



A Summary of the Sourdough Bread Classes



The Starter

Feeding the Starter: If the starter is kept on the counter, it should be fed at least daily. If kept in the fridge, feed it once a week or so.



How to Feed Your Starter:

- **Discard all but a small amount of your starter.** 60g is a good place to start until you figure out your needs.
- **Combine equal parts flour, water and starter.**
Ex 60g Flour, 60g Water, 60g Starter
- **Stir until no dry flour remains in your jar.** You will have a thick paste.
- Observe how long your starter takes to double in volume at different temperatures. You will need to know this to plan your bake schedule.

To Prepare Starter for a Bake:

- Look at the recipe you are using to find the amount of starter you need.
- Increase the amount of starter, flour, and water in your next feeding to ensure that you will have enough starter for your recipe, plus ~60g left over for future use.
- Feed your starter several hours in advance of when you want to bake.
- A starter is ready to use for baking when it has at least doubled in volume.

No Scale Available?

Want to make a sourdough recipe but don't have a kitchen scale on hand? No problem. Here is a handy dandy, baking conversion chart to make baking sourdough without a scale easy!

ACTIVE SOURDOUGH STARTER

50 g = ¼ cup

65 g = ⅓ cup

100 g = ½ cup

150 g = ¾ cup

FLOUR (AP, Bread and Whole Wheat)

40 g = ⅓ cup

50 g = ⅓ cup + tablespoon

60 g = ½ cup

90 g = ¾ cup

100 g = ¾ cups + 1 tablespoon

125 g = 1 cup + 1 teaspoon

200 g = 1 ⅔ cups

250 g = 2 cups + 2 teaspoons

300 g = 2 ½ cups

360 g = 3 cups

375 g = 3 cups + 2 tablespoons

400 g = 3 ⅓ cups

440 g = 3 ⅔ cups

450 g = 3 ¾ cups

480 g = 4 cups

500 g = 4 cups + 2 tablespoons

SOURDOUGH DISCARD (UNFEED)

10 g = 2 teaspoons

15 g = 1 tablespoon

62 g = ¼ cup

100 g = ⅓ cup

125 g = ½ cup

200 g = ¾ cup

WATER/MILK

15 g = 1 tablespoon

250 g = 1 cup + 2 teaspoons

270 g = 1 cup + 2 tablespoons

300 g = 1 ¼ cups

325 g = 1 ⅓ cups + 1 teaspoon

350 g = 1 ⅓ cups + 2 tablespoons

360 g = 1 ½ cups

365 g = 1 ½ cups + 1 teaspoon

375 g = 1 ½ cups + 1 tablespoon

390 g = 1 ½ cups + 2 tablespoons

400 g = 1 ⅔ cups

420 g = 1 ¾ cups

Tips

- Always keep some backup starter in the fridge or in a dry form.
- Experiment with the feeding ratio, feeding frequency, flour types and temperatures to get to know your starter.
- Keep your starter jar where you can see it so you remember to feed it.
- Use clean utensils and keep it covered to prevent contamination.
- A bit of clear liquid on top is ok. It is a byproduct of fermentation called "hooch". You can stir it in or discard it. It is a sign your starter is hungry and needs feeding. It might even be 'blackish'.
- A bit of drying on the top of the starter is fine, just give it a stir.
- Pink colors in the starter or any fuzzy molds are a sign of contamination. We recommend tossing, washing your jar well, and replacing it with your backup starter.

Basic Steps

Learning to make sourdough is almost like learning a whole new language. It is extremely easy and there is a lot of flexibility in the process but it basically goes through these steps. Sourdough recipes are less a recipe than they are a combination of formula and timeline.

1) Autolyse

Autolyse refers to the process of mixing the flour and water together in your bread recipe before adding your salt and usually before adding your leaven (starter) as well. Though it should be noted that some people do add their leaven in during this step. The benefit of mixing only the flour and water together before adding the salt is that it allows the flour to completely hydrate and it allows the gluten structure to begin building on its own.

The flour and water should be allowed to autolyse for at least 30 minutes to get the benefits of it. However, you can go for much longer, up to two hours. You do need to be careful not to allow your mixture to autolyse for too long, however, as the enzymatic activity can start breaking down the dough.

