



**CALIFORNIA STATE SCIENCE FAIR
2012 PROJECT SUMMARY**

Name(s) Jadyn V. Reed	Project Number J0520
Project Title The Effect of Cooking on Vitamin C	
Abstract Objectives/Goals The objective of this experiment is to find the effect of cooking methods and time on the Vitamin C content in food, specifically spinach. Methods/Materials 20 grams of spinach was measured out and were cooked for 30, 60, 90, 120, 150, and 180 seconds for each of the following cooking methods: boiled, steamed, microwaved and sautéed. Raw spinach was used as the control. The spinach was then blended into a solution using the cooked spinach and 100mL of distilled water. Then 2mL of the solution was mixed with 0.5mL of starch solution. Then the solution was titrated using Iodine. Results The microwave maintained the same Vitamin C content as the control, boiling decreased Vitamin C content, while sautéing and steaming showed a higher Vitamin C content. Conclusions/Discussion The experiment showed that cooking methods do affect the Vitamin C content of the food. Time of cooking also affects the Vitamin C content.	
Summary Statement The goal of this project was to determine if cooking method and time had an effect on Vitamin C concentration in food, specifically spinach.	
Help Received Mother diluted Lugol's iodine solution and trained me how to do a titration. She also helped type the report. My father helped me organize data into spreadsheet, and programmed the spreadsheet to do the standard deviation calculation, and the calculations for Vitamin C concentration.	