

Titration Calculations

Chemistry

The four-step method that works for every titration question.

The standard route.

1

Moles of the known solution

$n = c \times V$, with V in dm^3 .

2

Use the equation's mole ratio

From the balanced equation, not from the volumes.

3

Moles of the unknown

Apply the ratio.

4

Concentration

$c = n \div V$.

5

Scale if diluted

Multiply back by the dilution factor.

WATCH FOR

cm^3 to dm^3 : divide by 1000

Diprotic acids: the ratio is 1:2

A stated dilution before titration

Sulfuric acid is diprotic: one mole reacts with two moles of sodium hydroxide. Missing that halves every answer.