2) Build Strength & Structure

After your dough is mixed it needs to build some gluten structure and strength. There are three main methods for approaching this: the **no-knead method**, the **kneaded method**, and the **stretch and fold method**.

With no-knead sourdough bread you are letting time do all the work for you. Gluten structure will form all on its own given enough time. However, if you want a taller and more structured loaf you will want to knead your dough or utilize the stretch and fold method.

Kneading dough by hand or in a stand mixer can be used for sourdough bread, though it is not the most common method. Kneading to build strength and structure works best for lower hydration dough- usually something around 68% hydration or lower. Dough that has a higher hydration is very difficult to handle in the same way and therefore a different method of building strength is typically utilized.

STRETCH and FOLD: The stretch and fold method is typically used. This method is a more gentle way of building the gluten structure. It involves pulling up on sections of the dough, stretching it as far as it can go without tearing, and folding it down over itself. This process is performed all the way around the dough until it holds its shape into a tight ball.

Typically stretch and folds are performed in 15-30 minute intervals during the first few hours of the fermentation process. The process of stretching the dough and folding it over itself serves to align the gluten strands and even out the dough temperature, allowing strength and structure to build.

7) The final step is very important. Let your bread cool before you slice it.

3) Bulk Ferment

The bulk fermentation phase is also sometimes referred to as the first rise. This phase starts as soon as the final dough has been mixed, so if you are utilizing the stretch and fold method it is happening simultaneously as you build structure in your dough.

Bulk can sometimes be as quick as 2 hours or as long as 24 hours. There really isn't one clear answer on when the bulk fermentation stage is done. Essentially you want to allow your dough to build up a good amount of gasses in it before you shape.

4) Shaping

There are about as many different ways to approach the final shape of a dough as there is to approach a sourdough recipe. However, the main thing bakers are trying to accomplish during a final shape is to build tension on the surface of the dough to help it hold its shape when it bakes. This is also done in a gentle enough manner that as much air as possible is preserved inside the loaf.

5) Retard

The last step in the sourdough process is retarding your dough. The retard stage of bread baking is when you put your dough in the refrigerator. Cold temperatures will slow down the yeast activity while still allowing the bacteria to work in your dough. This creates a more flavorful and sour loaf.

Technically you can retard your dough at any point in the sourdough process and the refrigerator can be seen almost like a pause button on your timeline. You could even do a very long bulk ferment in the refrigerator for up to 3 or 4 days. However, I like to retard my dough after it has been shaped.

6) Bake

There are quite a few different ways to approach baking a loaf of sourdough. The most common method is to bake the loaf in a pre-heated dutch oven or oven safe pot. Whatever method is used, the important part here is the utilization of steam. This keeps the outside of the loaf moist and allows it to fully rise and open up before the crust sets. This is also known as oven-spring. A dutch oven tool for a home bread baker because the lid traps the moisture from the loaf inside the pot, creating a steamy environment.

BASIC SOURDOUGH BREAD BOULE

This is the basic sourdough recipe. It is not the most advanced or highest hydration recipe, but it is a good standard sourdough bread. You can use this as a guideline to work out your own ratios and timelines.

INGREDIENTS

100 grams ripe active starter

375 gr filtered water (90 F, 32 C)

500 grams unbleached all purpose flour or bread flour

10 grams fine sea salt or kosher salt

INSTRUCTIONS

Target timeline for this recipe. This can be used as a guideline to help you plan your schedule based on your own situation.

8:00 am Feed Starter: About 30 hours before you want to bake your bread, feed your starter. For this recipe I use these ratios:

1:30 pm Autolyse: In a large mixing bowl, combine your water and flour together. Use your hands to thoroughly combine the ingredients until the flour is completely saturated. The dough will look very shaggy and not very cohesive at this point. Cover and let sit for at least 30 minutes and up to 2 hours.

2:00 pm Float Test: About 6 hours after feeding your starter, gently drop a spoonful of starter in a glass of water. If it floats then it is ready to leaven your dough. If it doesn't float, give it a bit more time to get active. You will have a few hour window of when your starter will be active enough to go into your dough.

