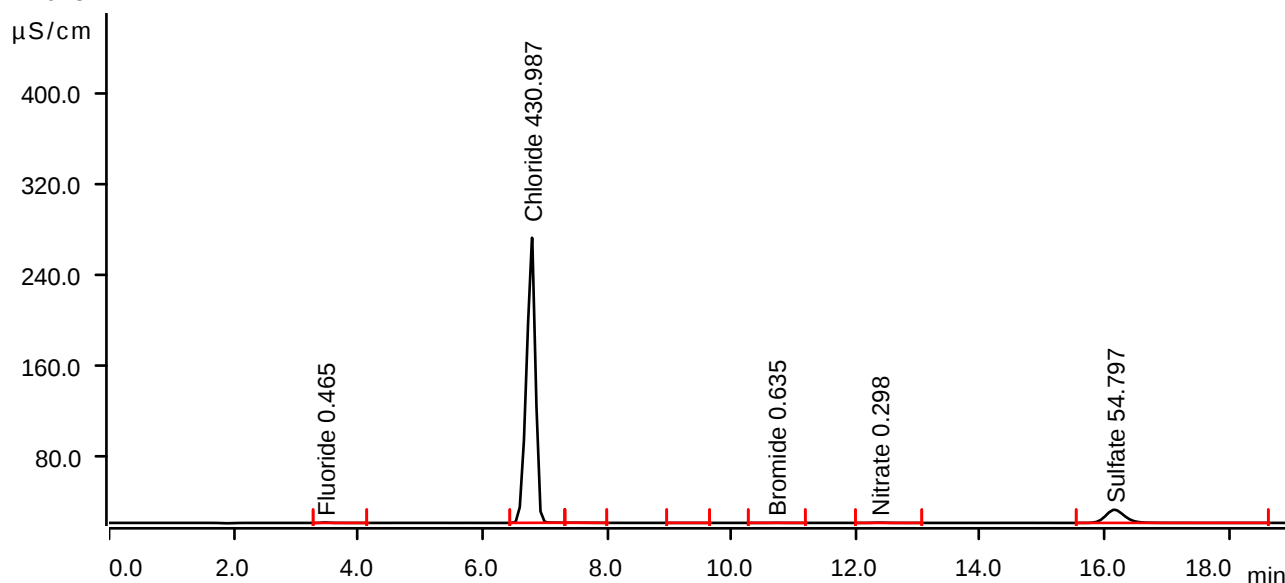
Sample data

Ident Q1716-01
Sample type Sample
Determination start 2025-04-04 15:43:31 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 10.81 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.468	0.0633	0.426	0.465	Fluoride
2	6.797	41.9803	250.415	430.987	Chloride
3	7.502	0.0164	0.050	invalid	
4	9.147	0.0030	0.014	invalid	
5	10.713	0.0228	0.101	0.635	Bromide
6	12.375	0.0627	0.246	0.298	Nitrate
7	16.157	4.1145	11.566	54.797	Sulfate

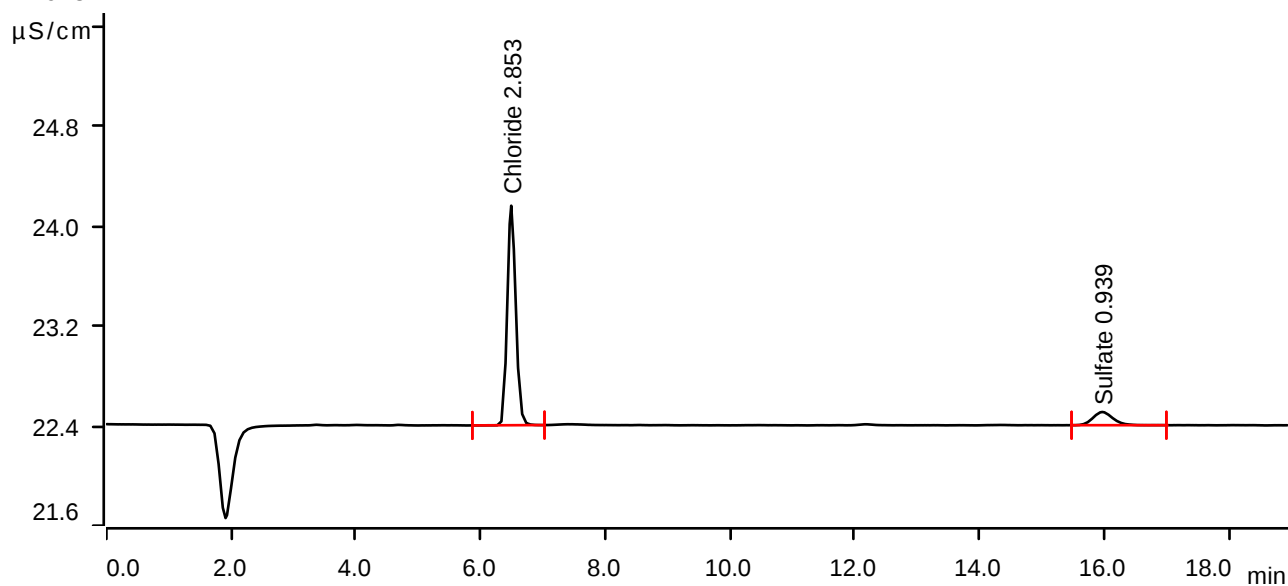
Sample data

Ident Q1716-01DLX100
Sample type Sample
Determination start 2025-04-04 16:05:06 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 10.81 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	6.492	0.2757	1.757	2.853	Chloride
2	15.967	0.0392	0.106	0.939	Sulfate

