



**Entitlement** Practice in a company, 20 cr.

### Prerequisites

B1 level of English language, General Chemistry, Analytical Chemistry, Organic Chemistry, Chromatographic Analysis.

### Main aim

The aim of the subject is to develop the abilities of a researcher of chemical analysis and to form practical skills necessary for professional activity. Perform chemical /biochemical analysis and collect data for the final work.

### Summary

Normative documents, research methodologies, technical characteristics of laboratory equipment, equipment used in practical work are analyzed. Theoretical material is collected, systematized and analyzed according to the possible methods of analyte detection and determination in the experimental part of the final work topic, the possibilities of using the methods are evaluated, chemical experiments are performed using different methods, the optimal analysis method is selected. Tools and materials for selected analysis are prepared. Chemical / biochemical analysis is planned and performed according to the chosen topic of the final work. The results of the analysis are presented and evaluated, the quality parameters of the chemical analysis are determined, the factors influencing the magnitude of the uncertainty of the analysis results are identified. Laboratory, fire and human and nature safety are described.

### Learning Outcomes

1. Be able to apply the chemistry/biochemistry literature search skills in practice;
2. Be able to analyse and organise scientific material, collected from various information sources
3. Be able to to deepen the knowledge in the chosen study area independently;
4. Be able to plan the chemical/biochemical analysis according to the thesis theme;
5. Be able to choose the right laboratory equipment and operate it safely;
6. Be able to prepare solutions for the chemical/biochemical analysis independently and safely
7. Be able to verify practically advantages and disadvantages of testing methods, to choose the optimal chemical/biochemical analysis method;
8. Be able to choose materials needed for the chemical/biochemical analysis; take representative samples for the chemical/biochemical analysis;

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| 9. Be able to follow the standards and standardised chemical research methodologies for a quality chemical/biochemical analysis and assess it by economic calculations; determine the quality parameters and evaluate results of the conducted chemical analysis; |
| 10. Be able to practically apply chemical information and result calculation and processing skills; evaluate and interpret the results of a conducted chemical/biochemical analysis and draw conclusions;   |
| 11. Be able to present the results of a conducted chemical/biochemical analysis;  |
| 12. Be able to analyse and evaluate the laboratory activity in accordance with work, fire and environmental safety requirements.  |

#### **Evaluation procedure of knowledge and abilities**

The final assessment is a cumulative score, which is the sum of the intermediate settlement received during the practice at the enterprise and practice report preparation and defence assessments multiplied by their respective quotients.