

Chapter 3

ATOMS AND MOLECULES

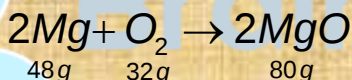
Matter:

The microscopic study of matter leads us to atoms and molecules.

- Matter is composed of many small particles.
- The smallest particle obtained by subdividing matter is named as “Paramanu” by “Maharshi kanad”.
- Ancient Greek philosopher ‘Democritus’ called the smallest indivisible particle as “atom”.
- The foundation for chemical sciences laid by Antoine Lavoisier by establishing two important laws of chemical combination.

Law of conservation of mass:

- It is postulated by Antoine Lavoisier. It states that “Mass can neither be created nor be destroyed in a chemical reaction”.



Law of constant proportions:

- It is proposed by Joseph Proust. It states that “In a chemical substance elements are always present in definite proportions by mass”.

Ex: The ratio of mass of hydrogen to that of mass of oxygen in water is always 1: 8. Sample water from lake, river, sea, tap to explain about nature of atom atomic theories were proposed. The first ever atomic theory is proposed by “Dalton”.