

0620 Chemistry June 2025 QP 11

- 38** A student measures 25.00 cm^3 of dilute hydrochloric acid accurately.

Which piece of apparatus is most suitable?

- A** beaker
- B** measuring cylinder
- C** burette
- D** dropping pipette

Answer: C

- 39** Excess solid magnesium oxide is added to dilute nitric acid.

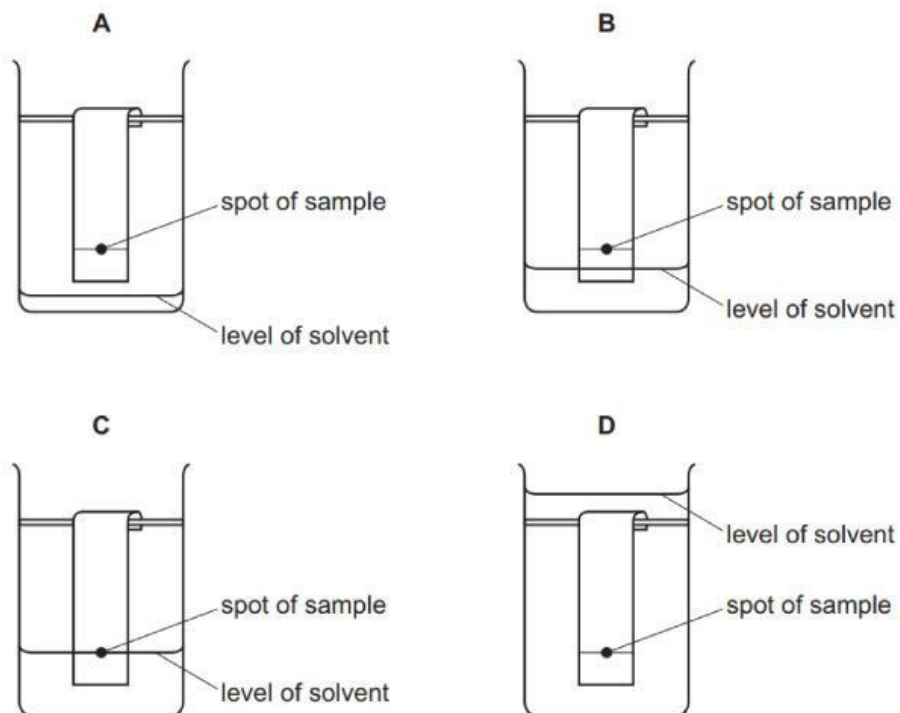
Which separation technique is used to remove the excess solid magnesium oxide after the reaction finishes?

- A** chromatography
- B** crystallisation
- C** distillation
- D** filtration

Answer: D

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38 Which diagram shows the correct level of solvent at the start of a chromatography experiment?



Answer: B

39 Which process is used to separate a mixture of liquids with different boiling points?

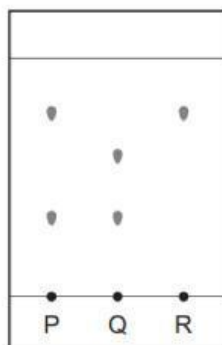
- A dissolving
- B crystallisation
- C filtration
- D fractional distillation

Answer: D

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39 Three coloured inks, P, Q and R, are tested using paper chromatography.

The chromatogram is shown.



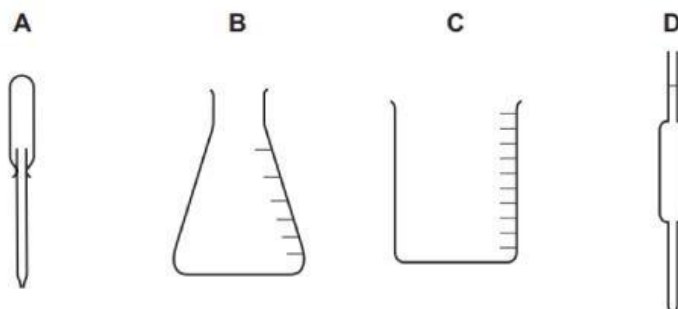
Which statement is correct?

- A** P is a pure substance.
- B** P and Q have a colour that could be the same in both inks.
- C** The top line of the chromatogram is called the baseline.
- D** All the colours in R are also in Q.

Answer: B

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38 Which item of apparatus is used to measure 25.0 cm^3 of aqueous sodium hydroxide?



Answer: D

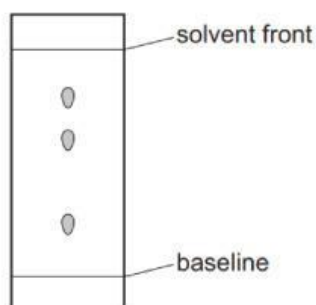
39 Which method is used to obtain copper(II) sulfate crystals from an aqueous solution of copper(II) sulfate?

