

## Homebrewed Craft Mead – VIKING'S BLOOD (CHERRY MEAD)



### A HISTORY OF MEAD AND INGREDIENTS

We think of mead as simply a combination of honey, water, and yeast originating in Europe. However, traces of mead, made with honey and rice, have been found in Chinese pottery dating back 9,000 years. Many varieties of mead contain fruit, grains, hops, and spices. Some ethnic variations do not use honey, but rather local herbs, tree barks, fruits, and a variety of sugars or syrups.

- ▶ Tej from Ethiopia is made with ground aromatics giving it a bitter flavor likes hops
- ▶ Poltorak from Poland uses 1 part honey to ½ part water making it extremely sweet
- ▶ Sima is Finnish, made with lemons and some sweeteners, and has a low alcohol content
- ▶ Myod, a Russian mead, may take 12 to 50 years to age
- ▶ Balche was prepared by the Mayans using honey and bark from a tree with the same name

Some mead has distinct varietal names based on ingredients:

- ▶ Meade with an “e” refers to a white wine with a bit of honey for flavoring
- ▶ Melomel is a more generic term of mead flavored with fruit
- ▶ Cyser is the term for mead made specifically with apple juice replacing some water
- ▶ Acerglyn mead is made with maple syrup
- ▶ Metheglin is mead made with honey and spices

The honey type used in mead meadmaking impacts the flavor and sweetness. Mead made with wildflower honey will taste different than mead made with honey harvested from a hive in the vicinity of grape vines or a blueberry patch. Popular varieties of honey used for mead include orange blossom, lavender, or a mixture of wildflowers. Bakers,



*Edye Buchanan - Author and Mazer*

alfalfa, or buckwheat honey are typically not used for making mead as the flavors are too strong. Fruits and juices can be used during the initial meadmaking or added prior to the completion of fermentation. The sugars present in these ingredients will aid in the fermentation process and can add complexity to the flavor of the mead. Raw honey may include wild yeast. When left on its own, it will ferment, but most recipes include yeast to ensure fermentation. The equivalency for honey is: 1 gallon = 16 cups = about 11.7 lbs. of honey.

There are yeasts specifically used for wine or champagne. These can also be used to make mead. A bit of caution prior to the beginning of the homebrewing process: Read and follow the package instructions carefully.

The recipe for this Viking's Blood Cherry Mead uses Lavlin® EC-1118 yeast. There are numerous others such as Lavlin® 71B-1122 which can also be used. It is important to read through the entire recipe and process to determine what, if any, optional equipment or ingredients are used. For additional information and clarification, a glossary of brewing terms is included at the end.

## DECRYSTALLIZE/WARM HONEY

At room temperature, honey is thick and difficult to mix. Over time, it starts to crystallize and may solidify. The honey must be heated to facilitate dissolving it in the water, tea, and juice. BriskHeat makes silicone band heaters with watt densities of 1.25 and 5.0 watts/in<sup>2</sup>. A DHLS10, high-watt, low-temperature model is selected to decrystallize quickly without risking damage to the pail. This was used with an SDC temperature controller and a FGDIW5V Wet Area Insulator to reduce the honey's viscosity. The SDC was set to 105°F (40°C) to maintain the properties of the raw honey. If the honey is not raw, set to 120°F (49°C). Without using a temperature controller such as the SDC, adjust the rotary dial to approximately ¾ full power. The insulator assists the honey to be heated more quickly and efficiently than the heater alone. The honey needs to be stirred to distribute the warm honey. Note: It may take several days to achieve the proper consistency.



## Cherry Mead Recipe

(still/non-carbonated) – Makes 5 gallons

- ▶ 4-6 pounds of frozen tart cherries defrosted (1 lb. mixed berries can be used)
- ▶ 17-20.5 cups (12.5-15 lb. or 5.8-6.8 kg) wildflower honey fully decrystallized and slightly warmed
- ▶ 1-2 cinnamon sticks
- ▶ 1-1.5 pk (5-7.5 g) Lavlin EC-1118 or 71B-1122 wine yeast (or equivalent)
- ▶ 1-2 qt tart cherry juice
- ▶ 1 tsp pectin enzyme (optional)
- ▶ 2-gallons hibiscus tea (room temp.)
- ▶ Water (bottled) approximately 4 gal
- ▶ Yeast energizer (optional)
- ▶ Yeast nutrient (optional)
- ▶ Potassium sorbate
- ▶ Potassium metabisulfite



## MEADMAKING PROCESS

**B**e sure to read package instructions in full of both the yeast and yeast nutrient prior to starting. There are steps which are time/product sensitive. If the ingredients are not ready or properly prepared when required, the brewing process can fail.

