

Cover Page

Order ID : Q1889

Project ID : Mitchell School

Client : Kleinfelder

Lab Sample Number

Q1889-01
Q1889-02
Q1889-03

Client Sample Number

COMP-1
COMP-2
COMP-3

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: 5/2/2025

DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following “ Results Qualifiers” are used:

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

APPENDIX A

QA REVIEW GENERAL DOCUMENTATION

Project #: Q1889

Completed

For thorough review, the report must have the following:

GENERAL:

Are all original paperwork present (chain of custody, record of communication,airbill, sample management lab chronicle, login page)

✓

Check chain-of-custody for proper relinquish/return of samples

✓

Is the chain of custody signed and complete

✓

Check internal chain-of-custody for proper relinquish/return of samples /sample extracts

✓

Collect information for each project id from server. Were all requirements followed

✓

COVER PAGE:

Do numbers of samples correspond to the number of samples in the Chain of Custody on login page

✓

Do lab numbers and client Ids on cover page agree with the Chain of Custody

✓

CHAIN OF CUSTODY:

Do requested analyses on Chain of Custody agree with form I results

✓

Do requested analyses on Chain of Custody agree with the log-in page

✓

Were the correct method log-in for analysis according to the Analytical Request and Chain of Custody

✓

Were the samples received within hold time

✓

Were any problems found with the samples at arrival recorded in the Sample Management Laboratory Chronicle

✓

ANALYTICAL:

Was method requirement followed?

✓

Was client requirement followed?

✓

Does the case narrative summarize all QC failure?

✓

All runlogs and manual integration are reviewed for requirements

✓

All manual calculations and /or hand notations verified

✓

QA Review Signature: MAYUR DESAI

Date: 05/02/2025

LAB CHRONICLE

OrderID:	Q1889	OrderDate:	4/25/2025 11:06:00 AM
Client:	Kleinfelder	Project:	Mitchell School
Contact:	Mark Warchol	Location:	L51,VOA Ref. #2 Soil

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1889-01	COMP-1	SOIL			04/24/25 10:15			04/25/25
			Ammonia	SM4500-NH3		04/30/25	04/30/25 13:51	
			Anions Group1	9056A			04/28/25 16:03	
			Hexavalent Chromium	7196A		04/28/25	04/28/25 12:30	
			Trivalent Chromium	6010D			04/30/25 20:31	
Q1889-02	COMP-2	SOIL			04/24/25 10:45			04/25/25
			Ammonia	SM4500-NH3		04/30/25	04/30/25 13:51	
			Anions Group1	9056A			04/28/25 16:24	
			Hexavalent Chromium	7196A		04/28/25	04/28/25 12:31	
			Trivalent Chromium	6010D			04/30/25 20:35	
Q1889-03	COMP-3	SOIL			04/24/25 11:25			04/25/25
			Ammonia	SM4500-NH3		04/30/25	04/30/25 13:51	
			Anions Group1	9056A			04/28/25 16:46	
			Hexavalent Chromium	7196A		04/28/25	04/28/25 12:32	
			Trivalent Chromium	6010D			04/30/25 20:39	



SAMPLE DATA

Report of Analysis

Client:	Kleinfelder	Date Collected:	04/24/25 10:15
Project:	Mitchell School	Date Received:	04/25/25
Client Sample ID:	COMP-1	SDG No.:	Q1889
Lab Sample ID:	Q1889-01	Matrix:	SOIL
		% Solid:	82.5

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Ammonia as N	5.50	J	1	2.60	5.90	mg/Kg	04/30/25 09:25	04/30/25 13:51	SM 4500-NH3 B plus G-11
Chloride	25.6		1	4.20	14.5	mg/Kg		04/28/25 16:03	9056A
Fluoride	3.40	J	1	2.10	9.70	mg/Kg		04/28/25 16:03	9056A
Sulfate	18.5	J	1	10.6	72.6	mg/Kg		04/28/25 16:03	9056A
Hexavalent Chromium	0.084	U	1	0.084	0.48	mg/Kg	04/28/25 08:50	04/28/25 12:30	7196A
Trivalent Chromium	17.8		1	0.61	0.61	mg/Kg		04/30/25 20:31	6010D

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Kleinfelder	Date Collected:	04/24/25 10:45
Project:	Mitchell School	Date Received:	04/25/25
Client Sample ID:	COMP-2	SDG No.:	Q1889
Lab Sample ID:	Q1889-02	Matrix:	SOIL
		% Solid:	80.5

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Ammonia as N	2.60	U	1	2.60	6.00	mg/Kg	04/30/25 09:25	04/30/25 13:51	SM 4500-NH3 B plus G-11
Chloride	4.70	J	1	4.30	14.8	mg/Kg		04/28/25 16:24	9056A
Fluoride	3.80	J	1	2.20	9.80	mg/Kg		04/28/25 16:24	9056A
Sulfate	27.8	J	1	10.8	73.8	mg/Kg		04/28/25 16:24	9056A
Hexavalent Chromium	0.14	J	1	0.085	0.48	mg/Kg	04/28/25 08:50	04/28/25 12:31	7196A
Trivalent Chromium	20.3		1	0.62	0.62	mg/Kg		04/30/25 20:35	6010D

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Kleinfelder	Date Collected:	04/24/25 11:25
Project:	Mitchell School	Date Received:	04/25/25
Client Sample ID:	COMP-3	SDG No.:	Q1889
Lab Sample ID:	Q1889-03	Matrix:	SOIL
		% Solid:	80.7

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Ammonia as N	2.70	U	1	2.70	6.10	mg/Kg	04/30/25 09:25	04/30/25 13:51	SM 4500-NH3 B plus G-11
Chloride	5.00	J	1	4.30	14.8	mg/Kg		04/28/25 16:46	9056A
Fluoride	10.3		1	2.20	9.90	mg/Kg		04/28/25 16:46	9056A
Sulfate	34.4	J	1	10.8	73.9	mg/Kg		04/28/25 16:46	9056A
Hexavalent Chromium	0.15	J	1	0.085	0.49	mg/Kg	04/28/25 08:50	04/28/25 12:32	7196A
Trivalent Chromium	20.6		1	0.62	0.62	mg/Kg		04/30/25 20:39	6010D

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

* = indicates the duplicate analysis is not within control limits.

E = Indicates the reported value is estimated because of the presence of interference.

OR = Over Range

N =Spiked sample recovery not within control limits



QC RESULT SUMMARY

Initial and Continuing Calibration Verification

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

RunNo.: LB135573

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1						
Bromide	mg/L	10.2	10	102	90-110	04/22/2025
Chloride	mg/L	3.1	3	103	90-110	04/22/2025
Fluoride	mg/L	2	2	100	90-110	04/22/2025
Nitrite	mg/L	3.1	3	103	90-110	04/22/2025
Nitrate	mg/L	2.6	2.5	104	90-110	04/22/2025
Sulfate	mg/L	15.1	15	101	90-110	04/22/2025
Orthophosphate as P	mg/L	5.2	5	104	90-110	04/22/2025
Sample ID: CCV1						
Bromide	mg/L	10.5	10	105	90-110	04/28/2025
Chloride	mg/L	3.2	3	107	90-110	04/28/2025
Fluoride	mg/L	2.1	2	105	90-110	04/28/2025
Nitrite	mg/L	3.1	3	103	90-110	04/28/2025
Nitrate	mg/L	2.7	2.5	108	90-110	04/28/2025
Sulfate	mg/L	15.4	15	103	90-110	04/28/2025
Orthophosphate as P	mg/L	5.1	5	102	90-110	04/28/2025
Sample ID: CCV2						
Bromide	mg/L	10.6	10	106	90-110	04/28/2025
Chloride	mg/L	3.2	3	107	90-110	04/28/2025
Fluoride	mg/L	2.1	2	105	90-110	04/28/2025
Nitrite	mg/L	3.2	3	107	90-110	04/28/2025
Nitrate	mg/L	2.7	2.5	108	90-110	04/28/2025
Sulfate	mg/L	15.4	15	103	90-110	04/28/2025
Orthophosphate as P	mg/L	5.3	5	106	90-110	04/28/2025

Initial and Continuing Calibration Verification

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

RunNo.: LB135578

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Hexavalent Chromium	mg/L	0.498	0.5	100	90-110	04/28/2025
Sample ID: CCV1 Hexavalent Chromium	mg/L	0.490	0.5	98	90-110	04/28/2025
Sample ID: CCV2 Hexavalent Chromium	mg/L	0.490	0.5	98	90-110	04/28/2025
Sample ID: CCV3 Hexavalent Chromium	mg/L	0.502	0.5	100	90-110	04/28/2025
Sample ID: CCV4 Hexavalent Chromium	mg/L	0.499	0.5	100	90-110	04/28/2025

Initial and Continuing Calibration Verification

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

RunNo.: LB135612

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Ammonia as N	mg/L	0.92	1	92	90-110	04/30/2025
Sample ID: CCV1 Ammonia as N	mg/L	0.94	1	94	90-110	04/30/2025
Sample ID: CCV2 Ammonia as N	mg/L	1	1	100	90-110	04/30/2025
Sample ID: CCV3 Ammonia as N	mg/L	0.97	1	97	90-110	04/30/2025

Initial and Continuing Calibration Verification

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

RunNo.: LB135612

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
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Initial and Continuing Calibration Blank Summary

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

RunNo.: LB135573

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	04/22/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	04/22/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	04/22/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	04/22/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	04/22/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	04/22/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	04/22/2025
Sample ID: CCB1							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	04/28/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	04/28/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	04/28/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	04/28/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	04/28/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	04/28/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	04/28/2025
Sample ID: CCB2							
Bromide	mg/L	< 1.0000	1.0000	U	0.37	2	04/28/2025
Chloride	mg/L	< 0.3000	0.3000	U	0.19	0.6	04/28/2025
Fluoride	mg/L	< 0.2000	0.2000	U	0.11	0.4	04/28/2025
Nitrite	mg/L	< 0.3000	0.3000	U	0.074	0.6	04/28/2025
Nitrate	mg/L	< 0.2500	0.2500	U	0.095	0.5	04/28/2025
Sulfate	mg/L	< 1.5000	1.5000	U	0.46	3	04/28/2025
Orthophosphate as P	mg/L	< 0.5000	0.5000	U	0.34	1	04/28/2025

Initial and Continuing Calibration Blank Summary

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

RunNo.: LB135578

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	04/28/2025
Sample ID: CCB1 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	04/28/2025
Sample ID: CCB2 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	04/28/2025
Sample ID: CCB3 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	04/28/2025
Sample ID: CCB4 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	04/28/2025

Initial and Continuing Calibration Blank Summary

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

RunNo.: LB135612

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/30/2025
Sample ID: CCB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/30/2025
Sample ID: CCB2 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/30/2025
Sample ID: CCB3 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/30/2025

Preparation Blank Summary

Client: Kleinfelder

SDG No.: Q1889

Project: Mitchell School

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB135573BLS							
Bromide	mg/Kg	< 20.0000	20.0000	U	7	40	04/28/2025
Chloride	mg/Kg	< 6.0000	6.0000	U	3.5	12	04/28/2025
Fluoride	mg/Kg	< 4.0000	4.0000	U	1.8	8	04/28/2025
Nitrite	mg/Kg	< 6.0000	6.0000	U	1.5	12	04/28/2025
Nitrate	mg/Kg	< 5.0000	5.0000	U	1.8	10	04/28/2025
Sulfate	mg/Kg	< 30.0000	30.0000	U	8.8	60	04/28/2025
Orthophosphate as P	mg/Kg	< 10.0000	10.0000	U	6.7	20	04/28/2025
Sample ID: PB167730BL							
Hexavalent Chromium	mg/Kg	< 0.2000	0.2000	U	0.07	0.4	04/28/2025
Sample ID: PB167793BL							
Ammonia as N	mg/Kg	< 2.5000	2.5000	U	2.2	5	04/30/2025

Matrix Spike Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1878-01
Client ID:	TR-4-042425MS	Percent Solids for Spike Sample:	98.9

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Hexavalent Chromium	mg/Kg	75-125	1270		0.070	U	1300	40	98		04/28/2025

Matrix Spike Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1878-01
Client ID:	TR-4-042425MS	Percent Solids for Spike Sample:	98.9

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Hexavalent Chromium	mg/Kg	85-115	38.6		0.070	U	40.4	2	96		04/28/2025

Matrix Spike Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1878-01
Client ID:	TR-4-042425MS	Percent Solids for Spike Sample:	98.9

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Hexavalent Chromium	mg/Kg	75-125	32.6		0.070	U	40.4	2	81		04/28/2025

Matrix Spike Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1889-01
Client ID:	COMP-1MS	Percent Solids for Spike Sample:	82.5

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Ammonia as N	mg/Kg	75-125	63.1		5.50	J	58.8	1	98		04/30/2025

Matrix Spike Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1889-01
Client ID:	COMP-1MSD	Percent Solids for Spike Sample:	82.5

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Ammonia as N	mg/Kg	75-125	65.5		5.50	J	59.4	1	101		04/30/2025

Matrix Spike Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1889-03
Client ID:	COMP-3MS	Percent Solids for Spike Sample:	80.7

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/Kg	80-120	252		8.70	U	250	1	101		04/28/2025
Chloride	mg/Kg	80-120	79.3		5.00	J	74.1	1	100		04/28/2025
Fluoride	mg/Kg	80-120	53.2		10.3		49.4	1	87		04/28/2025
Nitrite	mg/Kg	80-120	75.1		1.90	U	74.1	1	101		04/28/2025
Nitrate	mg/Kg	80-120	63.3		2.40	J	61.7	1	99		04/28/2025
Sulfate	mg/Kg	80-120	393		34.4	J	370	1	97		04/28/2025
Orthophosphate as P	mg/Kg	80-120	98.8		8.20	U	120	1	82		04/28/2025

Matrix Spike Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1889-03
Client ID:	COMP-3MSD	Percent Solids for Spike Sample:	80.7

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Bromide	mg/Kg	80-120	252		8.70	U	250	1	101		04/28/2025
Chloride	mg/Kg	80-120	79.3		5.00	J	73.9	1	101		04/28/2025
Fluoride	mg/Kg	80-120	53.7		10.3		49.3	1	88		04/28/2025
Nitrite	mg/Kg	80-120	75.2		1.90	U	73.9	1	102		04/28/2025
Nitrate	mg/Kg	80-120	63.3		2.40	J	61.6	1	99		04/28/2025
Sulfate	mg/Kg	80-120	394		34.4	J	370	1	97		04/28/2025
Orthophosphate as P	mg/Kg	80-120	99.1		8.20	U	120	1	83		04/28/2025

Duplicate Sample Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1878-01
Client ID:	TR-4-042425DUP	Percent Solids for Spike Sample:	98.9

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Hexavalent Chromium	mg/Kg	+/-20	0.070	U	0.070	U	1	0		04/28/2025

Duplicate Sample Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1889-01
Client ID:	COMP-1DUP	Percent Solids for Spike Sample:	82.5

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Ammonia as N	mg/Kg	+/-20	5.50	J	5.60	J	1	2		04/30/2025

Duplicate Sample Summary

Client:	Kleinfelder	SDG No.:	Q1889
Project:	Mitchell School	Sample ID:	Q1889-01
Client ID:	COMP-1MSD	Percent Solids for Spike Sample:	82.5

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Ammonia as N	mg/Kg	+/-20	63.1		65.5		1	4		04/30/2025

Duplicate Sample Summary

Client: Kleinfelder	SDG No.: Q1889
Project: Mitchell School	Sample ID: Q1889-03
Client ID: COMP-3MSD	Percent Solids for Spike Sample: 80.7

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Bromide	mg/Kg	+/-15	252		252		1	0		04/28/2025
Chloride	mg/Kg	+/-15	79.3		79.3		1	0		04/28/2025
Nitrate	mg/Kg	+/-15	63.3		63.3		1	0		04/28/2025
Nitrite	mg/Kg	+/-15	75.1		75.2		1	0		04/28/2025
Orthophosphate as P	mg/Kg	+/-15	98.8		99.1		1	0		04/28/2025
Sulfate	mg/Kg	+/-15	393		394		1	0		04/28/2025
Fluoride	mg/Kg	+/-15	53.2		53.7		1	1		04/28/2025

Laboratory Control Sample Summary

Client: Kleinfelder
Project: Mitchell School

SDG No.: Q1889
Run No.: LB135573

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135573BSS							
Bromide	mg/Kg	200	211		106	1	90-110	04/28/2025
Chloride	mg/Kg	60	63.6		106	1	90-110	04/28/2025
Fluoride	mg/Kg	40	41.5		104	1	90-110	04/28/2025
Nitrite	mg/Kg	60	63.2		105	1	90-110	04/28/2025
Nitrate	mg/Kg	50	53.6		107	1	90-110	04/28/2025
Sulfate	mg/Kg	300	308		103	1	90-110	04/28/2025
Orthophosphate as P	mg/Kg	100	105		105	1	90-110	04/28/2025

Laboratory Control Sample Summary

Client: Kleinfelder
Project: Mitchell School

SDG No.: Q1889
Run No.: LB135578

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB167730BS							
Hexavalent Chromium	mg/Kg	20	20.0		100	1	84-110	04/28/2025

Laboratory Control Sample Summary

Client: Kleinfelder
Project: Mitchell School

SDG No.: Q1889
Run No.: LB135612

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB167793BS							
Ammonia as N	mg/Kg	50	47.5		95	1	90-110	04/30/2025



RAW DATA

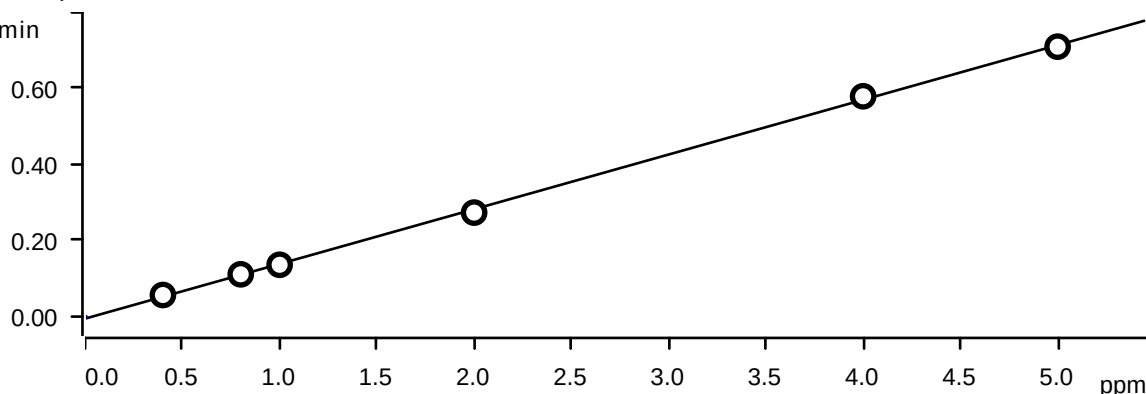
Instrument IC-1										Analyst: NF		Method: 300.0 / 9056A		Initial wt/Final Analyst	
Ident	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4	Method name	date time						
STD1	0	0	0	0	0	0	0	IC1-042225	4/22/2025 10:37			10 NF/IZ			
STD2	0.431	0.651	0.655	2.172	0.551	1.09	3.366	IC1-042225	4/22/2025 10:59			10 NF/IZ			
STD3	0.81	1.217	1.222	4.049	1.011	2.01	6.091	IC1-042225	4/22/2025 11:20			10 NF/IZ			
STD4	0.984	1.509	1.498	5.011	1.25	2.445	7.369	IC1-042225	4/22/2025 11:42			10 NF/IZ			
STD5	1.938	2.914	2.916	9.735	2.424	4.86	14.361	IC1-042225	4/22/2025 12:03			10 NF/IZ			
STD6	4.065	5.918	5.915	19.752	4.949	10.183	30.38	IC1-042225	4/22/2025 12:25			10 NF/IZ			
STD7	4.972	7.591	7.594	25.28	6.316	12.412	36.933	IC1-042225	4/22/2025 12:46			10 NF/IZ			
ICV	2.034	3.1	3.074	10.246	2.611	5.165	15.12	IC1-042225	4/22/2025 13:07			10 NF/IZ			
ICB	0	0	0	0	0	0	0	IC1-042225	4/22/2025 13:58			10 NF/IZ			
CCV	2.062	3.167	3.138	10.531	2.67	5.136	15.403	IC1-042225	4/28/2025 11:44			10 NF/IZ			
CCB	0	0	0	0	0	0	0	IC1-042225	4/28/2025 12:06			10 NF/IZ			
LB135573BLS	0	0	0	0	0	0	0	IC1-042225	4/28/2025 12:27	5.00g/100mL		NF/IZ			
LB135573BSS	2.074	3.178	3.158	10.549	2.679	5.248	15.415	IC1-042225	4/28/2025 12:49	5.00g/100mL		NF/IZ			
Q1889-01	0.14	1.058	0	0	0	0	0.763	IC1-042225	4/28/2025 16:03	5.01g/100mL		NF/IZ			
Q1889-02	0.155	0.191	0	0	0.086	0	1.129	IC1-042225	4/28/2025 16:24	5.05g/100mL		NF/IZ			
Q1889-03	0.419	0.202	0	0	0.097	0	1.398	IC1-042225	4/28/2025 16:46	5.03g/100mL		NF/IZ			
Q1889-03MS	2.157	3.211	3.044	10.218	2.564	4.004	15.91	IC1-042225	4/28/2025 17:07	5.02g/100mL		NF/IZ			
Q1889-03MSD	2.178	3.22	3.051	10.244	2.569	4.023	15.981	IC1-042225	4/28/2025 17:29	5.03g/100mL		NF/IZ			
Q1903-01	0.172	0.154	0	0	0.099	0	1.359	IC1-042225	4/28/2025 18:33	5.04g/100mL		NF/IZ			
Q1903-02	0.319	0.178	0	0	0.085	0	1.444	IC1-042225	4/28/2025 18:55	5.05g/100mL		NF/IZ			
Q1903-03	0.23	0.163	0	0	0	0	1.004	IC1-042225	4/28/2025 19:16	5.06g/100mL		NF/IZ			
CCV	2.078	3.173	3.16	10.565	2.679	5.343	15.39	IC1-042225	4/28/2025 19:38	10		NF/IZ			
CCB	0	0	0	0	0	0	0	IC1-042225	4/28/2025 19:59	10		NF/IZ			

Clear table

Instrument ID:		IC-2	Analyst :		IZ	Method:		300.0 / 9056A				
ident	concentra tion F-	concentratio n CL-	concentratio on NO2	concentratio on BR-	concentratio on NO3	concentratio on HPO4	concentratio on SO4	file name	date time	Initial wt/ Final	Analyst	
STD1	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	IC1-042225	4/22/2025 10:37	10	NF/IZ	
STD2	0.4310	0.6510	0.6550	2.1720	0.5510	1.0900	3.3660	IC1-042225	4/22/2025 10:59	10	NF/IZ	
STD3	0.8100	1.2170	1.2220	4.0490	1.0110	2.0100	6.0910	IC1-042225	4/22/2025 11:20	10	NF/IZ	
STD4	0.9840	1.5090	1.4980	5.0110	1.2500	2.4450	7.3690	IC1-042225	4/22/2025 11:42	10	NF/IZ	
STD5	1.9380	2.9140	2.9160	9.7350	2.4240	4.8600	14.3610	IC1-042225	4/22/2025 12:03	10	NF/IZ	
STD6	4.0650	5.9180	5.9150	19.7520	4.9490	10.1830	30.3800	IC1-042225	4/22/2025 12:25	10	NF/IZ	
STD7	4.9720	7.5910	7.5940	25.2800	6.3160	12.4120	36.9330	IC1-042225	4/22/2025 12:46	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	7.7500	8.5000	9.1667	8.6000	10.2000	9.0000	12.2000					
STD3	1.2500	1.4167	1.8333	1.2250	1.1000	0.5000	1.5167					
STD4	-1.6000	0.6000	-0.1333	0.2200	0.0000	-2.2000	-1.7467					
STD5	-3.1000	-2.8667	-2.8000	-2.6500	-3.0400	-2.8000	-4.2600					
STD6	1.6250	-1.3667	-1.4167	-1.2400	-1.0200	1.8300	1.2667					
STD7	-0.5600	1.2133	1.2533	1.1200	1.0560	-0.7040	-0.1811					

