Course Unit Descriptor

Study Programme: Food Engineering

Course Unit Title: Electrochemical Stripping Analysis

Course Unit Code:

Name of Lecturer(s): Professor Jaroslava Švarc-Gajić, Associate Professor Zorica Stojanović

Type and Level of Studies: Doctoral Degree

Course Status (compulsory/elective): Elective

Semester (winter/summer): Winter/Summer

Language of instruction: English

Mode of course unit delivery (face-to-face/distance learning): Face-to-face

Number of ECTS Allocated: 10

Prerequisites: /

Course Aims:

The course aim is to gain the knowledge and skills related to the theory of electrochemical stripping analysis (ESA) and its practical application in the analysis and quality control of various sample types (food, pharmaceutical, biological and environmental samples).

Learning Outcomes:

Practical experience in the application of ESA. Training for the independent planning and performing analysis by applying ESA, in order to determine traces of various analytes. Adequate interpretation of the obtained results.

Syllabus:

Theory

Principles of ESA. Working electrodes. Pre-concentration step. Analytical/dissolution step. Voltammetric, potentiometric, and chronopotentiometric stripping analysis. Interferences in ESA. Sample preparation and real sample analysis.

Practice

Literature survey about the latest findings in the field of ESA. Application of ESA for different purposes.

Required Reading:

- 1. Z. Suturović: Elektrohemijska striping analiza, Tehnološki fakultet, Novi Sad, 2003.
- 2. J. Wang: Stripping Analysis, Principles, Instrumentation and Application, VCH Publishers, Inc. Deerfield Beach, Florida, 1985.
- 3. F. Vydra, K. Štulik, E. Julakova: Electrochemical Stripping Analysis, Horwood Limited Publishers, 1976.
- 4. J. Wang: Analytical Electrochemistry, 2nd Edition, Wiley-VCH, 2000.
- 5. K. Brainina, E. Neyman: Electroanalytical Stripping Methods, Wiley-VCH, 1993.

	Weekly Contact Hours:	Lectures: 4	Practical work: 2
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Teaching Methods:

Lectures and students group work.

Knowledge Assessment (maximum of 100 points):

Pre-exam obligations	points	Final exam	points
Active class	10	written exam	
participation Practical work		oral exam	40
Preliminary exam(s)			

Seminar(s)	50				
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam,					
project presentation, seminars, etc.					