



STARTER KIT

Welcome to the art and science of mead-making. This starter kit ensures you'll be well-equipped to create mead that is a testament to the skill and dedication of a true mead maker.

This manual has been designed to provide you with detailed setup instructions for your equipment, as well as a collection of carefully curated recipes for crafting your own delicious mead.

The production and consumption of alcoholic beverages carry inherent responsibilities. As you embark on your mead-making journey, we kindly request that you brew responsibly and adhere to all local, state, and federal laws and regulations governing alcohol production. By utilizing this guide, you acknowledge and accept personal liability for the brewing process and the responsible consumption of the resulting mead. Your commitment to safety and accountability will ensure a rewarding and satisfying mead-making experience.

Cheers and happy mead making.



EQUIPMENT & ASSEMBLY

Fermenter System

The wide-mouth fermenter is designed to be equipped with an airlock lid and LCD strip thermometer to monitor temperature over time.

- 1. Carefully place LCD strip thermometer near base of fermenter.
- 2. Assemble airlock as described below and securely fasten lid any time your mead is fermenting or aging.

Airlock

The floating cup within the airlock will bob as gas is produced during fermentation, creating a one-way airlock to prevent contaminants from entering the vessel. The airlock system consists of the cylindrical body, inverted cup, and cap.

- 1. Place the inverted cup within the cylindrical body of the airlock, covering the gas release opening.
- 2. Fill cylindrical body partially with water until the cup begins to float.
- 3. Secure plastic cap onto cylindrical body.
- I. Insert airlock into fermenter lid opening. Ensure that just the tip is inserted such that it is flush with the inner lid surface.

Auto-siphon

The auto-siphon and hose minimizes air exposure and allows you to transfer liquid from one vessel to another without disturbing settled sediment at the bottom of your vessel resulting in a clear finished product.

- 1. Insert racking cane into plastic tube.
- 2. Slide one end of hose onto racking cane.
- When ready to transfer liquid, ensure empty vessel is placed below full vessel and begin pumping siphon until liquid is flowing steadily.
- 4. Carefully lower siphon as liquid level decreases and avoid transferring sediment.





INGREDIENTS

When it comes to crafting a high quality batch of mead, selecting the right ingredients is paramount. The quality and characteristics of the ingredients you choose will greatly influence the final taste, aroma, and overall experience of your homemade mead. Here are a few essential considerations to help you choose the best ingredients for your mead-making journey:

Honey, being the primary fermentable ingredient in mead, is of utmost importance. Opt for high-quality raw honey that suits your taste preferences and desired mead style. Different types of honey, such as wildflower, clover, or orange blossom, impart distinct flavors and aromas to the final product. Experimenting with various honey varieties can add depth and complexity to your meads.

Water, another critical component, should be free from chlorine and other impurities. Using filtered or spring water ensures a clean canvas for the flavors of your honey and other ingredients to shine. Additionally, consider the mineral content of the water, as it can impact the fermentation process and affect the character of your mead.

Yeast selection plays a crucial role in determining the fermentation profile and flavors of your mead. Different yeast strains produce varying levels of alcohol, residual sweetness, and esters. Research various yeast strains suitable for mead making, such as champagne yeast, ale yeast, or specialized mead yeast strains, and choose one that aligns with your desired flavor profile.

Lastly, if you desire additional flavors and complexities in your mead, consider incorporating adjunct ingredients. Fruits, spices, herbs, and even oak chips can be used to enhance the flavor profile and create unique mead variations. Select fresh and ripe fruits, whole spices, or high-quality herbs to ensure optimal flavor extraction. Do not limit yourself to the ingredients provided in these recipes.

Remember, the key to choosing the best ingredients for mead making is to prioritize freshness, quality, and personal preference. By carefully selecting honey, water, yeast, and adjuncts, you can create meads that delight your taste buds and showcase your creativity as a homebrewer. Enjoy the process, experiment, and most importantly, savor the delicious results of your mead-making endeavors.



