

2024 Higher Chemistry Paper 1 - Q23

Section: Researching Chemistry

Topic: Common Chemical Apparatus

Question summary (Q23):

Which piece of apparatus should be used to accurately measure 45 cm^3 of a solution?

Worked Solution:

- Beaker (50 cm^3): approximate, not accurate.
- Measuring cylinder (50 cm^3): more accurate than beaker, but still not precise enough.
- Burette (50 cm^3): precise for variable volumes, but not ideal for measuring out a fixed 45 cm^3 portion.
- Pipette (50 cm^3): designed to deliver a fixed, accurate volume.
- Therefore, the best choice is the 50 cm^3 pipette.

Final Answer: B — 50 cm^3 pipette

Revision Tips:

- Pipette: most accurate for fixed known volumes.
- Burette: accurate for variable volumes in titrations.
- Measuring cylinder: suitable for approximate volumes.
- Beaker: least accurate, used only for rough measurement.