



**CALIFORNIA STATE SCIENCE FAIR
2008 PROJECT SUMMARY**

Name(s) Daniel S. Sakakini	Project Number J1823
Project Title Does Lutein Content Vary Significantly in Domestic vs. Imported Avocados?	
Abstract Objectives/Goals The objective of my project was to see if there really was a significant difference in the nutritional benefits of avocados picked and shipped from Chile and locally grown avocados from my backyard. I thought that there might be significant differences in some nutrients, but I couldn't decide which nutrient to test. After researching my idea, I chose to test lutein, an important nutrient in avocados. Methods/Materials I used many materials in my project. I first surveyed for taste preferences comparing Chilean and local (my backyard) avocados. To test for the lutein content I needed to do Thin Layer Chromatography. It was difficult to obtain a laboratory where I could carry this out. I was finally able to do my testing at UCSD. Results My hypothesis was not supported by my results. After completing my thin layer chromatography, I found that there were almost no differences in lutein content between each avocado tested, although, according to my taste preference survey, the avocados from my backyard appeared to taste better. Conclusions/Discussion My conclusion is that one reason there may be no difference in lutein content was because all avocados have a protective skin on the outside, which helps to preserve the nutrients. Also, even local avocados are picked long before they ripen, so they will not bruise or spoil before they are purchased. This may mean that both types of avocados are picked at roughly the same point in the ripening process.	
Summary Statement My project compares flavor and lutein contents of Chilean avocados versus locally grown avocados through taste preference tests and the assessment of lutein content using thin layer chromatography	
Help Received Dr. John Kosmatka helped find Professor Pomeroy; Professor Pomeroy who provided me with a laboratory and supervision; Mr. Syed Rehan who helped me learn about thin layer chromatography	