Extract Brewing Instructions

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These are the step-by-step instructions for brewing *MoreBeer!* Malt Extract Ingredient Kits using either the *Partial-Boil* or *Full-Boil* method of brewing.

Necessary Equipment and Supplies:

1. *MoreBeer!* Personal Brewery Starter System
2. *MoreBeer!* Malt Extract Ingredient Kit
3. A kettle that will boil a minimum of 3 gallons. Usually a 5 gallon (20 qt) kettle is the minimum.
4. Approximately (48)12 oz or (24) 22 oz non-twist, pry-off style beer bottles.
5. Re-usable nylon mesh bags for steeping grain and hops.

Steps:

____ **1.** Getting Ready: Fill your carboy or plastic bucket fermenter with 5 gallons of water and draw a line at the 5 gallon mark with a permanent marker. Continue to fill to the rim and add 1 oz of sanitizer. You will need to fill your bottling bucket or another bucket with a sanitizing solution for sanitizing additional equipment later in the process. If using liquid yeast, take the yeast out of the refrigerator to allow it to warm to room temperature. If using dry yeast please follow step 13 at that time.

____ **2.** If you are using a 5 gallon kettle, add 2–3 gallons of water to your kettle. If using a 7.5 gallon, or larger, kettle fill with 6 gallons of water. Place kettle on stove and turn on heat.

____ **3.** Take your cracked flavoring grains (such as crystal, chocolate, roasted barley, black patent malts, etc.) and put them into a large nylon mesh bag. Put the bag into the heating water and remove when the water reaches 170°F, allowing about 30 minutes to do so. If you reach 170°F in less than 30 minutes, turn the heat off and let the grains steep until a total of 30 minutes has passed.

____ **4.** Remove the grain bag and continue to heat the water to a boil. Turn the heat off and stir in, so it does not burn on the bottom, the liquid malt extract, dried malt extract (DME), dextrin powder, sugar and/or lactose as called for in the recipe. This solution is now called sweet wort (pronounced wert.) ***Note: Do not add the 4 oz, white bag of corn sugar; the sugar will be used two weeks from now during the bottling process.***

____ **5.** Turn the heat back up and bring to a boil. Stay near your kettle! When your wort begins to boil, you will notice foam starting to rise. You need to be there to turn down the heat. When the foam drops, reapply heat and proceed to boil.

____ **6.** Add your bittering hops. Put the hops in a fine mesh nylon bag if available. If you do not have a bag add them directly to the boil. Boil for 60 minutes.

____ **7.** You now need to sanitize any equipment that might come in contact with the beer once it drops below 160°F. This list includes a lid (if you are using a plastic bucket fermenter), an airlock, funnel, thermometer, hydrometer sample taker, all stoppers, and anything else that will come in contact with the cooling wort. Put all this equipment into the sanitizing solution that you made earlier in step 1.

____ **8.** With 20 minutes left to the end of your boil, sanitize your wort chiller (for larger kettles) by placing chiller into the boiling wort.

____ **9.** With 5 minutes left in the boil, add the Whirlfloc tablet. Read addendum ***4** for info on Whirlfloc.

____ **10.** Add your hops according to the recipe, with 10, 5, or 1 minute(s) left in the boil. Use fine mesh nylon hop bags if available.

____ **11.** Cooling hot wort if using a **5 gallon kettle, doing a Partial-Boil**: *(if doing full-boil skip to section 11)*

A) You need to create a method for cooling your wort to around 130°F. For example, you can put the pot, with the **lid on**, in your sink and run tap water around it. Or you can put the pot in an ice water bath in your sink. If your pot is too big for the sink, you can use the bathtub.

B) While the kettle is cooling, empty the sanitizing solution out of your fermenting vessel and fill it with 2 gallons of cold water and/or ice. If using ice, use store bought so you won't transfer flavors acquired from your freezer. Remember that when using water from your tap and/or ice your beer is subjected to whatever level of contamination is in the water to begin with. That may be a little or it may be none. For more info read addendum ***2B & 2D**.

D) When the temperature reaches 130°F, transfer the wort into your fermenter (that you previously added 2 gallons of cool water/ice to) and top up to 5 gallons with cold water and/or ice. Do not attempt to strain during this transfer. For more information see addendum ***1.**

____ **12.** Cooling hot wort if using a **7.5 gallon, or larger, kettle, doing a Full-Boil:**

Hook up your wort chiller to tap water and slowly turn on. Be careful as the water leaving the wort chiller will be close to 200°F for the first few minutes.

When using a *MoreBeer!* wort chiller you will not need to use a thermometer to check temperature. 30 minutes after the kettle started cooling, feel the outside of the kettle with your hand. You will feel a cool layer on the bottom and a hot layer on top. When the cool layer reaches the top and the entire exterior of the kettle is a cool uniform temperature you can be assured the wort temperature is very close to the tap water temperature and you are ready to transfer wort into fermenter. **Do not attempt** to strain the wort during this transfer ***1.**

____ **13.** Once the wort is into the fermenter, cover the opening with

a lid (plastic bucket) or solid stopper (carboy). If the temperature dropped to between 70–80˚F, proceed to step 14, if not you will have to do additional cooling.

