

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 other words, the larger the surface area of the metal, the faster the reaction will proceed. This is because a larger surface area provides more contact points for the acid molecules to react with the metal atoms.

PROCEDURE

1. Weigh a precise amount of metal (e.g., 0.1g) and place it in a beaker.

2. Add a fixed volume of acid (e.g., 10ml) to the beaker.

3. Measure the time taken for the reaction to complete (e.g., gas evolution stops).

4. Repeat the experiment for different surface areas of the metal.

5. Plot a graph of time taken versus surface area. The graph should show a hyperbolic relationship, indicating that the rate of reaction is inversely proportional to the time taken.

EXPERIMENT

