

# Your Basic Brewing Instructions

**Note:** Read thru all of the instructions. *Then*, activate your **Wyeast Smack Pack** by breaking the inner pouch. Leave it out at room temperature. Now, start by steeping your grains. Follow the Step-By Step instructions, below.

## STEEPING AND SPARGING YOUR GRAINS:

- 1- In a separate pot bring your **mash water** to **exactly 160°F**.  
( On average, you'll use **1.5 quarts of water for every pound of grain**. Consult your recipe for the amount of water to use )
- 2- Stir in your **grain**, cover with a lid, turn off the heat, and let the grains steep (soak) **for 45 minutes**.  
( Putting your grains into a nylon or muslin steeping bag will make the next steps in this process much easier )
- 3- Using a large strainer, cheese cloth, or a steeping bag, strain the liquid (now called your **grain tea**) into your main **5 gallon brew kettle**.
- 4- Rinse your grain with additional water at 160°F. This rinsing water is called your **sparge water**. Now you can discard the spent grains.  
( **On average you will use the same quantity of water to sparge with, that you steeped with, but always consult the recipe** )
- 5- Add additional water to the main, **5 gallon brew kettle**, to bring it up to the **3.5 gallon mark**.
- 6- Stir in your liquid or dry **malt extract**. Make sure all of the extract is dissolved and none is left on the bottom of the kettle. ( A whisk works well for this task )

**Note:** These instructions assume you are using a **5 gallon Boiling Kettle**.

Never use water over **170°F** with your grains.

Do not over-sparge.

Do not squeeze the grain bag.

## THE BOIL:

- 1- After the malt extract is fully dissolved, bring the **wort** ( your liquid in the kettle ) to a **gentle, but rolling boil**.  
Keep your lid off.
- 2- Skim off the foam that begins to form, until it's gone.
- 3- Add in your **water salts** such as gypsum, calcium chloride, or calcium carbonate.

**Now**, set your timer for **60 minutes** and begin the **hop additions**.

**Only a 10% liquid loss is desired.**

Homebrew kettles of 4 – 10 gallons require only a **Gentle, but Rolling** boil, to prevent **boil-over** and more than a 10% loss.

## HOP ADDITIONS:

- 1- Add your **first hop addition** at the beginning of the 60 minute boil. This hop addition is called the **bittering hop** and will boil for the **full 60 minutes**.
- 2- **After 40 minutes** add in your **second hop addition**. This is your **flavoring hop** and will boil for 20 minutes. This is also the point where you should also add your **Irish Moss**.
- 3- **At the end of the 60 minute boil** turn off the heat and **add the last hop addition**. This is your **aroma hop**. **Cover with lid**.  

( **Note:** not all recipes have a third hop addition )
- 4- If your brew has a fourth hop for **“dry hopping”**, it goes into the secondary fermenter as fermentations starts slowing down, while you change from the primary into the secondary fermenter.

**Note:** 90% of **beer spoilage bacteria are air-born**, riding the dust particles into your wort.  
Therefore, **keep your wort covered, 100% of the time** while cooling, while pitching yeast, while fermenting.

## COOLING YOUR WORT AND PITCHING THE YEAST:

**From this point on, all equipment that comes in contact with your beer must be both *Clean & Sanitized!***

- 1- **Cover your kettle** with the lid and place the kettle in a water bath to cool to **below 90°F**.

**Choices for a quicker cooling of your wort:**

- Use a Wort Chiller.
- Circulate the cold sink water and/or add ice into sink.
- Pre-cool the top off water.

( **Do Not Add Your Yeast until the entire 5 gallons has been cooled to just below 70°F** )

- 2- Transfer your cooled wort to your **sanitized primary fermenter** ( your 6.5 gallons, or larger, white bucket or your 6.5 gallon glass carboy ). Use a cheesecloth lined strainer. **Leave the heavy trub behind that's in the kettle**. Keep fermenter covered at all times.
- 3- Top off with cold water to the **5 gallon mark**. Keep covered.

