

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

LAB CHRONICLE

OrderID:	Q2198	OrderDate:	6/3/2025 2:31:00 PM
Client:	Portal Partners Tri-Venture	Project:	Amtrak Sawtooth Bridges 2025
Contact:	Joseph Krupansky	Location:	N22,VOA Ref. #2 Soil,VOA Ref. #3 Water

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q2198-01	B-202-SB02	SOIL			05/31/25 16:55			06/03/25
			Hexavalent Chromium	7196A		06/05/25	06/05/25 13:25	
			pH	9045D			06/04/25 11:55	
			Trivalent Chromium	6010D			06/05/25 20:37	
Q2198-02	B-202-SB02	SOIL			05/31/25 16:55			06/03/25
			Corrosivity	9045D			06/04/25 11:55	
			Ignitability	1030			06/04/25 10:07	
			Reactive Cyanide	9012B		06/05/25	06/05/25 13:44	
			Reactive Sulfide	9034		06/04/25	06/04/25 17:20	
Q2198-03	B-207-SB02	SOIL			06/01/25 20:00			06/03/25
			pH	9045D			06/04/25 12:00	
			Hexavalent Chromium	7196A		06/05/25	06/05/25 13:26	
			Trivalent Chromium	6010D			06/05/25 20:41	
Q2198-04	B-207-SB02	SOIL			06/01/25 20:00			06/03/25
			Corrosivity	9045D			06/04/25 12:00	

LAB CHRONICLE

Q2198-05	B-202-GW01	WATER	Ignitability	1030		06/04/25 10:15	05/31/25 20:00	06/03/25
			Reactive Cyanide	9012B	06/05/25	06/05/25 13:44		
			Reactive Sulfide	9034	06/04/25	06/04/25 17:22		
			pH	9040C		06/06/25 12:35		
			trivalent Chromium	6010D		06/04/25 21:07		
			Hexavalent Chromium	7196A		06/04/25 09:52		



SAMPLE DATA

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	05/31/25 16:55
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/03/25
Client Sample ID:	B-202-SB02	SDG No.:	Q2198
Lab Sample ID:	Q2198-01	Matrix:	SOIL
		% Solid:	71.9

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Hexavalent Chromium	0.095	U	1	0.095	0.55	mg/Kg	06/05/25 09:30	06/05/25 13:25	7196A
pH	6.61	H	1	0	0	pH		06/04/25 11:55	9045D
Trivalent Chromium	7.85		1	0.70	0.70	mg/Kg		06/05/25 20:37	6010D

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	05/31/25 16:55
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/03/25
Client Sample ID:	B-202-SB02	SDG No.:	Q2198
Lab Sample ID:	Q2198-02	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	6.61	H	1	0	0	pH		06/04/25 11:55	9045D
Ignitability	NO		1	0	0	oC		06/04/25 10:07	1030
Reactive Cyanide	0.0084	U	1	0.0084	0.050	mg/Kg	06/05/25 08:50	06/05/25 13:44	9012B
Reactive Sulfide	3.19	J	1	0.20	10.0	mg/Kg	06/04/25 15:00	06/04/25 17:20	9034

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	06/01/25 11:04
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/03/25
Client Sample ID:	B-207-SB02	SDG No.:	Q2198
Lab Sample ID:	Q2198-03	Matrix:	SOIL
		% Solid:	52.1

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units(Dry Weight)	Prep Date	Date Ana.	Ana Met.
Hexavalent Chromium	0.13	U	1	0.13	0.77	mg/Kg	06/05/25 09:30	06/05/25 13:26	7196A
pH	7.87	H	1	0	0	pH		06/04/25 12:00	9045D
Trivalent Chromium	27.8		1	0.96	0.96	mg/Kg		06/05/25 20:41	6010D

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	06/01/25 20:00
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/03/25
Client Sample ID:	B-207-SB02	SDG No.:	Q2198
Lab Sample ID:	Q2198-04	Matrix:	SOIL
		% Solid:	100

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Corrosivity	7.87	H	1	0	0	pH		06/04/25 12:00	9045D
Ignitability	NO		1	0	0	oC		06/04/25 10:15	1030
Reactive Cyanide	0.0083	U	1	0.0083	0.050	mg/Kg	06/05/25 08:50	06/05/25 13:44	9012B
Reactive Sulfide	4.77	J	1	0.20	10.0	mg/Kg	06/04/25 15:00	06/04/25 17:22	9034

Comments: pH result reported at temperature 22.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Portal Partners Tri-Venture	Date Collected:	05/31/25 11:04
Project:	Amtrak Sawtooth Bridges 2025	Date Received:	06/03/25
Client Sample ID:	B-202-GW01	SDG No.:	Q2198
Lab Sample ID:	Q2198-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Dissolved Hexavalent Chromium	0.0030	U	1	0.0030	0.010	mg/L		06/04/25 09:52	7196A
pH	6.42	H	1	0	0	pH		06/06/25 12:35	9040C
trivalent Chromium	0.060		1	0.010	0.010	mg/L		06/04/25 21:07	6010D

Comments: pH result reported at temperature 20.6 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits



QC RESULT SUMMARY



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

Initial and Continuing Calibration Verification

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136000

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Hexavalent Chromium	mg/L	0.508	0.5	102	90-110	06/04/2025
Sample ID: CCV1 Hexavalent Chromium	mg/L	0.504	0.5	101	90-110	06/04/2025
Sample ID: CCV2 Hexavalent Chromium	mg/L	0.503	0.5	101	90-110	06/04/2025

Initial and Continuing Calibration Verification

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136005

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: Corrosivity	ICV	pH	7.02	7	100	90-110	06/04/2025
Sample ID: Corrosivity	CCV1	pH	2.01	2.00	101	90-110	06/04/2025
Sample ID: Corrosivity	CCV2	pH	12.01	12.00	100	90-110	06/04/2025
Sample ID: Corrosivity	CCV3	pH	2.01	2.00	101	90-110	06/04/2025

Initial and Continuing Calibration Verification

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136006

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV						
pH		pH	7.02	7	100	90-110	06/04/2025
Sample ID:	CCV1						
pH		pH	2.01	2.00	101	90-110	06/04/2025
Sample ID:	CCV2						
pH		pH	12.02	12.00	100	90-110	06/04/2025

Initial and Continuing Calibration Verification

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136021

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Reactive Cyanide	mg/L	0.1	0.099	101	85-115	06/05/2025
Sample ID: CCV1 Reactive Cyanide	mg/L	0.25	0.25	100	90-110	06/05/2025
Sample ID: CCV2 Reactive Cyanide	mg/L	0.25	0.25	100	90-110	06/05/2025
Sample ID: CCV3 Reactive Cyanide	mg/L	0.25	0.25	100	90-110	06/05/2025
Sample ID: CCV4 Reactive Cyanide	mg/L	0.25	0.25	100	90-110	06/05/2025

Initial and Continuing Calibration Verification

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136024

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Hexavalent Chromium	mg/L	0.493	0.5	99	90-110	06/05/2025
Sample ID: CCV1 Hexavalent Chromium	mg/L	0.497	0.5	99	90-110	06/05/2025
Sample ID: CCV2 Hexavalent Chromium	mg/L	0.495	0.5	99	90-110	06/05/2025
Sample ID: CCV3 Hexavalent Chromium	mg/L	0.493	0.5	99	90-110	06/05/2025
Sample ID: CCV4 Hexavalent Chromium	mg/L	0.495	0.5	99	90-110	06/05/2025

Initial and Continuing Calibration Verification

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136042

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV						
pH		pH	7.01	7	100	90-110	06/06/2025
Sample ID:	CCV1						
pH		pH	2.01	2.00	101	90-110	06/06/2025
Sample ID:	CCV2						
pH		pH	12.02	12.00	100	90-110	06/06/2025

Initial and Continuing Calibration Blank Summary

Client: Portal Partners Tri-Venture
Project: Amtrak Sawtooth Bridges 2025

SDG No.: Q2198
RunNo.: LB136000

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	06/04/2025
Sample ID: CCB1 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	06/04/2025
Sample ID: CCB2 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	06/04/2025

Initial and Continuing Calibration Blank Summary

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136021

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	06/05/2025
Sample ID: CCB1 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	06/05/2025
Sample ID: CCB2 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	06/05/2025
Sample ID: CCB3 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	06/05/2025
Sample ID: CCB4 Reactive Cyanide	mg/L	< 0.0025	0.0025	U	0.00096	0.005	06/05/2025

Initial and Continuing Calibration Blank Summary

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

RunNo.: LB136024

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: CCB1 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	06/05/2025
Sample ID: CCB2 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	06/05/2025
Sample ID: CCB3 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	06/05/2025
Sample ID: CCB4 Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	06/05/2025
Sample ID: ICB Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.0029	0.01	06/05/2025

Preparation Blank Summary

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB136000BL							
Hexavalent Chromium	mg/L	< 0.0050	0.0050	U	0.003	0.01	06/04/2025
Sample ID: PB168265BL							
Hexavalent Chromium	mg/Kg	< 0.2000	0.2000	U	0.07	0.4	06/05/2025
Sample ID: PB168266BL							
Reactive Cyanide	mg/Kg	< 0.0250	0.0250	U	0.0084	0.05	06/05/2025
Sample ID: PB168267BL							
Reactive Sulfide	mg/Kg	< 5.0000	5.0000	U	0.201	10	06/04/2025

Matrix Spike Summary

Client:	Portal Partners Tri-Venture	SDG No.:	Q2198
Project:	Amtrak Sawtooth Bridges 2025	Sample ID:	Q2185-01
Client ID:	TP02-MHB-WCMS	Percent Solids for Spike Sample:	85.5

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	1460		0.081	U	1500	40	97		06/05/2025

Matrix Spike Summary

Client:	Portal Partners Tri-Venture	SDG No.:	Q2198
Project:	Amtrak Sawtooth Bridges 2025	Sample ID:	Q2185-01
Client ID:	TP02-MHB-WCMS	Percent Solids for Spike Sample:	85.5

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	45.5		0.081	U	46.8	2	97		06/05/2025

Matrix Spike Summary

Client:	Portal Partners Tri-Venture	SDG No.:	Q2198
Project:	Amtrak Sawtooth Bridges 2025	Sample ID:	Q2185-01
Client ID:	TP02-MHB-WCMS	Percent Solids for Spike Sample:	85.5

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	36.5		0.081	U	46.8	2	78		06/05/2025

Matrix Spike Summary

Client:	Portal Partners Tri-Venture	SDG No.:	Q2198
Project:	Amtrak Sawtooth Bridges 2025	Sample ID:	Q2198-05
Client ID:	B-202-GW01MS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Hexavalent Chromium	mg/L	90-111	0.92		0.0030	U	1.0	2	92		06/04/2025

Matrix Spike Summary

Client:	Portal Partners Tri-Venture	SDG No.:	Q2198
Project:	Amtrak Sawtooth Bridges 2025	Sample ID:	Q2198-05
Client ID:	B-202-GW01MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Hexavalent Chromium	mg/L	90-111	0.93		0.0030	U	1.0	2	93		06/04/2025

Duplicate Sample Summary

Client: Portal Partners Tri-Venture Project: Amtrak Sawtooth Bridges 2025 Client ID: 32525DUP	SDG No.: Q2198 Sample ID: Q2175-01 Percent Solids for Spike Sample: 100
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Ignitability	oC	+/-20	NO		NO		1	0		06/04/2025

Duplicate Sample Summary

Client: Portal Partners Tri-Venture	SDG No.: Q2198
Project: Amtrak Sawtooth Bridges 2025	Sample ID: Q2185-01
Client ID: TP02-MHB-WCDUP	Percent Solids for Spike Sample: 85.5

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Hexavalent Chromium	mg/Kg	+/-20	0.081	U	0.081	U	1	0		06/05/2025

Duplicate Sample Summary

Client: Portal Partners Tri-Venture	SDG No.: Q2198
Project: Amtrak Sawtooth Bridges 2025	Sample ID: Q2185-04
Client ID: TP02-MHB-WCDUP	Percent Solids for Spike Sample: 100

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/AD	Qual	Analysis Date
Reactive Cyanide	mg/Kg	+/-20	0.0083	U	0.0083	U	1	0		06/05/2025
Reactive Sulfide	mg/Kg	+/-20	3.16	J	3.16	J	1	0		06/04/2025

Duplicate Sample Summary

Client: Portal Partners Tri-Venture Project: Amtrak Sawtooth Bridges 2025 Client ID: B-202-SB02DUP	SDG No.: Q2198 Sample ID: Q2198-01 Percent Solids for Spike Sample: 100
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
pH	pH	+/-20	6.61		6.62		1	0.15		06/04/2025

Duplicate Sample Summary

Client:	Portal Partners Tri-Venture	SDG No.:	Q2198
Project:	Amtrak Sawtooth Bridges 2025	Sample ID:	Q2198-02
Client ID:	B-202-SB02DUP	Percent Solids for Spike Sample:	100

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Corrosivity	pH	+/-20	6.61		6.62		1	0.15		06/04/2025

Duplicate Sample Summary

Client: Portal Partners Tri-Venture	SDG No.: Q2198
Project: Amtrak Sawtooth Bridges 2025	Sample ID: Q2198-05
Client ID: B-202-GW01DUP	Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Hexavalent Chromium	mg/L	+/-20	0.0030	U	0.0030	U	1	0		06/04/2025
pH	pH	+/-20	6.42		6.43		1	0.16		06/06/2025

Duplicate Sample Summary

Client:	Portal Partners Tri-Venture	SDG No.:	Q2198
Project:	Amtrak Sawtooth Bridges 2025	Sample ID:	Q2198-05
Client ID:	B-202-GW01MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
Hexavalent Chromium	mg/L	+/-20	0.92		0.93		2	0.43		06/04/2025

Laboratory Control Sample Summary

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

Run No.: LB136000

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB136000BS							
Hexavalent Chromium	mg/L	0.5	0.51		102	1	90-111	06/04/2025

