



ELECTRIC

HOMEBREW

STARTER KIT

BRTKIT401

BREW DAY

The brewing process entails steeping grains, diluting malt extract, and boiling hops. At the end of Brew Day you will have made wort (pronounced “wurt”), which is the name for pre-fermented beer.

Getting Ready

Open your Recipe Kit and review the recipe sheet, noting the order and times of the hop additions. We recommend that when you start your boil time, you do the math right then and write down what time to add your hops. Review any tips or additional information found on your Recipe Sheet.

Gather The Following Items Together:

- Ingredients from your recipe kit
- Yeast packet
- DigiBoil brewing kettle
- Mesh bags for steeping grain & hop additions
- Dial thermometer
- Wort chiller & faucet adapter
- Fermonster & lid
- Airlock & stopper
- Stainless mixing spoon
- Silicone transfer tubing
- Sanitizer solution
- Hydrometer & sample jar
- Bucket for sanitizer
- Scissors*
- Timer*
- Water source for wort chiller*

**Not included in equipment kit*

EXTRACT RECIPE BREW DAY

LET'S BREW!

1. Collect Water

Set your DigiBoil Kettle on a counter, table, or other raised surface. Fill the kettle with 6 gal (23 L) of clean, good-tasting water. If you buy bottled water to drink, that's what you should use for brewing. With the kettle powered on and both heating elements turned off, switch the controller to read in degrees Fahrenheit by holding down the + and - buttons simultaneously. Set the controller to 170°F and turn on both heating elements.

2. Add the Steeping Grains

Pour the steeping grains from your recipe (if included) into one of the 8" x 15" mesh bags. Tie the bag closed and place it in the heating water. It's wise to tie one end of the bag's drawstring to the kettle's handle or to the stainless steel spoon resting on one side of the kettle's rim.

3. Steep Grains

Steep the grains for 30 minutes. During this time, monitor the temperature of the water on the DigiBoil's controller. If the water reaches 170°F (76°C) before the grains have been steeping for 30 minutes, the heating elements will automatically turn off. Once the 30-minute steeping period is complete, remove the mesh bag. You can let the absorbed liquid drain out but do not squeeze the bag. Adjust the temp controller setting to 221°F and heat to boiling. We suggest this temperature setting because it will ensure that the elements will not automatically turn off once boiling temperature is reached. If you haven't already, wrap the kettle with the neoprene jacket to speed up the heating process.

4. Add Malt Extract

Once the water is boiling, manually turn off the heating elements and add the malt extract included with your recipe. Whether it is powdered or syrup extract, add it slowly, taking care to stir it until it is completely dissolved. Any extract that does not get stirred in can burn on the bottom of the kettle and impact your beer's flavor. Once all the extract is dissolved into your brewing water, flip the heating elements back on and bring the liquid to a boil once again.

****Note:**** Your recipe kit includes a small bag of corn sugar for bottling, do not add that at this time.

5. The Hot Break

As the liquid nears boiling again, you will start to see a lot of foam forming on the surface. It will start slowly and then just before you reach boiling temps a large volume of foam will form very rapidly. This is called the hot break and is caused by proteins from the grain and extract coagulating and coming out of solution. To keep from boiling over and making a mess, be prepared to turn the heating elements off if necessary when the foam starts building rapidly. Once the foaming subsides take note of the time and begin your boil timer. Turn the heating elements back on to maintain a gently rolling boil. **DO NOT** cover the kettle.

6. Add Bittering Hops

Most beer recipes call for a 1-hour boil, starting at the end of the hot break. The hops that will give your beer its bitterness are added at the beginning of this 60-minute period. Some recipes differ from this, so refer to your recipe sheet to verify the total boil time and when the first hop addition should be added. Traditionally, all kettle addition times are given in terms of minutes

remaining in the boil, and your recipe should say so specifically if it differs from this.

7. Make Some Sanitizer

At this point you should have some down time while the liquid is boiling and before the next hop addition. This is a great opportunity to sanitize all of the equipment that will be in contact with the wort after the boil. Mix a batch of sanitizer as directed in the Making & Using Sanitizer sidebar. Place your fermenter's spigot in the sanitizer for 1 minute, then install it in the bottom of the fermenter with the sediment blocker in the "down" position (open portion upwards). Pour some of the sanitizer into your fermenter and swirl it around, taking care to wet the entire interior of the fermenter, and set it aside to let the sanitizer work for 1 minute. Place the rest of the equipment that you'll use today, except the Hydrometer and Sample Jar, in the sanitizer to let it soak until you need it. Finally, drain the fermenter back into the sanitizer bucket and allow it to rest upside down in the mouth of the bucket until after you've cooled the wort.

