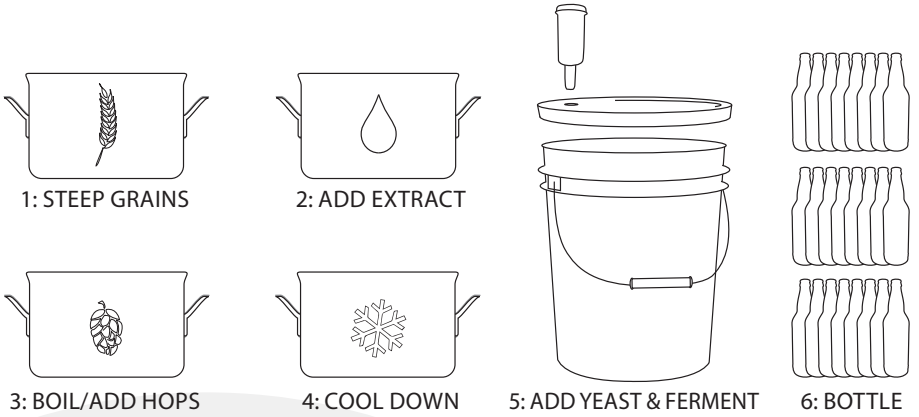
HOW TO HOMEBREW BEER



STEP BY STEP INSTRUCTIONS

1: Clean all brewing equipment, organize your brewing area, and take inventory of your equipment and ingredients to be sure you have everything you will need. An easy way to do this is to fill a sink with cleanser for cleaning, and mix up sanitizer in your bottling bucket for sanitizing.

2: If you have grains with your kit, add 1-2 gallons of water to your pot and begin heating it to about 155°. Put your grains into the provided grain bag, tie it off, and add them to the pot once it reaches temperature. Steep them for 30 minutes at this temperature (145-155°), then remove and let drain into the pot. Do not squeeze the bag. Discard the grains once drained.

3: Add additional water to this "grain tea" and bring to a boil. The amount of water you add is dependent on the size of your pot, but top up as much as you can until you fill your pot about 75%. You need some headspace in the pot to prevent a messy boil over. Anywhere from 2.5 to 5 gallons will work.

4: Once the liquid has reached a boil, remove from heat and add your extracts (LME and/or DME). Be sure to stir constantly as you poor them in so they dissolve thoroughly and don't stick to the bottom where they can scorch once you apply heat. This is now called "wort" (pronounced "wert"). Once dissolved, bring the pot back to a boil.

5: Once your wort has made it to a nice rolling boil, begin your 60 minute boil schedule per the recipe's instructions. You can add the hops directly to the wort, but using a muslin hop bag will cut down on some mess at the end. Boil with the lid off to let certain unwanted compounds evaporate off.

6: After your 60 minute boil, cool your wort as quickly as possible to minimize the potential for contamination. A wort chiller is ideal and can do this in 15 minutes or less, otherwise use an immersion ice bath by filling a sink, tub, or basin with cold water and ice and setting the COVERED pot in the water. You may need to keep circulating water around the pot and adding ice. Be sure to not get anything into the beer or splash the beer around. Cool to around 70-75 degrees (cool to the touch). This can take 30-90 minutes.

MINIMUM EQUIPMENT

- 3 Gallon Pot (Stainless, Aluminum, or Ceramic (un-chipped))
- Fermentor and airlock (6.5 gallon food grade bucket or carboy)
- Cleanser and Sanitizer
- A sink or basin to fill with cold water and ice to cool the pot down after the boil (ice bath)
- Siphon hose, racking cane, and bottle filling attachment
- Bottle capper, bottles, and caps (45-50 12 oz bottles)
- A little patience and 3-4 hours

SANITATION

Sanitation is perhaps the most important element involved in brewing beer. It's important to note the difference between cleaning and sanitizing. Cleaning involves using a cleanser to remove residue, contaminants, and other deposits from your brewing equipment. Sanitizing is done after the equipment is cleaned and is meant to kill microscopic bacteria and any wild yeast that might be hiding out on your brewing equipment or floating around in the air. EVERYTHING THAT TOUCHES YOUR BEER AFTER THE BOIL MUST BE SANITIZED (Fermentors, hydrometers, thermometers, strainers, measuring cups, siphons, funnels, tubing, air locks, caps, bottles, sponges, hands, feet, children, animals etc. etc.). Always err on the side of sanitizing. If you're not sure, sanitize it. If you drank too much and can't remember, sanitize it.

