

MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
 Educational Institution "Belarusian State Medical University"
 Department of Pharmaceutical Chemistry


Discussed at the meeting
 of the Pharmaceutical Chemistry department
 protocol № 6 from «28» December 2023

THEME PLAN

of laboratory classes on the academic discipline "Analytical Chemistry" for 2nd year students of the
 Faculty of Pharmacy full-time higher education in the specialty "Pharmacy" for the IV semester
 2023/2024 academic year.

№	THEME	Date
1	General characteristics of redox titration methods. Iodometric titration. Chloriodometric titration. Laboratory work "Iodometric determination of ascorbic acid and copper sulfate."	12.02-16.02
2	Iodatometric titration. Nitritometric titration. Dichromatometric titration. Laboratory work "Nitritometric determination of novocaine hydrochloride."	19.02-23.02
3	Permanganometric titration. Bromatometric titration. Cerimetric titration. Laboratory work "Permanganatometric determination of hydrogen peroxide."	26.02-01.03
4	Final lesson on the topics "Redox equilibria and titrations." Laboratory work "Bromatometric determination of phenol (resorcinol)."	04.03-08.03
5	General characteristics of instrumental methods of analysis. The basic law of absorption of electromagnetic radiation. Methods for calculating the concentration of a substance based on the value of the analytical signal. Laboratory work "Photometric determination of iron (III)".	11.03-15.03
6	Atomic absorption spectrometry. Infrared spectrometry. Laboratory work "Interpretation of IR spectra".	18.03-22.03
7	Molecular absorption spectrometry in the ultraviolet and visible region. Laboratory work "Photometric determination of cyanocobalamin and nitrofurazone."	25.03-29.03
8	Atomic emission spectrometry. Luminescence spectrometry. Laboratory work "Detection of quinine salts by characteristic fluorescence."	01.04-05.04
9	Atomic emission spectrometry. Luminescence spectrometry. Laboratory work "Detection of quinine salts by characteristic fluorescence."	08.04-12.04
10	Atomic emission spectrometry. Luminescence spectrometry. Laboratory work "Detection of quinine salts by characteristic fluorescence."	15.04-19.04
11	General characteristics and theoretical foundations of chromatographic methods of analysis. Laboratory work "Identification of metal cations using paper chromatography."	22.04-26.04
12	Gas chromatography. Laboratory work "Gas chromatographic analysis of organic substances. Processing of chromatograms."	29.04-03.05
13	Liquid chromatography: thin layer chromatography, column and HPLC. Laboratory work "Identification of organic substances using thin layer chromatography."	06.05-10.05
14	Liquid chromatography: other types of chromatography. Laboratory work "Separation of pigments using column chromatography."	13.05-17.05
15	General characteristics and classification of electrochemical methods of analysis. Conductometry. Coulometry. Laboratory work "Conductometric determination of electrical conductivity."	20.05-24.05
16	Potentiometric method of analysis. Voltammetry. Laboratory work "Potentiometric determination of pH. Potentiometric titration of acid solutions."	27.05-31.05
17	Radiometric methods of analysis. Final lesson on the topics "Chromatographic and electrochemical methods of analysis."	03.06-07.06
18	Final lesson on laboratory work. (Practical skills test)	10.06-14.06

Зав. кафедрой фармацевтической химии,
 к.фарм.н., доцент

 Р.И. Лукашов