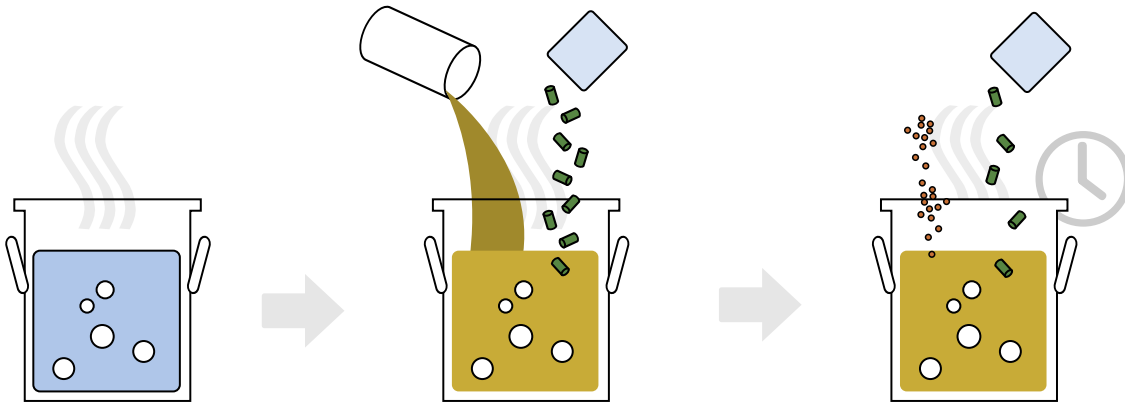


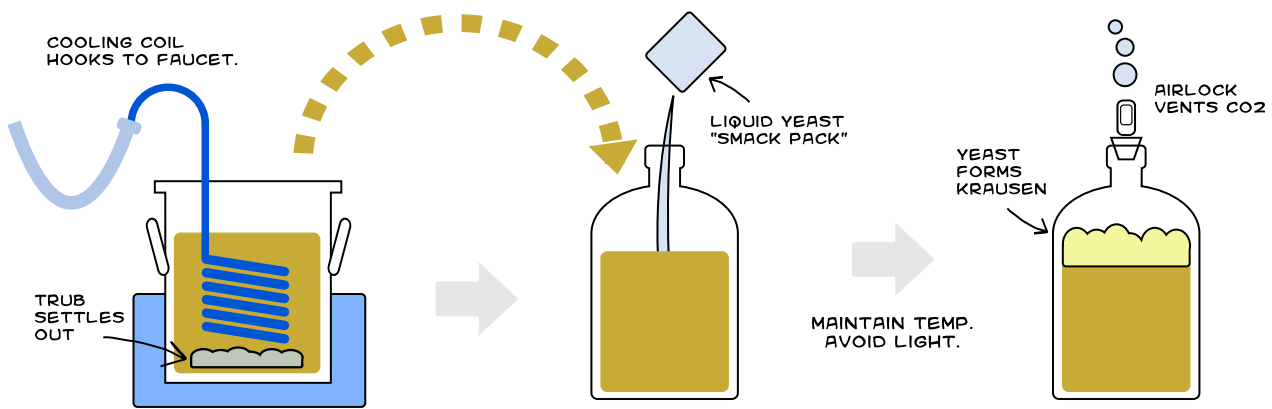
# HOMEBREWING SIMPLIFIED



Boil water.

Add extracts & bittering hops.

Add other ingredients per recipe.



COOLING COIL  
HOOKS TO FAUCET.

TRUB  
SETTLES  
OUT

LIQUID YEAST  
"SMACK PACK"

AIRLOCK  
VENTS CO<sub>2</sub>

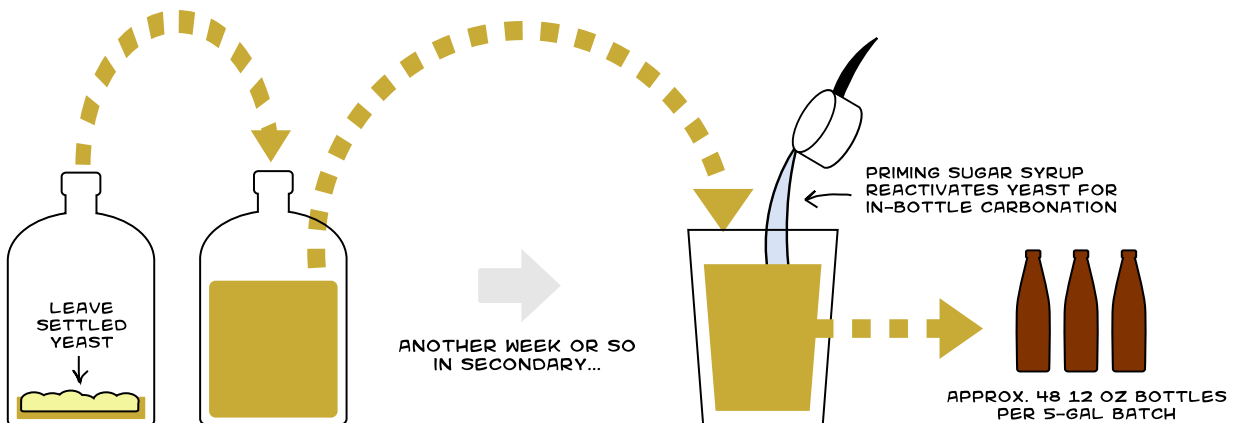
YEAST  
FORMS  
KRAUSEN

MAINTAIN TEMP.  
AVOID LIGHT.

