CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)

Janae E. Hutson

Project Number

38201

Project Title

The Accuracy of Reported Invisible Fat in Foods

Abstract

Objectives/Goals

In my experiment, I extracted the invisible fat from foods such as potato chips, chocolate chips, and almonds and compared that value to its label to see which food had the most inaccurate amount of invisible fat extracted. My objective of this study is to determine whether food manufacturers lied on their labels to make their food seem healthier than it is so they could cultivate more money, so I created a question of, #Which snack will have the most inaccurate amount of invisible fat extracted compared to its label?#, to help dictate whether my prediction was true or not.

Methods/Materials

My hypothesis was that almonds would have the most inaccurate amount of invisible fat extracted compared to its label. 20mL of acetone was added two times, per jar to dissolve the fat from the snacks. After that was completed, the acetone and dissolved fat in the mason jars were set out in the sun for 24 hours so the acetone would evaporate. That then left behind the invisible fat in the jars.

Results

On an average scale, potato chips had a decreased value of -0.2g of fat from its label, almonds has a decreased value of -1.2g, and chocolate chips had a increased value of +6.4g.

Conclusions/Discussion

Chocolate chips had such a greatly increased value because of a chemical component called Lecithin in it that prohibits the fat from separating from the food, thus making the results of the chocolate chips have an inaccurate value of fat extracted. Therefore, my results showed that chocolate chips had the most inaccurate amount of invisible fat extracted compared to its label, which contradicted my hypothesis.

Summary Statement

I extracted the invisible fat from foods such as potato chips, chocolate chips and almonds and discovered that chocolate chips have the most inaccurate amount of invisible fat extracted compared to its label because of a chemical additive.

Help Received

I constructed and performed the experiment by myself after some research on the materials and procedures on the Science Buddies website.