

# Baking Ingredients.

**Activity:** Compare Baking Ingredients

**Conclusion:** Ingredients and their reactions

1. Demonstrate the differences between the three common flours: cake flour, whole wheat flour, and all-purpose flour. Compare the texture of each flour when dry, and again after adding water to each type.

2. Have students collect recipes of various baked products which contain only baking soda or only baking powder and those with both ingredients. Explain the difference between baking soda and balanced double-acting Clabber Girl Baking Powder.

Baking soda used alone reacts to acids and liquids in the recipe, releasing carbon dioxide gas during mixing. This reaction is sometimes a disadvantage, as most of the carbon dioxide gas may be evolved before baking.

Balanced double acting Clabber Girl Baking Powder proportionately releases part of its gas when moistened, and the remainder is released during baking.

3. Supply students with the recipe. Stress the importance of measuring ingredients accurately, proper equipment, and sanitation rules to be observed.

4. Check supply of quality ingredients; order if needed.

## Student Learning Steps

1. Lab Day 1: Using recipes students have collected, as well as the Banana Nut Bread recipe, discuss which ingredients will react with the leavening agents. It should be stressed that recipes are tested formulas based on ingredients reacting with each other to produce a specific end result. Therefore, in some cases, substituting one leavening agent for another or changing their proportions may have unsatisfactory results.

2. Common acids in foods that will react with baking soda include sour milk, buttermilk, molasses, brown sugar, vinegar, citrus fruits, etc. The amount of acids in some foods may vary, and if there is not enough acid to react with the baking soda, the excess baking soda may cause the baked product to have a soapy flavor. Too fast or too slow a release of carbon dioxide gas may result in a coarse crumb or may cause the product to sink in the middle.

3. Clabber Girl Baking Powder contains two acid components: one that reacts to cold liquids or moisture, the other that reacts when the liquid is heated. Clabber Girl creates a light, creamy batter and provides additional leavening in the oven for a consistently stable baked product.

4. Lab Day 2: Using three groups, bake the Banana Nut Bread recipe with the three types of flour: cake flour, whole wheat flour, and all-purpose flour. Subtract 3-1/2 tablespoons from the 1-3/4 cups measurement of cake flour to substitute other types of flour.

5. Discuss the appearance, texture, and taste of products before and after baking, noting the fine, delicate texture of the bread prepared with cake flour. Discuss other non-cake recipes that can be prepared with cake flour, such as brownies, cookies, and biscuits. Figure the correct amount of cake flour to be substituted for all-purpose flour in other recipes: add 2 tablespoons for each cupful of flour.

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## Banana Nut Bread

### Ingredients:

- 1-3/4 cups sifted cake flour
- 1-3/4 teaspoons Clabber Girl Baking Powder
- 3/4 teaspoon salt
- 1/2 teaspoon baking soda
- 1/3 cup butter or other shortening
- 1/2 cup light brown sugar, firmly packed
- 2 eggs, well beaten
- 1/2 cup coarsely chopped pecan or walnut meats
- 1 teaspoon grated orange rind
- 1 cup mashed bananas

### Directions:

Preheat oven to 350°F. Sift flour once, measure, add baking powder, salt, and soda, and sift again. Set aside. Cream butter, add sugar gradually and cream together until light and fluffy. Add eggs and beat well. Stir in nuts and orange rind. Add flour alternately with banana, a small amount at a time, beating only until smooth after each addition.

Bake in greased loaf pan, 8-1/2 x 4-1/2 x 3 inches, in oven at 350° F for 55 minutes, or until done. Store 6 hours or overnight before serving.

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