Explain the meaning of the term “plane-polarized light”. State the principle of using the ability of light to polarize in the pharmaceutical analysis of a drug using the example of a glucose solution (injection form).

Define Optically Active Compounds Explain how this property is used in pharmaceutical analysis. Give an example based on the drug "validol" (tablet form) using the polarimetry method.

Formulate and list the main parameters used in determining the authenticity of a drug.

Describe the principle of operation of the polarimeter and its device. Give an example of the use of the polarimetry method in the pharmaceutical analysis of drugs.

Describe the method of refractometry and its role in the pharmaceutical analysis. Give examples.

Formulate the physical phenomenon underlying polarimetry. Give examples of the use of this phenomenon in pharmaceutical analysis.

Describe the information for pharmanalysis carried by a quantity measured by polarimetry.

Explain on what physical phenomenon the determination of the authenticity of a drug is based on UV spectroscopy.

Define the concepts: plane of oscillation of a light wave; linearly polarized, circularly polarized, elliptically polarized light. Describe the difference between natural and polarized light.

Describe the methods for producing plane-polarized light. Describe the scheme that allows you to receive plane-polarized light.

Establish the relation between the electronic transitions $\sigma \rightarrow \sigma^*$ in alkanes and cycloalkanes and their transparency in UV. Explain why λmax of propane is 140 nm, and λmax of cyclopropane is 190 nm.

Analyze a slight increase in λmax for the following compounds: methane (125 nm) and chloromethane (172 nm); methane and methylamine (213 nm); methylamine and triethylamine (227 nm).

State by what signs compounds are classified as chromophores. Describe ethylene chromophore.