



Bader Beer
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Fruit Wine Making Made Easy

By Steve Bader

Wine making is as simple as taking fruit juice and leaving it out in an open container and allowing wild yeast to ferment it into an alcoholic product. While this "traditional" or "Old Country method" can make wine, the results were inconsistent. This method relied on wild airborne yeast to be of such a quality that it will produce a wine you would like to drink. That may work where vineyards are grown, but the airborne yeast in non-vineyard regions is unlikely to be a wine yeast. I would not be comfortable with this method.

In this handout I will try to inform you of the basics of wine making. With these basics you should be able to go on your merry way producing the wine of your choice.

Wine is normally made of 4 ingredients: **water (from fruit or fruit juice)**, **sugar (from the fruit or added)**, **yeast** and **acid**. I am including grapes in a broad category description of fruit that you may choose to use to make wine. While almost all of the worlds' commercial wine is made from grapes, many other fruits can make excellent wine. In grape wine, you probably will not add water if the grapes are *Vinefera* grapes (grapes grown for wine making). All other grapes (Niagara, Concord, Thompson Seedless) are normally too high in acid (and sometimes tannin) and low in sugar content, and require you to add water and sugar to the wine to get an acceptable flavor. Most berries, apples, plums, apricots etc., are low in both sugar and acid, and need to have both added. The sugar quantity, acid level, and flavor vary from crop to crop, year to year.

*Fruit wine making can be a bit of a challenge, since there is a fair bit of time and skill necessary to complete the job. For the first-timers, we suggest making one of the **Winexpert Island Mist** fruit wine kits. All of the mixing and testing has been done for you, so they are very easy to make, and quite tasty, for under \$2.25 per bottle. **Island Mist** kits are available all year.*

Wine is made in many different size batches by home wine makers, from 1 gallon to hundreds of gallons. Since most home Winemakers make 5 gallon batches, that is the size batch I will talk about in these directions.

Listed below is the suggested list of equipment that you need to make a 5 gallon batch of wine. The first group of items are included in our Winemaking kit.

Included in Country Winemaking Kit

5-Gallon Glass Carboy.

8-Gallon graduated plastic bucket and lid with grommet for airlock (primary fermenter)

Straining bag for the fruit

Airlock and cork

Auto-Siphon and 4 ft hose

Hydrometer (to measure sugar content)

Carboy brush

Winemakers Recipe Handbook

Fermtech bottle filler

Plastic corker & 30 Corks

2 oz Potassium (Meta)Bisulfite (sanitizer)

Additional equipment recommended:

Acid test kit

Wine Thief (for removing samples of wine)

Wine Bottles (size of your choice - standard 750 ml wine bottle is 5 per gallon)

Fermometer (temperature strip)

Funnel

Long spoon

Lets get started - In this handout we will make 5 gallons of fruit wine using **Blackberries or Raspberries**.

Ingredients necessary:

Approximately 20 pounds of Blackberries or 15 pounds Raspberries (only good quality fully ripe berries) Or 96 Oz Can of Vintner's Harvest Blackberry or Raspberry wine base

About 5 gallons Good quality water

10 Lbs cane sugar or corn sugar (corn sugar ferments faster and cleaner)

10 Teaspoons Acid Blend

5 Teaspoons Yeast Nutrient

2 $\frac{1}{2}$ Teaspoon Pectic Enzyme (for clarity)

Potassium Bisulfite ($\frac{1}{4}$ teaspoon per 5 gallons of wine, added twice), (or 5 Campden Tablets for 5 gallons of wine) (**5 Campden Tablets = $\frac{1}{4}$ Teaspoon dry Potassium Bisulfite**)

Red Star *Premier Cuvee* wine yeast

2 $\frac{1}{2}$ Teaspoons Potassium Sorbate (wine stabilizer)

