

Waccamaw River Volunteer Monitors' Standard Operating Procedure:

pH (using Sension156 meter)

1. Fill out # 1-6 on the pH field data sheet first and #7 onwards as you follow the following guidelines.
2. For using the procedure on this page your meter model number should be Sension156.
3. Press the power/exit key (blue, on the left top corner of the meter) to turn the meter on. Press the pH key if "pH" is not seen on the screen (this sets the meter in pH measurement mode).
4. DO NOT attempt to recalibrate. If you accidentally hit the 'cal' key (or any other key that you are not supposed to touch), press the power/exit key to return to measurement mode.

Calibration Check

1. Remove the pH probe out of the storage solution bottle.
2. Rinse the probe with DI water (provided water bottle) and blot with the soft tissue.
3. Open the yellow colored Lab control Sample (LCS) and dip the pH probe into the small bottle. Make sure the probe is properly submerged. Stir the probe gently to dislodge air bubbles, if any. Press READ/enter key.
4. Wait for a couple of minutes for the reading to stabilize (**Stabilizing...** will appear on the screen). The display lock will "lock in" the reading once it stabilizes. In case the display lock was off i.e. the reading doesn't stabilize, follow step # 5 otherwise go to step # 6.
5. *Press the SETUP key. Use the up and down arrow keys to scroll to setup 5 (as displayed on the right hand top corner of the screen). A lock icon will appear on the lower left corner of the screen. If you see '(off)' next to the lock icon that means the display lock was off. Use the READ/enter key to turn the display lock on. If the '(off)' is not seen next to the lock icon the display lock was on. READ/enter key could be used to toggle between on and off of display lock.*
6. Record the reading on the specified place on the "pH field data sheet". You are required to record a total of three readings. Press READ/enter again and wait for the reading to stabilize and lock. This will be your duplicate reading for the yellow LCS, record it. Press READ/enter third time to get the third reading.
7. Similarly, measure and record the readings (triplicate; just like the yellow LCS) for the red colored LCS.
8. If the measured value for a Lab Control Sample (LCS) is not within the acceptance limits (shown on the bottle), review the measurement procedure and try again. Record the repeated measurement reading next to the previous reading.
9. If the LCS readings falls within the limits the second time, report the possible problem in the comments section on the field data sheet. If the readings are still out of the acceptance range, record the readings as such and report the problem in

the comments section. Also, let the lab personnel know about it as soon as possible.

10. After measurement, rinse the probe with deionized water and dry with a tissue.

Sample Measurements

1. Rinse the electrode with deionized water and blot the electrode.
2. Dip the electrode in the sample. Press READ. **Stabilizing...** will appear along with the sample temperature and the pH reading. These values may fluctuate until the stable reading is achieved.
3. **Stabilizing...** will disappear when stable reading is achieved and the display will “lock in” on the pH and sample temperature.
4. Record the pH value on the “pH field data sheet”. To record three measurements press READ/enter again, let it stabilize, and record the locked reading on the data sheet.
5. , rinse with deionized water.
6. When finished, turn the meter off. Remove the electrode from the sample, rinse the electrode with deionized water and gently blot dry. Place the electrode in the bottle containing electrode storage solution. Make sure the cap is tight.
7. At the end of the process check that pH field data sheet has been completely filled.