



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Michael P. Melkonian	Project Number J1322
Project Title Testing Various Substances in Inhibiting Bacteria Growth	
Abstract Objectives/Goals The purpose of my project is to test various substances in inhibiting bacteria growth. I added substances to the bacteria to see if it would have an effect on bacteria growth. The substances I used are salt, sugar, vinegar, and garlic. The machine I used is called a spectrophotometer. It measures the amount of light that penetrates through the bacteria. No light passing through is 0% (bacteria filled) and 100% (clear). Methods/Materials 1. spectrophotometer 2. test tubes with lids 3. 5ml pipette 4. 1ml pipette 5. inoculating loop 6. strainer/paper towels 7. gas stove 8. chicken broth 9. water 10. bacteria from mouth 11. white vinegar 12. garlic 13. salt 14. sugar 15. gloves 16. Q tips 17. goggles 18. lab apron Results There were 10 tests done on each substance. Readings were recorded after 24hrs, 48hrs, 72hrs, 96hrs. Sugar was the substance that had the most bacteria and vinegar had the least amount of bacteria. Conclusions/Discussion When I used the spectrophotometer, the substance that reduced bacteria the most was vinegar at 84.95%. The next highest was garlic at 69.8%. After garlic was salt at 67.05%. Then the lowest was sugar at 56.65%. In each group the control had the lowest average except for the last group, 96hrs. This meant that the control group had the most bacteria growth overall. These averages were taken over a 4 day period.	
Summary Statement The purpose of my project was to test various substances in inhibiting bacteria growth.	
Help Received Mother helped to do my report	