Name(s)	Project Number
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Project Title

Tough Tests on Tough Stains

Abstract

Objectives/Goals

The objective was to determine which stain removers worked best on different types of stains commonly encountered in a typical family's laundry. Also, since most stain removers claim to be effective on all stain types, the goal was to determine if any one outperformed the others.

Methods/Materials

Five popular stain removers were tested on 12 different stain types on two different types of fabrics. The stains were set, treated, and then machine washed. An image scanner was used to digitize the washed fabric and a computer program was used to measure the effectiveness of the stain remover by subtracting the fabrics unstained color value from the stained area's color values.

Results

The results indicated that different stain removers had substantial differences in effectiveness on different stain types. However, no one stain remover effectively removed all of the different stain types as claimed by the manufacturers.

Conclusions/Discussion

While most stain removers worked well across different stain classes (tannin, dye, oil, protein, and combination stains), each stain remover was not effecteive in at least one stain class. This is probably due to the fact that each stain remover uses a different chemical processes to try to remove the stain (enzyme, surfactants, or bleaching). Most of the stain removers got out a majority of the stains, but none of them worked best for every kind of stain.

Summary Statement

This project measured quantatively the effectiveness of five different laundry stain removers on twelve common stains.

Help Received

Mother, Father, Teacher