

Generating electricity from fruit

A: Planning

Task

Your task is to determine which fruits will generate electricity, and to find the maximum voltage that each fruit can produce.

Materials:

Wires; voltmeter; zinc and copper electrodes; fruit (lemon, kiwifruit, apple, tomato).

Write a method for how you will go about doing this task.

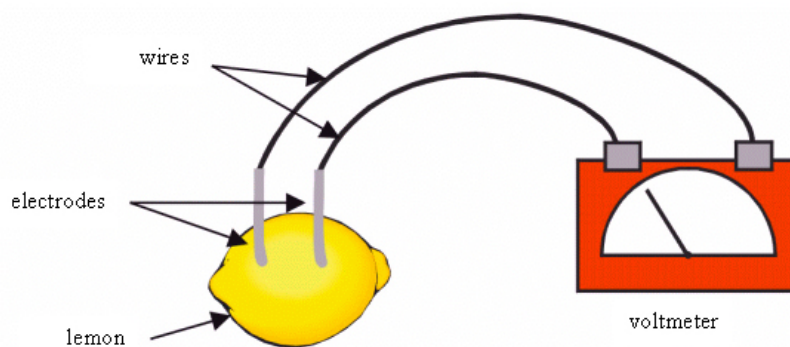
B: Processing

Draw up a table in the space below to show your results. Remember to include:

- a title for the table;
- headings for the columns; and,
- the units you need to use.

C: Evaluating

Below is a set of results from an experiment where the voltage produced by different fruits has been measured by using a voltmeter with zinc and copper electrodes. The voltage produced, as well as the pH of the fruits, has been recorded.



Fruit	pH	Voltage Produced			
		Trial 1	Trial 2	Trial 3	Average
Kiwifruit	2.8	.86	.85	.84	
Lemon	2.2	.94	.92	.93	
Tomato	4.2	.60	.62	.61	

a) Complete the "Average" column for each fruit.

b) What pattern or trend is there in the results between the pH and the average voltage produced?

c) Draw a bar graph of the results of fruit and voltage produced. Remember your graph will need:

- a title,
- a label for the fruit on the x axis,
- an even scale and units on the y axis

