



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Kate A. Mattson	Project Number J1121
Project Title Toothpaste: A Cloth Stain Remover?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to learn which brand of toothpaste is the most effective cloth stain remover.</p> <p>Methods/Materials Lawn grass, chocolate syrup, ballpoint ink pen, and soy sauce stains were each separately applied to 15 one inch squares of white cotton cloth. Divided into three trial groups of 5, each stain was brushed with either water (control) or one of 4 different brands of toothpaste (2 sodium fluoride and 2 sodium monofluorophosphate). The cleaning effectiveness results of the 60 treated stains (12 trials) were visually compared and rated using a 5 point scale. The total points and averages established which toothpaste was the most effective cleaner.</p> <p>Results Ultrabrite Advanced Whitening was the most effective toothpaste cleaner, but only by 1 point over two other brands that tied for second. All the toothpaste brands were effective cleaners of all the stains. The analysis/data showed that the sodium fluoride brands had a better cleaning effect on the food stains and the sodium monofluorophosphate brands worked better on non-food based stains.</p> <p>Conclusions/Discussion The data gathered by the point scale provided my objective of finding the most effective toothpaste cleaner. The chemical ingredients of all four different toothpaste brands were shown to be effective white cotton cloth cleaners.</p>	
Summary Statement My project uses 4 different toothpaste brands to remove 4 different types of stains from white cotton cloth samples to discover which toothpaste is the most effective cloth stain remover.	
Help Received My mother helped me with photographs, copy editing of typed information, and measuring, cutting, stapling, and taping for the board layout.	