

## DATA REPORTING QUALIFIERS- INORGANIC

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

<b>J</b>	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).
<b>U</b>	Indicates the analyte was analyzed for, but not detected.
<b>ND</b>	Indicates the analyte was analyzed for, but not detected
<b>E</b>	Indicates the reported value is estimated because of the presence of interference
<b>M</b>	Indicates Duplicate injection precision not met.
<b>N</b>	Indicates the spiked sample recovery is not within control limits.
<b>S</b>	Indicates the reported value was determined by the Method of Standard Addition (MSA).
<b>*</b>	Indicates that the duplicate analysis is not within control limits.
<b>+</b>	Indicates the correlation coefficient for the MSA is less than 0.995.
<b>D</b>	Indicates the reported value is from a secondary analysis with a dilution factor. The original analysis exceeded the calibration range.
<b>M</b>	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
<b>OR</b>	Indicates the analyte’s concentration exceeds the calibrated range of the instrument for that specific analysis.
<b>Q</b>	Indicates the LCS did not meet the control limits requirements
<b>H</b>	Sample Analysis Out Of Hold Time

## LAB CHRONICLE

<b>OrderID:</b>	Q3180	<b>OrderDate:</b>	9/24/2025 11:16:00 AM
<b>Client:</b>	Aramark Uniforms	<b>Project:</b>	Monthly 2025
<b>Contact:</b>	Jarrod Mills	<b>Location:</b>	J51

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
Q3180-01	Grab	WATER			09/24/25 10:23			09/24/25
			TPH	1664A			09/26/25 10:00	
Q3180-02	Comp	WATER			09/24/25 10:25			09/24/25
			BOD5	SM5210 B			09/25/25 10:00	
			TSS	SM2540 D			09/26/25 09:30	



# SAMPLE DATA

## Report of Analysis

Client:	Aramark Uniforms	Date Collected:	09/24/25 10:23
Project:	Monthly 2025	Date Received:	09/24/25
Client Sample ID:	Grab	SDG No.:	Q3180
Lab Sample ID:	Q3180-01	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
TPH	37.6		1	0.29	5.00	mg/L		09/26/25 10:00	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:	09/24/25 10:25
Project:	Monthly 2025	Date Received:	09/24/25
Client Sample ID:	Comp	SDG No.:	Q3180
Lab Sample ID:	Q3180-02	Matrix:	WATER
		% Solid:	0

Parameter	Conc.	Qua.	DF	MDL	LOQ / CRQL	Units	Prep Date	Date Ana.	Ana Met.
BOD5	3570		1	0.20	2.00	mg/L		09/25/25 10:00	SM 5210 B-16
TSS	908		1	1.00	4.00	mg/L		09/26/25 09:30	SM 2540 D-20

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.:** Q3180

**Project:** Monthly 2025

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID: BOD5	<b>LB137318BL</b> mg/L	< 0.2000	0.2000	U	0.20	2.0	09/25/2025
Sample ID: TPH	<b>LB137327BL</b> mg/L	< 2.5000	2.5000	U	0.29	5.0	09/26/2025
Sample ID: TSS	<b>LB137328BL</b> mg/L	< 2.0000	2.0000	U	1	4	09/26/2025

## Duplicate Sample Summary

<b>Client:</b> Aramark Uniforms	<b>SDG No.:</b> Q3180
<b>Project:</b> Monthly 2025	<b>Sample ID:</b> LB137327BS
<b>Client ID:</b> LB137327BSD	<b>Percent Solids for Spike Sample:</b> 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date
TPH	mg/L	+/-18	16.8		17.0		1	1.18		09/26/2025



## Duplicate Sample Summary

<b>Client:</b> Aramark Uniforms <b>Project:</b> Monthly 2025 <b>Client ID:</b> CompDUP	<b>SDG No.:</b> Q3180 <b>Sample ID:</b> Q3180-02 <b>Percent Solids for Spike Sample:</b> 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	3570		3480		1	2.55		09/25/2025
TSS	mg/L	+/-5	908		904		1	0.44		09/26/2025

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** Q3180

**Project:** Monthly 2025

**Run No.:** LB137318

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB137318BS							
BOD5	mg/L	198	193		97	1	84.6-115.4	09/25/2025

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** Q3180

**Project:** Monthly 2025

**Run No.:** LB137327

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB137327BS							
TPH	mg/L	20.0	16.8		84	1	78-114	09/26/2025

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** Q3180

**Project:** Monthly 2025

**Run No.:** LB137327

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB137327BSD							
TPH	mg/L	20.0	17.0		85	1	78-114	09/26/2025

### Laboratory Control Sample Summary

**Client:** Aramark Uniforms

**SDG No.:** Q3180

**Project:** Monthly 2025

**Run No.:** LB137328

Analyte	Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB137328BS							
TSS	mg/L	550	531		96	1	90-110	09/26/2025



# RAW DATA

# BOD5 LOG

ANALYST: rubin

SUPERVISOR: Iwona

Analysis Date: 09/25/2025

MANGANOUS SULFATE SOLUTION: W3103

Alkaline Iodide Azide: W3109

Sodium Thiosulfate, 0.025N: W3105

NaOH, 1N: WP113878

IncubatorID: INCUBATOR #3

GuageID: 0511064

Zero DO: WP114920

QC BATCH ID: LB137318

BOD Water: WP114908

Starch: W3149

Sulfuric acid, 1N: WP112832

POLYSEED: WP114910

GGA: WP114909

Chlorine Strips: W3155

pH Strips: W3215

Lab SampleID	Client ID	Bottle No.	VOL. ML	Initial Reading (ML)	Final Reading (ML)	Difference	Average
WINKLER 1	WINKLER 1	1	300	0.0	9.6	9.6	9.6
WINKLER 2	WINKLER 2	2	300	9.8	19.4	9.6	9.6