Fluoride (Anions)

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



Function: $A = - 6.13443\text{E-}3 + 0.0144025 \times Q$

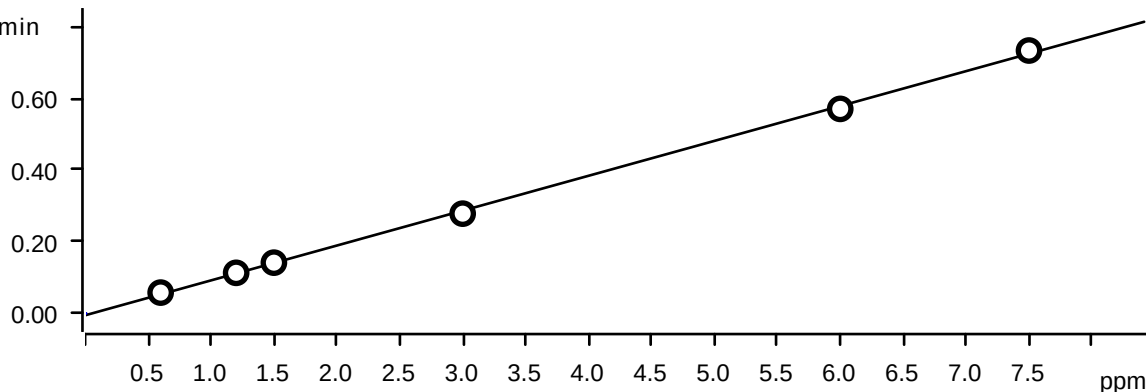
Relative standard deviation 2.337762 %

Correlation coefficient 0.999714

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-04-22 10:37:58 UTC-4	used
Standard 2	1	0.400	10.0	1.0	1.0	0.056	STD2	2025-04-22 10:59:20 UTC-4	used
Standard 3	1	0.800	10.0	1.0	1.0	0.110	STD3	2025-04-22 11:20:44 UTC-4	used
Standard 4	1	1.000	10.0	1.0	1.0	0.136	STD4	2025-04-22 11:42:09 UTC-4	used
Standard 5	1	2.000	10.0	1.0	1.0	0.273	STD5	2025-04-22 12:03:34 UTC-4	used
Standard 6	1	4.000	10.0	1.0	1.0	0.579	STD6	2025-04-22 12:25:01 UTC-4	used
Standard 7	1	5.000	10.0	1.0	1.0	0.710	STD7	2025-04-22 12:46:28 UTC-4	used

Chloride (Anions)

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

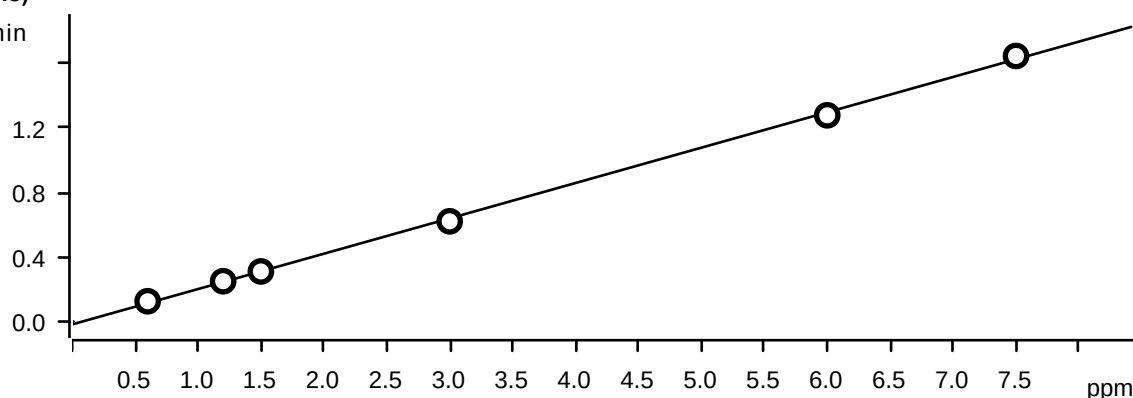


Function: $A = - 5.12446\text{E-}3 + 9.72422\text{E-}3 \times Q$

Relative standard deviation 2.452549 %

Correlation coefficient 0.999683

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-04-22 10:37:58 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.058	STD2	2025-04-22 10:59:20 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.113	STD3	2025-04-22 11:20:44 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.142	STD4	2025-04-22 11:42:09 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.278	STD5	2025-04-22 12:03:34 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	0.570	STD6	2025-04-22 12:25:01 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	0.733	STD7	2025-04-22 12:46:28 UTC-4	used

Nitrite (Anions) $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0187238 + 0.0219021 \times Q$

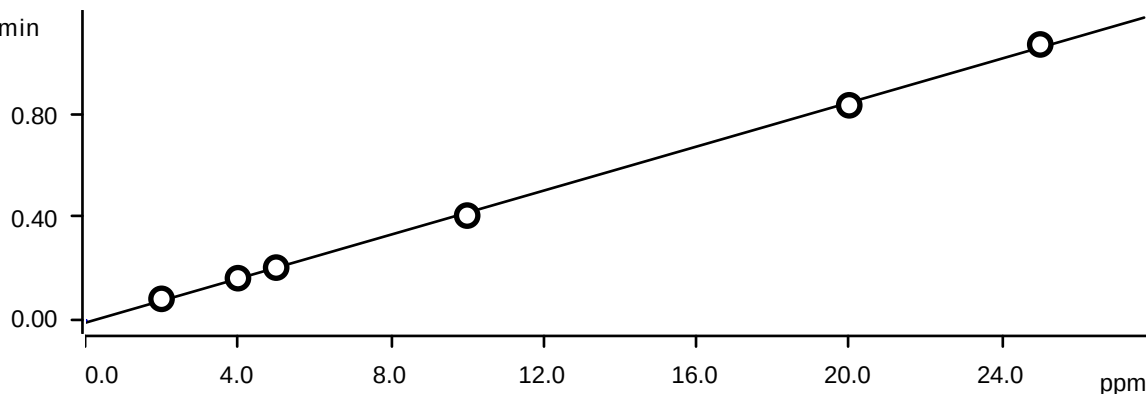
Relative standard deviation 2.531721 %

Correlation coefficient 0.999669

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-04-22 10:37:58 UTC-4	used
Standard 2	1	0.600	10.0	1.0	1.0	0.125	STD2	2025-04-22 10:59:20 UTC-4	used
Standard 3	1	1.200	10.0	1.0	1.0	0.249	STD3	2025-04-22 11:20:44 UTC-4	used
Standard 4	1	1.500	10.0	1.0	1.0	0.309	STD4	2025-04-22 11:42:09 UTC-4	used
Standard 5	1	3.000	10.0	1.0	1.0	0.620	STD5	2025-04-22 12:03:34 UTC-4	used
Standard 6	1	6.000	10.0	1.0	1.0	1.277	STD6	2025-04-22 12:25:01 UTC-4	used
Standard 7	1	7.500	10.0	1.0	1.0	1.644	STD7	2025-04-22 12:46:28 UTC-4	used

Bromide (Anions)

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



Function: $A = -9.36439E-3 + 4.26318E-3 \times Q$

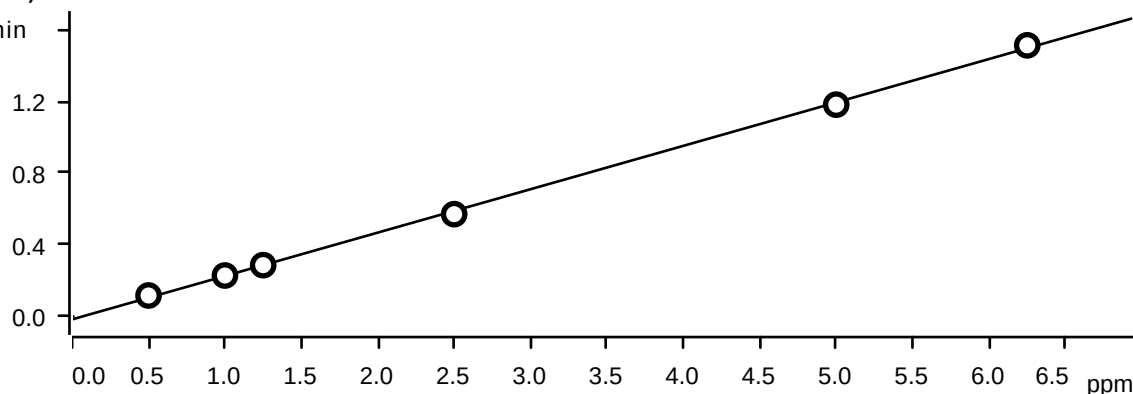
Relative standard deviation 2.280508 %

Correlation coefficient 0.999728

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-04-22 10:37:58 UTC-4	used
Standard 2	1	2.000	10.0	1.0	1.0	0.083	STD2	2025-04-22 10:59:20 UTC-4	used
Standard 3	1	4.000	10.0	1.0	1.0	0.163	STD3	2025-04-22 11:20:44 UTC-4	used
Standard 4	1	5.000	10.0	1.0	1.0	0.204	STD4	2025-04-22 11:42:09 UTC-4	used
Standard 5	1	10.000	10.0	1.0	1.0	0.406	STD5	2025-04-22 12:03:34 UTC-4	used
Standard 6	1	20.000	10.0	1.0	1.0	0.833	STD6	2025-04-22 12:25:01 UTC-4	used
Standard 7	1	25.000	10.0	1.0	1.0	1.068	STD7	2025-04-22 12:46:28 UTC-4	used

Nitrate (Anions)

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

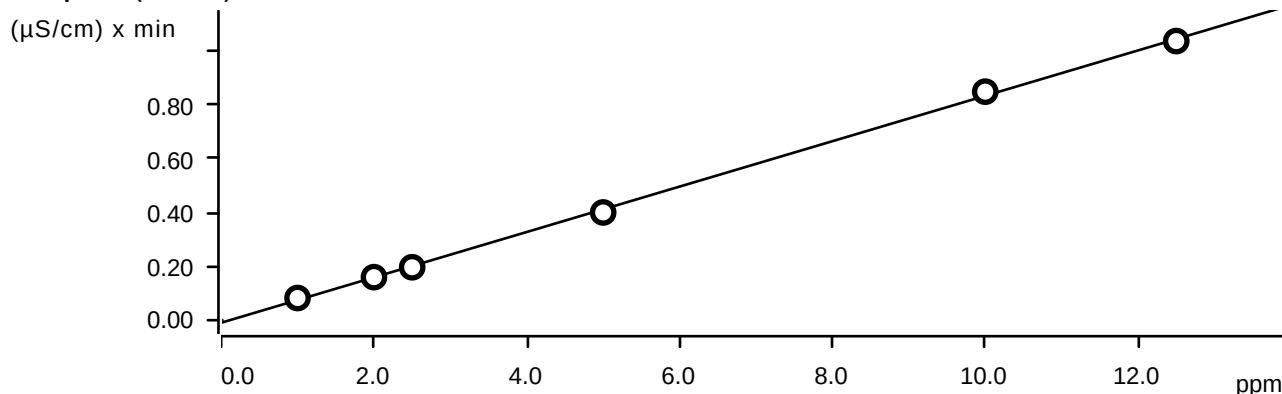


Function: $A = -0.0163950 + 0.0241967 \times Q$

Relative standard deviation 2.309177 %

Correlation coefficient 0.999724

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-04-22 10:37:58 UTC-4	used
Standard 2	1	0.500	10.0	1.0	1.0	0.117	STD2	2025-04-22 10:59:20 UTC-4	used
Standard 3	1	1.000	10.0	1.0	1.0	0.228	STD3	2025-04-22 11:20:44 UTC-4	used
Standard 4	1	1.250	10.0	1.0	1.0	0.286	STD4	2025-04-22 11:42:09 UTC-4	used
Standard 5	1	2.500	10.0	1.0	1.0	0.570	STD5	2025-04-22 12:03:34 UTC-4	used
Standard 6	1	5.000	10.0	1.0	1.0	1.181	STD6	2025-04-22 12:25:01 UTC-4	used
Standard 7	1	6.250	10.0	1.0	1.0	1.512	STD7	2025-04-22 12:46:28 UTC-4	used

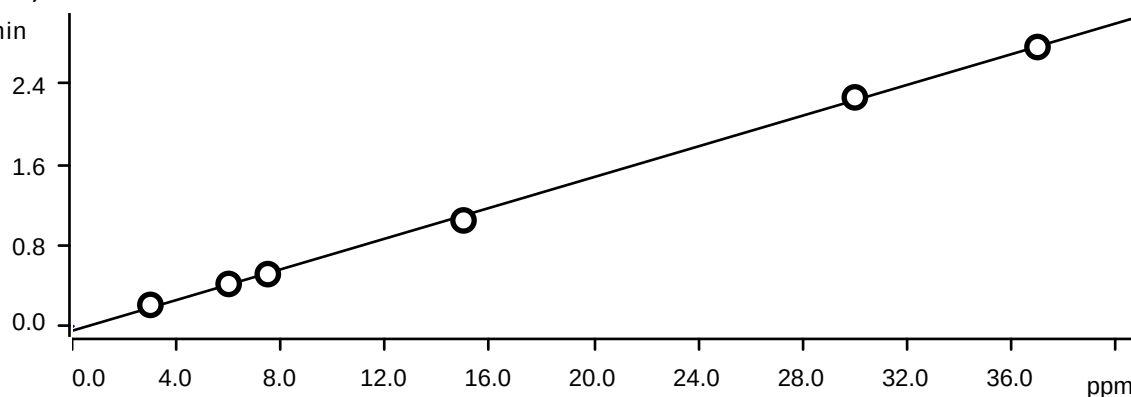
Phosphate (Anions)Function: $A = -9.96993E-3 + 8.43655E-3 \times Q$

Relative standard deviation 2.492252 %

Correlation coefficient 0.999676

Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-04-22 10:37:58 UTC-4	used
Standard 2	1	1.000	10.0	1.0	1.0	0.082	STD2	2025-04-22 10:59:20 UTC-4	used
Standard 3	1	2.000	10.0	1.0	1.0	0.160	STD3	2025-04-22 11:20:44 UTC-4	used
Standard 4	1	2.500	10.0	1.0	1.0	0.196	STD4	2025-04-22 11:42:09 UTC-4	used
Standard 5	1	5.000	10.0	1.0	1.0	0.400	STD5	2025-04-22 12:03:34 UTC-4	used
Standard 6	1	10.000	10.0	1.0	1.0	0.849	STD6	2025-04-22 12:25:01 UTC-4	used
Standard 7	1	12.500	10.0	1.0	1.0	1.037	STD7	2025-04-22 12:46:28 UTC-4	used

Sulfate (Anions)

 $(\mu\text{S}/\text{cm}) \times \text{min}$ Function: $A = -0.0453007 + 7.61540E-3 \times Q$

Relative standard deviation 2.675209 %

Correlation coefficient 0.999634

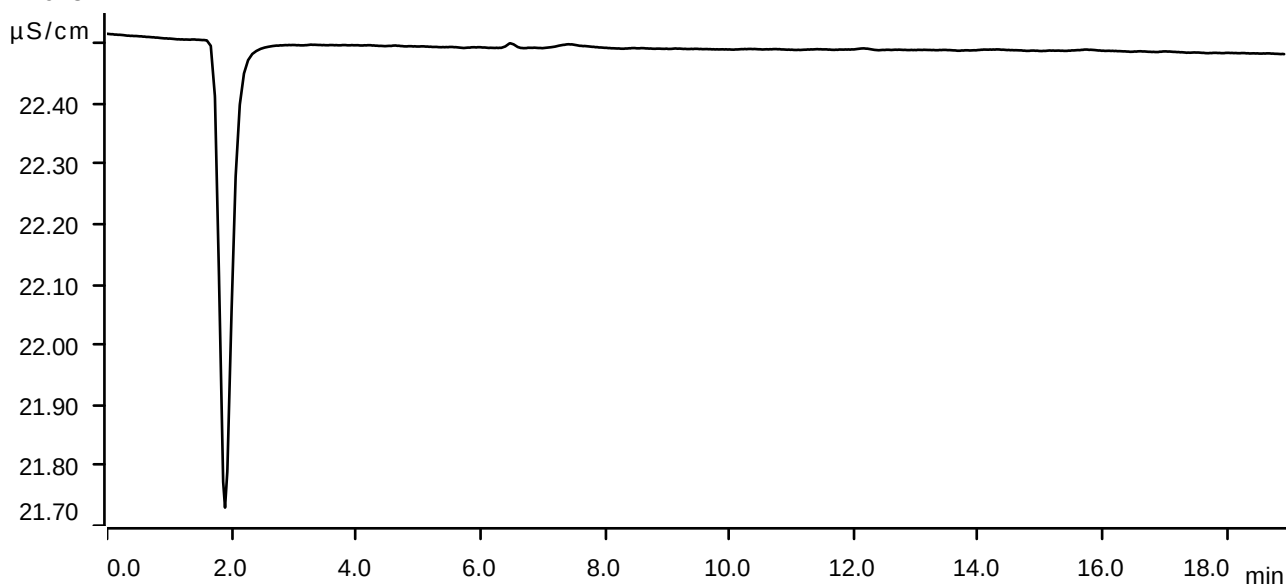
Sample type	Index	Conc.	Volume	Dilution	Sample amount	Area	Ident	Date	Used
Standard 1	1	0.000	10.0	1.0	1.0	n. d.	STD1	2025-04-22 10:37:58 UTC-4	used
Standard 2	1	3.000	10.0	1.0	1.0	0.211	STD2	2025-04-22 10:59:20 UTC-4	used
Standard 3	1	6.000	10.0	1.0	1.0	0.419	STD3	2025-04-22 11:20:44 UTC-4	used
Standard 4	1	7.500	10.0	1.0	1.0	0.516	STD4	2025-04-22 11:42:09 UTC-4	used
Standard 5	1	15.000	10.0	1.0	1.0	1.048	STD5	2025-04-22 12:03:34 UTC-4	used
Standard 6	1	30.000	10.0	1.0	1.0	2.268	STD6	2025-04-22 12:25:01 UTC-4	used
Standard 7	1	37.000	10.0	1.0	1.0	2.767	STD7	2025-04-22 12:46:28 UTC-4	used

Sample data

Ident STD1
Sample type Standard 1
Determination start 2025-04-22 10:37:58 UTC-4
Method IC1-042225
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 11.32 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

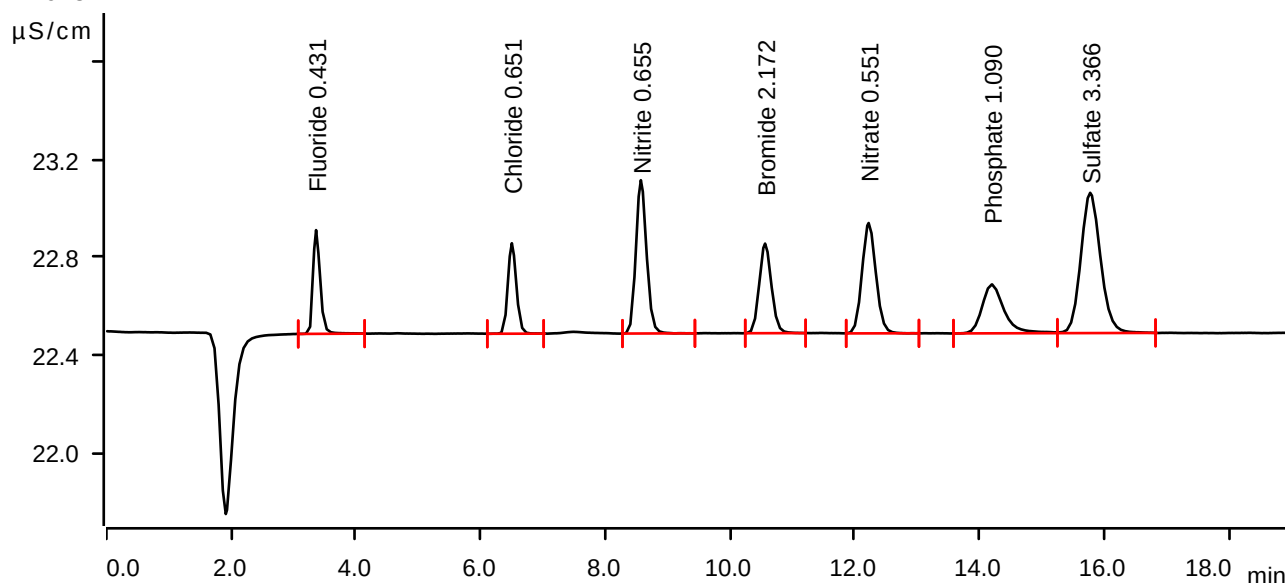
Sample data

Ident STD2
Sample type Standard 2
Determination start 2025-04-22 10:59:20 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.363	0.0560	0.425	0.431	Fluoride
2	6.502	0.0581	0.371	0.651	Chloride
3	8.570	0.1247	0.628	0.655	Nitrite
4	10.562	0.0832	0.367	2.172	Bromide
5	12.222	0.1168	0.452	0.551	Nitrate
6	14.197	0.0820	0.201	1.090	Phosphate
7	15.773	0.2111	0.575	3.366	Sulfate

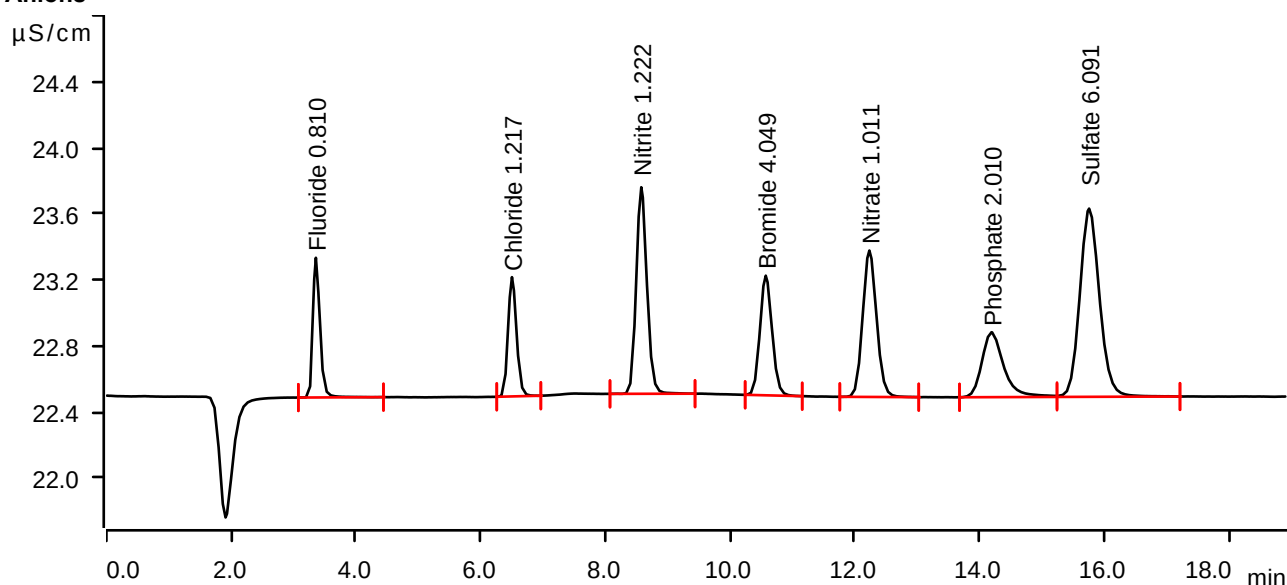
Sample data

Ident STD3
Sample type Standard 3
Determination start 2025-04-22 11:20:44 UTC-4
Method IC1-042225
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 11.43 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	3.360	0.1105	0.845	0.810	Fluoride
2	6.503	0.1132	0.722	1.217	Chloride
3	8.577	0.2488	1.250	1.222	Nitrite
4	10.572	0.1632	0.724	4.049	Bromide
5	12.233	0.2282	0.886	1.011	Nitrate
6	14.192	0.1596	0.393	2.010	Phosphate
7	15.757	0.4185	1.139	6.091	Sulfate