7: Transfer (pour or drain) your chilled wort into your sanitized fermentor leaving behind as much of the heavy sediment that has fallen to the bottom as possible (or strain with a kitchen strainer). Top up with cool clean water to 5.25 gallons. Cool water will also help lower the temperature of your wort, and can help get lukewarm wort down to pitching temperature quickly. Splashing into the fermentor helps add oxygen and is encouraged at this stage.
8: Vigorously stir with a sanitized paddle/spoon, or cover and shake the fermentor to aerate the wort. Yeast needs oxygen to do its business.
9: If you have a hydrometer, take a reading with it now and write it down. This is not a requirement, but it can be used to determine the alcohol % in your finished beer, and to help diagnose any potential problems that could arise in the fermentation process.
10: Add yeast by pitching liquid yeast directly into the beer or sprinkling dry yeast on top. Cover, insert air lock (filled with sanitizing solution or vodka), and place in a cool, dark area where it can do it's thing. You should see visible action in the air lock within 6-36 hours. Once fermentation begins it can take anywhere from three days to three weeks to finish.
11: (optional). After fermentation has slowed (only 1 bubble every minute or more --usually within 4-6 days), transfer into a sanitized carboy (secondary fermentor) with a sanitized siphon and tube. Be careful not to splash the beer too much or to disturb the sediment at the bottom. Leave as much of the sediment behind as you can. Let sit for an additional 7-14 days or until fermentation is complete. Letting your beer sit a little longer won't hurt it.
12: Sanitize a cup or wine thief and take a sample of the beer. Pour into your test jar and take a gravity reading. Your beer is ready to bottle if the gravity stays the same after consecutive readings at least 24 hours apart.

BOTTLING INSTRUCTIONS

13: Clean and sanitize enough bottles and caps for your batch (roughly 45-50 12 oz bottles)
14: Boil your priming sugar in two cups water for 15 minutes and add to your sanitized bottling bucket.
15: Slowly transfer your beer with a sanitized siphon into the bottling sanitized bucket, splashing as little as possible. Gently stir with a sanitized spoon/paddle or your syphon tube.
16: From your bottling bucket, attach some tubing to your spigot and bottle filler. Fill your bottles and cap immediately.
17: Store the beer at room temperature for 1-3 weeks or until carbonated. Chill a bottle every week or so to check for carbonation. Once carbonated your beer is ready to drink.
18: Rinse and repeat.

MORE HELPFUL RESOURCES AT SALTCITYBREW.BLOGSPOT.COM

ADDITIONAL RECOMMENDED EQUIPMENT

- Bottled spring or drinking water (tap, soft, distilled, and reverse osmosis water typically don't work as well due to chemicals & trace minerals that are, or are not, present)
- Hydrometer & test jar (to test gravity)
- Strainer
- Thermometer
- Wort Chiller (to chill beer quickly after the boil)
- Auto Siphon
- Beer (to drink)

READING YOUR HYDROMETER

Specific gravity is a measurement that shows you the density of your liquid. The illustration below demonstrates how to read your hydrometer. Fill the container it came in, or a test jar with the liquid you would like to measure (at room temperature). The Hydrometer will float in the liquid. Read the number at the top of the liquid. Surface tension will try an pull up on the liquid touching the glass, but make sure you read the number where the liquid would be if it were a perfectly flat surface. The diagram to the right is illustrating a Specific Gravity of 1.046, which could be the Original Gravity (density before fermentation) of a 4.6% ABV beer.