

CALIFORNIA STATE SCIENCE FAIR 2017 PROJECT SUMMARY

Name(s)

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Project Number

J0624

Project Title

Substance pH vs. Melting Rate

Abstract

Objectives/Goals

The objective of this study was to determine if certain pH levels affects the rate at which ice melts.

Methods/Materials

The experiments materials consisted of: apple juice, apricot juice, strawberry juice, milk, coffee, windex, bleach, water, pH paper, freezer, timer, thermometer, plates and a sunny spot. the procedure consisted of 8 liquids frozen into ice cubes, and exposing them to the sun at the same time =, after recording the temperature of the air. Then the time it took for each ice cube to melt was recorded along with the air temperature.

Results

At the end of the experiment, it was clear that water would have the longest melting time, and bleach would have the quickest. The results did not support my hypothesis, and showed that any liquid that was not an average 7 on the pH table, would melt faster than water. There is no relationship between the pH of a substance and it's melting rate.

Conclusions/Discussion

After my results were found, I did further research and found that the melting rate is mostly determined by the other chemicals in the solution, like salts, sugars, alcohols, etc.

Summary Statement

As measured by the 37 tests performed, there is no correlation between the pH of a substance and it's melting rate.

Help Received

I designed and tested the project myself, but received help in getting pH paper strips.