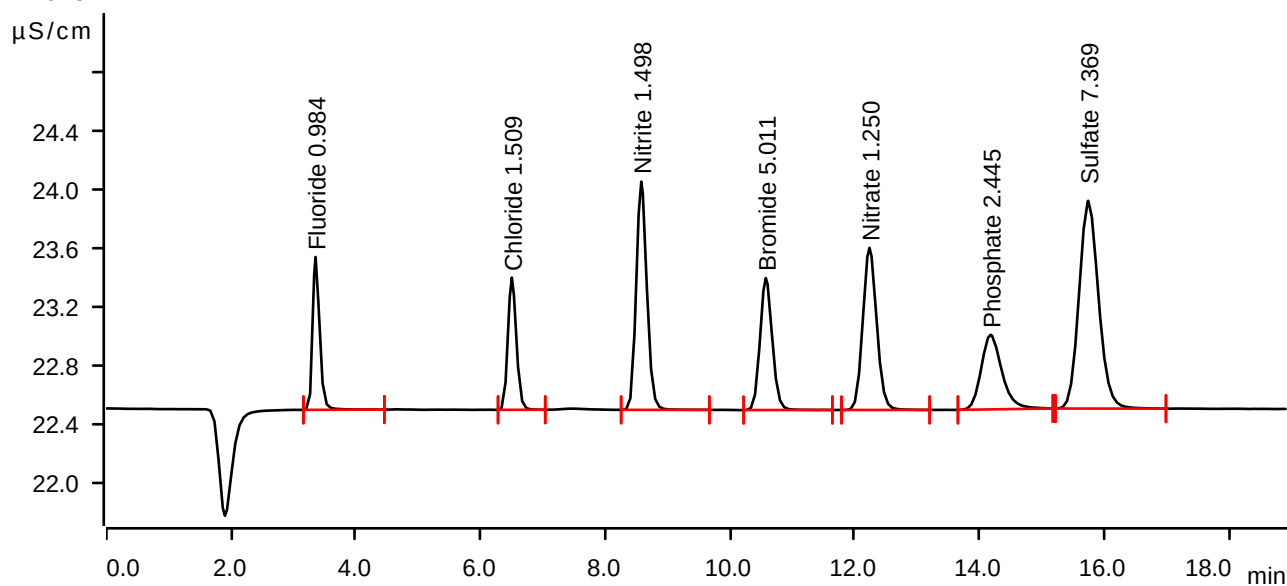
Sample data

Ident STD4
Sample type Standard 4
Determination start 2025-04-22 11:42:09 UTC-4
Method IC1-042225
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 11.43 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	3.355	0.1356	1.044	0.984	Fluoride
2	6.502	0.1416	0.903	1.509	Chloride
3	8.577	0.3094	1.559	1.498	Nitrite
4	10.573	0.2043	0.902	5.011	Bromide
5	12.235	0.2860	1.108	1.250	Nitrate
6	14.177	0.1963	0.510	2.445	Phosphate
7	15.743	0.5159	1.419	7.369	Sulfate

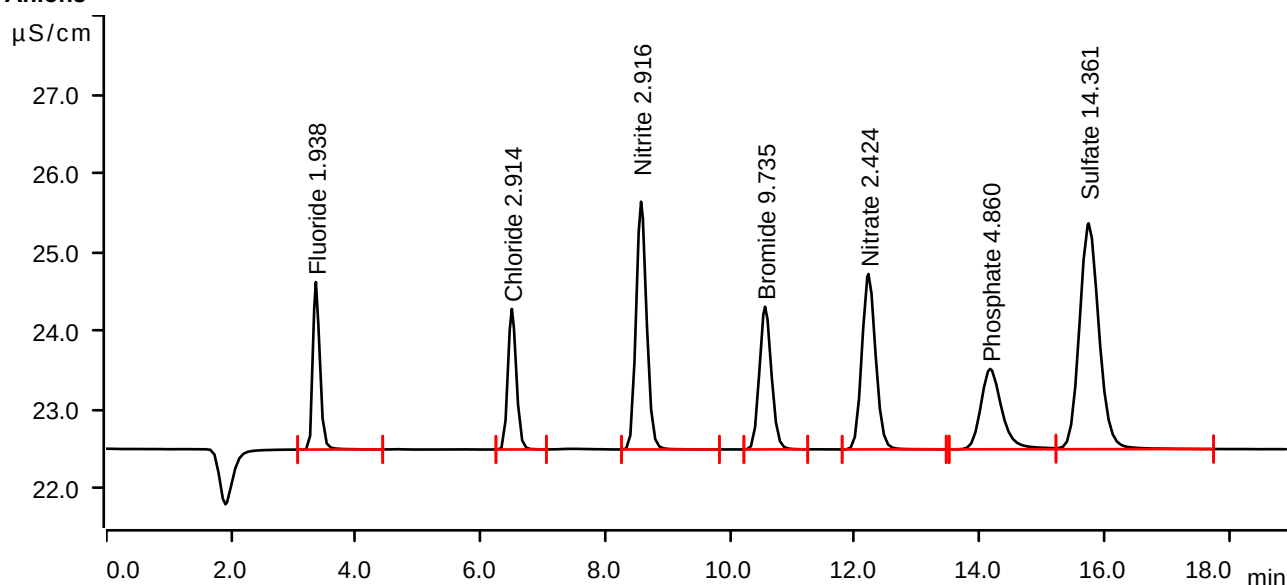
Sample data

Ident STD5
Sample type Standard 5
Determination start 2025-04-22 12:03:34 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.360	0.2730	2.125	1.938	Fluoride
2	6.502	0.2783	1.784	2.914	Chloride
3	8.573	0.6200	3.144	2.916	Nitrite
4	10.562	0.4057	1.810	9.735	Bromide
5	12.218	0.5702	2.226	2.424	Nitrate
6	14.170	0.4000	1.020	4.860	Phosphate
7	15.748	1.0484	2.866	14.361	Sulfate

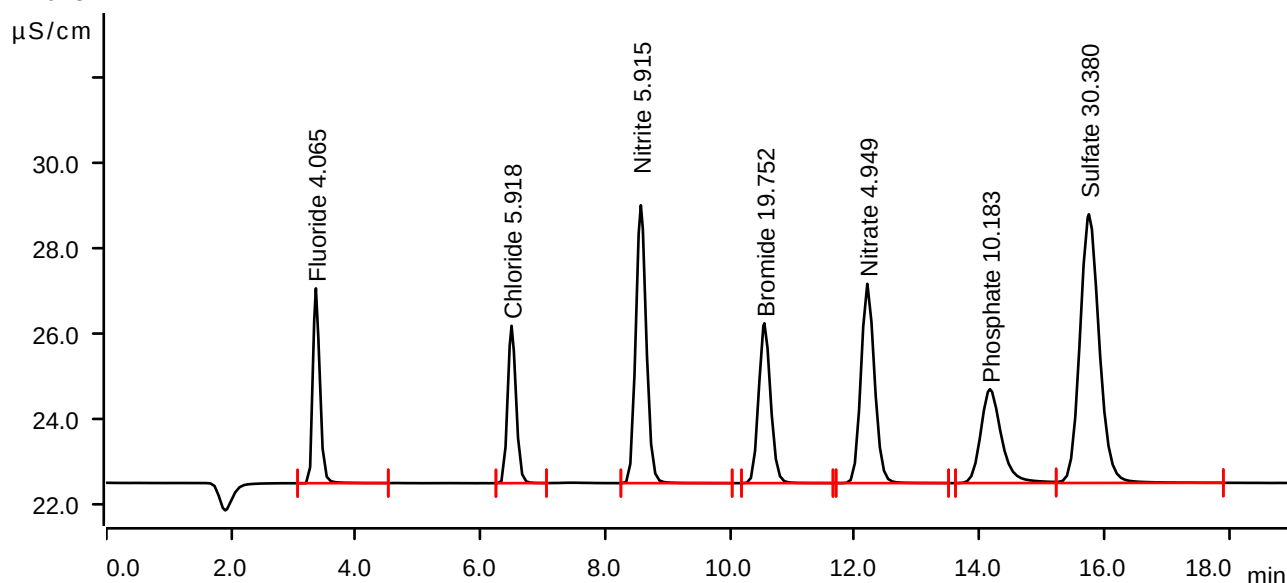
Sample data

Ident STD6
Sample type Standard 6
Determination start 2025-04-22 12:25:01 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.360	0.5793	4.564	4.065	Fluoride
2	6.497	0.5704	3.686	5.918	Chloride
3	8.570	1.2768	6.510	5.915	Nitrite
4	10.550	0.8327	3.746	19.752	Bromide
5	12.202	1.1810	4.667	4.949	Nitrate
6	14.167	0.8491	2.199	10.183	Phosphate
7	15.753	2.2683	6.294	30.380	Sulfate

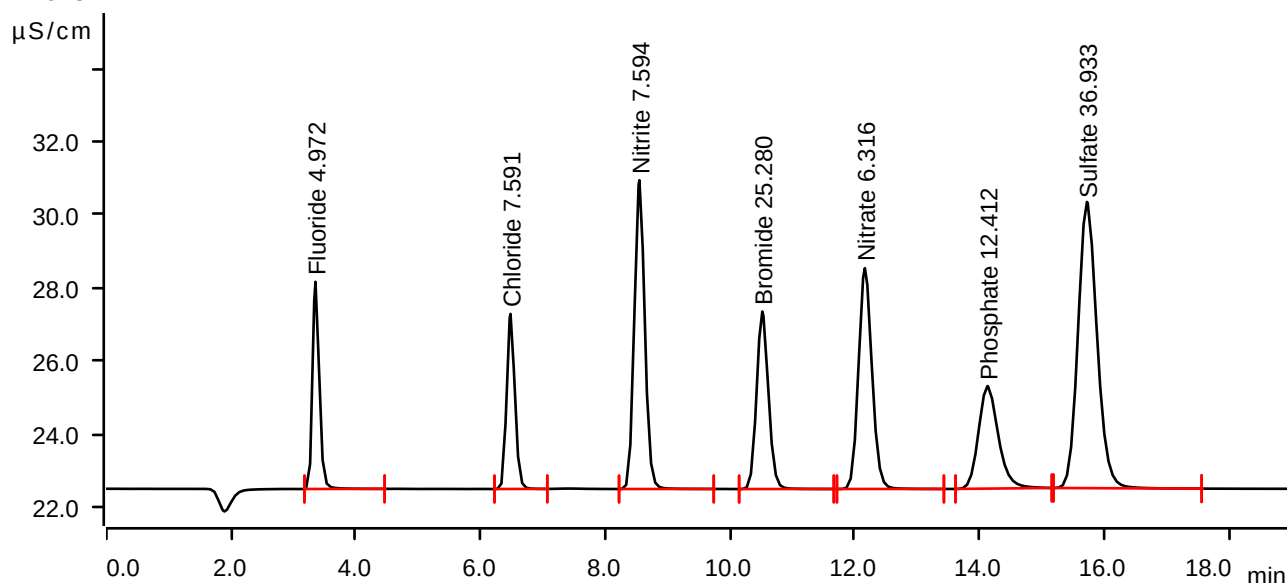
Sample data

Ident STD7
Sample type Standard 7
Determination start 2025-04-22 12:46:28 UTC-4
Method IC1-042225
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 11.43 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	3.353	0.7100	5.662	4.972	Fluoride
2	6.480	0.7331	4.785	7.591	Chloride
3	8.547	1.6445	8.440	7.594	Nitrite
4	10.517	1.0684	4.850	25.280	Bromide
5	12.162	1.5118	6.035	6.316	Nitrate
6	14.127	1.0372	2.803	12.412	Phosphate
7	15.722	2.7673	7.822	36.933	Sulfate

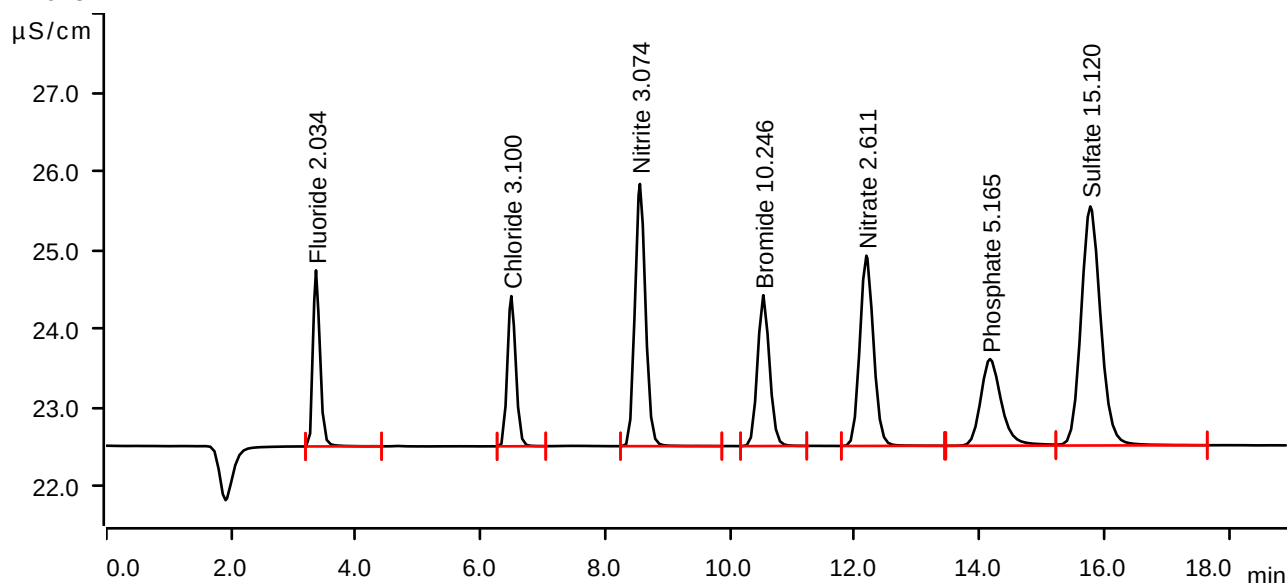
Sample data

Ident ICV
Sample type Check standard 1
Determination start 2025-04-22 13:07:56 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.362	0.2867	2.234	2.034	Fluoride
2	6.493	0.2963	1.906	3.100	Chloride
3	8.555	0.6546	3.328	3.074	Nitrite
4	10.532	0.4274	1.914	10.246	Bromide
5	12.185	0.6154	2.414	2.611	Nitrate
6	14.168	0.4257	1.100	5.165	Phosphate
7	15.775	1.1062	3.034	15.120	Sulfate

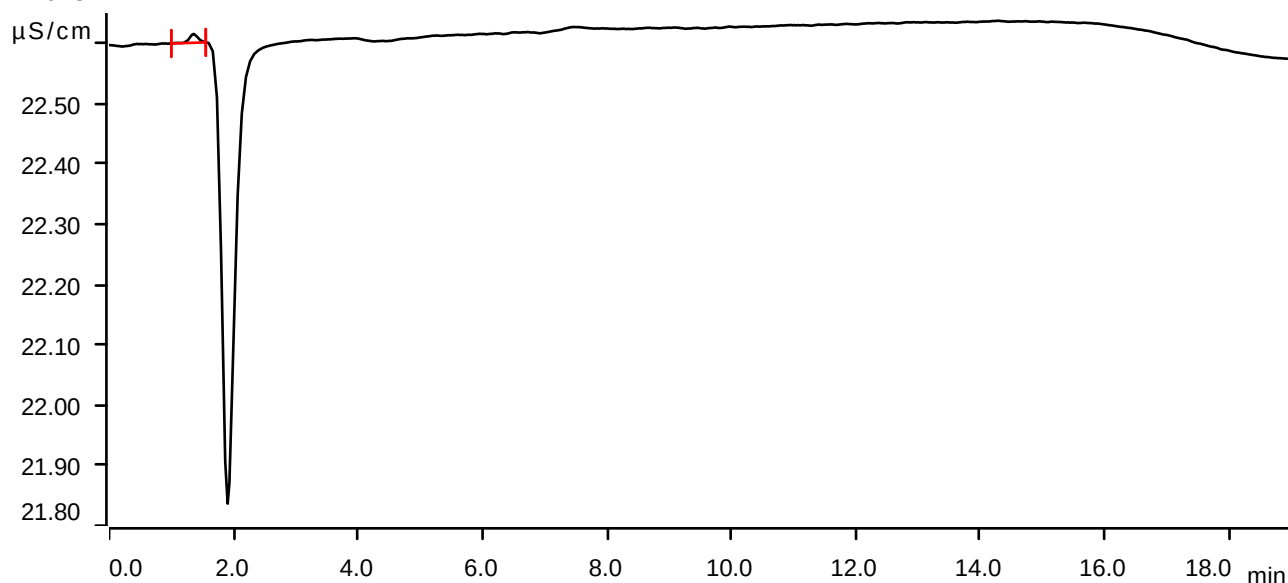
Sample data

Ident ICB
Sample type Sample
Determination start 2025-04-22 13:58:31 UTC-4
Method IC1-042225
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 11.32 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions



Peak number	Retention time	Area	Height	Concentration	Component name
	min	(μS/cm) x min	μS/cm	ppm	
1	1.362	0.0024	0.015	invalid	

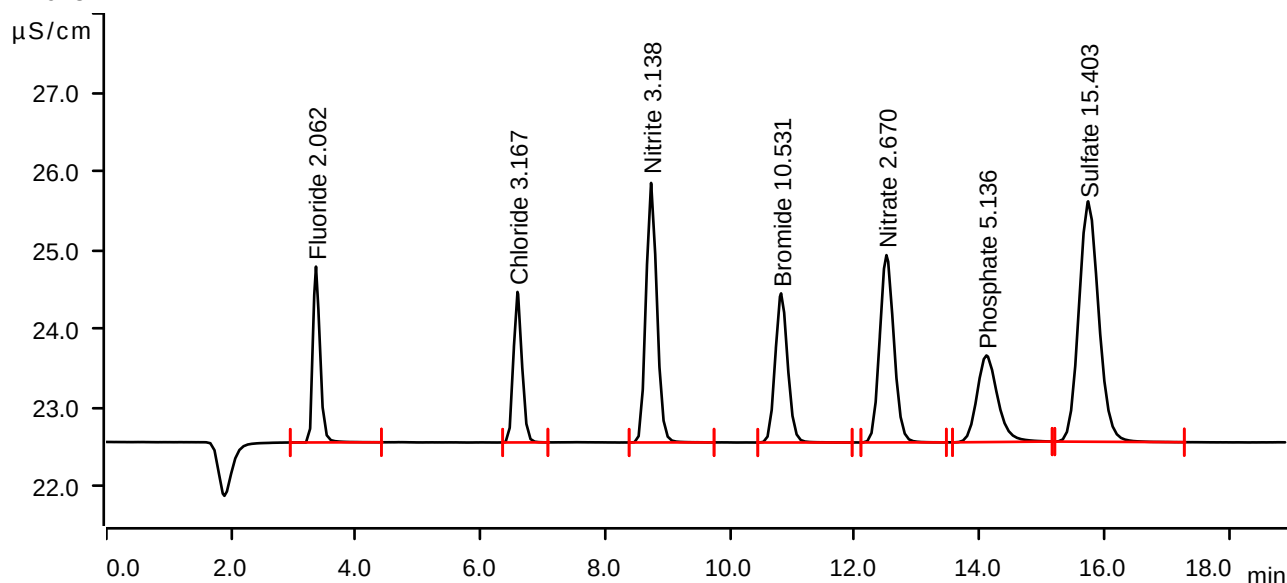
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-04-28 11:44:51 UTC-4
Method IC1-042225
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 12.27 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	3.362	0.2908	2.231	2.062	Fluoride
2	6.592	0.3029	1.910	3.167	Chloride
3	8.735	0.6685	3.293	3.138	Nitrite
4	10.818	0.4396	1.893	10.531	Bromide
5	12.507	0.6296	2.377	2.670	Nitrate
6	14.110	0.4234	1.099	5.136	Phosphate
7	15.742	1.1277	3.050	15.403	Sulfate

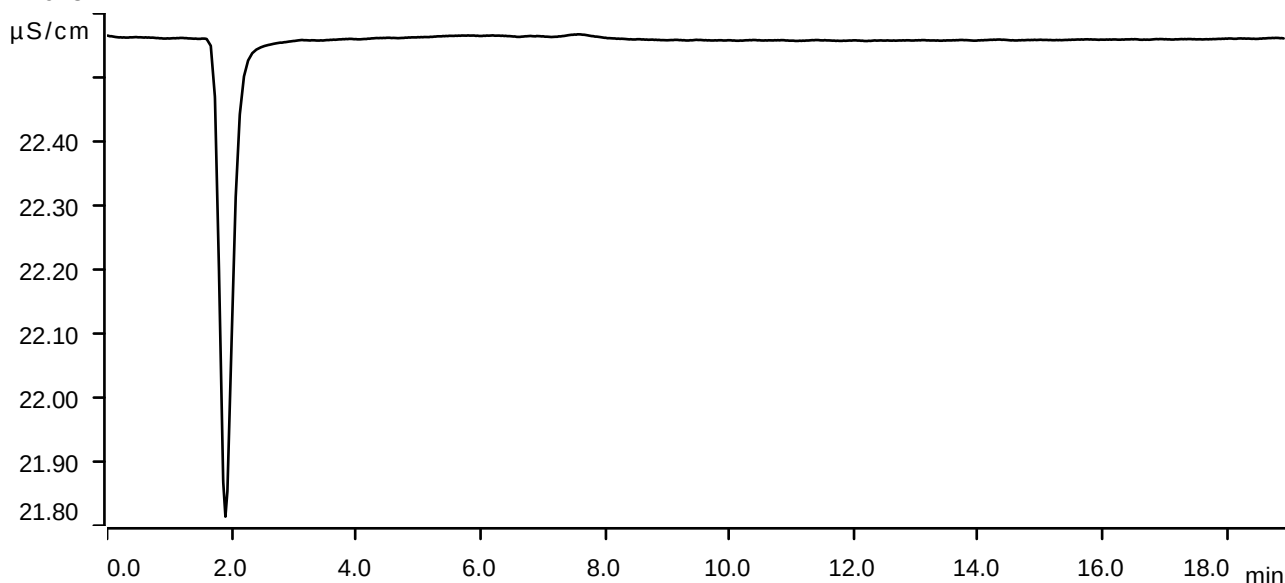
Sample data

Ident CCB
Sample type Sample
Determination start 2025-04-28 12:06:22 UTC-4
Method IC1-042225
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 12.27 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

