

**An Introduction to Sourdough Baking**  
**By Mike Avery**  
**(A free 2 chapter sample)**

## Table of Contents

- I. An introduction – why mess with sourdough?
- II. What IS sourdough?
- III. Caring for your starter**
- IV. Let's bake some bread**
- V. Forming Loaves
- VI. Baking at altitudes
- VII. Breadmaking troubleshooting
  - A. Sourdough troubleshooting
  - B. General baking troubleshooting

Appendix A. Some recipes

Appendix B. Some Resources

- 1. Books
- 2. The Internet
- 3. Vendors

Appendix C. Capturing your own starter

Appendix D. Converting regular recipes to sourdough

Appendix E. A glossary of bread terms

Appendix F. HOW do I clean up this mess?

Note – this sampler contains significant portions of chapters III and IV of the SourdoughHome pamphlet, “An Introduction to Sourdough”, the highlighted chapters above.

### III Caring for your starter

Early sourdough cultures were kept on the back of the stove, in a barrel of flour, or even in a leather pouch under a miner's shirt. At these temperatures, sourdough cultures need to be fed several times a day to maintain their vitality. This is fine if you're going to bake some bread, rolls, or make pancakes every day. Bakeries that bake every day still use those techniques. However, most of us don't bake every day.

Luckily, refrigeration has come to our rescue. Sourdough starters can be stored in quart canning jars in the refrigerator. I put two cups of freshly fed starter in a jar, and don't tightly seal the jar. Scott and Wing in "The Bread Builders" call this a "storage starter". A storage starter can be kept in the refrigerator for weeks between uses, and some people have stored their starters for months. Of course, while it is in storage, the starter will be weakening. The yeast and lactobacillus will be dying. The longer the starter sits, the longer it will take activate it again, and the greater the chances that it won't revive easily. How to revive a reluctant starter is covered in the troubleshooting section.

When I start a baking session, I remove one of my starters from the refrigerator the day before I plan on baking. It may look much like the picture below. The layer of clear liquid above the cream colored layer is called "hooch" by old-timers. Since yeast makes alcohol, and alcohol is lighter than water, it shouldn't be a big surprise that the hooch layer does in fact have alcohol in it. Some sources report the concentration of alcohol can reach 18%, which would be strong for a wine. It might not be a big surprise that only a lonely trapper would be interested in actually drinking the hooch. If the layer is an inch or less in depth, just stir it back into the starter when you use it. If it's more than an inch thick, pour it off and replace the liquid with water. If it has mold on it, you have a problem, and need to refer to the troubleshooting section of this pamphlet. However, it is very uncommon for this to happen. If you feed your starter frequently, neither hooch nor mold will form. The starter shown to the left had been in storage for over 3 months without being used when the picture was taken. However, it revived without problems.



Any time you use the sourdough starter, it should be fully revived, and should be vigorous and lively. To revive it, you'll need to follow these simple instructions. I put two cups of filtered water into the bottom of a large mixing bowl. I use a water filter to remove chlorine and other unpleasantness from the water I use to revive my starter. Some people say that's not necessary, but I'd rather not risk killing my starter with a dose of chlorine. Then, I add my storage starter to the water. A rubber spatula will help get the last of the starter out of the canning jar. At that point, I whisk the starter and water together, making sure I whisk in lots of air. The oxygen helps the yeast revive in its early stages, and the whisking helps evenly distribute the yeast and lactobacillus in the starter. Once you have poured the starter from



A Sampler from An Introduction to Sourdough

<http://www.sourdoughhome.com>

the jar, it is time to clean it. Make sure you don't let the starter dry out on your utensils. It still hardens like cabin chinking, and once dry, your cleaning job is MUCH harder.

Once the water and storage starter have been whisked together, it is time to whisk in flour. The kind of flour you will use depends on the results you want. As the hippies – or was it Adele Davis - used to say in the '60's, "You are what you eat!" And it's true –



many people prize wild boars that have been eating acorns as it flavors their meat. The French force-feed geese special foods to flavor the goose's liver to make special pate foie gras. If it's true for a wild boar or a goose, it's true for single celled organisms. White flour is the blandest flour. When a culture is fed white flour, its characteristic sourdough taste will diminish. This isn't always bad, it depends on what sort of bread you are baking. Whole-wheat flour generates a more pronounced nutty taste and adds a more assertive sour note, while rye flour provides the strongest taste. I usually use one cup of rye flour and two cups of white flour for most starters, although for other purposes, I will use all whole-wheat flour, or all rye flour. If you look at Europe, you'll see the farther north you go, the more rye flour is used in their breads, and the more flavorful the bread is. As you move south, less rye is used. This is largely due to what grains will grow where. Rye will grow in the colder northern climates and thrive, while wheat will not. In the southern areas, wheat will grow, and it is preferred. You can even see this inside some countries, such as Germany where rye is common, but the breads of northern Germany use more rye flour than the breads of southern Germany.

