



Midwest Homebrewing & Winemaking Supplies
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Two-stage fermentation is just what it sounds like—fermenting in two stages, using two separate fermentation vessels. The first stage, primary fermentation, usually takes place in a plastic fermenter. The second stage, secondary fermentation, takes place in a glass carboy or Better Bottle. The main reason for two-stage fermentation is clarity. Yeast, grains and hops all create a lot of sediment as the beer ferments. This can cause off-flavors in your beer. If you do single-stage fermentation, this sediment will end up settling out in your beer bottles. If you have a bad memory of trying your dad’s homebrew and finding things floating in it, it’s likely that dad did not use two-stage fermentation. While your beer will still be drinkable, you will see a vast improvement in not only clarity, but flavor and aroma when you do two-stage fermentation. We at Midwest feel that this is the one biggest thing that homebrewers can do to improve their beer.

Here is a checklist of everything you will need to do two-stage fermentation:



**5 Gallon
Glass Carboy**

OR



Better Bottle



#7 Stopper

OR



**Drilled Universal
Carboy Bung**



Airlock



Siphon Tubing



Racking Cane

When you are seeing one bubble a minute or less coming out of the airlock, your beer is ready to be transferred to the secondary. This will take from a few days to a couple of weeks, depending on the style your brewing. Fill your carboy with whatever sanitizing solution you use according to the package directions. After the solution has been in the carboy for as long as the package directions say, place your racking cane into the carboy. Attach your siphon tubing to the racking cane and start a siphon into your bottling bucket, where you have the airlock and bung. This way you can be sure that all of the equipment you’ll be using for the transfer (known as “racking”) will be properly sanitized.



Once your carboy is empty, you're ready begin racking. Just make sure there isn't any sanitizing solution left in the carboy. Place your sanitized carboy on the floor, or someplace where you'll be able to put your primary fermenter above the carboy. Place your primary fermenter on the countertop. Now you need something to put the bucket at a slight angle. You can use carboy wedges, but I just use my Brewmaster's Bible, which is the perfect thickness. Putting the bucket at a slight angle will allow you siphon the majority of your beer off of the sediment. Once you've done this, open your primary fermenter and place your racking cane on the side of the bucket. A racking cane holder comes in very handy for this. Take your length of siphon tubing and fill it with water, placing a finger on one end so that the water stays in the tubing. Keeping your finger on the end, slip the other end onto the end of the racking cane. Now place the other end of the tubing into the carboy and remove your finger. Your siphon should be started!

Remember, the idea here is to leave as much of that nasty sediment behind as possible. Look at your siphon tubing as the beer is going through it; it should be nice and clear. When the primary fermenter is getting close to empty, you'll want to keep a close eye on it. When you start to see the sediment coming through the tubing, lift up on the racking cane to stop the siphon.

Now, simply place the sanitized stopper or bung into the neck of the carboy. Fill your airlock halfway with water and slip it into the stopper. Now you wait! How long you'll leave it in the secondary will depend on the style, personal taste and of course, patience. For most styles of ale, 2 weeks is enough time to wait until it's drinkable. Lagers should be in the secondary for a minimum of 2 months. For more information, see our PDF titled ["How long should beer be left in the carboy?"](#) HOWEVER, we at Midwest have found that longer secondary fermentation can GREATLY improve the overall quality of your beer. Plus, you can keep it in the carboy pretty much as long as you want, within reason. As a rule of thumb, the higher the alcohol content, the longer it will need in the secondary. Most of the brewers here have at least two primary fermenters and up to 10 or more secondary vessels. Why? There are several reasons:

- Have multiple batches going at once
- Extra carboys means you'll be able to make that Imperial Stout you've been wanting to try without worrying about using your only carboy for a year
- You'll get to look at all your carboys full of beer and decide which one you'd like to bottle or keg next
- Carboys are relatively inexpensive and make an easy way to increase your brewery production

Note: Secondary fermentation will not allow all of the sediment to settle out; you'll still end up with enough live yeast to carbonate in the bottle. You do not need to add any more yeast at bottling time.