



**CALIFORNIA STATE SCIENCE FAIR  
2008 PROJECT SUMMARY**

<b>Name(s)</b> Sarah L. Pilegard	<b>Project Number</b>  28412
<b>Project Title</b> Which One Has More Vitamin C, Freshly Picked and Squeezed or Store Bought Orange Juice?	
<b>Objectives/Goals</b> My project is determining which orange juice has the most vitamin C, freshly picked and squeezed or store bought juice. My hypothesis is that the freshly picked and squeezed orange juice will have more vitamin C. <b>Abstract</b> <b>Methods/Materials</b> I used an iodine indicator solution which gave me a color variation when I added the orange juice. I then developed a color scale to judge each test. The solution consisted of cornstarch, water and iodine. I put that in test tube and then added the orange juice. If the resulting color stayed dark, that indicated there was less vitamin C in that juice, but if the resulting color was lighter than the indicator solution, then there was more vitamin C in that juice. The juice was sampled from 18 separate oranges from the same tree and 18 separate bottles of orange juice from the same brand of juice. <b>Results</b> The fresh orange juice averaged lighter on the color scale indicating more vitamin C. The store bought juice averaged darker on the color scale indicating less vitamin C. I recorded these results using numbers and colors representing the shades shown in the test tubes. <b>Conclusions/Discussion</b> The freshly picked and squeezed orange juice had more vitamin C proving my hypothesis to be correct. In my research I gained knowledge of how an indicator solution works by going through a chemical reaction and just how important vitamin C is for your body. From my experiment I learned which juice to drink to get the most vitamin C.	
<b>Summary Statement</b> Using an iodine indicator, I developed a color scale to determine whether or not freshly picked and squeezed orange juice or store bought orange juice had more vitamin C.	
<b>Help Received</b> Mother helped figure out the graphing program, used the paper cutter and took some of the pictures.	