CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY

Name(s)
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Project Number
J1429

Project Title
Tough on Germs?

Abstract

Objectives/Goals
The objective of my project was to test whether or not anti-bacterial soap really kills more bacteria than regular soap, and which is the best soap on the market for both categories. My hypothesis is that Dial Complete Gold will produce the least bacteria and be the best tested soap, since it#s the most advertised soap on the market.

Methods/Materials
This project tested two categories of soap, anti-bacterial and regular, with 4 soaps in each category. These soaps also acted as the variables of this experiment. The anti-bacterial soap category consisted of Dial Complete Gold, Clean and Smooth liquid soap, Bath and Body Works Cotton Blossom, and Safeguard White. Regular soaps included Softsoap Aloe Vera, Dove moisturizing hand soap, Yardley London Natural Oatmeal & Almond, and Pure & Natural. Potting soil was used to dirty my hands, as I washed them under warm water with one tsp. of testing soil for 2 minutes. My left index finger was then swabbed for existing bacteria and rubbed on Petri dishes of Tryptic Soy Agar with 5% sheep blood. These dishes were left to sit in a warm area for 2 days or 48 hours as I recorded data and other important information.

Results
The results in this experiment proved that Safeguard White was the best overall soap, and in its category of anti-bacterial soap. However, Softsoap Aloe Vera proved to be the best soap in its regular soap category. These two soaps consistently produced low amounts of bacteria through both experiment A and B.

Conclusions/Discussion
Through this experiment, I have concluded that regular soap and anti- bacterial soap are the same. In experiment B, results proved that both groups of soap produce the same amount of bacteria. Although regular soap can produce safer bacteria, the bacteria not destroyed by anti-bacterial soap or the #super bugs# are dangerous and cannot be destroyed by the common antibiotic. These results did not match my hypothesis and was proven in experiment B, when Dial Complete Gold grew the most bacteria. This experiment has proved that regular soap and antibacterial soap produce the same amount of bacteria and therefore one is not better than the other. I believe that this experiment will inform others of the types of soaps they should purchase and of false marketing ads.

Summary Statement
This project tests antibacterial soap and regular soap, and how it affects its bacterial growth.

Help Received
Mother swabbed finger, sister took pictures