

How to Clean and Store pH & ORP Electrodes

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pH Electrode Storage and Maintenance

To ensure a quick response and free-flowing liquid junction, the sensing element and reference junction must not be allowed to dry out. The following instructions apply to refillable electrodes. For gel-filled electrodes, consult instruction manual.

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Routine Storage

Soak electrode in a pH Electrode Storage Solution. If a storage solution is unavailable, pH 4 buffer or 0.1 M KCl may be used. The fill hole should be covered to prohibit evaporation of reference fill solution.

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Long-term Storage

Cover sensing element with its protective cap containing a several drops of pH/ORP storage solution.

NOTE: Before returning to use, rinse well with deionized water, refill with appropriate fill solution and soak in pH 4 buffer for 1-2 hours.

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Maintenance

Cleaning your electrode between and after use will help extend the life of your electrode and avoid the cost of early replacement.

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Routine Cleaning

General - Soak electrode in 0.1 M HCl or HNO₃ for half an hour, followed by soaking it in storage solution for at least two hours.

Reference junction - To clean a fouled junction:

- Heat electrode in 0.1 M KCl at 70°C (60°C for calomel electrodes) for 10 minutes.
- Drain and refill with fresh filling solution.
- Verify junction flow by suspending electrode in air and letting filling solution flow out and crystallize.
- Soak in storage solution for one hour (24 hours for calomel electrodes) prior to use.

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Weekly Maintenance

Inspect electrodes for scratches, cracks, salt crystal buildup, or membrane/junction deposits.

Rinse off any salt buildup with distilled water, and remove any membrane/junction deposits as directed in cleaning procedures below.

The reference chamber should be drained, flushed with fresh filling solution, and refilled.

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Removal of Membrane/Junction Deposits

- Grease and oil - Rinse electrode with a mild soap
- Inorganic - Soak electrodes in 0.1M ??? solution for 10 minutes
- Protein - Soak in a 0.1M HCl solution for 10 minutes, rinse with DI water
- After any of these cleaning procedures, flush and refill the reference chamber and soak the electrodes in storage solution overnight.

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