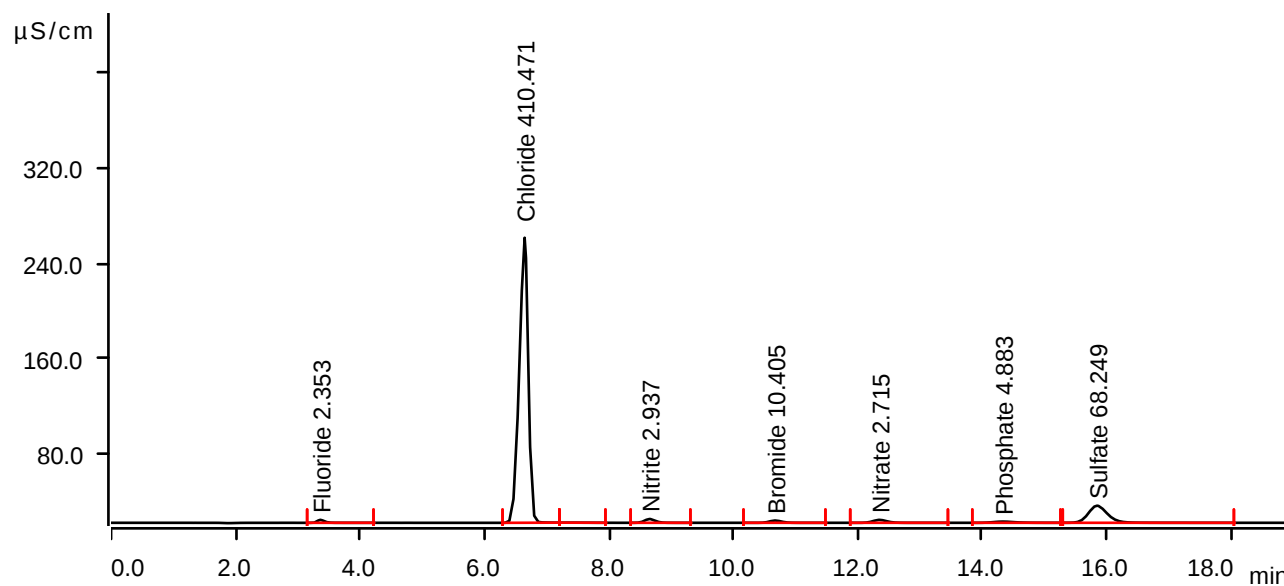
Sample data

Ident Q1716-01MS
Sample type Sample
Determination start 2025-04-04 17:45:07 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.37 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.365	0.3365	2.499	2.353	Fluoride
2	6.647	39.9819	239.230	410.471	Chloride
3	7.405	0.0179	0.050	invalid	
4	8.653	0.6325	3.182	2.937	Nitrite
5	10.672	0.4388	1.919	10.405	Bromide
6	12.348	0.6468	2.477	2.715	Nitrate
7	14.330	0.4012	1.017	4.883	Phosphate
8	15.845	5.1324	14.357	68.249	Sulfate

