Foods and Nutrition: Quick Bread vs. Yeast Bread

Bakers appreciate the aroma and creativity behind a yeast dough masterpiece. Yeast breads require time and patience in allowing the dough to proof and rise before baking. A fast-paced modern society found solutions to bake quick breads using food-safe chemical leavening agents such as baking soda and baking powder, eliminating the wait and fermentation time before baking. Quick breads also eliminated the kneading process, a step to develop the gluten to allow yeast bread dough to stretch and rise. As one of the world's oldest foods, yeast breads and quick breads come in various types, shapes, sizes, and textures.

Starting Out

Applesauce Muffins

- Review safety tips prior to making your recipe.
- Gather all ingredients and supplies, and remember to wash your hands.
- Most muffin recipes should be baked without using paper baking cups.
- Rate the quality of your muffins.
- Share some of your delicious muffins with someone else.

Learning More

Mountaintop Biscuits

- Follow regular kitchen safety basics.
- Gather all ingredients and supplies.
- Closely follow your recipe.
- Biscuits are considered a quick bread as it does not contain yeast.
- Rate the quality of your biscuits.
- Share some of your biscuits with a friend or neighbor.

Expanding Horizons

Yeast Bread

- Review kitchen safety basics.
- Yeast breads require patience in allowing the bread dough to rise.
- Review proper method to knead, rest, and shape bread.
- Evaluate your bread loaf and troubleshoot any problems.
- Share some of your bread with family, a neighbor, or friend.

Inspire Kids to Do

Skill Building

When baking bread, begin with a quick bread recipe using food-safe chemical leavening agents, then a biscuit recipe, and finally a yeast bread that requires properly proofing yeast and kneading the dough. It is important to be aware of the differences between a quick bread and a yeast bread and the time required to prepare each.

Goals

- Check for doneness of a bread.
- Properly proof yeast.
- Share what I have learned with others.

Project Ideas

- Try quick bread recipes using a variety of fruits and nuts.
- Experiment with butter and shortening in biscuits.
- Bake yeast bread using a sweet bread recipe such as cinnamon rolls.

Self-Evaluation Before

Using the rating scale below, answer the following:

1 = not at all
2 = a little
3 = a lot

I know how to…

Test for doneness in a quick bread ..... 1 - 2 - 3

Proof yeast ..... 1 - 2 - 3

Tell the difference between yeast bread and quick bread .....1 - 2 - 3

Foods and Nutrition: Quick Bread vs. Yeast Bread

Challenge Instructions

Try these recipes to learn the differences between quick breads and yeast breads.

- Bread Baking Basics, p. 3
- Applesauce Muffins, p. 4
- Mountaintop Biscuits, p. 6
- White or Whole Wheat Yeast Bread, p. 8

(Permission granted to use recipes from KSRE and Kansas Wheat Commission.)

Helpful Tips

- Over stirring or mixing a quick bread will make muffins tough.
- For a golden crust biscuit, use a shiny baking sheet.
- Biscuits require high heat to bake properly.
- Shortening makes biscuits more tender as it doesn't contain water or milk solids.
- Liquid temperature too high will kill yeast plants.
- 2¼ teaspoons equals one ¼-ounce packet yeast.
- Salt affects how quickly yeast rises, which affects bread texture.

Leadership

(Suggested for Intermediate and Advanced Levels.)

- Teach bread making lesson to other 4-H members.
- Teach bread making lesson to classmates or friends
- Other _____

_____

_____

_____

Curriculum and Resources

To learn more about the 4-H Foods and Nutrition Project, visit www.kansas4-h.org

K-State Research and Extension Kids a Cookin'

Kansas Wheat Commission Recipes

Rapid Response Center at Kansas State University

Kansas State Fair Foods & Nutrition Evaluation

Foods and Nutrition Project Page, 4H1112

Life Skills Learned (check all that apply)

- ☐ Positive Self-Concept
- ☐ Inquiring Mind
- ☐ Concern for Community
- ☐ Sound Decision-Making
- ☐ Healthy Interpersonal Relationships

Share

- ☐ Share part of your bread product with a neighbor/friend.
- ☐ Thank a 4-H supporter by sharing your bread and note of thanks.
- ☐ Present a demonstration at a club meeting or school classroom.
- ☐ Other _____

Evaluate Your Experiences!

