

- (ii) The experiment was repeated using the same mass of **powdered** magnesium carbonate with the same volume and concentration of dilute hydrochloric acid.

Explain how the initial rate of reaction and total volume of gas collected would compare to the first experiment.

initial rate of reaction

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total volume of gas

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[4]

- (b) A piece of magnesium ribbon was cleaned. The experiment was repeated using this clean magnesium ribbon instead of magnesium carbonate.



This reaction is exothermic.

The rate of the reaction gradually increased over the first 2 minutes.

Explain why the rate of the reaction increased.

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[5]