

Cover Page

Order ID : Q1522

Project ID : 540 Degraw St, Brooklyn, NY - E9309

Client : ENTACT

Lab Sample Number

Q1522-01
Q1522-02

Client Sample Number

TW-WTS-03
TW-WTS-04

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: 3/17/2025

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1522

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: PRADIP PRAJAPATI

Date: 03/17/2025

LAB CHRONICLE

OrderID:	Q1522	OrderDate:	3/7/2025 10:29:00 AM
Client:	ENTACT	Project:	540 Degraw St, Brooklyn, NY - E9309
Contact:	Jarod Stanfield	Location:	H31,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1522-01	TW-WTS-03	WATER			03/06/25 10:00			03/07/25
			pH	9040C			03/10/25 08:35	
			TSS	SM2540 D			03/10/25 10:00	
Q1522-02	TW-WTS-04	WATER			03/06/25 10:00			03/07/25
			Anions Group2	300.0			03/07/25 12:37	
			BOD5	SM5210 B			03/07/25 13:15	
			Flash Point	1010B			03/10/25 14:50	
			TSS	SM2540 D			03/10/25 10:00	
Q1522-02DL	TW-WTS-04DL	WATER			03/06/25 10:00			03/07/25
			Anions Group2	300.0			03/07/25 13:42	
Q1522-02DL 2	TW-WTS-04DL2	WATER			03/06/25 10:00			03/07/25
			Anions Group2	300.0			03/07/25 14:04	



SAMPLE DATA

Report of Analysis

Client:	ENTACT	Date Collected:	03/06/25 10:00
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	03/07/25
Client Sample ID:	TW-WTS-03	SDG No.:	Q1522
Lab Sample ID:	Q1522-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
pH	5.91	H	1	0	0	pH		03/10/25 08:35	9040C
TSS	2.10	J	1	1.00	4.00	mg/L		03/10/25 10:00	SM 2540 D-15

Comments: pH result reported at temperature 20.8 °C

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

Report of Analysis

Client:	ENTACT	Date Collected:	03/06/25 10:00
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	03/07/25
Client Sample ID:	TW-WTS-04	SDG No.:	Q1522
Lab Sample ID:	Q1522-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	83.1	OR	1	0.011	0.60	mg/L		03/07/25 12:37	300.0
BOD5	17.6		1	0.17	2.00	mg/L		03/07/25 13:15	SM 5210 B-16
Flash Point	>212		1	0	0	o F		03/10/25 14:50	1010B
TSS	2.40	J	1	1.00	4.00	mg/L		03/10/25 10:00	SM 2540 D-15

Comments: Other method reference for flash point : Pensky-Martens Closed Cup Flash Point ASTM D 93 - IP 34

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

Report of Analysis

Client:	ENTACT	Date Collected:	03/06/25 10:00
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	03/07/25
Client Sample ID:	TW-WTS-04DL	SDG No.:	Q1522
Lab Sample ID:	Q1522-02DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	68.3	OR	5	0.055	3.00	mg/L		03/07/25 13:42	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

Report of Analysis

Client:	ENTACT	Date Collected:	03/06/25 10:00
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	03/07/25
Client Sample ID:	TW-WTS-04DL2	SDG No.:	Q1522
Lab Sample ID:	Q1522-02DL2	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	66.7	D	20	0.22	12.0	mg/L		03/07/25 14:04	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



QC RESULT SUMMARY

Initial and Continuing Calibration Verification

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

RunNo.: LB134955

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV pH	pH	7.01	7	100	90-110	03/10/2025
Sample ID: CCV1 pH	pH	2.01	2.00	101	90-110	03/10/2025
Sample ID: CCV2 pH	pH	12.02	12.00	100	90-110	03/10/2025

Initial and Continuing Calibration Verification

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

RunNo.: LB134959

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	10.2	10	102	90-110	02/21/2025
Chloride	mg/L	3	3	100	90-110	02/21/2025
Fluoride	mg/L	2	2	100	90-110	02/21/2025
Nitrite	mg/L	3	3	100	90-110	02/21/2025
Nitrate	mg/L	2.5	2.5	100	90-110	02/21/2025
Sulfate	mg/L	15.1	15	101	90-110	02/21/2025
Orthophosphate as P	mg/L	5.1	5	102	90-110	02/21/2025
Sample ID: CCV1						
Bromide	mg/L	10.3	10	103	90-110	03/07/2025
Chloride	mg/L	3	3	100	90-110	03/07/2025
Fluoride	mg/L	2	2	100	90-110	03/07/2025
Nitrite	mg/L	3	3	100	90-110	03/07/2025
Nitrate	mg/L	2.6	2.5	104	90-110	03/07/2025
Sulfate	mg/L	15.2	15	101	90-110	03/07/2025
Orthophosphate as P	mg/L	5.2	5	104	90-110	03/07/2025
Sample ID: CCV2						
Bromide	mg/L	10.3	10	103	90-110	03/07/2025
Chloride	mg/L	3.1	3	103	90-110	03/07/2025
Fluoride	mg/L	2	2	100	90-110	03/07/2025
Nitrite	mg/L	3.1	3	103	90-110	03/07/2025
Nitrate	mg/L	2.6	2.5	104	90-110	03/07/2025
Sulfate	mg/L	15.1	15	101	90-110	03/07/2025
Orthophosphate as P	mg/L	5	5	100	90-110	03/07/2025

Initial and Continuing Calibration Verification

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

RunNo.: LB134962

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Flash Point	o F	82.4	81	102	78-84	03/10/2025

Initial and Continuing Calibration Blank Summary

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

RunNo.: LB134959

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	02/21/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	02/21/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	02/21/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	02/21/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	02/21/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	02/21/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	02/21/2025
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	03/07/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/07/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	03/07/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/07/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	03/07/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	03/07/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	03/07/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	03/07/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/07/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	03/07/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/07/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	03/07/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	03/07/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	03/07/2025

Preparation Blank Summary

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	LB134945BL						
BOD5	mg/L	< 0.2000	0.2000	U	0.17	2.0	03/07/2025
Sample ID:	LB134959BLW						
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	03/07/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/07/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	03/07/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	03/07/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	03/07/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	03/07/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	03/07/2025
Sample ID:	LB134975BL						
TSS	mg/L	1	2.0000	J	1	4	03/10/2025

Matrix Spike Summary

Client:	ENTACT	SDG No.:	Q1522
Project:	540 Degraw St, Brooklyn, NY - E9309	Sample ID:	Q1522-02
Client ID:	TW-WTS-04MS	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		0.60	J	10	1	96		03/07/2025
Chloride	mg/L	80-120	82.7	OR	83.1	OR	3	1	-13	*	03/07/2025
Fluoride	mg/L	80-120	3.20		1.30		2	1	95		03/07/2025
Nitrite	mg/L	80-120	11.2	OR	8.50	OR	3	1	90		03/07/2025
Nitrate	mg/L	80-120	14.6	OR	12.3	OR	2.5	1	92		03/07/2025
Sulfate	mg/L	80-120	375	OR	374	OR	15	1	7	*	03/07/2025
Orthophosphate as P	mg/L	80-120	5.20		0.079	U	5	1	104		03/07/2025

Matrix Spike Summary

Client:	ENTACT	SDG No.:	Q1522
Project:	540 Degraw St, Brooklyn, NY - E9309	Sample ID:	Q1522-02
Client ID:	TW-WTS-04MSD	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		0.60	J	10	1	102		03/07/2025
Chloride	mg/L	80-120	82.7	OR	83.1	OR	3	1	-13	*	03/07/2025
Fluoride	mg/L	80-120	3.30		1.30		2	1	100		03/07/2025
Nitrite	mg/L	80-120	11.4	OR	8.50	OR	3	1	97		03/07/2025
Nitrate	mg/L	80-120	14.7	OR	12.3	OR	2.5	1	96		03/07/2025
Sulfate	mg/L	80-120	375	OR	374	OR	15	1	7	*	03/07/2025
Orthophosphate as P	mg/L	80-120	5.20		0.079	U	5	1	104		03/07/2025

Duplicate Sample Summary

Client:	ENTACT	SDG No.:	Q1522
Project:	540 Degraw St, Brooklyn, NY - E9309	Sample ID:	Q1513-05
Client ID:	DSN003DUP	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
TSS	mg/L	+/-5	12.4		12.5		1	0.8		03/10/2025

Duplicate Sample Summary

Client:	ENTACT	SDG No.:	Q1522
Project:	540 Degraw St, Brooklyn, NY - E9309	Sample ID:	Q1516-03
Client ID:	GAS-AUD-25-0026DUP	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
Flash Point	o F	+/-2	>212.0		>212.0		1	0		03/10/2025

Duplicate Sample Summary

Client: ENTACT Project: 540 Degraw St, Brooklyn, NY - E9309 Client ID: TW-WTS-04DUP	SDG No.: Q1522 Sample ID: Q1522-02 Percent Solids for Spike Sample: 0
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
BOD5	mg/L	+/-20	17.6		17.2		1	1.78		03/07/2025

Duplicate Sample Summary

Client: ENTACT	SDG No.: Q1522
Project: 540 Degraw St, Brooklyn, NY - E9309	Sample ID: Q1522-02
Client ID: TW-WTS-04MSD	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
Orthophosphate as P	mg/L	+/-20	5.20		5.20		1	0		03/07/2025
Chloride	mg/L	+/-20	82.7	OR	82.7	OR	1	0		03/07/2025
Sulfate	mg/L	+/-20	375	OR	375	OR	1	0		03/07/2025
Nitrate	mg/L	+/-20	14.6	OR	14.7	OR	1	1		03/07/2025
Nitrite	mg/L	+/-20	11.2	OR	11.4	OR	1	2		03/07/2025
Fluoride	mg/L	+/-20	3.20		3.30		1	3		03/07/2025
Bromide	mg/L	+/-20	10.2		10.8		1	6		03/07/2025

Duplicate Sample Summary

Client: ENTACT Project: 540 Degraw St, Brooklyn, NY - E9309 Client ID: 60299DUP	SDG No.: Q1522 Sample ID: Q1529-06 Percent Solids for Spike Sample: 0
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
pH	pH	+/-20	9.30		9.31		1	0.11		03/10/2025

Laboratory Control Sample Summary

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

Run No.: LB134945

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134945BS							
BOD5	mg/L	198	185		94	1	84.6-115.4	03/07/2025

Laboratory Control Sample Summary

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

Run No.: LB134959

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134959BSW							
Bromide	mg/L	10	10.6		106	1	90-110	03/07/2025
Chloride	mg/L	3	3.10		103	1	90-110	03/07/2025
Fluoride	mg/L	2	2.10		105	1	90-110	03/07/2025
Nitrite	mg/L	3	3.10		103	1	90-110	03/07/2025
Nitrate	mg/L	2.5	2.60		104	1	90-110	03/07/2025
Sulfate	mg/L	15	15.6		104	1	90-110	03/07/2025
Orthophosphate as P	mg/L	5	5.20		104	1	90-110	03/07/2025

Laboratory Control Sample Summary

Client: ENTACT

SDG No.: Q1522

Project: 540 Degraw St, Brooklyn, NY - E9309

Run No.: LB134975

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134975BS							
TSS	mg/L	550	532		97	1	90-110	03/10/2025



RAW DATA

BOD5 LOG

ANALYST: rubin
 On:3/12/2025 12:33:46 PM
 Inst Id :DO METER
 LB :LB134945

SUPERVISOR: Iwona

QC BATCH ID: LB134945

Analysis Date: 03/07/2025

BOD Water: WP112227

MANGANOUS SULFATE SOLUTION: W3103

Starch: W3149

Alkaline Iodide Azide: W3109

Sulfuric acid, 1N: WP110386

Sodium Thiosulfate, 0.025N: W3105

POLYSEED: WP112229

NaOH, 1N: WP111323

GGA: WP112228

IncubatorID: INCUBATOR #3

Chlorine Strips: W3155

GuageID: 0511062

pH Strips: W3140

Zero DO: WP111875

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading (ML)	Final Reading (ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.4	9.4	9.4
WINKLER 2	WINKLER 2	2	300	9.7	19.1	9.4	9.4

Meter Calibration1: 9.45 Zero DO Reading1: 0.08 mg/L (<=0.2 Criteria)

Barometric Pressure1: 755 mmHg DO Meter BOD fluid reading for winkler comparison: 9.48

After Incubation

Meter Calibration2: 7.68 Zero DO Reading2: 0.10 mg/L (<=0.2 Criteria)

Barometric Pressure2: 760 mmHg

QC BATCH ID: LB134945

INCUBATOR TEMP IN(C): 20.0

INCUBATOR TEMP OUT(C): 20.0

TIME IN: 13:15

TIME OUT: 11:20

DATE IN: 03/07/2025

DATE OUT: 03/12/2025

Lab SampleID	Bottle No.	Check CL	Initial PH	Final PH	Temp °C	Sam Vol. (mL)	D.O.1 Initial	D.O.2 Final	Depletion	BOD Result (mg/L)	Avg Result (mg/L)	Comment
LB134945BL	1	No	6.59	N/A	20.80	300	9.48	9.46	0.02	0.02	0.02	
POLYSEED	1					10	9.45	6.70	2.75	0.55	0.54	
POLYSEED	2					15	9.42	5.26	4.16	0.55		
POLYSEED	3					20	9.39	4.07	5.32	0.53		
GGA	1					6	9.44	5.27	4.17	181.5	185.17	
GGA	2					6	9.44	5.20	4.24	185		
GGA	3					6	9.40	5.08	4.32	189		
Q1522-02	1	No	5.97	6.60	20.30	5	9.45	8.82	-	0	17.55	pH Adjusted
Q1522-02	2					20	9.37	7.91	-	0		
Q1522-02	3					50	9.23	4.61	4.62	24.48		
Q1522-02	4					150	8.97	3.12	5.85	10.62		
Q1522-02DUP	1	No	5.97	6.60	20.30	5	9.44	8.95	-	0	17.24	pH Adjusted
Q1522-02DUP	2					20	9.37	7.80	-	0		
Q1522-02DUP	3					50	9.21	4.69	4.52	23.88		
Q1522-02DUP	4					150	8.95	3.11	5.84	10.6		

NOTE: 2ml POLYSEED added to GGA and all the Samples, but not in Blank.

NOTE (For, CBOD5): 0.16 g Nitrification Inhibitor added to GGA and all the Samples, but not in Blank.

Analytical Summary Report

Analysis Method: 9040C

Analyst By : jignesh

Parameter: pH

Supervisor Review By : Iwona

Run Number: LB134955

Slope : 98.6

pH Meter ID : WC PH METER-1

Calibration Standards	Chemtech Log#
PH 4 BUFFER SOLUTION	W3107
BUFFER PH 7.00 GREEN 1PINT PK6	W3093
PH 10.01 BUFFER, COLOR CD 475ML	W3094
buffer solution pH 7 yellow	W3071
Buffer Solution, PH2 (500ml)	W3161
Buffer Solution, PH12 (500ml)	W3072

True Value of ICV = 7.00 Control Limits[+/- 0.1].

True Value of CCV1 = 2.00 Control Limits[+/- 0.1].

True Value of CCV2 = 12.00 Control Limits[+/- 0.1].

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.2	4.01	03/10/2025	08:15
2	CAL2	1	Water	NA	NA	20.2	7.00	03/10/2025	08:16
3	CAL3	1	Water	NA	NA	20.2	10.02	03/10/2025	08:20
4	ICV	1	Water	NA	NA	20.2	7.01	03/10/2025	08:25
5	CCV1	1	Water	NA	NA	20.2	2.01	03/10/2025	08:30
6	Q1522-01	1	Water	NA	NA	20.8	5.91	03/10/2025	08:35
7	Q1528-01	1	Water	NA	NA	20.2	6.54	03/10/2025	08:44
8	Q1528-02	1	Water	NA	NA	20.4	8.40	03/10/2025	08:45
9	Q1528-03	1	Water	NA	NA	20.5	7.32	03/10/2025	08:50
10	Q1529-05	1	Water	NA	NA	20.3	6.14	03/10/2025	09:00
11	Q1529-06	1	Water	NA	NA	20.9	9.30	03/10/2025	09:10
12	Q1529-06DUP	1	Water	NA	NA	20.8	9.31	03/10/2025	09:11
13	CCV2	1	Water	NA	NA	20.2	12.02	03/10/2025	09:15

WORKLIST(Hardcopy Internal Chain)

VB134955

WorkList Name : ph w q1529 WorkList ID : 188130 Department : Wet-Chemistry Date : 03-10-2025 08:03:29

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1522-01	TW-WTS-03	Water	pH	Cool 4 deg C	ENTA05	H31	03/06/2025	9040C
Q1528-01	C FERNOT	Water	pH	Cool 4 deg C	PSEG03	I31	03/07/2025	9040C
Q1528-02	A 22725	Water	pH	Cool 4 deg C	PSEG03	I31	03/07/2025	9040C
Q1528-03	C 22425	Water	pH	Cool 4 deg C	PSEG03	I31	03/07/2025	9040C
Q1529-05	A 60302	Water	pH	Cool 4 deg C	PSEG03	I31	03/07/2025	9040C
Q1529-06	A 60299	Water	pH	Cool 4 deg C	PSEG03	I31	03/07/2025	9040C

Date/Time 03/10/25 08:10
 Raw Sample Received by: SA we
 Raw Sample Relinquished by: SA we

