

# Introduction to Sourdough

## What is Sourdough Starter?

Sourdough starter is a combination of water, flour, wild yeast, and at least one lactic acid bacteria (*Lactobacillus* species). The yeast feeds on the starches of the flour and produces alcohol and carbon dioxide that leaven your dough. The *Lactobacillus* culture feeds on the sugars of the flour and produces lactic acid (lowers pH, and gives the sour flavor) and hydrogen peroxide. This combination (alcohol, low pH, and hydrogen peroxide) makes the sourdough starter very resistant to fungi, mold, or harmful bacteria and allowing it to be kept for years.

## Why Should I Purchase My Starter Instead of Growing My Own from Flour and Water (Plain or with Packaged Yeast)?

There are many varieties of microbes floating in the air. If you start with just flour and water you are taking a chance on getting the RIGHT microbes. Directions for trying this can be found on the [kingarthurfLOUR.com](http://kingarthurfLOUR.com) website. But, at the end of a week of daily maintenance, you still may have a mess to throw away.

If you try a water, flour, and baker's yeast combination you are still not guaranteed getting a good lactic acid bacteria. You could even get a bacteria that converts the alcohol from the yeast to vinegar. This is harmless; but, don't expect the taste to be right. This type of starter is best for those who want a straight yeast starter that produces minimal sour taste. Maintenance for "non-sour" starters requires immediate refrigeration after each use. These starters are less protected from other microbes and can go bad (or turn to sourdough). Note: If you want this type of starter you can find instruction on [allrecipes.com](http://allrecipes.com) under sourdough starter.

## Should I Order My Sourdough Starter?

There are many species of both wild yeast and *Lactobacillus* bacteria. The first couple of loaves may taste like New Orleans, San Francisco, or Alaskan bread. However; very quickly, the native yeast and *Lactobacillus* species from your area will take over. If you look at the three famous sourdoughs noted above they have one thing in common: salt water air. Salt concentration is a big factor in what microbes are found in any given environment. So, there is not a lot to gain from ordering verses obtaining a local start.

## Any Other Notes I Need to Know About My Sourdough Starter?

Starters made with non wheat flours, such as rye, will have different yeast and bacteria species than wheat flour. It is better to maintain a separate starter for some grains, especially rye. To make these "special" starters all you do is get your starter going with regular flour and then start replacing with the other flour as you use it.

Different recipes call for a different ratio of water to flour – does this require maintaining a different starter for each? No, the process of removing a set amount from your primary container, adding flour and water per recipe, and then returning the original amount. The slight difference that occurs in liquid content won't matter to your primary mix.

Water in Memphis area is fine right from the tap. Other areas may require use of bottled water to get full action and flavor.

## Using Your Starter

### What is the First Step?

Your new starter comes as a powder that contains flour and all the “good” microbes. Place the powdered starter in a glass, ceramic, or plastic container with a lid. The container should be able to hold at least 3 cups of liquid. In addition to the powder add 1 ½ cup of flour and 1 ½ cup of lukewarm water. Stir and let sit overnight.

### How do I get ready to cook?

1. Remove 1 cup of starter from your storage container and put into a mixing bowl (2 quart bowl is about right).
2. Add flour and water per recipe to the bowl. If recipe is listed simply as how much starter is needed use as much flour (and equal amount of water) as the recipe calls for starter. For example: If the recipe calls for two cups of starter add 2 cups each flour and water. Stir till smooth.
3. Let stand for 4 to 12 hours. The longer the time the more sour the final product.
4. Measure out the amount the recipe calls for and return remainder to storage container.
5. Refrigerate storage container until ready for next use.

### Notes:

1. Healthy starter should have a yellow fluid on top while being refrigerated. If the fluid starts to look gray it is getting hungry. Stir and throw out about half. Add a Cup each of flour and water. Stir and let sit for about 4 hours return if bubbling begins (if it has not shown any bubbling by 12 hours discard) to refrigerator. Starter should require feeding every 2-4 weeks depending on refrigerator temperature.
2. At any time you can take a spoonful out and place on a plate, wax paper, or parchment to dry and save for emergency restarting or to give away.
3. Starter can also be mixed with enough flour to make dough and placed in a zip lock bag to freeze. This be used later for camping.

