

Script for Acorn 5+ pH Meter Calibration

[00:07] Before using the pH meter in the field, it must be calibrated. We will use the pH 7 and pH 10 buffer solutions to calibrate the meter. Unlike the dissolved oxygen meter, it is okay to turn off the pH meter between calibration and use.

[00:24] To calibrate the pH meter, you will need:

- Acorn 5+ pH meter
- Distilled water
- pH7 and pH10 buffer solutions
- pH meter calibration log
- pen or pencil

1. [00:43] Connect the pH and temperature probes to the meter.
2. Turn the meter on.
3. Press the MODE button to enter pH mode, if necessary.
4. Record the date, time, person doing calibration, and the ambient temperature on the calibration data sheet.
5. [01:03] Remove the electrode from the container with the storage solution. Try not to spill out the solution in the process.
6. Rinse the electrode with distilled water, and shake off the excess.
7. Press CAL on the pH meter to begin the calibration process. The letters "CA" will appear on the screen. Once you enter the calibration mode, the pH symbol and reading will flash on the screen.
8. [01:28] Open the packet with the pH 7 buffer solution with a pair of scissors. Place the electrode and temperature sensor in the pH solution and submerge the electrode bulb completely.
9. Wait for the reading to stabilize and record the "Stabilized pH" value. The pH symbol on the screen will stop flashing when the meter has stabilized. Note that this reading is not used in the comparison that you will do later on. When in calibration mode, the numbers will continue to flash.
10. Press the ENTER key and record the "Calibrated pH" value on the data sheet.
11. [02:08] Check that the "Calibrated Value" is within 0.2 of the pH buffer standard. If the value differs by more than 0.2, recalibrate the meter. Record the new calibration results on a different line of the data sheet.
12. Repeat this process for the pH 10 buffer solution. **Do not** press CAL again. Pushing CAL will exit calibration mode.
13. When you are finished calibrating the meter to the pH 7 and pH 10 buffer solutions, rinse the pH probe with distilled water, and replace it in the storage solution. Turn the meter off, and head out into the field to take measurements.

[02:51] If your pH meter is not calibrating properly, try cleaning the probe using the instructions provided in the instrument user manual or contact your local WAV coordinator for help.