

Sourdough Guide



What is sourdough?

Sourdough, sometimes also called starter or levain, is nothing more than a mixture of flour and water, which can be used as a leavening agent through natural fermentation with lactic acid bacteria and wild yeast. Sourdough can therefore be used to bake bread, rolls and all sorts of other baked goods as an alternative to traditional yeast.

Advantages of sourdough over traditional yeast:

1. Sourdough is more nutrient-rich. It contains a higher amount of nutrients as it produces more minerals and vitamins through natural fermentation. In particular,



the acid in sourdough breaks down phytate present in the flour, allowing nutrients like iron, zinc, and magnesium to be better absorbed by the body.

2. Sourdough is better for our digestion. The fermentation process breaks down gluten present in the flour, making the bread more easily digestible.
3. Sourdough bread and baked goods have a longer shelf life. Natural preservatives formed during fermentation help keep baked goods fresher for a longer time and slow down the growth of mold compared to items baked with yeast.
4. Sourdough bread and baked goods develop a unique and complex flavor and special texture due to the slow fermentation process. Sourdough bread typically has a crispier crust and moister crumb compared to bread made with yeast.
5. Sourdough is more natural compared to yeast. Yeast usually consists of a single strain of yeast called "sugar fungus," while sourdough fermentation involves a variety of microorganisms naturally occurring in our environment. So, sourdough is not only a more natural but also a more diverse leavening agent.

Disadvantages of sourdough compared to traditional yeast?

The only disadvantage, in my opinion, is the increased effort, time, and care required to cultivate your own sourdough. It needs to be regularly "fed" or refreshed to thrive and stay alive. Additionally, bread and baked goods made with sourdough require more time, making the baking process somewhat less flexible. However, with proper planning and accumulated experience, these challenges can be mitigated!

How do I cultivate my own sourdough?

I cultivated my sourdough named "Griseldis" at the end of 2017 following a guide by Lutz Geißler (Plötzblog), which I unfortunately cannot recall in detail anymore. On his website, you can still find a precise step-by-step procedure for creating a new sourdough starter! In essence, you simply mix flour and water together and let it ferment for several hours in a warm place. A portion of this mixture is retained and mixed again with more flour and water, then left to ferment. This process is repeated four to five times, resulting in your own sourdough starter after about five days!



How do I "feed" my own sourdough properly?

Once I have a sourdough starter, I just need to keep it alive – or even better, make it lively, meaning strong and active! I achieve this by regularly feeding it, which means mixing a small portion of the starter with fresh flour and water (fresh food) in a clean jar. For a liquid sourdough, I follow a ratio of 1:5:5. This means I mix 20%-30% of the old starter with the same amount of flour and water. In practice, I typically take 10g-15g of my sourdough starter and mix it with 50g of flour and 50g of water. The water should ideally be around 40°C, so the sourdough starter has ideal conditions for fermenting from the beginning.

For my regular wheat sourdough, I always use 90% wheat flour and 10% rye flour. So when I feed it I use for example 45g wheat flour, 5g rye flour, 50g water and 10-15g old sourdough starter. 1. Rye flour naturally contains more enzymes and nutrients than wheat flour. The addition of rye flour makes the sourdough starter more active overall, as the enzymes promote the conversion of starch and proteins into fermentable sugars. This contributes to better development and strengthening of the sourdough. 2. The addition of rye flour can make the sourdough starter more stable, as rye contains a greater amount of natural microorganisms and wild yeasts. This leads to a more diverse bacterial culture in the sourdough and can help the sourdough to be better able to defend itself against unwanted contaminants.

During the fermentation process, the sourdough likes to be warm. It is recommended to place the jars in the (briefly!) preheated oven at 24-27°C. At such a warm room temperature, the sourdough is mature and ready to use after approximately seven to eight hours. At room temperature, it usually takes eight to twelve hours until it's mature. However, it is always essential to pay attention to your specific sourdough and not solely rely on a set time frame. The type of flour used for feeding should ideally remain consistent. The best containers for this purpose are canning jars and jam jars. It's recommended to feed the sourdough at least once, preferably twice a week. When I use my sourdough for baking, I usually refresh it one to two times in a row before mixing the final starter for my dough.

Is there a difference between feeding the "normal" sourdough starter and the one that goes into the bread dough?

