

# 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 OR	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  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
Н	Sample Analysis Out Of Hold Time



### LAB CHRONICLE

OrderID: P4764

Client: ENTACT

Contact: Jarod Stanfield

OrderDate: 11/7/2024 1:28:00 PM

**Project:** 540 Degraw St, Brooklyn, NY - E9309

Location: L23

LabID	ClientID	Matrix	Test	Method	Sample Date	Prep Date	Anal Date	Received
P4764-02	TW-WTS-01	WATER			11/07/24			11/07/24
					11:20			
			pН	9040C			11/07/24	
							14:35	
			TSS	SM2540 D			11/08/24	
							08:45	



# SAMPLE DATA



Lab Sample ID:

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

Matrix:

WATER

Fax: 908 789 8922

P4764-02

## **Report of Analysis**

Client: ENTACT Date Collected: 11/07/24 11:20

Project: 540 Degraw St, Brooklyn, NY - E9309 Date Received: 11/07/24

Client Sample ID: TW-WTS-01 SDG No.: P4764

% Solid: 0

Units Parameter Conc. DF MDL LOQ / CRQL **Prep Date** Date Ana. Ana Met. Qua. 7.08 рΗ рΗ 11/07/24 14:35 9040C 22.5 TSS 1 1.00 4.00 mg/L 11/08/24 08:45 SM 2540 D-15

Comments: pH result reported at temperature 20.1 °C

U = Not Detected

LOQ = Limit of Quantitation

MDL = Method Detection Limit

LOD = Limit of Detection

D = Dilution

Q = indicates LCS control criteria did not meet requirements

H = Sample Analysis Out Of Hold Time

J = Estimated Value

B = Analyte Found in Associated Method Blank

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

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

OR = Over Range

N =Spiked sample recovery not within control limits



# QC RESULT SUMMARY





# **Initial and Continuing Calibration Verification**

Client: ENTACT SDG No.: P4764

**Project:** 540 Degraw St, Brooklyn, NY - E9309 RunNo.: LB133337

Analyte		Units	Result	True Value	% Recovery	Acceptance Window (%R)	Analysis Date
Sample ID:	ICV	рН	7.01	7	100	90-110	11/07/2024
Sample ID:	CCV1	рН	2.01	2.00	101	90-110	11/07/2024
Sample ID: pH	CCV2	рН	12.02	12.00	100	90-110	11/07/2024





Fax: 908 789 8922

# **Preparation Blank Summary**

Client: ENTACT SDG No.: P4764

**Project:** 540 Degraw St, Brooklyn, NY - E9309

Analyte	Units	Result	Acceptance Limits	Conc Qual	MDL	RDL	Analysis Date
Sample ID:	LB133353BL mg/L	< 2.0000	2.0000	U	1	4	11/08/2024



 $284 \; Sheffield \; Street, \; Mountainside, \; New \; Jersey \; 07092, \; Phone: \; 908 \; 789 \; 8900, \\$ 

Fax: 908 789 8922

# **Duplicate Sample Summary**

Client: ENTACT SDG No.: P4764

**Project:** 540 Degraw St, Brooklyn, NY - E9309 **Sample ID:** P4757-01

Client ID: 001-WILLETS-BLVD(SEP)DUP Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date	
TSS	mg/L	+/-5	48.0		48.7		1	1.45		11/08/2024	_



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Fax: 908 789 8922

# **Duplicate Sample Summary**

Client: ENTACT SDG No.: P4764

**Project:** 540 Degraw St, Brooklyn, NY - E9309 **Sample ID:** P4760-01

Client ID: LPA-TOTE-1DUP Percent Solids for Spike Sample: 0

Analyte	Units	Acceptance Limit	Sample Result	Conc. Qualifier	Duplicate Result	Conc. Qualifier	Dilution Factor	RPD/ AD	Qual	Analysis Date	
nH	nН	+/-20	8.27		8.28		1	0.12		11/07/2024	





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# **Laboratory Control Sample Summary**