What is the main difference between a quick bread and a yeast bread? _____

_____

What methods can be used to determine whether breads are baked completely? _____

_____

_____

Name two food-safe chemical leavening agents. _____

What was the hardest part of the activity? _____

_____

To complete the Challenge, take a selfie while doing the activity. Upload the photo and take the survey about your Challenge experience.
www.tinyurl.com/KS4HChallenge

Self-Evaluation After

Using the rating scale below, answer the following:

1 = not at all
2 = a little
3 = a lot

I know how to…

Test for doneness in a quick bread..... ..... 1 - 2 - 3

Proof yeast ..... 1 - 2 - 3

Tell the difference between yeast bread and quick bread .....1 - 2 - 3

Local Contact Information

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Kansas Clover Classroom

Adapted from NW 4-H Advisory Challenge created by Karen Shepard, FCS Agent, and Patsy Maddy, 4-H Youth Development Agent, Twin Creeks Extension District

Bread Baking Basics

When are Baked Goods Done?

In baking, there are many visual clues to test if a product is done. This includes lightly touching a cake surface, golden brown color on breads, or inserting a toothpick in a quick bread to see if it is still sticky.

Another way to test for doneness is by checking the internal temperature using a food thermometer. By practicing a recipe, you can determine with temperature how long it takes to bake a product. Then, make note of that time in the recipe for future reference.

It is still important to use visual clues to determine if a product is done.

Suggested Temperatures for Doneness

Layer cakes — 205° to 210° F

Pound cake — 210° F

Jelly roll cakes — 190° to 195° F

Muffins — 210° F

Quick bread — 210° F

Yeast bread — 195° to 210° F

Bundt cake — 212° F

Yeast rolls — 190° to 195° F

Yeast

Yeast is a living microorganism in the fungi family. Starch, carbohydrates, and sugar feed the yeast. As it feeds, yeast digests carbohydrates and kickstarts fermentation, releasing carbon dioxide that expands gluten proteins and causes dough to expand and rise. Yeast feeds and reproduces best between 70° and 80°. Salt counteracts yeast. Never let salt come in direct contact with yeast. Yeast gives bread its distinctive flavor.

Temperature for Yeast

Yeast can thrive in the right warm temperature or be dormant or "killed" in the wrong temperature. For best results, follow the temperature recommendations for the type of yeast used in your recipe. The ideal temperature for active dry yeast is 100° to 110° F. The ideal temperature for instant (also called fast rising) and bread machine yeast is 120° to 130° F.

Packet and Jar Equivalents

1 Packet of Yeast = 2 ¼ teaspoons

2 Packets of Yeast = 4 ½ teaspoons

3 Packets of Yeast = 6 ¾ teaspoons

Types of Yeast

Dry Active — activated in warm water

Instant or RapidRise® — added directly to recipe

Sources: American Institute of Baking; King Arthur's Baker's Companion, The All-Purpose Baking Cookbook; Baking Illustrated by Cook's Illustrated; I'm Just Here for More Food by Alton Brown; Karen Blakeslee, K-State Research and Extension; Fleischmann's Yeast; National Festival of Breads

Applesauce Muffins

Make this batter now -- bake later!

Tools Needed

- Muffin tin
- Electric mixer
- Mixing bowl
- Measuring cups
- Measuring spoons
- Knife
- Rubber spatula
- Spoon
- Hot pad
- Cutting board

Photo by Mink Mingle on Unsplash

Ingredients

¼ cup margarine

1 cup sugar

1 egg

1½ teaspoons cinnamon

1 teaspoon baking soda

¼ teaspoon salt

2 cups flour

1¼ cups applesauce

Directions

Remember to wash your hands!