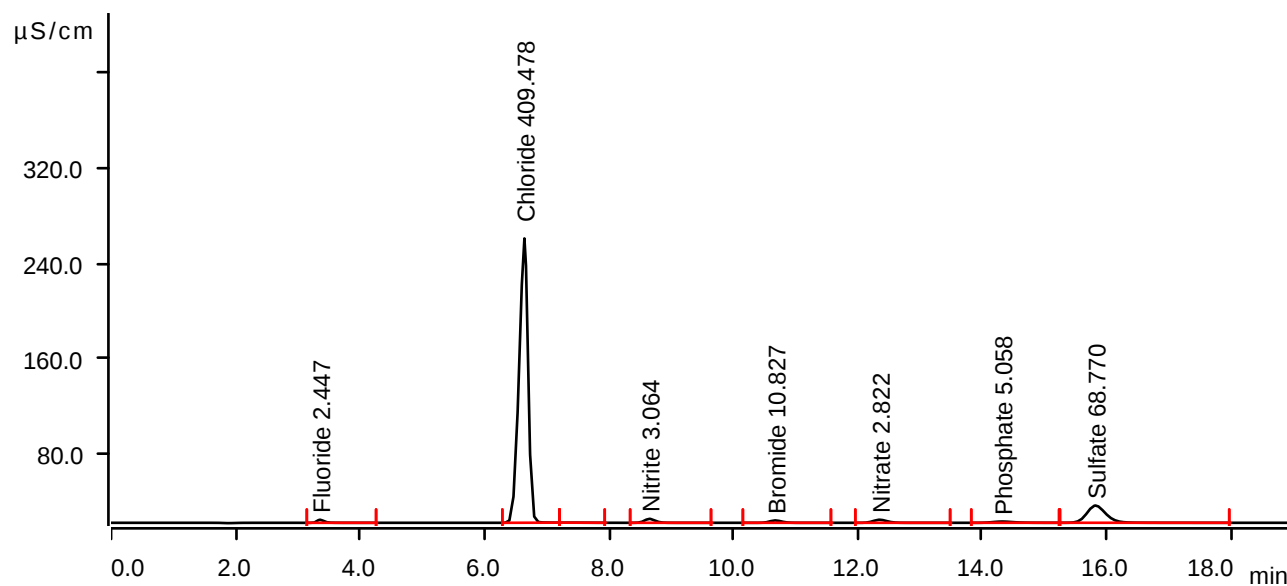
Sample data

Ident Q1716-01MSD
Sample type Sample
Determination start 2025-04-04 18:06:40 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.54 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.360	0.3500	2.591	2.447	Fluoride
2	6.643	39.8851	238.641	409.478	Chloride
3	7.400	0.0177	0.050	invalid	
4	8.653	0.6605	3.315	3.064	Nitrite
5	10.675	0.4569	1.996	10.827	Bromide
6	12.352	0.6726	2.575	2.822	Nitrate
7	14.318	0.4158	1.055	5.058	Phosphate
8	15.820	5.1718	14.476	68.770	Sulfate

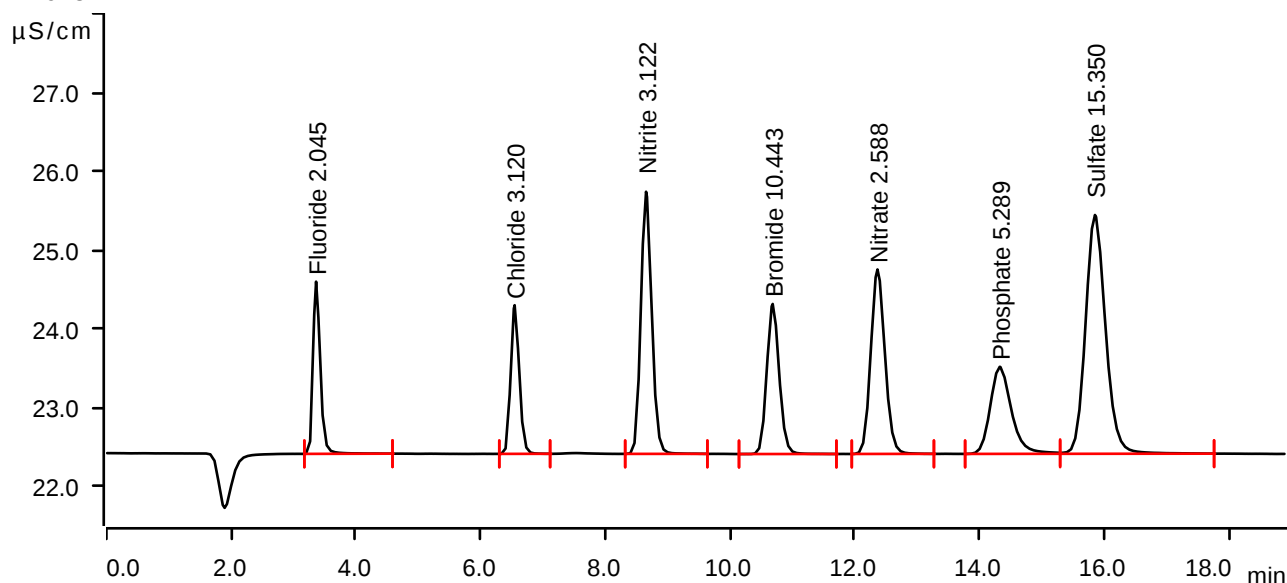
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-04-04 18:28:14 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.54 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.363	0.2918	2.185	2.045	Fluoride
2	6.547	0.3017	1.886	3.120	Chloride
3	8.653	0.6732	3.327	3.122	Nitrite
4	10.683	0.4405	1.904	10.443	Bromide
5	12.363	0.6160	2.341	2.588	Nitrate
6	14.323	0.4351	1.105	5.289	Phosphate
7	15.850	1.1296	3.031	15.350	Sulfate