Client: ENTACT SDG No.: P4764

**Project:** 540 Degraw St, Brooklyn, NY - E9309 **Run No.:** LB133353

Analyte		Units	True Value	Result	Conc. Qualifier	% Recovery	Dilution Factor	Acceptance Limit %R	Analysis Date
Sample ID	LB133353BS								
TSS		mg/L	550	542		98	1	90-110	11/08/2024



# RAW DATA



#### Analytical Summary Report

Analysis Method: 9040C

Analyst By : jignesh

Parameter: pH

Supervisor Review By : sohil

Run Number: LB133337

**Slope** : 98.3

 $\mathbf{pH} \ \mathbf{Meter} \ \mathbf{ID} \ : \ \mathtt{WC} \ \mathtt{PH} \ \mathtt{METER-1}$ 

Calibration Standards	Chemtech Log#
PH 4 BUFFER SOLUTION	W3107
BUFFER PH 7.00 GREEN 1PINT PK6	w3093
PH 10.01 BUFFER, COLOR CD 475ML	W3094
buffer solution pH 7 yellow	w3071
Buffer Solution, PH2 (500ml)	W3005
Buffer Solution, PH12 (500ml)	w3072

True Value of ICV = 7.00 Control Limits[+/- 0.1].

True Value of CCV1 = 2.00 Control Limits[+/- 0.1].

True Value of CCV2 = 12.00 Control Limits[+/- 0.1].

Seq	LabID	DF	Matrix	Weight (gm)	Volume (ml)	Temperature (°C)	Result (pH)	Anal Date	Anal Time
1	CAL1	1	Water	NA	NA	20.2	4.01	11/07/2024	14:00
2	CAL2	1	Water	NA	NA	20.2	7.00	11/07/2024	14:02
3	CAL3	1	Water	NA	NA	20.3	10.02	11/07/2024	14:05
4	ICV	1	Water	NA	NA	20.1	7.01	11/07/2024	14:10
5	CCV1	1	Water	NA	NA	20.2	2.01	11/07/2024	14:15
6	P4759-01	1	Water	NA	NA	23.6	7.70	11/07/2024	14:25
7	P4760-01	1	Water	NA	NA	24.6	8.27	11/07/2024	14:33
8	P4760-01DUP	1	Water	NA	NA	24.7	8.28	11/07/2024	14:34
9	P4764-02	1	Water	NA	NA	20.1	7.08	11/07/2024	14:35
10	CCV2	1	Water	NA	NA	20.3	12.02	11/07/2024	14:40

Reviewed By:sohil On:11/7/2024 3:19:24 PM Inst Id :WC PH METER-1

16,00

WORKLIST(Hardcopy Internal Chain)

WorkList ID: 185218

ph p4764

WorkList Name:

Department: Wet-Chemistry

J 13337

		WORALIST ID :	165218	Department: Wet-Chemistry	Wet-Chemistry	Da	Date: 11-07-2024 13:45:09	24 13:45:09
Sample	Customer Sample	Matrix Test	Test	Preservative	Customer	Raw Sample Storage Location	Collect Date Method	Method
) 10 077A	THOUSE CHINOM							
10-60-1-	MONICLAIR-IOIE-1	Water pH	Ha	Cool 4 dea C	000000	66		
P4760-01	P4760-01 / I DA_TOTE 1			D III	135603	L23	11/07/2024 9040C	9040C
	E ATOLETI	Water	Hd.	Cool 4 dea C	PSEG03	1 22	44 107 1000 4	
P4764-02	TW-WTS-04				- 0000	L23	11/07/2024 9040C	9040C
	0-0-10-0-	Water	Hd	Cool 4 dea C	FNTA05	1 22	44 101 10000	
						5	11/07/2024 9040C	9040C

Date/Time 11/07/124

Raw Sample Received by:

Raw Sample Relinquished by:

Page 1 of 1

Raw Sample Received by: 76 (60 C)

Raw Sample Relinquished by:

