

Course title:	Physicochemical analysis of selected food products
Institute/Specialty:	FACULTY OF CHEMICAL ENGINEERING AND TECHNOLOGY / Department of Chemical Technology and Environmental Analytics
Number of contact hours:	15 hours (laboratory classes)
Course duration:	1 semester
ETCS credits:	1
Course description:	Laboratory classes include practical analyzes of selected food products (e.g. milk, yeast, butter, water) using selected analytical and instrumental methods that typical research laboratories in the food industry are equipped with. Each class is preceded by a presentation of the principles of occupational health and safety as well as the principles of good laboratory practice and a theoretical introduction to the subject of the classes. During the classes, students will familiarize themselves with typical chemistry laboratory glassware and the principle of operation of basic laboratory equipment - e.g. laboratory dryer, moisture analyzer, shaker, pH-meter, homogenizer.
Course content:	<ol style="list-style-type: none"> 1. Training in the principles of occupational health and safety and the principles of good laboratory practice - general and workplace 2. Analysis of dairy products (determination of fresh milk acidity, detection of milk adulteration, assessment of thermal stability of milk, detection of dyes in butter) 3. Water analysis (analysis of drinking water hardness, analysis of basic parameters of drinking water - pH, conductivity, color, smell, determination of water content in selected food products) 4. Evaluation of technological parameters of baker's yeast (yeast viability and nutritional condition, evaluation of saccharolytic capacity, analysis of yeast dry matter content, organoleptic evaluation)
Literature:	<p>[1] Nielsen S.S., <i>Food Analysis</i>, 2018, Springer International Publishing AG</p> <p>[2] Nogala-Kałużka M. (red.), <i>Analiza żywności. Wybrane metody oznaczeń jakościowych i ilościowych składników żywności</i>, 2016, Wydawnictwo Uniwersytetu Przyrodniczego w Poznaniu</p> <p>[3] Sikorski Z., Drozdowski B., <i>Chemia żywności, tom 1 i 2</i>, 2007, Wydawnictwa Naukowo Techniczne</p>
Assessment method:	Average grade from all individual reports prepared after each laboratory class
Prerequisites:	Student should have basic knowledge of chemistry laboratory glassware
Primary target group:	all specialties students (Chemical Engineering / Chemical Technology)
Lecturer:	PhD Eng. Dagmara Malina
Contact person:	PhD Eng. Dagmara Malina (dagmara.malina@pk.edu.pl)
Deadline for application:	15th of January for students applying for spring semester
Remarks:	The course is selectable