1. Preheat oven to 350 degrees. Line muffin tin with paper baking cups or grease bottom of muffin tin with margarine or cooking spray.

2. Cream margarine and sugar with an electric mixer. Add egg, mixing well. Blend in remaining ingredients.

3. Fill muffin tins 2/3 full and bake for 15 to 18 minutes. Optional: Add 1/2 cup of diced apple or raisins to batter.

Helpful Hints

- While an electric mixer makes mixing these muffins a quick task, they will turn out best if mixed by hand. Either way — by hand, or by mixer — it is important to remember that muffins are a "quick bread" and that means muffins or coffeecakes will come out best if not overmixed.
- Just lightly stir the ingredients together — so dry ingredients are barely moistened. The batter will still be slightly lumpy, and that's fine.
- Overstirring or mixing a quick bread will make the muffins tough. Sometimes kids who help in the kitchen really like to stir big and long — and there are good recipes for that — but when it comes to mixing muffins, less is more!

Safety Tip #1: Before children use an electric mixer, it is important that they are shown how to use it safely. Be sure they know how to safely plug in and unplug an electric appliance and that they can operate the mixer's control switch. It may take practice for a child to be able to scrape a mixing bowl with a rubber spatula and use the electric mixer. Encourage them to stop the mixer and scrape the bowl, then restart the mixer.

Safety Tip #2: Remember, this recipe and most batters contain raw egg. Don't lick the spoon or bowl, because the raw egg can make us sick — especially young children. Wait until the batter is baked; it's then safe to go ahead and enjoy!

Recipe from Kids a Cookin' and used with permission of K-State Research and Extension.

Muffin Evaluation — You Be the Judge

Rate your product below using the following scale:

5 – Very Satisfied; 4 – Satisfied; 3 – Neutral; 2 – Dissatisfied; 1 – Very Dissatisfied

Exterior Appearance

_____ Muffins are about the same size in height and diameter

_____ Color on the top is golden brown

_____ Muffins have golden brown bottoms; not too dark or hard

_____ Tops pebbly rather than smooth and gently rounded

Interior Appearance

_____ Fairly large gas holes uniformly distributed

_____ Texture uniform and slightly moist

_____ Can be easily broken

Flavor

_____ Pleasant flavor

_____ Fresh

_____ Slightly sweet

Aroma

_____ Appealing, pleasing

Nutrient Value

(Check the recipe.
Compare with Nutrition Facts.)

_____ Low in sugar

_____ Low in sodium

_____ Low in fat

_____ High in fiber

Sugar

1 teaspoon sugar = 4 grams

1 teaspoon sugar = 16 calorie

100 calories added sugar is recommended daily limit

Sodium

1 teaspoon salt = 2,300 mg sodium; 2,000 mg is recommended daily limit

Fat

1 gram = 9 calories

Low fat is 3 grams fat per 100 calories

Fiber

High fiber contains more than 5 g fiber per serving

Nutrition Facts

Servings Per Container 18
Serving Size **1 muffin (48 g)**

Amount per serving
Calories **130**

	% Daily Value*
Total Fat 3g	**4%**
Saturated Fat **0.5g**	**3%**
Trans Fat 0g	
Cholesterol 10mg	**4%**
Sodium 130mg	**6%**
Total Carbohydrate 24g	**8%**
Dietary Fiber **less than 1 gram**	**3%**
Total Sugars **13g**	
Protein 2g	
Vitamin A	2%
Vitamin C	0%
Calcium	0%
Iron	0%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Mountaintop Biscuits

Kansas Wheat Commission Test Kitchen Note

A simple recipe that can be prepared in short order, and they're a mile high!