Laboratory Control Sample Summary

Client: Portal Partners Tri-Venture

SDG No.: Q2198

Project: Amtrak Sawtooth Bridges 2025

Run No.: LB136024

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB168265BS							
Hexavalent Chromium	mg/Kg	20	19.8		99	1	84-110	06/05/2025



RAW DATA

Analytical Summary Report

Analysis Method: 1030
Parameter: Ignitability
Run Number: LB135998

Reviewed By: Eman

Supervisor Review By: jignesh

Seq	LabID	ClientID	DF	matrix	Result Status	Burning Rate	Anal Date	Anal Time
1	Q2175-01	32525	1	Solid	NO	0.00	06/04/2025	08:45
2	Q2175-01DUP	32525DUP	1	Solid	NO	0.00	06/04/2025	08:52
3	Q2185-01	TP02-MHB-WC	1	Solid	NO	0.00	06/04/2025	09:00
4	Q2185-04	TP02-MHB-WC	1	Solid	NO	0.00	06/04/2025	09:07
5	Q2185-05	TP01-MHB-WC	1	Solid	NO	0.00	06/04/2025	09:15
6	Q2185-08	TP01-MHB-WC	1	Solid	NO	0.00	06/04/2025	09:22
7	Q2192-01	SB-1	1	Solid	NO	0.00	06/04/2025	09:30
8	Q2194-01	COMP-12	1	Solid	NO	0.00	06/04/2025	09:37
9	Q2194-02	COMP-12	1	Solid	NO	0.00	06/04/2025	09:45
10	Q2194-03	COMP-13	1	Solid	NO	0.00	06/04/2025	09:52
11	Q2194-04	COMP-13	1	Solid	NO	0.00	06/04/2025	10:00
12	Q2198-02	B-202-SB02	1	Solid	NO	0.00	06/04/2025	10:07
13	Q2198-04	B-207-SB01	1	Solid	NO	0.00	06/04/2025	10:15

$$\text{Burning Rate} = \frac{\text{Length (mm)}}{\text{Total Time (sec)}}$$

1B135998

WORKLIST(Hardcopy Internal Chain)

WorkList Name : IGN-060425

WorkList ID : 189911

Department : Wet-Chemistry

Date : 06-04-2025 08:28:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2175-01	32525	Solid	Ignitability	Cool 4 deg C	PSEG03	L41	05/30/2025	1030
Q2185-01	TP02-MHB-WC	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/02/2025	1030
Q2185-04	TP02-MHB-WC	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/02/2025	1030
Q2185-05	TP01-MHB-WC	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/02/2025	1030
Q2185-08	TP01-MHB-WC	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/02/2025	1030
Q2192-01	SB-1	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/02/2025	1030
Q2194-01	COMP-12	Solid	Ignitability	Cool 4 deg C	PSEG03	N31	06/03/2025	1030
Q2194-02	COMP-12	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/03/2025	1030
Q2194-03	COMP-13	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/03/2025	1030
Q2194-04	COMP-13	Solid	Ignitability	Cool 4 deg C	PSEG03	L31	06/03/2025	1030
Q2198-02	B-202-SB02	Solid	Ignitability	Cool 4 deg C	PORT06	N22	05/31/2025	1030
Q2198-04	B-207-SB01	Solid	Ignitability	Cool 4 deg C	PORT06	N22	06/01/2025	1030

Date/Time 06/04/25 08:35
Raw Sample Received by: EM (WC)
Raw Sample Relinquished by: 486009

Date/Time 06/04/25 10:30
Raw Sample Received by: 866009
Raw Sample Relinquished by: EM (WC)

Analysis Method: 7196A

ANALYST: rubina

Parameter: ~~Hexavalent Chromium~~

SUPERVISOR REVIEW BY: Iwona

Run Number: LB136000

pH Meter ID: WC pH Meter-1

Reagent/Standard	Lot/Log #
Calibration Std. hexchrome 0.1 ppm	WP113369
Calibration Std. hexchrome 0.05 ppm	WP113368
calibration std. hexchrome 0.01 ppm	WP113366
calibration std. hexchrome 0 ppm	WP113365
hexavalent chromium color reagent	WP113373
5N sulfuric acid	WP112831
Calibration Std Hexachrome 0.025 ppm	WP113367
Hexavalent Chromium ICV-LCS Std	WP113372
Calibration and CCV std HexChrome 0.5PPM	WP113370
Calibration std HexChrome 1.0PPM	WP113371

Intercept: 0.001

Slope: 0.7818

Regression: 0.999981

Seq	Lab ID	True Value (mg/l)	DF	Initial Vol (ml)	Final Vol (ml)	pH HN03	pH H2SO4	Absorb.at 540nm		Absorbance Difference	Result (mg/L)	%D	Anal Date	Anal Time
								Backgrnd	Color					
1	CAL1	0	1	100	100		1.69	0.000	0.000	0.000	-0.00		06/04/2025	09:45
2	CAL2	0.01	1	100	100		1.85	0.000	0.008	0.008	0.008	-20	06/04/2025	09:45
3	CAL3	0.025	1	100	100		1.89	0.000	0.019	0.019	0.023	-8	06/04/2025	09:46
4	CAL4	0.05	1	100	100		1.92	0.000	0.040	0.040	0.049	-2	06/04/2025	09:46
5	CAL5	0.1	1	100	100		1.88	0.000	0.081	0.081	0.102	2	06/04/2025	09:47
6	CAL6	0.5	1	100	100		1.94	0.000	0.395	0.395	0.503	0.6	06/04/2025	09:47
7	CAL7	1	1	100	100		1.90	0.000	0.781	0.781	0.997	-0.3	06/04/2025	09:48

Analytical Summary Report

Analysis Method: 7196A

ANALYST:rubina

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY:Iwona

Run Number: LB136000

pH Meter ID:WC pH Meter-1

Seq	Lab ID	True Value	DF	Initial Vol (ml/gm)	Final Vol (ml)	pH HN03	pH H2SO4	Absorb.at540nm		Absorbance Difference	Intermediate Result (mg/L)	Anal Date	Anal Time
								Backgrnd	Color				
1	ICV	0.5	1	100	100		1.97	0.000	0.398	0.398	0.508	06/04/2025	09:48
2	ICB		1	100	100		1.84	0.000	0.001	0.001	0.000	06/04/2025	09:49
3	CCV1	0.5	1	100	100		1.99	0.000	0.395	0.395	0.504	06/04/2025	09:49
4	CCB1		1	100	100		1.77	0.000	0.000	0.000	-0.001	06/04/2025	09:50
5	RL Check	0.01	1	100	100		1.88	0.000	0.009	0.009	0.010	06/04/2025	09:51
6	LB136000BL		1	100	100		1.92	0.000	0.001	0.001	0.000	06/04/2025	09:51
7	LB136000BS	0.5	1	100	100		1.87	0.000	0.400	0.400	0.510	06/04/2025	09:52
8	Q2198-05		1	100	100		2.19	0.000	0.000	0.000	-0.001	06/04/2025	09:52
9	Q2198-05DU		1	100	100		2.22	0.000	0.000	0.000	-0.001	06/04/2025	09:53
10	Q2198-05MS	1	2	100	100		2.19	0.000	0.362	0.362	0.462	06/04/2025	09:53
11	Q2198-05MS	1	2	100	100		2.20	0.000	0.364	0.364	0.464	06/04/2025	09:54
12	CCV2	0.5	1	100	100		1.95	0.000	0.394	0.394	0.503	06/04/2025	09:54
13	CCB2		1	100	100		1.80	0.000	0.000	0.000	-0.001	06/04/2025	09:55

Analytical Summary Report

Analysis Method: 9045D

Analyst By : jignesh

Parameter: Corrosivity

Supervisor Review By : Iwona

Run Number: LB136005

Slope : 99.2

BalanceID: WC SC-7

pH Meter ID : WC PH METER-1

Calibration Standards	Chemtech Log#
PH 4 BUFFER SOLUTION	W3178
BUFFER PH 7.00 GREEN 1PINT PK6	W3093
PH 10.01 BUFFER, COLOR CD 475ML	W3191
buffer solution pH 7 yellow	W3071
Buffer Solution, PH2 (500ml)	W3161
pH 12.00 Buffer	W3200

True Value of ICV = 7.00 Control Limits[+/- 0.05].

True Value of CCV1 = 2.00 Control Limits[+/- 0.05].

True Value of CCV2 = 12.00 Control Limits[+/- 0.05].

True Value of CCV3 = 2.00 Control Limits[+/- 0.05].

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.2	4.01	06/04/2025	11:30
2	CAL2	1	Water	NA	NA	20.2	7.00	06/04/2025	11:31
3	CAL3	1	Water	NA	NA	20.2	10.02	06/04/2025	11:33
4	ICV	1	Water	NA	NA	20.2	7.02	06/04/2025	11:35
5	CCV1	1	Water	NA	NA	20.2	2.01	06/04/2025	11:37
6	Q2194-02	1	Solid	20.02	20	24.4	8.32	06/04/2025	11:44
7	Q2194-04	1	Solid	20.03	20	24.1	8.30	06/04/2025	11:47
8	Q2198-02	1	Solid	20.05	20	22.1	6.61	06/04/2025	11:55
9	Q2198-02DUP	1	Solid	20.03	20	22.2	6.62	06/04/2025	11:56
10	Q2198-04	1	Solid	20.01	20	22.1	7.87	06/04/2025	12:00
11	Q2206-04	1	Solid	20.03	20	26.1	7.49	06/04/2025	12:10
12	Q2207-09	1	Solid	20.02	20	25.4	6.92	06/04/2025	12:15
13	Q2207-18	1	Solid	20.02	20	24.8	5.18	06/04/2025	12:20
14	Q2207-27	1	Solid	20.04	20	25.3	5.79	06/04/2025	12:30
15	Q2207-36	1	Solid	20.01	20	25.9	7.21	06/04/2025	12:35
16	CCV2	1	Water	NA	NA	20.2	12.01	06/04/2025	12:40
17	Q2207-45	1	Solid	20.03	20	25.1	5.14	06/04/2025	12:42
18	Q2208-09	1	Solid	20.05	20	23.6	5.09	06/04/2025	12:45
19	Q2208-18	1	Solid	20.02	20	24.8	5.18	06/04/2025	12:50
20	Q2208-27	1	Solid	20.03	20	25.3	5.92	06/04/2025	13:00

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	An
21	Q2208-36	1	Solid	20.02	20	25.9	7.02	06/04/2025	13:10
22	CCV3	1	Water	NA	NA	20.1	2.01	06/04/2025	13:15

WORKLIST(Hardcopy Internal Chain)

136005

WorkList Name : corrosion Q2198 WorkList ID : 189919 Department : Wet-Chemistry Date : 06-04-2025 09:52:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2194-02	COMP-12	Solid	Corrosivity	Cool 4 deg C	PSEG03	L31	06/03/2025	9045D
Q2194-04	COMP-13	Solid	Corrosivity	Cool 4 deg C	PSEG03	L31	06/03/2025	9045D
Q2198-02	B-202-SB02	Solid	Corrosivity	Cool 4 deg C	PORT06	N22	05/31/2025	9045D
Q2198-04	B-207-SB01	Solid	Corrosivity	Cool 4 deg C	PORT06	N22	06/01/2025	9045D
Q2206-04	TP-1	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/04/2025	9045D
Q2207-09	BU-703-COMP-01	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2207-18	BU-703-COMP-02	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2207-27	BU-703-COMP-03	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2207-36	BU-703-COMP-04	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2207-45	BU-703-COMP-05	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2208-09	BU-703-COMP-06	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2208-18	BU-703-COMP-07	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2208-27	BU-703-COMP-08	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D
Q2208-36	BU-703-COMP-09	Solid	Corrosivity	Cool 4 deg C	PSEG03	N31	06/02/2025	9045D

Date/Time 06/04/25 11:00
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

Date/Time 06/04/25 17:30
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

Analytical Summary Report

Analysis Method: 9045D

Analyst By : jignesh

Parameter: pH

Supervisor Review By : Iwona

Run Number: LB136006

Slope : 99.2

BalanceID: WC SC-7

pH Meter ID : WC PH METER-1

Calibration Standards	Chemtech Log#
PH 4 BUFFER SOLUTION	W3178
BUFFER PH 7.00 GREEN 1PINT PK6	W3093
PH 10.01 BUFFER, COLOR CD 475ML	W3191
buffer solution pH 7 yellow	W3071
Buffer Solution, PH2 (500ml)	W3161
pH 12.00 Buffer	W3200

True Value of ICV = 7.00 Control Limits[+/- 0.05].

True Value of CCV1 = 2.00 Control Limits[+/- 0.05].

True Value of CCV2 = 12.00 Control Limits[+/- 0.05].

