

### **Preparation for use**

All sensors are shipped with the measuring end covered with a soaker teat. Remove the soaker teat from the electrode and keep in a safe place for future long term storage. After rinsing the measuring end with deionised water, the electrode is ready for use. During shipment it is possible for air bubbles to move into the glass bulb. To remove the air, shake down the electrode in the same manner as a clinical thermometer until the glass bulb is filled with solution.

### **Electrode storage**

Glass or Plastic combination electrodes should be stored in a 3M KCL solution (pH adjusted to 4.0) if they are single junction types. Use a 3M solution of the appropriate salt if double junction types.

### **Electrode care and cleaning**

Slow response and non-reproducible measurements are signs that the electrode have become coated or clogged. If the glass becomes coated or clogged the time taken to make a measurement will increase (normally 95% of final reading should be achieved in less than 10 seconds). Rinsing with methyl alcohol should remove the coating and restore the speed of response. ORP electrode may need additional cleaning from time to time with crocus paper.

If the methyl alcohol rinse does not restore the response, soak in 0.1M HCL for five minutes. Remove and rinse with water and place in 0.1M NaOH for 5 minutes. Remove, rinse again, and soak in 4.0pH buffer for 10 minutes before use.

If a pH electrode is continuously used above 60°C the outer layer of the pH glass loses its sensitivity. This can be restored as follow:

- Prepare a 10% solution of ammonium bifluoride.
- Immerse electrode for 10 to 20 seconds.
- Rinse in water.
- Immerse in 5M HCL for 5 minutes to remove any excess bifluoride.
- Rinse again in water.
- Soak in 4.0pH buffer for 1 hour before use.

- ⓘ The pH electrodes respond best after being stored in slightly acidic solutions such as 4.0pH buffer.  
Ammonium bifluoride is a hazardous chemical and should only be handled by a qualified chemist familiar with fluoride compounds.

### **Filling solutions**

Prepare a 3M KCL saturated with AgCl. To fill electrode, slide down plastic ring to reveal hole in side. Using a small syringe, fill the outer part of the electrode (via the hole) with the filling solution detailed above, until the filling solution is just level with the hole. Slide the plastic ring back to cover the hole.

NOTE: Certain combination electrodes are filled with KCL gel. These do not require filling and have no filling hole on the side of the electrode.

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