

LabSen 212 Routine pH Electrode

User Manual

LabSen electrochemical sensors are premium pH electrode with manufacturing technology and key components imported from Switzerland. LabSen212 routine pH electrode is suitable for routine use, especially suitable for high-precision pH measurement of scientific research and quality control.

This probe has following features:

- Impact-resist membrane (see the right picture), there is no danger of electrode breakage during normal use.
- Blue gel inner solution, does not flow and will not cause bubble.
- Long life reference system, has better stability and service life.

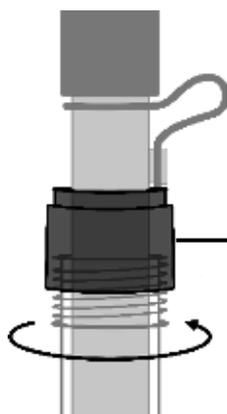


1 Technical Data

Measuring Range	(0 ~ 14) pH	Electrolyte	3M KCl
Temperature Range	(-5 ~ 100)°C	Soaking Solution	3M KCl
Shaft Material	Lead-free Glass	Electrode Dimension	(Ø12×120) mm
Membrane Shape	Half Ball	Connector	S7
Reference	Long Life	Cable	Ø3×1m
Junction	Ceramic		

2 Usage and Maintenance

- 2.1 Connect electrode to S7-BNC cable, and then connect BNC plug to the input on the pH meter.
- 2.2 When measuring, please unscrew the sleeve cap, pull out the electrode and rinse it with deionized or distilled water. After using, please put the electrode back into the bottle and screw tight the cap.



Before pulling out or putting back the electrode, make sure to fully loosen the blue cap on the storage sleeve so that the electrode can move in and out smoothly.

- 2.3 Prior to measurement, remove the rubber plug to maintain pressure of the reference solution, keep consistent flow rate of reference solution and stable potentials of junction.
- 2.4 After a period of usage, the reference solution will running low. Whenever the level falls to 1/2 height of the electrode, add 3M KCL solution to the refilling hole by using syringe or pipette.
- 2.5 The electrode's measuring tip should be soaked in the storage sleeve containing 3M KCL storage solution to keep the membrane hydrated and junction unblocked. Clean the sleeve and replace the storage solution if the storage solution gets turbid or mildewed. The electrode should never be soaked in purified water or buffer solution for long.

- 2.6 The connector of the electrode should be kept clean and dry. If being contaminated, please clean it with medical cotton and absolute alcohol and blow dry to prevent the short circuit of the electrode and slow reaction of electrode.
- 2.7 Please avoid measuring dehydrated medium like strong acid or alkaline solution, absolute ethyl alcohol and concentrated sulfuric acid. In case of measuring such solution, please try to reduce the immersion time and clean it carefully after use.
- 2.8 After 1-year of use, we recommend replacing the electrode for best accuracy.

3 Limited Warranty

We warrant this electrode to be free from defects in material and workmanship and agrees to repair or replace free of charge, at option of APERA INSTRUMENTS (Europe) GmbH, any malfunctioned or damaged product attributable to responsibility of APERA INSTRUMENTS for a period of **six months**. Warranty period is the time limit to provide free service for the products purchased by customers, not the service life of the tester or electrodes.

This limited warranty does not cover any damages due to:

- I. transportation;
- II. storage;
- III. improper use;
- IV. failure to follow the product instructions or to perform any preventive maintenance;
- V. modifications;
- VI. combination or use with any products, materials, processes, systems or other matter not provided or authorized in writing by us;
- VII. unauthorized repair;
- VIII. normal wear and tear; or
- IX. external causes such as accidents, abuse, or other actions or events beyond our reasonable control.

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