

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:	Q1879	OrderDate:	4/24/2025 3:50:52 PM
Client:	METEM A GE POWER Business	Project:	Tank Farm - Acid Analysis
Contact:	Sundas Pervez	Location:	L41

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1879-01	STEM-31-SULFURIC-ACID	Water			04/23/25 21:00			04/24/25
			Acidity	SM2310 B			04/25/25 12:35	
			Alkalinity	SM2320 B			04/25/25 11:52	
			Ammonia	SM4500-NH3		04/25/25	04/25/25 12:09	
			pH	9040C			04/25/25 10:00	
			Phenolics	9065		04/25/25	04/25/25 16:34	
			TKN	SM4500-N Org C-11 plus NH3 B plus G-11		04/25/25	04/25/25 14:07	
Q1879-02	STEM-32-NITRIC-ACID	Water			04/24/25 09:00			04/24/25
			Acidity	SM2310 B			04/25/25 12:47	
			Alkalinity	SM2320 B			04/25/25 11:55	
			Ammonia	SM4500-NH3		04/25/25	04/25/25 12:09	
			pH	9040C			04/25/25 10:01	
			Phenolics	9065		04/25/25	04/25/25 16:34	

LAB CHRONICLE

TKN	SM4500-N	04/25/25	04/25/25
	Org C-11 plus		15:12
	NH3 B plus		
	G-11		

Q1879-03	STEM-46-NITRIC-ACID	Water	04/24/25	04/24/25
	D		09:00	

Acidity	SM2310 B		04/25/25
			13:02
Alkalinity	SM2320 B		04/25/25
			11:58
Ammonia	SM4500-NH3	04/25/25	04/25/25
			12:09
pH	9040C		04/25/25
			10:05
Phenolics	9065	04/25/25	04/25/25
			16:34
TKN	SM4500-N	04/25/25	04/25/25
	Org C-11 plus		14:07
	NH3 B plus		
	G-11		

Q1879-04	ACID-MIXTURE-TF-CO	Water	04/24/25	04/24/25
	NTAINMENT		12:00	

Acidity	SM2310 B		04/25/25
			13:14
Alkalinity	SM2320 B		04/25/25
			12:00
Ammonia	SM4500-NH3	04/25/25	04/25/25
			12:09
pH	9040C		04/25/25
			10:06
Phenolics	9065	04/25/25	04/25/25
			16:34
TKN	SM4500-N	04/25/25	04/25/25
	Org C-11 plus		15:12
	NH3 B plus		
	G-11		

Q1879-04DL	ACID-MIXTURE-TF-CO	WATER	04/24/25	04/24/25
	NTAINMENTDL		12:00	

LAB CHRONICLE

Ammonia

SM4500-NH3

04/25/25

04/25/25
12:55



SAMPLE DATA

Report of Analysis

Client:	METEM A GE POWER Business	Date Collected:	04/23/25 21:00
Project:	Tank Farm - Acid Analysis	Date Received:	04/24/25
Client Sample ID:	STEM-31-SULFURIC-ACID	SDG No.:	Q1879
Lab Sample ID:	Q1879-01	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Acidity	276000		1	4.00	10.0	mg/L		04/25/25 12:35	SM2310 B
Alkalinity	1.00	U	1	1.00	2.00	mg/L		04/25/25 11:52	SM 2320 B-11
Ammonia as N	0.36	J	1	0.30	1.00	mg/L	04/25/25 09:20	04/25/25 12:09	SM 4500-NH3 B plus G-11
pH	0.51	H	1	0	0	pH		04/25/25 10:00	9040C
Phenolics	0.15	U	1	0.15	0.50	mg/L	04/25/25 14:00	04/25/25 16:34	9065
TKN	1.40		1	0.11	0.50	mg/L	04/25/25 08:40	04/25/25 14:07	SM4500-N Org C-11 plus NH3 B plus G-11

Comments: The acidity to pH 8.36=276000 mg CaCO3/L, pH result reported at temperature 20.2 °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:	METEM A GE POWER Business	Date Collected:	04/24/25 09:00
Project:	Tank Farm - Acid Analysis	Date Received:	04/24/25
Client Sample ID:	STEM-32-NITRIC-ACID	SDG No.:	Q1879
Lab Sample ID:	Q1879-02	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Acidity	310000		1	4.00	10.0	mg/L		04/25/25 12:47	SM2310 B
Alkalinity	1.00	U	1	1.00	2.00	mg/L		04/25/25 11:55	SM 2320 B-11
Ammonia as N	19.4		1	0.30	1.00	mg/L	04/25/25 09:20	04/25/25 12:09	SM 4500-NH3 B plus G-11
pH	0.51	H	1	0	0	pH		04/25/25 10:01	9040C
Phenolics	0.15	U	1	0.15	0.50	mg/L	04/25/25 14:00	04/25/25 16:34	9065
TKN	1.90		1	0.11	0.50	mg/L	04/25/25 08:40	04/25/25 15:12	SM4500-N Org C-11 plus NH3 B plus G-11

Comments: The acidity to pH 8.36=310000 mg CaCO₃/L, pH result reported at temperature 20.2 °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:	METEM A GE POWER Business	Date Collected:	04/24/25 09:00
Project:	Tank Farm - Acid Analysis	Date Received:	04/24/25
Client Sample ID:	STEM-46-NITRIC-ACID	SDG No.:	Q1879
Lab Sample ID:	Q1879-03	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Acidity	463000		1	4.00	10.0	mg/L		04/25/25 13:02	SM2310 B
Alkalinity	1.00	U	1	1.00	2.00	mg/L		04/25/25 11:58	SM 2320 B-11
Ammonia as N	0.35	J	1	0.30	1.00	mg/L	04/25/25 09:20	04/25/25 12:09	SM 4500-NH3 B plus G-11
pH	0.51	H	1	0	0	pH		04/25/25 10:05	9040C
Phenolics	0.15	U	1	0.15	0.50	mg/L	04/25/25 14:00	04/25/25 16:34	9065
TKN	0.15	J	1	0.11	0.50	mg/L	04/25/25 08:40	04/25/25 14:07	SM4500-N Org C-11 plus NH3 B plus G-11

Comments: The acidity to pH 8.34=463000 mg CaCO3/L, pH result reported at temperature 20.2 °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:	METEM A GE POWER Business	Date Collected:	04/24/25 12:00
Project:	Tank Farm - Acid Analysis	Date Received:	04/24/25
Client Sample ID:	ACID-MIXTURE-TF-CONTAINMENT	SDG No.:	Q1879
Lab Sample ID:	Q1879-04	Matrix:	Water
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Acidity	323000		1	4.00	10.0	mg/L		04/25/25 13:14	SM2310 B
Alkalinity	1.00	U	1	1.00	2.00	mg/L		04/25/25 12:00	SM 2320 B-11
Ammonia as N	68.0	OR	1	0.30	1.00	mg/L	04/25/25 09:20	04/25/25 12:09	SM 4500-NH3 B plus G-11
pH	0.51	H	1	0	0	pH		04/25/25 10:06	9040C
Phenolics	0.15	U	1	0.15	0.50	mg/L	04/25/25 14:00	04/25/25 16:34	9065
TKN	6.70		1	0.11	0.50	mg/L	04/25/25 08:40	04/25/25 15:12	SM4500-N Org C-11 plus NH3 B plus G-11

Comments: The acidity to pH 8.35=323000 mg CaCO3/L, pH result reported at temperature 20.2 °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:	METEM A GE POWER Business	Date Collected:	04/24/25 12:00
Project:	Tank Farm - Acid Analysis	Date Received:	04/24/25
Client Sample ID:	ACID-MIXTURE-TF-CONTAINMENTDL	SDG No.:	Q1879
Lab Sample ID:	Q1879-04DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	68.9	D	5	1.50	5.00	mg/L	04/25/25 09:20	04/25/25 12:55	SM 4500-NH3 B plus G-11

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits



QC RESULT SUMMARY

Initial and Continuing Calibration Verification

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

RunNo.: LB135555

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV						
pH		pH	7.01	7	100	90-110	04/25/2025
Sample ID:	CCV1						
pH		pH	2.01	2.00	101	90-110	04/25/2025
Sample ID:	CCV2						
pH		pH	12.02	12.00	100	90-110	04/25/2025

Initial and Continuing Calibration Verification

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

RunNo.: LB135559

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Ammonia as N	mg/L	0.94	1	94	90-110	04/25/2025
Sample ID: CCV1 Ammonia as N	mg/L	0.95	1	95	90-110	04/25/2025
Sample ID: CCV2 Ammonia as N	mg/L	0.99	1	99	90-110	04/25/2025
Sample ID: CCV3 Ammonia as N	mg/L	0.93	1	93	90-110	04/25/2025
Sample ID: CCV4 Ammonia as N	mg/L	0.99	1	99	90-110	04/25/2025

Initial and Continuing Calibration Verification

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

RunNo.: LB135562

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
TKN		mg/L	4.7	5	94	90-110	04/25/2025
Sample ID:	CCV1						
TKN		mg/L	4.8	5	96	90-110	04/25/2025
Sample ID:	CCV2						
TKN		mg/L	5.1	5	102	90-110	04/25/2025

Initial and Continuing Calibration Verification

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

RunNo.: LB135563

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Phenolics	mg/L	1.1	1	110	90-110	04/25/2025
Sample ID: CCV1 Phenolics	mg/L	1	1	100	90-110	04/25/2025
Sample ID: CCV2 Phenolics	mg/L	1	1	100	90-110	04/25/2025

Initial and Continuing Calibration Blank Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

RunNo.: LB135559

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/25/2025
Sample ID: CCB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/25/2025
Sample ID: CCB2 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/25/2025
Sample ID: CCB3 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/25/2025
Sample ID: CCB4 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/25/2025

Initial and Continuing Calibration Blank Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

RunNo.: LB135562

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 TKN	mg/L	0.13	0.2500	J	0.11	0.5	04/25/2025
Sample ID: CCB1 TKN	mg/L	0.13	0.2500	J	0.11	0.5	04/25/2025
Sample ID: CCB2 TKN	mg/L	0.15	0.2500	J	0.11	0.5	04/25/2025

Initial and Continuing Calibration Blank Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

RunNo.: LB135563

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Phenolics	mg/L	< 0.0250	0.0250	U	0.015	0.05	04/25/2025
Sample ID: CCB1 Phenolics	mg/L	< 0.0250	0.0250	U	0.015	0.05	04/25/2025
Sample ID: CCB2 Phenolics	mg/L	< 0.0250	0.0250	U	0.015	0.05	04/25/2025

Preparation Blank Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB135557BL Acidity	mg/L	< 5.0000	5.0000	U	4	10	04/25/2025
Sample ID: LB135561BL Alkalinity	mg/L	< 1.0000	1.0000	U	1	2	04/25/2025
Sample ID: PB167733BL Ammonia as N	mg/L	< 0.0500	0.0500	U	0.03	0.1	04/25/2025
Sample ID: PB167734BL TKN	mg/L	0.13	0.2500	J	0.11	0.5	04/25/2025
Sample ID: PB167735BL Phenolics	mg/L	< 0.0250	0.0250	U	0.015	0.05	04/25/2025

Duplicate Sample Summary

Client:	METEM A GE POWER Business	SDG No.:	Q1879
Project:	Tank Farm - Acid Analysis	Sample ID:	Q1875-05
Client ID:	AUD-25-0051DUP	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
pH	pH	+/-20	4.26		4.27		1	0.23		04/25/2025

Laboratory Control Sample Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

Run No.: LB135557

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135557BS							
Acidity	mg/L	2500	2230		89	1	80-120	04/25/2025

Laboratory Control Sample Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

Run No.: LB135561

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135561BS							
Alkalinity	mg/L	50	46.1		92	1	80-120	04/25/2025

Laboratory Control Sample Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

Run No.: LB135559

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB167733BS							
Ammonia as N	mg/L	1	0.93		93	1	90-110	04/25/2025

Laboratory Control Sample Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

Run No.: LB135562

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB167734BS							
TKN	mg/L	5	4.80		96	1	90-110	04/25/2025

