Physical and Chemical Changes

Introduction

Every day we come across many changes that are taking place all around us. These changes may involve one or more substances. Sometimes, milk becomes sour. Souring of milk is a change. Making a sugar solution is a change. Similarly, setting of curd from milk is a change.

Some changes that we have noticed around us are melting of ice, making of ice cream, melting of wax, stretching a rubber band, evaporation of water, cutting of paper, breaking of glass pane , etc.

Broadly, these changes are of two kinds:

1. Physical changes
2. Chemical changes

Physical Changes

Properties such as shape, size, color, physical state, temperature, etc. are called physical properties.

A change, in which only the physical properties of any substance get changed and no new substance is formed is called **physical change**.

Some examples of physical changes are:

- Evaporation or condensation of water.
- Dissolution solution of common salt or sugar in water.
- Melting of a solid on heating and freezing of a liquid on cooling.
- Glowing of an electric bulb.
- Breaking of a wooden stake etc.

Physical and Chemical Changes

Characteristics of a Physical Changes

- During a physical change only physical properties of the substance change.
- No new substances are formed during a physical change.
- Physical changes can be generally reversed.
- Only a little heat (if any) is absorbed or given off during physical change.

Chemical Changes

A change in which composition and chemical properties of the substance get changed is called a **chemical change.**

During a chemical change one or more new substances are formed.

The properties of the new substance formed are different from those of the original substance.

Chemical changes occur only under proper conditions.

Some examples of chemical changes are:

- Burning of coal, wood, paper, etc.
- Burning of candle
- Rusting of iron
- Formation of curd from milk
- Cooking of food
- Digestion of food, etc.

Physical and Chemical Changes

Characteristics of a Chemical Changes

- When a chemical change occurs, new substances with entirely new properties are formed.
- A chemical change cannot be easily reversed.
- There is usually a change in weight during a chemical reaction.
- A lot of heat is usually given off or absorbed during a chemical change.
- Chemical changes occur only under proper conditions.