

DATA REPORTING QUALIFIERS- INORGANIC

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

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

LAB CHRONICLE

OrderID:	Q1831	OrderDate:	4/17/2025 1:16:00 PM
Client:	Mars Chocolate North America, LLC	Project:	W.T.P. Final Effluent 2025
Contact:	Jeff Kram	Location:	L31

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1831-01	EFFLUENT-COMPOSITE	WATER			04/17/25 05:00			04/17/25
			Ammonia	SM4500-NH3		04/17/25	04/18/25 09:51	
			BOD Soluble	SM5210 B			04/18/25 13:45	
			BOD5	SM5210 B			04/18/25 13:45	
			COD	SM5220 D			04/21/25 13:57	
			Apparent Color	SM2120 B			04/18/25 09:40	
			Phosphorus-Total	365.3		04/18/25	04/18/25 11:51	
			TDS	SM2540 C			04/17/25 13:30	
			TSS	SM2540 D			04/21/25 10:00	
Q1831-01DL	EFFLUENT-COMPOSITE	WATER			04/17/25 05:00			04/17/25
	EDL		Phosphorus-Total	365.3		04/18/25	04/18/25 11:54	
Q1831-02	EFFLUENT-GRAB	WATER			04/17/25 05:00			04/17/25
			Oil and Grease	1664A			04/22/25 10:20	



SAMPLE DATA

Report of Analysis

Client:	Mars Chocolate North America, LLC	Date Collected:	04/17/25 05:00
Project:	W.T.P. Final Effluent 2025	Date Received:	04/17/25
Client Sample ID:	EFFLUENT-COMPOSITE	SDG No.:	Q1831
Lab Sample ID:	Q1831-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Ammonia as N	38.8		1	1.50	5.00	mg/L	04/17/25 14:00	04/18/25 09:51	SM 4500-NH3 B plus G-11
BOD Soluble	40.4		1	0.20	2.00	mg/L		04/18/25 13:45	SM 5210 B-16
BOD5	45.3		1	0.20	2.00	mg/L		04/18/25 13:45	SM 5210 B-16
COD	140		1	1.50	10.0	mg/L		04/21/25 13:57	SM 5220 D-11
Apparent Color	800	D	20	100	100	cu		04/18/25 09:40	SM 2120 B-11
Phosphorus, Total	1.56	OR	1	0.0050	0.050	mg/L	04/18/25 09:45	04/18/25 11:51	365.3
TDS	4150		1	1.00	10.0	mg/L		04/17/25 17:00	SM 2540 C-15
TSS	50.4		1	1.00	4.00	mg/L		04/21/25 10:00	SM 2540 D-15

Comments: Apparent color result reported at pH 7.93

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Mars Chocolate North America, LLC	Date Collected:	04/17/25 05:00
Project:	W.T.P. Final Effluent 2025	Date Received:	04/17/25
Client Sample ID:	EFFLUENT-COMPOSITEDL	SDG No.:	Q1831
Lab Sample ID:	Q1831-01DL	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Phosphorus, Total	3.89	D	5	0.023	0.25	mg/L	04/18/25 09:45	04/18/25 11:54	365.3

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits

Report of Analysis

Client:	Mars Chocolate North America, LLC	Date Collected:	04/17/25 05:00
Project:	W.T.P. Final Effluent 2025	Date Received:	04/17/25
Client Sample ID:	EFFLUENT-GRAB	SDG No.:	Q1831
Lab Sample ID:	Q1831-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
Oil and Grease	0.29	U	1	0.29	5.00	mg/L		04/22/25 10:20	1664A

Comments: _____

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits



QC RESULT SUMMARY

Initial and Continuing Calibration Verification

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Initial and Continuing Calibration Verification

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Initial and Continuing Calibration Verification

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

RunNo.: LB135532

Analyte	Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID: ICV COD	mg/L	49.329	50	99	95-105	01/22/2025
Sample ID: CCV1 COD	mg/L	50.319	50	101	95-105	04/21/2025
Sample ID: CCV2 COD	mg/L	49.329	50	99	95-105	04/21/2025

Initial and Continuing Calibration Verification

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

RunNo.: LB135532

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

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Initial and Continuing Calibration Blank Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Initial and Continuing Calibration Blank Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

RunNo.: LB135532

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: ICB COD	mg/L	< 5.0000	5.0000	U	1.50	10	01/22/2025
Sample ID: CCB1 COD	mg/L	< 5.0000	5.0000	U	1.50	10	04/21/2025
Sample ID: CCB2 COD	mg/L	< 5.0000	5.0000	U	1.50	10	04/21/2025

Initial and Continuing Calibration Blank Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

RunNo.: LB135532

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
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Preparation Blank Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: LB135481BL							
Apparent Color	cu	< 2.5000	2.5000	U	5.0	5.0	04/18/2025
Sample ID: LB135486BL							
TDS	mg/L	< 5.0000	5.0000	U	1.0	10	04/17/2025
Sample ID: LB135492BL							
BOD Soluble	mg/L	< 1.0000	1.0000	U	0.20	2	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: LB135532BL							
COD	mg/L	< 5.0000	5.0000	U	1.5	10.0	04/21/2025
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

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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
COD	mg/L	75-125	184		140		50.0	2	88		04/21/2025

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 2025	Sample ID:	Q1831-01DL
Client ID:	EFFLUENT-COMPOSITMSD	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
COD	mg/L	75-125	186		140		50.0	2	92		04/21/2025

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Matrix Spike Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Duplicate Sample Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Duplicate Sample Summary

Client: Mars Chocolate North America, LLC	SDG No.: Q1831
Project: W.T.P. Final Effluent 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

Duplicate Sample Summary

Client: Mars Chocolate North America, LLC	SDG No.: Q1831
Project: W.T.P. Final Effluent 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
TDS	mg/L	+/-5	4150		4170		1	0.5		04/17/2025
BOD Soluble	mg/L	+/-20	40.4		41.5		1	2.71		04/18/2025
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
COD	mg/L	+/-20	140		142		1	1.42		04/21/2025

Duplicate Sample Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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
Apparent Color	cu	+/-20	800	D	800	D	20	0		04/18/2025
Phosphorus, Total	mg/L	+/-20	3.89	D	3.89	D	5	0		04/18/2025

Duplicate Sample Summary

Client: Mars Chocolate North America, LLC	SDG No.: Q1831
Project: W.T.P. Final Effluent 2025	Sample ID: Q1831-01DL
Client ID: EFFLUENT-COMPOSITMSD	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
COD	mg/L	+/-20	184		186		2	1.08		04/21/2025

Duplicate Sample Summary

Client: Mars Chocolate North America, LLC	SDG No.: Q1831
Project: W.T.P. Final Effluent 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

Duplicate Sample Summary

Client:	Mars Chocolate North America, LLC	SDG No.:	Q1831
Project:	W.T.P. Final Effluent 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

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

Run No.: LB135486

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135486BS							
TDS	mg/L	100	94.0		94	1	90-110	04/17/2025

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

Run No.: LB135492

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135492BS							
BOD Soluble	mg/L	198	207		105	1	84.6-115.4	04/18/2025

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 2025

Run No.: LB135532

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB135532BS							
COD	mg/L	50	47.4		95	1	90-110	04/21/2025

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Laboratory Control Sample Summary

Client: Mars Chocolate North America, LLC

SDG No.: Q1831

Project: W.T.P. Final Effluent 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

