



Bluff City Brewers & Connoisseurs



Learn to Homebrew Day

You've always wanted to make your own beer, so why not try it? There's no better time to learn! If you can boil water, you can make beer. If you can make tea, you can make GREAT beer! Brewing is what you make of it. Put as little or as much into the hobby as you want. Even minimalists can make delicious, award-winning beer right in their kitchen.

INGREDIENTS

Malted grains: Provide fermentable sugars, flavor.
Hops: Lend bitterness and aroma.
Yeast: The workhorse that converts sugars to alcohol.
Water: 95% of your beer is water!

EQUIPMENT

For your first batch, consider a kit from your Local Home Brew Store (LHBS). You'll need to supply your own kettle, though, and all-grain brewers require more specialized equipment, like an insulated cooler.

SETUP

Check to make sure you have all the ingredients you need. Clean and lay out all your equipment where you can get to it easily. Prepare your yeast ahead of time (follow instructions on the package).

Beginner: Extract only

2-gal. boil, 5-gal. batch.

OR

Intermediate: Specialty grains

2-gal. boil, 5-gal. batch.

OR

Advanced: All grain

5-gal. boil, 5-gal. batch.

STEEP SPECIALTY GRAINS

Steeping specialty grains is a simple way to add unique flavors. Heat 2 gal. water to 160°F, add grains to straining bag and steep 30 min. Rinse grains with 2 c. 170°F water. Discard grains when done.
You now have wort!

MASH

All-grain brewing allows you to make truly authentic craft beer. Mix your grains with water and heat according to your mash schedule to convert starches into fermentable sugars.
You now have wort!

LAUTER

Lautering is a two-step process to separate the wort from the grain. First, drain off the wort. Second, rinse the grains with hot water (called sparging) to extract more fermentable sugars.

ADD EXTRACT

Liquid or dry malt extract adds fermentable sugars that you will later convert to alcohol. Add the extract off the stove to avoid burning.

"Extract" is previously mashed grains that have been concentrated either as a syrup (liquid malt extract) or powder (dry malt extract). This saves the homebrewer time and reduces the amount of equipment needed.

BOIL

Add hops according to your recipe and boil volume. Boil wort vigorously, uncovered. Watch for boil-overs! Sanitize your bucket while the wort is boiling. Once the wort is cool, everything that touches it must be sanitized to avoid contamination. After the boil, place the kettle in an ice bath to cool to 70°F, then transfer the beer to the SANITIZED bucket. Top off to your full 5 gal. volume.

FERMENTATION

Pitch your yeast into the wort and attach the airlock. Store your wort in a dark area at 65-70°F. After a day or so, bubbles in the airlock will indicate active fermentation. Once bubbling stops (3-5 days), fermentation is complete.

You now have beer!

Allow the beer to age in the bucket until it is time to bottle your beer.

SECONDARY FERMENTATION (OPTIONAL STEP)

Transfer beer to another sanitized container after bubbling has stopped completely. Transfer slowly, being careful to leave sediment behind. Attach airlock and continue to age. This step helps the beer mature and clarify.

BOTTLE

After a total of 14 days, you're ready to bottle. Clean and sanitize 50 bottles and bottle caps. Slowly transfer beer to a bottling bucket, being careful to leave the sediment behind. Attach the bottle filler to the bucket spigot. Add 3/4 c. corn sugar (or 1-1/4 c. dry malt extract boiled in 1 c. water) to the beer. Stir gently to mix thoroughly. Fill and cap bottles. Let the beer carbonate in the bottle for two weeks, then enjoy your brew!

I just finished my first batch of homebrew. Now what?

Here's some advanced procedures to help you make your good beer even better.

Join a homebrew club. Swap recipes, get help with problems, learn new techniques, socialize, participate in events, enter contests, learn how to judge beer, and more!

Keep a brewing journal. Record what you do on brew day and note how it turned out a month later. This is a great way to understand your process and where you can improve. Use a notebook, notepad, or even a word processing document to keep your records.

Make a yeast starter. A yeast starter gives you more and healthier yeast for a more consistent fermentation. Sanitize an Erlenmeyer flask (or an empty growler) the day before you brew. Make a small amount of wort for the yeast to ferment. To make a 1 L starter, add 1/2 c. dry malt extract to 650mL boiling water. Boil gently for 10 min. Cool, then pitch yeast and add airlock. Shake gently every time you walk past it. Make sure it foams a bit to indicate fermentation.

