



How to Measure pH



1 Prepare and Calibrate

- Remove electrode storage cap - if bulb is dry, place in solution overnight
- Remove electrode fill cover
- Fill 2 beakers with enough pH 7.01 buffer solution to cover the pH electrode junction (about 75 mL in a small beaker)
- Use one of the beakers to rinse the pH electrode and the second for the actual calibration
- Repeat for pH 3.00 buffer solution
- Rinse the pH electrode in the pH 7.01 rinse beaker and stir gently for 4-6 seconds
- Place the electrode in the pH 7.01 calibration beaker and stir gently for 4-6 seconds
- Place the electrode in the pH 7.01 calibration beaker and stir gently for 4-6 seconds
- Wait for the reading to stabilize (reading is stable for at least 3 seconds) and confirm it
- Rinse the pH electrode in the pH 3.00 rinse beaker and stir gently for 8-10 seconds
- Place the electrode in the pH 3.00 beaker and stir gently for 4-6 seconds
- Wait for the reading pH reading to stabilize and confirm it

2 Measure

- Do not start taking measurements unless the pH electrode has been properly hydrated and calibrated
- Fill 2 beakers with enough sample (juice/must) to cover the pH electrode junction (about 75 mL in a small beaker)
- Use one of the beaker to rinse the pH electrode and the second for the actual measurement
- Rinse the magnetic stir bar in the rinse beaker and remove it
- Place the measurement beaker with sample on the magnetic stirrer then drop in the stir bar
- Make sure the beaker is well centered on the stirrer
- Turn the stirrer on with speed set to circulate the sample without creating a vortex (too much speed)
- Place the electrode in the rinse beaker and stir gently for 4-6 seconds
- Clip the pH electrode onto the electrode holder and lower it until the junction is fully immersed
- Wait about 1 minute before recording measurement (reading is stable when the digits do not change for at least 3 seconds)

3 Clean and Store

- After measuring samples, unclip the pH electrode from holder and rinse
- Ensure all wine stains are removed
- Examine the pH electrode - refill if the level of the internal solution is less than 1/2 inch from the fill hole
- Empty, rinse, and refill the electrode with fill solution if it is clear that wine/must is present inside the pH electrode
- Fill a small beaker with cleaning solution for wine deposits or wine stains
- Immerse the pH electrode for 2-3 hours with junction covered
- Fill the storage cap of the pH electrode to the half point with storage solution
- Replace the storage cap on the electrode
- Make sure there is enough storage solution in the cap to cover the tip of the pH electrode