

Physical and Chemical Changes

Chapter 10: Physical and Chemical Changes · Topic 1

Key Concept

Physical changes, like dissolving sugar in water or cutting paper, don't create new substances and are often reversible.

Chemical changes, like burning, rusting, or fermentation, form new substances with different properties and are usually irreversible.

Signs of chemical change include gas formation, colour change, precipitate formation, temperature change, and the production of light or sound.

Distinguishing physical from chemical changes is fundamental to understanding chemical reactions and predicting substance behaviour.

Quick Revision Notes

- Physical changes don't create new substances.
- Examples: dissolving sugar, cutting paper.
- Physical changes are often reversible.
- Chemical changes create new substances.
- Examples: burning, rusting, fermentation.
- Chemical changes are usually irreversible.
- Signs include gas formation and colour change.
- Distinguishing these is fundamental to chemistry.

Practice Questions

- 1 List three physical and three chemical changes.
- 2 Discuss why fermentation is a chemical change.
- 3 Explain why dissolving sugar is a physical change.
- 4 Research a sign that indicates a chemical reaction.
- 5 Discuss why chemical changes are usually irreversible.
- 6 Create a chart comparing physical and chemical changes.