

Physical Change And Chemical Change

Physical and Chemical Changes

A matter is anything that has mass and occupies space. It is made up of tiny particles and has physical and chemical properties. Physical properties of matter include its appearance and melting and boiling points, etc. A chemical property is a property exhibited during a chemical reaction. This includes pH, reactivity, inflammability, etc. Let's learn about Physical and Chemical Changes, how they are related to physical and chemical properties.

Everything around us undergoes certain changes. Changes can be either physical or chemical.

Physical change

When matter changes its observable properties, we can say it has undergone a physical change. Physical change is a type of change where the physical properties of matter change. A change of state of matter, change in color, odor, solubility, etc. all are examples of physical change. During a physical change, neither the composition nor the chemical nature of matter is changed. During this change, molecules rearrange themselves without affecting the internal composition. A physical change doesn't affect the chemical property.

A common example of physical change is the conversion of states of water. Ice, water, and steam are the three physical states of water. But all the three forms contain H₂O. Other examples are whipping egg albumin, crushing of tomato, breaking of a bar magnet, etc.



Chemical change

Different substances have different chemical properties. According to these properties, substances show variation in their reactivity.

Chemical change is a type of change where the chemical properties of matter change. It is commonly called a chemical reaction. A chemical reaction results in a new product. During a chemical change, bonds between the molecules break and the composition of the substance changes. In other words, chemical change leads to the breaking and making of bonds. Combustion, rusting, fermentation, etc. are few examples of chemical change.



The following table shows major differences between a physical and chemical change.

PHYSICAL CHANGE	CHEMICAL CHANGE
Change in physical property	Change in physical and chemical property
Reversible process	Irreversible process
Energy is neither absorbed nor evolved	Energy is either absorbed or evolved
No new product formation	New product is formed