____ **14.** If using dry yeast you will want to re-hydrate the yeast in accordance with the directions on the packet. If no directions are printed on packet, add dry yeast to 4 oz of warm (86–92˚F) water for 15 minutes. If using liquid yeast there is no need to do anything at this time.

____ **15.** Take a hydrometer reading and mark it down on the recipe sheet. If using buckets utilize the spigot to get a sample. If using a carboy utilize the sample-taker to get a sample. Do not return your sample to the rest of the wort. You take a hydrometer reading to determine how much sugar is in the sweet wort.

____ **16.** Add the yeast. For an advanced tip on why and how to add oxygen at this step on your future batches, read addendum ***2C**.

____ **17.** If brewing an ale, ideally keep your fermenter in a dark spot and at a room temperature between 65–70˚F. Fermentation varies with individual conditions, but normally it starts in about 1–2 days and finishes in about 3–7 days. If you are doing a lager read addendum ***3**.

____ **18.** After approximately 14 days, allowing seven for fermentation and seven for settling, the beer is ready to be bottled or kegged.

Bottling:

____ **19.** You will need to sanitize about 2 cases of re-cappable bottles. You can either wash your bottles with a sanitizing solution and drain them upside down (this is where a bottle tree is worth its weight in gold) or run previously cleaned bottles through your dishwasher on hot wash and dry with no soap. If you are using dirty bottles, you must scrub the inside with a bottle brush first. Do not wash labeled bottles in your dishwasher, as pieces of labels will come off.

____ **20.** If you need to move your fermenter to be able to siphon, move it a few hours, or even a day, ahead of time so that the yeast and sediment, called 'trub', can settle.

____ **21.** Sanitize your bottling bucket, siphon hose, racking tube (w/carboys only), bottle filler, spoon, hydrometer, and bottle caps with a sanitizing solution.

____ **22.** In a small pot mix the 4 oz corn sugar packet and two cups of water. Boil for 5 minutes.

____ **23.** Take a final gravity hydrometer reading and record it on the recipe/log sheet.

____ **24.** Siphon your beer from the fermenting vessel into the bottling bucket being careful not to splash. Air is now the enemy. Dissolving air into the beer at this point causes premature staling via oxidation. After there is 2 inches of beer in the bottom of the bucket gently stir in the boiled corn sugar. The dissolved sugar will ferment in the bottle, making natural carbonation.

____ **25.** To prevent airborne bacteria from falling in, cover the bottling bucket. Aluminum foil or loose fitting saran wrap is perfect. We don't recommend attaching a bucket lid because these are so tight they can create a vacuum in the bucket as you drain out the beer.

____ **26.** Take the 5' of 3/8"siphoning hose and attach one end to the spigot on the bottling bucket and one end to the bottle filler. Fill the bottles to the top and remove the filler, leaving about 1" of headspace. Place a cap on top of each bottle. You can choose to cap the bottles as you go or you can fill all of the bottles first and then cap them all at once.

____ **27.** Leave the bottles at room temperature for at least 2 weeks to carbonate. Colder temperatures, 65˚F or below, will require additional time for carbonation. You can drink the beer after 2 weeks, or when carbonation is present, however your beer will improve significantly with additional aging in either the refrigerator (ideal) or at room temperature. The refrigerator, or a cool spot, is really beneficial for long-term aging (months). Beers with higher alcohol contents and higher bittering rates will need to age longer.

Addendums:

***1** While transferring from kettle to fermenter there is no need to strain the wort. Use fine mesh hop bags to retain most of the vegetable matter from the hops.

***2** Beginning brewers often ask what they can do to increase quality and consistency while saving time. Here are our top three biggest differences.

A. Use liquid yeast as the difference in quality when compared to dry yeast is noticeable.

B. Consider doing a full-boil if you are currently doing a partial-boil. You get a better flavor (less carmelization and more utilization from hops), less chance of contamination (no added water at end), and you save a great deal of time. When you upgrade to using a kettle of this size it often means getting a wort chiller and a stand-alone burner because your stove top will probably not have the power to boil 6 gallons of wort. Our large, Heavy-Duty *MoreBeer!* Kettles also come with a valve and spigot allowing you to transfer the wort into your fermenter without having to pour or siphon.

C. Use our oxygenation or filtered aeration kit to provide your wort with pure clean oxygen. The yeast uses the oxygen to create healthy cells, which translates into better beer and less fermentation problems.

D. Remove Chlorine from your brewing water. Filter your water with a carbon filter (FIL32) or use another filtered water source.

***3** We recommend that the beginning brewer start with ales, as they are easier to make. Lagers require a fermentation temperature between 48–58˚F, the addition of more yeast up front, and a 3-week fermentation time. With some experience and additional reading (see our paper online about Brewing Lager Beers) they can be successfully brewed at home.

***4** Whirlfloc is a natural product made from seaweed. It helps to clear your beer by attaching to protein molecules which then become heavy and fall out of solution.