



# CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

<b>Name(s)</b> <b>Dominic C. Jones</b>	<b>Project Number</b> <b>J0508</b>
<b>Project Title</b> <b>What Effect Do Different Cooking Methods Have on the Vitamin C Level of Broccoli?</b>	
<div><b>Objectives/Goals</b> The object of this project is to determine which method of cooking will maintain the most vitamin C in broccoli. The reason I am doing this investigation is to find the healthiest way to prepare broccoli.</div> <div><b>Abstract</b> I will be using raw broccoli as my control. I will use a vitamin C testing kit to determine the level of vitamin C in raw broccoli, and record the results. First I will boil broccoli for 10 minutes on the stove top in a pot of water. Then I will test with vitamin C kit and record the results. Next I will steam broccoli for 10 minutes, I will then test it with vitamin C kit and record the results. After, I will stir-fry broccoli in skillet on stove, then I will test with vitamin C kit and record results. In addition, I will microwave broccoli for 10 minutes, then I will test with vitamin C kit and record results. Finally I will grill broccoli with BBQ for 10 minutes, then I will test with vitamin C kit and record the results. I will perform ten trials per cooking methods.</div> <div><b>Methods/Materials</b> Boiling broccoli for 10 minutes took an average of 13 drops of vitamin C testing solution to turn the clear water blue. Making this the least effective method of cooking. Steaming broccoli for 10 minutes took an average of 6.8 drops of vitamin C testing solution to turn the clear water blue. Steaming broccoli for 10 minutes was the most beneficial method of cooking. Making it the best choice for healthy eating. Stir-frying broccoli for 10 minutes took an average of 7.5 drops of vitamin C testing solution to turn the clear water blue. Microwaving broccoli for 10 minutes took an average of 7.3 drops of vitamin C testing solution to turn the clear water blue. Grilling broccoli for 10 minutes took an average of 7 drops of vitamin C testing solution to turn the clear water blue. Only slightly less successful at maintain vitamin C level as steaming.</div> <div><b>Results</b> After completing this project, Steaming broccoli for only 10 minutes allowed the broccoli to supply the most vitamin C. Boiling was the least effective cooking method, containing the least amount of vitamin C. Stir-frying, grilling, and microwaving, were only slightly less successful at maintaining vitamin C level as steaming. In conclusion, I have learned to get the most nutritional benefits it is best to eat broccoli that has been steamed for 10 minutes. Although all vegetables provide nutrients to keep us healthy no matter how they are cooked.</div> <div><b>Conclusions/Discussion</b></div>	
<b>Summary Statement</b> Picking the right vegetables prepared the right way will allow us to get the most nutritional benefits, if we are going to eat our vegetables to stay healthy we should prepare them in a way that will offer the most nutrients.	
<b>Help Received</b> My Mom helped with Photos and Board.	