Sanitation is very important. **All equipment used in making wine should be sanitized before using it.** I suggest sanitizing with Potassium (meta)bisulfite (or commonly called "sulfites") Sulfites are uses in 2 different dilution ratios when winemaking. For sanitizing equipment you make a stronger solution, by dissolving the potassium bisulfite in water at a rate of **4 Teaspoons per 1/2 gallon** of cool water. For stabilizing your wine prior to bottling, you use far less sulfites, only $\frac{1}{2}$ teaspoon dry measure for 6 gallons of wine. To sanitize your glass and plastic fermenters, I would fill the fermenter with about $\frac{1}{4}$ to $\frac{1}{2}$ gallon of your sulfite solution, then swirl the liquid to contact

the entire inside of the fermenter and lid, and then let drip dry for 10 minutes. Any left over residue on your fermenters will be harmless to your wine. Sulfite solution has a fairly strong smell to it, and is an anti-oxidant, so be careful not to breath much of the aroma from the solution. You may re-use the solution as long as the solution is clear and it has not lost its aroma. I would suggest making your solution and storing it in a 1 gallon jug for use at a moments notice. You should also use this solution to sanitize airlock, corks, etc. ***It is assumed in these directions that all of the equipment that you will use will be sanitized before you put it in contact with your wine.***

1. Add the sugar to about 1 gallon of boiling water to dissolve sugar.
2. Sort through berries and throw away the poor quality berries. Place berries in nylon straining bag inside your plastic fermenter. Tie off bag. Press or crush the berries in the bucket to release the juice. Leave the berries in the bucket. Add the hot sugar water to the berries in the bucket
3. Add good quality water to about the 6-gallon mark. Don't worry about the exact amount since you can add more water later if you need to.
4. Take a hydrometer reading and record it here. This is optional, but helpful when you want to know alcohol content. It should be about 1.075 to 1.085. ***Avoid sugar readings above 1.085, since higher alcohol contents will hide all of the good fruit flavors.***

Original Hydrometer reading_____

5. Add the Acid blend, Pectic Enzyme, Yeast nutrient and $\frac{1}{4}$ Teaspoon Potassium Bisulfite (***measure carefully---too much can be harmful to your wine***) or 5 campden tablets (5 Campden Tablets = $\frac{1}{4}$ Teaspoon Potassium Bisulfite) to your wine. The wine is called "must" at this point. If you have an Acid test kit, test your wine and adjust it accordingly at this point. **(We will test the acid for you at the store for free!! Just bring us about an 8 ounce sample after the must has been completely mixed)** Put the lid on the bucket with the airlock filled with sanitizing solution, and let the Potassium Bisulfite sanitize the wine. The Potassium Bisulfite produces a gas called sulfur dioxide. It may smell unpleasant, don't worry. This gas is normal, and will dissipate in about 24 hours. The sulfur dioxide will destroy wild yeast and bacteria in your wine in the next 12 to 18 hours, while it will not be harmful to your packaged wine yeast. (The potassium bisulfite will also inhibit enzymatic browning of white wines, promotes clarity and extends the shelf life) **The wine yeast will be added approximately 24 hours later**

6. Approximately 24 hours after you have added the Potassium Bisulfite, you may then add the yeast. Cut one corner of the yeast package, and pour the yeast into the wine. Stir the yeast into the wine. Now tightly place the lid on the bucket with the airlock full of the sanitizing solution. Keep the temperature of your must about 70° to 75° during the fermentation.

7. Fermentation should start in 24 to 48 hours. You can tell that the fermentation is started by looking for foam production on top of the must, or gas bubbles coming out of the airlock (if the lid is tightly sealed) If your fermentation has not started within 48 hours, please call us at the store.

8. Let the wine ferment for about 5-7 days. Then siphon the wine into a sanitized glass carboy. This separates the pulp from the wine. Throw the pulp away. The purpose of this racking (transferring the wine into a different container is called racking) and all other racking is to separate the sediment from the wine, since the sediment can cause some off flavors, and of course causes cloudiness.

