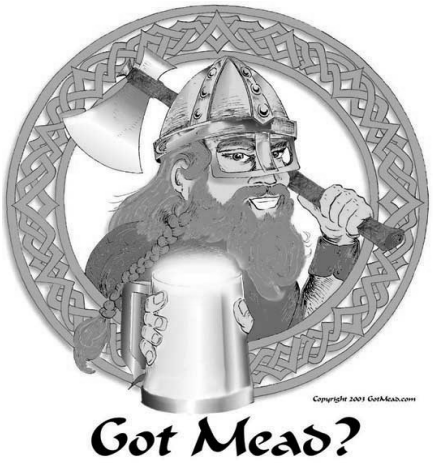
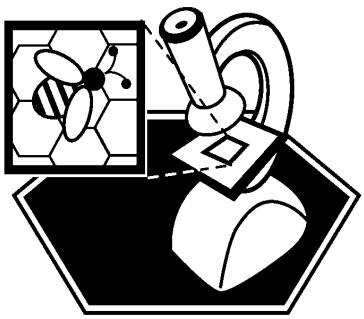
How I Brew – Mead



A very short history:

Mead, ambrosia, nectar of the gods. Mead brings about images of drinking horns, gods, vikings, and medieval times. Mead has been around for thousands (if not tens of thousands) of years in Egypt, China, the middle east, northern Europe, Greenland and Iceland. Mead has usually been made in those climates not suited for grape growing. Mead was pushed nearly out of existence due to the increased use of wine due to grape production and importation and that more people were using grains for brewing beer.

The word “honeymoon” is from the tradition of the newly married couple to drink mainly mead during that first month to ensure happiness and fertility.



Honey is the only food that won't go bad if additional moisture isn't introduced. Honey is cholesterol, fat and sodium free. Honey contains small amounts of proteins, vitamins (A1, B1, B6, B12, C, D, E, folic acid, etc), minerals, enzymes, amino acids, more than 18 different organic acids, antioxidants and antibacterial/microbial properties. And this last bit of information is the best. Why? No boiling necessary. Which makes making mead very simple (at least in the beginning). Interestingly enough, the good properties which the honey has starts to break down at 37°C (98.6°F) or normal body temperature.

As with grains and hops, there are many varieties of honeys which are available and may be used in making mead. You may of heard of wild flower, orange blossom and Tupelo honey. However, there is Mesquite, Blueberry, Sourwood, Bamboo, Buckwheat, Hawaiian Honey, etc. Honey from different sources produces different results. Light to dark, mild to robust flavor.

BJCP guidelines excerpt:

24 - Traditional Mead Styles: Traditional Meads feature the character of a blended honey or a blend of honeys. Varietal meads feature the distinctive character of certain honeys. "Show meads" feature no additives, but this distinction is usually not obvious to judges.

24A. Dry Mead (.990 – 1.010 SG)
24B. Semi-sweet Mead (1.011 – 1.020 SG)
24C. Sweet Mead (1.021 – 1.040 SG)

25 - Melomel (Fruit Mead) Styles:

25A - Cyser (Apple Melomel): A cyser is a mead made with apples or apple juice. Traditionally, cysers are made by the addition of honey to apple juice without additional water. A spiced cyser, or a cyser with other ingredients, should be entered as an Open Category Mead.

25B - Pyment (Grape Melomel): A pyment is a made with grapes or grape juices. Alternatively, the pyment may be a homemade grape-based wine sweetened with honey, or a mead mixed with homemade grape-based wine after fermentation. A spiced pyment *hippocras*, or a pyment with other ingredients should be entered as an Open Category Mead.

25C - Other Fruit Melomel: A melomel is a mead made with other fruit or fruit juices. A melomel can be made with a blend of fruits; however, a melomel that is spiced or that contains other ingredients should be entered as an Open Category Mead.

