ROSA CINNAMOMEA ROOTS CHROMATO-MASS-SPECTROMETRIC STUDY

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Herbal drugs have several advantages over synthetic ones. In this regard, the search for new sources of medicinal plants containing biologically active compounds is promising. It is known that in terms of pharmacological availability aggregate,herbal drugs have a lot of advantages over individual compounds, therefore it is advisable to use the aggregate substances as multifunctional preventional medicines. Finding primary sources of biologically active compounds among the species of Ukrainian flora that have sufficient herbal drug and have long been used in folk medicine, is a key issue in Pharmaceutical Sciences. The herbal drug is rose fruits (Rosae fructus) rich in ascorbic acid, carotenoids, organic acids, phenolic compounds. Under the current standart documents, fourteen species of wild rose are suitable for medicinal use.

At the same time roots of the genus Rosa are popular in folk medicine as an astringent and antiseptic, used to treat inflammation of the joints, gout, rheumatism, paralysis, hypertension, heart diseases, digestive disorders, cystitis.

The object of the study were the roots of Cinnamon rose, harvested in October 2013. The study of essential oil components and organic acids was performed by chromatography-mass spectrometry. The spectra were examined on the basis of the general laws of fragmentation under the action of electric shock and by look in mass spectral data base library.

In the herbal drug of cinnamon rose, there is presence of 27 substances belonging to the volatile compounds. Total content of terpenoid substances is 947,44 mg/kg. Volatile components of underground organs of cinnamon rose quantitative content of the following components were found: aliphatic hydrocarbons and hydrocarbon derivatives of aldehyde nature, terpenoid compounds, acyclic monoterpenoids and their derivatives–; monocyclic monoterpenoids, bycyclic monoterpenoids, aromatic compound, acyclic sesquiterpen, triterpen. The dominant components were heksakozan and squalene (as 367.45 mg / kg and 178.76 mg / kg).

In the roots of cinnamon rose have been defined 29 organic acids, 28 of which were identified, including 11 fatty acids. The total content of organic acids was-33556,5 mg/kg or 3,36%.

These results will be used for the Pharmacognostical study of this herbal drug