

Earlier Attempt to Classify Elements.

(1) **Dobereiner's law of triads** (1829) : It was the classification of elements into groups of three elements each with similar properties such that the atomic weight of the middle element was the arithmetic mean of the other two e.g. Ca, Sr, Ba ; Cl, Br, I etc.

(2) Telluric screw or Helix was proposed by Chancourtois in 1862.

(3) **Newlands law of octaves** (1864): It was an arrangement of elements in order of increasing atomic weights in which it was observed that every eighth element had properties similar to those of the first just like the eighth note of an octave of music.

(4) **Mendeleef's period law** (1869): The first significant classification (arrangement of known elements in a systematic way) was given by Mendeleeff (a Russian chemist) in 1869 in the form of periodic table, commonly known as Mendeleeff's periodic table. His periodic table was based on periodic law, "**The physical and chemical properties of elements are periodic functions of their atomic weights.**"

In Mendeleef's periodic table elements are arranged in order of their increasing atomic weights in such a way that elements with similar properties are placed in the same group. It consists of seven horizontal rows called periods. These are numbered from 1 to 7.

Mendeleef's original table consists of 8 vertical columns called groups. These are numbered as I, II III..... VIII. However, 9th vertical column called Zero group was added with the discovery of inert gases. Except for group VIII and zero, each group is further divided into two sub-groups designated as A and B. Group VIII consists of 9 elements arranged in three sets each containing three elements.