

Laws of Chemical Combination:

Various chemical reactions take place according to the certain laws, known as the Laws of chemical combination.

(1) Law of conservation of mass: It was proposed by Lavoisier and verified by Landolt. According to this law, Matter is neither created nor destroyed in the course of chemical reaction though it may change from one form to other. The total mass of materials after a chemical reaction is same as the total mass before reaction.

(2) Law of constant or definite proportion: It was proposed by Proust. According to this law, A pure chemical compound always contains the same elements combined together in the fixed ratio of their weights whatever its methods of preparation may be.

(3) Law of multiple proportions: It was proposed by Dalton and verified by Berzelius. According to this law, When two elements A and B combine to form more than one chemical compounds then different weights of A, which combine with a fixed weight of B, are in proportion of simple whole numbers.

(4) Law of equivalent proportion or law of reciprocal proportion: It was proposed by Richter. According to this law, The weights of the two or more elements which separately react with same weight of a third element are also the weights of these elements which react with each other or in simple multiple of them.

(5) Gay-Lussac's law: It was proposed by Gay-Lussac and is applicable only for gases. According to this law, When gases combine, they do so in volumes, which bear a simple ratio to each other and also to the product formed provided all gases are measured under similar conditions. The Gay-Lussac's law, was based on experimental observation.