

FST-314 Sensory Evaluation of Foods3(2-1)

Educational Objectives:

To help students comprehend the fundamentals of sensory analysis, the course discusses how humans perceive it. Students who take the course can learn about the resources needed by product designers and innovators in the food and meal sector to facilitate communication between consumers and producers. Further, the course discusses planning, carrying out, and assessing sensory methods for product and market research. Additionally, it makes clear the value of sensory analysis in terms of the tools it offers for improving the quality and development of products.

Course Outcomes:

1. Explain how sensory assessment and the human sensory physiology can be used as tools in product development
2. Give examples of the most popular techniques for consumer-targeted sensory evaluations.
3. Consider and assess the knowledge that sensory analysis contributes to the field of food science.

Theory:

- Introduction: overview, physiological and psychological foundations.
- Factors affecting sensory perception.
- Measurement of general requirements for sensory testing,
- design and conduct of sensory evaluation experiments.
- Difference testing,
- preference testing,
- panel selection procedures,
- taste and aroma profiling, texture profiling.
- Shelf life determination,
- sensory quality control,
- product development and optimization,
- relationship between sensory properties and product acceptability.
- Strategies for developing sensory evaluation programs.
- Organization and evaluation of sensory evaluation program.
- The role of sensory evaluation in marketing of food and beverages.
- Statistical procedures.
- Software packages for sensory evaluation.

- Requirements for sensory evaluation laboratory.

Practical:

- Taste, odor identification,
- trigeminal sensations,
- taste modifiers.
- Use of sequential testing in selecting judges.
- Training of panelists: difference tests - triangle test, paired comparison test, duo-trio test.
- Color, threshold determination, just noticeable difference.
- R-Index rating and ranking.
- Category scaling, determining an ideal level of an ingredient.
- Magnitude estimation.
- Descriptive analysis of different foods.
- Consumer test and analysis.
- Special assignment.

Recommended Books:

1. Kemp, SE., Hollywood, T and Hort, J. 2009. Sensory evaluation: a practical handbook. John Wiley & Sons, Inc. New York, USA.
2. Mona Baker Wolf, 2020, Sensory testing methods, American society of testing methods
3. Harry T. Lawless, 2013, Laboratory exercises for sensory evaluation, Springer USA
4. Herbert Stone, Rebecca Bleibaum, Heather A. Thomas, 2012, Sensory evaluation practices, Academic Press
5. Lawless, H.T. 2013. Quantitative sensory analysis: psychophysics, models and intelligent design. Wiley-Blackwell, USA.