

## CALIFORNIA STATE SCIENCE FAIR 2016 PROJECT SUMMARY

Name(s)

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**Project Number** 

**J0507** 

#### **Project Title**

# Drip, Drip, Drip: Which Ice Cream to Choose on a Hot Day to Avoid a Big Melted Mess?

## **Objectives/Goals**

Abstract

The purpose of my experiment was to determine which type of ice cream would melt the slowest by measuring time to first drip.

#### Methods/Materials

I made 1 control ice cream-high-fat, high-sugar, vanilla ice cream-and 6 other types of ice cream using the same base ingredients. While keeping the other ingredients constant, I varied FAT content in 2 ice creams, SUGAR content in 2 ice creams, and FLAVOR in 2 ice creams. I made a contraption out of Legos that suspended 3 spoons over a counter and measured how long it took for each ice cream to first drip. First, I tested 3 ice creams with different fat contents, then 3 ice creams with different sugar contents, and finally 3 ice creams with different flavors.

#### **Results**

My results were consistent across each set of trials. The low-fat ice cream had the longest time to first drip; low-sugar ice cream had the longest time to first drip; strawberry ice cream had the longest time to first drip.

## Conclusions/Discussion

My hypothesis was that the low-fat, the low-sugar, and the vanilla ice creams would melt the slowest. My assumptions about fat and sugar were correct; however, the strawberry ice cream melted the slowest. I think this was due to using all of the reserved liquid after pulsing the strawberries in the recipe, resulting in an icy strawberry ice cream. Next time, instead of testing for flavor, I would test 3 different colors of ice cream because my flavor experiment introduced too many different ingredients into the experiment.

### **Summary Statement**

As measured by time to first drip, I found that the low-fat, the low-sugar, and the strawberry ice creams melted the slowest.

#### Help Received

I designed and ran the experiments myself. My mother helped me make the ice creams.