

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:	Q1048	OrderDate:	1/9/2025 12:08:00 PM
Client:	VERINA CONSULTING GROUP, LLC	Project:	Rotor Clip - PO# 5183.0001
Contact:	Michael Valenzi	Location:	M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1048-01	WATER TREATMENT DISCHARGE	WATER			01/09/25 10:17			01/09/25
			Ammonia	SM4500-NH3		01/10/25	01/10/25 13:01	
			Residual Chlorine	SM4500 Cl G			01/09/25 14:36	



SAMPLE DATA

Report of Analysis

Client:	VERINA CONSULTING GROUP, LLC	Date Collected:	01/09/25 10:17
Project:	Rotor Clip - PO# 5183.0001	Date Received:	01/09/25
Client Sample ID:	WATER TREATMENT DISCHARGE	SDG No.:	Q1048
Lab Sample ID:	Q1048-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	0.46		1	0.045	0.10	mg/L	01/10/25 09:15	01/10/25 13:01	SM 4500-NH3 B plus G-11
Residual Chlorine	0.022	HJ	1	0.016	0.10	mg/L		01/09/25 14:36	SM 4500-Cl 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



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

Initial and Continuing Calibration Verification

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q1048

Project: Rotor Clip - PO# 5183.0001

RunNo.: LB134218

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV Residual Chlorine	mg/L	0.413	0.4	103	90-110	01/09/2025
Sample ID: CCV1 Residual Chlorine	mg/L	0.403	0.4	101	90-110	01/09/2025
Sample ID: CCV2 Residual Chlorine	mg/L	0.403	0.4	101	90-110	01/09/2025

Initial and Continuing Calibration Verification

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q1048

Project: Rotor Clip - PO# 5183.0001

RunNo.: LB134227

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV1 Ammonia as N	mg/L	0.97	1	97	90-110	01/10/2025
Sample ID: CCV1 Ammonia as N	mg/L	0.99	1	99	90-110	01/10/2025
Sample ID: CCV2 Ammonia as N	mg/L	1	1	100	90-110	01/10/2025



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

Initial and Continuing Calibration Blank Summary

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q1048

Project: Rotor Clip - PO# 5183.0001

RunNo.: LB134218

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.016	0.1	01/09/2025
Sample ID: CCB1 Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.016	0.1	01/09/2025
Sample ID: CCB2 Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.016	0.1	01/09/2025

Initial and Continuing Calibration Blank Summary

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q1048

Project: Rotor Clip - PO# 5183.0001

RunNo.: LB134227

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/10/2025
Sample ID: CCB1 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/10/2025
Sample ID: CCB2 Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/10/2025

Preparation Blank Summary

Client: VERINA CONSULTING GROUP, LLC

SDG No.: Q1048

Project: Rotor Clip - PO# 5183.0001

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB134218BL							
Residual Chlorine	mg/L	< 0.0500	0.0500	U	0.016	0.1	01/09/2025
Sample ID: PB165991BL							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.045	0.1	01/10/2025

Matrix Spike Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1033-01
Client ID:	28612MS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Ammonia as N	mg/L	75-125	1.90		0.93		1	1	97		01/10/2025

Matrix Spike Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1033-01
Client ID:	28612MSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Ammonia as N	mg/L	75-125	1.90		0.93		1	1	97		01/10/2025

Matrix Spike Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1048-01
Client ID:	WATER TREATMENT DISCHARGEMS	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Residual Chlorine	mg/L	71-148	0.40		0.022	J	0.4	1	95		01/09/2025

Matrix Spike Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1048-01
Client ID:	WATER TREATMENT DISCHARGEMSD	Percent Solids for Spike Sample:	0

Analyte	Units	Acceptance Limit %R	Spiked Result	Conc. Qualifier	Sample Result	Conc. Qualifier	Spike Added	Dilution Factor	% Rec	Qual	Analysis Date
Residual Chlorine	mg/L	71-148	0.41		0.022	J	0.4	1	98		01/09/2025

Duplicate Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1033-01
Client ID:	28612DUP	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
Ammonia as N	mg/L	+/-20	0.93		0.94		1	1		01/10/2025

Duplicate Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1033-01
Client ID:	28612MSD	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
Ammonia as N	mg/L	+/-20	1.90		1.90		1	0		01/10/2025

