



**CALIFORNIA STATE SCIENCE FAIR
2007 PROJECT SUMMARY**

Name(s) Courtney E. Nickell	Project Number J1522
Project Title Scientific Sugars	
Abstract Objectives/Goals The objective of this project is to find out which sports drink, Gatorade, water, or CytoMax, will affect the human blood sugar level the most when drinking the designated sports drink throughout a seven mile run. Methods/Materials Informed consent was obtained from ten volunteer runners. The materials needed were: Glucometer, sterile lancets, alcohol prep pads, test strips, water, Gatorade, CytoMax, and ten healthy, non-diabetic, experienced adult runners. Runners met at the Bike Path in Bakersfield, CA. They were tested for blood sugar levels with a glucometer by a designated tester immediately before the run. Runners then ran seven miles simultaneously on the bike path, all drinking the same amount of the assigned sports drink. Runners were then tested for blood sugar levels again with a glucometer immediately after the run. Results The average results of differences in blood sugar levels before and after runs for Gatorade were 30 mg/dl. The average results of differences before and after runs for water were 15 mg/dl. The average results of differences before and after runs for CytoMax were 5 mg/dl. Conclusions/Discussion I thought it was very interesting that the blood sugar levels went up after drinking water throughout the 7 mile run. The results confirmed my hypothesis concerning how the three drinks would affect blood sugar levels. The fact that water registered higher blood sugar levels than CytoMax is indicative of the compensation that a person's body makes when it is not supplied the proper fuel in the short term. Two years ago, I did a science fair project involving the same three sports drinks: Gatorade, water and CytoMax, but testing electrolyte levels. It is interesting to see that CytoMax was superior in keeping both the electrolytes balanced and the blood sugar level consistent.	
Summary Statement The objective of this project is to find out which sports drink, Gatorade, water, or CytoMax, will affect the human blood sugar level the most when drinking the designated sports drink throughout a seven mile run.	
Help Received Mother helped with blood sugar testing. Runners volunteered for blood sugar testing.	