



- Take a known mass of lumps of CaCO_3 .
- Add them to a known volume of known conc. of HCl at 25°C .
- Measure the volume of CO_2 produced using gas syringe per unit time.
- Repeat the exp. at 50°C .
- The exp. at 50°C produce CO_2 with less time.

② Surface Area:-

↪ state how the S.A affect rate of reaction.

As the ~~conc~~ S.A increases, the rate of reaction increases!

↪ Explain how S.A affect rate of reaction

- As S.A \uparrow , rate of reaction \uparrow
- (Decrease the particle size by crushing using mortar + pestle)
- more particles exposed to the reaction.
- more effective collisions per unit time.
- So faster rate.

↪ plan an exp. to show how S.A affect rate of reaction.

same, exp 2 \rightarrow temp $\rightarrow 25^\circ\text{C}$

exp 2 \rightarrow powder not lumps.

③ Concentration "Amount":

↪ state how the concentration affects rate of reaction.

As the conc. increases, rate of reaction increases.

↪ Explain how the conc. affect rate of reaction.

- As the conc. increase.
- More particles
- More effective collisions per unit time.