Alliance TECHNICAL GROUP

284 Sheffield Street, Mountainside NJ 07092
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DATA REPORTING QUALIFIERS- INORGANIC

For reporting results, the following " Results Qualifiers" are used:

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

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LAB CHRONICLE

OrderID:	Q1835	**OrderDate:**	4/17/2025 3:31:00 PM
Client:	Holland Manufacturing Co.	**Project:**	Pre Treatment Plant 2025
Contact:	Todd Holland	**Location:**	L31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1835-01	**EFFLUENT**	**WATER**			**04/17/25 12:30**			**04/17/25**
			Ammonia	SM4500-NH3		04/17/25	04/18/25 09:51	
			BOD5	SM5210 B			04/18/25 13:45	
			Oil and Grease	1664A			04/22/25 10:20	
			Phosphorus-Ortho	SM4500-P E			04/18/25 10:11	
			Phosphorus-Total	365.3		04/18/25	04/18/25 11:53	
			TSS	SM2540 D			04/21/25 10:00	
Q1835-01DL	**EFFLUENTDL**	**WATER**			**04/17/25 12:30**			**04/17/25**
			Ammonia	SM4500-NH3		04/17/25	04/18/25 11:06	
Q1835-04	**AERATION-1**	**WATER**			**04/17/25 12:30**			**04/17/25**
			TSS	SM2540 D			04/21/25 10:00	
Q1835-05	**INFLUENT**	**WATER**			**04/17/25 12:30**			**04/17/25**
			Ammonia	SM4500-NH3		04/17/25	04/18/25 09:51	
			BOD5	SM5210 B			04/18/25 13:45	

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LAB CHRONICLE

Q1835-05DL	**INFLUENTDL**	**WATER**			**04/17/25 12:30**			**04/17/25**
			Ammonia	SM4500-NH3		04/17/25	04/18/25 11:06	

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SAMPLE DATA

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Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	04/17/25 12:30
Project:	Pre Treatment Plant 2025	Date Received:	04/17/25
Client Sample ID:	EFFLUENT	SDG No.:	Q1835
Lab Sample ID:	Q1835-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	604	OR	1	1.50	5.00	mg/L	04/17/25 15:40	04/18/25 09:51	SM 4500-NH3 B plus G-11
BOD5	34000		1	0.20	2.00	mg/L		04/18/25 13:45	SM 5210 B-16
Oil and Grease	4.60	J	1	0.29	5.00	mg/L		04/22/25 10:20	1664A
Orthophosphate as P	0.019	J	1	0.0040	0.050	mg/L		04/18/25 10:11	SM 4500-P E-11
Phosphorus, Total	0.099		1	0.0050	0.050	mg/L	04/18/25 09:45	04/18/25 11:53	365.3
TSS	2800		1	1.00	4.00	mg/L		04/21/25 10:00	SM 2540 D-15

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

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Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	04/17/25 12:30
Project:	Pre Treatment Plant 2025	Date Received:	04/17/25
Client Sample ID:	EFFLUENTDL	SDG No.:	Q1835
Lab Sample ID:	Q1835-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	518	D	10	15.0	50.0	mg/L	04/17/25 15:40	04/18/25 11:06	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

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Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	04/17/25 12:30
Project:	Pre Treatment Plant 2025	Date Received:	04/17/25
Client Sample ID:	AERATION-1	SDG No.:	Q1835
Lab Sample ID:	Q1835-04	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TSS	1810		1	1.00	4.00	mg/L		04/21/25 10:00	SM 2540 D-15

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

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Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	04/17/25 12:30
Project:	Pre Treatment Plant 2025	Date Received:	04/17/25
Client Sample ID:	INFLUENT	SDG No.:	Q1835
Lab Sample ID:	Q1835-05	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	193	OR	1	1.50	5.00	mg/L	04/17/25 15:40	04/18/25 09:51	SM 4500-NH3 B plus G-11
BOD5	16700		1	0.20	2.00	mg/L		04/18/25 13:45	SM 5210 B-16

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

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Report of Analysis

Client:	Holland Manufacturing Co.	Date Collected:	04/17/25 12:30
Project:	Pre Treatment Plant 2025	Date Received:	04/17/25
Client Sample ID:	INFLUENTDL	SDG No.:	Q1835
Lab Sample ID:	Q1835-05DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	184	D	2	3.00	10.0	mg/L	04/17/25 15:40	04/18/25 11:06	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

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Initial and Continuing Calibration Verification

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025 **RunNo.:** LB135482

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV1						
Ammonia as N		mg/L	0.98	1	98	90-110	04/18/2025
Sample ID:	CCV1						
Ammonia as N		mg/L	0.96	1	96	90-110	04/18/2025
Sample ID:	CCV2						
Ammonia as N		mg/L	0.95	1	95	90-110	04/18/2025
Sample ID:	CCV3						
Ammonia as N		mg/L	1	1	100	90-110	04/18/2025
Sample ID:	CCV4						
Ammonia as N		mg/L	1	1	100	90-110	04/18/2025

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Initial and Continuing Calibration Verification

Client:	Holland Manufacturing Co.	**SDG No.:**	Q1835
Project:	Pre Treatment Plant 2025	**RunNo.:**	LB135485

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: **ICV**						
Orthophosphate as P	mg/L	0.489	0.50	98	90-110	04/18/2025
Sample ID: **CCV1**						
Orthophosphate as P	mg/L	0.517	0.5	103	90-110	04/18/2025
Sample ID: **CCV2**						
Orthophosphate as P	mg/L	0.498	0.5	100	90-110	04/18/2025

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Initial and Continuing Calibration Verification

Client:	Holland Manufacturing Co.	**SDG No.:**	Q1835
Project:	Pre Treatment Plant 2025	**RunNo.:**	LB135487

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV						
Phosphorus, Total	mg/L	0.487	0.50	97	90-110	04/18/2025
Sample ID: CCV1						
Phosphorus, Total	mg/L	0.500	0.50	100	90-110	04/18/2025
Sample ID: CCV2						
Phosphorus, Total	mg/L	0.493	0.50	99	90-110	04/18/2025
Sample ID: CCV3						
Phosphorus, Total	mg/L	0.499	0.50	100	90-110	04/18/2025

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Initial and Continuing Calibration Verification

Client:	Holland Manufacturing Co.	**SDG No.:**	Q1835
Project:	Pre Treatment Plant 2025	**RunNo.:**	LB135487

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date

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Initial and Continuing Calibration Blank Summary

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025 **RunNo.:** LB135482

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	04/18/2025
Sample ID: CCB1							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/18/2025
Sample ID: CCB2							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/18/2025
Sample ID: CCB3							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/18/2025
Sample ID: CCB4							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.030	0.1	04/18/2025

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Initial and Continuing Calibration Blank Summary

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025 **RunNo.:** LB135485

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB							
Orthophosphate as P	mg/L	0.004	0.0250	J	0.0038	0.05	04/18/2025
Sample ID: CCB1							
Orthophosphate as P	mg/L	< 0.0250	0.0250	U	0.0038	0.05	04/18/2025
Sample ID: CCB2							
Orthophosphate as P	mg/L	0.006	0.0250	J	0.0038	0.05	04/18/2025

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Initial and Continuing Calibration Blank Summary

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025 **RunNo.:** LB135487

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB							
Phosphorus, Total	mg/L	0.006	0.0250	J	0.0045	0.05	04/18/2025
Sample ID: CCB1							
Phosphorus, Total	mg/L	< 0.0250	0.0250	U	0.0045	0.05	04/18/2025
Sample ID: CCB2							
Phosphorus, Total	mg/L	0.006	0.0250	J	0.0045	0.05	04/18/2025
Sample ID: CCB3							
Phosphorus, Total	mg/L	< 0.0250	0.0250	U	0.0045	0.05	04/18/2025

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Initial and Continuing Calibration Blank Summary

Client:	Holland Manufacturing Co.	**SDG No.:**	Q1835
Project:	Pre Treatment Plant 2025	**RunNo.:**	LB135487

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date

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Preparation Blank Summary

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB135485BL							
Orthophosphate as P	mg/L	< 0.0250	0.0250	U	0.004	0.05	04/18/2025
Sample ID: LB135493BL							
BOD5	mg/L	< 0.2000	0.2000	U	0.20	2.0	04/18/2025
Sample ID: LB135500BL							
TSS	mg/L	1	2.0000	J	1	4	04/21/2025
Sample ID: LB135516BL							
Oil and Grease	mg/L	< 2.5000	2.5000	U	0.29	5.0	04/22/2025
Sample ID: PB167618BL							
Ammonia as N	mg/L	< 0.0500	0.0500	U	0.03	0.1	04/18/2025
Sample ID: PB167651BL							
Phosphorus, Total	mg/L	0.007	0.0250	J	0.005	0.05	04/18/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1782-01
Client ID: MW-1MS
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	0.97		0.030	U	1	1	97		04/18/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1782-01
Client ID: MW-1MSD
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	0.96		0.030	U	1	1	96		04/18/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-01DL
Client ID: EFFLUENT-COMPOSITEMS
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
Phosphorus, Total	mg/L	90-110	4.28	D	3.89	D	0.5	5	78	*	04/18/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-01DL
Client ID: EFFLUENT-COMPOSITEMSD
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
Phosphorus, Total	mg/L	90-110	4.28	D	3.89	D	0.5	5	78	*	04/18/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-02
Client ID: EFFLUENT-GRABMS
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
Oil and Grease	mg/L	78-114	20.3		0.29	U	20.0	1	102		04/22/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-02
Client ID: EFFLUENT-GRABMSD
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
Oil and Grease	mg/L	78-114	20.5		0.29	U	20.0	1	103		04/22/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1835-01
Client ID: EFFLUENTMS
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
Orthophosphate as P	mg/L	90-110	0.48		0.019	J	0.5	1	91		04/18/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1835-01
Client ID: EFFLUENTMSD
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
Orthophosphate as P	mg/L	90-110	0.49		0.019	J	0.5	1	93		04/18/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1835-01
Client ID: EFFLUENTMS
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
Oil and Grease	mg/L	78-114	24.9		4.60	J	20.0	1	102		04/22/2025

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Matrix Spike Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1835-01
Client ID: EFFLUENTMSD
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
Oil and Grease	mg/L	78-114	24.7		4.60	J	20.0	1	101		04/22/2025

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Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1782-01
Client ID: MW-1DUP
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	0.030	U	0.030	U	1	0		04/18/2025

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Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1782-01
Client ID: MW-1MSD
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	0.97		0.96		1	1		04/18/2025

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Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-01
Client ID: EFFLUENT-COMPOSITEDUP
Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
BOD5	mg/L	+/-20	45.3		45.8		1	1.12		04/18/2025
TSS	mg/L	+/-5	50.4		48.3		1	4.26		04/21/2025

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Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-01DL
Client ID: EFFLUENT-COMPOSITEDUP
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
Phosphorus, Total	**mg/L**	**+/-20**	**3.89**	**D**	**3.89**	**D**	**5**	**0**		**04/18/2025**

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

Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-01DL
Client ID: EFFLUENT-COMPOSITEMSD
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
Phosphorus, Total	**mg/L**	**+/-20**	**4.28**	**D**	**4.28**	**D**	**5**	**0**		**04/18/2025**

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

Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1831-02
Client ID: EFFLUENT-GRABMSD
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
Oil and Grease	mg/L	+/-18	20.3		20.5		1	0.98		04/22/2025

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Fax : 908 789 8922

Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1835-01
Client ID: EFFLUENTDUP
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
Orthophosphate as P	mg/L	+/-20	0.019	J	0.018	J	1	5.41		04/18/2025

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

Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1835-01
Client ID: EFFLUENTMSD
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
Orthophosphate as P	mg/L	+/-20	0.48		0.49		1	2.29		04/18/2025

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

Duplicate Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Sample ID: Q1835-01
Client ID: EFFLUENTMSD
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
Oil and Grease	mg/L	+/-18	24.9		24.7		1	0.81		04/22/2025

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Laboratory Control Sample Summary

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025 **Run No.:** LB135485

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB135485BS								
Orthophosphate as P	mg/L	0.5	0.48		97	1	90-110	04/18/2025

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

Laboratory Control Sample Summary

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025 **Run No.:** LB135493

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB135493BS								
BOD5	mg/L	198	208		105	1	84.6-115.4	04/18/2025

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Fax : 908 789 8922

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Run No.: LB135500

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB135500BS								
TSS	mg/L	550	532		97	1	90-110	04/21/2025

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Fax : 908 789 8922

Laboratory Control Sample Summary

Client: Holland Manufacturing Co. **SDG No.:** Q1835

Project: Pre Treatment Plant 2025 **Run No.:** LB135516

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID LB135516BS								
Oil and Grease	mg/L	20.0	16.8		84	1	78-114	04/22/2025

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

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Run No.: LB135482

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB167618BS								
Ammonia as N	mg/L	1	0.95		95	1	90-110	04/18/2025

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

Laboratory Control Sample Summary

Client: Holland Manufacturing Co.
SDG No.: Q1835
Project: Pre Treatment Plant 2025
Run No.: LB135487

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID PB167651BS								
Phosphorus, Total	mg/L	0.50	0.47		95	1	90-110	04/18/2025

RAW DATA

LB135482

Reviewed By:Iwona
On:4/21/2025 1:09:57 PM
Inst Id :Konelab 20
LB :LB135482

Test results | Aquakem 7.2AQ1 | Page:

