

Practical 2 – Topic 5

The internal resistance of a cell

Criteria assessed

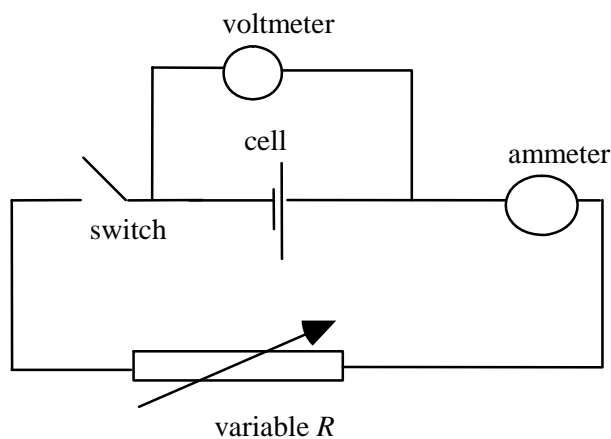
- CE

Materials needed

- Battery (size C, preferably non-alkaline)
- Variable resistor (e.g. 0–10 Ω)
- Ammeter
- Voltmeter
- Connecting wires

What to do

- Set up the circuit below.



- Measure the potential difference across the cell with the switch open.
- Set the variable resistance to its highest value and close the switch.
- Record the potential difference across the cell and the current through the circuit.
- Open the switch when you have taken your measurements.
- Change the value of the variable resistance and repeat changing the value of the variable resistance step by step.

How does your data allow you to find the e.m.f. and the internal resistance of the cell?