

PHYTOCHEMICAL RESEARCH OF PRUNELLA SPECIES

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Prunella (self-heal) is genus of perennial herbaceous plants of the family Lamiaceae. Genus includes about 15 species, in Ukraine are growing 3 species: *P. laciniata*, *P. vulgaris* and *P. grandiflora*. These species are also known as decorative and ornamental. Selfheal attracts the researcher's attention because for its wide range of applications in folk medicine as an antiviral, antibacterial, anti-inflammatory agents.

Herbal drugs of *Prunella* species were collected during the 2011-2012 years in blossom time in Dergachevsky region and Botanical Garden of NPhU. Study of phenolic compounds was carried out using paper chromatography and TLC compared with reference compounds in following solvent systems: butanol-acetic acid – water 4:1:2, 4:1:5, 2, 15 and 30% solution of acetic acid, chloroform-methanol-water 24:14:3, toluene- ethylacetate - formic acid 50:40:10. After developing the chromatograms were dried and analyzed in UV-light before and after spraying by specific reagents. Phenolic compounds were identified by a specific fluorescence in UV light (365 nm, blue, yellow, brown color) using the specific reagents. We succeed to identify about 18 phenolic compounds in herb of *P. vulgaris*, 21 phenolic derivatives in herb of *P. grandiflora* and 17 compounds in herb of *P. laciniata*.

We noted the presence in herbs of three species of *Prunella* hydroxycinnamic acid derivatives, especially rosmarinic, caffeic, chlorogenic and ferulic acids. Among the identified flavonoids there are quercetin, kaempferol, their glycosides and derivatives.

Analysis of total hydroxycinnamic acids was performed by the method of the European Pharmacopoeia, which is given for herbal drug of rosemary and lemon balm leaves. By spectrophotometric method using Folin-Chokolte reagent was determined total hydroxycinnamic derivatives at wavelength $\lambda = 505$ nm expressed as rosmarinic acid (Spectrophotometer "Evolution 60S"), with the reference into anhydrous herbal drug. Found that in the *Prunella vulgaris* herb total hydroxycinnamic acids is $4,8 \pm 0,08\%$, and in the *Prunella grandiflora* herb $4,5 \pm 0,09\%$, in the *Prunella lanceolata* herb $3,5 \pm 0,06\%$.

The data meets the requirement with the content of active substances of the European Pharmacopoeia monographs for leaves of lemon balm and rosemary. Therefore it is possible to assume that the species of the genus *Prunella* is a perspective source of therapeutic and preventive agents.