Duplicate Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1048-01
Client ID:	WATER TREATMENT DISCHARGEDUP	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
Residual Chlorine	mg/L	+/-20	0.022	J	0.022	J	1	0		01/09/2025

Duplicate Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Sample ID:	Q1048-01
Client ID:	WATER TREATMENT DISCHARGEMSD	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
Residual Chlorine	mg/L	+/-20	0.40		0.41		1	2.45		01/09/2025

Laboratory Control Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Run No.:	LB134218

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134218BS							
Residual Chlorine	mg/L	0.4	0.40		101	1	90-110	01/09/2025

Laboratory Control Sample Summary

Client:	VERINA CONSULTING GROUP, LLC	SDG No.:	Q1048
Project:	Rotor Clip - PO# 5183.0001	Run No.:	LB134227

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	PB165991BS							
Ammonia as N	mg/L	1	1.00		100	1	90-110	01/10/2025



RAW DATA

Analytical Summary Report

Analysis Method: SM4500 Cl G

ANALYST: Niha

Parameter: Residual Chlorine

SUPERVISOR REVIEW BY: Iwona

Run Number: LB134218

Reagent/Standard	Lot/Log #
Residual chlorine ICV-LCS, 0.4PPM	WP111334
Chlorine Calibration std, 0.1ppm	WP111329
Chlorine Calibration std, 0.2ppm	WP111330
Chlorine Calibration std, 0.8ppm	WP111331
Chlorine Calibration std, 0.0ppm	WP111328
Chlorine Calibration std, 1.6ppm	WP111332
Residual Chlorine Calibration and CCV std, 0	WP111333
Total Chlorine Powder Pillows	W3147

Intercept: -0.0017

Slope: 0.9969

Regression: 0.999912

Seq	Lab ID	True Val (mg/l)	DF	Initial Reading	Final Reading	Difference	Result (mg/l)	%D	AnalDate	Anal Time
1	CAL1	0	1	0.000	0.000	0.000	0.00		01/09/2025	14:00
2	CAL2	0.1	1	0.000	0.100	0.100	0.10	2	01/09/2025	14:03
3	CAL3	0.2	1	0.000	0.200	0.200	0.20	1	01/09/2025	14:06
4	CAL4	0.4	1	0.000	0.400	0.400	0.40	0.8	01/09/2025	14:09
5	CAL5	0.8	1	0.000	0.780	0.780	0.78	-2	01/09/2025	14:12
6	CAL6	1.6	1	0.000	1.600	1.600	1.61	0.4	01/09/2025	14:15

Analytical Summary Report

Analysis Method: SM4500 Cl G

ANALYST: Niha

Parameter: Residual Chlorine

SUPERVISOR REVIEW BY: Iwona

Run Number: LB134218

Seq	Lab ID	Initial Weight	Final Vol	True Value (mg/L)	DF	Initial Reading	Final Reading	Diff.	Result (mg/L)	Anal Date	Anal Time
1	ICV			0.4	1	0.0000	0.4100	0.4100	0.4130	01/09/2025	14:18
2	ICB				1	0.0000	0.0000	0.0000	0.0020	01/09/2025	14:21
3	CCV1			0.4	1	0.0000	0.4000	0.4000	0.4030	01/09/2025	14:24
4	CCB1				1	0.0000	0.0000	0.0000	0.0020	01/09/2025	14:27
5	LB134218BL	50	50		1	0.0000	0.0000	0.0000	0.0020	01/09/2025	14:30
6	LB134218BS	50	50	0.4	1	0.0000	0.4000	0.4000	0.4030	01/09/2025	14:33
7	Q1048-01	50	50		1	0.0000	0.0200	0.0200	0.0220	01/09/2025	14:36
8	Q1048-01DUP	50	50		1	0.0000	0.0200	0.0200	0.0220	01/09/2025	14:39
9	Q1048-01MS	50	50	0.4	1	0.0000	0.4000	0.4000	0.4030	01/09/2025	14:42
10	Q1048-01MSD	50	50	0.4	1	0.0000	0.4100	0.4100	0.4130	01/09/2025	14:45
11	CCV2			0.4	1	0.0000	0.4000	0.4000	0.4030	01/09/2025	14:48
12	CCB2				1	0.0000	0.0000	0.0000	0.0020	01/09/2025	14:51