- 4- **When the entire 5 gallons of wort** has cooled to **70°F**, **pitch (add) your yeast**. Keep covered.

## THE FERMENTATION:

- 1- Though individual recipes will vary, **most ales will be fermented at around 65°F - 68°F**. If the temperature is too high, the fermentation will speed up, **producing fruity off-flavors**. You will notice fermentation begin in around **3 - 12 hours** after pitching the yeast. **Primary fermentation** lasts around **7 - 14 days, depending on temperature**. A thick head of **foam** will develop.
- 2- As primary fermentation slows, the thick head of foam will break apart into **small islands of bubbles**. Once this has occurred you can **siphon** your beer into your **secondary fermenter** (usually a 5 gallon glass carboy). Transferring your beer with a siphon, and leaving behind the sediment, is called **racking**. Avoid splashing by filling from the bottom up. Keep covered.
- 3- If your beer has a **“dry hop” addition** this is when the hops will be added.
- 4- **Secondary fermentation** is considerably slower and less active than primary fermentation. Instead of foam you may see a small ring of tiny bubbles around the edge of the carboy. Secondary fermentation can last **7 - 14 days**.
- 5- **Once all activity has ceased** ( No foam. No ring of tiny bubbles. No bubbles coming up the sides ), you can assume the fermentation is complete.
- 6- If fermentation is complete, then it's **time to bottle**.

The only way to really be sure it's time to bottle, is to take an **hydrometer reading**. It should be close to the **Final Bottling Gravity** that's on your recipe. It's also, a great time to take a taste. Your beer should taste good, just flat.

## BOTTLING:

- 1- Mix your **priming sugar** into 1.5 cups of water.
- 2- Boil, partially covered, for 3 minutes. Cover and let cool a bit.
- 3- **Sanitize** your bottles **and your bottle caps**. Drain well and cover.
- 4- Add the boiled sugar mixture to a clean and sanitized fermenter.
- 5- Rack your finished beer into this fermenter. **Do Not Splash** the beer. Keep covered.
- 6- Gently fill each bottle using your **bottling wand**. Bottles should be filled up to about **half way up the neck** of the bottle. Place a sanitized cap on top.
- 7- Using your hand capper, crimp the caps onto your bottles.
- 8- Place the capped bottles in a warm, not hot, area.
- 9- Natural carbonation and clearing takes **14 - 21 days**.

### Easy Temperature Control:

Use a **Water Bath** around your fermenter.

**Put the Thermometer into the water bath**, not the brew.

**Add frozen** water/soda bottles to the water bath as necessary.

**Note:** Fermentation makes heat, so keep your water bath 5 - 7 degrees below target temperature.

## **ENJOYING:**

- 1- Chill your bottle.
- 2- Open and decant into your favorite glass, leaving behind the sediment.
- 3- Enjoy.

**Feel free to call us here at The Shop if you have any questions.**

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***Remember to bring back a sample to share while  
you are picking up your next batch!***

## **The Eight Rules of Cleaning and Sanitizing**

- 1. You can only sanitize CLEAN equipment.**
- 2. Dirty Equipment will always contain bacteria.**
- 3. Cleaners are NOT sanitizers. Whether alkali or acid, cleaners should not be used as the final procedure.**
- 4. Sanitizers are NOT cleaners. Sanitizers should be used Only as the final procedure.**
- 5. The more heat and longer the contact time, the better and easier the cleaning job becomes.**
- 6. DO NOT OVERUSE CLEANERS OR SANITIZERS. Never think, "If a little is good, then a lot is better." Generally, "a lot" is bad. Higher concentrations don't always work as well, normally require more water to rinse, can leave a chemical residue or cake and plug equipment.**
- 7. Cleaners and sanitizers can only do their job if they came in direct contact with the soils. This means that all surfaces must be directly soaked and/or hand cleaned with the cleaners and then directly soaked with sanitizers.**
- 8. ALWAYS add cleaning or sanitizing chemicals into the water.**

**NEVER add water into the chemicals.**