MORPHOLOGICAL, ANATOMICAL AND PHYTOCHEMICAL RESEARCH OF VERONICA LONGIFOLIA L. HERB

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Veronica longifolia L. - perennial herb of the family Scrophulariaceae, is widespread in Europe, the Caucasus, Central Asia, Siberia and the Far East. Plants of the genus Veronica L. is not sufficiently fully researched in morphological and anatomical, so their morphological differentiation is difficult. The chemical composition of the plant was not completely studied. It is known that the herb contains saponins, flavonoids (luteolin, cynaroside), iridoids (aukubin, catalpol), choline, tannins, fatty and essential oil, coumarins, hydroxycinnamic acids.

The aim of investigation was to study the morphological and anatomical definition and diagnostic signs of V. longifolia L., and preliminary phytochemical studies of the grass of this species. The object of research was the herb of V. longifolia, harvested in the summer 2012 in Ukraine. The research was conducted by used thin-layer and paper chromatography, as well as with the use of qualitative reactions.

This plant can be identified by macroscopic signs: stems are strong, straight, glabrous or shortly feathery, 30-150 cm in height, sessile leaves, opposite leaf aestivation or placed 2-4 in verticil, long-lanceolate, with almost cordate or flat base, or linear-lanceolate with wedge base, glabrous or little feathery below. Apical raceme up to 25 cm in length, single or multi-lateral racemes.

The study shown that for V. longifolia L. diagnostic signs are: celled and bicellular curved warty trichomes located on the edge of the leaves, stems densely covered with long, slightly warty, curved trichomes; flower with densely feathery calyx, with straight celled, curved and warty multicellular trichomes and glandular trichomes with celled or bicellular peduncle and celled or bicellular head.

Previous studies revealed the presence of such groups of biologically active substances (BAS): saponins, flavonoids, tannins of condensed group, iridoids. Chromatographic methods revealed the presence of at least 3 iridoids, 6 flavonoids, 4 hydroxycinnamic acids.

In results of our investigation was established series micro- and macroscopic signs that allows reliably differentiate the studied type of V. longifolia L. herb. The results of the phytochemical screening create preconditions for further in-depth study of V. longifolia L. herb as a promising source of BAS.