Analytical Summary Report

Analysis Method: SM2120 B

Parameter: Color

Run Number: LB135481

Reviewed By: Iwona

Supervisor Review By: jignesh

pH Meter ID: WC pH Meter-1

Reagent/Standard	Lot/Log #
Calibration std, 0 color unit	WP112741
Calibration std, 5 color unit	WP112742
Calibration std, 10 color unit	WP112743
Calibration std, 15 color unit	WP112752
Calibration std, 20 color unit	WP112744
Calibration std, 25 color unit	WP112745
Calibration std, 30 color unit	WP112746
Calibration std, 40 color unit	WP112747
Calibration std, 50 color unit	WP112748
Calibration std, 60 color unit	WP112749
Calibration std, 70 color unit	WP112750
Calibration std, 100 color unit	WP112751

Seq	LabID	ClientID	DL	pH Reading	pH Adjustment	Result (cu)	Anal Date	Anal Time
1	LB135481BL	LB135481BL	1	5.03	N/A	0.00	04/18/2025	09:35
2	Q1831-01	EFFLUENT-COMPOSITE	20	7.93	N/A	40.00	04/18/2025	09:40
3	Q1831-01DUP	EFFLUENT-COMPOSITEDU	20	7.92	N/A	40.00	04/18/2025	09:45

WORKLIST(Hardcopy Internal Chain)

LB135481

WorkList Name : COLOR-041825

WorkList ID : 189021

Department : Wet-Chemistry

Date : 04-18-2025 09:16:56

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1831-01	EFFLUENT-COMPOSITE	Water	Color	Cool 4 deg C	M&MMO1	L31	04/17/2025	SM2120 B

Date/Time 04/18/25 09:25
Raw Sample Received by: 12 (WC)
Raw Sample Relinquished by: HCCOC

Date/Time 04/18/25 10:00
Raw Sample Received by: HCCOC
Raw Sample Relinquished by: 12 (WC)

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

4/18/2025 11:08

Reviewed by : RM

Instrument ID : Konelab

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	
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

98% (50-150)
04/18/2025
RM

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

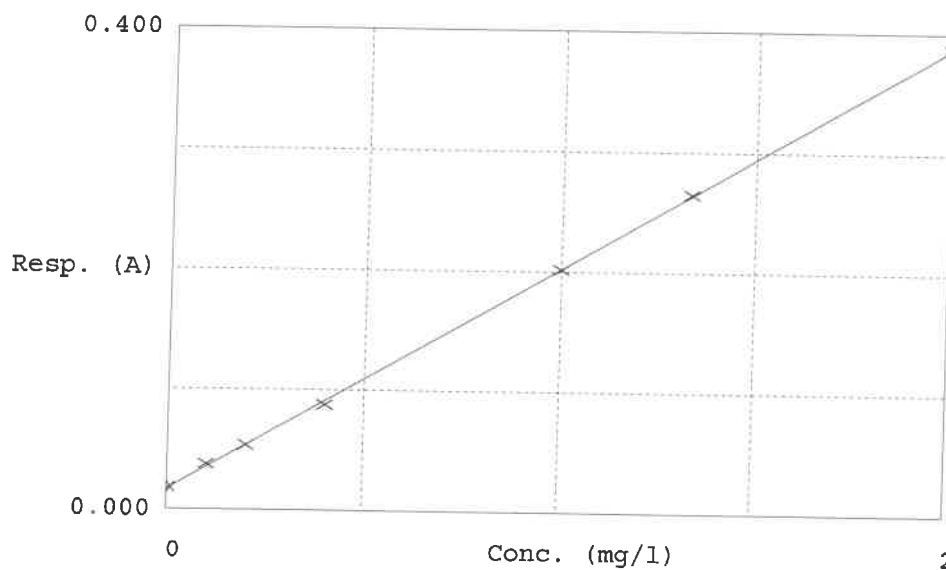
Test Ammonia-N

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	-
2	NH3-2PPM	0.038	0.1114	0.1000	11.4
3	NH3-2PPM	0.054	0.1975	0.2000	-1.3
4	NH3-2PPM	0.088	0.3814	0.4000	-4.7
5	NH3-2PPM	0.202	0.9971	1.0000	-0.3
6	NH3-2PPM	0.265	1.3383	1.3333	2.9
7	NH3-2PPM	0.388	2.0016	2.0000	0.1

04/18/2025
RM

TOTAL Dissolved Solids - SM2540C

Run Number: LB135486

Date: 04/18/2025

SUPERVISOR: Iwona

ANALYST: jignesh

BalanceID: WC SC-5

Filter ID: 17416528

EMPTY DISH				EMPTY DISH				OvenID:	WC OVEN-1	Thermo ID:	WET OVNE#1
TEMP IN:	104 °C	04/17/2025	12:00	TEMP OUT:	103 °C	04/17/2025	13:00				
TEMP1 IN:	104 °C	04/17/2025	13:30	TEMP1 OUT:	104 °C	04/17/2025	14:30	OvenID1:	WC OVEN-1	Thermo ID1:	WET OVEN#1
TEMP2 IN:	103 °C	04/17/2025	17:00	TEMP2 OUT:	104 °C	04/18/2025	08:00	OvenID2:	WC OVEN-2	Thermo ID2:	WET OVEN#2
TEMP3 IN:	180 °C	04/18/2025	08:05	TEMP3 OUT:	182 °C	04/18/2025	10:00	OvenID3:	WC OVEN#2	Thermo ID3:	WET OVEN#2

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 @180(±2) °C (g)	2nd Empty Dish+Sample weight after 1.5hr drying @180(±2) °C (g)	Final Empty Dish+Sample weight after 1.5hr drying @180(±2) °C (g)	Weight (g)	Result mg/L
1	LB135486BL	LB135486BL	856.3961	856.3961	100	856.3961	856.3961	856.3961	0.0000	0
2	LB135486BS	LB135486BS	76.8563	76.8563	100	76.8657	76.8657	76.8657	0.0094	94
3	Q1831-01	EFFLUENT-COMPOSITE	110.2008	110.2008	100	110.6157	110.6157	110.6157	0.4149	4149
4	Q1831-01DUP	EFFLUENT-COMPOSITEDUP	106.1289	106.1289	100	106.5459	106.5459	106.5459	0.4170	4170

A = Sample Volume (ml)
 B = Empty Dish Weight (g)
 C = 2nd Empty Dish + Sample weight after 1.5 hr drying @180(±2) °C(g)
 D = Weight (g)

$$\text{Weight (g)} = C - B$$

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

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

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

BOD Soluble LOG

ANALYST: rubin
 INST ID: DO METER
 LB: LB135492

SUPERVISOR: Iwona

QC BATCH ID: LB135492

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

QC BATCH ID: LB135492

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 °C	Sam Vol. (mL)	D.O.1 Initial	D.O.2 Final	Depletion	BOD Result (mg/L)	Avg Result (mg/L)	Comment
LB135492BL	1	No	6.61	N/A	20.90	300	9.78	9.77	0.01	0.01	0.01	
POLYSEED	1					10	9.69	6.73	2.96	0.59	0.64	
POLYSEED	2					15	9.57	4.53	5.04	0.67		
POLYSEED	3					20	9.50	2.93	6.57	0.66		
GGA	1					6	9.67	4.98	4.69	202.5	207.33	
GGA	2					6	9.63	4.89	4.74	205		
GGA	3					6	9.63	4.70	4.93	214.5		
Q1831-01	1	No	7.97	7.29	20.40	2	9.58	8.14	-	0	40.35	pH Adjusted
Q1831-01	2					10	9.47	7.31	2.16	45.6		
Q1831-01	3					50	9.30	2.81	6.49	35.1		
Q1831-01	4					100	9.11	0.10	-	0		
Q1831-01DUP	1	No	7.97	7.29	20.40	2	9.59	8.54	-	0	41.46	pH Adjusted
Q1831-01DUP	2					10	9.45	7.20	2.25	48.3		
Q1831-01DUP	3					50	9.30	2.89	6.41	34.62		
Q1831-01DUP	4					100	9.10	0.07	-	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.

