RESEARCH OF THE CHEMICAL COMPOSITION OF BIOLOGICALLY ACTIVE SUBSTANCES OF IRIS SIBIRICA L.

Krechun A.V., Zatylnikova O.A.
National University of Pharmacy, Kharkiv, Ukraine
ana-krechun@mail.ru

Siberian Iris (Iris sibirica L.) – species of Iris, family Iridaceae. The healing properties of this plant have been long known, in folk medicine rhizomes used as an expectorant, anti-inflammatory, antacydy agent in diseases of the digestive system, from the powder made flour and dust. According to the literature leaves of Siberian Iris contains of the organic acids (myristic, undetsylic, tridecylic, benzoic acid), glycoside iridin, starch, tannins, essential oil, the main component is a monoterpene ketone irony.

The aim of work was the study of qualitative and quantitative composition of active substances Siberian iris, harvested in M.M. Gryshko National botanic garden.

Leaves and rhizomes of Siberian iris used as raw materials. For the analysis received 70% alcohol and water extraction by exhaustive extraction with a water bath. For preliminary phytochemical analysis of the biologically active substances of the rhizomes and leaves of Siberian iris using the well-known reaction of identification and paper chromatography. Established the existence of such classes of biologically active substances: triterpenoid saponins (barite precipitation reactions with water, 10% solution of basic lead acetate, the reaction Fountain-Candel), hydrolysable tannins (reaction with iron ammonium alum), flavonoids (tsianidine reaction), coumarins (lactone test).

Also for the study of the chemical composition of leaves and rhizomes of Siberian iris chromatographic analysis was performed on paper (Filtrak FN – 4) with the solvent system: butanol – acetic acid – water (4:1:2) and 15% acetic acid. Phenolic compounds identified in daylight and UV light before and after treatment with ammonia vapors. The chromatograms revealed several compounds of the dark brown, yellow, blue, purple, which was referred previously to the phenolic compounds. The quantitative content of some classes of phenolic compounds. By spectrometry to determine the content of phenolic compounds in the leaves – 1.98%, rhizomes – 2.6% in terms of gallic acid. Flavonoids content was in the leaves – 1.34%, rhizomes – 1.29%. By the permanganatometrii method the content of tannin was (SF XI): rhizomes – 13.95% in the leaves – 2.6%.

The leaves and roots of Siberian iris are perspective material for creating medicines.