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.2	4.01	06/04/2025	11:30
2	CAL2	1	Water	NA	NA	20.2	7.00	06/04/2025	11:31
3	CAL3	1	Water	NA	NA	20.2	10.02	06/04/2025	11:33
4	ICV	1	Water	NA	NA	20.2	7.02	06/04/2025	11:35
5	CCV1	1	Water	NA	NA	20.2	2.01	06/04/2025	11:37
6	Q2198-01	1	Solid	20.05	20	22.1	6.61	06/04/2025	11:55
7	Q2198-01DUP	1	Solid	20.03	20	22.2	6.62	06/04/2025	11:56
8	Q2198-03	1	Solid	20.01	20	22.1	7.87	06/04/2025	12:00
9	CCV2	1	Water	NA	NA	20.2	12.02	06/04/2025	12:19

WORKLIST(Hardcopy Internal Chain)

136006

WorkList Name : PH S Q2198 WorkList ID : 189920 Department : Wet-Chemistry Date : 06-04-2025 09:52:53

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2198-01	B-202-SB02	Solid	pH	Cool 4 deg C	PORT06	N22	05/31/2025	9045D
Q2198-03	B-207-SB01	Solid	pH	Cool 4 deg C	PORT06	N22	06/01/2025	9045D

Date/Time 06/04/25 11:00

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 06/04/25 17:13

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Test results

Aquakem 7.2AQ1

Page:

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

Reviewed by : RM Instrument ID : Konelab

6/5/2025 14:17

Test: Total CN

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	99.713	0.0	0.078	
ICB1	0.397	0.0	0.001	
CCV1	246.043	0.0	0.191	
CCB1	0.268	0.0	0.001	
PB168266BL	0.264	0.0	0.001	
Q2185-04	0.254	0.0	0.001	
Q2185-04DUP	0.280	0.0	0.001	
Q2185-08	0.249	0.0	0.001	
Q2194-02	0.168	0.0	0.001	
Q2194-04	0.137	0.0	0.001	
Q2198-02	0.368	0.0	0.001	
Q2198-04	0.319	0.0	0.001	
Q2206-04	0.277	0.0	0.001	
Q2207-09	0.340	0.0	0.001	
CCV2	245.481	0.0	0.191	
CCB2	0.394	0.0	0.001	
Q2207-18	0.284	0.0	0.001	
Q2207-27	0.439	0.0	0.001	
Q2207-36	0.805	0.0	0.002	
Q2207-45	0.382	0.0	0.001	
Q2208-09	0.473	0.0	0.001	
Q2208-18	0.092	0.0	0.001	
Q2208-27	0.286	0.0	0.001	
Q2208-36	0.278	0.0	0.001	
PB168294BL	0.168	0.0	0.001	
Q2226-04	0.415	0.0	0.001	
CCV3	246.860	0.0	0.192	
CCB3	0.439	0.0	0.001	
Q2226-04DUP	0.546	0.0	0.001	
Q2227-04	0.539	0.0	0.001	
Q2228-04	0.544	0.0	0.001	
Q2235-03	0.549	0.0	0.001	
Q2236-03	0.499	0.0	0.001	
Q2236-07	0.566	0.0	0.001	
Q2236-11	0.587	0.0	0.001	
Q2236-15	0.701	0.0	0.001	
Q2236-19	0.643	0.0	0.001	
CCV4	253.932	0.0	0.197	
CCB4	0.768	0.0	0.002	
N	39			
Mean	28.352			
SD	76.9172			
CV%	271.29			

Aquakem v. 7.2AQ1

Results from time period:

Thu Jun 05 13:36:55 2025

Thu Jun 05 14:12:32 2025

Sample Id	Sam/Ctr/c/	Test short r	Test type	Result	Result unit	Result date and time Stat
0.0PPBCN	A	Total CN	P	-0.0452	µg/l	6/5/2025 10:01:29
5.0PPBCN	A	Total CN	P	4.7712	µg/l	6/5/2025 10:01:30
10PPBCN	A	Total CN	P	9.919	µg/l	6/5/2025 10:01:31
50PPBCN	A	Total CN	P	50.2661	µg/l	6/5/2025 10:01:32
100PPBCN	A	Total CN	P	101.6259	µg/l	6/5/2025 10:01:33
250PPBCN	A	Total CN	P	247.6217	µg/l	6/5/2025 10:01:34
500PPBCN	A	Total CN	P	500.8413	µg/l	6/5/2025 10:01:35
ICV1	S	Total CN	P	99.713	µg/l	6/5/2025 13:36:55
ICB1	S	Total CN	P	0.3966	µg/l	6/5/2025 13:36:57
CCV1	S	Total CN	P	246.043	µg/l	6/5/2025 13:37:00
CCB1	S	Total CN	P	0.2677	µg/l	6/5/2025 13:37:02
PB168266BL	S	Total CN	P	0.2644	µg/l	6/5/2025 13:37:04
Q2185-04	S	Total CN	P	0.254	µg/l	6/5/2025 13:37:05
Q2185-04DUP	S	Total CN	P	0.2802	µg/l	6/5/2025 13:44:32
Q2185-08	S	Total CN	P	0.2486	µg/l	6/5/2025 13:44:33
Q2194-02	S	Total CN	P	0.1678	µg/l	6/5/2025 13:44:34
Q2194-04	S	Total CN	P	0.1366	µg/l	6/5/2025 13:44:35
Q2198-02	S	Total CN	P	0.3679	µg/l	6/5/2025 13:44:36
Q2198-04	S	Total CN	P	0.3186	µg/l	6/5/2025 13:44:37
Q2206-04	S	Total CN	P	0.2772	µg/l	6/5/2025 13:44:38
Q2207-09	S	Total CN	P	0.3401	µg/l	6/5/2025 13:44:39
CCV2	S	Total CN	P	245.4805	µg/l	6/5/2025 13:52:08
CCB2	S	Total CN	P	0.3936	µg/l	6/5/2025 13:52:10
Q2207-18	S	Total CN	P	0.2845	µg/l	6/5/2025 13:52:11
Q2207-27	S	Total CN	P	0.4389	µg/l	6/5/2025 13:52:12
Q2207-36	S	Total CN	P	0.805	µg/l	6/5/2025 13:52:13
Q2207-45	S	Total CN	P	0.3817	µg/l	6/5/2025 13:52:14
Q2208-09	S	Total CN	P	0.4734	µg/l	6/5/2025 13:52:15
Q2208-18	S	Total CN	P	0.0922	µg/l	6/5/2025 13:59:40
Q2208-27	S	Total CN	P	0.2865	µg/l	6/5/2025 13:59:41
Q2208-36	S	Total CN	P	0.2779	µg/l	6/5/2025 13:59:42
PB168294BL	S	Total CN	P	0.1683	µg/l	6/5/2025 13:59:43
Q2226-04	S	Total CN	P	0.4152	µg/l	6/5/2025 13:59:44
CCV3	S	Total CN	P	246.8598	µg/l	6/5/2025 13:59:48
CCB3	S	Total CN	P	0.439	µg/l	6/5/2025 14:07:12
Q2226-04DUP	S	Total CN	P	0.5463	µg/l	6/5/2025 14:07:13
Q2227-04	S	Total CN	P	0.5385	µg/l	6/5/2025 14:07:14
Q2228-04	S	Total CN	P	0.5444	µg/l	6/5/2025 14:07:15
Q2235-03	S	Total CN	P	0.5488	µg/l	6/5/2025 14:07:16

Q2236-03	S	Total CN	P	0.4995 µg/l	6/5/2025 14:07:17
Q2236-07	S	Total CN	P	0.566 µg/l	6/5/2025 14:07:18
Q2236-11	S	Total CN	P	0.5873 µg/l	6/5/2025 14:07:19
Q2236-15	S	Total CN	P	0.7006 µg/l	6/5/2025 14:07:20
Q2236-19	S	Total CN	P	0.6427 µg/l	6/5/2025 14:07:21
CCV4	S	Total CN	P	253.9321 µg/l	6/5/2025 14:12:29
CCB4	S	Total CN	P	0.7675 µg/l	6/5/2025 14:12:32

Calibration results

Aquakem 7.2AQ1

Page: 1

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

6/5/2025 10:02

Reviewed by : RM

Instrument ID : Konelab

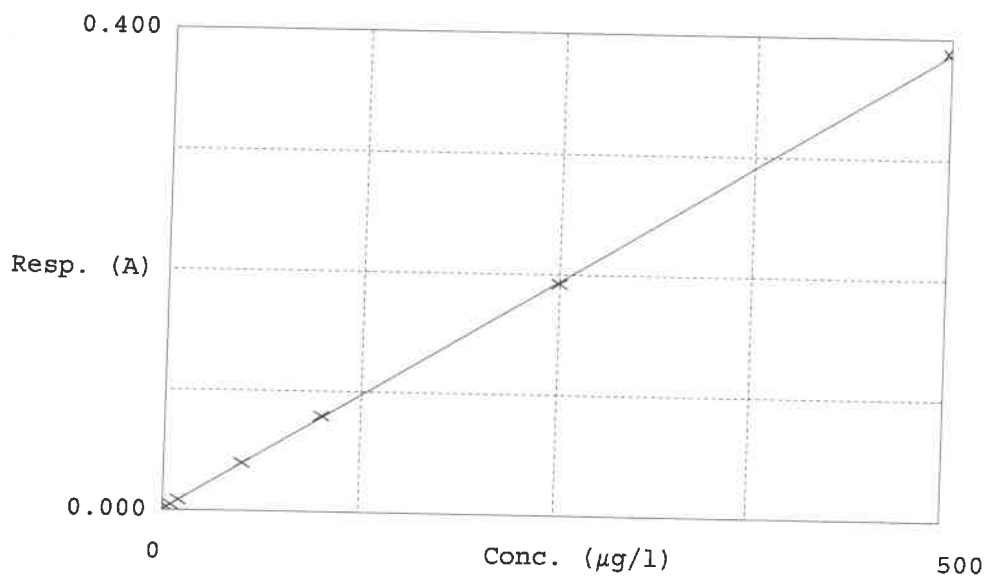
Test Total CN

Accepted 6/5/2025 10:02

Factor 1294
Bias 0.001

Coeff. of det. 0.999956

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.0PPBCN	0.001	-0.0452	0.0000	-
2	5.0PPBCN	0.005	4.7712	5.0000	-4.6
3	10PPBCN	0.009	9.9190	10.0000	-0.8
4	50PPBCN	0.040	50.2661	50.0000	0.5
5	100PPBCN	0.079	101.6259	100.0000	1.6
6	250PPBCN	0.192	247.6217	250.0000	-1.0
7	500PPBCN	0.388	500.8413	500.0000	0.2

06/05/2025
RM

Analysis Method: 9034

ANALYST: rubina

Parameter: Reactive Sulfide

SUPERVISOR REVIEW BY: Iwona

Run Number: LB136023

Constant: 16000

Normality1: 0.025

Normality2: 0.025

Reagent/Standard	Lot/Log #
SODIUM THIOSULFATE, 0.025N, 4LITRE	W3105
IODINE SOLUTION .025N 1L	W3213
Starch Solution, 4L	W3149

Seq	Lab ID	True Value (mg/l)	DF	Initial Weight (g)	Final Volume (ml)	T1 (ml)	T2 Initial	T2 Final	T2 Diff. (ml)	T1 - T2 Diff (mL)	Value Corrected With Blank	Result (ppm)	Anal Date	Anal Time
1	PB168267BL		1	5.00	50	2.00	0.00	1.92	1.92	0.08	0.00	0.00	06/04/2025	17:03
2	Q2185-04		1	5.07	50	2.00	0.00	1.88	1.88	0.12	0.04	3.16	06/04/2025	17:06
3	Q2185-04DUP		1	5.07	50	2.00	0.00	1.88	1.88	0.12	0.04	3.16	06/04/2025	17:09
4	Q2185-08		1	5.04	50	2.00	0.00	1.88	1.88	0.12	0.04	3.17	06/04/2025	17:11
5	Q2194-02		1	5.06	50	2.00	0.00	1.86	1.86	0.14	0.06	4.74	06/04/2025	17:15
6	Q2194-04		1	5.07	50	2.00	0.00	1.90	1.90	0.10	0.02	1.58	06/04/2025	17:18
7	Q2198-02		1	5.01	50	2.00	0.00	1.88	1.88	0.12	0.04	3.19	06/04/2025	17:20
8	Q2198-04		1	5.03	50	2.00	0.00	1.86	1.86	0.14	0.06	4.77	06/04/2025	17:22
9	Q2206-04		1	5.06	50	2.00	0.00	1.88	1.88	0.12	0.04	3.16	06/04/2025	14:24
10	Q2207-09		1	5.03	50	2.00	0.00	1.90	1.90	0.10	0.02	1.59	06/04/2025	17:26
11	Q2207-18		1	5.05	50	2.00	0.00	1.86	1.86	0.14	0.06	4.75	06/04/2025	17:29
12	Q2207-27		1	5.02	50	2.00	0.00	1.88	1.88	0.12	0.04	3.19	06/04/2025	17:32

T1 = Titrant1

T2 = Titrant2

T2 Diff = T2 Final - T2 Initial

Value Corrected With Blank = ((T1 - T2 Diff) - Blank Correction(BL))

Result = ((T1 * Normality1) - ((T1 - Value Corrected With Blank) * Normality2)) * Constant / Initial Volume

Analysis Method: 9034

ANALYST: rubina

Parameter: Reactive Sulfide

SUPERVISOR REVIEW BY: Iwona

Run Number: LB136023

Constant: 16000

Normality1: 0.025

Normality2: 0.025

Reagent/Standard	Lot/Log #
SODIUM THIOSULFATE, 0.025N, 4LITRE	W3105
IODINE SOLUTION .025N 1L	W3213
Starch Solution, 4L	W3149

Seq	Lab ID	True Value (mg/l)	DF	Initial Weight (g)	Final Volume (ml)	T1 (ml)	T2 Initial	T2 Final	T2 Diff. (ml)	T1 - T2 Diff (mL)	Value Corrected With Blank	Result (ppm)	Anal Date	Anal Time
13	Q2207-36		1	5.02	50	2.00	0.00	1.90	1.90	0.10	0.02	1.59	06/04/2025	17:35
14	Q2207-45		1	5.08	50	2.00	0.00	1.86	1.86	0.14	0.06	4.72	06/04/2025	17:37
15	Q2208-09		1	5.06	50	2.00	0.00	1.90	1.90	0.10	0.02	1.58	06/04/2025	17:40
16	Q2208-18		1	5.02	50	2.00	0.00	1.90	1.90	0.10	0.02	1.59	06/04/2025	17:42
17	Q2208-27		1	5.07	50	2.00	0.00	1.88	1.88	0.12	0.04	3.16	06/04/2025	17:45
18	Q2208-36		1	5.01	50	2.00	0.00	1.90	1.90	0.10	0.02	1.60	06/04/2025	17:47

T1 = Titrant1

T2 = Titrant2

T2 Diff = T2 Final - T2 Initial

Value Corrected With Blank = ((T1 - T2 Diff) - Blank Correction(BL))

Result = ((T1 * Normality1) - ((T1 - Value Corrected With Blank) * Normality2)) * Constant / Initial Volume

Analytical Summary Report

Analysis Method: 7196A

ANALYST: rubina

Parameter: ~~Hexavalent Chromium~~

SUPERVISOR REVIEW BY: Iwona

Run Number: LB136024

pH Meter ID: WC pH Meter-1

Reagent/Standard	Lot/Log #
hexavalent chromium color reagent	WP113405
5N sulfuric acid	WP112831
HNO3 Hex-Chrome, 5M	WP112830
Hexchrome Cleaning Solution	WP113087

