pH Best Practices

Keep the electrode hydrated

Why – Drying out the electrode leads to drifting pH values, slow response times, and incorrect measurements.

Fix – "Revive" a dry electrode by submerging the bulb and junction in pH storage solution for at least one hour.

Rinse, do not wipe your electrode

Why – Wiping the pH glass can produce a static charge which interferes with the pH reading of the electrode.

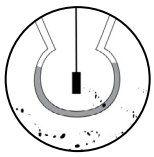
Fix – Simply rinse the electrode with distilled or deionized water (DI). Blot (do not rub) with a lint-free paper towel (e.g. Kimwipes®) to remove excess moisture.

Store your electrode in storage solution

Why – Storing in deionized water (DI) causes ions to leach from the glass membrane and reference electrolyte resulting in a slow and sluggish response.

Fix – Store your electrode in storage solution or pH 4.01 or pH 7.01 buffer if you do not have storage solution.

Clean your electrode regularly



Why – Deposits can form on the electrode during use, coating the sensing glass. This can lead to erroneous calibrations and readings.

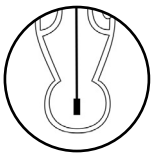
Fix – Clean the electrode using a specially formulated cleaning solution for pH electrodes- ideally one that's developed for your application.

Calibrate often

Why – All pH electrodes need to be calibrated often for best accuracy.

Fix – The frequency of calibration depends on how accurate you want to be - daily calibration is ideal.

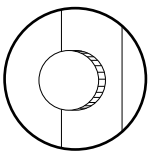
Pick the right electrode for your sample



Why – General purpose electrodes are functional for a wide variety of applications but not ideal for all samples.

Fix – Based on your sample you may require an electrode designed for food, high/low temp, non-aqueous, or other types of samples.

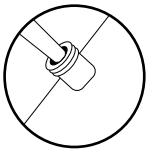
Open or loosen the fill hole cap



Why – A closed electrode fill hole may lead to slower stabilization times.

Fix – Loosen or remove the fill hole cap. Remember to put it back when storing the electrode. (Not applicable for non-refillable electrodes)

Keep the electrolyte level full



Why – Electrolyte flows out from the reference junction over time. Low electrolyte levels may cause erratic readings.
(Not applicable for non-refillable electrodes)

Fix – Ensure that your electrode fill solution level is no less than one-half inch from the fill hole cap.

Properly submerge your electrode

Why – Both the pH sensing glass and reference junction need to be completely immersed in order to function properly.

Fix – Add enough sample to submerge both the junction and sensing glass.

Inspect your electrode

Why – Over time, the sensing portion of the glass becomes less responsive and will eventually fail. Damage from use is also possible. This will cause erroneous readings.

Fix – Check your electrode for damage and perform a slope and offset calculation. Reference blog for instructions.

Read our blog on "Top 10 Mistakes in pH Measurement " at hannainst.com/top10

Hanna has put together this guide to serve as a quick reference tool for best practices.
Always remember to consult the instruction manual or contact us directly for detailed instructions for you specific needs.

Clean Regularly | **Calibrate** Often | **Condition** Always

hannainst.com | 877-MY-HANNA | sales@hannainst.com

HANNA® instruments