

# ELECTRODE INSTRUCTION GUIDE

**Code:** \_\_\_\_\_

Thank you for choosing Hanna Instruments products. Please read this instruction manual carefully before using this electrode.

This manual will provide you with all the necessary information for the correct use of the electrode, as well as a more precise idea of its versatility in a wide range of applications.

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## MEASUREMENT

- Rinse the electrode tip with distilled water.
- Immerse the tip in the sample and stir gently for approx. 30 seconds.
- For a faster response and to avoid cross contamination of the samples, rinse the electrode tip with a few drops of the solution to be tested, before taking measurements.

## STORAGE

- To minimize clogging and ensure a quick response time, the glass bulb and the junction should be kept moist and not allowed to dry out.
- Replace solution in the protective cap with a few drops of **HI70300 Storage Solution** or, in its absence, **Filling Solution (HI7071** for single junction or **HI7082** for double junction electrodes). If none of the above is available, tap water may also be used for a very short period (couple of days). Follow Preparation above before taking measurements.

**Note:** NEVER STORE THE ELECTRODE IN DISTILLED WATER.

## PERIODIC MAINTENANCE

- Inspect the electrode for any scratches or cracks. If any present, replace the electrode.
- Rinse off any salt deposits with water.

### **For refillable electrodes:**

Drain the reference chamber with a syringe and refill it with fresh electrolyte (HI7071 for single junction or HI7082 for double junction electrodes). Allow the electrode to stand upright for 1 hour.

- Follow the Storage Procedure above.

## CLEANING PROCEDURE

- General - Soak in **HI7061 General Cleaning Solution** for approximately 1 hour.
- Removal of films, dirt or deposits on the membrane/junction:
  - *Protein* Soak in **HI7073 Protein Cleaning Solution** for 15 minutes.
  - *Inorganic* Soak in **HI7074 Inorganic Cleaning Solution** for 15 minutes.
  - *Oil and grease* Rinse with **HI7077 Inorganic Cleaning Solution**.

**IMPORTANT:** After performing any of the cleaning procedures rinse the electrode thoroughly with distilled water, drain and refill the reference chamber with fresh electrolyte, (not necessary for GEL filled electrodes) and soak the electrode in HI70300 Storage Solution for at least 1 hour before taking measurements.

### **TROUBLE SHOOTING**

**pH Meter:** Follow attentively the meter's operating and calibration procedures from the instruction manual.

**Electrode:** Evaluate your electrode performance based on the following possibilities.

- **Noise** (Readings fluctuate up and down) could be due to:
  - **Clogged/Dirty Junction:** Refer to Cleaning Procedure above.
  - **Loss of shielding** due to low electrolyte level (in refillable electrodes only): Empty electrolyte with a syringe and refill with fresh HI7071 for single junction or HI7082 for double junction electrodes.
- **Dry Membrane/Junction:** Soak in Storage Solution HI70300 for at least 1 hour.
- **Drifting:** Soak the electrode tip in warm Hanna Solution HI7082 for one hour then flush tip with distilled water. Refill with fresh HI7071 for single junction electrodes and HI7082 for double junction electrodes.
- **Low Slope:** Refer to Cleaning Procedure above.
- **No Slope:** Check electrode for cracks in glass stem or bulb and replace the electrode.
- **Slow Response/Excessive Drift:** Soak the tip in Hanna Solution HI7061 for 30 minutes, rinse thoroughly in distilled water and then follow Cleaning Procedure above.

Each solution is available in M or L size (230 or 460 mL). Electrolyte Solutions are supplied in kits 4X50 mL.

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