

Study Programme: Food Engineering			
Course Unit Title: Antioxidants in Food Industry			
Course Unit Code: MIUH6			
Name of Lecturer(s): Prof. Dr Jasna Čanadanović-Brunet, Prof. Dr Jelena Vulić			
Type and Level of Studies: Master studies			
Course Status (compulsory/elective): elective			
Semester (winter/summer): winter			
Language of instruction: English			
Mode of course unit delivery (face-to-face/distance learning): face-to-face			
Number of ECTS Allocated: 7			
Prerequisites: none			
Course Aims: Acquisition of basic scientific and academic abilities and skills on the mechanisms of action of antioxidants and their impact on the quality and sustainability of food products.			
Learning Outcomes: Ability of students to understand the structure, importance and role of antioxidants from the aspect of their practical application in the food industry.			
Syllabus: <i>Theory</i> Division, chemical structure and role of antioxidants. Reaction mechanisms of action of antioxidants during oxidation of primary metabolites. Representatives of synthetic and natural antioxidants. Oxidation of primary metabolites and formation of reactive oxidative species. Antioxidants in the prevention of oxidative damage to constituents of food products. Sources of natural antioxidants. Antioxidants of plant and animal origin and their application in order to improve the nutritional characteristics and stability of food products. <i>Practice</i> Isolation, purification, physical and chemical characterization of natural antioxidants. Analysis of the action of natural and synthetic antioxidants in food products. Analysis of certain natural antioxidants using different instrumental methods.			
Required Reading: 1. Maureen Zimmerman, An Introduction to Nutrition v. 1.0, Beth Snow, Creative Commons, 2012. 2. M.M. Đukić: Oksidativni stres, slobodni radikali, prooksidansi, antioksidansi, Mono i Manjana, Beograd, 2008. 3. J.M. Čanadanović-Brunet: Kiseonikovi slobodni radikali i prirodni antioksidanti, Zadužbina Andrejević, Beograd, 1998. 4. B.Lj. Milić, S.M. Đilas, J.M. Čanadanović-Brunet, M.B. Sakač: Biljni fenoli, Univerzitet u Novom Sadu, Tehnološki fakultet, 2000.			
Weekly Contact Hours:	Lectures: 3	Practical work: 3	
Teaching Methods: Interactive lectures with the use of video equipment, consultations. Laboratory exercises - independently or in small groups.			
Knowledge Assessment (maximum of 100 points):			
Pre-exam obligations	points	Final exam	points
Active class participation	5	written exam	
Practical work	25	oral exam	40
Preliminary exam(s)			
Seminar(s)	30		
The methods of knowledge assessment may differ; the table presents only some of the options: written exam, oral exam, project presentation, seminars, etc.			