



**CALIFORNIA STATE SCIENCE FAIR
2004 PROJECT SUMMARY**

Name(s) Kathleen M. Farrelly	Project Number J1308
Project Title What Is the Best Way to Clean Your Toothbrush?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals My objective was to determine the best way to clean your toothbrush. My investigative question was whether or not washing your toothbrush in water would get rid of all the germs. My hypothesis was that the toothbrush cleaner would work better at cleaning a toothbrush and eliminating germs than plain water.</p> <p>Methods/Materials I had my family take turns spitting in a cup until there was about 1-½ inches of spit in the cup. I dipped 12 toothbrushes into the cup and let them sit in plastic bags for 2 days. I divided the toothbrushes into four groups: control group (doing nothing), water group (rinsing the toothbrush in hot tap water for 10 seconds), Aqua Blast group (soaking a toothbrush in Aqua Blast for 10 minutes) and dishwasher group (placing toothbrush in top rack of dishwasher using Cascade soap). I pressed each toothbrush into a petri dish with nutrient agar solution. I repeated the experiment 2 more times. My Dad supervised me during the experiment and I wore protective gloves.</p> <p>Results I took pictures of the petri dishes at 30 hours and 75 hours. Using a scale of 1 to 10, I rated the amount of bacteria where 1 had no bacteria and 10 had a lot of bacteria. I completed tables and charts and computed the average amount of bacteria for each group. By assigning numerical values, I was able to determine which method worked best at cleaning a toothbrush and eliminating germs.</p> <p>Conclusions/Discussion The Aqua Blast did work better at cleaning a toothbrush and eliminating germs than plain water; however, I was surprised that the dishwasher method worked best. I was also surprised that rinsing your toothbrush off with water was not much better than doing nothing at all to your toothbrush after brushing. Most people simply rinse their toothbrushes off with water; I think they would change their habits if they saw the results of my experiment. I concluded that the dishwasher method was best, was more cost effective and may be safer for you and the environment.</p>	
Summary Statement My project was to determine the best way to clean your toothbrush.	
Help Received My Father was my designated supervisor while I did the experiment. My Father ordered the petri dishes and nutrient agar solution for me from the Internet. My Father took pictures of the petri dishes for me. My Father disposed of the petri dishes when the experiment was over.	