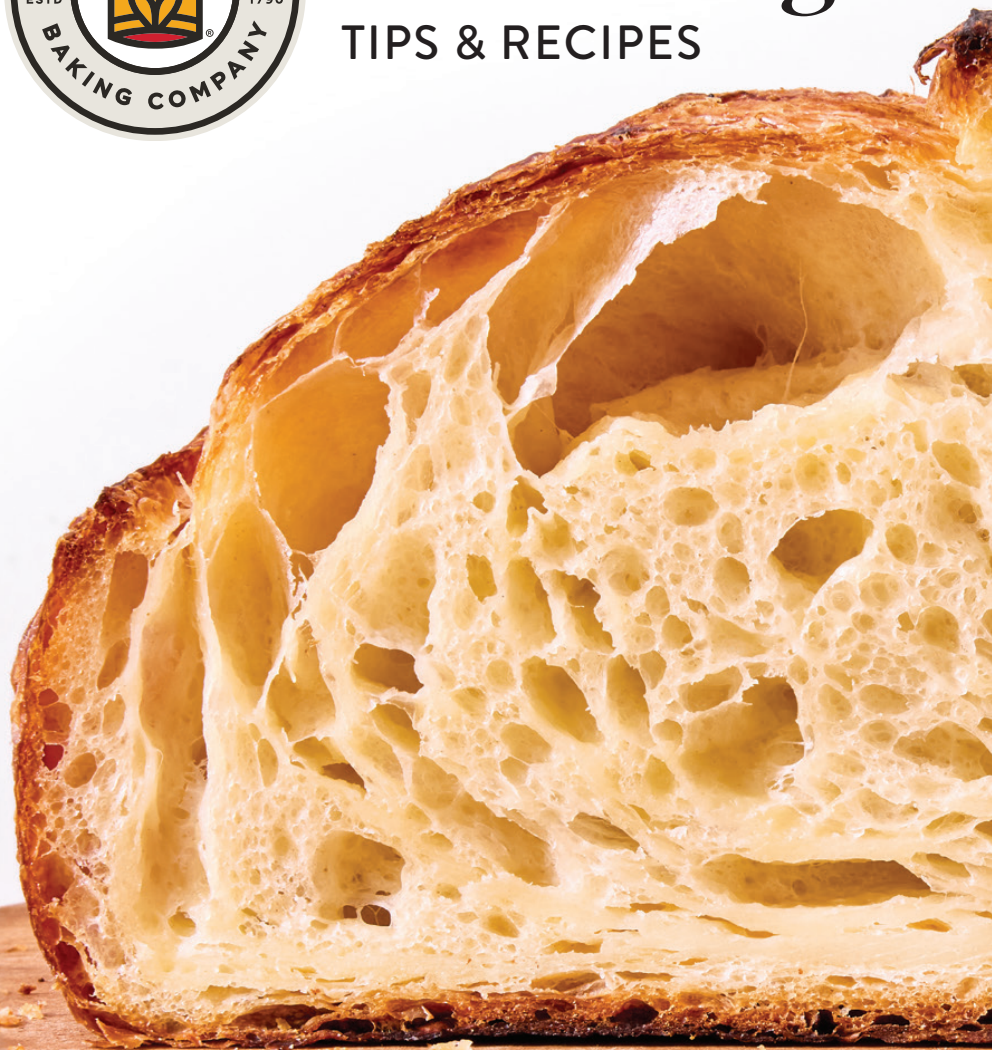




Sourdough

TIPS & RECIPES



**Feed
Me!**

Just received your King Arthur starter? It's hungry!
Please feed as soon as possible (within 24 hours).
Store in the refrigerator until ready to feed.

Find the recipe for Sourdough Croissant Bread
at [KingArthurBaking.com/Recipes](https://www.KingArthurBaking.com/Recipes)

YOUR STARTER'S HERE — AND IT'S HUNGRY

It needs food and water; read on to find out how to feed it. Do not consume raw starter.

MEET YOUR NEW STARTER!

Sourdough starter is a living culture of yeast and bacteria. When cared for properly, it can make beautiful bread (and lots of other things, too!). It is distinct from commercial yeast (instant or active dry yeast) in that it must be consistently maintained/fed with flour and water in order to keep it healthy and active.



Find more info at:
KingArthurBaking.com/Guides/Sourdough

SOURDOUGH TERMS TO KNOW

FEEDING is the act of adding flour and water to a portion of your starter, which sustains the yeast and bacteria.

