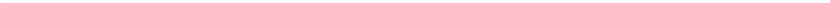


PROCESS



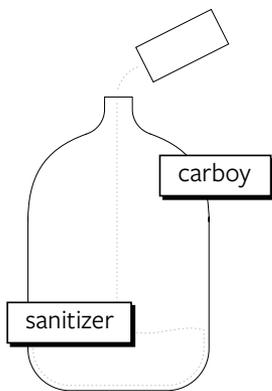


Note: For more recipes as well as pre-packaged ingredients for even more brewing, check out www.boxbrewkits.com/collections/recipe-kits to purchase Box Brew Kits Recipe Packs.

STEP 1

SELECTING A RECIPE

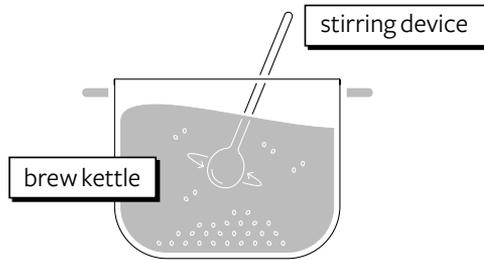
Selecting a recipe and procuring the ingredients can be among the most interesting and informative parts of the brewing process. Google is a great place to start - do a quick search for a favorite ingredient, beer, or beer style to see where it takes you. Many books on brewing have also been written (The Joy of Homebrewing, by Charlie Papazian, is considered “the bible” of homebrewing by many). Most recipes you’ll find will make 5 gallons (20L) of beer. Although you can use almost all of the tools in the kit to eventually brew at a larger scale, converting a 5-gallon recipe to 1-gallon (4L) is as simple as it sounds - just divide your ingredient list by 5, or ask for help at a local homebrew shop.



Note: Forgetting to sanitize or doing so with a lack of gusto is nearly guaranteed to ruin your beer. No matter how tedious it may seem, we cannot overstate the need to sanitize your equipment throughout the entire process, especially once the wort has been removed from the heat after boiling.

STEP 2**SANTIZING**

Start by wiping down your work surface with mild soap and water. Rinse off the area with a wet rag until all the soap has been removed. Once everything is clean, it's time to sanitize. We recommend using One-Step No-rinse cleaner (included with our recipe kits). This cleaner doesn't need to be thoroughly rinsed and can come in contact with your beer without imparting any off-flavors or toxins. Once your work area is clean and sanitized, you'll want to start cleaning and sanitizing your equipment. We recommend pouring a small amount of water-sanitizer mix into your fermenter to let it sit while undergoing the rest of the process. Once your equipment is soaking, let's move on with the brewing process.



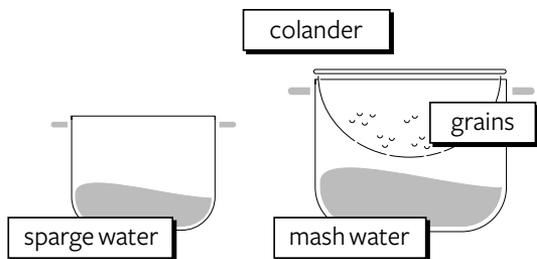
Note: When brewing a small batch of beer, it can be difficult to gauge exactly how much water you'll need to use to ensure you have the right amount of finished beer in your fermenter. Because many of the recipes included in this book utilize different techniques, please keep in mind that additional cold, filtered water can be added to your fermenter at the end of the boil to increase the volume of beer you create.

STEP 3

MASHING

Pour approximately 1/4 gallon (1L) of cold water per pound of grain in your recipe (our recipe kits typically each include 2-2.5 lbs of grain) into a stockpot and heat to 160 degrees (71C). We'll refer to this pot as "the kettle" from here on. Once at temperature, add your crushed grains to the water and stir to make sure all the grains are wet. This is known as "the mash." If it looks like oatmeal, you're doing it right!

After grains have been added, the temperature will drop to 152-155 degrees (66-68C). Maintain the mash temperature within this range, stirring every 15 minutes, for 60 minutes. Keeping your mash at a consistent temperature is critical to the success of your beer!

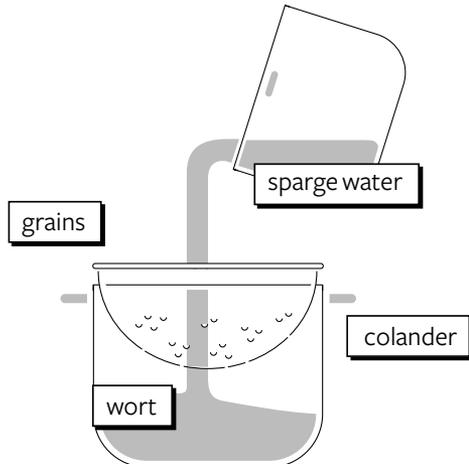


Note: Sparging, sometimes also called lautering, is often the most confusing part of the brewing process for new home brewers. Let's break it down. During the mashing process, you've extracted the sugars from your grain that will eventually become your beer, but they're trapped within the grain mixture itself. Sparging is the act of rinsing those sugars from your grains into your brewing kettle, allowing you to then discard your grains and continue with the brewing process.