8. Set Up the Wort Chiller

Place the wort chiller into your kettle with 20 minutes remaining in the boil. Be sure to connect the chiller's hose to your water source and direct the open end somewhere safe. This is good practice for future brew days, as any water left inside the chiller from a previous batch will soon boil and escape. If you're using a sink for the water source, unthread the faucet's aerator and install the Sink Faucet Adapter in its place, converting the sink's outlet to garden hose threads, which will connect to the chiller's inlet hose.

9. Other Boil Additions

Whirfloc, Irish Moss, or Kick tablets are seaweed derived clarifiers commonly used in homebrewing. If your recipe calls for any of them, they should be added with 5 minutes remaining in the boil.

****Note:**** Your recipe may have other ingredients that it calls for adding late in the boil or at the end (called flameout additions)—make these additions as instructed.

10. Chill the Wort

Once you reach the end of the boil, you will need to cool the liquid (now called wort) to a temperature where it will be safe to add the yeast. Once you have turned off the heating elements, cover the kettle and slowly turn on the water until you reach a slow but steady stream coming out of the chiller. Be very careful! For the first 10 minutes or so the water exiting the chiller will be extremely hot and can easily burn you. Run the chiller until the hottest part of the kettle's exterior (usually right at the top) is pleasantly warm to the touch, and not hot.

****Reminder, from this point on everything that touches your wort or beer MUST be sanitized****

11. Transfer Wort to Your Fermenter

Install the silicone transfer tubing from your kit to the spigot on the DigiBoil kettle and direct the open end of the tubing into your Fermonster fermenter. Ensure the Fermonster's spigot is closed, then open the kettle's valve and transfer your wort. Fill the airlock about halfway with sanitizer and insert it into the rubber stopper, and insert this whole assembly into the fermenter's lid. Screw the lid onto the Fermonster to seal it.

12. Measure the Sugars

Open the spigot valve at the bottom of the fermenter and collect a small amount of the wort in your Sample Jar. Holding the Sample jar over your sink, gently drop the hydrometer into the jar. Let it come to rest and then note the Specific Gravity on the recipe sheet or in your beer log.

****Tip:** If this is the first time you've taken a hydrometer sample, start by filling the jar to within 1/2" of the top, and after you've taken the measurement gently remove the hydrometer, leaving the wort in the jar. Mark the level of the wort in your jar with a Sharpie and now you have a fill line for future use!

13. Add the Yeast & Get Ready for Fermentation

Use the sanitized scissors to cut open the yeast packet, then open the fermenter and pour the yeast into the wort, observing any instructions on the yeast's packaging. In brewing, adding the yeast is called pitching. Place the fermenter somewhere out of direct light and with as steady as possible of a temperature around 68°F (20°C) for fermentation.

• • PROCEED TO FERMENTATION SECTION (page 5) • •

SANITATION IS THE KEY
TO GREAT BEER!

Great beer starts with great sanitation practices. Consistent, good flavor comes when the yeast that we select to perform the fermentation are the only organisms present. Wild yeasts & bacteria can also perform fermentations, usually with undesirable results. So, from the moment the boiling portion of the brewing day is over, until the beer hits your pint glass, everything that touches it needs to be sanitized!

Making & Using Sanitizer:

- 1. Fill your sanitizer bucket with water to the 5 gallon mark. Measure 1 oz (30 mL) of Star San concentrate and add it to the bucket, stirring it up with your mixing spoon. The sanitizer will foam up some, which is completely normal.
- 2. Star San requires 1 minute of contact time to effectively kill any bacteria or yeast present.
- 3. You cannot sanitize dirt! Be sure your equipment is clean prior to sanitizing.
- 4. If agitated (shaken, for example) Star San will foam up. This foam has the same sanitizing power as the liquid form.
- 5. There's no need to rinse the sanitizer off of any of the equipment before use. (It's 100% safe, we promise!)

ALL GRAIN RECIPE BREW DAY

With The DigiMash Add On Kit For All Grain Brewing.

LET'S BREW!

1. Assemble DigiBoil with DigiMash Upgrade Kit

The DigiMash upgrade kit includes 5 pieces that allow the DigiBoil to be used for all grain brewing: a malt pipe, a mesh screen, a false bottom with feet, a round wire support, and a detachable malt pipe handle. To install the upgrade kit, first place the false bottom inside the kettle and install the wire support in the channel located at the top of the kettle. Next, place the mesh screen inside the malt pipe and attach the handle, then lower the malt pipe into the kettle so it rests on the wire support. Wrap the kettle with the neoprene jacket, which will speed up heat times and reduce heat loss.

