

Script for Calibration of Dissolved Oxygen or DO Meter

[00:09] Be sure to calibrate your Dissolved Oxygen (or DO) meter before you go into the field to collect data. Once you have calibrated your meter, **do not turn it off** until you are done with your monitoring activities for the day.

[00:26] To calibrate the Dissolved Oxygen meter, you will need:

- YSI 550a Dissolved Oxygen meter
 - Dissolved Oxygen Calibration Log
 - Pen or Pencil
 - Distilled water (incase sponge in the probe chamber needs to be moistened)
1. [00:53] Turn on your meter and wait at least 15 minutes for it to warm up before you begin the calibration process.
 2. Verify that the sensor membrane is in good condition. To do this, check that the sponge inside the probe chamber is still moist. Check the membrane (the gold part) for tears, holes, or air bubbles. If damage exists, see the video on how to replace the membrane sensor tip. Shake excess water off of the sensor.
 3. Replace the probe in its chamber.
 4. [01:40] If needed, complete the top section of your Dissolved Oxygen Calibration Log. The serial number is located on the back of the meter. Always keep the calibration log with the meter. If volunteers are sharing a meter, they should share the calibration log. Give the calibration log to your local coordinator or WAV staff when the sheet is full. Make sure to pass on the log anytime you pass on the meter to others for use or maintenance.
 5. Record the date, time, name of volunteer/individual calibrating the meter, altitude of your current location, and warm up time for the meter on your Dissolved Oxygen Calibration Log.
 6. [02:30] Record the stabilized probe temperature. You will find this value in the lower right hand corner of the screen.
 7. Press and release the UP and DOWN arrow keys on the meter at the same time to begin calibration mode. The letters C-A-L will appear in the lower left hand corner of the screen and remain there for the rest of the calibration process.
 8. [03:01] Press ENTER on the meter. The ENTER button is the one with the sideways arrow. A value for altitude will appear. The number displayed, when multiplied by 100, is the altitude in feet.
 9. Adjust the altitude with the UP and DOWN arrows to the correct value for your location. Round to the nearest hundred feet. Press ENTER.
 10. The value for % saturation should now be showing on the screen. Allow this value to stabilize.
 11. [03:32] Press ENTER once the value on screen is stable. The salinity of the sample will appear on screen.

12. Press ENTER again to accept zero salinity, as we are testing fresh water. The calibrated % saturation should now appear on the screen, and the C-A-L in the lower left hand corner should have disappeared.
13. Press MODE to toggle to mg/L and record the post-calibration dissolved oxygen on your calibration log.
14. [04:06] Look up the calibration dissolved oxygen value on the table included with your meter. Find the probe temperature and your current altitude on the chart, and record the corresponding dissolved oxygen value on your data sheet. If the difference between your calibrated value and the value on the chart is **greater** than 0.3 mg/L recalibrate the meter before use.

[04:36] Leave your meter on after calibration until you are finished collecting data for the day. If an error appears during the calibration process see the video for changing the tip on the DO sensor. If calibration still does not work, contact your local WAV coordinator.