

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: Q1100	OrderDate: 1/15/2025 2:40:00 PM
Client: Aramark Uniforms	Project: Monthly 2025
Contact: Jose Liceaga	Location: M11

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q1100-01	GRAB	WATER			01/15/25 14:10			01/15/25
			TPH	1664A			01/16/25 09:40	
Q1100-02	COMP	WATER			01/15/25 14:13			01/15/25
			BOD5	SM5210 B			01/16/25 16:50	
			TSS	SM2540 D			01/16/25 09:30	



SAMPLE DATA

Report of Analysis

Client:	Aramark Uniforms	Date Collected:	01/15/25 14:10
Project:	Monthly 2025	Date Received:	01/15/25
Client Sample ID:	GRAB	SDG No.:	Q1100
Lab Sample ID:	Q1100-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TPH	125		1	0.40	5.00	mg/L		01/16/25 09:40	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

Report of Analysis

Client:	Aramark Uniforms	Date Collected:	01/15/25 14:13
Project:	Monthly 2025	Date Received:	01/15/25
Client Sample ID:	COMP	SDG No.:	Q1100
Lab Sample ID:	Q1100-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
BOD5	706		1	0.17	2.00	mg/L		01/16/25 16:50	SM 5210 B-16
TSS	224		1	1.00	4.00	mg/L		01/16/25 09:30	SM 2540 D-15

Comments: _____

U = Not Detected
 LOQ = Limit of Quantitation
 MDL = Method Detection Limit
 LOD = Limit of Detection
 D = Dilution
 Q = indicates LCS control criteria did not meet requirements
 H = Sample Analysis Out Of Hold Time

J = Estimated Value
 B = Analyte Found in Associated Method Blank
 * = indicates the duplicate analysis is not within control limits.
 E = Indicates the reported value is estimated because of the presence of interference.
 OR = Over Range
 N =Spiked sample recovery not within control limits



QC RESULT SUMMARY

Preparation Blank Summary

Client: Aramark Uniforms

SDG No.: Q1100

Project: Monthly 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: BOD5	LB134301BL mg/L	< 0.2000	0.2000	U	0.17	2.0	01/16/2025
Sample ID: TPH	LB134303BL mg/L	< 2.5000	2.5000	U	0.4	5.0	01/16/2025
Sample ID: TSS	LB134304BL mg/L	< 2.0000	2.0000	U	1	4	01/16/2025

Duplicate Sample Summary

Client: Aramark Uniforms Project: Monthly 2025 Client ID: LB134303BSD	SDG No.: Q1100 Sample ID: LB134303BS Percent Solids for Spike Sample: 0
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
TPH	mg/L	+/-18	16.7		17.7		1	5.81		01/16/2025

Duplicate Sample Summary

Client: Aramark Uniforms Project: Monthly 2025 Client ID: 001-WILLETS-PT-BLVD(DEC)DUP	SDG No.: Q1100 Sample ID: Q1083-01 Percent Solids for Spike Sample: 0
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
TSS	mg/L	+/-5	33.8		34.0		1	0.59		01/16/2025

Duplicate Sample Summary

Client: Aramark Uniforms Project: Monthly 2025 Client ID: COMPDUP	SDG No.: Q1100 Sample ID: Q1100-02 Percent Solids for Spike Sample: 0
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Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
BOD5	mg/L	+/-20	706		700		1	0.87		01/16/2025

Laboratory Control Sample Summary

Client: Aramark Uniforms

SDG No.: Q1100

Project: Monthly 2025

Run No.: LB134301

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134301BS							
BOD5	mg/L	198	193		97	1	84.6-115.4	01/16/2025

Laboratory Control Sample Summary

Client: Aramark Uniforms

SDG No.: Q1100

Project: Monthly 2025

Run No.: LB134303

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134303BS							
TPH	mg/L	20.0	16.7		84	1	78-114	01/16/2025

Laboratory Control Sample Summary

Client: Aramark Uniforms

SDG No.: Q1100

Project: Monthly 2025

Run No.: LB134303

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134303BSD							
TPH	mg/L	20.0	17.7		88	1	78-114	01/16/2025

Laboratory Control Sample Summary

Client: Aramark Uniforms

SDG No.: Q1100

Project: Monthly 2025

Run No.: LB134304

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB134304BS							
TSS	mg/L	550	510		93	1	90-110	01/16/2025