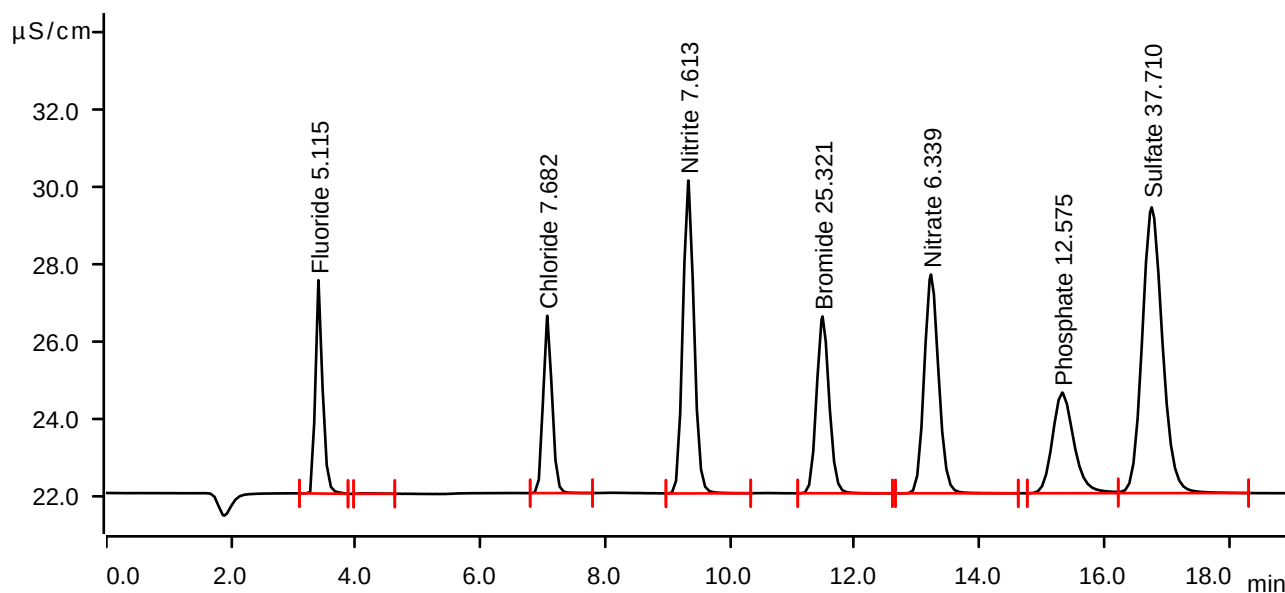
Date/Time 03/10/25 13:00
 Raw Sample Received by: SA we
 Raw Sample Relinquished by: SA we

Instrument II			Analyst :		NF		Method: :00.0 / 9056A					
Ident	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name	date time	wt/Fin	Analyst	
STD1	0	0	0	0	0	0	0	IC1-022125	2/21/2025 11:05	10	NF/IZ	
STD2	0.448	0.678	0.657	2.152	0.544	1.059	3.319	IC1-022125	2/21/2025 11:26	10	NF/IZ	
STD3	0.821	1.223	1.216	4.052	1.014	2.009	6.104	IC1-022125	2/21/2025 11:48	10	NF/IZ	
STD4	1.013	1.524	1.523	5.08	1.272	2.514	7.612	IC1-022125	2/21/2025 12:09	10	NF/IZ	
STD5	1.919	2.879	2.894	9.683	2.411	4.896	14.423	IC1-022125	2/21/2025 12:31	10	NF/IZ	
STD6	3.884	5.815	5.898	19.712	4.921	9.947	29.333	IC1-022125	2/21/2025 12:52	10	NF/IZ	
STD7	5.115	7.682	7.613	25.321	6.339	12.575	37.71	IC1-022125	2/21/2025 13:13	10	NF/IZ	
ICV	2.008	2.989	3.015	10.228	2.532	5.141	15.146	IC1-022125	2/21/2025 13:35	10	NF/IZ	
ICB	0	0	0	0	0	0	0	IC1-022125	2/21/2025 13:56	10	NF/IZ	
CCV	2.023	3.04	3.046	10.276	2.563	5.15	15.171	IC1-022125	3/7/2025 10:50	10	NF/IZ	
CCB	0	0	0	0	0	0	0	IC1-022125	3/7/2025 11:11	10	NF/IZ	
LB134959BLW	0	0	0	0	0	0	0	IC1-022125	3/7/2025 11:33	10	NF/IZ	
LB134959BSW	2.068	3.083	3.115	10.614	2.635	5.237	15.557	IC1-022125	3/7/2025 11:54	10	NF/IZ	
Q1525-01	0.404	3272.64	0	0.461	0.095	0	7.147	IC1-022125	3/7/2025 12:16	10	NF/IZ	
Q1522-02	1.299	83.109	8.52	0.603	12.349	0	374.401	IC1-022125	3/7/2025 12:37	10	NF/IZ	
Q1522-02MS	3.199	82.685	11.245	10.206	14.609	5.157	374.896	IC1-022125	3/7/2025 12:59	10	NF/IZ	
Q1522-02MSD	3.254	82.743	11.425	10.774	14.749	5.218	375.287	IC1-022125	3/7/2025 13:21	10	NF/IZ	
Q1522-02DLX5	0.317	13.65	1.686	0.264	2.314	0	61.322	IC1-022125	3/7/2025 13:42	10	NF/IZ	
Q1522-02DL2X20	0.136	3.336	0.497	0	0.627	0	14.817	IC1-022125	3/7/2025 14:04	10	NF/IZ	
CCV	1.984	3.051	3.058	10.279	2.564	5.028	15.14	IC1-022125	3/7/2025 14:25	10	NF/IZ	
CCB	0	0	0	0	0	0	0	IC1-022125	3/7/2025 14:47	10	NF/IZ	

Clear table

Reviewed By:Iwona
On:3/11/2025 4:16:22
PM
Inst Id :IC-2
LB :LB134959

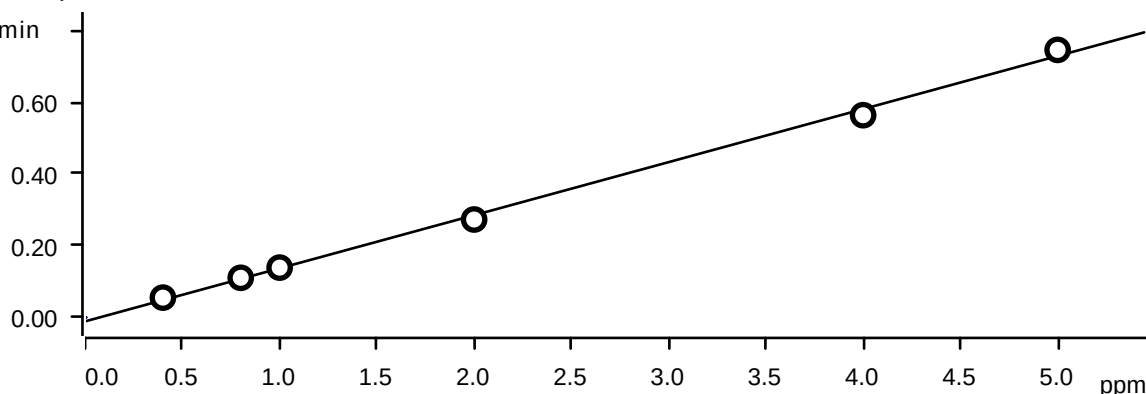
Anions



Peak number	Retention time min	Area ($\mu\text{S/cm}$) x min	Height $\mu\text{S/cm}$	Concentration ppm	Component name
1	3.400	0.7457	5.535	5.115	Fluoride
2	4.197	0.0046	0.012	invalid	
3	7.070	0.7592	4.602	7.682	Chloride
4	9.330	1.6810	8.120	7.613	Nitrite
5	11.483	1.0784	4.588	25.321	Bromide
6	13.222	1.5233	5.678	6.339	Nitrate
7	15.325	1.0441	2.611	12.575	Phosphate
8	16.760	2.7982	7.416	37.710	Sulfate

Fluoride (Anions)

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



Function: $A = -0.0112463 + 0.0147980 \times Q$

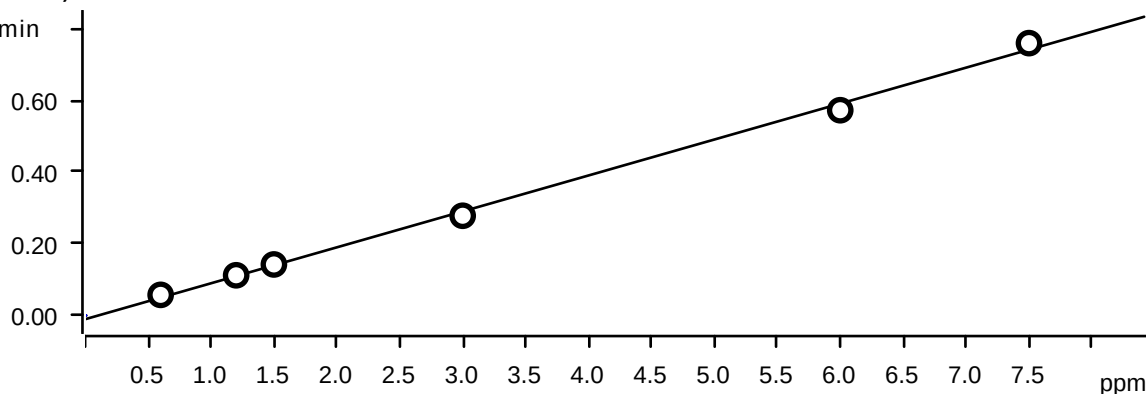
Relative standard deviation 4.464159 %

Correlation coefficient 0.998989

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	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.400	10.0	1.0	1.0	0.055	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	0.800	10.0	1.0	1.0	0.110	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.000	10.0	1.0	1.0	0.139	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	2.000	10.0	1.0	1.0	0.273	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	4.000	10.0	1.0	1.0	0.564	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	5.000	10.0	1.0	1.0	0.746	STD7	2025-02-21 13:13:53 UTC-5	used

Chloride (Anions)

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

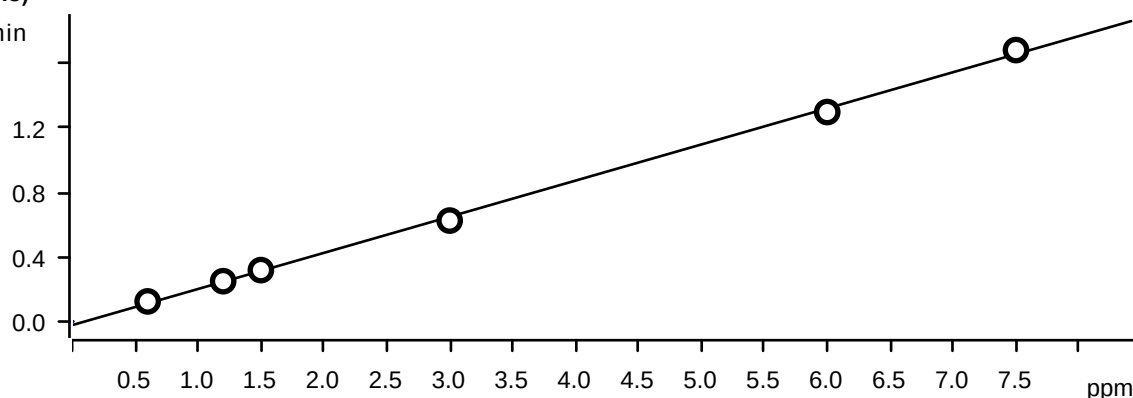


Function: $A = -0.0105167 + 0.0100207 \times Q$

Relative standard deviation 4.669067 %

Correlation coefficient 0.998888

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	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.600	10.0	1.0	1.0	0.057	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	1.200	10.0	1.0	1.0	0.112	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.500	10.0	1.0	1.0	0.142	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	3.000	10.0	1.0	1.0	0.278	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	6.000	10.0	1.0	1.0	0.572	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	7.500	10.0	1.0	1.0	0.759	STD7	2025-02-21 13:13:53 UTC-5	used

Nitrite (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0232250 + 0.0223870 \times Q$

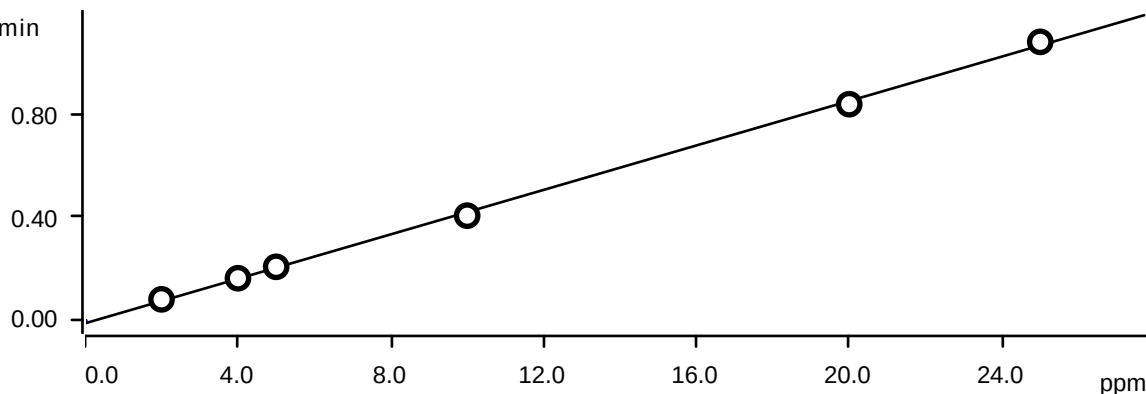
Relative standard deviation 3.068725 %

Correlation coefficient 0.999519

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	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.600	10.0	1.0	1.0	0.124	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	1.200	10.0	1.0	1.0	0.249	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.500	10.0	1.0	1.0	0.318	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	3.000	10.0	1.0	1.0	0.625	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	6.000	10.0	1.0	1.0	1.297	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	7.500	10.0	1.0	1.0	1.681	STD7	2025-02-21 13:13:53 UTC-5	used

Bromide (Anions)

(μS/cm) x min



Function: $A = -0.0113202 + 4.30364E-3 \times Q$

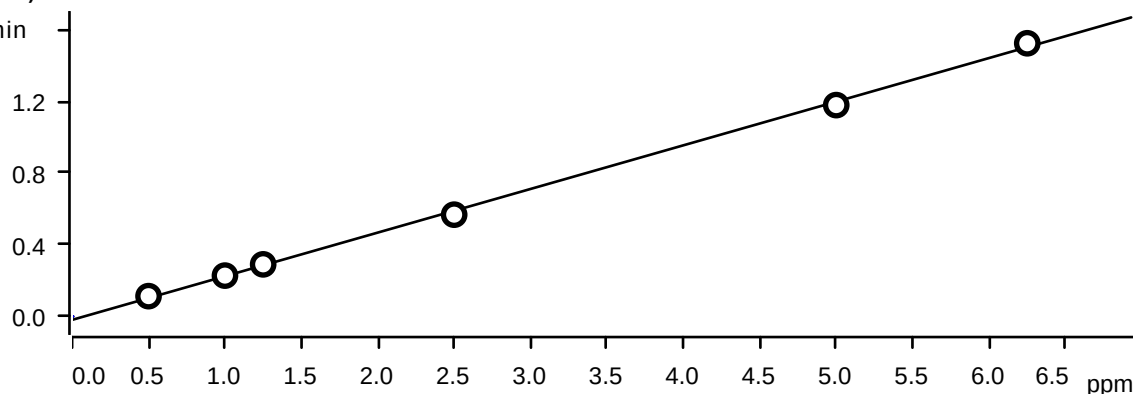
Relative standard deviation 2.628989 %

Correlation coefficient 0.999641

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	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	2.000	10.0	1.0	1.0	0.081	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	4.000	10.0	1.0	1.0	0.163	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	5.000	10.0	1.0	1.0	0.207	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	10.000	10.0	1.0	1.0	0.405	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	20.000	10.0	1.0	1.0	0.837	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	25.000	10.0	1.0	1.0	1.078	STD7	2025-02-21 13:13:53 UTC-5	used

Nitrate (Anions)

(μS/cm) x min

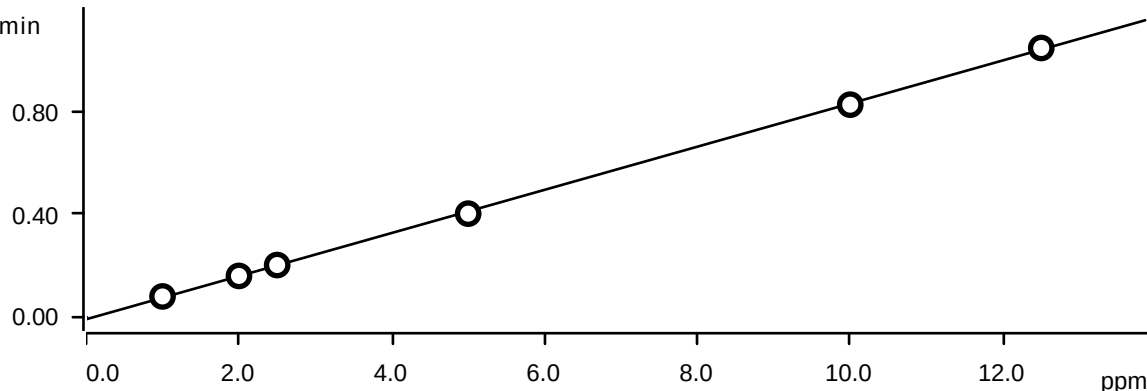


Function: $A = -0.0190446 + 0.0243327 \times Q$

Relative standard deviation 2.936394 %

Correlation coefficient 0.999557

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	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	0.500	10.0	1.0	1.0	0.113	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	1.000	10.0	1.0	1.0	0.228	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	1.250	10.0	1.0	1.0	0.290	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	2.500	10.0	1.0	1.0	0.568	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	5.000	10.0	1.0	1.0	1.178	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	6.250	10.0	1.0	1.0	1.523	STD7	2025-02-21 13:13:53 UTC-5	used

