LabSen 213 Routine 3-in-1 pH Electrode
User Manual

LabSen electrochemical sensors are premium pH electrode with manufacturing technology and key components imported from Switzerland. LabSen 213 routine 3-in-1 pH electrode is suitable for routine lab use, integrates ATC probe, especially suitable for high-precision pH measurement of scientific research and quality control.

This probe has following features:

- Impact-resist membrane (see diagram-1), 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.
- Fast heat conducting pH/Temp.combination structure (Swiss patented, Nr.699927), increase sensing speed by 40%, refer to diagram-2.

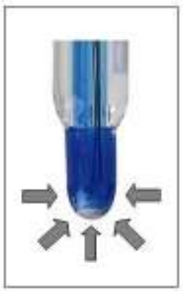


Diagram-1

Diagram-2

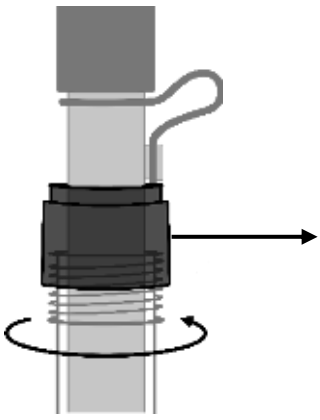
1 Technical Data

Measuring Range	(0 ~ 14) pH	Electrolyte	3M KCl
Temperature Range	(-5 ~100) °C	Soaking Solution	3M KCl
Shaft Material	Lead-free Glass	Temp. Probe	NTC 30kΩ
Membrane Type	S	Electrode Dimension	(Ø12×120) mm
Membrane Resistance	<150MΩ	Connector	BNC/RCA
Reference	Long Life	Cable	Ø5×1m
Junction	Ceramic		

2 Use and Maintenance

2.1 Connect BNC & RCA plug to the input on the pH meter.

2.2 When measuring, please unscrew the bottle cap, pull out the electrode and rinse it with deionized 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 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.

2.6 The electrode measuring tip should be soaked in the soaking bottle containing certain amount of storage solution to keep the membrane hydrated and junction unblocked. Clean the bottle and replace the storage solution if the storage solution gets turbid and mildewed. The electrode should never be sinked in pure water or buffer solution for long.

2.7 Please avoid measuring dehydrated medium like strong acid or alkaline solution, absolute ethyl alcohol and concentrated sulfric 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 to ensure the best accuracy.

3 Limited Warranty

We warrant this electrode to be free from defects in material and workmanship and agree 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 (Europe) GmbH for a period of SIX MONTHS from the delivery.

This limited warranty does not cover any damages due to:
Transportation, storage, improper use, failure to follow the product instructions or to perform any preventive maintenance, modifications, combination or use with any products, materials, processes, systems or other matter not provided or authorized in writing by us, unauthorized repair, normal wear and tear, or external causes such as accidents, abuse, or other actions or events beyond our reasonable control.

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