

Waccamaw River Volunteer Monitors' Standard Operating Procedure:

Conductivity (using **CO150** meter)

1. Fill out # 1-5 on the Conductivity field data sheet first and # 6 onwards as you follow the following guidelines.
2. For using the procedure on this page your meter model number should be CO150.
3. Press the power (1/0) key (on the left lower corner of the meter key pad) to turn the meter on.
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 (1/0) key to turn the meter off and on again and thus return to the measurement mode.

Calibration Check

1. When the meter is on, units of $\mu\text{S}/\text{cm}$ (microSiemens) will be displayed. If these units are not seen on the screen, press the 'MODE' key to switch the meter to conductivity mode (μS).
2. Rinse the electrode with DI water and wipe excess water with a tissue wipe. Dip the probe into the Lab control sample (LCS) solution. Make sure the probe is properly submerged. Gently agitate the probe vertically for to make sure air bubbles are not entrapped near the sensor. Allow the readings to stabilize before recording measurements. 'Ready' will be displayed on the screen when the reading has stabilized.
3. Record the value on the "Conductivity Field Data Sheet".
4. Turn the meter off and on again to record another reading after the reading stabilizes and 'Ready' is displayed. Your aim is to get a set of three readings for the LCS.
5. If the measurement of the Lab control sample (LCS) is found to be outside of the acceptance range (i.e., more than $\pm 5 \mu\text{S}$ off of the LCS label value), agitate the probe again and see if the reading changes and falls within the acceptance range. If it does, then move to the next step. If it again doesn't fall in the acceptance range go ahead and do the sample measurement after making a note in the comments section on the conductivity field data sheet. Also, let the lab personnel know about it as soon as possible.
6. Remove the probe from the LCS. Rinse the probe thoroughly with deionized water and blot dry.

Sample Measurement

1. Rinse the probe thoroughly with deionized water and blot dry.
2. Press the power (1/0) key if the meter is not on.

3. Dip the probe into the sample. Gently agitate the probe. Allow the readings to stabilize before recording measurements. 'Ready' would be displayed on the screen when the reading has stabilized.
4. Record the temperature, and conductivity reading on the Conductivity Field Data sheet.
5. Press the MODE key two times to get the Total Dissolved Solids (TDS in **mg/L**) reading. Record this reading.
6. Press the MODE key once again to get back to the conductivity mode. Now record the second Conductivity (**μS**) reading.
7. Follow step # 5 and #6 to get more Conductivity and TDS readings.
8. Turn the meter off and on again (using the power {1/0} key) to get another reading after the reading stabilizes and 'Ready' is displayed. Three readings should be recorded in total for both Conductivity and TDS.
9. Rinse the probe well with the DI water. Wipe the water off with a tissue wipe before storage.
10. Turn the meter off.
11. Make sure the Conductivity Field Data sheet is completely filled.