CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY

Name(s)
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Project Number
J0513

Project Title
The Rising Effects of Baking Powder, Baking Soda, and No Riser on Blueberry Muffins

Abstract

Objectives/Goals
My objective was to see which riser would make blueberry muffins rise the most, either baking powder or baking soda, and what would happen to a blueberry muffin without any riser. I believe that baking powder muffins will rise the most.

Methods/Materials
My materials were 3 cups of all-purpose flour, 3 cups of whole wheat flour, 2 cups of sugar, 3 teaspoons of baking powder, 3 teaspoons of baking soda, 1 ½ teaspoons of salt, 1 ½ teaspoons of ground nutmeg, 6 eggs, 2 cups of milk, 18 tablespoons of vegetable oil, 3 teaspoons of vanilla extract, 6 cups of fresh blueberries, a mixing bowl, and 36 muffin holders. My method was making 36 blueberry muffins, 12 at a time, and substituting each riser in, then no riser in the last batch. Then, I measured how tall each muffin was in millimeters.

Results
After gathering all the heights of the muffins and averaging the measurements, I found out that baking soda muffins raised the most. My hypothesis turned out to be wrong! The baking soda muffins had an average of 50.83 millimeters. In second, the baking powder#s average was 42 millimeters. Lastly, the no riser muffins came out with an average of 35.58 millimeters.

Conclusions/Discussion
My results did not support my hypothesis. I think the baking soda muffins rose the most because the carbon dioxide bubbles released were more aerated since the muffins was light and less dense compared to the other muffins. This project expands our knowledge in this subject because bakers will know which riser to use.

Summary Statement
To determine the effects of baking soda, baking powder and no riser on blueberry muffins.

Help Received
My mother helped take the muffins out of the oven.