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Cover Page

Order ID : P4843

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

Client : ENTACT

Lab Sample Number	Client Sample Number
P4843-01	SW-WTS-01

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: 11/22/2024

NYDOH CERTIFICATION NO - 11376

NJDEP CERTIFICATION NO - 20012

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside NJ 07092
Tel. 908-789-8900 Fax: 908-789-8922

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

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APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: **P4843**

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

QA Review Signature: **SHREENA PATEL** **Date:** **11/22/2024**

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LAB CHRONICLE

OrderID:	P4843	**OrderDate:**	11/13/2024 3:18:00 PM
Client:	ENTACT	**Project:**	540 Degraw St, Brooklyn, NY - E9309
Contact:	Jarod Stanfield	**Location:**	L23,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4843-01	**SW-WTS-01**	**WATER**			**11/13/24 08:00**			**11/13/24**
			Anions Group4	300.0			11/14/24 12:01	
			BOD5	SM5210 B			11/14/24 16:30	
			Flash Point	1010B			11/15/24 13:55	
			Hexavalent Chromium	7196A			11/14/24 09:04	
			pH	9040C			11/14/24 08:47	
			TKN	SM4500-N Org C-11 plus NH3 B plus G-11		11/21/24	11/21/24 15:22	
			Total Nitrogen	Cal			11/21/24 15:54	
			TS	SM2540 B			11/14/24 11:00	
			TSS	SM2540 D			11/15/24 09:00	
P4843-01DL	**SW-WTS-01DL**	**WATER**			**11/13/24 08:00**			**11/13/24**
			Anions Group4	300.0			11/14/24 13:06	
			TKN	SM4500-N Org C-11 plus NH3 B plus G-11		11/21/24	11/21/24 15:54	

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SAMPLE DATA

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Report of Analysis

Client:	ENTACT	Date Collected:	11/13/24 08:00
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	11/13/24
Client Sample ID:	SW-WTS-01	SDG No.:	P4843
Lab Sample ID:	P4843-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	24.4	OR	1	0.011	0.60	mg/L		11/14/24 12:01	300.0
Nitrite	0.18	J	1	0.011	0.60	mg/L		11/14/24 12:01	300.0
Nitrate	0.80		1	0.0034	0.50	mg/L		11/14/24 12:01	300.0
Nitrate+Nitrite	0.98	J	1	0.010	1.10	mg/L		11/14/24 12:01	300.0
BOD5	15.7		1	0.17	2.00	mg/L		11/14/24 16:30	SM 5210 B-16
Flash Point	>212		1	0	0	o F		11/15/24 13:55	1010B
Dissolved Hexavalent Chromium	0.020		1	0.0030	0.010	mg/L		11/14/24 09:04	7196A
pH	12.0	H	1	0	0	pH		11/14/24 08:47	9040C
TKN	19.7	OR	1	0.18	0.50	mg/L	11/21/24 09:15	11/21/24 15:22	SM4500-N Org C-11 plus NH3 B plus G-11
Nitrogen	26.9		1	0.31	1.30	mg/L		11/21/24 15:54	SM 4500-N Org C-11 plus NH3 B plus G-11
TS	1710		1	1.00	5.00	mg/L		11/14/24 11:00	SM 2540 B-15
TSS	307		1	1.00	4.00	mg/L		11/15/24 09:00	SM 2540 D-15

Comments: Other method reference for flash point : Pensky-Martens Closed Cup Flash Point ASTM D 93 - IP 34, pH result reported at temperature

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

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Report of Analysis

Client:	ENTACT	Date Collected:	11/13/24 08:00
Project:	540 Degraw St, Brooklyn, NY - E9309	Date Received:	11/13/24
Client Sample ID:	SW-WTS-01DL	SDG No.:	P4843
Lab Sample ID:	P4843-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Chloride	23.4	D	10	0.11	6.00	mg/L		11/14/24 13:06	300.0
TKN	25.9	D	5	0.90	2.50	mg/L	11/21/24 09:15	11/21/24 15:54	SM4500-N Org C-11 plus NH3 B plus G-11

Comments:

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

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

QC RESULT SUMMARY

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Initial and Continuing Calibration Verification

Client: ENTACT **SDG No.:** P4843

Project: 540 Degraw St, Brooklyn, NY - E9309 **RunNo.:** LB133442

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	10	10	100	90-110	10/16/2024
Chloride	mg/L	3	3	100	90-110	10/16/2024
Fluoride	mg/L	2	2	100	90-110	10/16/2024
Nitrite	mg/L	3	3	100	90-110	10/16/2024
Nitrate	mg/L	2.5	2.5	100	90-110	10/16/2024
Sulfate	mg/L	14.9	15	99	90-110	10/16/2024
Orthophosphate as P	mg/L	4.8	5	96	90-110	10/16/2024
Sample ID: CCV1						
Bromide	mg/L	10.4	10	104	90-110	11/14/2024
Chloride	mg/L	3.1	3	103	90-110	11/14/2024
Fluoride	mg/L	2.1	2	105	90-110	11/14/2024
Nitrite	mg/L	3.1	3	103	90-110	11/14/2024
Nitrate	mg/L	2.6	2.5	104	90-110	11/14/2024
Sulfate	mg/L	15.5	15	103	90-110	11/14/2024
Orthophosphate as P	mg/L	5.3	5	106	90-110	11/14/2024
Sample ID: CCV2						
Bromide	mg/L	9.7	10	97	90-110	11/14/2024
Chloride	mg/L	2.9	3	97	90-110	11/14/2024
Fluoride	mg/L	2	2	100	90-110	11/14/2024
Nitrite	mg/L	3	3	100	90-110	11/14/2024
Nitrate	mg/L	2.4	2.5	96	90-110	11/14/2024
Sulfate	mg/L	14.6	15	97	90-110	11/14/2024
Orthophosphate as P	mg/L	4.9	5	98	90-110	11/14/2024

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Initial and Continuing Calibration Verification

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**RunNo.:**	LB133444

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: **ICV**						
pH	pH	7.00	7	100	90-110	11/14/2024
Sample ID: **CCV1**						
pH	pH	2.01	2.00	101	90-110	11/14/2024
Sample ID: **CCV2**						
pH	pH	12.01	12.00	100	90-110	11/14/2024

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Initial and Continuing Calibration Verification

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**RunNo.:**	LB133448

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Hexavalent Chromium	mg/L	0.504	0.5	101	90-110	11/14/2024
Sample ID: CCV1						
Hexavalent Chromium	mg/L	0.500	0.5	100	90-110	11/14/2024
Sample ID: CCV2						
Hexavalent Chromium	mg/L	0.503	0.5	101	90-110	11/14/2024

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Initial and Continuing Calibration Verification

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**RunNo.:**	LB133474

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Flash Point	o F	82.1	81	101	78-84	11/15/2024

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Initial and Continuing Calibration Verification

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**RunNo.:**	LB133557

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	**ICV1**						
TKN		mg/L	4.6	5	92	90-110	11/21/2024
Sample ID:	**CCV1**						
TKN		mg/L	5	5	100	90-110	11/21/2024
Sample ID:	**CCV2**						
TKN		mg/L	5	5	100	90-110	11/21/2024
Sample ID:	**CCV3**						
TKN		mg/L	5	5	100	90-110	11/21/2024

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Initial and Continuing Calibration Blank Summary

Client: ENTACT **SDG No.:** P4843

Project: 540 Degraw St, Brooklyn, NY - E9309 **RunNo.:** LB133442

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	10/16/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	10/16/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	10/16/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	10/16/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	10/16/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	10/16/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	10/16/2024
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	11/14/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/14/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	11/14/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/14/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	11/14/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	11/14/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	11/14/2024
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	11/14/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/14/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	11/14/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/14/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	11/14/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	11/14/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	11/14/2024

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Initial and Continuing Calibration Blank Summary

Client: ENTACT **SDG No.:** P4843

Project: 540 Degraw St, Brooklyn, NY - E9309 **RunNo.:** LB133448

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB							
Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	11/14/2024
Sample ID: CCB1							
Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	11/14/2024
Sample ID: CCB2							
Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0027	0.01	11/14/2024

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Initial and Continuing Calibration Blank Summary

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**RunNo.:**	LB133557

Analyte		Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	ICB1							
TKN		mg/L	< 0.2500	0.2500	U	0.18	0.5	11/21/2024
Sample ID:	CCB1							
TKN		mg/L	< 0.2500	0.2500	U	0.18	0.5	11/21/2024
Sample ID:	CCB2							
TKN		mg/L	< 0.2500	0.2500	U	0.18	0.5	11/21/2024
Sample ID:	CCB3							
TKN		mg/L	< 0.2500	0.2500	U	0.18	0.5	11/21/2024

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Preparation Blank Summary

Client: ENTACT **SDG No.:** P4843

Project: 540 Degraw St, Brooklyn, NY - E9309

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB133442BLW							
Bromide	mg/L	< 1.0000	1.0000	U	0.034	2	11/14/2024
Chloride	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/14/2024
Fluoride	mg/L	< 0.2000	0.2000	U	0.057	0.4	11/14/2024
Nitrite	mg/L	< 0.3000	0.3000	U	0.011	0.6	11/14/2024
Nitrate	mg/L	< 0.2500	0.2500	U	0.0034	0.5	11/14/2024
Sulfate	mg/L	< 1.5000	1.5000	U	0.032	3	11/14/2024
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.079	1	11/14/2024
Sample ID: lb133448BL							
Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.003	0.01	11/14/2024
Sample ID: LB133454BL							
BOD5	mg/L	< 0.2000	0.2000	U	0.17	2.0	11/14/2024
Sample ID: LB133467BL							
TSS	mg/L	< 2.0000	2.0000	U	1	4	11/15/2024
Sample ID: LB133470BL							
TS	mg/L	< 2.5000	2.5000	U	1	5	11/14/2024
Sample ID: PB165161BL							
TKN	mg/L	< 0.2500	0.2500	U	0.18	0.5	11/21/2024

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Matrix Spike Summary

Client: ENTACT
SDG No.: P4843
Project: 540 Degraw St, Brooklyn, NY - E9309
Sample ID: P4843-01
Client ID: SW-WTS-01MS
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	11.4		0.82	J	10	1	106		11/14/2024
Chloride	mg/L	80-120	26.8	OR	24.4	OR	3	1	80		11/14/2024
Fluoride	mg/L	80-120	2.50		0.53		2	1	99		11/14/2024
Nitrite	mg/L	80-120	3.20		0.18	J	3	1	101		11/14/2024
Nitrate	mg/L	80-120	3.60		0.80		2.5	1	112		11/14/2024
Sulfate	mg/L	80-120	532	OR	540	OR	15	1	-53	*	11/14/2024
Orthophosphate as P	mg/L	80-120	0.80	J	0.079	U	5	1	16	*	11/14/2024

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Matrix Spike Summary

Client: ENTACT
SDG No.: P4843
Project: 540 Degraw St, Brooklyn, NY - E9309
Sample ID: P4843-01
Client ID: SW-WTS-01MSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/L	80-120	11.3		0.82	J	10	1	105		11/14/2024
Chloride	mg/L	80-120	26.8	OR	24.4	OR	3	1	80		11/14/2024
Fluoride	mg/L	80-120	2.50		0.53		2	1	99		11/14/2024
Nitrite	mg/L	80-120	3.20		0.18	J	3	1	101		11/14/2024
Nitrate	mg/L	80-120	3.60		0.80		2.5	1	112		11/14/2024
Sulfate	mg/L	80-120	531	OR	540	OR	15	1	-60	*	11/14/2024
Orthophosphate as P	mg/L	80-120	1.20		0.079	U	5	1	24	*	11/14/2024

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Duplicate Sample Summary

Client: ENTACT
SDG No.: P4843
Project: 540 Degraw St, Brooklyn, NY - E9309
Sample ID: P4834-01
Client ID: SLP-1-WATERDUP
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
pH	pH	+/-20	7.09		7.10		1	0.14		11/14/2024

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Duplicate Sample Summary

Client: ENTACT
Project: 540 Degraw St, Brooklyn, NY - E9309
Client ID: COMPDUP
SDG No.: P4843
Sample ID: P4840-02
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	728		734		1	0.82		11/15/2024

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Duplicate Sample Summary

Client: ENTACT
Project: 540 Degraw St, Brooklyn, NY - E9309
Client ID: SW-WTS-01DUP

SDG No.: P4843
Sample ID: P4843-01
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
TS	mg/L	+/-5	1710		1750		1	2.43		11/14/2024

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Duplicate Sample Summary

Client: ENTACT
SDG No.: P4843
Project: 540 Degraw St, Brooklyn, NY - E9309
Sample ID: P4843-01
Client ID: SW-WTS-01MSD
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Fluoride	mg/L	+/-20	2.50		2.50		1	0		11/14/2024
Nitrate	mg/L	+/-20	3.60		3.60		1	0		11/14/2024
Nitrite	mg/L	+/-20	3.20		3.20		1	0		11/14/2024
Chloride	mg/L	+/-20	26.8	OR	26.8	OR	1	0		11/14/2024
Sulfate	mg/L	+/-20	532	OR	531	OR	1	0		11/14/2024
Bromide	mg/L	+/-20	11.4		11.3		1	1		11/14/2024
Orthophosphate as P	mg/L	+/-20	0.80	J	1.20		1	40	*	11/14/2024

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Duplicate Sample Summary

Client: ENTACT
Project: 540 Degraw St, Brooklyn, NY - E9309
Client ID: 002-35TH-AVE(NOV)DUP
SDG No.: P4843
Sample ID: P4853-02
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
BOD5	mg/L	+/-20	44.2		45.6		1	3.08		11/14/2024

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Duplicate Sample Summary

Client: ENTACT
SDG No.: P4843
Project: 540 Degraw St, Brooklyn, NY - E9309
Sample ID: P4871-01
Client ID: WC-10-A-202411DUP
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		11/15/2024

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Laboratory Control Sample Summary

Client: ENTACT **SDG No.:** P4843

Project: 540 Degraw St, Brooklyn, NY - E9309 **Run No.:** LB133442

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB133442BSW								
Bromide	mg/L	10	10.3		103	1	90-110	11/14/2024
Chloride	mg/L	3	3.10		103	1	90-110	11/14/2024
Fluoride	mg/L	2	2.10		105	1	90-110	11/14/2024
Nitrite	mg/L	3	3.10		103	1	90-110	11/14/2024
Nitrate	mg/L	2.5	2.60		104	1	90-110	11/14/2024
Sulfate	mg/L	15	15.2		101	1	90-110	11/14/2024
Orthophosphate as P	mg/L	5	5.10		102	1	90-110	11/14/2024

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Laboratory Control Sample Summary

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**Run No.:**	LB133448

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID lb133448BS								
Hexavalent Chromium	mg/L	0.5	0.51		103	1	90-111	11/14/2024

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Laboratory Control Sample Summary

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**Run No.:**	LB133454

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **LB133454BS**								
BOD5	**mg/L**	**198**	**184**		**93**	**1**	**84.6-115.4**	**11/14/2024**

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Laboratory Control Sample Summary

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**Run No.:**	LB133467

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **LB133467BS**								
TSS	mg/L	550	544		99	1	90-110	11/15/2024

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Laboratory Control Sample Summary

Client:	ENTACT	**SDG No.:**	P4843
Project:	540 Degraw St, Brooklyn, NY - E9309	**Run No.:**	LB133557

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID **PB165161BS**								
TKN	**mg/L**	**5**	**4.90**		**98**	**1**	**90-110**	**11/21/2024**

RAW DATA

Instrument IC-1 Analyst : NF Method: 300.0 / 9056A

Ident	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name	date time	Initial w Analyst
STD1	0	0	0	0	0	0	0	IC1-101624	10/16/2024 10:55	10 NF/IZ
STD2	0.424	0.632	0.639	2.106	0.535	1.072	3.276	IC1-101624	10/16/2024 11:17	10 NF/IZ
STD3	0.796	1.206	1.205	4.013	1	2	6.052	IC1-101624	10/16/2024 11:38	10 NF/IZ
STD4	1.032	1.537	1.531	5.116	1.277	2.557	7.662	IC1-101624	10/16/2024 11:59	10 NF/IZ
STD5	1.966	2.927	2.921	9.77	2.439	4.871	14.51	IC1-101624	10/16/2024 12:21	10 NF/IZ
STD6	3.88	5.901	5.91	19.683	4.912	9.831	29.286	IC1-101624	10/16/2024 12:42	10 NF/IZ
STD7	5.102	7.598	7.593	25.312	6.337	12.67	37.714	IC1-101624	10/16/2024 13:04	10 NF/IZ
ICV	1.966	2.997	3	9.969	2.497	4.753	14.85	IC1-101624	10/16/2024 13:37	10 NF/IZ
ICB	0	0	0	0	0	0	0	IC1-101624	10/16/2024 13:59	10 NF/IZ
CCV	2.104	3.126	3.09	10.436	2.625	5.261	15.528	IC1-101624	11/14/2024 10:35	10 NF/IZ
CCB	0	0	0	0	0	0	0	IC1-101624	11/14/2024 10:56	10 NF/IZ
LB133442BLW	0	0	0	0	0	0	0	IC1-101624	11/14/2024 11:18	10 NF/IZ
LB133442BSW	2.061	3.073	3.082	10.274	2.581	5.133	15.168	IC1-101624	11/14/2024 11:39	10 NF/IZ
P4843-01	0.53	24.432	0.179	0.823	0.802	0	540.327	IC1-101624	11/14/2024 12:01	10 NF/IZ
P4843-01MS	2.479	26.82	3.199	11.391	3.598	0.795	532.358	IC1-101624	11/14/2024 12:22	10 NF/IZ
P4843-01MSD	2.48	26.786	3.203	11.323	3.589	1.167	531.158	IC1-101624	11/14/2024 12:44	10 NF/IZ
P4843-01DLX10	0.081	2.34	0	0	0	0	42.586	IC1-101624	11/14/2024 13:06	10 NF/IZ
CCV	1.963	2.926	2.959	9.651	2.435	4.943	14.593	IC1-101624	11/14/2024 13:27	10 NF/IZ
CCB	0	0	0	0	0	0	0	IC1-101624	11/14/2024 13:49	10 NF/IZ

Clear table

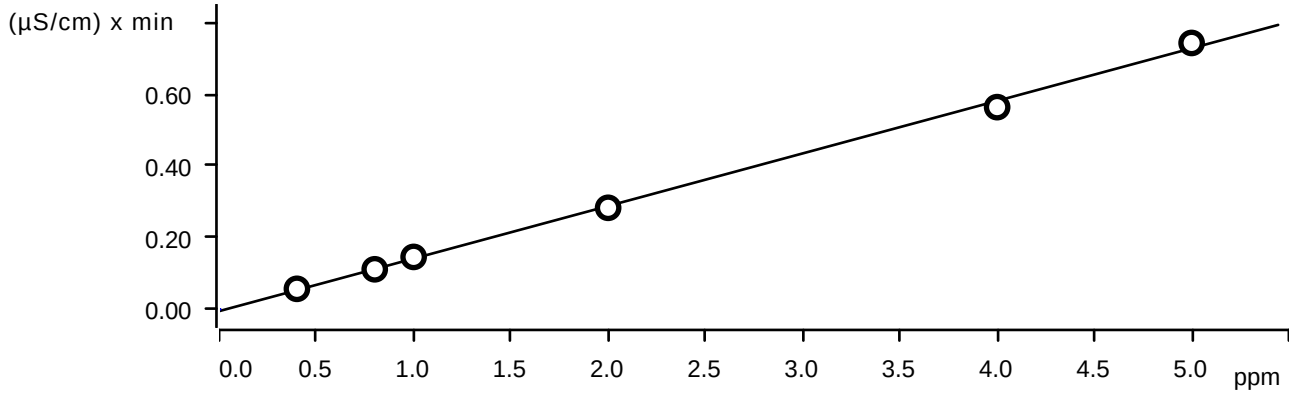
Instrument ID: IC-2 Analyst : IZ Method: 300.0 / 9056A

ident	concentration F-	concentration CL-	concentration NO2	concentration BR-	concentration NO3	concentration HPO4	concentration SO4	file name	date time	Initial wt/ Final	Analyst
STD1	0.000	0.000	0.000	0.000	0.000	0.000	0.000	IC1-101624	10/16/2024 10:55	10	NF/IZ
STD2	0.424	0.632	0.639	2.106	0.535	1.072	3.276	IC1-101624	10/16/2024 11:17	10	NF/IZ
STD3	0.796	1.206	1.205	4.013	1.000	2.000	6.052	IC1-101624	10/16/2024 11:38	10	NF/IZ
STD4	1.032	1.537	1.531	5.116	1.277	2.557	7.662	IC1-101624	10/16/2024 11:59	10	NF/IZ
STD5	1.966	2.927	2.921	9.77	2.439	4.871	14.51	IC1-101624	10/16/2024 12:21	10	NF/IZ
STD6	3.88	5.901	5.91	19.683	4.912	9.831	29.286	IC1-101624	10/16/2024 12:42	10	NF/IZ
STD7	5.102	7.598	7.593	25.312	6.337	12.67	37.714	IC1-101624	10/16/2024 13:04	10	NF/IZ

ident	True Value F-	True Value CL-	True Value NO2	True Value BR-	True Value NO3	True Value HPO4	True Value SO4
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
STD2	0.4000	0.6000	0.6000	2.0000	0.5000	1.0000	3.0000
STD3	0.8000	1.2000	1.2000	4.0000	1.0000	2.0000	6.0000
STD4	1.0000	1.5000	1.5000	5.0000	1.2500	2.5000	7.5000
STD5	2.0000	3.0000	3.0000	10.0000	2.5000	5.0000	15.0000
STD6	4.0000	6.0000	6.0000	20.0000	5.0000	10.0000	30.0000
STD7	5.0000	7.5000	7.5000	25.0000	6.2500	12.5000	37.0000

ident	Relative Error F-	Relative Error CL-	Relative Error NO2	Relative Error BR-	Relative Error NO3	Relative Error HPO4	Relative Error SO4
STD1							
STD2	6.0000	5.3333	6.5000	5.3000	7.0000	7.2000	9.2000
STD3	-0.5000	0.5000	0.4167	0.3250	0.0000	0.0000	0.8667
STD4	3.2000	2.4667	2.0667	2.3200	2.1600	2.2800	2.1600
STD5	-1.7000	-2.4333	-2.6333	-2.3000	-2.4400	-2.5800	-3.2667
STD6	-3.0000	-1.6500	-1.5000	-1.5850	-1.7600	-1.6900	-2.3800
STD7	2.0400	1.3067	1.2400	1.2480	1.3920	1.3600	1.9297

