

Energy changes in neutralisation – student sheet

In this experiment you will be using a special temperature strip to study energy changes in two chemical reactions.

You must wear eye protection.

Procedure

1. Put two drops of dilute hydrochloric acid on each marked section of the temperature strip.
2. Add a small piece of magnesium ribbon to each drop.
3. Observe and explain your findings.
4. Wipe the strip clean with tissue paper.
5. Put one drop of hydrochloric acid on the strip in each of the places marked by the arrows.
6. Add one drop of sodium hydroxide to each drop of acid.
7. Observe and explain your findings.

Health, safety and technical notes

- Wear eye protection throughout (splash-resistant goggles to BS EN166 3).
- Hydrochloric acid, $2 \text{ mol dm}^{-3} \text{ HCl(aq)}$, is of low hazard.
- Sodium hydroxide solution, $2 \text{ mol dm}^{-3} \text{ NaOH(aq)}$, is CORROSIVE.
- Magnesium ribbon is FLAMMABLE.