

Making a Yeast Starter with a Stir-Plate

Step 1:

Clean and Sanitize.

Everything should be clean. The yeast packet and a pair of scissors should be sanitized.

Step 2:

Make a starter wort with a gravity of 1.030 - 1.040

Use the following chart to determine how much water and dry malt extract to use.

Water	DME (by weight)
16oz ≈ .5 Liter	1.5oz ≈ 50g
32oz (1 quart) ≈ 1 Liter	3oz ≈ 100g
64oz (2 quarts) ≈ 2 Liters	6oz ≈ 200g
128oz (4 quarts) ≈ 4 Liters	12oz ≈ 400g

*½ cup of DME is **approximately** equal to 3oz by weight, but this varies between manufacturers. Measuring by weight is preferred.*



Step 3:

Boil the starter wort for 15-20 minutes.

Add some yeast nutrient if you have it.



Step 4:

Pour the hot wort into the flask.

Laboratory glass can handle large temperature changes without breaking. Since the wort is still hot, this has the added benefit of sanitizing the flask.



Step 5:

Drop the stir-bar into the flask and cover the flask.

The hot wort and escaping steam will sanitize the stir-bar and cover. A cover which allows oxygen exchange should be used, such as a foam stopper, loose piece of foil, or coffee filter (shown here).



Step 6:

Cool the starter wort to approximately 75°F.

Again, the laboratory glass can handle the temperature differences.



Step 7:

Pitch the yeast.

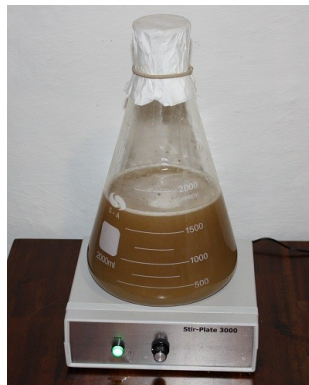
Break the nutrient packet now if using a Wyeast smack-pack. Re-cover the flask.



Step 8:

Stirring.

Start stirring. A large vortex is not necessary, moderate stirring is enough to keep the yeast suspended and drive off CO₂, while continually exchanging oxygen with the outside air for maximum cell reproduction.



Step 9: Fermentation.

Keep the starter warm, near 75°F, even for lager yeasts. The starter will become cloudy as more yeast cells are produced. These two pictures show a before & after.



Step 9a: (Optional)

Pitch the entire starter.

24-36 hours later, the starter will be ready to pitch into a full batch of beer. Many brewers do this with success, rather than cooling and decanting the wort from the yeast in the following steps.

Step 10: Refrigerate.

After 24-36 hours, the yeast will have multiplied and eaten all the sugars. Cooling the starter will encourage flocculation.

Step 11: Decant, swirl, and pitch.

When the full batch of beer is ready for yeast, remove the starter from the fridge and decant most of the clear liquid from the top of the yeast cake. Leave just enough liquid to swirl the yeast back into a slurry, then pitch. Don't let the stir-bar fall into the wort.



Step 12: Success!

Enjoy decreased lag times, fully attenuating fermentations, and all-around better beer.