Prep Time: 35 minutes

Bake Time: 12 minutes

Yield: 12, 2½-inch biscuits

Ingredients

3 cups all-purpose flour

2 tablespoons granulated sugar

4½ teaspoons baking powder

¾ teaspoon cream of tartar

¾ teaspoon salt

¾ cup vegetable shortening

1 beaten egg

1 cup low-fat milk

Instructions

1. Preheat oven to 450° F.
2. Stir flour so it is not packed from being in container. Measure dry ingredients and level off. Sift flour with sugar, baking powder, cream of tartar, and salt into medium bowl.
3. Cut in shortening, with pastry blender or 2 knives (used scissors-fashion), until mixture resembles coarse meal.
4. Combine egg and milk, and add to flour mixture all at once. Stir with fork just long enough to make a soft dough that forms a ball.
5. On lightly floured surface, knead lightly about 10 times. Roll or pat dough to 1-inch thickness, using as little flour as possible. Cut straight down into dough with a 2½-inch biscuit cutter, being careful not to twist cutter.
6. Place 1 inch apart on ungreased cookie sheet. Bake 12 to 15 minutes.

Nutrition Information

Per biscuit: 257 cal, 14 g fat, 19 mg cholesterol, 557 mg sodium, 28 g carbohydrates, 1 g fiber, 4 g protein, 50 mcg folate.

Recipe used with permission of the Kansas Wheat Commission.

Biscuit Evaluation — You Be the Judge

Rate your product below using the following scale:

5 – Very Satisfied; 4 – Satisfied; 3 – Neutral; 2 – Dissatisfied; 1 – Very Dissatisfied

Exterior Appearance

_____ Biscuits are about the same size in height and diameter

_____ Color on the top is golden brown

_____ Biscuits have golden brown bottoms; not too dark or hard

_____ Tops pebbly rather than smooth and gently rounded

Interior Appearance

_____ Small, uniform gas holes

_____ Thin cell walls

_____ Crumb peels off in sheets, flakes, or layers

Flavor

_____ Pleasant flavor

_____ Fresh

_____ No bitterness or rancidity

Aroma

_____ Appealing, pleasing

Nutrient Value

(Check the recipe.
Compare with Nutrition Facts.)

_____ Low in sugar

_____ Low in sodium

_____ Low in fat

_____ High in fiber

Sugar

1 teaspoon sugar = 4 grams

1 teaspoon sugar = 16 calorie

100 calories added sugar is recommended daily limit

Sodium

1 teaspoon salt = 2,300 mg sodium; 2,000 mg is recommended daily limit

Fat

1 gram = 9 calories

Low fat is 3 grams fat per 100 calories

Fiber

High fiber contains more than 5 g fiber per serving

Nutrition Facts

Servings Per Container 12

Serving Size 1 biscuit (44 g)

Amount per serving

Calories 170

	% Daily Value*
Total Fat 7g	**11%**
Saturated Fat **4.5g**	**23%**
Trans Fat 0g	
Cholesterol 20mg	**7%**
Sodium 70mg	**3%**
Total Carbohydrate 21g	**7%**
Dietary Fiber **1g**	**4%**
Total Sugars **1g**	
Protein 4g	
Vitamin A	4%
Vitamin C	0%
Calcium	4%
Iron	2%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

White or Whole Wheat Yeast Bread Dough

(makes about 3 ¾ pounds dough)

Ingredients

1 package or 2¼ teaspoons active dry yeast

½ cup lukewarm water (110°F-115°F)

½ teaspoon granulated sugar

½ cup vegetable shortening or butter

½ cup granulated sugar

1 large egg, beaten

1½ teaspoons salt

2 cups milk, scalded and cooled to lukewarm

7½ to 7¾ cups all-purpose flour or bread flour OR 4 cups whole wheat flour plus 3¼ to 3½ cups all-purpose or bread flour

Directions

In small bowl, dissolve yeast in lukewarm water, stirring in ½ teaspoon sugar. Let stand 5 minutes.

In mixer bowl, beat shortening with ½ cup sugar; add egg, salt, cooled milk, and dissolved yeast.

Stir in flour a little at a time until dough is stiff enough to knead. Knead by hand or with dough hook 8 minutes or until smooth and elastic. Place in greased bowl; cover and let rise until doubled.

