

Brewing Tutorial

Full-boil with a wort chiller

Step 1a:

(Liquid Yeast Only)

3+ hours (preferably 1-2 days) before brewing, break the nutrient pack.

Remove from the fridge and watch for swelling. Fresh, healthy yeast should swell within hours. Older yeast may take longer. This proves the yeast is alive. If you forget this step, simply break the nutrient pack before pitching in the final step.

Step 1:

Clean and sanitize.

Everything should be clean and free of debris. Equipment that will be boiled (brew-pot, stir paddle, etc.) does not need to be sanitized, the boil will take care of it. Items that are not boiled (fermenter, airlock, etc.) should be sanitized, preferably using a no-rinse sanitizer such as Iodophor or Star-San.



Step 2:

Fill the brew-pot with 6-6.5 gallons of water.

The goal is to end up with a little over 5 gallons after boiling. Your particular equipment will determine the boil-off rate, so you can fine-tune the volume in future batches. If this is your first full-boil, start with 6.25 gallons.



Step 3:

(Skip if your recipe does not include grains)

Heat the water to 155°F, then steep the specialty grains for 20 minutes.

Temperature is not critical, but should be kept under 170°F to avoid extracting excess tannins from the grains. Grains should already be crushed. The pot can be covered during this process.

Steep in a smaller volume? Steeping a small amount of grains in a large volume of water can lead to excess tannin extraction due to high pH levels, especially when steeping dark grains. You may want to start with approximately 2 quarts of water per pound of grain, then add water to raise the volume after steeping.



Step 4:

Remove the grains, allow them to drain, then discard.



Step 5:

Add the malt extract while stirring with the heat off.

Malt extract, especially liquid extract, can sink to the bottom and burn if you do not turn off the heat and stir.



Step 6:

Bring the wort to a boil.

The pot can be covered at this time to speed up the process.

Watch for boil-overs as the wort approaches boiling!



Step 7:

Follow the brew schedule for your particular recipe.

*For most recipes you will be boiling 60 minutes. Add the hops and any other additions at the times specified on the instruction sheet. Hops do not need to be placed in a steeping bag, though some brewers prefer to use one. The pot should **not** be covered during the boil so DMS can evaporate.*



Step 7a:

(Dry Yeast Only)

Rehydrate the yeast.

Empty the yeast packet into approximately 4oz. of 95-105°F water. Do not stir. After 15 minutes, stir to dissolve the yeast. Try to plan this so it is ready at the same time the wort is ready for yeast.



Step 8:

Place the wort chiller into the brewpot.

With 15 minutes of boiling remaining, drop the wort chiller into the brewpot. This will sanitize the wort chiller. Increase the heat to bring the wort back to a boil.

This is also a good time to add Irish-Moss/Whirlfloc and/or yeast nutrient. Irish-Moss/Whirlfloc will help clear the beer. Yeast nutrients are suggested for beers that contain a large amount of adjuncts (corn sugar, honey, candi sugar, etc.).



Step 9: Chill.

Turn off the heat and run water through the wort chiller. Initially, the water exiting will be hot enough to kill grass. We suggest running the water into a large bucket (or trash can), then using this water for clean-up. Continuous stirring will drastically reduce cooling time (under 5 minutes if it's February in Wisconsin). Try to cool the wort to fermentation temperature, typically 68°F for ales.



Step 10:

Transfer the wort to the fermenter.

You can strain the wort at this point if you wish, though it is not necessary.



Step 11:

Take a gravity reading.

Measure the gravity of the wort with a hydrometer. This is the Original Gravity (OG), write it down. It should be close to what the recipe sheet specifies. Don't worry if it's off by a few points. Discard the sample (taste it first!), do not return it to the fermenter. That only increases chance of infection.



Step 11a:

(Liquid Yeast Only)

Aerate the wort.

Liquid yeast needs oxygen for the beginning stages of fermentation. Pour the wort back and forth from the brew pot to the fermenter, cover and shake the fermenter, or stir the wort vigorously to dissolve oxygen. You cannot over-aerate (unless you are injecting pure oxygen from a tank).

Step 12:

Pitch the yeast, cover the fermenter, and install the airlock.

Yeast does not need to be stirred in. The airlock should be filled to the fill line with water.



Step 13:

Fermentation.

You should notice activity in the airlock within 48 hours. If you reach day 4 without activity, take a gravity reading with a hydrometer. If it has not changed from the OG, pitch new yeast.

Monitor the fermentation temperature. Yeast will create heat and raise the wort temperature by up to 5 degrees. Try to maintain a steady temperature by moving the fermenter to a cooler/warmer part of your house as needed. Temperature control is one of the most important factors in making good beer.

Fermentation is typically complete after 5-7 days, but it is wise to keep the beer in the fermenter for at least two weeks, three is better. Yeast are continuing to work cleaning up off-flavors, as well as settling to the bottom to clear the beer. Secondary fermenters are generally no longer recommended for most beers.

Take a gravity reading when you feel fermentation is complete. Most beers will finish at 1.010-1.014. Some "bigger" beers will be closer to, or even above 1.020. The important thing is that fermentation is complete. Check the gravity again 3+ days later, if it has not changed, the beer is done.

Step 13a:

Dry hopping.

If your recipe includes dry hopping, these hops should be added to the beer after fermentation is complete. Add them 5-7 days before you plan on bottling, or for the length of time your recipe specifies. A hop bag is not necessary, but you can use one if you prefer.

Please refer to our Bottling guide for instructions on bottling the beer.