

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 rate of reaction is directly proportional to the length of the metal strip used. This is because the larger the surface area of the metal, the more acid molecules will be in contact with it, and the faster the reaction will proceed.

APPARATUS

- 1. Dilute hydrochloric acid
- 2. Magnesium ribbon
- 3. Test tube
- 4. Delivery tube
- 5. Gas jar
- 6. Water trough
- 7. Stopwatch
- 8. Measuring cylinder
- 9. Glass plate
- 10. Stand and clamp

Procedure: The apparatus is set up as shown in the diagram. A small piece of magnesium ribbon is placed in a test tube containing dilute hydrochloric acid. The test tube is inverted and placed in a water trough. The gas evolved is collected in a gas jar by downward displacement of water. The time taken for the gas to fill the gas jar is measured using a stopwatch.

EXPERIMENT

