

USE AND MAINTAINANCE OF YOUR pH METER

NEW METERS

Prior to use - *You must soak the electrode's probe, (the glass pH sensing bulb at the tip of the meter) for one to two (1-2) hours in fresh pH 7 Buffer or fresh "Storage Solution".*

Now, get ready to "Calibrate" your meter.

You must calibrate your meter *before each daily use.*

More calibration = more accuracy and reliability.

You'll need:

- ***A Wash/Squeeze Bottle of Distilled Water*** for rinsing the meter's electrode sensing bulb, the probe, between uses.
- ***Glass Beaker*** or water glass to catch the rinse water.
- ***Calibration "Buffer Solutions".*** Both pH 7.01 and pH 4.01.

"CALIBRATE" YOUR METER

(All meters must be calibrated when first turned on.

They should be re-calibrated if you start getting readings that drift, or just look suspicious, or if the meter was turned off and then on again)

- **If the buffers are in bottles, pour a small amount of buffer into a small cup (a shot glass works well). Use just enough to cover the electrode sensing bulb, the probe. Tightly close the bottle. (You should have a cup each for the 7.01 and for the 4.01 buffer)**
- **If using the small sachets/envelopes, insert the pH probe into the sachet itself. Fold over and close the sachet opening with a paper clip when finished. Good for 2 – 3 weeks, unless contaminated by you.**

FOR HANNA pHEP 5 METERS

- **Turn on your pH meter by firmly pressing and releasing the left hand on-off button. These "microprocessor" meters will go through a self-check, letting you know if the battery needs replacing.**
- **Now go to the "Calibration Mode".**
 - **Press and hold down the left hand on-off button.**
 - **Release this button when the display reads "CAL" You are now in the "calibration mode".**
 - **The display will now read "USE 7.01"**
 - **Rinse the probe with the Distilled Water. Let drip dry.**
 - **Then, put the probe into the 7.01 Buffer Solution. Being a microprocessor, the meter has to sense the buffer's strength and set itself internally.**

- In less than 30 seconds, the meter will make up its mind and then read "USE 4.01".
 - Rinse the probe with the Distilled Water, and drip dry.
 - Put the probe, into the 4.01 Buffer Solution. Being a microprocessor, the meter has to sense the buffer's strength and set itself internally.
 - In less than 30 seconds, the meter will make up its mind, read "OK", and then go back to the ready mode, sensing both pH and temperature.
- Keep the meter turned on and the probe in the 4.01 buffer solution until you use the meter to do a pH check.
 - For non-microprocessor pH meters, follow the above steps, but the buffer settings are set manually by turning the adjustment screws (trimmers) for the 7.01 and 4.01 buffer readings.

MEASURING pH:

Now that your pH meter is calibrated, you're ready to test for pH.

- Rinse the probe with the Distilled Water and drip dry. Then, immerse the probe in the solution of wine or beer to be tested.
- Read and record the pH.
- Rinse the probe with the Distilled Water and let drip dry. Then, immerse the bulb in the buffer 4.01 solution until the next testing.

MAINTANENCE OF YOUR pH METER:

- Turn off your meter when you've finished your testings.
- *Never put the buffer solutions back into their bottles.*
- *At the end of every testing session, soak the probe in the General Purpose Cleaning Solution for 10-20 minutes. Rinse with Distilled Water. Put Electrode Storage Solution, or Buffer 4.01 Solution, in the storage cap and attach to meter.*
- Slow response and/or drifting readings indicate a clogged/dirty probe. Turn off the meter and try soaking in the Cleaning Solution for 10-20 minutes. Rinse, re-calibrate and try testing pH again.
- Bottles of Buffer solutions, once opened, have a *shelf life of around three (3) months*. Put the date on the bottle, when first opened.

ALWAYS KEEP THE ELECTRODE SENSING BULB WET.

If the probe dries out, it *may* become totally non-functional and need replacing. In such a case, try soaking it in fresh *pH 7 Buffer Solution* or fresh *Electrode Storage Solution* for 1-2 hours. Go through the calibration sequence. If the meter still doesn't calibrate, the probe needs to be replaced, --- or the meters' electronics are shot. If not still under warranty, it's time for a new meter.