26 - Other Mead Styles:

26A - Metheglin: A metheglin is a mead made with spices or herbs. Meads made with flowers (such as rose petal mead, or rhodomel) or chile peppers (capsimel/capsicumel) may also be entered in this category, as can meads made with a blend of spices. If spices are used in conjunction with other ingredients such as fruit, cider, or other fermentables, then the mead should be entered as an Open Category Mead.

26B - Braggot: A braggot is a mead made with both honey and malt providing flavor and fermentable extract. Originally, and alternatively, a mixture of mead and ale. A braggot can be made with any type of honey, and any type of base beer style. The malt component may be derived from grain or malt extracts. The beer may be hopped or not. If any other ingredients than honey and beer are contained in the braggot, it should be entered as an Open Category Mead. Smoked braggots may be entered in this category if using smoked malt or a smoked beer as the base style; braggots made using other smoked ingredients (i.e., liquid smoke, chipotles) should be entered in the Open Category Mead style.

26C - Open Category Mead: An Open Category Mead is a honey-based beverage that either combines ingredients from two or more of the other mead sub-categories, is a historical or indigenous mead (e.g., tej, Polish meads), or is a mead that does not fit into any other category. Any specialty or experimental mead using additional sources of fermentables (e.g., maple syrup, molasses, brown sugar, or agave nectar), additional ingredients (e.g., vegetables, liquors, smoke, etc.), alternative processes (e.g., icing, oak-aging) or other unusual ingredient, process, or technique would also be appropriate in this category. No mead can be "out of style" for this category unless it fits into another existing mead category.

Honey's density can vary from 1.450 or higher to 1.380 or lower. So the basic rule of thumb is 1# honey per % ABV per 5 gal water. The best way to figure out what your honey would do is adding 1# honey with 1 gallon of water and getting the specific gravity of that. From there you can figure out what you specifically need if you are shooting for a specific gravity reading.

When using honey it is best to incorporate yeast nutrient and energizer. Long fermentations are quite possible when these are not used. Also, if you are using raw honey (which usually have pieces of honey comb, bees and other items which do not belong) and you are concerned of bad things happening, then please do boil and skim off the foam which will build up on top. Boiling, however, will take away a lot of the good qualities in the honey such as it's flavor and aroma. In my experience, everything settles to the bottom anyway during the aging process.

As you make your meads, you will learn more about the importance of pH levels, tannin, the aging process, etc. Have fun in your adventure.

I have added a couple more recipes to get you started.

Resources to get you started:

“The Compleat Meadmaker” - Ken Schramm
“Mad About Mead – Nectar of the Gods” - Pamela Spence

www.GotMead.com
www.Honey.com

Simple Recipe
Traditional Mead - 5 gal

Ingredients:	Ingredients for later:
13# Clover Honey	1# honey (or more to taste or specific SG)
5 tsp yeast nutrient	1.25 tsp Potassium Sorbate (¼ tsp/gal)
2.5 tsp yeast energizer	¼ tsp Potassium Metabisulfite (¼ tsp/6 gal)
1 pkg Lalvin D-47	/racking except bottles
5 gal water	1 pkg Superkleer

SG: 1.111 (14.6% ABV possible)
FG: .996 (15.6% ABV) before honey addition

Place all ingredients, sans the yeast, in a sanitized primary fermenter. Beat the bat snot out of it and pitch the yeast. Store in a 60°-70°dark area (or if you are using a different yeast, then go by it's temperature range), be patient and wait. Although my first batch fermented out in 2 weeks, results may vary and could take much longer.

When the fermentation has come to a halt, put Potassium Sorbate and Potassium Metabisulfite in a sanitized secondary (mixing the two in a couple of ounces of water will ensure that it will mix well), the first part of the Superkleer (kieselsol) and rack the mead carefully into the secondary. After one hour wait add the second part of the Superkleer (chitosan) dissolved in 1 ounce warm water and gently stir into the mead. Store in 60°-70° dark area, be patient again and wait.

Once the yeast has settled (for the most part) to the bottom (two weeks or so), then you can re-rack with Potassium Metabisulfite (just to keep things safe) and then once every two or three months thereafter until the desired clarity is attained and then bottle.