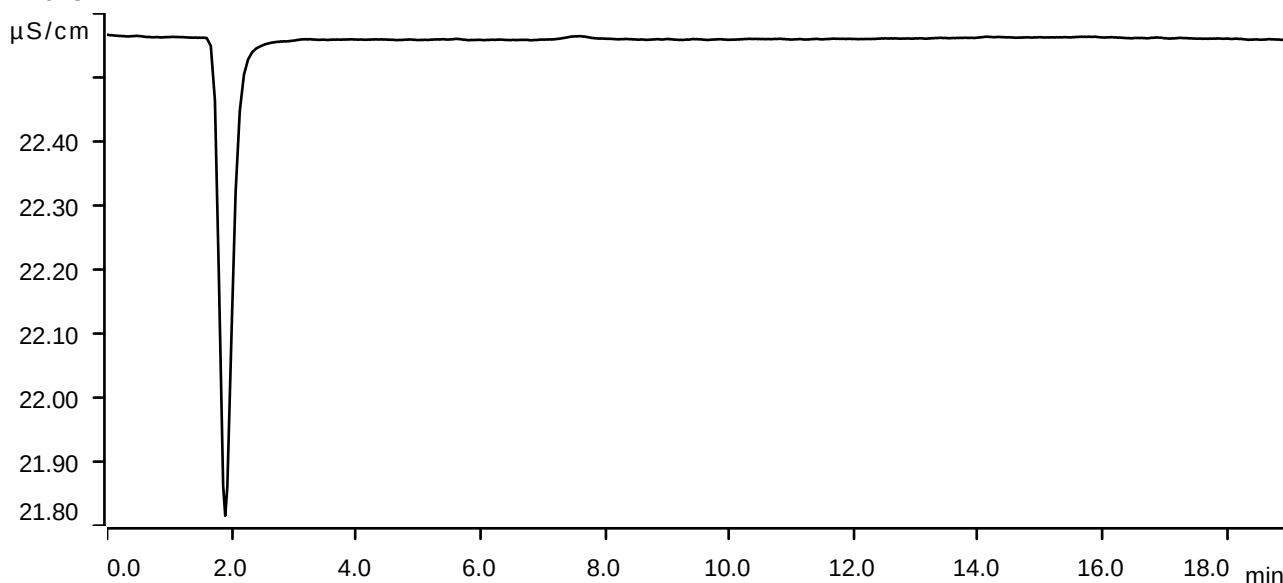


Sample data

Ident LB135573BLS
Sample type Sample
Determination start 2025-04-28 12:27:52 UTC-4
Method IC1-042225
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 12.22 MPa
Maximum pressure monitored yes
Temperature ---- °C

Anions

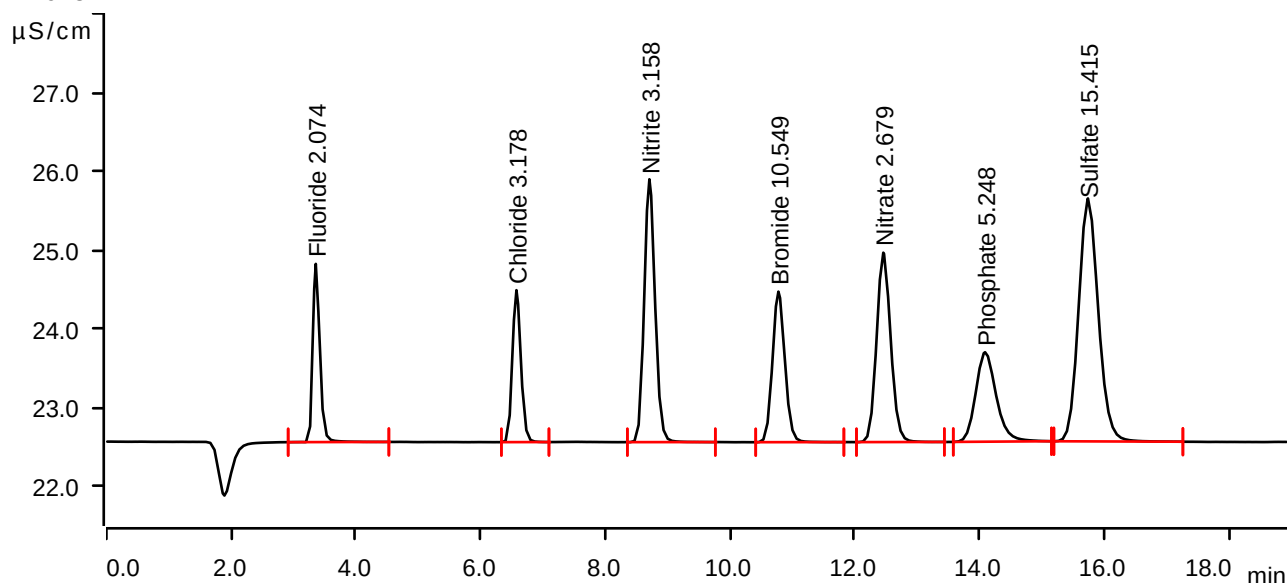
Sample data

Ident LB135573BSS
Sample type Check standard 1
Determination start 2025-04-28 12:49:23 UTC-4
Method IC1-042225
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 12.16 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	3.358	0.2926	2.261	2.074	Fluoride
2	6.575	0.3039	1.928	3.178	Chloride
3	8.707	0.6728	3.336	3.158	Nitrite
4	10.775	0.4404	1.910	10.549	Bromide
5	12.457	0.6318	2.404	2.679	Nitrate
6	14.088	0.4328	1.136	5.248	Phosphate
7	15.738	1.1286	3.083	15.415	Sulfate

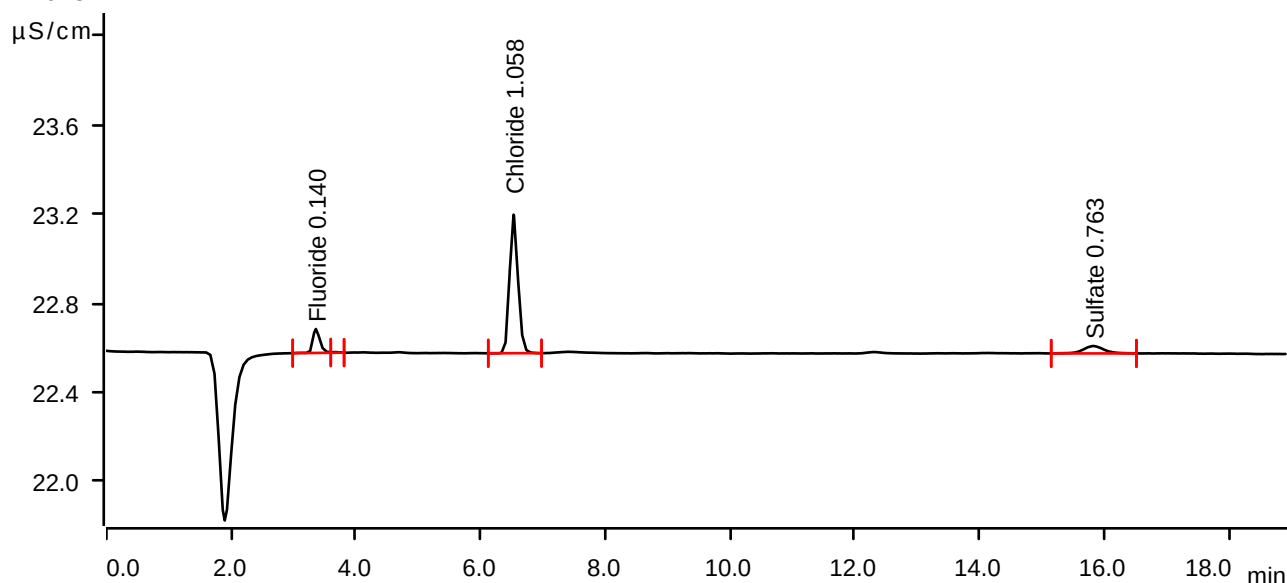
Sample data

Ident Q1889-01
Sample type Sample
Determination start 2025-04-28 16:03:05 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.360	0.0141	0.107	0.140	Fluoride
2	3.628	0.0004	0.003	invalid	
3	6.528	0.0978	0.622	1.058	Chloride
4	15.827	0.0128	0.033	0.763	Sulfate

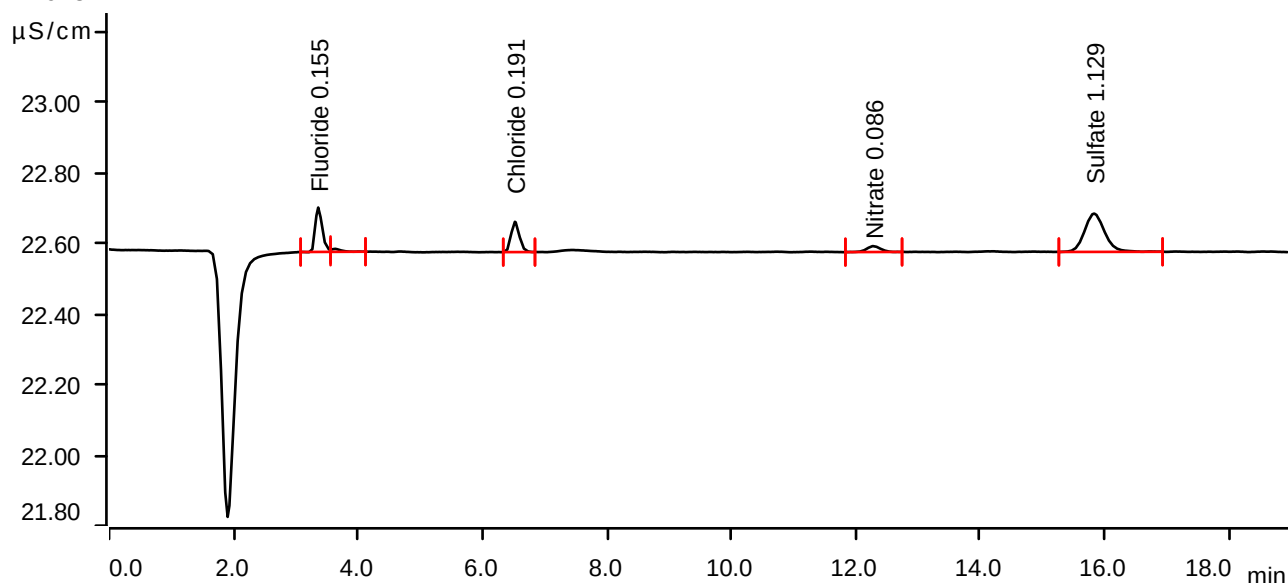
Sample data

Ident Q1889-02
Sample type Sample
Determination start 2025-04-28 16:24:39 UTC-4
Method IC1-042225
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	3.362	0.0162	0.126	0.155	Fluoride
2	3.637	0.0015	0.008	invalid	
3	6.523	0.0134	0.086	0.191	Chloride
4	12.278	0.0043	0.017	0.086	Nitrate
5	15.832	0.0407	0.108	1.129	Sulfate

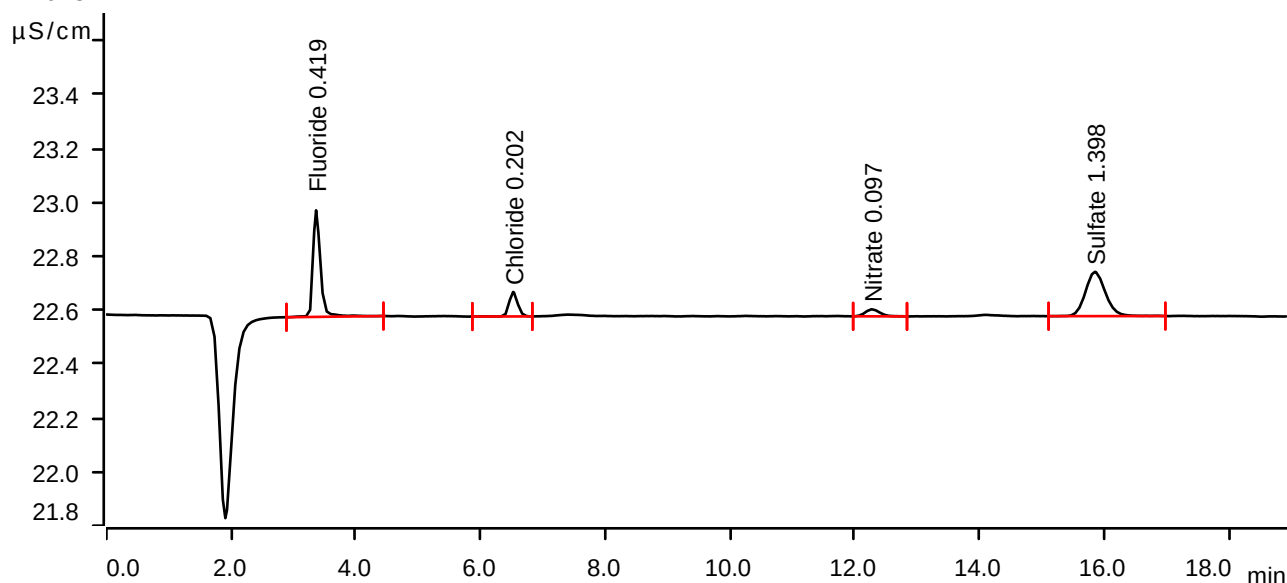
Sample data

Ident Q1889-03
Sample type Sample
Determination start 2025-04-28 16:46:13 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.363	0.0542	0.395	0.419	Fluoride
2	6.522	0.0145	0.091	0.202	Chloride
3	12.272	0.0071	0.026	0.097	Nitrate
4	15.850	0.0611	0.164	1.398	Sulfate

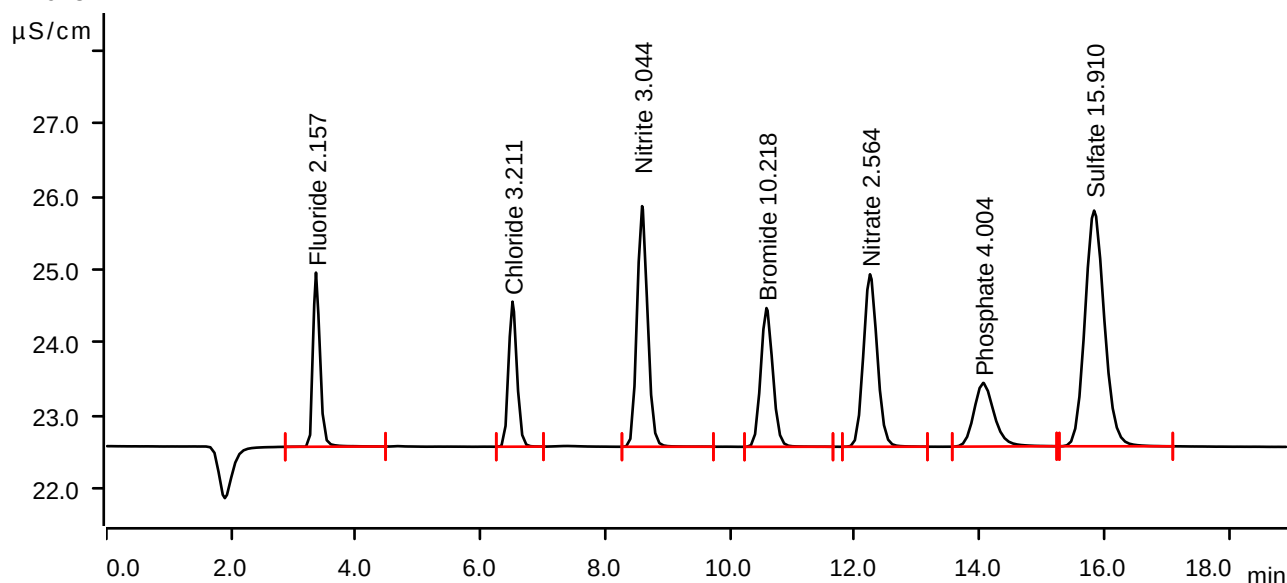
Sample data

Ident Q1889-03MS
Sample type Sample
Determination start 2025-04-28 17:07:47 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.362	0.3045	2.379	2.157	Fluoride
2	6.512	0.3071	1.982	3.211	Chloride
3	8.590	0.6480	3.288	3.044	Nitrite
4	10.583	0.4262	1.896	10.218	Bromide
5	12.243	0.6041	2.357	2.564	Nitrate
6	14.058	0.3279	0.870	4.004	Phosphate
7	15.837	1.1663	3.221	15.910	Sulfate

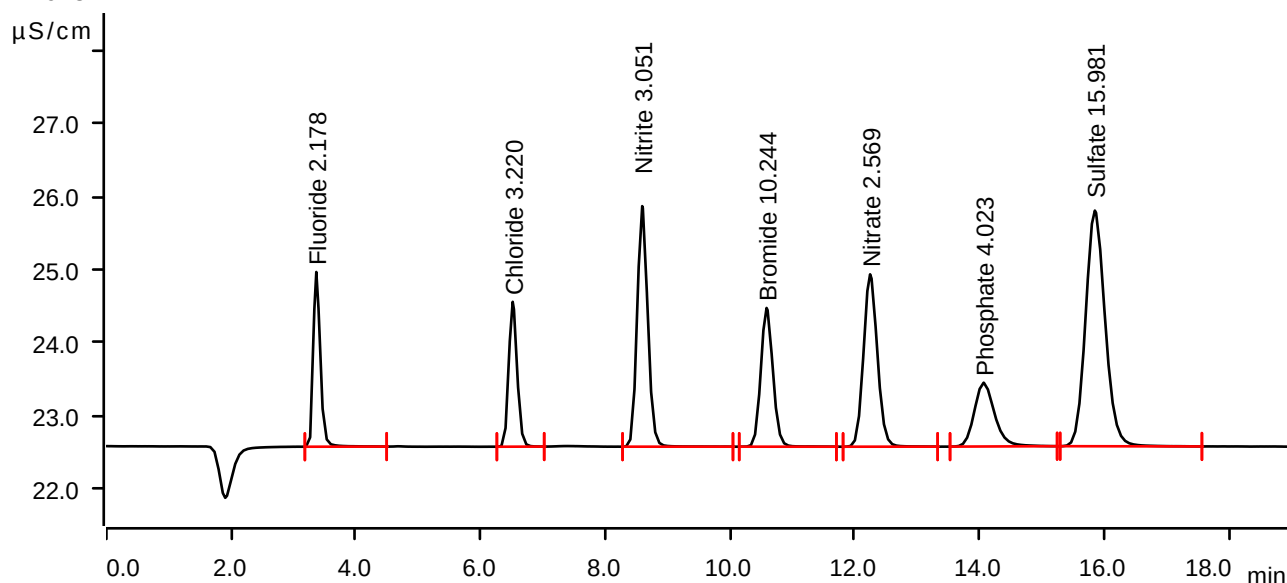
Sample data

Ident Q1889-03MSD
Sample type Sample
Determination start 2025-04-28 17:29:09 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.367	0.3076	2.387	2.178	Fluoride
2	6.515	0.3080	1.979	3.220	Chloride
3	8.592	0.6495	3.287	3.051	Nitrite
4	10.585	0.4273	1.896	10.244	Bromide
5	12.245	0.6052	2.356	2.569	Nitrate
6	14.065	0.3295	0.872	4.023	Phosphate
7	15.848	1.1717	3.221	15.981	Sulfate

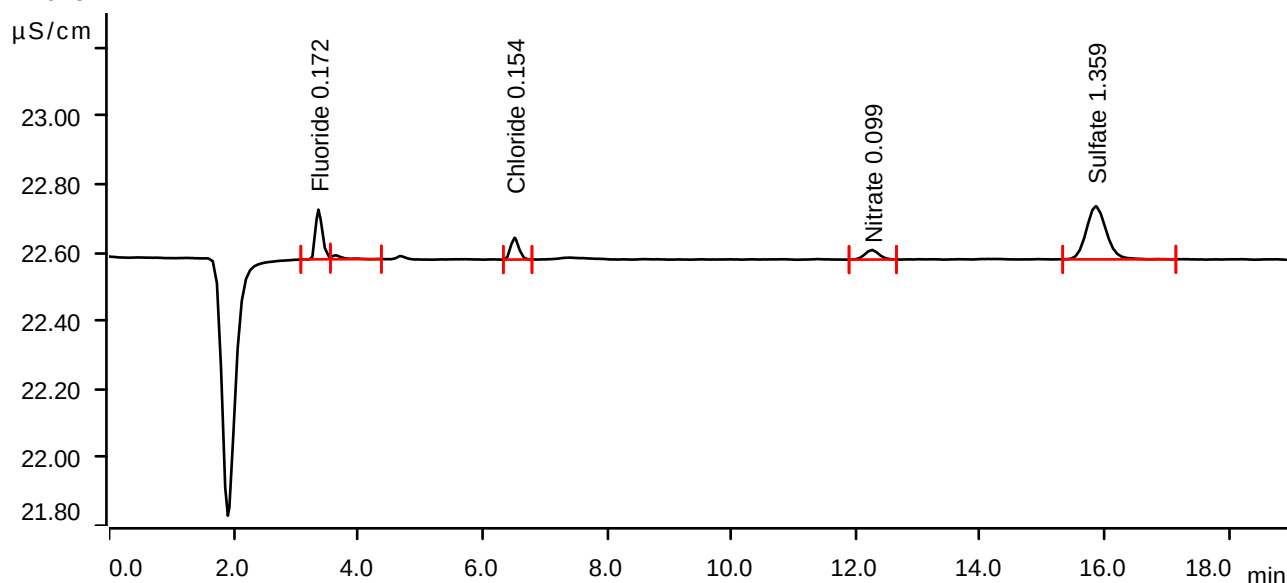
Sample data

Ident Q1903-01
Sample type Sample
Determination start 2025-04-28 18:33:41 UTC-4
Method IC1-042225
Operator

Anions

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

Anions



Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.365	0.0187	0.146	0.172	Fluoride
2	3.643	0.0024	0.012	invalid	
3	6.517	0.0098	0.064	0.154	Chloride
4	12.263	0.0075	0.028	0.099	Nitrate
5	15.855	0.0582	0.156	1.359	Sulfate

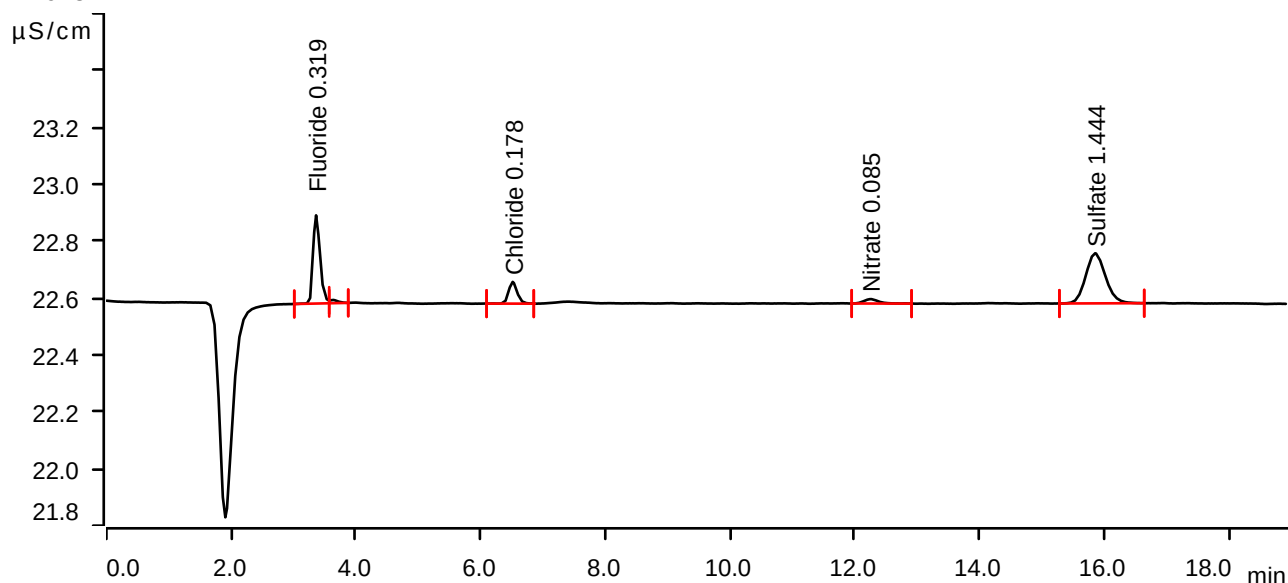
Sample data

Ident Q1903-02
Sample type Sample
Determination start 2025-04-28 18:55:08 UTC-4
Method IC1-042225
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	3.363	0.0399	0.310	0.319	Fluoride
2	3.637	0.0017	0.011	invalid	
3	6.515	0.0122	0.076	0.178	Chloride
4	12.267	0.0042	0.015	0.085	Nitrate
5	15.853	0.0647	0.176	1.444	Sulfate

