

Analytical Methods 1

Introducing

Description

This module is divided into three parts in order to understand and manage theoretical and experimental concepts relating to analytical methods.

Electrochemistry (Conductimetry, probes, ion-selective electrodes).

Liquid and gas Chromatographies: theory, instrumentation and quantification methods.

Sensors (biomass, microscopy, temperature, flow, pressure, viscosity, etc.).

Objectives

At the end of this module, the student will have understood and be able to explain the principles of analytical techniques implemented currently in laboratories and the associated mechanisms using his/her knowledge in quantum physics and chemistry (chemical reactions, physical and chemical properties &)

The student will be able to:

AA1 Choose the most relevant technique regarding the problem by explaining the relating theoretical concepts.

AA2 Carry out these analytical techniques.

AA3 Define and interface sensors with their electronic

signal processing unit and identify needs for filtering, amplification and other signal processing requirements

AA4 Analyse and discuss the results in a critical way.

Necessary prerequisites

Thermodynamic 1Y (I1ANETTH) and 2Y (I2BETH11) / Chemistry of solutions 1Y (I1ANETCH) / Organic Chemistry 2Y (I2BECH11) / biostructural chemistry 2Y / Electrokinetics 1Y

Évaluation

L'évaluation des acquis d'apprentissage est réalisée en continu tout le long du semestre. En fonction des enseignements, elle peut prendre différentes formes : examen écrit, oral, compte-rendu, rapport écrit, évaluation par les pairs...

Practical info

Location(s)

 Toulouse