

Determining A Mead's OG

Q: I forgot to take an OG. Can I determine it now?

A: Yes! It would seem prudent that a mead maker has an independent and reasonably reliable method to determine what the OG of a basic mead should be. Especially in view of the fact that available reference books have been shown to be somewhat less than accurate, and these inconsistencies cause unnecessary confusion and uncertainty.

If you can multiply, add, & subtract, you can do this calculation. It all begins with a simple 2 component solution formula:

- $C_1V_1 + C_2V_2 = CtVt$,
- Where **C** denotes a concentration (SG in our case)
- **V** represents liquid volume
- Subscript **1** for the water, **2** for the honey, and **(t)** signifies the total (final) values.

Note: It is **MOST IMPORTANT** that you **use consistent units**.

Example

What will the OG be if we mix 15 lbs of honey with 4 gallons of water?

- Let **C₁** be the **SG of water** (1.000), and **V₁** be the **volume of water** (64 cups) - there are 16 cups/gal.
- Now what about the honey? Well, the National Honey Board provides us this information. Honey's SG is primarily a function of its moisture content and typically that is 18%, which equates to a SG of 1.417 (15% honey is 1.435). And so **C₂** = 1.417.

Now for the "hard" part. Our recipes are usually in lbs of honey. Yet, we need its volume. As if by magic, we know that a gallon of 18% moisture honey weighs 11.75 Lbs (also noted in Ken's book, pg 89). So we know 16 cups of honey (1 gal) weighs 11.75 lbs. So if we use 15 Lbs of honey"

- The volume used is 20.425 cups [15 Lbs / 11.75 Lbs/gal * 16 cups/gal]. Thus, **V₂** = 20.425 cups

Now we have:

- $C_1V_1 + C_2V_2 = CtVt = (1.000)(64) + (1.417)(20.425) = CtVt$
- $Vt = V_1 + V_2 = 64 + 20.425 = 84.425$ cups (consistent units)

Solving for **Ct** you'll get $Ct = 1.1008$ (~1.101) as the mead's OG, and the final volume is 5.28 gallons (84.425 C/16). This can be simplified if you set this up in an Excel spreadsheet.

Now you have the basic tool to calculate your OG before you make your mead - this method can be used with more than 2 fermentable ingredients and with wine, cider, etc.