CALENDAR AND THEMATIC PLAN

of lectures of ***the elective course "Identification of organic compounds"***

for the 2nd Year students

of the ***Pharmaceutical Faculty***

(Spring semester, 2019/2020 educational year)

№	Theme	Hours	Date
1.	The structure of organic compounds. The most important classes of organic compounds as the basis for the identification of organic compounds. Relationship structure-activity (properties). Methods of separation and purification of organic compounds. Sensitivity and selectivity of chemical reactions. Approaches to the characteristics of organic compounds: the most important physicochemical constants, elemental analysis.	2	08.01
2	Physical methods of analysis: spectroscopic methods of investigation (NMR, EMR, IR, UV), mass spectrometry, diffractometry, chromatographic methods. Chemical methods of identification of organic compounds: general requirements, approaches to selection.	2	22.01
3	Identification by analytical-functional groups: saturated, unsaturated hydrocarbons, arenes, alcohols, phenols, amines, carbonyl compounds, acids and their functional derivatives.	2	05.02
4	Identification by analytic-functional groups: heterophunctional compounds (amino acids, hydroxy acids, monosaccharides). Identification of heterocyclic compounds (N- and S-containing heterocycles). Identification of the main classes of biologically active compounds (proteins, proteins).	2	19.02
5.	Identification of the main classes of biologically active compounds (di- and polysaccharides), lipids. Quantitative analysis as the basis for clinical laboratory diagnosis. Basic methods of quantitative analysis.	2	04.03
Total		**10**	
Number of lecture hours from the elective course		**10**	

Head of Pharmaceutical, Organic
& Bioorganic Chemistry Chair, prof. R. Lesyk

CALENDAR AND THEMATIC PLAN

of practical classes of ***the elective course "Identification of organic compounds"***

for the 2nd Year students

of the ***Pharmaceutical Faculty***

(Spring semester, 2019/2020 educational year)

№	Theme	Hours	Date
1.	The structure of organic compounds. The most important classes of organic compounds as the basis for the identification of organic compounds. Relationship structure-activity (properties). Methods of separation and purification of organic compounds. Sensitivity and selectivity of chemical reactions. Approaches to the characteristics of organic compounds: the most important physicochemical constants, elemental analysis.	2	15.01
2	Physical methods of analysis: spectroscopic methods of investigation (NMR, EMR, IR, UV), mass spectrometry, diffractometry, chromatographic methods. Chemical methods of identification of organic compounds: general requirements, approaches to selection.	2	29.01
3	Identification by analytical-functional groups: saturated, unsaturated hydrocarbons, arenes, alcohols, phenols, amines, carbonyl compounds, acids and their functional derivatives.	2	12.02
4	Identification by analytic-functional groups: heterophunctional compounds (amino acids, hydroxy acids, monosaccharides). Identification of heterocyclic compounds (N- and S-containing heterocycles). Identification of the main classes of biologically active compounds (proteins, proteins).	2	26.02
5.	Identification of the main classes of biologically active compounds (di- and polysaccharides), lipids. Quantitative analysis as the basis for clinical laboratory diagnosis. Basic methods of quantitative analysis.	2	11.03
Total		**10**	
Number of practical classes hours from the elective course		**10**	

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CALENDAR AND THEMATIC PLAN

of out-classes works of ***the elective course "Identification of organic compounds"***

for the 2nd Year students

of the ***Pharmaceutical Faculty***

(Spring semester, 2019/2020 educational year)

№	Theme	Hours
1.	The structure of organic compounds. The most important classes of organic compounds as the basis for the identification of organic compounds. Relationship between structure and activity (properties).	2
2.	Methods of separation and purification of organic compounds. Sensitivity and selectivity of chemical reactions.	2
3.	Approaches to the characteristics of organic compounds: the most important physicochemical constants, elemental analysis.	2
4.	Physical methods of analysis: spectroscopic methods of investigation (NMR, EMR, IR, UV).	2
5.	Physical methods of analysis: mass spectrometry, diffractometry, chromatographic methods.	3
6.	Chemical methods of identification of organic compounds: general requirements, approaches to selection.	2
7.	Identification by analytical-functional groups: saturated, unsaturated hydrocarbons, arenes.	3
8.	Identification by analytical-functional groups: alcohols, phenols, amines.	3
9.	Identification by analytical-functional groups: carbonyl compounds, acids and their functional derivatives.	3
10.	Identification by analytical-functional groups: heterophunctional compounds (amino acids, hydroxy acids, monosaccharides).	3
11.	Identification of heterocyclic compounds (N- and S-containing heterocycles).	3
12.	Identification of the main classes of biologically active compounds (proteins, proteins).	3
13.	Identification of the main classes of biologically active compounds (di- and polysaccharides).	3
14.	Identification of the main classes of biologically active compounds, lipids.	3
15.	Quantitative analysis as the basis for clinical laboratory diagnosis. Basic methods of quantitative analysis.	3
Total		**40**
Number of lecture hours from the elective course		**40**

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& Bioorganic Chemistry Chair, prof. R. Lesyk