



**CALIFORNIA STATE SCIENCE FAIR
2016 PROJECT SUMMARY**

Name(s) Shoshana H. Ellis	Project Number 36367
Project Title It Says Organic. Is It True?	
Abstract Objectives/Goals Do organic and standard fruits and vegetables have different levels of pesticides? Methods/Materials Commercial Blender, a standard centrifuge machine used for 30 minutes at the speed of 1000rpm., filters which are called filter vials, commercial Mass Spectrometer used with a liquid chromatography method. Results These tests determined that not all the pesticides were found, indicating that there were some pesticides detected. The levels are shown in parentheses and measured in kilo counts per second (kCps). The pesticides that were found in standard apples were Pyrimethanil (326.66), Chlorantraniliprole (0.95), and Thiabendazole (0.21). In standard blackberries, only Pyrimethanil (0.38) was found. In the standard carrots, Pyrimethanil (0.58), and Linuron (0.28) were found. Imidacloprid (1.58) and Azoxystrobin (5.73) were found in the standard tomatoes. In the standard cucumbers Boscalid (5.26) and Dime (3) were detected. Overall, the organic fruits and vegetables had no pesticides detected. Conclusions/Discussion The findings of pesticides did not support the hypothesis because there were no pesticides detected in the organic fruits and vegetables. A possible reason the results came out to be unexpected was because the method that was used in the test was a faster modified method. It could also be because the testing that was done through the mass spectrometer was only done using 180 types of pesticides when there are hundreds more that could have been tested.	
Summary Statement I tested to see if organic and standard fruits and vegetables have pesticides. I found that there were some pesticides in standard fruits and vegetables but no pesticides were detected in the organic foods.	
Help Received I traveled to Bruker , which is a lab in San Jose. Here I received guidance from Dr. Zicheng Yang who helped me test for my project.	