PHARMACOGNOSTIC STUDY OF HELIANTHUS TUBEROSUS VARIETY KIEV WHITE Gontova T., Kerkouri Y. Національний фармацевтичний університет, м. Харків, Україна

Introduction. In the pharmaceutical market, a significant list of drugs falls on herbal preparations. The impact on the body of natural substances that take part in the metabolism and have a polyvalent effect practically eliminates the risk of side effects, unlike synthetic agents. About 30% of drugs are obtained from plant materials and various extracts, tinctures based on it. The cost of phytopreparations in most cases is much lower than the cost of synthetic products with a similar effect.

Today, the search for new medicinal plant materials among widespread species, and especially cultivated ones, is promising. These include *Helianthus tuberosus* (tuberous sunflower - Jerusalem artichoke) from the *Asteraceae* family. This is a vegetable and ornamental plant, which is one of the main sources of inulin - fructans, which are absorbed by the body without the participation of insulin, which is of great importance for the complex treatment of type 1 and type 2 diabetes. Tubers are rich in biologically active substances; amino acids, pectins, macroelements and microelements, vitamins, organic acids. Jerusalem artichoke exhibits antioxidant, antitoxic, hypotensive properties, has a positive effect on the functioning of the gastrointestinal tract, the immune system, and metabolic processes in the body.

The purpose of this work was a pharmacognostic study of grass and tubers of the *Helianthus tuberosus* variety Kiev white, cultivated in Ukraine.

Research methods. The qualitative composition of raw materials was studied using chemical qualitative reactions, paper and thin layer chromatography methods [1]. Quantitative determination of the content of BAS was carried out by SP method and gas chromatography.

Main results. As a result of a preliminary study of the chemical composition of the above-ground and underground parts of Jerusalem artichoke with the help of qualitative reactions and chromatography on paper, the following were identified: monosaccharides, polysaccharides, inulin, amino acids, organic acids, flavonoids, tannins, ascorbic acid. Arabinose, glucose, galactose, xylose, fructose were found in the polysaccharides of Jerusalem artichoke, and arabinose and fructose were found in the tubers.

The polysaccharide content for tubers was determined to be 38.25%, and for grass to 10.43%. The content of hydroxycinnamic acids in terms of chlorogenic acid was 2.84% for the grass, and 2.17% for the tubers. The content of flavonoids in Jerusalem artichoke grass in terms of rutin was 0.84%. The content of organic acids was higher in tubers and amounted to 1.36%, and in grass - 1.67%. The content of ascorbic acid in tubers was 0.014 \pm 0.001%, and in grass - 0.041 \pm 0.001%.

Conclusions. A pharmacognostic study of *Helianthus tuberosus* variety Kiev white was conducted for the first time. The obtained research results will be used in further work.