



Innovation

protéus
BY SEQENS

LECTURE SCHEDULE

Training

USE OF ENZYMATIC CATALYSIS IN ORGANIC SYNTHESIS

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Paris

2 days

Day 1

9:00-10:30 Lecture 1: Introduction Notions of catalysis

- Relevant market
- Notions of catalysis
- Definitions of enzymatic catalysis
- Recent developments

10:30-10:45 Break

10:45-12:15 Lecture 2: Nature and function of enzymes

- Protein structure
- Basic enzymatic reactions
- Cofactors

12:15-13:15 Lunch

13:15-14:45 Lecture 3: Theory of enzymatic activity – Enzymatic kinetics

- Enzymatic kinetics
- Characterization of catalytic properties

14:45-15:00 Break

15:00-16:30 Lecture 4: Development of biotechnologies in the laboratory

- Principles of research and development
- Exploitation of enzyme collections and micro-organisms
- Functionalization of aromatics
- Example of a development in biocatalysis

Day 2

9:00-10:30 Lecture 5 Implementation of enzymes.

- Stability of enzymes
- Non-aqueous media
- Immobilized enzymes
- Examples

10:30-10:45 Break

10:45-12:15 Lecture 6:

From enzyme screening to scale-up of the biocatalytic reaction (1)

- Enzyme screening; Implementation and automation
- Enzyme kits
- Experimental part

12:15-1:15 PM Lunch

1:15-2:45 PM Lecture 6:

From enzyme screening to biocatalytic reaction scale-up (2)

- Protein engineering
- Reaction engineering
- Cofactor recycling
- Biocatalytic reaction scale-up

2:45-3:00 PM Coffee break

3:00-4:30 PM Lecture 7: Industrial applications

- Some major products obtained by enzymatic catalysis
- Recent developments
- Example of a recent development

4:30-5:00 PM Lecture 8: Conclusions and discussions