

## STUDY THE DYNAMICS OF THE ARBUTIN'S CONTENT IN *ARCTOSTAPHYLOS UVA-URSI* L. LEAVES

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**Introduction.** *Arctostaphylos uva-ursi*, also known as bearberry or manzanita, is a small procumbent woody groundcover shrub, widely distributed in Europe, Asia and North America. It is a pharmacopeia plant, which has long been known as a source of hydroquinone derivatives arbutin and methylarbutin. It is described that this plant contains also flavonoids, tannins and phenol carboxylic acids. From the leaves of this shrub diuretic and anti-inflammatory drugs are obtained. Substances with bearberry leaves ordinary exhibit antibacterial, anti-inflammatory, antioxidant, diuretic effect and can be used for the treatment of mild urinary tract infections.

**Aim.** The aim of the study was to investigate the content of arbutin and the dry residue in *Arctostaphylos uva-ursi* leaves.

**Materials and methods.** The object of the study was the dried and crushed leaves of *Arctostaphylos uva-ursi*. The sample was placed in a flask. Extraction was carried out with water, when heated in a water bath for 30 minutes. The resulting solutions were evaporated on a rotary evaporator and adjusted to 50 ml with distilled water. Polysaccharide is precipitated with ethanol. The resulting solutions were used for the determination of dry residue and arbutin. Determination of content of arbutin was performed by spectrophotometry method. Determination of the dry residue conducted by gravimetric method.

**Results and discussion.** As a result of phytochemical analysis of extracts of *Arctostaphylos uva-ursi* leaves the dynamics of the content of arbutin and in the dry residue content of the obtained extracts were revealed. In determining the arbutin was received 5 fractions, in which the content of arbutin amounted 4.05%, 1.26%, 0.026%, 0.012% and 0.006%, respectively (Fig. 1). The dry residue in these fractions amounted 7,79%, 2,56%, 1,61%, 0,45% and 0,07% respectively (Fig. 2).

**Conclusions.** In the course of our research it was found that the production of arbutin advisable in the first two fractions, starting with the third fraction, the content of the substance is insignificant. Our results are prove that further in-depth study of the *Arctostaphylos uva-ursi* leaves as a source of biologically active substances can be considered shows potential for the pharmacy.