LB1342-19

WORKLIST(Hardcopy Internal Chain)

WorkList Name : RESIDUAL CHLORINE-C

WorkList ID : 186840

Department : Wet-Chemistry

Date : 01-09-2025 12:39:06

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1048-01	WATER TREATMENT DISCHAF	Water	Residual Chlorine	Cool 4 deg C	VERI01	M11	01/09/2025	SM4500 Cl G

Date/Time 01.09.2025, 13:30
Raw Sample Received by: NFWC
Raw Sample Relinquished by: NFWC

Date/Time 01.09.2025, 15:00
Raw Sample Received by: NFWC
Raw Sample Relinquished by: NFWC

66134227

Test results

Aquakem 7.2AQ1

Page:

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

1/10/2025 13:13

Reviewed by : RM

Instrument ID : Konelab

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.968	0.0	0.147	
ICB1	0.003	0.0	0.018	
CCV1	0.994	0.0	0.151	
CCB1	0.002	0.0	0.018	
RL CHECK	0.094	0.0	0.031	
PB165991BL	-0.001	0.0	0.018	
PB165991BS	1.017	0.0	0.154	
Q1033-01	0.933	0.0	0.143	
Q1033-01DUP	0.937	0.0	0.143	
Q1033-01MS	1.899	0.0	0.272	
Q1033-01MSD	1.937	0.0	0.277	
Q1048-01	0.457	0.0	0.079	
Q1049-01	0.077	0.0	0.028	
CCV2	1.014	0.0	0.154	
CCB2	0.004	0.0	0.019	

94% (50-150)
01/10/2025
RM

N 15
Mean 0.689
SD 0.6654
CV% 96.57

Aquakem v. 7.2AQ1

Results from time period:

Fri Jan 10 11:58:00 2025

Fri Jan 10 13:07:58 2025

Sample Id	Sam/Ctr/c#	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-1 P		0.0056	mg/l	1/10/2025 12:20:17	
0.1PPM	A	Ammonia-1 P		0.1133	mg/l	1/10/2025 12:20:18	
0.2PPM	A	Ammonia-1 P		0.2047	mg/l	1/10/2025 12:20:19	
0.4PPM	A	Ammonia-1 P		0.3883	mg/l	1/10/2025 12:20:20	
1.0PPM	A	Ammonia-1 P		0.9496	mg/l	1/10/2025 12:20:21	
1.3PPM	A	Ammonia-1 P		1.3701	mg/l	1/10/2025 12:20:22	
2.0PPM	A	Ammonia-1 P		2.002	mg/l	1/10/2025 12:20:23	
ICV1	S	Ammonia-1 P		0.9684	mg/l	1/10/2025 12:50:34	
ICB1	S	Ammonia-1 P		0.0033	mg/l	1/10/2025 12:50:37	
CCV1	S	Ammonia-1 P		0.9942	mg/l	1/10/2025 12:50:39	
CCB1	S	Ammonia-1 P		0.0015	mg/l	1/10/2025 12:50:41	
RL CHECK	S	Ammonia-1 P		0.0939	mg/l	1/10/2025 12:50:42	
PB165991BL	S	Ammonia-1 P		-0.0011	mg/l	1/10/2025 12:50:44	
PB165991BS	S	Ammonia-1 P		1.0168	mg/l	1/10/2025 13:01:16	
Q1033-01	S	Ammonia-1 P		0.9326	mg/l	1/10/2025 13:01:17	
Q1033-01DUP	S	Ammonia-1 P		0.9368	mg/l	1/10/2025 13:01:20	
Q1033-01MS	S	Ammonia-1 P		1.8988	mg/l	1/10/2025 13:01:21	
Q1033-01MSD	S	Ammonia-1 P		1.9372	mg/l	1/10/2025 13:01:22	
Q1048-01	S	Ammonia-1 P		0.4573	mg/l	1/10/2025 13:01:25	
Q1049-01	S	Ammonia-1 P		0.077	mg/l	1/10/2025 13:07:54	
CCV2	S	Ammonia-1 P		1.0142	mg/l	1/10/2025 13:07:56	
CCB2	S	Ammonia-1 P		0.0039	mg/l	1/10/2025 13:07:58	

