

CALIFORNIA STATE SCIENCE FAIR 2012 PROJECT SUMMARY

Name(s)

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Project Number

J0509

Project Title

What Effect Do Different Cooking Methods Have on the Nutritional Value of Vegetables?

Objectives/Goals

Abstract

The purpose of my science project is to determine what affect different cooking methods have on the nutritional value of vegetables. The reason I am doing this investigation is to find the healthiest way to prepare vegetables. If we are going to eat vegetables to keep us healthy we should try to maintain its nutritional benefits. I am using boiling and steaming as my methods to cook vegetables.

Methods/Materials

I am using the vitamin c testing solution and liquid vitamin c as my control. I will boil vegetables for 5 minutes on the stove in a pot of water. I will then test it with a food nutrient kit and record the result. Next I will boil vegetables for 10 minutes on the stove in a pot of water of water. I will then test it with a food nutrient kit and record the results. I will repeat my experiment using a steaming basket on the stove for 5 and 10 minutes. I will then test it with a food nutrient kit and record the results. I will then test it with a food nutrient kit and record the results. The experiential test variables that I am using in my science project are Asparagus, Broccoli, Carrots, and Zucchini.

Results

*Boiling asparagus 5 and 10 minutes took an average of 1 drop of vitamin C testing solution to turn blue.*Steaming asparagus 5 and 10 minutes took an average of 1-2 drops of vitamin C testing solution to turn water blue.*Boiling carrots 5 minutes took an average of 1.9 drops and boiling for 10 minutes took an average of 2.2 drops of vitamin C testing solution to turn water blue *Steaming carrots for 5 minutes took an average of 1.8 drops and steaming 10 minutes took an average of 1.3 drops of vitamin C testing solution to turn water blue.*Boiling zucchini 5 minutes took an average of 2.8 drops and boiling 10 minutes took average of 2.6 drops of vitamin C testing solution to turn water blue.*Steaming zucchini 5 minutes took an average of 2.4 drops and steaming 10 minutes took an average of 3.2 drops of vitamin c testing solution to turn water blue.*Boiling broccoli 5 minutes took an average of 3.2 drops and boiling 10 minutes took an average of 4.7 drops of vitamin c testing solution to turn water blue.*Steaming boiling 10 minutes took an average of 9.3 drops and steaming 10 minutes took an average of 1.3 drops of vitamin c testing solution to turn water blue.*Boiling broccoli 5 minutes took an average of 1.3 drops of vitamin c testing solution to turn water blue.*Boiling broccoli 5 minutes took an average of 3.2 drops and boiling 10 minutes took an average of 4.7 drops of vitamin c testing solution to turn water blue.*Steaming broccoli 5 minutes took an average of 9.3 drops and steaming 10 minutes took an average of 19.3 drops of vitamin c testing solution to turn water blue.

Conclusions/Discussion

After completing my project, I have found that steaming broccoli for only 10 minutes allowed the broccoli to maintain and supply the most vitamin C.

Summary Statement

Selecting the right vegetables, prepared the right way will allow us to get the most nutritional benefits.

Help Received

Parents helped with supplies, photos, and typing.