

Sourdough for Beginners (and the frustrated)

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Class outline

- Advantages and disadvantages of sourdough
- Review basic bread process
- Keys to successful sourdough bread
- How to care for an active culture
- How to start your own culture from scratch
- How to pause and store your starter
- What to do with extra starter
- How to fake it until you make it
- How to fit bread baking into a busy life

Why sourdough?

- Taste – complex, not necessarily sour
- Keeping qualities
- Freedom from supply chain
- Greater flexibility of scheduling
- Better tolerated by some sensitive guts
- Possibly higher nutrition

Drawbacks

- Sourdough bread takes longer to rise
- Wild yeast is more heat-sensitive than commercial yeast
- Does require forethought and maintenance of starter

Basic Leavened Bread Process

1. **Mix** flour + liquid + salt + commercial yeast or sourdough culture
2. **Knead** to build dough strength (*gluten*)
3. **First rise** (*also called bulk fermentation, primary fermentation*)
4. **"Punching" down** (*better name: degassing*)
5. **Divide and pan, or divide, preshape, then final shape**
6. **Second Rise** (*also called final fermentation, final proofing*, blooming*)
7. **Slash and bake**

What is artisan bread?

"A baker's true skill lies in the way he or she manages fermentation. This is the soul of bread making."

-*Tartine Bread*

Making and maintaining a sourdough starter

- The method is simple.
 - Flour
 - Water
 - Glass or food-grade plastic container
 - Nothing else!!!
- Simple methods still require close attention and care

Creating a new starter from scratch

- Flour: Use whole wheat, rye or all-purpose
- **NOT Bleached flour!**
- Leave a glass of water out overnight (Allows chlorine to dissipate)

Sourdough for beginners

Day 1

1.

Combine, in non-reactive container
1.

3 ounces (shy 1 cup) flour
2.

3 ounces water (½ cup)
2.

Mix well.
3.

Cover.
4.

Refill your water container
5.

Let sit 24 hours

Day 1



Day 2

1.

Add
1.

3 ounces flour
2.

3 ounces water
2.

Mix well.
3.

Mark level.
4.

Cover.
5.

Refill water container to let chlorine dissipate.
6.

Leave 24 hours.

Day 3

1.

Discard half of starter
2.

To remaining starter, add
1.

3 ounces flour
2.

3 ounces water
3.

Mix well.
4.

Mark level.
5.

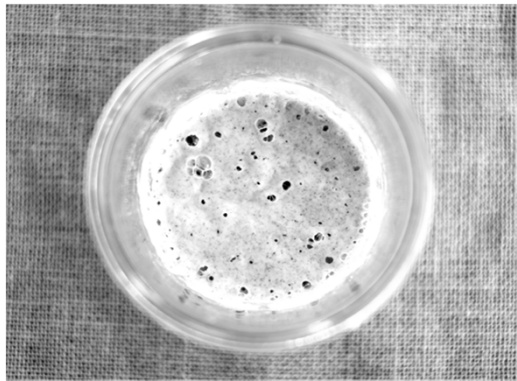
Cover.
6.

If you are starting to see bubbles, do the next step in 12 hours.
7.

If still flat and unchanging, do next step in 24 hours.

Sourdough for beginners

Day 3



Day 4

1.

By now, you should be detecting activity
1.

Bubbles
2.

Fruity or lightly acidic smell
2.

Discard half of starter
3.

To remaining starter, add
1.

3 ounces flour
2.

3 ounces water
4.

Mix well.
5.

Mark level and watch.
6.

Cover.
7.

Leave 12 - 24 hours, according to activity

Activity - What to look for

- Smell

•

Pleasantly fruity, with a little acid tang?

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Pleasantly acidic, with a little fruitiness?

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YIKES! Strongly acidic or alcoholic : Feed more frequently
- Appearance at different times of day

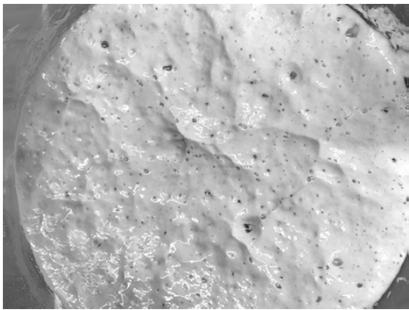
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Inflated, domed, multiple bubble sizes or

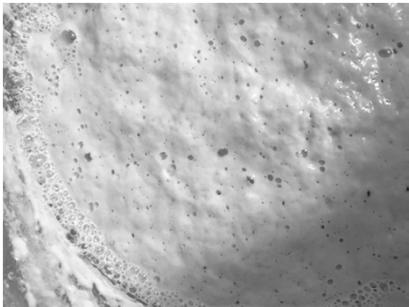
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Flat, frothy – probably smells acidic – past peak