DISCARD refers to unripe starter that is leftover after a regular maintenance feed. It can be composted or thrown away, or used in any recipe calling for “discard,” “discard starter,” or “unripe/unfed starter.” Discard is also often used as a verb to describe the process of removing or throwing away excess starter.

RIPE is how we describe starter that has been fed and allowed to rise until it is bubbly and double (or triple!) in size. This is when your starter has the most leavening power.

NATURALLY-LEAVENED is used to describe bread that is made with sourdough starter instead of commercial yeast.

THE BEST TOOL FOR SOURDOUGH SUCCESS

A DIGITAL SCALE is one of the most important tools you can have when working with sourdough. Weighing ingredients is the most accurate and consistent way to measure, and so the guidelines and recipes in this pamphlet list grams first, rather than volume. Starter volume varies depending on how thick it is and whether it's fully stirred down before measuring, so we highly recommend a scale for maintaining and baking with sourdough.



START HERE!

Your starter is hungry and should be fed within 24 hours of receiving it.

Here's how to do it:

1. As soon as possible, transfer the contents of the Classic Fresh Sourdough Starter jar (**28 grams**) into a larger, non-reactive container, like our Sourdough Crock (see sidebar).
2. To the starter in your new container, add equal weights of King Arthur Unbleached All-Purpose Flour and room temperature water — **28 grams of each (a scant ¼ cup flour and 2 tablespoons water)**. Stir until the mixture is smooth and slightly thick, like muffin batter.
3. Cover the container and let the starter rest at room temperature for about 8 to 12 hours (overnight works well).
4. After the rest, remove and discard **34 grams** of starter from your container (you should have **50 grams of starter** left). Feed the starter that remains in your container with **50 grams (about 6 tablespoons) of King Arthur Unbleached All-Purpose Flour** and **50 grams (about ¼ cup) of room temperature water**. Stir to combine and allow the mixture to rest for another 8 to 12 hours.
5. At this point, the starter should look bubbly and have expanded in size. Repeat the feeding process, starting by removing and discarding **100 grams of starter** from your container (you should have **50 grams of starter** left in your container) then adding **50 grams each of flour and room temperature water**; leave the starter at room temperature for another 8 to 12 hours. Continue this process until the starter is bubbly and regularly doubling in size 6 to 8 hours after feeding. This can take anywhere from 1 to 3 days. (Note that starters fall after they peak; once they start to fall they will no longer appear to have doubled in size. This is normal and not a sign that your starter is weak! Look for fresh residue on the side of the container for evidence that your starter did indeed double.)
6. Once your starter is reliably doubling in size after each feeding, then it is healthy, active, and ready to move on to maintenance mode. Maintenance will help get your starter ready for baking. (See the next page for details on how to maintain your starter.)

CHOOSING A CONTAINER:

Ceramic sourdough crocks are a beautiful and traditional choice, but any non-reactive, ½- to 1-quart lidded container will do. Clear containers, like our lidded glass sourdough crocks, are convenient because you can see the activity of your starter and easily monitor its progress as it ripens using the measurements printed on the glass. If you use another container without measurements already printed on it, you can use an erasable marker or rubber band around the jar to mark the level of the starter and track its growth.



Starter just after feeding (left) should roughly double in size (right) once it's ripe.

HOW TO MAINTAIN YOUR SOURDOUGH STARTER

So, you've gotten your starter to the point where it's doubling or tripling after each feeding. Hooray! You now have an active colony of beneficial bacteria and yeasts that you can use to leaven baked goods. But how should you maintain a healthy starter? There are two options:

1 BASIC MAINTENANCE AT ROOM TEMPERATURE

As far as sourdough organisms are concerned, room temperature is the preferable environment. Feeding a starter in this environment is a daily task, but it's a simple one, and less demanding than you might think.

To feed: Stir the starter well. Remove and discard all but **50 grams of starter** from your container. To your container add **50 grams each of water and all-purpose flour**, mix until smooth, and cover. Repeat daily, around the same time each day.

Keep in mind: The warmer your kitchen is, the faster your starter will rise.



Watch our video about feeding your sourdough:
[KingArthurBaking.com/Bread-Book/Feeding-Sourdough-Starter](https://www.kingarthurbaking.com/Bread-Book/Feeding-Sourdough-Starter)

2 BASIC MAINTENANCE IN THE REFRIGERATOR

If you bake less frequently, storing your starter in the refrigerator might be a better option. Refrigerated starter needs to be fed less frequently; once a week is enough to keep the starter going.