Laboratory Control Sample Summary

Client: METEM A GE POWER Business

SDG No.: Q1879

Project: Tank Farm - Acid Analysis

Run No.: LB135563

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB167735BS							
Phenolics	mg/L	1	1.10		110	1	80-120	04/25/2025



RAW DATA

Analytical Summary Report

Analysis Method: 9040C
Parameter: pH
Run Number: LB135555

Analyst By : jignesh

Supervisor Review By : Iwona

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
Buffer Solution, PH12 (500ml)	W3072

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

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

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

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.2	4.01	04/25/2025	09:01
2	CAL2	1	Water	NA	NA	20.2	7.00	04/25/2025	09:05
3	CAL3	1	Water	NA	NA	20.3	10.02	04/25/2025	09:06
4	ICV	1	Water	NA	NA	20.3	7.01	04/25/2025	09:10
5	CCV1	1	Water	NA	NA	20.2	2.01	04/25/2025	09:11
6	Q1875-05	1	Water	NA	NA	23.1	4.26	04/25/2025	09:20
7	Q1875-05DUP	1	Water	NA	NA	23.2	4.27	04/25/2025	09:21
8	Q1875-06	1	Water	NA	NA	23.2	4.18	04/25/2025	09:29
9	Q1875-07	1	Water	NA	NA	23.1	4.65	04/25/2025	09:33
10	Q1875-08	1	Water	NA	NA	23.2	4.80	04/25/2025	09:40
11	Q1879-01	1	Water	NA	NA	20.2	0.51	04/25/2025	10:00
12	Q1879-02	1	Water	NA	NA	20.2	0.51	04/25/2025	10:01
13	Q1879-03	1	Water	NA	NA	20.2	0.51	04/25/2025	10:05
14	Q1879-04	1	Water	NA	NA	20.2	0.51	04/25/2025	10:06
15	CCV2	1	Water	NA	NA	20.3	12.02	04/25/2025	10:10

WORKLIST(Hardcopy Internal Chain)

13555

WorkList Name : ph q1879 w WorkList ID : 189133 Department : Wet-Chemistry Date : 04-25-2025 07:37:12

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1875-05	AUD-25-0051	Water	pH	Cool 4 deg C	PSEG03	L41	04/24/2025	9040C
Q1875-06	AUD-25-0052	Water	pH	Cool 4 deg C	PSEG03	L41	04/24/2025	9040C
Q1875-07	AUD-25-0055	Water	pH	Cool 4 deg C	PSEG03	L41	04/24/2025	9040C
Q1875-08	AUD-25-0056	Water	pH	Cool 4 deg C	PSEG03	L41	04/24/2025	9040C
Q1879-01	STEM-31-SULFURIC-ACID	Water	pH	Cool 4 deg C	METE01	L41	04/23/2025	9040C
Q1879-02	STEM-32-SULFURIC-ACID	Water	pH	Cool 4 deg C	METE01	L41	04/24/2025	9040C
Q1879-03	STEM-46-SULFURIC-ACID	Water	pH	Cool 4 deg C	METE01	L41	04/24/2025	9040C
Q1879-04	ACID-MIXTURE-TF-CONTAININ	Water	pH	Cool 4 deg C	METE01	L41	04/24/2025	9040C

Date/Time 04/25/25 09:100

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 04/25/25

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Analytical Summary Report

Analysis Method: SM2310 B
Parameter: Acidity
Run Number: LB135557
Normality1 (T1): 0.02

Reviewed By: Iwona
Supervisor Review By: jignesh
Constant: 50,000
Normality2 (T2): 0.10
pH Meter ID: WC pH meter-1

Reagent/Standard	Lot/Log #
0.1N NaOH for Acidity	WP112846
0.1M Sodium thiosulfate	WP112848
Acidity-Alkalinity Stock Std(+2500PPM)	WP112844
Hydrogen Peroxide, 30% 1 gal	M6125
SULFURIC ACID, 0.02N, 4L	W3150
TEST PAPER, POT.IOD-STRCH, PK100, CS12	W3155

Seq	LabID	ClientID	TV (mg/L)	DL	Sample Vol (mL)	Residual Chlorine	Initial pH	T1 (mL)	Adj pH	T2 (mL)	End Point pH	Result (mg/L)	Anal Date	Anal Time
1	LB135557BL	LB135557BL		1	50.00	NEGATIVE	5.02	5.00	2.74	1.00	8.34	0.00	04/25/2025	12:20
2	LB135557BS	LB135557BS	2500	1	50.00	NEGATIVE	11.21	30.00	3.16	28.30	8.31	2,230.0	04/25/2025	12:25
3	Q1879-01	STEM-31-SULFURI		1	1.00	NEGATIVE	0.51	0.00	0.51	55.18	8.36	75,900.	04/25/2025	12:35
4	Q1879-02	STEM-32-NITRIC		1	1.00	POSITIVE	0.51	0.00	0.51	61.92	8.36	09,600.	04/25/2025	12:47
5	Q1879-03	STEM-46-NITRIC		1	1.00	POSITIVE	0.51	0.00	0.51	92.51	8.34	62,550.	04/25/2025	13:02
6	Q1879-04	ACID-MIXTURE-TE		1	1.00	POSITIVE	0.51	0.00	0.51	64.64	8.35	23,200.	04/25/2025	13:14

T1 = Titrant1 (H2SO4)

T2 = Titrant2 (NaOH)

Result = ((T2 * Normality2) - (T1 * Normality1)) * Constant / Sample Vol

WORKLIST(Hardcopy Internal Chain)

LB135557

WorkList Name : acidity-042525

WorkList ID : 189149

Department : Wet-Chemistry

Date : 04-25-2025 10:40:06

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1879-01	STEM-31-SULFURIC-ACID	Water	Acidity	Cool 4 deg C	METE01	L41	04/23/2025	SM2310 B
Q1879-02	STEM-32-SULFURIC-ACID	Water	Acidity	Cool 4 deg C	METE01	L41	04/24/2025	SM2310 B
Q1879-03	STEM-46-SULFURIC-ACID	Water	Acidity	Cool 4 deg C	METE01	L41	04/24/2025	SM2310 B
Q1879-04	ACID-MIXTURE-TF-CONTAINN	Water	Acidity	Cool 4 deg C	METE01	L41	04/24/2025	SM2310 B

Date/Time 04/25/25 10:40
Raw Sample Received by: 12 (SC)
Raw Sample Relinquished by: SP (SC)

Date/Time 04/25/25 13:20
Raw Sample Received by: SP (SC)
Raw Sample Relinquished by: 12 (SC)

LB135559

Test results

Aquakem 7.2AQ1

Page:

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

Reviewed by : RN

Instrument ID : Konelab

4/25/2025 12:55

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.936	0.0	0.188	
ICB1	0.002	0.0	0.017	
CCV1	0.949	0.0	0.190	
CCB1	-0.001	0.0	0.016	
RL CHECK.	0.092	0.0	0.033	
PB167731BL	-0.002	0.0	0.016	
PB167731BS	0.942	0.0	0.189	
Q1858-01	-0.003	0.0	0.016	
Q1858-01DUP	-0.004	0.0	0.016	
Q1858-01MS	0.942	0.0	0.189	
Q1858-01MSD	0.949	0.0	0.190	
Q1858-02	-0.004	0.0	0.016	
Q1858-03	-0.006	0.0	0.015	
Q1859-01	0.007	0.0	0.018	
CCV2	0.989	0.0	0.198	
CCB2	-0.002	0.0	0.016	
Q1859-02	0.462	0.0	0.101	
Q1859-03	0.007	0.0	0.018	
RL CHECK	0.087	0.0	0.032	
PB167733BL	-0.005	0.0	0.016	
PB167733BS	0.934	0.0	0.188	
Q1879-01	0.036	0.0	0.023	
Q1879-02	1.942	0.0	0.372	
Q1879-03	0.035	0.0	0.023	
Q1879-04	6.804	0.0	1.263	
CCV3	0.933	0.0	0.187	
CCB3	-0.002	0.0	0.016	
Q1879-04DLX5	1.378	0.0	0.269	
CCV4	0.986	0.0	0.197	
CCB4	0.002	0.0	0.017	

92% (50-150) 04/25/2025 RN

87% (50-150) 04/25/2025 RN

Test limit high

N 30
Mean 0.646
SD 1.2840
CV% 198.71

Aquakem v. 7.2AQ1

Results from time period:

Fri Apr 25 08:45:07 2025

Fri Apr 25 12:55:14 2025

Sample Id	Sam/Ctr/c	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-† P		0.0096	mg/l	4/25/2025 8:4507	
0.1PPM	A	Ammonia-† P		0.1014	mg/l	4/25/2025 8:4508	
0.2PPM	A	Ammonia-† P		0.1955	mg/l	4/25/2025 8:4509	
0.4PPM	A	Ammonia-† P		0.4062	mg/l	4/25/2025 8:4510	
1.0PPM	A	Ammonia-† P		0.9863	mg/l	4/25/2025 8:4511	
1.3PPM	A	Ammonia-† P		1.3186	mg/l	4/25/2025 8:4512	
2.0PPM	A	Ammonia-† P		2.0158	mg/l	4/25/2025 8:4513	
ICV1	S	Ammonia-† P		0.9362	mg/l	4/25/2025 11:3812	
ICB1	S	Ammonia-† P		0.0017	mg/l	4/25/2025 11:3815	
CCV1	S	Ammonia-† P		0.9491	mg/l	4/25/2025 11:3816	
CCB1	S	Ammonia-† P		-0.0007	mg/l	4/25/2025 11:3818	
RL CHECK	S	Ammonia-† P		0.0923	mg/l	4/25/2025 11:3820	
PB167731BL	S	Ammonia-† P		-0.0022	mg/l	4/25/2025 11:3823	
PB167731BS	S	Ammonia-† P		0.9423	mg/l	4/25/2025 11:4856	
Q1858-01	S	Ammonia-† P		-0.0031	mg/l	4/25/2025 11:4859	
Q1858-01DUP	S	Ammonia-† P		-0.0043	mg/l	4/25/2025 11:4900	
Q1858-01MS	S	Ammonia-† P		0.9416	mg/l	4/25/2025 11:4902	
Q1858-01MSD	S	Ammonia-† P		0.9492	mg/l	4/25/2025 11:4903	
Q1858-02	S	Ammonia-† P		-0.0037	mg/l	4/25/2025 11:4906	
Q1858-03	S	Ammonia-† P		-0.0061	mg/l	4/25/2025 11:4907	
Q1859-01	S	Ammonia-† P		0.0067	mg/l	4/25/2025 11:5940	
CCV2	S	Ammonia-† P		0.9894	mg/l	4/25/2025 11:5942	
CCB2	S	Ammonia-† P		-0.0019	mg/l	4/25/2025 11:5944	
Q1859-02	S	Ammonia-† P		0.4617	mg/l	4/25/2025 11:5945	
Q1859-03	S	Ammonia-† P		0.0074	mg/l	4/25/2025 11:5946	
RL CHECK	S	Ammonia-† P		0.0867	mg/l	4/25/2025 11:5948	
PB167733BL	S	Ammonia-† P		-0.0046	mg/l	4/25/2025 11:5949	
PB167733BS	S	Ammonia-† P		0.9337	mg/l	4/25/2025 12:0946	
Q1879-01	S	Ammonia-† P		0.0355	mg/l	4/25/2025 12:0947	
Q1879-02	S	Ammonia-† P		1.9419	mg/l	4/25/2025 12:0948	
Q1879-03	S	Ammonia-† P		0.0351	mg/l	4/25/2025 12:0949	
Q1879-04	S	Ammonia-† P		6.8037	mg/l	4/25/2025 12:0950	
CCV3	S	Ammonia-† P		0.9331	mg/l	4/25/2025 12:0951	
CCB3	S	Ammonia-† P		-0.0021	mg/l	4/25/2025 12:0956	
Q1879-04DLX5	S	Ammonia-† P		1.3779	mg/l	4/25/2025 12:5509	
CCV4	S	Ammonia-† P		0.9865	mg/l	4/25/2025 12:5511	
CCB4	S	Ammonia-† P		0.0024	mg/l	4/25/2025 12:5513	