Date/Time 11/07/11/ 13:50



#### TOTAL SUSPENDED SOLIDS - SM2540D

supervisor: jignesh

**ANALYST:** Niha

**Date:** 11/07/2024

Run Number: LB133353

103 °C 11/07/2024 14:00 TEMP1 OUT: 104 °C 11/07/2024 15:00 TEMP1 IN: BalanceID: WC SC-6 103 °C 11/07/2024 15:30 TEMP2 OUT: 104 °C 11/07/2024 16:30 TEMP2 IN: OvenID: WC OVEN-1 103 °C 11/08/2024 10:15 104 °C 11/08/2024 08:45 TEMP3 OUT: **FilterID:** 17416528 TEMP3 IN: 104 °C 11/08/2024 10:45 TEMP4 OUT: 103 °C 11/08/2024 12:15 TEMP4 IN: ThermometerID: WET OVEN#1

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	LB133353BL	LB133353BL	1.4035	1.4035	100	1.4035	1.4035	1.4035	0.0000	0
2	LB133353BS	LB133353BS	1.4126	1.4126	100	1.4668	1.4668	1.4668	0.0542	542
3	P4757-01	001-WILLETS-BLVD(SEP)	1.4106	1.4106	150	1.4178	1.4178	1.4178	0.0072	48
4	P4757-01DUP	001-WILLETS-BLVD(SEP)DUP	1.4028	1.4028	150	1.4101	1.4101	1.4101	0.0073	48.7
5	P4757-02	002-35TH-AVE(SEP)	1.4000	1.4000	200	1.4090	1.4090	1.4090	0.0090	45
6	P4757-03	001-WILLETS-BLVD(OCT)	1.3925	1.3925	150	1.4015	1.4015	1.4015	0.0090	60
7	P4757-04	002-35TH-AVE(OCT)	1.4045	1.4045	200	1.4165	1.4165	1.4165	0.0120	60
8	P4762-02	EFF-WW	1.3994	1.3994	800	1.4287	1.4287	1.4287	0.0293	36.6
9	P4764-02	TW-WTS-01	1.4112	1.4112	1000	1.4337	1.4337	1.4337	0.0225	22.5
10	P4765-01	DSN002	1.4148	1.4148	1000	1.4309	1.4309	1.4309	0.0161	16.1
11	P4765-03	DSN001	1.3989	1.3989	1000	1.4177	1.4177	1.4177	0.0188	18.8
12	P4765-05	DSN003	1.4041	1.4041	2000	1.4144	1.4144	1.4144	0.0103	5.1
13	P4767-01	TOWER-2	1.4155	1.4155	2000	1.4220	1.4220	1.4220	0.0065	3.3



#### TOTAL SUSPENDED SOLIDS - SM2540D

**SUPERVISOR:** jignesh

**ANALYST:** Niha

**Date:** 11/07/2024

Run Number: LB133353

103 °C 11/07/2024 14:00 TEMP1 OUT: 104 °c 11/07/2024 15:00 TEMP1 IN: BalanceID: WC SC-6 103 °C 11/07/2024 15:30 TEMP2 OUT: 104 °C 11/07/2024 16:30 TEMP2 IN: OvenID: WC OVEN-1 104 °C 11/08/2024 08:45 TEMP3 OUT: 103 °c 11/08/2024 10:15 TEMP3 IN: **FilterID:** 17416528 104 °C 11/08/2024 10:45 TEMP4 OUT: 103 °c 11/08/2024 12:15 TEMP4 IN: ThermometerID: WET OVEN#1

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)	weight after	Weight (g)	Result mg/L

A = Sample Volume (ml)

B = Final Empty Dish Weight (g)

C = Final Empty Dish + Sample weight after 1.5 hr drying @105°C(g)

) = Weight (g)