Intercept: 0.0005

Slope: 0.7659

Regression: 0.999983

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	7.34	1.71	0.000	0.000	0.000	-0.00		06/05/2025	13:00
2	CAL2	0.01	1	100	100	7.42	1.84	0.000	0.008	0.008	0.009	-10	06/05/2025	13:01
3	CAL3	0.025	1	100	100	7.44	1.92	0.000	0.021	0.021	0.026	4	06/05/2025	13:02
4	CAL4	0.05	1	100	100	7.37	1.94	0.000	0.039	0.039	0.050	0	06/05/2025	13:03
5	CAL5	0.1	1	100	100	7.39	1.87	0.000	0.078	0.078	0.101	1	06/05/2025	13:04
6	CAL6	0.5	1	100	100	7.38	1.94	0.000	0.380	0.380	0.495	-1	06/05/2025	13:05
7	CAL7	1	1	100	100	7.39	1.90	0.000	0.768	0.768	1.002	0.2	06/05/2025	13:06

Analytical Summary Report

Analysis Method: 7196A

ANALYST:rubina

Parameter: Hexavalent Chromium

SUPERVISOR REVIEW BY:Iwona

Run Number: LB136024

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	7.44	1.90	0.000	0.378	0.378	0.493	06/05/2025	13:07
2	ICB		1	100	100	7.28	1.83	0.000	0.001	0.001	0.001	06/05/2025	17:08
3	CCV1	0.5	1	100	100	7.44	1.99	0.001	0.382	0.381	0.497	06/05/2025	13:09
4	CCB1		1	100	100	7.31	1.77	0.000	0.000	0.000	-0.001	06/05/2025	13:10
5	RL Check	0.01	1	100	100	7.42	1.97	0.000	0.009	0.009	0.011	06/05/2025	13:11
6	PB168265BL		1	2.50	100	7.33	1.84	0.000	0.000	0.000	-0.001	06/05/2025	13:12
7	PB168265BS	20	1	2.50	100	7.42	1.94	0.000	0.379	0.379	0.494	06/05/2025	13:13
8	Q2185-01		1	2.52	100	7.36	1.85	0.001	0.002	0.001	0.001	06/05/2025	13:14
9	Q2185-01DU		1	2.52	100	7.39	1.88	0.001	0.002	0.001	0.001	06/05/2025	13:15
10	Q2185-01MS	40	2	2.51	100	7.36	1.90	0.000	0.301	0.301	0.392	06/05/2025	13:16
11	Q2185-01MS	1284	40	2.52	100	7.35	1.88	0.000	0.604	0.604	0.788	06/05/2025	13:17
12	Q2185-01MS	40	2	2.53	100	7.44	1.95	0.000	0.377	0.377	0.492	06/05/2025	13:18
13	Q2185-05		1	2.57	100	7.52	2.10	0.000	0.001	0.001	0.001	06/05/2025	13:19
14	Q2194-01		1	2.58	100	7.60	2.06	0.002	0.002	0.000	-0.001	06/05/2025	13:20
15	Q2194-03		1	2.55	100	7.39	1.90	0.004	0.004	0.000	-0.001	06/05/2025	13:21
16	CCV2	0.5	1	100	100	7.40	2.00	0.000	0.380	0.380	0.495	06/05/2025	13:22
17	CCB2		1	100	100	7.39	1.80	0.000	0.001	0.001	0.001	06/05/2025	13:23
18	Q2195-01		1	2.52	100	7.61	2.13	0.002	0.002	0.000	-0.001	06/05/2025	13:24
19	Q2198-01		1	2.55	100	7.57	2.06	0.035	0.036	0.001	0.001	06/05/2025	13:25
20	Q2198-03		1	2.51	100	7.52	2.20	0.036	0.036	0.000	-0.001	06/05/2025	13:26
21	Q2206-01		1	2.56	100	7.52	2.28	0.010	0.011	0.001	0.001	06/05/2025	13:27
22	Q2207-01		1	2.55	100	7.59	1.90	0.003	0.007	0.004	0.005	06/05/2025	13:28
23	Q2207-10		1	2.56	100	7.55	2.11	0.012	0.015	0.003	0.003	06/05/2025	13:29
24	Q2207-19		1	2.52	100	7.44	2.01	0.003	0.007	0.004	0.005	06/05/2025	13:30
25	Q2207-28		1	2.53	100	7.65	1.97	0.000	0.001	0.001	0.001	06/05/2025	13:31
26	Q2207-37		1	2.54	100	7.63	2.14	0.003	0.008	0.005	0.006	06/05/2025	13:32
27	Q2208-01		1	2.52	100	7.33	2.10	0.001	0.010	0.009	0.011	06/05/2025	13:33
28	CCV3	0.5	1	100	100	7.38	1.90	0.000	0.378	0.378	0.493	06/05/2025	13:34
29	CCB3		1	100	100	7.27	1.81	0.000	0.000	0.000	-0.001	06/05/2025	13:35
30	Q2208-10		1	2.57	100	7.53	2.07	0.002	0.002	0.000	-0.001	06/05/2025	13:36
31	Q2208-19		1	2.54	100	7.45	2.15	0.002	0.003	0.001	0.001	06/05/2025	13:37
32	Q2208-28		1	2.51	100	7.50	2.19	0.018	0.038	0.020	0.025	06/05/2025	13:38
33	Q2224-01		1	2.55	100	7.58	2.06	0.004	0.004	0.000	-0.001	06/05/2025	13:39
34	Q2226-01		1	2.51	100	7.60	1.93	0.000	0.001	0.001	0.001	06/05/2025	13:40
35	Q2227-01		1	2.55	100	7.60	2.06	0.000	0.001	0.001	0.001	06/05/2025	13:41
36	CCV4	0.5	1	100	100	7.49	1.88	0.000	0.380	0.380	0.495	06/05/2025	13:42
37	CCB4		1	100	100	7.31	1.78	0.000	0.001	0.001	0.001	06/05/2025	13:43

Analytical Summary Report

Analysis Method: 9040C

Analyst By : jignesh

Parameter: pH

Supervisor Review By : Iwona

Run Number: LB136042

Slope : 98.6

pH Meter ID : WC PH METER-1

Calibration Standards	Chemtech Log#
PH 4 BUFFER SOLUTION	W3178
BUFFER PH 7.00 GREEN 1PINT PK6	W3093
PH 10.01 BUFFER, COLOR CD 475ML	W3191
buffer solution pH 7 yellow	W3071
Buffer Solution, PH2 (500ml)	W3161
pH 12.00 Buffer	W3200

True Value of ICV = 7.00 Control Limits[+/- 0.05].

True Value of CCV1 = 2.00 Control Limits[+/- 0.05].

True Value of CCV2 = 12.00 Control Limits[+/- 0.05].

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.2	4.01	06/06/2025	12:15
2	CAL2	1	Water	NA	NA	20.2	7.00	06/06/2025	12:16
3	CAL3	1	Water	NA	NA	20.3	10.02	06/06/2025	12:17
4	ICV	1	Water	NA	NA	20.2	7.01	06/06/2025	12:20
5	CCV1	1	Water	NA	NA	20.2	2.01	06/06/2025	12:25
6	Q2198-05	1	Water	NA	NA	20.6	6.42	06/06/2025	12:35
7	Q2198-05DUP	1	Water	NA	NA	20.7	6.43	06/06/2025	12:37
8	Q2221-02	1	Water	NA	NA	21.1	5.50	06/06/2025	12:44
9	Q2221-03	1	Water	NA	NA	20.9	7.90	06/06/2025	12:55
10	Q2245-01	1	Water	NA	NA	21.2	5.22	06/06/2025	13:10
11	Q2245-02	1	Water	NA	NA	21.3	4.55	06/06/2025	13:15
12	CCV2	1	Water	NA	NA	20.2	12.02	06/06/2025	13:20

WORKLIST(Hardcopy Internal Chain)

2136042

WorkList Name : ph q2245

WorkList ID : 190000

Department : Wet-Chemistry

Date : 06-06-2025 11:56:24

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2198-05	B-202-GW01	Water	pH	Cool 4 deg C	PORT06	N22	05/31/2025	9040C
Q2221-02	34900	Water	pH	Cool 4 deg C	PSEG03	N41	06/04/2025	9040C
Q2221-03	34867	Water	pH	Cool 4 deg C	PSEG03	N41	06/04/2025	9040C
Q2245-01	AU-25-0090	Water	pH	Cool 4 deg C	PSEG03	D11	06/05/2025	9040C
Q2245-02	AU-25-0091	Water	pH	Cool 4 deg C	PSEG03	D11	06/05/2025	9040C

Date/Time

06/06/25 12:10

Raw Sample Received by:

SP WOC

Raw Sample Relinquished by:

CSM

Date/Time

06/06/25

Raw Sample Received by:

CSM

Raw Sample Relinquished by:

SP WOC

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-2, WC S-1

Weigh By : RM

Start Digest Date: 06/05/2025 Time : 09:30 Temp : 90 °C

End Digest Date: 06/05/2025 Time : 10:30 Temp : 95 °C

11 batch 06/05/2025 11-00 90 i
06/05/2025 12-00 94 c

Digestion tube ID : M6054

Block Thermometer ID : WC-Block#1

Filter paper ID : 400213

Prep Technician Signature: RIM

pH Meter ID : WC pH meter-1

Supervisor Signature: 12

Standard 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	WP112903
HEX. DIGESTION SOLN.	50.0ML	WP113085
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	WP113404
CAL3	CAL3	0.5ML	WP113404
CAL4	CAL4	1ML	WP113404
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

06/05/2025 RIM

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
PB168265BL	PBS265	2.50	100	N/A	N/A	N/A	N/A	N/A	N/A
PB168265BS	LCS265	2.50	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-01DUP	TP02-MHB-WCDUP	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-01MSPre	TP02-MHB-WCMSPRE	2.51	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-01MS2Ins	TP02-MHB-WCMS2INS	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-01MS3Post	TP02-MHB-WCMS3POST	2.53	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-01	TP02-MHB-WC	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-05	TP01-MHB-WC	2.57	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2194-01	COMP-12	2.58	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2194-03	COMP-13	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2195-01	OK-01-060325	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2198-01	B-202-SB02	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2198-03	B-207-SB01	2.51	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2206-01	TP-1	2.56	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-01	BU-703-COMP-01	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-10	BU-703-COMP-02	2.56	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-19	BU-703-COMP-03	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-28	BU-703-COMP-04	2.53	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-37	BU-703-COMP-05	2.54	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-01	BU-703-COMP-06	2.52	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-10	BU-703-COMP-07	2.57	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-19	BU-703-COMP-08	2.54	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-28	BU-703-COMP-09	2.51	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2224-01	EO-01-06042025	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A
Q2226-01	TP06-MHI-WC	2.51	100	N/A	N/A	N/A	N/A	N/A	N/A

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
Q2227-01	TP07-MHH-WC	2.55	100	N/A	N/A	N/A	N/A	N/A	N/A

SOP ID : M9012B-Total, Amenable and Reactive Cyanide-20

SDG No : N/A

Start Digest Date: 06/05/2025 **Time :** 08:50 **Temp :** N/A

Matrix : SOIL

End Digest Date: 06/05/2025 **Time :** 10:20 **Temp :** N/A

Pipette ID : N/A

Balance ID : WC SC-7

Hood ID : HOOD#1

Digestion tube ID : M5595

Block Thermometer ID : N/A

Block ID : MC-1,MC-2

Filter paper ID : N/A

Prep Technician Signature: RM

Weigh By : RM

pH Meter ID : N/A

Supervisor Signature: 12

Standardized Name	MLS USED	STD REF. # FROM LOG
PBS003	50.0ML	W3112
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.25N NaOH	50.0ML	WP111294
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
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Comment

Extraction Conformance/Non-Conformance Comments:

N/A

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
06/05/2025 10:30	RM	RM
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Weight (g)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/Nitrite	Comment	Prep Pos
PB168266BL	PBS266	5.00	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-04	TP02-MHB-WC	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-04DUP	TP02-MHB-WCDUP	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-08	TP01-MHB-WC	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2194-02	COMP-12	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2194-04	COMP-13	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2198-02	B-202-SB02	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2198-04	B-207-SB01	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2206-04	TP-1	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-09	BU-703-COMP-01	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-18	BU-703-COMP-02	5.04	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-27	BU-703-COMP-03	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-36	BU-703-COMP-04	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-45	BU-703-COMP-05	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-09	BU-703-COMP-06	5.08	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-18	BU-703-COMP-07	5.01	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-27	BU-703-COMP-08	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-36	BU-703-COMP-09	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A

SOP ID : M9030B-Sulfide-12

SDG No : N/A

Matrix : SOIL

Pipette ID : WC

Balance ID : WC SC-7

Hood ID : HOOD#1

Block ID : MC-2

Weigh By : RM

Start Digest Date: 06/04/2025 Time : 15:00 Temp : N/A

End Digest Date: 06/04/2025 Time : 16:30 Temp : N/A

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : N/A

Prep Technician Signature: RM

Supervisor Signature: 12

Standard Name	MLS USED	STD REF. # FROM LOG
PBS003	50.0ML	W3112
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
0.5M ZINC ACETATE	5.0ML	WP113086
FORMALDEHYDE	2.0ML	W2725
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
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

N/A

06/04/2025
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
PB168267BL	PBS267	5.00	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-04DUP	TP02-MHB-WCDUP	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-04	TP02-MHB-WC	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2185-08	TP01-MHB-WC	5.04	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2194-02	COMP-12	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2194-04	COMP-13	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2198-02	B-202-SB02	5.01	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2198-04	B-207-SB01	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2206-04	TP-1	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-09	BU-703-COMP-01	5.03	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-18	BU-703-COMP-02	5.05	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-27	BU-703-COMP-03	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-36	BU-703-COMP-04	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2207-45	BU-703-COMP-05	5.08	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-09	BU-703-COMP-06	5.06	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-18	BU-703-COMP-07	5.02	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-27	BU-703-COMP-08	5.07	50	N/A	N/A	N/A	N/A	N/A	N/A
Q2208-36	BU-703-COMP-09	5.01	50	N/A	N/A	N/A	N/A	N/A	N/A