Meter Calibration1: 9.15 Zero DO Reading1: 0.10 mg/L (<=0.2 Criteria)

Barometric Pressure1: 755 mmHg DO Meter BOD fluid reading for winkler comparison: 9.69

## After Incubation

Meter Calibration2: 8.65 Zero DO Reading2: 0.15 mg/L (<=0.2 Criteria)

Barometric Pressure2: 760 mmHg

QC BATCH ID: LB137318

INCUBATOR TEMP IN(C): 20.3

INCUBATOR TEMP OUT(C): 19.8

TIME IN: 10:00

TIME OUT: 09:20

DATE IN: 09/25/2025

DATE OUT: 09/30/2025

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
LB137318BL	1	No	6.59	N/A	20.90	300	9.68	9.66	0.02	0.02	0.02	
POLYSEED	1					10	9.63	6.67	2.96	0.59	0.63	
POLYSEED	2					15	9.59	4.53	5.06	0.67		
POLYSEED	3					20	9.52	3.23	6.29	0.63		
GGA	1					6	9.52	5.09	4.43	190	192.83	
GGA	2					6	9.50	5.00	4.5	193.5		
GGA	3					6	9.50	4.97	4.53	195		
Q3168-05	1	No	5.77	6.81	20.20	5	9.61	7.60	2.01	82.8	72.22	pH Adjusted
Q3168-05	2					20	9.52	4.78	4.74	61.65		
Q3168-05	3					50	8.93	0.24	-	0		
Q3168-05	4					150	7.27	0.19	-	0		
Q3168-06	1	No	6.32	6.92	20.20	5	9.59	6.98	2.61	118.8	107.1	pH Adjusted
Q3168-06	2					20	9.42	2.43	6.99	95.4		
Q3168-06	3					50	8.71	0.20	-	0		
Q3168-06	4					150	7.21	0.12	-	0		
Q3180-02	1	No	6.76	N/A	20.30	5	9.41	2.83	6.58	3570	3570	
Q3180-02	2					10	9.35	0.11	-	0		
Q3180-02	3					20	9.14	0.09	-	0		
Q3180-02	4					30	9.03	0.07	-	0		
Q3180-02DUP	1	No	6.76	N/A	20.30	5	9.42	2.99	6.43	3480	3480	
Q3180-02DUP	2					10	9.36	0.15	-	0		
Q3180-02DUP	3					20	9.12	0.12	-	0		
Q3180-02DUP	4					30	9.04	0.10	-	0		
Q3184-01	1	No	7.67	7.31	20.50	1	9.45	7.40	2.05	42600	16504.5	pH Adjusted
Q3184-01	2					5	9.34	6.67	2.67	12240		
Q3184-01	3					10	9.27	6.42	2.85	6660		
Q3184-01	4					50	9.17	1.01	8.16	4518		
Q3184-01	5					100	9.01	0.46	-	0		
Q3184-05	1	No	4.91	7.01	20.30	1	9.46	7.76	-	0	5370	pH Adjusted
Q3184-05	2					5	9.42	7.40	2.02	8340		
Q3184-05	3					10	9.39	7.04	2.35	5160		
Q3184-05	4					50	9.21	4.23	4.98	2610		
Q3184-05	5					100	8.90	0.94	-	0		
Q3202-01	1	No	5.99	7.09	20.10	5	9.36	8.89	-	0		pH Adjusted
Q3202-01	2					20	9.24	8.81	-	0		
Q3202-01	3					50	9.07	8.65	-	0		
Q3202-01	4					150	8.25	8.11	-	0		
Q3202-03	1	No	5.46	6.85	20.10	5	9.60	8.69	-	0		pH Adjusted
Q3202-03	2					20	9.44	8.39	-	0		
Q3202-03	3					50	9.35	8.27	-	0		
Q3202-03	4					150	8.44	8.16	-	0		



Q3202-05	1	No	5.84	6.74	20.00	5	9.63	8.78	-	0		
Q3202-05	2					20	9.60	8.51	-	0		
Q3202-05	3					50	9.57	8.40	-	0		
Q3202-05	4					150	8.97	7.49	-	0		
Q3202-07	1	No	5.94	6.99	20.00	5	9.65	8.86	-	0		pH Adjusted
Q3202-07	2					20	9.59	8.60	-	0		
Q3202-07	3					50	9.33	8.29	-	0		
Q3202-07	4					150	8.07	7.98	-	0		
Q3202-09	1	No	5.83	7.23	20.00	5	9.61	8.88	-	0		pH Adjusted
Q3202-09	2					20	9.57	8.68	-	0		
Q3202-09	3					50	9.45	8.27	-	0		
Q3202-09	4					150	8.68	8.12	-	0		
Q3202-11	1	No	6.44	6.70	20.00	5	9.55	7.56	-	0	37.06	pH Adjusted
Q3202-11	2					20	9.47	6.03	3.44	42.15		
Q3202-11	3					50	9.09	3.13	5.96	31.98		
Q3202-11	4					150	6.94	0.96	-	0		
Q3202-17	1	No	6.23	6.59	20.00	5	9.60	7.62	-	0	45.05	pH Adjusted
Q3202-17	2					20	8.89	4.89	4	50.55		
Q3202-17	3					50	8.30	1.08	7.22	39.54		
Q3202-17	4					150	6.02	0.49	-	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.**