Cool rapidly to about 70° F

Transfer to fermenting vessel.  
Pitch yeast, fit airlock & cover.

Ferment 7-10 days.



LEAVE  
SETTLED  
YEAST

ANOTHER WEEK OR SO  
IN SECONDARY...

PRIMING SUGAR SYRUP  
REACTIVATES YEAST FOR  
IN-BOTTLE CARBONATION

APPROX. 48 12 OZ BOTTLES  
PER 5-GAL BATCH

Racking beer to a secondary vessel  
can help clear it and avoid off flavors.

Move beer to bottling bucket, add priming sugar,  
bottle, and leave at room temp 7-10 days.

# HOMEBREWING TERMINOLOGY

**Ale vs. Lager:** Ale is beer fermented with ale yeast, which floats on top of the beer and works at room temperatures. Lager is beer fermented with lager yeast, which sinks to the bottom of the beer and works at colder (i.e., refrigerator) temperatures. Lager is often thought of as a “cleaner, crisper” beer, though homebrewers treasure the complexities of ale as well. A third category of beer is **Steam Beer** (a.k.a. “California Beer”) which uses lager yeast, but at room temperatures.

**Malt:** Grain (usu. barley) that has been sprouted, then halted by heating in a kiln. Provides the fermentable sugars & body of beer. Various kilning methods, from gentle drying to aggressive toasting, produce a wide variety of colors and flavors. **Base malt** is the workhorse, providing fermentables and body. **Crystal malt** is toasted and provides color (measured in degrees Lovibond). Various **specialty malts** impart other characteristics (e.g., head structure).

**Mash:** To steep malted grain in hot water (e.g., 60 min. at 154°F), causing the enzymes naturally present in the grain to convert the starch into fermentable sugars. There are several different mashing methods, some of which involve multiple temperature steps. A common homebrew approach is to fashion a **mash tun** from a picnic cooler equipped with a ball valve and filtering screen. After running off the sweet **wort**, brewers **sparge** (rinse) the grain to wash out all the remaining sugar. For many homebrewers, going “all-grain” represents a step up from **extract brewing**. Some brewers use a combination of extract plus a **mini mash** to make up their wort. It’s all good.

**Extract:** Pre-processed malt sugar that comes in a thick syrup form (liquid malt extract, or **LME**) or in a dry powder form (dry malt extract, or **DME**, also sometimes spraymalt). Because these can simply be poured into hot water to constitute a **wort**, extracts provide a convenient alternative to **mashing** grain and are the usual starting point for new homebrewers.

**Wort:** (“Wert”) What beer is called before fermentation (either before or after being boiled with hops).

**Hops:** Cone flowers from the hop plant that provide bitterness, resinous/citric/floral flavors, and aroma. Bitterness comes from **alpha acids**, which vary greatly among varieties. Boiling extracts bitterness but destroys delicate flavors, so hops are usually added in stages following a **hopping schedule** (e.g., **bittering hops** boil for 60 min.; **flavor hops** for 20 min; **finishing hops** for 0-5 min.). Hops come in different forms, including whole, pellet, and plug.

**HBUs:** Home Bittering Units. Also known as Alpha Acid Units (AAUs). An overall measure of a beer’s bitterness level. Calculate by multiplying your hop’s **alpha acid percentage** by weight in oz. E.g.: 1.5 oz of 4% alpha acid hops = 6 HBUs.

**Yeast:** An organism that consumes fermentable sugar and produces alcohol, CO<sub>2</sub>, and other by-products (e.g., esters) that have a pronounced impact on a beer’s flavor. Strains vary in their tolerances for temperature and environmental alcohol (see Ale vs. Lager above). Available in both liquid and dry form. A robust-fermenting yeast is said to have high **attenuation**; yeast that settles out well is **flocculant**.

**Gravity:** The density of a fluid. The more sugar in the wort, the higher the gravity and the potential alcohol content. By comparing the **original gravity** (before fermentation) of the wort to the **final gravity** (after fermentation) of the beer, we can calculate how much sugar was converted into alcohol.

**Carbonation:** There are two ways to carbonate beer. One is to put it in a keg or other vessel and **force carbonate** it with pressurized CO<sub>2</sub>. The other way is to **bottle condition** it by stirring in a little extra **priming sugar** just before bottling. The yeast acts on the sugar, and the naturally produced CO<sub>2</sub> is trapped and goes into solution in the beer. It is important to leave bottled beer at fermenting temperature until the yeast can convert the priming sugar. Bottle conditioned beer will retain yeast sediment and should be carefully decanted into a glass (except for styles where yeast is meant to be drunk).

**BJCP:** The Beer Judge Certification Program, which maintains beer style guidelines and certifies competition judges. For a window into the universe of styles, visit [www.bjcp.org](http://www.bjcp.org).