



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Kiana M. Strub	Project Number J1332
Project Title Bacillus cereus + Essential Oils = ???	
Objectives/Goals The purpose of this project is to determine the effectiveness of different concentration levels of select essential oils on the growth of the bacteria, Bacillus Cereus.	
Abstract	
Methods/Materials 40 petri dishes were placed into groups of 5. 1st group: one drop of first essential oil added/mixed into nutrient agar, 2 drops added/mixed to each of 2nd group, 3 drops added/mixed into 3rd group, 4th group: no essential oil added (controlled variable). Repeated using second essential oil. Inoculated all petri dishes with Bacillus Cereus spores and incubated 56 hrs at 33 degrees Celcius. Colonies were then counted.	
Results Thyme oil (2nd essential oil) resisted the growth of the bacteria with only one drop, whereas the Peppermint oil (1st essential oil) could only inhibit the growth of the bacteria at the highest concentration.	
Conclusions/Discussion My hypothesis was correct. I concluded that the Thyme oil had great effectiveness against the bacteria, but at the highest concentration, Peppermint oil inhibited the growth of Bacillus Cereus just as well.	
Summary Statement My project is designed to test the effectiveness of different concentration levels of select essential oils on the growth of Bacillus Cereus.	
Help Received Mother helped find reference books and supervised my experiment.; D. Cornelius helped find reference books; B. Peterson loaned lab equipment to me.	