

**Schedule of quantitative analytical chemistry
for second-year pharmacy students
1st semester in 2024/2025 academic year
LABORATORY PRACTICES**

02 (EP/2)

Week	Topic	Task
1. (IX. 3.)	<i>Introduction</i> <i>Chelatometry</i>	- Laboratory bench and equipments inventories; - Safety and order in the laboratory; - The schedule of the semester; - Practical and theoretical requirements in the semester; - Chelatometry: Introduction; - Determination of bismuth ions
2. (IX. 11.)	<i>Chelatometry</i>	- Determination of calcium and magnesium ions in the presence of each other (in mineral water)
3. (IX. 17.)	<i>Chelatometry</i>	- Determination of aluminum ions in "Aluminium aceticum tartaricum solute"; - Determination of copper and zinc ions in the presence of each other (1/2 group) - Determination of mercury and zinc ions in the presence of each other (1/2 group)
4. (IX. 24.)	<i>Argentometry</i>	- Determination of bromide ions by Volhard's and Fajans' methods
5. (X. 1.)	<i>Permanganometry</i>	- Permanganometric determination of hydrogen peroxide content in tablet "Hyperol"; - Determination of the total iron content by Zimmermann-Reinhardt method (1/2 group); - Permanganometric determination of bromide ions by Winkler's method (1/2 group);
6. (X. 8.)	<i>Chromatometry</i> <i>Bromatometry</i>	- Determination of Mohr salt with chromatometric method; - Bromatometric determination of azophene (Phenazonum); - Bromatometric determination of ascorbic acid (Vitamin C) in tablets (e.g. VitC, Rutascorbin, Béres C)
6. (X. 10.)		- Test I.
7. (X. 15.)	<i>Bromatometry / Iodometry</i>	- Determination of acetyl salicylic acid content in tablets (e.g. Aspirin, Kalmopyrin, ...) by Koppeschaar's method; - Standardization of Na ₂ S ₂ O ₃ titrant
8. (X. 22.)	<i>Iodometry</i>	- Iodometric determination of copper (II)-ions; - Determination of iodide by Winkler's method
8. (X. 24.)		- Retake I.
9. (X. 29.)	<i>Chromatography</i>	- HPLC measurement (theory, separation of medicine sample); - Ion chromatographic measurement (theory, determination of anions in Evian water sample)
9. (XI. 6. 5:00 -7:00 pm)		"EXTRA LAB" - Supplements
10. (XI. 5.)	<i>Potentiometry</i>	- Potentiometric titration of acetic acid; - Direct potentiometric determination of fluoride content in tooth paste; - Potentiometric titration of Cl ⁻ and I ⁻ in the presence of each other
11. (XI. 12.)	<i>Spectrofluorescency</i> <i>Spectrophotometry</i>	- Determination of quinine in "Tonic"; - Spectrophotometric determination of phosphate content in egg shell
12. (XI. 19.)	<i>Conductometry</i> <i>Coulometry</i>	- Conductometric determination of Betaine hydrochloride; - Conductometric determination of acid contents in red wine; - Water Determination by Karl Fischer Titration
13. (XI. 26.)	<i>Iodometria</i>	- Determination of mannitol by Malaprade's reaction with periodate - Supplements
13. (XI. 28.)		- Test II.
14. (XII. 3.)	<i>Supplements</i> <i>Closing</i>	- Supplements - Closing
14. (XII. 5.)		- Retake II.