

The Brew Shop

Bend, Oregon

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THE BASIC BREWING PROCESS

- 1. The first step is to create and boil up your wort.** Wort is the mixture of sweet malt sugars, hops (and whatever else you decide to put into the brew kettle) that the yeast will live on to create your beer. With a clean kettle, start bringing 2-4 gallons of water to a boil. The more water the better. If you are using a canned malt kit and have no grains to add proceed to step two. If you have grains they should be steeped in hot water (mashed). There are two methods for this. One is the **loose grain method**. Pour your grains into a separate pot with one or two quarts of water bringing them to 160 degrees and removing them from the heat. Let them steep for 30 minutes. You are mashing them (partially) and creating a small amount of wort. While the grains mash allow your other kettle to come to a boil. Leave enough room for 1 to 2 quarts of the mash water and another quart that you will use to sparge (rinse) your gains with. Strain your mash water into your boil kettle straining out the grains. Sparge (rinse) the grains with another quart of hot water. This will recover the converted starches from the grain (maltose sugars) and contribute flavor and color. Throw the spent grains onto the compost or use them for bread or dog biscuits. The second method is the **tea bag method**. This is the more simple method of using a grain bag to steep the grains. Place the grains in the bag and set them into the kettle while it's coming to a boil. You can either, withdraw the grain before the water boils or bring the water to 160 degrees and let it set for 30 minutes. Unless your recipe calls for it **DO NOT BOIL YOUR GRAINS**. When you are ready to boil remove the grains and sparge by placing the grain bag into a strainer. Keep an eye on how full your kettle is as you still need to add the malt extract.
- 2. Adding the extract.** When the water is boiling remove the kettle from the heat and add your malt extract (and any other sugars you may be adding). Stir thoroughly and return the kettle to the heat when the sugar has dissolved. Adding gypsum at this point is not a bad idea. It will improve fermentation and efficiency. When the wort starts to boil this is the time to start adding the hops, either loose or in hop bags. Boil

the wort for 60 minutes. Can malt kits only need about 10-15 minutes of boiling. The last 15 minutes is the time to add the finishing hops and 1 tsp. of Irish moss. Irish moss is a fining agent that isn't critical but will help clear your beer.

3. **Cool your kettle as quickly as possible.** Your per-fermentation cooled wort makes an extremely welcome place for infectious agents (bacteria and wild yeast). Your yeast makes a successful beer by getting a head start on any non-invited agents. The faster your yeast gets into the wort and starts fermenting the less likely it is to become infected by other agents. Don't panic. Just cool the wort as quickly as possible. Place the covered kettle in an ice bath, use a wort chiller or add the wort to cold water to bring it up 5 gallons.
4. **Strain your cooled wort into the fermentor.** After you have boiled and cooled the wort you will put it into the fermentor (6 gal. plastic bucket or glass carboy) and add cold water to make 5 gallons. If you used loose hops you will need to strain them out at this time. Be sure that anything that touches the cool wort is sanitized. Also be aware that chlorine will give the beer off flavors. If you live in an area with a lot of chlorine in your water be sure to filter or pre-boil the cold water you add.
5. **Adding the yeast.** When the wort is in the fermentor and the temperature is **BELOW 80 DEGREES** it is time to pitch your yeast. Add the yeast and aerate the wort. This can be done by carefully swirling the fermentor to add oxygen to the wort. Most ale yeast likes to ferment at 68-72 degrees. Add an airlock and place your fermentor in a dark place with steady temperatures. Be sure to use active healthy yeast. Yeast and your water are the most important aspects of a good beer.
6. **Secondary fermentation.** If you have a secondary fermentation vessel you may want to "rack" or transfer your beer it after the initial fermentation has slowed. The idea is to improve clarity and quality of the beer. There is some debate over the need to transfer. The benefit is that you are removing the beer from the "trub" (the spent yeast and fatty acids at the bottom of the fermentor). The beer can finish fermenting and age in a trub free environment and if you don't have time to bottle there in less worry about how long the beer is sitting.
7. **Bottling.** When the beer has stopped fermenting it's time to bottle. If the airlock bubbles come at 90-120 seconds apart the beer is ready. It is time to wash and sterilize your bottle supply. At this point you need to give the yeast some more sugar so they will carbonate your beer in the bottle. Boil $\frac{3}{4}$'s of a cup of corn sugar in two cups of water. Add this mixture into the beer and gently swirl. Now you are ready to bottle. Be sure everything is sanitized (including the caps). Bottle, cap and place in a warm place for 6 days to two weeks. Test a bottle to see when carbonation is achieved then put the beer in the fridge and enjoy.

CHEERS!!!