

These elements do not exist in the body in the free state, if we except traces of uncombined Oxygen, Nitrogen and Hydrogen, but in various combinations with one another forming exceedingly complex compounds. These, for the sake of convenience, fall into two great classes:—ORGANIC and INORGANIC, though the distinction is no longer a strictly accurate one. The organic compounds may be considered under the divisions, (a) NITROGENOUS, (b) NON-NITROGENOUS, according as to whether Nitrogen enters into their composition or not. Many of the elements above cited are common to both the Organic and Inorganic compounds.

The NITROGENOUS COMPOUNDS are the most numerous as to their number as well as most complex as to their quantitative composition, though they are made up of but four elements, Carbon, Hydrogen, Nitrogen and Carbon, with occasionally small amounts of Phosphorus and Sulphur. We can here only mention certain large groups of these compounds.

*Albuminoids* or *Proteids*, a generic term including a number of substances having the same percentage composition but different physical properties. Sub-divisions comprise, (1) *Native Albumens*, of which the white of egg is an example; (2) *Globulins*, chief among which is Myosin, the organic basis of muscle; (3) *Derived Albumens*, the casein or curd of milk and certain substances formed in the stomach during digestion; and (4) *Peptones* or *Soluble Albuminoids*, formed by the action of the digestive fluids on food, and which pass into the blood to nourish the body. Besides these there are the *Gelatins* found in bones, etc., and certain other waste products formed by the life functions of the various organs of the body.

The NON-NITROGENOUS ORGANIC COMPOUNDS are made up entirely of Carbon, Hydrogen and Oxygen. They consist of (a) *Carbo-hydrates*, in which the Oxygen and Hydrogen are in proportion to form water; (b) *Fats*, richer in Carbon and Hydrogen than the *Carbo-hydrates*, (c) *Fatty acids* and (d) *Alcohols*.

*Carbo-hydrates*, Sugar, Starch, are represented in comparatively small quantities in the body, though found in many of the fluids and