BOD5 LOG

ANALYST: rubin

SUPERVISOR: Iwona

Analysis Date: 04/18/2025

MANGANOUS SULFATE SOLUTION: W3103

Alkaline Iodide Azide: W3109

Sodium Thiosulfate, 0.025N: W3105

NaOH, 1N: WP111323

IncubatorID: INCUBATOR #3

GuageID: 0511064

Zero DO: WP112724

QC BATCH ID: LB135493

BOD Water: WP112768

Starch: W3149

Sulfuric acid, 1N: WP110386

POLYSEED: WP112771

GGA: WP112769

Chlorine Strips: W3155

pH Strips: W3140

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

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 °C	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 Adjusted
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 Adjusted
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 Adjusted
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 Adjusted
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 = $\frac{D}{A} \times 1000 \times 1000$

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	EFFLUENT-COMPOSITE	Water	TSS	Cool 4 deg C	M&MM01	L31	04/17/2025	SM2540 D
Q1833-02	EFF-WASTE-WATER	Water	TSS	Cool 4 deg C	ARDM01	L31	04/17/2025	SM2540 D
Q1835-01	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: [Signature]

Raw Sample Relinquished by: [Signature]

Date/Time 04/21/25

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

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
Extraction IN Time: 09:00
Extraction 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) In OVEN TEMP1 : 70 °C Dessicator Time In1 : 11:01

1.0000 gram Balance: 1.0004 (0.9950-1.0050) In Time1: 10:20

Bal Check Time: 09:10 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) In OVEN TEMP2 : 70 °C Dessicator Time In2 : 13:01

1.0000 gram Balance: 1.0005 (0.9950-1.0050) In Time2: 12:10

Bal Check Time: 13:40 Out OVEN TEMP2: 70 °C Dessicator Time Out2: 13:37

Out Time2: 13:00

WORKLIST(Hardcopy Internal Chain)

WB 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	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]

Date/Time 04/22/25

Raw Sample Received by: [Signature]

Raw Sample Relinquished by: [Signature]

Analytical Summary Report

Analysis Method: SM5220 D

ANALYST: Iwona

Parameter: COD

SUPERVISOR REVIEW BY: jignesh

Run Number: LB135532

Reagent/Standard	Lot/Log #
COD ICV-LCS std, 50ppm	WP111522
COD calibration std. 100 ppm	WP111519
COD calibration std. 10 ppm	WP111517
COD calibration std. 150 ppm	WP111520
COD calibration std. 50 ppm	WP111518
COD calibration std. 0 ppm	WP111516
COD Digestion Vials Low Level 0-150Mg/L	W3127
COD ICV-LCS std, 50ppm	WP112718
COD CCV std, 50ppm	WP112717

Temp In (C): 148	Date In: 04/21/2025	Time In: 09:45
Temp Out (C): 151	Date Out: 04/21/2025	Time Out: 11:45

Intercept: 0.1675

Slope: 1.0102

Regression: 1

Seq	Lab ID	TrueValue (mg/l)	DF	MATRIX	Reading	Result (mg/l)	%D	Anal Date	Anal Time
1	CAL1	0	1	Water	0.000	-0.166		01/22/2025	13:30
2	CAL2	10	1	Water	11.000	10.723	7.2	01/22/2025	13:30
3	CAL3	50	1	Water	50.000	49.329	-1.3	01/22/2025	13:31
4	CAL4	100	1	Water	101.000	99.814	-0.2	01/22/2025	13:31
5	CAL5	150	1	Water	152.000	150.299	0.2	01/22/2025	13:32

Analytical Summary Report

Analysis Method: SM5220 D

ANALYST: Iwona

Parameter: COD

SUPERVISOR REVIEW BY: jignesh

Run Number: LB135532

Seq	Lab ID	True Value (mg/l)	Initial Weight (g)	Final Vol (ml)	DF	MATRIX	Reading	Result	AnalDate	AnalTime
1	ICV	50	NA	NA	1	Water	50.000	49.329	01/22/2025	13:32
2	ICB		NA	NA	1	Water	0.000	-0.166	01/22/2025	13:33
3	CCV1	50	NA	NA	1	Water	51.000	50.319	04/21/2025	13:55
4	CCB1		NA	NA	1	Water	1.000	0.824	04/21/2025	13:55
5	LB135532BL		NA	NA	1	Water	1.000	0.824	04/21/2025	13:56
6	LB135532BS	50	NA	NA	1	Water	48.000	47.350	04/21/2025	13:56
7	Q1831-01		NA	NA	1	Water	142.000	140.400	04/21/2025	13:57
8	Q1831-01DUP		NA	NA	1	Water	144.000	142.380	04/21/2025	13:57
9	Q1831-01MS	50	NA	NA	2	Water	93.000	91.895	04/21/2025	13:58
10	Q1831-01MSD	50	NA	NA	2	Water	94.000	92.885	04/21/2025	13:58
11	CCV2	50	NA	NA	1	Water	50.000	49.329	04/21/2025	13:59
12	CCB2		NA	NA	1	Water	1.000	0.824	04/21/2025	13:59

WORKLIST(Hardcopy Internal Chain)

WorkList Name : COD-042125

WorkList ID : 189097

Department : Wet-Chemistry

Date : 04-21-2025 09:02:58

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1831-01	EFFLUENT-COMPOSITE	Water	COD	Conc H2SO4 to pH < 2	M&MM01	L31	04/17/2025	SM5220 D

Date/Time 04/21/25 09:10
Raw Sample Received by: 12(-C)
Raw Sample Relinquished by: 28(OC)

Date/Time 04/21/25 10:10
Raw Sample Received by: 28(OC)
Raw Sample Relinquished by: 12(-C)

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

SDG No : N/A

Matrix : WATER

Pipette ID : WC

Balance ID : N/A

Hood ID : HOOD#2

Block ID : WC-DIST-BLOCK-1

Weigh By : N/A

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

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

IT both
 04/17/2025 15:00 150°C
 04/17/2025 16:00 160°C *RM*

Digestion tube ID : M5595

Block Thermometer ID : WC CYANIDE

Filter paper ID : N/A

Prep Technician Signature: *RM*

pH Meter ID : N/A

Supervisor Signature: *12*

Standard 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	<i>RM WWC</i>	<i>RM WWC</i>
	Preparation Group	Analysis Group

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 LWC
 Raw Sample Relinquished by: nllcoy

Date/Time 04/17/2025 15.50
 Raw Sample Received by: RM LWC
 Raw Sample Relinquished by: nllcoy

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: RMW
 Raw Sample Relinquished by: RMW

