CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY

Name(s)
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Project Number
J0119

Project Title
A Sticky Situation

Abstract

Objectives/Goals
The objective of this experiment is to find out which type of liquid is the most resistant/viscous when using a marble as a frame of reference? (I used a mathematical equation to calculate.)

Methods/Materials
Used graduated cylinder to fill up the liquid and then mark 5 cm below the starting of the liquid and 5 cm above the boundary as friction can change results. Also used various liquids, and one marble to get the hang time of the liquids.

Results
From all of the liquids, my hypothesis was accepted as ketchup had the highest calculated viscosity. By only looking at the hang times, however, I thought my hypothesis was denied because honey had a larger hang time.

Conclusions/Discussion
I can deduce from the experiment that not only did ketchup had the highest viscosity, but the certain implications for the subject of viscosity. One of the major ones are the density of the liquid, temperature (which was one of my controlled variables), and in this case, the marble's factors. Using this type of technique, viscosity calculation can help in situations such as medicine, pipe efficiency, and even volcano eruption timing.

Summary Statement
In this project, I showed the different variables to viscosity, and how to calculate it using many liquids and determining them by using a marble for the hang time.

Help Received
None, I thought of, built, and conducted the full experiment myself.