Calibration results

Aquakem 7.2AQ1

Page: 1

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

Reviewed by : R14

Instrument ID : Konelab

1/10/2025 12:21

Test Ammonia-N

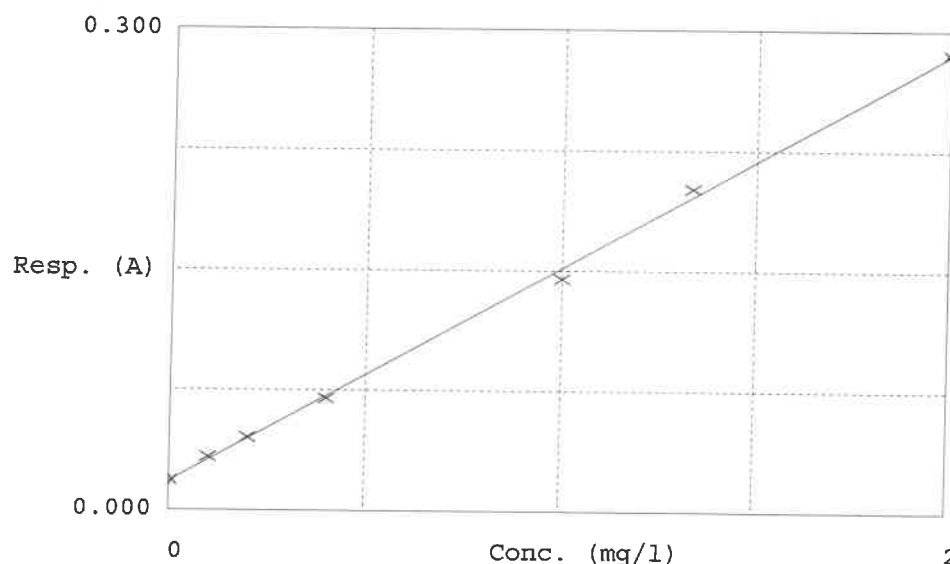
Accepted 1/10/2025 12:20

Factor 7.485

Bias 0.018

Coeff. of det. 0.998736

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.019	0.0056	0.0000	-
2	NH3-2PPM	0.033	0.1133	0.1000	13.3
3	NH3-2PPM	0.045	0.2047	0.2000	2.3
4	NH3-2PPM	0.070	0.3883	0.4000	-2.9
5	NH3-2PPM	0.145	0.9496	1.0000	-5.0
6	NH3-2PPM	0.201	1.3701	1.3333	5.4
7	NH3-2PPM	0.286	2.0020	2.0000	0.1

01/10/2025
R14

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

SDG No : N/A

Matrix : WATER

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

Start Digest Date: 01/10/2025 Time : 09:15 Temp : 150 °C

End Digest Date: 01/10/2025 Time : 10:15 Temp : 158 °C

Digestion tube ID : M5595

Filter paper ID : N/A

pH Meter ID : N/A

Block Thermometer ID : WC CYANIDE

Prep Technician Signature: RM

Supervisor Signature: 12

Standard Name	MLS USED	STD REF. # FROM LOG
LCSW	1.0ML	WP111092
MS/MSD SPIKE SOL.	1.0ML	WP111091
PBW	50.0ML	W3112
RL CHECK	0.1ML	WP111091
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP111325
NAOH 6N	0.5-2.0ML	WP111318
H2SO4 0.04N	5.0ML	WP110335
pH strip-Ammonia	N/A	W3133
KI-starch paper	N/A	W3155
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

Extraction Conformance/Non-Conformance Comments:

ALL GLASSWEAR ARE STEAMED OUT AND THERE WERE NO TRACE OF AMMONIA USING NESLER REAGENT
WP108814,

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
01/10/2025 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
PB165991BL	PBW991	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB165991BS	LCS991	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1033-01	28612	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1033-01DUP	28612DUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1033-01MS	28612MS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1033-01MSD	28612MSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1048-01	WATER TREATMENT DISCHARGE	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1049-01	FRAC-TANK-257952	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch ID # LB134218