It depends on the recipe and your preferences for acidity in your bread. Basically, you can use your regular starter super for your bread dough. Most people do it that way. I usually make my levain in a different feed ratio - I use a higher percentage of sourdough. I usually use a ratio of 1(sourdough):2(flour):2 (water). This is for the following reasons: 1. the levain



is then a bit milder, because the more sourdough starter you use, the faster the levain matures, ergo less acid forms. Thus, the bread also gets a little less acid, which tastes better to me personally. Others, however, like more acid in their bread. 2. As already mentioned in point one, the levain ripens faster, which makes you more flexible in terms of time. However, for the health of your sourdough starter, it is important that you normally feed it with rather little sourdough in the ratio, say 1:5:5 as mentioned above, and only make the levain you use for your bread dough in a different ratio.

Where do I store my sourdough?

During the fermentation process, you can keep the sourdough either in a shortly (!) preheated oven at around 24°C to 27°C or at room temperature. Otherwise, store your sourdough in the refrigerator at approximately 5°C.

In what state do I use my sourdough for baking?

For the sourdough starter to have strong leavening power and allow the bread or baked goods to rise nicely, it should be refreshed at least two times, preferably three times, or even four times before use, especially if you desire a particularly open crumb. Recipes typically call for a pre-ferment or levain that requires a higher amount of sourdough starter than the original starter. In such cases, two refreshments of the starter are usually sufficient. For ideal results, it is crucial to continue processing the sourdough starter or pre-ferment when it is at its peak maturity. That means it should have risen nicely but not collapsed yet. Otherwise, it becomes "hungry," and its leavening power decreases. You can mark your container (e.g., a canning jar) with a rubber band or any other method to keep track of whether your sourdough has doubled or even tripled in size. Roughly speaking, it should have doubled in volume, and the surface should have a slight upward curve at the edge. You can also perform a simple test by placing a spoonful of your pre-ferment into a glass of water: if the sourdough floats on the surface, it's ready to be used.

What should I do with the leftover sourdough from the refreshment process?

There are several great ways to use leftover sourdough starter, even if it's cold from the refrigerator. For example, I prefer making pancakes or waffles from my sourdough

remnants. You can also incorporate it into cake or cookie batters, or simply fry it in a pan with herbs and spices. The internet is full of ideas and recipes on how to make the most of your sourdough starter in any state.

What are the different types of sourdough starters?

The type of flour used determines the characteristics of the sourdough starter. For example, there are wheat sourdough starters, spelt sourdough starters, or rye sourdough starters. Ultimately, you can create a sourdough starter with any type of flour, but it is essential to consistently use the same type of flour, preferably even the same brand.

Furthermore, there are two main types of sourdough starters based on their consistency: liquid or soft and stiff starters. The consistency mainly depends on the amount of flour used. A stiff wheat sourdough starter is known as "Lievito Madre," which comes from Italian and translates to "mother yeast." I often affectionately call it the queen of sourdough starters. Traditionally, only wheat flour is used for Lievito Madre, along with a larger amount of sourdough starter, which leads to faster fermentation and a milder acidity compared to liquid sourdough. For this reason, Lievito Madre is particularly suitable for sweet baked goods like Panettone or doughs where a milder acidity is desired, such as pizza. I feed my Lievito Madre in a ratio of 1 (water) : 2 (flour) : 2 (sourdough starter). So, I usually mix 40g of my old Lievito Madre with 40g of flour and 20g of water. Lievito Madre likes to mature quickly (around three to five hours) at a warm room temperature (approximately 26°C to 30°C).





How do I store my Lievito Madre?

There are two main ways to store and mature Lievito Madre. The first method involves feeding the Lievito Madre in the ratio described above and kneading it until a smooth dough is formed. Shape the dough into a ball, then make cross-shaped cuts on top like a loaf of bread and place it with the cut side up in a small airtight container or a canning jar with a screw-on lid.

The second method is to roll the Lievito Madre multiple times into a long shape using a rolling pin and then tightly roll it into a dough spiral. Repeat this process about three times in succession to create tension in the dough. Afterward, place the rolled dough in a tall bottle or a tall, narrow, covered measuring cup filled with water. The water used should ideally be at a pleasant warm temperature, around 25°C. The dough spiral will sink to the bottom and rise as it ferments, and the Lievito Madre is ready when it floats to the surface and "bursts" the lid open.

Maturing the Lievito Madre in a water bath has several advantages. It allows for better temperature control, leading to more even fermentation. This makes the Lievito Madre more active, resulting in a faster rise and ultimately a milder flavor. However, the water bath method is mainly useful during the maturing process. For storage in the refrigerator, it is best to keep the Lievito Madre dry in an airtight container, such as a canning jar.

Can you create a Lievito Madre from a "regular" sourdough starter?

Yes, you can! That's exactly how I proceeded back then. Simply feed the liquid wheat sourdough starter three to four times in the ratio mentioned above for Lievito Madre, and you will have a stiff wheat sourdough starter.