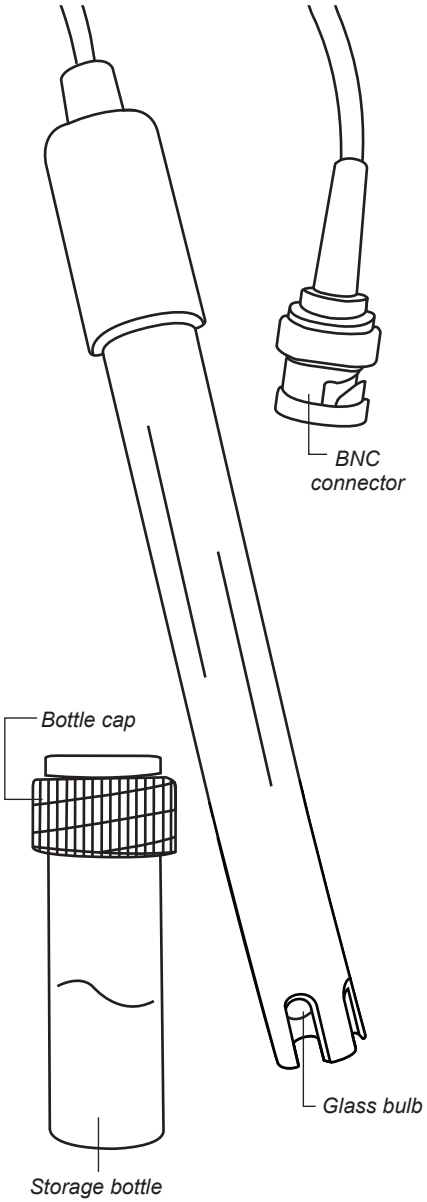
PH ELECTRODE

User Manual

Model: E-312



INTENDED USE

E-312 electrode is made of a pH electrode and a silver chloride (Ag/AgCl) reference electrode to measure pH value of liquid. Its wide application includes but not limits to chemical engineering, pharmaceuticals and laboratory experiments.

SPECIFICATIONS

Sensor type	General-purpose combination pH electrode
Dimensions	Φ12*156mm
Construction Material	Polymer housing and glass bulb
pH range	0~14pH
Working temperature	0~60°C / 32~140°F
Zero potential	7.0 ± 0.5pH (under 25°C / 77°F)
Percentage of slope	≥ 98% (under 25°C / 77°F)
Internal resistance	≤ 250 MΩ (under 25°C / 77°F)
Alkaline error	< 15 mV
Response time	< 2 mins
Repeatability	< 0.017
Noise	< 0.5 mV
Connection	BNC with fixed cable
Cable length	300 cm (118")

SCAN THE QR CODE

to download

USER MANUAL

in different languages

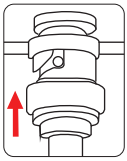
www.cd50.net/312

TUTORIAL VIDEO ON HOW TO USE

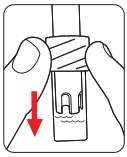
Need more help? **CONTACT US.**

OPERATION

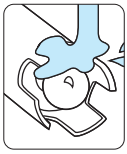
Pre-measurement



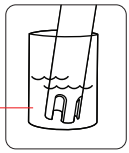
1. Plug the BNC connector of the electrode into the input terminal of the pH meter.



2. Spin down and remove the entire storage bottle (including the cap).



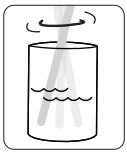
3. Rinse the ball-shaped glass bulb with distilled water and wipe it dry with filter paper.



4. Calibrate the electrode as explained in the manual of your pH meter, during which (3) should be repeated.

5. Repeat (3) and leave it ready for measurement.

During measurement

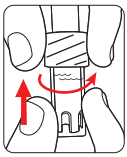


• Gently stir the sample to get rid of bubbles for more accurate measurement.

• Rinse the used electrode with distilled water before testing the next sample to avoid cross-contamination.

Post-measurement

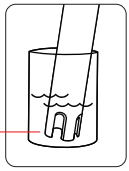
1. Rinse the contaminated electrode with distilled water and wipe it dry with filter paper.



2. Put the electrode back in the storage bottle consisting of NaCl solution.

3. Ensure the cap is tightly screwed.

MAINTENANCE



• For first use or use after being long idled, the electrode must be activated by soaking it in 3 mol/1 KCL solution for 8 hours.

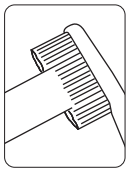
• Crystallization is a natural phenomenon. Soak the tip of the pH electrode into distilled water to wash out the crystalline solids before using.

• The ball-shaped glass bulb should not be rubbed against any hard substances to ensure accurate measurement.

• The BNC connector of the electrode must be kept clean and dry.

• The electrode must not be soaked in acidic fluoride solution for a long period of time.

• The ball-shaped glass bulb must be wet at all times.



• Clean the ball-shaped glass bulb with soft toothbrush and proper detergent if it is contaminated or the liquid junction is blocked.

Contaminated Substance	Detergent
Inorganic metal oxide	Less than 1 mol/1 HCL acid
Organic grease substance	Weal alkalinity
Resin substance	Alcohol, acetone, ether
Protein blood deposit	Acidity enzyme solution
Dyestuff substance	H2O2 diluted bleaching powder