



**CALIFORNIA STATE SCIENCE FAIR
2014 PROJECT SUMMARY**

Name(s) Dylan H. Harootunian	Project Number 34241
Project Title Sucrose to Glucose: Is Organic Baby Food Really Better?	
Abstract Objectives/Goals The objective of this experiment is to find out if organic baby food has less sugar than non-organic by testing the glucose level in different brands. Methods/Materials To do this experiment I will take multiple flavors of multiple brands, organic and non-organic, and test the glucose levels. Then I will use invertase to break down the sugars and see how the glucose levels change. The results will show much sugar the different baby foods really have. Results My results were different for each flavor, but in almost all cases the results were relatively close to one another. For peas, the results were 150 mg/dL for Beech-nut; 100 mg/dL for Gerber; 200mg/dL for Earth's Best; and 183.33mg/dL for Plum. For carrot, the results were 133.33mg/dL for Beech-nut; 116.67mg/dL for Gerber; 133.33mg/dL for Earth's Best; and 200mg/dL for Plum. For squash the results were 100mg/dL for Beech-nut; 133.33mg/dL for Gerber; 116.67mg/dL for Earth's Best; and 166.67mg/dL for Plum. For the final flavor, sweet potato, the result was 433.33mg/dL the first time. I thought this was high, so I retested with baby food with two different expiration dates to see if different batches had different sugar content. The results from the re-test were much lower, with an average of 249mg/dL. Then, for Gerber the results were 0 mg/dL. Upon further research, I found the reason was the ascorbic acid in the baby food nullifies the effect of the test strips. Then the other two tests went normally, with 183.33mg/dL for Earth's Best and 116.67mg/dL for Plum. Conclusions/Discussion My hypothesis was incorrect. I predicted that Gerber would have the highest sugar when in fact all brands had almost the same and Gerber was usually on the lower end of the results. The experiment showed that the lowest and highest results tended to be within 100 mg/dL of each other, which is actually an extremely small amount in ounces. This is about .004g of difference in total, which is barely noticeable and has a minimal effect on the body. The only exception is the odd results for the Gerber sweet potato because the ascorbic acid in the baby food nullified the effect of my test strips so I could not get results for that baby food. To conclude I will say that the difference between the brands is extremely minimal and the sugar difference has almost no effect on a person.	
Summary Statement I tested to find out if organic baby food had less sugar.	
Help Received My mother helped type the journal; father helped time tests; teacher helped with idea for retesting.	