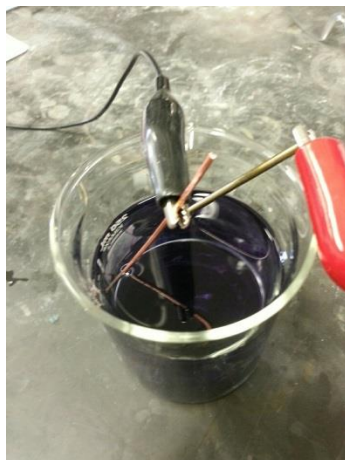




California State University of Bakersfield, Department of Chemistry

Best Electrolytic Drink



Standards:

PS1.B. Students will understand how substances combine and change.

HS-PS1-4. Develop a model to illustrate that the release or absorption of energy from a chemical reaction system depends upon the changes in total bond energy.

Introduction:

Have you ever wanted to know how much voltage is really in your drink? Well you've come to the right place! In this experiment you will be calculating the electrolytic content contained within your beverage. Electrolytes help with the cardiovascular and nervous system. Most energy drinks can be categorized into cations or anions which helps determine how electrolytic they truly are.

Materials:

- Nail
- Cut copper wire
- Voltmeter
- Alligator clips
- A small beaker
- Power drinks
- Water
- Sand paper

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Safety:

- Always have an adult with you to help you during your experiment.
- Always wear eye protection and gloves when doing chemistry experiments

Procedure:

1. Start by attaching the alligator clips to the voltmeter and their corresponding colors.
2. Now attach the copper wire to one of the clips and the nail to the other.
3. Fill the small beaker with water and place both the nail and wire in the beaker. (Don't let the wire and nail touch one another).
4. Record your observations of the voltage.
5. Now pour the water out and sand both the nail and the wire to make sure it is a smooth surface.
6. Pour the substance of choice into the beaker, and add the wire and nail into the beaker without either touching each other.
7. Record your observations.
8. Repeat this step as many times as needed depending on how many substances you have.

Data and Observations:

Drinks:	Voltage:

References:

1. <http://www.education.com/science-fair/article/electric-energy-drinks/>. (Accessed 8/5/2014).