

CALIFORNIA STATE SCIENCE FAIR 2006 PROJECT SUMMARY

Name(s)

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Project Number

S0506

Project Title

Salt and Ice

Abstract

Objectives/Goals

My goal was to see if the speed at which a salt melts ice is related to the salt's molecular structure.

Methods/Materials

I used three types of salt: Sodium chloride, Potassium chloride, and Magnesium sulfate. I put a small measurement of each of the salts into cups with ice cubes and measured the length of time it took each salt to melt the ice cubes completely. I repeated the experiment 3 times.

Results

Sodium chloride melted the ice the fastest, followed by Potassium chloride. Epsom salt made the ice take longer to melt than the control.

Conclusions/Discussion

The salts with a cubic crystal form (Sodium chloride and Potassium chloride) were close in their melting times, and the salt that had an acicular (needle-like) crystal form took longer than the control to melt the ice. I think that these differences in crystal form have an effect on the speed at which a salt melts ice.

Summary Statement

My project looks at how the structure of a salt effects the speed at which it melts ice.

Help Received

My mother helped me narrow down my topic. I got part of the idea from the internet.