

Research question: My question is which fruit produces the most energy, a lemon, a grapefruit, a lime, or an orange.

Data and analysis: My results show that the lime is the fruit that produces the most volts at 1.02 volts. The lemon came in second place right behind the lime at 1.01 volts only .01 volts ahead of the grapefruit.

I connected the wires to the multimeter and tested different batteries. I then connected the electrodes to the fruit. I placed the fruit on the counter for two hours, so they would all reach the same temperature before testing. I punched in the nail and penny, measuring the distance of 2 inches apart. Working quickly, I connected each electrode to the multimeter and recorded the time I continued this process, changing the fruit for each trial.

I hypothesized that the lemon would produce the most volts. My hypothesis was incorrect because the lime had .01 more volts than the lemon and the lemon was only 0.1 volts ahead of the grapefruit. I had no limitations for this experiment. Another variable that could be tested could be how many limes does it take to power a lightbulb.