wine sense™

for the love of winemaking

Using Your Hydrometer

Your hydrometer provides you with accurate specific gravity readings that indicate when certain stages of the wine and beer making processes are complete. Specific gravity (S.G.) is the density of a liquid. In the case of wine and beer making you are measuring the amount of sugar that is in the liquid.

The S.G. of plain water is 1.000, the more sugar that is in a liquid the higher the reading. Most wine kits read at about 1.080 at the start of the fermentation process, most beer kits start at about 1.035 S.G. As the fermentation process takes place the sugar is consumed by the yeast and is converted to alcohol and carbon dioxide (the bubbles in your airlock are caused by the production of carbon dioxide). As a result the S.G. drops.

Beers will typically have a finished S.G. reading of about 1.002-1.006. as there is usually residual (unfermented) sugar left in the beer. Wines will typically have a S.G. of 0.990-0.960. Wines have a lower finished gravity because the higher alcohol content of wine makes the finished gravity less than that of plain water. Keep in mind that if your wine kit has an F-Pack the final S.G. will differ. The juice and concentrates in the F-Pack contain sugars which once added, will raise your finished gravity from the 0.990-0.996 level.

A hydrometer does not have a mercury scale like a thermometer. All of the numbers are on the slip of paper in the long neck. Your hydrometer is designed to float in the liquid you are measuring the specific gravity of. To take a hydrometer reading, simply float your hydrometer in the wine or beer and take the reading where the hydrometer sticks out of liquid. Remember to give the hydrometer a spin to dislodge any CO^2 bubbles that may be clinging to the hydrometer.

Its easy enough to take a hydrometer reading while the wine is in the primary fermentor, when it is in the carboy however, it is best to remove a sample and take the reading in a test jar. A handy tool for this is called The Thief. The Thief will take a sample from your carboy, you can then drop your hydrometer directly into The Thief & take the S.G. reading.

The hydrometer is one of the most important and simplest tools for the home wine maker. It lets you know when certain stages of the wine making processes are complete is the easiest way to ensure your wine & beer making trouble free!

The last thing to remember is to write your hydrometer readings down somewhere. A note book or a free Wine Sense Wine Log is a great place to keep track of each batch.

Your hydrometer is set to read at 15ºC or 60ºF. Use this table to correct for any temperature difference.

ºC	ºF	Correction
10	50	-0.005
15.5	60	0.000
21	70	+0.001
25	77	+0.002
29	84	+0.005

*Therefore, if your sample is 29ºC and your S.G. is 1.080 you will have to add 0.005 to your reading. The corrected reading is 1.085.

Most wine kits ferment to about 11% alc./vol. To figure out the actual alcohol volume simply subtract the finished S.G. from the start S.G. and multiply the difference by 131. Don't forget to write down your S.G. When you start your wine kit. If you have an F-Pack use the finished S.G. reading prior to the addition of the F-Pack.

eg. 1.085 - 0.996= 0.089 0.089 x 131= 11.66%

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