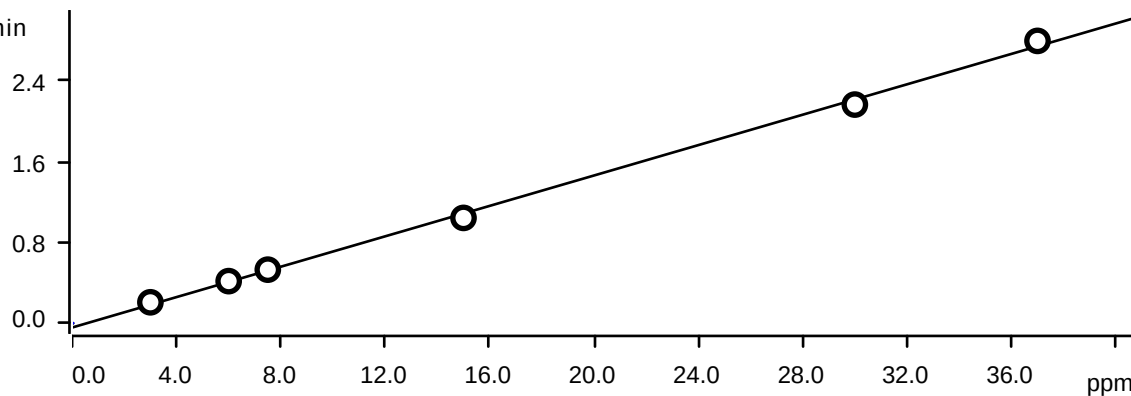
Phosphate (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -6.44326E-3 + 8.35469E-3 \times Q$

Relative standard deviation 1.393773 %

Correlation coefficient 0.999897

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	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	1.000	10.0	1.0	1.0	0.082	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	2.000	10.0	1.0	1.0	0.161	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	2.500	10.0	1.0	1.0	0.204	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	5.000	10.0	1.0	1.0	0.403	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	10.000	10.0	1.0	1.0	0.825	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	12.500	10.0	1.0	1.0	1.044	STD7	2025-02-21 13:13:53 UTC-5	used

Sulfate (Anions)

 $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0430107 + 7.53437E-3 \times Q$

Relative standard deviation 3.742757 %

Correlation coefficient 0.999282

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	2025-02-21 11:05:25 UTC-5	used
Standard 2	1	3.000	10.0	1.0	1.0	0.207	STD2	2025-02-21 11:26:47 UTC-5	used
Standard 3	1	6.000	10.0	1.0	1.0	0.417	STD3	2025-02-21 11:48:11 UTC-5	used
Standard 4	1	7.500	10.0	1.0	1.0	0.531	STD4	2025-02-21 12:09:35 UTC-5	used
Standard 5	1	15.000	10.0	1.0	1.0	1.044	STD5	2025-02-21 12:31:01 UTC-5	used
Standard 6	1	30.000	10.0	1.0	1.0	2.167	STD6	2025-02-21 12:52:27 UTC-5	used
Standard 7	1	37.000	10.0	1.0	1.0	2.798	STD7	2025-02-21 13:13:53 UTC-5	used

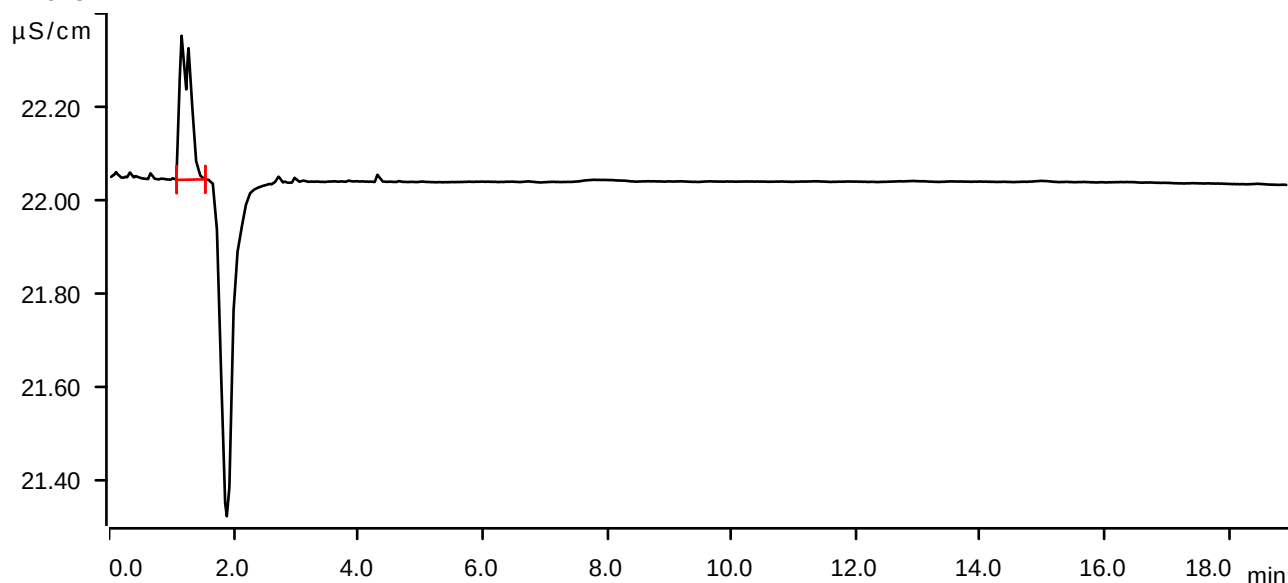
Sample data

Ident STD1
Sample type Standard 1
Determination start 2025-02-21 11:05:25 UTC-5
Method IC1-022125
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 12.05 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time	Area	Height	Concentration	Component name
	min	(µS/cm) x min	µS/cm	ppm	
1	1.167	0.0607	0.309	invalid	

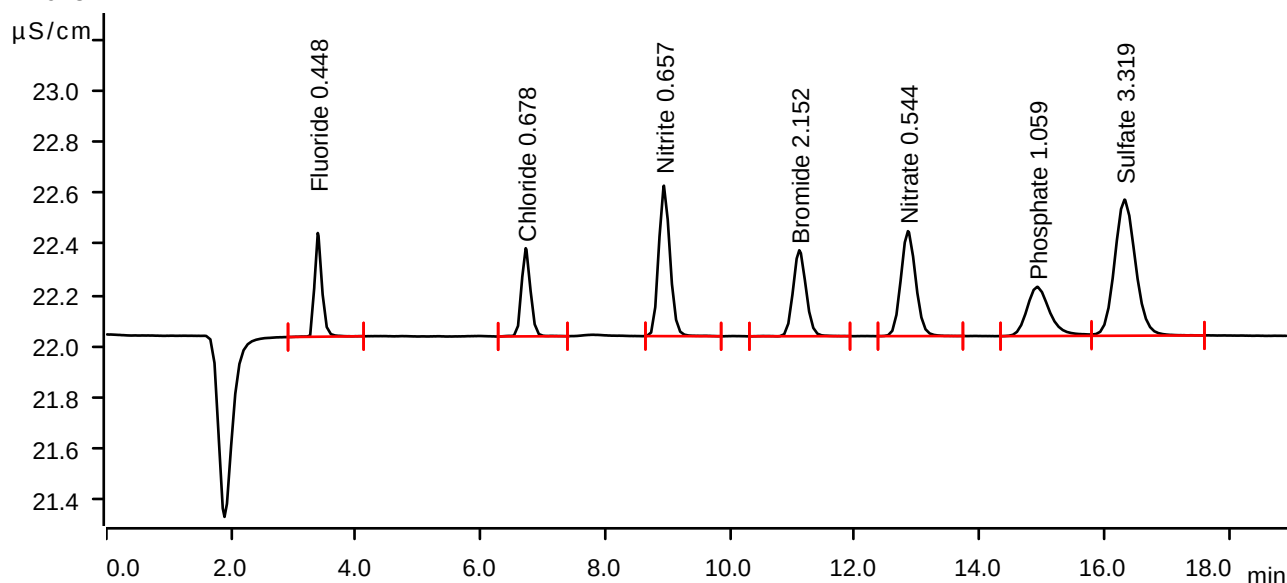
Sample data

Ident STD2
Sample type Standard 2
Determination start 2025-02-21 11:26:47 UTC-5
Method IC1-022125
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 12.11 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	3.390	0.0550	0.405	0.448	Fluoride
2	6.723	0.0574	0.344	0.678	Chloride
3	8.940	0.1238	0.587	0.657	Nitrite
4	11.110	0.0813	0.336	2.152	Bromide
5	12.852	0.1132	0.410	0.544	Nitrate
6	14.923	0.0820	0.192	1.059	Phosphate
7	16.323	0.2071	0.531	3.319	Sulfate

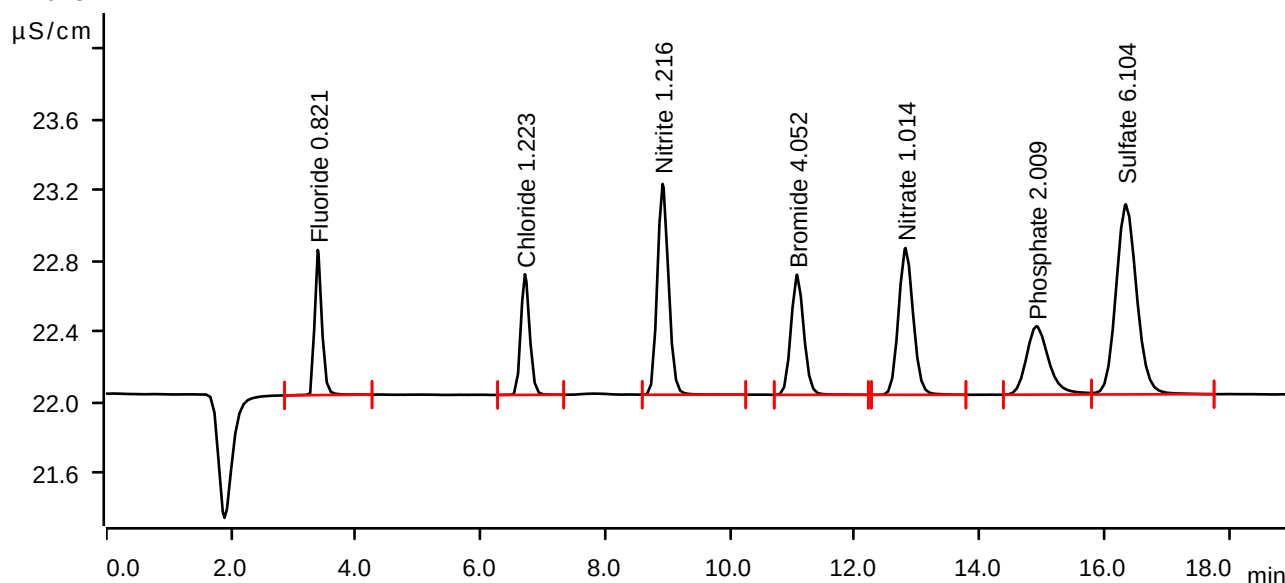
Sample data

Ident STD3
Sample type Standard 3
Determination start 2025-02-21 11:48:11 UTC-5
Method IC1-022125
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 11.94 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	3.390	0.1102	0.822	0.821	Fluoride
2	6.712	0.1120	0.683	1.223	Chloride
3	8.918	0.2491	1.193	1.216	Nitrite
4	11.075	0.1631	0.680	4.052	Bromide
5	12.813	0.2277	0.831	1.014	Nitrate
6	14.912	0.1614	0.387	2.009	Phosphate
7	16.345	0.4169	1.076	6.104	Sulfate

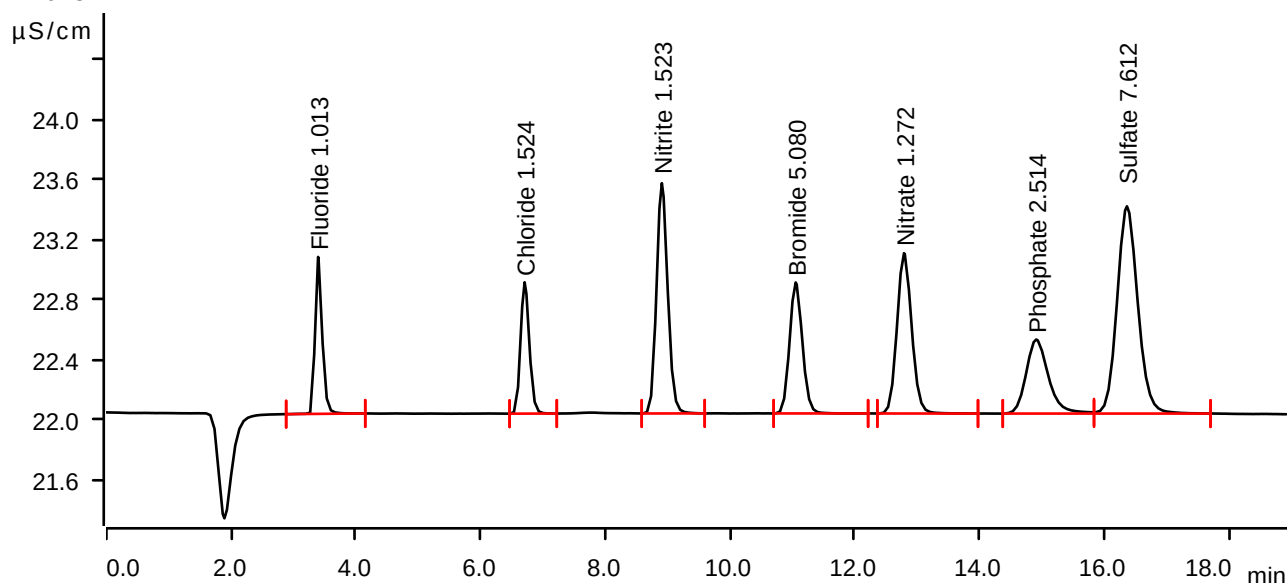
Sample data

Ident STD4
Sample type Standard 4
Determination start 2025-02-21 12:09:35 UTC-5
Method IC1-022125
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 11.94 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	3.395	0.1386	1.042	1.013	Fluoride
2	6.707	0.1422	0.872	1.524	Chloride
3	8.907	0.3178	1.529	1.523	Nitrite
4	11.052	0.2073	0.870	5.080	Bromide
5	12.788	0.2904	1.064	1.272	Nitrate
6	14.908	0.2036	0.492	2.514	Phosphate
7	16.363	0.5305	1.376	7.612	Sulfate

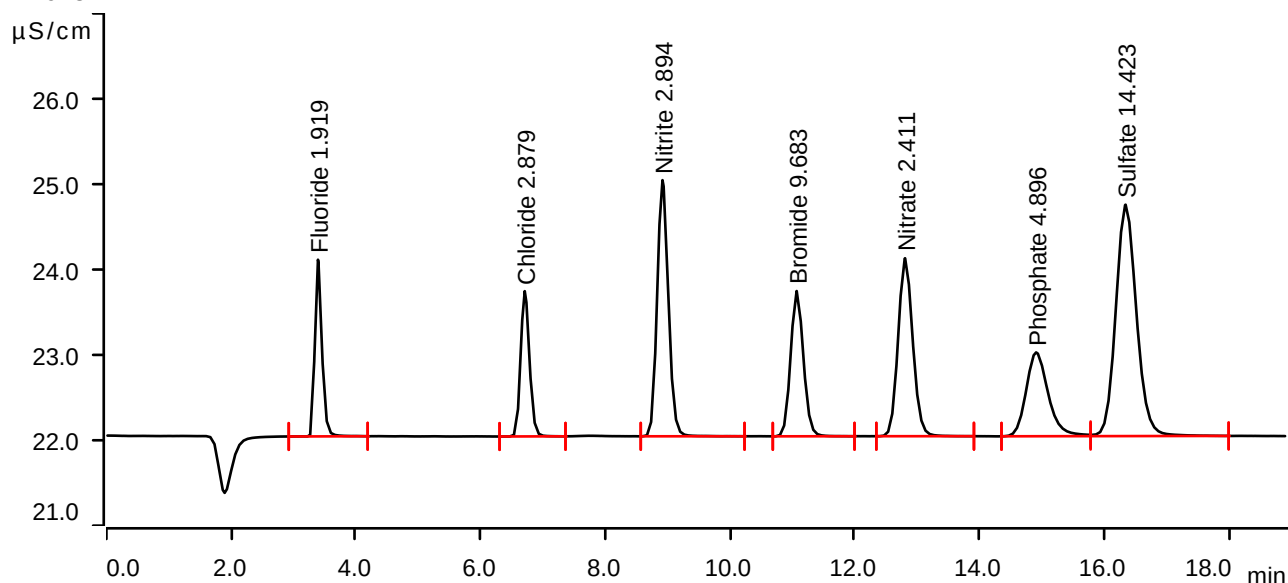
Sample data

Ident STD5
Sample type Standard 5
Determination start 2025-02-21 12:31:01 UTC-5
Method IC1-022125
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 11.88 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	3.393	0.2728	2.069	1.919	Fluoride
2	6.708	0.2780	1.702	2.879	Chloride
3	8.917	0.6246	3.000	2.894	Nitrite
4	11.068	0.4054	1.702	9.683	Bromide
5	12.807	0.5675	2.085	2.411	Nitrate
6	14.907	0.4026	0.982	4.896	Phosphate
7	16.342	1.0436	2.711	14.423	Sulfate