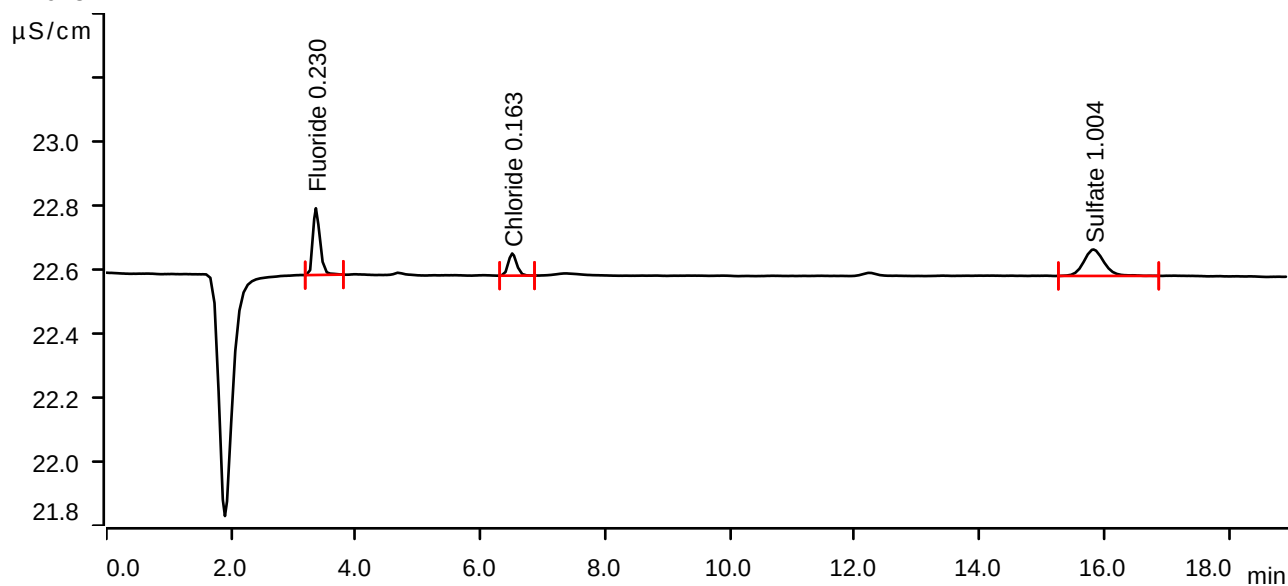
Sample data

Ident Q1903-03
Sample type Sample
Determination start 2025-04-28 19:16:35 UTC-4
Method IC1-042225
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	3.360	0.0270	0.208	0.230	Fluoride
2	6.507	0.0108	0.069	0.163	Chloride
3	15.828	0.0312	0.083	1.004	Sulfate

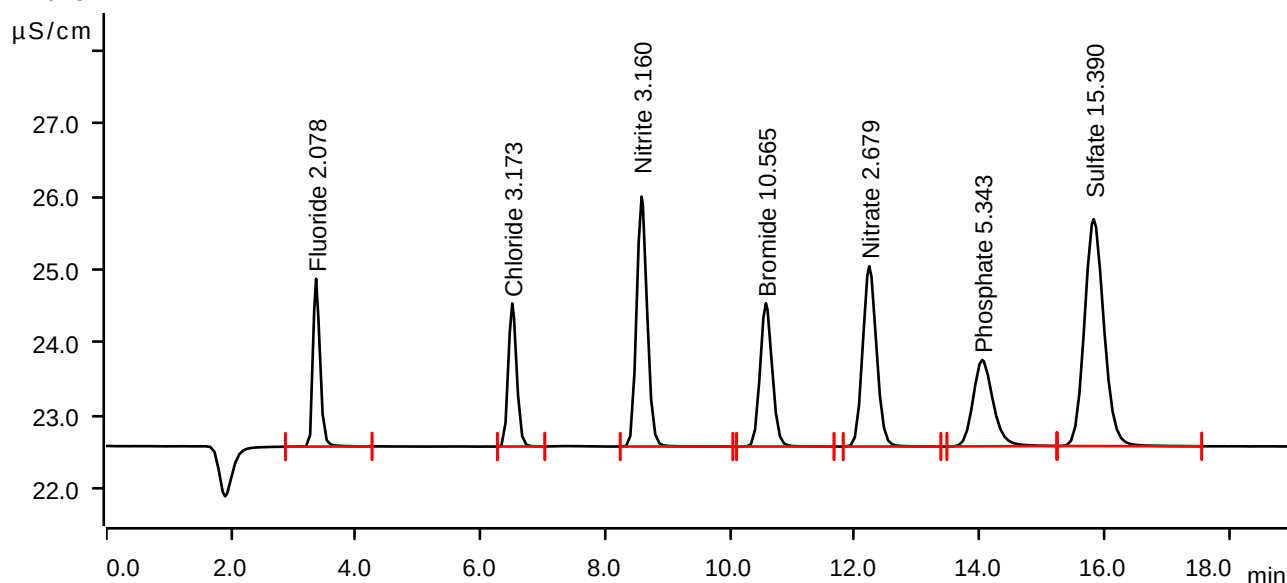
Sample data

Ident CCV
Sample type Check standard 1
Determination start 2025-04-28 19:38:00 UTC-4
Method IC1-042225
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



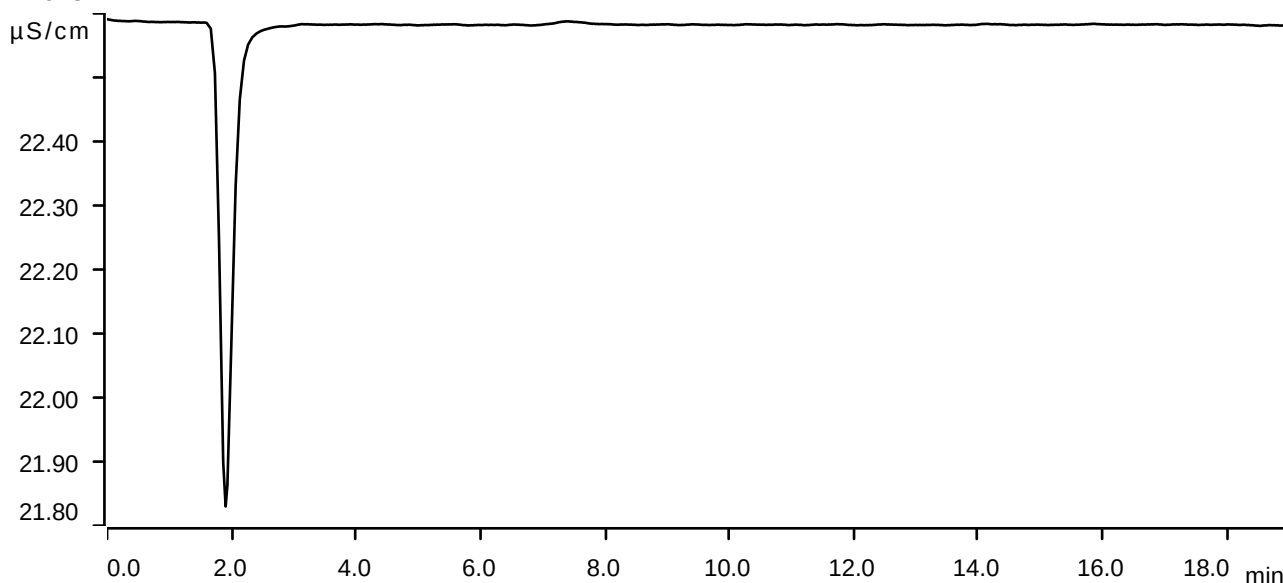
Peak number	Retention time min	Area (µS/cm) x min	Height µS/cm	Concentration ppm	Component name
1	3.363	0.2931	2.293	2.078	Fluoride
2	6.508	0.3034	1.956	3.173	Chloride
3	8.583	0.6734	3.415	3.160	Nitrite
4	10.575	0.4410	1.958	10.565	Bromide
5	12.232	0.6319	2.463	2.679	Nitrate
6	14.043	0.4408	1.180	5.343	Phosphate
7	15.830	1.1267	3.100	15.390	Sulfate

Sample data

Ident CCB
Sample type Sample
Determination start 2025-04-28 19:59:30 UTC-4
Method IC1-042225
Operator

Anions

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

Anions

Analytical Summary Report

Analysis Method: 7196A

ANALYST: rubina

Parameter: ~~Hexavalent Chromium~~

SUPERVISOR REVIEW BY: Iwona

Run Number: LB135578

pH Meter ID: WC pH Meter-1

Reagent/Standard	Lot/Log #
hexavalent chromium color reagent	WP112869
5N sulfuric acid	WP112831
HNO3 Hex-Chrome, 5M	WP112830
Hexchrome Cleaning Solution	WP111249

Intercept: 0.0005

Slope: 0.7665

Regression: 0.999957

Seq	Lab ID	True Value (mg/l)	DF	Initial Vol (ml)	Final Vol (ml)	pH HNO3	pH H2SO4	Absorb.at 540nm		Absorbance Difference	Result (mg/L)	%D	Anal Date	Anal Time
								Backgrnd	Color					
1	CAL1	0	1	100	100	7.28	1.84	0.000	0.000	0.000	-0.00		04/28/2025	12:00
2	CAL2	0.01	1	100	100	7.42	1.90	0.000	0.009	0.009	0.011	10	04/28/2025	12:01
3	CAL3	0.025	1	100	100	7.36	1.94	0.000	0.019	0.019	0.024	-4	04/28/2025	12:02
4	CAL4	0.05	1	100	100	7.38	1.85	0.000	0.038	0.038	0.048	-4	04/28/2025	12:03
5	CAL5	0.1	1	100	100	7.47	1.89	0.000	0.081	0.081	0.105	5	04/28/2025	12:04
6	CAL6	0.5	1	100	100	7.44	1.97	0.000	0.379	0.379	0.493	-1.4	04/28/2025	12:05
7	CAL7	1	1	100	100	7.35	1.88	0.000	0.769	0.769	1.002	0.2	04/28/2025	12:06

Analytical Summary Report

Analysis Method: 7196A

ANALYST:rubina

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY:Iwona

Run Number: LB135578

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	7.48	1.88	0.000	0.382	0.382	0.498	04/28/2025	12:07
2	ICB		1	100	100	7.23	1.79	0.000	0.001	0.001	0.001	04/28/2025	12:08
3	CCV1	0.5	1	100	100	7.40	1.90	0.000	0.376	0.376	0.490	04/28/2025	12:09
4	CCB1		1	100	100	7.31	1.84	0.000	0.001	0.001	0.001	04/28/2025	12:10
5	RL Check	0.01	1	100	100	7.43	1.95	0.000	0.010	0.010	0.012	04/28/2025	12:11
6	PB167730BL		1	2.50	100	7.33	1.75	0.000	0.000	0.000	-0.001	04/28/2025	12:12
7	PB167730BS	20	1	2.50	100	7.45	1.99	0.000	0.383	0.383	0.499	04/28/2025	12:13
8	Q1867-01		1	2.55	100	7.60	2.06	0.004	0.004	0.000	-0.001	04/28/2025	12:14
9	Q1867-03		1	2.57	100	7.36	1.88	0.014	0.015	0.001	0.001	04/28/2025	12:15
10	Q1869-01		1	2.52	100	7.62	2.06	0.016	0.016	0.000	-0.001	04/28/2025	12:16
11	Q1871-01		1	2.53	100	7.54	2.20	0.001	0.001	0.000	-0.001	04/28/2025	12:17
12	Q1871-05		1	2.57	100	7.56	2.11	0.010	0.013	0.003	0.003	04/28/2025	12:18
13	Q1874-01		1	2.54	100	7.67	2.19	0.014	0.015	0.001	0.001	04/28/2025	12:19
14	Q1874-03		1	2.54	100	7.59	2.06	0.006	0.011	0.005	0.006	04/28/2025	12:20
15	Q1874-05		1	2.57	100	7.52	1.99	0.004	0.014	0.010	0.012	04/28/2025	12:21
16	CCV2	0.5	1	100	100	7.49	1.92	0.000	0.376	0.376	0.490	04/28/2025	12:22
17	CCB2		1	100	100	7.27	1.86	0.000	0.000	0.000	-0.001	04/28/2025	12:23
18	Q1875-01		1	2.55	100	7.50	2.10	0.010	0.010	0.000	-0.001	04/28/2025	12:24
19	Q1878-01		1	2.53	100	7.51	2.04	0.003	0.004	0.001	0.001	04/28/2025	12:25
20	Q1878-01DU		1	2.53	100	7.55	2.10	0.003	0.004	0.001	0.001	04/28/2025	12:26
21	Q1878-01MS	40	2	2.52	100	7.52	2.10	0.000	0.312	0.312	0.406	04/28/2025	12:27
22	Q1878-01MS	1284	40	2.52	100	7.58	2.06	0.000	0.608	0.608	0.793	04/28/2025	12:28
23	Q1878-01MS	40	2	2.53	100	7.60	2.17	0.000	0.371	0.371	0.483	04/28/2025	12:29
24	Q1889-01		1	2.52	100	7.69	2.21	0.015	0.016	0.001	0.001	04/28/2025	12:30
25	Q1889-02		1	2.57	100	7.42	2.27	0.009	0.012	0.003	0.003	04/28/2025	12:31
26	Q1889-03		1	2.54	100	7.53	2.01	0.005	0.008	0.003	0.003	04/28/2025	12:32
27	Q1891-01		1	2.55	100	7.57	2.10	0.000	0.000	0.000	-0.001	04/28/2025	12:33
28	CCV3	0.5	1	100	100	7.51	2.02	0.000	0.385	0.385	0.502	04/28/2025	12:34
29	CCB3		1	100	100	7.34	1.88	0.000	0.001	0.001	0.001	04/28/2025	12:35
30	Q1891-05		1	2.51	100	7.70	2.13	0.010	0.010	0.000	-0.001	04/28/2025	12:36
31	Q1895-01		1	2.56	100	7.66	2.09	0.001	0.002	0.001	0.001	04/28/2025	12:37
32	Q1895-03		1	2.52	100	7.60	2.22	0.002	0.003	0.001	0.001	04/28/2025	12:38
33	Q1895-05		1	2.57	100	7.60	2.26	0.000	0.000	0.000	-0.001	04/28/2025	12:39
34	CCV4	0.5	1	100	100	7.41	1.94	0.000	0.383	0.383	0.499	04/28/2025	12:40
35	CCB4		1	100	100	7.39	1.76	0.000	0.001	0.001	0.001	04/28/2025	12:41

LB135

Test results

Aquakem 7.2AQ1

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CHEMTECH CONSULTING GROUP INC
 284 Sheffield Street, Mountainside, NJ 07092

Reviewed by : RM

Instrument ID : Konelab

4/30/2025 14:23

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.918	0.0	0.186	
ICB1	0.013	0.0	0.015	
CCV1	0.938	0.0	0.189	
CCB1	0.010	0.0	0.015	
RL CHECK	0.095	0.0	0.031	
PB167793BL	0.010	0.0	0.015	
PB167793BS	0.951	0.0	0.192	
Q1889-01	0.092	0.0	0.030	
Q1889-01DUP	0.095	0.0	0.031	
Q1889-01MS	1.072	0.0	0.214	
Q1889-01MSD	1.103	0.0	0.220	
Q1889-02	0.036	0.0	0.020	
Q1889-03	0.030	0.0	0.019	
Q1903-01	0.028	0.0	0.018	
CCV2	1.016	0.0	0.204	
CCB2	0.014	0.0	0.016	
Q1903-02	0.055	0.0	0.023	
Q1903-03	0.038	0.0	0.020	
Q1907-01	0.023	0.0	0.017	
Q1872-07	24.543	0.0	4.622	
Q1872-07DLX20	1.138	0.0	0.227	
CCV3	0.972	0.0	0.196	
CCB3	0.017	0.0	0.016	

95% (50-150)
 04/30/2025
 RM

Init abs., Test limit hig

N 23
 Mean 1.444
 SD 5.0574
 CV% 350.30

Aquakem v. 7.2AQ1

Results from time period:

Wed Apr 30 13:01:48 2025

Wed Apr 30 14:19:56 2025

Sample Id	Sam/Ctr/cf	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-1	P	0.0165	mg/l	4/30/2025 13:01	
0.1PPM	A	Ammonia-1	P	0.1119	mg/l	4/30/2025 13:01	
0.2PPM	A	Ammonia-1	P	0.1896	mg/l	4/30/2025 13:01	
0.4PPM	A	Ammonia-1	P	0.3931	mg/l	4/30/2025 13:01	
1.0PPM	A	Ammonia-1	P	0.9753	mg/l	4/30/2025 13:01	
1.3PPM	A	Ammonia-1	P	1.3315	mg/l	4/30/2025 13:01	
2.0PPM	A	Ammonia-1	P	2.0154	mg/l	4/30/2025 13:01	
ICV1	S	Ammonia-1	P	0.918	mg/l	4/30/2025 13:41	
ICB1	S	Ammonia-1	P	0.0127	mg/l	4/30/2025 13:41	
CCV1	S	Ammonia-1	P	0.9381	mg/l	4/30/2025 13:41	
CCB1	S	Ammonia-1	P	0.0105	mg/l	4/30/2025 13:41	
RL CHECK	S	Ammonia-1	P	0.0947	mg/l	4/30/2025 13:41	
PB167793BL	S	Ammonia-1	P	0.0103	mg/l	4/30/2025 13:41	
PB167793BS	S	Ammonia-1	P	0.9509	mg/l	4/30/2025 13:51	
Q1889-01	S	Ammonia-1	P	0.0921	mg/l	4/30/2025 13:51	
Q1889-01DUP	S	Ammonia-1	P	0.0948	mg/l	4/30/2025 13:51	
Q1889-01MS	S	Ammonia-1	P	1.0719	mg/l	4/30/2025 13:51	
Q1889-01MSD	S	Ammonia-1	P	1.1028	mg/l	4/30/2025 13:51	
Q1889-02	S	Ammonia-1	P	0.0356	mg/l	4/30/2025 13:51	
Q1889-03	S	Ammonia-1	P	0.0301	mg/l	4/30/2025 13:51	
Q1903-01	S	Ammonia-1	P	0.028	mg/l	4/30/2025 14:02	
CCV2	S	Ammonia-1	P	1.0163	mg/l	4/30/2025 14:02	
CCB2	S	Ammonia-1	P	0.0139	mg/l	4/30/2025 14:02	
Q1903-02	S	Ammonia-1	P	0.055	mg/l	4/30/2025 14:02	
Q1903-03	S	Ammonia-1	P	0.0376	mg/l	4/30/2025 14:02	
Q1907-01	S	Ammonia-1	P	0.0229	mg/l	4/30/2025 14:02	
Q1872-07	S	Ammonia-1	P	24.5428	mg/l	4/30/2025 14:13	
Q1872-07DLX20	S	Ammonia-1	P	1.1381	mg/l	4/30/2025 14:13	
CCV3	S	Ammonia-1	P	0.9717	mg/l	4/30/2025 14:19	
CCB3	S	Ammonia-1	P	0.0166	mg/l	4/30/2025 14:19	

Calibration results

Aquakem 7.2AQ1

Page: 1

CHEMTECH CONSULTING GROUP INC
284 Sheffield Street, Mountainside, NJ 07092

Reviewed by: RM Instrument ID: Konelab

4/30/2025 13:04

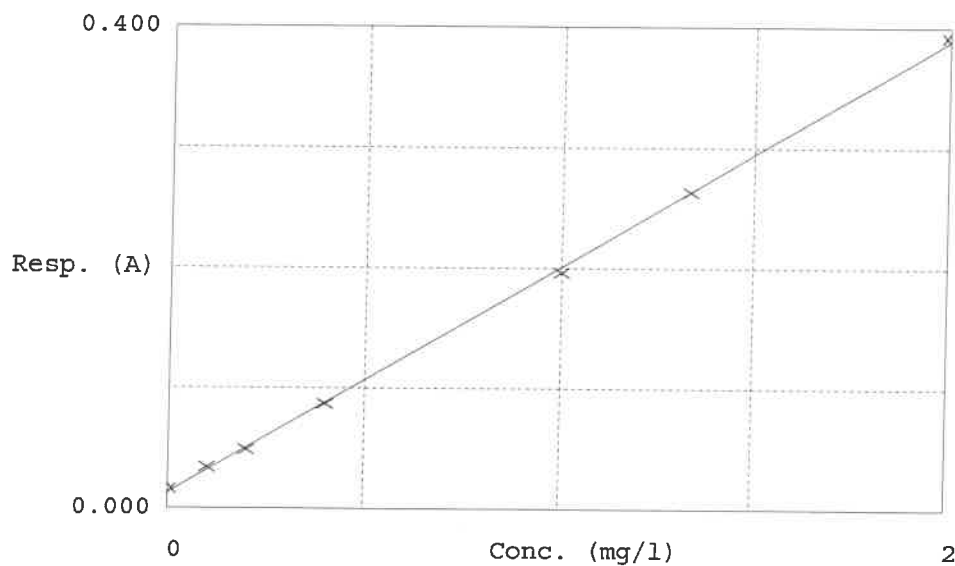
Test Ammonia-N

Accepted 4/30/2025 13:04

Factor 5.325
Bias 0.013

Coeff. of det. 0.999579

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.016	0.0165	0.0000	-
2	NH3-2PPM	0.034	0.1119	0.1000	11.9
3	NH3-2PPM	0.049	0.1896	0.2000	-5.2
4	NH3-2PPM	0.087	0.3931	0.4000	-1.7
5	NH3-2PPM	0.196	0.9753	1.0000	-2.5
6	NH3-2PPM	0.263	1.3315	1.3333	2.4
7	NH3-2PPM	0.392	2.0154	2.0000	0.8

04/30/2025
RM

SOP ID : M3060A,7196A-Hex.Chromium-26

SDG No : N/A

Matrix : SOIL

Pipette ID : WC

Balance ID : WC SC-7

Hood ID : HOOD#3

Block ID : WC S-1, WC S-2

Weigh By : RM

Start Digest Date: 04/28/2025 Time : 08:50 Temp : 90 °C

End Digest Date: 04/28/2025 Time : 09:50 Temp : 95 °C

ij batch 04/28/2025 10:10 90.2 } RY
04/28/2025 11:10 95.2 }

Digestion tube ID : M6054

Block Thermometer ID : WC-Block#1

Filter paper ID : 400213

Prep Technician Signature: RM

pH Meter ID : WC pH meter-1

Supervisor Signature: 12

Standardized Name	MLS USED	STD REF. # FROM LOG
PRE-DIGESTION SPIKE	2.0ML	WP111315
INSOLUBLE SPIKE	0.02GM	W2202
POST-DIGESTION SPIKE	2.0ML	WP111315
LCSS	1.0ML	WP111316
PBS003	50.ML	W3112

