



**CALIFORNIA STATE SCIENCE FAIR  
2013 PROJECT SUMMARY**

<b>Name(s)</b> Nolan W. Yamada	<b>Project Number</b> <b>J2022</b>
<b>Project Title</b> <b>Which DoTerra Essential Oil Is Most Effective in Killing Bacteria in the Oral Area?</b>	
<b>Abstract</b> <b>Objectives/Goals</b> My objective was to determine which DoTerra essential oil was the most effective in eliminating bacteria in the oral area <b>Methods/Materials</b> I used sterile swabs to wipe Bascilus Subtilis on petri dishes then dipped filter paper circles to dip in the essential oil and place in the petri dish. I then inverted them for 48 hours. Afterwards I gave my coach all the harmful bacteria for proper disposal. <b>Results</b> My study found that the DoTerra essential oil lemongrass killed the most bacteria but when tested against oral bacteria it killed little to no bacteria. <b>Conclusions/Discussion</b> In conclusion my research found that my project was incorrect. I should have used a wider range of oils, bacteria and nutrients. I also should have started my project sooner so I could have done more trials	
<b>Summary Statement</b> My project is about discovering which DoTerra essential oil is best to kill bacteria.	
<b>Help Received</b> Mom bought all supplies. Mrs. Loflin suggested what supplies to get and she read over my drafts.	