

Prep Standard - Chemical Standard Summary

Order ID : Q1069

Test : Ignitability,Percent Solids,pH

Prepbatch ID :

Sequence ID/Qc Batch ID: LB134243,LB134254,

Standard ID :

Chemical ID :

W3071,W3072,W3093,W3094,W3107,W3161,



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.	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 #	
Supplier PCI Scientific Supply, Inc.	ItemCode / ItemName AL14055-3 / PH 4 BUFFER SOLUTION	Lot # AL14055-3	Expiration Date 02/27/2026	Date Opened / Opened By 09/05/2024 / jignesh	Received Date / Received By 05/13/2024 / jignesh	Chemtech Lot # W3107	
Supplier PCI Scientific Supply, Inc. Supplier	ItemCode / ItemName AL14055-3 / PH 4 BUFFER SOLUTION ItemCode / ItemName	Lot # AL14055-3 Lot #	Expiration Date 02/27/2026 Expiration Date	Date Opened / Opened By 09/05/2024 / jignesh Date Opened / Opened By	Received Date / Received By 05/13/2024 / jignesh Received Date / Received By	Chemtech Lot # W3107 Chemtech Lot #	

RICCA CHEMICAL COMPANY®

W³07/ Mc 12/6/23 Certificate of Analysis 12

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Buffer, Reference Standard, pH 7.00 ± 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 .

°C 0 5 10 15 20 25 30 35 40 45 50 pH 7.12 7.09 7.06 7.04 7.02 7.00 6.99 6.98 6.98 6.97 6.97								*			a coponani.	18 tomber
	°C pH	0 7.12	5 7.09	$\begin{array}{c} 10 \\ 7.06 \end{array}$	15 7.04	$\begin{array}{c} 20 \\ 7.02 \end{array}$	$\begin{array}{c} 25 \\ 7.00 \end{array}$	30 6.99	35 6.98	40 6.98	45 6.97	50 6.97

Name	CAS#	Grade				
Water	7732-18-5	ACS/ASTM/USP/EP				
Sodium Phosphate Dibasic	7558-79-4	7558-79-4 ACS				
Potassium Dihydrogen Phosphate	7778-77-0	ACS				
Preservative	Proprietary					
Yellow Dye	Proprietary					
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	AS	TM (D 5464)				
Buffer A	AS	TM (D 5128)				
pH measurements were performed in our Batesville, IN la	boratory under ISO/IEC 17025 ac	creditation (ANAB Certific	ate L2387 02) and are certified			

The incontinents were periodicity in dur 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 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		

Faul 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[®] W^{3,072} M^c. (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 ± 0.01 at $25^{\circ}C$

Lot Number: 2310P21	Product Number 1615	Manufacture Date: OCT 24, 2023
Lot Humber: 20101 21	r roudet number: 1015	Expiration Date: APR 2025

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

°C	15	20	25	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	0000 P 1 48411111111111111111111111111111111	
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 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.

Size / Package Type	Shelf Life (Unopened Container)
4 L natural poly	18 months
500 mL clear PET-G	18 months
1 L natural poly	18 months
20 L Cubitainer®	18 months
	Size / Package Type 4 L natural poly 500 mL clear PET-G 1 L natural poly 20 L Cubitainer®

nron Jravers

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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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

рĤ	0 7.12	5 7.09	10 7.06	15 7.04	$\begin{array}{c} 20 \\ 7.02 \end{array}$	$25 \\ 7.00$	30 6.99	35 6.98	40 6 98	45 6 97	50 6 97	
			_					0.00	0.00	0.01	0.57	
Name						CA	.S#			Grade		
Water						778	32-18-5			ACS/AS	STM/USP/I	EP
Sodium	n Phosp	hate Di	basic			758	58-79-4	-		ACS		
Potassi	um Dił	nydrogen	n Phospi	hate		777	78-77-0			ACS		
Preserv	vative					Pro	prietar	y				
Yellow	Dye				·	Pro	prietar	7				
Sodium	Hydro	xide	ide 1310-73-2									
Test						4.27	Spec	ification	L	Re	sult	
Appeara	ance						Yell	ow liqui	d	Pas	ssed	*Not a certified valu
Test	inited.				545		Cert	ified Va	ue	Un	certainty	NIST SRM#
pH at 2	25°C (Method: SQCP027, SQCP033)						7.004	1		0.0	2	186-I-g, 186-II-g, 191d
Specific	ation					<u>.</u>		-115	Refe	rence		
Commer	cial Bu	ffer Sol	utions						ASTN	M (D 1293	B)	
Buffer A						ASTM (D 5464)						
									ASTN	A (D 5128)	

ement 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				

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°

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Certificate of Analysis

Buffer, Reference Standard, pH 10.00 ± 0.01 at 25°C (Color Coded Blue)