2:10 pm Mix Final Dough: Spread 100 gr of ripe starter of the dough and dimple it in and then fold the dough over to encase it inside. Next, sprinkle the 10 grams of salt over the top of the dough. Begin mixing the salt into the dough by squeezing and massaging it, then folding it over itself to evenly distribute. Continue squeezing the dough and folding until it is well combined- about 2 minutes.

2:15 pm - 8:15 ish pm Bulk Ferment: Cover the dough with plastic wrap, a shower cap, or a damp kitchen towel in the mixing bowl and let sit at room temperature (68-74 F, 20-23 C) for 6 hours. Do 4 rounds of stretch and folds about every 20-30 minutes during the first few hours of bulk fermentation.

8:15 pm Shape: Turn the dough out onto a very lightly floured work surface, being careful not to deflate. Pick up a piece of dough and pull it into the center. Continue working around the dough, pulling the edges in overlapping the previous piece until it is rounded into a tight ball. Flip the dough over and pull the dough towards you to build some tension and round it into a ball. Let the dough sit for about 2-3 minutes to seal the seam underneath.

8:30 pm Proof: Dust a 9" round banneton basket or a bowl lined with a lint free towel with rice flour. If you do not have

a banneton basket, you can line a bowl with a tea towel and dust that with rice flour. Turn the shaped loaf into the prepared banneton (or bowl) with the seam side up. Let sit at room temperature (68-74 F, 20-23 C) for about 1 hour.

9:00 pm - 1:00 pm next day Retard: Place the proofed dough into the refrigerator to retard for 12-18 hours. This will improve the flavor of the final bread and also can help the loaf hold its shape a bit better.

12:00 pm next day, Prep Oven: At least an 45 minutes before baking your bread, preheat the oven to 450 F (230 C) with your dutch oven inside.

1:00 pm Score: Turn the loaf out onto a piece of parchment paper and use a bread lame or a sharp knife to score it however you like.

1:00 pm Bake: Transfer the dough on the parchment paper carefully into your hot dutch oven or oven safe pot that is at least 4 qts in size. Place the lid on top and place it on the center rack of the oven and bake with the lid on 450 F (230 C) for 30 minutes. Take the lid off and bake the loaf for 15-20 more minutes until you reach your desired color.

Cool: Allow the bread to cool on a cooling rack for at the very least 1 hour before slicing it. Preferably let it cool for 4-12 hours for the best flavor, texture, and to prevent it from staling too quickly.

Store: Keep the bread at room temperature completely uncovered for the first 24 hours. If you have sliced into the bread, place the bread cut side down on your cutting board. For day 2 & 3, you can transfer it into a ziplock bag and refresh it by toasting it because the crust will get soft. After that, slice it and store it in the freezer. Toast to refresh from frozen.



Sourdough English Muffins



Ingredients

1 cup active sourdough starter (240 grams)
1 cup warm water (no more than 110° F) (240 grams)
1 tsp honey (5 grams)
2 ½ cups bread flour (365 grams)
2 tbsp salted butter, melted and cooled
1 ½ tsp unrefined sea salt (5 grams)
cornmeal, for dusting the parchment paper

Instructions

Mix Together the Dough

Place all of the ingredients except the cornmeal into the bowl of a stand mixer. Knead on medium-low speed using the dough hook attachment for 15 minutes. It won't quite completely clean the sides of the bowl.

First Rise or Bulk Fermentation:

Transfer to a greased large bowl. Allow to ferment for 1 hour in a warm place at room temperature. Cover and place in the fridge for 20 hours to ferment further.

Prepare a Baking Sheet

Cut out 12 squares of parchment paper that are 4 inches. Arrange the squares of parchment paper on a large cookie sheet. Sprinkle each of the squares of parchment paper very generously with corn meal to prevent sticking. Make sure you go all the way to the edge! If you have any problems with sticking, you could try greasing the parchment squares first, then sprinkling them with the cornmeal.

Shaping the Sourdough English Muffins:

Divide the dough into 12 equal pieces. Form each piece into a ball by pinching the edges into the middle and then rolling it across a lightly greased work surface to create tension. Transfer the balls of dough to the parchment paper squares on the prepared baking sheet. Flatten them out with your fingers by pressing on the top of the dough. You may need to press them out really firmly.

Final Rise

Cover with a tea towel and let the dough rest and rise until quite

puffy, about 2-6 hours

Cooking/Baking

Preheat oven to 350°F/176°C

Preheat a cast iron skillet or griddle over medium-low heat for 5 minutes. Carefully invert as many English muffins as will easily fit onto the griddle.



