avantor™

VWR® pH Buffer Standard Solutions

VWR®

pH buffer solutions

The measurement of pH is probably one of the most commonly used analytical methods. But to avoid serious mistakes in quality assurance and 'in process' control, you need to be sure of your results. The use of Certified Reference Materials (CRMs) will guarantee reliable results.

Our wide range offers:

- Both CRMs and analytical pH buffer solutions
- A complete range from pH 1.00 to 12.00
- Two distinct ranges at 20 °C and 25 °C
- Variety of pack sizes/types: 20 ml to 10 L, ampoules, sachets, bottles, bag-in-boxes and bulk packs
- Variety of formats: ready-to-use solutions, concentrates, tablets and capsules
- Labelled with minimum shelf life/batch number
- All relevant information (e.g., traceability, accreditation, preparation and use) can be found on the batch-specific Certificate of Analysis

COLOR-CODED BUFFER SOLUTIONS

For easy identification of buffer concentration

- All the products are produced and certified in accordance with ISO 17034 accreditation (except product 83610.*)

ISO 17034 - Certified Reference Material - Accredited by BELAC under accreditation N°: 542-RM

Description	Buffer contains	Quantity	Packaging type*	Cat. No.
pH 4 (red)	Potassium hydrogenphthalate	500 ml	PB	**32044.268**
		1 L	PB	**32044.292**
		5 L	BB	**32044.372**
		10 L	BB	**32044.418**
pH 7 (green)	Potassium di-hydrogenphosphate / di-Sodium hydrogenphosphate	500 ml	PB	**32045.262**
		1 L	PB	**32045.295**
		5 L	BB	**32045.375**
		10 L	BB	**32045.412**
pH 9 (blue)	Boric acid / potassium chloride / sodium hydroxide	500 ml	PB	**32046.265**
		1 L	PB	**32046.298**
		5 L	BB	**32046.378**
pH 10 (yellow)	Sodium hydrogen carbonate / sodium carbonate anhydrous	500 ml	PB	**85680.260**
		1 L	PB	**85680.295**
Set: pH 4, 7 and 10	Color codes: pH 4 red, pH 7 green, pH 10 blue	3×100 ml	SE	**83610.600**
		3×250 ml	SE	**83610.610**

*Packaging type abbreviations

BB: Bag-in-box
DB: Dosing bottle
PB: Plastic bottle
PC: Plastic container
VI: Vial (plastic)
SE: Set

COLOR-CODED BUFFERS IN DOSING BOTTLES

Packed in an innovative twin-neck 1 L bottle. Buffer stock is protected from contamination once the bottle is open, while the correct amount is dispensed into the calibration chamber for use.

- Traceability to SRM from NIST
- Produced and certified in accordance with ISO 17034
- Easy to carry, ideal for field work
- No additional containers needed, less waste

Description	Quantity	Packaging type*	Cat. No.
pH 4 (red)	1 L	DB	**32044.290**
pH 7 (green)	1 L	DB	**32045.290**
pH 9 (blue)	1 L	DB	**32046.290**
pH 10 (yellow)	1 L	DB	**85680.290**

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BUFFERS IN 20 OR 30 ML SACHETS

There is nothing to mix or measure; just take and open one sachet and your fresh solution is ready to use. Our buffer sachets are perfect for the field and lab since no extra glassware or measuring devices are needed, and nothing needs to be washed. These single-dose sachets ensure that you have just the right amount of solution every time, preventing cross-contamination of your samples.

- Available in boxes of 30 sachets of either 20 or 30 ml (pH 4, 7, 9 or 10 and sets of pH 4, 7 and 9 or pH 4, 7 and 10)
- Freshness sealed
- Easy to use, pocket size, reliable and accurate
- Batch-specific Certificates of Analysis included in each pack showing measurement uncertainty, expiry dates and traceability to NIST

Packaging: 30 ml sachets are produced and certified in accordance with ISO 17034 accreditation, and 20 ml sachets will be under accreditation soon. Two versions available: 30×30 ml in a regular box and 30×20 ml in a user-friendly dispenser box.

