

WJEC Wales Physics A Level

SP Unit 2 03 : DC Circuits

Practical notes



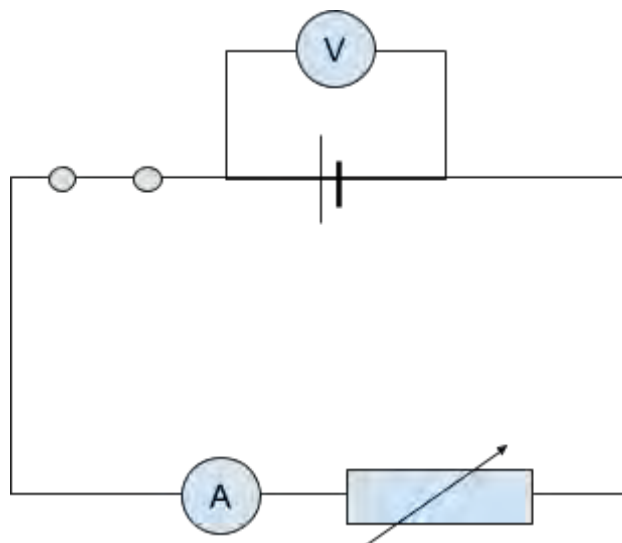
1. Determination of the Internal Resistance of a Cell

Equipment:

- Battery/cell
- Voltmeter
- Ammeter
- Switch
- Variable resistor

Method:

1. Set up the circuit as shown in the diagram.
2. Record the V reading with the switch open.
3. Set the variable resistor to maximum resistance. Close the switch and take current and voltage readings from the ammeter and voltmeter.
4. Decrease the resistance incrementally and repeat.
5. Plot a graph of V against I and draw a line of best fit.
6. Calculate the internal resistance.
 - a. Y intercept = emf, ϵ
 - b. Gradient = - internal resistance



Safety:

- The wires may get hot, so handle with care and do not exceed a current of 10A.

Tips:

- Open the switch between readings to avoid heating.

