



CALIFORNIA STATE SCIENCE FAIR 2011 PROJECT SUMMARY

Name(s) J. Alejandra Alvarez	Project Number S1103
Project Title Oily Hair!	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my project was to see if hair , using hair booms which are nylon stockings stuffed with hair, are able to absorb three different types of oil. Those three oils being cooking oil, motor oil, and used motor oil.</p> <p>Methods/Materials To test my objective I made hair booms, which are nylon stockings filled with hair. To make all the hair booms the same i weighed a pound of hair for each hair boom. Two hair booms were used per container. Totally 6 hair booms per experiment. I measured 1 liter of each type of oil (cooking oil, motor oil, and used motor oil) and added it to 10 liters of water (making it 1 part oil to 10 parts water). I let the oil sit in the water for one day before timing the amount of time it took for the hair booms to collect the oil. I repeated the experiment 5 times.</p> <p>Results My results showed that the hair booms took longer to absorb the cooking oil, averaging out to 8:03 minutes to absorb the oil. This time being the slowest, but even though it was the slowest the hair booms were still able to absorb the cooking oil. The average time that the hair booms absorbed the motor oil was 3:28 minutes and the average time for the used motor oil was 3:20 minutes. The hair booms absorbed the motor oil and used motor oil around the same time with a difference of only 8 seconds.</p> <p>Conclusions/Discussion The purpose of this project was to test if hair is able to absorb three different types of oil (cooking oil, motor oil, and used motor oil) using hair booms. Hair booms are nylon stockings filled with hair. My hypothesis stated that I thought the hair boom would pick up the motor oil and used motor oil a lot quicker than the cooking oil because cooking oil is a lot thinner than the other oils. I proved my hypothesis correct. The hair booms took about three times longer to pick up the cooking oil than the other two oils. My final conclusion is that hair is able to absorb three different types of oil even though it took longer for the cooking oil. If I were to repeat this experiment I would add more types of oils. Also I would test in salt water to see if there was any difference.</p>	
Summary Statement My project's purpose is to see if hair is able to absorb three different types of oil; cooking oil, motor oil, and used motor oil.	
Help Received	