



PH TESTING

How to test the pH of a purified water:

To properly test purified waters or waters as pure as Essentia Water you **MUST** use a calibrated pH meter. A calibrated pH meter is an electronic instrument used to measure the pH (acidity or alkalinity) of a liquid. Calibration should be performed with at least two standard buffer solutions that span the range of pH values to be measured. For general purposes buffers at pH 4 and pH 10 are acceptable. The pH meter has one control (calibrate) to set the meter reading equal to the value of the first standard buffer and a second control (slope) which is used to adjust the meter reading to the value of the second buffer. A third control allows the temperature to be set. Standard buffer sachets, which can be obtained from a variety of suppliers, usually state how the buffer value changes with temperature and provides explicit instructions for proper calibration.

The Hach Company is one of many manufacturers of analytical instruments used to test the quality of water. You can purchase a pH meter with buffer kit for about \$115. Hach recommends Oakton pH Tester, product code 2956100/\$91.49 and pH Buffer Kit, product code 2947600/\$21.70.

Feel free to contact them at www.hach.com.

Using Litmus paper or test strips:

The pH of low ionic strength water (high purity water) is harder to measure than one would think. An electrode designed for low ionic strength waters is recommended; otherwise the measurement will not stabilize quickly and just frustrate a user. When using colorimetric indicators or test strips, there is concern that the indicator or strip material actually changes the pH of the sample, especially in low ionic strength waters. This means that small or trace amounts of acidic components are present which, in low ionic strength waters, manifests itself and actually lowers the sample pH. Litmus papers or test strips will **NOT** test accurately on waters as pure as Essentia. You can use litmus papers/test strips to test saliva or urine.

To test saliva, all you need is a test strip color-coded, pH paper, a plastic spoon and some fresh saliva. Be sure not to eat or drink anything thirty minutes prior to the test (and don't brush your teeth or rinse with mouth wash 30 minutes before testing). Swallow a couple of times to clear the mouth and stimulate new saliva. Then expel some saliva into the plastic spoon, **DO NOT** touch the litmus paper to your tongue. This is not recommended due to the chemical on the paper. Place the torn pH strip into the saliva on the spoon and compare to the color chart provided with the test kit. An optimal pH reading for saliva is about 7.0.

To test urine, clean capture a small amount of urine in a plastic cup (just enough to insert the test strip). Insert the test strip into the urine specimen and compare to the color-coded chart provided with the test kit. Be reminded that test results can fluctuate due to foods you eat/drink, pollutants you breathe, stress you encounter, how much rest you receive and the biochemical activities going on in the body. It's best to repeat the test 2 to 3 times a day to get an average as urinary pH tends to be lower in the morning and higher in the evening. The most ideal range for urinary pH test is 6.4 to 7.0.