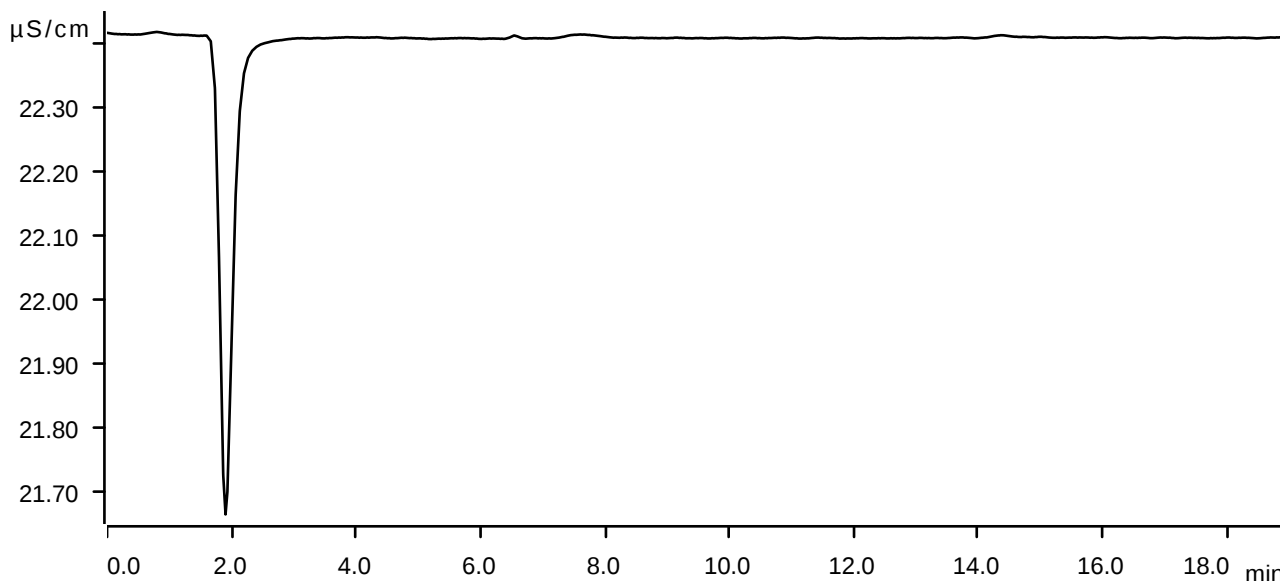
Sample data

Ident CCB
Sample type Sample
Determination start 2025-04-04 18:49:44 UTC-4
Method IC1-032125
Operator

Anions

Data source Conductivity detector 1 (Eco IC 1)
Channel Conductivity
Recording time 19.0 min
Integration Automatically
Column type Metrosep A Supp 19 - 150/4.0
Eluent composition not defined
Flow 0.700 mL/min
Maximum flow monitored yes
Pressure 11.60 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



WORKLIST(Hardcopy Internal Chain)

LB135314

WorkList Name : ANIONS-04042025

WorkList ID : 188736

Department : Wet-Chemistry

Date : 04-04-2025 08:53:19

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1731-05	EB01-040325	Water	Anions Group1	Cool 4 deg C	JACO05	L31	04/03/2025	9056A
Q1716-01	MOD-FOR-LRSA	Water	Anions Group1	Cool 4 deg C	PSEG04	I31	04/03/2025	9056A

Date/Time 04.04.2025 , 13:00

Raw Sample Received by: NF(WC)

Raw Sample Relinquished by: *meel*

Date/Time

04.04.2025 , 16:30

Raw Sample Received by:

Raw Sample Relinquished by:

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB135303

Review By	jignesh	Review On	4/7/2025 11:51:39 AM
Supervise By	Iwona	Supervise On	4/7/2025 12:22:08 PM
SubDirectory	LB135303	Test	TDS
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	N/A		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB135303BL	LB135303BL	MB	04/04/25 13:00		jignesh	OK
2	LB135303BS	LB135303BS	LCS	04/04/25 13:00		jignesh	OK
3	Q1731-05	EB01-040325	SAM	04/04/25 13:00		jignesh	OK
4	Q1731-05DUP	EB01-040325DUP	DUP	04/04/25 13:00		jignesh	OK

Instrument ID: TITRATOR

Daily Analysis Runlog For Sequence/QC Batch ID # LB135310

Review By	Niha	Review On	4/4/2025 2:13:14 PM
Supervise By	Iwona	Supervise On	4/4/2025 2:13:22 PM
SubDirectory	LB135310	Test	Alkalinity
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112573,W3150		

Sr#	SampleID	ClientID	QcType	Date	Comment	Operator	Status
1	LB135310BL	LB135310BL	MB	04/04/25 13:30		Iwona	OK
2	LB135310BS	LB135310BS	LCS	04/04/25 13:35		Iwona	OK
3	Q1731-05	EB01-040325	SAM	04/04/25 13:40		Iwona	OK