INSTRUCTIONS



The procedure outlined below is a general process for making mead which can be utilized with all of the provided recipes. Different recipes may require slight variations of this procedure which are noted with each individual recipe. All recipes are for 1 gallon of mead.

Refer to recipe notes for best results.

Primary Fermentation

Sanitize Batch Ferment

Weeks 1-6

Secondary Fermentation

Rack Finish Stabilize

Weeks 7-9

Aging

Sweeten Age Bottle

> Weeks 10+



PRIMARY FERMENTATION

Prepare Equipment

All equipment must be sanitized with food-grade sanitizer prior to batching. Sanitize equipment as directed on sanitizer label and ensure all equipment is properly assembled.

- Generally it is easiest to add sanitizing solution to a large bucket, fully submerge all of your equipment, and allow it to dry on a sanitized surface.
- Starsan is a food-grade sanitizer commonly used for homebrewing.

Prepare Must

Combine honey, fruits, and spices in fermenter. Top with water, and stir until honey is fully dissolved. Vigorous fermentation can push fruit upwards as gas is produced. Ensure you have adequate headspace to prevent fruit from clogging your airlock (1–2 inches). This mixture is referred to as the 'must'.

- For best results, use a masher to mash fresh or frozen fruit. Alternatively, fruit can be supplemented with fruit juice or syrup.
- Using warm water can help your honey dissolve easier.

Pitch Yeast

Next, you need to add yeast to your must, but your yeast need to be properly prepared. Yeast are the microorganisms responsible for converting the sugar in your must into alcohol. Most dry yeast require rehydration for optimal results. Once hydrated, stir yeast and yeast nutrient directly to your must.

- It is strongly recommended to follow the yeast packet instructions to rehydrate your yeast and reduce the risk of off-flavors due to yeast stress.
- Yeast nutrient helps to provide yeast with everything they need for a strong, healthy fermentation.

Record Starting Gravity

Once all of your ingredients are mixed, you need to measure the gravity. Specific gravity is a measurement of the relative density of your liquid. It tells you how much sugar is present in your sample at a given time. To measure your gravity, fill test tube (graduated cylinder) with a sample of must and carefully submerge hydrometer. Ensure there is enough liquid present for the hydrometer to float, and record where the liquid level intersects the scale. This value is known as the starting gravity.

- Starting gravity should be recorded on Day 1 prior to any fermentation.
- Too much sugar can actually inhibit fermentation. The ideal starting gravity for mead ranges from 1.07-1.16.
- Take note of your starting gravity value, as it will be used in conjunction with your final gravity to calculate alcohol by volume.
- Refer to Guide to Using a Hydrometer.

Fermentation

Once you've recorded your gravity, you are ready to ferment your must. Secure lid and airlock onto fermentation vessel and fill airlock halfway with water. Store vessel at room temperature and out of direct sunlight. Within 1-3 days you should notice bubbling within your fermenter and the airlock as CO2 gas escapes, which is a sign that fermentation has started. Let your mead ferment for at least 4-5 weeks until airlock activity slows down and you notice a significant accumulation of sediment at the bottom of your fermenter.

- It may be beneficial to give your mead a gentle stir every few days to keep fruit submerged. Aerating
 your mead during fermentation can also serve to help release CO2 and provide oxygen to your yeast.
- If you start to notice mead or fruit entering airlock, simply remove a few ounces from your vessel to increase your headspace as needed.



SECONDARY FERMENTATION

Rack

Once you've noticed that primary fermentation has significantly slowed down and you can see a layer of sediment settled at the base of your fermenter, it may be a good idea to rack. Racking is the process of separating mead from sediment that has formed as a result of fermentation. This sediment typically consists of dead yeast, referred to as lees, and fruit. Separate mead from sediment by racking to a secondary vessel to free your primary fermenter for another batch.