Date/Time 04/17/2025 15:50
 Raw Sample Received by: RMW
 Raw Sample Relinquished by: RMW

SOP ID : M365.3 & SM4500-P E-18

SDG No : N/A

Start Digest Date: 04/18/2025 Time : 09:45 Temp : 95 °C

Matrix : WATER

End Digest Date: 04/18/2025 Time : 10:50 Temp : 96 °C

Pippete ID : WC

Balance ID : N/A

Hood ID : HOOD#3

Digestion tube ID : M5595

Block Thermometer ID : WC-BLOCK#1

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

Filter paper ID : 400213

Prep Technician Signature: 12

Weigh By : IZ

pH Meter ID : N/A

Supervisor Signature: JP

Standard Name	MLS USED	STD REF. # FROM LOG
LCSW	0.5ML	WP110401
MS/MSD SPIKE SOL.	0.5ML	WP110400
PBW	50ML	W3112
N/A	N/A	N/A
N/A	N/A	N/A

Chemical Used	ML/SAMPLE USED	Lot Number
11N H2SO4	1ML	WP112615
AMMONIUM PERSULFATE	0.4g	W3035
pH Paper 0-14	N/A	W3140
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A

LAB SAMPLE ID	CLIENT SAMPLE ID	Wt(g)/Vol(ml)	Comment
CAL1	CAL1	50.0ML	WP112753
CAL2	CAL2	50.0ML	WP112754
CAL3	CAL3	50.0ML	WP112755
CAL4	CAL4	50.0ML	WP112756
CAL5	CAL5	50.0ML	WP112757
CAL6	CAL6	50.0ML	WP112758
ICV	ICV	50.0ML	WP112758
ICB	ICB	50.0ML	W3112
CCV	CCV	50.0ML	WP112759
CCB	CCB	50.0ML	W3112

Extraction Conformance/Non-Conformance Comments:

N/A

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

04/18/25

Lab Sample ID	Client Sample ID	Initial Vol (ml)	Final Vol (ml)	pH	Sulfide	Oxidizing	Nitrate/ Nitrite	Comment	Prep Pos
PB167651BL	PBW651	50	50	<2	N/A	N/A	N/A	N/A	N/A
PB167651BS	LCS651	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q1831-01DUP	EFFLUENT-COMPOSITEDUP	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q1831-01MS	EFFLUENT-COMPOSITEMS	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q1831-01MSD	EFFLUENT-COMPOSITMSD	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q1831-01	EFFLUENT-COMPOSITE	50	50	<2	N/A	N/A	N/A	N/A	N/A
Q1835-01	EFFLUENT	50	50	<2	N/A	N/A	N/A	N/A	N/A

Instrument ID: NESSLER TUBES

Daily Analysis Runlog For Sequence/QC Batch ID # LB135481

Review By	Iwona	Review On	4/18/2025 10:43:22 AM
Supervise By	jignesh	Supervise On	4/18/2025 10:44:03 AM
SubDirectory	LB135481	Test	Color
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	LB135481BL	LB135481BL	MB	04/18/25 09:35		Iwona	OK
2	Q1831-01	EFFLUENT-COMPOS	SAM	04/18/25 09:40		Iwona	OK
3	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/18/25 09:45		Iwona	OK

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch 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

Instrument ID: KONELAB

Daily Analysis Runlog For Sequence/QC Batch 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

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB135486

Review By	jignesh	Review On	4/18/2025 12:55:19 PM
Supervise By	Iwona	Supervise On	4/18/2025 1:01:03 PM
SubDirectory	LB135486	Test	TDS
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	LB135486BL	LB135486BL	MB	04/17/25 13:30		jignesh	OK
2	LB135486BS	LB135486BS	LCS	04/17/25 13:30		jignesh	OK
3	Q1831-01	EFFLUENT-COMPOS	SAM	04/17/25 13:30		jignesh	OK
4	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/17/25 13:30		jignesh	OK

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch 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

Instrument ID: SPECTROPHOTOMETER-1

Daily Analysis Runlog For Sequence/QC Batch 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

Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QC Batch ID # LB135492

Review By	rubina	Review On	4/24/2025 2:14:53 PM
Supervise By	Iwona	Supervise On	4/24/2025 2:15:57 PM
SubDirectory	LB135492	Test	BOD Soluble
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	LB135492BL	LB135492BL	MB	04/18/25 13:45		rubina	OK
2	LB135492BS	LB135492BS	LCS	04/18/25 13:45		rubina	OK
3	LB135492BSD1	LB135492BSD1	LCS	04/18/25 13:45		rubina	OK
4	LB135492BSD2	LB135492BSD2	LCS	04/18/25 13:45		rubina	OK
5	Q1831-01	EFFLUENT-COMPOS	SAM	04/18/25 13:45		rubina	OK
6	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/18/25 13:45		rubina	OK

Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QC Batch 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

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch 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

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch 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

Instrument ID: SPECTROPHOTOMETER-2

Daily Analysis Runlog For Sequence/QC Batch ID # LB135532

Review By	Iwona	Review On	4/23/2025 4:55:23 PM
Supervise By	jignesh	Supervise On	4/23/2025 4:55:58 PM
SubDirectory	LB135532	Test	COD
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	WP111522,WP111519,WP111517,WP111520,WP111518,WP111516,W3127,WP112718,WP112717		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	01/22/25 13:30		Iwona	OK
2	CAL2	CAL2	CAL	01/22/25 13:30		Iwona	OK
3	CAL3	CAL3	CAL	01/22/25 13:31		Iwona	OK
4	CAL4	CAL4	CAL	01/22/25 13:31		Iwona	OK
5	CAL5	CAL5	CAL	01/22/25 13:32		Iwona	OK
6	ICV	ICV	ICV	01/22/25 13:32		Iwona	OK
7	ICB	ICB	ICB	01/22/25 13:33		Iwona	OK
8	CCV1	CCV1	CCV	04/21/25 13:55		Iwona	OK
9	CCB1	CCB1	CCB	04/21/25 13:55		Iwona	OK
10	LB135532BL	LB135532BL	MB	04/21/25 13:56		Iwona	OK
11	LB135532BS	LB135532BS	LCS	04/21/25 13:56		Iwona	OK
12	Q1831-01	EFFLUENT-COMPOS	SAM	04/21/25 13:57		Iwona	OK
13	Q1831-01DUP	EFFLUENT-COMPOS	DUP	04/21/25 13:57		Iwona	OK
14	Q1831-01MS	EFFLUENT-COMPOS	MS	04/21/25 13:58		Iwona	OK
15	Q1831-01MSD	EFFLUENT-COMPOS	MSD	04/21/25 13:58		Iwona	OK
16	CCV2	CCV2	CCV	04/21/25 13:59		Iwona	OK
17	CCB2	CCB2	CCB	04/21/25 13:59		Iwona	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1831

Test : Ammonia,BOD Soluble,BOD5,COD,Color,Oil and Grease,Phosphorus-Total,TDS,TSS

Prepbatch ID : PB167618,PB167651,

Sequence ID/Qc Batch ID: LB135481,LB135482,LB135486,LB135487,LB135492,LB135493,LB135500,LB135516,LB135532,

Standard ID :

