

#### Prep Standard - Chemical Standard Summary

Order ID:
Q1985

Test:
pH,TSS

Prepbatch ID:
Sequence ID/Qc Batch ID:
LB135711,LB135749,
Standard ID:

**Chemical ID :** 

W3071,W3072,W3093,W3161,W3178,W3191,



475ML

#### CHEMICAL RECEIPT LOG BOOK

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.	AL13850-1 / Buffer Solution, PH2 (500ml)	2411E26	10/31/2026	12/09/2024 / Iwona	12/09/2024 / Iwona	W3161
Supplier	ItemCode / ItemName	Lot #	Expiration	Date Opened /	Received Date /	Chemtech
PCI Scientific Supply, Inc.	AL14055-3 / PH 4 BUFFER SOLUTION	2411A93	Date 10/30/2026	Opened By 04/01/2025 / JIGNESH	Received By 01/27/2025 / jignesh	Lot # W3178
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	2410F80	03/31/2026	04/01/2025 / JIGNESH	03/13/2025 / jignesh	W3191

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# W<sup>3</sup>07/ Mc 12/6/23 Certificate of Analysis 12

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#### 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  $\pm 0.01$  at 25 °C only. All other pH values at their corresponding temperatures are accurate to  $\pm 0.05$ .

°C pH	0 7.12	5 7.09	$\begin{array}{c} 10 \\ 7.06 \end{array}$	15 7.04	20 7.02	$\begin{array}{c} 25 \\ 7.00 \end{array}$	30 6.99	35 6.98	$\begin{array}{c} 40 \\ 6.98 \end{array}$	45 6.97	50 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	1111 B. Luce		
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	Re	ference		
Commercial Buffer Solutions	AS	TM (D 1293 B)		
Buffer A		TM (D 5464)		
Buffer A		ГМ (D 5128)		

per industributions were periorined in our Batesvine, 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. 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		

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

Foul Brandon

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

# RICCA CHEMICAL COMPANY<sup>®</sup> W<sup>3,072</sup> M<sup>c</sup>. (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 $25^{\circ}C$

Lot Number: 2310P21	Product Number: 1615	Manufacture Date: OCT 24, 2023
Lot Humper: 20101 21	110ddet 14dmber: 1015	<b>Expiration Date:</b> APR 2025

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

°C	15	20	<b>25</b>	30	35	40
pН	12.35	12.17	11.99	11.78	11.62	11.46

Name	CAS#	Grade	
Water	7732-18-5	ACS/ASTM/USP/EP	
Potassium Chloride	7447-40-7	ACS	6.00
Sodium Hydroxide	1310-73-2	Reagent	
Test	Specification	Result	
Appearance	Colorless liquid	Passed *Not a certified va	alue

		in the second se		
Test	Certified Value	Uncertainty	NIST SRM#	
pH at 25°C (Method: SQCP027, SQCP033)		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 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 Containe		
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)

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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

# RICCA CHEMICAL COMPANY<sup>®</sup> $3^{003}$ $0^{001}$ Certificate of Analysis $0^{010}$

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

Manufacture Date: JAN 08, 2024

Expiration Date: DEC 2025

#### Buffer, Reference Standard, pH 7.00 ± 0.01 at 25°C (Color Coded Yellow)

Product Number: 1551

°C pH	0 7.12	5 7.09	10 7.06	15 7.04	20 7.02	25 7.00	30 6.99	35 6.98	40 6.98	45 6.97	50 6.97	
Name						CA	S#		1.15	Grade		
Water						77	32-18-5			ACS/AS	STM/USP/I	ξP
Sodiun	n Phosp	hate Di	basic			758	58-79-4	-		ACS		
Potass	ium Dił	nydrogen	n Phospi	hate		77	78-77-0			ACS		
Preserv	vative					Pro	prietar	У				
Yellow	Dye				•		prietar					
Sodium	n Hydro	xide					.0-73-2	· .				
Test						1.1	Spec	ification	1	Re	sult	
Appear	ance				LEC.		Yell	ow liqui	d	Pas	ssed	*Not a certified value
<u>Fest</u>	Sec.				54-		Cert	ified Va	lue	Un	certainty	NIST SRM#
pH at 2	5°C (M	ethod: S	QCP02	7, SQCP	033)	7.004				0.0	2	186-I-g, 186-II-g, 191d
Specification					Reference							
Comme	rcial Bu	ffer Sol	utions						ASTN	A (D 1293	B)	
Buffer A						ASTM (D 54						
Buffer A	1								ASTN	4 (D 5128		

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
Decommonded Steven 1500	2000 (F00) - 000T)	

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

Lot Number: 4401F99

Paul Drondon

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

### RICCA CHEMICAL COMPANY<sup>®</sup> W3161 Rec. on 12/09/24 by IZ

# **Certificate of Analysis**

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

Lot Number:	2411E26	Pr
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oduct Number: 1493

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

Manufacture Date: NOV 11, 2024

Expiration Date: OCT 2026

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	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	1.994	0.02	185i, 186-I-g, 186-II-g