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

Reviewed by : RM | Instrument ID : Konelab

4/18/2025 11:08

Test: Ammonia-N

Sample Id	Result	Dil. 1 +	Response	Errors
ICV1	0.976	0.0	0.198	
ICB1	0.011	0.0	0.019	
CCV1	0.964	0.0	0.196	
CCB1	0.001	0.0	0.017	
RL CHECK	0.098	0.0	0.035	98% (50-150) 04/18/2025 RM
PB167618BL	0.002	0.0	0.017	
PB167618BS	0.945	0.0	0.192	
Q1782-01	0.013	0.0	0.019	
Q1782-01DUP	0.008	0.0	0.019	
Q1782-01MS	0.969	0.0	0.196	
Q1782-01MSD	0.959	0.0	0.195	
Q1782-03	3.543	0.0	0.673	Test limit high
Q1782-05	0.449	0.0	0.100	
Q1782-07	0.450	0.0	0.100	
CCV2	0.951	0.0	0.193	
CCB2	0.008	0.0	0.019	
Q1810-02	0.010	0.0	0.019	
Q1831-01	0.775	0.0	0.161	
Q1835-01	12.079	0.0	2.253	Test limit high
Q1835-05	3.865	0.0	0.732	Test limit high
CCV3	1.002	0.0	0.203	
CCB3	0.005	0.0	0.018	
Q1782-03DLX2	1.692	0.0	0.330	
Q1835-01DLX10	1.036	0.0	0.209	
Q1835-05DLX2	1.844	0.0	0.358	
CCV4	1.001	0.0	0.202	
CCB4	0.009	0.0	0.019	

N	27
Mean	1.247
SD	2.3803
CV%	190.90

Aquakem v. 7.2AQ1
Results from time period:
Fri Apr 18 08:45:14 2025
Fri Apr 18 11:06:48 2025

Sample Id	Sam/Ctr/c	Test short r	Test type	Result	Result unit	Result date and time	Stat
0.0PPM	A	Ammonia-ᴺ	P	0.0062	mg/l	4/18/2025 8:45:14	
0.1PPM	A	Ammonia-ᴺ	P	0.1114	mg/l	4/18/2025 8:45:15	
0.2PPM	A	Ammonia-ᴺ	P	0.1975	mg/l	4/18/2025 8:45:16	
0.4PPM	A	Ammonia-ᴺ	P	0.3814	mg/l	4/18/2025 8:45:17	
1.0PPM	A	Ammonia-ᴺ	P	0.9971	mg/l	4/18/2025 8:45:18	
1.3PPM	A	Ammonia-ᴺ	P	1.3383	mg/l	4/18/2025 8:45:19	
2.0PPM	A	Ammonia-ᴺ	P	2.0016	mg/l	4/18/2025 8:45:20	
ICV1	S	Ammonia-ᴺ	P	0.9765	mg/l	4/18/2025 9:29:52	
ICB1	S	Ammonia-ᴺ	P	0.0108	mg/l	4/18/2025 9:29:53	
CCV1	S	Ammonia-ᴺ	P	0.964	mg/l	4/18/2025 9:29:55	
CCB1	S	Ammonia-ᴺ	P	0.001	mg/l	4/18/2025 9:29:58	
RL CHECK	S	Ammonia-ᴺ	P	0.0977	mg/l	4/18/2025 9:29:59	
PB167618BL	S	Ammonia-ᴺ	P	0.002	mg/l	4/18/2025 9:40:35	
PB167618BS	S	Ammonia-ᴺ	P	0.9454	mg/l	4/18/2025 9:40:37	
Q1782-01	S	Ammonia-ᴺ	P	0.0127	mg/l	4/18/2025 9:40:39	
Q1782-01DUP	S	Ammonia-ᴺ	P	0.0076	mg/l	4/18/2025 9:40:42	
Q1782-01MS	S	Ammonia-ᴺ	P	0.969	mg/l	4/18/2025 9:40:43	
Q1782-01MSD	S	Ammonia-ᴺ	P	0.9588	mg/l	4/18/2025 9:40:44	
Q1782-03	S	Ammonia-ᴺ	P	3.5432	mg/l	4/18/2025 9:51:17	
Q1782-05	S	Ammonia-ᴺ	P	0.4491	mg/l	4/18/2025 9:51:18	
Q1782-07	S	Ammonia-ᴺ	P	0.4497	mg/l	4/18/2025 9:51:19	
CCV2	S	Ammonia-ᴺ	P	0.9511	mg/l	4/18/2025 9:51:21	
CCB2	S	Ammonia-ᴺ	P	0.0083	mg/l	4/18/2025 9:51:23	
Q1810-02	S	Ammonia-ᴺ	P	0.0104	mg/l	4/18/2025 9:51:24	
Q1831-01	S	Ammonia-ᴺ	P	0.7751	mg/l	4/18/2025 9:51:25	
Q1835-01	S	Ammonia-ᴺ	P	12.0792	mg/l	4/18/2025 9:51:26	
Q1835-05	S	Ammonia-ᴺ	P	3.8647	mg/l	4/18/2025 9:51:27	
CCV3	S	Ammonia-ᴺ	P	1.0023	mg/l	4/18/2025 9:56:46	
CCB3	S	Ammonia-ᴺ	P	0.005	mg/l	4/18/2025 9:56:48	
Q1782-03DLX2	S	Ammonia-ᴺ	P	1.6924	mg/l	4/18/2025 11:06:40	
Q1835-01DLX10	S	Ammonia-ᴺ	P	1.036	mg/l	4/18/2025 11:06:42	
Q1835-05DLX2	S	Ammonia-ᴺ	P	1.8444	mg/l	4/18/2025 11:06:44	
CCV4	S	Ammonia-ᴺ	P	1.0007	mg/l	4/18/2025 11:06:46	
CCB4	S	Ammonia-ᴺ	P	0.0095	mg/l	4/18/2025 11:06:48	

Calibration results Aquakem 7.2AQ1 Page: 1

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

Reviewed by : RM Instrument ID : Konelab

4/18/2025 8:47

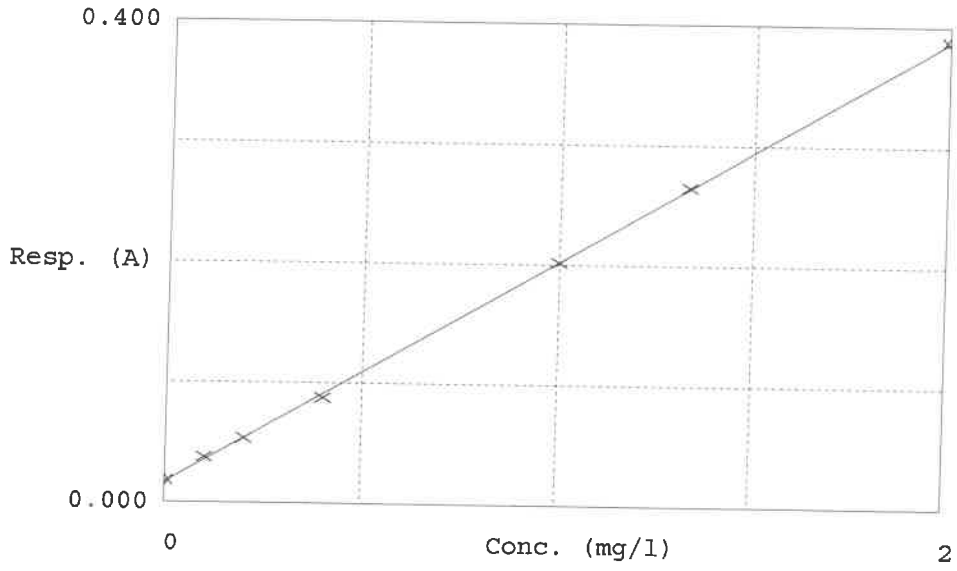
Test Ammonia-N

Accepted 4/18/2025 8:47

Factor 5.403
Bias 0.017

Coeff. of det. 0.999835

Errors



	Calibrator	Response	Calc. con.	Conc.	Errors
1	0.00PPM	0.018	0.0062	0.0000	11.4
2	NH3-2PPM	0.038	0.1114	0.1000	-1.3
3	NH3-2PPM	0.054	0.1975	0.2000	-4.7
4	NH3-2PPM	0.088	0.3814	0.4000	-0.3
5	NH3-2PPM	0.202	0.9971	1.0000	2.9
6	NH3-2PPM	0.265	1.3383	1.3333	0.1
7	NH3-2PPM	0.388	2.0016	2.0000	

04/18/2025
RM

Reviewed By:jignesh
On:4/18/2025 1:24:50 PM
Inst Id :SPECTROPHOTOME

Analytical Summary Report

Analysis Method: SM4500-P E

Parameter: Phosphorus-Ortho

Run Number: LB135485

ANALYST: Iwona

SUPERVISOR REVIEW BY: jignesh

Reagent/Standard	Lot/Log #
calibration std. phosphate 1 ppm	WP112758
calibration std. phosphate 0.5 ppm	WP112757
calibration std. phosphate 0.3 ppm	WP112756
calibration std. phosphate 0.1 ppm	WP112755
calibration std. phosphate 0.05 ppm	WP112754
calibration std. 0 ppm	WP112753
phosphate CCV std.	WP112759
5N sulfuric acid	WP110380
Combined reagent	WP112762
Phenolphthalein indicator	WP111415
Sodium hydroxide, 1N	WP111323
Phosphate ICV-LCS Std	WP112766

Intercept: -0.0006 **Slope:** 0.6515 **Regression:** 0.999968

Seq	Lab ID	True Value (mg/L)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	%D	AnalDate	AnalTime
1	CAL1	0.00	1	50	50	0.000	0.001		04/18/2025	10:05
2	CAL2	0.05	1	50	50	0.033	0.052	4	04/18/2025	10:05
3	CAL3	0.10	1	50	50	0.066	0.102	2	04/18/2025	10:06
4	CAL4	0.30	1	50	50	0.191	0.294	-2	04/18/2025	10:06
5	CAL5	0.50	1	50	50	0.325	0.5	0	04/18/2025	10:06
6	CAL6	1.00	1	50	50	0.652	1.002	0.2	04/18/2025	10:07

Reviewed By:jignesh
On:4/18/2025 1:24:50 PM
Inst Id :SPECTROPHOTOME

Analytical Summary Report

Analysis Method: SM4500-P E

ANALYST: Iwona

Parameter: Phosphorus-Ortho

SUPERVISOR REVIEW BY: jignesh

Run Number: LB135485

Seq	Lab ID	True Value (mg/l)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	AnalDate	AnalTime
1	ICV	0.50	1	50	50	0.318	0.489	04/18/2025	10:07
2	ICB		1	50	50	0.002	0.004	04/18/2025	10:08
3	CCV1	0.5	1	50	50	0.336	0.517	04/18/2025	10:08
4	CCB1		1	50	50	0.001	0.002	04/18/2025	10:09
5	RL Check	0.01	1	50	50	0.032	0.050	04/18/2025	10:09
6	LB135485BL		1	50	50	0.001	0.002	04/18/2025	10:10
7	LB135485BS	0.5	1	50	50	0.314	0.483	04/18/2025	10:10
8	Q1835-01		1	50	50	0.012	0.019	04/18/2025	10:11
9	Q1835-01DUP		1	50	50	0.011	0.018	04/18/2025	10:11
10	Q1835-01MS	0.5	1	50	50	0.309	0.475	04/18/2025	10:12
11	Q1835-01MSD	0.5	1	50	50	0.316	0.486	04/18/2025	10:12
12	CCV2	0.5	1	50	50	0.324	0.498	04/18/2025	10:13
13	CCB2		1	50	50	0.003	0.006	04/18/2025	10:13

WORKLIST(Hardcopy Internal Chain)

LB135485

WorkList Name : ORTHO PH- 041825 **WorkList ID :** 189019 **Department :** Wet-Chemistry **Date :** 04-18-2025 09:15:46

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1835-01	EFFLUENT	Water	Phosphorus-Ortho	Cool 4 deg C	HOLL01	L31	04/17/2025	SM4500-P E

Date/Time 04/18/25 09:25

Raw Sample Received by: IR(WC)

Raw Sample Relinquished by: [signature] (WC)

Date/Time 04/18/25 10:25

Raw Sample Received by: [signature]

Raw Sample Relinquished by: IR(WC)

Analytical Summary Report

Analysis Method: 365.3

Parameter: Phosphorus-Total

Run Number: LB135487

ANALYST: Iwona

SUPERVISOR REVIEW BY: jignesh

Reagent/Standard	Lot/Log #
calibration std. phosphate 1 ppm	WP112758
calibration std. phosphate 0.5 ppm	WP112757
calibration std. phosphate 0.3 ppm	WP112756
calibration std. phosphate 0.1 ppm	WP112755
calibration std. phosphate 0.05 ppm	WP112754
calibration std. 0 ppm	WP112753
phosphate CCV std.	WP112759
5N sulfuric acid	WP110380
Combined reagent	WP112762
Phenolphthalein indicator	WP111415
Sodium hydroxide, 1N	WP111323
Phosphate ICV-LCS Std	WP112766

Intercept: -0.0017 **Slope:** 0.655 **Regression:** 0.999858

Seq	Lab ID	True Value (mg/L)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	%D	AnalDate	AnalTime
1	CAL1	0.00	1	50	50	0.000	0.003		04/18/2025	11:45
2	CAL2	0.05	1	50	50	0.033	0.053	6	04/18/2025	11:45
3	CAL3	0.10	1	50	50	0.067	0.105	5	04/18/2025	11:46
4	CAL4	0.30	1	50	50	0.189	0.291	-3	04/18/2025	11:46
5	CAL5	0.50	1	50	50	0.321	0.493	-1.4	04/18/2025	11:47
6	CAL6	1.00	1	50	50	0.657	1.006	0.6	04/18/2025	11:47

Reviewed By:jignesh
On:4/18/2025 1:25:12 PM
Inst Id :SPECTROPHOTOME

Analytical Summary Report

Analysis Method: 365.3
ANALYST: Iwona
Parameter: Phosphorus-Total
SUPERVISOR REVIEW BY: jignesh
Run Number: LB135487