- Racking is optional and your mead can be aged in your primary fermenter, although the process of transferring your mead can help release CO2 gas and help ensure a more clear final product.
- It may be tempting to pour or strain your mead when transferring to another vessel, but this should be avoided. Doing so could oxidize your batch and/or disturb the settled sediment, creating a cloudy product which will take more time to clear. Instead, use a siphon or spigot to carefully transfer your mead.
- Ensure secondary vessel also has an airlock, as your mead will slowly finish fermenting during this time.
- Add one crushed campden tablet after racking to release sulfur dioxide and help prevent oxidation and microbial spoilage.

Record Final Gravity

Once you've entered the stage of secondary fermentation, begin recording gravity measurements weekly. You should notice the value decreasing over time, and when it stops changing after two consecutive weeks, fermentation is complete. The initial and final gravities can be used to calculate total alcohol by volume.

- Final gravity will typically range from 0.980-1.030. If it's higher than this, it likely is not finished fermenting. Use your initial and final gravity to calculate your alcohol content.
- Refer to Guide to Using a Hydrometer.

Stabilize

Once mead has fully fermented, you may choose to add additional sweetness or fruit, depending on how it tastes. Stabilizing ensures that your mead will not ferment if additional sugar is introduced. Stabilizers should be added prior to back-sweetening or adding additional fruit.

- To stabilize one gallon of mead, stir in 1 crushed campden tablet (sodium metabisulfite) and let sit for 24 hours before adding ½ tsp potassium sorbate. Gently stir, and after an additional 24 hours, your mead is stabilized.
- Stabilizing is only required if you wish to add additional fruit and/or honey to taste.
- Refer to Guide to Stabilizing



AGING

Backsweeten

Give your mead a taste. Even if you follow a recipe, your final product can be adjusted as needed to meet your specific preferences. If you prefer a sweeter final product, you can add honey to taste.

- Ensure mead is stabilized before sweetening to avoid fermentation from restarting.
- You are not limited to sweetening with only honey. You can also backsweeten with sugar, syrup, and more.
- Make sure to take in account the added volume of sweetner when calculating your final alcohol content, as added volume reduces your alcohol by volume percentage.
- Refer to Guide to Using a Hydrometer.

Add Flavor

Sweetness is not the only adjustment you can make to your fermented mead. The presence of alcohol can aid in flavor extraction, and you can add additional ingredients during this stage to fine-tune your mead.

- Commonly added ingredients include fruit, herbs, spices, vanilla, oak cubes, cocoa, and more.
- Using a brew bag to add additional ingredients makes it easier to keep everything separated.
- When adding additional ingredients, it is best to taste frequently and remove when you are satisfied with the flavor, as you cannot remove flavors if they become too strong.
- To further improve the taste and complexity of your mead, consider adding acids such as malic tartaric.

Clarify

It is highly recommended to wait until mead is perfectly clear before bottling to prevent sediment from accumulating within bottles. Mead will typically clear up on its own and can take several months of aging.

- Clarifiers or fining agents such as biofine, bentonite clay, and sparkolloid, are commonly used for clearing. The instructions for using fining agents vary from product to product.
- Adding pectic enzyme during primary fermentation will help reduce the hazing effect of pectins in fruit mead.
- Cold crashing is another method used to help speed up the clearing process. Cold crashing involves decreasing the temperature of your mead to allow particles to drop out of suspension. To cold crash, place fermenter in refrigerator for up to a week and rack or bottle immediately upon removal.

Age

Your mead can now be bottled and enjoyed at any point, but it is recommended to continue aging until the flavor has adequately matured. Aging is crucial for flavor development and enhancing the complexity and balance of your mead. You can age directly in your fermenter or within your bottles.

- To age properly, maintain stable storage conditions with consistent temperature, humidity, and minimal light exposure.
- Mead is best aged anywhere from a few months to over a year, depending on your taste preferences.
 Taste frequently and age until satisfied.
- The benefit of aging in your fermenter rather than bottles, is the airlock allows your mead to degass over time, which aids in flavor development.
- Monitor the water level in your airlock over time. You may need to refill them every couple of months.