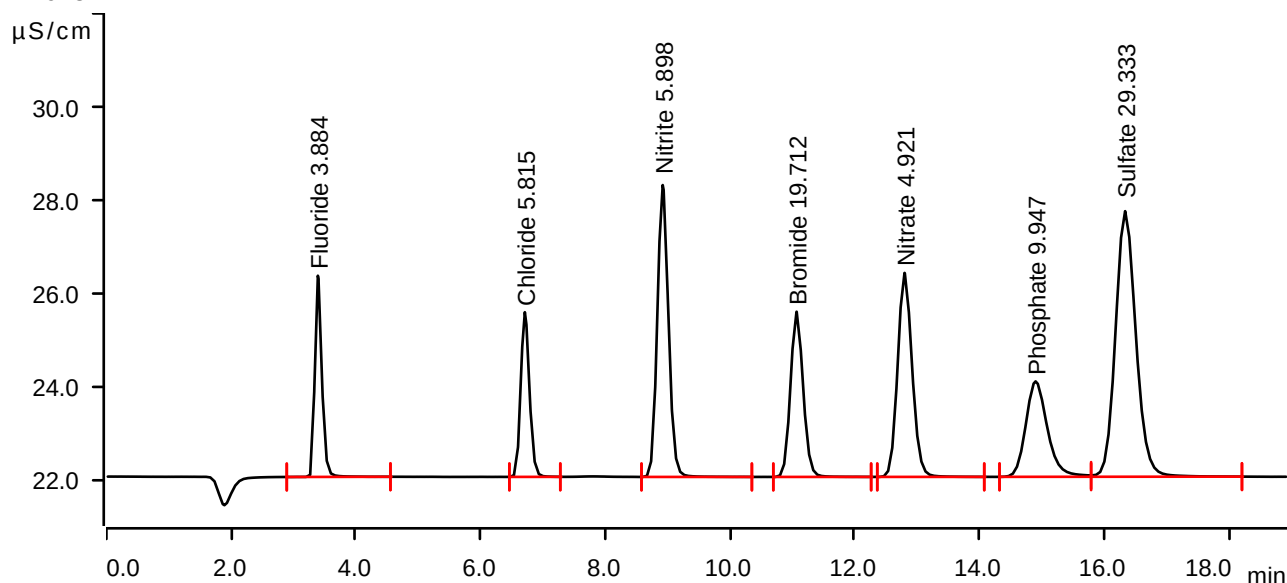
Sample data

Ident STD6
Sample type Standard 6
Determination start 2025-02-21 12:52:27 UTC-5
Method IC1-022125
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 11.94 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	3.392	0.5636	4.320	3.884	Fluoride
2	6.710	0.5722	3.536	5.815	Chloride
3	8.920	1.2971	6.268	5.898	Nitrite
4	11.065	0.8370	3.548	19.712	Bromide
5	12.797	1.1784	4.381	4.921	Nitrate
6	14.898	0.8246	2.050	9.947	Phosphate
7	16.333	2.1670	5.703	29.333	Sulfate

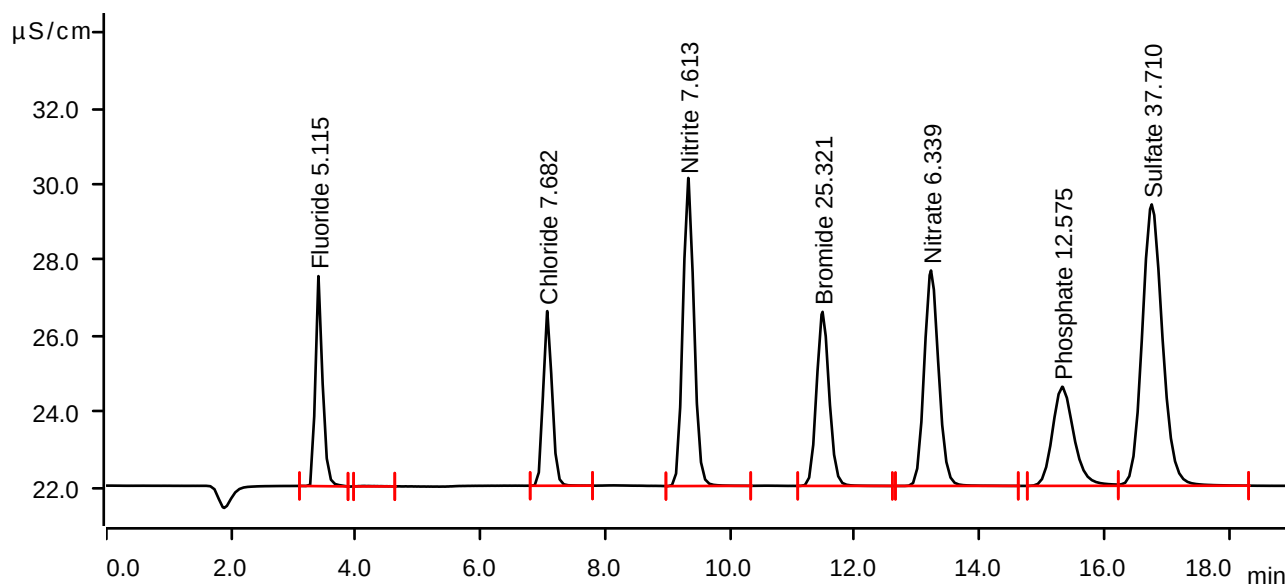
Sample data

Ident STD7
Sample type Standard 7
Determination start 2025-02-21 13:13:53 UTC-5
Method IC1-022125
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 11.88 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	3.400	0.7457	5.535	5.115	Fluoride
2	4.197	0.0046	0.012	invalid	
3	7.070	0.7592	4.602	7.682	Chloride
4	9.330	1.6810	8.120	7.613	Nitrite
5	11.483	1.0784	4.588	25.321	Bromide
6	13.222	1.5233	5.678	6.339	Nitrate
7	15.325	1.0441	2.611	12.575	Phosphate
8	16.760	2.7982	7.416	37.710	Sulfate

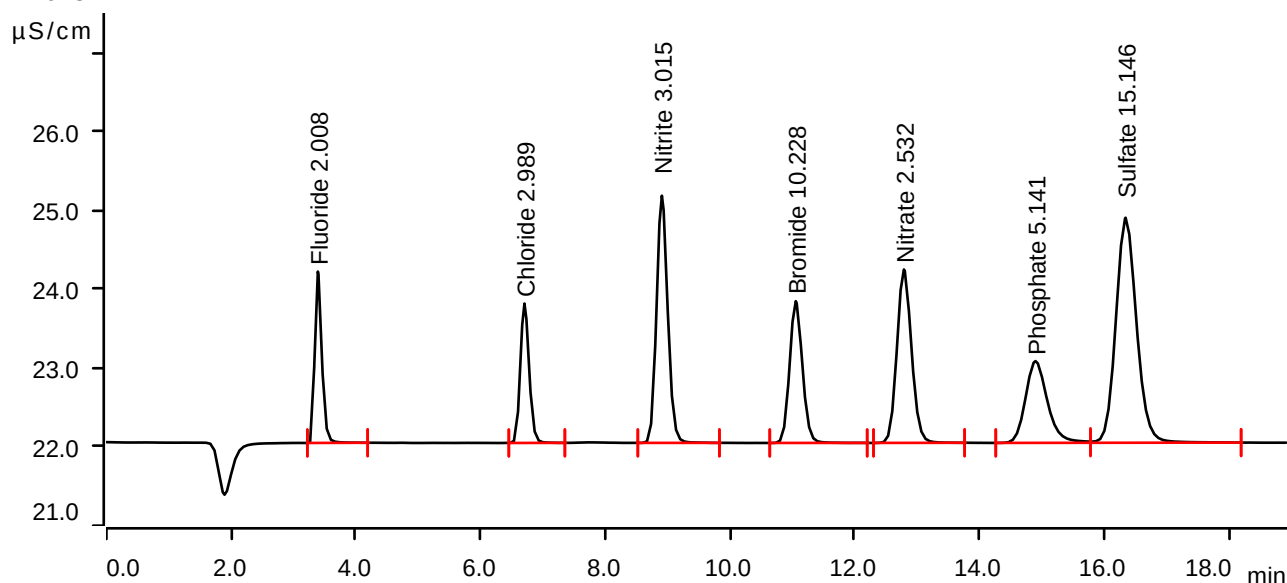
Sample data

Ident ICV
Sample type Check standard 1
Determination start 2025-02-21 13:35:21 UTC-5
Method IC1-022125
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 11.94 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



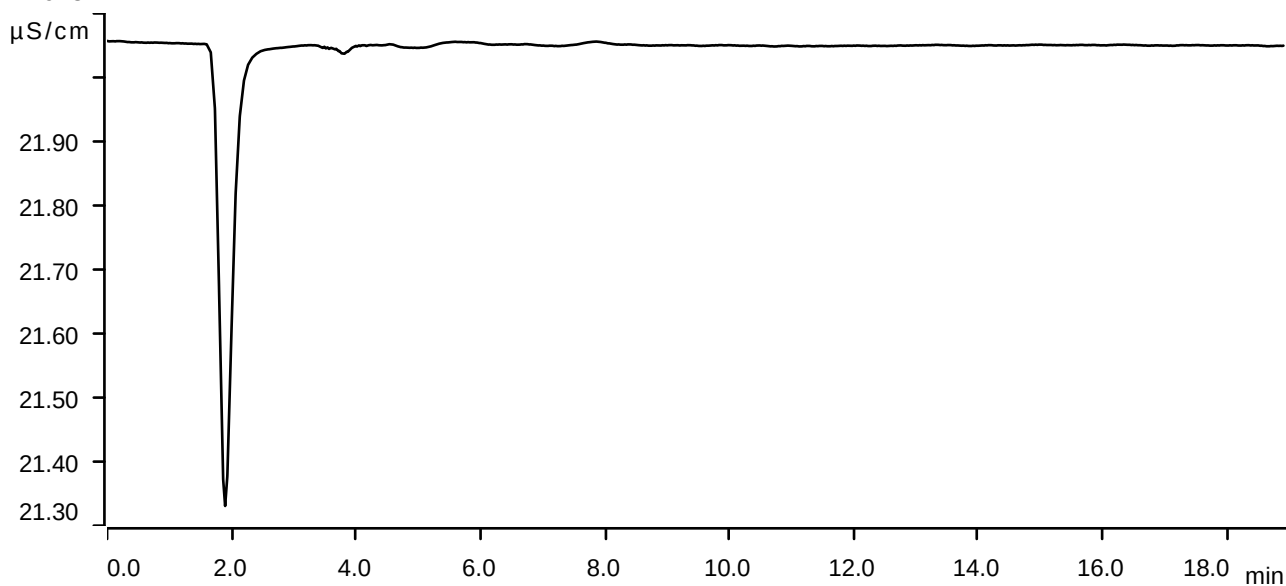
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.392	0.2859	2.174	2.008	Fluoride
2	6.703	0.2890	1.769	2.989	Chloride
3	8.907	0.6518	3.137	3.015	Nitrite
4	11.053	0.4289	1.799	10.228	Bromide
5	12.787	0.5971	2.200	2.532	Nitrate
6	14.897	0.4230	1.038	5.141	Phosphate
7	16.342	1.0982	2.855	15.146	Sulfate

Sample data

Ident ICB
Sample type Sample
Determination start 2025-02-21 13:56:49 UTC-5
Method IC1-022125
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 11.88 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

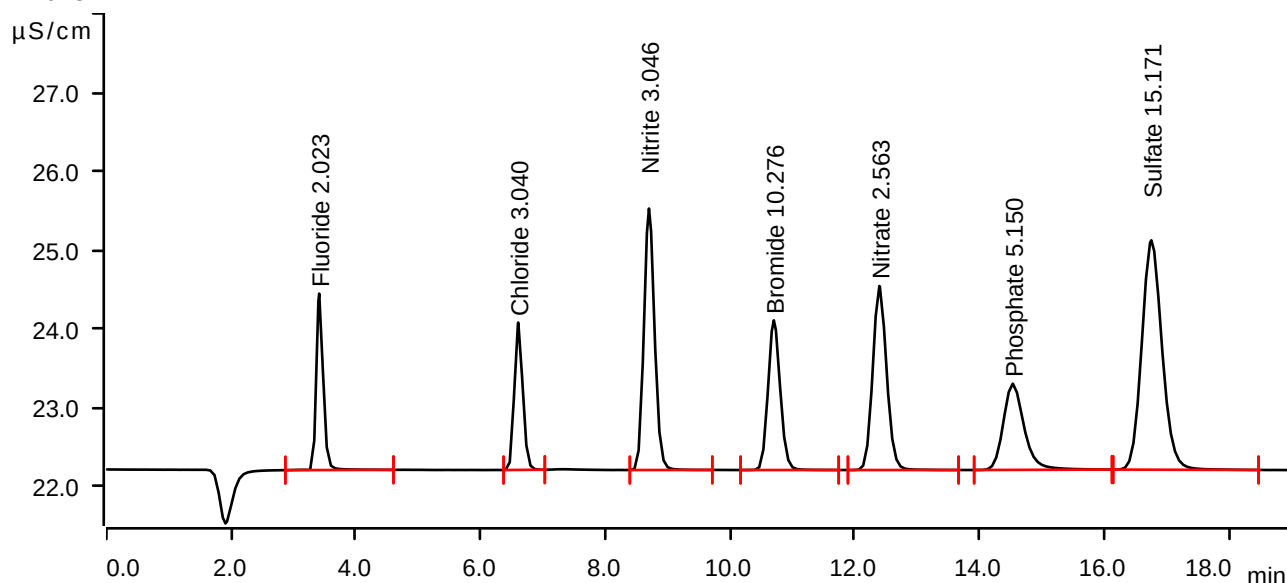
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-03-07 10:50:15 UTC-5
Method IC1-022125
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 10.75 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



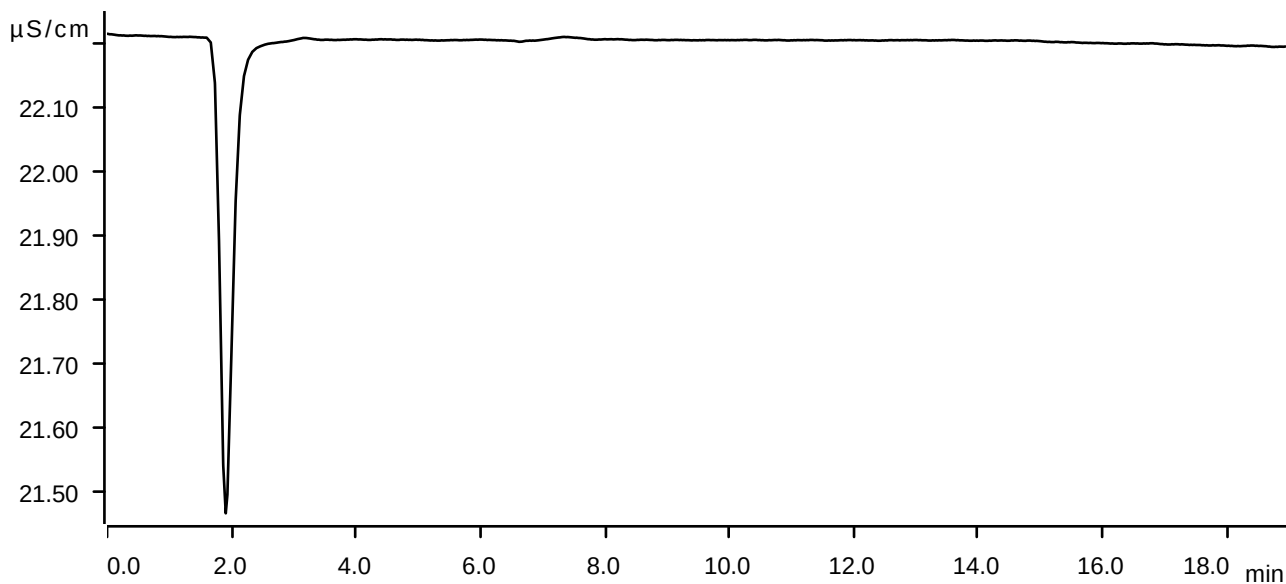
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.413	0.2881	2.239	2.023	Fluoride
2	6.605	0.2941	1.871	3.040	Chloride
3	8.700	0.6587	3.318	3.046	Nitrite
4	10.702	0.4309	1.900	10.276	Bromide
5	12.393	0.6046	2.335	2.563	Nitrate
6	14.532	0.4238	1.093	5.150	Phosphate
7	16.755	1.1000	2.911	15.171	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-03-07 11:11:45 UTC-5
Method IC1-022125
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

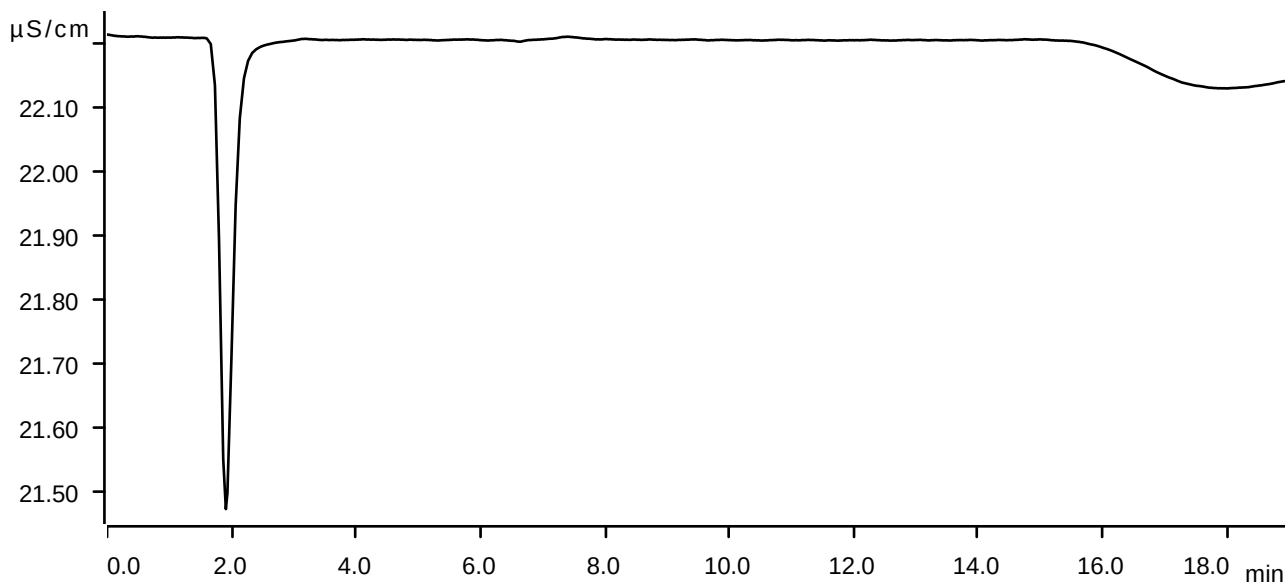
Sample data

Ident LB134959BLW
Sample type Sample
Determination start 2025-03-07 11:33:16 UTC-5
Method IC1-022125
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