RAW DATA

BOD5 LOG

ANALYST: Niha

SUPERVISOR: Iwona

Analysis Date: 01/16/2025

MANGANOUS SULFATE SOLUTION: W3103

Alkaline Iodide Azide: W3109

Sodium Thiosulfate, 0.025N: W3105

NaOH, 1N: WP111323

IncubatorID: INCUBATOR #3

GuageID: 0511064

Zero DO: WP111324

QC BATCH ID: LB134301

BOD Water: WP111426

Starch: W3149

Sulfuric acid, 1N: WP110386

POLYSEED: WP111428

GGA: WP111427

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	9.8	9.8	9.8
WINKLER 2	WINKLER 2	2	300	9.9	19.7	9.8	9.8

Meter Calibration1: 9.85

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

Barometric Pressure1: 760 mmHg

DO Meter BOD fluid reading for winkler comparison: 9.94

After Incubation

Meter Calibration2: 9.93

Zero DO Reading2: 0.13 mg/L (<=0.2 Criteria)

Barometric Pressure2: 765 mmHg

QC BATCH ID: LB134301

INCUBATOR TEMP IN(C): 19.8

INCUBATOR TEMP OUT(C): 20.3

TIME IN: 16:50

TIME OUT: 14:00

DATE IN: 01/16/2025

DATE OUT: 01/21/2025

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
LB134301BL	1	No	6.57	N/A	20.70	300	9.93	9.92	0.01	0.01	0.01	
POLYSEED	1					10	9.91	6.97	2.94	0.59	0.74	
POLYSEED	2					15	9.87	4.06	5.81	0.77		
POLYSEED	3					20	9.84	1.16	8.68	0.87		
GGA	1					6	9.91	5.80	4.11	168.5	192.83	
GGA	2					6	9.90	5.70	4.2	173		
GGA	3					6	9.90	4.42	5.48	237		
Q1100-02	1	No	6.75	N/A	20.20	0.5	9.90	7.80	2.1	816	706.25	
Q1100-02	2					1	9.86	6.20	3.66	876		
Q1100-02	3					2	9.82	4.86	4.96	633		
Q1100-02	4					3	9.74	4.00	5.74	500		
Q1100-02DUP	1	No	6.75	N/A	20.20	0.5	9.90	7.82	2.08	804	700.13	
Q1100-02DUP	2					1	9.84	6.21	3.63	867		
Q1100-02DUP	3					2	9.81	4.88	4.93	628.5		
Q1100-02DUP	4					3	9.74	3.99	5.75	501		
Q1101-01	1	No	7.77	7.09	20.90	0.5	9.89	1.01	8.88	4884	4884	pH Adjusted
Q1101-01	2					1	9.84	0.10	-	0		
Q1101-01	3					2	9.80	0.08	-	0		
Q1101-01	4					5	9.64	0.06	-	0		
Q1101-01	5					10	9.34	0.02	-	0		
Q1101-05	1	No	5.20	6.97	20.60	0.01	9.72	7.83	-	0	9096	pH Adjusted
Q1101-05	2					0.05	9.70	6.79	2.91	13020		
Q1101-05	3					0.1	9.67	5.73	3.94	9600		
Q1101-05	4					0.5	9.64	1.12	8.52	4668		
Q1101-05	5					1	9.53	0.08	-	0		
Q1111-01	1	No	6.32	6.56	20.00	0.05	9.75	8.57	-	0	5186	pH Adjusted
Q1111-01	2					0.1	9.65	6.87	2.78	6120		
Q1111-01	3					0.2	9.62	5.14	4.48	5610		
Q1111-01	4					0.5	9.44	2.32	7.12	3828		
Q1111-01	5					1	9.31	0.06	-	0		
Q1113-01	1	No	7.07	N/A	20.00	5	9.73	8.37	-	0	17.81	
Q1113-01	2					20	9.71	7.18	2.53	26.85		
Q1113-01	3					50	9.70	6.60	3.1	14.16		
Q1113-01	4					150	9.68	2.73	6.95	12.42		
Q1113-03	1	No	6.99	N/A	20.00	5	9.86	8.11	-	0	48.31	
Q1113-03	2					20	9.80	5.31	4.49	56.25		
Q1113-03	3					50	9.78	2.31	7.47	40.38		
Q1113-03	4					150	9.76	0.93	-	0		
Q1113-05	1	No	6.87	N/A	20.00	5	9.69	8.75	-	0	9.02	
Q1113-05	2					20	9.62	7.90	-	0		
Q1113-05	3					50	9.59	6.99	2.6	11.16		

Q1113-05	4					150	9.43	5.25	4.18	6.88	
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Reviewed By:Iwona
 On:1/21/2025 4:07:50
 PM
 Inst Id :DO METER
 LB :LB134301

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.

