



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Eesha Pamula	Project Number J0514
Project Title Effects of Cooking on Different Organic and Conventional Foods	
Abstract Objectives/Goals The objective is to determine if the organic foods retain more macronutrients after cooking than the conventional foods. I believe that organic foods retain more than conventional foods because of less chemical substances used in their growth. Methods/Materials Two different foods were chosen for each macronutrient type (proteins, lipids and carbohydrates). The quantity of macronutrient is measured based on units of chemical substance (Biuret reagent for proteins, Sudan red for lipids, Benedict and Iodine solution for carbohydrates) needed to cause a color change in the food. The test is repeated three times before cooking and for three different lengths of cooking with both the organic and conventional foods. Results Before cooking, 50% of the tested organic foods showed higher nutrition than conventional foods. After cooking, 87.5% of the tested organic foods showed higher nutrition than conventional foods, the rest were equal. Tests showed 36% higher retention rate in organic Olive oil (lipids), 10% higher in organic Vitamin D Milk (proteins) and 9% higher in organic Wheat (carbohydrates). Conclusions/Discussion Not all organic foods are richer in macronutrients compared to conventional foods. However, Organic foods retain more nutrition than conventional foods upon cooking. The retention rate varies with the duration of cooking.	
Summary Statement My project studies the retention rate of macronutrients in different organic and conventional foods after cooking.	
Help Received Mother helped with purchasing the needed materials for the test.	