

## **INTRODUCTION:**

Glycerol,  $C_3H_8O_3$ , 1,2,3-propanetriol, commonly known as glycerine, is the simplest triol. It can be found in all natural fats and oils as fatty esters and is an important intermediate in the metabolism of living organisms. Glycerin is an important item of commerce. It is essential for industrial progress and development of the country. It is used in the manufacture of life saving drugs, paints, lubricants, glyptal resins, glycerol cement, cosmetics, toilet soaps and in industries like leather, tobacco, printing and so on. The use of glycerol is steadily increasing. Glycerol is present in fats and oils in combination with fatty acids, both saturated and unsaturated.

## **HISTORY:**

Glycerine is a clear nearly colourless liquid, having a sweet taste but no odour. K.W. Scheele first prepared glycerine in 1779 by heating a mixture of olive oil and litarge. On washing with water, a sweet solution was obtained, giving on evaporation of water a viscous heavy liquid, which the discoverer called "the sweet principle of facts". In 1846, Sobrero produced the explosive nitroglycerine for the first time and in 1868 Noble, by absorbing it in Kieselghur made it safe to handle it as dynamite. These discoveries increased the demand for glycerine. This was in part satisfied by the development in 1850 of a method for recovering glycerin and salt from spent soap lyes. Since about 1948, glycerol has been produced from petrochemical raw materials by synthetic processes. The most important industrial synthesis of glycerol, which uses propene as the starting material, was developed in the late 1930s by I.G. Farben in Germany and by the Shell in the United States.

## **OCCURRENCE:**

Glycerol occurs in the combined form in all-vegetable fats and oils. It is rarely found in free state in these fats but usually present as triglyceride combined with such fatty acids as stearic, olicic, palmitic and lauric and these are generally combination of glycerides of several fatty acids. Such oils as coconut, palm kernel, cottonseed, Soya bean and olive yield larger amount of glycerine to such animal fats as tallow and lard. Glycerol also occurs naturally as triglycerides in all animals and vegetable cells in the form of liquids such as lecithin and cephalin. These complex fats differ from simple fats in that they invariably contain a phosphoric acid residue in place of one fatty acid residue. These glycerides of course have no commercial significance.