WORKLIST(Hardcopy Internal Chain)

WorkList Name : BOD5-1-15

WorkList ID : 186921

Department : Wet-Chemistry

Date : 01-15-2025 16:55:03

66134301

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1100-02	COMP	Water	BOD5	Cool 4 deg C	ARAM01	M11	01/15/2025	SM5210 B
Q1101-01	EFFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	M11	01/15/2025	SM5210 B
Q1101-05	INFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	M11	01/15/2025	SM5210 B
Q1111-01	DRAIN WATER TANK-1	Water	BOD5	Cool 4 deg C	MAJO01	M11	01/16/2025	SM5210 B

Date/Time 01/16/2025 13:50
 Raw Sample Received by: RM (unc)
 Raw Sample Relinquished by: RM (unc)

Date/Time 01/16/2025 17:00
 Raw Sample Received by: RM (unc)
 Raw Sample Relinquished by: RM (unc)

WORKLIST(Hardcopy Internal Chain)

6134301

WorkList Name : bod5-1-16

WorkList ID : 186960

Department : Wet-Chemistry

Date : 01-16-2025 15:04:12

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1113-01	DSN002	Water	BOD5	Cool 4 deg C	PSEG04	M11	01/16/2025	SM5210 B
Q1113-03	DSN001	Water	BOD5	Cool 4 deg C	PSEG04	M11	01/16/2025	SM5210 B
Q1113-05	DSN003	Water	BOD5	Cool 4 deg C	PSEG04	M11	01/16/2025	SM5210 B

Date/Time 01/16/2025 16:00
 Raw Sample Received by: RIM CWL
 Raw Sample Relinquished by: JH WEL

Date/Time 01/16/2025 16:00
 Raw Sample Received by: JH WEL
 Raw Sample Relinquished by: RIM CWL

Extraction and Analytical Summary Report

Analysis Method: 1664A
Test: TPH
Run Number: LB134303
Analysis Date: 01/16/2025
BalanceID: WC SC-6
OvenID: EXT OVEN-3

ANALYST: jignesh
REVIEWED BY: Iwona
Extraction Date: 01/16/2025
Extraction IN Time: 08:10
Extraction OUT Time: 09:00
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	LB134303BL	LB134303BL	WATER	1.3	1000	100	2.8563	2.8563	3.01	2.8564	2.8564	0.0001	0.1
2	LB134303BS	LB134303BS	WATER	1.3	1000	100	3.0144	3.0144	3.02	3.0311	3.0311	0.0167	16.7
3	LB134303BSD	LB134303BSD	WATER	1.3	1000	100	2.8755	2.8755	3.03	2.8932	2.8932	0.0177	17.7
4	Q1049-01	FRAC-TANK-257952	WATER	1.6	1000	100	3.0246	3.0246	3.04	3.0323	3.0323	0.0077	7.7
5	Q1097-01	402	WATER	1.3	1000	100	3.0431	3.0431	3.02	3.0436	3.0436	0.0005	0.5
6	Q1100-01	GRAB	WATER	1.6	1000	100	3.0864	3.0864	3.03	3.2117	3.2117	0.1253	125.3

QC Batch# LB134303

Test: TPH

Analysis Date: 01/16/2025

Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3110
pH Paper 0-14	M6069
Sodium Sulfate	EP2577
1:1 HCL	WP110826
Silica Gel	W3079
Sand	NA

Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	5.00 ML	WP100827
LCSWD	5.00 ML	WP100828
MS/MSD	NA	NA

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 : 10:31

1.0000 gram Balance: 1.0005 (0.9950-1.0050) In Time1: 09:40

Bal Check Time: 08:30 Out OVEN TEMP1: 71 °C Dessicator Time Out1: 11:10

Out Time1: 10:30

After Analysis

0.0020 gram Balance: 0.0019 (0.0018-0.0022) In OVEN TEMP2 : 70 °C Dessicator Time In2 : 12:26

