

30816 - Physical and sensory analyses of food

Syllabus Information

Academic year: 2024/25

Subject: 30816 - Physical and sensory analyses of food

Faculty / School: 105 - Facultad de Veterinaria

Degree: 568 - Degree in Food Science and Technology

ECTS: 6.0

Year: 2

Semester: Second semester

Subject type: Compulsory

Module:

1. General information

The objective is for the student to know the physical and sensory properties of foods, their measurement and interpretation of results, and their usefulness in the design of equipment, processes and products.

These goals are aligned with the following Sustainable Development Goals (SDGs) of the United Nations 2030 Agenda (<https://www.un.org/sustainabledevelopment/es/>).

Goal 3: Health and Wellness

Goal 4: Quality Education.

Goal 5: Gender Equality.

Goal 9: Industry, Innovation and Infrastructure

Goal 12. Responsible Production and Consumption

It is recommended to have completed the basic training subjects of the first year. It is recommended take simultaneously the subjects "Chemical Analysis of Food" and "Microbiological Analysis of Food" since an integration project is carried out in coordination with these subjects.

2. Learning results

The student, in order to pass this subject, must demonstrate that:

1. Understands the fundamentals of the physical properties of foods for application in process and product control.
2. Understands the fundamentals of food sensory analysis for its application in process and product control.
3. Is able to interpret data and graphs of thermal, optical, rheological, textural, surface and activity analysis of water (whether the data and graphs are expressed in Spanish or English) and solve problems of density, specific heat, viscosity, etc. calculations.
4. Is able to select the method of analysis and physically characterize foods in terms of morpho-geometric, thermal, optical, rheological, textural, surface and water activity parameters.
5. Is able to select the type of test and design and perform the sensory analysis of a food.
6. Is able to interpret the results of a sensory analysis and issue a report.
7. Is able to elaborate a project, working in a team, detailing the physical and sensory analysis that should be performed on a food

3. Syllabus

BLOCK I-Physical Analysis of Foods

1. Morpho geometric properties of foods
2. Thermal properties of food
3. Optical properties of foods. Colorimetry
4. Rheological properties of foods
5. Textural properties of foods

6. Surface properties of food
7. Water activity and sorption properties of foods

BLOCK II-Sensory analysis of foodstuffs

8. Introduction
9. Conditions for sensory analysis
10. Sensory analysis techniques
11. Judges and panels
- 12-Experimental and statistical design for sensory analysis
13. Sensory analysis with consumers

4. Academic activities

The subject consists of 30 lectures, 10 hours of seminars and 20 hours of laboratory practice.

Seminars (problems, integration project guidelines, etc.) will be organized in sessions of different lengths.

Three sessions will be dedicated to physical analysis and two to sensory analysis.

The student will carry out a group project on the physical and sensory analyses that should be carried out to evaluate and control the quality of a food. This work will be carried out in coordination with Food Chemical Analysis, Food Microbiological Analysis and Bromatology. It will be delivered in writing and presented orally.

5. Assessment system

Continuous Assessment

1. Written test . 60 multiple choice questions with four answers and only one correct answer. Incorrect ones will be penalized (-0.25). 60% of the grade.
2. Written test of problems. 2 problems similar to those solved in the seminars. 10% of the grade.
3. Written test of practices. 15 multiple choice questions (with four answers and only one correct answer, where incorrect ones will be penalized -0.25) on the practices carried out and a report on practice 1 (colour). 10% (5% exam and 5% report) of the grade
4. Evaluation of the integration project on the physical and sensory analysis to be performed on a food. The report and the oral presentation and defence will be evaluated. The review of criteria will be valued, as well as the capacity of synthesis. 20% of the grade.

In the case of not passing any of the continuous assessment tests, they must pass them in the global test.

Global test

-80 multiple choice questions on theoretical and practical contents with four possible answers and only one correct answer, where the incorrect ones will be penalized (-0.25). 80% of the grade.

-Presentation and defence of an autonomous work on the physical and sensory analysis to be performed on a food. 20% of the grade.

A minimum of 5 out of 10 must be obtained in all tests, and the average of the four tests must be equal to or higher than 5.

6. Sustainable Development Goals

- 4 - Quality Education
- 9 - Industry, Innovation and Infrastructure
- 12 - Responsible Production and Consumption