EP2604,WP110335,WP110380,WP110386,WP110400,WP110401,WP110587,WP110588,WP110826,WP110827,WP110828,WP111317,WP111318,WP111323,WP111325,WP111385,WP111415,WP111514,WP111515,WP111516,WP111517,WP111518,WP111519,WP111520,WP111522,WP111660,WP111745,WP112537,WP112611,WP112612,WP112613,WP112614,WP112615,WP112715,WP112716,WP112717,WP112718,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,W2784,W2788,W2817,W2858,W2871,W3009,W3035,W3059,W3074,W3082,W3103,W3105,W3109,W3112,W3113,W3127,W3132,W3133,W3140,W3144,W3149,W3153,W3155,W3169,W3174,W3195,W3196,

Extractions STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3923	Baked Sodium Sulfate	EP2604	04/16/2025	07/01/2025	RUPESHKUMAR SHAH	Extraction_SCALE_2	None	Riteshkumar Patel

(EX-SC-2)

FROM 4000.00000gram of E3551 = Final Quantity: 4000.000 gram

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

(WC)

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1841	Sulfuric Acid, 1N	WP110386	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3	Iwona Zarych
							(WC)	10/24/2024

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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
115	Phosphate Stock Std. (50 ppm)	WP110400	10/24/2024	04/23/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 10/25/2024
<u>FROM</u> 0.11000gram of W2699 + 500.00000ml of W3112 = Final Quantity: 500.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2790	Phosphate Stock std, 50PPM-SS	WP110401	10/24/2024	04/24/2025	Rubina Mughal	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 10/25/2024
<u>FROM</u> 0.11000gram of W2708 + 500.00000ml of W3112 = Final Quantity: 500.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
648	Ammonium molybdate solution	WP110587	11/07/2024	05/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh 11/07/2024
<u>FROM</u> 20.00000gram of W2664 + 480.00000ml of W3112 = Final Quantity: 500.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
588	Potassium Antimonyl Tartrate	WP110588	11/07/2024	05/07/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh 11/07/2024
<u>FROM</u>	1.37150gram of W2306 + 500.00000ml of W3112 = Final Quantity: 500.000 ml							

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2470	1664A SPIKING SOLN	WP110827	11/22/2024	04/23/2025	Jignesh Parikh	WETCHEM_S CALE_8 (WC SC-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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3374	1664A QCS spiking solution-SS	WP110828	11/22/2024	04/23/2025	Jignesh Parikh	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 11/22/2024
<u>FROM</u>	1000.00000ml of E3788 + 4.00000gram of W3009 + 4.00000gram of W3082 = Final Quantity: 1000.000 ml							

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1796	NaOH, 0.1N	WP111317	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_S CALE_7 (WC SC-6)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 4.00000gram of W3113 + 996.00000ml of W3112 = Final Quantity: 1000.000 ml								



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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1571	Sodium hydroxide, 1N	WP111323	01/09/2025	07/09/2025	Rubina Mughal	WETCHEM_S CALE_8 (WC SC-7)	None	Iwona Zarych 01/09/2025
<u>FROM</u> 4.00000gram of W3113 + 96.00000ml of W3112 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

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

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

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

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



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1213	Phenolphthalein indicator	WP111415	01/15/2025	06/04/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 01/16/2025
<u>FROM</u> 0.10000gram of W2650 + 50.00000ml of W2788 + 50.00000ml of W3112 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2456	COD Stock std, 1000ppm	WP111514	01/22/2025	01/29/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WCS-5)	None	Iwona Zarych 01/22/2025
<u>FROM</u>	0.08500gram of W3169 + 100.00000ml of W3112 = Final Quantity: 100.000 ml							

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2457	COD Stock std-SS, 1000ppm	WP111515	01/22/2025	01/29/2025	Niha Farheen Shaik	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 01/22/2025

FROM 0.08500gram of W2784 + 100.00000ml of W3112 = Final Quantity: 100.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
139	COD calibration std. 0 ppm	WP111516	01/22/2025	01/29/2025	Niha Farheen Shaik	None	None	Iwona Zarych 01/22/2025

FROM 10.00000ml of W3112 = Final Quantity: 10.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
138	COD calibration std. 10 ppm	WP111517	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 01/22/2025
<u>FROM</u> 9.90000ml of W3112 + 0.10000ml of WP111514 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
137	COD calibration std. 50 ppm	WP111518	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3 (WC)	Iwona Zarych 01/22/2025
<u>FROM</u> 9.50000ml of W3112 + 0.50000ml of WP111514 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
136	COD calibration std. 100 ppm	WP111519	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 01/22/2025
<u>FROM</u> 9.00000ml of W3112 + 1.00000ml of WP111514 = Final Quantity: 10.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
135	COD calibration std. 150 ppm	WP111520	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 01/22/2025
<u>FROM</u> 8.50000ml of W3112 + 1.50000ml of WP111514 = Final Quantity: 10.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2459	COD ICV-LCS std, 50ppm	WP111522	01/22/2025	01/29/2025	Niha Farheen Shaik	None	WETCHEM_PIPETTE_3	Iwona Zarych 01/22/2025
<u>FROM</u> 9.50000ml of W3112 + 0.50000ml of WP111515 = Final Quantity: 10.000 ml								

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
289	Sodium Hypochlorite for Ammonia	WP111745	02/03/2025	07/31/2025	Rubina Mughal	None	None	Iwona Zarych
								02/03/2025

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

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

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



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

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1322	Ammonia Intermediate Std, 50PPM	WP112613	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/07/2025
FROM 95.00000ml of W3112 + 5.00000ml of WP112611 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
1639	Ammonia Intermediate Std-Second source, 50PPM	WP112614	04/07/2025	05/07/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Iwona Zarych 04/07/2025
FROM 95.00000ml of W3112 + 5.00000ml of WP112612 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2456	COD Stock std, 1000ppm	WP112715	04/16/2025	04/23/2025	Iwona Zarych	None	WETCHEM_FIPETTE_3	Jignesh Parikh
							(WC)	04/16/2025

FROM 0.08500gram of W2784 + 100.00000ml of W3112 = Final Quantity: 100.000 ml



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2457	COD Stock std-SS, 1000ppm	WP112716	04/16/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/16/2025
<u>FROM</u> 0.08500gram of W3169 + 100.00000ml of W3112 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2458	COD CCV std, 50ppm	WP112717	04/16/2025	04/23/2025	Iwona Zarych	None	WETCHEM_PIPETTE_3 (WC)	Jignesh Parikh 04/16/2025
<u>FROM</u> 9.50000ml of W3112 + 0.50000ml of WP112715 = Final Quantity: 10.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
2459	COD ICV-LCS std, 50ppm	WP112718	04/16/2025	04/23/2025	Iwona Zarych	None	WETCHEM_FIPETTE_3 (WC)	Jignesh Parikh 04/16/2025

FROM 9.50000ml of W3112 + 0.50000ml of WP112716 = Final Quantity: 10.000 ml

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
121	calibration std. phosphate 0.05 ppm	WP112754	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 99.90000ml of W3112 + 0.10000ml of WP110400 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
120	calibration std. phosphate 0.1 ppm	WP112755	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 99.80000ml of W3112 + 0.20000ml of WP110400 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
119	calibration std. phosphate 0.3 ppm	WP112756	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 99.40000ml of W3112 + 0.60000ml of WP110400 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
118	calibration std. phosphate 0.5 ppm	WP112757	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 99.00000ml of W3112 + 1.00000ml of WP110400 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
117	calibration std. phosphate 1 ppm	WP112758	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 98.00000ml of W3112 + 2.00000ml of WP110400 = Final Quantity: 100.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
124	phosphate CCV std.	WP112759	04/18/2025	04/23/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 99.00000ml of W3112 + 1.00000ml of WP110400 = Final Quantity: 100.000 ml								