Bottle

Use a siphon or spigot to carefully fill into sanitized glass bottles and enjoy!

- Refer to Guide to Bottling
- Upon bottling, store bottles upright for 24 hours, then age on their side. This helps to avoid leaking from your corks as your mead may initially degas.



TRADITIONAL MEAD

A timeless and elegant beverage that's remarkably simple and profoundly delicious. Its minimalistic approach allows the pure, unadulterated essence of honey to shine through, creating a smooth and delightful libation reminiscent of ancient traditions.

FOR PRIMARY FERMENTATION

- 3 lbs raw wildflower honey
- 2.5g of K1-V1116 yeast or similar
- 1.5g Fermaid-O nutrient
- Topped with spring water

FOR POST-FERMENTATION

- 1 campden tablet
- ½ tsp potassium sorbate
- Raw wildflower honey to taste
- 10g togsted oak cubes
- ½ tsp tartaric acid
- ½ tsp malic acid

- I've made a lot of traditional meads experimenting with various yeast types, honey, and aging methods. Traditional meads often take the longest to ferment due to lack of fruits that would otherwise provide nutrients. Don't be surprised if your mead takes longer to ferment than expected. To help ensure things go smoothly, make sure you add nutrients and rehydrate your yeast as per the packet instructions.
- In previous recipes I included tartaric and malic acid in primary, but discovered that acids are better added post-fermentation so they do not create an environment that is too acidic for your yeast to thrive.
- I've never had issues with traditional meads fermenting out of control like you may notice with fruit meads. Therefore, I typically leave much less headspace than I otherwise would with a fruit mead.
- I find that my traditional meads tend to resemble dry white wines without a lot of complexity. Play around with aging with oak and backsweeten with your favorite honey to help elevate your batch.
- DETAILS FROM MY BATCH:
 - STARTING GRAVITY: 1.112
 - Final Gravity: 1.002
 - ESTIMATED FINAL ABV: 14.4%
 - Time in primary: 1 month
 - Time Aged: 6 months
 - O TASTING NOTES: SMOOTH, TANGY, LIGHT-BODIED, FULL HONEY PROFILE



RASPBERRY MEAD

Boasting a light, silky smooth character, the prominent taste of ripe raspberries offers a refreshing balance of fruitiness and delicacy.

FOR PRIMARY FERMENTATION

- 3 lbs raw wildflower honey
- 2.5g of K1-V1116 yeast or similar
- 1.5g Fermaid-O nutrient
- 1.5 lb mashed raspberries
- Topped with spring water
- ½ tsp pectic enzyme

FOR POST-FERMENTATION

- 1 campden tablet
- ½ tsp potassium sorbate
- 227g raspberry blossom honey
- ¾ tsp tartaric acid

- Perfect recipe for the summer. I find that raspberry flavor transfers over a lot more than other fruits so you don't need as much. Consider adding more after fermentation if desired.
- The raspberry blossom honey was a nice touch to add some complexity to this batch. I've never tasted a better raspberry mead, and most are far too sweet in my experience.
- DETAILS FROM MY BATCH:
 - STARTING GRAVITY: 1.100
 - Final Gravity: 0.998 sweetened to 1.020
 - ESTIMATED FINAL ABV: 11%
 - O TIME IN PRIMARY: 1 MONTH
 - Time Aged: 6 months
 - Tasting notes: Light-bodied, floral, semi-sweet



ORANGE BLOSSOM MEAD

Bright, citrusy character, capturing the essence of sun-kissed oranges and offering a refreshing, zesty flavor profile that's simple, yet invigorating.