# WORKLIST(Hardcopy Internal Chain)

6137318

WorkList Name : bod5-9-24

WorkList ID : 192047

Department : Wet-Chemistry

Date : 09-24-2025 12:51:32

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3168-05	TOTES COMP#1	Water	BOD5	Cool 4 deg C	PSEG03	J11	09/23/2025	SM5210 B
Q3168-06	TOTES COMP#2	Water	BOD5	Cool 4 deg C	PSEG03	J11	09/23/2025	SM5210 B
Q3180-02	Comp	Water	BOD5	Cool 4 deg C	ARAM01	J51	09/24/2025	SM5210 B
Q3184-01	EFFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	J52	09/24/2025	SM5210 B
Q3184-05	INFLUENT	Water	BOD5	Cool 4 deg C	HOLL01	J52	09/24/2025	SM5210 B

Date/Time 09/25/2025 07:25  
Raw Sample Received by: RH cws  
Raw Sample Relinquished by: RC (W)

Date/Time 09/25/2025 10:10  
Raw Sample Received by: RC (W)  
Raw Sample Relinquished by: RH cws

6137318

## WORKLIST(Hardcopy Internal Chain)

WorkList Name : bod5-09-25

WorkList ID : 192093

Department : Wet-Chemistry

Date : 09-25-2025 07:15:18

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3202-01	SY-6	Water	BOD5	Cool 4 deg C	LOCK01	I63	09/23/2025	SM5210 B
Q3202-03	SY-2R	Water	BOD5	Cool 4 deg C	LOCK01	I63	09/23/2025	SM5210 B
Q3202-05	SY-2D	Water	BOD5	Cool 4 deg C	LOCK01	I63	09/23/2025	SM5210 B
Q3202-07	SY-5	Water	BOD5	Cool 4 deg C	LOCK01	I63	09/23/2025	SM5210 B
Q3202-09	SY-3DD	Water	BOD5	Cool 4 deg C	LOCK01	I63	09/23/2025	SM5210 B
Q3202-11	SY-3D	Water	BOD5	Cool 4 deg C	LOCK01	I63	09/23/2025	SM5210 B
Q3202-17	SY-3	Water	BOD5	Cool 4 deg C	LOCK01	I63	09/23/2025	SM5210 B

Date/Time 09/25/2025 07:25  
Raw Sample Received by: RM (WC)  
Raw Sample Relinquished by: RM (WC)

Date/Time 09/20/25 10.10  
Raw Sample Received by: RM (WC)  
Raw Sample Relinquished by: RM (WC)

## Extraction and Analytical Summary Report

**Analysis Method:** 1664A  
**Test:** TPH  
**Run Number:** LB137327  
**Analysis Date:** 09/26/2025  
**BalanceID:** WC SC-5  
**OvenID:** EXT OVEN-3

**ANALYST:** JIGNESH  
**REVIEWED BY:** Iwona  
**Extraction Date:** 09/26/2025  
**Extraction IN Time:** 08:14  
**Extraction OUT Time:** 09:15  
**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	LB137327BL	LB137327BL	WATER	1.3	1000	100	2.7413	2.7413	3.01	2.7414	2.7414	0.0001	0.1
2	LB137327BS	LB137327BS	WATER	1.3	1000	100	2.9633	2.9633	3.02	2.9801	2.9801	0.0168	16.8
3	LB137327BSD	LB137327BSD	WATER	1.3	1000	100	3.1402	3.1402	3.03	3.1572	3.1572	0.0170	17
4	Q3168-05	TOTES COMP#1	WATER	1.6	1000	100	3.0183	3.0183	18.04	3.4589	3.4589	0.4406	440.6
5	Q3168-06	TOTES COMP#2	WATER	1.6	1000	100	0.0003	0.0003	18.05	3.6646	3.6646	3.6643	3664.3
6	Q3180-01	Grab	WATER	1.6	1000	100	3.0214	3.0214	3.04	3.0590	3.0590	0.0376	37.6

QC Batch# LB137327

**Test:** TPH

**Analysis Date:** 09/26/2025

### Chemicals Used:

Chemical Name	Chemical Lot #
HEXANE	W3204
pH Paper 0-14	M6069
Sodium Sulfate	EP2636
1:1 HCL	WP112782
Silica Gel	W3079
Sand	NA

### Standards Used:

Standard Name	Amount Used	Standard Lot #
LCSW	5.00 ML	WP112783
LCSWD	5.00 ML	WP112784
MS/MSD	N/A	N/A

### 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 : 10:46

1.0000 gram Balance: 1.0004 (0.9950-1.0050) In Time1: 10:00

Bal Check Time: 08:33 Out OVEN TEMP1: 70 °C Dessicator Time Out1: 11:25

Out Time1: 10:45

## After Analysis

0.0020 gram Balance: 0.0019 (0.0018-0.0022) In OVEN TEMP2 : 71 °C Dessicator Time In2 : 12:31

1.0000 gram Balance: 1.0005 (0.9950-1.0050) In Time2: 12:00

Bal Check Time: 13:01 Out OVEN TEMP2: 71 °C Dessicator Time Out2: 13:00

Out Time2: 12:30

WORKLIST(Hardcopy Internal Chain)

