PHENOLIC COMPOUNDS OF *GALIUM APARINE* L. HERB

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Catchweed bedstraw (*Galium aparine* L.) is a perennial herb belonging to the genus *Galium* L., Madder family (*Rubiaceae* Juss.). The main species' distinctive morphological features are weak central stem with whorls of 6-8 leaves that are rather widely separated from each other. Both the central stem and leaves have stiff hairs that point downward. The central stem is 4-angled and furrowed. Leaves are linear-oblong, smooth along the margins (except for stiff hairs), and sessile. Above the upper whorls of leaves, single flowers and/or small cymes of 2-3 flowers are produced. Flowers consist of 4 white petals with pointed tips, 4 stamens, 2 styles and a pair of green carpels that are joined together at the base of the flower. The blooming period occurs from late spring to mid-summer and lasts about 1-2 months.

Previous studies revealed that *Galium aparine* L. herb accumulates iridoids and flavonoids, in roots iridoids and anthracene derivatives of alizarin type have been identified. The plant is included in the British Pharmacopoeia, is a part of homeopathic medicines, is used in folk medicine in treatment of genitourinary system's diseases, fever, bleeding.

The aim of our work was to study phenolic compounds of *Galium aparine* L. herb. The object of the study was air-dried herb harvested in the phase of plant's full flowering in Artemivs'k, Donetsk region in summer 2012. By means of conventional qualitative chemical reactions in aqueous extract tannins have been identified (with a prevalence of condensed group), in 70% alcoholic extract flavonoids have been identified, in 96% alcoholic extract coumarins have been identified.

By means of one- and two-dimensional paper chromatography and one-dimensional thin layer chromatography on *Silufol* and *Sorbfil plates* by chromatographic characteristics chlorogenic acid, coumarin, scopoletin and rutin have been identified. Quantification of hydroxycinnamic acids was carried out in 70% alcoholic extract by direct spectrophotometry. Hydroxycinnamic acids' content in terms of chlorogenic acid was 2.14%. Quantification of flavonoids was carried out in 70% alcoholic extract by differential spectrophotometry using standard sample of rutin. The content of flavonoids was 0.95%.

These results provide the basis for further in-depth phytochemical research of *Galium aparine* L. herb as a new source of phenolic compounds.