

Queensland Cheese Artisan Sourdough Workshop

Duration of workshop : 3 hours

Agenda Introduction to Sourdough

Start Workshop

Introduction: Housekeeping, COVID

Start Sourdough

Overview of Sourdough Starter

Continue with sourdough steps

Tea/Coffee

Continue with sourdough steps

Discuss baking techniques; Proofing, overview of baking sourdough

Start Baking second sourdough loaf

Bake Bread at home

Sourdough starter overview

Feed your Starter

Sourdough in Container

Feed the starter in the plastic container WERE YOU GET HOME equal parts 50g Starter, flour (50g) and water (50g). Transfer the starter to another jar.

Flour feed your starter with good quality flour.

Water: always feed your starter with good quality water (e.g. filtered, boiled, spring water). Basically reduce the amount of chemicals within the water, too many chemicals will kill your starter.

Additionally, to reduce the risk of unwanted bacteria, I always ensure my working/baking area is clean. I follow basic hygiene principles; clean jar, utensils, hands, good flour (bugfree, etc) and clean water. We are encouraging healthy wild yeast not bad bacteria.

Feeding your sourdough starter

Feed your starter regularly to be kept active and to maintain its 'strength'. If it is not fed regularly with flour and water, the wild yeast 'community' will eventually die.

To feed your sourdough starter, firstly use a clean jar and utensils, remove all but approx. 50g of the sourdough starter from the jar. Add equal parts flour (50g) and filtered/boiled/spring water (50g) and stir well until all ingredients are combined. Seal the jar and store either:

1. **Room temperature** (if you are going to bake)
2. or **in the fridge** (if you are not going to bake).

Note : Your sourdough starter jar needs to be clean. However, reduce the use of disinfectants and other chemicals, as these products will kill your starter. I use my dishwasher or eco-friendly dishwashing liquid.

Storing your sourdough starter

There are 3 ways to store sourdough starter if you won't be using it:

1. **In the refrigerator** (between bakes, quiet and easy access)
2. **In the freezer** (e.g. as a backup in freezer, going on holiday, having a break from baking)
3. **Dried and stored** in sealed container in the kitchen cabinet/freezer (as a backup, going on holiday, having a break from baking etc)

A sourdough starter can either be kept at room temperature or in the fridge.

If you aren't intending to use your sourdough starter every day, it is best kept in the fridge. ***ALWAYS FEED BEFORE GOING INTO THE FRIDGE.*** Feed your starter, seal the jar and leave at room temperature for approx. 2 hours before placing in the fridge to store.

Feed the starter in your fridge approx. once a week to maintain good starter health. Starter from your fridge may have a strong yeast smell, this is normal.

Can you leave your starter a room temperature, this will require regular feeding approx. once a day.

