

Syllabus of B. Sc. (Biotechnology) Semester-V & Semester-VI
Effective from Academic Year: 2013-2014
VEER NARMAD SOUTH GUJARAT UNIVERSITY, SURAT

B. Sc. Semester-V/VI (Generic Elective Course)

DAIRY TECHNOLOGY

UNIT 1: Milk Collection and Processing

- 1.1 Composition and Components of milk.
- 1.2 Methods of testing and grading of milk.
- 1.3 Milk collection and transport.
- 1.4 Milk pasteurization.

UNIT 2: Preservation and Sterilization of Dairy Products

- 2.1 Sources of microorganisms in milk.
- 2.2 Contamination of milk.
- 2.3 Spoilage of milk and milk products.
- 2.4 Preservation of milk and milk products.
- 2.5 UHT sterilization of milk.

UNIT 3: Fermented Dairy Products

- 3.1 Lactic Acid Bacteria.
- 3.2 Biochemical types of milk fermentation.
- 3.3 Different types of fermented milk beverages.
- 3.4 Yogurt.
- 3.5 Cheese.

UNIT 4: Prebiotics and Probiotics

- 4.1 Health benefits of prebiotics and probiotics.
- 4.2 Probiotics: Criteria for microorganisms used.
- 4.3 Biochemistry of prebiotics.
- 4.4 Popular prebiotics and probiotics products.

REFERENCES:

1. Frazier, W. C., & Westhoff, D. C. (1988). Food Microbiology. McGraw-Hill.
2. Wiley, J. & Sherwood, L. (2011). *Prescott's Microbiology*, 8th Ed., McGraw-Hill.
3. Modi, H. A. (2009). Dairy Microbiology, Aavishkar Publishers, Jaipur.

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