CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)

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Project Number

35173

Project Title

The Effects of Food Preservation Methods on the Enzyme Catalase

Abstract

Objectives/Goals

This project was to determine the effect of different food preservation methods on enzymes.

Methods/Materials

The experiment#s control was fresh potatoes. The 4 variables were frozen, dehydrated, blanched, and boiled potatoes. Each kind of potato was tested 4 times by blending the potato with water and then mixing it in a beaker filled with hydrogen peroxide (H2O2). When catalase reacts with hydrogen peroxide it creates oxygen gas, which was measured.

Results

On average, fresh potatoes produced 10 mL of oxygen gas per 10 seconds, whereas frozen potatoes produced only about 3 mL of oxygen gas per 10 seconds and boiled, blanched, and dehydrated produced 0 mL of oxygen gas per 10 seconds.

Conclusions/Discussion

I also noticed some very interesting trends and connections. In conclusion my potato enzyme lab gave me lots of useful information.

Summary Statement

My project is about measuring the amount of catalase in blanched, boiled, frozen, dehydrated, and fresh potatoes.

Help Received

Preliminary