



Oxford Cambridge and RSA

GCSE Chemistry B (Twenty First Century Science)

J258/03 Breadth in chemistry (Higher Tier)

Question Set 26

1

Beth has some tablets that react by fizzing, and then dissolving, when water is added.

Beth puts a whole tablet into **Tube A**, and a broken-up tablet into **Tube B**.

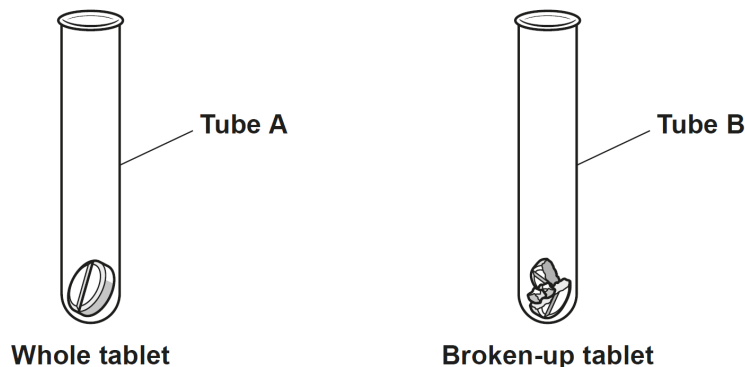


Fig 1.1

(a) Beth wants to measure the rate of the two reactions. This is Beth's method:

- Add the same volume of **cold** water to each test tube at the same time.
- Start a stopwatch.

(i) When should Beth stop the stopwatch?

Tick (✓) **one** box.

When the bubbles start to appear.

When the fizzing starts.

When the fizzing stops.

When only a small amount of tablet is left.

[1]

(ii) Which type of tablet, whole or broken-up, will dissolve more quickly?

Whole tablet

Broken-up tablet

Explain your answer.

Use ideas from the particle model in your answer.

[2]

(b) Suggest **one** reason why the reactions are much faster using **hot** water.

[1]

- (c) **Fig. 2.2** shows how the mass of **Tube A** and its contents changes over time when cold water is added.

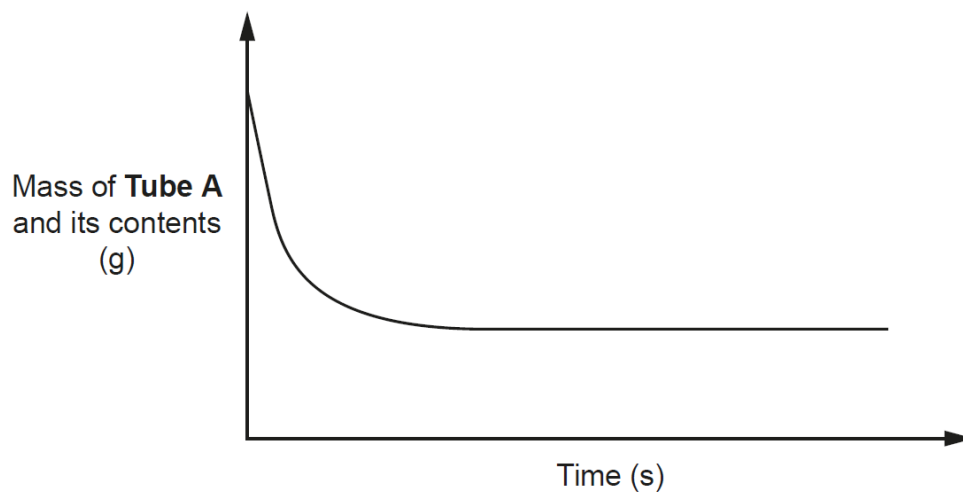


Fig 1.2

- (i) Using **Fig. 2.2**, explain why the mass of **Tube A** and its contents decreases during the reaction. [1]
- (ii) The rate of the reaction decreases with time.
Describe how **Fig. 2.2** shows this. [1]
- (iii) Explain why the rate of reaction decreases with time. [1]

Total Marks for Question Set 26 : 7

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