Fluoride (Anions)



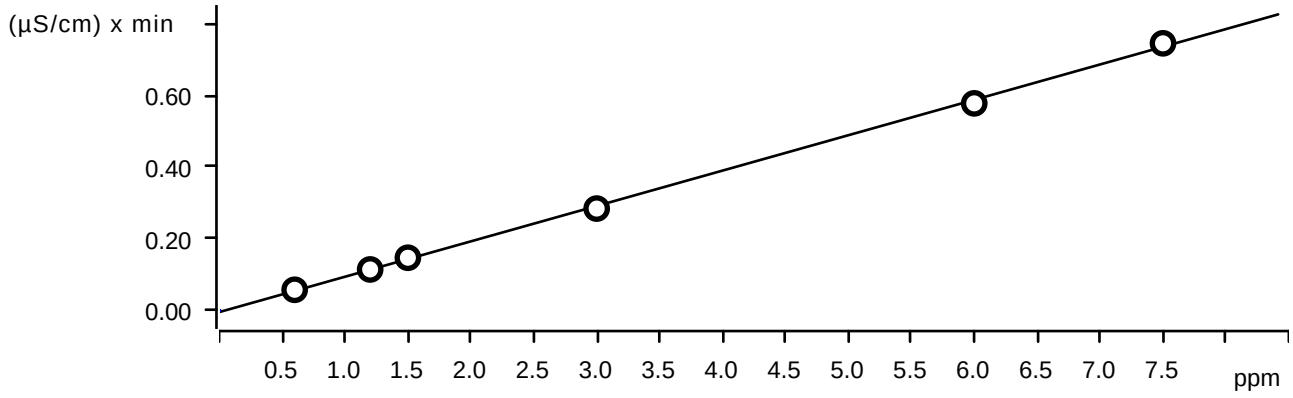
Function: . . . . . *A = - 5.06114E-3 + 0.0146570× Q*

Relative standard deviation . . . . . *3.824450 %*

Correlation coefficient *0.999229*

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	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.400	10.0	1.0	1.0	0.057	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	0.800	10.0	1.0	1.0	0.112	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.000	10.0	1.0	1.0	0.146	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	2.000	10.0	1.0	1.0	0.283	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	4.000	10.0	1.0	1.0	0.564	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	5.000	10.0	1.0	1.0	0.743	STD7	2024-10-16 13:04:15 UTC-4	used

Chloride (Anions)



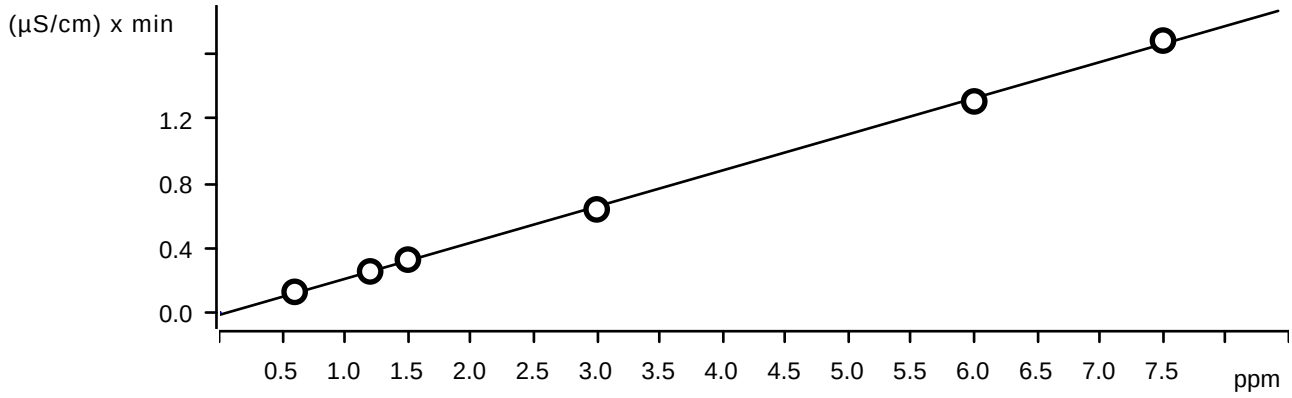
Function: . . . . . *A = - 4.66155E-3 + 9.86442E-3× Q*

Relative standard deviation . . . . . *2.532075 %*

Correlation coefficient *0.999661*

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	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.058	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.114	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.147	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.284	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	0.577	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	0.745	STD7	2024-10-16 13:04:15 UTC-4	used

Nitrite (Anions)



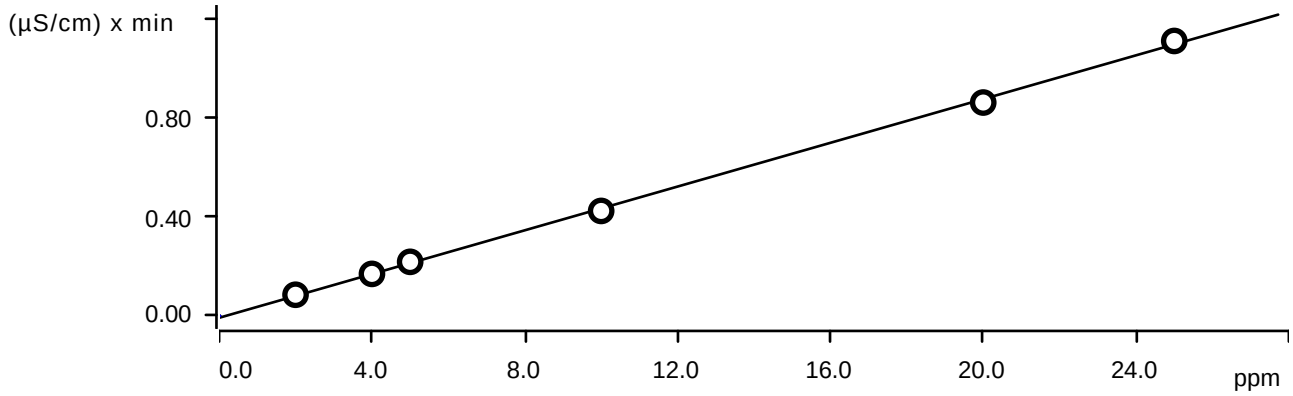
Function: . . . . . *A = - 0.0158639 + 0.0223869× Q*

Relative standard deviation . . . . . *2.476730 %*

Correlation coefficient *0.999680*

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	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.127	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.254	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.327	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.638	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	1.307	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	1.684	STD7	2024-10-16 13:04:15 UTC-4	used

Bromide (Anions)



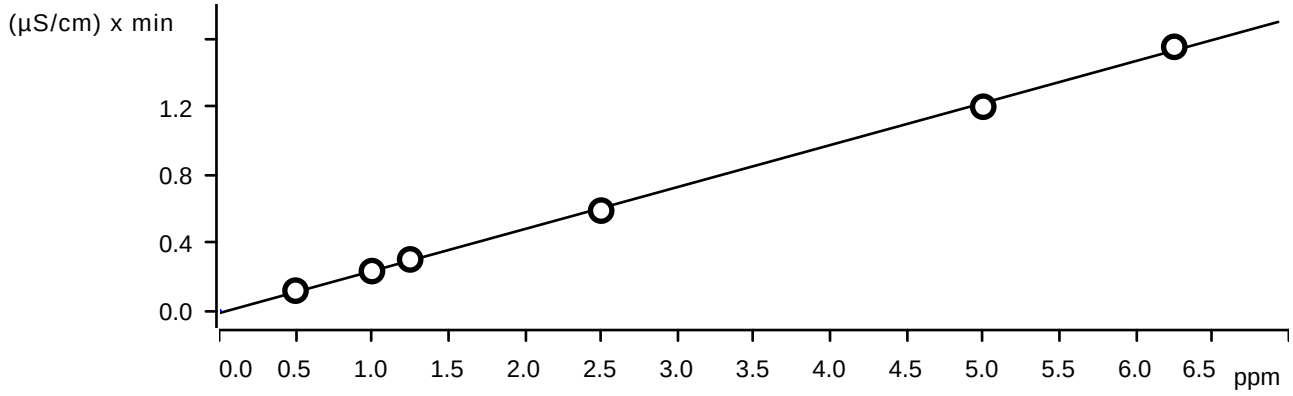
Function: . . . . . *A = - 7.83486E-3 + 4.40426E-3× Q*

Relative standard deviation . . . . . *2.425045 %*

Correlation coefficient *0.999690*

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	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	2.000	10.0	1.0	1.0	0.085	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	4.000	10.0	1.0	1.0	0.169	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	5.000	10.0	1.0	1.0	0.217	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	10.000	10.0	1.0	1.0	0.422	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	20.000	10.0	1.0	1.0	0.859	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	25.000	10.0	1.0	1.0	1.107	STD7	2024-10-16 13:04:15 UTC-4	used

Nitrate (Anions)



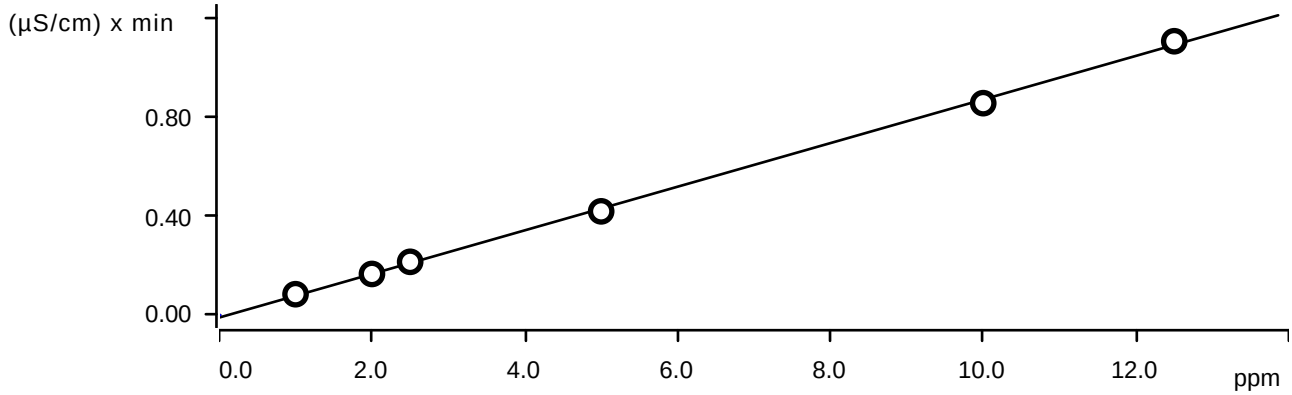
Function: . . . . . *A = - 0.0159932 + 0.0247327× Q*

Relative standard deviation . . . . . *2.693966 %*

Correlation coefficient *0.999623*

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	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	0.500	10.0	1.0	1.0	0.116	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	1.000	10.0	1.0	1.0	0.231	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	1.250	10.0	1.0	1.0	0.300	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	2.500	10.0	1.0	1.0	0.587	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	5.000	10.0	1.0	1.0	1.199	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	6.250	10.0	1.0	1.0	1.551	STD7	2024-10-16 13:04:15 UTC-4	used

Phosphate (Anions)



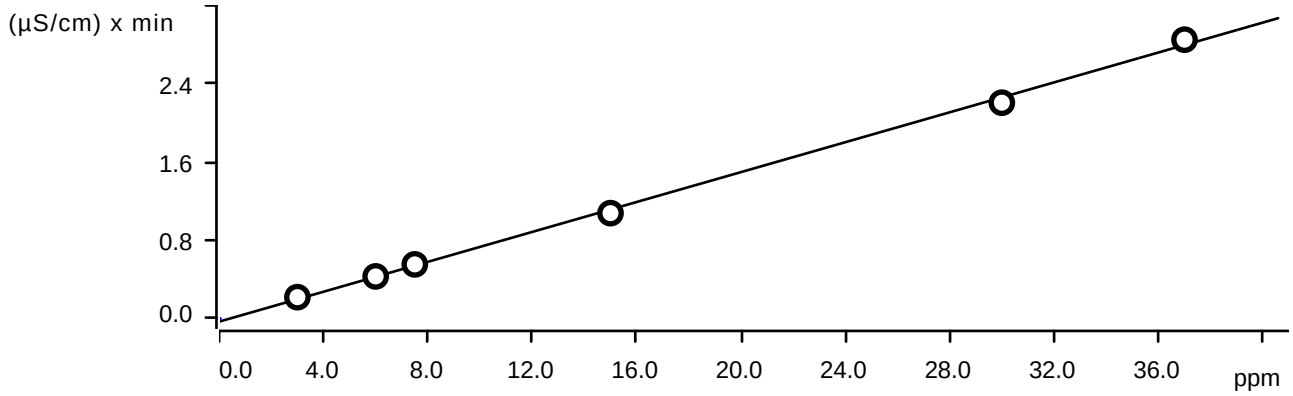
Function: . . . . . *A = - 9.96170E-3 + 8.78405E-3× Q*

Relative standard deviation . . . . . *2.667639 %*

Correlation coefficient *0.999628*

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	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	1.000	10.0	1.0	1.0	0.084	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	2.000	10.0	1.0	1.0	0.166	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	2.500	10.0	1.0	1.0	0.215	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	5.000	10.0	1.0	1.0	0.418	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	10.000	10.0	1.0	1.0	0.854	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	12.500	10.0	1.0	1.0	1.103	STD7	2024-10-16 13:04:15 UTC-4	used

Sulfate (Anions)



Function: . . . . . *A = - 0.0322401 + 7.64234E-3× Q*

Relative standard deviation . . . . . *3.651427 %*

Correlation coefficient *0.999303*

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	2024-10-16 10:55:46 UTC-4	used
Standard 2	1	3.000	10.0	1.0	1.0	0.218	STD2	2024-10-16 11:17:08 UTC-4	used
Standard 3	1	6.000	10.0	1.0	1.0	0.430	STD3	2024-10-16 11:38:32 UTC-4	used
Standard 4	1	7.500	10.0	1.0	1.0	0.553	STD4	2024-10-16 11:59:57 UTC-4	used
Standard 5	1	15.000	10.0	1.0	1.0	1.077	STD5	2024-10-16 12:21:22 UTC-4	used
Standard 6	1	30.000	10.0	1.0	1.0	2.206	STD6	2024-10-16 12:42:48 UTC-4	used
Standard 7	1	37.000	10.0	1.0	1.0	2.850	STD7	2024-10-16 13:04:15 UTC-4	used

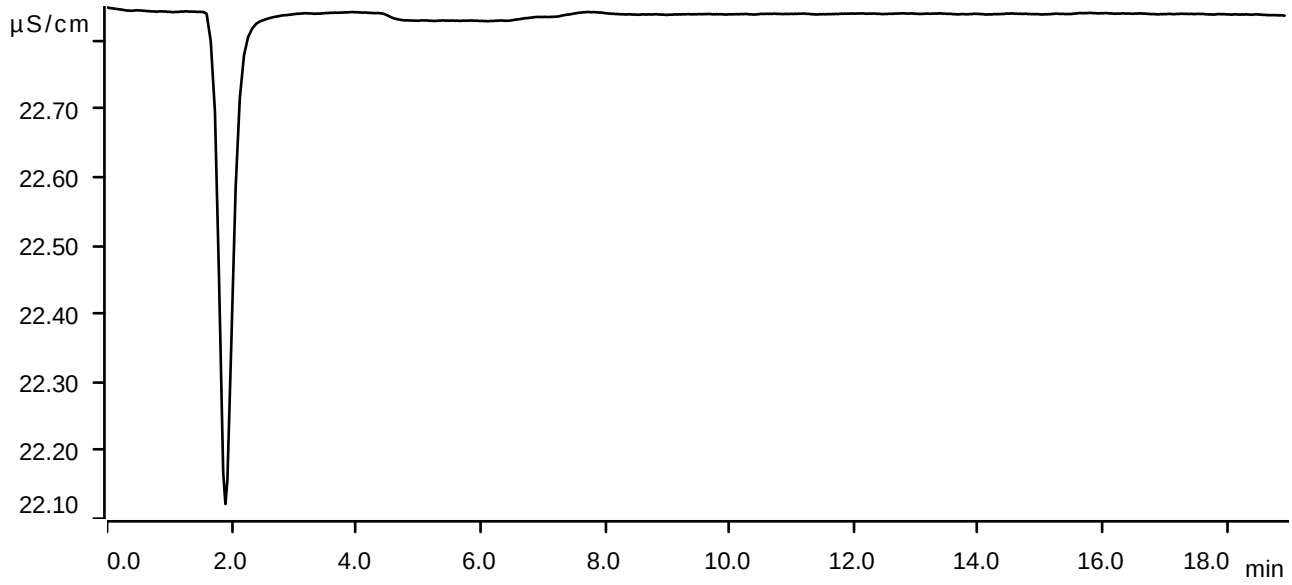
Sample data

Ident	STD1
Sample type	Standard 1
Determination start	2024-10-16 10:55:46 UTC-4
Method	IC1-101624
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	12.33	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



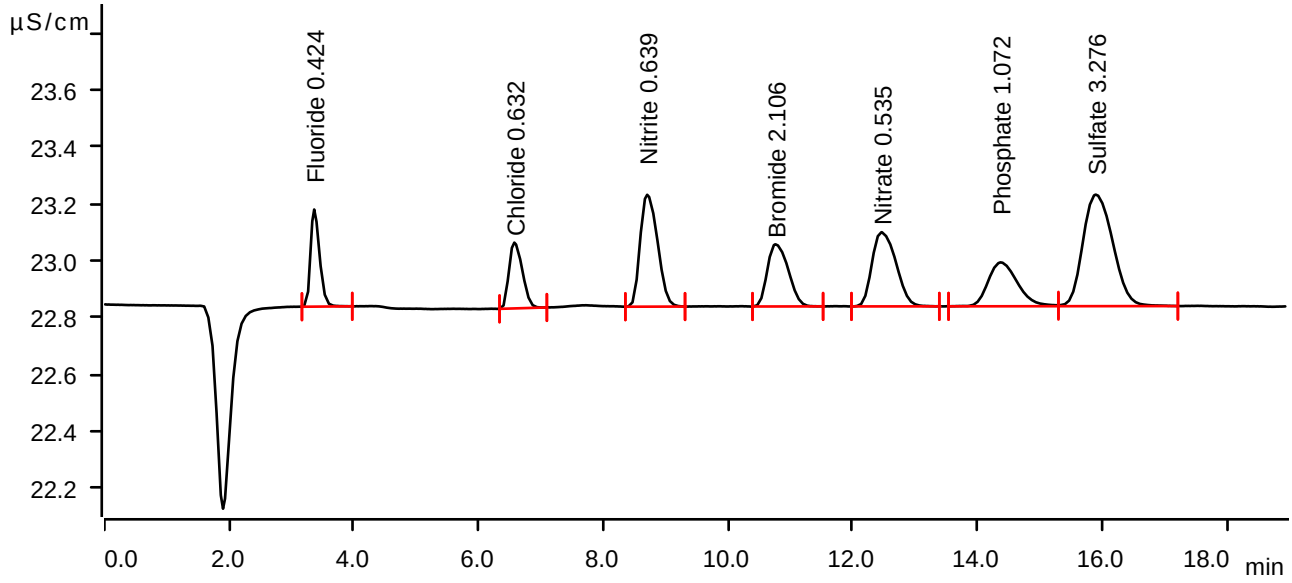
Sample data

Ident	STD2
Sample type	Standard 2
Determination start	2024-10-16 11:17:08 UTC-4
Method	IC1-101624
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	12.56	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.365	0.0571	0.341	0.424	Fluoride
2	6.573	0.0576	0.231	0.632	Chloride
3	8.703	0.1273	0.393	0.639	Nitrite
4	10.758	0.0849	0.219	2.106	Bromide
5	12.458	0.1163	0.261	0.535	Nitrate
6	14.368	0.0842	0.154	1.072	Phosphate
7	15.893	0.2181	0.392	3.276	Sulfate

