

Title of the course: Environmental analysis

Kredits:3

Coordinator/Department: Enikő Tatár, associate professor

Department of Analytical Chemistry

Terms for joining: Analytical Chemistry

Topics covered by the course:

Sampling for the analysis and speciation analysis of environmental samples (air, water, biological samples, sediments and soils); Sample preparation methods; Water analysis; Analysis of solids; Atmospheric analysis (gases and particulates); Atomic spectrometric analytical techniques (flame atomic absorption spectrometry, graphite furnace atomic absorption spectrometry, inductively coupled plasma atomic emission spectrometry, atomic fluorescence spectrometry, inductively coupled plasma mass spectrometry, X-ray fluorescence spectrometry), ultraviolet and visible absorption spectrometry, infrared spectrometry, separation techniques (gas chromatography and liquid chromatography), elemental speciation

Literature:

Compulsory:

C. Vandecasteele and C.B. Block: Modern methods for trace element determination, John Wiley & Sons, Chichester, 1993

H.H. Willard, L.L. Merritt, J.A. Dean, F.A. Settle: Instrumental methods of analysis, Wadsworth Publishing Company, California, 1988

Záray Gy.: Az elemanalitika korszerű módszerei, Akadémia Kiadó 2006

Suggested:

R.M. Reeve: Environmental Analysis, John Wiley & Sons, Chichester, 1994

J.R. Dean: Atomic Absorption and Plasma Spectroscopy

D.A. Skoog, D.M. West, F.J. Holler: Analytical chemistry, Saunders College Publishing, Fort Worth, 1992

L.R. Snyder, J.J. Kirkland, J.L. Glajch: Practical HPLC method development, 2nd ed., John Wiley & Sons, 1997