

Home Brewing Made Easy

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This brewing guide is designed to help the 1st time brewer make his or her first batch of beer. I am trying to keep it short and with as few "beer" words as possible. I will be emphasizing the basics of Homebrewing, but not going into the details of why it is done this way. If you want to know more, I suggest reading "*The New Complete Joy Of Homebrewing*" by Charlie Papazian, or take our Beginning Brewing Class.

Listed below is the equipment necessary for brewing 5 gallons of beer, which is the standard batch size.

Included in **Beginning Brewing Kit** and **Master Brewing Kit**

- 2 **6 Gallon Glass or Plastic Better Bottle Carboys**
- 1 Rubber Cork With Airlock (S Shaped Plastic, To Fit The Carboy)
- 1 Solid Rubber bung (better bottle only)
- 1 *Fermometer* (Temperature Strip To Monitor Temp. Of Beer)
- 1 Hydrometer (To Test For Sugar Content Of Beer, which helps you determine alcohol content)
- 1 Bottle Capper
- 110 Bottle Caps (1/2 pound)
- 1 Auto-Siphon, 4 foot Hose and shut-off clamp
- 1 Fermtech Bottle Filler
- 1 Carboy Brush (*NOT included in Better Bottle kit*)
- 1 2 oz. PBW (Powdered Brewers Wash) Cleaner
- 1 4 oz. Bottle Iodophor Sanitizer

Additional equipment included in **Master Brewing Kit**

- 1 Large (8 inch) funnel (that fits into the glass carboy)
- 1 Handled strainer (that fits inside the funnel)
- 1 Beer Thief (for taking samples out of the carboy)
- 1 Hydrometer Jar (for easier reading of the hydrometer)
- 1 "*New Complete Joy Of Homebrewing*" (The best book for beginners)

Other equipment needed

- 1 4 To 5 Gallon (minimum size) pot To boil beer in (Canning Pot, or Stainless Steel)
- 50 12 Oz beer bottles (not twist top), Or 28 - 22oz beer bottles for 5 gallons. (24 - 12oz bottles per case, or 12 - 22oz bottles per case)
- 1 Saucepan (About 3 Quart size)

Here are the ingredients for your first 5 gallon batch of homebrew. This recipe is for a beer we call NorthWest Pale Ale. (**Clone of Mirror Pond/Sierra Nevada**)

- 3.3 Pounds Coopers Light malt extract Syrup
- 2.0 Pounds Coopers Light Dry Malt Extract
- 1 Pound (10L) Munich malt (crushed in store)
- 1 Pound Great Western 2-row malt (crushed in store)
- 2 Ounce Centennial hops (boil 60 minutes, for bitterness)
- 1 Ounce Cascade hops (boil 15 minutes for flavor)
- 1 Ounce Cascade hops (boil last 5 minutes, for hop aroma)
- 1 Teaspoon Irish Moss (boil 60 minutes for clarity)
- 1 White Labs "California Ale" yeast
- 3/4 cup corn sugar for bottling

Sanitation is the most important process in brewing great beer. Everything that your beer comes in contact with must be clean and sanitary. The Iodophor sanitizer works well to sanitize your equipment, and does not require rinsing. Make your sanitizing solution when you start, and use it during the entire brewing process. When the color of the solution becomes clear, it no longer is useful. Hoses, carboys, strainers, funnels, and airlocks all need to be sanitized. Anything that will come in contact with your beer **after** you are done boiling needs to be sanitized. A 10 minute soak in the sanitizer solution will sanitize your equipment. **Clean and sanitary** are two different things. **Clean** means you have no visible residue on the surface of your equipment. **Sanitary** means all bacteria, mold and wild yeast are killed or neutralized. **Clean** your equipment after every use with PBW or Straight A. **Sanitize** your equipment before you use it. **If you sanitize properly, you will consistently make great beer!**

A special word about glass vs. plastic fermenters.