1. Sterilize all equipment and containers.
2. Rehydrate or proof yeast per package instructions maintaining the proper temperature requirements. Stir to dissolve.
3. Pour the hibiscus tea into a 6-gal fermentation bucket.



4. Using a paddle or slotted spoon, slowly add the decrystallized honey to the tea, stirring constantly to dissolve. **Note:** If using 4 lb. of fruit, use 20.5 cups honey for a dry mead; for 6 lb. of fruit, use 17 cups. Decrease honey if using sweetened cherries.

5. Add 1.5 gal of clean, bottled water and continue to stir. Slightly warm water can be added to help dissolve the honey. Remember to mind the mixture temperature as it will need to be approximately 90°F (32°C) when it's time to pitch the yeast. Add 1 qt of tart cherry juice. If using fresh rather than frozen fruit, stir in 1 tsp of pectin.



6. Sterilize a nylon bag or piece of cheese cloth large enough to contain the fruit. Pour fruit into the bag, retaining the juice and tie. Add the bagged fruit, its juice, and cinnamon stick into the fermentation bucket. Carefully stir to ensure ingredients and temperatures are well integrated.

7. Using a (sterilized) thermometer, check temperature. Add bottled water to reach 5.5 gal (20.8 l). Cooler or warmer water may be used to adjust the temperature to 80°-90°F (27°-32°C).

8. Add yeast nutrient, if desired.

9. Stir the yeast separately, then stir into the must (unfermented mead).

10. Test the specific gravity of the must and record. This will allow the maximum alcohol of the finished product to be determined. Typically, it will be 1.07 - 1.12, depending on the amount of honey used.



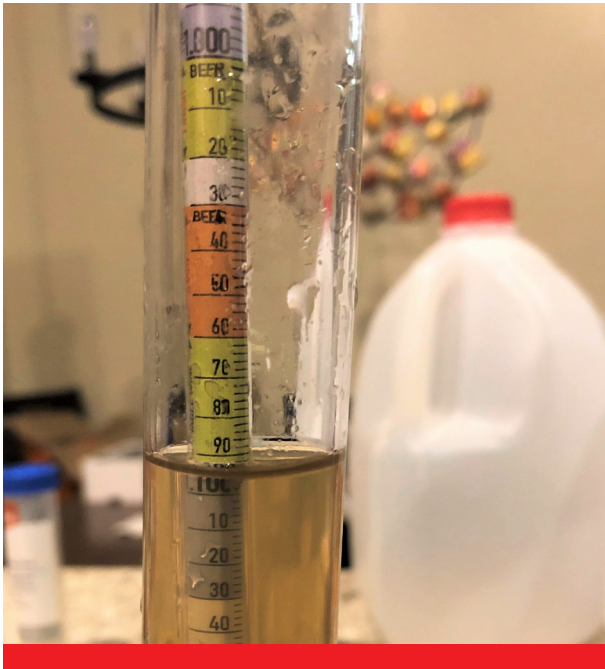
11. Place lid with airlock on the bucket. Place the container in a dark place with minimal temperature variation. The optimum fermentation temperature is 65°-77 °F (18°-25 °C).

12. Active fermentation can be observed (bubbles in the airlock) within 12 hours.



## FERMENTATION

**Important: Sterilize hands, sample thief, hydrometer, paddle, lid, and airlock any time the bucket is opened.**



1. Remove the lid of the fermenter and gently stir with a sanitized paddle at least once a day for a week. This helps to release the carbon dioxide which is a by-product of fermentation.
2. Yeast nutrient can be added on the 2nd and 4th days following brewing. This ensures the yeast is healthy and well fed. Follow the package instructions.
3. If fermentation slows or stops within the first 7 days, add yeast energizer to restart fermentation as directed on the package. Additional yeast nutrient can be added at the same time.
4. When fermentation stops (no more bubbles), approximately 10-14 days after brewing, remove the fruit. Use the wine (sample) thief and hydrometer to test the specific gravity and sample the mead.
  - a. If the specific gravity is  $<1.0$ , stir in 1 cup of decrystallized honey. Replace lid and airlock after washing and sterilizing. Wait 2-3 days to clarify, then rack to a secondary fermenter. (Honey added at this stage is likely to ferment rather than sweeten.)
  - b. If the specific gravity is  $\geq 1.0$ , rack to a secondary fermenter.

