



CHM1231 Elements of inorganic and analytical chemistry

[30h+50h exercises] 6 credits

Teacher(s): Michel Devillers
Language: French
Level: First cycle

Aims

The goal of this course is to give students theoretical and practical basis in the main physical and chemical properties of the elements and their most important compounds.

Main themes

The theoretical course covers the main group elements (s and p blocks) as well as the transition elements (including lanthanides and actinides). It includes a brief introduction to metallurgy and radioactivity. The first chapter describes in a general way the periodicity of chemical and physical-chemical properties. The second chapter is dedicated to hydrogen and its binary compounds. The next chapters are successively dedicated to the different families of the periodical table. In each case, the general characteristics of the group, the obtention, properties and uses of the most important elements and of their main compounds are described. Emphasis is put on practical and environmental aspects.

These practical exercises deal with the qualitative analysis of cations and anions in aqueous solutions. The analyses cover about 50 different species. The analytical approach is based on the chemical properties of the elements depending on their position in the periodical table. The student must be familiar with the simultaneous use of acid-base precipitation, complexation and redox properties.

Other credits in programs

CHIM12BA	Deuxième année de bachelier en sciences chimiques	(6 credits)	Mandatory
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