Calibration results

Aquakem 7.2AQ1

Page: 1

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

Reviewed by : RM

Instrument ID : Konelab

4/25/2025 10:40

Test Ammonia-N

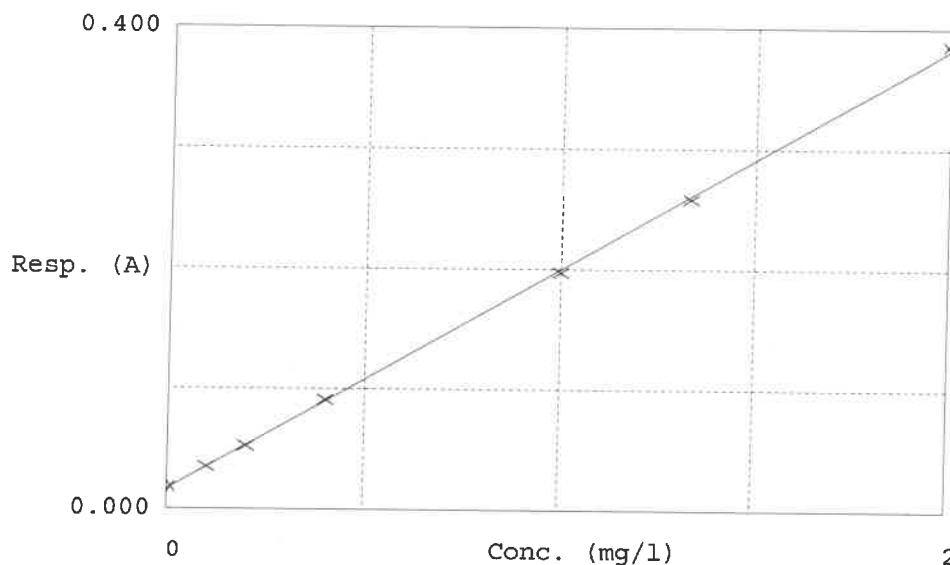
Accepted 4/25/2025 10:40

Factor 5.458

Bias 0.016

Coeff. of det. 0.999761

Errors



	Calibrator	Response	Calc. con.	Conc.	^{RE} Errors
1	0.00PPM	0.018	0.0096	0.0000	-1.4
2	NH3-2PPM	0.035	0.1014	0.1000	-2.3
3	NH3-2PPM	0.052	0.1955	0.2000	1.6
4	NH3-2PPM	0.091	0.4062	0.4000	-1.4
5	NH3-2PPM	0.197	0.9863	1.0000	1.4
6	NH3-2PPM	0.258	1.3186	1.3333	0.8
7	NH3-2PPM	0.386	2.0158	2.0000	

04/25/2025
RM

Analytical Summary Report

Analysis Method: SM2320 B
Parameter: Alkalinity
Run Number: LB135561
Constant: 50,000

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

Reagent/Standard	Lot/Log #
alkalinity LCSW 50 ppm	WP112850
SULFURIC ACID, 0.02N, 4L	W3150

Seq	LabID	ClientID	TV (mg/L)	DL	Sample Vol (mL)	Initial pH	pH(4.3- 4.7)	Final pH	0.02N H2SO4				Alkalinity	Anal Date	Anal Time
									A	B	C	D			
									Initial(ml)	ml at pH(4.3-4.7)	Final(ml)	Diff(ml)			
1	LB135561BL	LB135561BL		1	100	5.01	4.63	4.33	0.0	0.08	0.16	0.00	0.00	04/25/2025	11:45
2	LB135561BS	LB135561BS	50	1	100	9.58	4.48	4.18	0	5.23	5.85	4.61	46.10	04/25/2025	11:48
3	Q1879-01	STEM-31-SULFURI		1	100	0.51	0.51	0.51	0	0	0	0.00	0.00	04/25/2025	11:52
4	Q1879-02	STEM-32-SULFURI		1	100	0.51	0.51	0.51	0	0	0	0.00	0.00	04/25/2025	11:55
5	Q1879-03	STEM-46-SULFURI		1	100	0.51	0.51	0.51	0	0	0	0.00	0.00	04/25/2025	11:58
6	Q1879-04	ACID-MIXTURE-TF		1	100	0.51	0.51	0.51	0	0	0	0.00	0.00	04/25/2025	12:00

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

$$\text{Alkalinity} = (D * \text{Normality} * \text{Constant}) / \text{Sample Volume (ml)}$$

WORKLIST(Hardcopy Internal Chain)

LB135561

WorkList Name : ALKALANITY-042525

WorkList ID : 189157

Department : Wet-Chemistry

Date : 04-25-2025 10:36:10

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1879-01	STEM-31-SULFURIC-ACID	Water	Alkalinity	Cool 4 deg C	METE01	L41	04/23/2025	SM2320 B
Q1879-02	STEM-32-SULFURIC-ACID	Water	Alkalinity	Cool 4 deg C	METE01	L41	04/24/2025	SM2320 B
Q1879-03	STEM-46-SULFURIC-ACID	Water	Alkalinity	Cool 4 deg C	METE01	L41	04/24/2025	SM2320 B
Q1879-04	ACID-MIXTURE-TF-CONTAINM	Water	Alkalinity	Cool 4 deg C	METE01	L41	04/24/2025	SM2320 B

Date/Time 04/25/25 10:40
Raw Sample Received by: 12/507
Raw Sample Relinquished by: 726007

Date/Time 04/25/25 13:20
Raw Sample Received by: 726007
Raw Sample Relinquished by: 12/507

LB 135562

Test results

Aquakem 7.2AQ1

Page:

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

Reviewed by : RM

Instrument ID : Konelab

4/25/2025 15:25

Test: TKN-NH3

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	4.686	0.0	0.934	
ICB1	0.135	0.0	0.017	
CCV1	4.766	0.0	0.950	
CCB1	0.130	0.0	0.016	
RL CHECK	0.564	0.0	0.103	
PB167734BL	0.129	0.0	0.016	
PB167734BS	4.761	0.0	0.949	
Q1879-01	1.396	0.0	0.271	
Q1879-03	0.154	0.0	0.021	
Q1879-02	1.922	0.0	0.377	
Q1879-04	6.730	0.0	1.346	
CCV2	5.063	0.0	1.010	
CCB2	0.152	0.0	0.020	

112% (50-150)
04/25/2025
RM

N 13
Mean 2.353
SD 2.4555
CV% 104.36

Aquakem v. 7.2AQ1

Results from time period:

Fri Apr 25 13:23:22 2025

Fri Apr 25 15:12:10 2025

Sample Id	Sam/Ctr/c/	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	TKN-NH3	P	0.155	mg/l	4/25/2025 13:23:22	
0.5PPM	A	TKN-NH3	P	0.5574	mg/l	4/25/2025 13:23:23	
1.0PPM	A	TKN-NH3	P	0.9833	mg/l	4/25/2025 13:23:24	
2.5PPM	A	TKN-NH3	P	2.364	mg/l	4/25/2025 13:23:25	
5.0PPM	A	TKN-NH3	P	4.7904	mg/l	4/25/2025 13:23:26	
6.7PPM	A	TKN-NH3	P	6.7036	mg/l	4/25/2025 13:23:27	
10.0PPM	A	TKN-NH3	P	10.113	mg/l	4/25/2025 13:23:28	
ICV1	S	TKN-NH3	P	4.6864	mg/l	4/25/2025 13:56:34	
ICB1	S	TKN-NH3	P	0.1347	mg/l	4/25/2025 13:56:36	
CCV1	S	TKN-NH3	P	4.7659	mg/l	4/25/2025 13:56:38	
CCB1	S	TKN-NH3	P	0.1298	mg/l	4/25/2025 13:56:41	
RL CHECK	S	TKN-NH3	P	0.5644	mg/l	4/25/2025 13:56:43	
PB167734BL	S	TKN-NH3	P	0.1293	mg/l	4/25/2025 13:56:44	
PB167734BS	S	TKN-NH3	P	4.7608	mg/l	4/25/2025 14:07:16	
Q1879-01	S	TKN-NH3	P	1.3959	mg/l	4/25/2025 14:07:17	
Q1879-03	S	TKN-NH3	P	0.1541	mg/l	4/25/2025 14:07:20	
Q1879-02	S	TKN-NH3	P	1.9216	mg/l	4/25/2025 15:12:07	
Q1879-04	S	TKN-NH3	P	6.7303	mg/l	4/25/2025 15:12:08	
CCV2	S	TKN-NH3	P	5.0629	mg/l	4/25/2025 15:12:09	
CCB2	S	TKN-NH3	P	0.1525	mg/l	4/25/2025 15:12:10	

Calibration results

Aquakem 7.2AQ1

Page:

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

Reviewed by : RM

Instrument ID : Konelab

4/25/2025 13:26

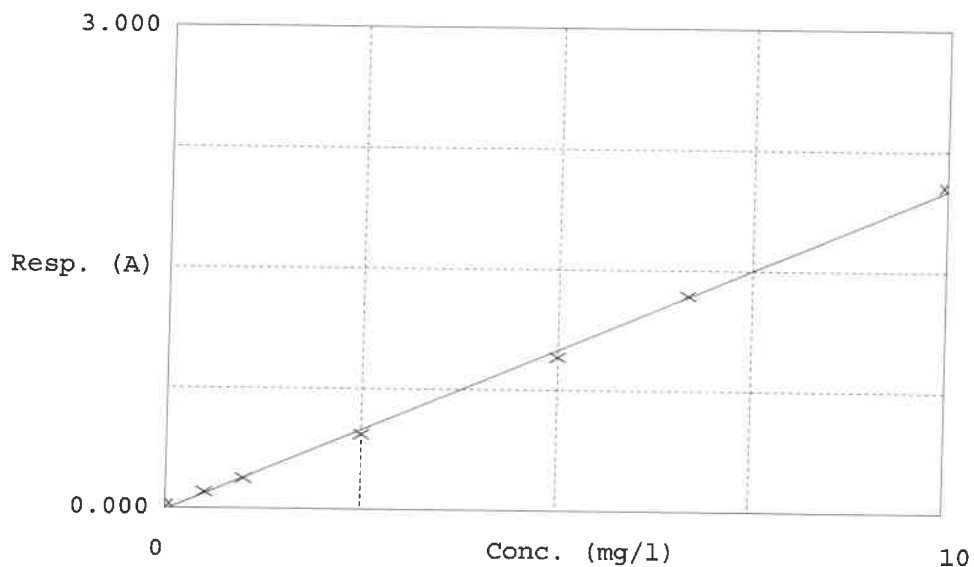
Test TKN-NH3

Accepted 4/25/2025 13:26

Factor 4.962
Bias -0.010

Coeff. of det. 0.998744

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.021	0.1550	0.0000	0
2	TKN-10	0.102	0.5574	0.5000	11.5
3	TKN-10	0.188	0.9833	1.0000	-1.7
4	TKN-10	0.466	2.3640	2.5000	-5.4
5	TKN-10	0.955	4.7904	5.0000	-4.2
6	TKN-10	1.341	6.7036	6.6667	0.1
7	TKN-10	2.028	10.1130	10.0000	1.1

04/25/2025
RM

6613558

Test results

Aquakem 7.2AQ1

Page:

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

Reviewed by : RM

Instrument ID : Konelab

4/25/2025 16:35

Test: Phenolics-

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	1.067	0.0	0.108	
ICB1	0.006	0.0	0.006	
CCV1	1.001	0.0	0.101	
CCB1	0.006	0.0	0.006	
PB167735BL	0.005	0.0	0.006	
PB167735BS	1.071	0.0	0.108	
Q1879-01	0.011	0.0	0.007	
Q1879-02	0.006	0.0	0.006	
Q1879-03	0.009	0.0	0.007	
Q1879-04	0.004	0.0	0.006	
CCV2	1.005	0.0	0.102	
CCB2	0.007	0.0	0.006	

N 12
Mean 0.350
SD 0.5070
CV% 144.96

Aquakem v. 7.2AQ1

Results from time period:

