Course Unit	Analysis and Quality Control of Olive Oil, Olives and Vegetable Oils			Field of study	Food industries
Bachelor in	Food Engineering			School	School of Agriculture
Academic Year	2023/2024	Year of study	3	Level	1-3
ECTS credits	6.0				
Type	Semestral	Semester	1	Code	9087-641-3102-00-23

Workload (hours)	162	Contact hours	T -	TP -	PL -	TC -	S -	E -	OT -	O -

T - Lectures; TP - Lectures and problem-solving; PL - Problem-solving, project or laboratory; TC - Fieldwork; S - Seminar; E - Placement; OT - Tutorial; O - Other

Name(s) of lecturer(s): Nuno Miguel Sousa Rodrigues, Maria de Fatima Tome Martins

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. To know the importance of the quality control analysis of olive oil, table olives and vegetable oils
2. Understand the need to control the quality at the processing level and final product
3. To know and be able to implement procedures of analysis and control of physical and chemical aspects of olive oil and vegetable oils, as well as sensory analysis
4. To know and be able to implement procedures of analysis and control of physical and chemical aspects of table olives, as well as sensory analysis
5. To know and apply tools and mechanisms of control and analysis during the technological process and final product.

Prerequisites

Before the course unit the learner is expected to be able to:
Students should have basic knowledge about chemistry, biochemistry and microbiology.

Course contents

1. Analysis and quality control f olive oil and vegetable oils 2. Analysis and quality control f table olives 3. Sampling, data analysis and presentation 4. Main procedures of analysis and control of raw materials and final products 5. Use of expeditious methods.

Course contents (extended version)

1. Analysis and quality control f olive oil and vegetable oils
   - Legislation and standards
   - Quality parameters and chemical composition. Methods of analysis and quality control.
   - Sensory evaluation of olive oil. Training of sensory tasters panel.
2. Analysis and quality control f table olives
   - Main microorganisms and its importance
   - Evaluation of microbial quality in table olives
   - Quality parameters and chemical composition. Methods of analysis and quality control
   - Sensory evaluation of table olives.
3. Sampling, data analysis and presentation
4. Main procedures of analysis and control of raw materials and final products
5. Use of expeditious methods, electronic tongue and electronic nose in the evaluation of quality

Recommended reading

1. AOAC (2000), Official Methods of Analysis of AOAC International, 17th Ed, ; Horwitz, W. ; AOAC: Arlington, VA, Vol, II (1-3).
2. Regulamento (CEE) n. 2568/91, relativo às características dos azeites e dos óleos de bagaço de azeitona, bem como aos métodos de análise relacionados e todas as sua alterações posteriores.
3. Kiritsakis, A. K. , 1998. Olive Oil from the tree to the table. Second Edition, Food & Nutrition Press, Inc. USA.
4. ISO 9936, 2006. Animal and vegetable fats and oils – Determination of tocopherol and tocotrienol contents by high-performance liquid chromatography.
5. Informação disponibilizada nos sites: http: //europa. eu. int/; http: ///www. internationaloliveoil. org/

Teaching and learning methods

Lessons: Practical and laboratorial lessons centred in the problem resolution. Visit processing units of olive oil and table olives. No presence hours: hours of study. Search of literature for preparing reports of practical works, discussion of results and preparation of seminar discussion.

Assessment methods

1. Alternative 1 - (Regular) (Final, Supplementary, Special)
   - Case Studies - 60%
   - Final Written Exam - 40%
2. Alternative 2 - (Student Worker) (Final, Supplementary, Special)
   - Final Written Exam - 100%

Language of instruction

Portuguese, with additional English support for foreign students.

Electronic validation

Nuno Miguel Sousa Rodrigues	José Alberto Cardoso Pereira	Elsa Cristina Dantas Ramalhosa	José Carlos Batista Couto Barbosa
24-01-2024	24-01-2024	28-01-2024	29-01-2024