9. Let the wine ferment for about another 10 - 15 days. The fermentation should slow during this time to a near stop. When you have about $\frac{3}{4}$ of an inch of sediment, it is time to rack again.

10. Rack a third time. Your wine should be stopped fermenting or very near stopped. (If your temperature was lower than 65°, it may take longer---but no worries) You should also see some clearing in your wine. You may take a hydrometer reading while racking to see how far the sugar level has dropped at this time. If the reading is 1.000 or below, you will want to add the 2 $\frac{1}{2}$ Teaspoon of Potassium Sorbate and 1/4 Teaspoon of Potassium Bisulfite (or 5 Campden Tablets). Try to rack your wine with a minimum of splashing from this point on. Remember that oxygen is your enemy from now until you drink your wine. The **Potassium Bisulfite** is added at this time as an anti-oxidant, to minimize browning, promote clarity and as a preservative. The **Potassium Sorbate** is added to prevent any additional fermentation in the bottle that would cause carbonation or to push the cork out of the bottle.

11. **Sweetness.** Your wine should taste pretty close to the final product by now. It is very common for the wine to have an ending specific gravity of .995 to 1.000. This is often too dry tasting for most people, since they would like a sweeter wine. The solution is to add sweetness back in at this time. The potassium sorbate you added in the previous step allows you to add more cane sugar (avoid corn sugar for sweetening), and not have it be fermented by the yeast. You can add boiled and cooled sugar water at this time. I cannot tell you how sweet you like your wine, so I also cannot tell you how much sugar to add. I would start by adding about $\frac{1}{2}$ pound of sugar boiled in about 2 cups of water. You can add more later if you would like. The idea here is to add a little at a time, taste the wine, and then add more if you feel it is not enough. Experience has taught me that it is best to have a friend help you tasting for sweetness. Patience is valuable here. *You can determine your alcohol content now if you subtract your ending gravity from your original gravity and multiply the difference by .125 (example original 1.090 - final 1.000 = 90. Multiply 90 X .125 = 11.25% alcohol by Volume.*

12. Let your wine set in a quiet place to clarify. This may take a few weeks, to a few months. Time is your friend here. Just keep the wine out of direct sunlight, and keep oxygen contact to a minimum. Some people will "top off" their wine at this time with additional boiled and cooled water.

This is up to you, as it is a compromise. Too much water added will dilute the wine flavors; too much oxygen contact can cause loss of flavor.

13. If your wine is not clarifying, as you would like it to, you can add some Sparkolloid at this time, or filter your wine. You may want to call to ask about your options here.

14. Once your wine is properly sweetened and clarified, you should bottle it. Sanitize your bottles with the sulfite solution (**4 teaspoons per 1/2 gallon** of cool water), and soak your corks in $\frac{1}{2}$ gallon water and 1 crushed campden Tablet for about 5 minutes to sterilize them and make them easier to insert into the bottle. Corks come in 3 sizes. Number 7, 8 and 9. The smaller the number the smaller the cork. The general rule is larger corks for longer aging. Transfer your wine quietly, with a minimum of aeration. Fill to about $\frac{1}{2}$ inch below where the cork will go in. Immediately put the cork in, and stand upright for about 5 days to let the cork dry out and form a seal. Then set the bottle on its side or upside down to keep the cork moist and sealed. Age your wine as you wish and drink when you want!! It's your wine, so drink it when you want. Most wine will improve with age, but many factors are involved here. In general, higher alcohol levels, higher acid levels, and higher tannin levels require more aging, and taste better older.

Store your wine about 45° to 50° if possible. Also higher humidity is also better since the cork is more likely to hold its' seal.

You should label your wine so that a year from now you remember what it is!! You can also put a shrink seal cover on to enhance the appearance of your wine. We have a full line of over 60 different wine labels we can overprint for you to personalize your wine.