Chemical Used	ML/SAMPLE USED	Lot Number
MAGNESIUM CHLORIDE	0.4GM	W3152
PHOSPHATE BUFFER	0.5ML	WP110498
HEX. DIGESTION SOLN.	50.0ML	WP112686
5M HNO3	5-7ML	WP112830
5N H2SO4	1-3ML	WP112831
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

LAB SAMPLE ID	CLIENT SAMPLE ID	Vol(ml)	Comment
CAL1	CAL1	2.5ML	W3112
CAL2	CAL2	0.2ML	WP112858
CAL3	CAL3	0.5ML	WP112858
CAL4	CAL4	1ML	WP112858
CAL5	CAL5	0.2ML	WP111315
CAL6	CAL6	1ML	WP111315
CAL7	CAL7	2.0ML	WP111315
ICV	ICV	1ML	WP111316
ICB	ICB	2.5ML	W3112
CCV	CCV	1ML	WP111315
CCB	CCB	2.5ML	W3112

Extraction Conformance/Non-Conformance Comments:

N/A

04/28/2025 RM

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/Nitrite	Comment	Prep Pos
PB167730BL	PBS730	2.50	100	N/A	N/A	N/A	N/A	N/A	N/A
PB167730BS	LCS730	2.50	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1867-01	RBR200059	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1867-03	VNJ211	2.57	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1869-01	MH-F	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1871-01	MH-A	2.53	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1871-05	MH-B	2.57	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1874-01	VNJ-236	2.54	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1874-03	RT1491	2.54	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1874-05	HT3727	2.57	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1875-01	AUD-25-0053	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1878-01	TR-4-042425	2.53	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1878-01DUP	TR-4-042425DUP	2.53	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1878-01MSPre	TR-4-042425MSPRE	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1878-01MS2Ins	TR-4-042425MS2INS	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1878-01MS3Post	TR-4-042425MS3POST	2.53	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1889-01	COMP-1	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1889-02	COMP-2	2.57	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1889-03	COMP-3	2.54	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1891-01	MH-C	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1891-05	MH-D	2.51	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1895-01	COMP-1	2.56	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1895-03	COMP-2	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q1895-05	COMP-3	2.57	100	N/A	N/A	N/A	N/A	N/A	N/A

SOP ID : MSM4500-NH3 B,G-Ammonia-17

SDG No : N/A

Matrix : SOIL

Pipette ID : WC

Balance ID : WC SC-7

Hood ID : HOOD#2

Block ID : WC-DIST-BLOCK-1

Weigh By : RM

Start Digest Date: 04/30/2025 Time : 09:25 Temp : 150 °C

End Digest Date: 04/30/2025 Time : 10:25 Temp : 158 °C

11 batch
04/30/2025 10:50 150°C RM
04/30/2025 11:50 160°C

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Filter paper ID : N/A

Prep Technician Signature: RM

pH Meter ID : N/A

Supervisor Signature: 12

Standardized Name	MLS USED	STD REF. # FROM LOG
LCSS	1.0ML	WP112614
MS/MSD SPIKE SOL.	1.0ML	WP112613
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP112613
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP111325
NAOH 6N	0.5-2.0ML	WP111318
H2SO4 0.04N	5.0ML	WP112828
pH Paper 0-14	N/A	W3140
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:

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT
WP111604

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/30/2025 12:05	RM CWC	RM CWC
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167793BL	PBS793	1.00	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB167793BS	LCS793	1.00	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1872-07	HW0425-PT-NUT-SOIL	1.00	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1889-01DUP	COMP-1DUP	1.02	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1889-01MS	COMP-1MS	1.03	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1889-01MSD	COMP-1MSD	1.02	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1889-01	COMP-1	1.02	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1889-02	COMP-2	1.04	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1889-03	COMP-3	1.01	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1903-01	COMP-4	1.04	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1903-02	COMP-5	1.04	50	N/A	N/A	N/A	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1903-03	COMP-6	1.02	50	N/A	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1907-01	CO-8R-WC	1.02	50	N/A	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB135573

Review By	rubina	Review On	4/30/2025 10:41:24 AM
Supervise By	Iwona	Supervise On	4/30/2025 10:44:41 AM
SubDirectory	LB135573	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP112787,WP112788,WP112789,WP112790,WP112791,WP112792,WP112793		
ICV Standard	WP112794		
CCV Standard	WP112870		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112871		
Chk Standard	WP112798,WP112800		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	STD1	STD1	CAL1	04/22/25 10:37	All standards, samples, and	NF/IZ	OK
2	STD2	STD2	CAL2	04/22/25 10:59	QC are filtered through	NF/IZ	OK
3	STD3	STD3	CAL3	04/22/25 11:20	0.45um, filter lot W3160	NF/IZ	OK
4	STD4	STD4	CAL4	04/22/25 11:42		NF/IZ	OK
5	STD5	STD5	CAL5	04/22/25 12:03		NF/IZ	OK
6	STD6	STD6	CAL6	04/22/25 12:25		NF/IZ	OK
7	STD7	STD7	CAL7	04/22/25 12:46		NF/IZ	OK
8	ICV1	ICV1	ICV	04/22/25 13:07		NF/IZ	OK
9	ICB1	ICB1	ICB	04/22/25 13:58		NF/IZ	OK
10	CCV1	CCV1	CCV	04/28/25 11:44		NF/IZ	OK
11	CCB1	CCB1	CCB	04/28/25 12:06		NF/IZ	OK
12	LB135573BLS	LB135573BLS	MB	04/28/25 12:27		NF/IZ	OK
13	LB135573BSS	LB135573BSS	LCS	04/28/25 12:49		NF/IZ	OK
14	Q1889-01	COMP-1	SAM	04/28/25 16:03		NF/IZ	OK
15	Q1889-02	COMP-2	SAM	04/28/25 16:24		NF/IZ	OK
16	Q1889-03	COMP-3	SAM	04/28/25 16:46		NF/IZ	OK
17	Q1889-03MS	COMP-3MS	MS	04/28/25 17:07	5ml W3092	NF/IZ	OK
18	Q1889-03MSD	COMP-3MSD	MSD	04/28/25 17:29	5ml W3092	NF/IZ	OK

Instrument ID: IC-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB135573

Review By	rubina	Review On	4/30/2025 10:41:24 AM
Supervise By	Iwona	Supervise On	4/30/2025 10:44:41 AM
SubDirectory	LB135573	Test	Anions
STD. NAME	STD REF.#		
ICAL Standard	WP112787,WP112788,WP112789,WP112790,WP112791,WP112792,WP112793		
ICV Standard	WP112794		
CCV Standard	WP112870		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112871		
Chk Standard	WP112798,WP112800		

19	Q1903-01	COMP-4	SAM	04/28/25 18:33		NF/IZ	OK
20	Q1903-02	COMP-5	SAM	04/28/25 18:55		NF/IZ	OK
21	Q1903-03	COMP-6	SAM	04/28/25 19:16		NF/IZ	OK
22	CCV2	CCV2	CCV	04/28/25 19:38		NF/IZ	OK
23	CCB2	CCB2	CCB	04/28/25 19:59		NF/IZ	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB135578

Review By	rubina	Review On	4/28/2025 4:40:33 PM
Supervise By	Iwona	Supervise On	4/28/2025 4:40:43 PM
SubDirectory	LB135578	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	WP112869,WP112831,WP112830,WP111249		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	04/28/25 12:00		rubina	OK
2	CAL2	CAL2	CAL	04/28/25 12:01		rubina	OK
3	CAL3	CAL3	CAL	04/28/25 12:02		rubina	OK
4	CAL4	CAL4	CAL	04/28/25 12:03		rubina	OK
5	CAL5	CAL5	CAL	04/28/25 12:04		rubina	OK
6	CAL6	CAL6	CAL	04/28/25 12:05		rubina	OK
7	CAL7	CAL7	CAL	04/28/25 12:06		rubina	OK
8	ICV	ICV	ICV	04/28/25 12:07		rubina	OK
9	ICB	ICB	ICB	04/28/25 12:08		rubina	OK
10	CCV1	CCV1	CCV	04/28/25 12:09		rubina	OK
11	CCB1	CCB1	CCB	04/28/25 12:10		rubina	OK
12	RL Check	RL Check	SAM	04/28/25 12:11		rubina	OK
13	PB167730BL	PB167730BL	MB	04/28/25 12:12		rubina	OK
14	PB167730BS	PB167730BS	LCS	04/28/25 12:13		rubina	OK
15	Q1867-01	RBR200059	SAM	04/28/25 12:14		rubina	OK
16	Q1867-03	VNJ211	SAM	04/28/25 12:15		rubina	OK
17	Q1869-01	MH-F	SAM	04/28/25 12:16		rubina	OK
18	Q1871-01	MH-A	SAM	04/28/25 12:17		rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB135578

Review By	rubina	Review On	4/28/2025 4:40:33 PM
Supervise By	Iwona	Supervise On	4/28/2025 4:40:43 PM
SubDirectory	LB135578	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	WP112869,WP112831,WP112830,WP111249		

19	Q1871-05	MH-B	SAM	04/28/25 12:18		rubina	OK
20	Q1874-01	VNJ-236	SAM	04/28/25 12:19		rubina	OK
21	Q1874-03	RT1491	SAM	04/28/25 12:20		rubina	OK
22	Q1874-05	HT3727	SAM	04/28/25 12:21		rubina	OK
23	CCV2	CCV2	CCV	04/28/25 12:22		rubina	OK
24	CCB2	CCB2	CCB	04/28/25 12:23		rubina	OK
25	Q1875-01	AUD-25-0053	SAM	04/28/25 12:24		rubina	OK
26	Q1878-01	TR-4-042425	SAM	04/28/25 12:25		rubina	OK
27	Q1878-01DUP	TR-4-042425DUP	DUP	04/28/25 12:26		rubina	OK
28	Q1878-01MSPre	TR-4-042425MS	MS	04/28/25 12:27		rubina	OK
29	Q1878-01MS2Ins	TR-4-042425MS	MS	04/28/25 12:28		rubina	OK
30	Q1878-01MS3Post	TR-4-042425MS	MS	04/28/25 12:29		rubina	OK
31	Q1889-01	COMP-1	SAM	04/28/25 12:30		rubina	OK
32	Q1889-02	COMP-2	SAM	04/28/25 12:31		rubina	OK
33	Q1889-03	COMP-3	SAM	04/28/25 12:32		rubina	OK
34	Q1891-01	MH-C	SAM	04/28/25 12:33		rubina	OK
35	CCV3	CCV3	CCV	04/28/25 12:34		rubina	OK
36	CCB3	CCB3	CCB	04/28/25 12:35		rubina	OK
37	Q1891-05	MH-D	SAM	04/28/25 12:36		rubina	OK
38	Q1895-01	COMP-1	SAM	04/28/25 12:37		rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB135578

Review By	rubina	Review On	4/28/2025 4:40:33 PM
Supervise By	Iwona	Supervise On	4/28/2025 4:40:43 PM
SubDirectory	LB135578	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	WP112869,WP112831,WP112830,WP111249		

39	Q1895-03	COMP-2	SAM	04/28/25 12:38		rubina	OK
40	Q1895-05	COMP-3	SAM	04/28/25 12:39		rubina	OK
41	CCV4	CCV4	CCV	04/28/25 12:40		rubina	OK
42	CCB4	CCB4	CCB	04/28/25 12:41		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135612

Review By	rubina	Review On	5/1/2025 9:04:33 AM
Supervise By	Iwona	Supervise On	5/1/2025 12:51:47 PM
SubDirectory	LB135612	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP112894		
ICV Standard	WP112896		
CCV Standard	WP112895		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112614		
Chk Standard	WP112897,WP111745,WP111385,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	04/30/25 13:01		rubina	OK
2	0.1PPM	0.1PPM	CAL2	04/30/25 13:01		rubina	OK
3	0.2PPM	0.2PPM	CAL3	04/30/25 13:01		rubina	OK
4	0.4PPM	0.4PPM	CAL4	04/30/25 13:01		rubina	OK
5	1.0PPM	1.0PPM	CAL5	04/30/25 13:01		rubina	OK
6	1.3PPM	1.3PPM	CAL6	04/30/25 13:01		rubina	OK
7	2.0PPM	2.0PPM	CAL7	04/30/25 13:01		rubina	OK
8	ICV1	ICV1	ICV	04/30/25 13:41		rubina	OK
9	ICB1	ICB1	ICB	04/30/25 13:41		rubina	OK
10	CCV1	CCV1	CCV	04/30/25 13:41		rubina	OK
11	CCB1	CCB1	CCB	04/30/25 13:41		rubina	OK
12	RL	RL	SAM	04/30/25 13:41		rubina	OK
13	PB167793BL	PB167793BL	MB	04/30/25 13:41		rubina	OK
14	PB167793BS	PB167793BS	LCS	04/30/25 13:51		rubina	OK
15	Q1889-01	COMP-1	SAM	04/30/25 13:51		rubina	OK
16	Q1889-01DUP	COMP-1DUP	DUP	04/30/25 13:51		rubina	OK
17	Q1889-01MS	COMP-1MS	MS	04/30/25 13:51		rubina	OK
18	Q1889-01MSD	COMP-1MSD	MSD	04/30/25 13:51		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB135612

Review By	rubina	Review On	5/1/2025 9:04:33 AM
Supervise By	Iwona	Supervise On	5/1/2025 12:51:47 PM
SubDirectory	LB135612	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP112894		
ICV Standard	WP112896		
CCV Standard	WP112895		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112614		
Chk Standard	WP112897,WP111745,WP111385,WP111660		

19	Q1889-02	COMP-2	SAM	04/30/25 13:51		rubina	OK
20	Q1889-03	COMP-3	SAM	04/30/25 13:51		rubina	OK
21	Q1903-01	COMP-4	SAM	04/30/25 14:02		rubina	OK
22	CCV2	CCV2	CCV	04/30/25 14:02		rubina	OK
23	CCB2	CCB2	CCB	04/30/25 14:02		rubina	OK
24	Q1903-02	COMP-5	SAM	04/30/25 14:02		rubina	OK
25	Q1903-03	COMP-6	SAM	04/30/25 14:02		rubina	OK
26	Q1907-01	CO-8R-WC	SAM	04/30/25 14:02		rubina	OK
27	Q1872-07	HW0425-PT-NUT-SO	SAM	04/30/25 14:13	High	rubina	Dilution
28	Q1872-07DL	HW0425-PT-NUT-SO	SAM	04/30/25 14:13	Report 20X	rubina	Confirms
29	CCV3	CCV3	CCV	04/30/25 14:19		rubina	OK
30	CCB3	CCB3	CCB	04/30/25 14:19		rubina	OK

Instrument ID: GRAVIMETRIC

Daily Analysis Runlog For Sequence/QC Batch ID # LB135637

Review By	JSathvara	Review On	5/2/2025 4:16:52 AM
Supervise By	pradip	Supervise On	5/2/2025 4:24:07 AM
SubDirectory	LB135637	Test	Trivalent 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	N/A		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	Q1889-01	COMP-1	SAM	04/30/25 20:31		JSathvara	OK
2	Q1889-02	COMP-2	SAM	04/30/25 20:35		JSathvara	OK
3	Q1889-03	COMP-3	SAM	04/30/25 20:39		JSathvara	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1889

Test : Ammonia, Anions Group1, Hexavalent Chromium, Percent Solids, Trivalent Chromium

Prepbatch ID : PB167730, PB167793,

Sequence ID/Qc Batch ID: LB135573, LB135578, LB135612, LB135637,

Standard ID :

WP110498, WP111249, WP111315, WP111316, WP111317, WP111318, WP111325, WP111385, WP111660, WP111745, WP112611, WP112612, WP112613, WP112614, WP112686, WP112787, WP112788, WP112789, WP112790, WP112791, WP112792, WP112793, WP112794, WP112796, WP112798, WP112800, WP112828, WP112830, WP112831, WP112869, WP112870, WP112871, WP112894, WP112895, WP112896, WP112897,

Chemical ID :

E3921, M6041, M6121, M6126, M6158, W2202, W2511, W2647, W2651, W2652, W2666, W2700, W2708, W2858, W2979, W3112, W3113, W3132, W3140, W3152, W3163, W3174, W3180, W3195, W3196, W3197, W3205,



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
190	HEX CHROME PHOSPHATE BUFFER	WP110498	10/31/2024	04/29/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 10/31/2024
<u>FROM</u>	0.84500L of W3112 + 68.04000gram of W2708 + 87.09000gram of W2511 = Final Quantity: 1.000 L							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3354	Hexchrome Cleaning Solution	WP111249	12/30/2024	05/13/2025	Rubina Mughal	None	None	Iwona Zarych 01/02/2025
<u>FROM</u> 182.00000ml of M6121 + 727.00000ml of W3112 + 91.00000ml of M6126 = Final Quantity: 1000.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1993	HEXAVALENTCHROMIUM STOCK STD 1, 50PPM	WP111315	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 0.14140gram of W2651 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1994	HEXAVALENTCHROMIUM STOCK STD 2, 50PPM	WP111316	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/09/2025
<u>FROM</u>	0.14140gram of W2652 + 1000.00000ml of W3112 = Final Quantity: 1000.000 ml							



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1796	NaOH, 0.1N	WP111317	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCS-6)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 4.00000gram of W3113 + 996.00000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1471	NaOH Solution, 6N	WP111318	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCS-6)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 240.00000gram of W3113 + 760.00000ml of W3112 = Final Quantity: 1000.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1494	BORATE BUFFER	WP111325	01/09/2025	07/09/2025	Rubina Mughal	None	None	Iwona Zarych
								01/09/2025

FROM 100.00000L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP111317 = Final Quantity: 100.000 L

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych
								01/13/2025

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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 01/28/2025
<u>FROM</u> 5.50000gram of W3113 + 50.00000gram of W3132 + 950.00000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
289	Sodium Hypochlorite for Ammonia	WP111745	02/03/2025	07/31/2025	Rubina Mughal	None	None	Iwona Zarych 02/03/2025
<u>FROM</u>	50.00000ml of W3112 + 50.00000ml of W3174 = Final Quantity: 100.000 ml							



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
153	Ammonia Stock Std. (1000 ppm)	WP112611	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 04/07/2025
<u>FROM</u> 3.81900gram of W3196 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1895	Ammonia Stock Std, 1000PPM-SS	WP112612	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 04/07/2025
<u>FROM</u>	3.81900gram of W3195 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml							

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1322	Ammonia Intermediate Std, 50PPM	WP112613	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 04/07/2025
FROM 95.00000ml of W3112 + 5.00000ml of WP112611 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1639	Ammonia Intermediate Std-Second source, 50PPM	WP112614	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 04/07/2025
FROM 95.00000ml of W3112 + 5.00000ml of WP112612 = Final Quantity: 100.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
148	hexchrome digestion fluid	WP112686	04/14/2025	05/14/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 04/14/2025
<u>FROM</u> 120.00000gram of W3163 + 4.00000L of W3112 + 80.00000gram of W3113 = Final Quantity: 4000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2487	Anions 300/9056 calibration standard 1	WP112787	04/22/2025	04/23/2025	Iwona Zarych	None	None	Jignesh Parikh 04/22/2025
<u>FROM</u> 10.00000ml of W3112 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
24	Anions 300/9056 calibration standard 2	WP112788	04/22/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3	Jignesh Parikh
(WC) FROM 0.20000ml of W3180 + 9.80000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
25	Anions 300/9056 calibration standard 3	WP112789	04/22/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/22/2025
<u>FROM</u> 0.40000ml of W3180 + 9.60000ml of W3112 = Final Quantity: 10.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
26	Anions 300/9056 calibration standard 4	WP112790	04/22/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/22/2025
FROM 0.50000ml of W3180 + 9.50000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP112791	04/22/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/22/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3679	Anions 300/9056 calibration standard 6	WP112792	04/22/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/22/2025
FROM 2.00000ml of W3180 + 8.00000ml of W3112 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3681	Anions 300/9056 calibration standard 7	WP112793	04/22/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/22/2025
FROM 2.50000ml of W3180 + 7.50000ml of W3112 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
83	TCLP Fluid#1	WP112794	04/22/2025	10/22/2025	Jignesh Parikh	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 04/22/2025
FROM 114.00000ml of W3205 + 19834.56000ml of W3112 + 45.00000ml of W3112 + 5.00000ml of W3197 + 51.44000gram of W3113 = Final Quantity: 50.000 ml								

[illegible]



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4035	IC ELUENT CONCENTRATE FOR IC-1	WP112796	04/22/2025	10/22/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh 04/22/2025
<u>FROM</u> 2.10000gram of W2647 + 84.75000gram of W3163 + 913.15000ml of W3112 = Final Quantity: 1000.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4036	IC ELUENT FOR IC-1	WP112798	04/22/2025	05/22/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 04/22/2025
<u>FROM</u> 1980.00000ml of W3112 + 20.00000ml of WP112796 = Final Quantity: 2000.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
4037	IC H2SO4 FOR IC-1	WP112800	04/22/2025	05/22/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 04/22/2025

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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1597	0.04 N H2SO4	WP112828	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/25/2025

FROM 1.00000ml of M6041 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1836	HNO3 Hex-Chrome, 5M	WP112830	04/25/2025	10/25/2025	Rubina Mughal	None	None	Iwona Zarych
								04/25/2025

FROM 320.00000ml of M6158 + 680.00000ml of W3112 = Final Quantity: 1000.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
126	5N sulfuric acid	WP112831	04/25/2025	10/25/2025	Rubina Mughal	None	None	Iwona Zarych
								04/25/2025

FROM 140.00000ml of M6041 + 860.00000ml of W3112 = Final Quantity: 1.000 L



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
114	hexavalent chromium color reagent	WP112869	04/28/2025	05/05/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych 04/28/2025
<u>FROM</u> 0.25000gram of W2979 + 50.00000ml of E3921 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3680	Anions 300/9056 calibration standard 5-CCV	WP112870	04/28/2025	04/29/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/28/2025
<u>FROM</u>	45.00000ml of W3112 + 5.00000ml of W3180 = Final Quantity: 50.000 ml							

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3233	Anions 300/9056 ICV-LCS std	WP112871	04/28/2025	04/29/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/28/2025
FROM 45.00000ml of W3112 + 5.00000ml of W3197 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
275	Ammonia Calibration Std. (2 ppm)	WP112894	04/30/2025	05/01/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 05/01/2025
FROM 48.00000ml of W3112 + 2.00000ml of WP112613 = Final Quantity: 50.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
285	Ammonia CCV Std. (1 ppm)	WP112895	04/30/2025	05/01/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<u>FROM</u>		(WC)						
49.00000ml of W3112 + 1.00000ml of WP112613 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
286	Ammonia ICV Std. (1 ppm)	WP112896	04/30/2025	05/01/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<u>FROM</u>		49.00000ml of W3112 + 1.00000ml of WP112614 = Final Quantity: 50.000 ml						



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
740	sodium nitroferricyanide for ammonia	WP112897	04/30/2025	05/30/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 05/01/2025
<u>FROM</u>	0.05000gram of W2666 + 99.95000ml of W3112 = Final Quantity: 100.000 ml							

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	6789	09/24/2025	03/14/2025 / Rajesh	03/13/2025 / Rajesh	E3921

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 #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	06/03/2025	12/03/2024 / Janvi	11/12/2024 / Janvi	M6126

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9598-34 / Nitric Acid, Instra-Analyzed (cs/4x2.5L)	24D1062002	03/25/2029	03/10/2025 / Eman	02/02/2025 / Sagar	M6158