Seq	Lab ID	True Value (mg/l)	DF	Initial Volume (mL)	Final Volume (mL)	Absorbance Reading at 880nm	Result (mg/L)	AnalDate	AnalTime
1	ICV	0.50	1	50	50	0.317	0.487	04/18/2025	11:48
2	ICB		1	50	50	0.002	0.006	04/18/2025	11:48
3	CCV1	0.50	1	50	50	0.326	0.500	04/18/2025	11:49
4	CCB1		1	50	50	0.001	0.004	04/18/2025	11:49
5	RL Check	0.01	1	50	50	0.032	0.051	04/18/2025	11:50
6	PB167651BL		1	50	50	0.003	0.007	04/18/2025	11:50
7	PB167651BS	0.50	1	50	50	0.308	0.473	04/18/2025	11:51
8	Q1831-01		1	50	50	1.020	1.560	04/18/2025	11:51
9	Q1831-01DUP		1	50	50	1.012	1.548	04/18/2025	11:52
10	Q1831-01MS	0.50	1	50	50	1.211	1.851	04/18/2025	11:52
11	Q1831-01MSD	0.50	1	50	50	1.232	1.884	04/18/2025	11:53
12	Q1835-01		1	50	50	0.063	0.099	04/18/2025	11:53
13	Q1831-01		5	50	50	0.508	0.778	04/18/2025	11:54
14	Q1831-01DUP		5	50	50	0.507	0.777	04/18/2025	11:54
15	CCV2	0.50	1	50	50	0.321	0.493	04/18/2025	11:55
16	CCB2		1	50	50	0.002	0.006	04/18/2025	11:56
17	Q1831-01MS	0.50	5	50	50	0.558	0.855	04/18/2025	11:56
18	Q1831-01MSD	0.50	5	50	50	0.559	0.856	04/18/2025	11:57
19	CCV3	0.50	1	50	50	0.325	0.499	04/18/2025	11:57
20	CCB3		1	50	50	0.001	0.004	04/18/2025	11:58

Reviewed By:Iwona
On:4/24/2025 2:15:15 PM
Inst Id :DO METER
LB :LB135493

BOD5 LOG

ANALYST: rubir
SUPERVISOR: Iwona

QC BATCH ID: LB135493
Analysis Date: 04/18/2025
BOD Water: WP112768
MANGANOUS SULFATE SOLUTION: W3103
Starch: W3149
Alkaline Iodide Azide: W3109
Sulfuric acid, 1N: WP110386
Sodium Thiosulfate, 0.025N: W3105
POLYSEED: WP112771
NaOH, 1N: WP111323
GGA: WP112769
IncubatorID: INCUBATOR #3
Chlorine Strips: W3155
GuageID: 0511064
pH Strips: W3140
Zero DO: WP112724

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading(ML)	Final Reading(ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.7	9.7	9.7
WINKLER 2	WINKLER 2	2	300	9.9	19.6	9.7	9.7

Meter Calibration1: 9.73 Zero DO Reading1: 0.14 mg/L (<=0.2 Criteria)

Barometric Pressure1: 765 mmHg DO Meter BOD fluid reading for winkler comparison: 9.79

After Incubation

Meter Calibration2: 9.75 Zero DO Reading2: 0.12 mg/L (<=0.2 Criteria)

Barometric Pressure2: 765 mmHg

Alliance TECHNICAL GROUP

QC BATCH ID: LB135493

INCUBATOR TEMP IN(C): 20.0

INCUBATOR TEMP OUT(C): 20.1

TIME IN: 13:45

TIME OUT: 14:00

DATE IN: 04/18/2025

DATE OUT: 04/23/2025

Lab SampleID	Bottle No.	Check CL	Initial PH	Final PH	Temp ℃	Sam Vol. (mL)	D.O.1 Initial	D.O.2 Final	Depletion	BOD Result (mg/L)	Avg Result (mg/L)	Comment
LB135493BL	1	No	6.61	N/A	20.90	300	9.78	9.77	0.01	0.01	0.01	
POLYSEED	1					10	9.68	6.73	2.95	0.59	0.66	
POLYSEED	2					15	9.59	4.23	5.36	0.71		
POLYSEED	3					20	9.54	2.61	6.93	0.69		
GGA	1					6	9.66	4.86	4.8	207	207.67	
GGA	2					6	9.64	4.63	5.01	217.5		
GGA	3					6	9.62	4.99	4.63	198.5		
Q1831-01	1	No	7.93	7.34	20.40	2	9.68	8.01	-	0	45.3	pH Adjuste
Q1831-01	2					10	9.58	7.61	-	0		
Q1831-01	3					50	9.54	1.33	8.21	45.3		
Q1831-01	4					100	9.25	0.27	-	0		
Q1831-01DUP	1	No	7.93	7.34	20.40	2	9.67	8.30	-	0	45.81	pH Adjuste
Q1831-01DUP	2					10	9.59	7.41	2.18	45.6		
Q1831-01DUP	3					50	9.52	1.19	8.33	46.02		
Q1831-01DUP	4					100	9.25	0.20	-	0		
Q1833-02	1	No	9.80	7.46	20.20	0.5	9.58	6.70	2.88	1332	1099	pH Adjuste
Q1833-02	2					1	9.54	4.91	4.63	1191		
Q1833-02	3					2	9.41	3.59	5.82	774		
Q1833-02	4					3	9.38	0.50	-	0		
Q1835-01	1	No	7.24	N/A	20.00	0.01	9.51	7.11	2.4	52200	33970	
Q1835-01	2					0.05	9.43	3.66	5.77	30660		
Q1835-01	3					0.1	9.41	2.40	7.01	19050		
Q1835-01	4					0.5	9.24	0.08	-	0		
Q1835-01	5					1	8.91	0.06	-	0		
Q1835-05	1	No	4.46	6.79	20.00	0.01	9.38	8.87	-	0	16665	pH Adjuste
Q1835-05	2					0.05	9.27	5.09	4.18	21120		
Q1835-05	3					0.1	9.23	4.50	4.73	12210		
Q1835-05	4					0.5	9.11	0.39	-	0		
Q1835-05	5					1	9.02	0.05	-	0		

NOTE: 2ml POLYSEED added to GGA and all the Samples, but not in Blank.

NOTE (For, CBOD5): 0.16 g Nitrification Inhibitor added to GGA and all the Samples, but not in Blank.

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona
ANALYST: jignesh
Date: 04/18/2025
Run Number: LB135500
BalanceID: WC SC-6
OvenID: WC OVEN-1
FilterID: 17416528
ThermometerID: WET OVEN#1

TEMP1 IN:	103 °C	04/18/2025 14:00	**TEMP1 OUT:**	104 °C	04/18/2025 15:00
TEMP2 IN:	103 °C	04/18/2025 15:30	**TEMP2 OUT:**	104 °C	04/18/2025 16:30
TEMP3 IN:	103 °C	04/21/2025 10:00	**TEMP3 OUT:**	103 °C	04/21/2025 11:30
TEMP4 IN:	104 °C	04/21/2025 12:00	**TEMP4 OUT:**	103 °C	04/21/2025 13:30

Dish #	Lab ID	Client ID	Empty Dish Weight (g)	Final Empty Dish Weight (g)	Sample Volume (ml)	1st Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Final Empty Dish+Sample weight after 1.5hr drying @103-@105°C (g)	Weight (g)	Result mg/L
1	LB135500BL	LB135500BL	1.3563	1.3563	100	1.3564	1.3564	1.3564	0.0001	1
2	LB135500BS	LB135500BS	1.6893	1.6893	100	1.7425	1.7425	1.7425	0.0532	532
3	Q1831-01	EFFLUENT-COMPOSITE	1.4803	1.4803	1000	1.5307	1.5307	1.5307	0.0504	50.4
4	Q1831-01DUP	EFFLUENT-COMPOSITEDUP	1.4832	1.4832	1000	1.5315	1.5315	1.5315	0.0483	48.3
5	Q1833-02	EFF-WASTE-WATER	1.4805	1.4805	200	1.4982	1.4982	1.4982	0.0177	88.5
6	Q1835-01	EFFLUENT	1.4841	1.4841	50	1.6239	1.6239	1.6239	0.1398	2796
7	Q1835-04	AERATION-1	1.5034	1.5034	50	1.5939	1.5939	1.5939	0.0905	1810

A = Sample Volume (ml)
B = Final Empty Dish Weight (g)
C = Final Empty Dish + Sample weight after 1.5 hr drying @105°C(g)
D = Weight (g)

Weight (g) = C - B

Result mg/L = $\frac{D}{A} * 1000 * 1000$

WORKLIST(Hardcopy Internal Chain)

LB135500

WorkList Name : TSS Q1833 **WorkList ID :** 189033 **Department :** Wet-Chemistry **Date :** 04-21-2025 07:48:29

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1831-01 I, M	EFFLUENT-COMPOSITE	Water	TSS	Cool 4 deg C	M&MM01	L31	04/17/2025	SM2540 D
Q1833-02 B	EFF-WASTE-WATER	Water	TSS	Cool 4 deg C	ARDM01	L31	04/17/2025	SM2540 D
Q1835-01 D	EFFLUENT	Water	TSS	Cool 4 deg C	HOLL01	L31	04/17/2025	SM2540 D
Q1835-04	AERATION-1	Water	TSS	Cool 4 deg C	HOLL01	L31	04/17/2025	SM2540 D

Date/Time 04/21/25 08:00

Raw Sample Received by:

Raw Sample Relinquished by:

Date/Time 04/21/25 14:00

Raw Sample Received by:

Raw Sample Relinquished by:

Extraction and Analytical Summary Report

Analysis Method: 1664A
Test: Oil and Grease
Run Number: LB135516
Analysis Date: 04/22/2025
BalanceID: WC SC-6
OvenID: EXT OVEN-3

ANALYST: jignesh
REVIEWED BY: Iwona
Extraction Date: 04/22/2025
Extration IN Time: 09:00
Extration OUT Time: 09:37
Thermometer ID: EXT OVEN#3

Dish #	Lab ID	Client ID	Matrix	pH	Sample Vol (ml)	Final Volume (ml)	Empty Dish Weight (g)	Final Empty Dish Weight(g)	Silica Gel Weight(g)	Weight After Drying(g)	Final Weight After Drying(g)	Change Weight (g)	Result in ppm
1	LB135516BL	LB135516BL	WATER	1.3	1000	100	2.8741	2.8741	0	2.8742	2.8742	0.0001	0.1
2	LB135516BS	LB135516BS	WATER	1.3	1000	100	2.9903	2.9903	0	3.0071	3.0071	0.0168	16.8
3	Q1831-02	EFFLUENT-GRAB	WATER	1.3	1000	100	3.0580	3.0580	0	3.0582	3.0582	0.0002	0.2
4	Q1831-03	Q1831-02MS	WATER	1.3	1000	100	3.1487	3.1487	0	3.1690	3.1690	0.0203	20.3
5	Q1831-04	Q1831-02MSD	WATER	1.3	1000	100	2.7036	2.7036	0	2.7241	2.7241	0.0205	20.5
6	Q1835-01	EFFLUENT	WATER	1.6	1000	100	3.0878	3.0878	0	3.0924	3.0924	0.0046	4.6
7	Q1835-02	Q1835-01MS	WATER	1.6	1000	100	3.1587	3.1587	0	3.1836	3.1836	0.0249	24.9
8	Q1835-03	Q1835-01MSD	WATER	1.6	1000	100	2.9903	2.9903	0	3.0150	3.0150	0.0247	24.7

QC Batch# LB135516 **Test:** Oil and Grease **Analysis Date:** 04/22/2025

Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3153
pH Paper 0-14	M6069
Sodium Sulfate	EP2604
1:1 HCL	WP110826
Silica Gel	NA
Sand	NA

Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	2.5 ML	WP110827
LCSWD	NA	NA
MS/MSD	2.5 ML	WP110828

BALANCE CALIBRATION / OVEN Dessicator Data

Analytical Balance ID # : WC SC-6

Before Analysis

0.0020 gram Balance: 0.0018 **(0.0018-0.0022)**
1.0000 gram Balance: 1.0004 **(0.9950-1.0050)**
Bal Check Time: 09:10

In OVEN TEMP1 : 70 °C **Dessicator Time In1 :** 11:01
In Time1: 10:20
Out OVEN TEMP1: 71 °C **Dessicator Time Out1:** 11:37
Out Time1: 11:00

After Analysis

0.0020 gram Balance: 0.002 **(0.0018-0.0022)**
1.0000 gram Balance: 1.0005 **(0.9950-1.0050)**
Bal Check Time: 13:40

In OVEN TEMP2 : 70 °C **Dessicator Time In2 :** 13:01
In Time2: 12:10
Out OVEN TEMP2: 70 °C **Dessicator Time Out2:** 13:37
Out Time2: 13:00

WORKLIST(Hardcopy Internal Chain)

LB 135516

WorkList Name : oil & grease Q1835 **WorkList ID :** 189074 **Department :** Wet-Chemistry **Date :** 04-22-2025 08:30:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1831-02	EFFLUENT-GRAB	Water	Oil and Grease	Conc H2SO4 to pH < 2	M&MM01	L31	04/17/2025	1664A
Q1831-03	Q1831-02MS	Water	Oil and Grease	Conc H2SO4 to pH < 2	M&MM01	L31	04/17/2025	1664A
Q1831-04	Q1831-02MSD	Water	Oil and Grease	Conc H2SO4 to pH < 2	M&MM01	L31	04/17/2025	1664A
Q1835-01 E	EFFLUENT	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	L31	04/17/2025	1664A
Q1835-02	Q1835-01MS	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	L31	04/17/2025	1664A
Q1835-03	Q1835-01MSD	Water	Oil and Grease	Conc H2SO4 to pH < 2	HOLL01	L31	04/17/2025	1664A

