

ANALYSIS OF BAS CONTENT IN THE LEAVES OF DOG ROSE

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Introduction. The rose genus (*Rosa L.*) of the rose family (*Rosaceae Juss.*) counts about 50 species in the territory of Ukraine, the most widespread of them being the dog rose (*Rosa canina L.*). The dog rose fruits are an officinal raw product which is widely used due to its significant content of biologically active substances (BAS), vitamins and flavonoids in particular, to reduce the risk of cardiovascular diseases, different types of cancer, diarrhea, bladder infections, diabetes. However, the dog rose leaves are not used in medicine.

Aim. The aim of the research is the analysis of *Rosa canina* leaves as BAS source.

Materials and methods. The dog rose leaves were collected during the flowering period at the end of May 2019 near the urban-type settlement of Kotelva of Poltavskaya region. The microscopic analysis of leaves was carried out according to the State Pharmacopoeia of Ukraine. The qualitative analysis was carried out according to the established practice. Loss on drying, total ash, content of polysaccharides were calculated gravimetrically. The content of organic acids in water extracts was calculated by titrimetry. The content of hydroxycinnamic acids and total phenol compounds was calculated by direct spectrophotometry at $\lambda=325$ nm and 270 nm respectively. The content of flavonoids was calculated by differential spectrophotometry at $\lambda=405$ nm.

Results and discussion. The microscopic analysis of raw product has revealed its main diagnostic characteristics: simple multicellular glandular hairs, stomatal complex of anisocytic type, anthocyanin-coloured glandular cell clusters along the leaf blade edges.

The qualitative analysis has shown that the dog rose leaves contain flavonoids, phenol compounds, steroid saponins and hydrolyzing tannins.

The raw product water extract contains 3.93% of polysaccharides, 13.1% of total free organic acids equivalent to malic acid. The alcohol extract contains 0.11% of hydroxycinnamic acids equivalent to chlorogenic acid, 1.68% of flavonoids equivalent to rutin and 9.54% of total phenol compounds equivalent to gallic acid. For the dog rose leaves, loss on drying constitutes 6.64%, total ash – 6.73%.

Conclusions. The dog rose leaves may be used as an additional source of BAS complexes of different pharmacological effect.

HERBAL TEA FOR NORMALIZATION OF ARTERIAL PRESSURE AND URIC ACID METABOLISM

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Introduction: Cardiovascular diseases (CVDs) are the most common healthcare problem worldwide being responsible for approximately 30% of all global deaths annually. It is estimated that the mortality rate caused by CVDs will continue to rise, reaching 23 million by 2025. Currently, hyperuricemia (HU), which is an independent CVD factor, attracts the attention of researchers. HU (serum uric acid (UA) level exceeds 360 $\mu\text{mol/L}$ in women and exceeds 420 $\mu\text{mol/L}$ in men) is associated with the development of a number of so-called "diseases of civilization," such as obesity, arterial hypertension, diabetes. A high UA level plays one of the key roles in the processes of inflammation, endothelial dysfunction, insulin resistance, atherogenesis. It was confirmed that HU is detected in a