Weight (g) = C - B

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

9:30

# 18133353

# WORKLIST(Hardcopy Internal Chain)

WorkList Name: TSS-11072024

WorkList Name :	TSS-11072024	WorkList ID :	ID: 185216	Department :	Wet-Chemistry	ä	Date: 11-07-20	11-07-2024 12-53-24
Sample	Customer Sample	Matrix	Test	Preservative	Customer	Raw Sample Storage Location		Method
P4757-01	001-WILLETS-BLVD(SEP)	Water	SSE	O and A load				
P4757-02	002-35TH_AVE/SEB	147.		o fight tooo	1 ULL01	L23	11/06/2024	11/06/2024 SM2540 D
04757.00	COT COLL PAR(SEL)	water	ISS	Cool 4 deg C	TULL01	L23	11/06/2024	SM2540 D
74737-03	UU1-WILLETS-BLVD(OCT)	Water	TSS	Cool 4 deg C	TULL01	123	11/06/2004	11/06/2004 CM2E40 B
P4757-04	002-35TH-AVE(OCT)	Water	TSS	Cool 4 dea C	F		1100/2024	SIMIZS40 D
P4762-02	EFE-WAA/			S S S S S S S S S S S S S S S S S S S	LOCEDI	L23	11/06/2024	11/06/2024 SM2540 D
00,100,00		water	SS	Cool 4 deg C	ARDM01	L11	11/07/2024	SM2540 D
F4764-02	TW-WTS-01	Water	TSS	Cool 4 deg C	ENTA05	1.23	44/07/2004	
P4765-01	DSN002	Water	TSS	0 - 4 1-00		3	11/07/2024	SMZ540 D
P4765-03	20000		8	Cool 4 deg C	PSEG04	L23	11/07/2024	11/07/2024 SM2540 D
	Consci	Water	TSS	Cool 4 deg C	PSEG04	123	11/07/2024	CMOEAD
P4765-05	DSN003	Water	LSS	Crop A Jose			120212011	3142340 D
P4767-01	TOWER 2			on the ded o	PSEG04	L23	11/07/2024	SM2540 D
	OWEN-2	Water	TSS	Cool 4 deg C	PSEG04	121	11/07/2024 SM2540 D	SM2540 D

Date/Time 11.08.2020 Raw Sample Relinquished by: Raw Sample Received by:

NFIWE 08:10

11.08.2024

Date/Time

Raw Sample Received by:

Raw Sample Relinquished by: 10 (LOLC)



Fax: 908 789 8922

Instrument ID: WC PH METER-1

## Daily Analysis Runlog For Sequence/QCBatch ID # LB133337

Review By	jigne	esh	Review On	11/7/2024 2:44:11 PM
Supervise By	sohi	I	Supervise On	11/7/2024 3:19:24 PM
SubDirectory	LB1	33337	Test	рН
STD. NAME STD REF.#				
ICAL Standard N/A		N/A		
ICV Standard		N/A		
CCV Standard		N/A		
ICSA Standard		N/A		
CRI Standard		N/A		
LCS Standard		N/A		
Chk Standard		W3107,W3093,W3094,V	V3071,W3005,W3072	

Sr#	Sampleld	ClientID	QcType	Date	Comment	Operator	Status
1	CAL1	CAL1	CAL	11/07/24 14:00		jignesh	ок
2	CAL2	CAL2	CAL	11/07/24 14:02		jignesh	ОК
3	CAL3	CAL3	CAL	11/07/24 14:05		jignesh	ОК
4	ICV	ICV	ICV	11/07/24 14:10		jignesh	ОК
5	CCV1	CCV1	CCV	11/07/24 14:15		jignesh	ОК
6	P4759-01	MONTCLAIR-TOTE-1	SAM	11/07/24 14:25		jignesh	ОК
7	P4760-01	LPA-TOTE-1	SAM	11/07/24 14:33		jignesh	ОК
8	P4760-01DUP	LPA-TOTE-1DUP	DUP	11/07/24 14:34		jignesh	ОК
9	P4764-02	TW-WTS-01	SAM	11/07/24 14:35		jignesh	ОК
10	CCV2	CCV2	CCV	11/07/24 14:40		jignesh	ОК