Date/Time 04/22/25 08:45

Raw Sample Received by: [signature]

Raw Sample Relinquished by: [signature] SM

Date/Time 04/22/25 14:30

Raw Sample Received by: [signature] SM

Raw Sample Relinquished by: [signature]

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB167618

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

SDG No : N/A

Matrix : WATER

Pippete ID : WC

Balance ID : N/A

Start Digest Date: 04/17/2025 **Time :** 14:00 **Temp :** 150 °C

End Digest Date: 04/17/2025 **Time :** 15:00 **Temp :** 160 °C

If both 04/17/2025 15:00 150C
04/17/2025 16:00 160C RM

Hood ID : HOOD#2

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

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

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

Chemical Used	ML/SAMPLE USED	Lot Number
BORATE BUFFER	2.5ML	WP111325
NAOH 6N	0.5-2.0ML	WP111318
H2SO4 0.04N	5.0ML	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 WP111604. Due to bad matrix and client history 1ML was taken as an initial vol for Q1835-01,Q1835-05,Q1831-01

Date / Time	Prepped Sample Relinquished By/Location	Received By/Location
04/17/2025 17:00	RM (WC)	RM WC
	Preparation Group	Analysis Group

Alliance TECHNICAL GROUP

Water Ammonia Preparation Sheet

PB167618

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167618BL	PBW618	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
PB167618BS	LCS618	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1782-01DUP	MW-1DUP	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1782-01MS	MW-1MS	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1782-01MSD	MW-1MSD	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1782-01	MW-1	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1782-03	MW-2	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1782-05	MW-3	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1782-07	MW-4	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1810-02	MOO-25-0118	50	50	<2	N/A	Negative	N/A	AFTER ADDING 6N NAOH PH IS 9.5	N/A
Q1831-01	EFFLUENT-COMPOSITE	1	50	<2	N/A	Negative	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1835-01	EFFLUENT	1	50	<2	N/A	Negative	N/A	PH AFTER ADDING DIST BUFFER>11	N/A
Q1835-05	INFLUENT	1	50	<2	N/A	Negative	N/A	PH AFTER ADDING DIST BUFFER>11	N/A

WORKLIST(Hardcopy Internal Chain)

WorkList Name : ammonia-4-15 **WorkList ID :** 188947 **Department :** Distillation **Date :** 04-15-2025 14:43:44

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1782-01	MW-1	Water	Ammonia	Conc H2SO4 to pH < 2	LOCK01	K11	04/09/2025	SM4500-NH3
Q1782-03	MW-2	Water	Ammonia	Conc H2SO4 to pH < 2	LOCK01	K11	04/09/2025	SM4500-NH3
Q1782-05	MW-3	Water	Ammonia	Conc H2SO4 to pH < 2	LOCK01	K11	04/09/2025	SM4500-NH3
Q1782-07	MW-4	Water	Ammonia	Conc H2SO4 to pH < 2	LOCK01	K11	04/09/2025	SM4500-NH3
Q1810-02	MOO-25-0118	Water	Ammonia	Conc H2SO4 to pH < 2	PSEG03	L51	04/14/2025	SM4500-NH3

Date/Time 04/17/2025 13.00

Raw Sample Received by: RM (WC)

Raw Sample Relinquished by: [signature]

Date/Time 04/17/2025 15.50

Raw Sample Received by: [signature]

Raw Sample Relinquished by: RM (WC)

WORKLIST(Hardcopy Internal Chain)

WorkList Name : ammonia-2 **WorkList ID :** 189015 **Department :** Distillation **Date :** 04-17-2025 14:36:30

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1831-01	EFFLUENT-COMPOSITE	Water	Ammonia	Conc H2SO4 to pH < 2	M&MM01	L31	04/17/2025	SM4500-NH3
Q1835-01	EFFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	L31	04/17/2025	SM4500-NH3
Q1835-05	INFLUENT	Water	Ammonia	Conc H2SO4 to pH < 2	HOLL01	L31	04/17/2025	SM4500-NH3

Date/Time 04/17/2025 15.15
Raw Sample Received by: RMcwc,
Raw Sample Relinquished by: JACOB

Date/Time 04/17/2025 15.50
Raw Sample Received by: JACOB
Raw Sample Relinquished by: RMcwc,

WORKLIST(Hardcopy Internal Chain)

WorkList Name : TotalPhos-041825 **WorkList ID :** 189020 **Department :** Distillation **Date :** 04-18-2025 09:15:58

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1831-01	EFFLUENT-COMPOSITE	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	M&MM01	L31	04/17/2025	365.3
Q1835-01	EFFLUENT	Water	Phosphorus-Total	Conc H2SO4 to pH < 2	HOLL01	L31	04/17/2025	365.3

Date/Time 04/18/25 09:25
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: [illegible]

Date/Time 04/18/25 10:25
Raw Sample Received by: [illegible]
Raw Sample Relinquished by: [illegible]

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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB135482

Review By	rubina	Review On	4/21/2025 9:42:09 AM
Supervise By	Iwona	Supervise On	4/21/2025 1:09:57 PM
SubDirectory	LB135482	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP112763
ICV Standard	WP112765
CCV Standard	WP112764
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	04/18/25 08:45		rubina	OK
2	0.1PPM	0.1PPM	CAL2	04/18/25 08:45		rubina	OK
3	0.2PPM	0.2PPM	CAL3	04/18/25 08:45		rubina	OK
4	0.4PPM	0.4PPM	CAL4	04/18/25 08:45		rubina	OK
5	1.0PPM	1.0PPM	CAL5	04/18/25 08:45		rubina	OK
6	1.3PPM	1.3PPM	CAL6	04/18/25 08:45		rubina	OK
7	2.0PPM	2.0PPM	CAL7	04/18/25 08:45		rubina	OK
8	ICV1	ICV1	ICV	04/18/25 09:29		rubina	OK
9	ICB1	ICB1	ICB	04/18/25 09:29		rubina	OK
10	CCV1	CCV1	CCV	04/18/25 09:29		rubina	OK
11	CCB1	CCB1	CCB	04/18/25 09:29		rubina	OK
12	RL	RL	SAM	04/18/25 09:29		rubina	OK
13	PB167618BL	PB167618BL	MB	04/18/25 09:40		rubina	OK
14	PB167618BS	PB167618BS	LCS	04/18/25 09:40		rubina	OK
15	Q1782-01	MW-1	SAM	04/18/25 09:40		rubina	OK
16	Q1782-01DUP	MW-1DUP	DUP	04/18/25 09:40		rubina	OK
17	Q1782-01MS	MW-1MS	MS	04/18/25 09:40		rubina	OK
18	Q1782-01MSD	MW-1MSD	MSD	04/18/25 09:40		rubina	OK

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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QCBatch ID # LB135482

Review By	rubina	Review On	4/21/2025 9:42:09 AM
Supervise By	Iwona	Supervise On	4/21/2025 1:09:57 PM
SubDirectory	LB135482	Test	Ammonia

STD. NAME	STD REF.#
ICAL Standard	WP112763
ICV Standard	WP112765
CCV Standard	WP112764
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	WP112614
Chk Standard	WP112537,WP111745,WP111385,WP111660

19	Q1782-03	MW-2	SAM	04/18/25 09:51	High	rubina	Dilution
20	Q1782-05	MW-3	SAM	04/18/25 09:51		rubina	OK
21	Q1782-07	MW-4	SAM	04/18/25 09:51		rubina	OK
22	CCV2	CCV2	CCV	04/18/25 09:51		rubina	OK
23	CCB2	CCB2	CCB	04/18/25 09:51		rubina	OK
24	Q1810-02	MOO-25-0118	SAM	04/18/25 09:51		rubina	OK
25	Q1831-01	EFFLUENT-COMPOS	SAM	04/18/25 09:51		rubina	OK
26	Q1835-01	EFFLUENT	SAM	04/18/25 09:51	High	rubina	Dilution
27	Q1835-05	INFLUENT	SAM	04/18/25 09:51	High	rubina	Dilution
28	CCV3	CCV3	CCV	04/18/25 09:56		rubina	OK
29	CCB3	CCB3	CCB	04/18/25 09:56		rubina	OK
30	Q1782-03DL	MW-2DL	SAM	04/18/25 11:06	Report 2X	rubina	Confirms
31	Q1835-01DL	EFFLUENTDL	SAM	04/18/25 11:06	Report 10X	rubina	Confirms
32	Q1835-05DL	INFLUENTDL	SAM	04/18/25 11:06	Report 2X	rubina	Confirms
33	CCV4	CCV4	CCV	04/18/25 11:06		rubina	OK
34	CCB4	CCB4	CCB	04/18/25 11:06		rubina	OK

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

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135485

Review By	Iwona	Review On	4/18/2025 12:40:03 PM
Supervise By	jignesh	Supervise On	4/18/2025 1:24:50 PM
SubDirectory	LB135485	Test	Phosphorus-Ortho

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	WP112758,WP112757,WP112756,WP112755,WP112754,WP112753,WP112759,WP110380,WP112762,WP111415,V

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	04/18/25 10:05		Iwona	OK
2	CAL2	CAL2	CAL	04/18/25 10:05		Iwona	OK
3	CAL3	CAL3	CAL	04/18/25 10:06		Iwona	OK
4	CAL4	CAL4	CAL	04/18/25 10:06		Iwona	OK
5	CAL5	CAL5	CAL	04/18/25 10:06		Iwona	OK
6	CAL6	CAL6	CAL	04/18/25 10:07		Iwona	OK
7	ICV	ICV	ICV	04/18/25 10:07		Iwona	OK
8	ICB	ICB	ICB	04/18/25 10:08		Iwona	OK
9	CCV1	CCV1	CCV	04/18/25 10:08		Iwona	OK
10	CCB1	CCB1	CCB	04/18/25 10:09		Iwona	OK
11	RL Check	RL Check	SAM	04/18/25 10:09		Iwona	OK
12	LB135485BL	LB135485BL	MB	04/18/25 10:10		Iwona	OK
13	LB135485BS	LB135485BS	LCS	04/18/25 10:10		Iwona	OK
14	Q1835-01	EFFLUENT	SAM	04/18/25 10:11		Iwona	OK
15	Q1835-01DUP	EFFLUENTDUP	DUP	04/18/25 10:11		Iwona	OK
16	Q1835-01MS	EFFLUENTMS	MS	04/18/25 10:12		Iwona	OK
17	Q1835-01MSD	EFFLUENTMSD	MSD	04/18/25 10:12		Iwona	OK
18	CCV2	CCV2	CCV	04/18/25 10:13		Iwona	OK

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Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135485

Review By	Iwona	Review On	4/18/2025 12:40:03 PM
Supervise By	jignesh	Supervise On	4/18/2025 1:24:50 PM
SubDirectory	LB135485	Test	Phosphorus-Ortho

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	WP112758,WP112757,WP112756,WP112755,WP112754,WP112753,WP112759,WP110380,WP112762,WP111415,V

19	CCB2	CCB2	CCB	04/18/25 10:13		Iwona	OK

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Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135487

Review By	Iwona	Review On	4/18/2025 1:20:21 PM
Supervise By	jignesh	Supervise On	4/18/2025 1:25:12 PM
SubDirectory	LB135487	Test	Phosphorus-Total

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	WP112758,WP112757,WP112756,WP112755,WP112754,WP112753,WP112759,WP110380,WP112762,WP111415,V

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	04/18/25 11:45		Iwona	OK
2	CAL2	CAL2	CAL	04/18/25 11:45		Iwona	OK
3	CAL3	CAL3	CAL	04/18/25 11:46		Iwona	OK
4	CAL4	CAL4	CAL	04/18/25 11:46		Iwona	OK
5	CAL5	CAL5	CAL	04/18/25 11:47		Iwona	OK
6	CAL6	CAL6	CAL	04/18/25 11:47		Iwona	OK
7	ICV	ICV	ICV	04/18/25 11:48		Iwona	OK
8	ICB	ICB	ICB	04/18/25 11:48		Iwona	OK
9	CCV1	CCV1	CCV	04/18/25 11:49		Iwona	OK
10	CCB1	CCB1	CCB	04/18/25 11:49		Iwona	OK
11	RL Check	RL Check	SAM	04/18/25 11:50		Iwona	OK
12	PB167651BL	PB167651BL	MB	04/18/25 11:50		Iwona	OK
13	PB167651BS	PB167651BS	LCS	04/18/25 11:51		Iwona	OK
14	Q1831-01	EFFLUENT-COMPOS	SAM	04/18/25 11:51		Iwona	OK
15	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/18/25 11:52		Iwona	OK
16	Q1831-01MS	EFFLUENT-COMPOS	MS	04/18/25 11:52		Iwona	OK
17	Q1831-01MSD	EFFLUENT-COMPOS	MSD	04/18/25 11:53		Iwona	OK
18	Q1835-01	EFFLUENT	SAM	04/18/25 11:53		Iwona	OK

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Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QCBatch ID # LB135487

Review By	Iwona	Review On	4/18/2025 1:20:21 PM
Supervise By	jignesh	Supervise On	4/18/2025 1:25:12 PM
SubDirectory	LB135487	Test	Phosphorus-Total

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	WP112758,WP112757,WP112756,WP112755,WP112754,WP112753,WP112759,WP110380,WP112762,WP111415,V

19	Q1831-01DL	EFFLUENT-COMPOS	SAM	04/18/25 11:54		Iwona	OK
20	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/18/25 11:54		Iwona	OK
21	CCV2	CCV2	CCV	04/18/25 11:55		Iwona	OK
22	CCB2	CCB2	CCB	04/18/25 11:56		Iwona	OK
23	Q1831-01MS	EFFLUENT-COMPOS	MS	04/18/25 11:56		Iwona	OK
24	Q1831-01MSD	EFFLUENT-COMPOS	MSD	04/18/25 11:57		Iwona	OK
25	CCV3	CCV3	CCV	04/18/25 11:57		Iwona	OK
26	CCB3	CCB3	CCB	04/18/25 11:58		Iwona	OK