### Where do I get recipes?

The recipes provided will get you started. The internet will provide so many more. For those that prefer books just be on the lookout at yard sales and thrift stores. Many people begin with kits that contain a recipe book then lose interest making used books accessible.

## Sourdough White Bread (Bread Machine)

### Ingredients:

- 2 Cups Sourdough Starter
- 3 Tbs Melted Butter
- 2 Tbs Powdered Milk
- 2 Tbs Sugar
- 2 Cups Flour
- 1 ½ Tsp Salt
- 1 Package Yeast (Fast rise if making on Quick Cycle)

### Instructions:

Add ingredients in the order shown to the machine. Run on Standard Cycle or Quick Cycle.

### Notes:

1. Yeast is added since bread machine cycles do not allow enough time for full rise with starter.
2. Dough Cycle can be used to prepare dough for pan baked loaves, rolls, etc. Just allow one more rise period after removing and placing in loaf pan or forming rolls.
3. Add flour or water to get right consistency. Dough should have same stickyness as any other bread machine loaf. This is basically a smooth ball showing no crumbling and just enough moisture to stick to side of the pan for kneading. It should be dry enough to “let go” of pan after a few kneading strokes just to stick at a new part of the pan.
4. Home made bread tends to dry out quicker than commercial bread. Use quickly or save dry bread for great croutons or french toast.

## Sourdough White Bread (Hand Kneading and Baking)

### Ingredients:

3 Cups Sourdough Starter

6 to 6 ½ Cups Flour

2 Tbs Sugar

3 Tbs Melted Butter

1 ½ Cups Milk

2 Tsp Salt

### Instructions:

1. Place starter in a large mixing bowl.
2. Add 1 Cup flour and the sugar and mix.
3. Add butter, milk, and salt and mix.
4. Add remaining flour until just too stiff to hand stir.
5. Place on floured surface and knead approximately 1 to 1 ½ Cups more flour to make a smooth and elastic dough. Can use a dough hook on standing mixer (about 5-6 minutes on medium speed).
6. Coat with shortening or oil. Return to bowl and let stand until double in size (about 2 hours).
7. Punch down and then let it rise again for 30 minutes.
8. After second rise place back on floured board and separate into two halves. Fold each half over itself and pinch together. Place each loaf in a greased and floured 9 x 5 loaf pan.
9. Brush the top of each loaf with melted butter. Let rise again for about 1 ½ hours.
10. Punch down and then let it rise again for 30 minutes. Bake at 375 degrees for approximately 45 minutes or until bread pulls away from side of pan and the top of the loaf pulls away from the side.

### Notes:

1. Dough can be divided into thirds and placed in three 7 x 3 pans. Reduce bake time approximately 8 minutes.
2. Dough Cycle can be used to prepare dough. Just allow one more rise period after removing and placing in loaf pan.

## Sourdough Biscuits (Hand Kneading and Baking)

### Ingredients:

1 ½ Cups Sourdough Starter

2 Cups Flour

½ Cup Milk

2 Tbs Melted Butter

1 Tbs Sugar

¼ Tsp Baking Soda

¾ Tsp Salt

### Instructions:

1. Place starter in a large mixing bowl.
2. Add and mix in 1 Cup flour, the milk, the butter, the sugar, the baking soda, and the salt.
3. Place remaining flour on smooth surface.
4. Turn the dough onto the flour knead in remaining flour. Add additional flour if required to make a smooth non sticky ball.
5. Pat down or roll dough to ½ inch thick. Cut with biscuit cutter and place on sprayed cookie sheet.
6. Coat top with butter. Cover and let rise for 30 minutes.
7. Bake for 30 minutes in a preheated 375 degrees oven.