Buffer solution pH @ 20 °C	Quantity	Cat. No.
Single buffer types in packs of 30		
4	30×20 ml	**85041.002**
	30×30 ml	**85041.001**
7	30×20 ml	**85042.002**
	30×30 ml	**85042.001**
9	30×20 ml	**85043.002**
	30×30 ml	**85043.001**
10	30×20 ml	**85044.002**
	30×30 ml	**85044.001**

Buffer solution pH @ 20 °C	Quantity	Cat. No.
Sets with 10 sachets of each pH		
4, 7 and 9	30×20 ml	**85045.002**
	30×30 ml	**85045.001**
4, 7 and 10	30×20 ml	**85046.002**
	30×30 ml	**85046.001**

READY-TO-USE pH BUFFERS @ 20 AND 25 °C
AVS® TITRINORM®

pH buffers @ 25 °C

- Traceable to Standard Reference Materials (SRMs) from NIST
- Batch number and packing date for traceability
- Certificate of Analysis available on **vwr.com**
- All the products below are produced and certified in accordance with ISO 17034 accreditation (except 84593)

Certificate of Analysis available on vwr.com

ISO 17034 - Certified Reference Material - Accredited by BELAC under accreditation N°: 542-RM

Description	Quantity	Packaging type*	Accreditation	Cat. No.
pH 1,68	500 ml	PB	20°C	**85506.260**
pH 4,01	500 ml	PB	20°C	**85511.260**
pH 6,87	500 ml	PB	20°C	**85515.260**
pH 7,41	500 ml	PB	20°C	**85516.260**
pH 9,18	500 ml	PB	20°C	**85517.260**
pH 10,01	500 ml	PB	20°C	**85518.260**
pH 12,45	500 ml	PB	20°C	**84593.260**

pH buffers @ 20 °C

- All products below are produced and certified according to ISO 17034 accreditation except pH 1, 11 and 12 buffers
- Traceable to NIST
- Manufactured from analytical-grade products presenting a high accuracy: 0.02 pH unit from pH 1.00 to 10.00 and 0.05 pH unit for pH pH 11.00 and 12.00
- Available in different pack sizes of 100 ml, 500 ml, 1 L and 5 L plastic bottles as well as in bag-in-box (5 and 10 L)

Description	Buffer contains	Quantity	Packaging type*	Accreditation	Cat. No.
pH 1	Glycine/sodium chloride/ hydrochloric acid	1 L	PB	-	**32031.297**
pH 2	Citric acid/ sodium hydroxide/ hydrochloric acid	500 ml	PB	**ISO 17034**	**32032.260**
		1 L	PB	**ISO 17034**	**32032.291**
pH 3	Citric acid/ sodium hydroxide/ hydrochloric acid	1 L	PB	**ISO 17034**	**32033.294**
		5 L	BB	**ISO 17034**	**32033.374**
pH 4	Potassium hydrogen phthalate	100 ml	PB	**ISO 17034**	**32095.184**
		500 ml	PB	**ISO 17034**	**32095.264**
		1 L	PB	**ISO 17034**	**32095.297**
		5 L	PC	**ISO 17034**	**32095.366**
		5 L	BB	**ISO 17034**	**32095.377**
pH 4,66	Acetic acid/sodium acetate	500 ml	PB	**ISO 17034**	**98192.260**
		1 L	PB	**ISO 17034**	**98192.290**
pH 5	Citric acid/sodium hydroxide	1 L	PB	**ISO 17034**	**32035.291**
pH 6	Citric acid/sodium hydroxide	1 L	PB	**ISO 17034**	**32036.294**
pH 6.88	Dihydrogen phosphate/ disodium hydrogen phosphate	500 ml	PB	**ISO 17034**	**83601.260**
		1 L	PB	**ISO 17034**	**83601.290**
pH 7	dDihydrogen phosphate/ disodium hydrogen phosphate	100 ml	PB	**ISO 17034**	**32096.187**
		500 ml	PB	**ISO 17034**	**32096.267**
pH 7	Dihydrogen phosphate/ disodium hydrogen phosphate	1 L	PB	**ISO 17034**	**32096.291**
		5 L	PC	**ISO 17034**	**32096.360**
		5 L	BB	**ISO 17034**	**32096.371**
		10 L	BB	**ISO 17034**	**32096.400**

