

Microbial and enzymatic catalysis

Niveau d'étude
Bac +4

ECTS
5 crédits

Composante
**Sciences Fondamentales
et Appliquées**

Période de l'année
Semestre 7

En bref

- # **Langue(s) d'enseignement:** Anglais
- # **Organisation de l'enseignement:** Formation initiale
- # **Ouvert aux étudiants en échange:** Oui
- # **Référentiel ERASMUS:** Chimie

Présentation

Description

Introduction to Microorganisms and Enzymes.

Enzymes structure and catalysis: amino-acids, proteins, active sites, substrate specificity. Models for enzymatic reaction, enzyme activities.

Enzymatic thermodynamics and kinetics.

Potentialities of microorganisms, manipulation of their products, among them enzymes, for industrial applications.

Advantages of immobilization techniques for optimizing production of different products in a wide range of industrial applications.

Denaturation, stability, activation and inhibition of enzymes.

Use of enzymes in less conventional catalytic systems. Examples of biocatalysis in organic solvents.

Available commercial enzymes, purity, activity and different ranges of temperatures and pH.

Objectifs

Expertise in biocatalysis

Heures d'enseignement

CM	CM	15h
TD	TD	25h

Pré-requis obligatoires

Bachelor degree in chemistry or equivalent

Programme détaillé

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