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB135314

Review By	Niha	Review On	4/7/2025 1:39:30 PM
Supervise By	Iwona	Supervise On	4/7/2025 1:41:56 PM
SubDirectory	LB135314	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP112435,WP112436,WP112437,WP112438,WP112439,WP112440,WP112441		
ICV Standard	WP112442		
CCV Standard	WP112616		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112617		
Chk Standard	WP112443,WP112444		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	03/21/25 10:45	All standards, samples, and	NF/IZ	OK
2	STD2	STD2	CAL2	03/21/25 11:07	QC are filtered through	NF/IZ	OK
3	STD3	STD3	CAL3	03/21/25 11:28	0.45um, filter lot W3160	NF/IZ	OK
4	STD4	STD4	CAL4	03/21/25 11:50		NF/IZ	OK
5	STD5	STD5	CAL5	03/21/25 12:11		NF/IZ	OK
6	STD6	STD6	CAL6	03/21/25 12:32		NF/IZ	OK
7	STD7	STD7	CAL7	03/21/25 12:54		NF/IZ	OK
8	ICV1	ICV1	ICV	03/21/25 13:37		NF/IZ	OK
9	ICB1	ICB1	ICB	03/21/25 13:58		NF/IZ	OK
10	CCV1	CCV1	CCV	04/04/25 12:51		NF/IZ	OK
11	CCB1	CCB1	CCB	04/04/25 13:12		NF/IZ	OK
12	LB135314BLW	LB135314BLW	MB	04/04/25 13:34		NF/IZ	OK
13	LB135314BSW	LB135314BSW	LCS	04/04/25 13:55		NF/IZ	OK
14	Q1731-05	EB01-040325	SAM	04/04/25 14:17		NF/IZ	OK
15	Q1716-01	MOD-FOR-LRSA	SAM	04/04/25 15:43	CL high	NF/IZ	Dilution
16	Q1716-01DL	MOD-FOR-LRSADL	SAM	04/04/25 16:05	100X for CL	NF/IZ	Confirms
17	Q1716-01MS	MOD-FOR-LRSAMS	MS	04/04/25 17:45	9.5ml of sample, 0.5mL W3092	NF/IZ	OK
18	Q1716-01MSD	MOD-FOR-LRSAMSD	MSD	04/04/25 18:06	9.5ml of sample, 0.5mL W3092	NF/IZ	OK

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB135314

Review By	Niha	Review On	4/7/2025 1:39:30 PM
Supervise By	Iwona	Supervise On	4/7/2025 1:41:56 PM
SubDirectory	LB135314	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP112435,WP112436,WP112437,WP112438,WP112439,WP112440,WP112441
ICV Standard	WP112442
CCV Standard	WP112616
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP112617
Chk Standard	WP112443,WP112444

19	CCV2	CCV2	CCV	04/04/25 18:28		NF/IZ	OK
20	CCB2	CCB2	CCB	04/04/25 18:49		NF/IZ	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1731

Test : Alkalinity,Anions Group1,TDS

Prepbatch ID :

Sequence ID/Qc Batch ID: LB135303, LB135310, LB135314,

Standard ID :

WP110259, WP112435, WP112436, WP112437, WP112438, WP112439, WP112440, WP112441, WP112442, WP112443, WP112444, WP112572, WP112573, WP112616, WP112617,

Chemical ID :

M6041, W2647, W3058, W3063, W3112, W3150, W3180,

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4035	IC ELUENT CONCENTRATE FOR IC-1	WP110259	10/16/2024	04/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 10/17/2024
FROM 2.10000gram of W2647 + 84.75000gram of W3058 + 913.15000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2487	Anions 300/9056 calibration standard 1	WP112435	03/21/2025	03/22/2025	Niha Farheen Shaik	None	None	Iwona Zarych 03/24/2025
FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
24	Anions 300/9056 calibration standard 2	WP112436	03/21/2025	03/22/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 03/24/2025
FROM 0.20000ml of W3180 + 9.80000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
25	Anions 300/9056 calibration standard 3	WP112437	03/21/2025	03/22/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 03/24/2025
FROM 0.40000ml of W3180 + 9.60000ml of W3112 = Final Quantity: 10.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
26	Anions 300/9056 calibration standard 4	WP112438	03/21/2025	03/22/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 03/24/2025
FROM 0.50000ml of W3180 + 9.50000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP112439	03/21/2025	03/22/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/24/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3679	Anions 300/9056 calibration standard 6	WP112440	03/21/2025	03/22/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/24/2025
FROM 2.00000ml of W3180 + 8.00000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3681	Anions 300/9056 calibration standard 7	WP112441	03/21/2025	03/22/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/24/2025
FROM 2.50000ml of W3180 + 7.50000ml of W3112 = Final Quantity: 10.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP112442	03/21/2025	03/22/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/24/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3063 = Final Quantity: 50.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4036	IC ELUENT FOR IC-1	WP112443	03/21/2025	04/16/2025	Niha Farheen Shaik	None	None	Iwona Zarych 03/24/2025

FROM 1980.00000ml of W3112 + 20.00000ml of WP110259 = Final Quantity: 2000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4037	IC H2SO4 FOR IC-1	WP112444	03/21/2025	04/21/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/24/2025