1.0000 gram Balance: 1.0003 (0.9950-1.0050) In Time2: 11:45

Bal Check Time: 13:05 Out OVEN TEMP2: 70 °C Dessicator Time Out2: 13:00

Out Time2: 12:25

WORKLIST(Hardcopy Internal Chain)

134303

WorkList Name : tph q1066

WorkList ID : 186924

Department : Wet-Chemistry

Date : 01-16-2025 07:45:13

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1049-01	N FRAC-TANK-257952	Water	TPH	Conc H2SO4 to pH < 2	PSEG03	N41	01/09/2025	1664A
Q1097-01	E 402	Water	TPH	Conc H2SO4 to pH < 2	PSEG04	N51	01/15/2025	1664A
Q1100-01	GRAB	Water	TPH	Conc H2SO4 to pH < 2	ARAM01	M11	01/15/2025	1664A

Date/Time 01-16-25 08:00
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

Date/Time 01-16-25
 Raw Sample Received by: [Signature]
 Raw Sample Relinquished by: [Signature]

TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona

ANALYST: Niha

Date: 01/15/2025

Run Number: LB134304

BalanceID: WC SC-6

OvenID: WC OVEN-1

FilterID: 17416528

ThermometerID: WET OVEN#1

TEMP1 IN: 103 °C 01/15/2025 11:00 TEMP1 OUT: 104 °C 01/15/2025 12:00
 TEMP2 IN: 103 °C 01/15/2025 12:30 TEMP2 OUT: 104 °C 01/15/2025 13:30
 TEMP3 IN: 103 °C 01/16/2025 09:30 TEMP3 OUT: 104 °C 01/16/2025 11:00
 TEMP4 IN: 103 °C 01/16/2025 11:30 TEMP4 OUT: 104 °C 01/16/2025 13:00

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	LB134304BL	LB134304BL	1.4210	1.4210	100	1.4210	1.4210	1.4210	0.0000	0
2	LB134304BS	LB134304BS	1.4452	1.4452	100	1.4962	1.4962	1.4962	0.0510	510
3	Q1083-01	001-WILLETTS-PT-BLVD (DEC)	1.4777	1.4777	400	1.4912	1.4912	1.4912	0.0135	33.8
4	Q1083-01DUP	001-WILLETTS-PT-BLVD (DEC) DUP	1.4774	1.4774	400	1.4910	1.4910	1.4910	0.0136	34
5	Q1083-02	002-35TH-AVE (DEC)	1.4932	1.4932	250	1.5041	1.5041	1.5041	0.0109	43.6
6	Q1100-02	COMP	1.4744	1.4744	100	1.4968	1.4968	1.4968	0.0224	224
7	Q1101-01	EFFLUENT	1.4959	1.4959	50	1.5337	1.5337	1.5337	0.0378	756
8	Q1101-04	AERATION TK 1	1.4828	1.4828	20	1.5229	1.5229	1.5229	0.0401	2005

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)

LB134304

WorkList Name : TSS-01152025 WorkList ID : 186923 Department : Wet-Chemistry Date : 01-15-2025 17:06:59

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q1083-01	001-WILLETS-PT-BLVD(DEC)	Water	TSS	Cool 4 deg C	TULL01	N41	01/14/2025	SM2540 D
Q1083-02	002-35TH-AVE(DEC)	Water	TSS	Cool 4 deg C	TULL01	N41	01/14/2025	SM2540 D
Q1100-02	COMP	Water	TSS	Cool 4 deg C	ARAM01	M11	01/15/2025	SM2540 D
Q1101-01	EFFLUENT	Water	TSS	Cool 4 deg C	HOLL01	M11	01/15/2025	SM2540 D
Q1101-04	AERATION TK 1	Water	TSS	Cool 4 deg C	HOLL01	M11	01/15/2025	SM2540 D

Date/Time 01.16.2024, 08:40
 Raw Sample Received by: NF(wc)
 Raw Sample Relinquished by: JF cool C/

Date/Time 01.16.2024, 10:00
 Raw Sample Received by: M cccc
 Raw Sample Relinquished by: NF(wc)

