

## **Dairy Processing-II 3(2-1)**

### **Theory**

Fermented milk products: production and economic importance. Microbiology of raw and processed milk. Starter cultures and incubation temperatures, schematic ways of fabrications and processing technologies used for yoghurt, butter, kefir, acidophilus milk and cheese production. Compositional and physico-chemical changes occur in milk during manufacturing of fermented dairy products. Rheological parameters, Microstructural properties and organoleptic scores of products. Chemistry of fermentation and flavor development. Physical defects, causes and remedies in fermented products. Microbiological hazards and pattern of spoilage. Factors affecting shelf life of milk and milk products. Utilization of by products for standardisation: native casein micelles, whey and butter milk. Packaging of fermented products.

### **Practical**

Preparation of fermented milk products: yoghurt, cheese, butter and therapeutic milk. Compositional, physico-chemical, microbial. Microstructural, rheological and sensory evaluation of fermented milk product. Identification of defects in cheese and yoghurt and their solutions like whey separation.

### **Books Recommended**

1. Fox, P.F., Guinee, T.P., Cogon, T.M. and McSweeney, P.L.H. 2000. Fundamental of Cheese Science. Springer-Verlag, New York, NY, USA.
2. Marshal, R.T. 1993. Standard Methods for the Examination of Dairy Products. American Public Health Association (APHA), Washing DC
3. Robinson, R.K. 1994. Modern Dairy Technology. Vol. I. Chapman and Hall, London, UK.
4. Varnam, A.H. and Suthaland, J.P. 1994. Milk and Milk Products: Technology, Chemistry, and Microbiology. Chapman and Hall, London, UK.
5. Walstra, P., Wouters, J.T.M. and Guerts, T.J. 2006. Dairy Science and Technology, 2<sup>nd</sup> Ed. CRC Press, Boca Raton, Florida, USA.

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