



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Krina A. Ghadia	Project Number 38200
Project Title Counteracting Coffee Stains: Dentifrice Whitening Properties	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The objective of my project is to determine which dentifrice is the most effective in coffee stain removal.</p> <p>Methods/Materials Ceramic tiles were stained using coffee for one day and then dried. The stain was then brushed and attempted to be removed using different forms and types of dentifrice. The tile was then compared with the shade guide for measurement.</p> <p>Results The Sodium Hypochlorite had the most whitening effect out of every type of dentifrice, although every type and form of dentifrice had some whitening effect.</p> <p>Conclusions/Discussion Each dentifrice had a varying amount and type of active ingredient that was used to eliminate the stain, however the Sodium Hypochlorite had the strongest stain removing ability and in the largest concentration. Therefore, Sodium Hypochlorite, or off-the-shelf bleach, removed the stain most effectively.</p>	
Summary Statement I determined how effective dentifrice with varying active ingredients was in removing coffee stains.	
Help Received Dentist Vinay Govindji answered my questions about whitening toothpastes, however I created and executed the experiment without assistance.	