VB 137327

WorkList Name : tph q3164

WorkList ID : 192101

Department : Wet-Chemistry

Date : 09-26-2025 07:42:18

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3168-05	TOTES COMP#1	Water	TPH	Conc H2SO4 to pH < 2	PSEG03	J11	09/23/2025	1664A
Q3168-06	TOTES COMP#2	Water	TPH	Conc H2SO4 to pH < 2	PSEG03	J11	09/23/2025	1664A
Q3180-01	Grab	Water	TPH	Conc H2SO4 to pH < 2	ARAM01	J51	09/24/2025	1664A

Date/Time 09/26/25 07:50  
Raw Sample Received by: SB WCC  
Raw Sample Relinquished by: OP

Date/Time 09/26/25 15:00  
Raw Sample Received by: OP  
Raw Sample Relinquished by: SB WCC

# TOTAL SUSPENDED SOLIDS - SM2540D

SUPERVISOR: Iwona

ANALYST: JIGNESH

Date: 09/25/2025

Run Number: LB137328

BalanceID: WC SC-5

OvenID: WC OVEN-1

FilterID: 60828725

ThermometerID: WET OVEN#1

TEMP1 IN: 104 °C 09/25/2025 14:00 TEMP1 OUT: 103 °C 09/25/2025 15:00  
 TEMP2 IN: 104 °C 09/25/2025 15:30 TEMP2 OUT: 103 °C 09/25/2025 16:30  
 TEMP3 IN: 104 °C 09/26/2025 09:30 TEMP3 OUT: 103 °C 09/26/2025 11:10  
 TEMP4 IN: 104 °C 09/26/2025 11:40 TEMP4 OUT: 103 °C 09/26/2025 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	LB137328BL	LB137328BL	1.3524	1.3525	100	1.3525	1.3525	1.3525	0.0000	0
2	LB137328BS	LB137328BS	1.4843	1.4844	100	1.5375	1.5375	1.5375	0.0531	531
3	Q3168-05	TOTES COMP#1	1.4720	1.4720	1000	1.5085	1.5086	1.5086	0.0366	36.6
4	Q3168-06	TOTES COMP#2	1.5004	1.5004	1000	1.5374	1.5375	1.5375	0.0371	37.1
5	Q3180-02	Comp	1.4935	1.4935	50	1.5389	1.5389	1.5389	0.0454	908
6	Q3180-02DUP	CompDUP	1.4856	1.4857	50	1.5309	1.5309	1.5309	0.0452	904
7	Q3184-01	EFFLUENT	1.4860	1.4861	20	1.5328	1.5328	1.5328	0.0467	2335
8	Q3184-04	AERATION	1.4943	1.4943	20	1.5717	1.5717	1.5717	0.0774	3870

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)

WB 137328

WorkList Name : tss q3184      WorkList ID : 192099      Department : Wet-Chemistry      Date : 09-26-2025 07:38:23

Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date	Method
Q3168-05	TOTES COMP#1 D,Q	Water	TSS	Cool 4 deg C	PSEG03	J11	09/23/2025	SM2540 D
Q3168-06	TOTES COMP#2 D,Q	Water	TSS	Cool 4 deg C	PSEG03	J11	09/23/2025	SM2540 D
Q3180-02	Comp	Water	TSS	Cool 4 deg C	ARAM01	J51	09/24/2025	SM2540 D
Q3184-01	EFFLUENT	Water	TSS	Cool 4 deg C	HOLL01	J52	09/24/2025	SM2540 D
Q3184-04	AERATION	Water	TSS	Cool 4 deg C	HOLL01	J52	09/24/2025	SM2540 D

Date/Time 09/26/25 07:40  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: [Signature]

Date/Time 09/26/25 12:40  
 Raw Sample Received by: [Signature]  
 Raw Sample Relinquished by: [Signature]



**Instrument ID:** DO METER

**Daily Analysis Runlog For Sequence/QC Batch ID # LB137318**

Review By	rubina	Review On	9/30/2025 12:10:59 PM
Supervise By	Iwona	Supervise On	9/30/2025 12:11:22 PM
SubDirectory	LB137318	Test	BOD5
<b>STD. NAME</b>	<b>STD REF.#</b>		
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	WP114908,W3149,WP112832,W3103,W3109,W3105,WP114910,WP114909,WP113878		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB137318BL	LB137318BL	MB	09/25/25 10:00		rubina	OK
2	LB137318BS	LB137318BS	LCS	09/25/25 10:00		rubina	OK
3	Q3168-05	TOTES COMP#1	SAM	09/25/25 10:00		rubina	OK
4	Q3168-06	TOTES COMP#2	SAM	09/25/25 10:00		rubina	OK
5	Q3180-02	Comp	SAM	09/25/25 10:00		rubina	OK
6	Q3180-02DUP	CompDUP	DUP	09/25/25 10:00		rubina	OK
7	Q3184-01	EFFLUENT	SAM	09/25/25 10:00	Due to bad matrix difference between highest and lowest results is >30% for	rubina	OK
8	Q3184-05	INFLUENT	SAM	09/25/25 10:00	Due to bad matrix difference between highest and lowest results is >30% for	rubina	OK
9	Q3202-01	SY-6	SAM	09/25/25 10:00		rubina	OK
10	Q3202-03	SY-2R	SAM	09/25/25 10:00		rubina	OK
11	Q3202-05	SY-2D	SAM	09/25/25 10:00		rubina	OK
12	Q3202-07	SY-5	SAM	09/25/25 10:00		rubina	OK
13	Q3202-09	SY-3DD	SAM	09/25/25 10:00		rubina	OK
14	Q3202-11	SY-3D	SAM	09/25/25 10:00		rubina	OK
15	Q3202-17	SY-3	SAM	09/25/25 10:00		rubina	OK