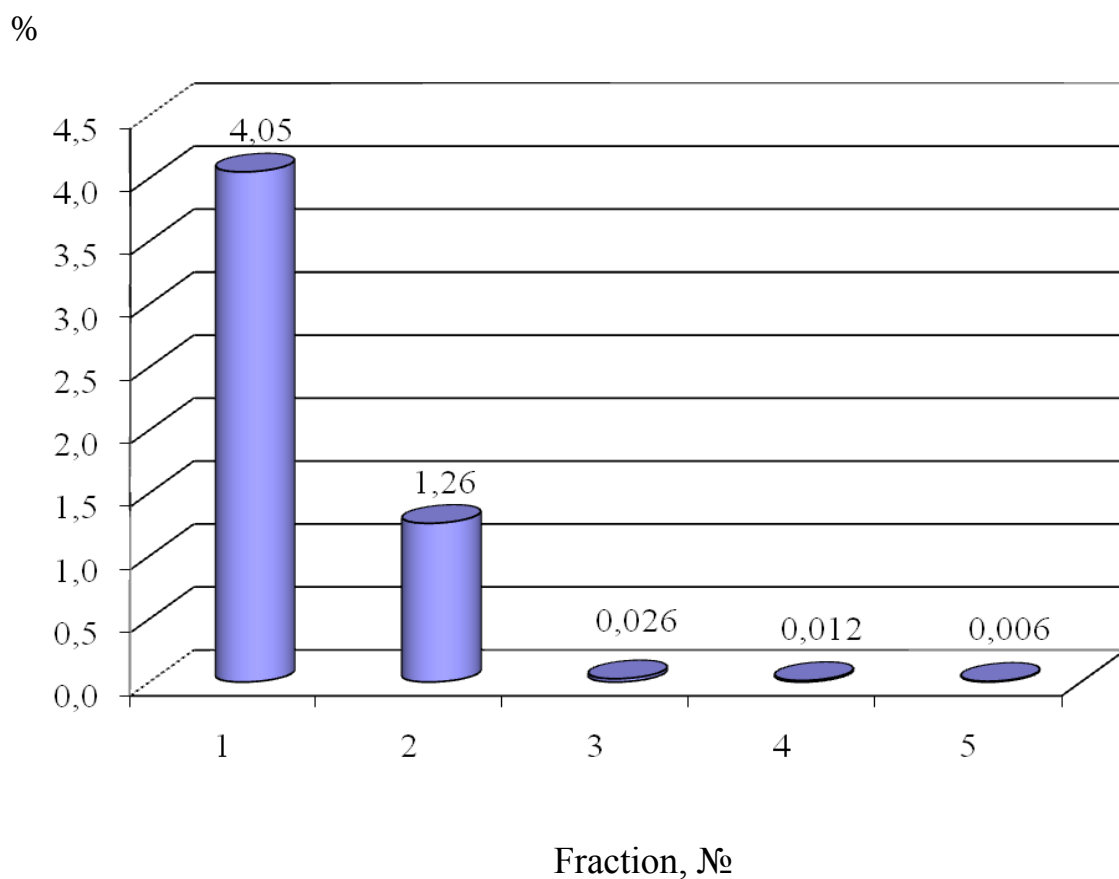


Fig. 1. Dynamics of the content of arbutin in the raw material during the extraction

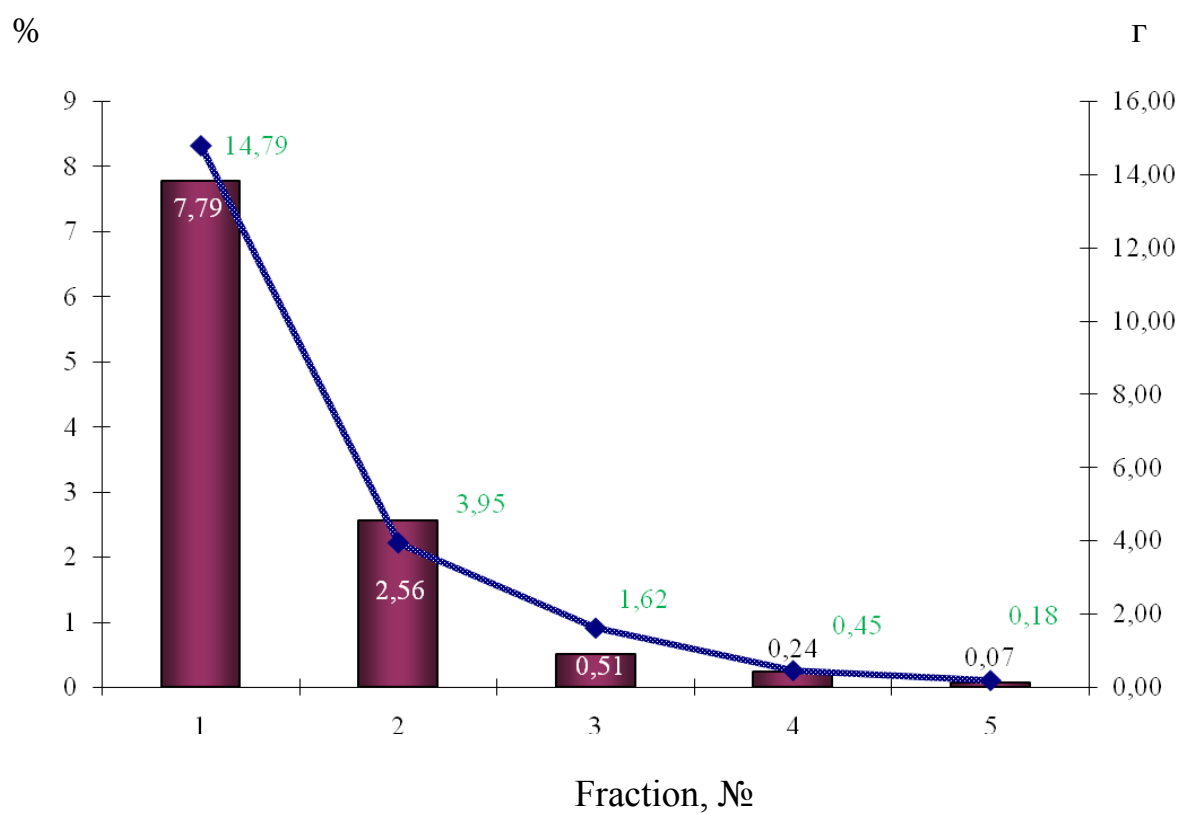


Fig. 2. Dynamics of dry residue during extraction