<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
590	Ascorbic Acid	WP112761	04/18/2025	04/19/2025	Iwona Zarych	WETCHEM_SCALE_5 (WCS-5)	None	Jignesh Parikh
FROM 0.52800gram of W3074 + 30.00000ml of W3112 = Final Quantity: 30.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
658	Combined reagent	WP112762	04/18/2025	04/19/2025	Iwona Zarych	None	Glass Pipette-A	Jignesh Parikh 04/18/2025
<u>FROM</u> 15.00000ml of WP110587 + 30.00000ml of WP112761 + 5.00000ml of WP110588 + 50.00000ml of WP110380 = Final Quantity: 100.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
275	Ammonia Calibration Std. (2 ppm)	WP112763	04/18/2025	04/19/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 48.00000ml of W3112 + 2.00000ml of WP112613 = Final Quantity: 50.000 ml								

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
285	Ammonia CCV Std. (1 ppm)	WP112764	04/18/2025	04/19/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025
FROM 49.00000ml of W3112 + 1.00000ml of WP112613 = Final Quantity: 50.000 ml								

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
286	Ammonia ICV Std. (1 ppm)	WP112765	04/18/2025	04/19/2025	Rubina Mughal	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025

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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3805	Phosphate ICV-LCS Std	WP112766	04/18/2025	04/24/2025	Iwona Zarych	None	WETCHEM_F IPETTE_3 (WC)	Jignesh Parikh 04/18/2025

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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
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

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
129	Glutamic acid-glucose mix for BOD	WP112769	04/18/2025	04/19/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-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

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
128	polyseed seed control	WP112771	04/18/2025	04/19/2025	Rubina Mughal	None	None	Iwona Zarych
04/21/2025								
<u>FROM</u>	1.00000PILLOW of W3059 + 300.00000ml of WP112768 = Final Quantity: 300.000 ml							

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

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

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	201089	06/30/2025	12/23/2020 / apatel	12/16/2020 / apatel	W2784

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

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
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 / lwona	02/27/2023 / lwona	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 / lwona	06/06/2023 / lwona	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 / lwona	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 / lwona	01/16/2024 / lwona	W3074

CHEMICAL RECEIPT LOG BOOK

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 / lwona	02/26/2024 / lwona	W3082

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 / lwona	04/22/2024 / lwona	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,4LIT RE	4403S13	09/30/2025	04/22/2024 / lwona	04/22/2024 / lwona	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 / lwona	05/23/2024 / lwona	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 / lwona	07/03/2024 / lwona	W3112

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Environmental Express LTD	B1010 / COD Digestion Vials Low Level 0-150Mg/L	13821	10/31/2027	03/21/2025 / Niha	07/25/2024 / Iwona	W3127

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

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

CHEMICAL RECEIPT LOG BOOK

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,P K100,CS12	14-860	12/02/2029	12/02/2024 / lwona	12/02/2024 / lwona	W3155

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	P243-500 / Potassium Hydrogen Phthalate, 500 gms	24H0956262	04/28/2026	01/03/2025 / lwona	01/03/2025 / lwona	W3169

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	J0660-1 / AMMONIUM CHLORIDE, ACS, 500G	24L0356561	08/31/2027	03/19/2025 / lwona	03/19/2025 / lwona	W3195

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



CERTIFICATE OF ANALYSIS

Printed: 12/8/2017

Page 1 of 1

Customer No : 30017
Order Number : 3008126
Catalog : A1561

Customer : PCI SCIENTIFIC
Delivery # : 58495347
Potassium Antimony Tartrate Trihydrate,
Reagent, ACS

Customer PO : 6035343
Lot : 2GH0057

Chemical Formula : $C_8H_4K_2O_{12}Sb_2 \cdot 3H_2O$
CAS# : 28300-74-5

Formula Weight : 667.87

W2306
received
12/11/17
AB

Test

Limit
Min. Max.

Results

ASSAY ($C_8H_4K_2O_{12}Sb_2 \cdot 3HO$)	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:

Subject to Vadodara Jurisdiction



CHAMPA PURIE-CHEM INDUSTRIES

ISO 9001 : 2015 CERTIFIED COMPANY

Importers Exporters Manufacturers & Marketing of Fine Chemicals & Pharmaceuticals

262-263, G.I.D.C. Estate,
Makarpura,
Vadodara - 390 010.
Gujarat - INDIA.

Phone : (F) +91-265-2633314 / 2643723
Fax : (F) +91-265-2638038
E-mail : info@cpclndia.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. Clarity 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 <u>J. A. PATHAK</u>		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

James Ethier
Jamie Ethier
Vice President Global Quality

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

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 ($\text{CH}_3(\text{CH}_2)_{14}\text{CH}_3$) (by GC)	$\geq 99.0 \%$	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

W2858 Received by AP on 07/07/2021

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

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

Retest date: January 7, 2026

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W2666 Recived on 02/10/2020 by AP

Product No.: 87683

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

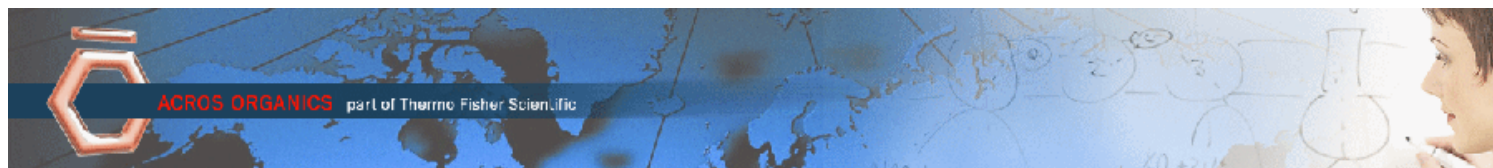
Lot No.: W12F013

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

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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)

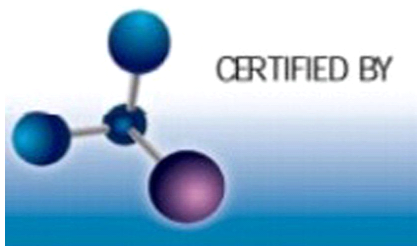
Certificate of Analysis

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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 (SO ₄)	=<300 ppm	=<200 ppm
Ammonium (NH ₄)	=<200 ppm	=<200 ppm
Arsenic oxide (As ₂ O ₃)	=<1 ppm	=<1 ppm



A handwritten signature in black ink, which appears to read "L. Van den Broek".