### Notes:

## Sourdough Rolls (Machine Kneading Hand Baking)

### Ingredients:

- 1 1/2 Cup Sourdough Starter
- 1 Cup Warm Water (Just slightly warmer than room temp)
- 3 Tbs Melted Butter
- 1 Tbs White Sugar
- 1 Tbs Brown Sugar
- 3-4 Cups Flour (Start with 3 Cups and add per Step 2 as required)
- 1 Tbs Salt
- 1 Pkg Yeast

### Instructions:

1. Add ingredients in the order shown to the machine.
2. Add flour or water to get right consistency. Dough should have same stickiness as any other bread machine loaf. This is basically a smooth ball showing no crumbling and just enough moisture to stick to side of the pan for kneading. It should be dry enough to “let go” of pan after a few kneading strokes just to stick at a new part of the pan.
3. Run on Dough Cycle.
4. Remove from machine and form into rolls.
5. Place on prepared pan and let rise until doubled.
6. Bake approximately 20 minutes in a 375 degree oven.
7. Prior to last 5 minutes of baking, brush with melted butter and return to oven.

### Notes:

## Sourdough Pizza Dough (Hand Kneading Hand Baking)

### Ingredients:

1 Cup Sourdough Starter (Straight from the refrigerator, DO NOT FEED, just stir fluid in before removing)

½ Cup Very Warm Water (Just a bit cooler than dish water hot)

2 ½ Cups Flour

1 Tsp Salt

½ Pkg Yeast

1 Tbs Garlic Powder

1 Tbs Italian Seasoning

### Instructions:

1. In a large bowl add the starter and water together. Add the rest of the ingredients and mix to combine ingredients.
2. Hand knead till smooth and slightly sticky, or run about 7 minutes at medium speed using a stand mixer with dough hook.
3. Place the kneaded dough in a lightly greased container, and allow it to rise till it's just about doubled in bulk (2 to 4 hours). A lot depends on how vigorous your starter is.
4. For two thinner-crust pizzas: Divide the dough in half, shaping each half into a flattened disk. Place on 2 lightly oiled 12" round pizza pans. Cover, and let rest for 15 minutes. Gently press the dough towards the edges of the pans; when it starts to shrink back, cover it, and let it rest again, for about 15 minutes. Finish pressing the dough to the edges of the pans.
5. For a thicker-crust pizza: Oil a half-sheet pan (18" x 13") or a 14" round pizza pan. Shape the dough into a flattened disk or oval. Place it on the pan, cover it, and let it rest for 15 minutes. Push the dough towards the edges of the pan; when it starts to fight back, cover it and let it rest for 15 minutes. Finish pushing it to the edges of the pan.
7. Preheat oven to 450°F. Pre-bake the crust for about 8 minutes (thick crust) or 4 minutes (thin crust) before topping. Top as desired and bake for about 10 minutes (thick crust) or 8 to 10 minutes (thin crust).

### Notes:

1. Cold starter and hot water mixed should result in close to room temperature.

## Sourdough Sour Cream Pancakes (Hand Mixing)

### Ingredients:

1 1/2 Cup Sourdough Starter

1 Cup Sour Cream

1 Cup Flour

2 Tbs Sugar

2 Tbs Melted Butter

1 1/2 Tsp Salt

1/4 Tsp Baking Soda

1/4 Tsp Baking Powder

### Instructions:

1. In a large bowl place starter, sour cream, and half the flour. Mix together.
2. Add sugar, butter, salt, baking soda, and baking powder. Mix together.
3. Add remaining flour. Mix together. Batter should be slightly lumpy.
4. Let stand 15 -20 minutes.
5. Carefully spoon onto preheated, greased griddle trying to keep as much of the batters frothyness as possible.
6. Cook until edges are dry and bubbles appear on top. Flip and finish cooking (1 1/2 to 2 minutes).

### Notes:

1. For traditional flap jacks omit baking soda and baking powder.