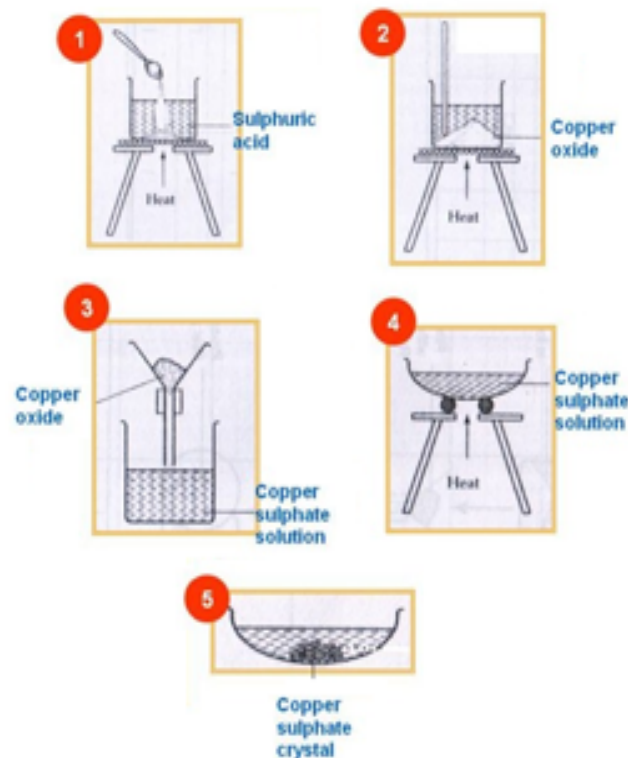


Using Insoluble Base

Copper (II) Oxide is an insoluble, black Base
Calcium Carbonate is an insoluble, white Base

Method

- Step 1** – Heat Acid for faster reaction. Add base and stir until it dissolves.
- Step 2** – Repeat until no more base dissolves (acid has been neutralised)
- Step 3** – Filter off Excess base
- Step 4** – Evaporate away some water (not all)
- Step 5** – Leave for crystals to form



Making Soluble Salts

Reading a Burette



- *Read scale carefully (scale upside-down)
- *Eye should be level with meniscus (curve)
- *Volume read at the bottom of meniscus
- *Volume recorded to 2 decimal places
- *This burette reading should be 35.60

Calculating Mean Titre

- *Only use concordant results
- *Concordant results are within 0.20 cm³
- *Record average (Mean Titre) to 2 dp even if second dp is 0
- *This burette reading should be 35.60

	Rough	reading 1	reading 2	reading 3	reading 4
final volume (cm ³)	20.05	19.80	23.10	19.80	20.05
initial volume (cm ³)	0.00	1.30	1.50	0.50	1.50
titre volume (cm ³)	20.05	18.50	21.60	19.30	18.60
concordant results		✓			✓

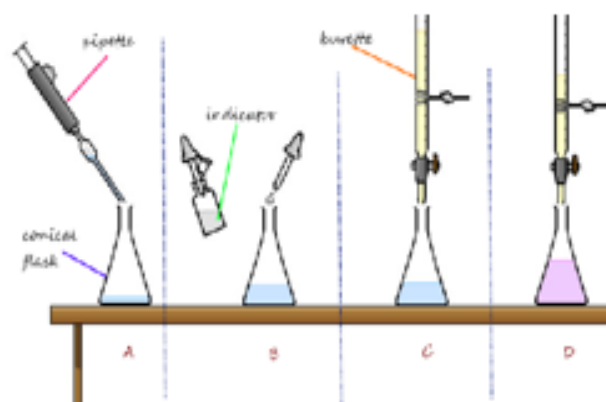
Mean Titre would be: 18.55 cm³

Using Soluble Base

Alkali or Carbonate solution

Method

- Step 1** – Fill burette with acid note opening volume
- Step 2** – Measure volume of base with pipette (not measuring cylinder) and place in flask with indicator (not Universal)
- Step 3** – Slowly add acid while swirling until colour changes. Note volume
- Step 4** – Repeat until you have 2 concordant results
- Step 5** – Calculate a **Mean Titre** – average volume of two concordant results.
- Step 6** – Repeat without indicator



Why not Universal Indicator?

Too many colours to judge end point easily

Why not use a Measuring Cylinder?

Pipettes are more accurate