L. Van den Broek, QA Manager

Issued: 24 January 2020

Acros Organics

ENA23, zone 1, nr 1350, Janssen Pharmaceuticaaan 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

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: QIQXTHQIDYTRH-UHFFFAOYSA-N
SMILES: CCCCCCCCCCCCCCCC(O)=O
Synonym: stearic acid acide stearique hydrofol acid 1855 hydrofol acid 1655 industrene 5016
stearic acid, ion(1-) (8Cl) glycon TP glycon DP acidum stearinicum 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 **W2788 Received on 12/30/2020 by AP**
Recommended Retest Date: Five Years from Date of Manufacture

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
Titration 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

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



W3009
rec. 2/27/2023 12

Product Name:

Hexadecane - ReagentPlus®, 99%

Certificate of Analysis

Product Number:

H6703

Batch Number:

SHBP8192

 $\text{CH}_3(\text{CH}_2)_{14}\text{CH}_3$

Brand:

SIAL

CAS Number:

544-76-3

MDL Number:

MFCD00008998

Formula:

C16H34

Formula Weight:

226.44 g/mol

Quality Release Date:

04 AUG 2022

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



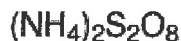
W 3035
rec. 6/6/23 12

Product Name:

Certificate of Analysis

Ammonium persulfate - ACS reagent, $\geq 98.0\%$

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



Test	Specification	Result
Appearance (Color)	White to Off White	White
Appearance (Form)	Powder or Crystals or Granules or Chunks	Crystals
ICP Major Analysis	Confirmed	Confirmed
Confirms Sulfur Component		
Titration by KMNO ₄	$\geq 98.0 \%$	100.0 %
Residue on ignition (Ash)	$\leq 0.05 \%$	< 0.05 %
Insoluble Matter	$\leq 0.005 \%$	0.002 %
c = 10 %; In Water		
Chloride and Chlorate (as Cl)	$\leq 0.001 \%$	< 0.001 %
Iron (Fe)	$\leq 0.001 \%$	< 0.001 %
Heavy Metal	$\leq 0.005 \%$	< 0.001 %
as Lead		
Manganese (Mn)	$\leq 0.5 \text{ ppm}$	< 0.1 ppm
Titrateable Acid (meq/g)	≤ 0.04	< 0.04
Meets ACS Requirements	Current ACS Specification	Conforms


Larry Coers, Director
Quality Control
Milwaukee, WI US

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CERTIFICATE OF ANALYSIS

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

W 3059
REC. 10/18/23 12

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 4.00×10^9 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: _____

Quality Control Department

Date: 05/15/2023

POLYSEED.Ref.1.19

Revised Jan 23

InterLab®
International Laboratory Supply



Certificate Of Analysis



Date of Release: 11/14/2019

W2700 Recived by AP on 3/11/2020

Name: **Sodium Borate, Decahydrate**
ACS

Item No: **SX0355 All Sizes**

Lot / Batch No: **2019111354**

Country of Origin: **India**

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

Joe Schoellkopf

Quality Control Manager

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

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

EMD Millipore Corporation

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

Form number: 00005624CA, Rev. 2.0



Certificate of Analysis

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

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

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

Catalog Number	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

Jerisa 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.

Certificate of Analysis

ThermoFisher
SCIENTIFIC

Certificate of Analysis

1 Reagent Lane

Fair Lawn, NJ 07410

201.796.7100 tel

201.796.1329 fax

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

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

Catalog Number	P243	Quality Test / Release Date	06/19/2020
Lot Number	201089		
Description	POTASSIUM HYDROGEN PHTHALATE, ACIDIMETRIC STANDARD, A.C.S.		
Country of Origin	Spain	Suggested Retest Date	Jun/2025
Chemical Origin	Organic - non animal		
BSE/TSE Comment	No animal products are used as starting raw material ingredients, or used in processing, including lubricants, processing aids, or any other material that might migrate to the finished product.		

N/A			
Result Name	Units	Specifications	Test Value
APPEARANCE		REPORT	WHITE CRYSTALS
ASSAY POTASSIUM HYDROGEN PHTHALATE	%	Inclusive Between 99.95 - 100.05	100.03
CHLORINE COMPOUNDS	%	<= 0.003	<0.003
HEAVY METALS (as Pb)	ppm	<= 5	<5
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
INSOLUBLE MATTER	%	<= 0.005	<0.005
IRON (Fe)	ppm	<= 5	<5
PH OF 0.05M SOLUTION		Inclusive Between 4.00 - 4.02	4.00
SODIUM (Na)	%	<= 0.005	<0.005
SULFUR COMPOUNDS	%	<= 0.002	<0.002%
TRACEABLE TO NIST	SOD CARBONATE	= LOT 351a	351a
TRACEABLE TO NIST KHP STD	POT. ACID PHTHALATE	= LOT 84L	84L



Julian Burton - Quality Control Manager – Fair Lawn

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

*Based on suggested storage condition.



**PRODUCTOS
QUÍMICOS
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 ₂ SO ₄
SPECIFICATION NUMBER :	6399	RELEASE DATE:	ABR/21/2023
LOT NUMBER :	313201		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na ₂ SO 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 foreign 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 R3 on 7/24/23 E 3551

RC-02-01, Ed. 3

Acetone

BAKER RESI-ANALYZED® Reagent
For Organic Residue Analysis

Avantor™



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) ₂ CO) (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
Titration Acid (μeq/g)	≤ 0.3	0.1
Titration Base (μeq/g)	≤ 0.6	< 0.1
Water (H ₂ O)	≤ 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

 **avantor**™



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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

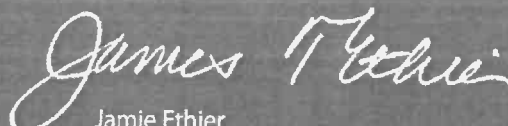


Material No.: 9673-33
Batch No.: 23D2462010

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality

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

avantor™



M 6041-4b
MS

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

Certificate of Analysis

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

>>> Continued on page 2 >>>

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

 **avantor™**

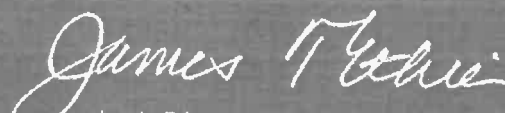


Material No.: 9673-33
Batch No.: 23D2462010

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

For Laboratory, Research, or Manufacturing Use

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


Jamie Ethier
Vice President Global Quality



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.



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

avantor™



R → 16/13/24
Met dig

M 6121

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

Certificate of Analysis

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

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

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

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

For Laboratory, Research or Manufacturing Use

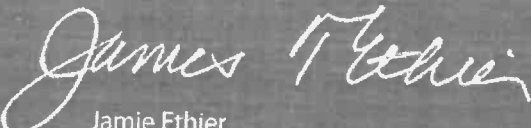
Product Information (not specifications):

Appearance (clear, fuming liquid)

Meets ACS Specifications

Country of Origin: US

Packaging Site: Phillipsburg Mfg Ctr & DC


Jamie Ethier

Vice President Global Quality

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

Avantor Performance Materials, LLC

100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700



CHAMPA PURIE-CHEM INDUSTRIES

ISO 9001 : 2015 CERTIFIED COMPANY

Importers Exporters Manufacturers & Marketing of Fine Chemicals & Pharmaceuticals

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

Makarpura,

Vadodara - 390 010.

Gujarat - INDIA.

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

Fax : (F) +91-265-2638036

E-mail : info@cpcindia.com

Web : www.cpcindia.com

W2708 Received on 05/05/20 by AP

CERTIFICATE OF ANALYSIS

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

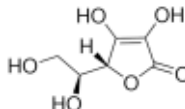
W3074 Rec. on 01/16/24 by IZ

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)	Conforms to Requirements	Powder
Powder, Crystals, Crystalline Powder, Granules and/or Chunks		
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

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



Certificate of analysis

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.

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ThermoFisher
S C I E N T I F I C



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."