- A chromatography
- B condensation
- C evaporation
- D filtration

Answer: C

40 A mixture of four different colourless amino acids is analysed by paper chromatography.

The final chromatogram is shown.



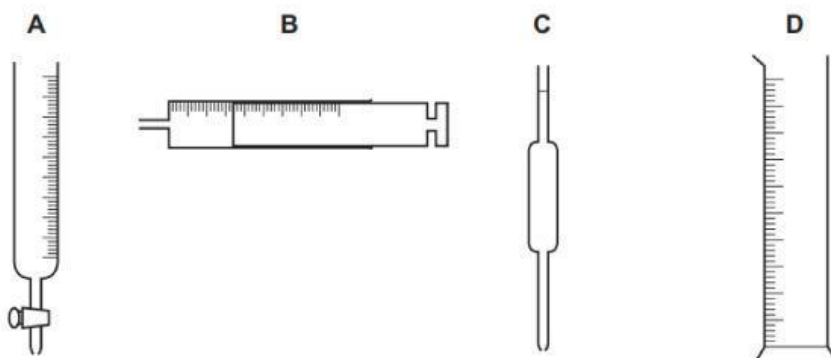
Why does the chromatogram only show three spots?

- A A locating agent is **not** used.
- B One of the amino acids is insoluble in the solvent.
- C The solvent front is too near the top of the paper.
- D Two of the amino acids have the same R_f value.

Answer: D

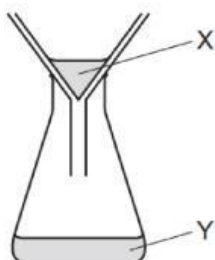
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38 Which item of apparatus is used to measure exactly 26.3 cm^3 of a liquid?



Answer: A

39 A mixture containing an aqueous salt and an insoluble salt is filtered.



Which row describes X and Y?

	X	Y
A	solute	pure water
B	solute	filtrate
C	residue	pure water
D	residue	filtrate

Answer: D

40 Pure ethanol has a melting point of -114°C and a boiling point of 78°C .

What are the melting and boiling points of a sample of ethanol with glucose dissolved in it?

	melting point/ $^{\circ}\text{C}$	boiling point/ $^{\circ}\text{C}$
A	-116	77
B	-116	79
C	-112	77
D	-112	79

Answer: B

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38 The steps used to separate a mixture of a soluble solid and an insoluble solid are listed.

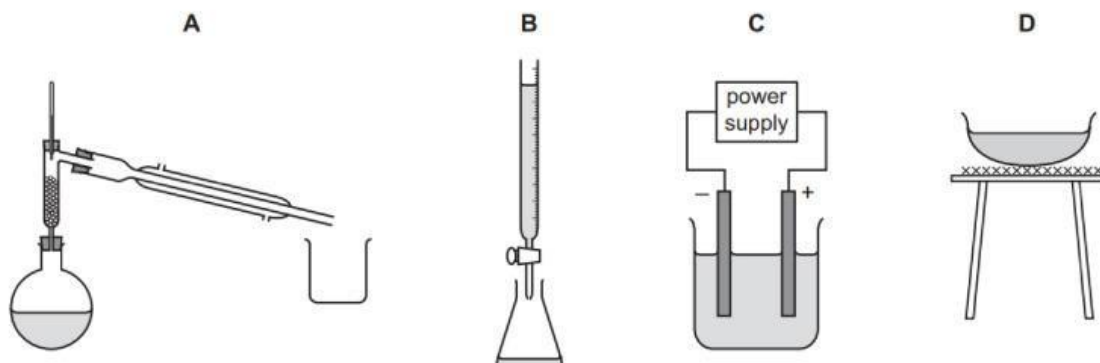
- A solution is made by adding the mixture to a suitable1..... .
- The mixture is stirred and then poured through a filter funnel lined with filter paper.
- The insoluble solid is collected on the filter paper as the2..... .

Which words complete gaps 1 and 2?

	1	2
A	solute	filtrate
B	solute	residue
C	solvent	filtrate
D	solvent	residue

Answer: D

39 Which items of apparatus are used to separate a mixture of liquids with different boiling points?



Answer: A

40 In paper chromatography, what is the equation for the R_f value?

- A $R_f = \frac{\text{distance travelled by solvent}}{\text{distance travelled by substance}}$
- B $R_f = \frac{\text{distance travelled by locating agent}}{\text{distance travelled by substance}}$
- C $R_f = \frac{\text{distance travelled by substance}}{\text{distance travelled by locating agent}}$
- D $R_f = \frac{\text{distance travelled by substance}}{\text{distance travelled by solvent}}$

Answer: D