Determination of tannins in raw materials of night-scented stock (*Matthiola bicornis* (Sibth. & Sm.) DC.)

Pinkevych V. O.*, Zhuravel I. O.

National University of Pharmacy, Kharkiv, Ukraine
**vikapinkevych@gmail.com*

Introduction. Tannins are compounds of polyphenolic structure. They are divided into hydrolyzed and condensed. The tannin compounds are widely distributed in many species of plants. Polyphenols are known for their high antioxidant properties, have gastroprotective, antimutagenic, anticancer, antifibrotic, antibacterial and antiviral activity, have an inhibitory effect on the enzymes α-glucosidase and maltase, contribute to the normalization of thyroid function [1-3]. The presence of a wide range of pharmacological action necessitates the determination of this group of compounds in medicinal plant raw materials. **The aim** of this study was a determination of tannins in the grass threshed from the stalks, stalks, roots collected during flovering, as well as seeds of Night-scented stock cultivars Tsarytsia Nochi (Queen of Night) and Vechirnii Aromat (Evening Scent).
Materials and methods. Raw materials has been collected in august 2020 in Kharkiv region. To confirm the presence of tannins compounds, aqueous extracts of the studied raw materials were previously obtained by extraction in a water bath. Extraction time − 2 hours. Extraction temperature − 50-60°C. Tannins were detected by chemical reactions of the obtained cooled extracts with 1% aqueous solutions of gelatin, quinine hydrochloride, ammonium sulfate and bromine water [4]. Determination of tannin content in stalk-threshed grass, stalks, roots and seeds of Night-scented stock cultivars Tsarytsia Nochi and Vechirnii Aromat was performed by spectrophotometric method, using the method of the general article of the State Pharmacopoeia of Ukraine of the second edition «Determination of tannins in herbal medicines» [5].
Results and discussion. The formation of turbidity, which disappeared with the addition of excess gelatin solution, white amorphous precipitate with alkaloid salts, the appearance of orange color when interacting with bromine water and dark green color with a solution of iron (III) ammonium sulfate indicated the presence in the studied raw materials of tannins of the condensed group. The content of tannins in terms of pyrogalol and absolutely dry raw materials in the grass threshed from the stalks was 0,78±0,04% and 0,69±0,03%, in the stalks – 0,29±0,02% and 0,35±0,02%, in the roots – 0,24±0.01% and 0,26±0,01%, in the seeds – 0,49±0,02% and 0,60±0,03% for the variety Tsarytsia Nochi and Vechirnii Aromat respectively. The results of the experiment showed that the tannin content in the grass threshed from the stalks slightly prevailed in the raw material of the Tsarytsia Nochi cultivar, in the seeds and stems the tannin content dominated in the Vechirnii Aromat cultivar, and in the roots of both studied cultivars they accumulated in almost equal amounts. In both varieties of night-scented stock selected for analysis, the highest content of tannins was in the grass threshed from the stalks, then their number decreased in seeds and stems, and their lowest content was in the roots.
Conclusions. Studies have shown the prospects for further in-depth pharmacognostic study of raw materials of *Matthiola bicornis* (Sibth. & Sm.) DC.

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