Once the starter has been refreshed, or fed, and whisked, it will have a thickness similar to heavy cream, or a light pancake batter. Once it is beaten, it is time to cover it, and set it aside. I like to use Saran Wrap "Quick Covers", as they are easy to use, and reusable. They keep out dust, insects, children, pets, and even cook's spills. The covered mixing bowl



is set into an oven with its electric light or pilot light on. In this area, that usually maintains a temperature between 85 and 90 degrees Fahrenheit. This lets the yeast and the lactobacillus be fruitful and multiply. Since I work at home, I put the starter into the oven in the evening as I go to bed. The first thing in the morning, I will refresh the starter again, using the same type of ingredients as before. Shortly after breakfast, the starter will usually be fully active, and I start making some bread. I time things to coincide with my breaks. I mix the dough before I start work, punch it down on my coffee break, and bake it around lunch time.



The starter will have risen, it will be full of bubbles, and be light and frothy. At this time, it is ready for use. The first thing to do is to save some of the starter for your next baking session. Whisk down the starter, and measure two cups into the jar. I label the lid of



the jar so I know which culture it is. Now that you have a healthy starter, it's time to make some bread....

## IV Let's bake some bread

### San Francisco Sourdough Bread.

In general, haste is the enemy of good bread. Slow development of your starter and slow risings allow the flavor of your bread to fully develop. Also, the longer you allow your bread to rise, the longer it will last. I'll give three variations on San Francisco Sourdough Bread recipe below, so you can try it different ways. While the slowest bread is the best one, I have to admit that sometimes I get in a hurry and I am very glad the quick recipe using more starter provides a very good bread quickly.

Unlike most San Francisco sourdough recipes I've seen, I use part whole-wheat flour. It makes the bread more interesting in color, texture, and taste. This is a very simple bread. Let's start with the ingredients:

Ingredients	Mild	Flavorful	Very flavorful
Starter	2 cups	1 cup	¼ cup
Whole Wheat flour	.5 cup	1 cup	1 cup
White bread Flour	2 1/2 cups	8 cups	5 ½ cups
Water	1/4 cup	2 2/3 cups	2 ½ cups
Salt	1/2 tsp	1 tsp	2 tsp
Rising time	2 hours	7 hours	12 – 14 hours
Yield	2 – 1 lb loaves	4 – 1 lb loaves	2 – 1 lb loaves
Notes	Rise at 85	Rise at 85	Rise at room temp

Start by measuring the starter you'll need. Remember the starter has flour and water in it, which affects the rest of the measurements, so using more or less starter isn't just a matter of changing the amount of starter you are using. Changing the amount of starter affects the flour to water ratio, which affects how the dough handles. Whisk the starter before measuring it, so you'll be measuring starter, not bubbles. Then whisk in the water called for in your recipe, the whole-wheat flour and then the salt. Set aside the whisk, and get a wooden spoon. Add the white bread flour a cup at a time, stirring as you go. After a while, the dough will become too stiff to stir. At that point, pour it out onto your kneading surface. Make sure you have floured your work surface before you turn the bread out, and flour your hands before you start kneading. I like using a large wooden trough to knead in. If you find troughs somewhere, get a big one with as few knot holes as possible, and ask the vendor to flatten the bottom. Keep it oiled. Using a trough REALLY minimizes the mess of kneading.



Kneading bread is a topic of some debate. Some people almost feel it's the point of baking bread, others say it reduces their tension, gives them exercise, and makes them feel better. Other people feel it isn't necessary, and that it's a waste of time. I think the jury's still out, so I have included a no-knead sourdough recipe in the back of the pamphlet. I think the amount of kneading depends on what sort of bread you want to make. A wetter dough with less kneading will give you a more open texture. More kneading, with a dryer dough, and multiple risings will give you a dough with a finer texture. You can play with it and make the bread the way you want it to turn out. For this bread, we're going to knead about 15 to 20 minutes. I like the James Beard approach to kneading. I ball the dough in front of me, put my hands on it and push the dough away, and then fold it back over towards me. I repeat this 3 or 4 times, turn the dough  $\frac{1}{4}$  turn and repeat the process. From time to time, I'll turn the dough over so the same side isn't always in contact with the kneading surface, and the flour. Keep adding flour as needed to keep the dough from sticking to the work surface.

However, don't get too carried away. Dough prefers to be a little too wet rather than a little too dry. A wetter bread rises better. You aren't interested in getting the bread to the point where it no longer sticks, but just to the point where it would rather stick to itself than to you or the work surface.

After 10 minutes or so, pull off a ball of dough about the size of a tennis ball. Roll it around in your hands, and then stretch it between your hands. You want it to stretch without tearing until you can see light through it. This is called the windowpane test, and it is appropriate for most medium-density breads. It is not appropriate for light French or Italian breads, or heavy rye breads. If your dough tears, give it another 5 minutes of kneading and then check again.

Once the bread is kneaded, let it rest for 30 minutes. Then form the bread into baguettes, boules, or pan loaves (see section V, "Forming Loaves"), and put them in the 85 degree oven to rise for about 2 hours.

Once the loaves have doubled in size, it's time to pull the loaves out of the oven and to preheat the oven to 375 degrees Fahrenheit. Once the oven is at the right temperature – use a thermometer to be SURE the oven is at the right temperature - slash the loaves with a razor blade, slide them into the oven, and put some water into a pan at the bottom of the oven. Allow to bake 45 minutes, or until the inside of the bread reaches 190 F.

Remove from oven, and let cool on wire racks before slicing. If your family will let you. I often vary this recipe by letting the bread rise once in a mixing bowl, punching it down, kneading it some more, and then forming loaves. The second rise takes about  $\frac{1}{2}$  as long as the first rise, and also adds to the flavor.