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Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QCBatch ID # LB135493

Review By	rubina	Review On	4/24/2025 2:14:49 PM
Supervise By	Iwona	Supervise On	4/24/2025 2:15:15 PM
SubDirectory	LB135493	Test	BOD5

STD. NAME	STD REF.#
ICAL Standard	N/A
ICV Standard	N/A
CCV Standard	N/A
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	WP112768,W3149,WP110386,W3103,W3109,W3105,WP112771,WP112769,WP111323

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB135493BL	LB135493BL	MB	04/18/25 13:45		rubina	OK
2	LB135493BS	LB135493BS	LCS	04/18/25 13:45		rubina	OK
3	Q1831-01	EFFLUENT-COMPOS	SAM	04/18/25 13:45		rubina	OK
4	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/18/25 13:45		rubina	OK
5	Q1833-02	EFF-WASTE-WATER	SAM	04/18/25 13:45	Intermediate dilution-10x	rubina	OK
6	Q1835-01	EFFLUENT	SAM	04/18/25 13:45	Intermediate dilution-100x	rubina	OK
7	Q1835-05	INFLUENT	SAM	04/18/25 13:45	Intermediate dilution-100x	rubina	OK

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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB135500

Review By	jignesh	Review On	4/21/2025 11:48:18 AM
Supervise By	Iwona	Supervise On	4/21/2025 11:52:17 AM
SubDirectory	LB135500	Test	TSS

STD. NAME	STD REF.#
ICAL Standard	N/A
ICV Standard	N/A
CCV Standard	N/A
ICSA Standard	N/A
CRI Standard	N/A
LCS Standard	N/A
Chk Standard	N/A

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB135500BL	LB135500BL	MB	04/21/25 10:00		jignesh	OK
2	LB135500BS	LB135500BS	LCS	04/21/25 10:00		jignesh	OK
3	Q1831-01	EFFLUENT-COMPOS	SAM	04/21/25 10:00		jignesh	OK
4	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/21/25 10:00		jignesh	OK
5	Q1833-02	EFF-WASTE-WATER	SAM	04/21/25 10:00		jignesh	OK
6	Q1835-01	EFFLUENT	SAM	04/21/25 10:00		jignesh	OK
7	Q1835-04	AERATION-1	SAM	04/21/25 10:00		jignesh	OK

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Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QCBatch ID # LB135516

Review By	jignesh	Review On	4/22/2025 9:28:21 AM
Supervise By	Iwona	Supervise On	4/24/2025 4:39:20 PM
SubDirectory	LB135516	Test	Oil and Grease

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	W3153,M6069,EP2604,WP110826,NA,NA,WP110827,NA,WP110828

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB135516BL	LB135516BL	MB	04/22/25 10:20		jignesh	OK
2	LB135516BS	LB135516BS	LCS	04/22/25 10:20		jignesh	OK
3	Q1831-02	EFFLUENT-GRAB	SAM	04/22/25 10:20		jignesh	OK
4	Q1831-03	Q1831-02MS	MS	04/22/25 10:20		jignesh	OK
5	Q1831-04	Q1831-02MSD	MSD	04/22/25 10:20		jignesh	OK
6	Q1835-01	EFFLUENT	SAM	04/22/25 10:20		jignesh	OK
7	Q1835-02	Q1835-01MS	MS	04/22/25 10:20		jignesh	OK
8	Q1835-03	Q1835-01MSD	MSD	04/22/25 10:20		jignesh	OK

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Prep Standard - Chemical Standard Summary

Order ID : Q1835

Test : Ammonia,BOD5,Oil and Grease,Phosphorus-Ortho,Phosphorus-Total,TSS

Prepbatch ID : PB167618,PB167651,

Sequence ID/Qc Batch ID: LB135482,LB135485,LB135487,LB135493,LB135500,LB135516,

Standard ID :

EP2604,WP110335,WP110380,WP110386,WP110400,WP110401,WP110587,WP110588,WP110826,WP110827,WP110828,WP111317,WP111318,WP111323,WP111325,WP111385,WP111415,WP111660,WP111745,WP112537,WP112611,WP112612,WP112613,WP112614,WP112615,WP112753,WP112754,WP112755,WP112756,WP112757,WP112758,WP112759,WP112761,WP112762,WP112763,WP112764,WP112765,WP112766,WP112768,WP112769,WP112771,

Chemical ID :

E3551,E3788,M5673,M6041,M6069,M6121,W2306,W2650,W2653,W2654,W2664,W2666,W2699,W2700,W2708,W2788,W2817,W2858,W2871,W3009,W3035,W3059,W3074,W3082,W3103,W3105,W3109,W3112,W3113,W3132,W3133,W3140,W3144,W3149,W3153,W3155,W3174,W3195,W3196,

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Extractions STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3923	Baked Sodium Sulfate	EP2604	04/16/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2 (EX-SC-2)	None	Riteshkumar Patel 04/16/2025

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

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

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

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Wet Chemistry STANDARD PREPARATION LOG

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

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

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

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
115	Phosphate Stock Std. (50 ppm)	WP110400	10/24/2024	04/23/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/25/2024

FROM 0.11000gram of W2699 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2790	Phosphate Stock std, 50PPM-SS	WP110401	10/24/2024	04/24/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 10/25/2024

FROM 0.11000gram of W2708 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
648	Ammonium molybdate solution	WP110587	11/07/2024	05/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 11/07/2024

FROM 20.00000gram of W2664 + 480.00000ml of W3112 = Final Quantity: 500.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
588	Potassium Antimonyl Tartrate	WP110588	11/07/2024	05/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 11/07/2024

FROM 1.37150gram of W2306 + 500.00000ml of W3112 = Final Quantity: 500.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
229	1:1 HCL	WP110826	11/22/2024	05/13/2025	Jignesh Parikh	None	None	Iwona Zarych 11/22/2024

FROM 500.00000ml of M6121 + 500.00000ml of W3112 = Final Quantity: 1.000 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
2470	1664A SPIKING SOLN	WP110827	11/22/2024	04/23/2025	Jignesh Parikh	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 11/22/2024

FROM 1000.00000ml of E3788 + 4.00000gram of W2817 + 4.00000gram of W2871 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3374	1664A QCS spiking solution-SS	WP110828	11/22/2024	04/23/2025	Jignesh Parikh	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 11/22/2024

FROM 1000.00000ml of E3788 + 4.00000gram of W3009 + 4.00000gram of W3082 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1796	NaOH, 0.1N	WP111317	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCSC-6)	None	Iwona Zarych 01/09/2025

FROM 4.00000gram of W3113 + 996.00000ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1471	NaOH Solution, 6N	WP111318	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCSC-6)	None	Iwona Zarych 01/09/2025

FROM 240.00000gram of W3113 + 760.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1571	Sodium hydroxide, 1N	WP111323	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 01/09/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

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

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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
290	Phenol reagent for Ammonia	WP111385	01/13/2025	07/13/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 01/13/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1213	Phenolphthalein indicator	WP111415	01/15/2025	06/04/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 01/16/2025

FROM 0.10000gram of W2650 + 50.00000ml of W2788 + 50.00000ml of W3112 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
635	EDTA BUFFER FOR AMMONIA	WP111660	01/28/2025	07/28/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 01/28/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
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

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
740	sodium nitroferricyanide for ammonia	WP112537	03/28/2025	04/28/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCSC-5)	None	Iwona Zarych 03/28/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
153	Ammonia Stock Std. (1000 ppm)	WP112611	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 04/07/2025

FROM 3.81900gram of W3196 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1895	Ammonia Stock Std, 1000PPM-SS	WP112612	04/07/2025	10/07/2025	Rubina Mughal	WETCHEM_SCALE_8 (WCSC-7)	None	Iwona Zarych 04/07/2025

FROM 3.81900gram of W3195 + 996.18100ml of W3112 = Final Quantity: 1000.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1322	Ammonia Intermediate Std, 50PPM	WP112613	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 04/07/2025

FROM 95.00000ml of W3112 + 5.00000ml of WP112611 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
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

FROM 95.00000ml of W3112 + 5.00000ml of WP112612 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
1211	11 N sulfuric acid	WP112615	04/03/2025	10/07/2025	Niha Farheen Shaik	None	None	Iwona Zarych 04/07/2025

FROM 306.00000ml of M6041 + 694.00000ml of W3112 = Final Quantity: 1000.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
122	calibration std. 0 ppm	WP112753	04/18/2025	04/25/2025	Iwona Zarych	None	None	Jignesh Parikh 04/18/2025

FROM 100.00000ml of W3112 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
121	calibration std. phosphate 0.05 ppm	WP112754	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 99.90000ml of W3112 + 0.10000ml of WP110400 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
120	calibration std. phosphate 0.1 ppm	WP112755	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 99.80000ml of W3112 + 0.20000ml of WP110400 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
119	calibration std. phosphate 0.3 ppm	WP112756	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 99.40000ml of W3112 + 0.60000ml of WP110400 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
118	calibration std. phosphate 0.5 ppm	WP112757	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP110400 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
117	calibration std. phosphate 1 ppm	WP112758	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 98.00000ml of W3112 + 2.00000ml of WP110400 = Final Quantity: 100.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
124	phosphate CCV std.	WP112759	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP110400 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
590	Ascorbic Acid	WP112761	04/18/2025	04/19/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCSC-5)	None	Jignesh Parikh 04/18/2025

FROM 0.52800gram of W3074 + 30.00000ml of W3112 = Final Quantity: 30.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
658	Combined reagent	WP112762	04/18/2025	04/19/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 04/18/2025

FROM 15.00000ml of WP110587 + 30.00000ml of WP112761 + 5.00000ml of WP110588 + 50.00000ml of WP110380 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
275	Ammonia Calibration Std. (2 ppm)	WP112763	04/18/2025	04/19/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 48.00000ml of W3112 + 2.00000ml of WP112613 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
285	Ammonia CCV Std. (1 ppm)	WP112764	04/18/2025	04/19/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP112613 = Final Quantity: 50.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
286	Ammonia ICV Std. (1 ppm)	WP112765	04/18/2025	04/19/2025	Rubina Mughal	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 49.00000ml of W3112 + 1.00000ml of WP112614 = Final Quantity: 50.000 ml

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
3805	Phosphate ICV-LCS Std	WP112766	04/18/2025	04/24/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/18/2025

FROM 99.00000ml of W3112 + 1.00000ml of WP110401 = Final Quantity: 100.000 ml

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
127	BOD Dilution fluid	WP112768	04/18/2025	04/19/2025	Rubina Mughal	None	None	Iwona Zarych 04/21/2025

FROM 18.00000L of W3112 + 3.00000PILLOW of W3144 = Final Quantity: 18.000 L

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
129	Glutamic acid-glucose mix for BOD	WP112769	04/18/2025	04/19/2025	Rubina Mughal	WETCHEM_SCALE_7 (WCSC-6)	None	Iwona Zarych 04/21/2025

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

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Wet Chemistry STANDARD PREPARATION LOG

Recipe ID	NAME	NO.	Prep Date	Expiration Date	Prepared By	ScaleID	PipetteID	Supervised By
128	polyseed seed control	WP112771	04/18/2025	04/19/2025	Rubina Mughal	None	None	Iwona Zarych 04/21/2025

FROM 1.00000PILLOW of W3059 + 300.00000ml of WP112768 = Final Quantity: 300.000 ml

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC19631-100 / SODIUM SULFATE, ANHYDROUS, PEST GRADE, 1	313201	07/01/2025	01/03/2024 / Rajesh	07/20/2023 / Rajesh	E3551

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	23H1462005	04/23/2025	08/13/2024 / Rajesh	08/13/2024 / Rajesh	E3788

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

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140440 / TEST PAPERS,PH,0-2.5,.2SENSI, 100PK	80A0441	02/29/2028	09/03/2024 / jignesh	08/19/2024 / Jaswal	M6069

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9530-33 / Hydrochloric Acid, Instra-Analyzed (cs/6x2.5L)	0000275677	05/13/2025	11/13/2024 / Eman	10/13/2024 / Eman	M6121

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	A1561-500GM / POTASSIUM ANTIMONY TARTRATE TRIHYDRATE, 500G	2GH0057	12/11/2027	12/11/2017 / apatel	12/11/2017 / apatel	W2306

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J2870-1 / PHENOLPHTHALEIN, INDICATOR F/TITRATION, 500G	0000235350	06/04/2025	01/31/2020 / AMANDEEP	01/20/2020 / apatel	W2650

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AC156212500 / GLUTAMIC ACID BIOCHEM REG, 250G	A0405990	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2653

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	D16-500 / DEXTROSE ANHYDROUS ACS REAGENT, 500G(New)	186122A	01/24/2030	01/24/2020 / apatel	01/24/2020 / apatel	W2654

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J07716-1 / Ammonium Molybdate 500G	0000234410	02/11/2026	02/10/2020 / AMANDEEP	01/31/2020 / apatel	W2664

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J3246-1 / POTAS PHOSPHATE, MONO, CRYS, ACS, 500G	04/2019-20	04/23/2025	04/23/2020 / apatel	03/11/2020 / apatel	W2699

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.	J3246-1 / POTAS PHOSPHATE, MONO, CRYS, ACS, 500G	99/2019-20	05/05/2025	05/05/2020 / apatel	05/05/2020 / apatel	W2708

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	PC16721-3 / Isopropanol, 99%	C20F23007	06/23/2025	12/30/2020 / apatel	12/30/2020 / apatel	W2788

