



Turbidity

Procedure with Vernier LabQuest:

- 1) Power up the LabQuest.
- 2) Plug the Turbidity Sensor into the LabQuest right away to ensure a warm up time of at least 5 minutes before sampling. **NOTE:** the sensor can be plugged into any channel.
- 3) Fill the empty cuvette (little glass bottle with a black cap) provided in the turbidity kit with a sample from the water source being tested. The bottom of the meniscus should be at the top of the line for every measurement throughout this test. This volume level is critical to obtain correct turbidity values.
- 4) Holding the sample by the lid, place it in the Turbidity Sensor. Align the mark (arrow) on the cuvette with the mark on the Turbidity Sensor.
Important: These marks must be aligned whenever a reading is taken. It will take no longer than 45 seconds to obtain an accurate reading.
- 6) Using distilled water, rinse out the cuvette used to obtain samples and you are ready for cleanup.

****Turbidity is the only Vernier water quality test that must be calibrated in the field. However, if the LabQuest is not turned off or the turbidity sensor remains plugged in then one calibration at the start of the day should be sufficient. If your LabQuest does get turned off, or the Turbidity Sensor comes unplugged simply follow the calibration steps on the other side of this sheet.

Turbidity Calibration: (directions taken from Vernier instruction manual)

1) First calibration point: Obtain the cuvette (little glass bottle) containing the Turbidity Standard (100 NTU) and gently invert it four times to mix in any particles that may have settled to the bottom. Important: Do not shake the standard. Shaking will introduce tiny air bubbles that will affect turbidity readings.

2) Wipe the outside of the cuvette with a soft, lint-free cloth or tissue.

3) Holding the standard by the lid, place it in the Turbidity Sensor. Align the mark (arrow) on the cuvette with the mark on the Turbidity Sensor. Important: These marks must be aligned whenever a reading is taken.

4) Close the lid. Enter 100 as the value in NTU. In order to do this you must use the stylus to press on the box that gives you the turbidity reading. A drop screen will appear, select the "calibrate" option. Select the "calibrate now" option located in the top left corner of the screen. Enter "100" using the number pad that appears in the bottom right hand corner and press the "keep" button on the left hand side of the screen.

5) Remove the standard.

6) Second calibration point: Prepare a blank by rinsing the empty cuvette with distilled water, then filling it to the top of the line with distilled water. Important: The bottom of the meniscus should be at the top of the line for every measurement throughout this test. This volume level is critical to obtain correct turbidity values.

7) Screw the lid on the cuvette. Wipe the outside with a soft, lint-free cloth or tissue.

8) Holding the cuvette by the lid, place it into the slot of the Turbidity Sensor. Make sure that the marks are aligned. Close the lid.

9) Enter 0 as the value in NTU by using the number pad and then press "keep" in the middle of the screen. Press "OK" and you are now ready to collect turbidity data. Simply use the bottle from the "0" NTU calibration to obtain samples from the water source being tested.