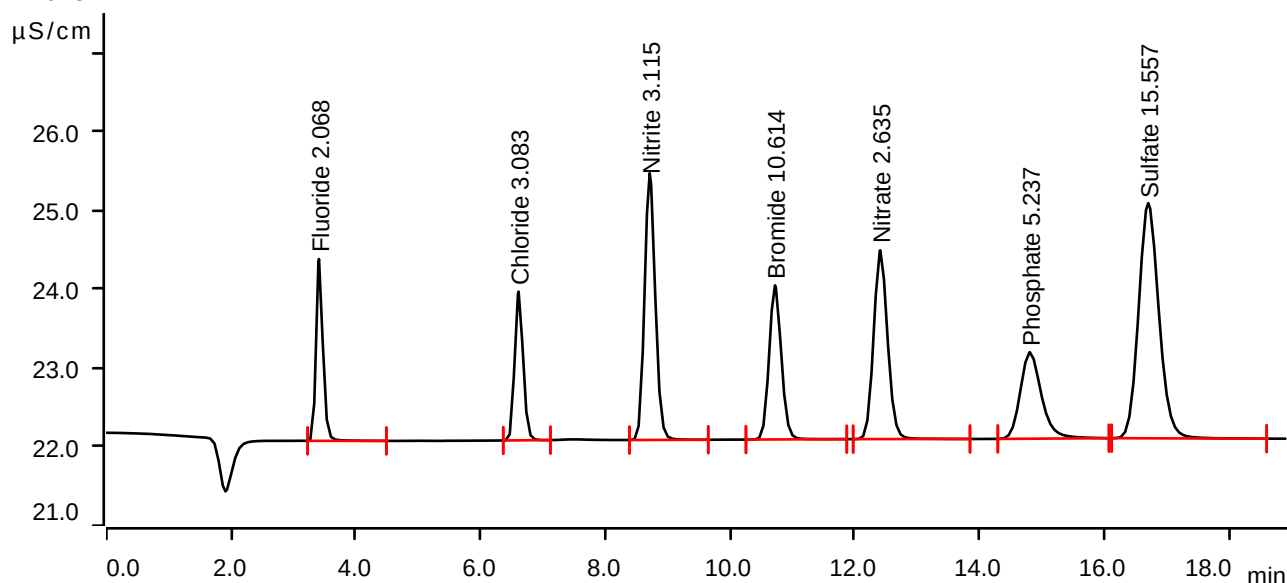
Sample data

Ident LB134959BSW
Sample type Check standard 1
Determination start 2025-03-07 11:54:46 UTC-5
Method IC1-022125
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	3.410	0.2948	2.306	2.068	Fluoride
2	6.610	0.2985	1.887	3.083	Chloride
3	8.712	0.6741	3.384	3.115	Nitrite
4	10.720	0.4455	1.956	10.614	Bromide
5	12.408	0.6222	2.396	2.635	Nitrate
6	14.807	0.4311	1.097	5.237	Phosphate
7	16.703	1.1291	2.984	15.557	Sulfate

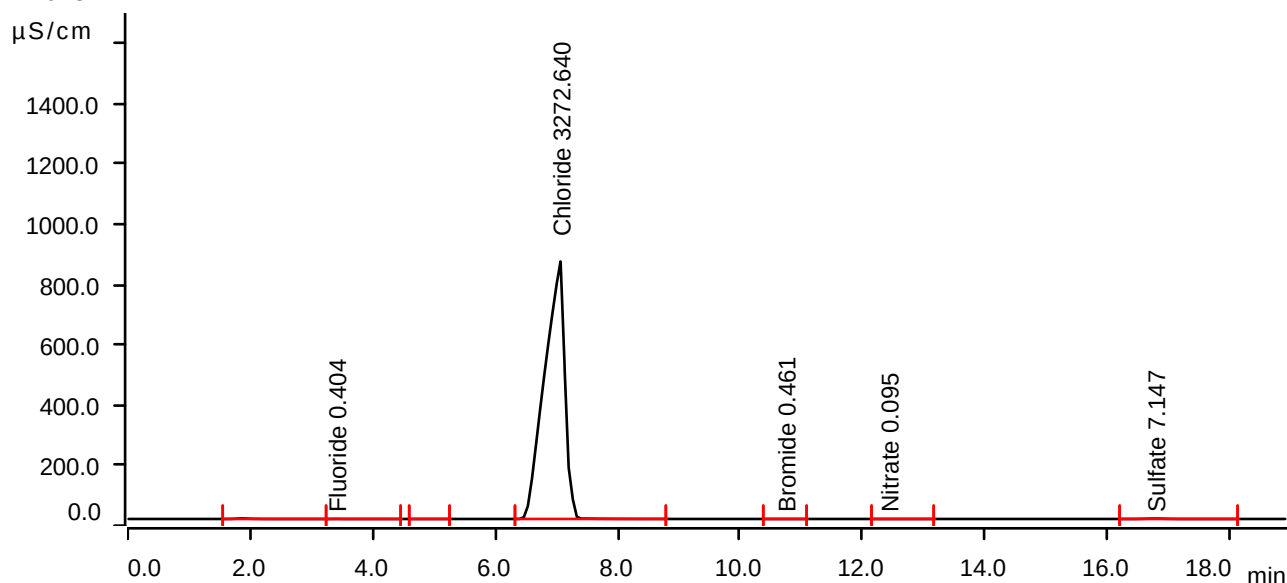
Sample data

Ident Q1525-01
Sample type Sample
Determination start 2025-03-07 12:16:19 UTC-5
Method IC1-022125
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 10.75 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	1.862	0.5067	1.853	invalid	
2	3.407	0.0485	0.316	0.404	Fluoride
3	4.773	0.0030	0.014	invalid	
4	7.068	327.9303	854.600	3272.640	Chloride
5	10.738	0.0085	0.039	0.461	Bromide
6	12.420	0.0042	0.016	0.095	Nitrate
7	16.775	0.4955	1.305	7.147	Sulfate

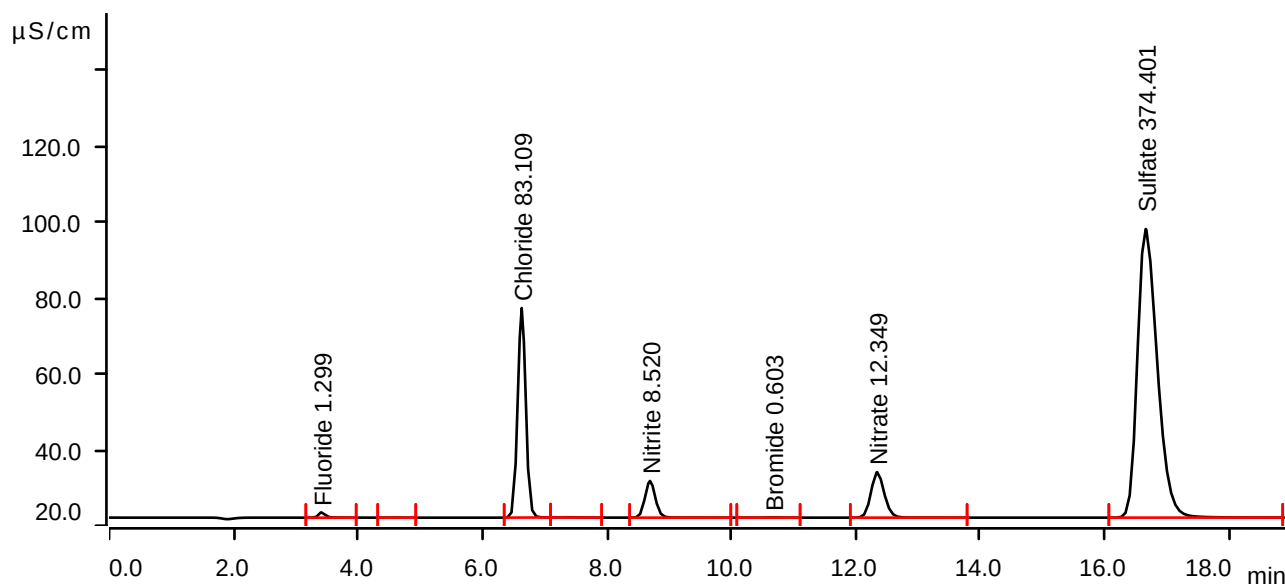
Sample data

Ident Q1522-02
Sample type Sample
Determination start 2025-03-07 12:37:54 UTC-5
Method IC1-022125
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 10.70 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	3.413	0.1810	1.384	1.299	Fluoride
2	4.592	0.0045	0.026	invalid	
3	6.632	8.3176	55.216	83.109	Chloride
4	7.333	0.0208	0.056	invalid	
5	8.693	1.8841	9.662	8.520	Nitrite
6	10.670	0.0146	0.060	0.603	Bromide
7	12.343	2.9857	11.995	12.349	Nitrate
8	16.658	28.1657	76.078	374.401	Sulfate

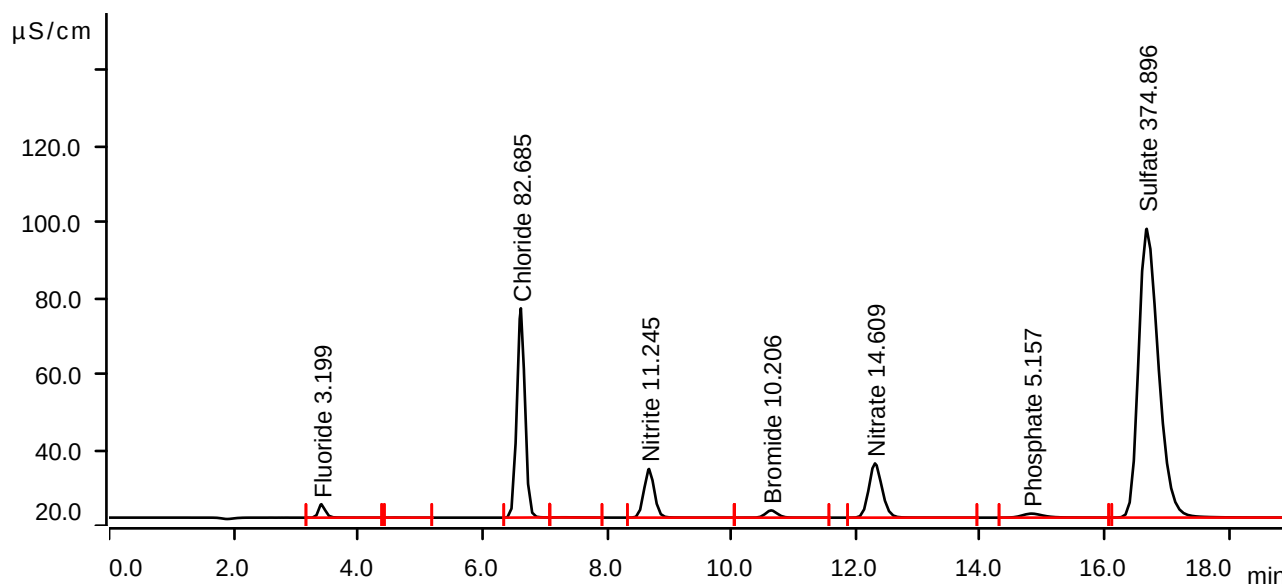
Sample data

Ident Q1522-02MS
Sample type Sample
Determination start 2025-03-07 12:59:27 UTC-5
Method IC1-022125
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 10.64 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	3.413	0.4622	3.546	3.199	Fluoride
2	4.588	0.0045	0.024	invalid	
3	6.618	8.2751	55.155	82.685	Chloride
4	7.330	0.0183	0.051	invalid	
5	8.678	2.4942	12.822	11.245	Nitrite
6	10.640	0.4279	1.908	10.206	Bromide
7	12.308	3.5357	14.297	14.609	Nitrate
8	14.825	0.4244	1.060	5.157	Phosphate
9	16.675	28.2030	76.107	374.896	Sulfate

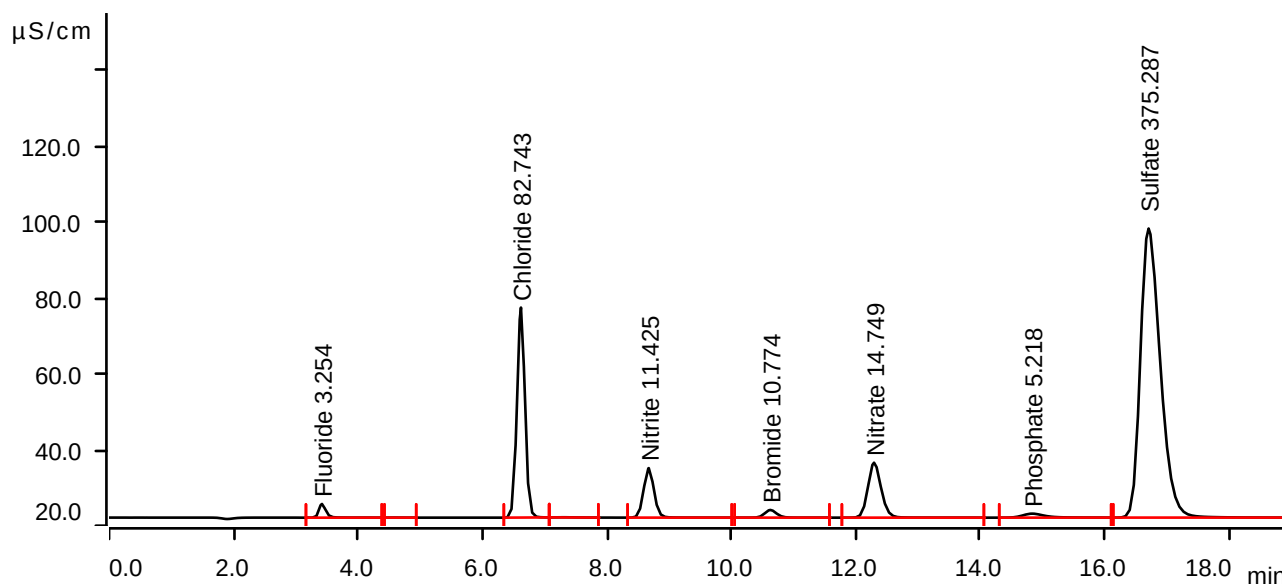
Sample data

Ident Q1522-02MSD
Sample type Sample
Determination start 2025-03-07 13:21:01 UTC-5
Method IC1-022125
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 10.53 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	3.422	0.4703	3.615	3.254	Fluoride
2	4.593	0.0042	0.024	invalid	
3	6.620	8.2809	55.344	82.743	Chloride
4	7.305	0.0173	0.049	invalid	
5	8.673	2.5345	13.053	11.425	Nitrite
6	10.628	0.4524	2.022	10.774	Bromide
7	12.293	3.5698	14.484	14.749	Nitrate
8	14.835	0.4295	1.050	5.218	Phosphate
9	16.705	28.2325	76.188	375.287	Sulfate

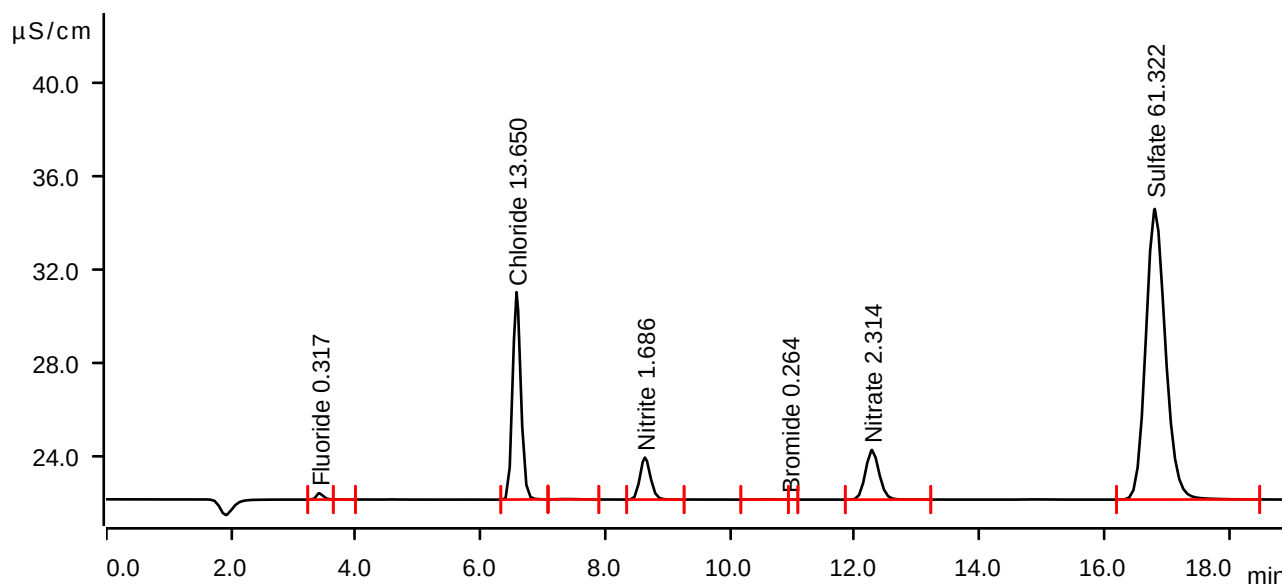
Sample data

Ident Q1522-02DLX5
Sample type Sample
Determination start 2025-03-07 13:42:35 UTC-5
Method IC1-022125
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 10.47 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	3.415	0.0356	0.277	0.317	Fluoride
2	3.720	0.0017	0.010	invalid	
3	6.577	1.3573	8.908	13.650	Chloride
4	7.362	0.0059	0.015	invalid	
5	8.635	0.3542	1.804	1.686	Nitrite
6	10.598	0.0029	0.012	invalid	
7	10.953	0.0001	0.001	0.264	Bromide
8	12.275	0.5440	2.134	2.314	Nitrate
9	16.810	4.5772	12.482	61.322	Sulfate

