

THEORY

The theory of the present experiment is based on the fact that the rate of reaction between a metal and an acid is directly proportional to the surface area of the metal. In this experiment, the rate of reaction between magnesium metal and hydrochloric acid is studied. The reaction is as follows:

$$\text{Mg} + 2\text{HCl} \rightarrow \text{MgCl}_2 + \text{H}_2$$

The rate of reaction is measured by the volume of hydrogen gas evolved over a given period of time. The rate of reaction is expected to increase with the surface area of the magnesium metal used.

Time (min)	Volume of H ₂ (ml)
0	0
1	10
2	20
3	30
4	40
5	50
6	60
7	70
8	80
9	90
10	100

EXPERIMENT

