Course Unit	Option II - Food Authenticity			Field of study	Food Industry								
Master in	Technology and Animal Science			School	School of Agriculture								
Academic Year	2022/2023	Year of study	1	Level	2-1	ECTS credits	6.0						
Type	Semestral	Semester	2	Code	5026-453-1205-01-22								
Workload (hours)	162	Contact hours	T 30	TP -	PL 26	TC -	S 4	E -	OT 20	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): Maria Fátima Alves Pinto Lopes da Silva

Learning outcomes and competences

At the end of the course unit the learner is expected to be able to:
1. Identify the different types of food fraud that are considered in current European legislation, as well as knowing the four main operational criteria that allow their identification;
2. Know legal and regulatory aspects of authenticity and certification of food products, as well as being able to search for this information and interpret it;
3. Know the control, inspection and regulation entities of the food sector;
4. Be able to develop and establish authenticity control processes for different food products (oils, juices, honey, meat products, etc.), using the acquired knowledge;
5. Know and be able to contribute to the implementation of the main institutional and private food certification systems.

Prerequisites

Before the course unit the learner is expected to be able to:
Students should have basic knowledge about food chemistry and food analytical methods.

Course contents

Food authenticity issues. Authenticity control processes. Specific examples of verification and control of the authenticity of food products. Certification of qualified products and production systems.

Course contents (extended version)

1. Food authenticity issues
   - Definitions: food authenticity and food fraud; types of food fraud; authentic products.
   - Meaning of authenticity for: economic operators, regulatory bodies and consumers.
   - Ways to approach food authenticity. Main steps.
   - Examples of specific analytical techniques used to detect possible tampering.
2. Authenticity control processes
   - Legal aspects of authenticity: national and european laws and standards.
   - Main operational criteria for identifying food fraud.
   - . Composition according to the label.
   - Difficulties in guaranteeing the authenticity of agri-food products.
3. Examples of verification and verification of authenticity
   - Authenticity of juices and fruit derivatives.
   - Authenticity of milk and dairy products.
   - Authenticity of olive oil and vegetable oils.
   - Honey authenticity.
   - Coffee authenticity.
   - Authenticity of meat and meat products.
   - Authenticity of aromatic and medicinal herbs.
   - Authenticity of other foodstuffs.
4. Certification of qualified products and production systems
   - Concepts and definitions.
   - Legal aspects of authenticity: national and international laws and standards
   - Main institutional certification schemes relating to products and mode of production

Recommended reading

1. FoodIntegrity Handbook. A guide to food authenticity issues and analytical solutions, Jean-François Morin and Michèle Lees (Eds.), 2018, Eurofins Analytics France.
2. FAO. Food fraud – Intention, detection and management. Food safety technical toolkit for Asia and the Pacific No. 5. 2021. Bangkok.
3. Food Safety and Food Quality, Issues in environmental science and technology, Editors R. E. Hester and R. M: Harrison, The Royal Society of Chemistry, 2001.
4. Food authenticity and traceability, edited by Michèle Lees, CRC press and Woodhead Publishing Limited, 2003.
5. Informação disponibilizada nos sites: http: //www. Icd. online. org. http: //www. ipq. pt. http: //europa. eu. int/; http: //www. codexalimentarius. net/. http: //www. iso. org.

Teaching and learning methods

Theoretical, theoretical-practical and laboratory classes based fundamentally on expository and active methods, but also, occasionally, using the interrogative method. Theoretical-practical classes: individual and group activities; preparation and presentation of interpretation work. Practical laboratory protocols performance.

Assessment methods

1. Alternative 1 - (Regular, Student Worker) (Final, Supplementary, Special)
   - Work Discussion - 20% (Group works with presentation and discussion (10 values minimum grade).)
   - Practical Work - 20% (Reports of laboratorial classes and worksheets)
   - Final Written Exam - 60% (Minimum grade: 8 values)
2. Alternative 2 - (Student Worker) (Final, Supplementary, Special)
   - Work Discussion - 40% (Group works with presentation and discussion (10 values minimum grade) and worksheets.)
   - Final Written Exam - 60% (Minimum grade: 8 values)

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Language of instruction

Portuguese

Electronic validation

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14-12-2022	14-12-2022	19-12-2022	19-12-2022

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