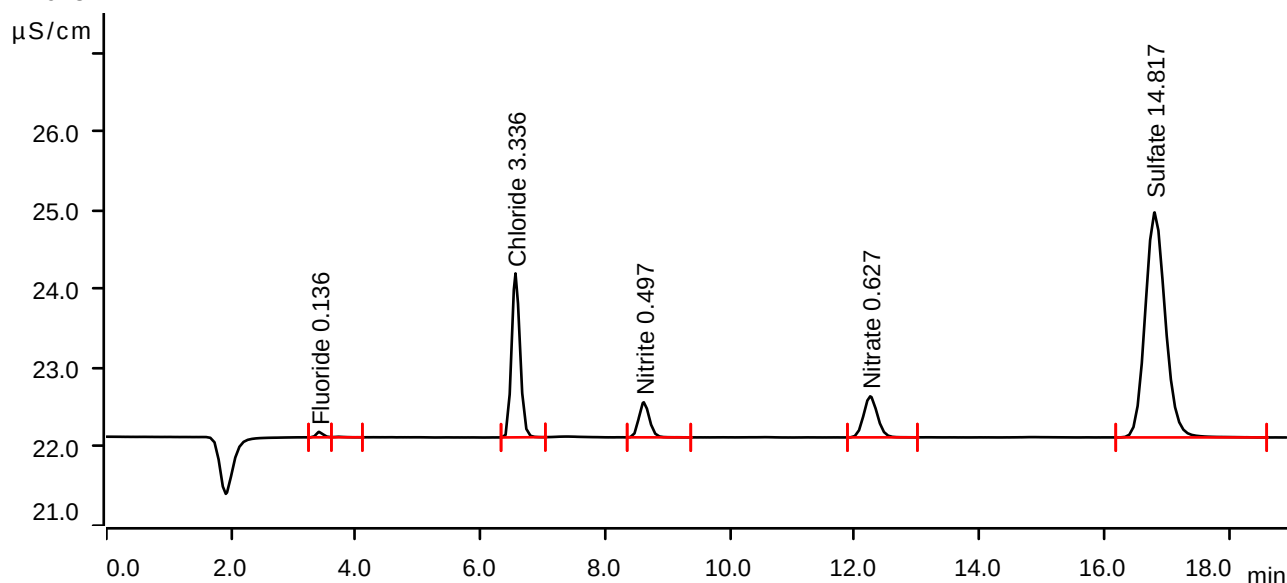
Sample data

Ident Q1522-02DL2X20
Sample type Sample
Determination start 2025-03-07 14:04:09 UTC-5
Method IC1-022125
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	3.412	0.0089	0.069	0.136	Fluoride
2	3.725	0.0012	0.007	invalid	
3	6.560	0.3237	2.080	3.336	Chloride
4	8.617	0.0880	0.445	0.497	Nitrite
5	12.247	0.1334	0.521	0.627	Nitrate
6	16.807	1.0734	2.855	14.817	Sulfate

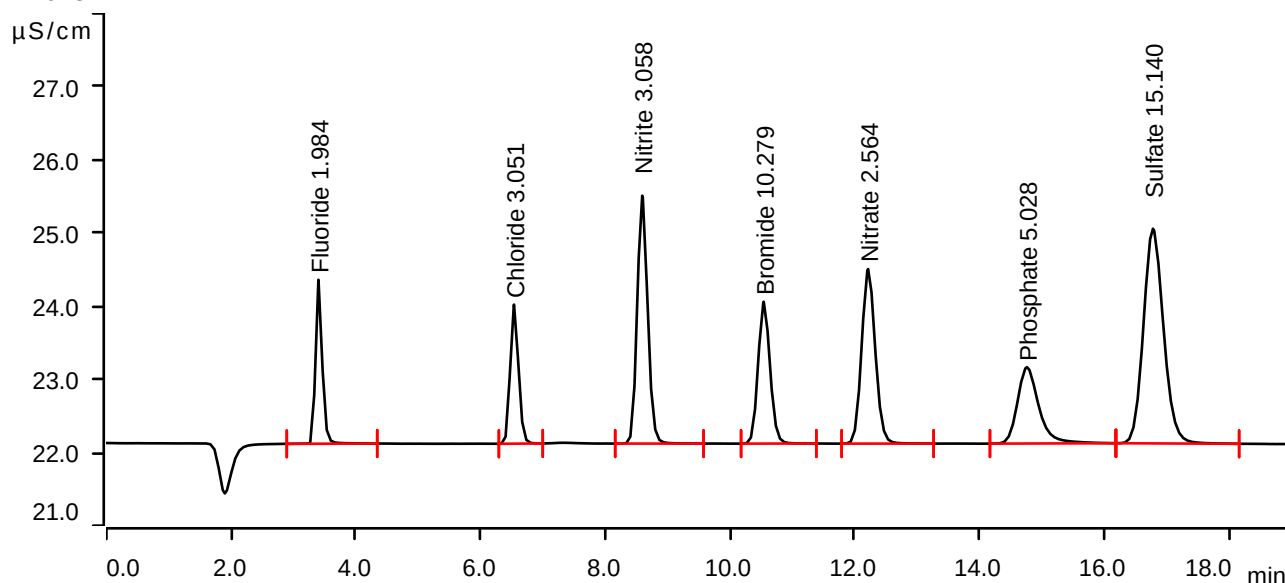
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-03-07 14:25:43 UTC-5
Method IC1-022125
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 12.11 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



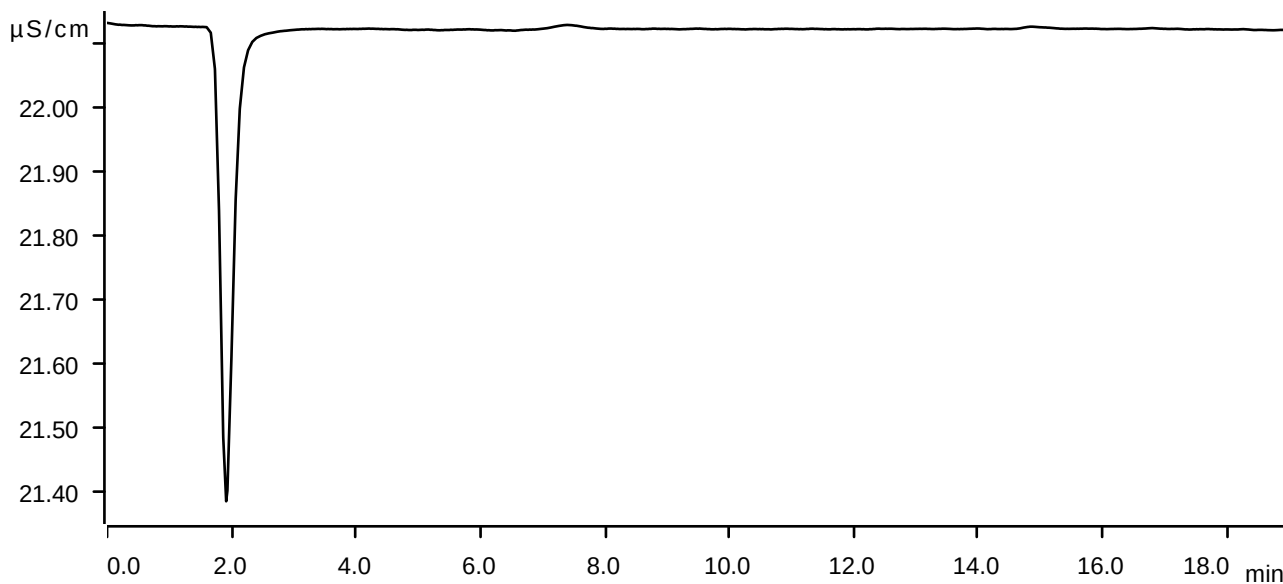
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.400	0.2823	2.240	1.984	Fluoride
2	6.537	0.2952	1.900	3.051	Chloride
3	8.592	0.6614	3.388	3.058	Nitrite
4	10.540	0.4310	1.939	10.279	Bromide
5	12.213	0.6049	2.386	2.564	Nitrate
6	14.760	0.4137	1.044	5.028	Phosphate
7	16.780	1.0977	2.934	15.140	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-03-07 14:47:13 UTC-5
Method IC1-022125
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 10.70 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

Analytical Summary Report

Analysis Method: 1010B

Reviewed By: rubina

Parameter: Flash Point

Supervisor Review By: Iwona

Run Number: LB134962

Ambient Barometric Pressure (mmHg): 760.00

Thermometer ID: Flash Point

Barometric Scale ID: 0511064

Reagent/Standard	Lot/Log #
p-xylene (ICV)	W3159

Seq	LabID	True Value °F	DL	Initial Sample °C	Celsius °C	Result °F	Final Result °F	Anal Date	Anal Time
1	ICV	81	1	8	28.00	82.4	82.4	03/10/2025	12:50
2	Q1516-03		1	15	100.00	>212.0	>212.0	03/10/2025	13:20
3	Q1516-03DUP		1	15	100.00	>212.0	>212.0	03/10/2025	13:50
4	Q1517-01		1	14	100.00	>212.0	>212.0	03/10/2025	14:20
5	Q1522-02		1	14	100.00	>212.0	>212.0	03/10/2025	14:50
6	Q1529-05		1	15	100.00	>212.0	>212.0	03/10/2025	15:20
7	Q1529-06		1	13	100.00	>212.0	>212.0	03/10/2025	15:50
8	Q1538-01		1	15	100.00	>212.0	>212.0	03/10/2025	16:20

Result = (Celsius * 1.8) + 32

Final Result = Result + (760 - Ambient Barometric Pressure) * 0.06

WORKLIST(Hardcopy Internal Chain)

LB134962

WorkList Name : fp-3-10

WorkList ID : 188132

Department : Wet-Chemistry

Date : 03-10-2025 08:06:25

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1516-03 F	GAS-AUD-25-0026	Water	Flash Point	Cool 4 deg C	PSEG03	I21	03/06/2025	1010B
Q1517-01 D	MOO-25-0062	Water	Flash Point	Cool 4 deg C	PSEG03	I31	03/06/2025	1010B
Q1522-02 C	TW-WTS-04	Water	Flash Point	Cool 4 deg C	ENTA05	H31	03/06/2025	1010B
Q1529-05 B	60302	Water	Flash Point	Cool 4 deg C	PSEG03	I31	03/07/2025	1010B
Q1529-06 B	60299	Water	Flash Point	Cool 4 deg C	PSEG03	I31	03/07/2025	1010B

Date/Time 03/10/2025 12:40
Raw Sample Received by: RM (wsg)
Raw Sample Relinquished by: JH (wsg)

Date/Time 03/10/2025 12:06
Raw Sample Received by: JH (wsg)
Raw Sample Relinquished by: RM (wsg)

WORKLIST(Hardcopy Internal Chain)

LB134962

WorkList Name : FP-03-10

WorkList ID : 188165

Department : Wet-Chemistry

Date : 03-10-2025 12:03:26

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1538-01E	BELL-25-0004	Water	Flash Point	Cool 4 deg C	PSEG03	H21	03/10/2025	1010B

Date/Time 03/10/2025 12:40
 Raw Sample Received by: RM
 Raw Sample Relinquished by: JH (WOC)

Date/Time 03/10/2025 17:00
 Raw Sample Received by: JH (WOC)
 Raw Sample Relinquished by: RM (WOC)

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona

ANALYST: jignesh

Date: 03/07/2025

Run Number: LB134975

BalanceID: WC SC-6

OvenID: WC OVEN-1

FilterID: 17416528

ThermometerID: WET OVEN#1

TEMP1 IN: 103 °C 03/07/2025 14:00 TEMP1 OUT: 104 °C 03/07/2025 15:00
 TEMP2 IN: 103 °C 03/07/2025 15:30 TEMP2 OUT: 104 °C 03/07/2025 16:30
 TEMP3 IN: 104 °C 03/10/2025 10:00 TEMP3 OUT: 103 °C 03/10/2025 11:40
 TEMP4 IN: 104 °C 03/10/2025 12:25 TEMP4 OUT: 103 °C 03/10/2025 14:20

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 @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
1	LB134975BL	LB134975BL	1.3562	1.3562	100	1.3563	1.3563	1.3563	0.0001	1
2	LB134975BS	LB134975BS	1.4893	1.4893	100	1.5425	1.5425	1.5425	0.0532	532
3	Q1512-01	TOWERS-1	1.3575	1.3575	1000	1.3618	1.3618	1.3618	0.0043	4.3
4	Q1512-02	TOWERS-2	1.4010	1.4010	2000	1.4102	1.4102	1.4102	0.0092	4.6
5	Q1513-01	DSN002	1.3591	1.3591	1000	1.3729	1.3729	1.3729	0.0138	13.8
6	Q1513-03	DSN001	1.3558	1.3558	1000	1.3823	1.3823	1.3823	0.0265	26.5
7	Q1513-05	DSN003	1.4855	1.4855	1000	1.4979	1.4979	1.4979	0.0124	12.4
8	Q1513-05DUP	DSN003DUP	1.4995	1.4995	1000	1.5120	1.5120	1.5120	0.0125	12.5
9	Q1519-01	WATER TREATMENT DISCHARGE	1.4162	1.4162	1000	1.4383	1.4383	1.4383	0.0221	22.1
10	Q1522-01	TW-WTS-03	1.3951	1.3951	950	1.3971	1.3971	1.3971	0.0020	2.1
11	Q1522-02	TW-WTS-04	1.5016	1.5016	500	1.5028	1.5028	1.5028	0.0012	2.4

A = Sample Volume (ml)
 B = Final Empty Dish Weight (g)
 C = Final Empty Dish + Sample weight after 1.5 hr drying @105°C(g)
 D = Weight (g)

Weight (g) = C - B

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

WORKLIST(Hardcopy Internal Chain)

JB 134975

WorkList Name : tss q1519 WorkList ID : 188127 Department : Wet-Chemistry Date : 03-10-2025 07:58:51

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1512-01	B TOWERS-1	Water	TSS	Cool 4 deg C	PSEG04	I21	03/06/2025	SM2540 D
Q1512-02	B,C TOWERS-2	Water	TSS	Cool 4 deg C	PSEG04	I21	03/06/2025	SM2540 D
Q1513-01	F DSN002	Water	TSS	Cool 4 deg C	PSEG04	I21	03/06/2025	SM2540 D
Q1513-03	F DSN001	Water	TSS	Cool 4 deg C	PSEG04	I21	03/06/2025	SM2540 D
Q1513-05	F,D DSN003	Water	TSS	Cool 4 deg C	PSEG04	I21	03/06/2025	SM2540 D
Q1519-01	F WATER TREATMENT DISCHAF	Water	TSS	Cool 4 deg C	VERI01	F11	03/06/2025	SM2540 D
Q1522-01	TW-WTS-03	Water	TSS	Cool 4 deg C	ENTA05	H31	03/06/2025	SM2540 D
Q1522-02	D TW-WTS-04	Water	TSS	Cool 4 deg C	ENTA05	H31	03/06/2025	SM2540 D

Date/Time 03/10/25 08:10
 Raw Sample Received by: JB 134975
 Raw Sample Relinquished by: CP SR

Date/Time 03/10/25 13:30
 Raw Sample Received by: CP SR
 Raw Sample Relinquished by: JB 134975

Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QC Batch ID # LB134945

Review By	rubina	Review On	3/12/2025 12:32:12 PM
Supervise By	Iwona	Supervise On	3/12/2025 12:33:46 PM
SubDirectory	LB134945	Test	BOD5
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	WP112227,W3149,WP110386,W3103,W3109,W3105,WP112229,WP112228,WP111323		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB134945BL	LB134945BL	MB	03/07/25 13:15		rubina	OK
2	LB134945BS	LB134945BS	LCS	03/07/25 13:15		rubina	OK
3	Q1522-02	TW-WTS-04	SAM	03/07/25 13:15		rubina	OK
4	Q1522-02DUP	TW-WTS-04DUP	DUP	03/07/25 13:15		rubina	OK

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB134955

Review By	jignesh	Review On	3/10/2025 9:26:31 AM
Supervise By	Iwona	Supervise On	3/10/2025 10:05:02 AM
SubDirectory	LB134955	Test	pH
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	W3107,W3093,W3094,W3071,W3161,W3072		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	03/10/25 08:15		jignesh	OK
2	CAL2	CAL2	CAL	03/10/25 08:16		jignesh	OK
3	CAL3	CAL3	CAL	03/10/25 08:20		jignesh	OK
4	ICV	ICV	ICV	03/10/25 08:25		jignesh	OK
5	CCV1	CCV1	CCV	03/10/25 08:30		jignesh	OK
6	Q1522-01	TW-WTS-03	SAM	03/10/25 08:35		jignesh	OK
7	Q1528-01	FERNOT	SAM	03/10/25 08:44		jignesh	OK
8	Q1528-02	22725	SAM	03/10/25 08:45		jignesh	OK
9	Q1528-03	22425	SAM	03/10/25 08:50		jignesh	OK
10	Q1529-05	60302	SAM	03/10/25 09:00		jignesh	OK
11	Q1529-06	60299	SAM	03/10/25 09:10		jignesh	OK
12	Q1529-06DUP	60299DUP	DUP	03/10/25 09:11		jignesh	OK
13	CCV2	CCV2	CCV	03/10/25 09:15		jignesh	OK

