

Al-Mustaqbal University

College of sciences

Department of Biology



Experiment Ohm's law

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Ohm's law

Purpose:

To verify ohm's law (the relation between I and V)

Theory:

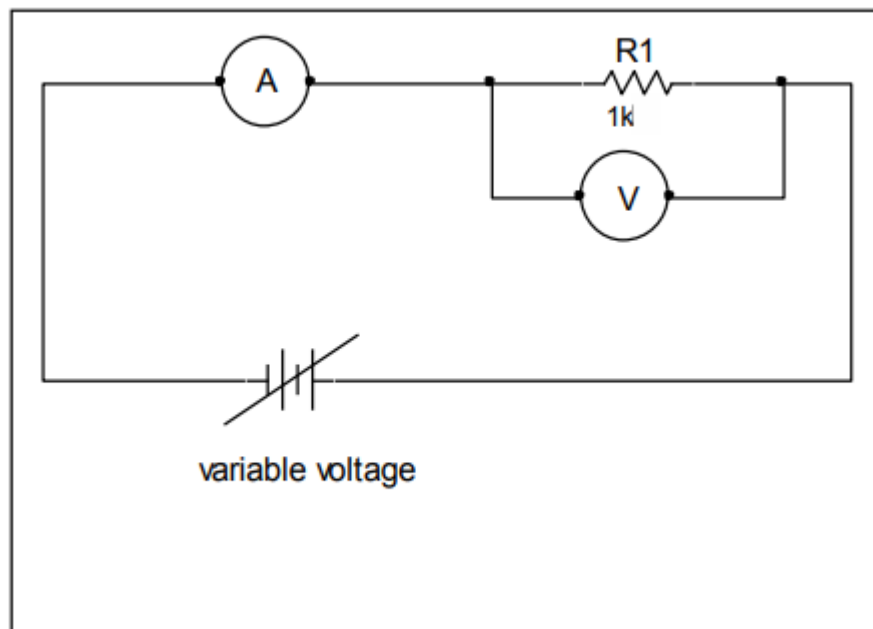
Ohm's law :the ratio of the potential (between the points in a conductor to a current at a given temp. Known as Resistance "R".

Apparatus :

Power supply, Ammeter , constant resistance "R" , voltmeter

Procedure:

- Connect the power supply "E" , the ammeter A the rheostat and the constant resistance "R" in series . then connect the voltmeter "V" in parallel with (R) as shown in fig

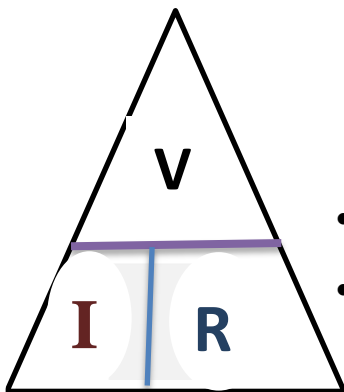


- Adjust the rheostat so that the ammeter and voltmeter are registers a convenient reading on the scale

- Record both the reading of I of the ammeter and voltmeter (V)
- Tabulate the results.

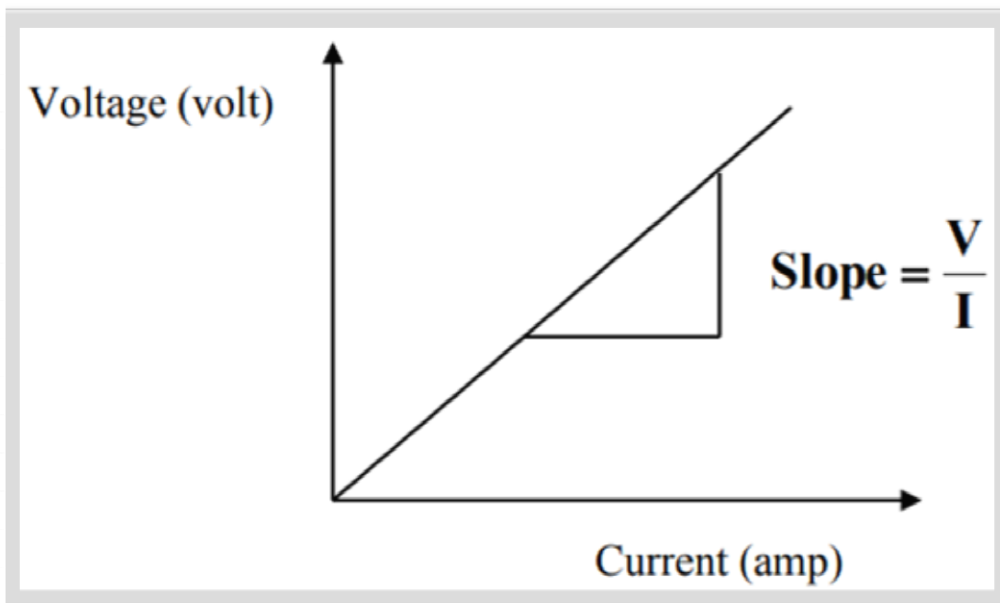
V (volt)	I (amp)	R(Ω)

R(Ω) = slope



$$R = \frac{V}{I}$$

- $V = R \cdot I$
- $I = V / R$



Discussion

- Draw the relationship between V & I form table
- Is it necessary that the relationship between V & I start with the original point (0, 0) and why?
- What does the slopes represent in V & I relationship?
- Why should the graphic be a straight line?

Q- choose the correct answer

1- What is the mathematical formula for Ohm's law?

- A- $R = V/C$
- B- $R=V/ I$
- C- $R= I/ V$
- D- $R = V/SLOPE$

2- What is the purpose of Ohm's law?

- A- To verify ohm's law (the relation between I and V)
- B- To verify ohm's law (the relation between R and V)
- C- To verify ohm's law (the relation between R and V)
- D- To verify ohm's law (the relation between R and T)

3- The slope in Ohm's law is:

- A- V/ R
- B- R/ V
- C- V/ I
- D- I/ V



تيار	a current	قانون أوم	Ohm's law
فولتيه	Volte	علاقة	relation
رسم بياني	graphic	الغرض	Purpose
المنافشة	Discussion	الجزء النظرية	Theory
الموصلات	conductors	الجهد	potential
نتائج	results	الاجهزة المستخدمة	Apparatus
ارسم	draw	الميل	the slope
تيار	a current	قانون أوم	Ohm's law

Q/What is the condition of ohm's law ?

Q\What is the use of ohm's law?

Q\What folding devices obey ohm's law ?

Q\What are the applications of ohm's law used in our daily life ?

