

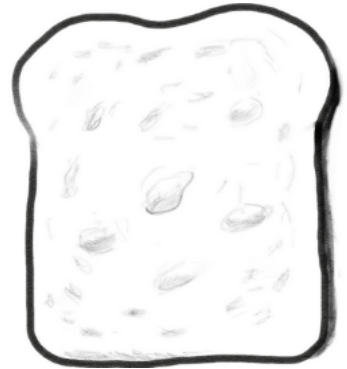
MICROBES IN THE KITCHEN

MAKING SOURDOUGH STARTER

Microbes are everywhere - in the soil that we use to grow our food and in our kitchens! They are responsible for making our yogurt thick and creamy, and they are a necessary ingredient in BREADS!

Yeast is the microbe that makes our bread rise. Like any living thing, yeast eats, breathes, excretes waste (poops!), reproduces, and eventually dies.

Bread rises because yeast breathes. The air it breathes out gets trapped in the dough and forms little pockets. When these air pockets hit the heat of the oven, they expand, making our loaves grow and creating the holes we see in a slice of bread.



What is sourdough? Sourdough is made with a starter instead of the yeast you buy at the store. It turns out, yeast lives almost everywhere, including in the flour we use to make bread and in the air in our kitchens. We can trap the yeast by making a cozy home for it. This is our starter.



Why is sourdough sour? There are two reasons. First, when yeast eats the flour in our starter, it breaks starch down into sugars and acids, giving our bread dough a distinctly sour flavor. Second, yeast is not the only microbe at work in our sourdough starter. There are also healthy bacteria, like the ones found in yogurt, that also add a sour flavor.

How do you make your own starter? It is pretty easy! You only need two ingredients: flour and water. But it does take a little work. A starter takes about four days to develop and needs to be fed every day. Think of it like a bread pet. You might even want to give it a name!

INSTRUCTIONS

Materials

- 1 glass or jar (about pint-sized)
- kitchen scale OR tablespoon and teaspoon measures
- fork
- rubber spatula
- water
- kitchen towel or small cloth
- elastic band
- 1 cup flour: Rye flour works well, as does a mixture of half whole wheat and half unbleached all-purpose. You can use just all-purpose flour if that is what you have on hand, just make sure it is not bleached or self-rising.

DAY 1

Place 3 tablespoons (25 grams) of the flour and 5 teaspoons (25 grams) of water into the glass jar. Use the fork to whisk the flour and water together then use the rubber spatula to scrape down the sides of the jar.

Place the kitchen towel or cloth over the jar and set it aside on the counter away from drafts.

Days 2, 3 and 4

The next three days will look a lot like Day 1. Each day we will be adding fresh flour and water to feed our friendly microbes. Try to do this at the same time every day - microbes like to eat their meals on schedule!

To feed:

Add 3 tablespoons (25 grams) of flour mixture and 5 teaspoons (25 grams) of water to the starter. Use the fork to whisk the mixture together then use the rubber spatula to scrape down the sides of the jar. Place a rubber band around the jar at the level of the starter. Cover the jar and set it aside on the counter away from drafts.

After a couple days the starter should ... START. It should start to smell a little sourer, but in a good way! It should also start to become bubbly and GROW. Use a rubber band to mark the level of the starter after you feed it. The starter should move up the sides of the glass jar by the next day's mealtime.

DAY 5

At this point, your starter should be bubbly AND doubling in size. If not, repeat step 4 for another day or two. If your kitchen is very cold, or your microbes are feeling a little lazy, it may take a few days longer.

If your starter is ready, it's time to make SOURDOUGH BREAD! Or sourdough waffles, or sourdough crackers, or sourdough pretzels.... The possibilities are endless.

Or you could store your starter in the refrigerator for future use. The cold temperature of the refrigerator will slow the growth of your microbes, so they will not need to be fed as often. But you will still need to feed the starter about once a week. If you keep feeding it, your starter will quickly fill the jar and may start to overflow. To prevent this, remove half the starter from the jar – you can use it, or donate it to a friend! Then feed the remaining starter the same way you have been doing - with 3 tablespoons (25 grams) of flour mixture and 5 teaspoons (25 grams) of water.

STAY TUNED FOR OUR NEXT LESSON
HOW TO MAKE SOURDOUGH BREAD

WORKSHEET

MY STARTER'S NAME IS: _____

MY STARTER WAS BORN ON (DATE): _____

DAY 1 Questions

What does your starter smell like?

What does your starter look like?

How many teaspoons in a tablespoon?

So how many teaspoons of flour did we use?

Why do we use equal weights of flour and water, but more teaspoons of flour than water?

Why might it be easier to weigh our ingredients?

DAY 2 Questions

What time will you feed your starter?

(Remember to try to feed it at the same time each day!)

What does your starter smell like?

Does the starter look different than yesterday?

If so, how?

DAY 3 Questions

What does your starter smell like?

Does the starter look different than yesterday? If so, how?

Is your starter beginning to grow?

DAY 4 Questions

What does your starter smell like?

Does the starter look different than yesterday? If so, how?

Is your starter growing? Has it doubled in size?

DAY 5 Questions

Do you think your starter is ready?

If so, why?