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)				
1493-1	4 L natural poly	24 months				
1493-16	500 mL natural poly	24 months				
1493-1CT	4 L Cubitainer®	24 months				
1493-2.5	10 L Cubitainer®	24 months				
1493-32	1 L natural poly	24 months				
Recommended Storage: 15°C - 30°C (59°F - 86°F)						

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

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Jose Pena (11/11/2024) Operations Manager

#### This product was tested in an ISO 17025 Accredited Laboratory

# RICCA CHEMICAL COMPANY®

# **Certificate of Analysis**

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

(ed) Manufacture Date: NOV 04, 2024 Expiration Date: OCT 2026

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 correspondence of the test of te

Lot Number: 2411A93

00	0	F	10			0 01117.21	n other p.	a seures s	it their co	rrespondi	ng tempera	tures are accurate to $\pm 0.05$ .
рH	4.00	о 4.00	10 4.00	15	20	25 4.00	30	35	40	45	50 4.06	

Product Number: 1501

Name	CAS#	Grade	
Water Potassium Acid Phthalate Preservative Red Dye	7732-18-5 877-24-7 Proprietary Proprietary	ACS/ASTM/USP/ Buffer Commercial Purified	EP
Test	Specification	Result	
Appearance	Red liquid	Passed	*Not a certified value
Test	Certified Value	Uncertainty	NIST SRM#
pH at 25°C (Method: SQCP027, SQCP033)	4.008	0.02	185i, 186-I-g, 186-II-g
Specification	Ref	erence	
Commercial Buffer Solutions Buffer B Buffer B pH measurements were performed in our Pocomoke City, M certified traceable to National Institute of Standards and T chain of comparisons. The uncertainty is calculated from th the NIST Standard Reference Material, and the uncertainty 95% coverage in a normal distribution. Volumetric glasswar it is calibrated before first use and recalibrated regularly in calibrated regularly with weights certified traceable to the N pefore first use and recalibrated regularly with a thermomer locuments that assure manufacture according to validated re	AST AST AST ID laboratory under ISO/IEC 1702 echnology (NIST) Standard Refere e uncertainty of the measurement y of the measurement process. The re complies with Class A tolerance accordance with ASTM E 542 and	M (D 1293 B) M (D 5464) M (D 5128) 5 accreditation (ANAB Conce Material as indicated variation from sample to uncertainty is multiplied requirements of ASTM E NIST Procedure NBSIR	above via an unbroken sample, the uncertainty in by k=2, corresponding to 288 and NIST Circular 434; 74-461 Belance are

	Size / Package Type	Shelf Life (Il monored Que to )
1501-16 1501-2.5 1501-5 Recommended Storage: 15°C - 3	500 mL natural poly 10 L Cubitainer® 20 L Cubitainer®	Shelf Life (Unopened Container) 24 months 24 months 24 months
Storage, 10 C . 3	U°C (59°F - 86°F)	

CCA CHEMICAL COMPANY U3191

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# Certificate of Analysis

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

Lot Number: 2410F80

1000

Product Number: 1601

Manufacture Date: OCT 09, 2024 Expiration Date: MAR 2026

Page 1 of 2

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 correspon

°C					01 00 <u>20</u>	Сощу. Al	1 other pl	1 values a	t their con	respondi	na tommomet
$\cup$	0	5	10	15	20	05				a coponal	ng temperatures are accurate to $\pm 0.05$ .
$_{ m pH}$	10.31	10.23	10.17	10 11	10.05	25	30	35	40	50	
				10.11	10.00	10.00	9.95	9.91	9.87	9.81	

Name	CAS#	Grade	The second s	
Water	7732-18-5			
Sodium Carbonate		ACS/ASTM/USP/	ΈP	
Sodium Bicarbonate	497-19-8	ACS		
Sodium Hydroxide	144-55-8	ACS		
Preservative	1310-73-2	Reagent		
Blue Dye	Proprietary	anotegoint.	and the second s	
	Proprietary			
Test	(1 an		Report Rando man	
Appearance	Specification	Result		
Fest	Blue liquid	Passed	*Not a certified valu	
· · · · · · · · · · · · · · · · · · ·	Certified Value	Uncertainty	NIST SRM#	
oH at 25°C (Method: SQCP027, SQCP033)	10.009	the second s		
Specification		0.02	186-I-g, 186-II-g, 191d	
Commercial Buffer Solutions	Refe			
Buffer C	AST			
Buffer C		M (D 5464)	× 80 T. 10 . 2010 T. 10 10	
pH measurements were performed in our Possenale. City		M (D 5128)		

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; calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are 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	QL-167 'S AT
1601-1		Shelf Life (Unopened Container)
	EDO TOTAL PROVIDENCE AND	18 months
1601-1CT	500 mL natural poly 4 L Cubitainer®	18 months
1601-2.5 1601-32		18 months
1001-32		
1601-5	+ D natural poly	18 months
ersion: 1.3		10 11010.08
	Lot Name L. Lo La am	umber: 1601