**Instrument ID:** WC SC-3

**Daily Analysis Runlog For Sequence/QC Batch ID # LB137327**

Review By	JIGNESH	Review On	9/26/2025 11:03:56 AM
Supervise By	Iwona	Supervise On	9/26/2025 1:37:47 PM
SubDirectory	LB137327	Test	TPH
<b>STD. NAME</b>	<b>STD REF.#</b>		
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	W3204,M6069,EP2636,WP112782,W3079,NA,WP112783,WP112784,N/A		

Sr#	SampleId	ClientID	QcType	Date	Comment	Operator	Status
1	LB137327BL	LB137327BL	MB	09/26/25 10:00		JIGNESH	OK
2	LB137327BS	LB137327BS	LCS	09/26/25 10:00		JIGNESH	OK
3	LB137327BSD	LB137327BSD	LCSD	09/26/25 10:00		JIGNESH	OK
4	Q3168-05	TOTES COMP#1	SAM	09/26/25 10:00		JIGNESH	OK
5	Q3168-06	TOTES COMP#2	SAM	09/26/25 10:00		JIGNESH	OK
6	Q3180-01	Grab	SAM	09/26/25 10:00		JIGNESH	OK

**Instrument ID:** WC SC-3

**Daily Analysis Runlog For Sequence/QC Batch ID # LB137328**

Review By	JIGNESH	Review On	9/26/2025 12:50:19 PM
Supervise By	Iwona	Supervise On	9/26/2025 1:36:49 PM
SubDirectory	LB137328	Test	TSS
<b>STD. NAME</b>	<b>STD REF.#</b>		
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	LB137328BL	LB137328BL	MB	09/26/25 09:30		JIGNESH	OK
2	LB137328BS	LB137328BS	LCS	09/26/25 09:30	55 mg w3186 + 100 ml w3112	JIGNESH	OK
3	Q3168-05	TOTES COMP#1	SAM	09/26/25 09:30		JIGNESH	OK
4	Q3168-06	TOTES COMP#2	SAM	09/26/25 09:30		JIGNESH	OK
5	Q3180-02	Comp	SAM	09/26/25 09:30		JIGNESH	OK
6	Q3180-02DUP	CompDUP	DUP	09/26/25 09:30		JIGNESH	OK
7	Q3184-01	EFFLUENT	SAM	09/26/25 09:30		JIGNESH	OK
8	Q3184-04	AEIRATION	SAM	09/26/25 09:30		JIGNESH	OK

## Prep Standard - Chemical Standard Summary

**Order ID :** Q3180

**Test :** BOD5,TPH,TSS

**Prepbatch ID :**

**Sequence ID/Qc Batch ID:** LB137318, LB137327, LB137328,

**Standard ID :**

EP2636, WP112782, WP112783, WP112784, WP112832, WP113878, WP114908, WP114909, WP114910,

**Chemical ID :**

E3875, E3917, M6041, M6069, M6151, W2653, W2654, W2817, W2871, W3009, W3079, W3082, W3103, W3105, W3109, W3112, W3113, W3149, W3204, W3212, W3233,

## 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	<a href="#">EP2636</a>	08/27/2025	01/28/2026	Riteshkumar Patel	Extraction_SC ALE_2 (EX-SC-2)	None	Evelyn Huang  08/27/2025

**FROM** 4000.00000gram of E3875 = 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>
229	1:1 HCL	<a href="#">WP112782</a>	04/22/2025	08/18/2025	Jignesh Parikh	None	None	Iwona Zarych  04/22/2025

**FROM** 500.00000ml of M6151 + 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	<a href="#">WP112783</a>	04/22/2025	10/03/2025	Jignesh Parikh	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 04/22/2025
<u>FROM</u>	1000.00000ml of E3917 + 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	<a href="#">WP112784</a>	04/22/2025	10/03/2025	Jignesh Parikh	WETCHEM_SCALE_8 (WCS-7)	None	Iwona Zarych 04/22/2025
<u>FROM</u>	1000.00000ml of E3917 + 4.00000gram of W3009 + 4.00000gram of W3082 = 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>
1841	Sulfuric Acid, 1N	<a href="#">WP112832</a>	04/25/2025	10/25/2025	Rubina Mughal	None	WETCHEM_FIPETTE_3 (WC)	Iwona Zarych 04/25/2025

**FROM** 2.80000ml of M6041 + 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>
1571	Sodium hydroxide, 1N	<a href="#">WP113878</a>	07/09/2025	12/31/2025	Iwona Zarych	WETCHEM_SCALE_7 (WC SC-6)	None	Jignesh Parikh 07/09/2025

**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	<a href="#">WP114908</a>	09/25/2025	09/26/2025	Rubina Mughal	None	None	Iwona Zarych
								09/26/2025

**FROM** 18.00000L of W3112 + 3.00000PILLOW of W3233 = 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	<a href="#">WP114909</a>	09/25/2025	09/26/2025	Rubina Mughal	WETCHEM_SCALE_7 (WC SC-6)	None	Iwona Zarych
								09/26/2025