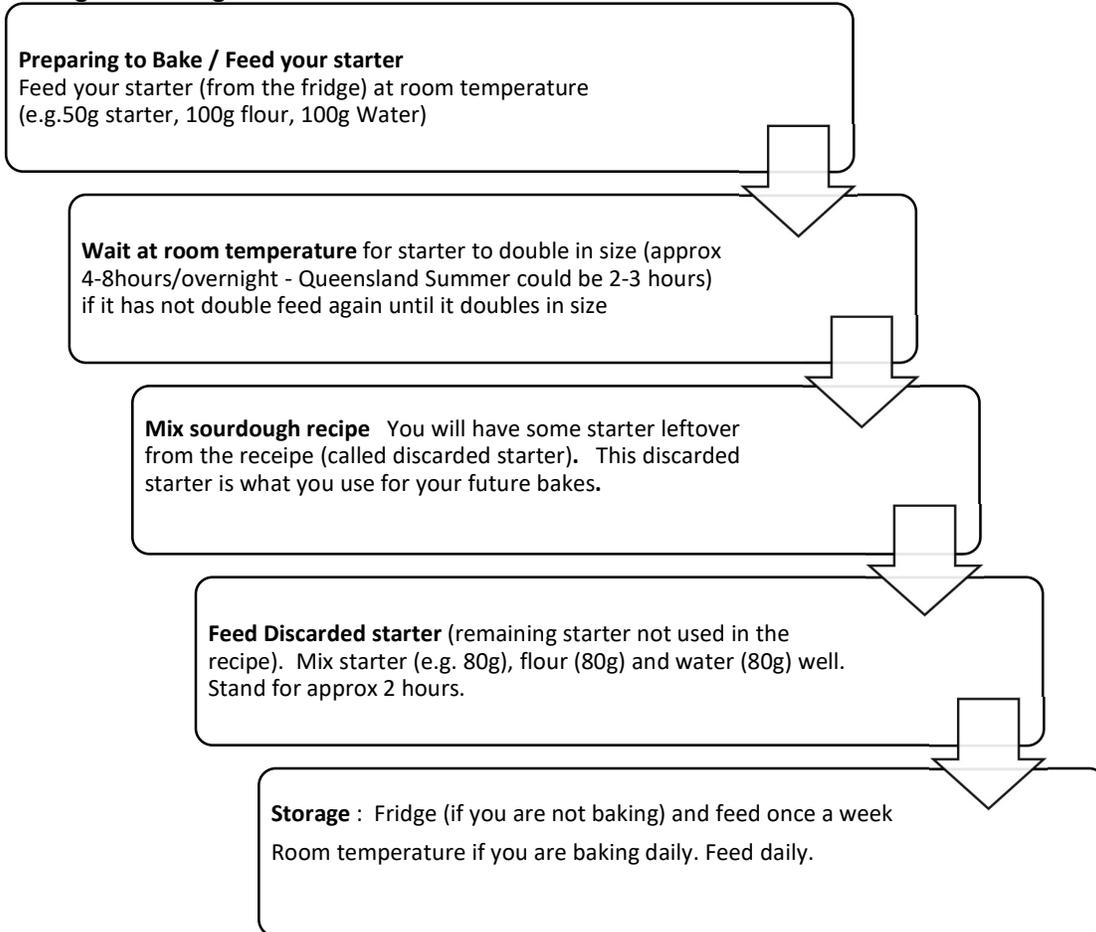
Increasing the volume of your sourdough starter

If you want to increase the amount of sourdough starter you have, for gifting to a friend or to increase the amount of sourdough baked. You just need to 'feed' your start more (equal parts, 200g starter, 200g flour, 200g water), without discarding any starter. I often increase the volume for workshops and I double numerous times over 2-3 days.

Grey liquid on Top and Smelly Sourdough

If your starter has a grey liquid on top and it's very smelly, it means your starter is hungry. I drain the liquid, before I feed the starter. Some people stir the liquid back into the starter, this increases the flavour of your starter and therefore your bread. Starters can be very smelly at times, its normal.

Baking Sourdough Bread timeline



Using your sourdough starter

When you want to use your sourdough starter in a recipe, feed it and stand at room temperature for 4-8 hours (or 2-3 hours Queensland summer) before you intend using it. It should at least double in volume (use a rubber band or marker pen as the starting level indicator) and bubbles will start breaking the surface in this time, which will indicate that it is strong and 'active' enough to use. The time will vary depending on whether it has been stored in the fridge and the temperature at which it is standing. If it doesn't, repeat the feeding and standing process until it does.

Remove the amount you require for the recipe and then repeat the feeding process and either stand at room temperature to use again or transfer to the fridge to store. (as per the above chart)

Once your starter is ready to use, you can begin your sourdough baking.