Lot Number: 4310G83 Product Number: 1601									Manuf	acture Date: OCT 09, 2023	
100110	illiour.	10100	100	-	rouuct	1 umbe	1, 100	T		1	Expiration Date: MAR 2025
The cert The NIS	ified valu T traceab	e for this le pH val	product is ue is certi	confirme fied to ±0.	d in indep 01 at 25 °	endent te C only. Al	sting by a l other pI	a second q H values a	ualified o t their co	hemist. prresponding temperatu	res are accurate to $+0.05$
°C 0 5 10			15	20	25	30	35	40	50	$100 \text{ are accurate to } \pm 0.00.$	
$_{\rm pH}$	10.31	10.23	10.17	10.11	10.05	10.00	9.95	9.91	9.87	9.81	
Name						CA	S#	ang.		Grade	
Water						778	32-18-5			ACS/ASTM/USP/	EP
Sodiun	ı Carbo	nate				497	-19-8			ACS	
Sodium	n Bicarb	onate				144	-55-8			ACS	
Sodium	a Hydro	xide				131	0-73-2			Reagent	
Preserv	vative					Pro	prietar	v		Trongont	
Blue D	ye					Pro	prietar	y			· · · · ·
Test	0.4					1.10	Spec	ification	ı	Result	
Appear	ance	· · · ·				Blue liquid				Passed	*Not a certified value.
Test			비난지			Certified Value			lue	Uncertainty	NIST SRM#
pH at 2	5°C (M	ethod: S	QCP02	7, SQCF	P033)		10.00	03		0.02	186-I-g, 186-II-g, 191d
Specific	ation			1	4-71				Refe	rence	
Comme	cial Bu	ffer Sol	utions						ASTN	4 (D 1293 B)	
Buffer C	; 								ASTN	1 (D 5464)	
Buffer C									ASTN	4 (D 5128)	
pH measu traceable compariso Standard a normal before firs	to Nation ons. The u Reference distributi	were perf al Institu incertaint e Materia on. Volum	ormed in te of Stan y is calcul l, and the netric glas	our Bates dards and lated from uncertain sware con	ville, IN 1. I Technolo the unce ty of the p nplies wit	aboratory ogy (NIST) rtainty of measurem h Class A	under IS Standar the meas ent proce tolerance	O/IEC 170 d Referent urement v ess. The un requirem	25 accre ce Mater ariation acertaint ents of A	ditation (ANAB Certific ial as indicated above v from sample to sample, y is multiplied by k=2, o STM E 288 and NIST (ate L2387.02) and are certified ia an unbroken chain of the uncertainty in the NIST corresponding to 95% coverage in 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**

I alt Humper	Size / Package Type	Shelf Life (Unopened Container)		
1601-16	500 mL natural poly	18 months		
1601-5	20 L Cubitainer®	18 months		
December 1, 100 1500				

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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

RICCA CHEMICAL COMPANY

Certificate of Analysis

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

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

Product Number: 1501

Manufacture Date: MAR 09, 2024 Expiration Date: FEB 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	0	5	10	15	20	25	30	35	40	45	50	
\mathbf{pH}	4.00	4.00	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	Re	ference	
Commercial Buffer Solutions	ASTM (D 1293 B)		
Buffer B	AS	TM (D 5464)	

Buffer 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 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.

ASTM (D 5128)

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		

Foul Brandon

Paul Brandon (03/09/2024) 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[®] W3161 Rec. on 12/09/24 by IZ

Certificate of Analysis

Buffer, Reference Standard, pH 2.00 ± 0.01 at 25° 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	\mathbf{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
Decommonded Storege: 15°C - 20°C (50°F.	9COF)	

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Jose Pena (11/11/2024) Operations Manager

This product was tested in an ISO 17025 Accredited Laboratory