**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	<a href="#">WP114910</a>	09/25/2025	09/26/2025	Rubina Mughal	None	None	Iwona Zarych 09/26/2025
<p><b><u>FROM</u></b>    1.00000PILLOW of W3212 + 300.00000ml of WP114908 = Final Quantity: 300.000 ml</p>								

## 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	417203	01/28/2026	07/28/2025 / RUPESH	01/29/2025 / Rajesh	E3875

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)	24H2762008	10/03/2025	04/03/2025 / Rajesh	03/31/2025 / Rajesh	E3917

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)	22G2862015	02/17/2026	02/18/2025 / Sagar	01/15/2025 / Sagar	M6151

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 #
PCI Scientific Supply, Inc.	A12244 / Stearic acid, 98%, 100 g	U20E006	04/02/2026	04/02/2021 / apatel	04/02/2021 / apatel	W2817

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

## CHEMICAL RECEIPT LOG BOOK

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	4620-32 / MANGANOUS SULFATE SOLUTION-364	2403J02	03/31/2026	04/22/2024 / 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,4LITRE	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

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

### 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)	25c0362005	04/30/2026	04/22/2025 / jignesh	04/18/2025 / jignesh	W3204

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	136742-80 / POLYSEED	132409	09/30/2026	05/21/2025 / lwona	05/21/2025 / lwona	W3212

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	A5105	05/31/2030	08/14/2025 / rubina	07/21/2025 / lwona	W3233

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



**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.

<b>Catalog Number</b>	15621	<b>Quality Test / Release Date</b>	13 March 2019
<b>Lot Number</b>	A0405990	<b>Suggested Retest Date</b>	March 2022
<b>Description</b>	L(+)-Glutamic acid, 99%		
<b>Country of Origin</b>	CHINA		
<b>Declaration of Origin</b>	plant		

<b>Origin Comment</b>	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



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

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**CAS Number:** 57-11-4  
**Molecular Formula:** C<sub>18</sub>H<sub>36</sub>O<sub>2</sub>  
**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

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**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.*

W3009  
rec. 2/27/2023 12

## Certificate of Analysis

Product Name:

Hexadecane - ReagentPlus®, 99%

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](http://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

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.



**PRODUCTOS  
QUÍMICOS  
MONTERREY, S.A. DE C.V.**

MIRADOR 201, COL. MIRADOR  
MONTERREY, N.L. MÉXICO  
CP 64070  
TEL +52 81 13 52 67 67  
www.pqm.com.mx

# CERTIFICATE OF ANALYSIS

PRODUCT :	SODIUM SULFATE CRYSTALS ANHYDROUS		
QUALITY :	ACS (CODE RMB3375)	FORMULA :	Na <sub>2</sub> SO <sub>4</sub>
SPECIFICATION NUMBER:	6399	RELEASE DATE:	MAY/23/2024
LOT NUMBER :	417203		

TEST	SPECIFICATIONS	LOT VALUES
Assay (Na <sub>2</sub> SO <sub>4</sub> )	Min. 99.0%	99.8 %
pH of a 5% solution at 25°C	5.2 - 9.2	6.2
Insoluble matter	Max. 0.01%	0.001 %
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 <sub>4</sub> )	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%	0.001 %
Magnesium (Mg)	Max. 0.005%	0.001 %
Potassium (K)	Max. 0.008%	0.001 %
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%	0.2 %
Retained on US Standard No. 60 sieve	Min. 94%	96.2 %
Through US Standard No. 60 sieve	Max. 5%	3.5 %
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.

RE-02-01, Ed. 3

E 3875

Acetone

BAKER RESI-ANALYZED® Reagent  
For Organic Residue Analysis

avantor™



Material No.: 9254-03

Batch No.: 24H2762008

Manufactured Date: 2024-04-18

Expiration Date: 2027-04-18

Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
Assay ((CH <sub>3</sub> ) <sub>2</sub> CO) (by GC, corrected for water)	>= 99.4 %	100.0 %
Color (APHA)	<= 10	5
Residue after Evaporation	<= 1.0 ppm	0.0 ppm
Substances Reducing Permanganate	Passes Test	Passes Test
Titration Acid (μeq/g)	<= 0.3	0.2
Titration Base (μeq/g)	<= 0.6	<0.1
Water (H <sub>2</sub> O)	<= 0.5 %	<0.1 %
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: United States

Packaging Site: Phillipsburg Mfg Ctr & DC

Recd by RP on 03/31/25

E3917

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

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 <sub>2</sub> SO <sub>4</sub> )	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 <sub>2</sub> )	≤ 2 ppm	< 2 ppm
Ammonium (NH <sub>4</sub> )	≤ 1 ppm	1 ppm
Chloride (Cl)	≤ 0.1 ppm	< 0.1 ppm
Nitrate (NO <sub>3</sub> )	≤ 0.2 ppm	< 0.1 ppm
Phosphate (PO <sub>4</sub> )	≤ 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™**

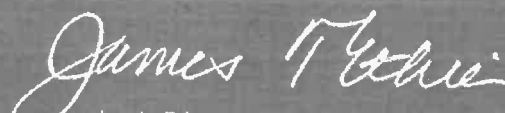


Material No.: 9673-33  
Batch No.: 23D2462010

Test	Specification	Result
Trace Impurities – Sodium (Na)	$\leq 500.0$ ppb	5.4 ppb
Trace Impurities – Strontium (Sr)	$\leq 5.0$ ppb	< 0.2 ppb
Trace Impurities – Tin (Sn)	$\leq 5.0$ ppb	< 0.8 ppb
Trace Impurities – Zinc (Zn)	$\leq 5.0$ 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.