Punch down dough and divide into 3 equal balls. Flatten each ball with hands or rolling pin into a rectangle about 8 inches by 4 inches on a lightly floured surface. Roll dough up tightly, beginning at the 8-inch side, to form a loaf. Press with thumbs to seal after each turn. Pinch edge of dough into roll to seal. Press each end with side of hand to seal. Fold ends under the loaf.

Place seam side down in the pan. Brush loaves lightly with butter. Cover and let rise in warm place for 35 to 50 minutes or until double in size.

Move oven racks to a lower position so that tops of pans will be in the center of the oven. Heat oven to 375° and bake for 35 to 40 minutes or until loaves are deep golden brown and sound hollow when tapped. A thermometer can be used to check for doneness. The thermometer should read about 200°.

Remove loaves from pans to a wire rack. Brush loaves with butter and cool.

Note: Dough may be kept covered in refrigerator for several days and used when needed.

Recipe used with permission of the Kansas Wheat Commission.

Yeast Bread Evaluation — You Be the Judge

Rate your product below using the following scale:

5 – Very Satisfied; 4 – Satisfied; 3 – Neutral; 2 – Dissatisfied; 1 – Very Dissatisfied

Appearance

_____ Good volume

_____ No flour streaks or excess flour

_____ A symmetrical, well-shaped uniform size

_____ A uniform golden-brown color

_____ Smooth, tender crust

Texture

_____ Free of large air pockets

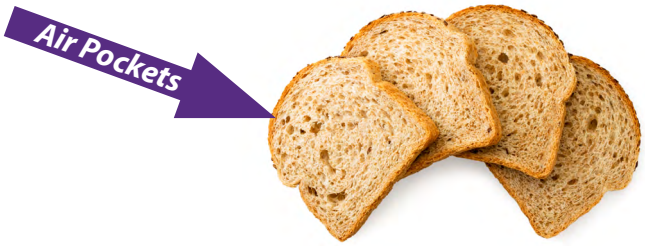
_____ Moderately fine and even-grained

_____ Soft and free of crumbliness

_____ Moist and silky

_____ Tender to the touch

_____ Elastic in quality



Flavor

_____ Pleasing, well-baked flavor (not overcooked or undercooked)

_____ Fresh

_____ Well blended (not tasting strongly of any one ingredient)

_____ Nutlike or 'wheaty' taste

Aroma

_____ Appealing, pleasing

Nutrient Value

(Check the recipe. Compare with Nutrition Facts.)

_____ Low in sugar

_____ Low in sodium

_____ Low in fat

_____ High in fiber

Sugar

1 teaspoon sugar = 4 grams

1 teaspoon sugar = 16 calorie

100 calories added sugar is recommended daily limit

Sodium

1 teaspoon salt = 2,300 mg sodium; 2,000 mg is recommended daily limit

Fat

1 gram = 9 calories

Low fat is 3 grams fat per 100 calories

Fiber

High fiber contains more than 5 g fiber per serving

Nutrition Facts

Serving Size	**1 thick slice (50 g)**
Amount per serving	
Calories	**140**
	% Daily Value*
Total Fat 2.5g	**3%**
Saturated Fat **0g**	**0%**
Trans Fat 0g	
Cholesterol 0mg	**0%**
Sodium 170mg	**7%**
Total Carbohydrate 25g	**9%**
Dietary Fiber **3 gram**	**11%**
Total Sugars **2g**	
Includes 0g Added Sugars	
Protein 4g	
Vitamin D 0mcg	0%
Calcium 17mg	2%
Iron 2mg	10%
Potassium 127mg	4%
Thiamin 0.2mg	15%
Niacin 3mg	20%
Folate 39mcg DFE	10%
Biotin 3mcg	10%
Selenium 19mcg	35%
Manganese 0.9mcg	40%

*The % Daily Value (DV) tells you how much a nutrient in a serving of food contributes to a daily diet. 2,000 calories a day is used for general nutrition advice.

Notes or Photos

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