Instrument ID: FLAME

Daily Analysis Runlog For Sequence/QC Batch ID # LB135998

Review By	Eman	Review On	6/4/2025 2:02:38 PM
Supervise By	jignesh	Supervise On	6/4/2025 2:06:56 PM
SubDirectory	LB135998	Test	Ignitability
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	Q2175-01	32525	SAM	06/04/25 08:45		Eman	OK
2	Q2175-01DUP	32525DUP	DUP	06/04/25 08:52		Eman	OK
3	Q2185-01	TP02-MHB-WC	SAM	06/04/25 09:00		Eman	OK
4	Q2185-04	TP02-MHB-WC	SAM	06/04/25 09:07		Eman	OK
5	Q2185-05	TP01-MHA-WC	SAM	06/04/25 09:15		Eman	OK
6	Q2185-08	TP01-MHA-WC	SAM	06/04/25 09:22		Eman	OK
7	Q2192-01	SB-1	SAM	06/04/25 09:30		Eman	OK
8	Q2194-01	COMP-12	SAM	06/04/25 09:37		Eman	OK
9	Q2194-02	COMP-12	SAM	06/04/25 09:45		Eman	OK
10	Q2194-03	COMP-13	SAM	06/04/25 09:52		Eman	OK
11	Q2194-04	COMP-13	SAM	06/04/25 10:00		Eman	OK
12	Q2198-02	B-202-SB02	SAM	06/04/25 10:07		Eman	OK
13	Q2198-04	B-207-SB02	SAM	06/04/25 10:15		Eman	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136000

Review By	rubina	Review On	6/4/2025 3:48:05 PM
Supervise By	Iwona	Supervise On	6/5/2025 2:55:27 PM
SubDirectory	LB136000	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	WP113369,WP113368,WP113366,WP113365,WP113373,WP112831,WP113367,WP113372,WP113370,WP113371		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	06/04/25 09:45		rubina	OK
2	CAL2	CAL2	CAL	06/04/25 09:45		rubina	OK
3	CAL3	CAL3	CAL	06/04/25 09:46		rubina	OK
4	CAL4	CAL4	CAL	06/04/25 09:46		rubina	OK
5	CAL5	CAL5	CAL	06/04/25 09:47		rubina	OK
6	CAL6	CAL6	CAL	06/04/25 09:47		rubina	OK
7	CAL7	CAL7	CAL	06/04/25 09:48		rubina	OK
8	ICV	ICV	ICV	06/04/25 09:48		rubina	OK
9	ICB	ICB	ICB	06/04/25 09:49		rubina	OK
10	CCV1	CCV1	CCV	06/04/25 09:49		rubina	OK
11	CCB1	CCB1	CCB	06/04/25 09:50		rubina	OK
12	RL Check	RL Check	SAM	06/04/25 09:51		rubina	OK
13	LB136000BL	LB136000BL	MB	06/04/25 09:51		rubina	OK
14	LB136000BS	LB136000BS	LCS	06/04/25 09:52		rubina	OK
15	Q2198-05	B-202-GW01	SAM	06/04/25 09:52		rubina	OK
16	Q2198-05DUP	B-202-GW01DUP	DUP	06/04/25 09:53		rubina	OK
17	Q2198-05MS	B-202-GW01MS	MS	06/04/25 09:53	2ML WP111315+98.0ML SAMPLE	rubina	OK
18	Q2198-05MSD	B-202-GW01MSD	MSD	06/04/25 09:54	2ML WP111315+98.0ML SAMPLE	rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136000

Review By	rubina	Review On	6/4/2025 3:48:05 PM
Supervise By	Iwona	Supervise On	6/5/2025 2:55:27 PM
SubDirectory	LB136000	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	WP113369,WP113368,WP113366,WP113365,WP113373,WP112831,WP113367,WP113372,WP113370,WP113371		

19	CCV2	CCV2	CCV	06/04/25 09:54		rubina	OK
20	CCB2	CCB2	CCB	06/04/25 09:55		rubina	OK

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136005

Review By	jignesh	Review On	6/5/2025 11:53:30 AM
Supervise By	Iwona	Supervise On	6/5/2025 1:03:29 PM
SubDirectory	LB136005	Test	Corrosivity
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	W3178,W3093,W3191,W3071,W3161,W3200		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	06/04/25 11:30		Jignesh	OK
2	CAL2	CAL2	CAL	06/04/25 11:31		Jignesh	OK
3	CAL3	CAL3	CAL	06/04/25 11:33		Jignesh	OK
4	ICV	ICV	ICV	06/04/25 11:35		Jignesh	OK
5	CCV1	CCV1	CCV	06/04/25 11:37		Jignesh	OK
6	Q2194-02	COMP-12	SAM	06/04/25 11:44		Jignesh	OK
7	Q2194-04	COMP-13	SAM	06/04/25 11:47		Jignesh	OK
8	Q2198-02	B-202-SB02	SAM	06/04/25 11:55		Jignesh	OK
9	Q2198-02DUP	B-202-SB02DUP	DUP	06/04/25 11:56		Jignesh	OK
10	Q2198-04	B-207-SB02	SAM	06/04/25 12:00		Jignesh	OK
11	Q2206-04	TP-1	SAM	06/04/25 12:10		Jignesh	OK
12	Q2207-09	BU-703-COMP-01	SAM	06/04/25 12:15		Jignesh	OK
13	Q2207-18	BU-703-COMP-02	SAM	06/04/25 12:20		Jignesh	OK
14	Q2207-27	BU-703-COMP-03	SAM	06/04/25 12:30		Jignesh	OK
15	Q2207-36	BU-703-COMP-04	SAM	06/04/25 12:35		Jignesh	OK
16	CCV2	CCV2	CCV	06/04/25 12:40		Jignesh	OK
17	Q2207-45	BU-703-COMP-05	SAM	06/04/25 12:42		Jignesh	OK
18	Q2208-09	BU-703-COMP-06	SAM	06/04/25 12:45		Jignesh	OK

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136005

Review By	jignesh	Review On	6/5/2025 11:53:30 AM
Supervise By	Iwona	Supervise On	6/5/2025 1:03:29 PM
SubDirectory	LB136005	Test	Corrosivity
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	W3178,W3093,W3191,W3071,W3161,W3200		

19	Q2208-18	BU-703-COMP-07	SAM	06/04/25 12:50		Jignesh	OK
20	Q2208-27	BU-703-COMP-08	SAM	06/04/25 13:00		Jignesh	OK
21	Q2208-36	BU-703-COMP-09	SAM	06/04/25 13:10		Jignesh	OK
22	CCV3	CCV3	CCV	06/04/25 13:15		Jignesh	OK

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136006

Review By	jignesh	Review On	6/5/2025 12:01:14 PM
Supervise By	Iwona	Supervise On	6/5/2025 1:03:19 PM
SubDirectory	LB136006	Test	pH
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3178,W3093,W3191,W3071,W3161,W3200		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	06/04/25 11:30		Jignesh	OK
2	CAL2	CAL2	CAL	06/04/25 11:31		Jignesh	OK
3	CAL3	CAL3	CAL	06/04/25 11:33		Jignesh	OK
4	ICV	ICV	ICV	06/04/25 11:35		Jignesh	OK
5	CCV1	CCV1	CCV	06/04/25 11:37		Jignesh	OK
6	Q2198-01	B-202-SB02	SAM	06/04/25 11:55		Jignesh	OK
7	Q2198-01DUP	B-202-SB02DUP	DUP	06/04/25 11:56		Jignesh	OK
8	Q2198-03	B-207-SB02	SAM	06/04/25 12:00		Jignesh	OK
9	CCV2	CCV2	CCV	06/04/25 12:19		Jignesh	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136021

Review By	rubina	Review On	6/5/2025 5:39:07 PM
Supervise By	Iwona	Supervise On	6/6/2025 9:40:17 AM
SubDirectory	LB136021	Test	Reactive Cyanide
STD. NAME	STD REF.#		
ICAL Standard	WP113382,WP113383,WP113384,WP113385,WP113386,WP113387,WP113388		
ICV Standard	WP113389		
CCV Standard	WP113383		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112643,WP112900,WP113390		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPBCN	0.0PPBCN	CAL1	06/05/25 10:01		rubina	OK
2	5.0PPBCN	5.0PPBCN	CAL2	06/05/25 10:01		rubina	OK
3	10PPBCN	10PPBCN	CAL3	06/05/25 10:01		rubina	OK
4	50PPBCN	50PPBCN	CAL4	06/05/25 10:01		rubina	OK
5	100PPBCN	100PPBCN	CAL5	06/05/25 10:01		rubina	OK
6	250PPBCN	250PPBCN	CAL6	06/05/25 10:01		rubina	OK
7	500PPBCN	500PPBCN	CAL7	06/05/25 10:01		rubina	OK
8	ICV1	ICV1	ICV	06/05/25 13:36		rubina	OK
9	ICB1	ICB1	ICB	06/05/25 13:36		rubina	OK
10	CCV1	CCV1	CCV	06/05/25 13:37		rubina	OK
11	CCB1	CCB1	CCB	06/05/25 13:37		rubina	OK
12	PB168266BL	PB168266BL	MB	06/05/25 13:37		rubina	OK
13	Q2185-04	TP02-MHB-WC	SAM	06/05/25 13:37		rubina	OK
14	Q2185-04DUP	TP02-MHB-WCDUP	DUP	06/05/25 13:44		rubina	OK
15	Q2185-08	TP01-MHA-WC	SAM	06/05/25 13:44		rubina	OK
16	Q2194-02	COMP-12	SAM	06/05/25 13:44		rubina	OK
17	Q2194-04	COMP-13	SAM	06/05/25 13:44		rubina	OK
18	Q2198-02	B-202-SB02	SAM	06/05/25 13:44		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136021

Review By	rubina	Review On	6/5/2025 5:39:07 PM
Supervise By	Iwona	Supervise On	6/6/2025 9:40:17 AM
SubDirectory	LB136021	Test	Reactive Cyanide
STD. NAME	STD REF.#		
ICAL Standard	WP113382,WP113383,WP113384,WP113385,WP113386,WP113387,WP113388		
ICV Standard	WP113389		
CCV Standard	WP113383		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112643,WP112900,WP113390		

19	Q2198-04	B-207-SB02	SAM	06/05/25 13:44		rubina	OK
20	Q2206-04	TP-1	SAM	06/05/25 13:44		rubina	OK
21	Q2207-09	BU-703-COMP-01	SAM	06/05/25 13:44		rubina	OK
22	CCV2	CCV2	CCV	06/05/25 13:52		rubina	OK
23	CCB2	CCB2	CCB	06/05/25 13:52		rubina	OK
24	Q2207-18	BU-703-COMP-02	SAM	06/05/25 13:52		rubina	OK
25	Q2207-27	BU-703-COMP-03	SAM	06/05/25 13:52		rubina	OK
26	Q2207-36	BU-703-COMP-04	SAM	06/05/25 13:52		rubina	OK
27	Q2207-45	BU-703-COMP-05	SAM	06/05/25 13:52		rubina	OK
28	Q2208-09	BU-703-COMP-06	SAM	06/05/25 13:52		rubina	OK
29	Q2208-18	BU-703-COMP-07	SAM	06/05/25 13:59		rubina	OK
30	Q2208-27	BU-703-COMP-08	SAM	06/05/25 13:59		rubina	OK
31	Q2208-36	BU-703-COMP-09	SAM	06/05/25 13:59		rubina	OK
32	PB168294BL	PB168294BL	MB	06/05/25 13:59		rubina	OK
33	Q2226-04	TP06-MHI-WC	SAM	06/05/25 13:59		rubina	OK
34	CCV3	CCV3	CCV	06/05/25 13:59		rubina	OK
35	CCB3	CCB3	CCB	06/05/25 14:07		rubina	OK
36	Q2226-04DUP	TP06-MHI-WCDUP	DUP	06/05/25 14:07		rubina	OK
37	Q2227-04	TP07-MHH-WC	SAM	06/05/25 14:07		rubina	OK
38	Q2228-04	TP08-MHI-WC	SAM	06/05/25 14:07		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB136021

Review By	rubina	Review On	6/5/2025 5:39:07 PM
Supervise By	Iwona	Supervise On	6/6/2025 9:40:17 AM
SubDirectory	LB136021	Test	Reactive Cyanide
STD. NAME	STD REF.#		
ICAL Standard	WP113382,WP113383,WP113384,WP113385,WP113386,WP113387,WP113388		
ICV Standard	WP113389		
CCV Standard	WP113383		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112643,WP112900,WP113390		

39	Q2235-03	WC-A2-08-C	SAM	06/05/25 14:07		rubina	OK
40	Q2236-03	WC-A4-05A-C	SAM	06/05/25 14:07		rubina	OK
41	Q2236-07	WC-A2-04-C	SAM	06/05/25 14:07		rubina	OK
42	Q2236-11	WC-A2-05-C	SAM	06/05/25 14:07		rubina	OK
43	Q2236-15	WC-A2-06-C	SAM	06/05/25 14:07		rubina	OK
44	Q2236-19	WC-A2-07-C	SAM	06/05/25 14:07		rubina	OK
45	CCV4	CCV4	CCV	06/05/25 14:12		rubina	OK
46	CCB4	CCB4	CCB	06/05/25 14:12		rubina	OK

