

Physical and Chemical Changes

Synopsis

- Most of the changes occurring around us can be classified into physical and chemical changes.
- Properties like the shape, size, colour and the state of a substance are called physical properties.
- A change in the physical properties of a substance is called a physical change.
- Physical changes are usually reversible and no new substances are formed.
- A change in which one or more new substances are formed is called a chemical change.
- Chemical changes take place because of chemical reactions.
- Exchange of heat, light, sound, smell or colour can be observed in chemical changes.
- Chemical changes are irreversible.
- The process of coating iron with a layer of zinc to protect it from rusting is called galvanization.

- The formation of large crystals of pure substances from their solutions is called crystallization. It is a physical change.
- Differences between physical and chemical changes:

Physical Changes	Chemical Changes
(i) Change is temporary (ii) It can be reversed. (iii) No new substances are formed. Only physical properties of the substances change. (iv) No energy change takes place	(i) Change is permanent. (ii) It cannot be reversed by simple chemical or physical means. (iii) New substances with different chemical properties are formed (iv) Energy changes take place.