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB134959

Review By	Niha	Review On	3/11/2025 9:15:10 AM
Supervise By	Iwona	Supervise On	3/11/2025 4:16:22 PM
SubDirectory	LB134959	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP112016,WP112017,WP112018,WP112019,WP112020,WP112021,WP112022		
ICV Standard	WP112023		
CCV Standard	WP112231		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112232		
Chk Standard	WP112024,WP112025		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	02/21/25 11:05	All standards, samples, and	NF/IZ	OK
2	STD2	STD2	CAL2	02/21/25 11:26	QC are filtered through	NF/IZ	OK
3	STD3	STD3	CAL3	02/21/25 11:48	0.45um, filter lot W3160	NF/IZ	OK
4	STD4	STD4	CAL4	02/21/25 12:09		NF/IZ	OK
5	STD5	STD5	CAL5	02/21/25 12:31		NF/IZ	OK
6	STD6	STD6	CAL6	02/21/25 12:52		NF/IZ	OK
7	STD7	STD7	CAL7	02/21/25 13:13		NF/IZ	OK
8	ICV1	ICV1	ICV	02/21/25 13:35		NF/IZ	OK
9	ICB1	ICB1	ICB	02/21/25 13:56		NF/IZ	OK
10	CCV1	CCV1	CCV	03/07/25 10:50		NF/IZ	OK
11	CCB1	CCB1	CCB	03/07/25 11:11		NF/IZ	OK
12	LB134959BLW	LB134959BLW	MB	03/07/25 11:33		NF/IZ	OK
13	LB134959BSW	LB134959BSW	LCS	03/07/25 11:54		NF/IZ	OK
14	Q1525-01	MW10	SAM	03/07/25 12:16	Cl high	NF/IZ	Dilution
15	Q1522-02	TW-WTS-04	SAM	03/07/25 12:37		NF/IZ	OK
16	Q1522-02MS	TW-WTS-04MS	MS	03/07/25 12:59	9.5ml of sample, 0.5mL W3092	NF/IZ	OK
17	Q1522-02MSD	TW-WTS-04MSD	MSD	03/07/25 13:21	9.5ml of sample, 0.5mL W3092	NF/IZ	OK
18	Q1522-02DL	TW-WTS-04DL	SAM	03/07/25 13:42	5X for Cl, but still high	NF/IZ	Dilution

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB134959

Review By	Niha	Review On	3/11/2025 9:15:10 AM
Supervise By	Iwona	Supervise On	3/11/2025 4:16:22 PM
SubDirectory	LB134959	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP112016,WP112017,WP112018,WP112019,WP112020,WP112021,WP112022		
ICV Standard	WP112023		
CCV Standard	WP112231		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112232		
Chk Standard	WP112024,WP112025		

19	Q1522-02DL2	TW-WTS-04DL2	SAM	03/07/25 14:04	20X for Cl	NF/IZ	Confirms
20	CCV2	CCV2	CCV	03/07/25 14:25		NF/IZ	OK
21	CCB2	CCB2	CCB	03/07/25 14:47		NF/IZ	OK

Instrument ID: IGN-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB134962

Review By	rubina	Review On	3/10/2025 5:05:53 PM
Supervise By	Iwona	Supervise On	3/11/2025 1:23:08 PM
SubDirectory	LB134962	Test	Flash Point
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	W3159		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	ICV	ICV	ICV	03/10/25 12:50		rubina	OK
2	Q1516-03	GAS-AUD-25-0026	SAM	03/10/25 13:20		rubina	OK
3	Q1516-03DUP	GAS-AUD-25-0026DU	DUP	03/10/25 13:50		rubina	OK
4	Q1517-01	MOO-25-0062	SAM	03/10/25 14:20		rubina	OK
5	Q1522-02	TW-WTS-04	SAM	03/10/25 14:50		rubina	OK
6	Q1529-05	60302	SAM	03/10/25 15:20		rubina	OK
7	Q1529-06	60299	SAM	03/10/25 15:50		rubina	OK
8	Q1538-01	BELL-25-0004	SAM	03/10/25 16:20		rubina	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB134975

Review By	jignesh	Review On	3/11/2025 8:50:13 AM
Supervise By	Iwona	Supervise On	3/11/2025 10:13:18 AM
SubDirectory	LB134975	Test	TSS
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	LB134975BL	LB134975BL	MB	03/10/25 10:00		jignesh	OK
2	LB134975BS	LB134975BS	LCS	03/10/25 10:00	55 mg w2576 + 100ml w3112	jignesh	OK
3	Q1512-01	TOWERS-1	SAM	03/10/25 10:00		jignesh	OK
4	Q1512-02	TOWERS-2	SAM	03/10/25 10:00		jignesh	OK
5	Q1513-01	DSN002	SAM	03/10/25 10:00		jignesh	OK
6	Q1513-03	DSN001	SAM	03/10/25 10:00		jignesh	OK
7	Q1513-05	DSN003	SAM	03/10/25 10:00		jignesh	OK
8	Q1513-05DUP	DSN003DUP	DUP	03/10/25 10:00		jignesh	OK
9	Q1519-01	WATER TREATMENT	SAM	03/10/25 10:00		jignesh	OK
10	Q1522-01	TW-WTS-03	SAM	03/10/25 10:00		jignesh	OK
11	Q1522-02	TW-WTS-04	SAM	03/10/25 10:00		jignesh	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1522

Test : Anions Group2,BOD5,Flash Point,pH,TSS

Prepbatch ID :

Sequence ID/Qc Batch ID: LB134945, LB134955, LB134959, LB134962, LB134975,

Standard ID :

WP110259, WP110386, WP111323, WP112016, WP112017, WP112018, WP112019, WP112020, WP112021, WP112022, WP112023, WP112024, WP112025, WP112227, WP112228, WP112229, WP112231, WP112232,

Chemical ID :

M5673, M6041, W2647, W2653, W2654, W3058, W3059, W3063, W3071, W3072, W3093, W3094, W3103, W3105, W3107, W3109, W3112, W3113, W3144, W3149, W3159, W3161, W3180,



<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_S CALE_5 (WC SC-5)	None	Jignesh Parikh 10/17/2024
<u>FROM</u>	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>
1841	Sulfuric Acid, 1N	WP110386	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/24/2024
<u>FROM</u> 2.80000ml of M5673 + 97.20000ml of W3112 = Final Quantity: 100.000 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>
1571	Sodium hydroxide, 1N	WP111323	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 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	WP112016	02/21/2025	02/22/2025	Iwona Zarych	None	None	Jignesh Parikh 02/24/2025
<u>FROM</u> 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	WP112017	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 02/24/2025
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	WP112018	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 02/24/2025
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	WP112019	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 02/24/2025
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	WP112020	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 02/24/2025
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	WP112021	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 02/24/2025
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	WP112022	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 02/24/2025
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	WP112023	02/21/2025	02/22/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 02/24/2025
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	WP112024	02/21/2025	03/21/2025	Iwona Zarych	None	None	Jignesh Parikh 02/24/2025
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	WP112025	02/21/2025	03/21/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 02/24/2025

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>
127	BOD Dilution fluid	WP112227	03/07/2025	03/08/2025	Rubina Mughal	None	None	Iwona Zarych 03/11/2025

FROM 18.00000L of W3112 + 3.00000PILLOW of W3144 = Final Quantity: 18.000 L



<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>
129	Glutamic acid-glucose mix for BOD	WP112228	03/07/2025	03/08/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC-6)	None	Iwona Zarych 03/11/2025
<u>FROM</u> 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml 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>
128	polyseed seed control	WP112229	03/07/2025	03/08/2025	Rubina Mughal	None	None	Iwona Zarych 03/11/2025
<u>FROM</u> 1.00000PILLOW of W3059 + 300.00000ml of WP112227 = Final Quantity: 300.000 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>
3680	Anions 300/9056 calibration standard 5-CCV	WP112231	03/07/2025	03/08/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/11/2025

FROM 45.00000ml of W3112 + 5.00000ml of W3180 = 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>
3233	Anions 300/9056 ICV-LCS std	WP112232	03/07/2025	03/08/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 03/11/2025

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	09/21/2023 / mohan	09/05/2023 / mohan	M5673

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.	AC156212500 / GLUTAMIC ACID BIOCHEM REG, 250G	A0405990	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2653

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	D16-500 / DEXTROSE ANHYDROUS ACS REAGENT, 500G(New)	186122A	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2654

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	152305	05/30/2025	02/15/2024 / Rubina	10/18/2023 / Iwona	W3059

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 / Iwona	11/16/2023 / Iwona	W3063

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14455-3 / buffer solution pH 7 yellow	4308H30	07/31/2025	01/02/2024 / JIGNESH	12/06/2023 / Iwona	W3071

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14940-1 / Buffer Solution, PH12 (500ml)	2310P21	04/30/2025	01/02/2024 / JIGNESH	12/07/2023 / Iwona	W3072

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	566002 / BUFFER PH 7.00 GREEN 1PINT PK6	44001f99	12/31/2025	04/03/2024 / jignesh	04/02/2024 / jignesh	W3093

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1601-1 / PH 10.01 BUFFER,COLOR CD 475ML	4310g83	03/31/2025	04/03/2024 / jignesh	04/02/2024 / jignesh	W3094

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	4620-32 / MANGANOUS SULFATE SOLUTION-364	2403J02	03/31/2026	04/22/2024 / lwona	04/22/2024 / lwona	W3103

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL69870-8 / SODIUM THIOSULFATE,0.025N,4LIT RE	4403S13	09/30/2025	04/22/2024 / lwona	04/22/2024 / lwona	W3105

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14055-3 / PH 4 BUFFER SOLUTION	AL14055-3	02/27/2026	09/05/2024 / jignesh	05/13/2024 / jignesh	W3107

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL04100-4 / Alkaline Iodide Azide, 1 L	1405D67	04/30/2026	05/23/2024 / lwona	05/23/2024 / lwona	W3109

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.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	23B1556310	12/31/2025	07/08/2024 / lwona	07/08/2024 / lwona	W3113

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	1486266 / BOD Nutrient Buffer Pillows, 6 mL concentrate to make 6 L, 50/pk	A4169	06/30/2029	11/20/2024 / rubina	10/01/2024 / lwona	W3144

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL70850-8 / Starch Solution, 4L	4408P62	08/31/2026	10/16/2024 / lwona	10/16/2024 / lwona	W3149

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	TCX0014-500ML / p-xylene	BWDZJ	12/06/2029	02/14/2025 / rubina	12/06/2024 / lwona	W3159

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL13850-1 / Buffer Solution, PH2 (500ml)	2411E26	10/31/2026	12/09/2024 / lwona	12/09/2024 / lwona	W3161

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,

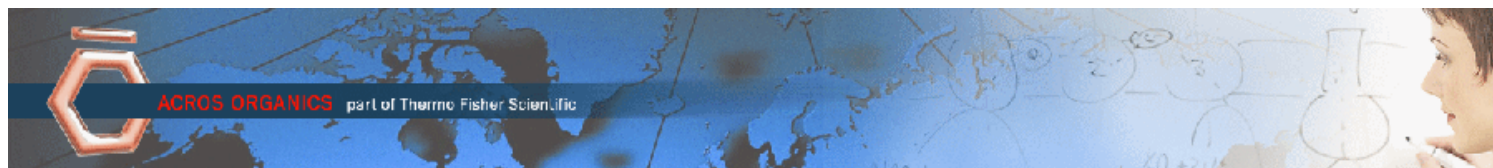
Test	Specification	Result
Assay (NaHCO ₃) (dried basis)	99.7 – 100.3 %	100.1
Insoluble Matter	<= 0.015 %	< 0.002
Chloride (Cl)	<= 0.003 %	0.003
Phosphate (PO ₄)	<= 0.001 %	0.001
Sulfur Compounds (as SO ₄)	<= 0.003 %	0.003
Calcium (Ca)	<= 0.02 %	0.02
Trace Impurities – Iron (Fe)	<= 0.001 %	0.001
Magnesium (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

James Ethier
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



ACROS
ORGANICS

Version 0
Molecular weight 147.13
Molecular formula C₅ H₉ N O₄
CAS No 56-86-0
Linear formula HO₂CCH₂CH₂CH(NH₂)CO₂H
Flash point (°C)

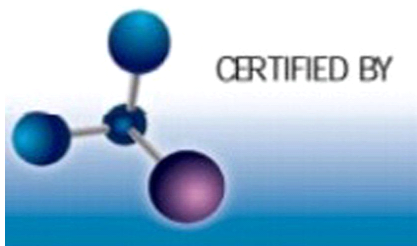
Certificate of Analysis

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. Acros Organics 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 human or animals. It is the responsibility of the purchaser, formulator or those performing further manufacturing 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	15621	Quality Test / Release Date	13 March 2019
Lot Number	A0405990	Suggested Retest Date	March 2022
Description	L(+)-Glutamic acid, 99%		
Country of Origin	CHINA		
Declaration of Origin	plant		

Origin Comment	The product is made by fermentation of sugar molasses
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Result Name	Specifications	Test Value
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Infrared spectrum	Conforms	Conforms
Titration with NaOH	98.5 to 100.5 % (On dried substance)	99.32 % (On dried substance)
Loss on drying	=<0.5 % (105°C, 3 hrs)	0.002 % (105°C, 3 hrs)
Heavy metals (as Pb)	=<10 ppm	=<10 ppm
Sulfated ash	=<0.1 %	0.08 %
Other amino acids	not detectable	not detectable
Specific optical rotation	+30.5° to +32.5° (20°C, 589 nm) (on dried substance)	+32° (20°C, 589 nm) (on dried substance)
Specific optical rotation	(c=10, 2N HCl)	(c=10, 2N HCl)
Chloride (Cl)	=<200 ppm	=<200 ppm
Iron (Fe)	=<30 ppm	=<10 ppm
Sulfate (SO ₄)	=<300 ppm	=<200 ppm
Ammonium (NH ₄)	=<200 ppm	=<200 ppm
Arsenic oxide (As ₂ O ₃)	=<1 ppm	=<1 ppm



A handwritten signature in black ink, which appears to read "L. Van den Broek".

L. Van den Broek, QA Manager

Issued: 24 January 2020

Acros Organics

ENA23, zone 1, nr 1350, Janssen Pharmaceuticaaan 3a, B-2440 Geel, Belgium

Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: <http://www.acros.com>

1 Reagent Lane, Fair Lawn, NJ 07410, USA Fax 201-796-1329

W3071
Rec 12/6/23

Certificate of Analysis 12

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Lot Number: 4308H30

Product Number: 1551

Manufacture Date: AUG 09, 2023

Expiration Date: JUL 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	0	5	10	15	20	25	30	35	40	45	50
pH	7.12	7.09	7.06	7.04	7.02	7.00	6.99	6.98	6.98	6.97	6.97

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Phosphate Dibasic	7558-79-4	ACS
Potassium Dihydrogen Phosphate	7778-77-0	ACS
Preservative	Proprietary	
Yellow Dye	Proprietary	
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Yellow liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	7.002	0.02	186-I-g, 186-II-g, 191d

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer A	ASTM (D 5464)
Buffer A	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1551-2.5	10 L Cubitainer®	24 months
1551-5	20 L Cubitainer®	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (08/09/2023)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --
Contents of Certificates and Labels."

This product was tested in an ISO 17025 Accredited Laboratory

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.

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

PO BOX 130549 Spring, TX 77393
Phone: (281) 298-9410 Fax: (281) 298-9411

W 3059
REC. 10/18/23 12

FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:

PolySeed® • Part No. P-110 • Lot 152305 • Mfg. Date: 05/2023 • Exp. Date: 05/2025

FORMULATION:

The formulation for this product contains a range of naturally occurring microorganisms, which are known to be non-pathogenic to man or animals.

VIABLE COUNT, FINAL TEST RESULT:

The product has been fully tested in accordance with Finished Product Specifications and contains a minimum viable count of 4.00×10^9 cfu/g.

GLUCOSE/GLUTAMIC-ACID RESULTS:

Tested results within acceptable range 198 ± 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# L257-09 – Average Test Result: 203.4

See www.polyseed.com for details.

SEED CONTROL FACTOR:

Tested results within acceptable range 0.6 – 1.0 see www.polyseed.com for details

SALMONELLA TEST RESULT:

The product has been shown to be Salmonella negative using procedures recommended in the Microbiology Laboratory Guidebook, published by the USDA Food Safety and Inspection Service.

The purpose of this document is to assure that the Finished Product conforms to the above specification.

Signature: _____

Quality Control Department

Date: 05/15/2023

POLYSEED.Ref.1.19

Revised Jan 23

InterLab®
International Laboratory Supply



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

W3063
rec. 11/16/23 12

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, NO_3^-	25.00 ± 0.09 µg/mL
Nitrite as N, NO_2^-	30.00 ± 0.15 µg/mL	o-Phosphate as P, PO_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





RICCA CHEMICAL COMPANY®

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Pocomoke City, MD 21851
<http://www.riccachemical.com>
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customerservice@riccachemical.com

W 3072
REC. 12/01/23
12

Certificate of Analysis

Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C

Lot Number: 2310P21

Product Number: 1615

Manufacture Date: OCT 24, 2023

Expiration Date: APR 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

°C	15	20	25	30	35	40
pH	12.35	12.17	11.99	11.78	11.62	11.46

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Chloride	7447-40-7	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed

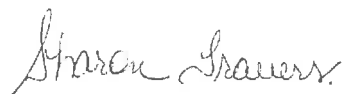
*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	12.005	0.02	186-I-g, 186-II-g, 191d

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1615-1	4 L natural poly	18 months
1615-16	500 mL clear PET-G	18 months
1615-32	1 L natural poly	18 months
1615-5	20 L Cubitainer®	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Sharon Travers (10/24/2023)

Operations Manager

This document is designed to comply with ISO Guide 31 "Reference Materials --
Contents of Certificates and Labels."