Creating a Sourdough Starter

While the process of making this starter is a little lengthy (at least 4-5 days) it isn't difficult, if you follow the steps and take note of my tips. Refer to the detailed steps in the next sections, but here is a nifty quick reference to keep you on track:

Day 0

50 g flour + 50 g water (or unsweetened organic pineapple juice), stand for 48 hours

↓↓

Day 2 (in Qld Summer Day 1)

1st feeding: 50 g starter + 50 g flour + 50 g water,
stand for 24 hours

↓↓

Day 3

2nd feeding: 50g starter + 50g flour + 50g water,
stand for 24 hours

↓↓

Day 4

3rd feeding: 50g starter + 50g flour + 50g water,
stand until doubled in size (8 — 24 hours)

↓↓

Day 5

If not doubled in size, feed every 12 hours until doubled in 8 hours or less

↓↓

Use 'active' starter OR store at room temp or in fridge



Figure 1 How your starter will change in appearance and volume from Day 0 (jar 1, from left) to Day . Will occur faster in Queensland heat.

Basic Sourdough Loaf

Feed our starter (Ratio 1:2:2)

50g starter

100g water

100 g flour

Sourdough Bread

This recipe makes one loaf around 780g. It's a one day mix and bake sourdough. I mix and folded over 5-6 hours and CAN be proofed the dough overnight in the fridge.

Mix the dough

- 140 grams starter
- 240 grams water
- 400 grams flour (I use unbleached white)
- 9 grams salt (not iodine salt) (approx. 1 teaspoon)

Creating the dough

1. Mix the ingredients together, cover and let set for ½ hour
2. Bulk ferment stage - Fold the dough (either just fold in half and flatten out or stretch/fold each corner into the middle then flatten out). Wet hands are good for folding and handling dough
3. During the first two hours after mixing, fold dough every 30 minutes (e.g. 3-4 folds)

1st fold (30 mins)	Time :
2 nd Fold (30 mins)	Time :
3 rd Fold (30 mins)	Time :
4 th Fold (30 mins)	Time :

4. During the next 3 hours, fold dough every hour (e.g. 2-3 folds)

1st fold (1 Hour)	Time :
2 nd Fold (1 Hour)	Time :
3 rd Fold (1 Hour) (maybe)	Time :

5. Bulk ferment (step 3 & 4) is around 5 hours
6. After final fold, let dough rest for 30 minutes
7. Do a preshape or first shape of your loaf, keep your hands wet while shaping
8. Bench rest for 20 minutes
9. After 20 minutes – do final shaping and put dough into bowl/basket which is lined with floured teatowel/clothes or floured. Apparently 16cm diameter. Cover with cloth
10. Let the dough proof at room temp (around 21c) for around 2 hours (could be sooner). If its colder, your dough might take a bit longer (in the winter I do this in the fridge)

Baking

1. Preheat oven 260c for approx. 30 minutes before baking bread

2. Place Dutch oven/pizza stone/ceramic baking dish/ loaf tin with roasting lid (I use metal bowl) 5 minutes before the bake to preheat
3. Make sure loaf has no sticky spots and sprinkle the top with flour (this is the actual bottom of the loaf)
4. Turn out the loaf from the bowl (if teatowel is sticky to the dough, use a little water to help release). You can add rice flour on top for the white artisan/rustic look. Score (cut the top, super sharp knife/rasor to help steam release)
5. Slide your dough into your dish or on to the pizza stone and spray lightly with water and cover with lid/roasting lid/big metal bowl – its very hot be careful
6. Turn oven down to 230c and let bread bake for 14minutes
7. Remove lid and turn loaf in the oven for even browning
8. Bake for 15-20 minutes
9. Loaf is ready/done when the crust is a nice dark colour & the loaf sounds hollow when you hit it
10. Turn out on a cooling rack and loaf to cool

Mixed Sourdough Loaf

Feed our starter (Ratio 1:2:2)

- 20g starter
- 40g water
- 40 g flour

This recipe makes one loaf around 900g.

