

# pH Best Practices

Hanna has put together a guide to serve as a quick reference for 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.

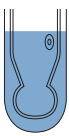
## ✓ Pick the right electrode for your sample



**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.

## ✓ Store your electrode in storage solution



**Why** - Storing the 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 a storage solution or pH 4.01 or pH 7.01 buffer if you do not have a storage solution.

## ✓ 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.

## ✓ Inspect your electrode



**Why** - Over time, the sensing portion of 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.

## ✓ 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.

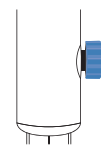
## ✓ Properly submerge your electrode



**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.

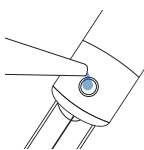
## ✓ Open or loosen the fill hole cap



**Why** - A closed electrode fill hole may lead to lower stabilisation 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.

## ✓ 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.

Always remember to consult the instruction manual or contact us directly for detailed instructions for your specific needs.