

## THE ELEMENTAL COMPOSITION OF GRASS *ASPERULA OCTONARIA* KLOKOV

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**Introduction.** The attention of scientists from different countries attract the plants from genus Woodruff *Asperula* L. family *Rubiaceae* Juss, and among them there is *Asperula octonaria* Klokov. This is a perennial herb which is widespread in the central eastern and southern Ukraine. The plant is unofficial and in folk medicine infusion of herbs is used as a diuretic. Previously, it has been found that underground organs of the plant contain anthraquinones, in herb - hydroxycinnamic acid, flavonoids and iridoids.

The **aim** of this work is determination of the elemental composition of the herb *Asperula octonaria*.

The objects of the study were samples of herb *Asperula octonaria* collected in Kharkov region in June 2015.

**Materials and methods.** The study of qualitative composition and quantitative content of elements conducted by using of atomis - emission spectrophotometry method. The samples were evaporated from craters arc discharge of graphite electrodes by the power of 16A at 60 seconds exposure. As a source of excitation spectra was used SES-28. Spectra were recorded on film using a DFS-8 spectrograph with a diffraction grating of 600 lines/mm and a slit illumination of lens system. The lines of spectra were photometrated at a wavelength from 240 to 347 nm in the samples which were compared with standard samples of the mixture using a mineral elements microphotometer MF-4.

**Results and discussion.** The content of the test samples is determined by 6 macro (K, Na, Ca, P, Mg, Si) and 13 micro elements (Fe, Mn, Al, Pb, Sr, Zn, Ni, Mo, Cu, Co, Cd, As, Hg). The raw materials are absent or are beyond the scope of the definition of the method of Co, Pb, Mo (<0.03), Cd (<0.001), As (<0.001) and Hg (<0.001). The greatest quantity (mg / 100 g) is accumulated in K - 1275, Si - 1020, Ca – 680. The following pattern of accumulation of elements in the raw materials is established: K> Si> Ca> Mg> P> Fe> Na = Al> Mn> Zn> Sr> Cu> Ni.

**Conclusion.** Thus it is established that the content of heavy metals in the raw material complies with the requirements, and significant content elements allows us to consider it as promising source of bioavailable trace elements.