Fax: 908 789 8922

**Instrument ID:** WC SC-3

## Daily Analysis Runlog For Sequence/QCBatch ID # LB133353

Review By	Nih	a	Review On	11/8/2024 12:30:10 PM
Supervise By	jign	nesh	Supervise On	11/8/2024 12:31:36 PM
SubDirectory	LB	133353	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	LB133353BL	LB133353BL	MB	11/08/24 08:45		Niha	ОК
2	LB133353BS	LB133353BS	LCS	11/08/24 08:45		Niha	ОК
3	P4757-01	001-WILLETS-BLVD(S	SAM	11/08/24 08:45		Niha	ОК
4	P4757-01DUP	001-WILLETS-BLVD(	DUP	11/08/24 08:45		Niha	ОК
5	P4757-02	002-35TH-AVE(SEP)	SAM	11/08/24 08:45		Niha	ОК
6	P4757-03	001-WILLETS-BLVD(0	SAM	11/08/24 08:45		Niha	ок
7	P4757-04	002-35TH-AVE(OCT)	SAM	11/08/24 08:45		Niha	ОК
8	P4762-02	EFF-WW	SAM	11/08/24 08:45		Niha	ок
9	P4764-02	TW-WTS-01	SAM	11/08/24 08:45		Niha	ОК
10	P4765-01	DSN002	SAM	11/08/24 08:45		Niha	ОК
11	P4765-03	DSN001	SAM	11/08/24 08:45		Niha	ОК
12	P4765-05	DSN003	SAM	11/08/24 08:45		Niha	ок
13	P4767-01	TOWER-2	SAM	11/08/24 08:45		Niha	ОК



P4764

Order ID:

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

8900, Fax: 908 789 8922

# **Prep Standard - Chemical Standard Summary**

Test :	pH,TSS
Prepbatch ID :	
Sequence ID/Qc Bate	ch ID: LB133337,LB133353,
Standard ID :	
Chemical ID :	
W3005,W3071,W307	72,W3093,W3094,W3107,



# **CHEMICAL RECEIPT LOG BOOK**

Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL13850-1 / Buffer Solution, PH2 (500ml)	4212E45	12/31/2024	01/31/2023 / lwona	01/31/2023 / Iwona	W3005
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14455-3 / buffer solution pH 7 yellow	4308H30	07/31/2025	01/02/2024 / JIGNESH	12/06/2023 / Iwona	W3071
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	AL14940-1 / Buffer Solution, PH12 (500ml)	2310P21	04/30/2025	01/02/2024 / JIGNESH	12/07/2023 / Iwona	W3072
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	566002 / BUFFER PH 7.00 GREEN 1PINT PK6	44001f99	12/31/2025	04/03/2024 / jignesh	04/02/2024 / jignesh	W3093
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #
PCI Scientific Supply, Inc.	1601-1 / PH 10.01 BUFFER,COLOR CD 475ML	4310g83	03/31/2025	04/03/2024 / jignesh	04/02/2024 / jignesh	W3094
				_		
Supplier	ItemCode / ItemName	Lot #	Expiration Date	Date Opened / Opened By	Received Date / Received By	Chemtech Lot #



# RICCA CHEMICAL COMPANY®

1490 Lammers Pike Batesville, IN 47006 http://www.riccachemical.com 1-888-GO-RICCA customerservice@riccachemical.com

# Certificate of Analysis

Buffer, Reference Standard, pH  $7.00 \pm 0.01$  at 25°C (Color Coded Yellow)

Lot Number: 4308H30

Product Number: 1551

Manufacture Date: AUG 09, 2023

Expiration Date: JUL 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

5 10 15 20 25 35 40 45 pH 7.12 7.09 7.06 7.04 7.027.00 6.99 6.98 6.98 6.97 6.97

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Phosphate Dibasic	7558-79-4	ACS
Potassium Dihydrogen Phosphate	7778-77-0	ACS
Preservative	Proprietary	
Yellow Dye	Proprietary	cook IIIII A Tues see at
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result	
Appearance	Yellow liquid	Passed	*Not a certified value
Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	7.002	0.02	186-I-g, 186-II-g, 191d

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer A	ASTM (D 5464)
Buffer A	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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)
1551-2.5	10 L Cubitainer®	24 months
1551-5	20 L Cubitainer®	24 months
Possesses de d'Otens en 1500 ou	· · · · · · · · · · · · · · · · · · ·	24 months

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

Youl Drandon

Paul Brandon (08/09/2023)

**Production Manager** 

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

# This product was tested in an ISO 17025 Accredited Laboratory

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

Version: 1.3 Lot Number: 4308H30 Product Number: 1551 Page 2 of 2



RICCA CHEMICAL COMPANY®

W 3072

MC. (2/01/23)

Certificate of Analysis

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

Buffer, Reference Standard, pH  $12.00 \pm 0.01$  at 25°C

Lot Number: 2310P21

Product Number: 1615

Manufacture Date: OCT 24, 2023

Expiration Date: APR 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

°C 15 35 40 12.35 12.17 11.99 11.78 11.62 Нg

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Chloride	7447-40-7	ACS
Sodium Hydroxide	1310-73-2	Reagent

Test	Specification	Result	
Appearance	Colorless liquid	Passed	*Not a certified value.

