Getting Started with Sourdough Starter

Making starter is simple, but nurturing the flour-water mixture into a mature culture can be confusing. I've mapped out the process and answered common questions.

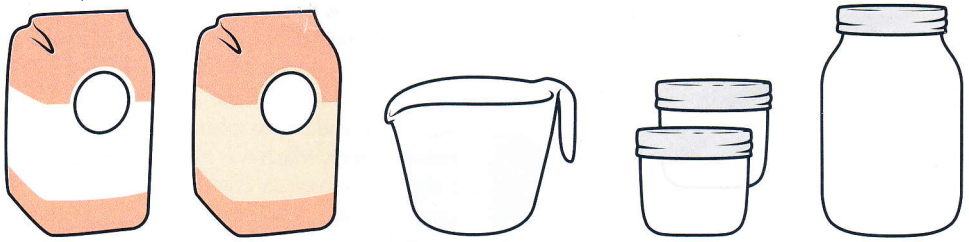
BY ANDREW JANJIGIAN

A sourdough starter—also called a culture or levain—is a mixture of flour, water, and microorganisms that flavors and leavens bread. Wild yeasts and bacteria are naturally present on wheat kernels and on flour ground from them, but it takes time and proper care for them to multiply and transform the initial mixture into a bubbly, boozy-scented leavener.

First, you mix flour and water and let the mixture sit for a day or longer until the dormant microorganisms on the flour wake up. After that, you "refresh" (or "feed") the nascent culture on a daily or twice-daily basis by moving a portion of it to a new mixture of flour and water and discarding the remainder. (Don't worry about waste—you can save the leftover portion as backup and for use in other applications.) After a few weeks, the starter will have built up a sufficient amount of the appropriate yeasts and bacteria it needs, and it can be used in baking.

INGREDIENTS AND EQUIPMENT

For the best results, weigh your ingredients and use organic flour (which is richer in microorganisms than conventional flour) and bottled or filtered water (which is free of the chlorine in tap water that can kill those essential microorganisms) to create the starter. Be sure to include both white and either whole-wheat or rye flour in the bulk flour mixture; whole-grain flours are more nutritious than white flour and are more likely to contain the bacteria and yeast we want, making them ideal nourishment for the nascent culture. (Once the starter is mature, you maintain it with just white flour; nonorganic is fine.) Placing the starter in a clear jar will allow for easy observation of activity beneath the surface.



Organic bread or King Arthur all-purpose flour

Organic whole-wheat or rye flour

Warm room-temperature (70- to 80-degree) bottled or filtered water

2 small lidded containers, such as 4-ounce canning jars

1 larger lidded container, such as a 16-ounce canning jar

HOW TO MAKE SOURDOUGH STARTER

The key difference between my starter and most others is scale. Typical formulas start with several cups of flour, and you might churn through a few pounds before you can bake a single loaf of bread; my starter takes just a few teaspoons to get going and uses just a few cups total before it's ready to bake with. (Making a tiny starter is an idea that I came up with last spring, when flour and yeast were scarce due to the pandemic—I affectionately dubbed it "quarantinystarter." But I quickly realized that this is a smarter, substantially less wasteful approach to maintaining sourdough starter under any circumstances.) Once the starter is ready for use, it can easily be scaled up to the necessary proportions. **Note that the time frame of each step is approximate:** How quickly your starter moves from one step to the next will depend on the flour you're using to refresh it and how hospitable the environment is for yeast and bacteria activity. Let visual cues be your guide and use the day count as a reference.

STEP 1 — CREATE AND PROOF INITIAL STARTER

1 to 3 days

Create bulk batch of flour mixture by combining 1½ cups bread or all-purpose flour with 1½ cups whole-wheat or rye flour in sealable container (weighing ingredients will become vital later, but volume is fine here). Using spoon, mix 4 teaspoons (⅓ ounce; 10 grams) flour mixture and 2½ teaspoons (⅓ ounce; 10 grams) water in small jar. Cover with plastic wrap or loosely with lid and let sit at warm room temperature (70 to 80 degrees).

VISUAL CUE TO MOVE TO NEXT STEP

Starter is bubbly, wet-looking (there might be liquid pooled on top), and fragrant—even pungent.

STEP 2 — REFRESH ONCE DAILY

4 to 10 days (timing may vary widely)

Stir starter well and transfer 2 teaspoons (⅓ ounce; 10 grams) to clean jar; reserve remaining starter as backup in original jar and store in refrigerator (see "Save the Leftovers!"). Stir 4 teaspoons (⅓ ounce; 10 grams) flour mixture and 2½ teaspoons (⅓ ounce; 10 grams) water into starter mixture until no dry flour remains. Cover with plastic wrap or loosely with lid and let sit at warm room temperature for 24 hours. Repeat every 24 hours.

VISUAL CUE TO MOVE TO NEXT STEP

Starter is bubbly and fragrant less than 12 hours after the previous refreshment.

