

# Analytical methods II

# Introducing

Description

- 1. formulate a scientific problem related to analysis methods in order to illustrate it by manipulations.
- 2. Make a bibliography with the aim of proposing, adapting or creating experiments which will illustrate the chosen issue.
- 3. Gather its theoretical and practical knowledge of the previous years and implement them to solve the chosen problem.
- 4. Plan the experimental work of the group and organize the interactions with the other groups.
- 5. Explain the principle and learn how to implement the experimental techniques for the analysis.
- 6. teach yourself on the new analysis techniques necessary to undertake the project when this methods haven't been taught previously.
- 7. carry out an experiment at the laboratory
- 8. Analyze the experimental results.
- 9. Share and debate the results in the scientific point of view with both your teachers and inside your students group. Suggest improvements or work lead.
- 10. Verbally explain the objectives desired, the chosen scientific approach, and the results of the debate during an oral presentation.
- 11. Give explanation on the scientific approach followed and the results reached in a written scientific report.

Forcing students to use all of their scientific knowledge in order to analyze the experimental results of their experiments and if necessary modify the protocols

### Necessary prerequisites

- Molecular structure and reactivity.
- Thermodynamics, chemistry, electrochemistry.
- Techniques of separation, extraction.
- Analytical methods: chromatographic, UV-visible, electrochemical.

#### 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

# Objectives

Learning by experimental project: illustrate a scientific problem using various experiments involving analytical techniques.

