

Brewery Water Preparation

By: Douglas Wright, President

In many brewing guides the most plentiful ingredient is overlooked as if it were insignificant.

Whether your source is from surface water (i.e. lakes, rivers, streams etc.) or ground water (i.e. aquifers, wells, etc.), this is an *often overlooked* area that brewers can monitor to influence their beer's quality.

The quality of the water used for brewing can affect the final product in several ways:



- i) The flavors and aromas can be influenced by the [pH](#) levels in the beer.
- ii) Contaminants and minerals can cause off flavors.
- iii) [Chlorine content](#) from treated municipal water can cause off flavors.
- iv) Microbial contaminants can lead to spoilage or off tastes in the Mash or even in the CIP rinse steps.



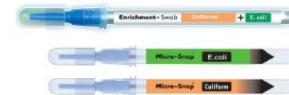
Ideally your brewing water has a clean taste, without inordinate amounts of chlorine or minerals for a neutral start to brewing. If this is a huge concern for you, a water quality report can be ordered from your local government or an independent lab to have the full picture of the specific content of your water. Even with such a report

these levels can vary seasonally making it critical that you do regular analysis of your water in house in order to be sure your water source not variable and not a source of contamination. We have a wide range of instruments to provide tests for chlorine, iron, salts, pH and TDS. All these can vary and will create seasonal or lot to lot variances. Knowing the levels of each will allow you to take measures to solve these variances. Our [Lab Instruments](#) & combined [pH/ORP /EC/TDS/NaCl/ Temp Bench Meter](#) is ideal for very accurate and precise measurements for all laboratory needs. It can perform Conductivity

pH, [TDS](#), Conductivity, ORP, NaCl and temperature measurements. We also have a wide range of other pH meters and systems for mineral detection. Call us to discuss your specific water profiles and how it might affect you seasonally and more specific tests. We also supply a range of [test strips](#). These are fine for quick checks but a quality electronic meter should be used for accurate testing. Strips are fine for measuring sanitizer strengths or to verify CIP rinses no longer contain sanitizers.



Another factor often over looked is microbial contaminants. These are present even in relatively pure sources of water. While most Enterobacteriaceae are killed by high alcohol, in the malting and mashing process they can grow creating off flavors that last through the finished brew. We have rapid 8 hours tests for [Coliforms](#), [Enterobacteriaceae](#), and [E.coli](#) that are AOAC approved to qualify for any required testing.



Tests for Yeast (wanted) as well as Wild Yeast and other bacterial spoilers can be done rapidly using our [Microsnaps](#) for rapid accurate results.

Contact us directly for more detail on this product.

When troubleshooting problem you should start at the beginning and investigate every potential regardless of how insignificant. Water is used in the first steps beginning with malting but is also used in the cleaning process and more critically in the rinse steps. Contaminated water or incoming water lines should be tested routinely to head off problems.



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