2. Collect Strike Water

Set your DigiBoil Kettle on a counter, table, or other raised surface. Depending on your recipe, fill the kettle with 7 to 8 gallons of strike water. In brewing, the water that is heated and then mixed with the grain is referred to as 'strike water'. Approximately 0.125 gallons of water per pound of grain will be lost to absorption, and we are shooting for 6 gallons remaining after the mashing process. Reference the chart to the right for a more precise suggested volume based on the total amount of grain in your recipe.

Grain Bill Weight (lbs)	Fill Volume (gal)
8	7
9	7.125
10	7.25
11	7.375
12	7.5
13	7.625
14	7.75
15	7.875
16	8
17	8.125
18	8.25

3. Heat Strike Water

With the kettle powered on and both heating elements turned off, switch the controller to read in degrees Fahrenheit by holding down the + and - buttons simultaneously. Set the temperature controller to 156°F and turn on both heating elements. Our target mash temperature is 152°F, however there will be some temperature loss when the grain is introduced. In this process, our water to grist ratio is much higher than in a typical all-grain brew, so our expected heat loss is only 4-6 degrees.

4. Mash In (Adding Your Grains)

Once your strike water has reached the target temperature, it is time to mash in. Mashing is the process of steeping grain, allowing enzymes to convert starches into fermentable sugars. Quickly pour your grain into the malt pipe and stir until the water and grain are well mixed. At this point, turn off the high wattage heating element (1000w or 1900w) so only the 500w element is in the on position. Adjust the temperature controller to the target mash temperature of 152°F. Put the lid on the kettle and let the mash sit for 60 minutes. In most scenarios, letting the mash sit for 60 minutes at 148-158°F will result in full enzymatic conversion of starches to sugars. During this time the DigiBoil will automatically maintain the mash temperature by cycling on the 500w element when necessary. It is important that the high wattage element is turned off during this process, as it can cause scorching if used to maintain mash temperature.

****Note:**** Your recipe kit includes a small bag of corn sugar for bottling, do not add that at this time.

5. Drain & Vorlauf

Remove the lid and use the malt pipe handle to lift the malt pipe out of the kettle and rotate it 90° so the feet come to rest on the wire support. Allow

the wort to drain into the kettle. At this point you will perform a vorlauf, which is simply the process of recirculating the wort over the grain bed to filter out any sediment that may have gotten through the mesh screen and false bottom. Open the ball valve at the base of the unit and collect the wort in a pitcher or large Pyrex measuring cup. Close the valve and then pour the wort back over the grain in the malt pipe. Repeat this process until the wort coming out of the ball valve is reasonably free of grain particles. Remove the malt pipe when you are done draining and vorlaufing.

6. Top Up and Proceed to Boil

When finished draining you should have close to 6 gallons of wort in your kettle. If you end up with less, simply add water until your total volume is 6 gallons. Turn the high wattage element back on and adjust the temp controller setting to 221°F. We suggest this temperature setting because it will ensure that the elements will not automatically turn off once boiling temperature is reached.

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HAVE QUESTIONS?

Our friendly staff are ready to help! Give us a call at 800-600-0033 or email us 24/7 at info@morebeer.com

FERMENTATION

Fermentation is the process by which the yeast consume the sugars present in the wort and convert them to alcohol and carbon dioxide (CO₂). The presence of the alcohol is what turns your wort into beer and the CO₂ being released will make your airlock dance the whole time!

1. Fermentation Starts

You should see the first signs of fermentation within a day or two... or three. It varies because yeast is a living organism and doesn't behave exactly the same every time.

2. Fermentation Continues

As the yeast begin to work you'll see bubbles form on the surface of the wort, and soon afterwards you'll start to see the airlock bouncing up and down as CO₂ is released. Over the next 2-3 days a lot of thick foam, called krausen (croy-zen) will form before it falls back into the beer.

3. Fermentation Ends

About 7-10 days after the point of high krausen your beer will be done fermenting. You're ready to bottle when there's been no activity in the airlock for 3 days. Optionally, as soon as you see activity in the airlock die down, you take a sample of beer from the fermenter's spigot and use your hydrometer to check and record the current Specific Gravity. Then wait 3 days and check the Gravity of a fresh sample--if there's been no change then you are ready to move on to bottling!

