



NORTHERN BREWER

YEAST STARTER KIT

Yeast starters are the #1 way to radically improve every aspect of your homebrew. Make sure higher ABV beers will complete fermentation. Eliminates off-flavors through strong, healthy yeast. Reassurance that your yeast is viable before you pitch it. A yeast starter is the fast track to commercial-quality craft brew. Pitching billions of healthy yeast cells into your wort reduces lag phases, off-flavors, and the risk of infection. Your beer will thank you!

KIT INCLUDES

- 1000 or 2000 mL flask
- Foam Stopper
- 1 lb light dry malt extract

MAKING A YEAST STARTER

The following instructions are for making a one pint starter in a 1000 mL flask using liquid yeast. Refer to the quantities below for making a larger starter in a 2000 mL flask.

SIZE OF STARTER	DME	WATER
1L	1/2 cup	650 mL
2L	1 cup	1300 mL

1. If using Wyeast break the inner pouch to activate the yeast; ideally, the yeast would be allowed to incubate for 3 hours, but it can be pitched immediately.
2. Boil water and sanitize flask. Boil 650 mL of water. When the water is hot, stir in 1/2 cup dry malt extract. Gently boil the wort for 15 minutes.
3. Sanitize. While the wort cools, sanitize the flask, foam stopper, the yeast pack, and a pair of scissors.
4. Carefully pour the wort into the flask, then attach the foam stopper. Using a hot pad or potholder, move the flask to a cold-water bath. Add ice or cold water periodically to speed cooling.
5. Once cool, remove the stopper and pitch the yeast. Reattach the foam stopper. Shake the flask to aerate the wort.
6. Allow the yeast starter to ferment for at least 12 hours. Usually, a fermenting yeast starter will not exhibit the same indicators of fermentation as your main batch (e.g., krausen, bubbling airlock) - instead, look for a cloudy appearance, "yeasty" or "beery" aroma (instead of sweet and "worty"), and a layer of white sediment on the bottom of the flask.
7. Pitch the starter into the main batch. Swirl the flask to pick up the sediment at the bottom, and pour it into the fermenter. Alternately, you may wish to decant the spent wort from the flask and add only the thick yeast slurry at the bottom. To decant the spent wort - chill the flask for several hours to cause the yeast cells to settle, then pour the wort off of the top. Before pitching, add 100-200 ml of boiled and cooled water or wort to the flask and swirl vigorously to dislodge the slurry.

Note: It's best to use the starter when it is visibly active or immediately thereafter; if the starter finishes fermenting days before it will be pitched into the main batch, add more boiled, cooled wort to get it going again. The starter should be refrigerated if it has finished fermenting but will not be pitched or increased in size soon thereafter.

TIPS & TRICKS

CHOOSING A STARTER SIZE

A 1000mL starter is appropriate for a 5-gallon batch of ale with up to about 1.080 starting gravity, or a lager of up to about 1.060 starting gravity. A 2000mL starter is appropriate for a 5-gallon batch of ale with over 1.080 starting gravity or a lager up to 1.080.

BUILDING UP TWICE

To increase pitching rates even more for very strong beers or larger batches, allow the starter to ferment completely. Chill the flask to cause the yeast to settle, then decant the spent wort and add more wort. Remember to follow strict sanitation procedures! Stepping up a 1000mL starter with an equal amount of wort will produce an even higher cell count than a plain 2000mL starter.

USING A STIR PLATE

Putting your yeast starter on a stir plate will greatly increase the rate of growth and the size of the yeast culture. A .5L starter on a stir plate will produce the same cell count as a 2L non-stirred culture. A starter on a stir plate will usually be ready to pitch in about 12 hours instead of 24.

WHY USE A STARTER?

The homebrewer has a few specific goals when making a yeast starter. Here are the key reasons to make a yeast starter for better beer:

Increase Cell Count. Having a high pitching rate makes better beer.

Increase Cell Viability. Healthy yeast cells ferment quickly, produce minimal fermentation by-products, attenuate fully (ferment to a proper final gravity), can ferment high-gravity worts, and have more tolerance for high concentrations of alcohol.

Reach Full Attenuation. An insufficient amount of cells may ferment sluggishly or incompletely, especially in a high-gravity or lager wort.

Shorten Lag and Growth / Respiration Phases. Reducing the duration of the lag and growth phases minimizes the opportunity for wort contamination and the formation of fermentation byproducts.

Improve Beer Flavors and Aromas. Under-pitching creates stress—too much work for too few cells. Stressed cells are more likely to create off-flavors or aromas in the finished beer.

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