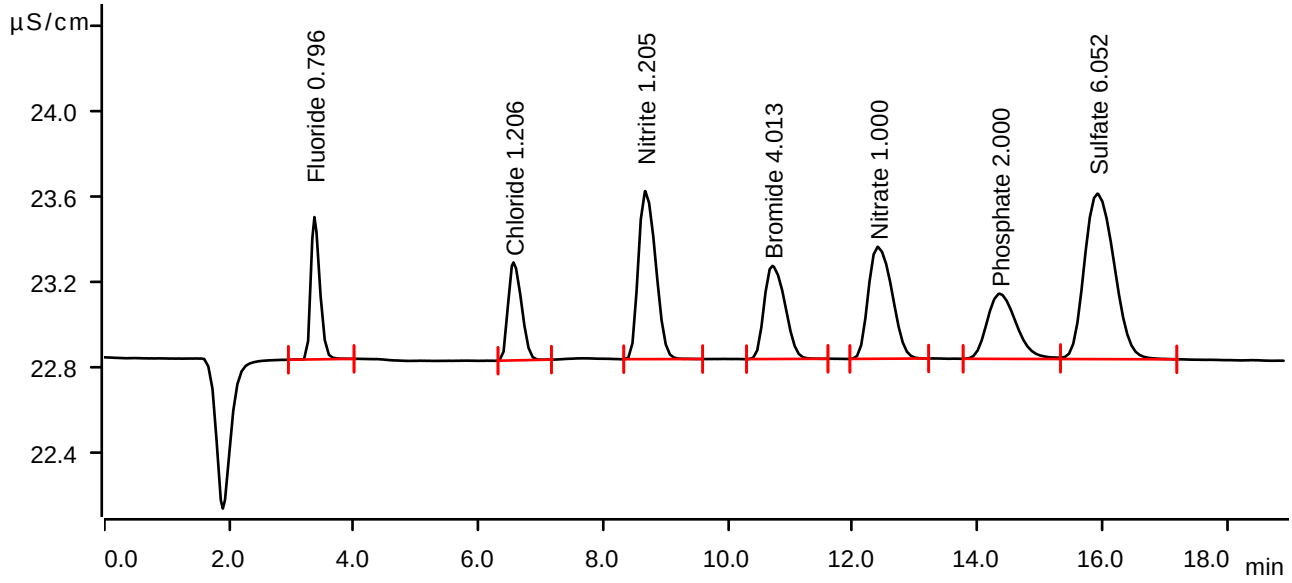
Sample data

Ident	STD3
Sample type	Standard 3
Determination start	2024-10-16 11:38:32 UTC-4
Method	IC1-101624
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	3.368	0.1116	0.667	0.796	Fluoride
2	6.560	0.1143	0.459	1.206	Chloride
3	8.673	0.2538	0.788	1.205	Nitrite
4	10.712	0.1689	0.436	4.013	Bromide
5	12.398	0.2314	0.525	1.000	Nitrate
6	14.353	0.1657	0.305	2.000	Phosphate
7	15.922	0.4302	0.775	6.052	Sulfate

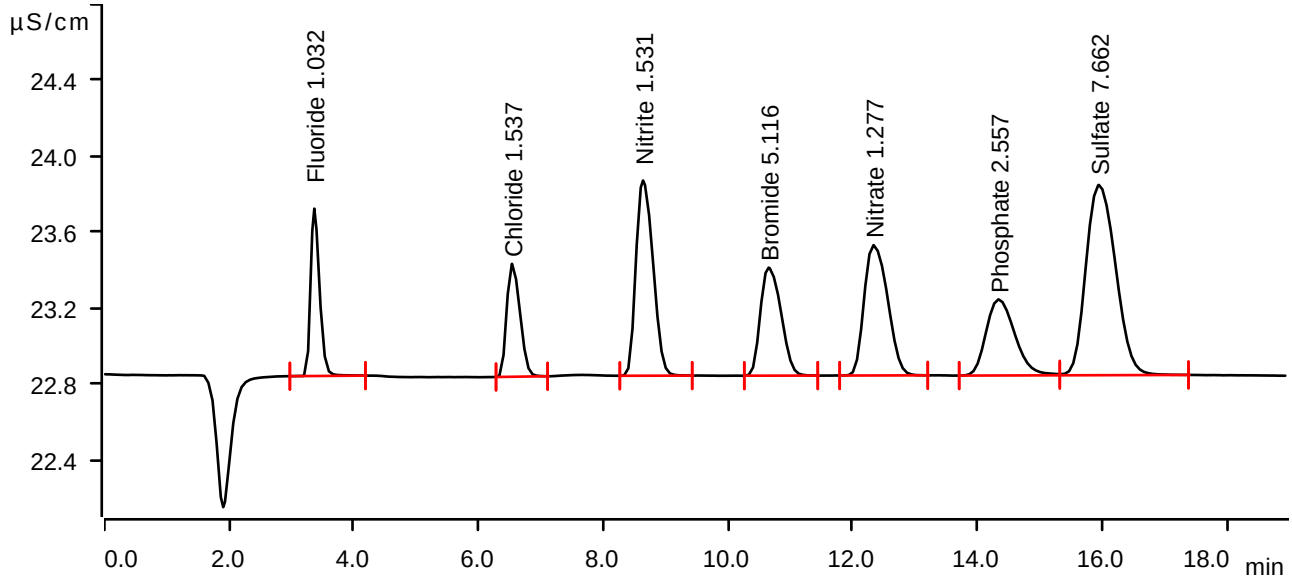
Sample data

Ident	STD4
Sample type	Standard 4
Determination start	2024-10-16 11:59:57 UTC-4
Method	IC1-101624
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	3.367	0.1462	0.882	1.032	Fluoride
2	6.537	0.1469	0.595	1.537	Chloride
3	8.637	0.3270	1.029	1.531	Nitrite
4	10.650	0.2175	0.569	5.116	Bromide
5	12.332	0.2999	0.687	1.277	Nitrate
6	14.337	0.2147	0.401	2.557	Phosphate
7	15.945	0.5533	1.003	7.662	Sulfate

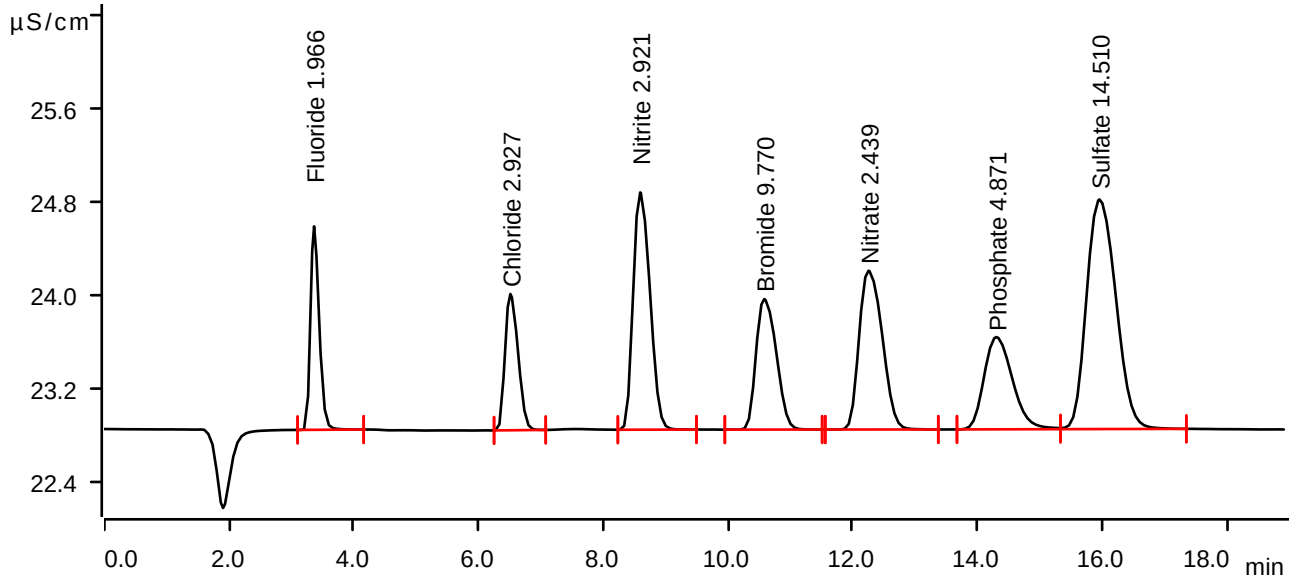
Sample data

Ident	STD5
Sample type	Standard 5
Determination start	2024-10-16 12:21:22 UTC-4
Method	IC1-101624
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	11.99	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.363	0.2831	1.748	1.966	Fluoride
2	6.510	0.2841	1.170	2.927	Chloride
3	8.592	0.6381	2.038	2.921	Nitrite
4	10.580	0.4225	1.121	9.770	Bromide
5	12.252	0.5873	1.364	2.439	Nitrate
6	14.302	0.4179	0.793	4.871	Phosphate
7	15.955	1.0767	1.972	14.510	Sulfate

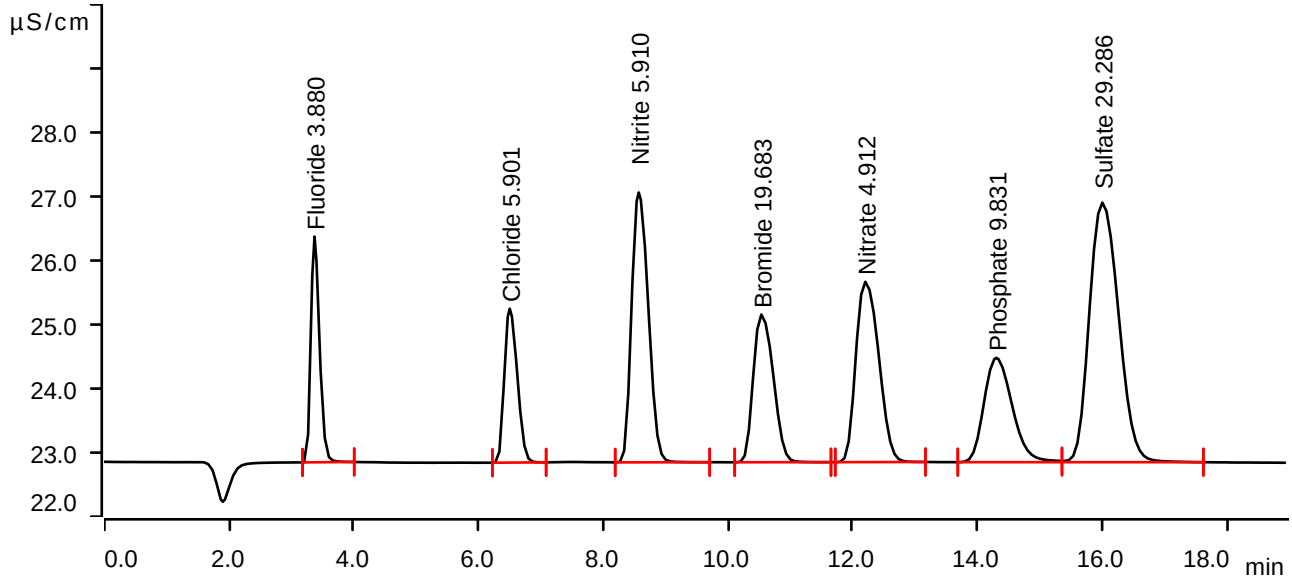
Sample data

Ident	STD6
Sample type	Standard 6
Determination start	2024-10-16 12:42:48 UTC-4
Method	IC1-101624
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	3.370	0.5637	3.525	3.880	Fluoride
2	6.500	0.5774	2.404	5.901	Chloride
3	8.568	1.3072	4.215	5.910	Nitrite
4	10.535	0.8590	2.306	19.683	Bromide
5	12.202	1.1988	2.815	4.912	Nitrate
6	14.302	0.8536	1.629	9.831	Phosphate
7	16.002	2.2059	4.054	29.286	Sulfate

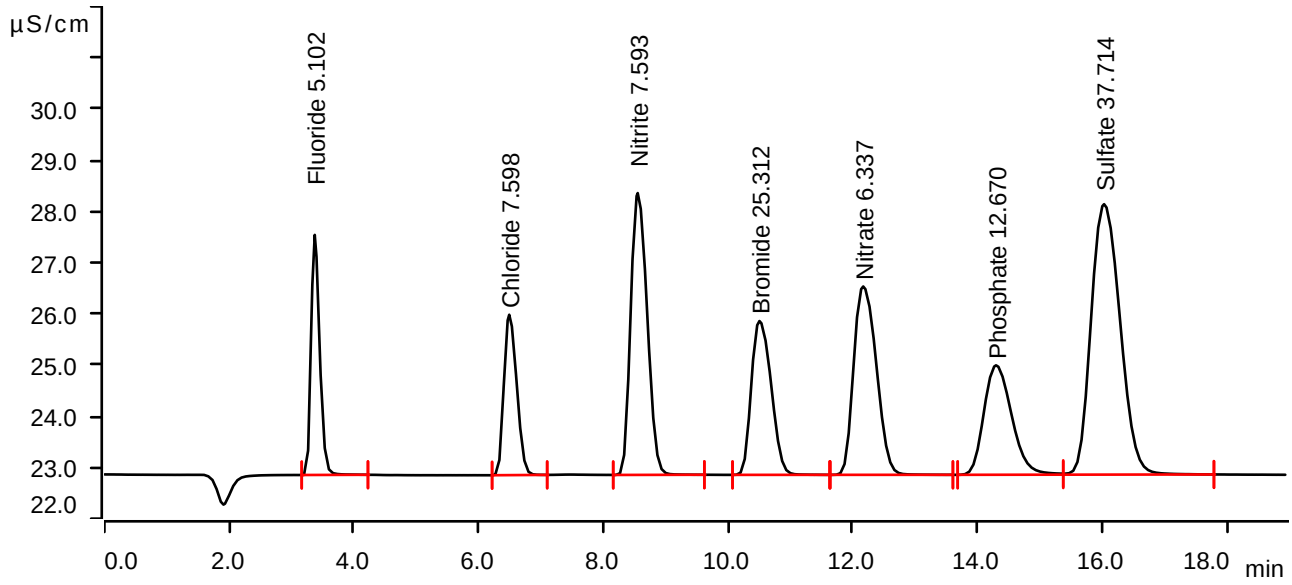
Sample data

Ident	STD7
Sample type	Standard 7
Determination start	2024-10-16 13:04:15 UTC-4
Method	IC1-101624
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	12.73	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	3.373	0.7427	4.687	5.102	Fluoride
2	6.492	0.7448	3.132	7.598	Chloride
3	8.552	1.6841	5.502	7.593	Nitrite
4	10.503	1.1070	3.003	25.312	Bromide
5	12.167	1.5512	3.678	6.337	Nitrate
6	14.297	1.1030	2.137	12.670	Phosphate
7	16.028	2.8500	5.280	37.714	Sulfate

Metrohm

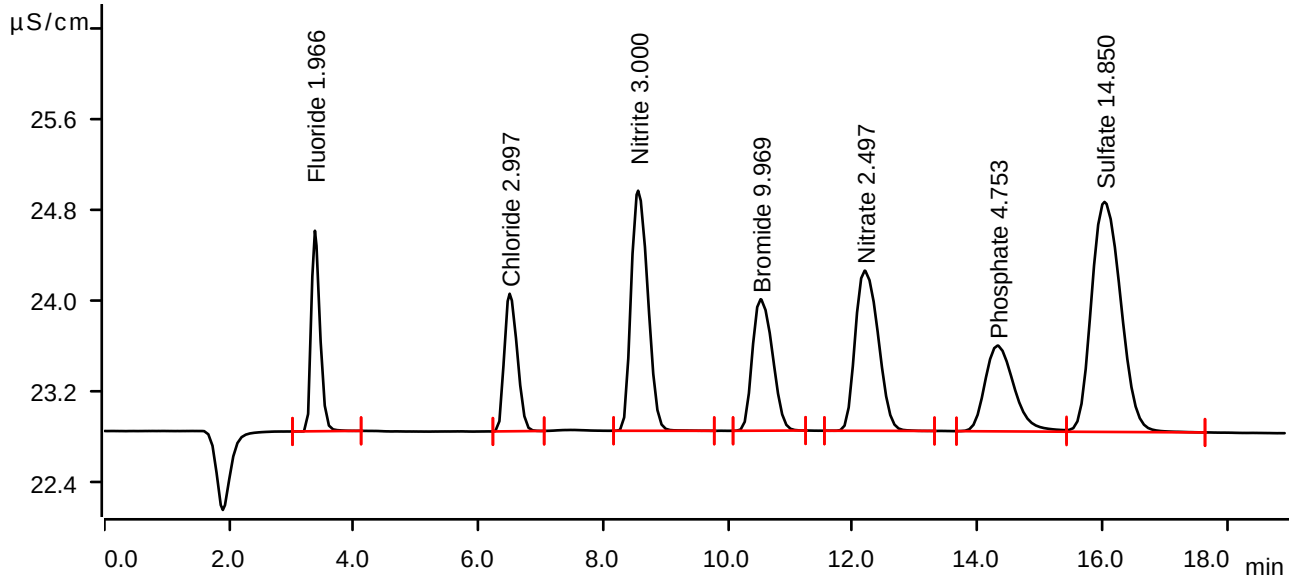
Sample data

Ident	ICV
Sample type	Check standard 1
Determination start	2024-10-16 13:37:49 UTC-4
Method	IC1-101624
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.377	0.2830	1.762	1.966	Fluoride
2	6.498	0.2910	1.209	2.997	Chloride
3	8.558	0.6557	2.109	3.000	Nitrite
4	10.522	0.4312	1.155	9.969	Bromide
5	12.190	0.6017	1.407	2.497	Nitrate
6	14.320	0.4076	0.753	4.753	Phosphate
7	16.035	1.1027	2.020	14.850	Sulfate

Metrohm

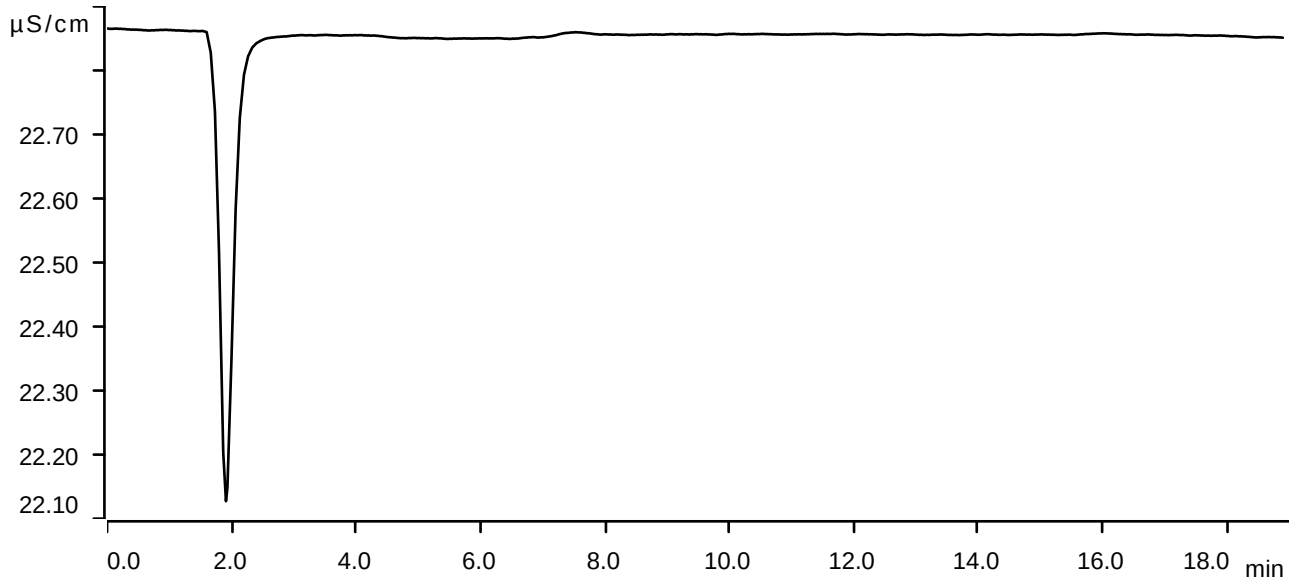
Sample data

Ident	ICB	
Sample type	Sample	
Determination start	2024-10-16 13:59:18 UTC-4	
Method	IC1-101624	
Operator		

