

Biological vs. Chemical Leaveners

Session 4: April 16, 2014

In our Spring 2014 JW Iron Chef Club we're studying the science of cooking!

In our fourth session, we explored the difference between chemical and biological leaveners. Using two recipes, students prepared both sourdough yeast waffles and quick waffles and tasted the difference in flavor and texture.

Concepts We'll Explore:

Biological vs. Chemical leavening

Fermentation

Symbiotic relationships (lactobacilli and wild yeast)

Skills:

Measuring by volume with cups, teaspoons, etc, and weight using a scale

Helpful Videos:

Alton Brown's Sourdough Yeast video:

<https://www.youtube.com/watch?v=FqykMqsEQI0&app=desktop>

Morrell's Sourdough video:

<https://www.youtube.com/watch?v=y5xOpss4j5E>

Sourdough Waffles

Based on the Sourdough Waffle recipe from Nancy Silverton's Breads from the La Brea Bakery.

This batter can also make sourdough pancakes.

makes 6 servings

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Club Cooking Instructor

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GARDEN STATE ON YOUR PLATE:
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Ingredients

9 ounces (about a cup or 255g) white starter
1 teaspoon salt
1 tablespoon (packed) brown sugar
2 large eggs
4 ounces (1/2 cup or 115 g) butter, melted and cooled
8 ounces (1 cup or 225 g) milk
6 ounces (about 1 1/2 cups or 170 g) all purpose flour
1/4 teaspoon baking soda (optional)

Directions

Mix these together to form a thick batter.

Preheat your waffle iron for 10-15 minutes.

Pour 1/2 to 3/4 cups of batter on the hot waffle iron and close the lid. Allow to cook for 3-5 minutes until golden brown and crisp.

Classic Quick Waffles

Recipe from allrecipes.com "Waffles I"

makes 6 servings

Ingredients

2 eggs
2 cups all-purpose flour
1 3/4 cups milk
1/2 cup vegetable oil
1 tablespoon white sugar
4 teaspoons baking powder
1/4 teaspoon salt
1/2 teaspoon vanilla extract

Directions

1. Preheat waffle iron. Beat eggs in large bowl with hand beater until fluffy. Beat in flour, milk, vegetable oil, sugar, baking powder, salt and vanilla, just until smooth. Do NOT overmix.
2. Spray preheated waffle iron with non-stick cooking spray. Pour mix onto hot waffle iron. Cook until golden brown. Serve hot.