FROM 5.60000ml of M6041 + 994.40000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3407	Acidity-Alkalinity Stock Std(-+2500PPM)	WP112572	04/02/2025	04/09/2025	Iwona Zarych	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 04/03/2025

FROM 0.62500gram of W3058 + 249.40000ml of W3112 = Final Quantity: 250.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
293	alkalinity LCSW 50 ppm	WP112573	04/02/2025	04/09/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/03/2025
FROM 196.00000ml of W3112 + 4.00000ml of WP112572 = Final Quantity: 200.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP112616	04/04/2025	04/05/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 04/07/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP112617	04/04/2025	04/05/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 04/07/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3063 = Final Quantity: 50.000 ml								

CHEMICAL RECEIPT LOG BOOK

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)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

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	0000240594	06/03/2026	02/24/2020 / AMANDEEP	01/20/2020 / apatel	W2647

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	2023012653	10/19/2028	09/03/2024 / jignesh	10/19/2023 / lwona	W3058

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	U2-MEB735684	04/09/2025	04/09/2024 / lwona	11/16/2023 / lwona	W3063

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL74050-8 / SULFURIC ACID, 0.02N, 4L	235420	03/31/2029	11/04/2024 / lwona	11/04/2024 / lwona	W3150

CHEMICAL RECEIPT LOG BOOK

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	V2-MEB742616	02/19/2026	02/19/2025 / lwona	01/27/2025 / lwona	W3180

Sodium Bicarbonate, Powder
BAKER ANALYZED® A.C.S. Reagent

(sodium hydrogen carbonate)



Material No.: 3506-05
Batch No.: 0000240594
Manufactured Date: 2019/06/05
Retest Date: 2026/06/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (NaHCO ₃) (dried basis)	99.7 – 100.3 %	100.1
Insoluble Matter	<= 0.015 %	< 0.002
Chloride (Cl)	<= 0.003 %	0.003
Phosphate (PO ₄)	<= 0.001 %	0.001
Sulfur Compounds (as SO ₄)	<= 0.003 %	0.003
Calcium (Ca)	<= 0.02 %	0.02
Trace Impurities – Iron (Fe)	<= 0.001 %	0.001
Magnesium (Mg)	<= 0.005 %	0.005
Potassium (K)	<= 0.005 %	0.005
Ammonium (NH ₄)	<= 5 ppm	5
Trace Impurities – ACS – Heavy Metals (as Pb)	<= 5 ppm	5

For Laboratory, Research or Manufacturing Use
Meets Reagent Specifications for testing USP/NF monographs

Country of Origin: US
Packaging Site: Paris Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Certificate Of Analysis



W 3058

Re. 10/19/23 12

Date of Release: 1/27/2023

Name: **Sodium Carbonate, Anhydrous**

Powder, ACS

Item No: **SX0395 All Sizes**

Lot / Batch No: **2023012653**

Country of Origin: **India**

Item	Specifications	Analysis
Assay (calculated on dried substance)	99.5% min.	100.2%
Calcium (Ca)	0.03% max.	0.004%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Powder	Passes Test
Heavy metals (by ICP-OES)	5 ppm max.	<5 ppm
Insoluble Matter	0.01% max.	0.003%
Iron (Fe)	5 ppm max.	<5 ppm
Loss on heating at 285C	1.0% max.	0.1%
Magnesium (Mg)	0.005% max.	0.0008%
Phosphate (PO ₄)	0.001% max.	<0.001%
Potassium (K)	0.005% max.	0.003%
Silica (SiO ₂)	0.005% max.	<0.005%
Sulfur compounds (as SO ₄)	0.003% max.	<0.003%

Joe Schoellkopf

Quality Control Manager

This document has been produced electronically and is valid without a 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

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

W3063
rec. 11/16/23 12

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution
Catalog Number: 300-CAL-A
Lot Number: U2-MEB735684
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 ± 0.14 µg/mL
Fluoride, F-	20.00 ± 0.06 µg/mL	Nitrate as N, NNO ₃ -	25.00 ± 0.09 µg/mL
Nitrite as N, NNO ₂ -	30.00 ± 0.15 µg/mL	o-Phosphate as P, PPO ₄	50.00 ± 0.18 µg/mL
Sulfate, SO ₄	150.0 ± 0.8 µg/mL		

Density: 0.999 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	190830
Cl	Fajans	999c	999c
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	170309
NNO2-	IC Assay		traceable to 40h
PPO4	IC Assay	3186	170606
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/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:

$$X_{CRM/RM} = \sum(w_i) (X_i)$$

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:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2 (u_{char i}^2)]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (z) = U_{CRM/RM} = k (u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures Terms and Conditions of Sale. <https://www.inorganicventures.com/terms-and-conditions-sale>. The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

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

August 10, 2023

- 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

- **August 10, 2028**

- 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 Prepared By:

Justin Dirico
Stock Processing Supervisor



Certificate Approved By:

