

Four Ingredients, Limitless Possibilities

Part 1: Making Your First Bread





How many types of bread can you think of?

Lots of Variety. Same ingredients. Mostly.



There are four core ingredients in all bread:

Bread is very simple to make. The simplest breads only requires 4 ingredients:

1. **Water**
2. **Yeast**
3. **Salt**
4. **Flour**

That's it.

Some breads add different fats (oil and butter), herbs, or sugars, but bread is just four things.

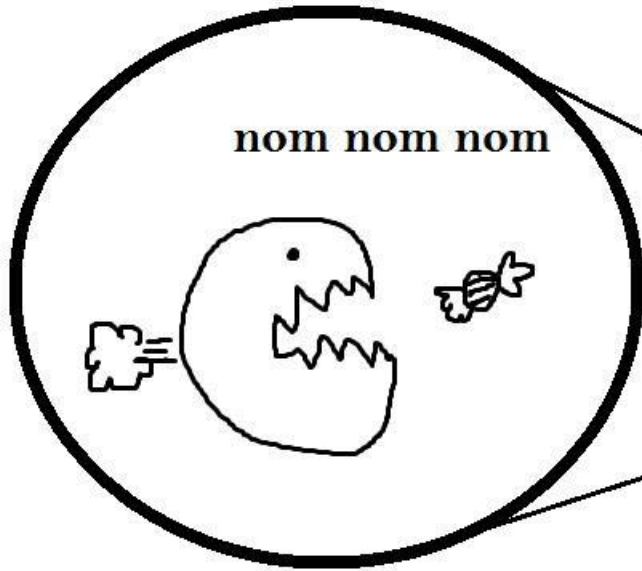
What kinds and how much
of each?

That is a tough question to answer. There are lots of choices

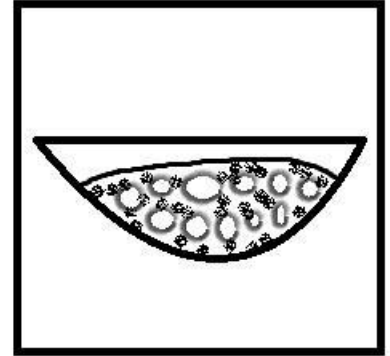
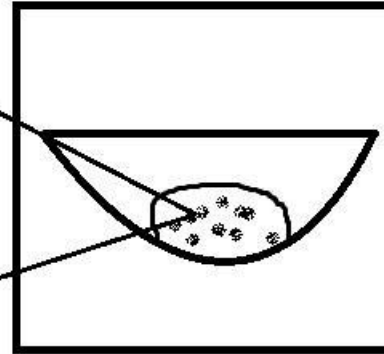


Ingredient	Different Options
Flour	All purpose, whole wheat, white whole wheat, cake, pastry, rye, self rising, gluten free, about a billion others
Yeast	Cake, Active dry, Instant, Baker's
Salt	iodized, kosher, sea, pink, an actual billion plus other options
Water	Filtered...unless you have a magical spring in your closet. If you do, use that.

What yeast does



yeast eat sugars and release
carbon dioxide and ethyl
alcohol



this process causes bread to rise as
carbon dioxide bubbles get trapped by
the gluten net

Bread is best when the yeast have a chance to take up residence in the bread and starting the flour. Though it may sound unpleasant, they are making energy in a process called cellular respiration that we will discuss in a later part. As they do this, they are releasing carbon dioxide which makes the bread rise. This is shown in the highly technical picture above

Step 1. Make a Starter

It's not necessary but it'll make your bread taste great cuz science



Materials

1 cup of all purpose flour or your favorite gluten free flour

1 cup of water

Clean or sterilized Mason jar

Instructions

1. Wash your hands and clean any utensils you will use
2. Combine and flour in a measuring or mixing cup
3. Add to jar and leave uncovered at room temperature in the kitchen overnight

Step 2. Collect data



In the digital lab notebook or any 2 column data table, you will record data on how the fermentation is going.

Make a circle with your fingers and pick a section of your sourdough and count the bubbles you see. How many bubbles do you count in the image to the left?

Check the bubbles 15 minutes after you finish the starter prepare. You can check it every hour you are able to and then once again before you add more flour to it.

3. Make the Sponge

Again... not necessary but it'll make your bread taste great cuz science



Materials

1. ½ teaspoon of salt
2. ½ cup filtered water
3. 1 cup of starter
4. 1 cups of flour
 - a. Feel to mix different types of flour together and note it in your lab notebook
 - b. *Michael's recommendation is ½ cup of bread flour, and ½ cup of white whole wheat*
5. Mixing bowl and whisk

Instructions

1. Mix all ingredients until they are the consistency of cake batter
2. Cover with very very slightly damp kitchen towel or plastic wrap

Step 4. Collect data



Exact same procedure as two slides ago

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Make a circle with your fingers and pick a section of your sourdough and count the bubbles you see. How many bubbles do you count in the image to the left?

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Step 5. Prepare the First Rise

Stuff with flour.