- c. Use the following guide to equate ending specific gravity and taste:
  - i. Dry mead: 0.099-1.006
  - ii. Medium mead: 1.007-1.011
  - iii. Sweet mead: 1.012-1.20



**Note:** When racking, use a sterilized bucket or carboy which can be fitted with an airlock. Ensure the bottom of the syphon is about 1/2 inch off the bottom so no sediment is transferred to the secondary fermenter.

5. Place the secondary fermenter in a dark location which maintains an ambient temperature of 65°-77 °F (18°-25 °C). Bubbles may or may start to form after racking. **DO NOT STIR.**
6. After 3-5 days, check the clarity of the mead. If it is still cloudy, rack into another sanitized container. Recheck again in 3-5 days and rerack if still cloudy.
7. Once mead is satisfactorily clear, add potassium sorbate and potassium metabisulfite as directed on the package. Gently stir and replace the lid or stopper.
8. After 24 hours, sample the mead. If the mead is too dry, additional honey, brewing sugar, or juice can be stirred into the mead. This is known as back-sweetening.

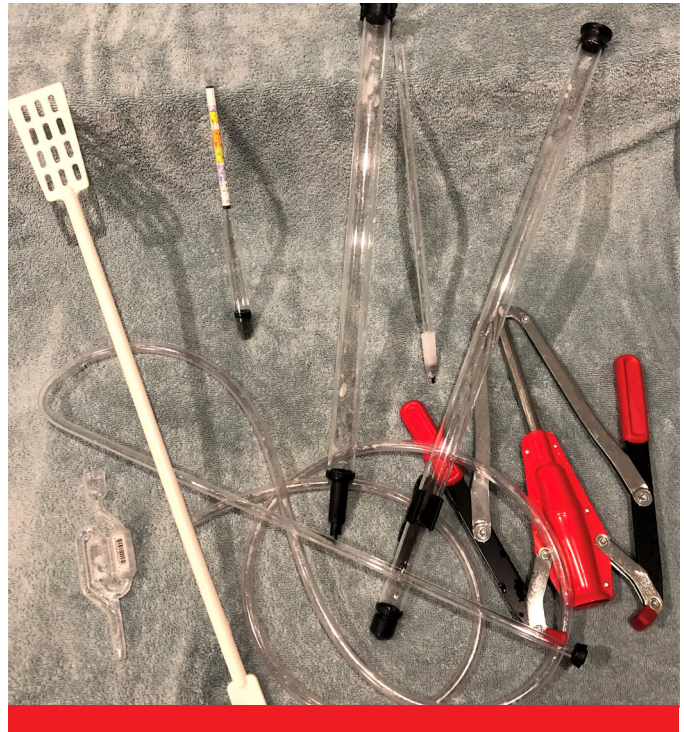
The mead is now completely fermented, flavored to your taste and ready for conditioning. Mead may be left in a secondary fermenter for conditioning, or it can be bottled. Bottling can be performed 2-3 days after the potassium compounds have been added if no further bubbling is observed. It is recommended the mead age for at least 2 months, but it can be consumed immediately or conditioned for years.

## BOTTLING

**Bottling is best done with a friend to make the process quicker.**

**Drinking aged mead while bottling fresh mead adds to the fun!**

1. Sanitize bottles, corking device, syphon, bottling wand, and tubing. The syphon can be used to fill the inside of the bottles with sanitizer. Swish the liquid inside the bottle so it contacts all surfaces. Be sure to sanitize the inside and outside of the throat area.
  2. Soak the corks in sanitizer for about 1 hour.
  3. Position the carboy or fermentation bucket on a stable working surface such as a kitchen counter.
  4. Have the tube between the auto-syphon and bottling wand.
  5. The wand has a spring which must be pressed to the bottom of the bottle. This allows the mead to freely flow. Engage the wand in the bottle and pump the syphon until the mead begins to fill the bottle. Holding the bottles below the bucket allows gravity to finish filling the bottle.
  6. Leave at least 1 in of air space below the cork. To do this, simply pull the wand from the bottom of the bottle to stop the flow. Any partially filled bottles can be used for tasting during the conditioning process.
  7. Cork the bottles, being careful not to contaminate the bottle opening. Place bottles in a box or rack which allows them to be stored horizontally.
  8. Check bottles for leaks frequently during the next 24 hours.
- Mead can be served cold, at room temperature, or slightly chilled.



