



Dormant Sourdough Starter cold from the fridge
Does this look normal? YES!

The yellowish clear liquid that forms on the top of the starter is normal. This is referred to as "hootch". It is a natural separation that occurs when the starter is entering a semi-dormant state. The hootch has a pungent alcohol smell and taste, and, in part, contributes to the flavour of your sourdough starter.

Do not discard the hootch. When you are ready to re-activate your cold starter (cold starter lives in the fridge and is in a semi-liquid state as above) mix the hootch back into the solids that have settled on the bottom of your container and proceed with the feeding. If you are not reactivating your starter then leave it alone with the hootch layer remaining on top. The hootch is a good indicator of the health of your starter: clear and yellowish is normal, dark grey or black is not normal and is an indication your starter is dying or is already dead.

When the hootch turns very dark grey or black this is an indication that your sourdough starter has either been contaminated by a foreign bacterium or has been left so long between feedings that it has died. You may try to reactivate it and see if there are enough sourdough bacteria and yeasts left that will thrive, but it is likely you will need to discard the starter and start again with dried or from scratch. Therefore, drying your active and healthy starter is imperative! It is like sourdough insurance and is very valuable.



Semi-dormant sourdough straight from the fridge
Does this look normal? YES!

When activating your semi-liquid sourdough starter from the fridge, pour all the hootch and starter into a bowl large enough to accommodate the ingredients for a feeding including space for the starter to rise. The gasses created when the yeast and bacteria feed are what make your starter double or triple in size.

Depending how long it has been since the last time you fed your starter, it may come right back to vigorous life or it may take two or three feedings to see the bubbling activity of a healthy sourdough starter. Have patience. As you learn how your starter reacts to feeding and as you become more familiar using it, you will learn what you need to do better in order to predict the success you will have with your starter.

Don't concern yourself with stirring the hootch completely into the starter at this stage. You'll be adding water, sugar and flour in the next steps which will effectively mix the hootch and redistribute the bacteria within a new batch of food.



Semi-liquid sourdough starter with 340g of room temperature water

Does this look normal? YES!

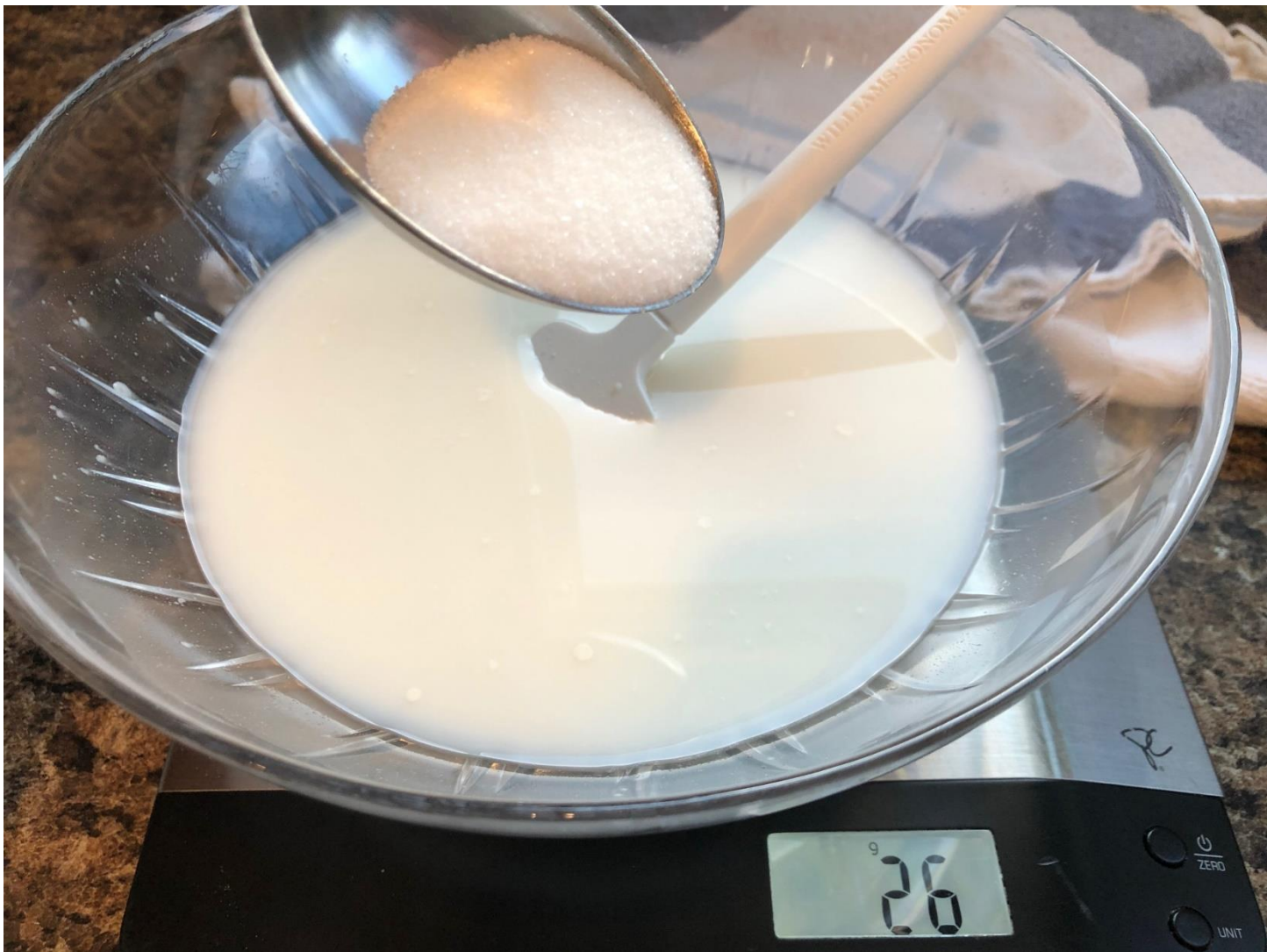
I use room temperature, non-chlorinated water in my sourdough starters. Chlorine is used to kill bacteria, and even though the amount in city drinking water is usually very small it can still wreak havoc on your sourdough.