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

avantor™



M6151

R → 11/15/25

Material No.: 9530-33  
Batch No.: 22G2862015  
Manufactured Date: 2022-06-15  
Retest Date: 2027-06-14  
Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
ACS – Assay (as HCl) (by acid–base titrn)	36.5 – 38.0 %	37.9 %
ACS – Color (APHA)	≤ 10	5
ACS – Residue after Ignition	≤ 3 ppm	< 1 ppm
ACS – Specific Gravity at 60°/60°F	1.185 – 1.192	1.191
ACS – Bromide (Br)	≤ 0.005 %	< 0.005 %
ACS – Extractable Organic Substances	≤ 5 ppm	< 1 ppm
ACS – Free Chlorine (as Cl <sub>2</sub> )	≤ 0.5 ppm	< 0.5 ppm
Phosphate (PO <sub>4</sub> )	≤ 0.05 ppm	< 0.03 ppm
Sulfate (SO <sub>4</sub> )	≤ 0.5 ppm	< 0.3 ppm
Sulfite (SO <sub>3</sub> )	≤ 0.8 ppm	0.3 ppm
Ammonium (NH <sub>4</sub> )	≤ 3 ppm	< 1 ppm
Trace Impurities – Arsenic (As)	≤ 0.010 ppm	< 0.003 ppm
Trace Impurities – Aluminum (Al)	≤ 10.0 ppb	1.3 ppb
Arsenic and Antimony (as As)	≤ 5.0 ppb	< 3.0 ppb
Trace Impurities – Barium (Ba)	≤ 1.0 ppb	0.2 ppb
Trace Impurities – Beryllium (Be)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Bismuth (Bi)	≤ 10.0 ppb	< 1.0 ppb
Trace Impurities – Boron (B)	≤ 20.0 ppb	< 5.0 ppb
Trace Impurities – Cadmium (Cd)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Calcium (Ca)	≤ 50.0 ppb	163.0 ppb
Trace Impurities – Chromium (Cr)	≤ 1.0 ppb	0.7 ppb
Trace Impurities – Cobalt (Co)	≤ 1.0 ppb	< 0.3 ppb
Trace Impurities – Copper (Cu)	≤ 1.0 ppb	< 0.1 ppb
Trace Impurities – Gallium (Ga)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Germanium (Ge)	≤ 3.0 ppb	< 2.0 ppb
Trace Impurities – Gold (Au)	≤ 4.0 ppb	0.6 ppb
Heavy Metals (as Pb)	≤ 100 ppb	< 50 ppb
Trace Impurities – Iron (Fe)	≤ 15 ppb	6 ppb

>>> Continued on page 2 >>>

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

 **avantorsm**



Material No.: 9530-33  
Batch No.: 22G2862015

Test	Specification	Result
Trace Impurities – Lead (Pb)	≤ 1.0 ppb	< 0.5 ppb
Trace Impurities – Lithium (Li)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Magnesium (Mg)	≤ 10.0 ppb	2.9 ppb
Trace Impurities – Manganese (Mn)	≤ 1.0 ppb	< 0.4 ppb
Trace Impurities – Mercury (Hg)	≤ 0.5 ppb	0.1 ppb
Trace Impurities – Molybdenum (Mo)	≤ 10.0 ppb	< 3.0 ppb
Trace Impurities – Nickel (Ni)	≤ 4.0 ppb	< 0.3 ppb
Trace Impurities – Niobium (Nb)	≤ 1.0 ppb	0.8 ppb
Trace Impurities – Potassium (K)	≤ 9.0 ppb	< 2.0 ppb
Trace Impurities – Selenium (Se), For Information Only		< 1.0 ppb
Trace Impurities – Silicon (Si)	≤ 100.0 ppb	< 10.0 ppb
Trace Impurities – Silver (Ag)	≤ 1.0 ppb	0.5 ppb
Trace Impurities – Sodium (Na)	≤ 100.0 ppb	2.3 ppb
Trace Impurities – Strontium (Sr)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Tantalum (Ta)	≤ 1.0 ppb	1.6 ppb
Trace Impurities – Thallium (Tl)	≤ 5.0 ppb	< 2.0 ppb
Trace Impurities – Tin (Sn)	≤ 5.0 ppb	4.0 ppb
Trace Impurities – Titanium (Ti)	≤ 1.0 ppb	1.5 ppb
Trace Impurities – Vanadium (V)	≤ 1.0 ppb	< 0.2 ppb
Trace Impurities – Zinc (Zn)	≤ 5.0 ppb	0.8 ppb
Trace Impurities – Zirconium (Zr)	≤ 1.0 ppb	0.3 ppb

>>> Continued on page 3 >>>

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



Material No.: 9530-33  
Batch No.: 22G2862015

Test	Specification	Result
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For Laboratory, Research, or Manufacturing Use  
Product Information (not specifications):  
Appearance (clear, fuming liquid)  
Meets ACS Specifications  
Storage Condition: Store below 25 °C.

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

A handwritten signature in cursive script that reads 'Jamie Ethier'.  
Jamie Ethier  
Vice President Global Quality

# 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 <sup>2</sup> /g, N <sub>2</sub> 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 <sub>2</sub> adsorption) :	0.65 - 0.85	0.82
Mean pore size (Å, N <sub>2</sub> 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.