To feed: Take the starter out of the refrigerator, stir well, then remove and discard all but **50 grams** from your container. To your container, add **50 grams each of water and all-purpose flour**, mix until smooth, and cover. Let the starter sit for about 1 hour at room temperature before putting it back in the refrigerator. Repeat weekly.

DO I HAVE TO DISCARD?

It may seem odd (and wasteful) to discard a portion of your starter each time you feed it. But if you didn't, not only would you soon have a large volume of starter, it would also become too acidic. Keep in mind you don't necessarily have to *discard* the discard; you can use it in any recipe that calls for sourdough discard. (See Easiest Sourdough Discard Crackers on the back cover.) Sourdough discard will keep for a week or two in the refrigerator; you can combine the discard from several feedings in a single container.

SOURDOUGH STARTER LIFECYCLE

Ripe and ready to bake!





BUT WHEN CAN I BAKE BREAD?

If your starter is fed and maintained at room temperature, you may be just one feed away from ripe starter, which is when it has the most leavening power. A day or two before you plan to bake with it, start feeding your room temperature starter twice a day (spacing the feeds about 12 hours apart) to raise its activity level. If your starter has been stored in the refrigerator, it's going to be sluggish, and you'll need to raise its activity to a more energetic level before using it. About two days before you're planning to bake, take the starter out of the refrigerator in the evening, feed it like you normally would, and let it rest, covered and at room temperature, for 12 hours (whether this is one day or six days after your regular weekly feeding, it doesn't matter; the process is the same). The next day feed it twice, once in the morning, then again about 12 hours later. The last feeding should take place 6 to 12 hours before you start your recipe, so it has time to become ripe.

For most starters that are fed with a 1:1:1 ratio (that is, equal parts by weight starter, flour, and water), the starter will reach peak ripeness about 6 to 8 hours after feeding, but it could take more or less time, depending on the temperature of your kitchen and the health of your starter. Starter that is underripe has not yet doubled in size, and starter that is overripe has doubled or tripled in size and then started to sink again. There is a range of ripeness in between, and that is the zone you are looking for to get the best results in your recipe. (See the curve representing the lifecycle of a sourdough starter to the left.)

While you're waiting for your starter to become ripe, you can use your sourdough discard — that is, the portion of the starter you are removing each time you feed it — in any recipe calling for sourdough discard.



WHAT IF I NEED MORE STARTER?

To increase the quantity of your starter for a large recipe (or to make multiple recipes at once), one option is to feed the starter without discarding. Week to week, it's important to discard to keep your starter from getting too big, but when you want a larger quantity of starter, it's OK to occasionally feed it without discarding. You may also increase the volume of starter by increasing the amount of flour and water you add at each feeding. **No matter which option you choose, remember to follow the 1:1 ratio of equal parts flour and water (by weight) for your feedings.**

For example, if you want to bake Rustic Sourdough Bread (page 8) on Sunday, you need 227 grams of ripe starter, plus enough left over to feed and put back in the refrigerator. You should also count on losing some starter that will get stuck in your bowl and on your tools, so round up to 300 grams of ripe starter needed on Sunday morning. Here's how to get there:

- **Friday p.m.** — Give your starter a regular maintenance feed — discard all but **50 grams**, and feed the starter **50 grams each of flour and water**. Leave it at room temperature overnight.
- **Saturday a.m.** — Do another regular maintenance feed, discarding and feeding as usual.
- **Saturday p.m.** — Discard like normal, but now, instead of feeding the **50 grams of starter** that remains in your container the usual 50 grams of flour and 50 grams of water, feed it **125 grams each of flour and water**. You now have a total of 300 grams in your container. Cover and leave it at room temperature overnight to ripen.
- **Sunday a.m.** — Time to bake! The starter should be bubbly and doubled (or tripled) in size. Take out what you need for your recipe. Leave **50 grams of starter** in your container and feed it **50 grams of flour and water** just like normal, then return it to the refrigerator for another week.

TROUBLESHOOTING

A mature and well-maintained sourdough starter is hard to kill. Starters resist spoilage due to their acidic nature, but sometimes the unexpected happens! Here are some things to watch out for:

MOLD: Furry white or black mold is a sign that your starter isn't healthy, so it's usually best to toss it and start over. If your starter has orange or pink mold or streaks, it's unsafe to use. It means your starter has lost its natural ability to ward off intruders, and it's time to throw it out.

BAD SMELL: Some smells, like alcohol, acetone, or vinegar, are normal — these are just indications your starter is hungry! But if your starter has a putrid smell like garbage or rotting food, that's a sign some bad bacteria have taken over, and it's time to throw it out.



