

AH2208 «Analytical chemistry, Part 1»

6B05301 – Chemistry

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1. Role of analytical chemistry in the modern world. Classic methods of analytical chemistry and their analytical signals
2. Forms of analyte in liquid, gaseous and solid samples and equilibrium between them
3. Calculation of equilibrium concentrations
4. Techniques for preparation of liquid samples with a desired concentration of analyte
5. Uncertainties in preparing solutions
6. Techniques for preparation of gaseous samples with a desired concentration of analyte
7. Techniques for preparation of solid samples with a desired concentration of analyte
8. Gravimetric methods of analysis
9. Problems and optimization of gravimetric analysis
10. Titrimetric analysis. Acid-base titration
11. Titrimetry based on reactions of complexation and precipitation
12. Redox titrations
13. General principles of a qualitative chemical analysis. Identification of inorganic cations
14. Identification of inorganic anions
15. Identification of organic compounds