

THE CHEMICAL STUDY OF BUPLEURUM AUREUM FISCH EXTRACTS

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The questions of standardization and quality control of the medicinal plant raw material and phytodrugs produced in Ukraine continue to be of a vital importance because of the increase of the total amount of phytodrugs, introduction of new types of the medicinal plant raw material into medical practice, as well as medicines based on the previously known medicinal plants of the national flora. Therefore, it is necessary to standardize different types of the raw material and develop the analytical normative documentation, which allows to perform standardization of the medicinal plant raw material taking into account specific properties. Our attention has been drawn by *Bupleurum aureum Fisch* (hare's ear). It contains a lot of flavonoids and since ancient times it has been used for treating pathology of the hepatobiliary system in folk and traditional medicine.

The aim of our work is identification and quantitative determination of biologically active substances in aqueous and aqueous-alcoholic extracts of *Bupleurum aureum Fisch*.

Aqueous and aqueous-alcoholic extracts were prepared from the air-dry crushed overground part of *Bupleurum aureum Fisch* in the ratio of 1:20. To prepare aqueous-alcoholic extracts 30%, 50% and 70% alcohols were used.

The identification reactions conducted indicate the presence of phenols and tannins, substances with the restorative action, steroid compounds, flavonoids and alkaloids in the extracts studied.

The quantitative determination of flavonoids was performed after the reaction of interaction with the solution of aluminum chloride in the alcoholic medium in the presence of the solution of acetic acid by the absorption spectrophotometry method at the wavelength of 411 nm. The results obtained testify that the greatest amount of flavonoids calculated with reference to rutin and the raw material is in 70% alcoholic extract of *Bupleurum aureum Fisch* (2.72%).

After the reaction with phosphomolybdenum tungstic reagent the quantitative content of polyphenolic compounds was determined by the method of absorption spectrophotometry at the wavelength of 760 nm. Simultaneously the optical density of pyrogallol was determined. The content of polyphenolic compounds calculated with reference to pyrogallol (%) indicates that the greatest amount of polyphenolic compounds is in 50% alcoholic extract of *Bupleurum aureum Fisch* (0.97%).

Thus, a great amount of substances with the flavonoid structure in the extracts under study indicates the opportunities of using *Bupleurum aureum Fisch* in traditional medicine.