

Fixanal pH for preparation of buffer solution – pH working standard of 1st category

INTENDED FOR

preparation of buffer solutions, reproducing and transmitting value of the activity index of hydrogen ions (pH) in aqueous solution.

DESCRIPTION OF MEASURING INSTRUMENT

Fixanal pH represents quantities of chemical substances upon dissolution of which in a certain volume buffer solution - pH working standard is received. pH working standard of 1st category is prepared by diluting the quantity of substance with double-distilled water with specific electrical conductance (SEC) not more than $2 \cdot 10^{-4}$ S/m. pH working standard of 1st category is prepared in accordance with TC 2642-006-02567567-2010. Fixanal pH for preparation of buffer solutions – pH working standards of 1st and 2nd categories of CT-pH. Technical conditions.

Fixanal pH is contained in plastic bottles. The bottle is leakproof and has a screw cap with a protective ring. F-pH-1 have 8 modifications differing in the composition of the quantity of substance, the concentration of chemicals in the prepared buffer solution and reproducible pH value.

The limits of the permissible absolute error in reproducing the pH of working standards of the 1st category at a temperature of $T = 25 \text{ }^{\circ}\text{C} - \pm 0.004$.



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Modifications of Fixanal pH	Name of chemical substances, included in Fixanal pH	Chemical formula of substances	Weight of quantities of chemical substances, g	Weight of quantities of chemical substances, g	pH reproducible value at temperature +25°C
F-pH-1-1	Potassium tetraoxalate dihydrate	$\text{KH}_3(\text{C}_2\text{O}_4)_2 \cdot 2\text{H}_2\text{O}$	12.6100	0.05	1.646
F-pH-1-2	Potassium hydrotartrate	$\text{KHC}_4\text{H}_4\text{O}_6$	9.50	saturated at temperature +25°C	3.557
F-pH-1-3	Potassium hydrogenphthalate	$\text{KHC}_8\text{H}_4\text{O}_4$	10.1200	0.05	4.005
F-pH-1-4	Potassium phosphate monosubstituted	KH_2PO_4	3.3880	0.025	6.865
	Sodium phosphate twice-substituted	Na_2HPO_4	3.5330	0.025	
F-pH-1-5	Potassium phosphate monosubstituted	KH_2PO_4	1.1790	0.0087	7.413
	Sodium phosphate twice-substituted	Na_2HPO_4	4.3030	0.0304	
F-pH-1-6	Sodium tetraborate decahydrate	$\text{Na}_2\text{B}_4\text{O}_7 \cdot 10\text{H}_2\text{O}$	3.8064	0.01	9.180
F-pH-1-7	Sodium carbonate	Na_2CO_3	2.6428	0.025	10.012
	Sodium carbonate acid	NaHCO_3	2.0947	0.025	
F-pH-1-8	Calcium hydroxide	$\text{Ca}(\text{OH})_2$	1.75	saturated at temperature +20°C	12.43