Buffer solutions – working standards pH of 2nd category

INTENDED FOR

reproducing and transmitting the activity index of hydrogen ions (pH) in aqueous solutions; verification and calibration of pH measuring instruments according to GOST 8.120-2014 of controlling the metrological characteristics when tested, and for type approval; error control of measurement procedures (MP) pH of liquid media.

Buffer solutions are aqueous solutions of chemicals. Solutions reproduce values of activity of hydrogen ions. Buffer solutions are contained in plastic bottles. The bottle is leakproof and has a screw cap with a protective ring. Buffer solutions have 9 modifications, that differ by concentration of chemicals and reproducible values.

FIELD OF APPLICATION

for verification and calibration of working measuring instruments in research institutions, analytical laboratories pH.

Limits of permissible absolute accuracy of pH reproduction:	
in the temperature range from + 5 to + 20°C	±0,02
in the temperature range from + 20 to + 40°C	±0,01
in the temperature range from + 40 to + 80°C	±0,02
Bottle volume	125 cm^3, 270 cm^3
Expiry date	1 year

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Marking of buffer solutions	Marking of buffer solutions	Chemical formula of substances	Substance concentration	pH reproducible value at temperature +25°C
BR-pH-1	Potassium tetraoxalate dihydrate	$KH_3(C_2O_4)_2 \cdot 2H_2O$	0,1	1,48
BR-pH-2	Potassium tetraoxalate dihydrate	$KH_3(C_2O_4)_2 \cdot 2H_2O$	0,05	1,65
BR-pH-3	Potassium hydrogenphthalate	$KHC_8H_4O_4$	0,05	4,01
BR-pH-4	Potassium phosphate monosubstituted Sodium phosphate twice-substituted	KH_2PO_4 Na_2HPO_4	0,025 0,025	6,86
BR-pH-5	Potassium phosphate monosubstituted Sodium phosphate twice-substituted	KH_2PO_4 Na_2HPO_4	0,0087 0,0304	7,41
BR-pH-6	Potassium phosphate monosubstituted Sodium phosphate twice-substituted	$Na_2B_4O_7 \cdot 10H_2O$	0,01 0,04	7,43
BR-pH-7	Sodium tetraborate decahydrate	$Na_2B_4O_7 \cdot 10H_2O$	0,01	9,18
BR-pH-8	Sodium tetraborate decahydrate	$Na_2B_4O_7 \cdot 10H_2O$	0,05	9,18
BR-pH-9	Sodium carbonate Sodium carbonate acid	Na_2CO_3 $NaHCO_3$	0,025 0,025	10,00