Review By	Niha	Review On	1/9/2025 3:27:37 PM
Supervise By	Iwona	Supervise On	1/9/2025 3:39:20 PM
SubDirectory	LB134218	Test	Residual Chlorine
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	WP111334,WP111329,WP111330,WP111331,WP111328,WP111332,WP111333,W3147		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	01/09/25 14:00		Niha	OK
2	CAL2	CAL2	CAL	01/09/25 14:03		Niha	OK
3	CAL3	CAL3	CAL	01/09/25 14:06		Niha	OK
4	CAL4	CAL4	CAL	01/09/25 14:09		Niha	OK
5	CAL5	CAL5	CAL	01/09/25 14:12		Niha	OK
6	CAL6	CAL6	CAL	01/09/25 14:15		Niha	OK
7	ICV	ICV	ICV	01/09/25 14:18		Niha	OK
8	ICB	ICB	ICB	01/09/25 14:21		Niha	OK
9	CCV1	CCV1	CCV	01/09/25 14:24		Niha	OK
10	CCB1	CCB1	CCB	01/09/25 14:27		Niha	OK
11	LB134218BL	LB134218BL	MB	01/09/25 14:30		Niha	OK
12	LB134218BS	LB134218BS	LCS	01/09/25 14:33		Niha	OK
13	Q1048-01	WATER TREATMENT	SAM	01/09/25 14:36		Niha	OK
14	Q1048-01DUP	WATER TREATMENT	DUP	01/09/25 14:39		Niha	OK
15	Q1048-01MS	WATER TREATMENT	MS	01/09/25 14:42		Niha	OK
16	Q1048-01MSD	WATER TREATMENT	MSD	01/09/25 14:45		Niha	OK
17	CCV2	CCV2	CCV	01/09/25 14:48		Niha	OK
18	CCB2	CCB2	CCB	01/09/25 14:51		Niha	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB134227

Review By	rubina	Review On	1/13/2025 8:37:45 AM
Supervise By	Iwona	Supervise On	1/13/2025 9:35:20 AM
SubDirectory	LB134227	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP111350		
ICV Standard	WP111352		
CCV Standard	WP111351		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP111092		
Chk Standard	WP110416,WP110019,WP108709,WP108840		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	0.0PPM	0.0PPM	CAL1	01/10/25 12:20		rubina	OK
2	0.1PPM	0.1PPM	CAL2	01/10/25 12:20		rubina	OK
3	0.2PPM	0.2PPM	CAL3	01/10/25 12:20		rubina	OK
4	0.4PPM	0.4PPM	CAL4	01/10/25 12:20		rubina	OK
5	1.0PPM	1.0PPM	CAL5	01/10/25 12:20		rubina	OK
6	1.3PPM	1.3PPM	CAL6	01/10/25 12:20		rubina	OK
7	2.0PPM	2.0PPM	CAL7	01/10/25 12:20		rubina	OK
8	ICV1	ICV1	ICV	01/10/25 12:50		rubina	OK
9	ICB1	ICB1	ICB	01/10/25 12:50		rubina	OK
10	CCV1	CCV1	CCV	01/10/25 12:50		rubina	OK
11	CCB1	CCB1	CCB	01/10/25 12:50		rubina	OK
12	RL	RL	SAM	01/10/25 12:50		rubina	OK
13	PB165991BL	PB165991BL	MB	01/10/25 12:50		rubina	OK
14	PB165991BS	PB165991BS	LCS	01/10/25 13:01		rubina	OK
15	Q1033-01	28612	SAM	01/10/25 13:01		rubina	OK
16	Q1033-01DUP	28612DUP	DUP	01/10/25 13:01		rubina	OK
17	Q1033-01MS	28612MS	MS	01/10/25 13:01		rubina	OK
18	Q1033-01MSD	28612MSD	MSD	01/10/25 13:01		rubina	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch ID # LB134227

Review By	rubina	Review On	1/13/2025 8:37:45 AM
Supervise By	Iwona	Supervise On	1/13/2025 9:35:20 AM
SubDirectory	LB134227	Test	Ammonia
STD. NAME	STD REF.#		
ICAL Standard	WP111350		
ICV Standard	WP111352		
CCV Standard	WP111351		
ICSA Standard	N/A		
CRI Standard	N/A		
LCS Standard	WP111092		
Chk Standard	WP110416,WP110019,WP108709,WP108840		

