

# LEARNING INSTRUMENTAL ANALYSIS IN CHEMISTRY COURSES ET THE UNIVERSITY LEVEL. AN ACCOUNT OF EDUCATIONAL DIFFICULTIES

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## Abstract

An account of difficulties associated to learning instrumental analysis in Chemistry and Chemical Engineering courses has been made from tests and structured interviews to a sample of students from the University of Valencia (Spain) submitted to orthodox theoretical lessons during their regular academic instruction. Difficulties for learning formal concepts and operational abilities in instrumental analysis can be associated to a great extent with misconceptions dealing with peculiar methods of analytical chemistry and the prevalence among students of a pseudo-empiricist view of science which impregnates students learning style so that instrumentation is viewed as an autonomous-like element to be used, automatically, in chemical analysis.