Nicholas Plymale
Custom VSM Coordinator



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director



Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

avantor™



M 6041-4b
MS

Material No.: 9673-33
Batch No.: 23D2462010
Manufactured Date: 2023-03-22
Retest Date: 2028-03-20
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H ₂ SO ₄)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO ₂)	≤ 2 ppm	< 2 ppm
Ammonium (NH ₄)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO ₃)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO ₄)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

Sulfuric Acid
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis
Low Selenium

 **avantor™**

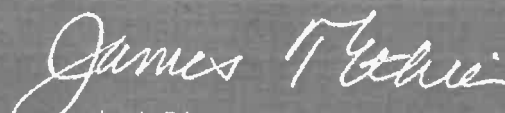


Material No.: 9673-33
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities – Sodium (Na)	≤ 500.0 ppb	5.4 ppb
Trace Impurities – Strontium (Sr)	≤ 5.0 ppb	< 0.2 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	< 0.8 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.4 ppb

For Laboratory, Research, or Manufacturing Use

Country of Origin: USA
Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier
Vice President Global Quality

ThermoFisher
SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 faxThermo Fisher Scientific's Quality System has been found to conform to Quality Management System
Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

This is to certify that units of the lot number below were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability and fitness for a particular purpose. Products are for research use or further manufacturing. Not for direct administration to humans or animals. It is the responsibility of the final formulator and end user to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

Catalog Number	SA226	Quality Test / Release Date	03/18/2024
Lot Number	235420		
Description	SULFURIC ACID, 0.02N, CERTIFIED		
Country of Origin	United States	Suggested Retest Date	Mar/2029

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	Clear, colorless liquid
COLOR	APHA	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
NORMALITY		Inclusive Between 0.0198 - 0.0202	0.0200
TRACEABLE TO NIST KHP STD	POT. ACID PHTHALATE	= LOT 84L	SRM 84I



Harout Sahagian - Quality Control Manager - Fair Lawn

Note: The data listed is valid for all package sizes of this lot of this product, expressed as an extension of this catalog number listed above.
If there are any questions with this certificate, please call at (800) 227-6701.

*Based on suggested storage condition.



Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

P: 800-669-6799/540-585-3030
F: 540-585-3012
info@inorganicventures.com

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).



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution
Catalog Number: 300-CAL-A
Lot Number: V2-MEB742616
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 ± 0.13 µg/mL
Fluoride, F-	20.00 ± 0.07 µg/mL	Nitrate as N, NNO ₃ -	25.00 ± 0.10 µg/mL
Nitrite as N, NNO ₂ -	30.00 ± 0.10 µg/mL	o-Phosphate as P, PPO ₄	50.00 ± 0.18 µg/mL
Sulfate, SO ₄	150.0 ± 0.8 µg/mL		

Density: 0.999 g/mL (measured at 20 ± 4 °C)

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	190830
Cl	Fajans	999c	999c
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	170309
NNO2-	IC Assay	Traceable to 40H	08228TH-H2
NNO2-	Calculated	40h	40h
PPO4	IC Assay	3186	170606
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/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:

$$X_{CRM/RM} = \sum(w_i)(X_i)$$

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:

$$w_i = (1/u_{char i}^2) / (\sum(1/u_{char i}^2))$$

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

k = coverage factor = 2

$u_{char} = [\sum(w_i)^2(u_{char i}^2)]^{1/2}$ 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

$$CRM/RM \text{ Expanded Uncertainty } (\pm) = U_{CRM/RM} = k(u_{char a}^2 + u_{bb}^2 + u_{lts}^2 + u_{ts}^2)^{1/2}$$

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

6.1 This standard is intended for the calibration of analytical instruments and validation of analytical methods as appropriate. This CRM may be used in connection with EPA Methods 6010, 6020 (all versions), Standard Methods 3120 B and USP <232> / ICH Q3D.

6.2 For products attaining traceability through Inorganic Ventures' Primary Certified Reference Materials (PCRM™) see the Limited License to Use PCRM™ in the Inorganic Ventures [Terms and Conditions of Sale](https://www.inorganicventures.com/terms-and-conditions-sale). The Terms and Conditions contain information on the use of materials traceable to PCRM™ certified reference materials. This Limited License agreement is especially pertinent for laboratories accredited under ISO:17034.

