Dissolved Oxygen Protocol (Probe)

Field Guide

Task

Measure the dissolved oxygen of your water sample using a DO probe.

What You Need

- ☐ *Hydrosphere Investigation Data Sheet*
- ☐ Dissolved Oxygen Probe
- ☐ Zero Oxygen solution (if applicable for your probe)
- ☐ 250 mL polyethylene bottle with lid
- ☐ Latex gloves
- ☐ Distilled water
- ☐ Salinity correction tables (if appropriate)
- ☐ Barometer
- ☐ Pen or pencil

In the Lab or Field

Calibration (Performed within 24 hours before taking a measurement)

1. Warm up the probe as described in the probe manual.
2. Use the barometer to measure the atmospheric pressure at your site. If a barometer is not available, use your elevation to approximate the atmospheric pressure at your site.
3. Follow the probe manual instructions to enter calibration information for the probe.
4. Follow the probe manual instructions to measure the first calibration point (Zero oxygen point).
5. Rinse probe with distilled water and blot dry without touching membrane.
6. Follow the probe manual instructions to measure the second calibration point (100% oxygen).

In the Field

1. Warm up the probe as described in the probe manual.
2. Lower the tip of the probe into the water body that you are sampling and slowly move it back and forth. If you are measuring a stream or river and the water is moving past the probe, you can just hold the probe in place.
3. When reading has stabilized, record the dissolved oxygen in your water body on your *Hydrosphere Investigation Data Sheet*.
4. Repeat the readings two more times and record the dissolved oxygen under Observers 2 and 3.
5. Check to make sure that the three readings are within 0.2 mg/L of one another. If they are not, continue taking readings until the last three are within 0.2 mg/L of one another.
6. Apply the salinity correction (if appropriate).
7. Calculate the average of the three (adjusted if salinity correction applied) measurements.
8. Rinse the electrode with distilled water and blot dry. Cap electrode to protect membrane and turn off meter.