



CALIFORNIA SCIENCE & ENGINEERING FAIR 2018 PROJECT SUMMARY

Name(s) Noorah Dhamim	Project Number 38175
Project Title The Eco Cleanser	
Objectives/Goals The purpose of this experiment is to create an all-purpose hair and body cleansing powder that can be made from natural ingredients. The aim is to create a powder that will be able to absorb body and hair oil, absorb sweat, and kill bacteria using materials that are inexpensive and commonly found. This project will replace harmful chemicals used in dry shampoos with antioxidants, leaving behind a good long lasting smell using the powders of citrus and natural herbs and lastly to donate to the homeless people. Abstract Methods/Materials To test my prediction, I gathered 18 Petri dishes and 6 different types of powders that are commonly used to test how many bacteria colonies each powder produced. I tested each powder 3 times to get accurate results. To do this, I contaminated the counter with raw chicken grease because chicken is known to produce the most bacteria. After that, I found the percent of water and oil each powder absorbed during intervals of 10, 20, and 30 minutes. I did this by first soaking the powder for the specific amount of time, then filtered the mixture using a coffee filter. I tested each interval for every single powder 5 times to get accurate results that we could rely on. Results According to my results, baking soda has the least growing bacteria colonies out of all the other powders I tested. Sedr lost the least amount of water and oil in 10, 20, and 30 minute intervals, which means it would be best body cleansing powder. Lemon and pomegranate also followed in order of absorbing the second and third most water and oil. Conclusions/Discussion After conducting the experiment, my hypothesis was proven right. My results proved that Sedr absorbed the most percent of water and oil, and that Baking Soda had the least amount of bacteria colonies. The combination of the four winning powders that killed the most bacteria and absorbed the most water and oil, which are: Baking soda, Sedr, Lemon, and Pomegranate, created the ultimate cost-efficient cleansing powder that will help many homeless people that do not have hygienic products.	
Summary Statement My project is to test 6 different powders to find out which powder absorbs the most water and oil, and kills the most bacteria.	
Help Received My teacher always encouraged me to keep moving forward with my project. My science teacher kindly let me use her incubator, and my parents gave me great moral support.	