Fri Apr 25 16:01:27 2025

Fri Apr 25 16:34:09 2025

Sample Id	Sam/Ctr/c/	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.00PPM	A	Phenolics-	P	0.0042	mg/l	4/25/2025 16:01:27	
0.05PPM	A	Phenolics-	P	0.0513	mg/l	4/25/2025 16:01:28	
0.1PPM	A	Phenolics-	P	0.1049	mg/l	4/25/2025 16:01:29	
0.25PPM	A	Phenolics-	P	0.2575	mg/l	4/25/2025 16:01:30	
0.50PPM	A	Phenolics-	P	0.5016	mg/l	4/25/2025 16:01:31	
1.0PPM	A	Phenolics-	P	0.9642	mg/l	4/25/2025 16:01:32	
2.0PPM	A	Phenolics-	P	2.0163	mg/l	4/25/2025 16:01:33	
ICV1	S	Phenolics-	P	1.0669	mg/l	4/25/2025 16:26:47	
ICB1	S	Phenolics-	P	0.006	mg/l	4/25/2025 16:26:50	
CCV1	S	Phenolics-	P	1.0007	mg/l	4/25/2025 16:26:52	
CCB1	S	Phenolics-	P	0.0056	mg/l	4/25/2025 16:26:53	
PB167735BL	S	Phenolics-	P	0.0055	mg/l	4/25/2025 16:26:55	
PB167735BS	S	Phenolics-	P	1.0709	mg/l	4/25/2025 16:26:57	
Q1879-01	S	Phenolics-	P	0.0105	mg/l	4/25/2025 16:34:01	
Q1879-02	S	Phenolics-	P	0.0061	mg/l	4/25/2025 16:34:02	
Q1879-03	S	Phenolics-	P	0.0088	mg/l	4/25/2025 16:34:03	
Q1879-04	S	Phenolics-	P	0.0043	mg/l	4/25/2025 16:34:04	
CCV2	S	Phenolics-	P	1.0047	mg/l	4/25/2025 16:34:07	
CCB2	S	Phenolics-	P	0.0075	mg/l	4/25/2025 16:34:09	

Calibration results

Aquakem 7.2AQ1

Page: 1

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

Reviewed by : RM

Instrument ID : Konelab

4/25/2025 16:02

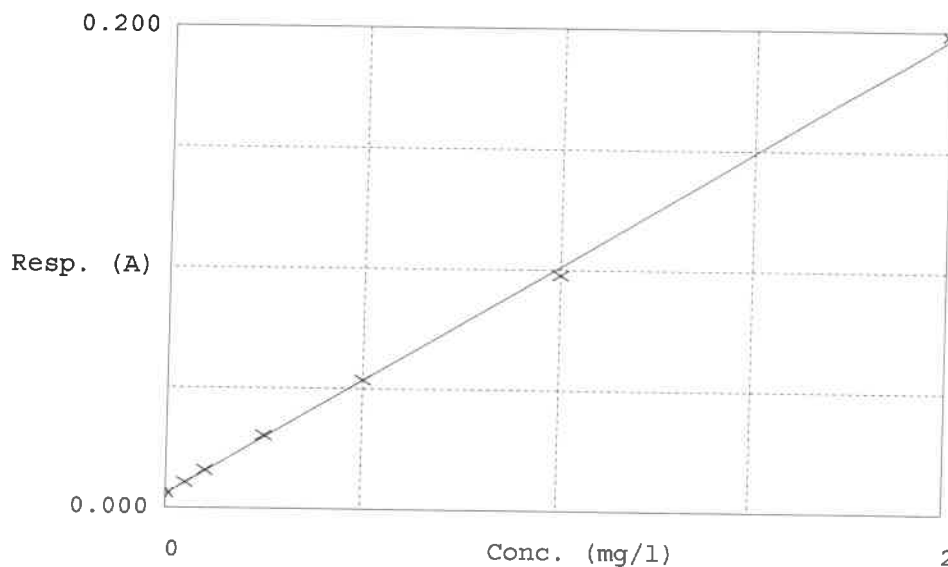
Test Phenolics-

Accepted 4/25/2025 16:02

Factor 10.47
Bias 0.006

Coeff. of det. 0.999477

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.006	0.0042	0.0000	~
2	Phenol-2	0.011	0.0513	0.0500	2.6
3	Phenol-2	0.016	0.1049	0.1000	4.9
4	Phenol-2	0.030	0.2575	0.2500	3.0
5	Phenol-2	0.054	0.5016	0.5000	0.3
6	Phenol-2	0.098	0.9642	1.0000	-3.6
7	Phenol-2	0.198	2.0163	2.0000	0.8

04/25/2025

RM

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

SDG No : N/A

Start Digest Date: 04/25/2025 Time : 09:20 Temp : 150 °C

Matrix : WATER

End Digest Date: 04/25/2025 Time : 10:20 Temp : 160 °C

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Block ID : WC-DIST-BLOCK-1

Filter paper ID : N/A

Prep Technician Signature: RM

Weigh By : N/A

pH Meter ID : N/A

Supervisor Signature: 12

Standard Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP112614
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP112613
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP111325
NAOH 6N	1.0ML-5.0ML	WP111318
H2SO4 0.04N	5.0ML	WP112828
pH strip-Ammonia	N/A	W3133
KI-starch paper	N/A	W3155
Dechlorinating	2.0ML-22ML	WP112843
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP111604. Due to limited vol 5ML was taken as a initial vol and DUP, MS and MSD was not performed.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/25/2025 10:30	RM (WC)	RM (WC)
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167733BL	PBW733	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB167733BS	LCS733	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1879-01	STEM-31-SULFURIC-ACID	5	50	<2	N/A	Positive	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1879-02	STEM-32-SULFURIC-ACID	5	50	<2	N/A	Positive	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1879-03	STEM-46-SULFURIC-ACID	5	50	<2	N/A	Positive	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1879-04	ACID-MIXTURE-TF-CONTAINMENT	5	50	<2	N/A	Positive	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : AMMONIA-W04-24 WorkList ID : 189130 Department : Distillation Date : 04-24-2025 16:38:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1879-01	STEM-31-SULFURIC-ACID	Water	Ammonia	Conc H2SO4 to pH < 2	METE01	L41	04/23/2025	SM4500-NH3
Q1879-02	STEM-32-SULFURIC-ACID	Water	Ammonia	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	SM4500-NH3
Q1879-03	STEM-46-SULFURIC-ACID	Water	Ammonia	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	SM4500-NH3
Q1879-04	ACID-MIXTURE-TF-CONTAININ	Water	Ammonia	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	SM4500-NH3

Date/Time 04/25/2025 08:10
Raw Sample Received by: RMW
Raw Sample Relinquished by: RMW

Date/Time 04/25/2025 14:30
Raw Sample Received by: PPCC
Raw Sample Relinquished by: RMW

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

SDG No : N/A

Matrix : WATER

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2&3

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

Start Digest Date: 04/25/2025 Time : 08:40 Temp : 380 °C

End Digest Date: 04/25/2025 Time : 10:10 Temp : 385 °C

Start Distillation Date: 04/25/2025 Time : 10:45 Temp : 150 °C

End Distillation Date: 04/25/2025 Time : 11:45 Temp : 160 °C

Digestion tube ID : M5595

Block Thermometer ID : Therm#2(2179)

Filter paper ID : N/A

Prep Technician Signature: RM

pH Meter ID : N/A

Supervisor Signature: 12

Standard Name	MLS USED	STD REF. # FROM LOG
TKN CAL STD	50.0ML	WP112836
TKN CCV STD	50.0ML	WP112837
TKN ICV STD	50.0ML	WP112838
TKN LCS STD	50.0ML	WP112839
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
TKN DIGESTION FLUID	10.0ML	WP111319
TKN DISTILLATION BUFFER	10.0ML	WP112079
H2SO4 0.04N	5.0ML	WP112828
pH Paper 0-14	N/A	W3140
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

RL CHECK 10ML FROM WP112837 ,ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT WP111604. Due to limited vol 5ML was taken as a initial vol and DUP, MS and

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/25/2025 12:00	RM (WC)	RM (WC)
04/25/2025 13:20	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167734BL	PBW734	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
PB167734BS	LCS734	50	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1879-01	STEM-31-SULFURIC-ACID	5	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1879-02	STEM-32-SULFURIC-ACID	5	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1879-03	STEM-46-SULFURIC-ACID	5	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1879-04	ACID-MIXTURE-TF-CONTAINMENT	5	50	<2	N/A	N/A	N/A	PH AFTER ADDING DIST BUFFER>11	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TKN-W04-24 WorkList ID : 189131 Department : Distillation Date : 04-24-2025 16:38:28

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1879-01	STEM-31-SULFURIC-ACID	Water	TKN	Conc H2SO4 to pH < 2	METE01	L41	04/23/2025	SM4500 N Org
Q1879-02	STEM-32-SULFURIC-ACID	Water	TKN	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	SM4500 N Org
Q1879-03	STEM-46-SULFURIC-ACID	Water	TKN	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	SM4500 N Org
Q1879-04	ACID-MIXTURE-TF-CONTAININ	Water	TKN	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	SM4500 N Org

Date/Time 04/25/2025 08:10
Raw Sample Received by: RM wls
Raw Sample Relinquished by: JH Cox

Date/Time 04/25/2025 14:50
Raw Sample Received by: JH Cox
Raw Sample Relinquished by: RM wls

SOP ID : M420.1 & 9065-Phenolics-13

SDG No : N/A

Start Digest Date: 04/25/2025 Time : 14:00 Temp : 150 °C

Matrix : WATER

End Digest Date: 04/25/2025 Time : 15:00 Temp : 160 °C

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Block ID : WC-DIST-BLOCK-1

Filter paper ID : N/A

Prep Technician Signature: RM

Weigh By : N/A

pH Meter ID : N/A

Supervisor Signature: 12

Standardized Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP112726
PBW	50.0ML	W3112
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
pH Paper 0-14	N/A	W3140
CONC H2SO4	N/A	M6041
KI-starch paper	N/A	W3155
Ferrous Ammonium Sulfate	1.0ML-18ML	WP112333
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:

Due to limited vol 5ML was taken as a initial vol and DUP, MS and MSD was not performed.

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/25/2025 15:15	RM (wc)	RM (wc)
	Preparation Group	Analysis Group

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167735BL	PBW735	50	50	<2	N/A	Negative	N/A	N/A	N/A
PB167735BS	LCS735	50	50	<2	N/A	Negative	N/A	N/A	N/A
Q1879-01	STEM-31-SULFURIC-ACID	5	50	<2	N/A	Positive	N/A	N/A	N/A
Q1879-02	STEM-32-SULFURIC-ACID	5	50	<2	N/A	Positive	N/A	N/A	N/A
Q1879-03	STEM-46-SULFURIC-ACID	5	50	<2	N/A	Positive	N/A	N/A	N/A
Q1879-04	ACID-MIXTURE-TF-CONTAINMENT	5	50	<2	N/A	Positive	N/A	N/A	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : PHE-W04-24 WorkList ID : 189132 Department : Distillation Date : 04-24-2025 16:38:33

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1879-01	STEM-31-SULFURIC-ACID	Water	Phenolics	Conc H2SO4 to pH < 2	METE01	L41	04/23/2025	9065
Q1879-02	STEM-32-SULFURIC-ACID	Water	Phenolics	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	9065
Q1879-03	STEM-46-SULFURIC-ACID	Water	Phenolics	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	9065
Q1879-04	ACID-MIXTURE-TF-CONTAINM	Water	Phenolics	Conc H2SO4 to pH < 2	METE01	L41	04/24/2025	9065

Date/Time 04/25/2025 08:10
 Raw Sample Received by: RM ewj
 Raw Sample Relinquished by: JR (wcc)

Date/Time 04/25/2025 14:30
 Raw Sample Received by: JR (wcc)
 Raw Sample Relinquished by: RM (wcc)

Instrument ID: WC PH METER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB135555

