

## SUMMARY

In cow milk fat, the triacylglycerols account for about 98% of the total milk lipids. Chemical changes that takes place in fat content of milk and milk products is of great concern to the dairy industry due to the flavour changes that bring about in the products particularly during storage of fat rich dairy products. There are two changes that the fat undergoes chemical changes. They are hydrolytic rancidity and autoxidation. Hydrolytic rancidity is a result of hydrolytic degradation of milk lipids due to action of lipase enzyme on lipids, whereas, autoxidation is the oxidation of milk lipids. Development of rancid flavour is due to the accumulation of proper concentration and type of free fatty acids which are released as a result of the hydrolysis of milk fat by the action of lipases. Various factors, such as vigorous agitation, homogenization, temperature activation and freezing will induce the lipolytic activities. Proper heat treatment to inactivate the natural lipase enzyme and minimizing the bacterial count which produces the lipase can prevent the flavour changes due to lipolytic activity. Autoxidation of milk fat results in development of oxidized flavour in the fat rich dairy products. The autoxidation takes place in three stages i.e., initiation, propagation and termination. Presence of certain metals such as copper and iron will catalyze the autoxidation. Presence of natural antioxidants such as tocopherol, ascorbic acid and thiolgroup can prevent the autoxidation. Use of synthetic antioxidants such as BHA, TBHQ and gallic acid ester are permitted in ghee to extend the shelf life of ghee.