

Lauren La Gow

Electrolyte Challenge: Sports Drinks

Sports drinks are a very popular drink in America. Athletes use sports drinks to replace lost electrolytes. Sports drinks claim to replace these lost electrolytes in the body. The goal of this project was to determine which of these sports drinks supplied the most electrolytes. For this experiment a digital multi-meter was used for measuring electrolytes in each drink. The control was distilled water. Testing for each drink was replicated 3 times on 3 different samples. Nine bowls were labeled accordingly: Distilled Water (DH₂O), Gatorade (G), PowerAde (P), and Vitamin Water (V). A tube from a pen an inch long was cut. 2 pieces of 24 gauge wire were cut and wrapped around the ends of the tube. Battery clips were attached to a 9 volt battery with alligator clips. One of the wires on the tube was attached to the positive terminal on the battery. Another wire was attached to the black terminal on the multi-meter. The sensor was submersed in the drink sample and the results were recorded for each trial. Between each test the conducting sensor was rinsed with tap and distilled water. Average test results for 3 trials were as follows: DH₂O was 0.03 electrolytes, V water was 2.78, G water was 5.28, and P water was 6.59. Data indicated that PowerAde had the most electrolytes. If an athlete wanted the most for their money in a sports drink to replace lost electrolytes they would buy PowerAde.