How do I make a yeast starter?

Making a yeast starter is easy to do, and is highly recommended for higher gravity beers, meads, cysers, etc. You don’t actually need to do a yeast starter for lower gravity brews, but it certainly wouldn’t hurt anything if you did. You should also make a yeast starter if you are doing large batches of 10 gallons or more. Whatever your need for making a yeast starter, the process will be pretty much the same.

Here is a checklist of everything you will need to make a yeast starter:

1000ml (or larger) Laboratory Flask
Foam Stopper for Flask
Dry Malt Extract

—OR—

*Midwest Yeast Starter Kit

—AND—

Yeast

*All the items needed (except for the yeast) are conveniently packaged in our yeast starter kit.

We also recommend the following items:

- Saucepan: To boil the malt extract and water
- Hot pad or oven mitts
- Aluminum foil
- Scissors
- Magnetic Yeast Stirrer (optional): Get up to 25-50% more yeast out of your yeast starters!
The first thing you should keep in mind is that a yeast starter should be made one to three days before you plan to brew. You’re going to want a healthy, bubbly fermentation going on in your starter before you pitch it into your cooled wort, and it’ll take a day or two for that to happen.

First, clean and sanitize anything that will be coming into contact with your wort: the flask and the foam stopper. The 1000ml flask is the right size for most homebrewers; we’ll get into larger starters in a bit.

To make a yeast starter, you need to make a “mini-batch” of brew, cider or mead. For any beer, you’ll want to use the plain light dry malt extract. Depending on the size starter you’re making, here are the proportions:

- **1L**: ~1L water, 1 cup Dry Malt Extract, ½ tsp yeast nutrient
- **2L**: ~2L water, 2 cups Dry Malt Extract, 1 tsp yeast nutrient
- **5L**: ~5L water, 5 cups Dry Malt Extract, 2-½ tsp yeast nutrient

If you’re making hard cider, you’ll want to use 16 oz. of cider to make your 1 liter starter. If you are making mead, you’ll want to use 1 part honey to 4 parts water ratio, 1/2 cup of honey to two cups of water, for example. Keep in mind for honey starters that you will need to twice the given amount of yeast nutrient. Honey is devoid of minerals and nutrients critical to the fermentation process, so add a pinch of yeast nutrient during the pasteurization.

Process

1. Activate yeast pack and allow to inflate. Wait until the yeast package has swelled to at least 1 inch thick, which can take around 6-8 hours. If you absolutely need to get the starter going sooner, the yeast can be pitched before it inflates.
2. Heat water and when hot, dissolve the DME in the water. Also, add the yeast nutrient to the mix if you have some available. Lightly boil the wort for 20 minutes. The goal is to create a starter about 1.040 in specific gravity.
3. While boiling, sanitize the flask.
4. When the boil is complete, gently pour the hot wort into the sanitized flask. Cover the opening of the flask with a square of aluminum foil. Be careful when doing these steps, use a hot pad to move the flask.
5. Cool the flask in an ice bath. It helps to gently swirl the flask and periodically add ice to hasten cooling.
6. Sanitize the stopper, airlock, yeast packaging, and scissors (if using Wyeast).
7. When the starter wort has cooled to around 70°F (the flask is cool to the touch), shake the flask vigorously to introduce oxygen, then pitch the yeast. Attach the stopper and airlock.
8. Ferment the starter around 70°F for 24-36 hours for maximum cell growth. Do not expect to see a vigorous fermentation or layer of foam as you would see in a primary fermentation. To increase cell growth, you may wish to agitate the starter periodically to introduce oxygen and remove carbon dioxide. Stir plates are an excellent way to significantly increase the culture’s population. The starter may be refrigerated for up to a week before using, if need be. If refrigerated, allow the yeast to warm up before pitching on brew day.
9. Pitch yeast starter into cooled, aerated wort. Agitate the flask to get the yeast into suspension before pitching. Alternatively, you can drop the yeast by refrigerating the yeast starter for a few hours and decant the fermented starter liquid leaving the yeast cake on the bottom. Add a few ounces of boiled and cooled water and swirl to create a slurry. Then, pitch the slurry into your wort. Some brewers prefer this method to leave the fermented starter wort out of their batch or to do a subsequent, larger starter to generate an appropriate pitching rate for high gravity beers or large batches.

Larger Starters

For very high gravity brews such as an Imperial Stout or Barleywine, you may want to make a starter larger than this. The best way to achieve this is to first make a yeast starter as previously explained. Once you have an active fermentation going on, then you can “step up” the starter. Using the same ratios mentioned earlier, make another mini batch of wort. For example, if you are going to be stepping up from a 1 liter starter to a one gallon jug, you’ll need 2/3-1 cup of dry malt extract and 32 oz. of water. Remember, you’ll still need to pasteurize this wort and cool it before you pitch the yeast into it.

**Congrats!** As always, we’re only a phone call away if you have any questions. Also, check out our forum at [www.brew-wineforum.com](http://www.brew-wineforum.com).