Description	Buffer contains	Quantity	Packaging type*	Accreditation	Cat. No.
pH 8	Disodium tetraborate/ hydrochloric acid	1 L	PB	**ISO 17034**	**32038.291**
pH 9	Boric acid/ potassium chloride/ sodium hydroxide	500 ml	PB	**ISO 17034**	**32039.261**
		1 L	PB	**ISO 17034**	**32039.294**
		5 L	BB	**ISO 17034**	**32039.374**
pH 9 (borate free)	Glycocol/glycine/ sodium hydroxide	1 L	PB	-	**32037.297**
pH 9.22	Disodium tetraborate	500 ml	PB	**ISO 17034**	**32097.261**
		1 L	PB	**ISO 17034**	**32097.290**
pH 10	Sodium hydrogen carbonate/sodium carbonate	100 ml	PB	**ISO 17034**	**32040.185**
		500 ml	PB	**ISO 17034**	**32040.260**
		1 L	PB	**ISO 17034**	**32040.298**
		5 L	BB	**ISO 17034**	**32040.378**
pH 10 for total hardness	Ammonia/ ammonium chloride/EDTA dipotassium magnesium salt	500 ml	PB	-	**98213.260**
pH 10 for determination of water hardness	Ammonia/ ammonium chloride/magnesium sulfate/EDTA disodium salt	1 L	GB	-	**160204A**
pH 11	Disodium hydrogen phosphate/ sodium hydroxide	1 L	PB	-	**32041.292**
pH 12	Disodium hydrogen phosphate/ sodium hydroxide	1 L	PB	-	**32042.295**

BUFFER SOLUTIONS, SECONDARY STANDARDS

- Solution standardized @ 25 °C
- Accurate to ±0.01 pH units (except pH 12.454 with 0.050 pH units)
- Traceable to NIST, DIN 19266 and IUPAC
- Temperature dependence data is printed on the labels, as are batch number and expiry date
- Supplied in 500 ml packs

Description	Packaging type*	Quantity	Cat. No.
pH 1.679	PB	500 ml	**84580.260**
pH 3.776	PB	500 ml	**84581.260**
pH 4.005	PB	500 ml	**84582.260**
pH 6.865	PB	500 ml	**84583.260**
pH 7.000	PB	500 ml	**85788.260**
pH 7.413	PB	500 ml	**84584.260**
pH 9.180	PB	500 ml	**84585.260**
pH 10.012	PB	500 ml	**84586.260**
pH 12.454	PB	500 ml	**84587.260**

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pH ELECTRODE MAINTENANCE KIT

pH measurement is one of the most frequently and universally made measurements in science.

What is often not fully understood is the fact that a large number of problems related to pH measurement are caused by incorrect selection, care or maintenance of the electrodes, with particular emphasis on the reference electrode.

VWR® offers a full range of products to optimize the life and use of your electrodes. In addition to several individual potassium chloride electrolytic solutions, electrode cleaning solutions and of course pH buffer standard solutions, we offer a user-friendly electrode maintenance kit.

SPECIAL pH BUFFERS IN TABLETS FOR HEMATOLOGY

Buffer tablets for the preparation of microscopical staining solution provide a rapid and convenient method for preparing a buffer solution.

- One tablet dissolved in distilled water and made up to 100 ml produces a solution of the stated pH at 20 °C
- The molarity of these buffer solutions is 0.005 M
- Delivered in plastic pots

Description	Packaging type*	Quantity	Cat. No.
Buffer tablets make 100 ml			
pH 7	PC	50 tablets	**331552S**
pH 9.22	PC	50 tablets	**331562U**
pH 6.8	PC	50 tablets	**331932D**
pH 7.2	PC	50 tablets	**331942F**

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Components:

- pH 4 buffer solution, red (100 ml)
- pH 7 buffer solution, green (100 ml)
- pH 10 buffer solution, blue (100 ml)
- Electrode cleaning solution (100 ml)
- Potassium chloride 3 mol/L (100 ml)

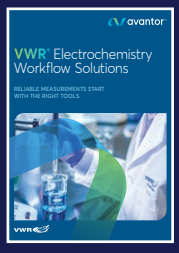
Description	Cat. No.
1 Set	**83609.600**

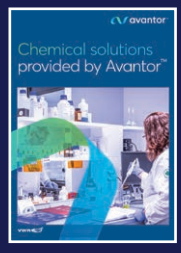
ADVANCE YOUR MEASUREMENTS WITH CONFIDENCE.

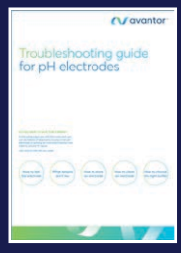
Explore the complete range of VWR electrochemistry solutions, including meters, electrodes, buffers, standards, volumetric solutions, glassware and accessories, all designed for accuracy, repeatability and efficiency at every stage of your workflow.

Whether you're preparing samples, calibrating instruments, performing routine testing or running titrations, our integrated portfolio helps you bundle smarter and work more effectively.

Discover more at avantorsciences.com







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