

Back Titrations

Chemistry

When the substance cannot be titrated directly.

Used for insoluble solids or slow reactions.

1

Add a known excess of reagent

Enough to react completely with the sample.

2

Allow the reaction to complete

Warming or standing, as required.

3

Titrate the unreacted excess

With a standard solution.

4

Subtract

Moles reacted = moles added – moles remaining.

5

Apply the mole ratio

To find the original sample.

TYPICAL USE

Calcium carbonate in an indigestion tablet

Insoluble, so it cannot be titrated directly

Dissolve in excess acid, titrate the leftover acid

The commonest error is forgetting to subtract. The titre measures what did NOT react with the sample.