WHAT YOU DON'T NEED TO WORRY ABOUT

HOOCH: This is the translucent, sometimes grayish liquid that collects on the top of your starter when it hasn't been fed in a while (see photo above). It's alcohol, a natural byproduct of fermentation, and not a sign your starter is in danger, just that it needs to be fed! Stir the liquid back in and feed your starter like normal.

SHARP AROMA: A happy, well-fed starter should smell yeasty, fruity, sour, and tangy, but when starters are neglected they can develop sharper aromas, like vinegar or acetone. If your starter smells like nail polish remover, it's not spoiled, it's just hungry! Feed your starter like normal and it'll return to those bright, tangy smells in no time.



**NEED HELP WITH YOUR SOURDOUGH?
WE'RE HERE TO HELP.**

Call our Baker's Hotline at 855-371-2253.
KingArthurBaking/Bakers-Hotline





RUSTIC SOURDOUGH BREAD

Whether you're new to baking sourdough bread or just looking for something reliable and quick, give this bread a try. A small amount of commercial yeast used along with your starter ensures your loaf will rise beautifully.

YIELD: two 10" loaves

INGREDIENTS

660g (5 cups) King Arthur
Unbleached All-Purpose
Flour
340g (1½ cups) water, lukewarm
227g (1 cup) ripe sourdough
starter
15g (2½ teaspoons) table salt
1 to 2 teaspoons instant yeast*

*BAKER'S TIP:

If you're sure your starter is healthy and vigorous, and you don't mind potentially extending the rise times listed in the recipe, use 1 teaspoon yeast. If your starter seems lethargic (or you want to keep rise times on the shorter side), use 2 teaspoons.

DIRECTIONS

1. In large bowl, combine all ingredients, kneading to form smooth dough.
2. Allow dough to rise in covered bowl until doubled in size, about 1½ hours.
3. Transfer dough to lightly floured surface and divide in half. Preshape each piece by pulling edges into center, turning over so seam is on bottom, and rolling under your cupped hands to form ball. Let rest, covered, for 15 minutes.
4. Shape into bûtons (fat ovals) by rolling each piece back and forth on unfloured work surface several times to elongate. (See QR code on page 11.) For longer loaves, continue rolling until about 10" to 11" long.
5. Place loaves on lightly greased or parchment-lined baking sheet. Cover and let rise until very puffy, about 1 hour. Toward end of rising time, preheat oven to 425°F.
6. Spray loaves with lukewarm water and dust lightly with flour.
7. Score loaves: Make two fairly deep diagonal slashes on top of each loaf.
8. Bake for 25 to 30 minutes, until deep golden brown. Remove from oven and cool on rack.
9. Store loaves, loosely wrapped, for several days at room temperature; freeze for longer storage.



SOURDOUGH SANDWICH BREAD

Sourdough bread can be more than a crusty, chewy loaf. This richly flavored, soft-textured sandwich bread is ideal for all of your favorite fillings.

YIELD: two 8½" x 4½" loaves

INGREDIENTS

Levain

128g (1 cup plus 1 tablespoon)
King Arthur Unbleached
Bread Flour

128g (½ cup plus 1 tablespoon)
water, cool (60°F to 70°F)

44g (3 tablespoons) ripe
sourdough starter

Dough

630g (5¼ cups) King Arthur
Unbleached Bread Flour

340g (1½ cups) water, warm
(70°F to 80°F)

57g (4 tablespoons) unsalted
butter, room temperature

50g (¼ cup) granulated sugar

42g (6 tablespoons) King Arthur
Baker's Special Dry Milk or
nonfat dry milk

15g (2½ teaspoons) table salt

2 teaspoons instant yeast

all of the ripe levain

DIRECTIONS

- 1. For levain:** In medium bowl or container, combine levain ingredients; cover and let rest at room temperature (65°F to 75°F) for about 12 hours. It should double in size and have large bubbles just below the surface.
- 2. For dough:** In large bowl or bowl of stand mixer fitted with dough hook, mix and knead together dough ingredients until smooth, about 3 to 4 minutes if using a mixer, or 5 to 6 minutes if kneading by hand.
- 3.** Cover bowl and let rise for 1 to 2 hours, until doubled in size.
- 4.** Divide dough in half (about 700g per piece), and shape each into 8" log. (See QR code on page 11.) Place into lightly greased 8½" x 4½" loaf pans. Cover and let rise until dough has crowned about 1" over rim of pan, 1 to 2 hours.
- 5.** Toward end of rise, preheat oven to 375°F.
- 6.** Bake for 30 to 35 minutes, until crust is golden brown. Remove from oven and transfer to rack to cool completely before slicing.
- 7.** Store leftover bread, well wrapped, at room temperature for several days. Freeze for longer storage.



