CALIFORNIA STATE SCIENCE FAIR
2015 PROJECT SUMMARY

Name(s)
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Project Number
35811

Project Title
What Fabric Will Hold the Most Dye?

Abstract

Objectives/Goals
The objective of my science project was to determine which type of fabric would have the greatest saturation of dye (brightest) and which one would have the lowest saturation (dullest) of dye.

Methods/Materials
Six different fabrics were cut into the same size. Four different colors of dyes were acquired for the experiment. All sample swatches were placed in buckets, then the different color dyes were added into separate buckets (based on their color), then allowing the dye set into the fabric, remove fabric from buckets, rinse then wash each swatch, and finally let all swatches air dry.

Results
For the red, purple and blue dye tests, the order of saturation was the same. The rayon spandex blend had the greatest saturation, followed by the Linen, then cotton, the poly-cotton blend followed by nylon, lastly, polyester. An anomaly occurred with the green dye. For some reason, the green dye did not follow the pattern. The nylon and polyester swatches turned #BLUE# with the green dye test.

Conclusions/Discussion
The three dyes (Red, purple, blue) along with the six sample swatches, followed a pattern, however, the green dye test did NOT follow this pattern. This anomaly has great potential in the medical/biological field as well as the military and energy communities.

Summary Statement
What fabric would hold the most dye, and what fabric would hold the least amount of dye?

Help Received
My Father purchased all of the materials used, and helped me with my experiment. My mother helped me with my board, putting my notebook together and revising my research.