MOREBEER! BEER MAKING INSTRUCTIONS

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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
4) A kettle that will boil a minimum of 3 gallons. Usually a 5 gallon (20 qt) kettle is the minimum.
5) Approximately 45 non-twist off 12 oz or 24 22 oz beer bottles.
6) Re-usable nylon mesh bags for steeping grain and hops are extremely helpful but not essential.

STEPS:

_____1) Fill either your glass carboy or plastic bucket 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 1-2 tablespoons 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 White Labs liquid yeast, take the yeast out of the refrigerator to allow it to warm to room temperature. If using dry yeast please follow step 10-C at that time.

_____2) If you are using a 5 gallon kettle, add 2-3 gallons of water, and turn on the heat. If using a 7.5 gallon, or larger, kettle fill with 6 gallons of water. Place kettle on stove and turn stove on.

_____3) Take your cracked flavoring grains (usually crystal, chocolate, roasted barley, or 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 degrees, allowing *about 30* minutes to do so. If you reach 170 degrees 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, candi (rock) sugar and/or lactose as called for in the recipe. DO NOT add the 4 oz bag of corn sugar that will be used two weeks from now during the bottling process. This solution is now called sweet wort. (Pronounced wert)

_____5) Turn the heat back up and 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.

_____6) Stay near your kettle! When your boil starts to commence, you will notice the foam starting to rise. You need to be there to turn down the heat. When the foam drops, reapply heat and proceed to boil for 1 hour.

_____7) You now need to sanitize any equipment that might come in contact with the beer once it drops below 160 degrees. This list includes a lid, if you are using a plastic fermenter, an airlock, funnel, thermometer, hydrometer sample taker, all stoppers, and anything else that will come in contact with the cooling beer. Put all this equipment into the sanitizing solution that you made earlier in step 1.

_____8) With 20 minutes left in the boil, add the Whirlfloc tablet or Irish Moss. Whirlfloc and Irish Moss are natural fining agents that will help to clear your beer by attaching to protein molecules, which then precipitate out of solution. If using a wort chiller (for larger kettles) place wort chiller into boiling wort at this time.

_____9) Add your hops according to the recipe, with 10, 5, or 1 minute(s) left in the boil. The last addition of aroma hops will steep while your wort cools. Use fine mesh nylon hop bags if available.

_____10) Cooling hot wort if using a **5 gallon kettle, doing a Partial-Boil**:

A) You need to create a method for cooling your wort to around 130 degrees. 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, depending on how much you boiled, of cold water and/or ice. If using ice, use store bought so you won't transfer flavors acquired from your ice machine. 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. Please read addendum *2.
C) If using dry yeast you will want to re-hydrate the yeast in accordance with the directions on the packet. (If using White Labs liquid yeast there is no need to do anything at this step.)
D) When the temperature reaches 130 degrees, transfer the wort into your fermenter and top up to *5* gallons with cold water and/or ice. Do not attempt to strain during this transfer. *1

_____11) Cooling hot wort if using a **7.5 gallon, or larger, kettle, doing a Full- Boil:**

Hook up wort chiller to tap water and turn on. When using B3 wort chiller you will not need to use a thermometer to check temperature. As the kettle is cooling, feel the out side of the kettle with your hand. You will feel an inversion layer of cold wort on the bottom and hot wort on top. When the inversion layer reaches the top and the entire exterior of the kettle is a cool uniform temperature you can be assured the wort temperature if 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.

_____12) Once the wort is into the fermenter cover the opening with lid (plastic bucket) or solid stopper (carboy). If the temperature dropped to between 70-80 degrees, *proceed* to step 13, if not you will have to do additional cooling.

_____ 13) 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.

_____14) Add the yeast and rock/shake your fermenter for a few minutes to give the yeast oxygen. Use a solid stopper with glass carboys. Attach the 3-piece airlock and stopper, filling the airlock approximately half full of water. To read more about oxygenation/aeration read addendum *2.

_____15) If brewing an ale keep your fermenter in a dark spot and at a room temperature between *65-70* degrees, ideally. 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.

_____16) After approximately 14 days, allowing seven for fermentation and seven for settling, the beer is ready to be bottled or kegged.

BOTTLING:

_____17) 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.

_____18) If you need to move your fermenter to be able to siphon, try to do so a few hours, or even a day ahead of time.

_____19) Sanitize your bottling bucket, siphon hose, racking tube (w/carboys only), bottle filler, spoon, hydrometer, and bottle caps with a sanitizing solution.

_____20) In one small pot, put 4 oz, or 3/4 cup corn and one to two cups of water. Boil for 5 minutes.

_____21) Take a final gravity hydrometer reading and record it on the recipe/log sheet.

_____22) 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" of beer in the bottom, put the boiled corn sugar into the bottling bucket. The dissolved sugar will provide natural carbonation in the bottle. You can gently stir in the sugar but be sure not to

_____23) To prevent airborne bacteria from falling in, cover the bottling bucket. Covering with aluminum foil or loose fitting saran wrap is perfect.

_____24) Take the 4' 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 as close to the top as possible (l" of headspace usually) and place a cap on top of each one. When you have filled every bottle, go back and cap the bottles starting with the first ones you filled.

_____25) Leave the bottles at room temperature for at least 2 weeks to carbonate. Colder temperatures, 65 degrees 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.

ADDENDUM:

***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 is what we find makes the biggest difference. Use White Labs liquid yeast slurries, as the difference in quality when compared to dry yeast is noticeable by even the beginning brewer. Consider doing a full 5-gallon boil if you are currently doing a partial boil. By boiling all 5-gallons at a time 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 stovetop will probably not have the power to boil 6 gallons of wort. Once you have a large kettle with a spigot you can then transfer to your fermenter without having to pour or siphon. Simply attach transfer tubing to spigot and drain into the bottom of your fermenter. Then 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. By using the pure oxygen or filtered air systems you eliminate the need to rock the carboy or to splash the wort as it enters the fermenter.

***3** We recommend that the beginning brewer start with ales, as they are easier to make. Lagers require a consistent temperature range of 48-60 degrees and a 3-week fermentation time. With some experience and additional reading they can be successfully brewed at home.