

### DESCRIPTION OF THE SAFE\_20 MODULE IMPLEMENTED AS PART OF THE INTENSIVE FORM OF EDUCATION (IFoE)

<b>Module Name</b>	<i>Chemical analyses of food</i>			
<b>Language of Instruction</b>	english			
<b>Module Purpose</b>	The aim of this module is to familiarize students with basic chemical analysis of food, including chromatographic methods.			
<b>Module Content</b>	Students will be introduced to the basic chemical components of agricultural products and foods, including proteins, lipids, (poly)saccharides, and minerals, as well as the methods used for their determination. The course will also cover advanced and sophisticated techniques for the analysis of bioactive compounds, such as chromatographic and mass spectrometric methods.			
<b>Description of learning outcomes</b>	Effect Symbol	Effect Name Methods	Verification and Documentation	Reference to Directional Effect Set
	KNOWLEDGE (graduate knows and understands)			
	W1	Knows the basic chemical components in agricultural and food products.	Test	SAFE_W01 SAFE_W04
	W2	Knows advanced techniques for analyzing bioactive compounds.	Test	SAFE_W01 SAFE_W04
	SKILLS (graduate can)			
	U1	Is able to determine the basic chemical components in agricultural and food products.	Test	SAFE_U02
	U2	Is able to analyze food in the context of a selected bioactive compound.	Test	SAFE_U02
	SOCIAL COMPETENCES (graduate is ready to)			
	K1	Critically evaluates the obtained analytical results.	Test	SAFE_K01

	K2	Effectively collaborates within an interdisciplinary team in the field of food quality.	Activity in class	SAFE_K02
<b>Module crediting method</b>	Passing with a grade			
<b>ECTS credit balance (total, developing practical skills, from classes conducted using distance learning methods and techniques)</b>	Number of contact hours/ECTS points		Number of non-contact hours/ECTS points	
	Lectures (hours 1 ECTS points 0.04) Classes (hours 2 ECTS points 0.08)		Reading literature (hours 1 ECTS points 0.04) Preparing a presentation (hours .... ECTS points .....) Preparing for credit (hours 1 ECTS points 0.04)	
	<b>Total contact hours 3 hr. 0,12 pt. ECTS</b>		<b>Total non-contact hours 2 hr. 0,08 pt. ECTS</b>	
<b>Staffing</b>	Jan Bedrníček PhD			
<b>Information on the infrastructure ensuring the implementation of learning outcomes</b>	The lecture will be held in a lecture hall equipped with a multimedia projector. Practical exercises will be conducted in the Lublin Biostimulators and Bioprotectants Laboratory, equipped with the necessary equipment to achieve the intended learning outcomes. The rooms are accessible to people with disabilities.			
<b>Planned teaching methods</b>	Mono- and dialogic lectures; Practical training; Demonstration			
<b>Recommended reading list</b>	Damodaran, S., Parkin, K. L., & Fennema, O. R. (Eds.). (2007). <i>Fennema's food chemistry</i> . CRC press. Christian, G. D., Dasgupta, P. K., & Schug, K. A. (2013). <i>Analytical chemistry</i> . John Wiley & Sons.			

