MINISTRY OF HEALTH OF THE REPUBLIC OF BELARUS
Educational Institution "Belarusian State Medical University"

Department of Pharmaceutical Chemistry with a course

for advanced training and retraining

Discussed at the department meeting
Protocol No. 6 of January 23, 2026

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 2025/2026 academic year.

№	THEME	Date
1	General characteristics of redox titration methods. Iodometric titration. Chloriodometric titration. Laboratory work “Iodometric determination of ascorbic acid and copper (II) sulfate”	13.02.2026
2	Iodatemetric titration. Nitritometric titration. Dichromatometric titration. Laboratory work “Nitritometric determination of novocaine hydrochloride. Dichromatometric determination of iron salts"	20.02.2026
3	Permanganometric titration. Bromatometric titration. Cerimetric titration. Laboratory work “Permanganatometric determination of hydrogen peroxide. Bromatometric determination of phenol"	27.02.2026
4	Final lesson on the topics “Redox equilibria and titrations.” Laboratory work “Bromatometric determination of phenol (resorcinol).”	06.03.2026
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). Spectrophotometric quality control of para-aminosalicylic acid"	13.03.2026
6	Atomic absorption spectrometry. Molecular absorption spectrometry. Laboratory work “Interpretation of IR spectra. Spectrometric determination of novocaine (procaine) hydrochloride"	20.03.2026
7	Molecular absorption spectrometry in the ultraviolet and visible region. Laboratory work “Photometric determination of cyanocobalamin and nitrofural. Spectrophotometric analysis of moxifloxacin tablets."	27.03.2026
8	Atomic emission spectrometry. Luminescent spectrometry. Laboratory work “Fluorimetric determination of quinine and aluminum salts in complex with morine”	03.04.2026

9	Optical methods not involving absorption or emission of radiation. Laboratory work “Refractometric determination of the concentration of glucose, magnesium sulfate and calcium chloride”	10.04.2026
10	Final lesson on the topics “Spectrometric methods of analysis”. Laboratory work “Polarimetric determination of glucose and sucrose in solutions”	17.04.2026
11	General characteristics and theoretical foundations of chromatographic methods of analysis. Laboratory work “Identification of metal cations using paper chromatography”	24.04.2026
12	Gas chromatography. Liquid chromatography. Laboratory work “Thin layer chromatography of biologically active substances”	01.05.2026
13	General characteristics and classification of electrochemical methods of analysis. Conductometry. Coulometry. Laboratory work “Conductometric determination of the electrical conductivity of water and sucrose solution”	08.05.2026
14	Potentiometric method of analysis. Laboratory work “Potentiometric determination of pH”	15.05.2025
15	Voltammetry. Laboratory work “Potentiometric titration of solutions of acids and their mixtures”	22.05.2026
16	Final lesson on the topics “Chromatographic and electrochemical methods of analysis”	29.05.2026
17	Radiometric methods of analysis	05.06.2026
18	Final lesson on laboratory work (passing practical skills)	12.06.2026

Associate Professor of Department
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