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Date of measurement: 16.02.2023 22:00

# 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 %

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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."

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# 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

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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.

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.



# 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

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W3204  
084K: 09/22/2025  
38

Material No.: 9262-03  
Batch No.: 25C0362005  
Manufactured Date: 2025-01-29  
Expiration Date: 2026-04-30  
Revision No.: 0

## Certificate of Analysis

Test	Specification	Result
FID-Sensitive Impurities (as 2-Octanol) Single Impurity Peak (ng/mL)	$\leq 5$	1
ECD Sensitive Impurities (as HeptachlorEpoxide) Single Peak (pg/mL)	$\leq 10$	6
ECD-Sensitive Impurities (as EthyleneDibromide) - Single Impurity Peak (ng/mL)	$\leq 5$	5
Assay (Total Saturated C <sub>6</sub> Isomers) (by GC, corrected for water)	$\geq 99.5 \%$	100.0 %
Assay (as n-Hexane) (by GC, corrected for water)	$\geq 95 \%$	100 %
Color (APHA)	$\leq 10$	10
Residue after Evaporation	$\leq 1.0 \text{ ppm}$	0.1 ppm
Substances Darkened by H <sub>2</sub> SO <sub>4</sub>	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: United States  
Packaging Site: Phillipsburg Mfg Ctr & DC

*J. Croak*

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

N3212 Received on 5/21/25 by 12



## 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 132409 • Mfg. Date: 09/2024 • Exp. Date: 09/2026

**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  $4.00 \times 10^9$  cfu/g.

**GLUCOSE/GLUTAMIC-ACID RESULTS:**

Tested results within acceptable range  $198 \pm 30.5$  mg/L (167.5 - 228.5 mg/L). GGA Lot# 43100020 – Average Test Result: 202.1

See [www.polyseed.com](http://www.polyseed.com) for details.

**SEED CONTROL FACTOR:**

Tested results within acceptable range 0.6 – 1.0 see [www.polyseed.com](http://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 ensure that the Finished Product conforms to the above specification.

Signature: \_\_\_\_\_

*Quality Control Department*

Date: 09/13/2024

POLYSEED.Ref.1.19

Revised Jan 24





An ISO 9001 Certified Company

P.O. Box 389  
Loveland, CO 80539  
(970) 669-3050

## *Certificate of Analysis*

*This is a Component of 1486266 / LOT A5105*

**PRODUCT:** BOD Nutrient Buffer Pillows

**PRODUCT NUMBER:** 1486227

**LOT NUMBER:** A5105

**MANUFACTURE DATE:** 05/13/2025

**DATE OF ANALYSIS:** 05/27/2025

TEST	SPECIFICATIONS	RESULTS
Ammonia Concentration of a diluted pillow	0.57 to 0.79 ppm	0.570
Calcium Concentration of a diluted pillow	0.93 to 1.29 ppm	0.980
Iron Concentration of a diluted pillow	0.27 to 0.36 ppm	0.283
Magnesium Concentration of a diluted pillow	0.35 to 0.48 ppm	0.360
Phosphorus Concentration of a diluted pillow	7.6 to 10.3 ppm	8.11
pH in a 6 L of DI water	7.1 to 7.6 ph	7.31
Five Day Change in Dissolved Oxygen Concentration	-0.2 to 0.2 ppm	0.03
Sterility	To Pass	Passed

The expiration date is May 2030

Certified by: *Scott Als*

Analytical Services Chemist



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

DATA DELIVERABLE INFORMATION

☐ Level 1 (Results Only) ☐ Level 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 TSS

PRESERVATIVES

COMMENTS

ALLIANCE SAMPLE ID	PROJECT SAMPLE IDENTIFICATION	SAMPLE MATRIX	SAMPLE TYPE		SAMPLE COLLECTION		# OF BOTTLES										COMMENTS ← Specify Preservatives A-HCl D-NaOH B-HNO3 E-ICE C-H2SO4 F-OTHER
			COMP	GRAB	DATE	TIME		1	2	3	4	5	6	7	8	9	
1.	Grab Comp	W		✓	9-24-25	1023	1	✓									
2.		W	✓		9-24-25	1025	4		✓	✓							
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:	DATE/TIME: <u>1028</u>	RECEIVED BY:	Conditions of bottles or coolers at receipt: <input type="checkbox"/> COMPLIANT <input type="checkbox"/> NON COMPLIANT <input type="checkbox"/> COOLER TEMP <u>22.8</u> °C
1. <u>[Signature]</u>	<u>9-24-25</u>	1. <u>[Signature]</u>	Comments:
RELINQUISHED BY SAMPLER:	DATE/TIME:	RECEIVED BY:	
2. <u>[Signature]</u>		2. <u>[Signature]</u>	
RELINQUISHED BY SAMPLER:	DATE/TIME: <u>1730</u>	RECEIVED BY:	
3. <u>[Signature]</u>	<u>9-24-21</u>	3. <u>[Signature]</u>	

Page \_\_\_\_ of \_\_\_\_

CLIENT: ☐ Hand Delivered ☐ Other

Shipment Complete

☐ YES ☐ NO

### Laboratory Certification

Certified By	License No.
Connecticut	PH-0830
DOD ELAP (ANAB)	L2219
Maine	2024021
Maryland	296
New Hampshire	255425
New Jersey	20012
New York	11376
Pennsylvania	68-00548
Soil Permit	525-24-234-08441
Texas	TX-C25-00189
Virginia	460312