Instrument ID: TITRAMETRIC

Daily Analysis Runlog For Sequence/QC Batch ID # LB136023

Review By	rubina	Review On	6/5/2025 3:53:13 PM
Supervise By	Iwona	Supervise On	6/5/2025 4:20:18 PM
SubDirectory	LB136023	Test	Reactive Sulfide
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	W3105,W3213,W3149		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	Q2206-04	TP-1	SAM	06/04/25 14:24		rubina	OK
2	PB168267BL	PB168267BL	MB	06/04/25 17:03		rubina	OK
3	Q2185-04	TP02-MHB-WC	SAM	06/04/25 17:06		rubina	OK
4	Q2185-04DUP	TP02-MHB-WCDUP	DUP	06/04/25 17:09		rubina	OK
5	Q2185-08	TP01-MHA-WC	SAM	06/04/25 17:11		rubina	OK
6	Q2194-02	COMP-12	SAM	06/04/25 17:15		rubina	OK
7	Q2194-04	COMP-13	SAM	06/04/25 17:18		rubina	OK
8	Q2198-02	B-202-SB02	SAM	06/04/25 17:20		rubina	OK
9	Q2198-04	B-207-SB02	SAM	06/04/25 17:22		rubina	OK
10	Q2207-09	BU-703-COMP-01	SAM	06/04/25 17:26		rubina	OK
11	Q2207-18	BU-703-COMP-02	SAM	06/04/25 17:29		rubina	OK
12	Q2207-27	BU-703-COMP-03	SAM	06/04/25 17:32		rubina	OK
13	Q2207-36	BU-703-COMP-04	SAM	06/04/25 17:35		rubina	OK
14	Q2207-45	BU-703-COMP-05	SAM	06/04/25 17:37		rubina	OK
15	Q2208-09	BU-703-COMP-06	SAM	06/04/25 17:40		rubina	OK
16	Q2208-18	BU-703-COMP-07	SAM	06/04/25 17:42		rubina	OK
17	Q2208-27	BU-703-COMP-08	SAM	06/04/25 17:45		rubina	OK
18	Q2208-36	BU-703-COMP-09	SAM	06/04/25 17:47		rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136024

Review By	rubina	Review On	6/5/2025 4:28:45 PM
Supervise By	Iwona	Supervise On	6/9/2025 1:16:19 PM
SubDirectory	LB136024	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	WP113405,WP112831,WP112830,WP113087		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	06/05/25 13:00		rubina	OK
2	CAL2	CAL2	CAL	06/05/25 13:01		rubina	OK
3	CAL3	CAL3	CAL	06/05/25 13:02		rubina	OK
4	CAL4	CAL4	CAL	06/05/25 13:03		rubina	OK
5	CAL5	CAL5	CAL	06/05/25 13:04		rubina	OK
6	CAL6	CAL6	CAL	06/05/25 13:05		rubina	OK
7	CAL7	CAL7	CAL	06/05/25 13:06		rubina	OK
8	ICV	ICV	ICV	06/05/25 13:07		rubina	OK
9	CCV1	CCV1	CCV	06/05/25 13:09		rubina	OK
10	CCB1	CCB1	CCB	06/05/25 13:10		rubina	OK
11	RL Check	RL Check	SAM	06/05/25 13:11		rubina	OK
12	PB168265BL	PB168265BL	MB	06/05/25 13:12		rubina	OK
13	PB168265BS	PB168265BS	LCS	06/05/25 13:13		rubina	OK
14	Q2185-01	TP02-MHB-WC	SAM	06/05/25 13:14		rubina	OK
15	Q2185-01DUP	TP02-MHB-WCDUP	DUP	06/05/25 13:15		rubina	OK
16	Q2185-01MSPre	TP02-MHB-WCMS	MS	06/05/25 13:16		rubina	OK
17	Q2185-01MS2Ins	TP02-MHB-WCMS	MS	06/05/25 13:17		rubina	OK
18	Q2185-01MS3Post	TP02-MHB-WCMS	MS	06/05/25 13:18		rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136024

Review By	rubina	Review On	6/5/2025 4:28:45 PM
Supervise By	Iwona	Supervise On	6/9/2025 1:16:19 PM
SubDirectory	LB136024	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	WP113405,WP112831,WP112830,WP113087		

19	Q2185-05	TP01-MHA-WC	SAM	06/05/25 13:19		rubina	OK
20	Q2194-01	COMP-12	SAM	06/05/25 13:20		rubina	OK
21	Q2194-03	COMP-13	SAM	06/05/25 13:21		rubina	OK
22	CCV2	CCV2	CCV	06/05/25 13:22		rubina	OK
23	CCB2	CCB2	CCB	06/05/25 13:23		rubina	OK
24	Q2195-01	OK-01-060325	SAM	06/05/25 13:24		rubina	OK
25	Q2198-01	B-202-SB02	SAM	06/05/25 13:25		rubina	OK
26	Q2198-03	B-207-SB02	SAM	06/05/25 13:26		rubina	OK
27	Q2206-01	TP-1	SAM	06/05/25 13:27		rubina	OK
28	Q2207-01	BU-703-COMP-01	SAM	06/05/25 13:28		rubina	OK
29	Q2207-10	BU-703-COMP-02	SAM	06/05/25 13:29		rubina	OK
30	Q2207-19	BU-703-COMP-03	SAM	06/05/25 13:30		rubina	OK
31	Q2207-28	BU-703-COMP-04	SAM	06/05/25 13:31		rubina	OK
32	Q2207-37	BU-703-COMP-05	SAM	06/05/25 13:32		rubina	OK
33	Q2208-01	BU-703-COMP-06	SAM	06/05/25 13:33		rubina	OK
34	CCV3	CCV3	CCV	06/05/25 13:34		rubina	OK
35	CCB3	CCB3	CCB	06/05/25 13:35		rubina	OK
36	Q2208-10	BU-703-COMP-07	SAM	06/05/25 13:36		rubina	OK
37	Q2208-19	BU-703-COMP-08	SAM	06/05/25 13:37		rubina	OK
38	Q2208-28	BU-703-COMP-09	SAM	06/05/25 13:38		rubina	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136024

Review By	rubina	Review On	6/5/2025 4:28:45 PM
Supervise By	Iwona	Supervise On	6/9/2025 1:16:19 PM
SubDirectory	LB136024	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	WP113405,WP112831,WP112830,WP113087		

39	Q2224-01	EO-01-06042025	SAM	06/05/25 13:39		rubina	OK
40	Q2226-01	TP06-MHI-WC	SAM	06/05/25 13:40		rubina	OK
41	Q2227-01	TP07-MHH-WC	SAM	06/05/25 13:41		rubina	OK
42	CCV4	CCV4	CCV	06/05/25 13:42		rubina	OK
43	CCB4	CCB4	CCB	06/05/25 13:43		rubina	OK
44	ICB	ICB	ICB	06/05/25 17:08		rubina	OK

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB136042

Review By	jignesh	Review On	6/6/2025 2:47:29 PM
Supervise By	Iwona	Supervise On	6/9/2025 1:10:10 PM
SubDirectory	LB136042	Test	pH
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	W3178,W3093,W3191,W3071,W3161,W3200		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	06/06/25 12:15		jignesh	OK
2	CAL2	CAL2	CAL	06/06/25 12:16		jignesh	OK
3	CAL3	CAL3	CAL	06/06/25 12:17		jignesh	OK
4	ICV	ICV	ICV	06/06/25 12:20		jignesh	OK
5	CCV1	CCV1	CCV	06/06/25 12:25		jignesh	OK
6	Q2198-05	B-202-GW01	SAM	06/06/25 12:35		jignesh	OK
7	Q2198-05DUP	B-202-GW01DUP	DUP	06/06/25 12:37		jignesh	OK
8	Q2221-02	34900	SAM	06/06/25 12:44		jignesh	OK
9	Q2221-03	34867	SAM	06/06/25 12:55		jignesh	OK
10	Q2245-01	AU-25-0090	SAM	06/06/25 13:10		jignesh	OK
11	Q2245-02	AU-25-0091	SAM	06/06/25 13:15		jignesh	OK
12	CCV2	CCV2	CCV	06/06/25 13:20		jignesh	OK

Prep Standard - Chemical Standard Summary

Order ID : Q2198

Test : Corrosivity,Hexavalent Chromium,Ignitability,Percent Solids,pH,Reactive Cyanide,Reactive Sulfide,trivalent Chromium

Prepbatch ID : PB168265,PB168266,PB168267,

Sequence ID/Qc Batch ID: LB135998,LB136000,LB136005,LB136006,LB136021,LB136023,LB136024,LB136042,LB136074,LB136075

Standard ID :
WP111294,WP111315,WP111316,WP112643,WP112830,WP112831,WP112900,WP112903,WP112995,WP113085,WP113086,WP113087,WP113364,WP113365,WP113366,WP113367,WP113368,WP113369,WP113370,WP113371,WP113372,WP113373,WP113381,WP113382,WP113383,WP113384,WP113385,WP113386,WP113387,WP113388,WP113389,WP113390,WP113405,

Chemical ID :
E3937,M6041,M6151,M6158,W2202,W2651,W2652,W2668,W2725,W2926,W2979,W3019,W3071,W3093,W3105,W3112,W3113,W3139,W3149,W3152,W3161,W3163,W3168,W3173,W3178,W3191,W3200,W3203,W3206,W3213,W3214,



<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>
11	Sodium hydroxide absorbing solution 0.25 N	WP111294	01/07/2025	07/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC-5)	None	Iwona Zarych 01/07/2025
<u>FROM</u>	21.00000L of W3112 + 210.00000gram of W3113 = Final Quantity: 21.000 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>
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 (WCS-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>
539	CN BUFFER	WP112643	04/09/2025	10/09/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 04/09/2025
<u>FROM</u>	138.00000gram of W2668 + 862.00000ml 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>
607	PYRIDINE-BARBITURIC ACID	WP112900	05/01/2025	08/18/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	Glass Pipette-A	Iwona Zarych 05/01/2025
<u>FROM</u>	145.00000ml of W3112 + 15.00000gram of W3203 + 15.00000ml of M6151 + 75.00000ml of W3019 = Final Quantity: 250.000 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>
190	HEX CHROME PHOSPHATE BUFFER	WP112903	05/01/2025	11/01/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 05/01/2025
<u>FROM</u> 0.84500L of W3112 + 68.04000gram of W3206 + 87.09000gram of W3168 = Final Quantity: 1.000 L								

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>
3371	Cyanide LCS Spike Solution, 5PPM	WP112995	05/07/2025	07/07/2025	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 05/07/2025

FROM 1.00000ml of W3173 + 199.00000ml of WP111294 = Final Quantity: 200.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
148	hexchrome digestion fluid	WP113085	05/15/2025	06/15/2025	Rubina Mughal	WETCHEM_SCALE_8 (WC SC-7)	None	Iwona Zarych 05/15/2025

FROM 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>
160	0.5M ZINC ACETATE	WP113086	05/15/2025	08/18/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 05/15/2025
<u>FROM</u> 0.88900L of W3112 + 1.00000ml of M6151 + 110.00000gram of W2926 = 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>
3354	Hexchrome Cleaning Solution	WP113087	05/15/2025	08/18/2025	Rubina Mughal	None	None	Iwona Zarych 05/15/2025
<u>FROM</u> 182.00000ml of M6151 + 727.00000ml of W3112 + 91.00000ml of M6158 = 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>
1103	HEX CHROME INTERMEDIATE STD SOURCE 1 (5PPM)	WP113364	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 06/05/2025

FROM 9.00000ml of W3112 + 1.00000ml of WP111315 = 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>
110	calibration std. hexchrome 0 ppm	WP113365	06/04/2025	06/05/2025	Rubina Mughal	None	None	Jignesh Parikh 06/05/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
109	calibration std. hexchrome 0.01 ppm	WP113366	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/05/2025
<u>FROM</u> 99.80000ml of W3112 + 0.20000ml of WP113364 = 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>
3800	Calibration Std Hexachrome 0.025 ppm	WP113367	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/05/2025
<u>FROM</u> 99.50000ml of W3112 + 0.50000ml of WP113364 = Final Quantity: 100.000 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>
108	Calibration Std. hexchrome 0.05 ppm	WP113368	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/05/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP113364 = 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>
107	Calibration Std. hexchrome 0.1 ppm	WP113369	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/05/2025

FROM 99.80000ml of W3112 + 0.20000ml of WP11315 = 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>
3808	Calibration and CCV std HexChrome 0.5PPM	WP113370	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/05/2025
<u>FROM</u> 99.00000ml of W3112 + 1.00000ml of WP111315 = 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>
3809	Calibration std HexChrome 1.0PPM	WP113371	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 06/05/2025
<u>FROM</u> 98.00000ml of W3112 + 2.00000ml of WP111315 = Final Quantity: 100.000 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>
3804	Hexavalent Chromium ICV-LCS Std	WP113372	06/04/2025	06/05/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/05/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP111316 = 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>
114	hexavalent chromium color reagent	WP113373	06/04/2025	06/05/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 06/05/2025

FROM 0.25000gram of W2979 + 50.00000ml of E3937 = 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>
3456	Cyanide Intermediate Working Std, 5PPM	WP113381	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 0.25000ml of W3214 + 49.75000ml of WP111294 = 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>
4	Calibration standard 500 ppb	WP113382	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 45.00000ml of WP111294 + 5.00000ml of WP113381 = 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>
3761	Calibration-CCV CN Standard 250 ppb	WP113383	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 2.50000ml of WP113381 + 47.50000ml of WP111294 = 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>
6	Calibration Standard 100 ppb	WP113384	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 1.00000ml of WP113381 + 49.00000ml of WP111294 = 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>
7	Calibration Standard 50 ppb	WP113385	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 0.50000ml of WP113381 + 49.50000ml of WP111294 = 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>
8	Calibration Standard 10 ppb	WP113386	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 1.00000ml of WP113382 + 49.00000ml of WP111294 = 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>
9	Calibration Standard 5 ppb	WP113387	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 0.50000ml of WP113382 + 49.50000ml of WP111294 = 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>
167	0 ppb CN calibration std	WP113388	06/05/2025	06/06/2025	Rubina Mughal	None	None	Jignesh Parikh 06/06/2025

FROM 50.00000ml of WP111294 = 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>
2168	RCN ICV STD, 100 PPB	WP113389	06/05/2025	06/06/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 06/06/2025

FROM 1.00000ml of WP112995 + 49.00000ml of WP111294 = 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>
1582	Chloramine T solution, 0.014M	WP113390	06/05/2025	06/06/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	Glass Pipette-A	Jignesh Parikh 06/06/2025

