The Difference between Electrolytes from Food and Drink Sources

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Electrolytes are substances that dissociate into ions when in solution and are important for one's health. While sports drinks are filled with many electrolytes, many contain unnatural sugars. Fruits and vegetables have natural sugars and electrolytes. I did this project to answer the question as to which of the three sources (sports drinks, vegetables, and fruits) contain the most electrolytes. I wanted to solve how to obtain the most amount of electrolytes and to investigate which food could be a healthier alternative. I hypothesized that sports drinks contain the most electrolytes as compared to fruits and vegetables. In my procedure, I used a multi-meter to measure the current in milliamps. Measurements were taken in triplicates for all food items and sports drinks tested. A formula was used to find the conductivity, which is proportional to the electrolyte concentration. A student ttest was performed with $p<0.05$ considered to be significantly different. The results showed that sports drinks had a significantly greater amount of electrolytes as compared to fruits and vegetables. Lastly, fruits had a significantly greater amount of electrolytes than the vegetables.

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