Review By	jignesh	Review On	4/25/2025 11:23:54 AM
Supervise By	Iwona	Supervise On	4/25/2025 12:07:52 PM
SubDirectory	LB135555	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,W3072		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	04/25/25 09:01		jignesh	OK
2	CAL2	CAL2	CAL	04/25/25 09:05		jignesh	OK
3	CAL3	CAL3	CAL	04/25/25 09:06		jignesh	OK
4	ICV	ICV	ICV	04/25/25 09:10		jignesh	OK
5	CCV1	CCV1	CCV	04/25/25 09:11		jignesh	OK
6	Q1875-05	AUD-25-0051	SAM	04/25/25 09:20		jignesh	OK
7	Q1875-05DUP	AUD-25-0051DUP	DUP	04/25/25 09:21		jignesh	OK
8	Q1875-06	AUD-25-0052	SAM	04/25/25 09:29		jignesh	OK
9	Q1875-07	AUD-25-0055	SAM	04/25/25 09:33		jignesh	OK
10	Q1875-08	AUD-25-0056	SAM	04/25/25 09:40		jignesh	OK
11	Q1879-01	STEM-31-SULFURIC	SAM	04/25/25 10:00		jignesh	OK
12	Q1879-02	STEM-32-NITRIC-AC	SAM	04/25/25 10:01		jignesh	OK
13	Q1879-03	STEM-46-NITRIC-AC	SAM	04/25/25 10:05		jignesh	OK
14	Q1879-04	ACID-MIXTURE-TF-C	SAM	04/25/25 10:06		jignesh	OK
15	CCV2	CCV2	CCV	04/25/25 10:10		jignesh	OK

Instrument ID: TITRAMETRIC

Daily Analysis Runlog For Sequence/QC Batch ID # LB135557

Review By	Iwona	Review On	5/5/2025 4:28:24 PM
Supervise By	jignesh	Supervise On	5/5/2025 4:28:51 PM
SubDirectory	LB135557	Test	Acidity
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	WP112846,WP112848,WP112844,M6125,W3150,W3155		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB135557BL	LB135557BL	MB	04/25/25 12:20		Iwona	OK
2	LB135557BS	LB135557BS	LCS	04/25/25 12:25		Iwona	OK
3	Q1879-01	STEM-31-SULFURIC	SAM	04/25/25 12:35		Iwona	OK
4	Q1879-02	STEM-32-NITRIC-AC	SAM	04/25/25 12:47		Iwona	OK
5	Q1879-03	STEM-46-NITRIC-AC	SAM	04/25/25 13:02		Iwona	OK
6	Q1879-04	ACID-MIXTURE-TF-C	SAM	04/25/25 13:14		Iwona	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135559

Review By	rubina	Review On	4/28/2025 9:01:25 AM
Supervise By	Iwona	Supervise On	4/28/2025 12:59:09 PM
SubDirectory	LB135559	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP112840		
ICV Standard	WP112842		
CCV Standard	WP112841		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112614		
Chk Standard	WP112537,WP111745,WP111385,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	04/25/25 08:45		rubina	OK
2	0.1PPM	0.1PPM	CAL2	04/25/25 08:45		rubina	OK
3	0.2PPM	0.2PPM	CAL3	04/25/25 08:45		rubina	OK
4	0.4PPM	0.4PPM	CAL4	04/25/25 08:45		rubina	OK
5	1.0PPM	1.0PPM	CAL5	04/25/25 08:45		rubina	OK
6	1.3PPM	1.3PPM	CAL6	04/25/25 08:45		rubina	OK
7	2.0PPM	2.0PPM	CAL7	04/25/25 08:45		rubina	OK
8	ICV1	ICV1	ICV	04/25/25 11:38		rubina	OK
9	ICB1	ICB1	ICB	04/25/25 11:38		rubina	OK
10	CCV1	CCV1	CCV	04/25/25 11:38		rubina	OK
11	CCB1	CCB1	CCB	04/25/25 11:38		rubina	OK
12	RL	RL	SAM	04/25/25 11:38		rubina	OK
13	PB167731BL	PB167731BL	MB	04/25/25 11:38		rubina	OK
14	PB167731BS	PB167731BS	LCS	04/25/25 11:48		rubina	OK
15	Q1858-01	COMP-1	SAM	04/25/25 11:48		rubina	OK
16	Q1858-01DUP	COMP-1DUP	DUP	04/25/25 11:49		rubina	OK
17	Q1858-01MS	COMP-1MS	MS	04/25/25 11:49		rubina	OK
18	Q1858-01MSD	COMP-1MSD	MSD	04/25/25 11:49		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135559

Review By	rubina	Review On	4/28/2025 9:01:25 AM
Supervise By	Iwona	Supervise On	4/28/2025 12:59:09 PM
SubDirectory	LB135559	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP112840		
ICV Standard	WP112842		
CCV Standard	WP112841		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112614		
Chk Standard	WP112537,WP111745,WP111385,WP111660		

19	Q1858-02	COMP-2	SAM	04/25/25 11:49		rubina	OK
20	Q1858-03	COMP-3	SAM	04/25/25 11:49		rubina	OK
21	Q1859-01	COMP-1	SAM	04/25/25 11:59		rubina	OK
22	CCV2	CCV2	CCV	04/25/25 11:59		rubina	OK
23	CCB2	CCB2	CCB	04/25/25 11:59		rubina	OK
24	Q1859-02	COMP-2	SAM	04/25/25 11:59		rubina	OK
25	Q1859-03	COMP-3	SAM	04/25/25 11:59		rubina	OK
26	RL	RL	SAM	04/25/25 11:59		rubina	OK
27	PB167733BL	PB167733BL	MB	04/25/25 11:59		rubina	OK
28	PB167733BS	PB167733BS	LCS	04/25/25 12:09		rubina	OK
29	Q1879-01	STEM-31-SULFURIC	SAM	04/25/25 12:09		rubina	OK
30	Q1879-02	STEM-32-NITRIC-AC	SAM	04/25/25 12:09		rubina	OK
31	Q1879-03	STEM-46-NITRIC-AC	SAM	04/25/25 12:09		rubina	OK
32	Q1879-04	ACID-MIXTURE-TF-C	SAM	04/25/25 12:09	High	rubina	Dilution
33	CCV3	CCV3	CCV	04/25/25 12:09		rubina	OK
34	CCB3	CCB3	CCB	04/25/25 12:09		rubina	OK
35	Q1879-04DL	ACID-MIXTURE-TF-C	SAM	04/25/25 12:55	Report 5X	rubina	Confirms
36	CCV4	CCV4	CCV	04/25/25 12:55		rubina	OK
37	CCB4	CCB4	CCB	04/25/25 12:55		rubina	OK

Instrument ID: TITRATOR

Daily Analysis Runlog For Sequence/QC Batch ID # LB135561

Review By	Iwona	Review On	4/25/2025 2:53:14 PM
Supervise By	jignesh	Supervise On	4/25/2025 3:51:43 PM
SubDirectory	LB135561	Test	Alkalinity
STD. NAME	STD REF.#		
ICAL Standard	N/A		
ICV Standard	N/A		
CCV Standard	N/A		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	N/A		
Chk Standard	WP112850,W3150		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB135561BL	LB135561BL	MB	04/25/25 11:45		Iwona	OK
2	LB135561BS	LB135561BS	LCS	04/25/25 11:48		Iwona	OK
3	Q1879-01	STEM-31-SULFURIC	SAM	04/25/25 11:52		Iwona	OK
4	Q1879-02	STEM-32-NITRIC-AC	SAM	04/25/25 11:55		Iwona	OK
5	Q1879-03	STEM-46-NITRIC-AC	SAM	04/25/25 11:58		Iwona	OK
6	Q1879-04	ACID-MIXTURE-TF-C	SAM	04/25/25 12:00		Iwona	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135562

Review By	rubina	Review On	4/28/2025 9:02:23 AM
Supervise By	Iwona	Supervise On	4/28/2025 12:59:16 PM
SubDirectory	LB135562	Test	TKN
STD. NAME	STD REF.#		
ICAL Standard	WP112836		
ICV Standard	WP112838		
CCV Standard	WP112837		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112839		
Chk Standard	WP112537,WP111745,WP111385,WP111660		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	04/25/25 13:23		rubina	OK
2	0.5PPM	0.5PPM	CAL2	04/25/25 13:23		rubina	OK
3	1.0PPM	1.0PPM	CAL3	04/25/25 13:23		rubina	OK
4	2.5PPM	2.5PPM	CAL4	04/25/25 13:23		rubina	OK
5	5.0PPM	5.0PPM	CAL5	04/25/25 13:23		rubina	OK
6	6.7PPM	6.7PPM	CAL6	04/25/25 13:23		rubina	OK
7	10.0PPM	10.0PPM	CAL7	04/25/25 13:23		rubina	OK
8	ICV1	ICV1	ICV	04/25/25 13:56		rubina	OK
9	ICB1	ICB1	ICB	04/25/25 13:56		rubina	OK
10	CCV1	CCV1	CCV	04/25/25 13:56		rubina	OK
11	CCB1	CCB1	CCB	04/25/25 13:56		rubina	OK
12	RL	RL	SAM	04/25/25 13:56		rubina	OK
13	PB167734BL	PB167734BL	MB	04/25/25 13:56		rubina	OK
14	PB167734BS	PB167734BS	LCS	04/25/25 14:07		rubina	OK
15	Q1879-01	STEM-31-SULFURIC	SAM	04/25/25 14:07		rubina	OK
16	Q1879-03	STEM-46-NITRIC-AC	SAM	04/25/25 14:07		rubina	OK
17	Q1879-02	STEM-32-NITRIC-AC	SAM	04/25/25 15:12		rubina	OK
18	Q1879-04	ACID-MIXTURE-TF-C	SAM	04/25/25 15:12		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135562

Review By	rubina	Review On	4/28/2025 9:02:23 AM
Supervise By	Iwona	Supervise On	4/28/2025 12:59:16 PM
SubDirectory	LB135562	Test	TKN
STD. NAME	STD REF.#		
ICAL Standard	WP112836		
ICV Standard	WP112838		
CCV Standard	WP112837		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112839		
Chk Standard	WP112537,WP111745,WP111385,WP111660		

19	CCV2	CCV2	CCV	04/25/25 15:12		rubina	OK
20	CCB2	CCB2	CCB	04/25/25 15:12		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135563

Review By	rubina	Review On	4/28/2025 9:04:39 AM
Supervise By	Iwona	Supervise On	4/28/2025 12:59:22 PM
SubDirectory	LB135563	Test	Phenolics
STD. NAME	STD REF.#		
ICAL Standard	WP112851		
ICV Standard	WP112853		
CCV Standard	WP112852		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112726		
Chk Standard	WP112609,WP112610,WP112854		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.00PPM	0.00PPM	CAL1	04/25/25 16:01		rubina	OK
2	0.05PPM	0.05PPM	CAL2	04/25/25 16:01		rubina	OK
3	0.1PPM	0.1PPM	CAL3	04/25/25 16:01		rubina	OK
4	0.25PPM	0.25PPM	CAL4	04/25/25 16:01		rubina	OK
5	0.50PPM	0.50PPM	CAL5	04/25/25 16:01		rubina	OK
6	1.0PPM	1.0PPM	CAL6	04/25/25 16:01		rubina	OK
7	2.0PPM	2.0PPM	CAL7	04/25/25 16:01		rubina	OK
8	ICV1	ICV1	ICV	04/25/25 16:26		rubina	OK
9	ICB1	ICB1	ICB	04/25/25 16:26		rubina	OK
10	CCV1	CCV1	CCV	04/25/25 16:26		rubina	OK
11	CCB1	CCB1	CCB	04/25/25 16:26		rubina	OK
12	PB167735BL	PB167735BL	MB	04/25/25 16:26		rubina	OK
13	PB167735BS	PB167735BS	LCS	04/25/25 16:26		rubina	OK
14	Q1879-01	STEM-31-SULFURIC	SAM	04/25/25 16:34		rubina	OK
15	Q1879-02	STEM-32-NITRIC-AC	SAM	04/25/25 16:34		rubina	OK
16	Q1879-03	STEM-46-NITRIC-AC	SAM	04/25/25 16:34		rubina	OK
17	Q1879-04	ACID-MIXTURE-TF-C	SAM	04/25/25 16:34		rubina	OK
18	CCV2	CCV2	CCV	04/25/25 16:34		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB135563