Anions

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

Anions



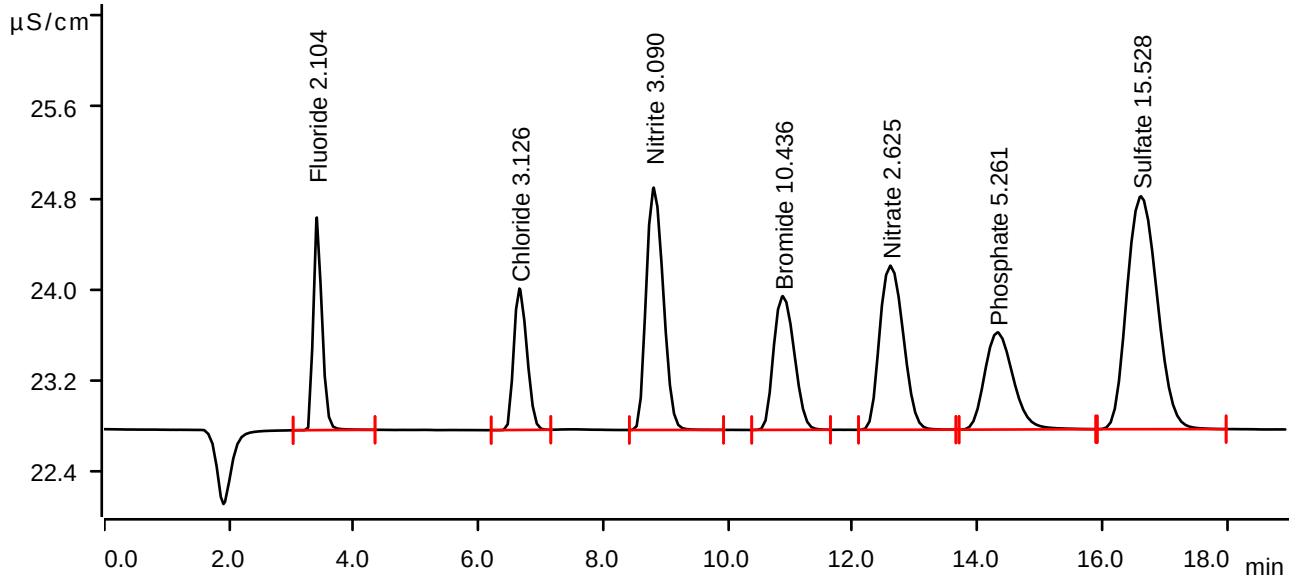
Sample data

Ident	CCV
Sample type	Check standard 1
Determination start	2024-11-14 10:35:16 UTC-5
Method	IC1-101624
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 min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.407	0.3033	1.868	2.104	Fluoride
2	6.655	0.3037	1.242	3.126	Chloride
3	8.808	0.6760	2.129	3.090	Nitrite
4	10.878	0.4518	1.175	10.436	Bromide
5	12.605	0.6333	1.441	2.625	Nitrate
6	14.320	0.4522	0.854	5.261	Phosphate
7	16.620	1.1544	2.046	15.528	Sulfate

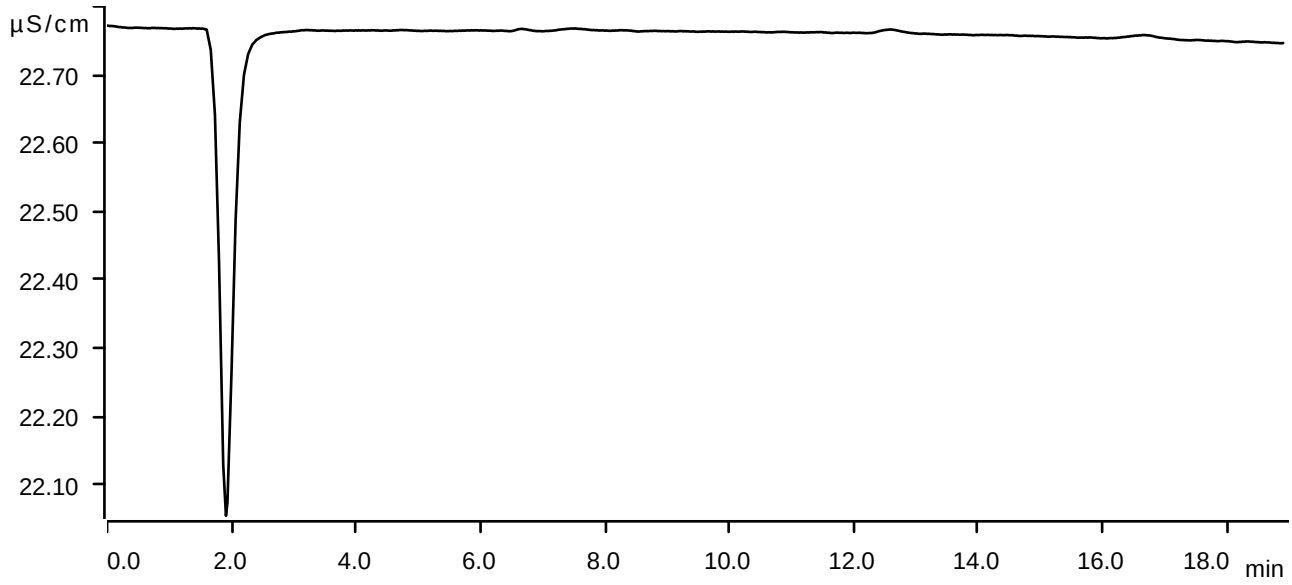
Sample data

Ident	CCB
Sample type	Sample
Determination start	2024-11-14 10:56:46 UTC-5
Method	IC1-101624
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	11.99	MPa
Maximum pressure monitored	yes	
Temperature	-----	°C

Anions



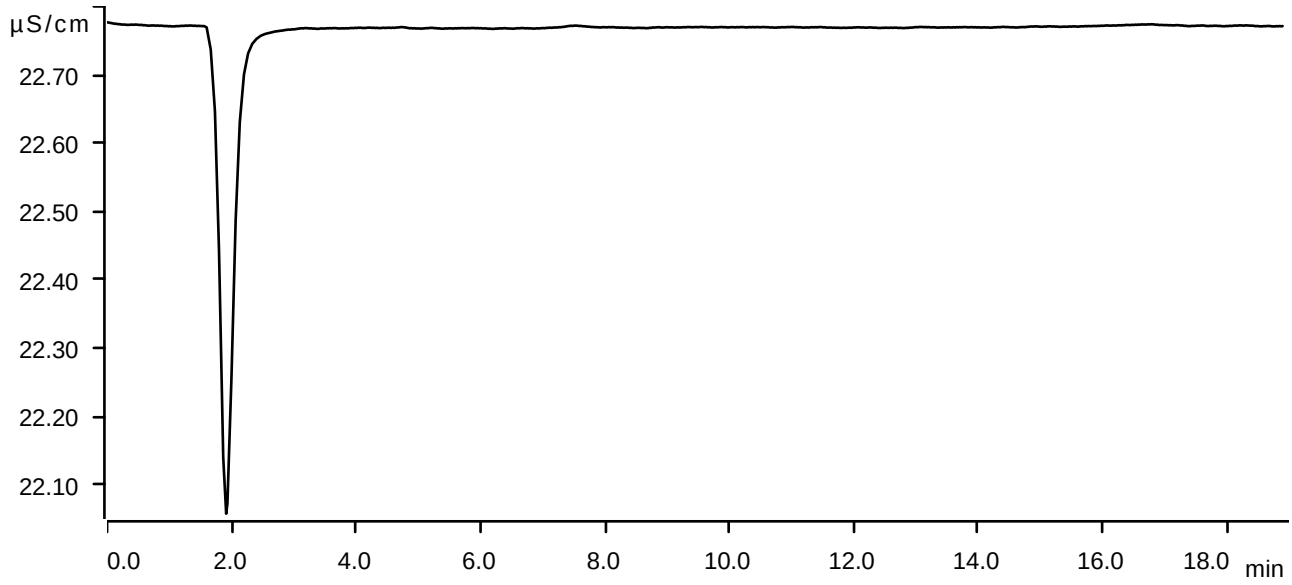
Sample data

Ident	LB133442BLW
Sample type	Sample
Determination start	2024-11-14 11:18:16 UTC-5
Method	IC1-101624
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



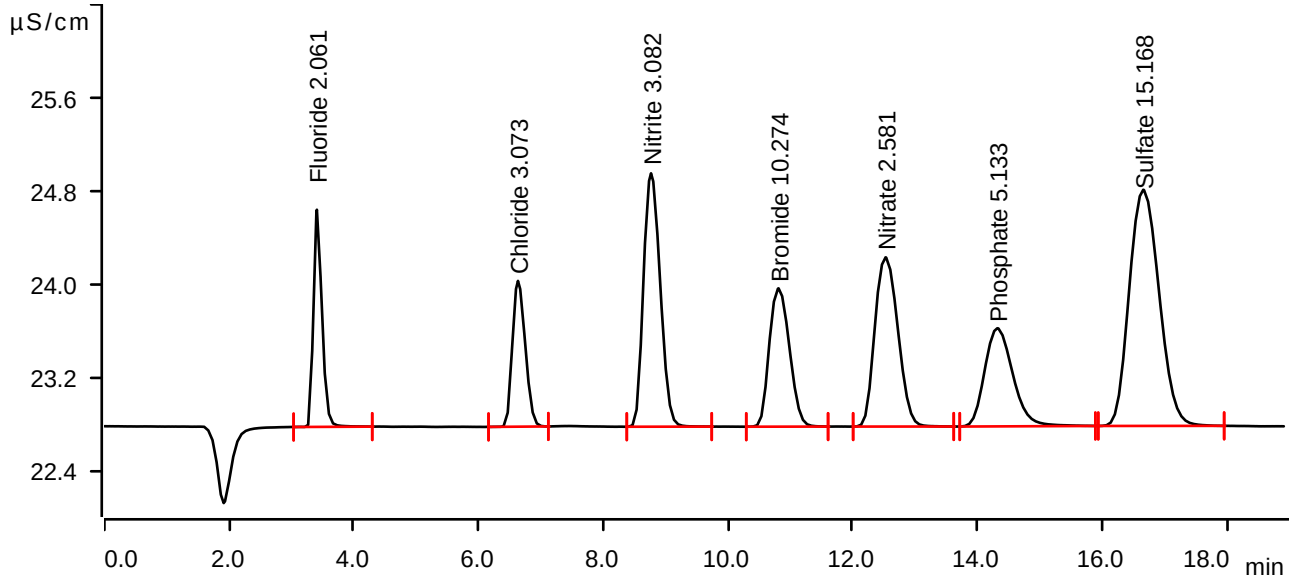
Sample data

Ident	LB133442BSW
Sample type	Check standard 1
Determination start	2024-11-14 11:39:47 UTC-5
Method	IC1-101624
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	3.408	0.2969	1.866	2.061	Fluoride
2	6.632	0.2985	1.252	3.073	Chloride
3	8.765	0.6740	2.177	3.082	Nitrite
4	10.810	0.4446	1.188	10.274	Bromide
5	12.525	0.6224	1.454	2.581	Nitrate
6	14.317	0.4409	0.843	5.133	Phosphate
7	16.657	1.1270	2.029	15.168	Sulfate

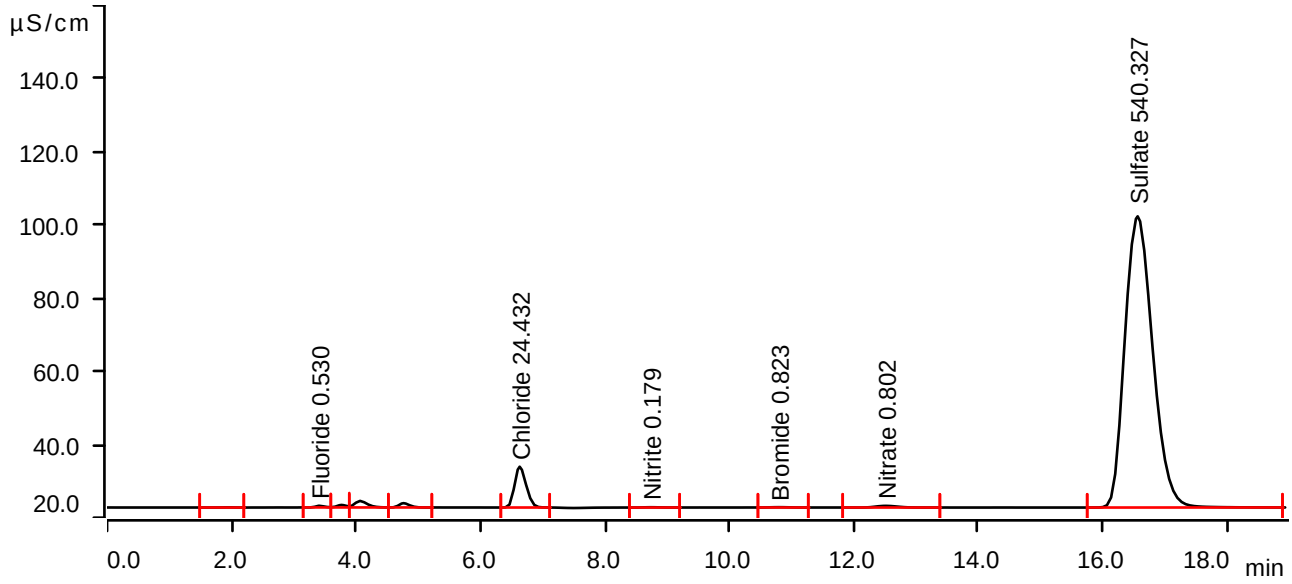
Sample data

Ident	P4843-01	
Sample type	Sample	
Determination start	2024-11-14 12:01:19 UTC-5	
Method	IC1-101624	
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	11.82	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	1.933	0.0086	0.037	invalid	
2	3.410	0.0727	0.451	0.530	Fluoride
3	3.768	0.1189	0.678	invalid	
4	4.067	0.4220	1.781	invalid	
5	4.765	0.2284	1.171	invalid	
6	6.632	2.4054	11.151	24.432	Chloride
7	8.740	0.0242	0.082	0.179	Nitrite
8	10.790	0.0284	0.084	0.823	Bromide
9	12.515	0.1823	0.454	0.802	Nitrate
10	16.562	41.2614	79.587	540.327	Sulfate

Reviewed By:Iwon
On:11/19/2024 9:2
AM
Inst Id :IC-2
LB :LB133442

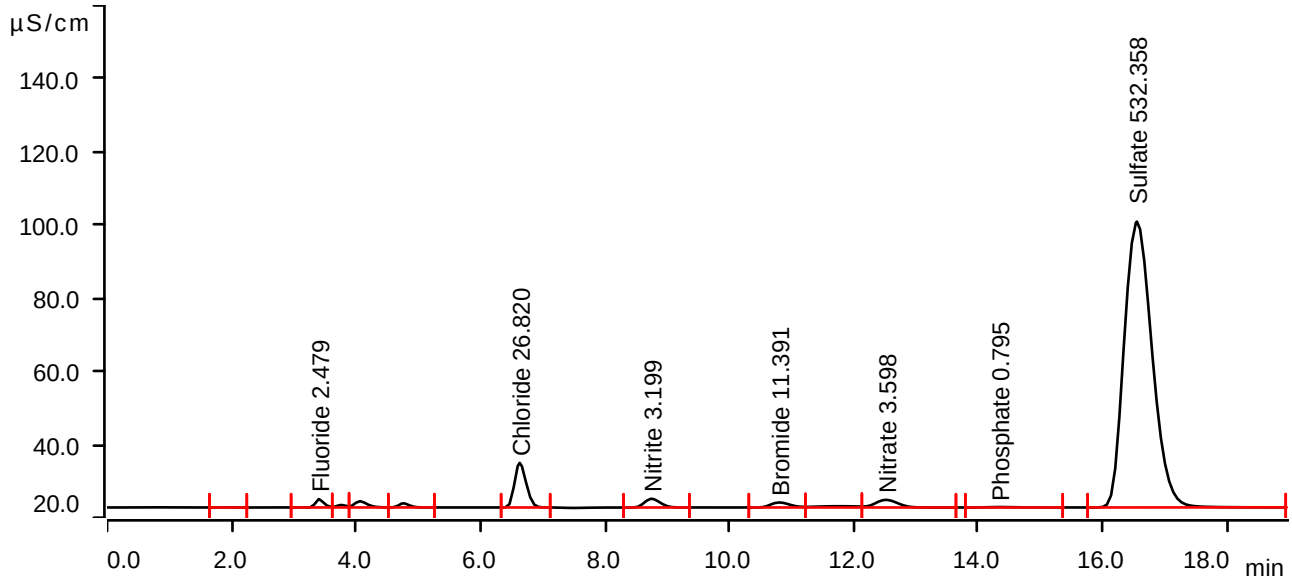
Sample data

Ident	P4843-01MS	
Sample type	Sample	
Determination start	2024-11-14 12:22:52 UTC-5	
Method	IC1-101624	
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	1.937	0.0086	0.037	invalid	
2	3.407	0.3582	2.276	2.479	Fluoride
3	3.763	0.1182	0.667	invalid	
4	4.065	0.4082	1.710	invalid	
5	4.762	0.2208	1.122	invalid	
6	6.632	2.6410	12.190	26.820	Chloride
7	8.752	0.7004	2.378	3.199	Nitrite
8	10.803	0.4939	1.362	11.391	Bromide
9	11.765	0.2529	0.341	invalid	
10	12.518	0.8738	2.079	3.598	Nitrate
11	14.358	0.0599	0.117	0.795	Phosphate
12	16.550	40.6524	78.120	532.358	Sulfate

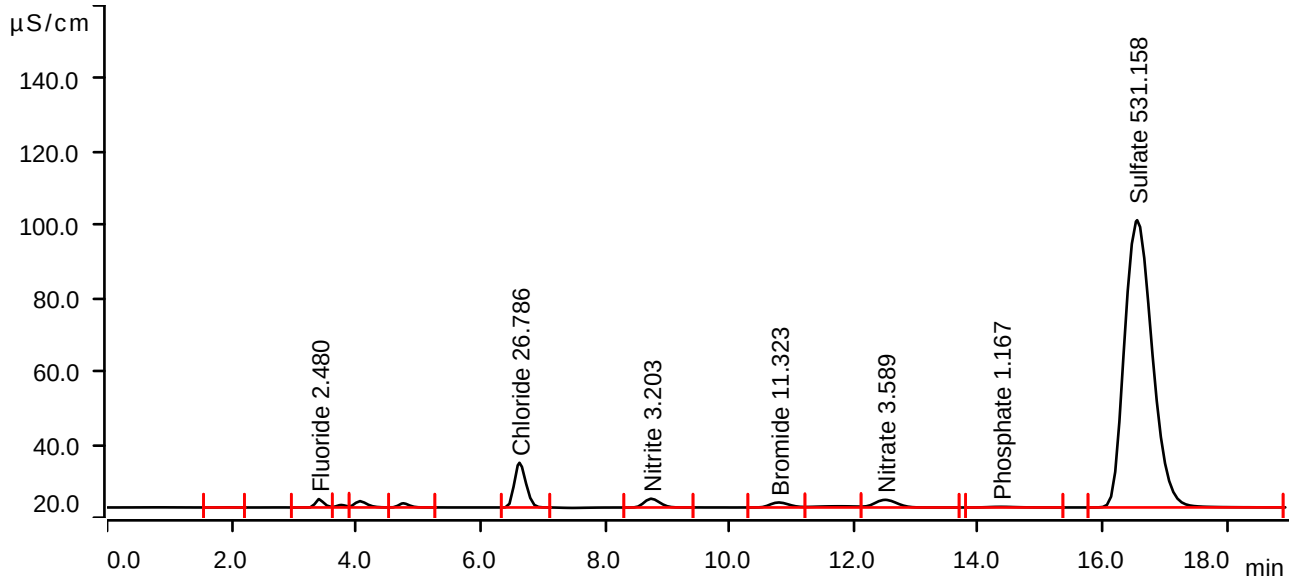
Sample data

Ident	P4843-01MSD	
Sample type	Sample	
Determination start	2024-11-14 12:44:27 UTC-5	
Method	IC1-101624	
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	1.932	0.0085	0.037	invalid	
2	3.407	0.3585	2.281	2.480	Fluoride
3	3.763	0.1185	0.671	invalid	
4	4.065	0.4074	1.716	invalid	
5	4.762	0.2210	1.128	invalid	
6	6.628	2.6377	12.216	26.786	Chloride
7	8.745	0.7013	2.390	3.203	Nitrite
8	10.793	0.4909	1.365	11.323	Bromide
9	11.755	0.2389	0.325	invalid	
10	12.505	0.8717	2.087	3.589	Nitrate
11	14.367	0.0926	0.183	1.167	Phosphate
12	16.553	40.5606	78.520	531.158	Sulfate

