

Practice and Revision - Study of Compounds - Sulphuric Acid

Chapter 11: Study of Compounds - Sulphuric Acid · Topic 2

Key Concept

Sulphuric acid is manufactured industrially by the Contact process, involving the oxidation of sulphur dioxide to sulphur trioxide using a vanadium pentoxide catalyst.

Concentrated sulphuric acid acts as a strong dehydrating agent, removing water from substances like sugar, turning it black through charring.

Dilute sulphuric acid shows typical acidic properties, reacting with metals, bases, and carbonates to produce sulphate salts.

Sulphuric acid is widely used in manufacturing fertilisers, detergents, and in various industrial processes, earning it the title 'king of chemicals'.

Quick Revision Notes

- Industrial prep: Contact process.
- SO_2 oxidised to SO_3 using V_2O_5 catalyst.
- Concentrated H_2SO_4 : strong dehydrating agent.
- It chars sugar by removing water.
- Dilute H_2SO_4 shows typical acidic properties.
- It reacts with metals, bases, carbonates.
- Uses: fertilisers, detergents, industrial processes.
- Called the 'king of chemicals'.

Practice Questions

- 1 Describe the Contact process for manufacturing sulphuric acid.
- 2 Explain the dehydrating property of concentrated sulphuric acid.
- 3 Write the reaction of dilute sulphuric acid with zinc.
- 4 Research industrial uses of sulphuric acid.
- 5 Discuss why sulphuric acid is called the 'king of chemicals'.
- 6 Explain sulphuric acid's properties in your own words.