“My Honey's just Braggin”
Wheat Braggot – 5 gal

Ingredients:

3# Breiss DME
1# Carapils
Hefeweizen Ale Yeast (WLP 300)
1tsp yeast energizer
5 oz priming suger
3.6# Wildflower Honey
3 oz Tettnenger hops (German)
1 tsp Irish moss
2tsp yeast nutrient

SG: 1.048 (6.3% ABV possible)
FG: 1.002 (6% ABV)

Place Carapils in 2 gallons of water, heat to 170° and hold for 30 minutes. Remove Carapils and bring to a boil. Add DME and 1 oz hops. Boil for 45 minutes. Add 1 oz hops and Irish moss. Boil for 10 minutes. Add remaining hops and boil for 5 minutes. Remove from heat and place in primary which has 2 gals ice cold water. Once wort is less than 100° add the honey, yeast energizer and nutrient. Continue cooling to about 80° and fill to 5 gals. Aerate well and pitch yeast.

Rack into secondary after kruesen falls. (It took two weeks in 65°.) Bottled after another week with priming sugar into, mainly, ½ Liter flip top bottles.

“Cyser of Life”
Cyser – 3 Gal

Ingredients:

5# Tupelo Honey
½# Dark Brown Sugar
2.5 gal Apple cider
3 tsp yeast nutrient
1.5 tsp yeast energizer
1 pkg Eau de Vie (Wyeast 4347)

Ingredients for later:

6# honey
cider
Potassium Sorbate
Potassium Metabisulfite
Yeast energizer and Nutrient
1 pkg Superkleer

Target ABV: 21% Final ABV: 18%
FG: 1.016

This is my first attempt at creating a very high gravity cyser. In the mead arena, a sack mead is usually a mead with a high quantity of honey which results in a very sweet or a high ABV (above 14%) or both. It's hard to get yeasts to do anything when the gravity is initially high. So the answer to avoiding a stalled or even no fermentation is to add the additional sugars periodically.

Day 1: Mixed all ingredients from the left list (except for the yeast), aerated well and poured off 1.6 Liters to use as starter. Pitched yeast into the starter beaker. Added Potassium Metabisulfite, to keep wild yeasts at bay, with the remainder of the must and set aside. SG: 1.104

Day 2: Starter is going well. Added to Primary.

Day 4: Added 2.5# honey and 20 oz cider. SG@ 1.082

Day 7: SG@ 1.028. Added 1 tsp nutrient ½tsp energizer, 2.5# honey and 20oz cider.
SG@ 1.048 after additions.

Note: Allow me to interject here. You will notice that I did not have an SG reading before the sugar additions on day 4. This was a mistake of mine and this is when I learned of an important formula. (S1xV1)+(S2xV2)=(StxVt) where S1, S2 and St is the SG of the main batch, addition and total respectively, V1, V2 and vt is the volume of the main batch, addition and total respectively. The volumes must remain constant (ie ounces, cups, pints, etc.). And the smaller the unit, the more accurate the outcome.

So I figured that the honey/cider additions were at an SG of about 1.050 with a total volume of 48 ounces. I plugged the math in and with a Brix reading from a good Samaritan (Jeff L.) I was pretty close. So, as of day 11, I was at an SG of 1.024 with a Brix of 16.5 which computed out to 16.18 ABV. Not bad, so far.

Day 15: SG @ 1.014 Wait a bit more. I don't want to add too much honey/cider mix to make it too sweet if the yeast peters out.

Day 18: SG @ 1.008. Added more energizer and nutrient (which my have been my downfall here), 1# honey and 10 oz cider. SG raised to 1.020.

Day 21: SG @ 1.018.

Day 48: SG @ 1.016. Fermentation is pretty much done. Racked in secondary and added 1.5 tsp Potassium Sorbate, 1/8 tsp Metabisulfite and Superkleer.

Day 65: Racked to tertiary with 1/8 tsp Metabisulfite.

Bottle when you think it's clear enough. Let this one age for at the very least six months. Although I think it would be great after a year.