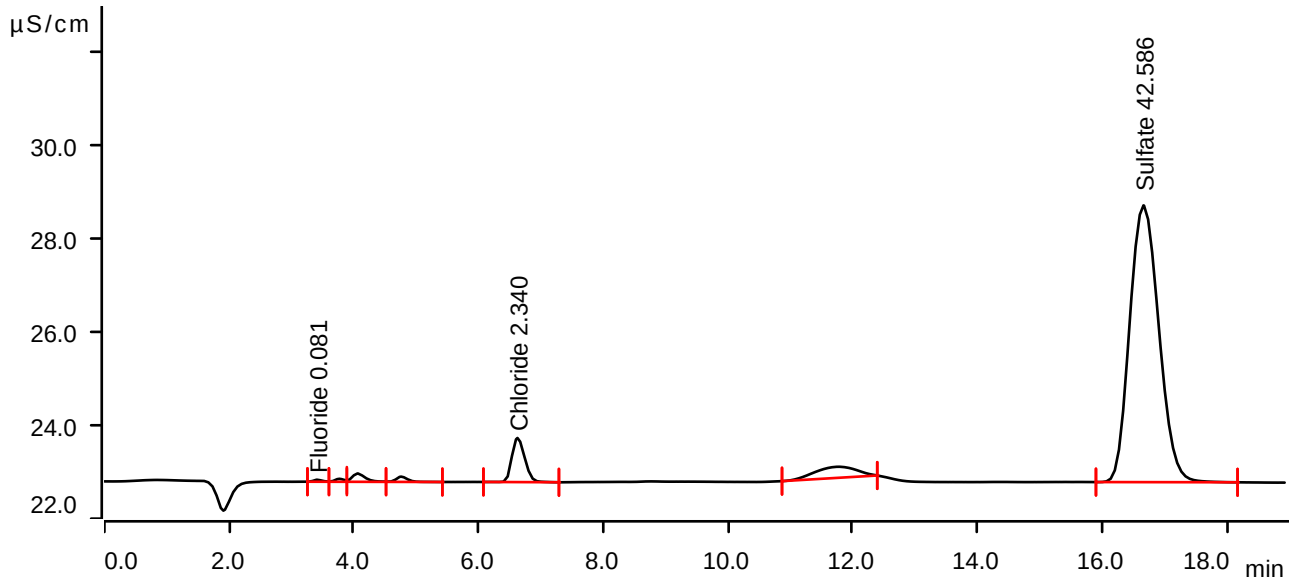
Sample data

Ident	P4843-01DLX10
Sample type	Sample
Determination start	2024-11-14 13:06:00 UTC-5
Method	IC1-101624
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	11.77	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	0.0068	0.043	0.081	Fluoride
2	3.770	0.0108	0.064	invalid	
3	4.058	0.0438	0.179	invalid	
4	4.758	0.0239	0.113	invalid	
5	6.625	0.2261	0.947	2.340	Chloride
6	11.783	0.1858	0.236	invalid	
7	16.660	3.2224	5.943	42.586	Sulfate

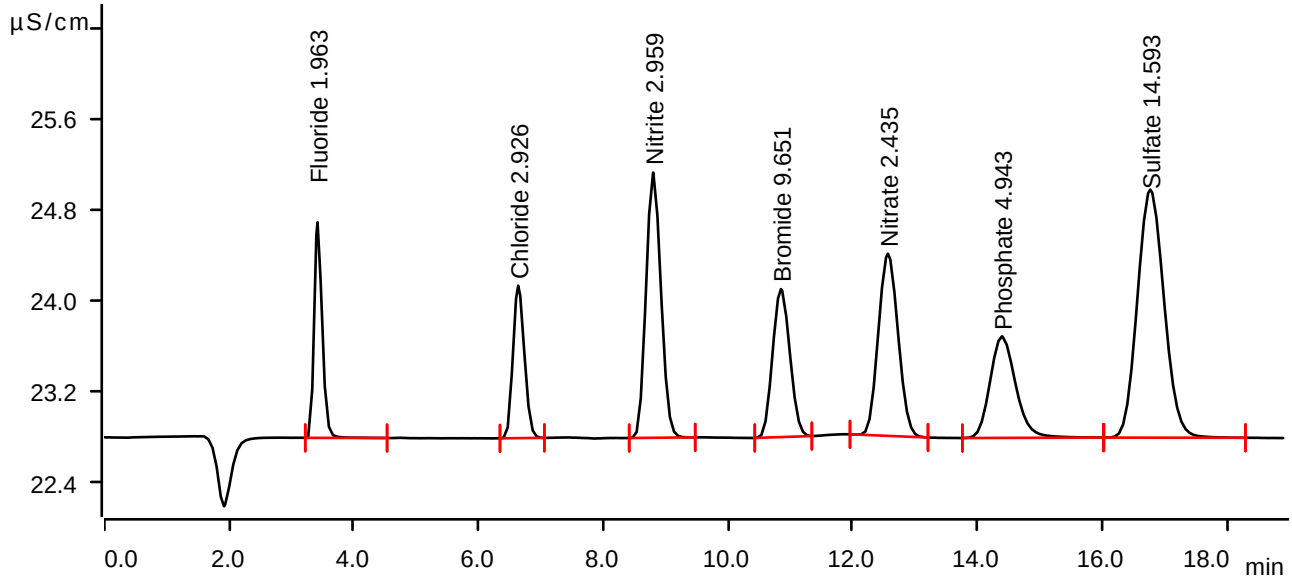
Sample data

Ident	CCV
Sample type	Check standard 1
Determination start	2024-11-14 13:27:34 UTC-5
Method	IC1-101624
Operator	

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.418	0.2827	1.894	1.963	Fluoride
2	6.635	0.2840	1.340	2.926	Chloride
3	8.798	0.6465	2.331	2.959	Nitrite
4	10.848	0.4172	1.300	9.651	Bromide
5	12.563	0.5863	1.600	2.435	Nitrate
6	14.390	0.4243	0.892	4.943	Phosphate
7	16.768	1.0830	2.180	14.593	Sulfate

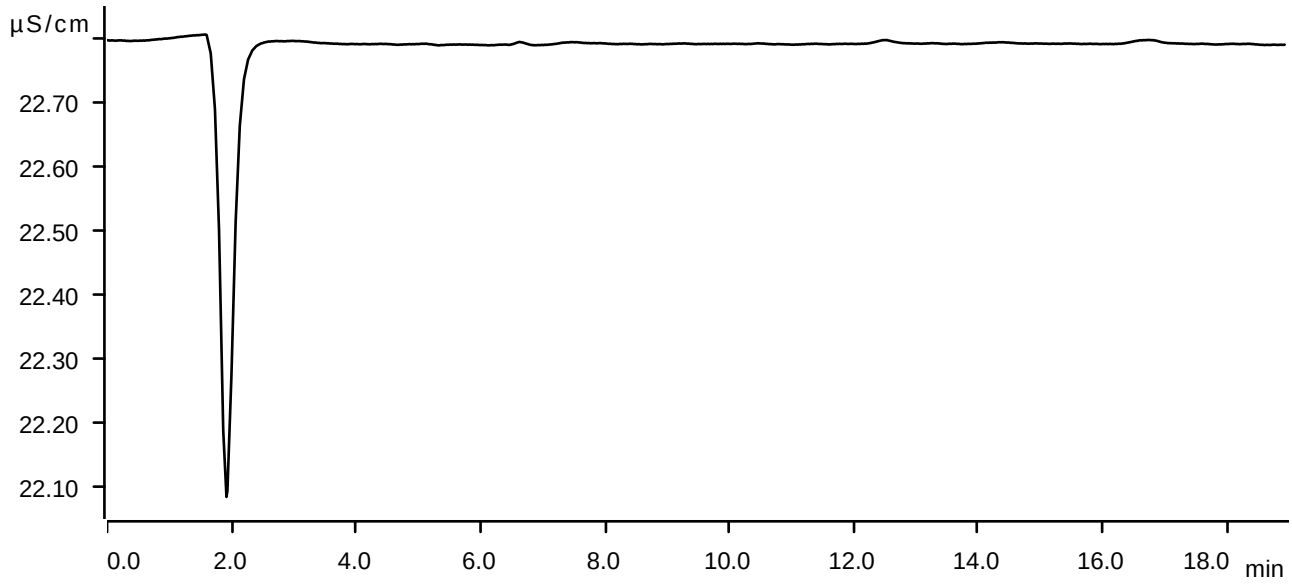
Sample data

Ident	CCB	
Sample type	Sample	
Determination start	2024-11-14 13:49:04 UTC-5	
Method	IC1-101624	
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



Reviewed By:Iwona
On:11/14/2024
11:47:13 AM
Inst Id :WC PH METER-1

Analytical Summary Report

Analysis Method: 9040C
Parameter: pH
Run Number: LB133444

Analyst By : jignesh
Supervisor Review By : Iwona
Slope : 98.4
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)	W3005
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	20.3	4.01	11/14/2024	08:15
2	CAL2	1	Water	NA	NA	20.2	7.01	11/14/2024	08:16
3	CAL3	1	Water	NA	NA	20.3	10.02	11/14/2024	08:19
4	ICV	1	Water	NA	NA	20.3	7.00	11/14/2024	08:20
5	CCV1	1	Water	NA	NA	20.3	2.01	11/14/2024	08:22
6	P4834-01	1	Water	NA	NA	20.7	7.09	11/14/2024	08:25
7	P4834-01DUP	1	Water	NA	NA	20.8	7.10	11/14/2024	08:26
8	P4835-01	1	Water	NA	NA	20.4	5.53	11/14/2024	08:30
9	P4836-01	1	Water	NA	NA	20.6	6.74	11/14/2024	08:33
10	P4837-01	1	Water	NA	NA	20.3	7.56	11/14/2024	08:37
11	P4838-01	1	Water	NA	NA	20.6	7.39	11/14/2024	08:40
12	P4843-01	1	Water	NA	NA	20.2	12.02	11/14/2024	08:47
13	CCV2	1	Water	NA	NA	20.3	12.01	11/14/2024	08:50

WORKLIST(Hardcopy Internal Chain)

VB 133444

WorkList Name : ph p4838 **WorkList ID :** 185416 **Department :** Wet-Chemistry **Date :** 11-14-2024 08:00:50

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4834-01 B	SLP-1-WATER	Water	pH	Cool 4 deg C	PSEG03	L41	11/13/2024	9040C
P4835-01 B	345-2-WATER	Water	pH	Cool 4 deg C	PSEG03	L41	11/13/2024	9040C
P4836-01 B	T3-WATER	Water	pH	Cool 4 deg C	PSEG03	L41	11/13/2024	9040C
P4837-01 B	3TRK-WATER	Water	pH	Cool 4 deg C	PSEG03	L41	11/13/2024	9040C
P4838-01 B	T1-WATER	Water	pH	Cool 4 deg C	PSEG03	L41	11/13/2024	9040C
P4843-01 B	SW-WTS-01	Water	pH	Cool 4 deg C	ENTA05	L23	11/13/2024	9040C

Date/Time 11-14-24 08:10

Raw Sample Received by: VB Cwell

Raw Sample Relinquished by: CS SM

Date/Time 11-14-24 12:00

Raw Sample Received by: CS SM

Raw Sample Relinquished by: VB WC

Reviewed By:Iwona
On:11/14/2024 3:30:46 PM
Inst Id :SPECTROPHOTOME

Analytical Summary Report

Analysis Method: ~~7196A~~

Parameter: ~~Hexavalent Chromium~~

Run Number: ~~LB133448~~

ANALYST: rubina

SUPERVISOR REVIEW BY: Iwona

pH Meter ID: WC pH Meter-1

Reagent/Standard	Lot/Log #
Calibration Std. hexchrome 0.1 ppm	WP110708
Calibration Std. hexchrome 0.05 ppm	WP110707
calibration std. hexchrome 0.01 ppm	WP110705
calibration std. hexchrome 0 ppm	WP110704
hexavalent chromium color reagent	WP110606
5N sulfuric acid	WP110380
Calibration Std Hexachrome 0.025 ppm	WP110706
Hexavalent Chromium ICV-LCS Std	WP110711
Calibration and CCV std HexChrome 0.5PPM	WP110709
Calibration std HexChrome 1.0PPM	WP110710

Intercept: -0.0004 **Slope:** 0.7822 **Regression:** 0.999997

Seq	Lab ID	True Value (mg/l)	DF	Initial Vol (ml)	Final Vol (ml)	pH HN03	pH H2SO4	Absorb.at 540nm		Absorbance Difference	Result (mg/L)	%D	Anal Date	Anal Time
								Backgrnd	Color					
1	CAL1	0	1	100	100		1.79	0.000	0.000	0.000	0.000		11/14/2024	08:50
2	CAL2	0.01	1	100	100		1.88	0.000	0.007	0.007	0.009	-10	11/14/2024	08:51
3	CAL3	0.025	1	100	100		1.84	0.000	0.019	0.019	0.024	-4	11/14/2024	08:52
4	CAL4	0.05	1	100	100		1.88	0.000	0.038	0.038	0.049	-2	11/14/2024	08:53
5	CAL5	0.1	1	100	100		1.90	0.000	0.079	0.079	0.101	1	11/14/2024	08:54
6	CAL6	0.5	1	100	100		1.91	0.000	0.390	0.390	0.499	-0.2	11/14/2024	08:55
7	CAL7	1	1	100	100		1.89	0.000	0.782	0.782	1.000	0	11/14/2024	08:56

Reviewed By:Iwona
On:11/14/2024 3:30:46 PM
Inst Id :SPECTROPHOTOME

Analytical Summary Report

Analysis Method: 7196A
ANALYST: rubina
Parameter: Hexavalent Chromium
SUPERVISOR REVIEW BY: Iwona
Run Number: LB133448
pH Meter ID: WC pH Meter-1

Seq	Lab ID	True Value	DF	Initial Vol (ml/gm)	Final Vol (ml)	pH HN03	pH H2SO4	Absorb.at540nm		Absorbance Difference	Intermediate Result (mg/L)	Anal Date	Anal Time
								Backgrnd	Color				
1	ICV	0.5	1	100	100		1.94	0.000	0.394	0.394	0.504	11/14/2024	08:57
2	ICB		1	100	100		1.82	0.000	0.001	0.001	0.002	11/14/2024	08:58
3	CCV1	0.5	1	100	100		1.97	0.000	0.391	0.391	0.500	11/14/2024	08:59
4	CCB1		1	100	100		1.79	0.000	0.000	0.000	0.001	11/14/2024	09:00
5	RL Check	0.01	1	100	100		1.92	0.000	0.008	0.008	0.011	11/14/2024	09:01
6	lb133448BL		1	100	100		1.80	0.000	0.001	0.001	0.002	11/14/2024	09:02
7	lb133448BS	0.5	1	100	100		1.93	0.000	0.402	0.402	0.514	11/14/2024	09:03
8	P4843-01		1	100	100		2.10	0.001	0.016	0.015	0.020	11/14/2024	09:04
9	CCV2	0.5	1	100	100		1.95	0.000	0.393	0.393	0.503	11/14/2024	09:05
10	CCB2		1	100	100		1.76	0.000	0.001	0.001	0.002	11/14/2024	09:06

WORKLIST(Hardcopy Internal Chain)

lb133448

WorkList Name : hex-w-11-13 **WorkList ID :** 185434 **Department :** Wet-Chemistry **Date :** 11-13-2024 17:09:55

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4843-01	SW-WTS-01	Water	Hexavalent Chromium	Ammonium sulfate buffer	ENTA05	L23	11/13/2024	7196A

Date/Time 11/13/2024 17.50
Raw Sample Received by: RM (WC)
Raw Sample Relinquished by: JP (WC)

Date/Time 11/14/2024 08.30
Raw Sample Received by: JP (WC)
Raw Sample Relinquished by: RM (WC)

Reviewed By:Iwona
On:11/19/2024 2:30:00 PM
Inst Id :DO METER
LB :LB133454

BOD5 LOG

ANALYST: rubir
SUPERVISOR: Iwona

QC BATCH ID: LB133454
Analysis Date: 11/14/2024
BOD Water: WP110700
MANGANOUS SULFATE SOLUTION: W3103
Starch: W3149
Alkaline Iodide Azide: W3109
Sulfuric acid, 1N: WP110386
Sodium Thiosulfate, 0.025N: W3105
POLYSEED: WP110702
NaOH, 1N: WP108662
GGA: WP110701
IncubatorID: INCUBATOR #3
Chlorine Strips: W2965
GuageID: 0511062
pH Strips: W3104
Zero DO: WP110595

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading(ML)	Final Reading(ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.2	9.2	9.2
WINKLER 2	WINKLER 2	2	300	9.1	18.3	9.2	9.2

Meter Calibration1: 9.30 Zero DO Reading1: 0.12 mg/L (<=0.2 Criteria)

Barometric Pressure1: 776 mmHg DO Meter BOD fluid reading for winkler comparison: 9.27

After Incubation

Meter Calibration2: 8.89 Zero DO Reading2: 0.10 mg/L (<=0.2 Criteria)

Barometric Pressure2: 765 mmHg

Alliance TECHNICAL GROUP

QC BATCH ID: LB133454

INCUBATOR TEMP IN(C): 20.1

INCUBATOR TEMP OUT(C): 20.3

TIME IN: 16:30

TIME OUT: 11:15

DATE IN: 11/14/2024

DATE OUT: 11/19/2024

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
LB133454BL	1	No	6.56	N/A	20.50	300	9.26	9.24	0.02	0.02	0.02	
POLYSEED	1					10	9.19	6.29	2.9	0.58	0.57	
POLYSEED	2					15	9.16	5.02	4.14	0.55		
POLYSEED	3					20	9.14	3.48	5.66	0.57		
GGA	1					6	9.22	5.09	4.13	178	183.5	
GGA	2					6	9.20	4.90	4.3	186.5		
GGA	3					6	9.16	4.87	4.29	186		
P4840-02	1	No	7.48	N/A	20.00	0.5	9.15	7.44	-	0	386	
P4840-02	2					1	9.10	6.82	2.28	513		
P4840-02	3					2	9.05	6.20	2.85	342		
P4840-02	4					3	9.00	5.40	3.6	303		
P4843-01	1	No	12.02	7.18	20.10	5	9.24	7.83	-	0	15.69	pH Adjuste
P4843-01	2					20	9.20	6.94	2.26	25.35		
P4843-01	3					50	9.19	6.32	2.87	13.8		
P4843-01	4					150	9.15	4.62	4.53	7.92		
P4853-01	1	No	6.12	6.70	20.00	5	9.07	6.63	2.44	112.2	51.22	pH Adjuste
P4853-01	2					20	8.99	4.20	4.79	63.3		
P4853-01	3					50	8.58	4.10	4.48	23.46		
P4853-01	4					150	7.53	4.00	3.53	5.92		
P4853-02	1	No	6.16	6.89	20.00	5	9.10	7.05	2.05	88.8	44.18	pH Adjuste
P4853-02	2					20	8.77	4.42	4.35	56.7		
P4853-02	3					50	8.74	4.11	4.63	24.36		
P4853-02	4					150	7.96	3.96	4	6.86		
P4853-02DUP	1	No	6.16	6.89	20.00	5	9.11	6.98	2.13	93.6	45.56	pH Adjuste
P4853-02DUP	2					20	8.77	4.38	4.39	57.3		
P4853-02DUP	3					50	8.73	4.09	4.64	24.42		
P4853-02DUP	4					150	7.94	3.90	4.04	6.94		

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.

