N E W S
OF THE NATIONAL ACADEMY OF SCIENCES OF THE REPUBLIC OF KAZAKHSTAN
SERIES CHEMISTRY AND TECHNOLOGY
ISSN 2224-5286
Volume 1, Number 427 (2018), 42 – 45

A.K. Umbetova, G.O. Slan, A.T. Omarova, G.Sh. Burasheva, K. T. Abidkulova

Kazakh national university named after al-Farabi, Almaty, Kazakhstan
E-mail: slangulnur@gmail.com, guni_9645@mail.ru

THE STUDY OF CHEMICAL COMPOSITION OF *ATRAPHAXIS VIRGATA* FROM THE ALMATY REGION

Abstract. The qualitative composition (moisture, total ash content, extractive substance) of the *Atraphaxis virgata* plant, *Polygonaceae* family harvested in the ravine Aksay of Almaty region was determined. Atomic-absorption spectroscopy studied the composition of macro- and microelements of the plant. The qualitative and quantitative composition of the basic biologically active substances groups, the basic technological parameters for obtaining the biologically active complex were studied.

Keywors: *Atraphaxis virgata*, moisture, total ash content, extractive substance, macro- and microelements, biologically active substances.

The study is aimed at finding and improving new drugs based on the local flora. Unlike synthetic drugs, there is a chain of privileges, such as a lack of (or fewer) side effects in phytopreparations, biological similarity to the human body, lightness, long and steady effect, relative simplicity of production, low cost with high demand.

The search for promising plants became possible due to the use of empirical data from folk and folk medicine, from the least studied taxon and photochemical studies of taxa and related species.

At the same time, research aimed at using extracts of biologically active compounds in medicine and industry, the use of new sources of raw materials, their use, storage and use is very important. This issue is very important for Kazakhstan with a rich and unique flora. In this case, the plant *Atraphaxis Atraphaxis virgata* of the *Polygonaceae* family is of interest.

Objective: Determination of biologically active substances on the surface of the plant *Atraphaxis virgata*, belonging to the family *Polygonaceae*, collected from the Aksay gorge of Almaty, qualitative and quantitative analysis.

Object of the study: Plants *Atraphaxis virgata* family *Polygonaceae*, collected in the Aksay gorge of Almaty region of Kazakhstan.

Objectives of work: To achieve this goal, the following tasks were put forward:

- Authenticity of the plant surface *A. virgata* (moisture, total ash, extractives)
- Quantitative analysis of raw materials using spectrophotometry and titrimetry
- Development of basic technological parameters for obtaining a biologically active complex based on plant raw materials.

The *Polygonaceae* has about 1250 species , distributed in about 55 genera. Here mainly perennial grasses, although there are several tree-like and shrubby plant [1].

Atraphaxis - a height of 0.2 to 2 m, usually significantly branched directly from the soil level. The bark is gray or brown, scaly. Shoots elongated and shortened, often ending with thorns. Flowers in apical small hands, bisexual, perianth simple 4-5-membered. Stamens 6-8, at the base of fused into a glandular ring, with nectaries. Leaflets of the perianth do not fall off with fruits and grow; outer, smaller, bend downward; Internal, much larger[2].

In many places of the universe, as well as in the desert, in the foothills, in clay. It grows in 14 species on the territory of Kazakhstan from 18 species of the Flora of the USSR [3].