CHIM2141 Exercices de chimie organique

[120h] 7.5 credits

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Language: French
Level: Second cycle

Aims

After these exercises, the student has to be able to reproduce with success a current synthesis, starting from data from literature. The best of them will be able to conceive an operation mode for these synthesises. Learning how to write a report is also part of the objectives. The determination of an unknown product's structure, on the basis of spectroscopic documents, is also a problem that will be faced.

Main themes

The exercises a part specific to organic chemistry and a part integrated in physical and analytical chemistry. The exercises cover a large number of processes used of organic synthesis while illustrating as many reactions as possible. The techniques illustrated in the laboratory are : crystallization, liquid-liquid and solid-liquid extractions, distillations, manipulations and drying gazes, sodium and hydride manipulations, working under anhydride conditions and drying solvents, working in semi-micro, synthesis in inert atmosphere, using Uvs, colon chromatography. The techniques used for the control of products are: physical characteristics: fusion point, refractiometry, polarimetry, thin-layer chromatography, gas phase chromatography, liquid HPLC chromatography; spectroscopy: infra-red and RMN (proton-carbon). We also offer an initiation in computerized bibliographic research, and the use of RMN software.

Other information (prerequisite, evaluation (assessment methods), course materials recommended readings, ...)

Prerequisites: course and exercises of inorganic chemistry (2nd candidature).
Evaluation: discussions with teachers and assistants during exercises sessions, laboratory exercise book, synthesized products quality and quantity, reports, seminars.
Support: technical documents provided for each synthesis, laboratory manual for integrated exercises, reference books available in the laboratory for synthesis and purification methods as well as spectroscopic analysis.

Other credits in programs

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