Review By	rubina	Review On	4/28/2025 9:04:39 AM
Supervise By	Iwona	Supervise On	4/28/2025 12:59:22 PM
SubDirectory	LB135563	Test	Phenolics
STD. NAME	STD REF.#		
ICAL Standard	WP112851		
ICV Standard	WP112853		
CCV Standard	WP112852		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP112726		
Chk Standard	WP112609,WP112610,WP112854		

19	CCB2	CCB2	CCB	04/25/25 16:34		rubina	OK
----	------	------	-----	----------------	--	--------	----

Prep Standard - Chemical Standard Summary

Order ID : Q1879

Test : Acidity,Alkalinity,Ammonia,pH,Phenolics,TKN

Prepbatch ID : PB167733,PB167734,PB167735,

Sequence ID/Qc Batch ID: LB135555,LB135557,LB135559,LB135561,LB135562,LB135563,

Standard ID :

WP111317,WP111318,WP111319,WP111325,WP111385,WP111660,WP111745,WP111833,WP111834,WP112079,WP112333,WP112537,WP112609,WP112610,WP112611,WP112612,WP112613,WP112614,WP112725,WP112726,WP112828,WP112836,WP112837,WP112838,WP112839,WP112840,WP112841,WP112842,WP112844,WP112846,WP112848,WP112850,WP112851,WP112852,WP112853,WP112854,

Chemical ID :

M6041,M6125,W2211,W2663,W2666,W2697,W2700,W2858,W2983,W3058,W3071,W3072,W3093,W3112,W3113,W3132,W3133,W3140,W3141,W3148,W3150,W3155,W3161,W3164,W3174,W3176,W3178,W3191,W3195,W3196,



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

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



<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>
619	TKN digestion solution	WP111319	01/09/2025	04/23/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 134.00000gram of W2983 + 134.00000ml of M6041 + 7.30000gram of W2697 + 725.00000ml 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>
1494	BORATE BUFFER	WP111325	01/09/2025	07/09/2025	Rubina Mughal	None	None	Iwona Zarych 01/09/2025
<u>FROM</u> 100.00000L of W3112 + 9.50000gram of W2700 + 88.00000ml of WP111317 = Final Quantity: 100.000 L								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 01/13/2025
<u>FROM</u> 3.20000gram of W3113 + 8.30000gram of W2858 + 88.80000ml of W3112 = Final Quantity: 100.000 ml								

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

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>
289	Sodium Hypochlorite for Ammonia	WP111745	02/03/2025	07/31/2025	Rubina Mughal	None	None	Iwona Zarych
								02/03/2025

FROM 50.00000ml of W3112 + 50.00000ml of W3174 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1903	Phenol stock std, 1000PPM	WP111833	02/07/2025	08/07/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych
								02/07/2025

FROM 1.00000gram of W2663 + 999.00000ml 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>
1904	Phenol stock std, 1000PPM-SS	WP111834	02/07/2025	08/07/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych 02/07/2025
<u>FROM</u>	1.00000gram of W2858 + 999.00000ml 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>
1338	TKN DISTILLING BUFFER	WP112079	02/27/2025	08/27/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 02/27/2025
<u>FROM</u> 0.47500L of W3112 + 25.00000gram of W3148 + 500.00000gram of W3113 = 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>
3375	Ferrous Ammonium Sulfate solution	WP112333	03/18/2025	09/18/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC-8)	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 03/18/2025
<u>FROM</u> 1.00000ml of M6041 + 1.10000gram of W3164 + 998.00000ml 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>
740	sodium nitroferricyanide for ammonia	WP112537	03/28/2025	04/28/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 03/28/2025
<u>FROM</u> 0.05000gram of W2666 + 99.95000ml 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>
672	ammonia buffer for phenol	WP112609	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 04/07/2025
FROM 143.00000ml of W3141 + 19.60000gram of W3195 + 90.10000ml of W3112 = 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>
1935	Potassium ferricyanide solution-phenol	WP112610	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 04/07/2025
<u>FROM</u> 8.00000gram of W2211 + 92.00000ml 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>
153	Ammonia Stock Std. (1000 ppm)	WP112611	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 04/07/2025
<u>FROM</u> 3.81900gram of W3196 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml								

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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1322	Ammonia Intermediate Std, 50PPM	WP112613	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/07/2025
<u>FROM</u> 95.00000ml of W3112 + 5.00000ml of WP112611 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1639	Ammonia Intermediate Std-Second source, 50PPM	WP112614	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/07/2025
<u>FROM</u> 95.00000ml of W3112 + 5.00000ml of WP112612 = 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>
1478	Phenol Intermediate Std - 50PPM	WP112725	04/16/2025	05/16/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/18/2025
FROM 47.50000ml of W3112 + 2.50000ml of WP111833 = 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>
1635	Phenol Intermediate Std Second Source-50PPM	WP112726	04/16/2025	05/16/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/18/2025
FROM 47.50000ml of W3112 + 2.50000ml of WP111834 = 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>
1597	0.04 N H2SO4	WP112828	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 1.00000ml of M6041 + 999.00000ml of W3112 = Final Quantity: 1000.000 ml</p>								

<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>
295	TKN Calibration Std (10 ppm)	WP112836	04/25/2025	05/02/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/25/2025
<u>FROM</u> 49.50000ml of W3112 + 0.50000ml of WP112611 = 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>
297	TKN CCV STD 5 ppm	WP112837	04/25/2025	05/02/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/25/2025
FROM 49.75000ml of W3112 + 0.25000ml of WP112611 = 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>
296	TKN ICV STD 5 ppm	WP112838	04/25/2025	05/02/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/25/2025
FROM 49.75000ml of W3112 + 0.25000ml of WP112612 = 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>
298	TKN LCS STD 5 ppm	WP112839	04/25/2025	05/02/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/25/2025
<u>FROM</u> 49.75000ml of W3112 + 0.25000ml of WP112612 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
275	Ammonia Calibration Std. (2 ppm)	WP112840	04/25/2025	04/26/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 48.00000ml of W3112 + 2.00000ml of WP112613 = Final Quantity: 50.000 ml</p>								

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>
285	Ammonia CCV Std. (1 ppm)	WP112841	04/25/2025	04/26/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/25/2025
FROM 49.00000ml of W3112 + 1.00000ml of WP112613 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
286	Ammonia ICV Std. (1 ppm)	WP112842	04/25/2025	04/26/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/25/2025
FROM 49.00000ml of W3112 + 1.00000ml of WP112614 = Final Quantity: 50.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3407	Acidity-Alkalinity Stock Std(-+2500PPM)	WP112844	04/25/2025	05/02/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh 04/28/2025
<u>FROM</u> 0.62500gram of W3058 + 249.40000ml of W3112 = 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>
3896	0.1N NaOH for Acidity	WP112846	04/25/2025	10/25/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh
<u>FROM</u> 4.00000gram of W3113 + 997.00000ml 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>
4160	0.1M Sodium thiosulfate	WP112848	04/25/2025	10/25/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh 04/28/2025
<u>FROM</u> 0.10000gram of W3058 + 25.00000gram of W3148 + 974.90000ml 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>
293	alkalinity LCSW 50 ppm	WP112850	04/25/2025	05/02/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 04/28/2025
<u>FROM</u> 196.00000ml of W3112 + 4.00000ml of WP112844 = 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>
1633	Phenol Calibration Std, 2PPM	WP112851	04/25/2025	04/26/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/25/2025
<u>FROM</u> 48.00000ml of W3112 + 2.00000ml of WP112725 = 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>
1634	Phenol CCV Std, 1PPM	WP112852	04/25/2025	04/26/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/25/2025
<u>FROM</u> 49.00000ml of W3112 + 1.00000ml of WP112725 = 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>
1636	Phenol ICV Std, 1PPM	WP112853	04/25/2025	04/26/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 49.00000ml of W3112 + 1.00000ml of WP112726 = Final Quantity: 50.000 ml</p>								

<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>
506	4-AMINOANTIPYRINE	WP112854	04/25/2025	04/26/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	Glass Pipette-A	Iwona Zarych 04/25/2025
<u>FROM</u> 0.40000gram of W3176 + 20.00000ml of W3112 = Final Quantity: 20.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	08/16/2024 / mohan	08/16/2024 / mohan	M6041

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1403 / Hydrogen Peroxide, 30% 1 gal	820803	05/25/2025	11/26/2024 / Eman	11/22/2024 / Eman	M6125

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	97062-260 / POTASSIUM FERRICYANIDE ACS GRADE 500G	1136C335	03/01/2027	03/01/2017 / apatel	02/28/2017 / apatel	W2211

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P1060-10 / PHENOL, ACS, 500G	2HD0179	01/27/2030	01/27/2020 / apatel	01/27/2020 / apatel	W2663

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	87683 / Sodium Nitroferricyanide 250g	W12F013	02/10/2030	02/10/2020 / apatel	02/10/2020 / apatel	W2666

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

CHEMICAL RECEIPT LOG BOOK

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

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	EM-SX0395-3 / SODIUM CARBONATE ANHYDR 2.5KG	2023012653	10/19/2028	09/03/2024 / jignesh	10/19/2023 / lwona	W3058

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

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

CHEMICAL RECEIPT LOG BOOK

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 #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / lwona	07/03/2024 / lwona	W3112

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140476 / Test Paper,PH Short Range 9.0/10.0	L23	08/22/2029	08/22/2024 / lwona	08/22/2024 / lwona	W3133

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9721-3 / Ammonium Hydroxide, 2.5 L	431110	11/30/2025	09/18/2024 / lwona	09/18/2024 / lwona	W3141

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3946-1 / Sodium Thiosulfate Pentahydrate, 500 gms	MKCW3077	07/31/2029	10/07/2024 / lwona	10/07/2024 / lwona	W3148

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140730 / TEST PAPER,POT.IOD-STRCH,P K100,CS12	14-860	12/02/2029	12/02/2024 / lwona	12/02/2024 / lwona	W3155

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.	J2054-1 / FERROUS AMMONIUM SULF ACS REAGENT, 500ML	2024071104	01/02/2035	01/02/2025 / lwona	01/02/2025 / lwona	W3164

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J9416-1 / Sodium Hypochlorite 500 ml	2501J28	07/31/2025	01/24/2025 / lwona	01/24/2025 / lwona	W3174

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	JA630-5 / 4-aminoantipyrine, 100 gm	50107308	07/31/2028	01/24/2025 / lwona	01/24/2025 / lwona	W3176

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 #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	24L0356561	08/31/2027	03/19/2025 / lwona	03/19/2025 / lwona	W3195

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	MKCV1009	09/30/2026	03/19/2025 / lwona	03/19/2025 / lwona	W3196



ISO 9001 CERTIFIED
ISO 13485 CERTIFIED

AMRESKO LLC

28600 Fountain Parkway
Solon, Ohio USA 44139
440/349-1199 FAX: 440/349-1182
www.amresco-inc.com
Email: info@amresco-inc.com

CERTIFICATE OF QUALITY / CERTIFICATE OF ANALYSIS

Potassium Ferricyanide

Code: 0713

Chemical Formula:	K ₃ Fe(CN) ₆	Manufacture Date:	(batch specific)
Molecular Weight:	329.25	Expiration/Reassay Date:	(batch specific)
CAS #:	13746-66-2		
Appearance:		Storage:	
Dark orange crystals		Grade:	ACS GRADE

Additional Information

TEST	SPECIFICATION	DISPOSITION
Chloride	<= 0.01 %	PASS
Ferro Compounds	<= 0.05 %	PASS
Insolubles	<= 0.005 %	PASS
Purity	>= 99.0 %	PASS
Sulfate	<= 0.01 %	PASS

Spec Set: 0713ACS

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

Product meets analytical specifications of the grades listed.