STARTER FAQs

You've sent me dozens of great questions since I began the **#QuarantinyStarter** project last spring. Here, I respond to the most common ones.

My house typically runs cold. Where's the best place to keep my starter?

If your kitchen is below 70 degrees, try storing your starter in one of the following places (but make sure that these areas—or anywhere that you might store your starter—aren't more than a degree or so above 80 degrees, which can encourage the growth of unwanted molds).

- On top of the refrigerator
- In a turned-off oven with the light turned on
- On a wire rack set over a heating pad or seedling mat set to low

Why do you refresh just a portion of the starter?

Moving just 30 percent of your starter to a new home and adding more flour and water dilutes the waste by-products of fermentation that could harm the microorganisms you are trying to propagate. The process also ensures that the amount of starter you maintain is manageable and doesn't quadruple each day.

My starter looks inactive; should I start over?

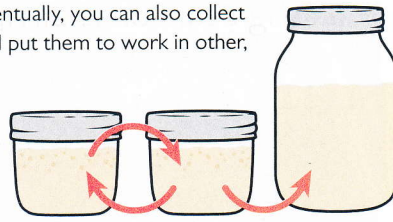
Probably not. Visible activity tends to slow down after the first five days, but things are happening regardless. The only sign that you need to start over is significant visible mold, which can grow if the starter is stored at a temperature above 80 degrees.

How can so little starter be enough to bake bread?

Once it's mature, a starter of any size can be scaled up. Maintaining a small amount simply minimizes waste.

SAVE THE LEFTOVERS!

The daily or twice-daily process of refreshing sourdough starter generates a leftover portion that you should save as backup in case something happens to the current batch. Eventually, you can also collect generations of backup starter and put them to work in other, nonbread applications.



Backup: The first time you refresh your nascent starter, keep the remainder as backup in the original jar in the fridge. When you refresh your starter again the next day, throw away the backup (when you're refreshing the starter just once daily, as in Step 2, the backup is not mature enough to use in other applications, so you should dispose of it), clean out the jar thoroughly, use that jar to store the day's newly refreshed culture, and refrigerate the rest as the new backup.

Backup for Cooking ("Sourdough Discard"):

Once you reach Step 3 and are refreshing the culture twice daily, you can collect generations of backup (some sources refer to leftover starter as "sourdough discard") in a single sealed jar—you'll need a third, larger one—and refrigerate them for up to two weeks. Once you have amassed a cup or two of this sourdough discard, you can use it to flavor all sorts of doughs and batters by replacing a portion of the flour and/or liquid with this flavorful culture. For our free recipes for sourdough pancakes, biscuits, and crackers, go to **CooksIllustrated.com/oct20.** (Note that this sourdough discard cannot be used in place of a leavener.)

STEP 3 REFRESH TWICE DAILY

0 to 20 days

Refresh starter as before every 12 hours. At this stage, in addition to saving leftover starter as backup, you can collect generations of backup starter in a larger sealed jar; store it in the refrigerator to keep on hand for use in other nonbread applications such as pancakes, biscuits, and crackers (see "Save the Leftovers!"). If at any point the starter activity slows down or stops altogether, return to refreshing the culture once daily.

VISUAL CUE TO MOVE TO NEXT STEP

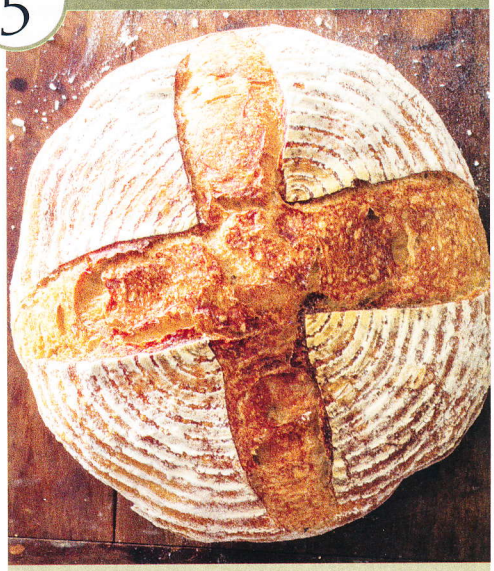
Starter doubles or triples in volume within 12 hours of being refreshed and smells yeasty/bready/yogurt-y.

STEP 4 CHECK READINESS FOR BAKING

CONDUCT A "FLOAT TEST"

Place a blob of starter in a jar with water. If the starter floats, it's producing and retaining ample amounts of carbon dioxide, meaning the yeast population has increased sufficiently.

STEP 5 MAINTAIN AND BAKE WITH MATURE STARTER



For information on how to scale up and bake with mature starter; information on how to store, maintain, and cook with the remainder; and our recipes for Almost No-Knead Sourdough Bread and Classic Sourdough Bread (Pain au Levain), go to **CooksIllustrated.com/oct20.**