FROM 0.08000gram of W3139 + 20.00000ml of W3112 = Final Quantity: 20.000 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>
114	hexavalent chromium color reagent	WP113405	06/05/2025	06/12/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Jignesh Parikh 06/06/2025
<u>FROM</u>	0.25000gram of W2979 + 50.00000ml of E3937 = Final Quantity: 50.000 ml							

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	24H1462005	11/22/2025	05/22/2025 / RUPESH	05/14/2025 / RUPESH	E3937

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)	22G2862015	08/18/2025	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

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

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

CHEMICAL RECEIPT LOG BOOK

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.	J3818-5 / SODIUM PHOSPHATE, MONOBAS/HYD, CRYST, ACS, 2.5 KG	0000225799	12/03/2025	04/05/2021 / Alexander	02/10/2020 / apatel	W2668

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EMD-FX0410-5 / FORMALDEHYDE SOLUTION 450ML	60045	06/22/2025	08/19/2024 / lwona	06/22/2020 / apatel	W2725

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J4296-1 / ZINC ACETATE, DIHYD, CRYST, ACS, 500G	383058	07/05/2027	07/05/2022 / ketankumar	07/05/2022 / ketankumar	W2926

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
SIGMA ALDRICH	270970-1L / Pyridine 1L	SHBQ2113	04/03/2028	04/03/2023 / lwona	04/03/2023 / lwona	W3019

CHEMICAL RECEIPT LOG BOOK

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

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

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

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	JTE494-6 / CHLORAMINE-T BAKER 250GM	10239484	09/09/2029	09/09/2024 / Iwona	09/09/2024 / Iwona	W3139

CHEMICAL RECEIPT LOG BOOK

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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.	J3252-1 / POTAS PHOSPHATE, DIBASIC PWD, ACS, 500G	24H0856239	04/19/2028	01/03/2025 / lwona	01/03/2025 / lwona	W3168

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	LC135457 / Cyanide Standard, 1000 PPM, Second Source	45010168	07/17/2025	01/24/2025 / lwona	01/24/2025 / lwona	W3173

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14055-3 / PH 4 BUFFER SOLUTION	2411A93	10/30/2026	04/01/2025 / JIGNESH	01/27/2025 / jignesh	W3178

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1601-1 / PH 10.01 BUFFER,COLOR CD 475ML	2410F80	03/31/2026	04/01/2025 / JIGNESH	03/13/2025 / jignesh	W3191

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
RICCA CHEMICAL COMPANY	1615-16 / pH 12.00 Buffer	2504F20	09/30/2026	04/11/2025 / lwona	04/11/2025 / lwona	W3200

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-BX0035-3 / Barbituric Acid, 100 gms	WXBFB3271V	05/16/2029	04/21/2025 / lwona	04/21/2025 / lwona	W3203

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	MKCX1379	01/31/2029	04/29/2025 / lwona	04/29/2025 / lwona	W3206

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL35830-4 / IODINE SOLUTION .025N 1L	MK25A21527	01/20/2029	05/21/2025 / lwona	05/21/2025 / lwona	W3213

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	RC2543-4 / CYANIDE STD 1000PPM 4OZ	1505H73	11/30/2025	05/21/2025 / lwona	05/21/2025 / lwona	W3214

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

W3071
Rec 12/6/23

Certificate of Analysis 12

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

Lot Number: 4308H30

Product Number: 1551

Manufacture Date: AUG 09, 2023

Expiration Date: JUL 2025

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

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

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

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

Test	Specification	Result
Appearance	Yellow liquid	Passed

*Not a certified value.

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

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

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

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

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



Paul Brandon (08/09/2023)

Production Manager

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

This product was tested in an ISO 17025 Accredited Laboratory

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

W3019
rec 4/3/23

3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

Certificate of Analysis

Product Name:

Pyridine - anhydrous, 99.8%

Product Number:

270970

Batch Number:

SHBQ2113

Brand:

SIAL

CAS Number:

110-86-1

MDL Number:

MFCD00011732

Formula:

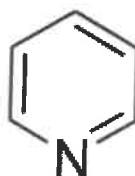
C₅H₅N

Formula Weight:

79.10 g/mol

Quality Release Date:

15 DEC 2022



Test	Specification	Result
Appearance (Color)	Colorless	Colorless
Appearance (Form)	Liquid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Purity (GC)	≥ 99.75 %	99.99 %
Water (by Karl Fischer)	≤ 0.003 %	0.002 %
Residue on Evaporation	≤ 0.0005 %	< 0.0001 %


Larry Coers, Director
Quality Control
Sheboygan Falls, 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.





Certificate of Analysis

Date of Release: 2/26/2020

Name: Formaldehyde Solution
GR ACS
Meets ACS Specifications

Item No: FX0410 all size codes

Lot / Batch No: 60045

Country of Origin: USA

Characteristic	Requirement		Results	Units
	Min.	Max.		
Assay	36.5	38.0	36.71	%
Chloride (Cl)		5	<5	ppm
Color (APHA)		10	<10	
Form			Passes test	
Heavy metals (as Pb)		5	<5	ppm
Iron (Fe)		5	0.6	ppm
Residue after ignition		0.005	<0.0050	%
Sulfate (SO ₄)		0.002	<0.0020	%
Titrate acid		0.006	<0.0060	meq/g

Heather Sinn,

Quality Control Manager

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

EMD Millipore Corporation, an affiliate of Merck KGaA, Darmstadt, Germany
290 Concord Road
Billerica, MA 01821
U.S.A

The life science business of Merck KGaA, Darmstadt, Germany operates as MilliporeSigma in the U.S. and Canada.



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

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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.

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H1462005

Manufactured Date: 2024-05-24

Expiration Date: 2027-05-24

Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ((CH ₃) ₂ CO) (by GC, corrected for water)	>= 99.4 %	99.8 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.2 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (µeq/g)	<= 0.3	0.2
Titration Base (µeq/g)	<= 0.6	<0.1
Water (H ₂ O)	<= 0.5 %	0.2 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	<= 5	<1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	<= 10	1

For Laboratory, Research, or Manufacturing Use

MEETS SPECIFICATIONS WITHIN THE EXPIRATION PERIOD

Country of Origin: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

E3937

Jamie Croak
Director Quality Operations, Bioscience Production

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

Avantor Performance Materials LLC

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

avantor™



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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

 **avantor™**

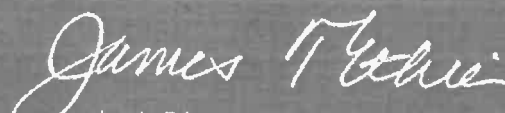


Material No.: 9673-33
Batch No.: 23D2462010

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality

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

 **avantor™**



M6151

R → 11/15/25

Material No.: 9530-33
Batch No.: 22G2862015
Manufactured Date: 2022-06-15
Retest Date: 2027-06-14
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl ₂)	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO ₄)	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO ₄)	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO ₃)	≤ 0.8 ppm	0.3 ppm
Ammonium (NH ₄)	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

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

 **avantorsm**



Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

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



Material No.: 9530-33
Batch No.: 22G2862015

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications
Storage Condition: Store below 25 °C.

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

A handwritten signature in cursive script that reads 'Jamie Ethier'.
Jamie Ethier
Vice President Global Quality

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

Sodium Phosphate, Monobasic, Monohydrate,
Crystal
BAKER ANALYZED® A.C.S. Reagent

(sodium dihydrogen phosphate, monohydrate)



Material No.: 3818-05
Batch No.: 0000225799
Manufactured Date: 2018/12/05
Retest Date: 2025/12/03
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay ($\text{NaH}_2\text{PO}_4 \cdot \text{H}_2\text{O}$)	98.0 – 102.0 %	99.5
pH of 5% Solution at 25°C	4.1 – 4.5	4.3
Insoluble Matter	$\leq 0.01 \%$	< 0.01
Chloride (Cl)	$\leq 5 \text{ ppm}$	< 5
ACS – Sulfate (SO_4)	$\leq 0.003 \%$	< 0.003
Calcium (Ca)	$\leq 0.005 \%$	< 0.005
Potassium (K)	$\leq 0.01 \%$	< 0.01
Heavy Metals (as Pb)	$\leq 0.001 \%$	< 0.001
Trace Impurities – Iron (Fe)	$\leq 0.001 \%$	< 0.001

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

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


Jamie Ethier
Vice President Global Quality

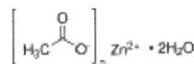
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

Certificate of Analysis

Product Name:

Zinc acetate dihydrate - ACS reagent, $\geq 98\%$

Product Number: 383058
Batch Number: MKCQ9159
Brand: SIGALD
CAS Number: 5970-45-6
MDL Number: MFCD00066961
Formula: $C_4H_6O_4Zn \cdot 2H_2O$
Formula Weight: 219.51 g/mol
Quality Release Date: 06 JAN 2022



W2926
Open 7/5/22
received
on
7/5/22

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystal or Chunk(s)	Powder
Infrared Spectrum	Conforms to Structure	Conforms
Insoluble Matter	$\leq 0.005\%$	0.003 %
Calcium (Ca)	$\leq 0.005\%$	0.003 %
Chloride (Cl)	≤ 5 ppm	< 5 ppm
Iron (Fe)	≤ 5 ppm	< 5 ppm
Potassium (K)	$\leq 0.01\%$	0.00 %
Magnesium (Mg)	$\leq 0.005\%$	0.003 %
Sodium (Na)	$\leq 0.05\%$	0.03 %
Lead (Pb)	$\leq 0.002\%$	$< 0.001\%$
pH	6.0 - 7.0	6.1
Sulfate (SO ₄)	$\leq 0.005\%$	$< 0.005\%$
Complexometric EDTA	98.0 - 101.0 %	100.3 %
Meets ACS Requirements	Meets Requirements	Meets Requirements


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.



3050 Spruce Street, Saint Louis, MO 63103, USA

Website: www.sigmaaldrich.comEmail USA: techserv@sial.comOutside USA: eurtechserv@sial.com

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:

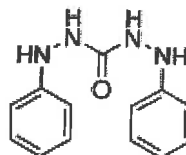
C₁₃H₁₄N₄O

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.



**RICCA CHEMICAL COMPANY®**

1490 Lammers Pike

Batesville, IN 47006

<http://www.riccachemical.com>

1-888-GO-RICCA

customerservice@riccachemical.com

Certificate of Analysis

W3093
004121
04/03/2024
16

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

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

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

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

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

Test	Specification	Result
Appearance	Yellow liquid	Passed

*Not a certified value.

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

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

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

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

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



Paul Brandon (01/08/2024)

Production Manager

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

This product was tested in an ISO 17025 Accredited Laboratory

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

Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 4403S13

Product Number: 7900

Manufacture Date: MAR 29, 2024

Expiration Date: SEP 2025

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

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

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

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

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

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

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



Paul Brandon (03/29/2024)

Production Manager

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Contents of Certificates and Labels."

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Certificate of Analysis



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.

W3139 Received on 9/9/24 by IZ

Product No.: A12044
Product: Chloramine-T trihydrate, 98%
Lot No.: 10239484

Appearance:	White powder
Melting Point:	166°C(dec)
Assay (Iodometric titration):	100.5%
Identification (FTIR):	Conforms

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Products are processed under ISO 9001:2015 quality management systems and samples are tested for conformance to the noted specifications. Certain data may have been supplied by third parties. We disclaim the implied warranties of merchantability and fitness for a particular purpose, and the accuracy of third party data or information associated with the product. Products are for research and development use only. Products are not for direct administration to humans or animals. It is the responsibility of the final formulator or end user to determine suitability, and to qualify and/or validate each product for its intended use.



Certificate of Analysis

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

Lot Number: 4408P62

Product Number: 8000

Manufacture Date: AUG 28, 2024

Expiration Date: AUG 2026

This product is Mercury-free.

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

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

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

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

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

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

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

Paul Brandon (08/28/2024)
Production Manager

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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



Certificate of Analysis

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

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

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

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

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

Test	Specification	Result
Appearance	Colorless liquid	Passed

*Not a certified value.

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

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

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

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



Jose Pena (11/11/2024)
Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory

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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.



Material	BDH9266-500G
Material Description	BDH POTASS PHOSPHAT DBSC 500GM
Grade	ACS GRADE
Batch	24H0856239
Reassay Date	04/19/2028
CAS Number	7758-11-4
Molecular Formula	K ₂ HPO ₄
Molecular Mass	174.18
Date of Manufacture	04/19/2024
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	Fine white crystalline powder	Fine white crystalline powder
Chloride	<= 0.003 %	0.002 %
Heavy Metals (as Pb)	<= 0.0005 %	<0.0005 %
Insolubles	<= 0.01 %	<0.01 %
Iron	<= 0.001 %	<0.001 %
Loss on Drying	<= 1.0 %	<0.5 %
Nitrogen Compounds	<= 0.001 %	<0.001 %
pH (5%, Water) @25C	8.5 - 9.6	8.8
Purity	>= 98.0 %	99.1 %
Sodium	<= 0.05 %	<0.05 %
Sulfate	<= 0.005 %	<0.002 %
CUSTOMER PART # BDH9266-500G		

Internal ID #: 793

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.



Part of TCP Analytical Group

Jackson's Pointe Commerce Park- Building 1000
1010 Jackson's Pointe Court, Zelienople, PA 16063

Certificate of Analysis

Cyanide Standard 1000 ppm (1ml = 1mg CN)

Product Code: **LC13545**

Manufacture Date: January 16, 2025

Lot Number: **45010168**

Expiration Date: July 17, 2025

Test	Specification	Result
Appearance (clarity)	clear solution	clear solution
Appearance (color)	colorless	colorless
Concentration (CN)	0.990 - 1.010mg/mL	1.000mg/mL
Concentration (CN)	990 - 1,010ppm	1,000ppm
Traceable to NIST SRM	Report	999b

Intended Use - Product is intended for use in manufacturing procedures and laboratory procedures and protocols.

