CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)

Elise M. Ochs

Project Number

35060

Project Title

Investigating the Spoilage Rate of Different Milks Based on Their Expiration Date

Abstract

Objectives/Goals

The objective of this project was to find out what type of milk spoiled the quickest before and after the quickest.

Methods/Materials

The first thing I did was get 2%, whole, and non-fat milk (Producers Milk). Then I measured one cup of milk. After that, I connected my pH to the vernier. I then started testing the milk and recording the results on a data sheet. Finally, I repeated this process, using each milk, ten times. I recorded the milk to days before the expiration date, the day it expires, and 5 days after it expires.

Results

My final results for the 2% milk was that the spoilage rate drops as it gets older, which was expected. My results for the non-fat milk was that the spoilage rate went up as it expired, which was not expected. Finally, my results for the whole milk was that the spoilage rate decreased as it grew older, and that was expected.

Conclusions/Discussion

Once I concluded my project I found out that 2% milk spoils the quickest out of all three milks. I also found out that non-fat milk stays fresh for a while after the expiration date. My first hypothesis stated that whole milk would have the largest drop in spoilage rate, but I was incorrect. However, my second hypothesis stated that non-fat milk would not have a large drop in spoilage rates, and that was correct.

Summary Statement

Spoilage Rate of Different Kinds of Milk

Help Received

Mr. Darvin Aalto Science Instructor Sanger High School provided the Verniar and pH Meter