

TITRATION



WHAT TITRATION IS:

A way to find an unknown concentration by reacting it with a solution whose concentration you already know.

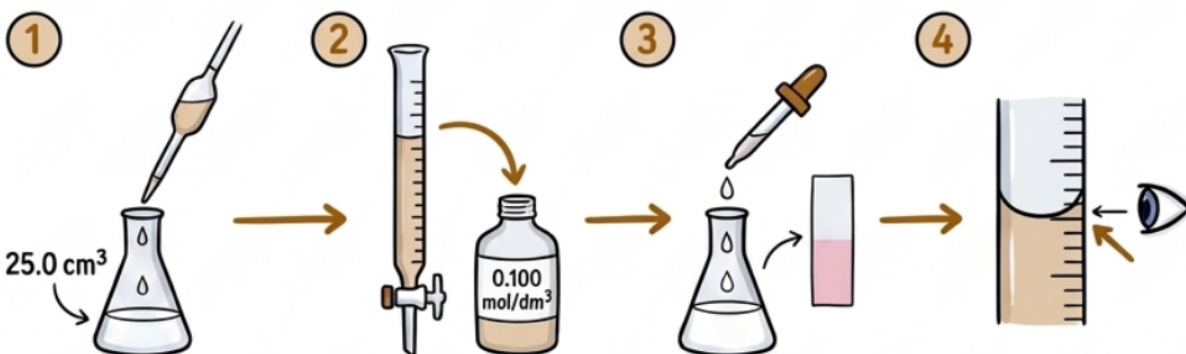


WHY IT MATTERS:

It turns a colour change into a hard number, so labs can measure acidity, purity and dosage.

SETTING UP

Everything you measure out before a single drop is added



1
THE ANALYTE
The solution of unknown concentration. A pipette measures an exact volume into a conical flask.

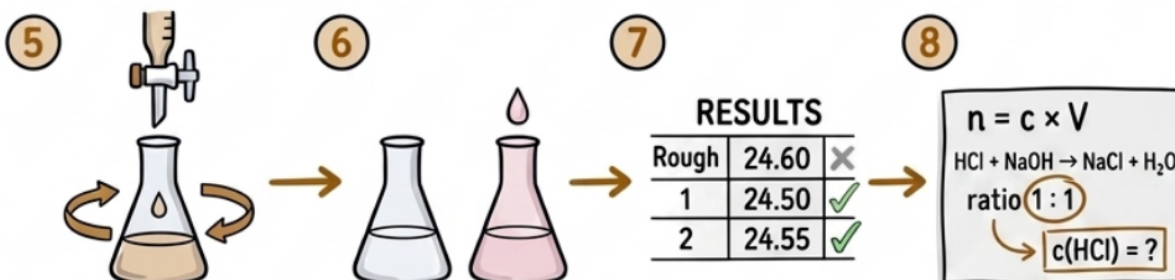
2
THE STANDARD
A solution whose concentration is known exactly. It goes in the burette and is called the titrant.

3
THE INDICATOR
Two or three drops of a dye that changes colour sharply when the reaction is complete.

4
FIRST READING
Record the starting burette volume before you begin, reading the bottom of meniscus at eye level.

FINDING THE ANSWER

How the colour change becomes a concentration



5
ADD AND SWIRL
Run the titrant in while swirling the flask, then slow to one drop at a time near the end.

6
THE ENDPOINT
The first permanent colour change. One extra drop is all it takes to tip it over.

7
THE TITRE
Final reading minus first reading. Repeat until two results agree within 0.10 cm³.

8
THE MATHS
Moles equal concentration times volume. The balanced equation gives the ratio that unlocks the unknown.

RESULTS		
Rough	24.60	✗
1	24.50	✓
2	24.55	✓