Instrument ID: DO METER

Daily Analysis Runlog For Sequence/QC Batch ID # LB134301

Review By	Niha	Review On	1/21/2025 2:48:37 PM
Supervise By	Iwona	Supervise On	1/21/2025 4:07:50 PM
SubDirectory	LB134301	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	WP111426,W3149,WP110386,W3103,W3109,W3105,WP111428,WP111427,WP111323		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB134301BL	LB134301BL	MB	01/16/25 16:50		rubina	OK
2	LB134301BS	LB134301BS	LCS	01/16/25 16:50		rubina	OK
3	Q1100-02	COMP	SAM	01/16/25 16:50		rubina	OK
4	Q1100-02DUP	COMPDUP	DUP	01/16/25 16:50		rubina	OK
5	Q1101-01	EFFLUENT	SAM	01/16/25 16:50		rubina	OK
6	Q1101-05	INFLUENT	SAM	01/16/25 16:50		rubina	OK
7	Q1111-01	DRAIN WATER TANK	SAM	01/16/25 16:50		rubina	OK
8	Q1113-01	DSN002	SAM	01/16/25 16:50		rubina	OK
9	Q1113-03	DSN001	SAM	01/16/25 16:50		rubina	OK
10	Q1113-05	DSN003	SAM	01/16/25 16:50		rubina	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB134303

Review By	jignesh	Review On	1/16/2025 1:25:05 PM
Supervise By	Iwona	Supervise On	1/16/2025 1:32:51 PM
SubDirectory	LB134303	Test	TPH
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	W3110,M6069,EP2577,WP110826,W3079,NA,WP100827,WP100828,NA		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB134303BL	LB134303BL	MB	01/16/25 09:40		jignesh	OK
2	LB134303BS	LB134303BS	LCS	01/16/25 09:40		jignesh	OK
3	LB134303BSD	LB134303BSD	LCSD	01/16/25 09:40		jignesh	OK
4	Q1049-01	FRAC-TANK-257952	SAM	01/16/25 09:40		jignesh	OK
5	Q1097-01	402	SAM	01/16/25 09:40		jignesh	OK
6	Q1100-01	GRAB	SAM	01/16/25 09:40		jignesh	OK

Instrument ID: WC SC-3

Daily Analysis Runlog For Sequence/QC Batch ID # LB134304

Review By	Niha	Review On	1/16/2025 1:18:35 PM
Supervise By	Iwona	Supervise On	1/16/2025 1:31:52 PM
SubDirectory	LB134304	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	LB134304BL	LB134304BL	MB	01/16/25 09:30		Niha	OK
2	LB134304BS	LB134304BS	LCS	01/16/25 09:30		Niha	OK
3	Q1083-01	001-WILLETS-PT-BL	SAM	01/16/25 09:30		Niha	OK
4	Q1083-01DUP	001-WILLETS-PT-BL	DUP	01/16/25 09:30		Niha	OK
5	Q1083-02	002-35TH-AVE(DEC)	SAM	01/16/25 09:30		Niha	OK
6	Q1100-02	COMP	SAM	01/16/25 09:30		Niha	OK
7	Q1101-01	EFFLUENT	SAM	01/16/25 09:30		Niha	OK
8	Q1101-04	AERATION 1	SAM	01/16/25 09:30		Niha	OK

Prep Standard - Chemical Standard Summary

Order ID : Q1100

Test : BOD5,TPH,TSS

Prepbatch ID :

Sequence ID/Qc Batch ID: LB134301, LB134303, LB134304,

Standard ID :

EP2577, WP100827, WP100828, WP110386, WP110826, WP111323, WP111426, WP111427, WP111428, WP99896,

Chemical ID :

E3551, M5673, M6069, M6121, W2606, W2653, W2654, W2783, W2845, W2898, W2979, W3059, W3079, W3103, W3105, W3109, W3110, W3112, W3113, W3144, W3149,



<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	EP2577	01/06/2025	07/01/2025	Rajesh Parikh	Extraction_SC ALE_2 (EX-SC-2)	None	RUPESHKUMAR SHAH 01/06/2025
<u>FROM</u> 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>
114	hexavalent chromium color reagent	WP100827	02/02/2023	02/09/2023	Rubina Mughal	WETCHEM_SCALE_5 (WC SC-5)	None	Iwona Zarych 02/02/2023
<u>FROM</u>	0.25000gram of W2979 + 50.00000ml of W2783 = Final Quantity: 50.000 ml							