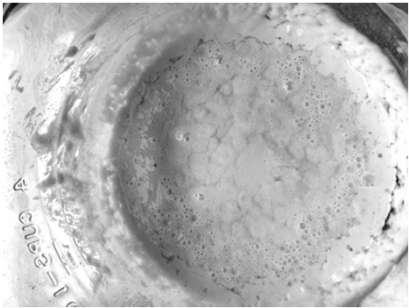
What to look for



What to look for



What to look for



Days 5 - 8

Sometime between day 5 and day 8, this culture should be strong enough to make bread

**Now what?
Care and feeding of your starter**

- To feed: at least double the starter's weight with each feeding
 - To 4 ounces starter: feed 2 ounces water, 2 ounces flour
- You can double, triple or quadruple, but never less than double
 - Not enough fuel
- That is why we usually pour off half the remaining starter

Care and Feeding – every culture is different

If your starter is strong and active, note how often it “wants” to be fed and compare that to how often you want to feed it.

- Manipulate time and temperature to make it work for you, not the other way around

Strong culture: checking strength

Float test

The keys to successful sourdough

- Strong, active sourdough starter/mother culture
- Accuracy of ingredients and temperatures
- Support final rise with proper shaping and physical support
- Bake at the right time
- Use a reliable beginner’s formula (recipe)

Sourdough starter/mother culture

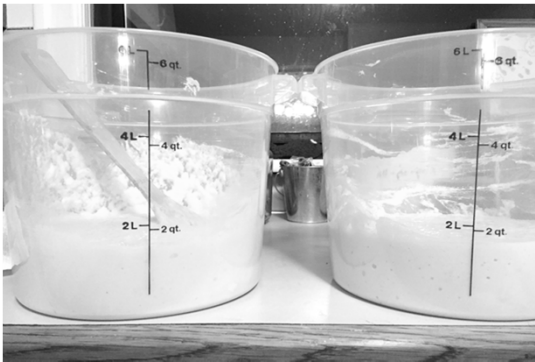
- When flour and water are mixed together and left to ferment, the mixture is colonized by wild yeast and bacteria
- This yeast-bacteria community consumes the flour, breaking down the starchy grain into simpler sugars
- A byproduct of that process is production of carbon dioxide bubbles
- Over time, the yeast and bacteria consume the available starches.
- In order to stay strong, the community needs to be fed/refreshed with new flour and water

A strong mother culture is active and alive

Dynamic

- after feeding, size of starter doubles in 6 – 8 hours

6:00 AM



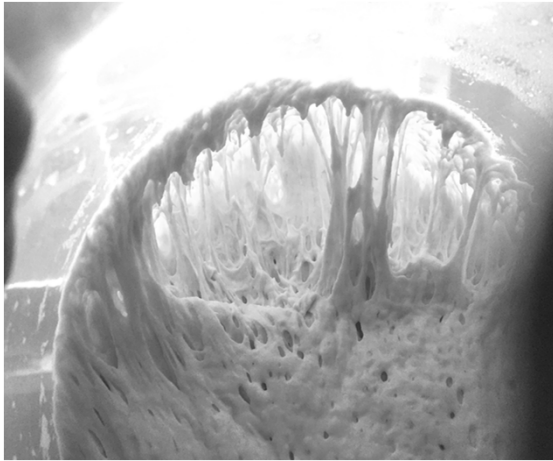
10:00 AM



Strong mother culture?

- Strong starter is active and alive –
- **Dynamic** – size doubles in 6 – 8 hours
- It **smells** good
- At its peak of growth, it **floats** on water

Sourdough for beginners



Sourdough starter: wild yeast

- Where does it come from?
 - The air and the flour and you
 - The more you bake, the more friendly yeast will be in your kitchen
 - You only give it a chance to flourish
- What does it do?
 - Leavens your bread
 - Breaks down starches into sugars - yum

Sourdough starter/ mother culture: bacteria

- What does it do?
 - *Lactobacilli* produce the acids that add sourness
 - Break down starches that yeast cannot, adding complexity of flavor
 - Acids also enhance keeping qualities of the bread

Sourdough starter/ mother culture

- How does it work to make sourdough bread?
 - Use a portion of starter directly in dough
 - Or take small portion of starter and turn into a **levain**
 - **Levain** – a portion of your starter pulled out for a specific recipe and fed specifically to elaborate (scale up) or to alter the taste or performance of the dough
 - Bottom line: Always keep a portion of your starter culture out of your bread dough, so that you still have starter. Otherwise, you'll have to start over and re-build your starter!

