CALIFORNIA STATE SCIENCE FAIR
2011 PROJECT SUMMARY

Name(s)
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Project Number
J1601

Project Title
Hand Washing vs. Sanitizer

Abstract

Objectives/Goals
That hand sanitizer is much more effective in reducing the amount of micro-organisms on hands than washing hands.

Methods/Materials
Materials
1. Warm running tap water
2. Dial hospital grade soaps
3. Surgical sterile towels
4. Sheep blood agar plates
5. Hospital microbiology incubator
6. Purell aloe formula hand sanitizer

Method/Procedure
First, 10 individuals washed their hands with warm water and dial hospital grade soap for 20 seconds. Each of them dried their hands with sterile towels. I swabbed each individual#s hands with culture swabs. After I applied the culture swabs to the blood agar plates.

Second, 10 individuals sanitized their hands with hospital grade Purell aloe formula hand sanitizer for 20 seconds and dried their hands with sterile towels. I swabbed each individual#s hands and applied it on to the blood agar plates.

Third, I swabbed 10 individual#s hands that did not wash their hands or sanitizer for comparison.

Fourth, I took the blood agar plates to the lab and placed them in an incubator. It stayed in the incubator for 72 hours.

Results
Hand Sanitizer is more affective than hand washing.

Conclusions/Discussion
Post my experiment, my hypothesis was proven incorrect. The results indicate that sanitizer is much more affective in reducing micro-organisms count than hand washing.

Summary Statement
That hand sanitizer is much more effective in reducing the amount of micro-organisms on hands than washing hands.

Help Received
Father and science teacher