19	Q1048-01	WATER TREATMENT	SAM	01/10/25 13:01		rubina	OK
20	Q1049-01	FRAC-TANK-257952	SAM	01/10/25 13:07		rubina	OK
21	CCV2	CCV2	CCV	01/10/25 13:07		rubina	OK
22	CCB2	CCB2	CCB	01/10/25 13:07		rubina	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1048

Test : Ammonia,Residual Chlorine

Prepbatch ID : PB165991,

Sequence ID/Qc Batch ID: LB134218, LB134227,

Standard ID :

WP108709, WP108840, WP110019, WP110149, WP110150, WP110335, WP110416, WP111091, WP111092, WP111317, WP111318, WP111325, WP111326, WP111327, WP111328, WP111329, WP111330, WP111331, WP111332, WP111333, WP111334, WP111350, WP111351, WP111352,

Chemical ID :

M5673, W1992, W1993, W2666, W2700, W2858, W3112, W3113, W3130, W3131, W3132, W3133, W3143, W3147, W3155,

<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	WP108709	07/11/2024	01/11/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Mohan Bera 07/17/2024
<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	WP108840	07/26/2024	01/26/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 07/26/2024
<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	WP110019	10/02/2024	01/31/2025	Rubina Mughal	None	None	Iwona Zarych
								10/04/2024

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

<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)	WP110149	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych
								10/14/2024

FROM 3.81900gram of W1993 + 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	WP110150	10/11/2024	04/08/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych 10/14/2024
<u>FROM</u>	3.81900gram of W1992 + 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>
1597	0.04 N H2SO4	WP110335	10/22/2024	04/22/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 10/22/2024
<u>FROM</u> 1.00000ml of M5673 + 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>
740	sodium nitroferricyanide for ammonia	WP110416	10/25/2024	04/25/2025	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 10/25/2024
FROM 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>
1322	Ammonia Intermediate Std, 50PPM	WP111091	12/16/2024	01/16/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 12/16/2024
<u>FROM</u> 95.00000ml of W3112 + 5.00000ml of WP110149 = 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	WP111092	12/16/2024	01/16/2025	Rubina Mughal	WETCHEM_S CALE_5 (WC SC-5)	None	Iwona Zarych 12/16/2024
<u>FROM</u> 95.00000ml of W3112 + 5.00000ml of WP110150 = 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>
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								

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>
1471	NaOH Solution, 6N	WP111318	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-6)	None	Iwona Zarych
								01/09/2025

FROM 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>
1494	BORATE BUFFER	WP111325	01/09/2025	01/10/2025	Rubina Mughal	None	None	Iwona Zarych
								01/09/2025

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

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>
3443	Residual chlorine std, Intermediate 10PPM	WP111326	01/09/2025	01/10/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/13/2025

FROM 42.75000ml of W3112 + 7.25000ml of W3130 = 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>
3444	Residual chlorine std, Intermediate-SS 10PPM	WP111327	01/09/2025	01/10/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/13/2025

FROM 42.50000ml of W3112 + 7.50000ml of W3131 = 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>
3710	Chlorine Calibration std, 0.0ppm	WP111328	01/09/2025	01/10/2025	Niha Farheen Shaik	None	None	Iwona Zarych
								01/13/2025

FROM 50.00000ml of W3112 = 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>
3707	Chlorine Calibration std, 0.1ppm	WP111329	01/09/2025	01/10/2025	Niha Farheen Shaik	None	WETCHEM_FIPETTE_3	Iwona Zarych
							(WC)	01/13/2025

FROM 49.50000ml of W3112 + 0.50000ml of WP111326 = 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>
3708	Chlorine Calibration std, 0.2ppm	WP111330	01/09/2025	01/10/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 49.00000ml of W3112 + 1.00000ml of WP111326 = 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>
3709	Chlorine Calibration std, 0.8ppm	WP111331	01/09/2025	01/10/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych
<p>(WC)</p> <p>FROM 46.00000ml of W3112 + 4.00000ml of WP111326 = 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>
3711	Chlorine Calibration std, 1.6ppm	WP111332	01/09/2025	01/10/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/13/2025

FROM 42.00000ml of W3112 + 8.00000ml of WP111326 = 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>
3799	Residual Chlorine Calibration and CCV std, 0.4PPM	WP111333	01/09/2025	01/10/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/13/2025