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; info@inorganicventures.com;

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 02, 2024

- 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

- **April 02, 2029**

- 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

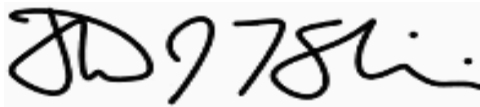
Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Thomas Kozikowski
Stock VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





SHIPPING DOCUMENTS

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Jacobs
ADDRESS: 412 Mt Kumbie Ave Suite 100
CITY Morrisstown STATE: NJ ZIP: 07910
ATTENTION: John Yufante John.Yufante@Jacobs.com
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: STC PTC
PROJECT NO.: D3808221 LOCATION: Princeton Junction
PROJECT MANAGER: Mary Murphy
e-mail: Mary.Murphy@Jacobs.com
PHONE: FAX:

CLIENT BILLING INFORMATION

BILL TO: Mary Murphy PO#:
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) Standard TAT DAYS*
HARDCOPY (DATA PACKAGE): DAYS*
EDD: DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 4 (QC + Full Raw Data)
☐ Level 2 (Results + QC) ☐ NJ Reduced ☐ US EPA CLP
☒ Level 3 (Results + QC) ☐ NYS ASP A ☐ NYS ASP B
+ Raw Data ☐ Other
☐ EDD FORMAT

1. 1/4 Dioxane (62705-504)
2. Site Specific VOCs (62705-504)
3. Total Metals (60208)
4. Dissolved Iron (60208)
5. Alkalinity (50123708)
6. TDS (50123708)
7. Ammonia (4056)
8.
9.

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		E	A/E	B/E	E	E	E	E				
1.	RMW-018-82-040325	GW		X	4-3-25	1135	4	✓	✓									
2.	RMW-048-91-040325	GW		X	4-3-25	1415	4	✓	✓									
3.	RMW-018-82-040325-ED	GW		X	4-3-25	1140	4	✓	✓									
4.	RMW-038-90-040325	GW		X	4-3-25	1510	4	✓	✓									
5.	EB01-040325	DI		X	4-3-25	1545	8	✓	✓	✓	✓	✓	✓	✓	✓		PH: 1.9	
6.	TB01-040325	DI		X	4-3-25	1600	2	✓									Lot # 80A0441	
7.																	Samples preserved (H2O2)	
8.																	on 4/4/25 @ 0715	
9.																	Samples placed in 501-fully	
10.																	Samples refrigerated	

SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION INCLUDING COURIER DELIVERY

RELINQUISHED BY SAMPLER: 1. <u>[Signature]</u>	DATE/TIME: <u>4/3/25 1634</u>	RECEIVED BY: 1. <u>[Signature]</u>	DATE/TIME: <u>4-3-25 1634</u>	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP <u>2.7</u> °C
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY: 2. <u>[Signature]</u>	DATE/TIME:	Comments: <u>See work order for list of site specific VOCs</u>
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>4-3-25 1820</u>	RECEIVED BY: 3. <u>[Signature]</u>	DATE/TIME:	<u>Preserve Dissolved Iron sample upon arrival to the lab</u>
Temp <u>2.7°C</u> (Adjusted Factor +1) IR Gun #1.				CLIENT: ☐ Hand Delivered ☐ Other
Page <u>1</u> of <u>1</u>				Shipment Complete ☐ YES ☐ NO

Laboratory Certification

Certified By	License No.
CAS EPA CLP Contract	68HERH20D0011
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255424 Rev 1
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	T104704488

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1731	JACO05	Order Date : 4/4/2025 10:52:00 AM	Project Mgr :
Client Name : JACOBS Engineering Grou		Project Name : Former Schlumberger STC	Report Type : Level 4
Client Contact : John Ynfante		Receive DateTime : 4/3/2025 6:20:00 PM	EDD Type : CH2MHILL
Invoice Name : JACOBS Engineering Grou		Purchase Order :	Hard Copy Date :
Invoice Contact : John Ynfante			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1731-01	RMW-01B-82-040325	Water	04/03/2025	11:35					
					VOCMS Group3		8260-Low	2 Bus. Days	
Q1731-02	RMW-04B-91-040325	Water	04/03/2025	14:15					
					VOCMS Group3		8260-Low	2 Bus. Days	
Q1731-03	RMW-01B-82-040325-FD	Water	04/03/2025	11:40					
					VOCMS Group3		8260-Low	2 Bus. Days	
Q1731-04	RMW-03B-90-040325	Water	04/03/2025	15:10					
					VOCMS Group3		8260-Low	2 Bus. Days	
Q1731-05	EB01-040325	Water	04/03/2025	15:45					
					VOCMS Group3		8260-Low	2 Bus. Days	
Q1731-07	TB01-040325	Water	04/03/2025	16:00					
					VOCMS Group3		8260-Low	2 Bus. Days	

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1731	JACO05	Order Date : 4/4/2025 10:52:00 AM	Project Mgr :
Client Name : JACOBS Engineering Grou		Project Name : Former Schlumberger STC	Report Type : Level 4
Client Contact : John Ynfante		Receive DateTime : 4/3/2025 6:20:00 PM	EDD Type : CH2MHILL
Invoice Name : JACOBS Engineering Grou		Purchase Order :	Hard Copy Date :
Invoice Contact : John Ynfante			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
--------	-----------	--------	----------------	----------------	------	------------	--------	----------	--------------

stored in ref #04
(VOA)

Relinquished By :

Date / Time : 4/4/25 1120

Received By :

Date / Time : 4-4-25 11:20

Storage Area : VOA Refridgerator Room