Separately, bring 1 gallon (4L) of cold water to 170 degrees. We'll call this your "sparge water." After the 60 minute mash is complete, raise the mash temperature to 170 degrees and continue stirring. Find your muslin bag (or any other type of straining cloth) and spread it open over a colander. Scoop - or pour - grains from your mash into the colander, spreading them as evenly as possible. Once all the grains are in the colander and your sparge water has been heated, you'll be ready to begin sparging.

STEP 4

SPARGING

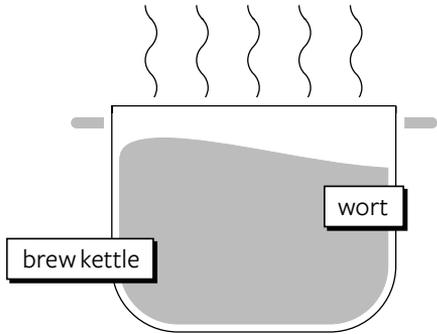


Troubleshooting: If you're in a pinch and can't locate a colander to sparge with, stretch your muslin bag taut around your brew kettle (to suspend the grains above your kettle) and repeat the process above.

**STEP 4
(CONT.)**

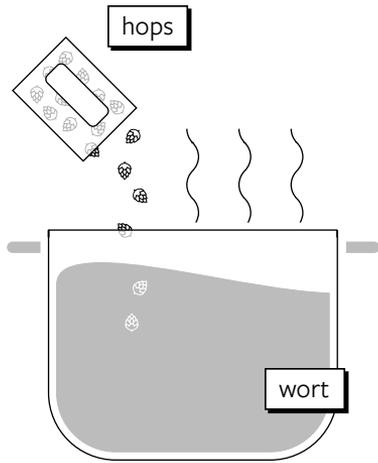
SPARGING

Holding the colander above your brew kettle, slowly pour your sparge water over the grains as evenly as possible. After the entire amount of water has drained through the grains, repeat by pouring this liquid through the grains 2 more times. Remove spent grains - although commonly discarded, spent grains can be dried in an oven and used in baking, dog treats, burgers, and a myriad of other recipes.



Note: At this point, you've successfully created your wort - pronounced "wert"- a sweet, sugary liquid that will become your beer.

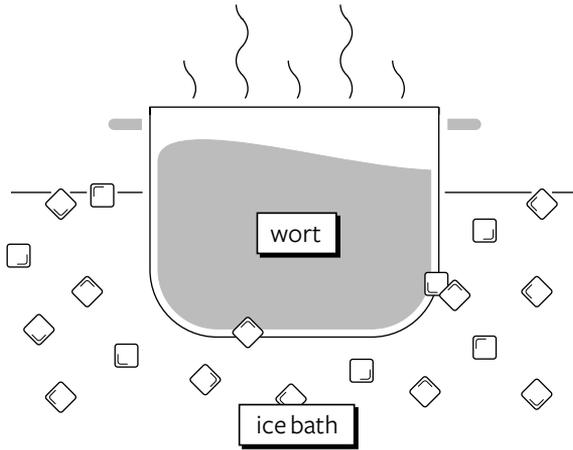
Now, turn on the heat and bring your wort to a boil! If your recipe incorporates malt extract (dry or liquid), slowly add this to the wort while stirring to prevent burning. After the extract has been incorporated, turn the heat back on and return your wort to a rolling boil, being careful to avoid boilover.



As your wort comes to a boil, most recipes will call for the addition of hops. Hops added toward the beginning of the boil will impart a bitterness to the beer, whereas hops added at the end of the boil will have more of an effect on the aroma. Follow your recipe's instructions regarding the addition of hops to the wort.

STEP 6

ADDING HOPS



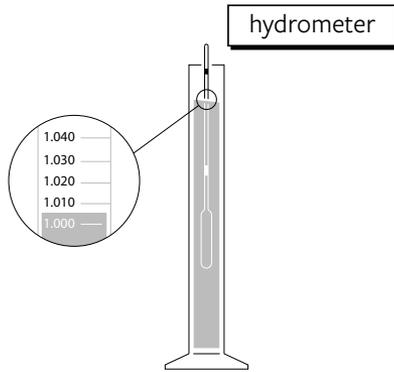
Note: Do not pour hot wort into your glass fermenter before cooling!

