4. Heat 1 1/2 gallons cold water to **100˚-120˚F**; hot enough to melt your malt extract.

5. Add your extracts and boil according to the recipe. Add any **flavoring hops** for the proper amount of time, then turn off heat, add **aroma hops**, cover and steep.

6. While steeping your hops, allow 1/2 gallon of **rinse water** to come to a boil.

7. Pour your **wort** through a strainer into the carboy, then rinse the hops in the strainer with the boiled rinse water.

8. Add **cold water** to make 5 gallons; stir thoroughly.

9. When the wort has cooled below 80˚, then add **yeast** and stir gently.

10. Place your **airlock** (and lid if using a bucket) on your carboy, and let it sit out of direct light for 7-14 days for initial fermentation.

11. Prime the beer with corn sugar to give the yeast something to eat while bottle conditioning. If using a bottling bucket, siphon your beer into it before priming.

12. Fill your sanitized bottles from your bottling bucket, leaving about an **inch of head space** for carbonation.

13. Cap your bottles, and store in a cool, dark place. How long it conditions in the bottle is relative to the style of beer you are making. Let the magic happen, and then enjoy your creation and share with friends!

Experiment, repeat, perfect, create, have fun, drink beer!

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BREWING 101

Creating your own craft beers

There are infinite techniques and preferences to brewing your own craft beer. If you know anyone who brews, you'll know that everyone has their own methods and opinions on how to create the perfect home brew. Here, we are just going to go over the **very basic** steps on how to brew beer, and the necessary equipment you'll need to create a homemade product you can enjoy, share, and be proud of. Home brew makes an excellent gift!

IMPORTANT TERMS TO KNOW:

CARBOY: A plastic or glass vessel commonly used for fermenting beer or wine, commonly with a capacity of 5-15 gallons. Glass is heavy, breakable, and typically more expensive; the use of glass over plastic is the brewer's preference.

MASH: A combination of milled grains, mainly barley with a supplementary grain like corn, sorghum, rye, or wheat. The mashing process allows enzymes to break down the starches into sugars that will produce the malty product called ***wort*** which is essentially unfermented beer***.*** *For simplicity and staying with the theme of beginning brewers, we will discuss only brewing methods using pre-made malt extracts as your wort.*

TRUB: The layer of sediment that appears at the bottom of your batch after the yeast has completed the bulk of the fermentation.

RACKING: The act of siphoning the clear desired liquid from the ***trub*** into a clean vessel that allows for clarification & stabilization of your brew.

EQUIPMENT FOR YOUR FIRST BREW:

Depending on your commitment and experience, there are vast possibilities of brewing equipment you can use. The following list is a very basic guideline of the minimum requirements you'll need to invest in for your initial setup.

FIRST THING'S FIRST...

For Fermenting: You're going to need a large vessel to ferment your beer. Your **carboy** can be glass or plastic, the choice is subjective and completely up to you. A six gallon food-grade plastic pail is recommended for beginners due to the ease of use. Glass carboys are also available and come in several sizes.

Cooking: You'll also need a **large boiling pot** that can comfortably hold a minimum of 3 gallons of liquid; ideally you'll do best with a capacity of 5 gallons or more. You can use an **enameled stockpot** typically used in canning as a least expensive option for just starting out, or invest in a **stainless steel pot** *(Keep in mind that much liquid is a large amount of weight. An electric range holds no larger than a 3 gallon pot, and a gas range can go up to 8 gallons or more).*

Airlock: An airlock is essential to prevent contamination from the outside atmosphere. They are filled with water to create a barrier to allow CO2 to escape without letting in any unwanted particles.

Bottles: *(Make sure your bottles are brown, not clear or green, as they let in too much light, causing your beloved brew to develop a skunky smell and taste).* You'll need approximately 48 recappable 12oz. bottles for a typical 5 gallon batch. Alternatively, you could use 30 22oz. sized bottles.

Bottle Cappers: A good standard capper to have ready is a **Emily Wing Capper**, which uses leverage on both sides to secure your caps to the bottle.

Bottle Caps: Either **oxygen absorbing crown caps** (preferable for long term storage) or a standard style cap will work just fine.

Bottle Brush: Sanitation and cleanliness are of the utmost importance when fermenting! A **long handled bottle brush** is necessary for the initial hard core cleaning of used bottles.

Strainer: Either Stainless Steel or plastic will work fine.

Measuring Glass: A large heat resistant **quart sized or larger Pyrex style measuring cup** will serve you well for measuring boiling water, and is easy to sanitize.

Siphon: You will need either a plastic or stainless steel cane + tubing to siphon your beer from the ***trub.*** We carry the easy auto siphon, made from acrylic, which includes a 30" racking tube, bent to perfection. The racking tube fits a standard sized hose, and includes an anti-sediment tip.

Bottle Filler: A **bottle filler** is a rigid plastic or metal tube usually with a spring loaded valve at the tip for filling bottles with ease.

Stirring Paddle: A **food grade plastic paddle** or spoon used for stirring the ***wort*** during boiling.

Thermometer: A thermometer that can be safely immersed in the wort and has a range of *at least* 40˚-180˚F. **Dial thermometers** read quickly and are inexpensive.

Cleaner: The standard is **PBW** (Powdered Brewery Wash) for cleaning up your equipment.

Sanitizing: Star San is a phosphoric acid based sanitizer that does not require rinsing, and is safe and easy to use for sanitizing your brewing equipment.

Hydrometer: Attenuation is the measure of how much of the sugar in the ***wort*** is converted to alcohol. A hydrometer gauges the fermentation process by this method, measuring the relative specific gravity between water and water with dissolved sugar by how high it floats in the liquid when immersed. A hydrometer is necessary when making beer from scratch, optional when using a kit.

Wine Thief or Turkey Baster: Handy for withdrawing a sample of wort or beer from the fermenter without risking contamination of the entire batch.

*****Optional, but highly recommended:***
A **bottling bucket**, which is a 6 gallon food-grade plastic pail with an attached spigot and fill tube. The finished product is racked into this for priming prior to bottling. The bucket allows clearer beer with less sediment in the bottle. The spigot is used rather than the bottle filler, allowing greater control of the fill level, and no hassle with a siphon during bottling.

OKAY, LET'S BREW!!

Simplified overview of brewing your first batch:

1. Sanitize your equipment!

2. Add 1 1/2 Gallons of fresh, cold water to your carboy.

3. Warm up your **malt extract** by placing the unopened container in warm water, this will make it easier to work with.