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	A12244 / Stearic acid, 98%, 100 g	U20E006	04/02/2026	04/02/2021 / apatel	04/02/2021 / apatel	W2817

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	H223-57 / Hexadecane, 99.0%	0000266903	05/04/2027	09/07/2021 / apatel	08/26/2021 / apatel	W2871

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	H223-57 / Hexadecane, 99.0%	SHBP8192	02/27/2028	02/27/2023 / Iwona	02/27/2023 / Iwona	W3009

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	BDH0214-500G / Ammonium Persulfate Crystal, 500g	MKCR9319	06/30/2028	03/05/2024 / Iwona	06/06/2023 / Iwona	W3035

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	152305	05/30/2025	02/15/2024 / Rubina	10/18/2023 / Iwona	W3059

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0938-7 / Ascorbic Acid, 500 gms	MKCS4627	09/30/2025	01/16/2024 / Iwona	01/16/2024 / Iwona	W3074

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	A12244 / Stearic acid, 98%, 100 g	U23E020	02/26/2029	02/26/2024 / Iwona	02/26/2024 / Iwona	W3082

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	4620-32 / MANGANOUS SULFATE SOLUTION-364	2403J02	03/31/2026	04/22/2024 / Iwona	04/22/2024 / Iwona	W3103

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL04100-4 / Alkaline Iodide Azide, 1 L	1405D67	04/30/2026	05/23/2024 / Iwona	05/23/2024 / Iwona	W3109

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

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

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

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CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	140476 / Test Paper,PH Short Range 9.0/10.0	L23	08/22/2029	08/22/2024 / Iwona	08/22/2024 / Iwona	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 / Iwona	09/17/2024 / Iwona	W3140

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	1486266 / BOD Nutrient Buffer Pillows, 6 mL concentrate to make 6 L, 50/pk	A4169	06/30/2029	11/20/2024 / rubina	10/01/2024 / Iwona	W3144

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	24G1962003	08/22/2025	11/25/2024 / jignesh	11/21/2024 / jignesh	W3153

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,PK100,CS12	14-860	12/02/2029	12/02/2024 / Iwona	12/02/2024 / Iwona	W3155

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CHEMICAL RECEIPT LOG BOOK

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

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 / Iwona	03/19/2025 / Iwona	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 / Iwona	03/19/2025 / Iwona	W3196

CERTIFICATE OF ANALYSIS

Printed: 12/8/2017

Customer No : 30017 **Customer :** PCI SCIENTIFIC **Customer PO :** 6035343

Order Number : 3008126 **Delivery # :** 58495347

Catalog : A1561 Potassium Antimony Tartrate Trihydrate, Reagent, ACS **Lot :** 2GH0057

W2306
Received
12/11/17
AP

Chemical Formula : $C_8H_4K_2O_{12}Sb_2.3H_2O$ **Formula Weight :** 667.87

CAS# : 28300-74-5

Test	Limit Min.	Limit Max.	Results
ASSAY ($C_8H_4K_2O_{12}Sb_2.3HO$)	99.0	103.0 %	101.0 %
TITRATABLE ACID OR BASE	--	0.020 meq/g	<0.020 meq/g
LOSS ON DRYING	--	2.7 %	<2.7 %
ARSENIC (As)	--	0.015 %	<0.015 %
APPEARANCE			WHITE POWDER
DATE OF MANUFACTURE			29-DEC-2015

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

Read and understand label and MSDS/SDS before handling any chemical. All Spectrum's chemicals are for manufacturing, processing, repacking or research purposes by experienced personnel only. The customer must ensure to provide its users adequate hazardous material training and appropriate protective gears before handling our chemicals.

Certificate of Analysis Results Certified By:

Ibad Tirmizi
Director, Quality Assurance, Quality Control
New Brunswick, NJ 08901

spectrum CHEMICAL MFG CORP
SpectrumChemical.com

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New Brunswick, NJ 08901
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West Coast Plant:
14422 S. San Pedro St.
Gardena, CA 90248
(310) 516-8000

Subject to Vadodara Jurisdiction

CPC Industries

CHAMPA PURIE-CHEM INDUSTRIES

ISO 9001 : 2015 CERTIFIED COMPANY

Importers Exporters Manufacturers & Marketing of Fine Chemicals & Pharmaceuticals

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Gujarat - INDIA.

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E-mail : info@cpcindia.com
Web : www.cpcindia.com

CERTIFICATE OF ANALYSIS

PRODUCT : POTASSIUM PHOSPHATE MONOBASIC Anhy. - ACS

CERTIFICATE NO : 04/2019-20 DATE 13-05-2019

Date of receipt of sample : 29.04.2019 Quantity : 1000 KGS.

Batch No. /Lot No : 04/2019-20

Mfg. Date : April-2019

1. Characteristic : A White powder

2. Identification : Positive

	RESULT OBTAINED	LIMITS
3. Clearity and colour of solution	: 10% solution is clear and colourless	
4. Assay (on dry basis)	99.35%	Min.99.00%
5. PH (5% solution)	4.28	4.1-4.5
6. Loss on Drying	0.06%	Max 0.2%
7. Heavy Metals	0.0004%	Max.0.001%
8. iron	0.001%	Max 0.002%
9. Sulphate	0.0015%	Max. 0.003%
10. Chloride	0.0005%	Max.0.001%
11. Insoluble Matter	0.002%	Max. 0.01%
12. Sodium	0.0038%	Max. 0.005%

The sample does comply with specification as per Above.

Analysed by J. A. PATHAK

Quality Control Department

Ammonium Molybdate, 4-Hydrate, Crystal
BAKER ANALYZED® A.C.S. Reagent

(ammonium heptamolybdate, tetrahydrate)

Material No.: 0716-01
Batch No.: 0000234410
Manufactured Date: 2019/02/13
Retest Date: 2026/02/11
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
Assay (as MoO_3)	81.0 - 83.0 %	81.4
ACS - Insoluble Matter	<= 0.005 %	< 0.001
Chloride (Cl)	<= 0.002 %	< 0.002
Nitrate (NO_3)	Passes Test	PT
Arsenate, Phosphate and Silicate (as SiO_2)	<= 0.001 %	< 0.001
ACS - Phosphate (PO_4)	<= 5 ppm	< 5
Sulfate (SO_4)	<= 0.02 %	< 0.02
Heavy Metals (as Pb)	<= 0.001 %	< 0.001
Magnesium (Mg)	<= 0.005 %	< 0.001
Potassium (K)	<= 0.01 %	< 0.01
Sodium (Na)	<= 0.01 %	<0.001

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

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

Jamie Ethier
Vice President Global Quality

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

Phenolphthalein, Powder
BAKER ANALYZED® A.C.S. Reagent

Material No.: 2870-01
Batch No.: 0000235350
Manufactured Date: 2018/06/06
Retest Date: 2025/06/04
Revision No: 1

Certificate of Analysis

Meets ACS Reagent Chemical Requirements,

Test	Specification	Result
ACS - Clarity of Solution	Passes Test	PT
Visual Transition Interval - pH...8.0 (Colorless)	Passes Test	PT
Visual Transition Interval - pH...10.0 (Red)	Passes Test	PT

For Laboratory, Research or Manufacturing Use

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

Jamie Ethier
Vice President Global Quality

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

Hexadecane, 99.0%

Material No.: H223-57
Batch No.: 0000266903
Manufactured Date: 2020/05/05
Retest Date: 2027/05/04
Revision No: 1

Certificate of Analysis

Test	Specification	Result
Assay ($CH_3(CH_2)_{14}CH_3$) (by GC)	>= 99.0 %	99.3
Infrared Spectrum	Passes Test	PT

For Laboratory, Research or Manufacturing Use

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

Jamie Ethier
Vice President Global Quality

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

ThermoFisher SCIENTIFIC

Certificate of Analysis

W2858 Received by AP on 07/07/2021

Product No.: 33213

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

Lot No.: M13H048

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

Retest date: January 7, 2026

ThermoFisher SCIENTIFIC

Certificate of Analysis

W2666 Recived on 02/10/2020 by AP

Product No.: 87683

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

Lot No.: W12F013

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

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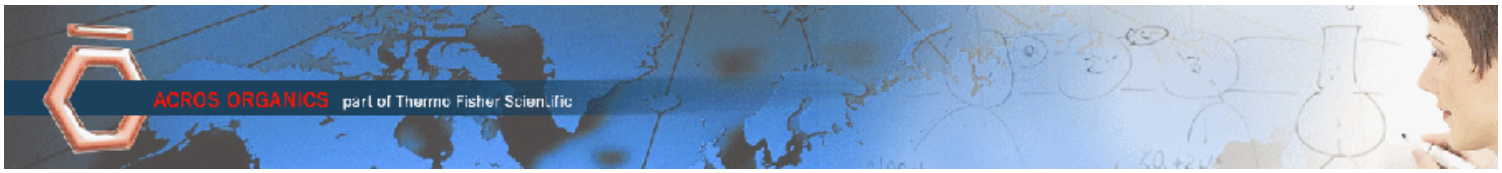
This is to certify that units of the lot number above were tested and found to comply with the specifications of the grade listed. Certain data have been supplied by third parties. Thermo Fisher Scientific expressly disclaims all warranties, expressed or implied, including the implied warranties of merchantability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



ACROS ORGANICS

Version	0
Molecular weight	147.13
Molecular formula	C5 H9 N O4
CAS No	56-86-0
Linear formula	HO2CCH2CH2CH(NH2)CO2H
Flash point (°C)	

Certificate of Analysis

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Catalog Number	15621	**Quality Test / Release Date**	13 March 2019
Lot Number	A0405990	**Suggested Retest Date**	March 2022

Description	L(+)-Glutamic acid,99%
Country of Origin	CHINA
Declaration of Origin	plant

Origin Comment	The product is made by fermentation of sugar molasses

Result Name	Specifications	Test Value
Appearance (Color)	White	White
Appearance (Form)	Powder	Powder
Infrared spectrum	Conforms	Conforms
Titration with NaOH	98.5 to 100.5 % (On dried substance)	99.32 % (On dried substance)
Loss on drying	=<0.5 % (105°C, 3 hrs)	0.002 % (105°C, 3 hrs)
Heavy metals (as Pb)	=<10 ppm	=<10 ppm
Sulfated ash	=<0.1 %	0.08 %
Other amino acids	not detectable	not detectable
Specific optical rotation	+30.5° to +32.5° (20°C, 589 nm) (on dried substance)	+32° (20°C, 589 nm) (on dried substance)
Specific optical rotation	(c=10, 2N HCl)	(c=10, 2N HCl)
Chloride (Cl)	=<200 ppm	=<200 ppm
Iron (Fe)	=<30 ppm	=<10 ppm
Sulfate (SO4)	=<300 ppm	=<200 ppm
Ammonium (NH4)	=<200 ppm	=<200 ppm
Arsenic oxide (As2O3)	=<1 ppm	=<1 ppm

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

Acros Organics
ENA23, zone 1, nr 1350, Janssen Pharmaceuticalaan 3a, B-2440 Geel, Belgium
Tel +32 14/57.52.11 - Fax +32 14/59.34.34 Internet: http://www.acros.com
1 Reagent Lane, Fair Lawn, NJ 07410,USA Fax 201-796-1329

ThermoFisher SCIENTIFIC

W2817
Rec. 04/02/2021

Product Specification

Product Name: Stearic acid, 98%, Thermo Scientific Chemicals
Catalog Number: A12244.14

CAS Number:	57-11-4
Molecular Formula:	C18H36O2
Molecular Weight:	284.48
InChI Key:	QIQXTHQIDYTFRH-UHFFFAOYSA-N
SMILES:	CCCCCCCCCCCCCCCCCC(O)=O
Synonym:	stearic acid acide stearique hydrofol acid 1855 hydrofol acid 1655 industrene 5016 stearic acid, ion(1-) (8CI) glycon TP glycon DP acidum stearinicul hydrofol acid 150

Product Specification

Appearance (Color):	White
Form:	Crystals or powder or crystalline powder or flakes or waxy solid
Assay (Silylated GC):	≥97.5%
Melting Point (clear melt):	67.0-74.0?C

Date Of Print: 11/30/2023

Product Specifications are subject to amendment and may change over time. Data contained is accurate as of the date printed.

CERTIFICATE OF ANALYSIS

Product Name	ISOPROPYL ALCOHOL, 99%
Grade	Meets ACS/USP/NF Monographs
Catalog #	231000099, zp231000099
Lot #	C20F23007
Date of Manufacture:	06/23/20
Recommended Retest Date:	Five Years from Date of Manufacture

W2788 Received on 12/30/2020 by AP

TEST	MONO GRAPH	SPECIFICATION	RESULT
Assay (corrected for water)	USP	99.0% min	99.92%
Assay (corrected for water)	ACS	99.5% min	
Solubility in water	ACS+	To Pass Test	Pass
Appearance	ACS+	Clear, colorless liquid	Pass
Color, APHA	ACS	10 max	1
Limit of Nonvolatile Residue	USP+	NMT 2.5 mg (0.005%)	0.1 mg
Residue after Evaporation	ACS+	0.001% max	< 0.001%
Specific Gravity	USP	0.783 - 0.787 @25°C	0.783
Identification A - Infrared Absorption	USP	To Pass Test	Pass
Identification B	USP	To Pass Test	Pass
Refractive Index @ 20°C	USP	1.376-1.378	1.377
Acidity	USP+	NMT 0.70 ml of 0.020N NaOH is required	0.30 mL
Titrable Acid or Base	ACS+	0.0001 meq/g max	0.0001 meq/g
Carbonyl Compounds	ACS	Propionaldehyde 0.002% max	< 0.002%
		Acetone 0.002% max	None Detected
Limit of Volatile Impurities	USP	Diethyl Ether NMT 0.1%	< 0.1%
		Acetone NMT 0.1%	None Detected
		Diisopropyl Ether NMT 0.1%	< 0.1%
		n-Propyl Alcohol NMT 0.1%	< 0.1%
		2-Butanol NMT 0.1%	< 0.1%
		Total NMT 1.0%	< 0.1%
Water, wt%	ACS	NMT 0.2%	0.05%
Water Determination	USP	NMT 0.5%	

+ This test is performed quarterly

58 Vale Road, Brookfield, Connecticut, 06804, USA | P. 800.243.5360
www.pharmco.com | www.greenfield.com

Certification and Compliance Statements

This lot of Isopropyl Alcohol complies with all of the current requirements listed in the United States Pharmacopeia, American Chemical Society monographs and the National Formulary.
No chemicals whatsoever are used as solvents at any point in the manufacture, processing or packaging of Isopropyl Alcohol. Only Class 2 and Class 3 residual solvents may appear as impurities / related substances / low level contaminants in IPA Concentration of Class 2 Option 1 and Class 3 residual solvents is below limits in the current USP/NF General Chapter <467>.
This product is not derived, nor does it come in contact with, any materials derived from bovine or other animal sources.
This product is for further commercial manufacturing, laboratory or research use, and may be used as an excipient or a process solvent for pharmaceutical purposes. It is not intended for use as an active ingredient in drug manufacturing nor as a medical device or disinfectant. Appropriate/legal use of this product is the responsibility of the user.