STEP 7

FERMENTING

After the wort has been boiled (usually for 30-60 minutes, depending on your recipe), the next step will be to quickly cool the wort to a temperature that can support and encourage the growth of yeast. This is when sanitizing becomes paramount - a warm, sugary liquid is extremely vulnerable to contamination, so take the time to make sure all utensils, thermometers, etc. that will come in contact with the wort have been sanitized. There are a number of methods commonly used for bringing the wort to yeast-pitching temperature (about 70-90 degrees F (21-32 C)) - one of the most effective is to fill a sink or bathtub with ice cold water and place your kettle in the water, stirring to release heat. Whichever method you



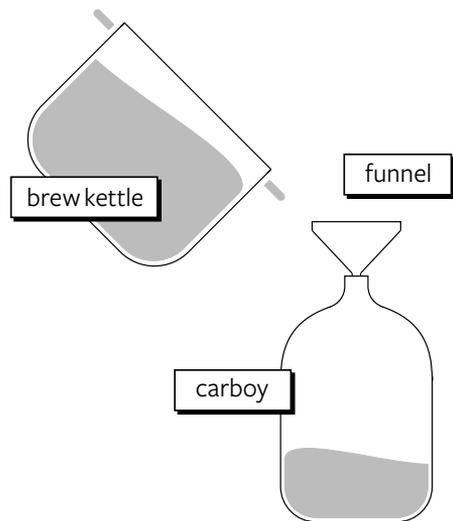


Note: Measure the "OG" (original gravity) where the hydrometer scale meets the surface of your sample.

**STEP 7
(CONT.)**

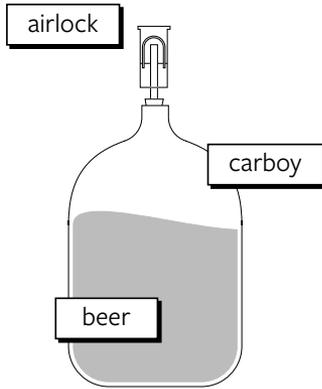
FERMENTING

use, bringing the temperature to within this range is imperative to give your yeast the best environment to encourage fermentation. If your wort is too hot, the yeast won't survive long enough to ferment your beer. Once the wort has been cooled, carefully pour a small amount into the sanitized hydrometer test jar, using the green base to support it while you pour. Sanitize your hydrometer and place it into the test jar, gently tapping to remove any bubbles. Record your wort's OG, or original gravity (this is the scale beginning with 1.000...). Eventually, when the wort is finished fermenting, you'll measure its specific gravity again to determine the alcohol content of your beer. Measuring specific gravity will also indicate when your beer has finished fermenting.



Once your wort has been cooled, make sure your fermenter is sanitized (pouring sanitizer into the fermenter and sloshing it around is a great way to make sure every surface is covered). Dump out any sanitizer and, using the sanitized funnel pour your wort into the fermenter (including any leftover wort in your hydrometer test jar), making sure to leave enough room for yeast activity at the top, about 3 inches or 7cm. Carefully open your yeast packet (or vial, if you are using liquid yeast) and “pitch,” or pour, your yeast on top of the wort. Pour a small amount of liquid sanitizer (or vodka) into your airlock, and place it into the rubber stopper on top of the fermenter.

STEP 8**PRIMARY
FERMENTATION**

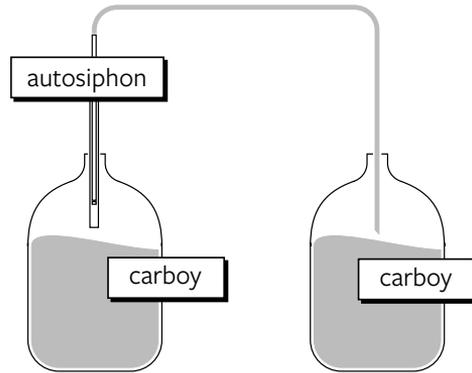


Note: You should notice your airlock begin to bubble within the next few hours (sometimes this can take a bit longer, so don't worry if a day passes and your wort hasn't begun fermenting) - this is evidence of the fermentation process in action.

Rinse out and clean your equipment before putting it away. You'll be glad you did when it comes time to brew your next batch! Depending on the beer style, leave your wort fermenting in your fermenter for 7-10 days, even if you've noticed the bubbling has significantly subsided or stopped altogether. When brewing just 1-2 gallons (4-8L) of beer, fermentation can sometimes happen quite quickly (just a few days, in some cases) - if bubbling in your airlock stops, you can double-check whether fermentation has finished by using your hydrometer to compare your results to your recipe's target "FG" or final gravity.

**STEP 8
(CONT.)**

**PRIMARY
FERMENTATION**



Note: If your brewing kit includes just one fermenter, you can skip this step!