WORKLIST(Hardcopy Internal Chain)

LB133454

WorkList Name : bod5-11-14 **WorkList ID :** 185440 **Department :** Wet-Chemistry **Date :** 11-14-2024 11:49:58

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4840-02	COMP	Water	BOD5	Cool 4 deg C	ARAM01	L11	11/13/2024	SM5210 B
P4843-01	SW-WTS-01	Water	BOD5	Cool 4 deg C	ENTA05	L23	11/13/2024	SM5210 B
P4853-01	001-WILLETS-PT-BLVD(NOV)	Water	BOD5	Cool 4 deg C	TULL01	L41	11/13/2024	SM5210 B
P4853-02	002-35TH-AVE(NOV)	Water	BOD5	Cool 4 deg C	TULL01	L41	11/13/2024	SM5210 B

Date/Time 11/14/2024 14:30

Raw Sample Received by: RM (WC)

Raw Sample Relinquished by: [illegible] (COC)

Date/Time 11/14/2024 16:00

Raw Sample Received by: [illegible]

Raw Sample Relinquished by: RM (WC)

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona
ANALYST: Niha
Date: 11/14/2024
Run Number: LB133467
BalanceID: WC SC-6
OvenID: WC OVEN-1
FilterID: 17416528
ThermometerID: WET OVEN#1

TEMP1 IN:	103 °C	11/14/2024 14:00	**TEMP1 OUT:**	104 °C	11/14/2024 15:00
TEMP2 IN:	103 °C	11/14/2024 15:30	**TEMP2 OUT:**	104 °C	11/14/2024 16:30
TEMP3 IN:	103 °C	11/15/2024 09:00	**TEMP3 OUT:**	104 °C	11/15/2024 10:30
TEMP4 IN:	103 °C	11/15/2024 11:00	**TEMP4 OUT:**	104 °C	11/15/2024 12:30

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	LB133467BL	LB133467BL	1.3872	1.3872	100	1.3872	1.3872	1.3872	0.0000	0
2	LB133467BS	LB133467BS	1.4096	1.4096	100	1.4640	1.4640	1.4640	0.0544	544
3	P4790-01	DRAIN WATER TANK-1	1.3679	1.3679	50	1.4237	1.4237	1.4237	0.0558	1116
4	P4791-02	HINCHMAN-OILY-WATER	1.4119	1.4119	100	1.4297	1.4297	1.4297	0.0178	178
5	P4792-04	MANHOLE-WASTE-DRUM	1.3947	1.3947	100	1.5257	1.5257	1.5257	0.1310	1310
6	P4840-02	COMP	1.3929	1.3929	100	1.4657	1.4657	1.4657	0.0728	728
7	P4840-02DUP	COMPDUP	1.4062	1.4062	100	1.4796	1.4796	1.4796	0.0734	734
8	P4843-01	SW-WTS-01	1.3939	1.3939	100	1.4246	1.4246	1.4246	0.0307	307
9	P4853-01	001-WILLETS-PT-BLVD(NOV)	1.3881	1.3881	100	1.4033	1.4033	1.4033	0.0152	152
10	P4853-02	002-35TH-AVE(NOV)	1.4032	1.4032	150	1.4231	1.4231	1.4231	0.0199	132.7
11	P4856-01	001-WILLETS-PT-BLVD(OCT)	1.3942	1.3942	250	1.4043	1.4043	1.4043	0.0101	40.4
12	P4856-02	002-35TH-AVE(OCT)	1.4015	1.4015	250	1.4159	1.4159	1.4159	0.0144	57.6

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona
ANALYST: Niha
Date: 11/14/2024
Run Number: LB133467
BalanceID: WC SC-6
OvenID: WC OVEN-1
FilterID: 17416528
ThermometerID: WET OVEN#1

TEMP1 IN:	103 °C	11/14/2024 14:00	**TEMP1 OUT:**	104 °C	11/14/2024 15:00
TEMP2 IN:	103 °C	11/14/2024 15:30	**TEMP2 OUT:**	104 °C	11/14/2024 16:30
TEMP3 IN:	103 °C	11/15/2024 09:00	**TEMP3 OUT:**	104 °C	11/15/2024 10:30
TEMP4 IN:	103 °C	11/15/2024 11:00	**TEMP4 OUT:**	104 °C	11/15/2024 12:30

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

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 = $\frac{D}{A} * 1000 * 1000$

WORKLIST(Hardcopy Internal Chain)

LB133467

WorkList Name : TSS-11082024 **WorkList ID :** 185259 **Department :** Wet-Chemistry **Date :** 11-08-2024 13:09:28

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4840-02	COMP	Water	TSS	Cool 4 deg C	ARAM01	L11	11/13/2024	SM2540 D
P4790-01	DRAIN WATER TANK-1	Water	TSS	Cool 4 deg C	MAJO01	L11	11/08/2024	SM2540 D
P4791-02	HINCHMAN-OILY-WATER	Water	TSS	Cool 4 deg C	PSEG03	L23	11/08/2024	SM2540 D
P4792-04	MANHOLE-WASTE-DRUM	Water	TSS	Cool 4 deg C	PSEG03	L21	11/08/2024	SM2540 D
P4843-01	SW-WTS-01	Water	TSS	Cool 4 deg C	ENTA05	L23	11/13/2024	SM2540 D
P4853-01	001-WILLETS-PT-BLVD(NOV)	Water	TSS	Cool 4 deg C	TULL01	L41	11/13/2024	SM2540 D
P4853-02	002-35TH-AVE(NOV)	Water	TSS	Cool 4 deg C	TULL01	L41	11/13/2024	SM2540 D
P4856-01	001-WILLETS-PT-BLVD(OCT)	Water	TSS	Cool 4 deg C	TULL01	L23	11/13/2024	SM2540 D
P4856-02	002-35TH-AVE(OCT)	Water	TSS	Cool 4 deg C	TULL01	L23	11/13/2024	SM2540 D

Date/Time 11.15.2024, 08:40
Raw Sample Received by: NF(WC)
Raw Sample Relinquished by: [illegible]

Date/Time 11.15.2024, 09:30
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: NF(WC)

TOTAL SOLIDS - SM2540B

SUPERVISOR: Iwona
ANALYST: Niha
Date: 11/14/2024
Run Number: LB133470
BalanceID: WC SC-6
OvenID: WC OVEN-1
ThermometerID: WET OVEN#1

TEMP1 IN:	103 °C	11/14/2024 11:00	**TEMP1 OUT:**	104 °C	11/14/2024 12:00
TEMP2 IN:	103 °C	11/14/2024 12:30	**TEMP2 OUT:**	103 °C	11/14/2024 13:30
TEMP3 IN:	104 °C	11/14/2024 16:00	**TEMP3 OUT:**	103 °C	11/15/2024 09:15
TEMP4 IN:	104 °C	11/15/2024 09:45	**TEMP4 OUT:**	103 °C	11/15/2024 11:15

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Vol (ml)	Orignal weight 1st Dish+Sample weight after Drying @103-@105°C (g)	Constant weight 2nd Dish+Sample weight after Drying @103-@105°C (g)	Final Constant weight Final Dish+Sample weight after Drying @103-@105°C (g)	Weight (g)	Result (mg/L)
1	LB133470BL	LB133470BL	58.7214	58.7214	100	58.7214	58.7214	58.7214	0.0000	0
2	P4843-01	SW-WTS-01	89.0848	89.0848	100	89.2558	89.2558	89.2558	0.1710	1710
3	P4843-01DUP	SW-WTS-01DUP	90.2164	90.2164	100	90.3916	90.3916	90.3916	0.1752	1752

A = Sample Volume (ml)
B = Final Empty Dish Weight (g)
C = Final Dish+Sample weight after Drying @103-@105°C (g)

Result mg/L = ((C - B) / A) * 1000 * 1000

LB133470

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TS-11142024 **WorkList ID :** 185489 **Department :** Wet-Chemistry **Date :** 11-14-2024 14:59:01

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4843-01	SW-WTS-01	Water	TS	Cool 4 deg C	ENTA05	L23	11/13/2024	SM2540 B

Date/Time 11.14.2024, 15:15
Raw Sample Received by: NF(WC)
Raw Sample Relinquished by: MWC

Date/Time 11.14.2024, 16:15
Raw Sample Received by: MWC
Raw Sample Relinquished by: NF(WC)

Analytical Summary Report

Analysis Method: 1010B
Parameter: Flash Point
Run Number: LB133474
Thermometer ID: Flash Point

Reviewed By: rubina
Supervisor Review By: Iwona
Ambient Barometric Pressure(mmHg): 765.00
Barometric Scale ID: 0511064

Reagent/Standard	Lot/Log #
p-xylene (ICV)	W3088

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	82.1	11/15/2024	13:25
2	P4843-01		1	14	100.00	>212.0	>212.0	11/15/2024	13:55
3	P4861-01		1	12	100.00	>212.0	>212.0	11/15/2024	14:25
4	P4871-01		1	13	100.00	>212.0	>212.0	11/15/2024	14:55
5	P4871-01DUP		1	13	100.00	>212.0	>212.0	11/15/2024	15:25

Result = (Celsius * 1.8) + 32

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

WORKLIST(Hardcopy Internal Chain)

lb133474

WorkList Name : fp-11-15 **WorkList ID :** 185478 **Department :** Wet-Chemistry **Date :** 11-15-2024 12:15:14

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4843-01	SW-WTS-01	Water	Flash Point	Cool 4 deg C	ENTA05	L23	11/13/2024	1010B
P4861-01	WC-11-A-202411	Water	Flash Point	Cool 4 deg C	AECO02	L41	11/13/2024	1010B
P4871-01	WC-10-A-202411	Water	Flash Point	Cool 4 deg C	AECO02	M11	11/13/2024	1010B

Date/Time 11/15/2024 13:15
Raw Sample Received by: RM CWC
Raw Sample Relinquished by: JP (CWC)

Date/Time 11/15/2024 16:05
Raw Sample Received by: JP (CWC)
Raw Sample Relinquished by: RM CWC

Alliance TECHNICAL GROUP

Water TKN Preparation Sheet

PB165161

SOP ID : MSM4500-N Org C-TKN-11

SDG No : N/A

Matrix : WATER

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#2&3

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

Start Digest Date: 11/21/2024 **Time :** 09:15 **Temp :** 380 °C

End Digest Date: 11/21/2024 **Time :** 10:45 **Temp :** 375 °C

Start Distillation Date: 11/21/2024 **Time :** 11:10 **Temp :** 150 °C

End Distillation Date: 11/21/2024 **Time :** 12:10 **Temp :** 160 °C

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : Therm#2(2179)

Prep Technician Signature: RM

Supervisor Signature: IZ

Standared Name	MLS USED	STD REF. # FROM LOG
TKN CAL STD	50.0ML	WP110784
TKN CCV STD	50.0ML	WP110785
TKN ICV STD	50.0ML	WP110786
TKN LCS STD	50.0ML	WP110787
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
TKN DIGESTION FLUID	10.0ML	WP108657
TKN DISTILLATION BUFFER	10.0ML	WP109441
H2SO4 0.04N	5.0ML	WP110335
pH Paper 0-14	N/A	W3104
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

RL CHECK 10ML FROM WP110785, ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP108814

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
11/21/2024 12:30	RM CWC	RM CWC
	Preparation Group	Analysis Group

WORKLIST(Hardcopy Internal Chain)

WorkList Name : tkn-11-21 **WorkList ID :** 185631 **Department :** Distillation **Date :** 11-21-2024 08:38:42

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
P4843-01	SW-WTS-01	Water	TKN	Conc H2SO4 to pH < 2	ENTA05	L23	11/13/2024	SM4500 N Org

Date/Time 11/21/2024 08.40
Raw Sample Received by: RM CWS
Raw Sample Relinquished by:

Date/Time 11/21/2024 09.25
Raw Sample Received by:
Raw Sample Relinquished by: RM CWS

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Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB133442

Review By	Niha	Review On	11/19/2024 9:23:19 AM
Supervise By	Iwona	Supervise On	11/19/2024 9:24:50 AM
SubDirectory	LB133442	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP110250,WP110251,WP110252,WP110253,WP110254,WP110255,WP110256,WP110257
ICV Standard	WP110258
CCV Standard	WP110712
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP110713
Chk Standard	WP110260,WP110261

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	10/16/24 10:55	All standards, samples, and	NF/IZ	OK
2	STD2	STD2	CAL2	10/16/24 11:17	QC are filtered through	NF/IZ	OK
3	STD3	STD3	CAL3	10/16/24 11:38	0.45um, filter lot W2865	NF/IZ	OK
4	STD4	STD4	CAL4	10/16/24 11:59		NF/IZ	OK
5	STD5	STD5	CAL5	10/16/24 12:21		NF/IZ	OK
6	STD6	STD6	CAL6	10/16/24 12:42		NF/IZ	OK
7	STD7	STD7	CAL7	10/16/24 13:04		NF/IZ	OK
8	ICV1	ICV1	ICV	10/16/24 13:37		NF/IZ	OK
9	ICB1	ICB1	ICB	10/16/24 13:59		NF/IZ	OK
10	CCV1	CCV1	CCV	11/14/24 10:35		NF/IZ	OK
11	CCB1	CCB1	CCB	11/14/24 10:56		NF/IZ	OK
12	LB133442BLW	LB133442BLW	MB	11/14/24 11:18		NF/IZ	OK
13	LB133442BSW	LB133442BSW	LCS	11/14/24 11:39		NF/IZ	OK
14	P4843-01	SW-WTS-01	SAM	11/14/24 12:01	Cl high	NF/IZ	Dilution
15	P4843-01MS	SW-WTS-01MS	MS	11/14/24 12:22	9.5ml of sample, 0.5mL W3091	NF/IZ	OK
16	P4843-01MSD	SW-WTS-01MSD	MSD	11/14/24 12:44	9.5ml of sample, 0.5mL W3091	NF/IZ	OK
17	P4843-01DL	SW-WTS-01DL	SAM	11/14/24 13:06	10X for Cl	NF/IZ	Confirms
18	CCV2	CCV2	CCV	11/14/24 13:27		NF/IZ	OK

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Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QCBatch ID # LB133442

Review By	Niha	Review On	11/19/2024 9:23:19 AM
Supervise By	Iwona	Supervise On	11/19/2024 9:24:50 AM
SubDirectory	LB133442	Test	Anions

STD. NAME	STD REF.#
ICAL Standard	WP110250,WP110251,WP110252,WP110253,WP110254,WP110255,WP110256,WP110257
ICV Standard	WP110258
CCV Standard	WP110712
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP110713
Chk Standard	WP110260,WP110261

19	CCB2	CCB2	CCB	11/14/24 13:49		NF/IZ	OK

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Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133444

Review By	jignesh	Review On	11/14/2024 11:14:17 AM
Supervise By	Iwona	Supervise On	11/14/2024 11:47:13 AM
SubDirectory	LB133444	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,W3005,W3072

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	11/14/24 08:15		jignesh	OK
2	CAL2	CAL2	CAL	11/14/24 08:16		jignesh	OK
3	CAL3	CAL3	CAL	11/14/24 08:19		jignesh	OK
4	ICV	ICV	ICV	11/14/24 08:20		jignesh	OK
5	CCV1	CCV1	CCV	11/14/24 08:22		jignesh	OK
6	P4834-01	SLP-1-WATER	SAM	11/14/24 08:25		jignesh	OK
7	P4834-01DUP	SLP-1-WATERDUP	DUP	11/14/24 08:26		jignesh	OK
8	P4835-01	345-2-WATER	SAM	11/14/24 08:30		jignesh	OK
9	P4836-01	T3-WATER	SAM	11/14/24 08:33		jignesh	OK
10	P4837-01	3TRK-WATER	SAM	11/14/24 08:37		jignesh	OK
11	P4838-01	T1-WATER	SAM	11/14/24 08:40		jignesh	OK
12	P4843-01	SW-WTS-01	SAM	11/14/24 08:47		jignesh	OK
13	CCV2	CCV2	CCV	11/14/24 08:50		jignesh	OK

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Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133448

Review By	rubina	Review On	11/14/2024 3:22:03 PM
Supervise By	Iwona	Supervise On	11/14/2024 3:30:46 PM
SubDirectory	LB133448	Test	Hexavalent Chromium

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	WP110708,WP110707,WP110705,WP110704,WP110606,WP110380,WP110706,WP110711,WP110709,WP110710

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	11/14/24 08:50		rubina	OK
2	CAL2	CAL2	CAL	11/14/24 08:51		rubina	OK
3	CAL3	CAL3	CAL	11/14/24 08:52		rubina	OK
4	CAL4	CAL4	CAL	11/14/24 08:53		rubina	OK
5	CAL5	CAL5	CAL	11/14/24 08:54		rubina	OK
6	CAL6	CAL6	CAL	11/14/24 08:55		rubina	OK
7	CAL7	CAL7	CAL	11/14/24 08:56		rubina	OK
8	ICV	ICV	ICV	11/14/24 08:57		rubina	OK
9	ICB	ICB	ICB	11/14/24 08:58		rubina	OK
10	CCV1	CCV1	CCV	11/14/24 08:59		rubina	OK
11	CCB1	CCB1	CCB	11/14/24 09:00		rubina	OK
12	RL Check	RL Check	SAM	11/14/24 09:01		rubina	OK
13	lb133448BL	lb133448BL	MB	11/14/24 09:02		rubina	OK
14	lb133448BS	lb133448BS	LCS	11/14/24 09:03		rubina	OK
15	P4843-01	SW-WTS-01	SAM	11/14/24 09:04		rubina	OK
16	CCV2	CCV2	CCV	11/14/24 09:05		rubina	OK
17	CCB2	CCB2	CCB	11/14/24 09:06		rubina	OK

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Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QCBatch ID # LB133454

Review By	rubina	Review On	11/19/2024 2:29:24 PM
Supervise By	Iwona	Supervise On	11/19/2024 2:30:00 PM
SubDirectory	LB133454	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	WP110700,W3149,WP110386,W3103,W3109,W3105,WP110702,WP110701,WP108662

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB133454BL	LB133454BL	MB	11/14/24 16:30		rubina	OK
2	LB133454BS	LB133454BS	LCS	11/14/24 16:30		rubina	OK
3	P4840-02	COMP	SAM	11/14/24 16:30	Intermediate dilution	rubina	OK
4	P4843-01	SW-WTS-01	SAM	11/14/24 16:30		rubina	OK
5	P4853-01	001-WILLETS-PT-BL	SAM	11/14/24 16:30		rubina	OK
6	P4853-02	002-35TH-AVE(NOV)	SAM	11/14/24 16:30		rubina	OK
7	P4853-02DUP	002-35TH-AVE(NOV)I	DUP	11/14/24 16:30		rubina	OK

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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB133467

Review By	Niha	Review On	11/15/2024 12:48:54 PM
Supervise By	Iwona	Supervise On	11/15/2024 1:53:20 PM
SubDirectory	LB133467	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	LB133467BL	LB133467BL	MB	11/15/24 09:00		Niha	OK
2	LB133467BS	LB133467BS	LCS	11/15/24 09:00		Niha	OK
3	P4790-01	DRAIN WATER TANK	SAM	11/15/24 09:00		Niha	OK
4	P4791-02	HINCHMAN-OILY-WA	SAM	11/15/24 09:00		Niha	OK
5	P4792-04	MANHOLE-WASTE-D	SAM	11/15/24 09:00		Niha	OK
6	P4840-02	COMP	SAM	11/15/24 09:00		Niha	OK
7	P4840-02DUP	COMPDUP	DUP	11/15/24 09:00		Niha	OK
8	P4843-01	SW-WTS-01	SAM	11/15/24 09:00		Niha	OK
9	P4853-01	001-WILLETS-PT-BL	SAM	11/15/24 09:00		Niha	OK
10	P4853-02	002-35TH-AVE(NOV)	SAM	11/15/24 09:00		Niha	OK
11	P4856-01	001-WILLETS-PT-BL	SAM	11/15/24 09:00		Niha	OK
12	P4856-02	002-35TH-AVE(OCT)	SAM	11/15/24 09:00		Niha	OK

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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB133470

Review By	Niha	Review On	11/15/2024 4:33:32 PM
Supervise By	Iwona	Supervise On	11/15/2024 4:42:13 PM
SubDirectory	LB133470	Test	TS

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	LB133470BL	LB133470BL	MB	11/14/24 11:00		Niha	OK
2	P4843-01	SW-WTS-01	SAM	11/14/24 11:00		Niha	OK
3	P4843-01DUP	SW-WTS-01DUP	DUP	11/14/24 11:00		Niha	OK

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Instrument ID: IGN-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB133474

Review By	rubina	Review On	11/15/2024 4:24:35 PM
Supervise By	Iwona	Supervise On	11/15/2024 4:31:27 PM
SubDirectory	LB133474	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	W3088

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	ICV	ICV	ICV	11/15/24 13:25		rubina	OK
2	P4843-01	SW-WTS-01	SAM	11/15/24 13:55		rubina	OK
3	P4861-01	WC-11-A-202411	SAM	11/15/24 14:25		rubina	OK
4	P4871-01	WC-10-A-202411	SAM	11/15/24 14:55		rubina	OK
5	P4871-01DUP	WC-10-A-202411DUP	DUP	11/15/24 15:25		rubina	OK

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB133557

Review By		Review On	
Supervise By		Supervise On	
SubDirectory	LB133557	Test	TKN

STD. NAME	STD REF.#
ICAL Standard	WP110784
ICV Standard	WP110786
CCV Standard	WP110785
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP110787
Chk Standard	WP110416,WP110019,WP108709,WP108840

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	11/21/24 14:43		rubina	OK
2	0.5PPM	0.5PPM	CAL2	11/21/24 14:43		rubina	OK
3	1.0PPM	1.0PPM	CAL3	11/21/24 14:43		rubina	OK
4	2.5PPM	2.5PPM	CAL4	11/21/24 14:43		rubina	OK
5	5.0PPM	5.0PPM	CAL5	11/21/24 14:43		rubina	OK
6	6.7PPM	6.7PPM	CAL6	11/21/24 14:43		rubina	OK
7	10.0PPM	10.0PPM	CAL7	11/21/24 14:43		rubina	OK
8	ICV1	ICV1	ICV	11/21/24 15:13		rubina	OK
9	ICB1	ICB1	ICB	11/21/24 15:13		rubina	OK
10	CCV1	CCV1	CCV	11/21/24 15:13		rubina	OK
11	CCB1	CCB1	CCB	11/21/24 15:13		rubina	OK
12	RL	RL	SAM	11/21/24 15:13		rubina	OK
13	PB165161BL	PB165161BL	MB	11/21/24 15:13		rubina	OK
14	PB165161BS	PB165161BS	LCS	11/21/24 15:22		rubina	OK
15	P4843-01	SW-WTS-01	SAM	11/21/24 15:22	High	rubina	Dilution
16	CCV2	CCV2	CCV	11/21/24 15:22		rubina	OK
17	CCB2	CCB2	CCB	11/21/24 15:22		rubina	OK
18	P4843-01DL	SW-WTS-01DL	SAM	11/21/24 15:54	Report 5x	rubina	Confirms