Cook for 5-8 minutes, or until nicely golden brown on the bottom.

Flip and cook for an additional 5-8 minutes, or until browned on the second side as well.

Transfer the muffins to a baking pan or sheet pan and place in the oven for 10 minutes.

Cooling

Transfer the sourdough English muffins to a wire cooling rack. Cool on the wire rack for at least 10 minutes before splitting.

To use a fork to split the English muffin, poke it into the side of the muffin, wiggle it around a bit, and repeat all the way around.



Baguette - Artisan Bread

Ingredients

1 1/4 cups (283g) water, lukewarm
2 cups (481g) sourdough starter, ripe (fed) or discard*
4 1/2 to 5 cups (540g to 600g) All-Purpose Flour
2 1/2 teaspoons (15g) salt
2 teaspoons sugar
1 to 2 teaspoons instant yeast, depending on the vigor of your fed starter*

Instructions

In a large bowl, combine the water, starter, and 3 cups (360g) of the flour, mixing until smooth.

Stir in the salt, sugar, yeast, and gluten, then an additional 1 1/2 to 2 cups (180g to 240g) of flour. Stir until the dough pulls away from the sides of the bowl, adding only enough additional flour as necessary; a slack (sticky) dough makes a light loaf.

Knead the dough for about 7 minutes in a stand mixer; or 8 to 10 minutes by hand, on a lightly greased work surface. .

Turn the dough into an oiled bowl, cover the bowl, and let the dough rise until doubled in bulk, about 90 minutes.

Gently deflate the dough, and divide it into six pieces (for thin baguettes) or three pieces (for thicker Italian



loaves).

Shape each piece into a 16" long loaf, and place the loaves, at least 4" apart, on parchment-lined baking sheets, or in lightly greased baguette pans (French loaf pans). If you're using baguette pans, make the loaves 15" long.

Cover the loaves with lightly greased plastic wrap, and let them rise for 1 1/2 to 2 hours, or until they're nice and puffy. Towards the end of the rising time, preheat your oven to 450°F.

For a classic look, make three diagonal slashes in each loaf, cutting about 1/4" deep. For taller, rounder baguettes, don't slash.

Bake the baguettes for about 25 minutes, or until they're a rich golden brown. If you baked in baguette pans, remove the loaves from the oven and unmold. Turn off the oven, return the loaves (without the pan) to the oven, and crack the oven door open a few inches. If you baked on a parchment-lined baking sheet, simply turn off the oven and crack the oven door open a few inches. Letting the loaves cool right in the turned-off oven helps preserve their crunchy crust.

Remove the baguettes from the oven, and cool them completely on a rack. Store any leftovers in a paper bag for a day or so; paper will preserve their crunchy crust better than plastic. Freeze for longer storage.



Cinnamon Rolls & Brioche

Cinnamon Rolls

Ingredients

550 grams (4 cups) All-purpose flour

200 ml (220 gr or scant 1 cup) milk

55 grams (1/4 cup) unsalted butter

1 egg + 1 yolk + white

60 grams (1/3 cup) sugar

7 grams (1 T) dry yeast

4 grams (1/2 t.) salt

Directions

In a sauce pan over medium heat, scald milk (stir constantly until fine bubbles appear around edge); Melt butter in scalded milk. While hot, add sugar to dissolve. When cool (below 100 degrees), add eggs, yeast and flour. (1 egg, 1/2 egg yolk; save white for egg wash) Mix until smooth. Proof until double (30-60 minutes).

*For class: divide dough in half to use the 2nd half for Brioche.

Gently press dough into rectangular shape. Let rest covered for 15 minutes.

Roll to 3/8-inch thickness, maintaining the rectangle shape. Use egg wash and brush rectangle.

Sprinkle with cinnamon and sugar to suit. Eliminate cinnamon for cranberry rolls.

Start with wide side of rectangle and roll tightly. Pinch closed after rectangle is rolled. Roll back and forth with your hands to get even shape.

To cut into rolls, take a piece of dental floss about 18 inch long. Slide floss under roll of dough. Bring floss ends together over top past each other to cut into roll. Place on parchment paper on baking sheet, with space between to allow for rising.

