

Properties of Acids and Bases

Chapter 2: Acids, Bases and Salts · Topic 1

Key Concept

Acids react with metals like zinc or magnesium to produce hydrogen gas and a salt (e.g., $\text{Zn} + 2\text{HCl} \rightarrow \text{ZnCl}_2 + \text{H}_2$), which can be tested using a burning splint that produces a characteristic 'pop' sound. Acids and bases both react with metal carbonates to release carbon dioxide gas, which turns limewater milky — a test used to confirm the presence of CO_2 . The strength of an acid or base is measured by how completely it ionises (splits into ions) in water — strong acids like HCl ionise almost completely, while weak acids like acetic acid ionise only partially.

Quick Revision Notes

- Acids release H^+ ions in water; turn blue litmus red; react with metals to release H_2 gas.
- Bases release OH^- ions in water; turn red litmus blue; feel soapy.
- The hydrogen gas test uses a burning splint, producing a 'pop' sound.
- Strong acids/bases ionise almost completely in water; weak ones ionise only partially.

Practice Questions

- 1 Write the reaction of zinc metal with dilute hydrochloric acid.
- 2 Explain the difference between a strong acid and a weak acid in terms of ionisation.
- 3 Describe the test used to confirm the presence of hydrogen gas.