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AA14125-36 / LEAD (II) CHROMATE, ACS, 500G	U19B018	01/23/2027	01/23/2017 / apatel	01/23/2017 / apatel	W2202

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3252-1 / POTAS PHOSPHATE, DIBASIC PWD, ACS, 500G	0000207436	04/29/2025	05/22/2019 / AMANDEEP	03/21/2019 / apatel	W2511

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3506-5 / SODIUM BICARBONATE, PWD, ACS, 2.5KG	0000240594	06/03/2026	02/24/2020 / AMANDEEP	01/20/2020 / apatel	W2647

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	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.	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.	J3568-1 / Sodium Borate, 500 gms	2019111354	04/23/2025	04/23/2020 / apatel	03/11/2020 / apatel	W2700

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3246-1 / POTAS PHOSPHATE, MONO, CRYST, ACS, 500G	99/2019-20	05/05/2025	05/05/2020 / apatel	05/05/2020 / apatel	W2708

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-Diphenylcarbazine	MKCR6636	12/09/2027	12/09/2022 / lwona	12/09/2022 / lwona	W2979

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19510-7 / Sodium Hydroxide Pellets 12 Kg	23B1556310	12/31/2025	07/08/2024 / lwona	07/08/2024 / lwona	W3113

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 / lwona	07/26/2024 / lwona	W3132

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140444 / TEST PAPERS,PH 0-14,.5 SENSI,100PK	10D0142	09/17/2029	09/17/2024 / lwona	09/17/2024 / lwona	W3140

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	01237-10KG / Megnasium Chloride Hexahydrate ACS 10KG	002126-2019-201	11/25/2029	11/25/2024 / lwona	11/25/2024 / lwona	W3152

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	24E3156178	09/30/2027	12/10/2024 / lwona	12/10/2024 / lwona	W3163

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	2501J28	07/31/2025	01/24/2025 / lwona	01/24/2025 / lwona	W3174

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Inorganic Ventures	300-CAL-A-500ML / 300.0 Calibration Standard, 500 ml	V2-MEB742616	02/19/2026	02/19/2025 / lwona	01/27/2025 / lwona	W3180

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	24L0356561	08/31/2027	03/19/2025 / lwona	03/19/2025 / lwona	W3195

CHEMICAL RECEIPT LOG BOOK

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	MKCV1009	09/30/2026	03/19/2025 / lwona	03/19/2025 / lwona	W3196

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	040525	04/05/2027	04/08/2025 / lwona	04/08/2025 / lwona	W3197

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC01050-3 / ACETIC ACID, GLACIAL, ACS, 2.5L	540404	04/30/2026	04/22/2025 / jignesh	04/17/2025 / jignesh	W3205

Certificate of analysis

Product No. 14125
Product: Lead(II) chromate, ACS, 98%
Lot No.: U19B018

Test	Limits	Results
Assay	98.0 % min	99.3 %
Soluble matter	0.15 % max	< 0.02 %
Carbon compounds	0.01 % max	< 0.01 %

Traceable to NIST? Yes

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ThermoFisher
S C I E N T I F I C

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 %

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

(sodium hydrogen carbonate)



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

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

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

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

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

James Ethier
Jamie Ethier
Vice President Global Quality

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

Potassium Phosphate, Dibasic, Powder
BAKER ANALYZED® A.C.S. Reagent

(dipotassium hydrogen phosphate)



Material No.: 3252-01
Batch No.: 0000207436
Manufactured Date: 2018/05/01
Retest Date: 2025/04/29
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (K ₂ HPO ₄) (by acidimetry)	>= 98.0 %	99.2
Insoluble Matter	<= 0.01 %	< 0.01
Loss on Drying at 105°C	<= 1.0 %	< 1.0
pH of 5% Solution at 25°C	8.5 – 9.6	9.1
Chloride (Cl)	<= 0.003 %	< 0.003
Fluoride (F)	<= 0.001 %	< 0.001
Nitrogen Compounds (as N)	<= 0.001 %	< 0.001
Sulfate (SO ₄)	<= 0.005 %	< 0.005
Trace Impurities – Iron (Fe)	<= 0.001 %	< 0.001
Sodium (Na)	<= 0.05 %	< 0.05
Trace Impurities – Arsenic (As)	<= 1.000 ppm	< 1.000
Trace Impurities – ACS – Heavy Metals (as Pb)	<= 5 ppm	< 5
Trace Impurities – Lead (Pb)	<= 5.000 ppm	< 5.000
Color (APHA), For Information Only		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



Phillipsburg, NJ 9001:2015, FSC22000
Paris, KY 9001:2008
Mexico City, Mexico 9001:2008
Gliwice, Poland 9001:2015, 13485:2012
Selangor, Malaysia 9001:2008
Dehradun, India, 9001:2008, 14001:2004, 13485:2003
Mumbai, India, 9001:2015, 17025:2005
Panoli, India 9001:2015

James Ethier
Jamie Ethier
Vice President Global Quality

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

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	40.5°C min	40.5 °C
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

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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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Certificate Of Analysis



Date of Release: 11/14/2019

W2700 Recived by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**
ACS

Item No: **SX0355 All Sizes**

Lot / Batch No: **2019111354**

Country of Origin: **India**

Item	Specifications	Analysis
Assay (Na ₂ B ₄ O ₇ • 10H ₂ O)	99.5 - 105.0%	101.7%
Calcium (Ca)	0.005% max.	0.003%
Chloride (Cl)	0.001% max.	<0.001%
Color	White	Passes Test
Form	Crystals	Passes Test
Heavy Metals (as Pb)	0.001% max.	<0.001%
Insoluble Matter	0.005% max.	0.002%
Iron (Fe)	5 ppm max.	<5 ppm
pH of a 0.01 M solution at 25C	9.15 - 9.20	9.17
Phosphate (PO ₄)	0.001% max.	<0.001%
Sulfate (SO ₄)	0.005% max.	<0.005%

Joe Schoellkopf

Quality Control Manager

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

EMD Millipore is a division of Merck KGaA, Darmstadt, Germany

EMD Millipore Corporation

400 Summit Drive
Burlington, MA 01803
U.S.A.

Form number: 00005624CA, Rev. 2.0



Certificate of Analysis

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

Jerusa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

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

*Based on suggested storage condition.

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

avantor™



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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

 **avantorsm**

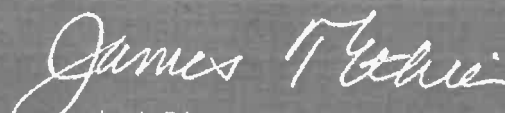


Material No.: 9673-33
Batch No.: 23D2462010

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality

Hydrochloric Acid, 36.5-38.0%
BAKER INSTRA-ANALYZED® Reagent
For Trace Metal Analysis

avantor™



R → 16/13/24
Met dig

M 6121

Material No.: 9530-33
Batch No.: 0000275677
Manufactured Date: 2020/12/16
Retest Date: 2025/12/15
Revision No: 1

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl ₂)	<= 0.5 ppm	< 0.5
Phosphate (PO ₄)	<= 0.05 ppm	< 0.03
Sulfate (SO ₄)	<= 0.5 ppm	< 0.3
Sulfite (SO ₃)	<= 0.8 ppm	0.3
Ammonium (NH ₄)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

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

Material No.: 9530-33
Batch No.: 0000275677

Test	Specification	Result
Trace Impurities – Germanium (Ge)	<= 3.0 ppb	< 2.0
Trace Impurities – Gold (Au)	<= 4.0 ppb	< 0.2
Heavy Metals (as Pb)	<= 100 ppb	< 50
Trace Impurities – Iron (Fe)	<= 15.0 ppb	< 1
Trace Impurities – Lead (Pb)	<= 1.0 ppb	< 0.5
Trace Impurities – Lithium (Li)	<= 1.0 ppb	0.2
Trace Impurities – Magnesium (Mg)	<= 10.0 ppb	0.4
Trace Impurities – Manganese (Mn)	<= 1.0 ppb	< 0.4
Trace Impurities – Mercury (Hg)	<= 0.5 ppb	0.1
Trace Impurities – Molybdenum (Mo)	<= 10.0 ppb	< 5.0
Trace Impurities – Nickel (Ni)	<= 4.0 ppb	< 0.3
Trace Impurities – Niobium (Nb)	<= 1.0 ppb	< 0.2
Trace Impurities – Potassium (K)	<= 9.0 ppb	< 2.0
Trace Impurities – Selenium (Se), For Information Only	ppb	1.0
Trace Impurities – Silicon (Si)	<= 100.0 ppb	< 10.0
Trace Impurities – Silver (Ag)	<= 1.0 ppb	< 0.3
Trace Impurities – Sodium (Na)	<= 100.0 ppb	< 5.0
Trace Impurities – Strontium (Sr)	<= 1.0 ppb	< 0.2
Trace Impurities – Tantalum (Ta)	<= 1.0 ppb	< 0.9
Trace Impurities – Thallium (Tl)	<= 5.0 ppb	< 2.0
Trace Impurities – Tin (Sn)	<= 5.0 ppb	< 0.8
Trace Impurities – Titanium (Ti)	<= 1.0 ppb	0.2
Trace Impurities – Vanadium (V)	<= 1.0 ppb	< 0.2
Trace Impurities – Zinc (Zn)	<= 5.0 ppb	0.3
Trace Impurities – Zirconium (Zr)	<= 1.0 ppb	< 0.1

For Laboratory, Research or Manufacturing Use

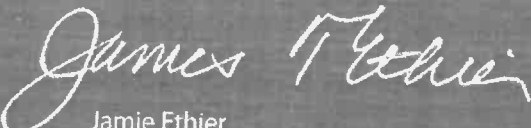
Product Information (not specifications):

Appearance (clear, fuming liquid)

Meets ACS Specifications

Country of Origin: US

Packaging Site: Phillipsburg 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

Nitric Acid 69%
CMOS



R → 11/12/24

M6126

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

 **avantor**TM



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
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For Microelectronic Use

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



Jamie Croak
Director Quality Operations, Bioscience Production

Nitric Acid 69%
CMOS

avantor™



R- 0210212025

m - 6158

Material No.: 9606-03
Batch No.: 24D1062002
Manufactured Date: 2024-03-26
Retest Date: 2029-03-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay (HNO ₃)	69.0 – 70.0 %	69.7 %
Appearance	Passes Test	Passes Test
Color (APHA)	≤ 10	5
Residue after Ignition	≤ 2 ppm	1 ppm
Chloride (Cl)	≤ 0.08 ppm	< 0.03 ppm
Phosphate (PO ₄)	≤ 0.10 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.2 ppm	< 0.2 ppm
Trace Impurities – Aluminum (Al)	≤ 40.0 ppb	< 1.0 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Barium (Ba)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Beryllium (Be)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Bismuth (Bi)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 50 ppb	< 1 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	2.3 ppb
Trace Impurities – Chromium (Cr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Cobalt (Co)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Copper (Cu)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Gallium (Ga)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Germanium (Ge)	≤ 20 ppb	< 10 ppb
Trace Impurities – Gold (Au)	≤ 20 ppb	< 5 ppb
Heavy Metals (as Pb)	≤ 100 ppb	100 ppb
Trace Impurities – Iron (Fe)	≤ 40.0 ppb	< 1.0 ppb
Trace Impurities – Lead (Pb)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Lithium (Li)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Magnesium (Mg)	≤ 20 ppb	< 1 ppb
Trace Impurities – Manganese (Mn)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Nickel (Ni)	≤ 20.0 ppb	< 5.0 ppb

>>> Continued on page 2 >>>

Nitric Acid 69%
CMOS

 **avantorsTM**



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
Trace Impurities – Niobium (Nb)	≤ 50.0 ppb	< 1.0 ppb
Trace Impurities – Potassium (K)	≤ 50 ppb	16 ppb
Trace Impurities – Silicon (Si)	≤ 50 ppb	< 10 ppb
Trace Impurities – Silver (Ag)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Sodium (Na)	≤ 150.0 ppb	< 5.0 ppb
Trace Impurities – Strontium (Sr)	≤ 30.0 ppb	< 1.0 ppb
Trace Impurities – Tantalum (Ta)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Thallium (Tl)	≤ 10.0 ppb	< 5.0 ppb
Trace Impurities – Tin (Sn)	≤ 20.0 ppb	< 10.0 ppb
Trace Impurities – Titanium (Ti)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Vanadium (V)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Zinc (Zn)	≤ 20.0 ppb	< 1.0 ppb
Trace Impurities – Zirconium (Zr)	≤ 10.0 ppb	< 1.0 ppb
Particle Count – 0.5 µm and greater	≤ 60 par/ml	10 par/ml
Particle Count – 1.0 µm and greater	≤ 10 par/ml	3 par/ml

>>> Continued on page 3 >>>

Nitric Acid 69%
CMOS

 **avantor™**



Material No.: 9606-03
Batch No.: 24D1062002

Test	Specification	Result
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For Microelectronic Use

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



Jamie Croak
Director Quality Operations, Bioscience Production



CHAMPA PURIE-CHEM INDUSTRIES

ISO 9001 : 2015 CERTIFIED COMPANY

Importers Exporters Manufacturers & Marketing of Fine Chemicals & Pharmaceuticals

262-263, G.I.D.C. Estate,

Makarpura,

Vadodara - 390 010.

Gujarat - INDIA.

Phone : (F) +91-265-2633314 / 2643723

Fax : (F) +91-265-2638036

E-mail : info@cpcindia.com

Web : www.cpcindia.com

W2708 Received on 05/05/20 by AP

CERTIFICATE OF ANALYSIS

PRODUCT	: POTASSIUM PHOSPHATE MONOBASIC Anhy. - ACS	
CERTIFICATE NO	: 99/2019- 20	DATE 26-08-2019
Date of receipt of sample	: 22.08.2019	Quantity : 1000 KGS
Batch No. /Lot No	: 99/2019- 20	
Mfg. Date	: Aug-2019	
1. Characteristic	: A White powder	
2. Identification	: Positive	
	RESULT OBTAINED	LIMITS
3. Clarity and colour of solution	: 10% solution is clear and colourless	
4. Assay (on dry basis)	: 99.27%	Min.99.00%
5. PH (5% solution)	: 4.4	4.1-4.5
6. Loss on Drying	: 0.1%	Max 0.2%
7. Heavy Metals	: 0.0003%	Max.0.001%
8. Iron	: 0.001%	Max 0.002%
9. Sulphate	: 0.001%	Max. 0.003%
10. Chloride	: 0.0005%	Max.0.001%
11. Insoluble Matter	: 0.003%	Max. 0.01%
12. Sodium	: 0.004%	Max. 0.005%
The sample does comply with specification as per Above.		
Analysed by	<u>J.A. PATHAK</u>	Quality Control Department

W 2979

Rec: 12/09/22

exp. 12/09/27

Product Name:

1,5-Diphenylcarbazide - ACS reagent

Product Number:

259225

Batch Number:

MKCR6636

Brand:

SIAL

CAS Number:

140-22-7

MDL Number:

MFCD00003013

Formula:

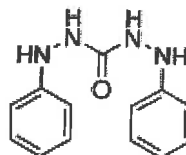
C₁₃H₁₄N₄O

Formula Weight:

242.28 g/mol

Quality Release Date:

02 JUN 2022



Certificate of Analysis

Test	Specification	Result
Appearance (Color)	Conforms to Requirements	Pink
Off-White to Pink, Light Purple or Tan		
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)	≤ 0.05 %	0.01 %
15 minutes, 800 Degrees Celsius		
Solubility	Pass	Pass
Sensitivity Test	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms



Larry Coers, Director
Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.





Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.

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) ₃ N]		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.

Chem-Impex International, Inc.

Tel: (630) 766-2112**E-mail:** sales@chemimpex.com**Shipping and Correspondence:**

935 Dillon Drive

Wood Dale, IL 60191

Fax: (630) 766-2218**Web site:** www.chemimpex.com**Manufacturing site:**

825 Dillon Drive

Wood Dale, IL 60191

Certificate of Analysis

Catalogue Number	01237
Lot Number	002126-2019-201
Product	Magnesium chloride hexahydrate

Magnesium chloride•6H₂O

CAS Number	7791-18-6
Molecular Formula	MgCl ₂ •6H ₂ O
Molecular Weight	203.3

Appearance	White crystals
Solubility	167 g in 100 mL water
Melting Point	~ 115 °C
Heavy Metals	4.393 ppm
Anion	Nitrate (NO ₃) : < 0.001% Phosphate (PO ₄) : < 5 ppm Sulfate (SO ₄) : < 0.002%
Cation	Ammonium (NH ₄) : < 0.002% Barium (Ba) : 0.005% Calcium (Ca) : 0.01% Iron (Fe) : 4.5 ppm Manganese (Mn) : 0.624 ppm Potassium (K) : 0.004% Sodium (Na) : 0.000003% Strontium (Sr) : 0.005%
Insoluble material	0.0021%
Assay by titration	100.83%
Grade	ACS reagent
Storage	Store at RT

Certificate of Analysis

Catalog Number: 01237

Lot Number: 002126-2019-201

Remarks

See material safety data sheet for additional information

For laboratory use only

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

A handwritten signature in black ink, appearing to read 'Bala Kumar', with a stylized flourish at the end.

Bala Kumar
Quality Control Manager



W3163 Rec. on 12/10/24 by IZ

Certificate of Analysis



Material BDH9284-2.5KG
Material Description BDH SODIUM CARB ANHYD ACS 2.5KG
Grade U S P REAGENT (ACS GRADE)

Batch 24E3156178
Reassay Date 09/30/2027
CAS Number 497-19-8
Molecular Formula Na₂CO₃
Molecular Mass 105.99

Date of Manufacture 09/01/2023
Storage Room Temperature
Material is hygroscopic. Protect from Moisture.
Additional Product Description:

Characteristics	Specifications	Measured Values
Appearance	Fine white granular powder	Fine white granular powder
Calcium	<= 0.03 %	0.003 %
Chloride	<= 0.001 %	0.0003 %
Heavy Metals (as Pb)	<= 0.0005 %	0.0001 %
Insolubles	<= 0.01 %	0.001 %
Iron	<= 0.0005 %	0.0001 %
Loss on Heating	<= 1.0 %	0.03 %
Magnesium	<= 0.005 %	0.001 %
Phosphate	<= 0.001 %	0.001 %
Potassium	<= 0.005 %	0.003 %
Purity	>= 99.5 %	100.0 %
Silica	<= 0.005 %	0.001 %
Sulfur Compounds	<= 0.003 %	0.002 %
Extra Description:	Meets Reagent Specifications for testing USP/NF monographs	

Internal ID #: 710

Signature	Additional Information
We certify that this batch conforms to the specifications listed above. 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	Analysis may have been rounded to significant digits in specification limits Product meets analytical specifications of the grades listed.

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2501J28**Product Number:** 7495.5**Manufacture Date:** JAN 17, 2025**Expiration Date:** JUL 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	5.17 % (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 (01/17/2025)
Operations Manager

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



Refine your results. Redefine your industry.

Certificate of Analysis

300 Technology Drive
Christiansburg, VA 24073 USA
inorganicventures.com

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

1.0 ACCREDITATION / REGISTRATION

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



2.0 PRODUCT DESCRIPTION

Product Code: Multi Analyte Ion Chromatography Solution
Catalog Number: 300-CAL-A
Lot Number: V2-MEB742616
Matrix: H₂O
Value / Analyte(s):
150 µg/mL ea:
Sulfate,
100 µg/mL ea:
Bromide,
50 µg/mL ea:
o-Phosphate as P,
30 µg/mL ea:
Chloride, Nitrite as N,
25 µg/mL ea:
Nitrate as N,
20 µg/mL ea:
Fluoride

3.0 CERTIFIED VALUES AND UNCERTAINTIES

ANALYTE	CERTIFIED VALUE	ANALYTE	CERTIFIED VALUE
Bromide, Br	100.0 ± 0.5 µg/mL	Chloride, Cl	30.01 ± 0.13 µg/mL
Fluoride, F-	20.00 ± 0.07 µg/mL	Nitrate as N, NNO ₃ -	25.00 ± 0.10 µg/mL
Nitrite as N, NNO ₂ -	30.00 ± 0.10 µg/mL	o-Phosphate as P, PPO ₄	50.00 ± 0.18 µg/mL
Sulfate, SO ₄	150.0 ± 0.8 µg/mL		

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

Assay Information:

ANALYTE	METHOD	NIST SRM#	SRM LOT#
Br	IC Assay	3184	151130
Br	Fajans	999c	999c
Cl	IC Assay	3182	190830
Cl	Fajans	999c	999c
F-	IC Assay	3183	140203
NNO3-	IC Assay	3185	170309
NNO2-	IC Assay	Traceable to 40H	08228TH-H2
NNO2-	Calculated	40h	40h
PPO4	IC Assay	3186	170606
SO4	IC Assay	3181	080603

- The Calculated Value is a value calculated from the weight of a starting material that has been certified directly vs. a National Institute of Standards and Technology (NIST) SRM/RM. See Sec 4.2 for balance traceability.

The following equations are used in the calculation of the certified value and the uncertainty. Reported uncertainties represent expanded uncertainties expressed at approximately the 95% confidence level using a coverage factor of k = 2.

Characterization of CRM/RM by Two or More Methods

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

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

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

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

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

Characterization of CRM/RM by One Method

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

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

X_a = mean of Assay Method A with

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

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

k = coverage factor = 2

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

u_{bb} = bottle to bottle homogeneity standard uncertainty

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

u_{ts} = transport stability standard uncertainty

4.0 TRACEABILITY TO NIST

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

4.1 Thermometer Calibration

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

4.2 Balance Calibration

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

4.3 Glassware Calibration

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

5.0 CHROMATOGRAM

N/A

6.0 INTENDED USE

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

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

7.0 INSTRUCTIONS FOR THE CORRECT USE OF THIS REFERENCE MATERIAL

7.1 Storage and Handling Recommendations

- Store between approximately 4° - 30° C while in sealed TCT bag.
- While stored in the sealed TCT bag, transpiration of this CRM/RM is negligible. After opening the sealed TCT bag transpiration of the CRM/RM will occur, resulting in a gradual increase in the analyte concentration(s). It is the responsibility of the user to account for this effect. When the bottle is weighed both before and after being placed in storage, the mass difference observed will be a measure of transpiration mass loss.
- After opening the sealed TCT bag, keep cap tightly sealed when not in use and store between 4° - 24° C to minimize the effects of transpiration. Use at 20° ± 4° C to minimize volumetric dilution error when using the reported density. Do not pipette from the container. Do not return removed aliquots to container.

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

8.0 HAZARDOUS INFORMATION

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

9.0 HOMOGENEITY

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

10.0 QUALITY STANDARD DOCUMENTATION

10.1 ISO 9001 Quality Management System Registration

- QSR Certificate Number QSR-1034

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

- Chemical Testing - Accredited / A2LA Certificate Number 883.01

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

- Reference Material Producer - Accredited / A2LA Certificate Number 883.02

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

11.0 CERTIFICATION, LOT EXPIRATION AND PERIOD OF VALIDITY

11.1 Certification Issue Date

April 02, 2024

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

11.2 Lot Expiration Date

- **April 02, 2029**

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

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

11.3 Period of Validity

- Sealed TCT Bag Open Date: _____

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

12.0 NAMES AND SIGNATURES OF CERTIFYING OFFICERS

Certificate Prepared By:

Uyen Truong
Custom Processing Supervisor



Certificate Approved By:

Thomas Kozikowski
Stock VS Manager



Certifying Officer:

Paul Gaines
Chairman / Senior Technical Director





W3195 Received on 03/19/2025 by IZ

Certificate of Analysis



Material	BDH9208-500G
Material Description	BDH AMMONIUM CHLORIDE ACS 500G
Grade	U S P REAGENT (ACS GRADE)
Batch	24L0356561
Reassay Date	08/31/2027
CAS Number	12125-02-9
Molecular Formula	NH ₄ Cl
Molecular Mass	53.49
Date of Manufacture	08/01/2024
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	White granular powder	White granular powder
Calcium	<= 0.001 %	0.001 %
Heavy Metals (as Pb)	<= 0.0005 %	<0.0002 %
Insolubles	<= 0.005 %	0.001 %
Iron	<= 0.0002 %	<0.0002 %
Magnesium	<= 0.0005 %	0.0001 %
pH (5%, Water) @25C	4.5 - 5.5	4.8
Phosphate	<= 0.0002 %	<0.0002 %
Purity	>= 99.5 %	99.8 %
Residue on Ignition	<= 0.01 %	0.003 %
Sulfate	<= 0.002 %	<0.002 %
Extra Description:	Meets Reagent Specifications for testing USP/NF monographs	

Internal ID #: 710

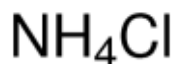
Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA	Analysis may have been rounded to significant digits in specification limits Product meets analytical specifications of the grades listed.

