New Year, New Bread: a challenge for Sourdough Project participants and bakers worldwide

Now that we know which microbes live in your starters, we are issuing a new challenge to help visualize and compare the differences between breads that can be attributed to the microbes in your particular starter. To make sure our results are comparable, we'd like everyone to bake Lea Shell's Sourdough Recipe. After your loaves have cooled, cut a slice of bread and complete the activities below.

How we will use the images:

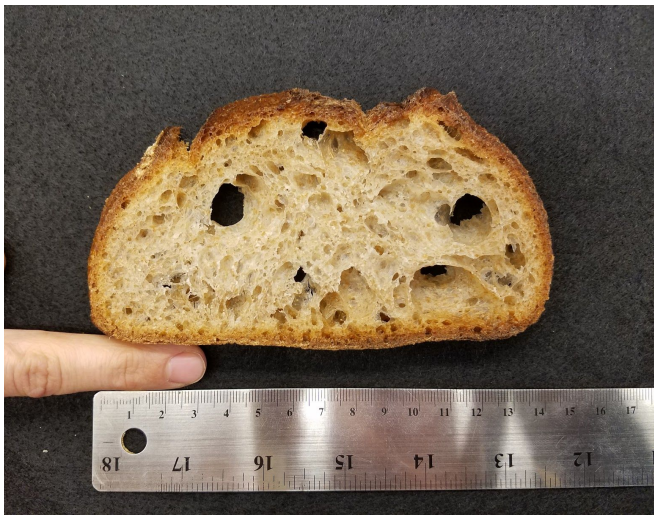
- Pictures of bread can be analyzed with software (i.e. ImageJ) to measure differences in crumb texture and air bubbles. We can then connect any measurable differences back to the microbes that we identified in your starter.
- Bread prints will be assembled into a "quilt" of global sourdough diversity!

Materials:

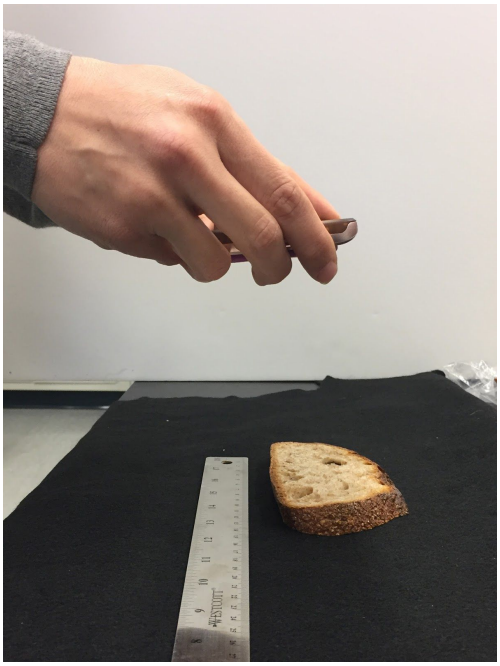
- A slice of sourdough bread
- A piece of clean, black fabric
- Camera or camera-phone
- A plate or other flat, waterproof surface (i.e. laminated placemat) at least as wide as your slice of bread
- Tempera or acrylic paint
- A spoon or paper towel tube
- Plain, smooth white paper (standard copy paper, or multipurpose craft paper for paint/markers will be fine)

Part 1: Bread portrait

1. Cut a slice of bread that is about ½ inch (~1.3 cm) thick.
2. Place your slice of bread on a clean, black piece of fabric.
3. Place a ruler one finger-width below the bottom crust of your bread. *This will help us get a sense of scale, for accurate measurements.*



4. Take a picture of your bread “head-on” (straight down, not at an angle), making sure to capture the ruler in the frame.
    a. Use the HDR photo setting on your camera. Turn off the flash.
    b. Hold your phone about 6 inches (~15.2 cm) above the bread, making sure to leave equal “margins” of black fabric around the slice.



5. Upload your picture to our SciStarter project page. *Sourdough Project participants: be sure to include your Entry ID!*

Part 2: Bread printing

We’d like you to create a print of your bread to share with the world. Baking is an art, after all!

1. Remove the crust from your slice of bread, leaving the soft spongy middle. (You can use a knife or gently pinch the spongy bread away from the inside of the crust. Either way, you want to preserve as much of the middle of your slice as possible.)
2. Pour a dollop of paint about 2 inches (5 cm) in diameter onto your plate or other waterproof surface.
3. Use the paper towel roll or the back of your spoon to spread the paint into an even layer, the approximate dimensions of your slice of bread.
4. Transfer the spongy middle of your sourdough slice to the paint. Use your hands to gently press the slice into the paint (but without squishing the bread).
5. Pick up the bread and transfer it, paint-side down, to a fresh sheet of white paper. **Make sure to place the bread straight down onto the paper, without sliding it, so you don’t smear your print.**
6. Use your hands to gently press the slice of bread onto the paper (again, without squishing the bread).
7. Lift the bread straight off the paper. **Voila! You should see a sponge-print of your bread!*
    - You may need to experiment with the amount of paint, to make the “perfect print”.

- Too much paint will obscure the final details of your bread crumb. The resulting print will look “gloppy” on the paper.

- Too little paint, and your print will be difficult to see.

- A “Goldilocks print” (*juuuuust right!)* will capture all the “nooks and crannies”.

8. When you are happy with your print, take a picture and upload it to our SciStarter project page. *Sourdough Project participants: be sure to include your Entry ID!*