Name(s)	Project Number
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Project Title

Your Carpet: The Unexpected Culprit

Abstract

Objectives/Goals
The goal of my experiment was to test different types of carpets and analyze which one would arrest the most bacterial growth. I believe that the antimicrobial carpet will work best in inhibiting the growth of bacteria, followed by the stain protection carpet which will work second best in inhibiting the growth of bacteria. My control carpet will be least effective in arresting the growth of bacteria.

Methods/Materials
In order to conduct my experiment, I applied S. marcescens and E. coli bacteria onto the carpet samples and incubated them for 48 hours. Next, I ran sterile swabs on the carpets, and applied them onto Petri dishes which were incubated as well. I then washed the carpet samples, streaked the sterile swab applicators onto the carpets, and applied them onto seperate Petri dishes.

Results
For my overall result, I found that the antimicrobial carpet was most effective in inhibiting the growth of bacteria, which proved the first part of my hypothesis correct. I also found that the control carpet was more resistant to the bacteria than the stain protection sample, thus proving the second part of my hypothesis incorrect.

Conclusions/Discussion
After conducting my experiment, I found that antimicrobial carpets do work best in stopping the growth and spread of bacteria. This is due to the presence of silver and zinc ions, which are embedded in the fibers, that have natural antimicrobial qualities. However, the stain protection carpet sample did not stop the growth of bacteria, but did the opposite. This maybe due to the topical treatments that are applied to its surface to prevent stains. The control carpet which did not have any kind of treatment on its surface did not prove to have the most bacteria present.

Summary Statement

My experiment was done to check the efficiency of antimicrobial carpets in stopping the growth and spread of bacteria on its suface.

Help Received

Mom helped me order my materials; Hallmark and Magic Carpet Stores ordered my carpet samples; my pediatrician allowed me to dispose of the biohazard materials in his facility.

Ap2/09