Plastic "Better Bottles" are a new type of plastic carboy that is "hydrophobic", which means they repel liquids. This means they do not get as dirty as glass carboys. However, you **CANNOT use a brush** to clean the better bottles, since a brush will scratch a Better Bottle. Use a percarbonate cleaner like PBW (included) to clean them when you are done with them. Fill the bottle with about a gallon of warm water and 1 Tablespoon PBW, and put the solid bung on. Shake the bottle to get the interior coated, release any pressure, and then let set for up to an hour upside down to clean the neck area. Then rinse and sanitize. *Please note that the 6 gallon glass fermenters are actually about 6 ½ gallons volume to the base of the neck, and the Better Bottles are 6 gallon volume to the base of the neck.*

Brew day will take about 2 hours from start to clean up.

Fermentation will take 10 to 14 days, you may wait longer till you are ready to bottle high temperatures (above 72°) will speed up fermentation, but is not desirable for flavor of beer
Bottling day will take about 1 1/2 hours. 7 days later you can drink your beer!

- 1) Start brewing. **Remove the vial of White Labs yeast from the refrigerator and set out at room temperature to warm up.** Fill your brewing pot with about 2 gallons of hot water. Add the 2 cracked malted grains together to the brewpot, turn the heat to low and let the malts steep for about 30 minutes. 150° is the preferred temperature, but don't worry if you don't have a thermometer. Avoid boiling the malts.

- 2) While your grain is steeping, clean the inside of one of your 6 gallon glass carboys, then **sanitize** it by filling it with **1 Tablespoon Iodophor** and about $6\frac{1}{2}$ gallons of cold water (fill to the very top). *(Tip: fill one gallon at a time, try to mark the $5\frac{1}{2}$ gallon level)* Let it soak for about 10 minutes and then dump all of the sanitizing solution into a sink or other container to sanitize the rest of your equipment.
- 3) Remove most of the malted grains from the brewpot when the 30 minute steeping is done. Use a handled strainer to scoop it out. Throw the malted grain onto the compost pile. Don't worry if you leave a little.
- 4) Turn heat to high and bring the beer (the beer is actually called wort at this stage) to a boil.
- 5) When beer has started to boil, slide the pot off the hot burner to avoid scorching the malt syrup. Add about 2 cups of the **Light malt extract syrup**, 1 teaspoon **Irish Moss**, and 2 ounces of the **Centennial hops** to the beer. *(This hop addition is where the bitterness is added to beer.)* Stir the malt to completely dissolve it in the water. Return the pot to the burner and heat to a boil. Do not put the lid on your pot unless you want a boil over!! The addition of the malt syrup will lower the temperature in the pot, and will take a few minutes to return to a boil.
- 6) Let boil for a total of 60 minutes. **Have a glass of your favorite beer---you deserve it!!**
- 7) With about 15 minutes to go, add 1 ounce of **Cascade hops** (the bag is 2 ounces) to the beer. *This hop addition increases hop flavor (some bitterness, some unique flavors)*
- 8) Also with about 15 minutes to go, fill the sanitized carboy with about 2 gallons of cold water (the colder the better). Put funnel, strainer, beer thief and a saucepan in the sanitizing solution to soak.
- 9) Add the last 1 ounce of Cascade hops to your beer with 5 minutes left in the boil. *(This addition of hops is for hop aroma).*
- 10) When the beer has boiled for a total of 60 minutes, turn off the heat, and add the remaining malt syrup and dry malt extract. Stir to mix the malt syrup and dry extract evenly in the beer. Wait 10 minutes for the malts to dissolve completely and sanitize.
- 11) Place your sanitized funnel on the carboy and a sanitized strainer in the funnel. Using your sanitized saucepan, ladle the beer into the carboy through the strainer. Discard the hops and any of the malted grains that may be left. Top off the carboy with cold water to the **$5\frac{1}{2}$ gallon mark** you made when you first sanitized the carboy. . (This should leave you about 7 inches from the very top of the glass carboy, or about 2"-3" below the shoulder of the glass carboy - about 3 inches below the neck on the better bottles.)
- 12) Mix up the beer in the carboy thoroughly. Draw out enough beer using a sanitized beer Thief to float the hydrometer in it's tube. Take a reading where the hydrometer floats at the water line. (it should be 1.000 in water on the specific gravity scale). Your reading should be approximately 1.048. **The beer settles in just a few minutes, so take your reading immediately after mixing.** Write the specific gravity down for later use. **Original Specific Gravity**_____
- 13) Place a sanitized airlock and cork in the mouth of the carboy and fill the airlock with some of the sanitized water to create a water barrier. Let the beer cool until the temperature on the fermometer shows 78° or cooler. (this is almost immediately when you have cold tap water in the winter--in the

