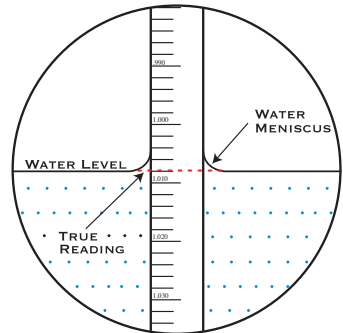


How to Read A Hydrometer



Why Use a Hydrometer: A Hydrometer is an instrument used to measure the progress of fermentation and determine alcohol percentage.

How to Use My Hydrometer: Place a sample of the liquid to be tested into a hydrometer testing jar, and lower the hydrometer into the sample. Spin the hydrometer to eliminate any air bubbles that might cling to the side of the hydrometer. Once the Hydrometer stops moving, take your first reading from the Specific Gravity (beer) or Brix (wine) scale. In beer making, the first reading is often called the “Original Gravity Reading”, which implies it was taken prior to the onset of fermentation. See our included diagram for an example of how to read your hydrometer. From years of experience, we suggest you write down your reading on a recipe or log sheet.

How to Determine Alcohol Percentage for Beer: The most accurate way to determine alcohol percentage by volume in beer is to make an **Original Gravity** reading and **Final Gravity** reading. Then plug those numbers into the following formula:
 $(\text{Original Gravity Reading}) - (\text{Final Gravity Reading}) \times (131) = \% \text{ Alcohol Content by volume.}$

Example formula: 1.073 was the Original Gravity reading and 1.012 is the Final Gravity reading.: $1.073 - 1.012 = .061 \times 131 = 7.99\% \text{ Alc. By Vol}$

How to Determine Alcohol Percentage for Wine: For Wine, your final reading is often below zero. In wine, nearly all the sugar is converted to alcohol – because alcohol is lighter than water, your reading at the end of a wine fermentation is often negative. When the reading is negative, you have to add this back to your first reading. Here is an example for these situations:

Example Using Potential Alcohol Scale for Wine:

Original Reading: 12.5 Potential alcohol

Final Reading: -.7 Potential alcohol

$(12.5 + .7) = 13.2 \% \text{ alcohol by volume}$

Temperature Correction Chart

The Brewmaster hydrometer has been calibrated to give an accurate reading at 68 °F. This means that if the temperature of the liquid being tested is something other than 68 °F, the Temperature Correction Chart below must be used to obtain an accurate reading.

Temperature in degrees °F.	Specific Gravity Correction
54.2	-.002
61.5	-.001
68	No correction
73.7	+.001
79.2	+.002
84.3	+.003

Correction Example:

If the temperature of the “Wort” or “Must” is 84 °F. and the Specific Gravity is 1.040, the true reading would be:

The Specific Gravity = 1.040
 The Correction Figure = +.003
 1.043