



**CALIFORNIA STATE SCIENCE FAIR
2005 PROJECT SUMMARY**

Name(s) Richard R. Van Horne	Project Number J1132
Project Title Is Your Cleaner Making the Grade?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals I tried to find the most effective, safest and most cost-effective bathroom cleaner.</p> <p>In PHASE ONE I thought that Tylex would work the best for preventing and killing mildew.</p> <p>In PHASE TWO I thought that Clorox spray would work the best on all germs.</p> <p>Methods/Materials I have two phases. In both phases there are 2-3 experiments using agar petri dishes and bacteria or mildew samples. I also tried the cleaner directly on the shower mildew in PHASE ONE. I tried all cleaners on the samples to both prevent growth and kill it. All experiments were repeated to test reliability and validity. All variables were carefully monitored and results were photographed. I kept a detailed journal with all measurements and observations.</p> <p>Results I found that Tylex worked the best in Phase one in both preventing and killing shower mildew. The generic brand produced more growth than the control.</p> <p>I found that Clorox spray cleaner worked the best in both preventing and killing bacteria and mildew growth. Oust, which was the most expensive, produced more growth than the control.</p> <p>I have graphed all results.</p> <p>Conclusions/Discussion I have decided that choosing a product solely by cost is not a good idea. You should always read the label. Expensive does not necessarily mean effective! Products that contain the higher levels of ammonium chloride will work the best for disinfecting bathrooms. Products with a lot of sodium hydrochloride can irritate skin and eyes so they are not safe around children. I learned there is a difference between a disinfectant and a sanitizer. Also, keeping areas dry will help prevent harmful microorganisms from growing in a bathroom.</p>	
Summary Statement I want to find the most effective, safe, and cost effective bathroom cleaner.	
Help Received My mother helped me type and organize my report.	