summer it may take a few hours). You can speed up the cooling process by putting the carboy in the sink and wrapping a wet towel around it. Additional cooling can be achieved by placing ice cubes in the neck area under the towel. It is better to cool the beer to between 75° and 78° quickly so you can add the yeast.

- 14) When beer is 75° to 78° it is time to add the yeast. Shake the room temperature vial of yeast to suspend the sediment in the liquid. Remove the cap, and then add the yeast to the beer. Fermentation should start in about 10 to 20 hours. Ferment your beer at room temperature, about 68°-70°. Avoid temperatures above 72° and below 64°.
- 15) Fermentation should last about 10 to 14 days. *It is possible, and quite likely, for the fermentation to be shorter or longer.* Warmer temperatures cause a faster fermentation. The easiest way to tell if fermentation is done is to time how fast the bubbles come out of the airlock. When the bubbles have slowed to longer than 60 seconds between bubbles, it is time to bottle your beer. You could also take a hydrometer reading of your beer at this time, and if it is between 1.012 and 1.016 the beer is done fermenting.
- 16) Clean and sanitize your second carboy, auto-siphon and hose, bottle filler. with Iodophor as in **step 2.** Clean your beer bottles of residue, and sanitize in the same solution that you sanitized your carboy. Soak the bottles and bottle caps in the Iodophor solution for 10 minutes, then drain them for about 10 minutes before filling.
- 17) Boil **3/4 cup** of corn sugar in 2 cups of water for 5 minutes. The addition of this sugar to your beer will cause fermentation to re-start in the bottle and carbonate your beer.
- 18) Put full carboy of beer on table, and empty sanitized carboy on the floor underneath it. Siphon the beer into the empty carboy using your sanitized siphon assembly. You are trying to separate the beer from the sediment on the bottom of the carboy, so try not to mix up the beer at this time. The sediment tip on the siphon assembly allows you to set the siphon assembly on the sediment, and suck only a small amount of sediment into your beer. Avoid splashing the beer. After you get about 1/2 a gallon siphoned into the carboy, add the corn sugar mixture to the carboy and finish siphoning the beer. Mix this sugar gently in the full carboy to get an even carbonation in all the bottles. While you are siphoning this take another hydrometer reading. The original reading you took earlier (see #12), minus the final reading, multiplied by .125 gives you an estimated alcohol content by volume. (this beer should be about 1.048 starting and 1.014 ending) $1.048 - 1.014 = 34$. $34 \times .125$ gives you an alcohol content of 4.25% by volume. **Final Specific Gravity**_____
- 19) Put the full carboy up on the table. Put the siphon assembly into the beer, and the bottle filler on the end of the siphon hose. Fill the bottles to the top with the bottle filler, when you remove the bottle filler from inside the bottle, the beer will be about 1½ inch from the top. Then cap the bottles.
- 20) Let the bottles age at **room temperature** (65° to 80°) for 1 week to carbonate. Temperatures below 65° will be too cool for the yeast to carbonate the beer.

Chill and drink!!! There will be yeast sediment in the bottom of the bottle, so pour the beer into a glass in one motion so you don't mix the sediment into the beer. Drink and enjoy!

Your beer will improve with age for a few weeks. Store it cool if you can and you will have great beer for 6 months or more. Cheers!