63007 - Food enzymology

Información del Plan Docente

Academic Year	2016/17
Academic center	105 - Facultad de Veterinaria
Degree	566 - Master's in Food Quality, Safety and Technology
ECTS	3.0
Course	1
Period	Second semester
Subject Type	Optional
Module	---

1.Basic info

1.1.Recommendations to take this course

1.2.Activities and key dates for the course

2.Initiation

2.1.Learning outcomes that define the subject

2.2.Introduction

3.Context and competences

3.1.Goals

3.2.Context and meaning of the subject in the degree

3.3.Competences

3.4.Importance of learning outcomes

4.Evaluation

5.Activities and resources

5.1.General methodological presentation

5.2.Learning activities

5.3.Program

1) Enzyme extraction methods. Procedures to maintain enzyme activity.

2) Enzyme concentration and salting out

3) Activity measurements:

i) PME. Potentiometric method

ii) EndoPG: sampling method + chemical analysis and viscosimetric method

iii) PPO: continuous indirect spectrophotometric method

iv) Pepck: coupled assays

v) LOX: continuous indirect spectrophotometric method

4) Purification and measurement of protein concentration. SDS-PAGE, chromatography

5) Kinetic parameter calculation (Km, kcat, kcat/Km)

6) The effect of temperature on enzyme activity and stability. Dt, z and Ea values calculations. Measurement of the energy of activation of an enzyme catalyzed reaction

7) Enzyme inhibition. Inhibitor effect on Km and kcat. Ki calculation.

5.4.Planning and scheduling

5.5.Bibliography and recomended resources