



# CALIFORNIA STATE SCIENCE FAIR 2015 PROJECT SUMMARY

<b>Name(s)</b> <b>Evelyn S. Olivarez</b>	<b>Project Number</b> <b>J1917</b>
<b>Project Title</b> <b>Uncovering the Hidden Glucose in Foods and Liquids</b>	
<b>Abstract</b> <b>Objectives/Goals</b> The purpose of this experiment is to determine which food or liquid contains the highest amount of glucose among orange juice, cranberry juice, Coca Cola, Diet Pepsi, lemon juice, ketchup, plain sugar water, an apple, and a pineapple. The hypothesis is that honey will have the highest amount of glucose among the selected foods and liquids. <b>Methods/Materials</b> Ten foods and liquids were gathered to test the hypothesis. A digital scale was used for measuring 5 grams of each food and liquid, and glucose test strips were used to measure the glucose levels of these. A timer was set to 30 seconds, and the test strips were compared to the glucose scale on the package. <b>Results</b> The glucose level test strip has a range from 0% to 2% glucose. After three repeated trials, cranberry juice averaged the highest reading, with an average of 1.7% glucose. A 1% glucose concentration was found in the Coca Cola, orange juice, and the mashed apple samples. Ketchup and the mashed pineapple gave a .50% glucose reading. Lemon juice had .25% of glucose. Lastly, Diet Pepsi, honey, and plain sugar water showed negative, or 0% glucose. <b>Conclusions/Discussion</b> Cranberry juice has the highest glucose levels among the tested foods and liquids. The liquids with the second highest levels of glucose were orange juice and Coca Cola, followed by the pineapple, ketchup, and then the lemon juice. Sugar water, honey, and Diet Pepsi showed the least amount of glucose. Therefore, my hypothesis was proven incorrect. I realized that the "fruit group" had the most glucose, along with Coca Cola and ketchup, which both have added sugars. Therefore, cranberry juice, orange juice, and Coca Cola are good "Fast Sugar Foods" to keep on hand for people who have low blood sugar. On the other hand, people with high blood sugar should avoid having these drinks, in order to avoid spiking up their sugar levels.	
<b>Summary Statement</b> My experiment was about finding the glucose level concentrations in ten common foods and liquids.	
<b>Help Received</b> My mother helped me when making the data graphs. My science teacher, Mrs. Gonzalez, answered all of my project questions. My father bought the necessary materials I needed for this project.	