



Microscale titration

Integrated instructions



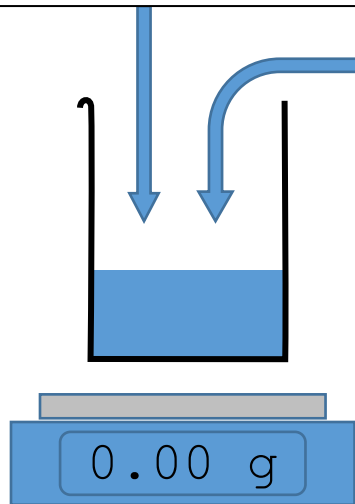
Integrated instructions

Integrated instructions use clear numbering, arrows and simple pictograms (for example, an eye showing when to make observations). They were developed using cognitive load theory and remove unnecessary information. Integrated instructions reduce extraneous load on learners, increasing the capacity of their working memory to think about what they are doing and why.

Read more at rsc.li/47bIKi5.

Full technician notes, including safety, preparation and disposal, are available from rsc.li/4iclogx.

1 1 drop phenolphthalein.
Take the mass, **M1**



2 1 cm³ vinegar. Take
the mass, **M2**

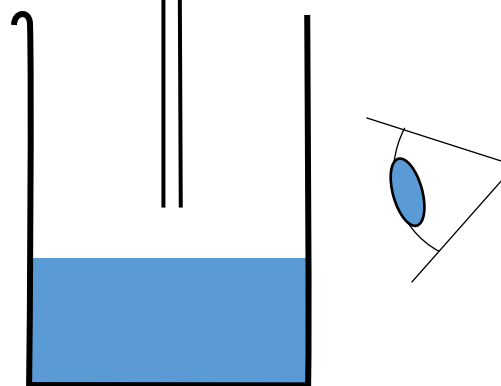
3 Fill pipette with NaOH

4 Clamp pipette gently

5 Carefully tighten
clamp to add 1 drop
NaOH

6 Swirl vial

7 Repeat steps **5** and **6**
until permanent pink. Take
the mass, **M3**



RSC Microscale chemistry

Gravimetric titration

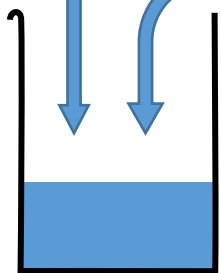
Downloaded from rsc.li/4iclogx

Based on a method developed by CLEAPSS



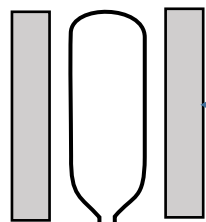
1 1 drop phenolphthalein

2 1 cm³ vinegar



3 Fill pipette with NaOH

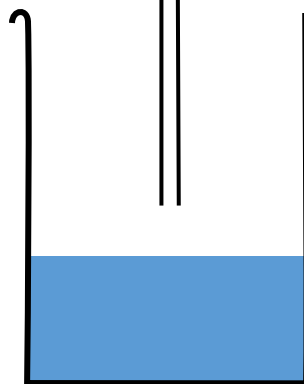
4 Clamp pipette gently



5 Carefully tighten clamp to add 1 drop NaOH

6 Swirl vial

7 Repeat steps 5 and 6, counting the drops, until permanent pink



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Volumetric titration

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Based on a method developed by CLEAPSS