First, mix a small amount of sanitizer with warm water. Locate your auto-siphon and plastic tubing included in your kit. Dip both elements into the sanitizer. Slide the end of the tube onto the top of the auto-siphon (sometimes heating the tube will help - the fit must be tight to maintain a good seal), and gently remove the airlock and rubber stopper from your primary fermenter. Slide the siphon into the fermenter, taking care to make sure the tip stays above the layer of trub at the bottom of the fermenter (this is a combination of hops, dead yeast, and particulates settling out of your beer). Leaving it undisturbed will help to clear up your beer and leave out any off-flavors. If this “trub” gets into your beer, don’t worry! It’s perfectly safe to drink.

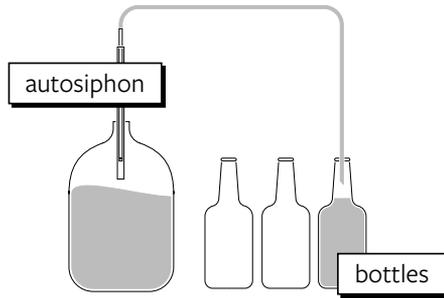
**STEP 9****RACKING &
2ND FERMENTATION**

Note: Leaving your beer in the fermenter for longer than required is not a problem, in fact, many beers will improve with a little extra conditioning.

Use the auto-siphon to begin the flow of beer from your primary to your secondary fermenter - as soon as a continuous flow of liquid is achieved, the remaining beer will continue to siphon until the transfer is complete. If you'd like, you can also use the auto siphon to fill your glass test jar to measure the specific gravity of your beer, in order to determine the alcohol content. After you have measured the final gravity and poured all of the wort into the secondary fermenter, add the rubber stopper and air-lock back to the top of the fermenter. Let sit for an additional week, depending on your recipe.

**STEP 9
(CONT.)**

**RACKING &
2ND FERMENTATION**



Note: If your beer has not fermented completely, adding additional sugars (such as priming sugar) can re-start fermentation - this can result in "bottle bombs," or exploding bottles. The same can be said for adding too much priming sugar. Take care to carefully measure your priming sugar before adding it to the bottle to avoid over-carbonation.

STEP 10

PRIMING & BOTTLING

"Priming" prepares your beer to carbonate by giving the yeast a small, controlled amount of sugar to digest - this generates a small amount of CO₂ which, in a closed environment, will carbonate your beer. Priming sugar is also known as dextrose, and is available at all local homebrew shops (and in all of our recipe kits). Use 1/2-2/3 teaspoon (2.5-3.25ml) of priming sugar per 12 oz. (355 ml) bottle, 1 tsp (5ml) per 16 oz. (500ml) bottle, or 1.5 tsp (7.5ml) per 32 oz. (1L) bottle. Make sure the inside of the bottle has been sanitized before adding sugar and filling the bottle. Fill bottles approximately 1.5 inches (4cm) below the top. Carbonation will typically take about a week after bottles have been capped, but depending



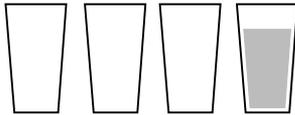
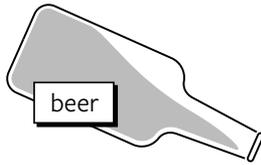
Note: There are a number of factors at work in the carbonation process, including temperature (60-70 degrees [15-21C] is ideal), the type of beer, even the health of your yeast. Although most beers will be perfectly drinkable after 5-7 days, flavors will continue to deepen and develop as your beer conditions in the bottle. This is especially true for high ABV beers such as imperial stouts and barley wines, which often carbonate more slowly. If you open a beer and it's not as carbonated as you'd like, don't give up just yet - good things take time!

**STEP 10
(CONT.)**

PRIMING & BOTTLING

on the beer can sometimes take longer (see note at left or our FAQ for more details!)

Two things are critical when adding priming sugar - the first is that the FG, or final gravity, has been reached. There are several options available for bottling, each with its own advantages. We recommend using EZ-Cap flip-top bottles (similar to Grolsch beer bottles), because they do not require the purchase of a capper and can be re-used several times. Most local homebrew shops will also have a selection of bottles to choose from, and can recommend different options depending on the type of brew you're making. In a pinch, another option is to use simple soda bottles with screw-top lids.



*Note: Friends to enjoy successful brew not included
with Box Brew Kits.*

STEP 11

DRINKING

When you pour your beer from the bottle, pour it slowly so you don't disturb the yeast layer at the bottom of each bottle. With a little practice, you will be able to pour out all but the last quarter inch of beer. Again, this sediment is perfectly fine to drink. Sip slowly and enjoy the fruits of your labor!