

CALIFORNIA STATE SCIENCE FAIR 2004 PROJECT SUMMARY

Name(s)

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Project Number

J1137

Project Title

Do You Smell What Soy Is Cooking?

Objectives/Goals

Abstract

Problem Statement: Although there is evidence that soy products contain beneficial properties which help reduce the risk for certain diseases, consumption of soy products in the United States is low.

Hypothesis: When substituting soy flour for white flour in a recipe; the product of the original recipe will have a better outcome and taste.

Methods/Materials

Procedure: A. Cook recipes with original ingredients {Yeast Bread (See Appendix A for recipe), Quick Bread (See Appendix B for recipe)}

B. Cook recipes substituting soy flour for white flour in the following amounts: 10%-12.5%, 25%, 50%.

C. Collect Data

Measure height, length and width of bread

Measure the weight of bread

Take picture to record color of bread}

D. Perform taste tests

E. Calculate nutritional data

Materials: Stove-Oven 9" x 5" Loaf pan

Internal Stove Thermometer Large mixing bowl

Recipe Ingredients (see Appendix A & B) Small mixing bowl

Measuring cups Wooden spoon

Measuring spoons

Results

Results: One of the primary findings of the testing was that the original yeast bread recipe provided a better outcome and was preferred for taste. However, all the loaves of quick bread produced fairly similar outcomes and the recipe that contained the most soy flour was preferred for taste.

Conclusions/Discussion

Conclusion: When substituting soy flour in a recipe it may be better to use a recipe that does not require yeast and is sweet.

Summary Statement

When substituting soy flour for white flour in a recipe; the product of the original recipe will have a better nutritional benefits and taste.

Help Received

Mom supervised cooking, administered some surveys to firefighters and helped with some typing, Dad supervised taste tests, Mr. Zimmerman administered some surveys to computer students.