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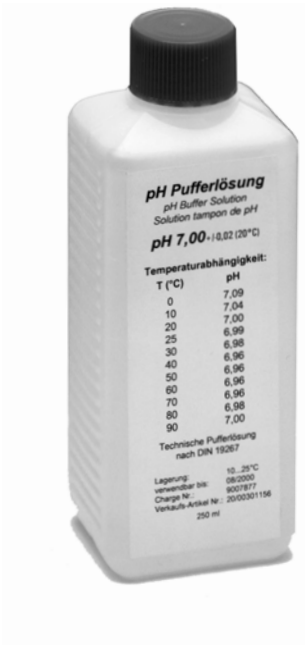
Technical buffer and cleaning solutions

Brief description



pH buffer solution
Technical buffer solutions as defined by DIN 19267 are used to calibrate (adjust) technical pH measuring instruments (sensors, cables and measurement amplifiers). Buffer solutions are available with different pH values and colored bottle seals make it easy to tell them apart. Temperature can easily be read in a table on the bottle. Typical accuracy is +/-0.02 pH units. JUMO buffer solutions can be traced to standard reference material of NIST (National Institute of Standards and Technology). A use-by date and batch number appear on the label.

Test solution for redox potential
The redox test solution as defined by ASTM D 1498 is used to verify technical redox measuring instruments (sensors, cables and transmitters). The output signal may drift in older redox sensors. The test solution can then be used to readjust the display values in the measurement amplifier. The three anticipated voltage values are then printed for sensors with different reference electrodes and electrolyte concentrations (Pt against Ag/AgCl; Pt against Ag/AgCl in saturated KCl and Pt against calomel). A use-by date and batch number appear on the label.

Referece solutions for electrolytic conductivity
These reference solutions are used to calibrate (adjust) and verify conductive and inductive conductivity measurement instruments in technical systems, The solutions can be retraced to PTB and NIST. They consists of a potassium chloride solution with various dilutions. A use-by date and batch number appear on the label.

Auxiliary electrolyte (replacement electrolyte KCl)
pH and redox sensors lose electrolytes through the diaphragm when in use. This is intentional and indispensable for functionality. Electrodes with a liquid reference electrolyte (auxiliary electrolyte) can generally be refilled by the user. A potassium chloride solution (KCl) is required for this purpose. A silver-ion-free solution of KCl is used for sensors with a cartridge-style conduction system (without silver chloride (AgCl). Sensors with wire conduction require a KCl solution with AgCl. Both types are available from JUMO. The KCl solution can also be used for storing and activating the pH electrodes that are used. The KCl solution neutralizes or dilutes contamination from the electrodes in the area of the diaphragm and regenerates the pH-sensitive swelling layer of the pH membrane glass.

Cleaning solutions
Diaphragm cleaner: consists of an aqueous thiourea solution. This cleaner dissolves silver sulfide, which is not readily soluble, from the diaphragms of pH, redox and reference electrodes.
Electrode cleaner: consists of a solution of pepsin and hydrochloric acid. It helps to remove proteins and calcification on electrochemical sensors.

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Order details: Technical buffer and cleaning solutions

(1) Basic type

202950 Technical buffer and cleaning solutions

(2) Value code

10307 Technical buffer solution pH 3.07
10400 Technical buffer solution pH 4.00
10465 Technical buffer solution pH 4.65
10680 Technical buffer solution pH 6.80
10700 Technical buffer solution pH 7.00
10927 Technical buffer solution pH 9.27
11000 Technical buffer solution pH 10.00

20468 Redox test solution 468 mV

30141 Reference solution for electrolytic conductivity 1.41 mS/cm
31288 Reference solution for electrolytic conductivity 12.88 mS/cm
31118 Reference solution for electrolytic conductivity 111.8 mS/cm

40300 Auxiliary electrolyte KCl solution 3.00 mol

50001 Diaphragm cleaner (thiourea solution)
50002 Protein remover (solution of pepsin and hydrochloric acid)

(3) Filling quantity

250 250 ml
50 50 ml

(4) Extra codes

000 None
111 With AgCl (for value code 40300 only)

	(1)		(2)		(3)		(8)	
Order code		/		-		/		, ...
Sample order	202950	/	10927	-	250	/	000	

Stock versions (delivery within 3 working days after receipt of order)

Technical buffer solutions as defined by DIN 19267 (packaging unit contains 5 pieces)

Type	Designation	Sales No.
202950/10307-250/000	250 ml buffer solution pH 3.07 as defined by DIN 19267 at 20°C	20/00309747
202950/10400-250/000	250 ml buffer solution pH 4.00 as defined by DIN 19267 at 20°C	20/00344977
202950/10400-50/000	50 ml buffer solution pH 4.00 as defined by DIN 19267 at 20°C	20/00452491
202950/10465-250/000	250 ml buffer solution pH 4.65 as defined by DIN 19267 at 20°C	20/00301070
202950/10680-250/000	250 ml buffer solution pH 6.80 as defined by DIN 19267 at 20°C	20/00301071
202950/10700-250/000	250 ml buffer solution pH 7.00 as defined by DIN 19267 at 20°C	20/00338371
202950/10700-50/000	50 ml buffer solution pH 7.00 as defined by DIN 19267 at 20°C	20/00452494
202950/10927-250/000	250 ml buffer solution pH 9.27 as defined by DIN 19267 at 20°C	20/00301072
202950/11000-250/000	250 ml buffer solution pH 10.00 as defined by DIN 19267 at 20°C	20/00345027
202950/20468-250/000	250 ml redox potential test solution +468mV (at 25°C)	20/00301073

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Cleaner for pH/redox electrodes (packaging unit contains 5 pieces)

Type	Designation	Sales No.
202950/50001-250/000	250 ml diaphragm cleaner (thiourea solution)	20/00307586
202950/50002-250/000	250 ml electrode cleaner (solution of pepsin and hydrochloric acid, protein remover)	20/00307114

Auxiliary electrolyte (packaging unit contains 5 pieces)

Type	Designation	Sales No.
202950/40300-250/000	250 ml 3-molar KCl solution without AgCl (silver-ion free)	20/00306215
202950/40300-50/000	50 ml 3-molar KCl solution without AgCl (silver-ion free)	20/00452495
202950/40300-250/000	250 ml 3-molar KCl solution with AgCl (for electrodes with wire conduction in the reference system)	20/00307585

Reference solutions for electrolytic conductivity (packaging unit contains 5 pieces)

Type	Designation	Sales No.
202950/30141-250/000	250 ml KCl 0.01 mol/l 1.41 mS/cm	20/00346056
202950/31288-250/000	250 ml KCl 0.1 mol/l 12.88 mS/cm	20/00346058
202950/31118-250/000	250 ml KCl 1.0 mol/l111.80 mS/cm	20/00346060