CALIFORNIA STATE SCIENCE FAIR
2002 PROJECT SUMMARY

Name(s)
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Project Number
J1126

Project Title
Bacteria Killer

Abstract

Objectives/Goals
My objective is to find out which kind of anti-bacterial soap would kill the most bacteria. My hypothesis is that Ajax will be the most affective.

Methods/Materials
I asked the volunteers to put their hands in the dirt behind the classroom for 30 second. I use a sterile swab and streak it across their hand then onto a plate of nutrient agar. I gave each volunteer a different brand of soap with a certain amount. I use 5 different brands of soap, Ajax, Equate, Dial, Softsoap, and Ivory. For three volunteers I asked them to wash their hands with just water. The volunteers washed their hands for one minute. After one minute, I use a sterile swab and streak it across their hands then onto a plate of nutrient agar. I let the bacteria on the agar to grow for two days. After two days, I counted the bacteria colonies on the agar plates and recorded my data. In the end, I gram stained the different color of bacteria colonies, to see if they are gram negative or positive. I followed the instructions on the gram staining kit.

Results
After comparing the results, all the data varied. Ajax had the lowest amount of bacteria colonies after handwashing. The one with the most bacteria colonies was Ivory. While the controls of the three volunteers varied from 0-18.

Conclusions/Discussion
My conclusion supported my hypothesis, and Ajax was the most affective in reducing hand bacteria. Although, the low bacterial counts from the control plates suggest that just using water and vigorously rubbing the hands is as affective as using the soap. So it is difficult to really conclude which brand of soap is the most affective, because each person has a different style of rubbing their hands and that could affect the results.

Summary Statement
I want to find out which kind of soap would be most the affective for destroying bacteria.

Help Received
I use the microscope at Fresno State University to take pictures of my gram stained slides of bacteria colonies with Dr. Wright .