Storage Information - Unless noted on the product label, store the product under normal lab conditions in its tightly closed, original container. Do not pipet directly from the container or return unused portions to the container.

Instructions for Handling and Use - Please refer to the associated product label and Safety Data Sheet (SDS) for information regarding safety and handling of this product.

Preparation - All products are manufactured and tested according to established, documented procedures and methodology. Production documentation records manufacturing data, raw material traceability and testing history on a per lot basis. Balances, thermometers, and glassware are calibrated before first use and on a regular schedule with references traceable to NIST

The suffix of the product code may differ from what is on your product label. The suffix will designate the size and be associated with a numeric digit(s). Visit LabChem.com for more information

Suffix	1	2	3/3S/36/36S	4/4C	5	6	7	8	9	20	44	200	246	486
Size	500mL org	1L or 1kg	2.5L/2.5L Coated/6x2.5L/6x2.5L Coated	4L	20L	10L	125mL	25g	100g	20x20mL	4x4L	200L	24x6mL	48x6mL

Michael Monteleone

Michael Monteleone
Chemistry Supervisor - Quality Control
2025011610:36:11bsturges-0-0

ISO9001:2015 Registration #0306-01

**RICCA CHEMICAL COMPANY®**

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

Certificate of Analysis

W21758 58

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

Lot Number: 2411A93

Product Number: 1501

Manufacture Date: NOV 04, 2024

Expiration Date: OCT 2026

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

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

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

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

Test	Specification	Result
Appearance	Red liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	4.008	0.02	185i, 186-I-g, 186-II-g

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

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1501-16	500 mL natural poly	24 months
1501-2.5	10 L Cubitainer®	24 months
1501-5	20 L Cubitainer®	24 months

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



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

Lot Number: 2410F80

Product Number: 1601

Manufacture Date: OCT 09, 2024

Expiration Date: MAR 2026

The certified value for this product is confirmed in independent testing by a second qualified chemist.
The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

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

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

Test	Specification	Result
Appearance	Blue liquid	Passed

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	10.009	0.02	186-I-g, 186-II-g, 191d

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

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
1601-1	4 L natural poly	18 months
1601-16	500 mL natural poly	18 months
1601-1CT	4 L Cubitainer®	18 months
1601-2.5	10 L Cubitainer®	18 months
1601-32	1 L natural poly	18 months
1601-5	20 L Cubitainer®	18 months

Version: 1.3

Lot Number: 2410F80

Product Number: 1601

Page 1 of 2



Certificate of Analysis

Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C**Lot Number:** 2504F20**Product Number:** 1615**Manufacture Date:** APR 08, 2025**Expiration Date:** SEP 2026

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

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

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

Test	Specification	Result
Appearance	Colorless liquid	Passed

*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	12.009	0.02	186-I-g, 186-II-g, 191d

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

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

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



Jose Pena (04/08/2025)
Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory

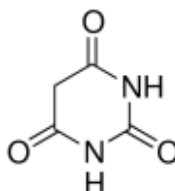
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Certificate of Analysis

Product Name:

Barbituric acid - ReagentPlus® , 99%

Product Number: 185698
Batch Number: WXBFB3271V
Brand: SIAL
CAS Number: 67-52-7
Formula: C₄H₄N₂O₃
Formula Weight: 128,09 g/mol
Quality Release Date: 16 MAY 2024



Test	Specification	Result
Appearance (Colour)	White to Off-White	White
Appearance (Form)	Powder	Powder
Infrared spectrum	Conforms to Structure	Conforms
Purity (Titration by NaOH)	98.5 - 101.5 %	100.4 %
GC (area %)	≥ 98 %	100 %
VPCT		



Kang Chen
Quality Manager
Wuxi , China CN

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.

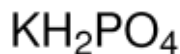


Certificate of Analysis

Product Name:

Potassium phosphate monobasic - ACS reagent, ≥99.0%

Product Number: P0662
Batch Number: MKCX1379
Brand: SIGALD
CAS Number: 7778-77-0
MDL Number: MFCD00011401
Formula: H₂KO₄P
Formula Weight: 136.09 g/mol
Quality Release Date: 27 JAN 2025
Recommended Retest Date: JAN 2029



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals	Crystals
Assay	≥ 99.0 %	99.9 %
Insoluble Matter	≤ 0.01 %	< 0.01 %
Loss on Drying	≤ 0.2 %	< 0.1 %
At 105°C		
pH	4.1 - 4.5	4.5
(c = 5%, 25 deg C)		
Chloride Content	≤ 0.001 %	< 0.001 %
Sulfate (SO ₄)	≤ 0.003 %	< 0.003 %
Heavy Metals	≤ 0.001 %	< 0.001 %
by ICP		
Iron (Fe)	≤ 0.002 %	< 0.001 %
Sodium (Na)	≤ 0.005 %	< 0.001 %
Recommended Retest Period	-----	-----
4 Years		



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.





Material	BDHVBDH7206-1
Material Description	IODINE SOLUTION 0.025N
Lot	25A2461008
Expires end of	2029-Jan-20
Molecular mass	0
Last Quality Control	2025-Jan-24
Date of manufacture	2025-Jan-21
Made in	United States
Manufacturer Source Batch	MK25A21527

Additional information

Characteristics	Specifications	Measured values
Prepared to formulation on file	Confirmed	Confirmed
Appearance	Passes Test	Passes Test
Normality, N	0.0200 - 0.0300	0.0268

Signature

We certify that this batch conforms to the specifications listed above.

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

Michelle Bales - Sr. Manager Quality Assurance
 Avantor Performance Materials, LLC

For Professional use in Laboratory or Manufacturing. Not for use as an Active Pharmaceutical Ingredient or Food or Animal Feed. Suitability and intended use of the product remains the responsibility of the user.

VWR International LLC, Radnor Corporate Center, Building One, Suite 200, 100 Matsonford Road, Radnor, PA 19087, USA.

VWR International bv, Haasrode Research Park Zone 2020, Geldenaaksebaan 464, 3001 Leuven, Belgium

BDHVBDH72 25A2461008 Page 1 / 1

Certificate of Analysis

Cyanide Standard, 1000 ppm CN⁻

Lot Number: 1505H73

Product Number: 2543

Manufacture Date: MAY 08, 2025

Expiration Date: NOV 2025

This standard is prepared using accurate volumetric techniques from material that has been assayed against Silver Nitrate solution certified traceable to NIST Standard Reference Material 999. The certified value reported is the prepared value based upon the method of preparation of the material. The uncertainty in the prepared value is the combined uncertainty based on the stability of the assayed Potassium Cyanide, and the uncertainty in the mass and volume measurements.

Use 0.16% (w/v) (0.04 N) Sodium Hydroxide or 0.225 % (w/v) (0.04 N) Potassium Hydroxide to make dilutions of this standard. Restandardize weekly if extreme accuracy is required.

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

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

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

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
2543-16	500 mL amber poly	6 months
2543-32	1 L amber poly	6 months
2543-4	120 mL amber poly	6 months

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



Ernest Mahan (05/08/2025)
Plant Manager

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PERCENT SOLID

Supervisor: Iwona
Analyst: jignesh
Date: 6/5/2025

OVENTEMP IN Celsius(°C): 108
Time IN: 17:25
In Date: 06/04/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
OvenID: M OVEN#1

OVENTEMP OUT Celsius(°C): 103
Time OUT: 08:26
Out Date: 06/05/2025
Weight Check 1.0g: 1.00
Weight Check 10g: 10.00
BalanceID: M SC-4
Thermometer ID: % SOLID- OVEN

QC:LB135996

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
Q2198-01	B-202-SB02	1	1.18	10.51	11.69	8.74	71.9	
Q2198-03	B-207-SB01	2	1.19	10.01	11.2	6.41	52.1	
Q2199-01	ETGI-343	3	1.15	10.53	11.68	9.98	83.9	
Q2199-02	ETGI-343	4	1.19	10.46	11.65	10.55	89.5	
Q2199-03	VNJ-231	5	1.17	10.34	11.51	10.4	89.3	
Q2199-04	VNJ-231	6	1.12	10.63	11.75	10.13	84.8	
Q2199-05	72-11978	7	1.13	10.47	11.6	10.7	91.4	
Q2199-06	72-11978	8	1.13	10.62	11.75	10.66	89.7	
Q2206-01	TP-1	9	1.18	10.47	11.65	10.38	87.9	
Q2206-02	TP-1-EPH	10	1.15	10.03	11.18	10.00	88.2	
Q2206-03	TP-1-VOC	11	1.11	10.44	11.55	10.3	88.0	
Q2215-01	BC122669-1-1	12	1.00	1.00	2.00	2.00	100.0	oilc
Q2215-02	BC122669-1-2	13	1.00	1.00	2.00	2.00	100.0	oilc
Q2215-03	BC283059-1-1	14	1.00	1.00	2.00	2.00	100.0	oilc
Q2215-04	BC283059-1-2	15	1.00	1.00	2.00	2.00	100.0	oilc
Q2216-01	3898	16	1.00	1.00	2.00	2.00	100.0	debris
Q2217-01	HEH707X-1-1	17	1.00	1.00	2.00	2.00	100.0	oilc
Q2217-02	HEH707X-1-2	18	1.00	1.00	2.00	2.00	100.0	oilc

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

WORKLIST(Hardcopy Internal Chain)

LB 135996

WorkList Name : %1-060425 WorkList ID : 189903 Department : Wet-Chemistry Date : 06-04-2025 08:10:46

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q2198-01	B-202-SB02	Solid	Percent Solids	Cool 4 deg C	PORT06	N22	05/31/2025	Chemtech -SO
Q2198-03	B-207-SB01	Solid	Percent Solids	Cool 4 deg C	PORT06	N22	06/01/2025	Chemtech -SO
Q2199-01	ETGI-343	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/03/2025	Chemtech -SO
Q2199-02	ETGI-343	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/03/2025	Chemtech -SO
Q2199-03	VNJ-231	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/03/2025	Chemtech -SO
Q2199-04	VNJ-231	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/03/2025	Chemtech -SO
Q2199-05	72-11978	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/03/2025	Chemtech -SO
Q2199-06	72-11978	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/03/2025	Chemtech -SO
Q2215-04	BC283059-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/03/2025	Chemtech -SO
Q2216-01	3898	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2217-01	HEH707X-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2217-02	HEH707X-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2206-01	TP-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2206-02	TP-1-EPH	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2206-03	TP-1-VOC	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2215-01	BC122669-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2215-02	BC122669-1-2	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO
Q2215-03	BC283059-1-1	Solid	Percent Solids	Cool 4 deg C	PSEG03	N31	06/04/2025	Chemtech -SO

Date/Time 06/04/25 16:26
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

Date/Time 06/04/25
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]



SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: Granet Fleming
ADDRESS: 1010 Adams Avenue
CITY: Quakam STATE: PA ZIP: 19403
ATTENTION: Joe Krinsky
PHONE: 610-310-8342 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: AMTRAK Sawtooth
PROJECT NO.: 95000878 LOCATION: Kony, NJ
PROJECT MANAGER: Joe Krinsky
e-mail: QAQC@BEMSYS.com
PHONE: 6103108342 FAX:

CLIENT BILLING INFORMATION

BILL TO: Alliance PO#:
ADDRESS: 284 Sheffield
CITY: Mountainside STATE: NJ ZIP: 07092
ATTENTION: Samara Beatty PHONE: 9887283143

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): 10 DAYS*
EDD: 10 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 BCM BPD

1. VOC + 10
2. SPEC - BVA-20
3. PCB
4. PAHs
5. TH Metals
6. G.IV (G.IV)
7. Full TSP
8. PCRA
9. EPH

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	
1.	B-202-SB02	S		X	5/31/05	1605	6	X	X	X		X	X	X	X	X	
2.	B-202-QU01	GW		X		2200	8	X	X	X		X	X	X	X	X	
3.	B-207-SB02	S		X	6/1/05	11:00	7	X	X	X		X	X	X	X	X	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	Conditions of bottles or coolers at receipt: ☐ COMPLIANT ☐ NON COMPLIANT ☐ COOLER TEMP _____ °C
1. <u>Vanda Pujara</u>	<u>06/02 - 9:57</u>	<u>[Signature]</u> <u>0452</u>	Comments: _____ _____ _____
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
2. <u>[Signature]</u>	<u>6-3-25</u>	<u>[Signature]</u>	
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	Page _____ of _____
3. <u>[Signature]</u>	<u>6-3-25</u>	<u>[Signature]</u>	CLIENT: ☐ Hand Delivered ☐ Other
			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

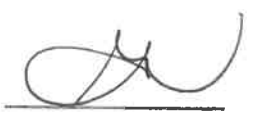
LOGIN REPORT/SAMPLE TRANSFER

Order ID : Q2198 PORT06
Client Name : Portal Partners Tri-Venture
Client Contact : Joseph Krupansky
Invoice Name : Portal Partners Tri-Venture
Invoice Contact : Joseph Krupansky

Order Date : 6/3/2025 2:31:00 PM
Project Name : Amtrak Sawtooth Bridges 2
Receive DateTime : 6/3/2025 ~~12:00:00~~ AM
Purchase Order : 19:02

Project Mgr :
Report Type : NJ Reduced
EDD Type : EXCEL NJCLEANUP
Hard Copy Date :
Date Signoff :

LAB ID	CLIENT ID	MATRIX	SAMPLE DATE	SAMPLE TIME	TEST	TEST GROUP	METHOD	FAX DATE	DUE DATES
Q2198-01	B-202-SB02	Solid	05/31/2025	16:55					
					VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2198-03	B-207-SB01 B-207-SB02	Solid	06/01/2025	20:00 11:04					
					VOC-TCLVOA-10		8260D	10 Bus. Days	
Q2198-05	B-202-GW01	Water	05/31/2025	44:04 20:00					
					VOC-TCLVOA-10		8260-Low	10 Bus. Days	

Relinquished By : 

Date / Time : 6/4/25 1040

Samples received on 6/3/25
Samples placed in SM-REF-2

Received By : 

Date / Time : 06/04/25 10:40

Storage Area : VOA Refrigerator Room

Reg #4
Reg #6
Fr2-2