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Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB133557

Review By		Review On	
Supervise By		Supervise On	
SubDirectory	LB133557	Test	TKN

STD. NAME	STD REF.#
ICAL Standard	WP110784
ICV Standard	WP110786
CCV Standard	WP110785
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP110787
Chk Standard	WP110416,WP110019,WP108709,WP108840

19	CCV3	CCV3	CCV	11/21/24 15:54		rubina	OK
20	CCB3	CCB3	CCB	11/21/24 15:54		rubina	OK

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Prep Standard - Chemical Standard Summary

Order ID : P4843

Test : Anions Group4,BOD5,Flash Point,Hexavalent Chromium,pH,TKN,Total Nitrogen,TS,TSS

Prepbatch ID : PB165161,

Sequence ID/Qc Batch ID: LB133442,LB133444,LB133448,LB133454,LB133467,LB133470,LB133474,LB133557,LB133560,

Standard ID :

WP108657,WP108658,WP108659,WP108662,WP108709,WP108840,WP109441,WP110019,WP110149,WP110150,WP110250,WP110251,WP110252,WP110253,WP110254,WP110255,WP110256,WP110257,WP110258,WP110259,WP110260,WP110261,WP110335,WP110380,WP110386,WP110416,WP110606,WP110700,WP110701,WP110702,WP110703,WP110704,WP110705,WP110706,WP110707,WP110708,WP110709,WP110710,WP110711,WP110712,WP110713,WP110784,WP110785,WP110786,WP110787,

Chemical ID :

E3824,M5673,M6041,W1992,W1993,W2647,W2651,W2652,W2653,W2654,W2666,W2697,W2858,W2979,W2983,W3005,W3030,W3058,W3062,W3063,W3071,W3072,W3088,W3093,W3094,W3103,W3104,W3105,W3107,W3109,W3112,W3113,W3117,W3132,W3136,W3143,W3149,

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
619	TKN digestion solution	WP108657	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_4 (WCSC-4)	None	Iwona Zarych 07/09/2024

FROM 134.00000gram of W2983 + 134.00000ml of M5673 + 7.30000gram of W2697 + 725.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1993	HEXAVALENTCHROMIUM STOCK STD 1, 50PPM	WP108658	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/09/2024

FROM 0.14140gram of W2651 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1994	HEXAVALENTCHROMIUM STOCK STD 2, 50PPM	WP108659	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/09/2024

FROM 0.14140gram of W2652 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1571	Sodium hydroxide, 1N	WP108662	07/09/2024	01/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/11/2024

FROM 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
290	Phenol reagent for Ammonia	WP108709	07/11/2024	01/11/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Mohan Bera 07/17/2024

FROM 3.20000gram of W3113 + 8.30000gram of W2858 + 88.80000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
635	EDTA BUFFER FOR AMMONIA	WP108840	07/26/2024	01/26/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 07/26/2024

FROM 5.50000gram of W3113 + 50.00000gram of W3132 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1338	TKN DISTILLING BUFFER	WP109441	08/29/2024	02/28/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 08/30/2024

FROM 0.47500L of W3112 + 25.00000gram of W3136 + 500.00000gram of W3113 = Final Quantity: 1.000 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
289	Sodium Hypochlorite for Ammonia	WP110019	10/02/2024	01/31/2025	Rubina Mughal	None	None	Iwona Zarych 10/04/2024

FROM 50.00000ml of W3112 + 50.00000ml of W3143 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
153	Ammonia Stock Std. (1000 ppm)	WP110149	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/14/2024

FROM 3.81900gram of W1993 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1895	Ammonia Stock Std, 1000PPM-SS	WP110150	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/14/2024

FROM 3.81900gram of W1992 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2487	Anions 300/9056 calibration standard 1	WP110250	10/16/2024	10/17/2024	Iwona Zarych	None	None	Jignesh Parikh 10/17/2024

FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
24	Anions 300/9056 calibration standard 2	WP110251	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 0.20000ml of W3062 + 9.80000ml of W3112 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
25	Anions 300/9056 calibration standard 3	WP110252	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 0.40000ml of W3062 + 9.60000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
26	Anions 300/9056 calibration standard 4	WP110253	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 0.50000ml of W3062 + 9.50000ml of W3112 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP110254	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 45.00000ml of W3112 + 5.00000ml of W3062 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3679	Anions 300/9056 calibration standard 6	WP110255	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 2.00000ml of W3062 + 8.00000ml of W3112 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3681	Anions 300/9056 calibration standard 7	WP110256	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 2.50000ml of W3062 + 7.50000ml of W3112 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
34	Anions 300/9056 calibration standard 8	WP110257	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

FROM 5.00000ml of W3062 + 5.00000ml of W3112 = Final Quantity: 10.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP110258	10/16/2024	10/17/2024	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 10/17/2024

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4035	IC ELUENT CONCENTRATE FOR IC-1	WP110259	10/16/2024	04/16/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 10/17/2024

FROM 2.10000gram of W2647 + 84.75000gram of W3058 + 913.15000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4036	IC ELUENT FOR IC-1	WP110260	10/16/2024	11/16/2024	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 10/17/2024

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
4037	IC H2SO4 FOR IC-1	WP110261	10/16/2024	11/16/2024	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 10/17/2024

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1597	0.04 N H2SO4	WP110335	10/22/2024	04/22/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/22/2024

FROM 1.00000ml of M5673 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
126	5N sulfuric acid	WP110380	10/24/2024	04/24/2025	Rubina Mughal	None	None	Iwona Zarych 10/24/2024

FROM 140.00000ml of M5673 + 860.00000ml of W3112 = Final Quantity: 1.000 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1841	Sulfuric Acid, 1N	WP110386	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/24/2024

FROM 2.80000ml of M5673 + 97.20000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
740	sodium nitroferricyanide for ammonia	WP110416	10/25/2024	04/25/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/25/2024

FROM 0.05000gram of W2666 + 99.95000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
114	hexavalent chromium color reagent	WP110606	11/08/2024	11/15/2024	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 11/11/2024

FROM 0.25000gram of W2979 + 50.00000ml of E3824 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
127	BOD Dilution fluid	WP110700	11/14/2024	11/15/2024	Rubina Mughal	None	None	Iwona Zarych 11/18/2024

FROM 18.00000L of W3112 + 3.00000PILLOW of W3117 = Final Quantity: 18.000 L

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
129	Glutamic acid-glucose mix for BOD	WP110701	11/14/2024	11/15/2024	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 11/18/2024

FROM 0.15000gram of W2653 + 0.15000gram of W2654 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
128	polyseed seed control	WP110702	11/14/2024	11/15/2024	Rubina Mughal	None	None	Iwona Zarych 11/18/2024

FROM 1.00000PILLOW of W3030 + 300.00000ml of WP110700 = Final Quantity: 300.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1103	HEX CHROME INTERMEDIATE STD SOURCE 1 (5PPM)	WP110703	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 9.00000ml of W3112 + 1.00000ml of WP108658 = Final Quantity: 10.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
110	calibration std. hexchrome 0 ppm	WP110704	11/14/2024	11/15/2024	Rubina Mughal	None	None	Iwona Zarych 11/18/2024

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
109	calibration std. hexchrome 0.01 ppm	WP110705	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 99.80000ml of W3112 + 0.20000ml of WP110703 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3800	Calibration Std Hexachrome 0.025 ppm	WP110706	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 99.50000ml of W3112 + 0.50000ml of WP110703 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
108	Calibration Std. hexchrome 0.05 ppm	WP110707	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 99.00000ml of W3112 + 1.00000ml of WP110703 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
107	Calibration Std. hexchrome 0.1 ppm	WP110708	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 99.80000ml of W3112 + 0.20000ml of WP108658 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3808	Calibration and CCV std HexChrome 0.5PPM	WP110709	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 99.00000ml of W3112 + 1.00000ml of WP108658 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3809	Calibration std HexChrome 1.0PPM	WP110710	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 98.00000ml of W3112 + 2.00000ml of WP108658 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3804	Hexavalent Chromium ICV-LCS Std	WP110711	11/14/2024	11/15/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/18/2024

FROM 99.00000ml of W3112 + 1.00000ml of WP108659 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3680	Anions 300/9056 calibration standard 5-CCV	WP110712	11/14/2024	11/15/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/18/2024

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3233	Anions 300/9056 ICV-LCS std	WP110713	11/14/2024	11/15/2024	Niha Farheen Shaik	None	None	Iwona Zarych 11/18/2024

FROM 45.00000ml of W3112 + 5.00000ml of W3062 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
295	TKN Calibration Std (10 ppm)	WP110784	11/21/2024	11/28/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/21/2024

FROM 49.50000ml of W3112 + 0.50000ml of WP110149 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
297	TKN CCV STD 5 ppm	WP110785	11/21/2024	11/28/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/21/2024

FROM 49.75000ml of W3112 + 0.25000ml of WP110149 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
296	TKN ICV STD 5 ppm	WP110786	11/21/2024	11/28/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/21/2024

FROM 49.75000ml of W3112 + 0.25000ml of WP110150 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
298	TKN LCS STD 5 ppm	WP110787	11/21/2024	11/28/2024	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 11/21/2024

FROM 49.75000ml of W3112 + 0.25000ml of WP110150 = Final Quantity: 50.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	05/24/2027	11/05/2024 / Rajesh	11/01/2024 / Rajesh	E3824

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.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	WL13B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1992

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	XE09B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1993

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AA13450-36 / Potassium Dichromate, 500g(NEW)	T15F019	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2651

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P188-500 / Potassium Dichromate, 500g(new-2nd lot)	194664	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2652

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.	87683 / Sodium Nitroferricyanide 250g	W12F013	02/10/2030	02/10/2020 / apatel	02/10/2020 / apatel	W2666

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	0330-500G / Cupric Sulfate Pentahydrate	CPECG2635	04/23/2025	04/23/2020 / apatel	04/23/2020 / apatel	W2697

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P1060-10 / PHENOL, ACS, 500G	M13H048	01/07/2026	07/07/2021 / apatel	07/07/2021 / apatel	W2858

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	31390 / 1,5-Diphenylcarbazide	MKCR6636	12/09/2027	12/09/2022 / Iwona	12/09/2022 / Iwona	W2979

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3278-5 / Potassium Sulfate, 2.5 Kgs	SLCM9788	11/21/2027	11/21/2022 / Iwona	11/21/2022 / Iwona	W2983

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)	4212E45	12/31/2024	01/31/2023 / Iwona	01/31/2023 / Iwona	W3005

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	282211	11/30/2024	10/30/2024 / Iwona	05/10/2023 / Iwona	W3030

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 / Iwona	W3058

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	T2-MEB716667	02/12/2025	02/12/2024 / Iwona	10/30/2023 / Iwona	W3062

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.	TCX0014-500ML / p-xylene	Y348K-RX	03/20/2029	09/19/2024 / rubina	03/20/2024 / Iwona	W3088

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

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

CHEMICAL RECEIPT LOG BOOK

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

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 / Iwona	04/22/2024 / Iwona	W3103

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	1404G63	09/30/2024	04/22/2024 / Iwona	04/22/2024 / Iwona	W3104

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,4LITRE	4403S13	09/30/2025	04/22/2024 / Iwona	04/22/2024 / Iwona	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 / Iwona	05/23/2024 / Iwona	W3109

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CHEMICAL RECEIPT LOG BOOK

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 / Iwona	07/03/2024 / Iwona	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 / Iwona	07/08/2024 / Iwona	W3113

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	A4032	04/30/2029	10/02/2024 / rubina	07/12/2024 / Iwona	W3117

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC05050-1 / EDTA, disodium salt, dihydrate 1 lb	2ND0156	07/10/2026	07/26/2024 / Iwona	07/26/2024 / Iwona	W3132

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3946-1 / Sodium Thiosulfate Pentahydrate, 500 gms	MKCV5080	01/31/2029	08/26/2024 / Iwona	08/26/2024 / Iwona	W3136

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9416-1 / Sodium Hypochlorite 500 ml	2407F34	01/31/2025	09/30/2024 / Iwona	09/30/2024 / Iwona	W3143

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CHEMICAL RECEIPT LOG BOOK

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 / Iwona	10/16/2024 / Iwona	W3149

Certificate of Analysis

Date of Release: ***12/18/2013***

Product: ***Ammonium Chloride GR ACS*** ***Catalog No.:*** ***AX1270 all size codes***

Grade: ***Meets ACS Specifications*** ***CAS #:*** ***12125-02-9***

Country of Origin: ***India*** ***FW:*** ***53.49***

Lot No.: ***WL13B*** ClH_4N

	Requirement			
Characteristic	**Minimum**	**Maximum**	**Results**	**UOM**
Assay (argentometric)	99.5		99.9	%
Calcium (Ca)		0.001	0.0001	%
Form	White crystals		White crystals	
Heavy metals (as Pb)		5	5	ppm
Identification	To pass test		Passes	
Insoluble matter		0.005	0.002	%
Iron (Fe)		2	2	ppm
Loss on drying (105 C)		0.5	0.21	%
Magnesium (Mg)		5	0.6	ppm
pH of a 5% solution at 25 C	4.5	5.5	4.76	
Phosphate (PO4)		2	2	ppm
Residue after ignition		0.01	0.002	%
Sulfate (SO4)		0.002	0.002	%

Joe Schoellkopff

Quality Control Manager

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EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

Certificate of Analysis

Date of Release: ***5/12/2014***

Product: ***Ammonium Chloride GR ACS*** ***Catalog No.:*** ***AX1270 all size codes***

Grade: ***Meets ACS Specifications*** ***CAS #:*** ***12125-02-9***

Country of Origin: ***India*** ***FW:*** ***53.49***

Lot No.: ***XE09B*** ClH_4N

Characteristic	Requirement Minimum	Maximum	Results	UOM
Assay (argentometric)	99.5		99.8	%
Calcium (Ca)		0.001	0.0001	%
Form	White crystals		White crystals	
Heavy metals (as Pb)		5	5	ppm
Identification	To pass test		Passes	
Insoluble matter		0.005	0.002	%
Iron (Fe)		2	2	ppm
Loss on drying (105 C)		0.5	0.22	%
Magnesium (Mg)		5	0.7	ppm
pH of a 5% solution at 25 C	4.5	5.5	4.95	
Phosphate (PO4)		2	2	ppm
Residue after ignition		0.01	0.002	%
Sulfate (SO4)		0.002	0.002	%

Joe Schoellkopff

Quality Control Manager

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EMD Millipore Corporation
290 Concord Road
Billerica, MA 01821

ThermoFisher SCIENTIFIC

Certificate of Analysis

Product No.: 13450

Product: Potassium dichromate, ACS, 99.0% min

Lot No.: T15F019

Test	Limits	Results
Appearance	Orange-red crystals	Orange-red crystals
Identification	To Pass	Passes
Purity	99.0 % min	99.67 %
Insoluble matter	0.005 % max	0.004 %
Loss on drying	0.05 % max	0.03 %
Chloride	0.001 % max	< 0.001 %
Sulfate	0.005 % max	< 0.005 %
Iron	0.001 % max	< 0.001 %
Calcium	0.003 % max	0.0012 %
Sodium	0.02 % max	0.0047 %

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

(sodium hydrogen carbonate)

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

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($NaHCO_3$) (dried basis)	99.7 - 100.3 %	100.1
Insoluble Matter	<= 0.015 %	< 0.002
Chloride (Cl)	<= 0.003 %	0.003
Phosphate (PO_4)	<= 0.001 %	0.001
Sulfur Compounds (as SO_4)	<= 0.003 %	0.003
Calcium (Ca)	<= 0.02 %	0.02
Trace Impurities - Iron (Fe)	<= 0.001 %	0.001
Magnesium (Mg)	<= 0.005 %	0.005
Potassium (K)	<= 0.005 %	0.005
Ammonium (NH_4)	<= 5 ppm	5
Trace Impurities - ACS - Heavy Metals (as Pb)	<= 5 ppm	5

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

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

Jamie Ethier
Vice President Global Quality

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

ThermoFisher SCIENTIFIC

Certificate of Analysis

W2858 Received by AP on 07/07/2021

Product No.: 33213

Product: Phenol, ACS, 99+%, stab.

Lot No.: M13H048

Test	Limits	Results
Assay	99.0 % min	99.8 %
Freezing point	40.5ºC min	40.5 ºC
Clarity of solution	To pass test	Passes
Residue after evaporation	0.05 % max	< 0.05 %
Water	0.5 % max	0.2 %

Retest date: January 7, 2026

ThermoFisher SCIENTIFIC

Certificate of Analysis

W2666 Recived on 02/10/2020 by AP

Product No.: 87683

Product: Sodium pentacyanonitrosylferrate(III) dihydrate, ACS, 99.0-102.0%

Lot No.: W12F013

Test	Limits	Results
Assay	99.0 - 102.0 %	99.67 %
Insoluble	0.01 % max	0.0079 %
Chloride	0.02 % max	Not detected
Sulfate	To pass test	Passes test
Aqueous solubility	To pass test	Passes test
Limit on Ferricyanide	To pass test	Passes test
Limit on Ferrocyanide	To pass test	Passes test

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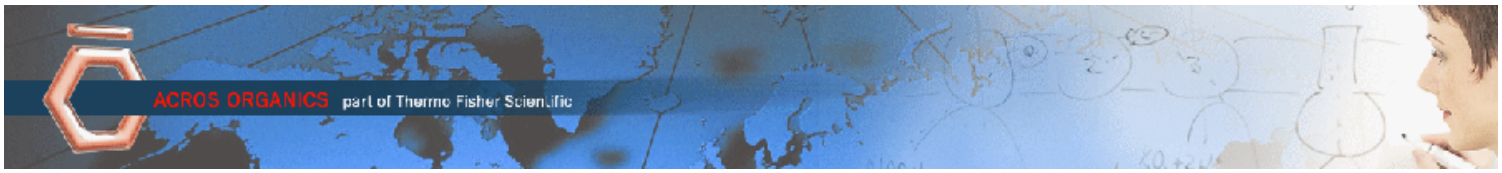
This is to certify that units of the lot number above were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability 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 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 above information is the actual analytical results obtained.



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 responsiblity 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

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 (SO4)	=<300 ppm	=<200 ppm
Ammonium (NH4)	=<200 ppm	=<200 ppm
Arsenic oxide (As2O3)	=<1 ppm	=<1 ppm

L. Van den Broek, QA Manager Issued: 24 January 2020

Acros Organics
ENA23, zone 1, nr 1350, Janssen Pharmaceuticalaan 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

RICCA CHEMICAL COMPANY®

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Batesville, IN 47006
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customerservice@riccachemical.com

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

Sigma-Aldrich.

~~H2278~~ W2983

Rec. 11/21/22 ,2

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Potassium sulfate - ReagentPlus®, ≥99.0%

Product Number:	**P0772**
Batch Number:	**SLCM9788**
Brand:	SIGALD
CAS Number:	7778-80-5
MDL Number:	MFCD00011388
Formula:	K2O4S
Formula Weight:	174.26 g/mol
Quality Release Date:	03 MAR 2022

K_2SO_4

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity) 10 g plus 150 mL, H2O	Clear	Clear
Titration with NaOH	≥ 99.0 %	99.2 %

Brian Dulle

Brian Dulle, Supervisor
Quality Assurance
St. Louis, Missouri US

W 3029
W 3030

Rec. 05/11/23
12

POLYSEED®

CERTIFICATE OF ANALYSIS

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

FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:
PolySeed® • Part No. P-110 • Lot 282211 • Mfg. Date: 11/2022 • Exp. Date: 11/2024

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 $x10^9$ cfu/g.

GLUCOSE/GLUTAMIC-ACID RESULTS:
Tested results within acceptable range 198 +/- 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# J317-19 – Average Test Result: 205.3

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: _____ Date: 11/28/2022
Quality Control Department

POLYSEED.Ref.1.19 Revised Jan 22

InterLab®
International Laboratory Supply

ISO 9002
DNV
DNV Certification, Inc.
REGISTERED FIRM

Certificate Of Analysis

W 3058

Rec. 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 (PO4)	0.001% max.	<0.001%
Potassium (K)	0.005% max.	0.003%
Silica (SiO2)	0.005% max.	<0.005%
Sulfur compounds (as SO4)	0.003% max.	<0.003%

Joe Schoellkopff

Quality Control Manager

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EMD Millipore Corporation
400 Summit Drive
Burlington, MA 01803
U.S.A.

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

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Christiansburg, VA 24073 USA
inorganicventures.com

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

N 3062
NEC on 10/30/23
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).