Wet Chemistry STANDARD PREPARATION LOG

<u>Recipe ID</u>	<u>NAME</u>	<u>NO.</u>	<u>Prep Date</u>	<u>Expiration Date</u>	<u>Prepared By</u>	<u>ScaleID</u>	<u>PipetteID</u>	<u>Supervised By</u>
3456	Cyanide Intermediate Working Std, 5PPM	WP100828	02/02/2023	02/03/2023	Iwona Zarych	None	WETCHEM_FIPETTE_3	Sohil Jodhani

(WC)

FROM 0.25000ml of W2898 + 49.75000ml of WP99896 = 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>
1841	Sulfuric Acid, 1N	WP110386	10/24/2024	04/24/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3	Iwona Zarych

(WC)

FROM 2.80000ml of M5673 + 97.20000ml 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>
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>
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

FROM 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>
127	BOD Dilution fluid	WP111426	01/16/2025	01/17/2025	Rubina Mughal	None	None	Iwona Zarych
								01/16/2025

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	WP111427	01/16/2025	01/17/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-6)	None	Iwona Zarych
								01/16/2025

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	WP111428	01/16/2025	01/17/2025	Rubina Mughal	None	None	Iwona Zarych
								01/16/2025

FROM 1.00000PILLOW of W3059 + 300.00000ml of WP111426 = Final Quantity: 300.000 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>
11	Sodium hydroxide absorbing solution 0.25 N	WP99896	11/15/2022	05/15/2023	Jignesh Parikh	WETCHEM_SCALE_4 (WC SC-4)	None	Iwona Zarych
								11/15/2022

FROM 21.00000L of W2606 + 210.00000gram of W2845 = Final Quantity: 21.000 L

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-9673-33 / Sulfuric Acid, Instra-Analyzed (cs/6c2.5L)	23D2462010	03/20/2028	09/21/2023 / mohan	09/05/2023 / mohan	M5673

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Seidler Chemical	DIW / DI Water	Daily Lab-Certified	10/24/2024	10/24/2019 / apatel	10/24/2019 / apatel	W2606

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

CHEMICAL RECEIPT LOG BOOK

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 #
Seidler Chemical	BA-9254-03 / Acetone, Ultra Resi (cs/4x4L)	0000263246	06/17/2023	12/23/2020 / ketankumar	12/23/2020 / ketankumar	W2783

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	21C2456604	01/31/2024	03/30/2022 / JIGNESH	06/24/2021 / apatel	W2845

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
Supelco	90157 / Cyanide Standard, 1000ppm from Supelco	HC03107133	06/30/2023	01/24/2022 / apatel	01/24/2022 / apatel	W2898

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

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

CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	04667-2.5 / Silica Gel (60-200 mesh), 2.5 KG	072154301	01/30/2029	05/07/2024 / jignesh	01/30/2024 / jignesh	W3079

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	BA-9262-03 / Hexane, Ultra-Resi (cs/4x4L)	235898	02/28/2029	06/27/2024 / jignesh	06/26/2024 / jignesh	W3110

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

CHEMICAL RECEIPT LOG BOOK

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

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
HACH	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 / lwona	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 / lwona	10/16/2024 / lwona	W3149



Certificate of Analysis

1.19533.0500 Cyanide standard solution traceable to SRM from NIST $K_2[Zn(CN)_4]$ in H_2O
1000 mg/l CN Certipur®
Batch HC03107133

Batch Values

Concentration	β (CN ⁻)	1002	mg/l
---------------	----------------------------	------	------

Determination method: Argentometric titration.

The content of this solution was determined with silver nitrate standard solution (article number 1.09081) standardized against volumetric standard sodium chloride (article number 1.02406). The expanded measurement uncertainty is $\pm 0.7\%$ ($k=2$ coverage factor for 95% coverage probability). The certified value is traceable to primary standard NIST SRM 999c (NIST: National Institute of Standards and Technology, USA) by means of volumetric standard sodium chloride, measured in the accredited calibration laboratory of Merck KGaA, Darmstadt, Germany in accordance to DIN EN ISO/IEC 17025.