BOTTLING DAY

Now that you've got fermented beer, it's time to bottle and carbonate it. Carbonation is provided by adding a small amount of fresh sugar to the bottle, known as priming the beer, and then sealing the bottle. The small amount of residual yeast in the bottle will ferment this new sugar and create more CO₂. This time, with no airlock to let it escape, the CO₂ will be trapped in your beer, creating carbonation! This process is called bottle conditioning.

Gather the following items:

- Vinyl Transfer Tubing
- Bottling Bucket
- Star San Sanitizer
- 2-3 gallon container to hold sanitizer
- Priming Sugar (from ingredient kit)
- Bottle Filler
- Capper
- Bottle Caps
- 48 clean, pry-off, 12 oz. bottles

1. Move the Fermenter

Place your fermenter on the edge of a counter or table, so that you can fill the bottles via gravity. Move the fermenter as early and gently as possible, allowing time for any sediment disturbed by the movement to settle back out.

2. Boil the Priming Sugar

In a small saucepan, combine the Priming Sugar (usually corn sugar) that was included with your kit with 2 cups of water, and boil for 3-5 minutes. This will dissolve the sugar and sanitize it at the same time. Cover the pot and set aside.

3. Mix Sanitizer

Install the spigot in your bottling bucket with the inner open port in the down position. Ensure the spigot is closed and mix a batch of sanitizer.

4. Sanitize Bottles

Sanitize your bottles by submerging them for 2 minutes and then letting them drain. A Bottle Tree or Rack is very helpful for this stage--or you can run your dishwasher the night before bottling and set the bottles upside down on the upper rack after sanitizing.

5. Sanitize Remaining Equipment

Transfer 1-2 gallons of the sanitizer into your 2-3 gallon container, and discard the rest from your bottling bucket. Place the transfer tubing, bottle filler and bottle caps in the sanitizer.

6. Transfer Beer into Bottling Bucket

Pour the priming solution from the pot into the bottom of the bottling bucket. Place the bucket on a chair below the fermenter and fix the transfer tubing to the spigot on the fermenter, directing the open end into the bottling bucket. Open the fermenter's spigot and drain the beer into the bottling bucket, diverting the first portion of the beer into your sample jar, which you can set aside until you are done bottling.

7. Attach the Bottle Filler

It's helpful to move the Bottling Bucket from the chair up onto the counter, so you can sit in the chair while filling bottles. Position the bucket with the spigot facing you and hanging over the edge of the counter top, and install the Bottle Filler's open end directly onto the spigot of the Bottling Bucket. Be sure you're within reach of your bottles. It can also be handy to transfer your bottle caps to a bowl of sanitizer so that they're within reach as well.

8. Fill the Bottles

Open the spigot on the bottling bucket. Beer may not flow into the filling wand until you begin filling the first bottle. Slide a bottle up over the wand so the inside of the bottom of the bottle presses up on the Bottle Filler's valve, allowing the beer to flow. Be careful as the beer enters the bottle neck as it will fill very quickly. Fill the bottle all the way to the top and then lower it away from the filler, leaving about 1" of headspace in the bottle. Place a cap on top of the bottle--you can elect to crimp the caps as you go or all at once after the bottles are full. Or enlist a helper to cap the bottles as you fill them!

9. Cap the Bottles

Center the bottle capper bell over the cap on top of the bottle. Press down firmly on the capper's handles to crimp the cap onto the bottle. You should leave a round dimple in the top of the bottle cap if you've sealed the bottle firmly enough. Once all the bottles are filled and capped, wipe them down with a dry towel as you return them to their case boxes. Set the boxes aside somewhere with an even room temperature and out of direct sunlight.

10. Measure the Final Gravity

Use your hydrometer to measure the specific gravity of the finished beer (referred to as the Final Gravity) and note it on your recipe sheet. You can approximate the beer's alcohol content pretty closely with the following equation: **(Original Gravity – Final Gravity) x 131 = Est. % Alcohol/Volume.**

CONDITIONING

Bottle Conditioning is the original, natural process of adding carbonation to beer. Once the bottles are filled, they are set aside for 2 weeks to allow the natural carbonation to occur. This additional time in the bottle is also important for full maturation of the beer's flavors and aroma.

At the end of your 2 week wait, move a couple of bottles into the fridge overnight. Go grab your favorite pint glass. Crack the top off and listen for the satisfying "psst!" In one gentle motion, pour your beer into the glass leaving behind the last 1/4" with the sediment in the bottle. Sniff, sip, and savor. Congratulations, & enjoy your home crafted brew... you've earned it!