FROM 96.00000ml of W3112 + 4.00000ml of WP111326 = 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>
3452	Residual chlorine ICV-LCS, 0.4PPM	WP111334	01/09/2025	01/10/2025	Niha Farheen Shaik	None	Glass Pipette-A	Iwona Zarych 01/13/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP111327 = 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)	WP111350	01/10/2025	01/11/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 01/13/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP111091 = Final Quantity: 50.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
285	Ammonia CCV Std. (1 ppm)	WP111351	01/10/2025	01/11/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3	Iwona Zarych
FROM 49.00000ml of W3112 + 1.00000ml of WP111091 = Final Quantity: 50.000 ml <div></div>								

<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)	WP111352	01/10/2025	01/11/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/13/2025
<u>FROM</u> 49.00000ml of W3112 + 1.00000ml of WP111092 = Final Quantity: 50.000 ml								

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	09/21/2023 / mohan	09/05/2023 / mohan	M5673

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	WL13B	04/08/2025	04/08/2015 / apatel	04/08/2015 / apatel	W1992

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

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

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	07/03/2029	07/03/2024 / 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 #
HACH	14268-10 / Chlorine Std, Pk of 16	A4144	01/31/2026	07/25/2024 / lwona	07/25/2024 / lwona	W3130

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	14268-10 / Chlorine Std, Pk of 16	A4166	02/28/2026	07/25/2024 / lwona	07/25/2024 / lwona	W3131

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

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	2407F34	01/31/2025	09/30/2024 / lwona	09/30/2024 / lwona	W3143

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	14064-99 / Total Chlorine Powder Pillows	A4230	08/31/2029	10/01/2024 / lwona	10/01/2024 / lwona	W3147

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

Certificate of Analysis



Date of Release: 12/18/2013

Product: Ammonium Chloride GR ACS

Catalog No.: AX1270 all
size codes

Grade: Meets ACS Specifications

CAS #: 12125-02-9

Country of Origin: India

FW: 53.49

Lot No.: WL13B



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

Joe Schoellkopff

Quality Control Manager

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Certificate of Analysis



Date of Release: 5/12/2014

Product: Ammonium Chloride GR ACS

Catalog No.: AX1270 all
size codes

Grade: Meets ACS Specifications

CAS #: 12125-02-9

Country of Origin: India

FW: 53.49

Lot No.: XE09B



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

Joe Schoellkopf

Quality Control Manager

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W2858 Received by AP on 07/07/2021

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

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

Retest date: January 7, 2026

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W2666 Recived on 02/10/2020 by AP

Product No.: 87683

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

Lot No.: W12F013

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

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Certificate Of Analysis



Date of Release: 11/14/2019

W2700 Recived by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**
ACS

Item No: **SX0355 All Sizes**

Lot / Batch No: **2019111354**

Country of Origin: **India**

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

Joe Schoellkopf

Quality Control Manager

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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

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

 **avantor**™



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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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



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

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality



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.

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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

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VWR Chemicals, LLC.
28600 Fountain Parkway, Solon OH 44139 USA

Additional Information

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

Product meets analytical specifications of the grades listed.



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

PRODUCT: Chlorine Solution Ampule 50-75 mg/l

PRODUCT NUMBER: 1426810

LOT NUMBER: A4144

MANUFACTURE DATE: 05/28/2024

DATE OF ANALYSIS: 05/30/2024

TEST	SPECIFICATIONS	RESULTS
Standard Deviation for the ampules sampled	0 to 0.4 mg/L	0.10 mg/L
Mean Chlorine Concentration ampules sampled.	50 to 75 mg/L	60.9 mg/L

The expiration date is Jan 2026

Certified by: *Scott Als*

Analytical Services Chemist



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

PRODUCT: Chlorine Solution Ampule 50-75 mg/l

PRODUCT NUMBER: 1426810

LOT NUMBER: A4166

MANUFACTURE DATE: 06/24/2024

DATE OF ANALYSIS: 06/25/2024

TEST	SPECIFICATIONS	RESULTS
Standard Deviation for the ampules sampled	0 to 0.4 mg/L	0.10 mg/L
Mean Chlorine Concentration ampules sampled.	50 to 75 mg/L	61.9 mg/L

The expiration date is Feb 2026

Certified by: *Scott Als*

Analytical Services Chemist

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.

