

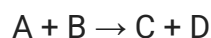
Vidya bhawan, balika vidyapiteh, class 9th

Subject- chemistry by soni Kumari

Law of Chemical Combination

Given by Lavoisier and Joseph L. Proust as follows:

1. **Law of conservation of mass:** Mass can neither be created nor destroyed in a chemical reaction. e.g.,



Reactants \rightarrow Products Mass of reactants = Mass of products

2. **Law of constant proportion:** In a chemical substance the elements are always present in definite proportions by mass.

E.g., in water, the ratio of the mass of hydrogen to the mass of oxygen is always 1 : 8 respectively.

These laws lacked explanation. Hence, John Dalton gave his theory about the matter. He said that the smallest particle of matter is called 'atom'.

Dalton's Atomic Theory

- Every matter is made up of very small or tiny particles called atoms.
- Atoms are not divisible and cannot be created or destroyed in a chemical reaction.
- All atoms of a given element are same in size, mass and chemical properties.
- Atoms of different elements are different in size, mass and chemical properties.
- Atoms combine in the ratio of a small whole number to form compounds.
- The relative number and kinds of atoms are constant in a given compound.

Symbols of some common elements:

Name of the element	Latin name	Symbol
Hydrogen	-	H
Helium	-	He
Carbon	-	C
Copper	Cuprum	Cu
Cobalt		Co
Chlorine		Cl
Cadmium		Cd
Boron		B
Barium		Ba
Bromine		Br
Bismuth		Bi
Sodium	Natrium	Na
Potassium	Kalium	K
Iron	Ferrum	Fe
Gold	Aurum	Au
Silver	Argentum	Ag
Mercury	Hydragyrum	Hg