



ET1600 pH Micro Electrode Instruction Sheet

You DO NOT need external reference electrode !

Unpacking Instructions:

Loosen the screw cap of the vial, then PULL the sensor out SLOWLY

Calibration:

The Calibration procedure is similar to that of the glass electrode. The only difference is that an extra potential offset might be needed to display zero mV in pH 7.00 solution using a Potential Shifting Device (PSD), if the potential of the electrode, in pH 7.00 is more than ± 60 mV, depending on the model of the pH meter.

1. Connect the PSD through the BNC connector to the pH meter. Switch the pH meter to display mV.
2. Connect the electrode to the PSD.
3. Immerse the electrode in pH 7.00 solution and wait for a stable reading. Even though the electrode tip is 20mm or longer, ONLY 1-2mm of tip is active. Therefore there is no difference if 1mm or the whole tip length is immersed in solution.
4. Adjust the mV reading to zero by adjusting the offset port of the PSD using a small screwdriver.

The following steps are similar to the glass electrode

5. Switch the pH meter to display pH. Make sure the reading is 7.00. If not, adjust to pH 7.00 using the adjustment of the pH meter.
6. Rinse the electrode with distilled water and immerse it in pH 4.00 or 10.00 buffer. Wait for stable reading.
7. Adjust the pH meter to display the pH of the buffer (Using slope adjustment.)
8. Rinse the electrode and immerse it in pH 7.00 and ensure it now reads 7.00 and 0 mV. If not repeat calibration.
9. After calibration, the electrode should be kept in pH 7.00, ready to measure samples.

- For maximum stability and reproducibility, we recommend keeping the electrode in a complex sample mixture for extended periods. Since the response time is only a few seconds, it takes a maximum of 30 seconds to record the pH of the sample.
- The temperature of the calibration buffer should be the same as the samples.

Tip diameter, micron:	1600	Internal reference:	Ag/AgCl
Tip Length, mm:	50	Slope:	Nernstian
Construction:	All Plastic	pH range:	2-12
Depth of immersion, micron:	Under 40	Storage:	pH 7
Minimum sample volume, nano-litre:	250	Connector:	BNC
Response time, 90% response:	< 3 Sec	Electrode holder OD/length, mm:	4.8 / 75
Temperature Range °C:	0-100	Cable Length, mm:	1200