# Subject Guide

## Food Analysis

### Academic Year 2016-2017

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**LECTURER(S)**

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**Degree within which the subject is taught**

Food Science and Technology

**Prerequisites and/or recommendations (if necessary)**

In particular this course requires previously successful completion of all the materials previously for the Common Basic Training module, and the subjects: Chemical Analysis, Commodity Production, Food Chemistry and Biochemistry and Food Science I and II.

**Brief account of the subject programme (According to the degree)**

- The food analysis: purposes, procedures. Types of analysis. Quality of analytical results.
- Sensory analysis of foods.
- Methodologies for quantification of the different nutrients of a food product, to evaluate other quality specifications and food quality control, detection of tampering, adulteration and fraud.

**General and particular abilities**

**General**

- The Basic Skills of University contained in the Agreement of the Andalusian Committee of the Degree in Science and Food Technology
Specific

- Ability to correct handling of samples during sampling and preparation for analysis of different types of food
- To develop common and the most frequently analytical protocols used to detect alterations in food, adulteration and fraud.
- To acquire fluency in the use of official methods of analysis used in food.
- To understand the foundations and objectives of the sensory analysis.
- To understand its importance as a parameter of quality food and drinks.
- To analyze your interest in research, development and innovation of new foods.
- To study the standard conditions for the training of the panel and to perform the tests.
- To learn the most commonly used sensory testing.
- To initiate students on tests of sensory analysis.
- Ability to participate in sensory analysis tests.
- Use knowledge gained about the chemical composition and properties of food, food analysis, detection of fraud and its alterations, processing, preservation and evaluation of the quality of food.
- Conduct Chemical analyzes, interpret results and write reports, take responsibility for issuing opinions related to the overall quality of the food samples.

OBJECTIVES (EXPRESSED IN TERMS OF EXPECTED RESULTS OF THE TEACHING PROGRAMME)

The knowledge needed to analyze food, raw materials, ingredients, additives, etc., assess results and, where appropriate, propose actions for improvement.

DETAILED SUBJECT SYLLABUS

THEORY

9. - Determination of Vitamins. Extraction and separation. Most common methods used in their determination.
12. - Quality control of edible oils and fats. Standards and analytical methods.
13. - Quality control of hydrocarbon food. Quality parameters. Methods of analysis
15. - Canned and semi preserved Foods. Packaging, Labeling and factors relating to storage.
17. - Sensory attributes. Appearance or aspect. Importance of color. Odor and flavor: properties and sensory evaluation
PRACTICES

Seminars / Workshops
- Design of Standard Operating Procedures
- Use of Reference Materials
- Reporting

Laboratory Practices
Practice 1. - Performing preference sensory analysis: paired comparison test.
Discriminative tests: duo-trio test and triangular test
Practice 2. Organoleptic assessment of virgin olive oil: different sensory attributes and profile sheets
Practice 3. - Wine tasting: sensory attributes and profile sheet
Practice 4. - Determination of essential elements and pollutants by atomic absorption spectroscopy
Practice 5. - Determination of caffeine and quinine in soft drinks
Practice 6. - Determination of reducing sugars and acidity in honey

READING

BASIC BIBLIOGRAPHY

SUPPLEMENTARY BIBLIOGRAPHY

• Ducauze, Ch. J. 2006 Fraudes alimentarios. indicaciones reglamentarias y metodología analítica. Ed. Acribia, S.A. Zaragoza, España

RECOMMENDED INTERNET LINKS

Organizations
- Agencia Española de Seguridad Alimentaria y Nutrición - AESAN
- Association of Official Analytical Chemists - AOAC
- Codex Alimentarius
- European Food Safety Authority - EFSA
- European Food International Council European Federation for Biotechnology - EFUIC
- Institute of Food Science & Technology - IFST
- International Life Sciences Institute - ILSI
- International Organization for Standardization - ISO
- Ministerio de Agricultura, Alimentación y Medio Ambiente

Journals
- Critical Reviews in Food Science and Nutrition
- Food Chemistry
- International Journal of Food Science and Nutrition
- Journal of Agricultural and Food Chemistry
- Journal of Food Composition and Analysis
- Journal of Association of Official Analytical Chemists International
- Proceedings of the National Academy of Sciences
### Food Law
- Boletín Oficial de la Junta de Andalucía
- Boletín Oficial del Estado
- Diario Oficial de la Unión Europea

### Other Websites of Interest
- Confederación de Industrias Agro-Alimentarias de la Unión Europea - CIIA
- Federación Española de Industrias de la Alimentación y Bebidas - FIAB
- Información Consumidor
- Portal de Tecnologías y Mercados del Sector Alimentario