Internal ID #: 269

Signature: _____

Title:

Date Printed:

03/09/2016

Page 1 of 1



Certificate Of Analysis

Item Number	P1060	Lot Number	2HD0179
Item	Phenol, Loose Crystal, Reagent, ACS		
CAS Number	108-95-2		
Molecular Formula	C ₆ H ₆ O	Molecular Weight	94.11

Test	Specification		Result
	min	max	
ASSAY (C ₆ H ₅ OH)	99.0 %		100.02 %
FREEZING POINT (DRY)	40.5 C		40.5°C
CLARITY OF SOLUTION	TO PASS TEST		PASSES TEST
RESIDUE AFTER EVAPORATION		0.05 %	<0.05 %
WATER		0.5 %	0.0087 %
DATE OF MANUFACTURE			06-MAR-2018

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



Certificate Of Analysis Results Certified by

Ibad Tirmizi
Director of Quality
Spectrum Chemical Mfg. Corp.

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

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

W2858 Received by AP on 07/07/2021

Product No.: 33213
Product: Phenol, ACS, 99+%, stab.
Lot No.: M13H048

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

Retest date: January 7, 2026

Order our products online [alfa.com](https://www.alfa.com)**This document has been electronically generated and does not require a signature.**

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.

W2666 Recived on 02/10/2020 by AP

Product No.: 87683

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

Lot No.: W12F013

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

Order our products online [alfa.com](https://www.alfa.com)

This document has been electronically generated and does not require a signature.

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.

~~112778~~ W2983
Rec. 11/21/22 12

Product Name:

Certificate of Analysis**Potassium sulfate - ReagentPlus[®], ≥99.0%**

Product Number:

P0772

Batch Number:

SLCM9788

Brand:

SIGALD

CAS Number:

7778-80-5

MDL Number:

MFCD00011388

Formula:

K₂O₄S

Formula Weight:

174.26 g/mol

Quality Release Date:

03 MAR 2022



Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Solubility (Color)	Colorless	Colorless
Solubility (Turbidity)	Clear	Clear
10 g plus 150 mL, H ₂ O		
Titration with NaOH	≥ 99.0 %	99.2 %



Brian Dulle, Supervisor

Quality Assurance

St. Louis, Missouri 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



W 3058

Re. 10/19/23 12

Date of Release: 1/27/2023

Name: **Sodium Carbonate, Anhydrous**

Powder, ACS

Item No: **SX0395 All Sizes**

Lot / Batch No: **2023012653**

Country of Origin: **India**

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

Joe Schoellkopf

Quality Control Manager

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

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

EMD Millipore Corporation

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

Form number: 00005624CA, Rev. 2.0

**RICCA CHEMICAL COMPANY®**

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

W 3072
REC. 12/01/23
12

Certificate of Analysis

Buffer, Reference Standard, pH 12.00 ± 0.01 at 25°C**Lot Number: 2310P21****Product Number: 1615****Manufacture Date: OCT 24, 2023****Expiration Date: APR 2025**

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

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

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

Test	Specification	Result
Appearance	Colorless liquid	Passed

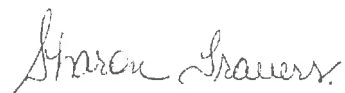
*Not a certified value.

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

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

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

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



Sharon Travers (10/24/2023)

Operations Manager

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

This product was tested in an ISO 17025 Accredited Laboratory

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

Certificate Of Analysis



Date of Release: 11/14/2019

W2700 Recived by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**
ACS

Item No: **SX0355 All Sizes**

Lot / Batch No: **2019111354**

Country of Origin: **India**

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

Joe Schoellkopf

Quality Control Manager

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

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

EMD Millipore Corporation

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

Form number: 00005624CA, Rev. 2.0

Allan Chemical Corporation

235 Margaret King Avenue
Ringwood NJ 07456

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

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

W2697

CERTIFICATE OF ANALYSIS CUPRIC SULFATE CRYSTAL – ACS GRADE

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

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

avantor™



M 6041-4b
MS

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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

 **avantor™**



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

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality

M612 S

Receive → 11/22/24

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

Office and Plant
299 Cedar Lane
Fairless Hills, PA 19030

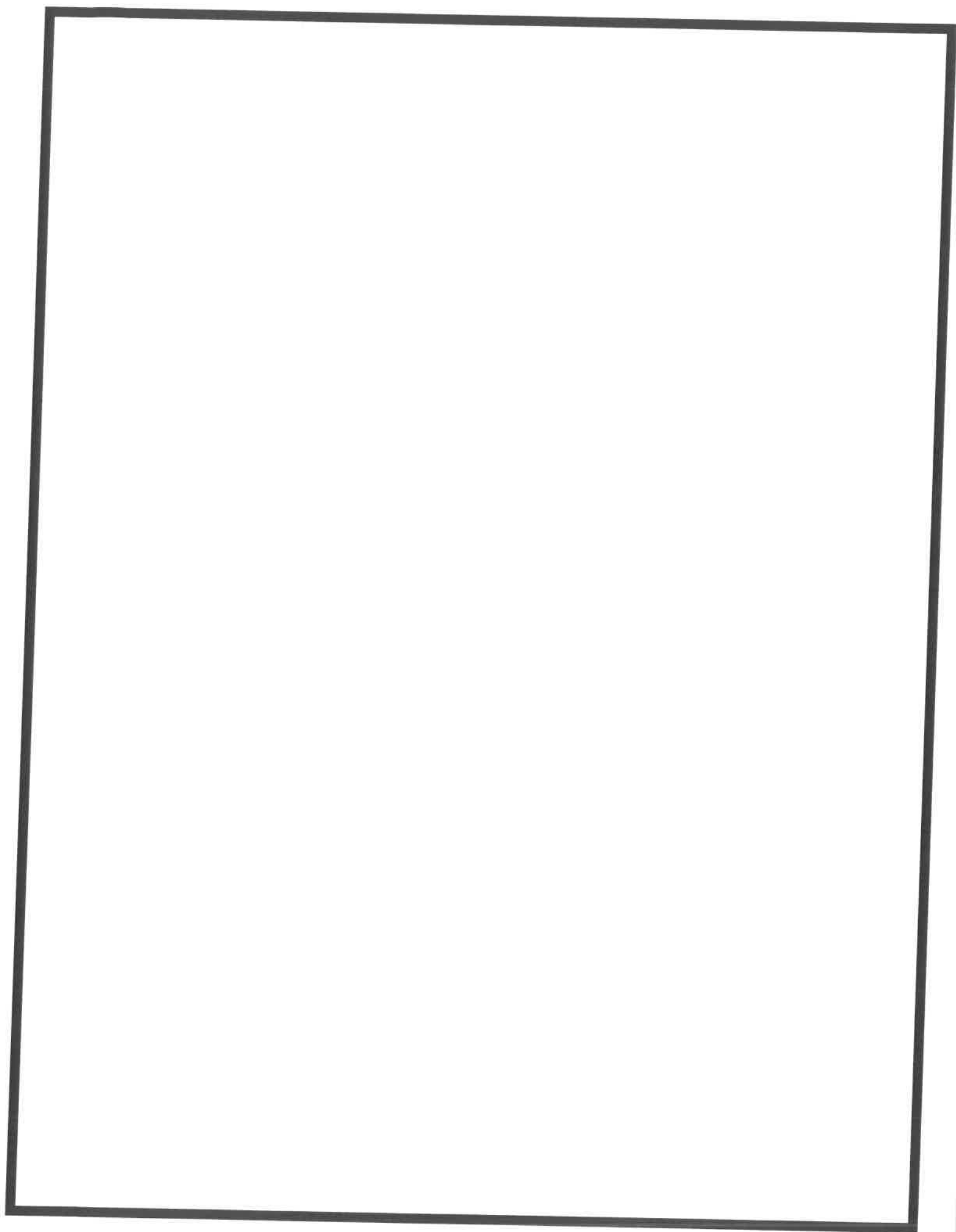
Phone: 215-295-5006
Fax: 215-295-0781

Hydrogen Peroxide 30%, ACS Reagent Grade

SPECIFICATION

MAXIMUM LIMITS

Appearance	Colorless and free from suspended matter or sediment
Assay	29-32%
Color (APHA)	10
Residue after Evaporation	0.002%
Titrateable Acid	0.0006 meq/g
Chloride (Cl)	3 ppm
Nitrate (NO ₃)	2 ppm
Phosphate	2 ppm
Sulfate (SO ₄)	5 ppm
Ammonium (NH ₄)	5 ppm
Heavy Metals (as Pb)	1 ppm
Iron (Fe)	0.5 ppm



**RICCA CHEMICAL COMPANY®**

1490 Lammers Pike

Batesville, IN 47006

<http://www.riccachemical.com>

1-888-GO-RICCA

customerservice@riccachemical.com

Certificate of Analysis

W3093
094121
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 Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.

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

TEST	SPECIFICATION		RESULT
	MIN	MAX	
ASSAY (DRIED BASIS)	99.0	101.0 %	99.5 %
pH OF A 5% SOLUTION @ 25°C	4.0	6.0	4.6
LOSS ON DRYING	8.7	11.4 %	8.90 %
CALCIUM (Ca)	NO PRECIPITATE IS FORMED		NO PRECIPITATE IS FORMED
ELEMENTAL IMPURITIES:			.
NICKEL (Ni)	AS REPORTED		<0.3 ppm
CHROMIUM (Cr)	AS REPORTED		<0.3 ppm
NITRILOTRIACETIC ACID[n[(HOCOCH ₂) ₃ N]		0.1 %	<0.10 %
IDENTIFICATION A	MATCHES REFERENCE		MATCHES REFERENCE
IDENTIFICATION B	RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION		RED COLOR IS DISCHARGED, LEAVING A YELLOWISH SOLUTION
IDENTIFICATION C	MEETS THE REQUIREMENTS FOR SODIUM		MEETS THE REQUIREMENTS FOR SODIUM
CERTIFIED HALAL			CERTIFIED HALAL
EXPIRATION DATE			10-JUL-2026
DATE OF MANUFACTURE			11-JUL-2023
APPEARANCE			WHITE CRYSTALLINE POWDER
RESIDUAL SOLVENTS		AS REPORTED	NO RESIDUAL SOLVENTS PRESENT
MONOGRAPH EDITION			USP 2024

Certificate of Analysis Results Entered By:

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

Certificate of Analysis Results Approved By:

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

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



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

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

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

CORCO CHEMICAL CORPORATION

Manufacturers of ACS Reagents and Semiconductor Grade Chemicals

W3141 Rec on 9/18/24 by IZ

CERTIFICATE OF ANALYSIS

Date: 11/10/2023

Lot No. 431110

Ammonium Hydroxide, ACS

Reagent Grade

<u>TEST</u>	<u>MAXIMUM LIMITS</u>	<u>RESULT</u>
Appearance	Colorless and free from Suspended matter or sediment	Pass
Assay	28-30%	29.85%
Residue after ignition	0.002%	.0005%
Carbon Dioxide (CO ₂)	0.002%	.0001%
Chloride	0.5 ppm	<.2 ppm
Phosphate (PO ₄)	2 ppm	< 1 ppm
Total Sulfur (as SO ₄)	2 ppm	< 1 ppm
Heavy Metals (as Pb)	0.5 ppm	< .05 ppm
Iron (Fe)	0.2 ppm	< .02 ppm
Sub. Red. Permanganate	Passes Test	Pass
Nitrate (NO ₃)	2 ppm	< 1 ppm
Specific Gravity @ 60 Degrees	0.896- 0.902	Pass

Date of MFG: 11/2023

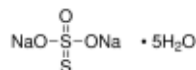
Retest Date: 11/2025

Certificate of Analysis

Product Name:

Sodium thiosulfate pentahydrate - ACS reagent, ≥99.5%

Product Number: 217247
Batch Number: MKCW3077
Brand: SIGALD
CAS Number: 10102-17-7
MDL Number: MFCD00149186
Formula: Na₂O₃S₂ · 5H₂O
Formula Weight: 248.18 g/mol
Quality Release Date: 12 JUL 2024
Recommended Retest Date: JUL 2029



Test	Specification	Result
Appearance (Color)	Colorless or White	White
Appearance (Form)	Powder or Crystals or Pellets	Crystals
ICP Major Analysis	Confirmed	Confirmed
Confirms Sodium and Sulfur Components		
Titration by Iodine	99.5 - 101.0 %	100.2 %
pH	6.0 - 8.4	6.1
c = 5%; Water; At 25 Deg C		
Insoluble Matter	≤ 0.005 %	< 0.001 %
c = 10%; Water		
Nitrogen Compounds	≤ 0.002 %	< 0.002 %
Sulfate & Sulfite (as SO ₄)	≤ 0.1 %	< 0.1 %
Sulfide	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms
Recommended Retest Period	-----	-----
5 Years		



Larry Coers, Director
Quality Control
Milwaukee, WI US

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

ThermoFisher
SCIENTIFIC

Certificate of Analysis

1 Reagent Lane

Fair Lawn, NJ 07410

201.796.7100 tel

201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System
Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120633

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

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

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



Harout Sahagian - Quality Control Manager - Fair Lawn

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

*Based on suggested storage condition.



