



**CALIFORNIA SCIENCE & ENGINEERING FAIR
2018 PROJECT SUMMARY**

Name(s) Travis H. Nguyen	Project Number J0513
Project Title The Effect of Invertase and Drink Type on a Drink's Glucose Concentration Level	
Objectives/Goals Goal:	Abstract
<p>I wanted to learn if sucrose, also known as table sugar, can be converted into glucose during the human digestion process.</p>	
Methods/Materials Materials/Methods:	
<p>Invertase, Gatorade, Arizona Tea, Sunny D Juice, Coke, Glucose test strips, sucrose, graduated cylinders, disposable plastic cups, measuring spoons, pipettes. I took a sample of a drink's glucose level to determine the amount of glucose already present. Next, I added 0.5 milliliters of invertase to 15 milliliters of the drink, and waited 20 minutes, which was the linear time point. I repeated this step 44 more times for each drink. To determine the linear time point, I divided the time it took settle by 2.</p>	
Results Results:	
<p>The results showed that the more sucrose that was present in the drink, the more sucrose was converted into glucose after adding invertase. The drink with the most amount of sucrose (Coke), had an 80% increase in glucose concentration level, from 1%, to 1.8%</p>	
Conclusions/Discussion Conclusion:	
<p>My hypothesis was supported by the data because the results have shown that the drink with the most sucrose had the largest increase in glucose levels. One problem I had was that the glucose strips were still changing colors. If I did this project again, I would use a digital blood glucose monitor. People with diabetes can find out which foods are safe to moderately consume by determining the amount of glucose in the food in order to keep their blood sugar at an appropriate level. They can also be aware that they will be digesting even more glucose than what the food originally had.</p>	
Summary Statement Summary Statement: Invertase is a type of enzyme I used in order to simulate the human digestion process to determine if sucrose can be converted to glucose during the human digestion process.	
Help Received I tested and analyzed the data myself. My Science teacher reviewed my results.	