To easily de-chlorinate your tap water: Fill a water jug with cold tap water and leave uncovered on your kitchen counter for 24 hours. The chlorine will evaporate and your sourdough starter will grow much more vigorously because of this small step. I have the luxury of using Yukon Spring water from nature which has a very high mineral content but is extremely clean and non-chlorinated.

When you add the water, mix the sourdough starter to completely disperse it in the water. You will have a milky looking water mix. This is exactly what you want.

When I use my 1898 Sourdough Starter, I usually activate a large batch using 340g of water so I can make a few different food products with it. It does take some planning but if you do it once a week you'll find yourself looking forward to all the different things you're going to make with it week after week.

FOR THE HALF BATCH OF SOURDOUGH STARTER ONLY USE 170G OF WATER



Sourdough Starter that has been mixed with 340g of room temperature water

Next to add: 26g of granulated sugar

Does this look normal? YES!

This 1898 sourdough starter has been fed many different forms of simple sugars over the past 120+ years. Simple sugars are carbohydrates that are rapidly and easily used as food for the yeast in the starter. White sugar is one of the most common types of simple sugar. In the early 1900's leftover porridge was also commonly used as a food source for the yeast and bacteria in sourdough starters. If the food source you are using is something that has minimal ingredients it should be okay; oatmeal porridge that contains nothing other than oatmeal and water is an acceptable food source for sourdough starter. Don't use anything to feed your starter that has added salt because salt kills yeast. Milk also has an enzyme that destroys yeast so just stick to the basics; flour, sugar and water and you'll be fine.

This starter has typically been fed white sugar for at least the last 50 years or more and the bacterium and yeast are quite accustomed to eating it.

NEVER feed your starter with pre-made bread dough or anything that may contain commercial yeast. Your starter will likely die if it is contaminated with commercial yeast.

FOR THE HALF BATCH OF SOURDOUGH STARTER ONLY USE 13G OF SUGAR



Sourdough Starter that is being fed with 340g of ALL PURPOSE flour

Does this look normal? YES!

Mix the flour in until a somewhat lumpy batter is formed (see next picture). You can mix it until it is quite smooth if you like; however, it's not necessary as long as you have mixed it as well as you can. A few small lumps will absorb moisture, become hydrated and then be able to be consumed by the bacteria and yeast.

Do not leave large pockets/lumps of unmixed flour as these may not ever break down which will result in dry lumps of flour in your dough.

FOR THE HALF BATCH OF SOURDOUGH STARTER ONLY USE 170G OF FLOUR



What starter looks like after mixing the water, sugar, and flour in

Does this look normal? YES!

See there are only small lumps of unmixed flour in the batter? This is fine. Those will disappear in a few hours as the flour becomes hydrated by the water.

Mix the flour in as well as you're able, and then clean the batter that is sticking to your mixing spoon back into the sourdough starter **with your clean finger**. You always need to contribute your own bacteria from your hands to your starter. This bacteria exchange is what makes your starter uniquely yours and helps this Yukon grown starter become climatized to your home or bakery wherever you are in the world.

FOR THE HALF BATCH OF SOURDOUGH STARTER ONLY USE 170G OF ALL PURPOSE FLOUR



Cover your starter with a clean tea towel and then place plastic wrap over top of the towel

We do this so the starter can “breathe”. The bacteria do not actually breath (no lungs) but they do create a large amount of gasses when they burst (mostly carbon dioxide) which needs somewhere to go. You’ve likely seen pictures of other baker’s sourdough starters blowing the lids off their containers if they are covered too tightly. To avoid this, we cover the starter with a clean tea towel which allows gasses to escape slowly and some fresh air to circulate in.