W3196 Received on 03/19/2025 by IZ

Certificate of Analysis

Product Name:

Ammonium chloride - ACS reagent, ≥99.5%



Product Number: 213330
Batch Number: MKCV1009
Brand: SIGALD
CAS Number: 12125-02-9
MDL Number: MFCD00011420
Formula: H4ClN
Formula Weight: 53.49 g/mol
Quality Release Date: 23 OCT 2023
Recommended Retest Date: SEP 2026

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals or Chunk(s)	Crystals
Titration by AgNO ₃	≥ 99.5 %	100.2 %
pH	4.5 - 5.5	4.9
@ 25 Deg c (5% Solution)		
Insoluble Matter	≤ 0.005 %	0.001 %
10%, H ₂ O		
Residue on ignition (Ash)	≤ 0.01 %	< 0.01 %
Calcium (Ca)	≤ 0.001 %	< 0.001 %
Magnesium (Mg)	≤ 5 ppm	1 ppm
Heavy Metals	≤ 5 ppm	< 1 ppm
by ICP		
Iron (Fe)	≤ 2 ppm	< 1 ppm
Phosphate (PO ₄)	≤ 2 ppm	< 2 ppm
Sulfate (SO ₄)	≤ 0.002 %	< 0.002 %
Meets ACS Requirements	Current ACS Specification	Conforms
Recommended Retest Period	-----	-----
3 Years		



Larry Coers, Director

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Certificate of Analysis

Product Number: 213330
Batch Number: MKCV1009

Quality Control
Milwaukee, WI US

Sigma-Aldrich warrants, that at the time of the quality release or subsequent retest date this product conformed to the information contained in this publication. The current Specification sheet may be available at Sigma-Aldrich.com. For further inquiries, please contact Technical Service. Purchaser must determine the suitability of the product for its particular use. See reverse side of invoice or packing slip for additional terms and conditions of sale.



Ident	Instrument IC-1				Analyst :	NF	Method: 300.0 / 9056A		Initial Analyst	
	Con F-	Con CL-	Con NO2	Con BR-	Con NO3	Con HPO4	Con SO4			
STD1	0	0	0	0	0	0	0	IC1-032125	3/21/2025 10:45	10 NF/IZ
STD2	0.421	0.619	0.631	2.075	0.523	1.052	3.247	IC1-032125	3/21/2025 11:07	10 NF/IZ
STD3	0.795	1.199	1.203	3.994	1.001	1.993	5.998	IC1-032125	3/21/2025 11:28	10 NF/IZ
STD4	0.977	1.475	1.468	4.904	1.226	2.407	7.216	IC1-032125	3/21/2025 11:50	10 NF/IZ
STD5	1.993	3.009	2.995	10.03	2.493	4.968	14.842	IC1-032125	3/21/2025 12:11	10 NF/IZ
STD6	4.034	5.988	5.986	19.975	5.011	10.256	30.502	IC1-032125	3/21/2025 12:32	10 NF/IZ
STD7	4.979	7.51	7.517	25.022	6.247	12.323	36.695	IC1-032125	3/21/2025 12:54	10 NF/IZ
ICV	2.031	3.038	3.08	10.364	2.568	5.199	15.269	IC1-032125	3/21/2025 13:37	10 NF/IZ
ICB	0	0.122	0.08	0	0	0	0	IC1-032125	3/21/2025 13:58	10 NF/IZ
CCV	2.034	3.119	3.093	10.383	2.559	5.188	15.179	IC1-032125	4/3/2025 9:38	10 NF/IZ
CCB	0	0	0	0	0	0	0	IC1-032125	4/3/2025 9:59	10 NF/IZ
LB135296BSW	2.028	3.121	3.103	10.387	2.561	5.226	15.185	IC1-032125	4/3/2025 10:43	10 NF/IZ
LB135296BLW	0	0	0	0	0	0	0	IC1-032125	4/3/2025 11:04	10 NF/IZ
Q1711-01	0.332	26.59	0	0.215	0	2.108	10.666	IC1-032125	4/3/2025 12:29	10 NF/IZ
Q1711-02MS	2.301	28.881	3.076	10.43	2.571	2.367	24.892	IC1-032125	4/3/2025 12:50	10 NF/IZ
Q1711-03MSD	2.172	28.857	2.983	10.101	2.479	1.573	24.485	IC1-032125	4/3/2025 13:12	10 NF/IZ
Q1711-04	0.275	20.1	0	0.221	0	0	4.529	IC1-032125	4/3/2025 13:55	10 NF/IZ
Q1711-08	0	0.047	0	0	0	0	0	IC1-032125	4/3/2025 14:16	10 NF/IZ
Q1716-01	0.433	427.687	0	0.63	0.296	0	54.697	IC1-032125	4/3/2025 14:38	10 NF/IZ
Q1711-01DLX10	0.054	2.364	0	0	0	0	1.413	IC1-032125	4/3/2025 14:59	10 NF/IZ
Q1711-04DLX5	0.071	3.687	0	0	0	0	1.238	IC1-032125	4/3/2025 15:21	10 NF/IZ
CCV	2.072	3.107	3.112	10.418	2.589	5.237	15.386	IC1-032125	4/3/2025 15:43	10 NF/IZ
CCB	0	0	0	0	0	0	0	IC1-032125	4/3/2025 17:16	10 NF/IZ

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

W3205
0942

04/22/25

CERTIFICATE OF ANALYSIS

Date: 4/4/2024

80

Lot No. 540404

Acetic Acid, Glacial (ACS) Reagent Grade

<u>TEST</u>	<u>MAXIMUM LIMITS</u>	<u>RESULT</u>
Appearance	Colorless and free from suspended matter or sediment	Pass
Assay	99.7 min.	99.99%
Color (APHA)	10	5
Dilution Test	Passes Test	Pass
Residue after evaporation	0.001%	0.0003%
Acetic Anhydride	0.01%	0.00%
Chloride (cl)	1 ppm	<1 ppm
Sulfate (SO ₄)	1 ppm	<1 ppm
Heavy Metals (as Pb)	0.5ppm	<0.02 ppm
Iron (Fe)	0.2ppm	<0.1 ppm
Sub. Red. Dichromate	Passes Test	Pass
Sub. Red. Permanganate	Passes Test	Pass
Titratable Base	0.0004meq/g	<0.0002 meq/g

DATE OF MFG: 4/2024
RETEST DATE: 4/2026



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/28/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 04/25/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:37
Out Date: 04/26/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135558

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1883-01	OU4-PCS-TC-27-042325	1	1.18	10.04	11.22	10.67	94.5	
Q1883-03	OU4-PCS-TC-28-042325	2	1.14	9.97	11.11	10.56	94.5	
Q1883-05	OU4-PCS-TC-29-042325	3	1.19	10.54	11.73	11.28	95.7	
Q1883-07	OU4-PCS-TC-30-042325	4	1.17	10.15	11.32	10.96	96.5	
Q1883-09	OU4-PCS-TC-31-042325	5	1.18	10.48	11.66	11.34	96.9	
Q1883-11	OU4-PCS-TC-32-042325	6	1.18	9.96	11.14	10.87	97.3	
Q1883-13	OU4-PCS-18-042325	7	1.15	10.25	11.4	10.86	94.7	
Q1883-15	OU4-PCS-19-042325	8	1.19	10.54	11.73	11.29	95.8	
Q1884-01	P001-SS037-01	9	1.17	10.30	11.47	10.87	94.2	
Q1884-02	P001-SS038-01	10	1.17	10.32	11.49	11.22	97.4	
Q1888-05	SVOC-GPC-BLANK	11	1.00	1.00	2.00	2.00	100.0	
Q1888-06	PEST-GPC-BLANK	12	1.00	1.00	2.00	2.00	100.0	
Q1888-07	PEST-GPC-BLANK-SPIKE	13	1.00	1.00	2.00	2.00	100.0	
Q1888-08	PCB-GPC-BLANK	14	1.00	1.00	2.00	2.00	100.0	
Q1888-09	PCB-GPC-BLANK-SPIKE	15	1.00	1.00	2.00	2.00	100.0	
Q1888-10	SVOC-GPC2-BLANK	16	1.00	1.00	2.00	2.00	100.0	
Q1888-11	PEST-GPC2-BLANK	17	1.00	1.00	2.00	2.00	100.0	
Q1888-12	PEST-GPC2-BLANK-SPIKE	18	1.00	1.00	2.00	2.00	100.0	
Q1888-13	PCB-GPC2-BLANK	19	1.00	1.00	2.00	2.00	100.0	
Q1888-14	PCB-GCP2-BLANK-SPIKE	20	1.00	1.00	2.00	2.00	100.0	
Q1889-01	COMP-1	21	1.19	10.07	11.26	9.5	82.5	
Q1889-02	COMP-2	22	1.16	10.50	11.66	9.61	80.5	
Q1889-03	COMP-3	23	1.11	10.73	11.84	9.77	80.7	
Q1891-01	MH-C	24	1.15	9.48	10.63	9.8	91.2	
Q1891-02	MH-C-EPH	25	1.16	9.82	10.98	10.15	91.5	
Q1891-03	MH-C-VOC	26	1.19	9.94	11.13	10.2	90.6	
Q1891-05	MH-D	27	1.15	10.17	11.32	9.64	83.5	
Q1891-06	MH-D-EPH	28	1.15	9.97	11.12	8.74	76.1	



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/28/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 04/25/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:37
Out Date: 04/26/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135558

Lab ID	Client SampleID	Dish #	Dish Wt(g) (A)	Sample Wt(g)	Dish + Sample Wt(g) (B)	Dish+Dry Sample Wt(g) (C)	% Solid	Comments
Q1891-07	MH-D-VOC	29	1.18	9.46	10.64	8.83	80.9	
Q1892-01	MH-G	30	1.13	9.61	10.74	9.35	85.5	
Q1892-02	MH-G-EPH	31	1.15	10.29	11.44	9.98	85.8	
Q1892-03	MH-G-VOC	32	1.18	10.45	11.63	9.82	82.7	
Q1892-05	MH-H	33	1.14	9.66	10.8	9.92	90.9	
Q1892-06	MH-H-EPH	34	1.12	10.66	11.78	10.68	89.7	
Q1892-07	MH-H-VOC	35	1.18	10.19	11.37	10.28	89.3	
Q1892-09	MH-U2	36	1.18	10.04	11.22	9.96	87.5	
Q1892-10	MH-U2-EPH	37	1.19	10.34	11.53	10.04	85.6	
Q1892-11	MH-U2-VOC	38	1.18	10.22	11.4	10.14	87.7	
Q1893-01	UGGP-1	39	1.00	1.00	2.00	2.00	100.0	TAR SAMPLE
Q1893-02	UGGP-2	40	1.00	1.00	2.00	2.00	100.0	TAR SAMPLE
Q1893-03	INTERIOR-1	41	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1893-04	INTERIOR-2	42	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1893-05	INTERIOR-3	43	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1893-06	INTERIOR-4	44	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1893-07	EXTERIOR-1	45	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1895-01	COMP-1	55	1.14	10.58	11.72	10.97	92.9	
Q1895-03	COMP-2	56	1.14	10.77	11.91	10.96	91.2	
Q1895-05	COMP-3	57	1.18	10.06	11.24	10.56	93.2	
Q1896-01	295-BERGEN-RO	58	1.14	11.31	12.45	10.91	86.4	
Q1896-02	295-BERGEN-RO	59	1.18	10.01	11.19	9.9	87.1	
Q1898-01	41525A	60	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1898-02	41525B	61	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1898-03	42525A	62	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1898-04	42525B	63	1.00	1.00	2.00	2.00	100.0	wipe sample
Q1900-01	WC-1	46	1.14	9.98	11.12	9.56	84.4	
Q1900-02	WC-1-EPH	47	1.14	10.35	11.49	10.19	87.4	



PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 4/28/2025

OVENTEMP IN Celsius(°C): 107
Time IN: 17:25
In Date: 04/25/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:37
Out Date: 04/26/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135558

Lab ID	Client SampleID	Dish #	Dish Wt (g) (A)	Sample Wt (g)	Dish + Sample Wt (g) (B)	Dish+Dry Sample Wt (g) (C)	% Solid	Comments
Q1900-03	WC-1-VOC	48	1.14	10.01	11.15	9.73	85.8	
Q1900-05	WC-2	49	1.19	8.82	10.01	8.76	85.8	
Q1900-06	WC-2-EPH	50	1.19	10.08	11.27	9.76	85.0	
Q1900-07	WC-2-VOC	51	1.17	10.79	11.96	10.33	84.9	
Q1900-09	WC-3	52	1.14	9.61	10.75	9.32	85.1	
Q1900-10	WC-3-EPH	53	1.12	10.38	11.5	9.11	77.0	
Q1900-11	WC-3-VOC	54	1.19	10.71	11.9	10.39	85.9	

$$\% \text{ Solid} = \frac{(C-A) * 100}{(B-A)}$$

WORKLIST(Hardcopy Internal Chain)

13558

WorkList Name : %1-042525

WorkList ID : 189135

Department : Wet-Chemistry

Date : 04-25-2025 08:09:39

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1883-01	OU4-PCS-TC-27-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1883-03	OU4-PCS-TC-28-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1883-05	OU4-PCS-TC-29-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1883-07	OU4-PCS-TC-30-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1883-09	OU4-PCS-TC-31-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1883-11	OU4-PCS-TC-32-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1883-13	OU4-PCS-18-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1883-15	OU4-PCS-19-042325	Solid	Percent Solids	Cool 4 deg C	NOBI03	L41	04/23/2025	Chemtech -SO
Q1884-01	P001-SS037-01	Solid	Percent Solids	Cool 4 deg C	ROYF02	L51	04/24/2025	Chemtech -SO
Q1884-02	P001-SS038-01	Solid	Percent Solids	Cool 4 deg C	ROYF02	L51	04/24/2025	Chemtech -SO
Q1888-05	SVOC-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-06	PEST-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-07	PEST-GPC-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-08	PCB-GPC-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-09	PCB-GPC-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-10	SVOC-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-11	PEST-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-12	PEST-GPC2-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-13	PCB-GPC2-BLANK	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1888-14	PCB-GPC2-BLANK-SPIKE	Solid	Percent Solids	Cool 4 deg C	CHEM02	L31	04/18/2025	Chemtech -SO
Q1889-01	COMP-1	Solid	Percent Solids	Cool 4 deg C	POWE02	L51	04/24/2025	Chemtech -SO

Date/Time 04/25/25 13:20

Raw Sample Received by: 50 (wec)

Raw Sample Relinquished by: 50 (wec)

Date/Time 04/25/25

Raw Sample Received by: 50 (wec)

Raw Sample Relinquished by: 50 (wec)

WORKLIST(Hardcopy Internal Chain)

JB 13555d

WorkList Name : %1-042525

WorkList ID : 189135

Department : Wet-Chemistry

Date : 04-25-2025 08:09:39

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1889-02	COMP-2	Solid	Percent Solids	Cool 4 deg C	POWE02	L51	04/24/2025	Chemtech -SO
Q1889-03	COMP-3	Solid	Percent Solids	Cool 4 deg C	POWE02	L51	04/24/2025	Chemtech -SO
Q1891-01	MH-C	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1891-02	MH-C-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1891-03	MH-C-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1891-05	MH-D	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1891-06	MH-D-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1891-07	MH-D-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1892-01	MH-G	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1892-02	MH-G-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1892-03	MH-G-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1892-05	MH-H	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1892-06	MH-H-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1892-07	MH-H-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/24/2025	Chemtech -SO
Q1892-09	MH-U2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/25/2025	Chemtech -SO
Q1892-10	MH-U2-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/25/2025	Chemtech -SO
Q1892-11	MH-U2-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L51	04/25/2025	Chemtech -SO
Q1893-01	UGGP-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1893-02	UGGP-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1893-03	INTERIOR-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1893-04	INTERIOR-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO

Date/Time 04/25/25 15420
 Raw Sample Received by: JB wbl U
 Raw Sample Relinquished by: JD csm

Date/Time 04/25/25 17130
 Raw Sample Received by: JD csm
 Raw Sample Relinquished by: JB wbl U

WORKLIST(Hardcopy Internal Chain)

135558

WorkList Name : %1-042525

WorkList ID : 189135

Department : Wet-Chemistry

Date : 04-25-2025 08:09:39

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1893-05	INTERIOR-3	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1893-06	INTERIOR-4	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1893-07	EXTERIOR-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1895-01	COMP-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1895-03	COMP-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1895-05	COMP-3	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1896-01	295-BERGEN-RO	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/25/2025	Chemtech -SO
Q1896-02	295-BERGEN-RO	Solid	Percent Solids	Cool 4 deg C	PSEG03	L31	04/25/2025	Chemtech -SO
Q1898-01	41525A	Solid	Percent Solids	Cool 4 deg C	PSEG03	L12	04/25/2025	Chemtech -SO
Q1898-02	41525B	Solid	Percent Solids	Cool 4 deg C	PSEG03	L12	04/25/2025	Chemtech -SO
Q1898-03	42525A	Solid	Percent Solids	Cool 4 deg C	PSEG03	L12	04/25/2025	Chemtech -SO
Q1898-04	42525B	Solid	Percent Solids	Cool 4 deg C	PSEG03	L12	04/25/2025	Chemtech -SO
Q1900-01	WC-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-02	WC-1-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-03	WC-1-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-05	WC-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-06	WC-2-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-07	WC-2-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-09	WC-3	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-10	WC-3-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO
Q1900-11	WC-3-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	L41	04/25/2025	Chemtech -SO

04/25/25 13:20

17:30

Raw Sample Received by: 30 wcc

Raw Sample Received by: JDCSM

Raw Sample Relinquished by: JDCSM

Raw Sample Relinquished by: 30 wcc



SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Kleinfelder
ADDRESS: 180 Sheree Blvd Suite 3800
CITY: Exton STATE: PA ZIP: 19341
ATTENTION: Mark Warchol
PHONE: 484-883-3892 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Mitchell School
PROJECT NO.: 4005164.001A LOCATION: Philadelphia, PA
PROJECT MANAGER: Mark Warchol
e-mail: mwarchol@kleinfelder.com
PHONE: 484-883-3892 FAX:

CLIENT BILLING INFORMATION

BILL TO: PO#:
ADDRESS: Same
CITY: STATE: ZIP:
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) 5 DAYS*
HARDCOPY (DATA PACKAGE): 5 DAYS*
EDD: 5 DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

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

1	2	3	4	5	6	7	8	9
PADEP Historic Parameters								

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		E	E								← Specify Preservatives	
1.	COMP-1	Soil	✓		4/24/25	10:15	4	✓									A-HCl	D-NaOH
2.	COMP-2		↓			10:45	↓	↓									B-HNO3	E-ICE
3.	COMP-3		↓			11:25	↓	↓									C-H2SO4	F-OTHER
4.	SB-1			✓		9:45	1		✓									
5.	SB-2					9:55	↓		↓									
6.	SB-3					10:00	↓		↓									
7.	SB-4					10:10	↓		↓									
8.	SB-5					10:18	↓		↓									
9.	SB-6					10:30	↓		↓									
10.	SB-7					10:35	↓		↓									

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

RELINQUISHED BY SAMPLER: 1. [Signature]	DATE/TIME: 4/24/25 13:00	RECEIVED BY: 1. [Signature]	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 4.7°C
RELINQUISHED BY SAMPLER: 2. FedEx	DATE/TIME: 4-25-25 1045	RECEIVED BY: 2. [Signature]	Comments: Hold grab samples SB-1 through SB-12
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY: 3.	Adjust Factor +1 ILQW #1

Page 1 of 2 CLIENT: ☐ Hand Delivered ☒ Other
Shipment Complete ☐ YES ☐ NO

CLIENT INFORMATION

CLIENT PROJECT INFORMATION

CLIENT BILLING INFORMATION

REPORT TO BE SENT TO:

COMPANY: Kleinfelder
ADDRESS: 180 Sheree Blvd Suite 3800
CITY: Exton STATE: PA ZIP: 19341
ATTENTION: Mark Warchol
PHONE: 484-883-3892 FAX:

PROJECT NAME: Mitchell School
PROJECT NO.: 4005164.001A LOCATION: Philadelphia, PA
PROJECT MANAGER: Mark Warchol
e-mail: m.warchol@kleinfelder.com
PHONE: 484-883-3892 FAX:

BILL TO: PO#: Same
ADDRESS: Same
CITY: STATE: ZIP:
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) 5 DAYS*
HARDCOPY (DATA PACKAGE): 5 DAYS*
EDD: 5 DAYS*

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

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

1	2	3	4	5	6	7	8	9

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS	
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER	
1.	SB-8	Soil		✓	4/24/25	10:40	1	✓										
2.	SB-9	↓		↓	↓	11:00	↓	↓										
3.	SB-10	↓		↓	↓	11:05	↓	↓										
4.	SB-11	↓		↓	↓	11:15	↓	↓										
5.	SB-12	↓		↓	↓	11:20	↓	↓										
6.																		
7.																		
8.																		
9.																		
10.																		

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

RELINQUISHED BY SAMPLER: 1. [Signature]	DATE/TIME: 4/24/25 13:00	RECEIVED BY: 1. [Signature]	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP 47°C
RELINQUISHED BY SAMPLER: 2. FedEx	DATE/TIME: 4-25-25 1045	RECEIVED BY: 2. [Signature]	Comments: Adjust Factor +1 Julian #1
RELINQUISHED BY SAMPLER: 3.	DATE/TIME:	RECEIVED BY: 3.	Page 2 of 2 CLIENT: ☐ Hand Delivered ☒ Other Fedex Shipment Complete ☐ YES ☐ NO

Laboratory Certification

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

LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q1889	POWE02	Order Date : 4/25/2025 11:06:00 AM	Project Mgr :
Client Name : Kleinfelder		Project Name : Mitchell School Lincoln High School	Report Type : Results+QC
Client Contact : Mark Warchol		Receive DateTime : 4/25/2025 10:45:00 AM	EDD Type : EXCEL NOCLEANUP
Invoice Name : Kleinfelder		Purchase Order :	Hard Copy Date :
Invoice Contact : Mark Warchol			Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q1889-01	COMP-1	Solid	04/24/2025	10:15					
					VOCMS Group1		8260D	5 Bus. Days	
Q1889-02	COMP-2	Solid	04/24/2025	10:45					
					VOCMS Group1		8260D	5 Bus. Days	
Q1889-03	COMP-3	Solid	04/24/2025	11:25					
					VOCMS Group1		8260D	5 Bus. Days	

Relinquished By :

Date / Time : 4/25/25 11:34

Received By :

Date / Time : 04/25/25 11:34

Storage Area : VOA Refridgerator Room