

## Antimony Electrode Maintenance Tips

Usually antimony electrodes which are mechanically intact with no broken parts can often be restored to normal performance by one of the following procedures:

**General Cleaning:** If the electrode surface becomes contaminated, its function can usually be restored by light grinding with a fine grade of abrasive paper until a bright surface is obtained. If no abrasive paper is available, soak the electrode in 1:10 dilution of household laundry bleach in a 0.1-0.5% liquid detergent solution in hot water with vigorous stirring for 15 minutes. Place junction under warm, running tap water for 15 seconds. Drain/refill the reference chamber. Soak the electrode in storage solution for at least 10 minutes.

**Salt Deposits:** Dissolve the deposit by immersing the electrode in 0.1 M HCl for five minutes, followed by immersion in 0.1M NaOH for five minutes, and thorough rinsing with distilled water.

**Oil/Grease Films:** Wash electrode pH area in a little detergent and water. Rinse electrode tip with distilled water.

**Clogged Reference Junction:** Heat a diluted KCl solution to 60-80°C. Place the reference portion of the pH electrode into the heated KCl solution for approximately 10 minutes. Allow the electrode to cool while immersed in some unheated KCl solution.

**Protein Deposits:** Dissolve the deposit by immersing the electrode in a 1% pepsin solution with a background of 0.1M HCl for five minutes, followed by thorough rinsing with distilled water.

After any of these special cleaning procedures, remember to drain/refill the reference chamber, if refillable. Soak the electrode in storage solution for at least 10 minutes. If these steps fail to restore normal electrode response, replace the electrode.