Science Education Resources

Frequently Asked Questions

Optical Dissolved Oxygen probe readings unexpected

My Optical Dissolved Oxygen probe is not giving me the expected readings.

How do I calibrate the ODO?

Using the zero-oxygen sodium sulfite solution is NOT recommended for the ODO. It's really hard to thoroughly remove the sodium sulfite from the tip of the probe. An easy fix could be just resetting the calibration on the probe.

Here are the steps to reset the probe:

- 1. Attach the clear storage bottle with the damp yellow sponge on the Optical DO Probe.
- 2. Place the switch on the % setting.
- 3. Connect the probe to a Vernier data-collection interface and start the data collection program.
- 4. Take a small paper clip and press and hold the reset button for about 3 sec. The reset button is located on the bottom of the box containing the microSD card.

The reading should initially drop to about 0%. In a few minutes the probe will reset and the reading will be 100%.

Can my ODO read more than 100% dissolved oxygen levels?

The % setting on Optical DO Probes purchased prior to January 2015 is 0-100%. Optical DO Probes purchased after January 2015 can measure from 0-300%. If you are unsure of the purchase date, check the serial number or the stored factory calibration.

Serial Number

The serial number is located on the box containing the microSD card.

- If the serial number starts with DOV1, the Optical DO can measure between 0-100%.
- If the serial number starts with DOV2, the Optical DO Probe can measure between 0-300%.

Factory Calibration

- 1. Position the switch to %.
- 2. Connect the Optical DO Probe to the data-collection interface and start the data-collection program.
- 3. Choose Calibrate from the Experiment menu (Logger Pro) or the Sensors menu (LabQuest App).
- 4. Choose Equation (Logger *Pro* or LabQuest App).
- 5. Compare the information to the following calibration values to identify the range.

0-100 % range

Intercept: -2.2222 Slope: 22.222

0-300 % range

Intercept: -6.6667 Slope: 66.667