This product was tested in an ISO 17025 Accredited Laboratory

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Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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	D16	Quality Test / Release Date	03/19/2019
Lot Number	186122A		
Description	DEXTROSE, ANHYDROUS, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Mar/2022
Chemical Origin	Organic - Plant		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		
Chemical Comment			

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White, granular powder
TITRATABLE ACID	MEQ/G	<= 0.002	<0.002
STARCH		= PASS TEST	pass test
SPECIFIC ROTATION @ 25 C	DEGREES (+ OR -)	Inclusive Between +52.5 - +53.0	53.0
SULFATE & SULFITE	%	<= 0.005	<0.005
IRON (Fe)	ppm	<= 5	<5
CHLORIDE	%	<= 0.01	<0.01
IGNITION RESIDUE	%	<= 0.02	<0.02
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
HEAVY METALS (as Pb)	ppm	<= 5	<5
LOSS ON DRYING @ 105 C	%	<= 0.2	<0.2
INSOLUBLE MATTER	%	<= 0.005	0.002

Jerisa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis 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.

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

 **avantor**™



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

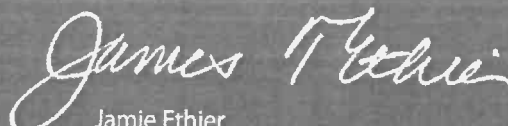


Material No.: 9673-33
Batch No.: 23D2462010

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

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

avantor™



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™**

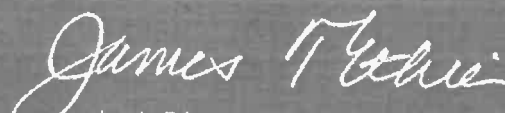


Material No.: 9673-33
Batch No.: 23D2462010

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

**RICCA CHEMICAL COMPANY®**

1490 Lammers Pike

Batesville, IN 47006

<http://www.riccachemical.com>

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customerservice@riccachemical.com

Certificate of Analysis

W3093
004121
04/03/2024
16

Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)**Lot Number:** 4401F99**Product Number:** 1551**Manufacture Date:** JAN 08, 2024**Expiration Date:** DEC 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	0	5	10	15	20	25	30	35	40	45	50
pH	7.12	7.09	7.06	7.04	7.02	7.00	6.99	6.98	6.98	6.97	6.97

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Phosphate Dibasic	7558-79-4	ACS
Potassium Dihydrogen Phosphate	7778-77-0	ACS
Preservative	Proprietary	
Yellow Dye	Proprietary	
Sodium Hydroxide	1310-73-2	

Test	Specification	Result
Appearance	Yellow liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	7.004	0.02	186-I-g, 186-II-g, 191d

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer A	ASTM (D 5464)
Buffer A	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1551-1	4 L natural poly	24 months
1551-1CT	4 L Cubitainer®	24 months
1551-2.5	10 L Cubitainer®	24 months
1551-5	20 L Cubitainer®	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (01/08/2024)

Production Manager

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Contents of Certificates and Labels."

This product was tested in an ISO 17025 Accredited Laboratory

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Certificate of Analysis

Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C (Color Coded Blue)

Lot Number: 4310G83

Product Number: 1601

Manufacture Date: OCT 09, 2023

Expiration Date: MAR 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	0	5	10	15	20	25	30	35	40	50
pH	10.31	10.23	10.17	10.11	10.05	10.00	9.95	9.91	9.87	9.81

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Carbonate	497-19-8	ACS
Sodium Bicarbonate	144-55-8	ACS
Sodium Hydroxide	1310-73-2	Reagent
Preservative	Proprietary	
Blue Dye	Proprietary	

Test	Specification	Result
Appearance	Blue liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	10.003	0.02	186-I-g, 186-II-g, 191d

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer C	ASTM (D 5464)
Buffer C	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1601-16	500 mL natural poly	18 months
1601-5	20 L Cubitainer®	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (10/09/2023)

Production Manager

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Certificate of Analysis

Manganous Sulfate Solution, 364 g/L**Lot Number:** 2403J02**Product Number:** 4620**Manufacture Date:** MAR 15, 2024**Expiration Date:** MAR 2026

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Manganous Sulfate Monohydrate	10034-96-5	Reagent
Sulfuric Acid	7664-93-9	ACS

Test	Specification	Result
Appearance	Pink liquid	Passed
Assay (by Refractive Index)	360-368 g/L	367 g/L

Specification	Reference
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	EPA (360.2)
Manganous Sulfate Solution	EPA (360.2)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
4620-32	1 L natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Jose Pena (03/15/2024)

Operations Manager

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Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 4403S13

Product Number: 7900

Manufacture Date: MAR 29, 2024

Expiration Date: SEP 2025

This product is specially formulated to increase its stability. A preservative is added to prevent bacterial contamination. However, all Sodium Thiosulfate solutions are subject to slow chemical deterioration and should be restandardized periodically.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Thiosulfate Pentahydrate	10102-17-7	ACS
Organic Preservative	Proprietary	
Sodium Carbonate	497-19-8	ACS

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Potassium Iodate/Starch)	0.02499-0.02501 N at 20°C	0.02501 N at 20°C	136

Specification	Reference
Standard Sodium Thiosulfate Solution, 0.0250 N	APHA (4500-S2- F)
Standard Sodium Thiosulfate Titrant	APHA (4500-O D)
Standard Sodium Thiosulfate Titrant	APHA (4500-O E)
Standard Sodium Thiosulfate Titrant	APHA (4500-O F)
Standard Sodium Thiosulfate Titrant, 0.025 N	APHA (4500-CI B)
Standard Sodium Thiosulfate Titrant	APHA (4500-O C)
Standard Sodium Thiosulfate Titrant, 0.025 M	APHA (5530 C)
Standard Sodium Thiosulfate Solution (0.025 N)	EPA (SW-846) (9031)
Standard Sodium Thiosulfate solution (0.025 N)	EPA (SW-846) (9034)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
7900-1	4 L natural poly	18 months
7900-16	500 mL natural poly	18 months
7900-1CT	4 L Cubitainer®	18 months
7900-32	1 L natural poly	18 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (03/29/2024)

Production Manager

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Certificate of Analysis

Buffer, Reference Standard, pH 4.00 ± 0.01 at 25°C (Color Coded Red)

Lot Number: 4403F90

Product Number: 1501

Manufacture Date: MAR 09, 2024

Expiration Date: FEB 2026

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST Traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	0	5	10	15	20	25	30	35	40	45	50
pH	4.00	4.00	4.00	4.00	4.00	4.00	4.01	4.02	4.03	4.04	4.06

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Acid Phthalate	877-24-7	Buffer
Preservative	Proprietary	Commercial
Red Dye	Proprietary	Purified

Test	Specification	Result
Appearance	Red liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	4.000	0.02	185i, 186-I-g, 186-II-g

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer B	ASTM (D 5464)
Buffer B	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1501-2.5	10 L Cubitainer®	24 months
1501-32	1 L natural poly	24 months
1501-5	20 L Cubitainer®	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (03/09/2024)

Production Manager

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This product was tested in an ISO 17025 Accredited Laboratory

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Certificate of Analysis

Alkaline-Iodide-Azide, Pomeroy Formulation for Dissolved Oxygen (DO) Analysis

Lot Number: 1405D67

Product Number: 535

Manufacture Date: APR 05, 2024

Expiration Date: APR 2026

This solution is intended for use with samples with high Dissolved Oxygen content (above 15 mg/L) and for samples with high concentrations of organic material.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Iodide	7681-82-5	ACS
Sodium Hydroxide	1310-73-2	ACS
Sodium Azide	26628-22-8	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Free Iodine	To Pass Test	Passed

Specification	Reference
Alkaline Iodide-Sodium Azide Solution II	ASTM (D 888 A)
Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.	

Part Number	Size / Package Type	Shelf Life (Unopened Container)
535-32	1 L natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Heidi J Green (04/05/2024)
Operations Manager

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Certificate of Analysis



Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 23B1556310

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance:

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

TEST	SPECIFICATION	ANALYSIS	DISPOSITION
Calcium	<= 0.005 %	<0.005 %	PASS
Chloride	<= 0.005 %	0.002 %	PASS
Heavy Metals	<= 0.002 %	<0.002 %	PASS
Iron	<= 0.001 %	<0.001 %	PASS
Magnesium	<= 0.002 %	<0.002 %	PASS
Mercury	<= 0.1 ppm	<0.1 ppm	PASS
Nickel	<= 0.001 %	<0.001 %	PASS
Nitrogen Compounds	<= 0.001 %	<0.001 %	PASS
Phosphate	<= 0.001 %	<0.001 %	PASS
Potassium	<= 0.02 %	<0.02 %	PASS
Purity	>= 97.0 %	99.2 %	PASS
Sodium Carbonate	<= 1.0 %	0.5 %	PASS
Sulfate	<= 0.003 %	<0.003 %	PASS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

Material: 0583
Grade: ACS GRADE
Batch Number: 23B1556310

Chemical Formula: NaOH
Molecular Weight: 40
CAS #: 1310-73-2
Appearance:

Manufacture Date: 12/14/2022
Expiration Date: 12/31/2025

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

This document has been electronically produced and is valid without a signature.

Leona Edwardson, Quality Control Sr. Manager - Solon
VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

Analysis may have been rounded to significant digits in specification limits.

Product meets analytical specifications of the grades listed.



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

This is a Component of 1486266 / LOT A4169

PRODUCT: BOD Nutrient Buffer Pillows

PRODUCT NUMBER: 1486227

LOT NUMBER: A4169

MANUFACTURE DATE: 06/24/2024

DATE OF ANALYSIS: 07/03/2024

TEST	SPECIFICATIONS	RESULTS
Calcium Concentration of a diluted pillow	0.93 to 1.29 ppm	0.960 ppm
Magnesium Concentration of a diluted pillow	0.35 to 0.48 ppm	0.390 ppm
pH in a 6 L of DI water	7.1 to 7.6	7.37
Ammonia Concentration of a diluted pillow	0.57 to 0.79 ppm	0.593 ppm
Iron Concentration of a diluted pillow	0.27 to 0.36 ppm	0.311 ppm
Sterility	To Pass	Passed
Phosphorus Concentration of a diluted pillow	7.6 to 10.3 ppm	8.32 ppm
Five Day Change in Dissolved Oxygen Concentration	-0.2 to 0.2 ppm	0.03 ppm

The expiration date is Jun 2029

Certified by: *Scott Als*

Analytical Services Chemist



Certificate of Analysis

Starch Indicator, 0.5% (w/v), Mercury Free, for Iodometric Titrations

Lot Number: 4408P62

Product Number: 8000

Manufacture Date: AUG 28, 2024

Expiration Date: AUG 2026

This product is Mercury-free.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Starch, soluble	9005-84-9	ACS
Salicylic Acid	69-72-7	ACS

Test	Specification	Result
Appearance	White translucent liquid	Passed
Suitability for Use	Colorless (Iodine absent) - Blue (Iodine present)	Passed

Specification	Reference
Starch Solution	APHA (4500-S2- F)
Starch Indicator Solution	APHA (4500-CI B)
Starch Indicator	APHA (4500-SO32- B)
Starch indicator solution	APHA (2350 B)
Starch indicator solution	APHA (2350 E)
Starch Solution	APHA (510 B)
Starch Solution	APHA (5530 C)
Starch Indicator	APHA (4500-CI C)
Starch Indicator	EPA (345.1)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
8000-1	4 L natural poly	24 months
8000-16	500 mL natural poly	24 months
8000-32	1 L natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)

A handwritten signature in blue ink that reads "Paul Brandon". The signature is fluid and cursive, with the first name "Paul" and last name "Brandon" clearly distinguishable.

Paul Brandon (08/28/2024)
Production Manager

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



W3157, W3158, W3159 Received on 12/6/24 by IZ

Certificate of Analysis

12/06/2024(JST)

TOKYO CHEMICAL INDUSTRY CO.,LTD.

T-PLUS Nihonbashi-Kodemmacho

16-12 Nihonbashi-kodemmacho, Chuo-ku, Tokyo 103-0001, Japan

Chemical Name: p-Xylene		
Product Number: X0014 CAS RN: 106-42-3	Lot: BWDZJ	

Tests	Results	Specifications
Appearance	Colorless clear liquid	Colorless to Almost colorless clear liquid
Purity(GC)	99.7 %	min. 99.0 %

TCI Lot numbers are 4-5 characters in length. Characters listed after the first 4-5 characters are control numbers for internal purpose only.

The contents of the specifications are subject to change without advance notice. The specification values displayed here are the most up to date values. There may be cases where the product labels display a different specification, however, the product quality still meets the latest specification.

Customer Service:

TCI AMERICA

Tel: +1-800-423-8616 / +1-503-283-1681

Fax: +1-888-520-1075 / +1-503-283-1987

E-mail: Sales-US@TCIchemicals.com

Takuya Nishioka
Quality Assurance Department Manager



Certificate of Analysis

Buffer, Reference Standard, pH 2.00 ± 0.01 at 25°C**Lot Number:** 2411E26**Product Number:** 1493**Manufacture Date:** NOV 11, 2024**Expiration Date:** OCT 2026

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C	10	15	20	25	30	35	40	45	50
pH	1.93	1.98	1.98	2.00	2.01	2.03	2.03	2.04	2.04

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Chloride	7447-40-7	ACS
Hydrochloric Acid	7647-01-0	ACS

Test	Specification	Result
Appearance	Colorless liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	1.994	0.02	185i, 186-I-g, 186-II-g

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1493-1	4 L natural poly	24 months
1493-16	500 mL natural poly	24 months
1493-1CT	4 L Cubitainer®	24 months
1493-2.5	10 L Cubitainer®	24 months
1493-32	1 L natural poly	24 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Jose Pena (11/11/2024)
Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory

This test report shall not be reproduced, except in full, without the written approval of Ricca Chemical Company.



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, $X_{\text{CRM/RM}}$, where two or more methods of characterization are used is the weighted mean of the results:

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

X_i = mean of Assay Method i with standard uncertainty $u_{\text{char } i}$

w_i = the weighting factors for each method calculated using the inverse square of the variance:

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

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

k = coverage factor = 2

$u_{\text{char}} = [\sum(w_i)^2(u_{\text{char } i}^2)]^{1/2}$ where $u_{\text{char } i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = long term stability standard uncertainty (storage)

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

Certified Value, $X_{\text{CRM/RM}}$, where one method of characterization is used is the mean of individual results:

$$X_{\text{CRM/RM}} = (X_a)(u_{\text{char } a})$$

X_a = mean of Assay Method A with

$u_{\text{char } a}$ = the standard uncertainty of characterization Method A

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

k = coverage factor = 2

$u_{\text{char } a}$ = the errors from characterization

u_{bb} = bottle to bottle homogeneity standard uncertainty

u_{Its} = 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

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



284 Sheffield Street, Mountainside, NJ 07092

(908) 789-8900 Fax: (908) 788-9222

www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number:

Q1522

COC Number: 2042109

Page 1 of 1

CLIENT INFORMATION

COMPANY: ENTACT, LLC

ADDRESS: 150 Bay Street, Suite 806

CITY: Jersey City STATE: NJ ZIP: 07302

ATTENTION: Jarod Stanfield

PHONE: 570-886-0442

FAX:

PROJECT INFORMATION

PROJECT NAME: 540 Degraw St Brooklyn, NY

PROJECT #: E9309

LOCATION: Brooklyn, NY

PROJECT MANAGER: Jarod Stanfield

E-MAIL: jstanfield@entact.com

PHONE: 570-886-0442

FAX:

BILLING INFORMATION

BILL TO: ENTACT, LLC

PO# E9309

ADDRESS: 999 Oakmont Plaza Drive, Suite 300

CITY: Westmont

STATE: IL ZIP: 60559

ATTENTION: Wendy Murray

PHONE: 800-936-8228

ANALYSIS

Metals	Flashpoint + PCB	VOC	SVOC + Chloride (Anions)	BOD+TSS	pH+TSS				
1	2	3	4	5	6	7	8	9	

PRESERVATIVES

COMMENTS

<-- Specify Preservatives
A-HCl B-HNO3
C-H2SO4 D-NaOH
E-ICE F-Other

DATA TURNAROUND INFORMATION

FAX: 5 DAYS*
HARD COPY: 5 DAYS*
EDD 5 DAYS*
* TO BE APPROVED BY ALLIANCE
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS

DATA DELIVERABLE INFORMATION

- ☐ RESULTS ONLY ☐ USEPA CLP
☐ RESULTS + QC ☐ New York State ASP "B"
☐ New Jersey REDUCED ☐ New York State ASP "A"
☐ New Jersey CLP ☐ Other _____
☐ EDD Format _____

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# of Bottles	B	E	E	E	E						
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9		
1.	TW-WTS-03	Surface Water		X	3/6	10:00	1						X					
2.	TW-WTS-04	Surface Water		X	3/6	10:00	1	X	X	X	X	X						pH 1.6
3.																		
4.																		
5.																		
6.																		
7.																		
8.																		
9.																		
10.																		

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

RELINQUISHED BY SAMPLER 1. Jarod Stanfield	DATE/TIME 03/06/25 15:34	RECEIVED BY 1. 3-7-25 0700	Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 5.3°C ☐ Ice in Cooler?:
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.	Comments:
RELINQUISHED BY 3.	DATE/TIME	RECEIVED FOR LAB BY 3.	SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight ALLIANCE: ☐ Picked Up ☐ Overnight
Page _____ of _____			Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPY FOR RETURN TO CLIENT

YELLOW - ALLIANCE COPY

PINK - SAMPLER COPY

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 : Q1522 ENTA05

Order Date : 3/7/2025 10:29:00 AM

Project Mgr :

Client Name : ENTACT

Project Name : 540 Degraw St, Brooklyn, N

Report Type : Level 1

Client Contact : Jarod Stanfield

Receive DateTime : 3/7/2025 7:00:00 AM

EDD Type : Excel NJ

Invoice Name : ENTACT

Purchase Order :

Hard Copy Date :

Invoice Contact : Jarod Stanfield

Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1522-01	TW-WTS-03	Water	03/06/2025	10:00	VOCMS Group4		8260-Low		5 Bus. Days
Q1522-02	TW-WTS-04	Water	03/06/2025	10:00	VOCMS Group4		8260-Low		5 Bus. Days

Relinquished By :



Date / Time : 3.7.25 1232

Received By :



Date / Time : 3.7.25 12:32

Storage Area : VOA Refridgerator Room