Date of release (DD.MM.YYYY) 02.07.2020

Minimum shelf life (DD.MM.YYYY) 30.06.2023

Ayfer Yildirim

Responsible laboratory manager quality control

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

Acetone
ULTRA RESI-ANALYZED
For Organic Residue Analysis



Material No.: 9254-03
Batch No.: 0000263246
Manufactured Date: 2020/06/17
Expiration Date: 2023/06/17
Revision No: 1

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	<= 1.0000 ppm	0.1000
Substances Reducing Permanganate	Passes Test	PT
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	5

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


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



ACROS ORGANICS part of Thermo Fisher Scientific





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)

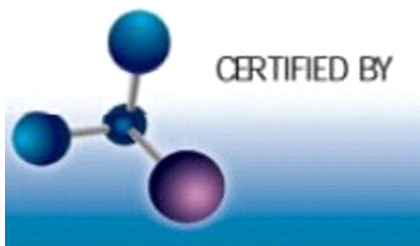
Certificate of Analysis

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. Acros Organics 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 human or animals. It is the responsibility of the purchaser, formulator or those performing further manufacturing to determine suitability based upon the intended use of the end product. Products are tested to meet the analytical requirements of the noted grade. The following information is the actual analytical results obtained.

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



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



CERTIFICATE OF ANALYSIS

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

FINISHED PRODUCT, LOT NUMBER, MFG. /EXP DATE:

PolySeed® • Part No. P-110 • Lot 152305 • Mfg. Date: 05/2023 • Exp. Date: 05/2025

FORMULATION:

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

VIABLE COUNT, FINAL TEST RESULT:

The product has been fully tested in accordance with Finished Product Specifications and contains a minimum viable count of 4.00×10^9 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

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

Jerusa Bailey-Wyche

Quality Assurance Specialist - Certificate of Analysis Fair Lawn

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

*Based on suggested storage condition.



**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

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



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

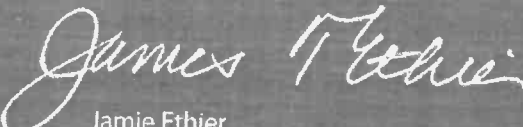
100 Matsonford Rd, Suite 200, Radnor, PA 19087. U.S.A. Phone: 610.386.1700

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

W 2979

Rec: 12/09/22

exp. 12/09/27

Product Name:

1,5-Diphenylcarbazide - ACS reagent

Product Number:

259225

Batch Number:

MKCR6636

Brand:

SIAL

CAS Number:

140-22-7

MDL Number:

MFCD00003013

Formula:

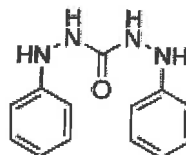
C₁₃H₁₄N₄O

Formula Weight:

242.28 g/mol

Quality Release Date:

02 JUN 2022



Certificate of Analysis

Test	Specification	Result
Appearance (Color)	Conforms to Requirements	Pink
Off-White to Pink, Light Purple or Tan		
Appearance (Form)	Powder or Chunks	Powder
Melting Point	173.0 - 176.0 °C	173.0 °C
Infrared Spectrum	Conforms to Structure	Conforms
Residue on ignition (Ash)	≤ 0.05 %	0.01 %
15 minutes, 800 Degrees Celsius		
Solubility	Pass	Pass
Sensitivity Test	Pass	Pass
Meets ACS Requirements	Current ACS Specification	Conforms



Larry Coers, Director
Quality Control
Milwaukee, WI US

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



Certificate of Analysis

Product information

Product: Silica 60, 0.063 - 0.200 mm
REF: 815330.25
LOT: 072154301

W 3049
SP

Technical data

Material: Synthetic amorphous silica (irregular shaped)
Description: White powder

Parameter	Specifications	Result
Specific surface (m ² /g, N ₂ adsorption) :	450 - 550	537
Particle size distribution (screen analysis) :	< 63 µm max. 5 %	0.3
	> 200 µm max. 5 %	0.1
pH value :	6.0 - 7.5	7
Water content (%) :	< 7	3.6
Pore volume (mL/g, N ₂ adsorption) :	0.65 - 0.85	0.82
Mean pore size (Å, N ₂ adsorption) :	50 - 70	62

Expiry

This product has no stated expiration date or shelf life.

We recommend to use the product within a time period of 5 years after date of QC release.