Approved by: D. Simoncelli, Quality Control Chemist

Date of Approval: 06/23/2020

58 Vale Road, Brookfield, Connecticut, 06804, USA | P. 800.243.5360
www.pharmco.com | www.greenfield.com

Sigma-Aldrich

W3009

rec. 2/27/2023 12

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

Certificate of Analysis

Product Name:
Hexadecane - ReagentPlus® , 99%

Product Number:	**H6703**
Batch Number:	**SHBP8192**
Brand:	SIAL
CAS Number:	544-76-3
MDL Number:	MFCD00008998
Formula:	C16H34
Formula Weight:	226.44 g/mol
Quality Release Date:	04 AUG 2022

$CH_3(CH_2)_{14}CH_3$

Test	Specification	Result
Appearance (Color)	Colorless or White	Colorless
Appearance (Form)	Liquid or Solid	Liquid
Infrared Spectrum	Conforms to Structure	Conforms
Refractive index at 20 ° C	1.432 - 1.436	1.435
Purity (GC)	≥ 98.5 %	99.3 %
Color Test	≤ 20 APHA	< 5 APHA

Larry Coers, Director
Quality Control
Sheboygan Falls, WI US

Sigma-Aldrich.

W 3035
Lec. 6/6/23 12

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

Certificate of Analysis

Product Name:
Ammonium persulfate - ACS reagent, ≥98.0%

Product Number:	**248614**
Batch Number:	**MKCR9319**
Brand:	SIGALD
CAS Number:	7727-54-0
MDL Number:	MFCD00003390
Formula Weight:	228.20 g/mol
Quality Release Date:	13 OCT 2022

$(NH_4)_2S_2O_8$

Test	Specification	Result
Appearance (Color)	White to Off White	White
Appearance (Form)	Powder or Crystals or Granules or Chunks	Crystals
ICP Major Analysis Confirms Sulfur Component	Confirmed	Confirmed
Titration by KMNO4	≥ 98.0 %	100.0 %
Residue on ignition (Ash)	≤ 0.05 %	< 0.05 %
Insoluble Matter c = 10 %; In Water	≤ 0.005 %	0.002 %
Chloride and Chlorate (as Cl)	≤ 0.001 %	< 0.001 %
Iron (Fe)	≤ 0.001 %	< 0.001 %
Heavy Metal as Lead	≤ 0.005 %	< 0.001 %
Manganese (Mn)	≤ 0.5 ppm	< 0.1 ppm
Titratable Acid (meq/g)	≤ 0.04	< 0.04
Meets ACS Requirements	Current ACS Specification	Conforms

Larry Coers, Director
Quality Control
Milwaukee, WI US

W 3059
rec. 10/18/23 12

POLYSEED®

CERTIFICATE OF ANALYSIS

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

FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:
PolySeed® • Part No. P-110 • Lot 152305 • Mfg. Date: 05/2023 • Exp. Date: 05/2025

FORMULATION:
The formulation for this product contains a range of naturally occurring microorganisms, which are known to be non-pathogenic to man or animals.

VIABLE COUNT, FINAL TEST RESULT:
The product has been fully tested in accordance with Finished Product Specifications and contains a minimum viable count of 4.00 x10^9 cfu/g.

GLUCOSE/GLUTAMIC-ACID RESULTS:
Tested results within acceptable range 198 +/- 30.5 mg/L (167.5 - 228.5 mg/L). GGA Lot# L257-09 – Average Test Result: 203.4

See www.polyseed.com for details.

SEED CONTROL FACTOR:
Tested results within acceptable range 0.6 – 1.0 see www.polyseed.com for details

SALMONELLA TEST RESULT:
The product has been shown to be Salmonella negative using procedures recommended in the Microbiology Laboratory Guidebook, published by the USDA Food Safety and Inspection Service.

The purpose of this document is to assure that the Finished Product conforms to the above specification.

Signature: _____ Date: 05/15/2023
Quality Control Department

POLYSEED.Ref.1.19 Revised Jan 23

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International Laboratory Supply

ISO 9002
DNV
DNV Certification, Inc.
REGISTERED FIRM

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 (Na2B4O7 • 10H2O)	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 (PO4)	0.001% max.	<0.001%
Sulfate (SO4)	0.005% max.	<0.005%

Joe Schoellkopff

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.

ThermoFisher SCIENTIFIC

Certificate of Analysis

1 Reagent Lane
Fair Lawn, NJ 07410
201.796.7100 tel
201.796.1329 fax

Thermo Fisher Scientific's Quality System has been found to conform to Quality Management System Standard ISO9001:2015 by SAI Global Certificate Number CERT – 0120632

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Catalog Number	D16	Quality Test / Release Date	03/19/2019
Lot Number	186122A		
Description	DEXTROSE, ANHYDROUS, A.C.S.		
Country of Origin	United States	Suggested Retest Date	Mar/2022
Chemical Origin	Organic - Plant		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		
Chemical Comment			

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	White, granular powder
TITRATABLE ACID	MEQ/G	<= 0.002	<0.002
STARCH		= PASS TEST	pass test
SPECIFIC ROTATION @ 25 C	DEGREES (+ OR -)	Inclusive Between +52.5 - +53.0	53.0
SULFATE & SULFITE	%	<= 0.005	<0.005
IRON (Fe)	ppm	<= 5	<5
CHLORIDE	%	<= 0.01	<0.01
IGNITION RESIDUE	%	<= 0.02	<0.02
IDENTIFICATION	PASS/FAIL	= PASS TEST	pass test
HEAVY METALS (as Pb)	ppm	<= 5	<5
LOSS ON DRYING @ 105 C	%	<= 0.2	<0.2
INSOLUBLE MATTER	%	<= 0.005	0.002

Teresa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

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

PRODUCTOS QUIMICOS MONTERREY, S.A. DE C.V.

MIRADOR 201, COL. MIRADOR
MONTERREY, N.L. MEXICO
CP 64070
TEL +52 81 13 52 57 57
www.pqm.com.mx

CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na_2SO_4
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na_2SO_4)	Min. 99.0%	99.7 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.1
Insoluble matter	Max. 0.01%	0.005 %
Loss on ignition	Max. 0.5%	0.1 %
Chloride (Cl)	Max. 0.001%	<0.001 %
Nitrogen compounds (as N)	Max. 5 ppm	<5 ppm
Phosphate (PO_4)	Max. 0.001%	<0.001 %
Heavy metals (as Pb)	Max. 5 ppm	<5 ppm
Iron (Fe)	Max. 0.001%	<0.001 %
Calcium (Ca)	Max. 0.01%	0.002 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.003 %
Extraction-concentration suitability	Passes test	Passes test
Appearance	Passes test	Passes test
Identification	Passes test	Passes test
Solubility and foreing matter	Passes test	Passes test
Retained on US Standard No. 10 sieve	Max. 1%	0.1 %
Retained on US Standard No. 60 sieve	Min. 94%	97.3 %
Through US Standard No. 60 sieve	Max. 5%	2.5 %
Through US Standard No. 100 sieve	Max. 10%	0.1 %

COMMENTS

QC: PhC Irma Belmares

If you need further details, please call our factory or contact our local distributor.

Recd. by RB on 7/24/23 E3551

Acetone
BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

avantor™ | J.T.Baker®

Material No.: 9254-03
Batch No.: 23H1462005
Manufactured Date: 2023-07-26
Expiration Date: 2026-07-25
Revision No.: 0

Certificate of Analysis

Test	Specification	Result
Assay ($(CH_3)_2CO$) (by GC, corrected for water)	≥ 99.4 %	99.7 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.3 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titrable Acid (µeq/g)	≤ 0.3	0.1
Titrable Base (µeq/g)	≤ 0.6	< 0.1
Water (H_2O)	≤ 0.5 %	0.3 %
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	< 1
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1

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

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

Recd. by RP on 8/13/24

E 3788

Ken Koehnlein
Sr. Manager, Quality Assurance

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

9673- 33

avantor™ | J.T.Baker®

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

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

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

avantor™ | J.T.Baker®

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

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

For Laboratory,Research,or Manufacturing Use

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

James T Ethier

Jamie Ethier
Vice President Global Quality

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

M 6041-46
MS

avantor™ | J.T.Baker®

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

Certificate of Analysis

Test	Specification	Result
ACS – Assay (H_2SO_4)	95.0 – 98.0 %	96.1 %
Appearance	Passes Test	Passes Test
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Substances Reducing Permanganate (as SO2)	≤ 2 ppm	< 2 ppm
Ammonium (NH_4)	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO_3)	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO_4)	≤ 0.5 ppm	< 0.1 ppm
Trace Impurities – Aluminum (Al)	≤ 30.0 ppb	< 5.0 ppb
Arsenic and Antimony (as As)	≤ 4.0 ppb	< 2.0 ppb
Trace Impurities – Boron (B)	≤ 10.0 ppb	8.5 ppb
Trace Impurities – Cadmium (Cd)	≤ 2.0 ppb	< 0.3 ppb
Trace Impurities – Chromium (Cr)	≤ 6.0 ppb	< 0.4 ppb
Trace Impurities – Cobalt (Co)	≤ 0.5 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gold (Au)	≤ 10.0 ppb	0.5 ppb
Heavy Metals (as Pb)	≤ 500.0 ppb	< 100.0 ppb
Trace Impurities – Iron (Fe)	≤ 50.0 ppb	1.3 ppb
Trace Impurities – Lead (Pb)	≤ 0.5 ppb	< 0.5 ppb
Trace Impurities – Magnesium (Mg)	≤ 7.0 ppb	0.8 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	< 0.1 ppb
Trace Impurities – Nickel (Ni)	≤ 2.0 ppb	0.3 ppb
Trace Impurities – Potassium (K)	≤ 500.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se)	≤ 50.0 ppb	< 0.1 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	31.5 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	< 0.3 ppb

>>> Continued on page 2 >>>

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

avantor™ | J.T.Baker®

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

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

For Laboratory,Research,or Manufacturing Use

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

James T Ethier

Jamie Ethier
Vice President Global Quality

R: 8/19/24 M6069

MACHEREY-NAGEL

Certificate of Analysis

Product information

Product	pH-Fix 0.3-2.3
REF	92180
LOT	80A0441
Expiration date:	29.02.2028
Date of examination:	23.01.2024
Gradation:	pH 0.3-0.7-1.0-1.3-1.6-1.9-2.3

Confirmation

Hereby we confirm, that the above mentioned product has successfully passed our quality control system in accordance with ISO 9001 and meets the specific quality criteria.

