



**CALIFORNIA STATE SCIENCE FAIR
2006 PROJECT SUMMARY**

Name(s) Martin R. Ermino	Project Number J0510
Project Title Do Different Types and Brands of Orange Juice Contain the Same Amount of Vitamin C?	
Objectives/Goals To compare the Vitamin C amount in the different types and brands of orange juice	
Abstract Methods/Materials 1. Prepare the Vitamin C indicator(Starch-Iodine). a. Add 2 grams of corn starch in 200 mL of cold distilled water. b. Boil the mixture fully in a glass bowl. c. Add 8 mL of the starch solution and 1 mL of Tincture of Iodine to one liter of water. The color of the starch solution must turn to blue. 2. In an empty 50 mL medicine cup, pour 15 mL of vitamin C indicator. 3. With the use of a clean medicine dropper, add one drop of orange juice sample to the starch indicator and swirl the liquids. Observe and record it. 4. Continue to do #3 until the indicator turns clear. 5. Repeat all the steps above three times for each sample. 6. Compute the average number of drops it takes to change the color of the indicator from royal blue to colorless for each sample. Materials: Sunny D orange juice, Florida's Natural, Minute Maid, Tropicana, Langers Pure Conc., Freshly Squeezed, medicine dropper, stirring rod, Distilled water, 50 & 10 mL medicine cups, scale, corn starch, Tincture of Iodine	
Results The graph and the chart showed that the Vitamin C amount in the different types and brands of orange juice is not the same. The amount differs by types and brands. The Langers Pure Conc. with an average number of drops of 2.5 has the highest amount of Vitamin C followed by the Freshly Squeezed orange juice with a 5.7 number of drops. The different brands of orange juice did not differ much from each other. Florida's Natural and Tropicana have an average of 11.7 and 11.0 while Sunny D and Minute Maid have 10 and 9.7 drops. There is a 100% of Vitamin C in each juice except Langers Pure Concentrate which has 130%.	
Conclusions/Discussion My hypothesis is incorrect because each type and brand of orange juice contains different amounts of Vitamin C. The Langers Pure Concentrate has the highest amount of Vitamin C because it has the least number of drops. The lesser number of drops, the higher is the Vitamin C amount.	
Summary Statement My science project is to determine if different types and brands of orange juice contain the same amount of Vitamin C.	
Help Received My dad helped buy the materials. My mom helped type my report.	