This time period is valid only if the product is stored under dry and frost-free conditions.

After 5 years we recommend retesting the adsorbent to make sure that the expected performance is still given.

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.

Date of measurement: 16.02.2023 22:00



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."

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

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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W3110
58
operate!
06/27/2024

Certificate of Analysis

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

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

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

Catalog Number	H303	Quality Test / Release Date	02/23/2024
Lot Number	235898		
Description	HEXANES - OPTIMA		
Country of Origin	United States	Suggested Retest Date	Feb/2029
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	Clear, colorless liquid
ASSAY (N-HEXANE)	%	>= 60	73
ASSAY (SUM C6 HYDROCARBONS)	%	>= 99.9	>99.9
COLOR	APHA	<= 5	<5
DENSITY AT 25 DEGREES C	GM/ML	Inclusive Between 0.653 - 0.673	0.670
EVAPORATION RESIDUE	ppm	<= 1	0.3
FLUORESCENCE BACKGROUND	ppb	<= 1	<1
IDENTIFICATION	PASS/FAIL	= PASS TEST	PASS TEST
OPTICAL ABS AT 195 NM	ABS. UNITS	<= 1	0.64
OPTICAL ABS AT 210 NM	ABS. UNITS	<= 0.25	0.16
OPTICAL ABS AT 220 NM	ABS. UNITS	<= 0.07	0.06
OPTICAL ABS AT 254 NM	ABS. UNITS	<= 0.005	0.002
PESTICIDE RESIDUE ANALYSIS	NG/L	<= 10	<10
REFRACTIVE INDEX @ 25 DEG C		Inclusive Between 1.375 - 1.385	1.380
SUITABILITY FOR GC/MS		= PASS TEST	PASS TEST
SULFUR COMPOUNDS	%	<= 0.005	<0.005
THIOPHENE	PASS/FAIL	= PASS TEST	PASS TEST
WATER (H2O)	%	<= 0.01	<0.01
WATER-SOLUBLE TITRABLE ACID	MEQ/G	<= 0.0003	0.0001

Harout Sahagian
Harout Sahagian - Quality Control Manager - Fair Lawn

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

*Based on suggested storage condition.



Certificate of Analysis



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

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

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



Sodium Hydroxide (Pellets)

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

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

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

Storage: Room Temperature

Pellets

Spec Set: 0583ACS

Internal ID #: 710

Signature

We certify that this batch conforms to the specifications listed.

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

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

Additional Information

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

Product meets analytical specifications of the grades listed.



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

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



SHIPPING DOCUMENTS

CLIENT INFORMATION

REPORT TO BE SENT TO:

COMPANY: Aramark Uniforms
 ADDRESS: 740 Frelinghuysen Ave
 CITY Newark STATE: NJ ZIP: 07114
 ATTENTION: Jarrod Mills
 PHONE: 973-824-1101 FAX:

CLIENT PROJECT INFORMATION

PROJECT NAME: Monthly
 PROJECT NO.: LOCATION:
 PROJECT MANAGER:
 e-mail:
 PHONE: FAX:

CLIENT BILLING INFORMATION

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

ANALYSIS

DATA TURNAROUND INFORMATION

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

DATA DELIVERABLE INFORMATION

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

1 2 3 4 5 6 7 8 9
 TPH
 BOD5
 ISS

PRESERVATIVES

COMMENTS

CHEMTECH SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES	PRESERVATIVES									COMMENTS
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	Grab Comp	W	✓	✓	1-5-25	1410	1	✓	✓	✓							← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
2.		W	✓	✓	1-5-25	1413	2	✓	✓	✓							
3.																	
4.																	
5.																	
6.																	
7.																	
8.																	
9.																	
10.																	

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

RELINQUISHED BY SAMPLER: 1.	DATE/TIME: <u>1-5-25</u> <u>1416</u>	RECEIVED BY: 1.	DATE/TIME: <u>1-5-25</u> <u>1416</u>	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>3.2</u> °C
RELINQUISHED BY SAMPLER: 2.	DATE/TIME:	RECEIVED BY: 2.	DATE/TIME:	Comments:
RELINQUISHED BY SAMPLER: 3.	DATE/TIME: <u>1-5-25</u> <u>1532</u>	RECEIVED BY: 3.	DATE/TIME:	



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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