Let rise. Bake 375 for 20 minutes

Cream Cheese Icing

112 grams (4 oz) Cream cheese, room temp.

220 grams (2 cups) powdered sugar

7 gm (1 1/2 teaspoon) vanilla



Brioche

Place remaining rectangle of dough in front of you, long side closest to you. Cut into three long even strips, separated to allow working room.

Stud fruit into all three strips. Make 'snakes' from the fruited strips. Place each 'snake' next to each other in order to braid tightly. Roll to join together. Let rise until almost double in size. Egg wash before baking. Bake @375 degrees for 20 to 25 min. until internal temperature of 190 degrees.



Discard Recipes

Part of keeping a sourdough starter alive involves discarding portions of it during each feeding. Those discards don't need to go to waste: They can be used in recipes like these.

Sourdough Pancakes



Ingredients

2 cups all-purpose flour
2 teaspoons baking powder
1 teaspoon baking soda
2 tablespoons granulated sugar
1 teaspoon salt
1 cup sourdough discard (discard is runnier and works best in this recipe)
1 1/2 cups milk (or more to thin the batter)
1 large egg beaten
2 tablespoons vegetable oil

Instructions

In a large bowl, whisk together the flour, baking powder and soda, sugar and salt.

Add the sourdough starter, milk, egg and oil. Mix well just until combined.

Spray a pancake griddle with cooking spray or grease well with butter. Heat to about 300-350 degrees.

Pour 1/4 cup pancake batter on the hot griddle. Cook until the pancake starts bubbling on top, then flip the pancake.

Cook for an additional 1-2 minutes or until the pancake is cooked through.

Serve warm with butter and syrup.

Sourdough Waffles

Ingredients

5 ounces all-purpose flour, (1 cup, spooned; 142g)
1 1/2 teaspoons baking powder (1/4 ounce; 6g)
1 ounce granulated sugar (2 tablespoons; 30g)
1 teaspoon (4g) salt; 100g)
6 ounces whole milk (3/4 cup; 170g)
8 ounces sourdough starter, unfed/discard (1 cup; 226g)
1 1/2 ounces unsalted butter, melted (3 tablespoons; 40g)

Directions

In a medium bowl, whisk together flour, baking powder, sugar, and salt until well combined.

In a large bowl, whisk together eggs, milk, starter, and melted butter until well combined.

Add dry mixture to wet mixture and whisk until just combined. (Depending on the thickness of the starter, you may need to adjust the batter's consistency. It should be the consistency of pancake batter. Add milk to thin it, if necessary.)

Cook in waffle iron. Serve right away with butter and maple syrup.

Sourdough Crackers

Ingredients

1 cup (227g) sourdough starter, unfed/discard
1 cup (113g) King Arthur White Whole Wheat Flour
1/2 teaspoon flaky sea salt
4 tablespoons (57g) unsalted butter, room temperature
2 tablespoons dried herbs, of your choice, optional
oil, for brushing coarse salt, (such as kosher or sea salt) for sprinkling on top

Directions

Mix together the sourdough starter, flour, salt, butter, and herbs to make a smooth (not sticky), cohesive dough.

Divide the dough in half and shape each half into a small rectangular slab. Cover with plastic wrap, and refrigerate for 30 minutes, or up to a couple of hours, until the dough is firm.

Preheat the oven to 350°F.

Working with one piece of dough at a time, very lightly flour a piece of parchment, your rolling pin, and the top of the dough.

Place the dough onto the floured parchment and roll it about

1/16" thick. It'll have ragged, uneven edges; that's OK. Just try to make it as even as possible.

Transfer the dough and parchment together onto a baking sheet. Lightly brush with oil and then sprinkle the salt over the top of the crackers.

Cut the dough into 1 1/4" squares; a rolling pizza wheel works well here.

Prick (dock) each cracker a couple of times with a fork; this will help keep them from puffing up like little pitas as they bake.

Roll and cut the second piece of dough following the directions above.

Bake the crackers for 20 to 25 minutes, until they're starting to brown around the edges. Midway through, rotate the baking sheets both top to bottom and front to back; this will help the crackers brown evenly.

When fully browned, remove the crackers from the oven and place the pans on a rack to cool.