

Study programme: Food Processing				
Type and level of study: Bachelor's degree (240 ECTS) – First cycle				
<b>Course title: Qualitative Chemical Analysis</b>				
<b>Lecturer:</b> Assoc. Prof. Jelena Mašković, PhD				
<b>Language of instruction:</b> English				
ECTS credits: 6				
Prerequisite: General and unorganic chemistry 1				
Semester: winter				
<b>Course objective</b> Substantial understanding of the basic principles of qualitative analysis. Independent performance of qualitative analysis and correct interpretation of obtained experimental results. The skill of connecting theoretical and experimental knowledge. Successful application of acquired knowledge in the preparation of samples for qualitative chemical analysis in order to precisely identify the appropriate ions that are important in the food industry.				
<b>Learning outcomes</b> <ul style="list-style-type: none"> <li>• Essential understanding of the basic principles of qualitative analysis</li> <li>• Independent performance of qualitative analysis and proper interpretation of the obtained experimental results</li> <li>• The skill of connecting theoretical and experimental knowledge</li> <li>• Use of experimental results obtained for the successful management of technological processes in the food industry</li> </ul>				
<b>Course contents</b> <i>Theoretical instruction</i> Introduction. Principles and theoretical foundations of qualitative chemical analysis. Chemical equilibrium in homogeneous and heterogeneous systems. Oxido-reduction reactions in qualitative chemical analysis. Complex compounds. Qualitative chemical analysis of I-V analytical group cations. Qualitative chemical analysis of anions. <i>Practical instruction</i> Proof reactions of cations of the I-V analytical group. Separation and proof of cations of analytical group I-V. Proof reactions of anions. Separation and proof of anions. Preparation and analysis of real samples.				
<b>Recommended reading</b> Mašković J. (2018): Practicum in Applied Analytical Chemistry, Faculty of Agronomy, Čačak 1-159. Vučurović, B., Rajaković, Lj., Rajaković, M. (2004): Analytical Chemistry, Belgrade, 1-197. Skoog D., West J., Holler J.(1999): Fundamentals of analytical chemistry, Školska knjiga, Zagreb, 1-951. Rikovski, I., Džamić, M., Rajaković, M. (2004): Practicum in Analytical Chemistry. GraĐ.knjiga, Belgrade,. 1-298. Rajaković, Lj., (2006):Analytical chemistry: Qualitative chemical analysis: practical, solved tasks, tests. TMF, Belgrade, 1-177.				
<b>Hours of active teaching</b>				<b>Other classes</b>
Lectures: 3x15=45	Practicals: 3x15=45	Other forms of teaching	Individual work:	
<b>Teaching methods</b> Theory teaching: lectures ex catedra Practical classes: experimental exercises				
<b>Assessment (maximum points 100)</b>				
<b>Examination requirements</b>	<b>Points</b>	<b>Final examination</b>	<b>Points</b>	
Class participation	5	oral examination	50	
Practical sessions/tests	10	written examination		
Term paper assignments/homework	35	.....		
Project				
Other				
<b>Grading system</b>				

<b>Grade</b>	<b>ECTS</b>	<b>Description</b>
<b>10</b>	<b>91-100</b>	Excellent
<b>9</b>	<b>81-90</b>	Exceptionally good
<b>8</b>	<b>71-80</b>	Very good
<b>7</b>	<b>61-70</b>	Good
<b>6</b>	<b>51-60</b>	Passing
<b>5</b>	<b>≤50</b>	Failing