Certificate of Analysis

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

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

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

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

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

Test	Specification	Result
Appearance	Colorless liquid	Passed

*Not a certified value.

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

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

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

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



Jose Pena (11/11/2024)
Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory

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

Certificate Of Analysis



Date of Release: 7/15/2024

Name: **Ferrous Ammonium Sulfate**

Hexahydrate, ACS

Item No: **FX0245 All Sizes**

Lot / Batch No: **2024071104**

Country of Origin: **USA**

Item	Specifications	Analysis
Assay ($\text{Fe}(\text{NH}_4)_2(\text{SO}_4)_2 \cdot 6\text{H}_2\text{O}$)	98.5 - 101.5%	99.4%
Calcium (Ca)	0.005% max.	0.0001%
Color	Blue-green	Passes Test
Copper (Cu)	0.003% max.	0.001%
Ferric iron (Fe^{3+})	0.01% max.	<0.01%
Form	Crystals	Passes Test
Insoluble Matter	0.01% max.	0.001%
Magnesium (Mg)	0.002% max.	0.0001%
Manganese (Mn)	0.01% max.	0.0004%
Phosphate (PO_4)	0.003% max.	0.0008%
Potassium (K)	0.002% max.	0.0001%
Sodium (Na)	0.02% max.	<0.0001%
Zinc (Zn)	0.003% max.	0.001%

Joe Schoellkopf

Quality Control Manager

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

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

EMD Millipore Corporation

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

Form number: 00005624CA, Rev. 2.0

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2501J28**Product Number:** 7495.5**Manufacture Date:** JAN 17, 2025**Expiration Date:** JUL 2025

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

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

Test	Specification	Result	NIST SRM#
Appearance	Colorless to greenish-yellow liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	4.75-5.25 % (w/w) Cl ₂	5.17 % (w/w) Cl ₂	136

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

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
7495.5-1	4 L black poly	6 months
7495.5-16	500 mL amber poly	6 months
7495.5-32	1 L amber poly	6 months
7495.5-8	250 mL amber poly	6 months

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

Jose Pena (01/17/2025)
Operations Manager

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

Certificate of Analysis

Catalog Number 212760
Product Description 4-Aminoantipyrine, 97%
CAS Number 83-07-8

Lot Number 50107308

Test Results

	<u>Specifications</u>	<u>Results</u>
Assay	≥97.0% min	99.61%
Appearance	Light yellow to tan fine crystals	Conforms
Identification	To pass test	Passes test
Melting Point	107-109°C	107.5-108.6°C
Sensitivity to phenol	To pass test	Passes test
Residue after Ignition	≤0.10%	0.09%
Loss on drying	≤0.5%	0.08%
Clarity of solution (1g/20ml water)	Clear solution	Clear solution
Clarity of solution (1g/20ml EtOH)	Clear solution	Clear solution
Suggested retest date	July 2028	

This certificate of analysis has been electronically generated and is valid without a signature.

BEANTOWN CHEMICAL CORPORATION, 9 SAGAMORE PARK ROAD, HUDSON NH 03051

WWW.BEANTOWNCHEM.COM TOLL FREE: 1-844-891-6306 EMAIL: TECHNICAL@BEANTOWNCHEM.COM

**RICCA CHEMICAL COMPANY®**

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

Certificate of Analysis

031758 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)



RICCA CHEMICAL COMPANY®

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

Certificate of Analysis

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



W3195 Received on 03/19/2025 by IZ

Certificate of Analysis



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

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

Internal ID #: 710

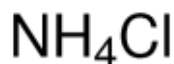
Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA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

W3196 Received on 03/19/2025 by IZ

Certificate of Analysis

Product Name:

Ammonium chloride - ACS reagent, ≥99.5%



Product Number: 213330
Batch Number: MKCV1009
Brand: SIGALD
CAS Number: 12125-02-9
MDL Number: MFCD00011420
Formula: H4CIN
Formula Weight: 53.49 g/mol
Quality Release Date: 23 OCT 2023
Recommended Retest Date: SEP 2026

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



Larry Coers, Director

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



Certificate of Analysis

Product Number: 213330
Batch Number: MKCV1009

Quality Control
Milwaukee, WI US

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





SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: **Melcom - A GE Vernova business**
ADDRESS: **700 Passippany Road**
CITY: **Passippany** STATE: **NJ** ZIP: **07054**
ATTENTION: **Sundas Pervez**
PHONE: **908-259-2531** FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: **Process Tank Acid mixture**
PROJECT NO.: LOCATION:
PROJECT MANAGER: **Sundas Pervez**
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

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

ANALYSIS

DATA TURNAROUND INFORMATION

FAX (RUSH) DAYS*
HARDCOPY (DATA PACKAGE): **1 Day TAT** DAYS*
EDD: **1 Day TAT** 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

Total Metals
Ammonia (Nitrogen)
pH
Total Acidity
TDS
TOC
TCLP
Specific Gravity
Oil/Grease Test

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.	Stem 31 - Sulfuric Acid	Liquid		X	4/23	9 PM	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
2.	Stem 32 Nitric Acid	Liquid		X	4/24	9 AM	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
3.	Stem 46 - Nitric Acid	Liquid		X	4/24	9 AM	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
4.	Acid Mixture TF Containment	Liquid		X	4/24	12 PM	1	✓	✓	✓	✓	✓	✓	✓	✓	✓	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER: 1. Sundas Pervez	DATE/TIME: 4/24 12 PM	RECEIVED BY: 1. [Signature]	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input checked="" type="checkbox"/> COOLER TEMP 2.9° + 1 = 3.9° C Comments: IR Gun #1 Temp 3.4° (Adjusted Factor + 1)
RELINQUISHED BY SAMPLER: 2. [Signature]	DATE/TIME:	RECEIVED BY: 2. [Signature]	
RELINQUISHED BY SAMPLER: 3. [Signature]	DATE/TIME: 4-24-2025	RECEIVED BY: 3. [Signature]	

Page ____ of CLIENT: ☐ Hand Delivered ☐ Other Shipment Complete ☐ YES ☐ NO

From: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>
Sent: Friday, April 25, 2025 10:04 AM
To: Yazmeen Gomez
Cc: Jordan Hedvat
Subject: RE: Acid Samples

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Hi Yazmeen,

I can source more sample, however, given the urgency of us needing the results today, I will just hold off on specific gravity until we can see our results today for the samples we already gave.

Thanks for your quick support on this!

Regards,

Sundas Pervez

Environmental Health and Safety Leader
Gas Power

M +1 862 289 2531



Please note my e-mail has changed to sundas.pervez@gevernova.com

From: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>
Sent: Friday, April 25, 2025 9:35 AM
To: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>
Cc: Jordan Hedvat <Jordan.Hedvat@AllianceTG.com>
Subject: EXT: RE: Acid Samples






Sundas,

Are you able to provide more volume? Specific Gravity would be a sub analysis, and we would need more volume to send to the sub lab.

Specific Gravity requires a 1L plastic. I could set someone up to bring you the bottles and wait while you fill the bottles?

Best Regards,



Yazmeen Gomez
Sr. Project Manager
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3147
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com     

From: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>
Sent: Thursday, April 24, 2025 5:04 PM
To: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>
Cc: Jordan Hedvat <Jordan.Hedvat@AllianceTG.com>
Subject: RE: Acid Samples

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Thanks, Yazmeen!

Looks good. Is specific gravity a possibility of running also? I believe I indicated that on the COC.

Regards,

Sundas Pervez

Environmental Health and Safety Leader
Gas Power

M +1 862 289 2531



Please note my e-mail has changed to sundas.pervez@gevernova.com

From: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>
Sent: Thursday, April 24, 2025 4:45 PM
To: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>
Cc: Jordan Hedvat <Jordan.Hedvat@AllianceTG.com>
Subject: EXT: RE: Acid Samples






Sundas,

Please see attached. I highlighted all the analysis we will be running.

I wanted to give you a heads up we are no longer certified for Acidity, but we can still run the analysis.

Best Regards,



Yazmeen Gomez
Sr. Project Manager
An Alliance Technical Group Company
Main: 908-789-8900
Direct: 908-728-3147
Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092
www.alliancetg.com     

From: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>
Sent: Thursday, April 24, 2025 4:22 PM
To: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>
Cc: Jordan Hedvat <Jordan.Hedvat@AllianceTG.com>
Subject: RE: Acid Samples

EXTERNAL EMAIL - This email was sent by a person from outside your organization. Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Yes, can you please call me at (862) 289-2531?

Regards,

Sundas Pervez

Environmental Health and Safety Leader
Gas Power

M +1 862 289 2531



Please note my e-mail has changed to sundas.pervez@gevernova.com

From: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>
Sent: Thursday, April 24, 2025 4:11 PM
To: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>
Cc: Jordan Hedvat <Jordan.Hedvat@AllianceTG.com>
Subject: EXT: RE: Acid Samples

Can we hop on a call with the lab manager to discuss this? Let me know if you are available.
He will need more information on these samples before analyzing, he is trying to avoid ruining the instruments.

Best Regards,



Yazmeen Gomez
Sr. Project Manager
An Alliance Technical Group Company
Main: 908-789-8900

Direct: 908-728-3147

Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092

www.alliancetg.com   

From: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>

Sent: Thursday, April 24, 2025 3:38 PM

To: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>

Cc: Jordan Hedvat <Jordan.Hedvat@AllianceTG.com>

Subject: Re: Acid Samples

This is the first time you received an email from this sender (Sundas.Pervez@gevernova.com). Exercise caution when clicking links, opening attachments or taking further action, before validating its authenticity.

Secured by Check Point

Hi Yazmeen,

What do you mean by pure products? This is an acid mixture from our process acid tank containment. We suspect some foreign material may have fallen into that mixture that resulted in NO2 orange gas that we observed as a result. So, need to understand the constituents of our mixture.

Please let me know if you need help understanding further. Also, I requested 1 day TAT as this is urgent. Will we be able to get the results tomorrow?

Thanks.

Regards,

Sundas Pervez

Environmental Health and Safety Leader
Gas Power

M +1 862 289 2531



From: Yazmeen Gomez <Yazmeen.Gomez@alliancetg.com>

Sent: Thursday, April 24, 2025 1:40:12 PM

To: Pervez, Sundas (GE Vernova) <Sundas.Pervez@gevernova.com>

Cc: Jordan Hedvat <Jordan.Hedvat@AllianceTG.com>

Subject: EXT: Acid Samples

WARNING: This email originated from outside of GE. Please validate the sender's email address before clicking on links or attachments as they may not be safe.

Good afternoon Sundas,

Do you know if these samples are pure products?

I also, wanted to confirm the COC mentions a large list of analysis but the Lab Manager mentioned we can only run –

Acidity

Alkalinity

Ammonia

Phenolics

pH

TKN

Total Nitrogen

I am also not completely sure we have enough volume to run all these analysis (only received 1 plastic bottle for each sample).

But I will confirm once you let me know if the samples are pure products.

Best Regards,

Yazmeen Gomez

Sr. Project Manager

An Alliance Technical Group Company

Main: 908-789-8900

Direct: 908-728-3147

Address: 284 Sheffield St, Ste 1, Mountainside, NJ 07092

www.alliancetg.com     



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