Aerate the wort. Yeast needs oxygen to do their best. Aerating your wort right before pitching the yeast adds oxygen for a more consistent fermentation. The simplest way is to "box" the cooled wort back and forth between the kettle and your bucket before adding the yeast. For more thorough aeration, purchase an aquarium pump from your LHBS to infuse air into the wort.

Keg your beer. Proudly pour your beer from the tap, with less work than bottling. Build your own kegerator. You'll need at least one keg, a CO₂ tank, and a regulator to get started. Ask your LHBS how to make the leap.

Adjust your water chemistry. Salts and minerals can greatly affect the flavor of the beer. Memphis' low-mineral tap water is fantastic for most beers, but in order to reproduce some classic styles, you'll need to match their water. Gypsum, for instance, can help accentuate hop bitterness to create authentic British-style ales. If your water is too hard (not uncommon with well water), add distilled water to dilute the mineral content. Ask your LHBS for tips on how best to make these adjustments, or use one of many online water-profile calculators.

Make a lager. Expand your brewing horizons to the cold side. Lagers are challenging, time consuming, require more equipment, and few homebrewers make them. So why bother? Because it allows you to brew smooth, crisp classic styles like Pilsner or an Oktoberfest. You'll need temperature control (like an old freezer with a thermostatic controller). Lager fermentation takes place at 45-60°F for up to 10 days, and aging can last a month or longer at 33-40°F. Ask your LHBS for advice and a good beginning recipe.

Make your own recipes. Why? Because it may be the only way to recreate the incredible beer you had at that one place that one time, that you can never find in a store. Or, tweak a good beer into something truly amazing. Brewing references, your LHBS, and computer programs can help you get the proportions right, adjust your batch size, and substitute ingredients. This is a great way to express your brewing creativity and experience the satisfaction of creating your own recipe.

I've got 99 problems, but a beer's not one.

Troubleshooting your beer and your process.

That's right, you now have a *process*, and the things you do greatly affect the flavor of your beer. Don't despair - even the best brewers still brew the occasional funky beer. Working through problems will help make you a better brewer. And remember, no matter how crazy your problem sounds to you, your LHBS has probably heard it before and can offer you sound advice.

My beer tastes funny. What do I do now? You'll have to drink your mistakes, because there's no removing a flavor once it's in the beer. However, you can learn from your missteps and keep off-flavors out of future batches. Brewing references or a friendly LHBS clerk will help you identify odd flavors and their cause.

American Pale Ale

Pale or Gold liquid malt extract (LME): 6.0 lbs.
Crystal 60 malt 0.5 lbs.
Cascade hop pellets (6%): 2.0 oz. [60 min. boil time]
Irish Moss: 1 tsp. [20 min.] (Optional; for clarity)
Mt. Hood hop pellets (6.5%): 0.5 oz. [20 min.]
Mt. Hood hop pellets (6.5%): 0.5 oz. [5 min.]
Gypsum: 1 tsp. [add to cold water]
1 pkg. Nottingham Ale Yeast OR 1 pkg. Wyeast 1056

Why didn't my bottles carbonate evenly? This results from differing quantities of sugar between bottles. At bottling time, be sure to stir the corn sugar in evenly to ensure a consistent mix.

I was traveling and couldn't bottle on Day 14. Is my beer ruined? Not at all! Beer is patient and will wait for you. A few extra days means more time to mature.

My fermentation never started. What happened? Your fermentation is stuck. This will invariably happen to every brewer. If you don't see bubbles after 36 hours, carefully stir the wort with a sanitized spoon to rouse the yeast. Check your temperature. If it is too low for your strain of yeast, move the beer to a warmer location. As a last resort, you can add additional fresh yeast. To reduce the risk of a stuck fermentation in the future, consider using a more active strain of yeast or make a yeast starter.

Why is my homebrew cloudy? Yeast and sediment are an indication of fresh beer and are ok to drink, but it sure is satisfying to brew a crystal clear Pilsner. Simple solutions include pouring the wort through a strainer after boiling to remove hops, adding a secondary fermentation, cold conditioning, using clarifiers like Irish Moss, and transferring the beer slowly to avoid moving sediment.



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