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 2407F34**Product Number:** 7495.5**Manufacture Date:** JUL 12, 2024**Expiration Date:** JAN 2025

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

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

Test	Specification	Result	NIST SRM#
Appearance	Colorless to greenish-yellow liquid	Passed	
Assay (vs. Sodium Thiosulfate/Starch)	4.75-5.25 % (w/w) Cl ₂	5.05 % (w/w) Cl ₂	136

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

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

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

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

Jose Pena (07/12/2024)
Operations Manager

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Loveland, CO 80539

(970) 669-3050

Certificate of Analysis

PRODUCT: DPD Total Chlorine Reagent

PRODUCT NUMBER: 1406499

LOT NUMBER: A4230

MANUFACTURE DATE: 08/27/2024

DATE OF ANALYSIS: 08/28/2024

TEST	SPECIFICATIONS	RESULTS
Percent Recovery for a 2.5 ppm Standard. Chlorine concentration determined using DPD compared to the actual concentration.	93 to 107 %	95.7 %
pH of reagent in 50 mL of DI water.	6.2 to 6.5	6.40
Percent Recovery for a 5.0 ppm Standard. Chlorine concentration determined using DPD compared to the actual concentration.	93 to 107 %	96.2 %
Hardness Blank: 1000 ppm as Calcium Carbonate Hardness standard vs DI water measured at 530 nm in 1 cm cells.	0 to 0.009 abs	0.0020 abs

The expiration date is Aug 2029

Certified by: *Scott Als*

Analytical Services Chemist



SHIPPING DOCUMENTS

CHEMTECH

CHAIN OF CUSTODY RECORD

284 Sheffield Street, Mountainside, NJ 07092
(908) 789-8900 • Fax (908) 789-8922
www.chemtech.net

CHEMTECH PROJECT NO. **Q1048**
QUOTE NO.

COC Number **2041652**

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Verina Consulting Group
ADDRESS: 1011 US Highway 22, Suite 302
CITY Bridgewater STATE: NJ ZIP: 08807
ATTENTION: Michael Valenzi
PHONE: 908-864-4400 FAX: 908-864-4401

CLIENT PROJECT INFORMATION

PROJECT NAME: Rotary Clip
PROJECT NO.: 5183.0001 LOCATION: NJ
PROJECT MANAGER: Michael Valenzi
e-mail: mvalenzi@vcg-llc.com
PHONE: 908-864-4400 FAX: 908-864-4401

CLIENT BILLING INFORMATION

BILL TO: SEE LEFT PO#: 5183.0001
ADDRESS:
CITY STATE: ZIP:
ATTENTION: PHONE:

ANALYSIS

DATA TURNAROUND INFORMATION

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

*TO BE APPROVED BY CHEMTECH

STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS DAYS

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

*Cr, Cu, Ni, Zn
Chlorine Demand
Ammonia*

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		B	E	C							
1.	<u>Water Treatment Discharge</u>	<u>WW</u>	<u>X</u>		<u>1/9/25</u>	<u>10:17</u>	<u>3</u>	<u>X</u>	<u>X</u>	<u>X</u>							
2.																	
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER: 1. <u>M. Valenzi</u>	DATE/TIME: <u>1-9-25 12:00</u>	RECEIVED BY: <u>[Signature]</u>	DATE/TIME: <u>1-9-25 12:00</u>	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>3.1°C</u>
RELINQUISHED BY SAMPLER: 2. <u>[Signature]</u>	DATE/TIME:	RECEIVED BY: 2. <u>[Signature]</u>		Comments: <u>Flow rate = 59</u>
RELINQUISHED BY SAMPLER: 3. <u>[Signature]</u>	DATE/TIME: <u>1-9-25 12:25</u>	RECEIVED BY: 3. <u>[Signature]</u>		<u>pH = 9.4</u>
				<u>Temperature = 75.4</u>
Page <u>1</u> of <u>1</u>			CLIENT: <input type="checkbox"/> Hand Delivered <input type="checkbox"/> Other	Shipment Complete
			CHEMTECH: <input type="checkbox"/> Picked Up <input type="checkbox"/> Field Sampling	<input type="checkbox"/> YES <input type="checkbox"/> NO



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

Laboratory Certification

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