PP10. COMPLEXES OF WATER-SOLUBLE LOCAL PLANT POLYPHENOL DERIVATIVES AND THEIR BIOLOGICAL ACTIVITY

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The article is devoted to obtaining water-soluble complexes of iminoazo derivatives of gossypol, studying their physicochemical properties and biological activity. Aromatic, heterocyclic amines and sulfanilamide preparations were used as amine componentsin obtaining iminoazo derivatives of gossypol and their water-soluble complexes. The maximum values of wavelengths and the corresponding optical densities were determined in the UV spectra of compounds in acetone solvent. In order to determinethe structure of the compounds, the infrared spectrum was taken and analyzed: the shift of the fundamental vibrational frequencies up to 31 cm^{-1} showed that the water- poly-N- vinylpyrrolidone in the compound is connected to a lesser extent because of hydrogen bonding. Obtaining complexes of azoderivatives of gossypol imines with poly-N- vinylpyrrolidone is related to the multi-functionality of the reactive groups ofthe ligand compound; formed hydrogen bonds due to the oxygen of the cycloamide group. For the first time, six new water-soluble complexes iminoazo derivatives of gossypol with poly- N-vinylpyrrolidone were obtained. The results of determination of interferon-inducing activity of compounds were analyzed. The activity was compared with the effectiveness of azo-, iminoazo derivatives of gossypol. Accordingto the obtained results, it was shown that the effectiveness of water-soluble complexes iminoazo derivatives of gossypol.

Keywords: Gossypol, Schiff bases, azo derivatives of gossypol, iminoazo derivativesof gossypol, poly-N-vinylpyrrolidone, UV and IR spectroscopy methods, interferon- inducing activity.