## SUMMARY:

Fatty acids are defined as compounds synthesized in nature by condensation of malonyl coenzyme A units under the influence of a fatty acid synthase complex. Fatty acid molecule is amphipathic and has two distinct regions or ends i.e a long hydrocarbon chain, which is hydrophobic (water insoluble) and not very reactive chemically, and a carboxyl acid group which is ionized in solution (COO-), extremely hydrophilic (water soluble) and readily forms esters and amides. In neutral solutions, salts of fatty acids form small spherical droplets or micelles in which the dissociated carboxyl groups occur at the surface and the hydrophobic chains project towards the centre. Fatty acids are classified into following groups based upon the degree of saturation in the carbon chain: Saturated fatty acids, unsaturated fatty acids. Fatty acids are carbon chains with a methyl group at one end of the molecule (designated as omega ' $\omega$ ') and a carboxyl group at the other end. Rancidity in fatty acids may be of two types: Oxidative rancidity and Hydrolytic rancidity. Fatty acids mainly undergo following reactions like: Hydrolysis, Etherification, Ester Exchange Reactions and oxidation and these are discussed below in detail. The fatty acids are mainly used in vegetable oils, Cellular Regulation, the Pharmaceutical/Personal Hygiene and also in skin treatment.