



**CALIFORNIA STATE SCIENCE FAIR
2003 PROJECT SUMMARY**

Name(s) Sonya Aggarwal	Project Number J0901
Project Title Got Water?	
<p style="text-align: center;">Abstract</p> <p>Objectives/Goals The purpose of my project was to test the quality of water in terms of microbial count from different water sources in different cities of the Bay Area. These sources included tap water, drinking fountain water, and refrigerator dispenser water. Tap water is chlorinated, therefore, it is expected that it should be free from any bacteria. However, refrigerator dispenser and fountain water pose a possibility of contamination, so tap water may be the cleanest or contain the least number of bacterial count.</p> <p>Methods/Materials Using sterile bottles, I collected water samples from the tap, drinking fountains, and refrigerator dispensers from Palo Alto, Saratoga, San Jose, and Santa Clara. After I measured the pH of water from various sources, I pipeted 1 ml of water into each of the 3 petri dishes from each sample and mixed it with warm liquefied nutrient agar. After the agar was solidified, I incubated all the plates for 48 hours at 37 degrees Celsius. I counted and recorded the number of colony(s) from each plate. I made some sample smears of bacteria from various sources onto glass slides. I stained them with Gram Stain, and then examined them under the microscope.</p> <p>Results The results show that the pH of water from most sources was about 7. The bacterial count was from 0 to very few in tap water, from a few to "too many to count" in both fountain water and refrigerator water. The bacteria found in the water samples were Gram-negative and Gram-positive bacilli as well as Gram-positive cocci.</p> <p>Conclusions/Discussion I concluded that tap water was the safest to drink among the four cities in the Bay Area.</p>	
Summary Statement The purpose of my project is to test the quality of water in terms of microbial count within the four various cities of the Bay Area.	
Help Received Mr. Francis Lee explained how to test the quality of water, helped me with the Gram Stain method, and microbial count. My father helped me in collecting the water samples and research some background information about water quality.	