## PURCHASING EQUIPMENT

When starting meadmaking or homebrewing, an initial investment is required to obtain the basic tools of the trade. These can be purchased online from sources not familiar with homebrewing; however, there are many online retailers that specialize in craft brewing. One such company is Midwest Supplies, selling beer, wine, cider and kombucha, equipment and ingredients. Their offerings include recipe kits, too. Overall costs will not vary much, and these specialized retailers are great sources of knowledge. Local brick-and-mortar stores may offer classes and an opportunity to meet other hobbyist in the area. Trusted sources will help you decide what items are essential to get started such as a basic brewing kit, versus what items can be added as your enthusiasm increases. No matter what equipment is used, it must be cleaned thoroughly before and after each use. So don't forget brushes and pipe cleaners. Sterilizing powder or tablets will become one of the most important ingredients purchased.

## EQUIPMENT

- ▶ 6-gal fermentation bucket with airlock
- ▶ 5-gal carboy (or bucket) with airlock
- ▶ Bottling syphon
- ▶ 6-ft syphon tube
- ▶ Bottling wand
- ▶ Corking device
- ▶ 750 ml bottles (22-26 recycled wine bottles)
- ▶ #9 corks (or as needed to fit bottles)
- ▶ Wine (sample) thief (recommended for tests and sampling)
- ▶ Hydrometer (recommended)
- ▶ 4 in wide silicone band heater for 5-gal bucket – BriskHeat DHLS10
- ▶ Temperature controller – BriskHeat SDC (if using raw honey)
- ▶ 5-gal wet-area insulator or cloth heater
- ▶ Measuring spoons and cups, funnel, ladles, paddle
- ▶ Sanitizer (bucket or tote)

## GLOSSARY

**Airlock** – a small plastic assembly that allows carbon dioxide to escape a fermenter but prohibits air from flowing back into the container. Without an airlock, bacteria can contaminate mead and cause it to spoil.

**Back-sweetening** – the addition of honey, sugar, or juices to sweeten mead after fermentation. See Potassium Sorbate.

**Carboy (demijohn)** – a clear glass or plastic container used for transporting liquids; glass is preferred as it is more resistant to infiltration of oxygen

**Conditioning** – extended time allotted for flavors to mature, like aging liquors.

**Fermentation** – a metabolic process creating chemical changes in a substance such as transforming sugar to ethanol

**Fermentation bucket** – a food grade plastic pail or bucket used for primary fermentation

**Hydrometer** – an instrument used to measure the specific gravity of a liquid. In brewing, it is used to predict alcohol strength and determine if fermentation is complete.

**Mazer** – one who makes mead, also a vessel for drinking mead

**Mead** – an alcoholic beverage traditionally made from honey, water, and yeast. Flavors can be enhanced by adding fruit, spices, grains, and hops.

**Must** – a mixture of water and honey that will be fermented into mead

**Potassium sorbate** – an additive required to stop the fermentation process before back-sweetening mead

**Potassium metabisulfite** – an additive that helps to prevent spoilage by eliminating oxygen in fermented liquids

**Primary fermentation** – the conversion of sugars to alcohol as facilitated by yeast. Typically, this is complete in 7 to 14 days for beer and wine.

**Racking** – the act of transferring liquid from one container to another using a syphon system. This can refer to racking from the primary fermentation bucket to a carboy for secondary fermentation (or conditioning). Less often it is used to indicate bottling.

**Sanitizer** – a substance used to kill bacteria and germs that can contaminate food and spoil food products

**“Secondary” fermentation** – technically, fermentation is complete, and this stage is clearing and conditioning of the liquid

**Yeast** – a single-cell fungus that digests food (sugar) to facilitate fermentation. Different varieties of yeast impact the flavor, speed and maximum alcohol content of beer, mead, and wine.

**Yeast energizer (booster)** – a substance used to reactivate or stimulate yeast for optimizing fermentation

**Yeast Nutrient** – an additive used before and during fermentation to ensure the health of the yeast

## ABOUT THE AUTHOR:

Edye Buchanan started homebrewing beer with her son 15 years ago. In what has become a holiday tradition, she estimates brewing over 300 gallons split between 15 varieties of ales, lagers, and hard ciders she has shared with family and friends. Inspired by a BriskHeat co-worker, she has handcrafted 6 varieties of mead including cyser, melomels with blueberries, peaches and cranberries, as well as a traditional flavor. Professionally, Edye is a Sales Strategist with BriskHeat Corporation and tasked with finding new applications for their products. This application appears to be a success!

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