Mix the dough

- 100 grams active starter/leaven
- 300 grams water
- 400 grams white flour (I use unbleached white)
- 100 grams wholemeal baking flour
- 10 grams salt in 15g cold water (not iodine salt) (approx. 1 teaspoon)

Creating the dough

1. Mix the starter with water. Add flour. Mix into a large ball.
2. Autolyse. Cover with damp cloth/lid. **Rest for 1 hour.**
3. Fold in Salt. Make dimples in the flour mix with your fingers. Salt Add
4. Leave for 10 mins to settle. Fold the dough.
5. Bulk ferment stage - Fold the dough (either just fold in half and flatten out or stretch/fold each corner into the middle then flatten out). Wet hands are good for folding and handling dough
6. During the next two hours after mixing, fold dough every 30 minutes (e.g. 3-4 folds)

1st fold (30 mins)	Time :
2 nd Fold (30 mins)	Time :
3 rd Fold (30 mins)	Time :
4 th Fold (30 mins)	Time :

7. Shape the dough into ball/oval shape; you could use a banneton, teatowel dusted with flour inside a colander or loaf tin or bowl. Remember to dusted the proving container with flour. Dust the top of the dough with flour, then cover with a damp teatowel.
8. Prove – leave your dough to one side until its approx. 50% bigger. Transfer to the fridge to prove there for 8-12 hours.
9. Bake the following morning/evening.
10. Baking
 - Preheat oven 220C.
 - i. Use a baking stone. Have a large pan of boiling water underneath. Hydration helps form a beautiful crust.
 - ii. Or use a Dutch Oven.
 - iii. Once the oven is fully heated (approx. 30-60mins) . On the baking stone, have a fine layer of semolina (or baking paper) to stop the dough from sticking. Score with top of the dough.
 - iv. Bake for one hour
 - Turn the heat down to 180C. (remove lid of you are using a Dutch Oven). Bake for approx. 10-15 minutes. Until the crust is the colour you like.
11. Turn out on a cooling rack and loaf to cool. Wrap in tea towel or cotton bag

Overnight Sourdough Loaf

Feed our starter (Ratio 1:2:2)

20g starter

40g water

40 g flour

Mix the dough

- 50 grams active starter/leaven
- 340 grams water
- 400 grams white flour (I use unbleached white)
- 100 grams wholemeal baking flour
- 10 grams salt in 20g cold water (not iodine salt) (approx. 1 tablespoon)

Creating the dough

1. Mix the starter with water. Add flour. Mix into a large ball.
2. Autolyse. Cover with damp cloth/lid. **Rest for 30 minutes.**
3. Fold in Salt. Make dimples in the flour mix with your fingers. Salt Add
4. Leave for 10 mins to settle. Fold the dough.
5. Bulk ferment stage - Fold the dough (either just fold in half and flatten out or stretch/fold each corner into the middle then flatten out). Wet hands are good for folding and handling dough
6. During the hour after mixing, fold dough every 30 minutes (e.g. 3 folds)
7. Let to rise at room temperature for couple of hours
8. Refrigerate overnight or at room temperature for next 6-8hours
9. Bake at 260c for 25mins covered
10. Remove cover, bake uncovered for 10 minutes

CHEESE-OLIVE SOURDOUGH BREAD (hybrid)

PREP: 1 hour, 45 minutes

COOK: 1 hour, 45 minutes

TOTAL: 3 hours, 30 minutes

YIELD: Makes 1 loaf.

INGREDIENTS:

- 3/4 cup active sourdough starter
- 3/4 cup lukewarm water
- 1/2 tsp. yeast
- 1/2 Tbsp. sugar
- 2½ tsp. salt
- 2 & 1/2 cups unbleached flour
- 1/4 cup CUBED cheese
- 1/4 cup sliced black olives

INSTRUCTIONS:

1. In a medium bowl, combine all ingredients.
2. Turn dough out onto a floured surface and knead for 5-10 minutes.
3. Allow the dough to rise in a greased/oiled and covered bowl until doubled in size, about 90 minutes.
4. Gently shape dough into one loaf on a large greased baking sheet. Slash the top and cover with a towel.
5. Place the pan in a warm place for about an hour or until almost doubled in size. About halfway through this hour-long rising, preheat oven to 220°C.
6. Use a mister to lightly spray the loaves with warm water. Dust with flour for an artisan look.
7. Bake for 25-30 minutes, or until the crust turns deep brown
8. Remove the bread from the oven and cool on a rack.