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	12.005	0.02	186-I-g, 186-II-g, 191d

pH measurements were performed in our Pocomoke City, MD laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.01) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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)
1615-1	4 L natural poly	18 months
1615-16	500 mL clear PET-G	18 months
1615-32	1 L natural poly	18 months
1615-5	20 L Cubitainer®	18 months

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

Storen Travers.

Sharon Travers (10/24/2023)

**Operations Manager** 

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

# This product was tested in an ISO 17025 Accredited Laboratory

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Version: 1.3 Lot Number: 2310P21 Product Number: 1615 Page 2 of 2



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1490 Lammers Pike Batesville, IN 47006 http://www.riccachemical.com 1-888-GO-RICCA customerservice@riccachemical.com

# Certificate of Analysis

Buffer, Reference Standard, pH  $2.00 \pm 0.01$  at  $25^{\circ}$ C

Lot Number: 4212E45

Product Number: 1493

Manufacture Date: DEC 20, 2022

Expiration Date: DEC 2024

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to ±0.01 at 25 °C only. All other pH values at their corresponding temperatures are accurate to ± 0.05.

°C 10 15 20 25 30 35 40 45 50 pН 1.93 1.98 1.98 2.00 2.01 2.03 2.03 2.04 2.04

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Potassium Chloride	7447-40-7	ACS
Hydrochloric Acid	7647-01-0	ACS

Test	Specification	Result	
Appearance	Colorless liquid	Passed	*Not a certified value.
Test	0		

Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	2.000	0.02	185i, 186-I-g, 186-II-g
**	***********************		1001' 100 T.S' 100-II-B

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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)
1493-1	4 L natural poly	24 months
1493-16	500 mL natural poly	24 months
1493-32	1 L natural poly	24 months
1493-5	20 L Cubitainer®	24 months

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

faul Drandon

Paul Brandon (12/20/2022)

**Production Manager** 

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

# This product was tested in an ISO 17025 Accredited Laboratory

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Version: 1.3 Lot Number: 4212E45 Product Number: 1493 Page 2 of 2



# RICCA CHEMICAL COMPANY

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Certificate of Analysis Onlong Concession Co

Buffer, Reference Standard, pH  $7.00 \pm 0.01$  at 25°C (Color Coded Yellow)

Lot Number: 4401F99

Product Number: 1551

Manufacture Date: JAN 08, 2024

Expiration Date: DEC 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST traceable pH value is certified to  $\pm 0.01$  at 25 °C only. All other pH values at their corresponding temperatures are accurate to  $\pm 0.05$ .

5 10 15 20 25 30 35 40 45 50 pН 7.12 7.09 7.06 7.04 7.02 7.00 6.99 6.98 6.98 6.97 6.97

Name	CAS#	Grade	
Water	7732-18-5	ACS/ASTM/USP/EP	
Sodium Phosphate Dibasic	7558-79-4	ACS	
Potassium Dihydrogen Phosphate	7778-77-0	ACS	
Preservative	Proprietary	II II Ta' .	
Yellow Dye	Proprietary		
Sodium Hydroxide	1310-73-2		

Test	Specification	Result	
Appearance	Yellow liquid	Passed	*Not a certified value
Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	7.004	0.02	186-I-g, 186-II-g, 191d

Specification	Reference	
Commercial Buffer Solutions	ASTM (D 1293 B)	
Buffer A	ASTM (D 5464)	
Buffer A	ASTM (D 5128)	

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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)
1551-1	4 L natural poly	24 months
1551-1CT	4 L Cubitainer®	24 months
1551-2.5	10 L Cubitainer®	24 months
1551-5	20 L Cubitainer®	24 months
		V (V)

