

CALIFORNIA STATE SCIENCE FAIR 2010 PROJECT SUMMARY

Name(s)

C. Jared Lampson

Project Number

J0408

Project Title

Milk Made? II

Abstract

Objectives/Goals

The purpose of my project was to determine what form of milk, when mixed with vinegar and microwave heated, will form the heaviest solid. My hypothesis was that the skim milk would form the heaviest solid.

Methods/Materials

Three types of milk (skim, low fat, and whole) were mixed with vinegar and heated in a microwave. The result of each test was the formation of a solid and liquid. The solid was strained from the liquid and weighed, while the liquid remaining was measured. Each type of milk was tested three separate times and the appropriate data was recorded.

Results

The chemical reaction of whole and low fat milk, mixed with vinegar and heated, consistently and equally formed the heaviest solid and liquid volume, whereas the skim milk solid was not as substantial.

Conclusions/Discussion

Last year I discovered that vinegar formed a heavier substance than both lemon juice and apple juice when mixed with skim milk and heated in the microwave. In continuation of last year#s project I used three forms of milk and one acidic(vinegar) instead of three acidics and one form of milk. I decided to test vinegar with three forms of milk to see which milk would make the heaviest solid. The solid formed by a heated mixture of milk and an acidic was how many of the beginning forms of plastics were made.

Summary Statement

The goal of my project was to discover what form of milk, when mixed with vinegar and heated, forms the heaviest solid.

Help Received

Father helped type report; Mother helped with laying out board