The Keys

- Strong, active culture
- Accuracy of ingredients and temperatures
- Support final rise with proper shaping and physical support
- Bake at the right time
- Use a reliable beginner’s formula (recipe)

Accuracy of ingredients and temps

- Weighing is best and easiest
- 1 cup of flour is 4.0 – 4.5 ounces
- 1 cup of 1:1 flour-water starter = 7- 8 ounces
- If using volume, pay special attention to character and performance of the dough

Accuracy of ingredients and temps

- Temperature affects fermentation = rising time
 - Flour, room, water, friction
 - 17 degrees doubles/halves rising time
 - Wild yeast is damaged above 100 degrees, dies above ~120 degrees
- Some recipes list an expected dough temp
 - Know your kitchen – recipes are developed for mid-70s
 - Use water temp to manipulate dough temp

More sour <--> Less sour

- Loooong, cold rise time = more sour
- Warmer temps (80F) , quicker rise = more sour

Storing your starter

- Refrigerate
 - Slowly approaches dormancy but never goes entirely dormant.
 - Feed once a week
 - Or expect a long recovery time
- Reviving an old starter:
 - **Hooch** is okay, but “off” colors or smells, mold are not.

Storing your starter long-term



Storing your starter

1. Take out 1 ounce or 1/3 – 1/4 cup of starter chips
2. Add 2 ounces (1/4) lukewarm water
3. Soak until chips dissolve
4. Feed 1 oz (1/4 cup) flour
5. Put somewhere warm 24 hours
6. Feed 1 oz flour, 1 oz water. Stir.
7. Repeat steps 5 and 6.
8. Return to normal feeding routine

The Keys

- Strong, active culture
- Accuracy of ingredients and temperatures
- Support final rise with proper shaping and physical support**
- Bake at the right time**
- Use a reliable beginner’s formula (recipe)

Support final rise with proper shaping

- Use a loaf pan or
- Learn to free-form loaves
 - surface tension
- You Tube links at end of presentation

Don't forget to cover the rising dough.

Bake at the right time

- Sourdough rise times are just a guide
 - type of flour
 - mixing method
 - mixing time
 - Water temperature
 - ambient temperature of kitchen
- **Poke test to check rise**

The Keys

- Strong, active culture
- Accuracy of ingredients and temperatures
- Support final rise with proper shaping and physical support**
- Bake at the right time
- Use ONE or TWO reliable beginner's formulas consistently
 - Authors:
 - Peter Reinhart
 - Chad Robertson
 - Ed and Jean Wood
 - Martin Philip
 - Websites:
 - King Arthur Baking Company
 - The Perfect Loaf
 - Be cautious of formulas for high hydration (open crumb) breads

What to do with poured-off starter culture?

Save your discard in a separate, refrigerated jar. Use for:

- Pancakes!
- Crackers!
- Muffins!
- Cake!
- Yeast bread!
- Links at end of presentation

It doesn't need to be the leaven in order to taste great or to be useful

“I just don't have time.....”

Sourdough is the perfect bread for you

- Flexibility measured in hours, not minutes
 - You can refrigerate (retard) dough before or after shaping to extend rise times

Resources for further learning

My favorite websites:

<https://www.theperfectloaf.com/new-baker-start-here/>

https://www.kingarthurbaking.com/search?blog_index%5Bquery%5D=sourdough

<https://www.kingarthurbaking.com/bakers-hotline>

Autolyse, Levain, Preferments, Oh My! (so much vocabulary)

<https://www.kingarthurbaking.com/blog/2017/09/29/using-the-autolyse-method>

<https://www.theperfectloaf.com/guides/how-to-autolyse/>

<https://www.theperfectloaf.com/what-is-a-levain-and-how-is-it-different-from-a-starter/>

Understanding hydration and baker's percentage:

<https://truesourdough.com/sourdough-hydration-explained-what-why-how-when/>

<https://www.craftybaking.com/howto/hydration-bread-dough>

<https://www.kingarthurbaking.com/pro/reference/bakers-percentage>

Resources for further learning

More about sourdough culture feeding schedules:

<https://www.theperfectloaf.com/sourdough-starter-maintenance-routine/>

Shaping Videos:

Ciril Hitz's Channel Breadhitz: https://www.youtube.com/watch?v=RggPij_sLLM

Northwest Sourdough: <https://www.youtube.com/watch?v=45x18TIFjU>

KA Baking: <https://www.youtube.com/watch?v=VuITORJDz8>

San Diego Artisan Bread School: <https://www.youtube.com/c/SanDiegoArtisanBreadSchool/videos>

For recipes that use discarded culture:

<https://www.kingarthurbaking.com/recipes/collections/sourdough-discard-recipes>

Online community of avid bakers:

<https://www.thefreshloaf.com/>

Happy Baking!