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

faul Drandon

Paul Brandon (01/08/2024)

**Production Manager** 

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

# This product was tested in an ISO 17025 Accredited Laboratory

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Version: 1.3 Lot Number: 4401F99 Product Number: 1551 Page 2 of 2



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Certificate of Analysis

# Buffer, Reference Standard, pH $10.00 \pm 0.01$ at 25°C (Color Coded Blue)

Lot Number: 4310G83

Product Number: 1601

Manufacture Date: OCT 09, 2023

Expiration Date: MAR 2025

The certified value for this product is confirmed in independent testing by a second qualified chemist. The NIST traceable pH value is certified to  $\pm 0.01$  at 25 °C only. All other pH values at their corresponding temperatures are accurate to  $\pm 0.05$ .

°C 0 5 10 15 20 25 30 35 40 50

pH 10.31 10.23 10.17 10.11 10.05 10.00 9.95 9.91 9.87 9.81

Name	CAS#	Grade
Water	7732-18-5	ACS/ASTM/USP/EP
Sodium Carbonate	497-19-8	ACS
Sodium Bicarbonate	144-55-8	ACS
Sodium Hydroxide	1310-73-2	Reagent
Preservative	Proprietary	110000011
Blue Dye	Proprietary	
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Test	Specification	Result	
Appearance	Blue liquid	Passed	*Not a certified value.
Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	10.003	0.02	186-I-g, 186-II-g, 191d

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer C	ASTM (D 5464)
Buffer C	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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)
1601-16	500 mL natural poly	18 months
1601-5	20 L Cubitainer®	18 months

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

Hand Brandon

Paul Brandon (10/09/2023)

**Production Manager** 

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

# This product was tested in an ISO 17025 Accredited Laboratory

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Version: 1.3 Lot Number: 4310G83 Product Number: 1601 Page 2 of 2



# RICCA CHEMICAL COMPANY

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1-888-GO-RICCA

# Certificate of Analysis

Manufacture Date: MAR 09, 2024

Expiration Date: FEB 2026

Buffer, Reference Standard, pH  $4.00 \pm 0.01$  at 25°C (Color Coded Red)

Lot Number: 4403F90

Product Number: 1501

The certified value for this product is confirmed in independent testing by a second qualified chemist.

The NIST Traceable pH value is certified to  $\pm 0.01$  at 25 °C only. All other pH values at their corresponding temperatures are accurate to  $\pm 0.05$ .

10 15 20 25 30 35 45 50 4.00 4.00 pН 4.00 4.00 4.00 4.00 4.01 4.02 4.03 4.04 4.06

Name	CAS#	Grade					
Water	7732-18-5	ACS/ASTM/USP/I	EP				
Potassium Acid Phthalate	877-24-7	Buffer	•				
Preservative	Proprietary	Commercial	• •				
Red Dye	Proprietary	Purified					
Test	Specification	Result					
Appearance	Red liquid	Passed	*Not a certified value				
Test	Certified Value	Uncertainty	NIST SRM#				
pH at 25°C (Method: SQCP027, SQCP033)	4.000	0.02	185i, 186-I-g, 186-II-g				

Specification	Reference
Commercial Buffer Solutions	ASTM (D 1293 B)
Buffer B	ASTM (D 5464)
Buffer B	ASTM (D 5128)

pH measurements were performed in our Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387.02) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The uncertainty is calculated from the uncertainty of the measurement variation from sample to sample, the uncertainty in the NIST Standard Reference Material, and the uncertainty of the measurement process. The uncertainty is multiplied by k=2, corresponding to 95% coverage in a normal distribution. 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)							
1501-2.5	10 L Cubitainer®	24 months							
1501-32	1 L natural poly	24 months							
1501-5	20 L Cubitainer®	24 months							

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

Hand Brandon

Paul Brandon (03/09/2024)

**Production Manager** 

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# This product was tested in an ISO 17025 Accredited Laboratory

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Version: 1.3 Lot Number: 4403F90 Product Number: 1501 Page 2 of 2



# SHIPPING DOCUMENTS



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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

QA Control Code: A2070148