The plastic wrap over top is necessary in dryer climates so a skin doesn’t form on the top of your starter – that skin is created when the surface is too dry. Many factors contribute to a sourdough starter drying out: humidity of the room, the type of cloth you’re using to cover the bowl, etc. Heavier muslin cloth (tighter weave of cotton fibers) will allow less air to get into the space between the starter and the tea towel. Therefore, decreasing the chance of your starter drying out. I can’t buy muslin where I live so the plastic wrap works well. The bonus of using a tea towel is that any condensation that comes off the sourdough starter will be collected and absorbed by the tea towel and not drip back into the sourdough starter.

Set the bowl in a warm place in your kitchen. **Optimal temperature for sourdough bacteria to grow is 21-30°C/70-85°F.** The warmer the temperature, the quicker the yeast and bacteria will produce their gasses (rise). I keep mine away from windows and draft free if possible. The inside of my cold oven is usually a great place to let my starter slowly rise. If you used warmer-than-room-temperature water to feed your starter that factor will also contribute to how quickly it will rise.



What my starter looks like 6-8 hours after it has been fed

IT IS NORMAL FOR STARTERS TO TAKE UP TO 24 HOURS TO LOOK LIKE THIS. BE PATIENT!

What's happening here? Sourdough bacteria convert starch into sugar when it consumes it. That sugar is digested by the bacteria which then creates carbon dioxide gas inside the bacteria. The gas expands, blows the bacteria apart and the contents inside the bacteria then proceed to repeat the digestion of the starch and on and on the process goes until the bacteria run out of food. The higher starch content in all-purpose flour is easier for the sourdough bacterium to digest; therefore, the more starch that converts to sugar means more carbon dioxide, and that is what those bubbles are made of in your sourdough starter. More bubbles = more rise in your sourdough starter. That's why sourdough starter increases in volume after you feed it.

This 1898 sourdough starter is fed sugar right from the get-go so the bacteria don't have to work as hard because the sugar is already there and ready to digest. You might be thinking well great, why doesn't everyone feed their starter sugar then? Because it makes for very lazy bacteria and you will see the effect of this if you ever try to wean this 1898 starter off simple sugars.

Starters fed with no sugar, and only flours such as bread, rye or whole wheat/whole grain look and behave slightly differently than this 1898 starter. These 'lean' starters are usually thicker like bread dough, and the bubbles are much smaller. Remember, sourdough starters are like human beings and they come in all shapes and sizes; all equally remarkable and offer great flavour to life!



HOW TO SAVE YOUR STARTER AND RETURN IT TO THE FRIDGE

When your starter has risen and is still bubbly and full of life, remove a small portion and return it to the container in which you store it in the fridge.

In this picture I have a 1/2 cup measure and this is the amount I normally save. Because I use my starter at least once a week, I do not clean the storage container each time. I do not allow anything to contaminate this container so I don't worry about introducing or harbouring any unwanted bacteria in it.

However, if you only revive your starter once a month I suggest you thoroughly wash and sanitize your storage container each time. Some bacteria, if it's in a large enough quantity, may harm your sourdough. These unwanted non-sourdough-loving bacteria can overtake and kill the sourdough bacteria you worked so hard to cultivate. If you're ever in doubt, be safe and wash your storage container and let it air dry.

I usually have to "burp" this sourdough storage container at least once on the first day I return it to the fridge. It continues to off-gas as it slowly goes into a semi-dormant state in the cold fridge.



FULL OF LIFE AND HEADED BACK TO THE FRIDGE

The most important part of preserving liquid sourdough starter is to get it to a semi-dormant state while it is still alive but with some food still left to eat.

What does that mean? When your starter is on the rise and producing bubbles, that is the indication it is in good health and has plenty of food to eat. The starter will look voluminous and have a slightly rounded top which indicates there are bubbles underneath still pushing the starter up. When the starter has collapsed, you will see sunken areas in your starter or the entire mass will have begun to shrink in the container which indicates the bacteria has run out of food and died off.

If that happens, you may not get the rise out of your bread that you are anticipating or it may take a lot longer to rise than it would have if you used it when it was at its optimal condition. If you are putting mostly dead bacteria into your dough then you can't expect it to resurrect itself and raise your bread at land speed record. There will still be some live bacteria left, but the amount will be considerably less than if you used the starter when it was at its optimal bacterial level – on the way up and still creating bubbles.

Solution? Just feed it again! Simple as that. Don't throw out the fallen starter! Use it in items that require less leavening power such as pancakes, waffles, cakes, or scones. Baked or cooked items that don't rely 100% on their success from the sourdough starter are great because it's just the sour taste you're after, not the leavening. Bread relies 100% on the leavening power of the starter and if it's not there, your bread will not be very edible.