



**CALIFORNIA STATE SCIENCE FAIR  
2009 PROJECT SUMMARY**

<b>Name(s)</b> <b>Camila R. Dadabhoy</b>	<b>Project Number</b> <b>J2103</b>
<b>Project Title</b> <b>Got Electrolytes?</b>	
<b>Objectives/Goals</b> A brief overview of this project is to find out which drink has the most electrolytes. The main purpose of this experiment was to see which drink has the most electrolytes and to see if other drinks are better for you than to drink an energy sports drink.	
<b>Abstract</b> <b>Methods/Materials</b> Copper wire, 24 gauge, Wire cutters, Plastic tube from a pen, about one inch, 9-V battery/clip, Wires with clips, Sports drinks, Orange Juice, Distilled water, Measuring cup 1/2- cup capacity, Digital Multimeter. Procedure: 1. Use the wire cutters, cut 2 pieces of copper wire. 2. Use cutters to cut the plastic tube. 3. Wrap one piece of the wire around the tube on one side with 1 inch free. 4. Wrap the other wire on the other end, leaving 1 inch free without any contact between the wires. 5. Attach the battery clip onto the battery. 6. Attach one of the free copper wires on the conductance sensor to the red terminal (+) of the 9-V battery, using clip. 7. Attach the other copper wire from the sensor to the black terminal (-) of the multimeter, using the other clip.	
<b>Results</b> Distilled Water- No Reaction or conductance Sunny D -2nd highest in electrolytes but lots of carbohydrates based on ingredients Power Ade-4th best in electrolytes Gatorade-Almost no calories as the company claims but 3rd in electrolytes V8-Highest in electrolytes also high in carbohydrates, but lowest in calories	
<b>Conclusions/Discussion</b> Surprisingly the V8 had the most electrolytes. I observed that the V8 has the most electrolytes because the vegetables and the number of milligrams of sodium and potassium were more than all the other drinks I tested. It has the most energy and could replace the electrolytes much better than all the other drinks. Note that distilled water had hardly any electrolytes as I had expected, because it is pure. All the water does is to quench our thirst but it has no salts. Juices have relatively high concentration of carbohydrates, which is okay for morning drink, but adds carbs, which is not recommended for rehydrating during exercise. My recommendation is to stick with drinking Gatorade like I had hypothesized because it has the most electrolytes out of the other drinks tested. I would suggest that one could substitute V8 as an energy supplier to our body. After all V8 have the most electrolytes based on my observations and it is the healthiest.	
<b>Summary Statement</b> Which of the following drinks have the highest concentration of electrolytes, Distilled Water, Orange Juice, Gatorade, PowerAde, or V8?	
<b>Help Received</b> Grandfather taught me how to use the multimeter.	