
	PROCESO PARA EL DESARROLLO DE LAS ENSEÑANZAS DE LA ESCUELA DE INGENIERÍAS AGRARIAS		
		CÓDIGO: P/CL009_D002	

PROGRAMME IN DESCRIPTIVE BROMATOLOGY I
Academic course: 2020-2021

Identification and characteristics of the subject			
Code	502222	ECTS credits	6
Name (Spanish)	Bromatología Descriptiva I		
Name (English)	DESCRIPTIVE BROMATOLOGY I		
Degree	ENGINEERING IN AGRICULTURAL AND FOOD INDUSTRIES		
Center	Agricultural Engineering School		
Semester	(8th)	Type	Compulsory
Module	Food Science		
Subject	Descriptive Bromatology		
Language	Spanish		
Professor/s			
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Field of knowledge	Food Science and Nutrition		
Department	Animal Production and Food Science		
Coordinator (if there is more than one professor)	Alberto Martín González		
Lessons and contents			
Syllabus			
<u>SECTION I.- INTRODUCTION TO DESCRIPTIVE BROMATOLOGY</u>			
1.1 Introduction.			
1.2. General concepts.			
1.3. Nutrients and Foods.			
<u>SECTION II.- MEAT AND MEAT PRODUCTS</u>			
2.1. Meat. Structure of the muscle. Chemical composition.			
2.2. Meat II. Types of meat. Quality parameters.			
2.3. Carcass, selection and grading of manufactured meat and animal by-products.			
2.4. Refrigerated and frozen meats. Minced meats.			
2.5. Raw and marinated meat products.			
2.6. Fermented and dry-cured meat products.			
2.7. Cooked meat products.			
<u>SECTION III.- FISH, SEAFOOD AND FISH PRODUCTS</u>			
3.1. Fish. Structure of the muscle. Chemical composition. Types of fish. Quality parameters.			
3.2. Seafood: Classification. Chemical composition. Quality parameters.			
3.3. Fish and seafood products.			

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SECTION IV.- MILK AND DERIVATES

- 4.1. Milk: Structural elements of the milk. Chemical composition. Quality parameters.
- 4.2. Pasteurized and sterilized milks. Concentrated milks. Modified milks.
- 4.3. Fermented milks. Probiotics.
- 4.4. Cheese.
- 4.5. Cream and butter.
- 4.6. Ice cream and dairy desserts.

SECTION V.- EGGS AND EGG PRODUCTS

- 5.1. Eggs, egg products. Structure of the egg. Chemical composition. Quality parameters. Egg products.

PRACTICAL SYLLABUS

PRACTICAL LESSON 1. Meat products

- Determination of moisture and dry extract.
- Determination of ashes.
- Determination of water activity.

PRACTICAL LESSON 2. Meat products

- Extraction of sarcoplasmic and myofibrillar proteins
- Analysis of protein fractions by SDS-PAGE.

PRACTICAL LESSON 3. Fish

- Determination of fat content.
- Determination of non-protein nitrogen in fishery products by spectrophotometry.

PRACTICAL LESSON 4. MILK

- Milk density.
- Dry extract and acidity.
- Fat content. Gerber method.



PRACTICAL LESSON 5. MILK

- Protein fractions of milk.
- Lactic and enzymatic curds.
- Rennet coagulant activity.

PRACTICAL LESSON 6. EGG

- Determination of egg quality.

PRACTICAL LESSON 7. ANIMAL FAT

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- Fat stability: peroxide index.
- Spectrophotometric characterization of fats.

PRACTICAL LESSON 8. Aditives

- Determination of anions (chloride, nitrates y nitrites) by micellar electrokinetic chromatography.