FOR PRIMARY FERMENTATION

- 3 lbs raw orange blossom honey
- 2.5g of K1-V1116 yeast or similar
- 1.5g Fermaid-O nutrient
- ½ tsp pectic enzyme
- Juice and zest from one orange
- Topped with spring water

FOR POST-FERMENTATION

- 1 campden tablet
- ½ tsp potassium sorbate
- 250g raw orange blossom honey
- 10g togsted oak cubes

- This recipe is my modern take on joe's ancient orange recipe. Rather than adding full oranges, I wanted to avoid the bitterness of the pith, which is why i opted for zest and juice which captures all of the citrus you need when paired with orange blossom honey. You can get away with using a full orange if you use a more aggressive yeast.
- This is a great beginner recipe, as it is one of the easiest to make and adjust to your taste.
- DETAILS FROM MY BATCH:
 - O STARTING GRAVITY: 1.112
 - Final Gravity: 0.998 sweetened to 1.02
 - ESTIMATED FINAL ABV: 14.3%
 - Time in primary: 1 month
 - Time Aged: 12 months
 - Tasting notes: Bright, Tangy, Citrusy, Light-Bodied, Sweet



STRAWBERRY MEAD

Reveals an elegant interplay of floral and fruit notes, delivering a bright and refined flavor profile that gracefully harmonizes the nuanced with the vibrant.

FOR PRIMARY FERMENTATION

- 3 lbs raw wildflower honey
- 2.5g of K1-V1116 yeast or similar
- 1.5g Fermaid-O nutrient
- ½ tsp pectic enzyme
- 1.5 lbs mashed strawberries
- Topped with spring water

FOR POST-FERMENTATION

- 3 tbs dried hibiscus
- 1 tbs dried rose petals
- Zest from 1 lemon
- ½ tsp malic acid

- Strawberries have a bad reputation in the homebrewing world because they are seedy, messy, don't put out a ton of flavor, and are hard to get right. This recipe challenges that notion.
- The seediness factor is very real. Definitely use a brew bag to hold your fruit or alternatively, make a strawberry syrup. I am currently in the process of experimenting with a strawberry mead using homemade strawberry syrup only.
- Strawberry mead ferments extremely fast. I noticed airlock activity just a few hours after batching. Be mindful of headspace.
- I find that the dried flower added in secondary helps add perceived sweetness and so I did not backsweeten. Be sure to stabilize if you choose to.
- DETAILS FROM MY BATCH:
 - O STARTING GRAVITY: 1.122
 - Final Gravity: 1.002
 - ESTIMATED FINAL ABV: 15.8%
 - Time in primary: 1 month
 - Time Aged: 12 months
 - Tasting notes: Sweet, tangy, floral, slightly bitter, medium-bodied



BLUEBERRY MAPLE MEAD

Conveys a luscious, hearty depth enriched with the warmth of maple and spice, evoking a flavor that's both indulgently sweet and distinctly opulent.

FOR PRIMARY FERMENTATION

- 1.5 lbs raw wildflower honey
- 1 lb pure maple syrup
- 2.5g of K1-V1116 yeast or similar
- 1.5g Fermaid-O nutrient
- ½ tsp pectic enzyme
- 1 qt blueberry juice
- Topped with spring water

FOR POST-FERMENTATION

- 1 campden tablet
- ½ tsp potassium sorbate
- 1.5 lbs mashed blueberries
- 1 cinnamon stick
- ¼ vanilla bean

- This recipe is a favorite amongst my family and friends. If you enjoy sweeter dessert wines, and/or blueberry pancakes. This one's for you.
- THE CINNAMON AND VANILLA BEAN ELEVATES THIS RECIPE AND MAKES IT STRONGLY RESEMBLE BLUEBERRY PANCAKES... PLUS, THE BLUEBERRIES COULD EASILY BE SUBSTITUTED FOR OTHER BERRIES.
- The first time I made this recipe, I probably used too much honey and maple syrup, which you can see with my starting gravity below. Consequently, this took forever to ferment, and stalled out earlier than expected. This is how I learned that having a starting gravity that is too high can actually inhibit fermentation.
- DETAILS FROM MY BATCH:
 - Starting Gravity: 1.158
 - Final Gravity: 1.070
 - ESTIMATED FINAL ABV: 11.6%
 - Time in primary: 2 months
 - Time Aged: 6 months
 - Tasting notes: Maple, Fruity, Slight creaminess, sweet, subtle spice



GUIDE TO USING A HYDROMETER

Gravity Explained

Specific gravity is a dimensionless ratio that compares the density of a substance to the density of water at a specific temperature. In homebrewing, it is used to measure the concentration of sugars in your mead so that you can determine alcohol production over time.

