

Describe the essence of the subject of pharmaceutical chemistry and its relationship with other disciplines.

Describe the objects of pharmaceutical chemistry.

Analyze current issues in pharmaceutical chemistry.

Evaluate the development of pharmaceutical chemistry in Kazakhstan.

Describe the scientific and technical documentation and legislative aspects governing pharmacopoeial articles.

Describe the classification of dosage forms by consistency, composition and application.

Provide regulatory requirements for the quality of dosage forms (authenticity, benign, toxicity, specificity, solubility, pyrogenicity, sterility).

Estimate the value of physical constants in the analysis of medicinal substances (optical rotation and pH). Give specific methods for their practical use.

Describe solid dosage forms and their classification.

Describe the excipients that make up solid dosage forms.

Describe the chemical methods for determining the authenticity of drugs.

Describe the refractometry method and give specific examples of the use of refractometry in drug analysis.

Describe liquid dosage forms, give examples of their practical application.

Describe the titrimetric methods of pharmaceutical analysis using bromatometry as an example.

Describe the method of using bromatometry using an example of a specific drug substance. Give the chemical scheme.

Describe the soft dosage forms (ointments, pastes, capsules, suppositories and liniment) and excipients in their composition.

Describe methods for the quantitative determination of drugs by acid-base and non-aqueous titration.

Describe redox methods for quantifying drugs.

Describe the basic ways to test the authenticity of drugs

Describe the method for the quantitative determination of drugs (nitritometry) using sulfonamide drugs as an example.

Describe titrimetric methods in pharmaceutical analysis using iodometry as an example. Describe the method of using iodometry using an example of a specific drug substance. Give the chemical scheme.

Describe the redox methods for the quantitative determination of drugs using permanganatometry as an example.

Describe the argentometric method in pharmaceutical analysis. Describe the method of using argentometry using an example of a specific drug substance. Give the chemical scheme.

Describe the trilonometric method in pharmaceutical analysis. Describe the method of using trilonometry on the example of a specific drug substance containing calcium ions Give a chemical diagram.

Describe the effect of sulfa drugs and their mechanism of action.

Describe the general methods for determining the authenticity of sulfanilamide preparations (azo coupling reaction, lignin test, pyrolysis). Give chemical schemes where possible.

Describe the general methods for determining the authenticity of sulfanilamide preparations (bromatometry, iodometry, reaction with heavy salts metals, with sodium nitroprusside). Give chemical schemes where possible.

Describe the general and particular methods for determining the authenticity of sulfa drugs

Describe the methods for the quantification of sulfa drugs. Give specific examples and schemes of chemical reactions.

Describe the methods of analysis of acetylsalicylic acid. Give chemical schemes.

Describe the methods of analysis of methyl salicylate. Give chemical schemes.

Describe the methods for the analysis of phenyl salicylate. Give chemical schemes.

Analyze common and specific assay methods that distinguish aspirin, phenyl salicylate, and methyl salicylate.

Describe the methods for quantifying phenyl salicylate and methyl salicylate.

Describe the methods for quantifying acetylsalicylic acid