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

Certificate of Analysis

Sodium Thiosulfate, 0.0250 Normal (N/40)

Lot Number: 4403S13

Product Number: 7900

Manufacture Date: MAR 29, 2024

Expiration Date: SEP 2025

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

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

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

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

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

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

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



Paul Brandon (03/29/2024)

Production Manager

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

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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

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Certificate of Analysis



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

Additional Information

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

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

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.

W3127 rec. 7/25/24 12
W3128 exp. 10/31/27
W3129

ENVIRONMENTAL EXPRESS
Charleston, SC USA
www.envexp.com
(800) 343-5319

October 27, 2022

CERTIFICATE OF ANALYSIS

Environmental Express certifies that the following COD Reagent Vials have been rigorously checked against NIST Traceable standards and also compared for conformance to another major brand name product. Environmental Express COD Vial performance is evaluated using bench top spectrophotometers. Acceptance guidelines are strict and ensure dependable, quality results.

Environmental Express further certifies that the COD products listed below are recognized by the United States Environmental Protection Agency (USEPA) as equivalent to an approved Water Pollutant Testing Procedure for COD (Federal Register, Vol. 45, No. 78, Monday, April 20th, 1980, page 26811) and as such can be used for National Pollution Discharge Elimination System (NPDES) reporting.

<u>Cat. No.</u>	<u>Lot No.</u>	<u>Product Description</u>
B1010	13821	COD Reagent Vials, 0 - 150 ppm

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

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

Certificate of Analysis Results Entered By:

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

Certificate of Analysis Results Approved By:

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

Spectrum Chemical Mfg Corp
755 Jersey Avenue
New Brunswick 08901 NJ



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

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

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



An ISO 9001 Certified Company

Loveland, CO 80539

(970) 669-3050

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



Certificate of Analysis

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

Lot Number: 4408P62

Product Number: 8000

Manufacture Date: AUG 28, 2024

Expiration Date: AUG 2026

This product is Mercury-free.

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

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

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

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

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

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

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

Paul Brandon (08/28/2024)
Production Manager

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



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

WJ3153
SB
0844e. 11/25/2024
SB

Certificate of Analysis

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)	$\geq 99.5 \%$	99.7 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	98 %
Color (APHA)	≤ 10	5
Residue after Evaporation	≤ 1.0 ppm	0.1 ppm
Substances Darkened by H ₂ SO ₄	Passes Test	Passes Test
Water (by KF, coulometric)	$\leq 0.05 \%$	< 0.01 %

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

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

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



Material	BDH9260-500G
Material Description	BDH POTASS HYDRGN PHTHLTE 500G
Grade	ACS GRADE
Batch	24H0956262
Reassay Date	04/28/2026
CAS Number	877-24-7
Molecular Formula	HOCC6H4COOK
Molecular Mass	204.22
Date of Manufacture	04/29/2023
Storage	Room Temperature

Characteristics	Specifications	Measured Values
Appearance	White crystals.	White crystals.
Assay (dried basis)	99.95 - 100.05 %	99.98 %
Chlorine Compounds	<= 0.003 %	<0.003 %
Heavy Metals (as Pb)	<= 5 ppm	<5 ppm
Insoluble Matter	<= 0.005 %	0.003 %
Iron	<= 5 ppm	<5 ppm
pH (0.05M, Water) @25C	4.00 - 4.02	4.00
Sodium	<= 0.005 %	<0.005 %
Sulfur Compounds	<= 0.002 %	<0.002 %

Internal ID #: 322

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

Certificate of Analysis

Sodium Hypochlorite Solution, 5% available Chlorine

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

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

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

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

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

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

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

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

Jose Pena (01/17/2025)
Operations Manager

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Certificate of Analysis



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

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

Internal ID #: 710

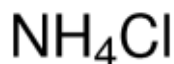
Signature	Additional Information
We certify that this batch conforms to the specifications listed above. This document has been electronically produced and is valid without a signature. Leona Edwardson, Quality Control Sr. Manager - Solon VWR Chemicals, LLC. 28600 Fountain Parkway, Solon OH 44139 USA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

W3196 Received on 03/19/2025 by IZ

Certificate of Analysis

Product Name:

Ammonium chloride - ACS reagent, ≥99.5%



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

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



Larry Coers, Director

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



Certificate of Analysis

Product Number: 213330
Batch Number: MKCV1009

Quality Control
Milwaukee, WI US

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





SHIPPING DOCUMENTS

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(908) 789-8900 Fax (908) 789-8922
www.chemtech.net

Chemtech Project Number WTP Final Effluent 2024 **Q1831**
Bottle Order ID B2410055

CLIENT INFORMATION			PROJECT INFORMATION			BILLING INFORMATION											
Report to be sent to			PROJECT NAME: Waste Treatment Plant			BILL TO: PO#											
COMPANY: Mars Chocolate North America, LLC			PROJECT #: LOCATION:			ADDRESS:											
ADDRESS: 700 High Street			Project Manager: Jeff Kram			CITY: STATE: ZIP:											
CITY: Hackettstown STATE: NJ ZIP: 07840			EMAIL Address: jeffery.kram@effem.com			ATTENTION:											
ATTENTION: Anthony Fosco EMAIL: anthony.fosco@effem.com			Telephone # 908-736-6742 FAX: 908-850-7923			PHONE:											
PHONE: 908-850-2446 FAX: 908-850-2734																	
DATA TURNAROUND INFORMATION			DATA DELIVERABLE INFORMATION			ANALYSIS											
FAX: <u>5</u> DAYS*			☐ RESEULTS ONLY ☐ USEPA CLP ☐ RESULTS * QC ☐ New York State ASP "B" ☒ New Jersey REDUCED ☐ New York State ASP "A" ☒ New Jersey CLP ☐ Other _____ ☐ EDD FORMAT None			BOD 5 TSS, TDS Oil & Grease Ammonia-N Total Phosphorus Total, COD BOD Soluble Color											
HARD COPY: _____ DAYS*						1 2 3 4 5 6 7 8 9											
EDD _____ DAYS*																	
* TO BE APPROVED BY CHEMTECH						PRESERVATIVES											
STANDARD TURNAROUND TIME IS 10 BUSINESS DAYS						COMMENTS											
CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	E TYPE	SAMPLE COLLECTION	# of Bottles	E	E	C	C	C	E	E	C		A-HCl	HNO3	B-
			COMP	DATE	TIME		1	2	3	4	5	6	7	8	9	C-H2SO4 E-ICE	D-NaOH F-OTHER
1	Effluent Composite	Waste Water	X	4.17.25	5:00	10	X	X		X	X	X	X				
2	Effluent Grab	Waste Water	X	4.17.25	5:00	3			X								

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

RELINQUISHED BY SAMPLER	DATE/TIME	RECEIVED BY	Conditions of bottles or collars at receipt: → COMPLIANT → NON COMPLIANT → COOLER TEMP <u>3.7°C</u>
1. Joe Pato	4/17/25	[Signature]	MeOH extraction requires an additional 4oz. Jar for percent solid
RELINQUISHED BY	DATE/TIME	RECEIVED BY	Comments:
2.			Temp 3.7°C Adjustment factor +1 IR Gun #1
RELINQUISHED BY	DATE/TIME	RECEIVED FOR LAB BY	SHIPPED VIA:
3. [Signature]	4-17-25		

19713/2004

WHITE - CHEMTECH COPY FOR RETURN TO CLIENT

YELLOW - CHEMTECH COPY

PINK - SAMPLER COPY

#

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