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

MACHEREY-NAGEL GmbH & Co. KG
Valencienner Str. 11
52355 Düren · Germany
www.mn-net.com

DE Tel.: +49 24 21 969-0 info@mn-net.com
CH Tel.: +41 62 388 55 00 sales-ch@mn-net.com
FR Tel.: +33 388 68 22 68 sales-fr@mn-net.com
US Tel.: +1 888 321 62 24 sales-us@mn-net.com

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

avantor™ | J.T.Baker®

R → 10/13/24
Met dig

M 6121

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

Certificate of Analysis

Test	Specification	Result
ACS - Assay (as HCl) (by acid-base titrn)	36.5 - 38.0 %	37.6
ACS - Color (APHA)	<= 10	5
ACS - Residue after Ignition	<= 3 ppm	1
ACS - Specific Gravity at 60°/60°F	1.185 - 1.192	1.190
ACS - Bromide (Br)	<= 0.005 %	< 0.005
ACS - Extractable Organic Substances	<= 5 ppm	1
ACS - Free Chlorine (as Cl_2)	<= 0.5 ppm	< 0.5
Phosphate (PO_4)	<= 0.05 ppm	< 0.03
Sulfate (SO_4)	<= 0.5 ppm	< 0.3
Sulfite (SO_3)	<= 0.8 ppm	0.3
Ammonium (NH_4)	<= 3 ppm	< 1
Trace Impurities - Arsenic (As)	<= 0.010 ppm	< 0.003
Trace Impurities - Aluminum (Al)	<= 10.0 ppb	< 0.2
Arsenic and Antimony (as As)	<= 5 ppb	< 3
Trace Impurities - Barium (Ba)	<= 1.0 ppb	< 0.2
Trace Impurities - Beryllium (Be)	<= 1.0 ppb	< 0.2
Trace Impurities - Bismuth (Bi)	<= 10.0 ppb	< 1.0
Trace Impurities - Boron (B)	<= 20.0 ppb	< 5.0
Trace Impurities - Cadmium (Cd)	<= 1.0 ppb	< 0.3
Trace Impurities - Calcium (Ca)	<= 50.0 ppb	29.7
Trace Impurities - Chromium (Cr)	<= 1.0 ppb	< 0.4
Trace Impurities - Cobalt (Co)	<= 1.0 ppb	< 0.3
Trace Impurities - Copper (Cu)	<= 1.0 ppb	< 0.1
Trace Impurities - Gallium (Ga)	<= 1.0 ppb	< 0.2

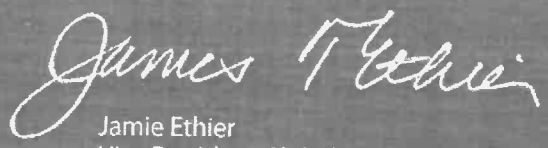
For questions on this Certificate of Analysis please contact Technical Services at 855.282.6867 or +1.610.386.1700
Avantor Performance Materials, LLC
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

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

For Laboratory, Research or Manufacturing Use
Product Information (not specifications):
Appearance (clear, fuming liquid)
Meets ACS Specifications

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



Jamie Ethier
Vice President Global Quality

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

Subject to Vadodara Jurisdiction

CHAMPA PURIE-CHEM INDUSTRIES

ISO 9001 : 2015 CERTIFIED COMPANY

Importers Exporters Manufacturers & Marketing of Fine Chemicals & Pharmaceuticals

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Web : www.cpcindia.com

W2708 Received on 05/05/20 by AP

CERTIFICATE OF ANALYSIS

PRODUCT : **POTASSIUM PHOSPHATE MONOBASIC Anhy. - ACS**

CERTIFICATE NO : 99/2019- 20 DATE 26-08-2019

Date of receipt of sample : 22.08.2019 Quantity : 1000 KGS

Batch No. /Lot No : 99/2019- 20

Mfg. Date : Aug-2019

1. Characteristic : A White powder

2. Identification : Positive

	RESULT OBTAINED	LIMITS
3. Clearity and colour of solution	: 10% solution is clear and colourless	
4. Assay (on dry basis)	: 99.27%	Min.99.00%
5. PH (5% solution)	: 4.4	4.1-4.5
6. Loss on Drying	: 0.1%	Max 0.2%
7. Heavy Metals	: 0.0003%	Max.0.001%
8. Iron	: 0.001%	Max 0.002%
9. Sulphate	: 0.001%	Max. 0.003%
10. Chloride	: 0.0005%	Max.0.001%
11. Insoluble Matter	: 0.003%	Max. 0.01%
12. Sodium	: 0.004%	Max. 0.005%

The sample does comply with specification as per Above.

Analysed by J.A.PATHAK

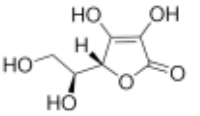
Quality Control Department

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

W3074 Rec. on 01/16/24 by IZ

Certificate of Analysis

Product Name:
L-Ascorbic acid - ACS reagent, ≥99%



Product Number:	**255564**
Batch Number:	**MKCS4627**
Brand:	SIAL
CAS Number:	50-81-7
MDL Number:	MFCD00064328
Formula:	C6H8O6
Formula Weight:	176.12 g/mol
Quality Release Date:	21 NOV 2022
Recommended Retest Date:	SEP 2025

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form) Powder, Crystals, Crystalline Powder, Granules and/or Chunks	Conforms to Requirements	Powder
Infrared Spectrum	Conforms to Structure	Conforms
Optical Rotation (+); c = 10%; Water	20.5 - 21.5 deg	20.7 deg
Titration by Iodine	≥ 99.0 %	99.4 %
Residue on Ignition	≤ 0.10 %	0.03 %
Iron (Fe)	≤ 0.001 %	< 0.001 %
Heavy Metals by ICP-OES	≤ 0.002 %	0.001 %
Recommended Retest Period 3 Years	----------	----------
Meets ACS Requirements	Current ACS Specification	Conforms

Larry Coers, Director
Quality Control
Milwaukee, WI US

Certificate of analysis

W3082 Received on 2/26/2026 by IZ

Product No.:	A12244
Product:	Stearic acid, 98%
Lot No.:	U23E020

Appearance	White flakes
Assay	98.7 %

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

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

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

Certificate of Analysis

Manganous Sulfate Solution, 364 g/L

Lot Number: 2403J02 **Product Number:** 4620

Manufacture Date: MAR 15, 2024
Expiration Date: MAR 2026

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Manganous Sulfate Monohydrate	10034-96-5	Reagent
Sulfuric Acid	7664-93-9	ACS

Test	Specification	Result
Appearance	Pink liquid	Passed
Assay (by Refractive Index)	360-368 g/L	367 g/L

Specification	Reference
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	ASTM (D 888 A)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O E)
Manganous Sulfate Solution	APHA (4500-O F)
Manganous Sulfate Solution	APHA (4500-O D)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	APHA (4500-O C)
Manganous Sulfate Solution	EPA (360.2)
Manganous Sulfate Solution	EPA (360.2)

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
4620-32	1 L natural poly	24 months

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

Jose Pena (03/15/2024)

Operations Manager

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

RICCA CHEMICAL COMPANY®

1490 Lammers Pike
Batesville, IN 47006
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customerservice@riccachemical.com

W3105 Received on 4/22/24 by IZ

Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 4403S13 **Product Number:** 7900

Manufacture Date: MAR 29, 2024
Expiration Date: SEP 2025

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

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

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

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

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

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

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

Paul Brandon (03/29/2024)
Production Manager
This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

RICCA CHEMICAL COMPANY®

448 West Fork Dr
Arlington, TX 76012
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customerservice@riccachemical.com

Certificate of Analysis

Alkaline-Iodide-Azide, Pomeroy Formulation for Dissolved Oxygen (DO) Analysis

Lot Number: 1405D67 **Product Number:** 535

Manufacture Date: APR 05, 2024
Expiration Date: APR 2026

This solution is intended for use with samples with high Dissolved Oxygen content (above 15 mg/L) and for samples with high concentrations of organic material.

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Iodide	7681-82-5	ACS
Sodium Hydroxide	1310-73-2	ACS
Sodium Azide	26628-22-8	Reagent

Test	Specification	Result
Appearance	Colorless liquid	Passed
Free Iodine	To Pass Test	Passed

Specification	Reference
Alkaline Iodide-Sodium Azide Solution II	ASTM (D 888 A)

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

Part Number	Size / Package Type	Shelf Life (Unopened Container)
535-32	1 L natural poly	24 months

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

Heidi J Green (04/05/2024)
Operations Manager

Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: 0583

Grade: ACS GRADE

Batch Number: 23B1556310

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

Pellets

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

Storage: Room Temperature

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.

Certificate of Analysis

Sodium Hydroxide (Pellets)

Material: **0583**

Grade: **ACS GRADE**

Batch Number: **23B1556310**

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

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.

spectrum® CHEMICAL MFG CORP

Certificate Of Analysis

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

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

Certificate of Analysis Results Entered By:

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

Certificate of Analysis Results Approved By:

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

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ

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

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

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

Loveland, CO 80539
(970) 669-3050

An ISO 9001 Certified Company

Certificate of Analysis

This is a Component of 1486266 / LOT A4169

PRODUCT: BOD Nutrient Buffer Pillows

PRODUCT NUMBER: 1486227

LOT NUMBER: A4169

MANUFACTURE DATE: 06/24/2024

DATE OF ANALYSIS: 07/03/2024

TEST	SPECIFICATIONS	RESULTS
Calcium Concentration of a diluted pillow	0.93 to 1.29 ppm	0.960 ppm
Magnesium Concentration of a diluted pillow	0.35 to 0.48 ppm	0.390 ppm
pH in a 6 L of DI water	7.1 to 7.6	7.37
Ammonia Concentration of a diluted pillow	0.57 to 0.79 ppm	0.593 ppm
Iron Concentration of a diluted pillow	0.27 to 0.36 ppm	0.311 ppm
Sterility	To Pass	Passed
Phosphorus Concentration of a diluted pillow	7.6 to 10.3 ppm	8.32 ppm
Five Day Change in Dissolved Oxygen Concentration	-0.2 to 0.2 ppm	0.03 ppm

The expiration date is Jun 2029

Certified by: Scott Als

Analytical Services Chemist

RICCA CHEMICAL COMPANY®

W3149 Received on 10/16/24 by IZ

1490 Lammers Pike
Batesville, IN 47006
http://www.riccachemical.com
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customerservice@riccachemical.com

Certificate of Analysis

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

Lot Number: 4408P62 **Product Number:** 8000

Manufacture Date: AUG 28, 2024
Expiration Date: AUG 2026

This product is Mercury-free.

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

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

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

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

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

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

Paul Brandon (08/28/2024)
Production Manager

n-Hexane 95%
ULTRA RESI-ANALYZED
For Organic Residue Analysis

avantor™ | J.T.Baker®

W3153
TB
Opyte. 11/25/2024
TB

Certificate of Analysis

Material No.: 9262-03
Batch No.: 24G1962003
Manufactured Date: 2024-05-23
Expiration Date: 2025-08-22
Revision No.: 0

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	≤ 5	3
ECD Sensitive Impurities (as Heptachlor Epoxide) Single Peak (pg/mL)	≤ 10	1
ECD-Sensitive Impurities (as Ethylene Dibromide) - Single Impurity Peak (ng/mL)	≤ 5	1
Assay (Total Saturated C_6 Isomers) (by GC, corrected for water)	≥ 99.5 %	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	≥ 95 %	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H_2SO_4	Passes Test	Passes Test
Water (by KF, coulometric)	≤ 0.05 %	< 0.01 %

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

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

JCroak

Jamie Croak
Director Quality Operations, Bioscience Production

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

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

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

Lot Number: 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

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	NH4Cl
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

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

Additional Information

Analysis may have been rounded to significant digits in specification limits

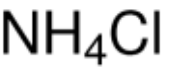
Product meets analytical specifications of the grades listed.

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

W3196 Received on 03/19/2025 by IZ

Certificate of Analysis

Product Name:
Ammonium chloride - ACS reagent, ≥99.5%



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

Test	Specification	Result
Appearance (Color)	White	White
Appearance (Form)	Powder or Crystals or Chunk(s)	Crystals
Titration by AgNO3	≥ 99.5 %	100.2 %
pH @ 25 Deg c (5% Solution)	4.5 - 5.5	4.9
Insoluble Matter 10%, H2O	≤ 0.005 %	0.001 %
Residue on ignition (Ash)	≤ 0.01 %	< 0.01 %
Calcium (Ca)	≤ 0.001 %	< 0.001 %
Magnesium (Mg)	≤ 5 ppm	1 ppm
Heavy Metals by ICP	≤ 5 ppm	< 1 ppm
Iron (Fe)	≤ 2 ppm	< 1 ppm
Phosphate (PO4)	≤ 2 ppm	< 2 ppm
Sulfate (SO4)	≤ 0.002 %	< 0.002 %
Meets ACS Requirements	Current ACS Specification	Conforms
Recommended Retest Period 3 Years	----------	----------

Larry Coers, Director

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

Certificate of Analysis

Product Number: **213330**
Batch Number: **MKCV1009**

Quality Control
Milwaukee, WI US

SHIPPING DOCUMENTS

Alliance TECHNICAL GROUP

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

ALLIANCE PROJECT NO.
QUOTE NO. Q1835
COC Number 2045907

CLIENT INFORMATION

REPORT TO BE SENT TO:
COMPANY: HOLLAND MFG CO
ADDRESS: 15 MAIN ST
CITY SUCCASUNNA STATE: NJ ZIP: 07846
ATTENTION:
PHONE: FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: HMC PRETREATMENT
PROJECT NO.: LOCATION:
PROJECT MANAGER: TODD HOLLAND
e-mail:
PHONE: FAX:

CLIENT BILLING INFORMATION

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

DATA TURNAROUND INFORMATION

FAX (RUSH) _____ DAYS*
HARDCOPY (DATA PACKAGE): _____ DAYS*
EDD: _____ DAYS*
*TO BE APPROVED BY CHEMTECH
STANDARD HARDCOPY TURNAROUND TIME IS 10 BUSINESS

DATA DELIVERABLE INFORMATION

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

ANALYSIS

1	2	3	4	5	6	7	8	9
BOD5	TSS	O+G	PO4	TOTAL P	NH3			

PRESERVATIVES

1	2	3	4	5	6	7	8	9
E	E	C	C	C	C			

COMMENTS

← Specify Preservatives
A-HCl D-NaOH
B-HN03 E-ICE
C-H2SO4 F-OTHER

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE COMP	SAMPLE TYPE GRAB	SAMPLE COLLECTION DATE	SAMPLE COLLECTION TIME	# OF BOTTLES	1	2	3	4	5	6	7	8	9	COMMENTS
1.	EFFLUENT	W		✓	4/17	12:30	6	X	X	X	X	X	X				
2.	AERATION	W		✓	4/17	12:30	1		X								
3.	INFLUENT	W		✓	4/17	12:10	2	X					X				
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:
1. E MARINEZ	4/17 1300	1 4-17-25 1455
2.		2.
3.		3.

Conditions of bottles or coolers at receipt: ❑ COMPLIANT ❑ NON COMPLIANT ❑ COOLER TEMP 2.2 °C
Comments: Adjust Factor +1 IN Row #1
LAB TO FILTER

Page _____ of

CLIENT: ❑ Hand Delivered ❑ Other

Shipment Complete ❑ YES ❑ NO

WHITE - ALLIANCE COPY FOR RETURN TO CLIENT YELLOW - ALLIANCE COPY PINK - SAMPLER COPY

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

QA Control Code: A2070148