During fermentation, yeast converts sugars into alcohol and carbon dioxide gas. By measuring the specific gravity before and after fermentation, you can estimate the amount of sugar consumed, and therefore, the alcohol content of the final product.

Using a Hydrometer

A hydrometer is a device designed to measure the specific gravity of a liquid. Here is a simplified explanation of how specific gravity is used in measuring sugar content and tracking fermentation:

- **1. Initial Reading:** Before fermentation starts, a sample of the must is placed in a graduated cylinder, and its specific gravity is measured by placing a hydrometer in your sample. This reading represents the original sugar content of the liquid.
- **2. Fermentation:** As yeast consumes sugars and produces alcohol, the density of the liquid decreases. This is reflected in lower specific gravity values over time. Eventually this number will stop changing as all of the sugar in your mead is consumed, or the yeast reaches it's alcohol threshold.
- **3. Final Reading:** After fermentation is complete, another sample is taken, and its specific gravity is measured again. The final specific gravity reading is compared to the initial reading to calculate the change in sugar content.

Calculating Alcohol Content

Calculating your alcohol by volume (ABV) can be done several different ways. Many brewers turn to online alcohol calculators to quickly get precise values. ABV can also be calculated by hand using the following formula:

Sweetness Indication

Final gravity can also be used to help classify the sweetness of your final product. Note that while gravity measures the relative density of your liquid, sweetness is actually a product of both residual sugar and acidity, so the levels of perceived sweetness may vary depending on the recipe used.





GUIDE TO BOTTLING

Bottling Explained

Bottling plays a crucial role in the process of making mead, as it marks the final step before consumption. Proper bottling ensures that mead is sealed in airtight containers, preventing exposure to oxygen and contaminants that could compromise its flavor and quality over time.

Additionally, bottling allows the mead to undergo further aging and maturation, allowing its flavors to harmonize and develop complexity. The choice of bottles, closures, and sanitation practices during bottling significantly impacts the quality of your final product. You don't want to ruin a batch of mead by improperly bottling.

Choosing Bottles

There are several options when choosing what type of bottles to use. Glass bottles are best for mead, and the most commonly used bottles are 750ml wine bottles with corks, 12oz beer bottles with bottle caps, and 1L flip-top bottles. They type of bottle comes down to personal preference.

Filling

Bottling methods vary depending on the type of fermentation vessel used to age your mead. For example, if you are using a standard glass fermenter or carboy, you will need to siphon your mead from the vessel to your bottles. If you are using a fermenter equipped with a spigot, simply attach a hose directly to spigot and into your bottles. See below procedure for bottling:

Prepare Bottles

- Thoroughly clean and sanitize your bottles, caps or corks, and any other equipment that will come
 into contact with the mead. Ensure bottles are fully dry before bottling.
- Find a way to secure bottles to prevent them from tipping while being filled. Be sure that you can easily see the fill levels within the bottles.
- Place fermenter on a stable surface above bottles.

Fill Bottles

- If using a siphon, submerge the auto-siphon or racking cane in the mead and pump it a few times to start the siphon. Allow the mead to flow directly into the bottles, leaving about an inch or two of headspace.
- If using a spigot, first remove fermenter lid so liquid can flow out, then secure hose to spigot nozzle. Open nozzle and allow the mead to flow directly into the bottles, leaving about an inch or two of headspace.
- Hose clamps or bottling wands can attach to your hose to make filling easier.

Seal

- Cap or cork each bottle immediately after filling to minimize the risk of contamination.
- If using corks, practice corking on an empty bottle to make depth adjustments to your corker. When ready to cork, dunk corks in sanitizing solution to help them slide in easier.



GUIDE TO STABILIZING

