

2.14 30714 TECHNOLOGY OF MILK AND MILK PRODUCTS

UNIT-1

1.1 Physical properties of milk, Color, taste, pH and buffering capacity, refractive index, viscosity, surface tension, freezing, boiling point, specific heat, OR, electrical conductivity.

UNIT-2

2.1 Lactose (alpha and beta forms and their differences) Significances of lactose in dairy industry.

UNIT-3

3.1 Milk fat, Composition and structure, factors affecting melting point, boiling point, solubility and Refractive Index, fat constants (saponification value, iodine value, RM value, Polenske value, peroxide value).
3.2 Chemical reactions of fat (hydrolysis, auto-oxidation), condition favouring autooxidation, prevention, measurement of auto-oxidation.

UNIT-4

4.1 Protein and Enzymes, General structure, amphoteric nature, difference between casein and serum protein, different types of casein (acid and rennet), uses of casein, fractionation of protein.
4.2 Enzymes- catalase, alkaline phosphatase, lipases and proteases.

UNIT-4

4.1 Market milk industry and milk products, Systems of collection of milk Reception, Platform testing Various stages of processing
4.2 Filtration, Clarification
4.3 Homogenization
4.4 Pasteurization Description and working of clarifier, cream separator, homogenizer and plate heat exchanger.
4.5 Flow diagram of following milk products, Butter, ghee, flavored milk, yoghurt, dahi, shrikhand, ice-cream, condensed milk, milk powder, channa, paneer, cheese (cheddar).

Reference Book:

1. Hall GM, Fish Processing Technology, VCH Publishers Inc., NY, 1992
2. Sen DP, Advances in Fish Processing Technology, Allied Publishers Pvt.Limited 2005
3. Shahidi F and Botta JR, Seafoods: Chemistry, Processing, Technology and Quality, Blackie Academic & Professional,London,1994