GCSE Chemistry

Titration

Online Chem Tuition

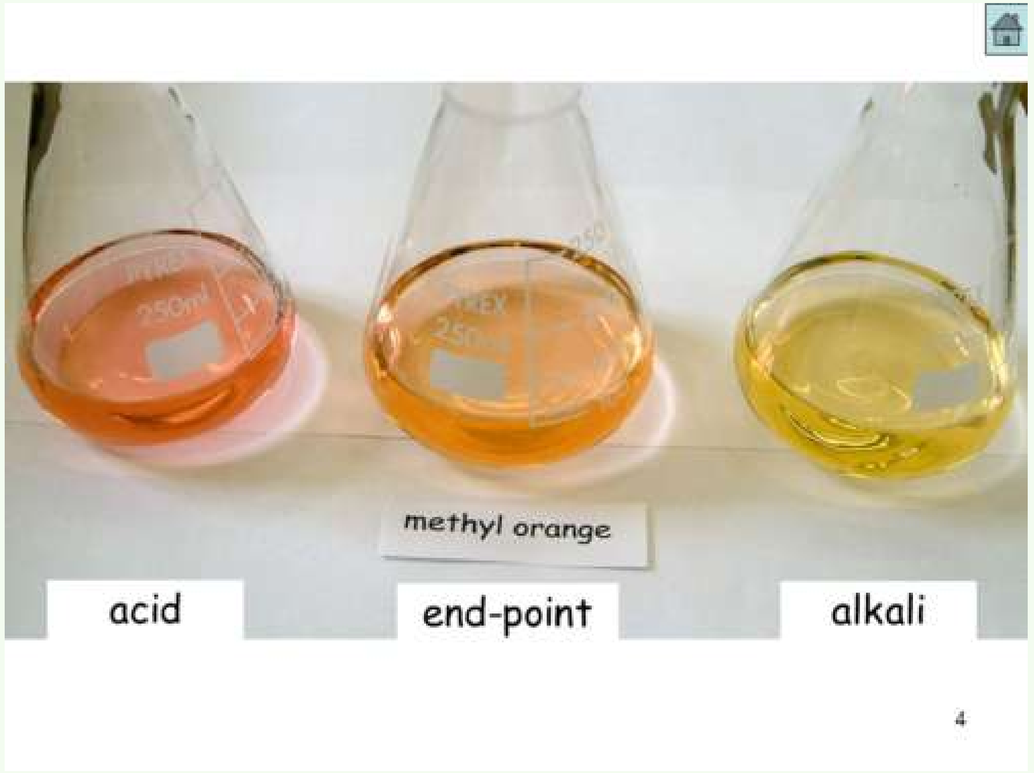
Titration

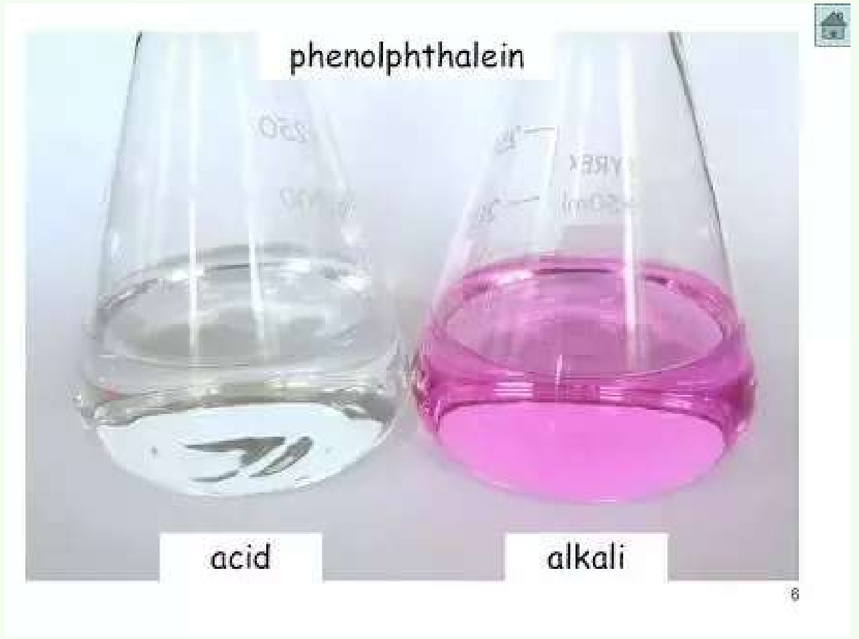
- Titrations are a very accurate way of measuring the concentration of acids and alkalis.
- In a titration, we measure the volume of an acid (or alkali), measured in a burette, needed to exactly neutralise an alkali (or acid) which has been carefully measured into a conical flask with a pipette.
- An indicator is used to judge the exact volume required to do this.

Titration Method

1) Add 25cm ^{3}alkali (or acid) into a conical flask using a pipette and place on a white tile.
2) Place the acid (or alkali) into a burette. Record the initial volume.
3) Add a suitable indicator (e.g. methyl orange, phenolphthalein)
4) Add the acid (or alkali) from the burette to the conical flask until the colour changes. Swirl the flask after each addition and add drop by drop near the endpoint.
5) Record the final reading.
6) Repeat until concordant results obtained.

Indicator

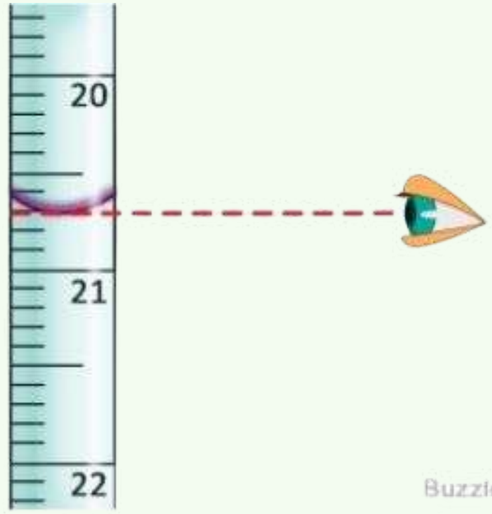




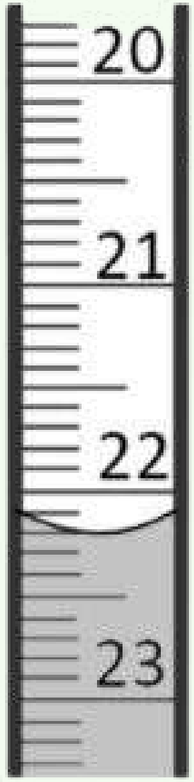
White tile used to make colour change easier to see. One drop will cause a colour change.

Reading Burette

Readings should be recorded to two decimal places, ending in 0 or 5 (where the liquid level is between two graduations on the burette).



1



2

3

4

Concordant Results

These are titres within 0.20 cm^3 (Edexcel) or 0.10 cm^3 (AQA) of each other.

Run	End vol	Start vol	Titre
Rough	25.45 cm^3	0.00 cm^3	25.45 cm^3
1	24.80 cm^3	1.00 cm^3	23.80 cm^3 ✓
2	47.90 cm^3	23.80 cm^3	24.10 cm^3
3	23.70 cm^3	0.00 cm^3	23.70 cm^3 ✓

Calculate the mean titre using the concordant data only.