PAIN AU LEVAIN

This mildly tangy loaf uses no commercial yeast, relying instead on ripe starter for all its leavening. If you store your starter in the refrigerator, be sure to feed it at room temperature several times in advance of making this recipe (see page 4).

YIELD: two 10" loaves

INGREDIENTS

Levain

150g (1¼ cups) King Arthur Unbleached All-Purpose Flour

74g (⅓ cup) water, room temperature (70°F)

28g (2 tablespoons) ripe sourdough starter

Dough

482g (2 cups plus 2 tablespoons) water, warm (75°F to 80°F)

630g (5¼ cups) King Arthur Unbleached All-Purpose Flour

53g (½ cup) King Arthur Pumpernickel Flour or 57g (½ cup) Whole Wheat Flour

18g (1 tablespoon) table salt

DIRECTIONS

1. **For levain:** In medium bowl, mix and knead together levain ingredients to make a smooth, stiff dough. Cover and allow to ferment overnight (about 12 hours) at room temperature (65°F to 75°F); it should double in size and become domed.
2. **For dough:** Place water in large bowl or bowl of stand mixer fitted with dough hook. Tear levain into pieces and add to water. Mix, further breaking down levain, for about 2 minutes, until dough is homogenous. Cover bowl and allow dough to rest for 30 minutes.
3. Knead dough for about 3 minutes by hand or 1½ minutes using mixer. Cover and let rest for 1 hour.
4. Give the dough a fold and return to bowl to rise for another 1 to 2 hours, until puffy and soft but not necessarily doubled in size.
5. Transfer dough to lightly floured surface, gently deflate, and divide in half (about 700g each). Preshape into two rounds by pulling edges into center. Place seam-side up on floured surface, covered well. Let rounds relax for 20 minutes.
6. Shape loaves into either bâtards (football shape) or boules (rounds). (See QR codes below for a visual demonstration of shaping.)
7. Transfer loaves to two towel-lined, flour-dusted brotforms or bowls. Cover and allow to rise for approximately 2 hours at room temperature or up to 24 hours in the refrigerator.
8. Preheat oven to 500°F with baking stone or steel on center rack and cast iron pan on rack below for 1 hour.
9. Just before baking, turn loaves out onto parchment; trim overhang. (If baking one loaf at a time, let other loaf rest in refrigerator while the first one bakes.)
10. Slide parchment and loaf onto hot stone. Immediately pour about 1½ cups of boiling water into cast iron pan (wear good oven mitts to prevent steam burn).
11. Immediately lower oven temperature to 450°F. Bake for 35 to 40 minutes, until deep brown and internal temperature measures 195°F.
12. Remove from oven and allow to cool completely on rack. (If baking one at a time, allow stone to reheat for 20 minutes before loading second loaf.)
13. Store at room temperature, lightly wrapped, for a day or so; freeze for longer storage.

FIND MORE SOURDOUGH RECIPES



LEARN HOW TO SHAPE, STEP BY STEP



SHAPE A
BÂTARD



SHAPE A
PAN LOAF



SHAPE A
BOULE

EASIEST SOURDOUGH DISCARD CRACKERS

Making good use of your sourdough discard could not be easier!

You don't even need a rolling pin to make these crispy, customizable crackers.

INGREDIENTS

227g to 241g (1 cup) sourdough starter, unfed/discard

57g (4 tablespoons) unsalted butter, melted

½ teaspoon to 3 teaspoons of your favorite seasoning(s) and/or seed(s), plus more for topping

½ teaspoon table salt

Looking for more ways to use up your sourdough discard? Scan the QR code for more recipes.



DIRECTIONS

1. Preheat oven to 325°F with rack in center.
2. In medium bowl, combine all ingredients, stirring vigorously with spatula until evenly combined.
3. Transfer batter to parchment-lined baking sheet; spread evenly into thin rectangle, about 11" x 15". Sprinkle batter with toppings of your choice.
4. Bake for 15 minutes, then remove from oven, and use pizza wheel or bench knife to cut into 1" to 1½" squares (don't separate, just cut them).
5. Return baking sheet to oven and bake for an additional 35 to 45 minutes, rotating pan halfway through, until golden brown in center and crackers feel firm.
6. Remove from oven and allow to cool completely on the baking sheet before serving.
7. Store crackers in an airtight container at room temperature for several weeks.



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