

pH

The pH Sensor is used to study a wide range of topics involving acid-base interactions.

Materials List

- 1: Xplorer Datalogger (PS-2000)
- 1: pH Sensor (PS-2102)
- distilled water and a soft towel







Site Selection

- The sensor range is between 0 and 14 pH. Accuracy is ± 0.1 pH.
- Several factors contribute to the natural pH level of water and soils (i.e., vegetation type and density, the underlying strata of rocks and soil, and the quality of flowing water).

Sample Preparation

- ➔ *DO NOT use in perchlorate, silver, sulfide, hydrofluoric solutions, in concentrated solutions that are more than one molar, or at temperatures above 50°C.*
- ➔ *The probe must remain moist! Be sure the storage bottle is full and secure.*

Measurement & Recording

1. Press  to turn on the datalogger and attach the pH sensor.
 2. Plug the probe into the sensor; unscrew the electrode storage bottle (leave lid on probe).
 3. Rinse the pH probe with distilled water.
 4. Submerge the probe to the desired level; wait 30 seconds for readings to stabilize.
 5. Press  to start logging data; wait 15 seconds; press  to stop logging data.
 6. Record the time of day, site notes, and pH reading in pH.
- ⊕ *The pH range of natural systems under normal circumstances is usually 6.0 - 8.0.*
7. Press  to turn off the datalogger.

Clean-up & Completion

1. Unplug the probe from the sensor and the sensor from the datalogger.
2. Rinse the sensor with distilled water.
3. Put the pH probe back into the soaker bottle, making sure that the end of the probe is slightly above the bottom of the bottle.
4. Dry the cord with a soft towel.
5. Replace all items in their original storage bag(s).