MI-407, MI-408, MI-418 and MI-419
NEEDLE PH MICROELECTRODES
OPERATING INSTRUCTIONS

Calibration

These electrodes are standardized in two pH buffers. Follow the procedure recommended by the manufacturer of your pH meter for calibrating your pH meter with our MI-407, MI-408, MI-418 or MI-419 microelectrodes.

Optimum Response Time: Optimum response time will be obtained after the probe has been exercised in two buffer solutions. Place a pH 4.01 buffer or equivalent in a beaker and a pH 6.86 buffer or equivalent in a second beaker. Hold the microelectrode and reference electrode together and touch the pH 4.01 buffer allowing 15-20 seconds for equilibration. Rinse the two electrodes with distilled water and then touch the pH 6.86 buffer in the same manner. Do this several times.

Handling

Although the electrode appears to be indestructible, always handle the electrode with the same care you would use with other glass electrodes.

Cleaning

When using the electrodes in solutions containing protein, the MI-407, MI-408, MI-418 or MI-419 and the reference electrode should be rinsed with an enzyme cleaning solution such as Terg-a-zyme (Alconox, Inc.) or a chromic/sulfuric acid glass cleaning solution after each use for a couple of minutes to remove the protein from the glass and reference junction. This will prolong the useful life of the electrodes.

Storage

Always clean the microelectrode before storing:

Long-term (over 2 weeks): Return the electrode to its original container and prepare it in the same condition in which you received it. Usually this means simply moistening the sponge located in the bottom of the protective glass tube with distilled water.

Short-term: The electrode can be left in an acid pH buffer solution, e.g. pH 4.01.

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