



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Jaycee C. Raymond</b>	<b>Project Number</b> <b>J0418</b>
<b>Project Title</b> <b>Vitamin C Amounts in Alfalfa Sprouts</b>	
<p style="text-align: center;"><b>Abstract</b></p> <p><b>Objectives/Goals</b> The purpose of my experiment is to test if the amount of vitamin C in alfalfa sprouts changes over a period of time. Also, I want to find out if the amount of vitamin C differs between homegrown and store bought alfalfa sprouts.</p> <p>Hypothesis #1 - I think that my experiment will show that the amount of vitamin C in alfalfa sprouts will decrease over a period of time. Hypothesis #2 - I think that homegrown alfalfa sprouts will prove to have a higher amount of vitamin C than store bought alfalfa sprouts.</p> <p><b>Methods/Materials</b> Sprout juice from both homegrown and store bought alfalfa sprouts was measured and combined with a starch solution. A titration was performed with an iodine indicator solution demonstrating the relative concentration of vitamin C present.</p> <p><b>Results</b> Results of testing hypothesis #1: The number of drops of iodine used decreased each test date over a period of 23 days. This indicates that the vitamin C content of the sprouts decreased consistently over time. Results of testing hypothesis #2: Test 1 shows the vitamin C content of homegrown sprouts is higher than the store bought sprouts. Test 2 shows the vitamin C content of the store bought sprouts is higher than the homegrown sprouts.</p> <p><b>Conclusions/Discussion</b> Hypothesis #1 was correct. The results show that vitamin C content in alfalfa sprouts does decrease over time. By the time the sprouts are three weeks old, they contain almost half the vitamin C content that they had at one week old. Hypothesis #2 was not shown to be correct. The test results for Hypothesis #2, vitamin C content in homegrown versus store bought sprouts can not be considered reliable. In test 1, I believe my error in the testing procedure produced unreliable results. I should have performed this test multiple times to validate the results. Test 2 showed the store bought sprouts to be higher in vitamin C than homegrown sprouts, but I believe these results are skewed due to the age of the homegrown sprouts at the time of test 2. The homegrown sprouts were over three weeks old at the time of this test. The store bought sprouts were newly purchased.</p>	
<b>Summary Statement</b> I tested if the amount of vitamin C in alfalfa sprouts changes over a period of time and I compared the vitamin C content of homegrown to store bought alfalfa sprouts.	
<b>Help Received</b> Ms. Skiles, the science instructor at my school, loaned me all of the lab equipment necessary for my project, including glass beakers, flasks, stir rods, graduated cylinders, and safety equipment. My mother taught me how to make graphs on the computer and how to find research information.	