What is an Autolyse?

An autolyse ("auto-lease"), sometimes written as autolyze, autolysis, or dough autolysis, is the act of combining the flour, starter and some or all of the water in a recipe, and then leaving the mixture to rest for some period. That's it! During this time, gluten bonds begin forming, the dough takes on a smoother texture and begins to strengthen overall.

Also, in the presence of water, enzymes in the flour begin to function. Somewhat paradoxically since the dough feels stronger overall, protease enzymes start breaking down protein bonds, slackening the dough. This slackening leads to an increase in a dough's extensibility (i.e. strength in the dough).

The ability for the dough to stretch out without tearing. Extensibility is an essential quality for bread dough. Having the right amount of extensibility—which is counter-balanced by elasticity, or the tendency for the dough to resist stretching—means a dough can expand and be filled with the gaseous byproducts of fermentation.

What is a sourdough starter?

Wild yeast are fungi and exist everywhere - in flour, on our bodies, and in the air. By fermenting water and flour, you're growing colonies of both wild yeast and "good bacteria" or lactobacilli.

- Bacteria or Lactobacilli - The bacteria's main job is to turn your sourdough starter into an acidic environment. This acidity contributes to the sour flavour of your bread and, more importantly, prevents "bad bacteria" from taking hold. The most common question I've seen online is, "Why doesn't the starter make me sick after weeks on the counter?" The answer is bacteria. Counterintuitive but that's why science is awesome.
- Wild Yeast - Commercial yeast can't hang in the above mentioned acidic environment so that's where wild yeast comes in. Not only does wild yeast thrive with the "good bacteria", but colonies of yeast give off carbon dioxide which contributes to the structure and rise of your bread. For the record, bacteria also gives off carbon dioxide but that isn't its main function in the levain/starter.

In summary, your sourdough starter is a goopy utopia where wild yeast and bacteria live harmoniously.

What is Sourdough Hydration ?

Hydration. A "100% hydration sourdough starter" means it's 1 part water and 1 part flour. In other words, for every gram of flour there's a corresponding gram of water, hence 100% of the flour is hydrated. This is the easiest starter to maintain since most recipes are written with a 1:1 ratio in mind.

What does sourdough hydration mean and how does it affect bread? The hydration level of bread is measured in percentage. It is a calculation of how much water the dough contains, in relation to how much flour it has. In general, sourdough bread tends to have hydration levels from 65% to 100% depending on the type of flour used. The higher the hydration level, the more open the crumb texture, and the thinner and crisper the crust.

How Hydration Levels Affect Bread?

Hydration levels affect not just your dough, but the end result of your bread. Here are some of the ways your bread can be affected if you were to increase the hydration level in your recipe:

- **Texture** – The higher the hydration level of your bread, the softer the texture will be, and the more open the crumb will be (i.e. bigger holes inside).
- **Crust** – Sourdough bread crust tends to be quite thick and hard, but a higher hydration sourdough has a thinner crust that stays crispy for longer.
- **Flavour** – Higher hydration loaves tend to have a more developed flavor of mild sourness, whereas lower hydration gives a more pronounced ‘vinegary’ sourness.
- **Appearance** – The higher the hydration of your loaf, the less amount it is likely to rise because the dough is a lot slacker. (You can choose to bake it in a loaf tin if you wish for a taller loaf that still has the benefits of a high hydration bread).

Shaping your dough



Figure 2 lightly flour the surface. Fold the dough into itself to shape appropriately