ACCREDITED Testing Laboratory Certificate 883.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Ion Chromatography Solution
Catalog Number:	300-CAL-A
Lot Number:	T2-MEB716667
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 ± 0.13 µg/mL**
Fluoride, F-	**20.00 ± 0.06 µg/mL**	**Nitrate as N, NNO3-**	**25.00 ± 0.09 µg/mL**
Nitrite as N, NNO2-	**30.00 ± 0.15 µg/mL**	**o-Phosphate as P, PPO4**	**50.00 ± 0.30 µg/mL**
Sulfate, SO4	**150.0 ± 0.9 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	060925
Cl	Fajans	999c	999c
Cl	Calculated		See Sec. 4.2
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	050517
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:

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

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

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

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{1/2}$

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

- This product is traceable to NIST via an unbroken chain of comparisons. The uncertainties for each certified value are reported, taking into account the SRM/RM uncertainty error and the measurement, weighing and volume dilution errors. In rare cases where no NIST SRM/RM are available, the term 'in-house std.' is specified.

4.1 Thermometer Calibration

- All thermometers are NIST traceable through thermometers that are calibrated by an accredited calibration laboratory.

4.2 Balance Calibration

- All analytical balances are calibrated by an accredited calibration laboratory and procedure. The weights used for testing are annually compared to master weights and are traceable to NIST.

4.3 Glassware Calibration

- An in-house procedure is used to calibrate all Class A glassware used in the manufacturing and quality control of CRM/RMs.

5.0 CHROMATOGRAM

N/A

6.0 INTENDED USE

- For the calibration of analytical instruments and validation of analytical methods as appropriate.

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.

- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.

- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

- For more information, visit **www.inorganicventures.com/TCT**

8.0 HAZARDOUS INFORMATION

- Please refer to the Safety Data Sheet for information regarding this CRM/RM.

9.0 HOMOGENEITY

- This solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. Homogeneity data indicate that the end user should take a minimum sample size of 0.2 mL to assure homogeneity.

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

10.2 ISO/IEC 17025 "General Requirements for the Competence of Testing and Calibration Laboratories"

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

10.3 ISO 17034 "General Requirements for the Competence of Reference Material Producers"

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

Inorganic Ventures, 300 Technology Drive, Christiansburg, Va. 24073, USA; Telephone: 800.669.6799; 540.585.3030, Fax: 540.585.3012; inorganicventures.com; info@inorganicventures.com

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

March 17, 2022

- The certification is valid within the measurement uncertainty specified provided the CRM/RM is stored and handled in accordance with instructions given in Sec 7.1. This certification is nullified if instructions in Sec 7.1 are not followed or if the CRM/RM is damaged, contaminated, or otherwise modified.

11.2 Lot Expiration Date

- March 17, 2027

- The date after which this CRM/RM should not be used.

- The lot expiration date reflects the period of time that the stability of a CRM/RM can be supported by long term stability studies conducted on properly stored and handled CRM/RMs. Lot expiration is limited primarily by transpiration (loss of water from the solution) and infrequently by chemical stability.

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

- This CRM/RM should not be used longer than one year (or six months in the case of a 30 mL bottle) from the date of opening the aluminized bag or after the date given in Sec. 11.2, whichever comes first. This is contingent upon the CRM/RM being stored and handled in accordance with the instructions given in Sec. 7.1.

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Approved By:

Thomas Kozikowski
Manager, Quality Control

Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director

INORGANIC VENTURES
Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

W3063
rec. 11/16/23 12

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

1.0 ACCREDITATION / REGISTRATION

INORGANIC VENTURES is accredited to ISO 17034, "General Requirements for the Competence of Reference Material Producers" and ISO/IEC 17025, "General Requirements for the Competence of Testing and Calibration Laboratories". Inorganic Ventures is also an ISO 9001 registered manufacturer (QSR Certificate Number QSR-1034).

ACCREDITED Testing Laboratory Certificate 863.01
ACCREDITED Reference Material Producer Certificate 883.02

2.0 PRODUCT DESCRIPTION

Product Code:	Multi Analyte Ion Chromatography Solution
Catalog Number:	300-CAL-A
Lot Number:	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, NNO3-	25.00 ± 0.09 µg/mL
Nitrite as N, NNO2-	30.00 ± 0.15 µg/mL	o-Phosphate as P, PPO4	50.00 ± 0.18 µg/mL
Sulfate, SO4	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:

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

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

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

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

k = coverage factor = 2

$u_{char} = [\Sigma((w_i)^2\,(u_{char\ i})^2)]^{½}$ where $u_{char\ i}$ are the errors from each characterization method

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

CRM/RM Expanded Uncertainty (±) = $U_{CRM/RM} = k\,(u^2_{char\ a} + u^2_{bb} + u^2_{lts} + u^2_{ts})^{½}$

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

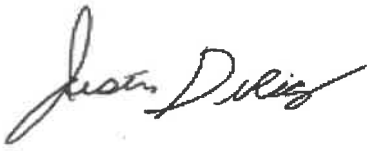
- Sealed TCT Bag Open Date: _____

- 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®

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

W3072
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

ThermoFisher SCIENTIFIC

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

Teresa 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.

ThermoFisher SCIENTIFIC

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	P188	Quality Test / Release Date	08/12/2019
Lot Number	194664		
Description	POTASSIUM DICHROMATE, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Aug/2024
Chemical Origin	Inorganic-non animal		
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	Fine, orange-red crystals
ASSAY	%	>= 99	99.2
CALCIUM	%	<= 0.003	<0.003
CHLORIDE	%	<= 0.001	<0.001
LOSS ON DRYING @ 105 C	%	<= 0.05	<0.05
SULFATE (SO4)	%	<= 0.005	<0.005
INSOLUBLE MATTER	%	<= 0.005	0.003
IRON (Fe)	%	<= 0.001	<0.001
SODIUM (Na)	%	<= 0.02	<0.02
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST

Teresa 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.

Allan Chemical Corporation

235 Margaret King Avenue
Ringwood NJ 07456

Telephone: 973-962-4014
Fax: 973-962-6820
E-Mail: allanchem@allanchem.com

W2697

ATTN: ALLAN CHEMICAL - QC DEPT.
DATE: September 20, 2021
P.O. #: 14410
PART #: N/A
LOT #: CPECG2635

CERTIFICATE OF ANALYSIS

CUPRIC SULFATE CRYSTAL – ACS GRADE

ASSAY:	102.0 %
LEAD:	< 0.0001 %
NITROGEN COMPOUNDS:	< 0.001 %
ZINC:	< 0.0001 %
INSOLUBLE MATTER:	< 0.001 %
CHLORIDE:	< 0.001 %
CHROMIUM:	< 0.00002 %
IRON:	0.0003 %
NICKEL:	< 0.0001 %
CADMIUM:	< 0.0001 %
MANGANESE:	< 0.0001 %
CALCIUM:	< 0.005 %
POTASSIUM:	< 0.001 %
SODIUM:	< 0.001 %

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker

Material No.: 9254-03
Batch No.: 24H1462005
Manufactured Date: 2024-05-24
Expiration Date:2027-05-24
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ($(CH_3)_2CO$) (by GC, corrected forwater)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (µeq/g)	<= 0.3	0.2
Titrable Base (µeq/g)	<= 0.6	<0.1
Water (H_2O)	<= 0.5 %	0.2 %
FID-Sensitive Impurities (as 2-Octanol)Single Impurity Peak (ng/mL)	<= 5	<1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory,Research,or Manufacturing Use
MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States
Packaging Site: Phillipsburg Mfg Ctr & DC

E3824

JCroak
Jamie Croak
Director Quality Operations, Bioscience Production

For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700

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

9673- 33

avantor™ | J.T.Baker®

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_2SO_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 SO2)	≤ 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™ | J.T.Baker®

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

James T Ethier

Jamie Ethier
Vice President Global Quality

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

M 6041-46
MS

avantor™ | J.T.Baker®

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_2SO_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 SO2)	≤ 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™ | J.T.Baker®

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

James T Ethier

Jamie Ethier
Vice President Global Quality

Sigma-Aldrich.

W 2979

Rec: 12/08/22

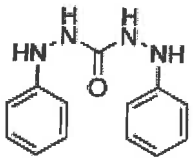
exp. 12/08/27

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
1,5-Diphenylcarbazide - ACS reagent

Product Number:	**259225**
Batch Number:	**MKCR6636**
Brand:	SIAL
CAS Number:	140-22-7
MDL Number:	MFCD00003013
Formula:	C13H14N4O
Formula Weight:	242.28 g/mol
Quality Release Date:	02 JUN 2022



Test	Specification	Result
Appearance (Color) Off-White to Pink, Light Purple or Tan	Conforms to Requirements	Pink
Appearance (Form)	Powder or Chunks	Powder
Melting Point	173.0 - 176.0 °C	173.0 °C
Infrared Spectrum	Conforms to Structure	Conforms
Residue on ignition (Ash) 15 minutes, 800 Degrees Celsius	≤ 0.05 %	0.01 %
Solubility	Pass	Pass
Sensitivity Test	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms

Larry Coers, Director
Quality Control
Milwaukee, WI US

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W 3005 REC. 1/31/23 12

Certificate of Analysis

Buffer, Reference Standard, pH 2.00 ± 0.01 at 25°C

Lot Number: 4212E45 **Product Number:** 1493

Manufacture Date: DEC 20, 2022
Expiration Date: DEC 2024

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)	2.000	0.02	185i, 186-I-g, 186-II-g

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)
1493-1	4 L natural poly	24 months
1493-16	500 mL natural poly	24 months
1493-32	1 L natural poly	24 months
1493-5	20 L Cubitainer®	24 months

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

Paul Brandon (12/20/2022)
Production Manager
This Certificate of Analysis 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

W3084-W3088 Received on 3/20/24 by IZ

Certificate of Analysis

03/20/2024(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: Y348K	

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

RICCA CHEMICAL COMPANY®

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W3093 0941 04/03/2024 LG

Certificate of Analysis

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
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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W3094 78 opuc: 04/03/2025

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
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

RICCA CHEMICAL COMPANY®
W3103 Received on 4/22/24 by IZ

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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

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

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W3104 Received on 4/22/24 by IZ

Certificate of Analysis

Cyanide Standard, 1000 ppm CN^-

Lot Number: 1404G63 **Product Number:** 2543

Manufacture Date: APR 12, 2024
Expiration Date: SEP 2024

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.
Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Cyanide	151-50-8	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Cyanide (CN^-)	995-1005 ppm	1000 ppm

Specification	Reference
Stock Standard Cyanide Solution	APHA (4500-CN- F)
Stock Cyanide Solution	APHA (4500-CN- E)
Stock Cyanide Solution	APHA (4500-CN- K)
Stock Cyanide Solution	APHA (4500-CN- H)
Cyanide Reference Solution (1000 mg/L)	EPA (SW-846) (7.3.3.2)
Cyanide Calibration Stock Solution (1,000 mg/L CN-)	EPA (SW-846) (9213)
Stock Cyanide Solution	EPA (335.3)
Stock Cyanide Solution	EPA (335.2)
Cyanide Solution Stock	ASTM (D 4282)
Simple Cyanide Solution, Stock (1.0 g/L CN)	ASTM (D 4374)

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)
2543-4	120 mL amber poly	6 months

Recommended Storage: 2°C - 8°C (36°F - 46°F)

Heidi J Green (04/12/2024)

Operations Manager

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W3105 Received on 4/22/24 by IZ

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

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W3107
38

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
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

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

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:

Pellets

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

Storage: Room Temperature

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.

Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: **0583**

Grade: **ACS GRADE**

Batch Number: **23B1556310**

Chemical Formula:	NaOH	Manufacture Date:	12/14/2022
Molecular Weight:	40	Expiration Date:	12/31/2025
CAS #:	1310-73-2		
Appearance:		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.

Certificate of Analysis List

For request number 2018139

Catalog Number Entered	Lot Number Entered	Related Catalog Number	Related Lot Code	Description
1486227	4032	1486266	4032	BOD Nutrient Buffer Pillows

Total Enclosures: 1

HACH COMPANY

P.O.Box 389
Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

This is a Component of 1486266 lot A4032

COMMODITY:**BOD Nutrient Buffer Pillows**
COMMODITY NUMBER: **1486227** MANUFACTURE DATE: **3/5/2024** DATE OF ANALYSIS: **3/13/2024**
LOT NUMBER: **A4032**

TEST	*SPECIFICATIONS*	*RESULTS*
Ammonia Concentration of a diluted pillow	0.57 to 0.79 ppm	0.710 ppm
Calcium Concentration of a diluted pillow	0.93 to 1.29 ppm	1.060 ppm
Iron Concentration of a diluted pillow	0.27 to 0.36 ppm	0.298 ppm
Magnesium Concentration of a diluted pillow	0.35 to 0.48 ppm	0.430 ppm
Phosphorus Concentration of a diluted pillow	7.6 to 10.3 ppm	8.05 ppm
pH in a 6 L of DI water	7.1 to 7.6	7.32
Five Day Change in Dissolved Oxygen Concentration	-0.2 to 0.2 ppm	-0.18 ppm
Sterility	To Pass	Passed

The expiration date is Mar 2029

Certified by Scott Als

Scott Als
Analytical Services Chemist

spectrum® CHEMICAL MFG CORP

Certificate Of Analysis

Item Number	ED150	Lot Number	2ND0156
Item	Edetate Disodium, Dihydrate, USP	CAS Number	6381-92-6
Molecular Formula	$C_{10}H_{14}N_2Na_2O_8 \cdot 2H_2O$	Molecular Weight	372.24

TEST	SPECIFICATION		RESULT
	MIN	MAX	
ASSAY (DRIED BASIS)	99.0	101.0 %	99.5 %
pH OF A 5% SOLUTION @ 25°C	4.0	6.0	4.6
LOSS ON DRYING	8.7	11.4 %	8.90 %
CALCIUM (Ca)	NO PRECIPITATE IS FORMED		NO PRECIPITATE IS FORMED
ELEMENTAL IMPURITIES:			.
NICKEL (Ni)	AS REPORTED		<0.3 ppm
CHROMIUM (Cr)	AS REPORTED		<0.3 ppm
NITRILOTRIACETIC ACID[$n[(HOCOCH_2)_3N]$]		0.1 %	<0.10 %
IDENTIFICATION A	MATCHES REFERENCE		MATCHES REFERENCE
IDENTIFICATION B	RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION		RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION
IDENTIFICATION C	MEETS THE REQUIREMENTS FOR SODIUM		MEETS THE REQUIREMENTS FOR SODIUM
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			10-JUL-2026
DATE OF MANUFACTURE			11-JUL-2023
APPEARANCE			WHITE CRYSTALLINE POWDER
RESIDUAL SOLVENTS		AS REPORTED	NO RESIDUAL SOLVENTS PRESENT
MONOGRAPH EDITION			USP 2024

Certificate of Analysis Results Entered By:

CACEVEDO
Charmian Acevedo
22-MAY-24 08:12:30

Certificate of Analysis Results Approved By:

GHERRERA
Genaro Herrera
22-MAY-24 12:32:01

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ

All pharmaceutical ingredients are tested using current edition of applicable pharmacopeia.

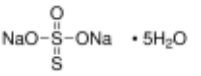
Read and understand label and SDS before handling any chemicals. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. It is the customer's responsibility to provide adequate hazardous material training and ensure that appropriate Personal Protective Equipment (PPE) is used before handling any chemical.

The Elemental Impurities standards implemented by USP and other Pharmaceutical Compendia reflect a growing understanding of the toxicology of trace levels of elemental impurities that can remain in drug substances originating from either raw materials or manufacturing processes. Identifying and quantifying impurities can be critical to predicting the best possible patient outcomes. Elemental Impurities has been a requirement of all products meeting USP/NF, EP and BP monographs since January 1, 2018. More information can be found in USP sections <232> Elemental Impurities – Limits and <233> Elemental Impurities – Procedures. Data for drug substances furnished by Spectrum Chemical Mfg. Corp can be used to ensure that patient daily exposures by oral administration to the selected elements are not exceeded in the formulation of pharmaceutical products.

3050 Spruce Street, Saint Louis, MO 63103, USA
Website: www.sigmaaldrich.com
Email USA: techserv@sial.com
Outside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:
Sodium thiosulfate pentahydrate - ACS reagent, ≥99.5%



Product Number:	**217247**
Batch Number:	**MKCV5080**
Brand:	SIGALD
CAS Number:	10102-17-7
MDL Number:	MFCD00149186
Formula:	Na2O3S2 · 5H2O
Formula Weight:	248.18 g/mol
Quality Release Date:	10 JAN 2024
Recommended Retest Date:	JAN 2029

Test	Specification	Result
Appearance (Color)	Colorless or White	White
Appearance (Form)	Powder or Crystals or Pellets	Crystals
ICP Major Analysis Confirms Sodium and Sulfur Components	Confirmed	Confirmed
Titration by Iodine	99.5 - 101.0 %	99.8 %
pH c = 5%; Water; At 25 Deg C	6.0 - 8.4	7.2
Insoluble Matter c = 10%; Water	≤ 0.005 %	0.003 %
Nitrogen Compounds	≤ 0.002 %	< 0.002 %
Sulfate & Sulfite (as SO4)	≤ 0.1 %	< 0.1 %
Sulfide	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms
Recommended Retest Period 5 Years	----------	----------

Larry Coers, Director
Quality Control
Milwaukee, WI US

RICCA CHEMICAL COMPANY®

1841 Broad Street
Pocomoke City, MD 21851
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2407F34 **Product Number:** 7495.5

Manufacture Date: JUL 12, 2024
Expiration Date: JAN 2025

This solution is subject to slow decomposition upon exposure to air. Keep container tightly capped. Refrigeration may improve stability. When used in the Phenate method for Ammonia, APHA recommends replacing this solution about every 2 months.

Name	CAS#	Grade
Water	7732-18-5	Commercial
Sodium Hypochlorite	7681-52-9	Commercial

Test	Specification	Result	NIST SRM#
Appearance	Colorless to greenish-yellow liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	4.75-5.25 % (w/w) Cl_2	5.05 % (w/w) Cl_2	136

Specification	Reference
Sodium Hypochlorite, 5%	APHA (4500-NH3 F)
Sodium Hypochlorite	ASTM (D 4785)

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)
7495.5-1	4 L black poly	6 months
7495.5-16	500 mL amber poly	6 months
7495.5-32	1 L amber poly	6 months
7495.5-8	250 mL amber poly	6 months

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

Jose Pena (07/12/2024)
Operations Manager

RICCA CHEMICAL COMPANY®

W3149 Received on 10/16/24 by IZ

1490 Lammers Pike
Batesville, IN 47006
http://www.riccachemical.com
1-888-GO-RICCA
customerservice@riccachemical.com

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-Cl 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-Cl 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)

Paul Brandon (08/28/2024)
Production Manager

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 Fax: (908) 788-9222
www.chemtech.net

CHAIN OF CUSTODY RECORD

Alliance Project Number: P4843

COC Number: 2042104

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**

DATA TURNAROUND INFORMATION

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

DATA DELIVERABLE INFORMATION

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

ANALYSIS

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

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# of Bottles	PRESERVATIVES 1	2	3	4	5	6	7	8	9
1.	SW-WTS-01	Surface Water		X	11/13	8:00	4	B X	E X	E X	E X	E X				
2.																
3.																
4.																
5.																
6.																
7.																
8.																
9.																
10.																

PRESERVATIVES

COMMENTS

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

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

	DATE/TIME		
RELINQUISHED BY SAMPLER 1. **Jarod Stanfield**	11/13 15:13	RECEIVED BY 1.	1513 11-13-24
RELINQUISHED BY 2.	DATE/TIME	RECEIVED BY 2.	
RELINQUISHED BY 3.	DATE/TIME 1735 11-13-24	RECEIVED FOR LAB BY 3.	

Conditions of bottles or coolers at receipt: ☐ Compliant ☐ Non Compliant ☐ Cooler Temp 3.5°C ☐ Ice in Cooler?: _____

Comments: Field pH: 10+ Field Temp: 37.5 °F

Page _____ of _____

SHIPPED VIA: CLIENT: ☐ Hand Delivered ☐ Overnight
ALLIANCE: ☐ Picked Up ☐ Overnight

Shipment Complete ☐ YES ☐ NO

WHITE - ALLIANCE COPYFOR RETURN TO CLIENT **YELLOW** - ALLIANCE COPY **PINK** - SAMPLER COPY

CHEMTECH 284 Sheffield Street, Mountainside NJ 07092 (908)-789-8900 Fax : 908 789 8922

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

Alliance TECHNICAL GROUP

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : P4843 ENTA05
Client Name : ENTACT
Client Contact : Jarod Stanfield
Invoice Name : ENTACT
Invoice Contact : Jarod Stanfield

Order Date : 11/13/2024 3:18:00 PM
Project Name : 540 Degraw St, Brooklyn, N
Receive DateTime : 11/13/2024 ~~12:00:00~~ AM 18:35
Purchase Order :

Project Mgr : Yazmeen
Report Type : Level 1
EDD Type : Excel NJ
Hard Copy Date :
Date Signoff : 11/14/2024 10:47:46 AM

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
P4843-01	SW-WTS-01	Water	11/13/2024	08:00					
					VOCMS Group4		8260-Low		5 Bus. Days

Relinguished By :
Date / Time : 11/14/24 1220

Received By :
Date / Time : 11.14.24 12:20

Storage Area : VOA Refridgerator Room