



CVM
UNIVERSITY

Aegis: Charutar Vidya Mandal (Estd.1945)

FACULTY OF ENGINEERING & TECHNOLOGY

Effective from Academic Batch: 2022-23

Programme: Bachelor of Technology (Dairy Technology)

Semester: VI

Course Code: 202200603

Course Title: Sensory Evaluation of Dairy Products

Course Group: Professional Core course

Course Objectives: Sensory evaluation refers to a scientific discipline used to evoke measure, analyze and interpret reactions to those properties of foods and materials as they are perceived by senses of sight, smell, taste, touch, and hearing. The sensory quality of dairy products has been considered an important factor since the beginning of the dairy industry due to its influence on the overall quality of the product. Quality of dairy products is related with the adequate levels of sensory attributes considering the appearance, aroma, flavor, and texture. The subject helps to judge the quality of dairy products in order to produce a stable product with better demand among consumers.

Teaching & Examination Scheme:

Contact hours per week			Course Credits	Examination Marks (Maximum / Passing)				
Lecture	Tutorial	Practical		Theory		J/V/P*		Total
				Internal	External	Internal	External	
3	2	0	4	50 / 18	50 / 17	25 / 9	25 / 9	150 / 53

* J: Jury; V: Viva; P: Practical

Detailed Syllabus:

SN	Contents	Hours
1	Importance of sensory evaluation and sensory organs Introduction, definition and importance of sensory evaluation in relation to consumer acceptability and economic aspects. Design and requirements of a sensory evaluation laboratory. Basic principles: senses and sensory perception. Physiology of sensory organs. Classification of tastes and odors, threshold value. Factors affecting senses, visual, auditory, tactile and other responses, Novel techniques of sensory evaluation.	7
2	Procedure and types of test in sensory evaluation Fundamental rules for scoring and grading of milk and milk products. Procedure and types of tests – difference tests (Paired comparison, due-trio, triangle) ranking, scoring, hedonic scale and descriptive tests. Panel selection, screening and training of judges. Requirements of sensory evaluation, sampling procedures. Factors influencing sensory measurements.	7
3	Factors affecting the sensory quality of different dairy based food products	7



	Milk: score card and its use. Judging and grading of milk, defects associated with milk. Cream: desirable attributes and defects in cream, Score card for cream, sensory evaluation of different types of cream. Butter: Specific requirements of high grade butter, undesirable attributes of butter, butter score-card, sensory evaluation of butter. Ghee: grades of ghee, special requirements of quality ghee, defects in ghee, sensory evaluation of ghee.	
4	Sensory evaluation of fermented dairy products Sensory evaluation of srikhand, lassi and other fermented drinks and their specific requirements. Cheese: sensory Quality attributes of some common cheese varieties and their defects, score card for cheese. Sensory evaluation and grading for cheddar, cottage and other varieties of cheeses.	8
5	Sensory evaluation of Non fermented dairy products Sensory evaluation and grading of dry milk products; Concentrated milks, evaporated and condensed milk. Sensory evaluation of paneer, chhana and chhana based sweets. Frozen dairy products: desirable and undesirable characteristics of frozen dairy products; ice cream, kulfi and milk sherbets.	10
6	Sensory properties and consumer acceptance Interrelationship between sensory properties of dairy products and various instrumental and physico-chemical tests. Objectives, methods, types or questionnaires, development of questionnaires, comparison of laboratory testing and consumers studies, limitations. Interrelationship between sensory properties of dairy products and various instrumental and physico-chemical tests.	6
	Total	45

List of Practicals:

S.N.	Experiment Title
1.	Determination of threshold value for basic tastes
2.	Estimation of threshold value for various odors
3.	Selection of sensory evaluation panel; Training of judges
4.	Statistical analysis for consumer behavior study
5.	Sensory evaluation of cream, butter and ghee
6.	Sensory evaluation of sweets (khoa and chhana based)
7.	Sensory evaluation of fermented dairy products (dahi, Cheese)
8.	Sensory evaluation of milk powder and frozen desserts
9.	Sensory evaluation of UHT milk
10.	Sensory evaluation of Paneer

Reference Books:

1	P. S. Prajapati & J. P. Prajapati, Judging of dairy products, Agrimoon.com
2	Michael O Mahony: Sensory evaluation of food.
3	Sensory Evaluation Techniques, Gail Vance Civille, B. Thomas Carr
4	De, Sukumar (1980). Outlines of dairy technology, Oxford University Press, Delhi.
5	Novel Techniques in Sensory Characterization and Consumer Profiling, Paula Varela, Gastón Ares



Supplementary learning Material:

1	https://www.agrimoon.com/wp-content/uploads/Judging-of-Dairy-Products.pdf
2	PDF: Design and requirements of sensory evaluation laboratory
3	Video: Requirements and sampling of sensory evaluation

Pedagogy: Following one or more points can be incorporated as relevant pedagogy methods.

- Direct classroom teaching
- Audio Visual presentations/demonstrations
- Assignments/Quiz
- Continuous assessment
- Interactive methods
- Seminar/Poster Presentation
- Industrial/ Field visits
- Course Projects

Suggested Specification table with Marks (Theory) (Revised Bloom’s Taxonomy):

Distribution of Theory Marks in %						R: Remembering; U: Understanding; A: Applying; N: Analyzing; E: Evaluating; C: Creating
R	U	A	N	E	C	
10%	10%	25%	20%	15%	15%	

Note: This specification table shall be treated as a general guideline for students and teachers. The actual distribution of marks in the question paper may vary slightly from above table.

Course Outcomes (CO):

S.N.	Course Outcome Statements	%weightage
CO-1	To Understand the importance and basic principles of sensory evaluation processes	20
CO-2	To demonstrate the interrelationship of various instrumental and physico-chemical tests	20
CO-3	To examine factors influencing the sensory quality of different dairy based food and food products	25
CO-4	To investigate the consumer acceptance studies in sensory evaluation of dairy products for better reach of product in society	20
CO-5	To develop an in-depth understanding of sensory attributes (taste, smell, texture, appearance) and their role in evaluating the quality of dairy products	15

Curriculum Revision:

Version:	2.0
Drafted on (Month-Year):	June-2022
Last Reviewed on (Month-Year):	-
Next Review on (Month-Year):	June-2025