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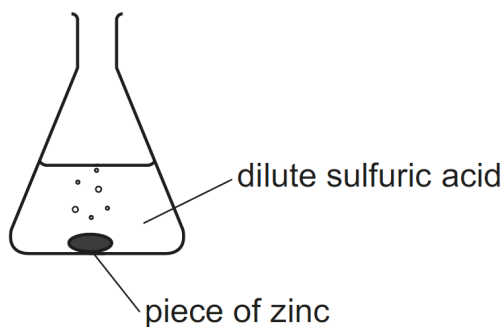
GCSE Chemistry B (Twenty First Century Science)

J258/03 Breadth in chemistry (Higher Tier)

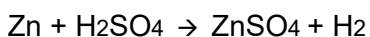
Question Set 20

1

Sundip reacts zinc with dilute sulfuric acid.



This is the equation for the reaction:



(a) Sundip drops a **piece** of zinc into some dilute sulfuric acid.

She then drops some zinc **powder** into the dilute sulfuric acid.

Which reaction is faster?

Explain your answer.

[1]

(b) Sundip adds some blue copper sulfate solution to the sulfuric acid. She then drops in a piece of zinc.

Sundip thinks copper sulfate is a catalyst.

Describe **two** things that Sundip would observe if copper sulfate is a catalyst.

[2]

(c) (i) Sundip uses 6.5 g of zinc and excess acid. All the zinc reacts.

Calculate the **volume** of hydrogen is made at room temperature and pressure.

Use the formula: number of moles of gas = $\frac{\text{volume of gas in sample}}{24}$

Give your answer to **2** significant figures.

One mole of gas at room temperature and pressure has a volume of 24 dm³.

Volume of hydrogen = dm³ [2]

(ii) Sundip repeats (c)(i) with a catalyst present.

How does the volume of hydrogen compare with the volume calculated in part (c)(i)?

Give **one** reason for your answer.

[2]

Total Marks for Question Set 20 : 7

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