



**CALIFORNIA STATE SCIENCE FAIR  
2012 PROJECT SUMMARY**

<b>Name(s)</b> <b>Lucia Gonzalez</b>	<b>Project Number</b> <b>J0507</b>
<b>Project Title</b> <b>See C Stay: The Effect of Preservation Technique on the Amount of Vitamin C in Orange Juice</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The objective of this experiment was to learn the effect of preservation technique on the amount of vitamin C in orange juice.</p> <p><b>Methods/Materials</b> Orange juice samples were preserved in the freezer, the refrigerator, by pasteurization and by dehydration. Freezing/refrigeration required: plastic bags, orange juice, and a freezer/refrigerator. The pasteurization process required: canning jars, orange juice, a pot to boil the orange juice in, and a small graduated cylinder. The dehydration process required: home dehydrator, orange juice and plastic baggies. The iodine titration method was used to determine the amount of vitamin C in orange juice/standard vitamin C solution. This part of the process involved: burette, Erlenmeyer flask, orange juice, iodine solution, starch indicator solution, and the vitamin C solution.</p> <p><b>Results</b> The frozen samples turned out with the highest concentration of vitamin C with refrigerating in second and dehydration closely behind it. Pasteurization came out with the lowest amount.</p> <p><b>Conclusions/Discussion</b> Based on my data the first three methods had more Vitamin C than what it started out with and I chalk this up to error on my part. I also conclude that I did not test for a long enough period of time to be able to get significant results but that it is probable that freezing would preserve the vitamin C in orange juice the best. But with the data that I got, the numbers are not really different because they were only preserved for a week, not long enough to actually have noticeable change.</p>	
<b>Summary Statement</b> My project tests four different home preservation techniques of orange juice to see which one maintains the vitamin C concentration the highest.	
<b>Help Received</b> Dad made me a ring stand out of wood for lack of one and helped me squeeze the orange juice in the beginning to make the process go faster.	