

## Biochemistry

### Industrial Processes Project

#### IDENTIFICATION

CODE : BS-5-S1-EC-BBIOC7  
ECTS : 5.0

#### HOURS

Lectures :	0.0 h
Seminars :	0.0 h
Laboratory :	62.0 h
Project :	0.0 h
Teacher-student contact :	62.0 h
Personal work :	63.0 h
<b>Total :</b>	<b>125.0 h</b>

#### ASSESSMENT METHOD

Drafting of an industrial production protocol. Writing a research report processes

#### TEACHING AIDS

scientific publications, patent texts, processes of production and analysis, supplier's web sites of industrial equipment.

#### TEACHING LANGUAGE

French

#### CONTACT

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#### AIMS

**COMPETENCES:** At the end of this course the students will be able to make a change of scale between a phase of development in laboratory and a production unit.

#### OBJECTIVES:

Provide additional training on methods of preparatory biochemistry by introducing concepts of mass and continuous production. Confront students to solve practical theoretical and practical problems of production, purification and analysis of natural substances and to bring them into line with the requirements of quality, cost and safety.

#### CONTENT

Implementation of a pre-pilot scale extraction and purification process collagen for medical use; This project will enable students to implement technologies in the field of production, in BPI conditions [good industrial practices]. These technologies than continuous grinding, vacuum mixing and mixing, tangential filtration or freeze-drying will be implemented with semi-industrial equipment. This project will also allow students to become familiar with the quality and health safety of products and reflect on the costs of production related to materials, reagents and personnel. Finally, they will design the transposition of the study to the industrial scale.

#### PRE-REQUISITE

Analytic Chemical and Biochemistry