

Component Composition of Biologically Active Substances in Extracts of Some Species from the Family Lamiaceae Lindl.

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Abstract : From a medical point of view some species from the family Lamiaceae Lindl. attract the attention of scientists. Many plant species from this family are used in science and medicine. Some researchers believe that the medicinal properties of these plants are caused by the action on the organism of the individual components (camphor, menthol, thymol, eugenol, phenols, flavonoids, alcohols, and their derivatives) or the entire complex of essential oils. Biologically active substances (BAS), isolated from these medicinal plants can be an effective supplement in the complex treatment of infectious diseases. The substances of the phenolic group such as flavonoids and phenolic acids; and also alkaloids included in the component composition of the plants from the family Lamiaceae Lindl. present the scientific and practical interest for future investigations of their biological activity and development of medicinal products. The research objects are the species from the family Lamiaceae Lindl., cultivated in the North-Kazakhstan region. In this abstract, we present the results of the investigation of polyphenolic complex (flavonoids and phenolic acids) and alkaloids in aqueous and ethanol extracts. Investigation of the qualitative composition of flavonoids in the aqueous extracts showed that the species *Monarda Diana* contains flavone, *Dracocephalum moldavica* contains rutin, *Ocimum basilicum* (purple form) contains both rutin and quercetin. Biochemical analysis revealed that the ethanol extract of *Monarda Diana* has phenolic acids, similar to protocatechuic and benzoic acids by their chromatographic characteristics. But the aqueous extract contains four phenolic acids, one of which is an analogue of gentisic acid, and the other three are not identified yet. The phenolic acids such as benzoic and gentisic acids identified in ethanol extracts of species *Ocimum basilicum* (purple form) and *Satureja hortensis*, correspondingly. But the same phenolic acids did not appear in aqueous extracts. The phenolic acids were not determined neither in the ethanol or aqueous extracts of species *Dracocephalum moldavica*. The biochemical analysis did not reveal the content of alkaloids in aqueous extracts of investigated plants. However, the alkaloids in the amount of 5-13 components were identified in the ethanolic extracts of plants by the qualitative reactions. The results of analysis with reagent of Dragendorff showed that next amounts of alkaloids were identified in extracts of *Monarda Diana* (6-7), *Satureja hortensis* (6), *Ocimum basilicum* (7-9) and *Dracocephalum moldavica* (5-6). The reactions with reagent of Van-Urca showed that next amounts of alkaloids were identified in extracts of *Monarda Diana* (9-12), *Satureja hortensis* (9-10), two alkaloids of them with $Rf_6=0,39$ and $Rf_6=0,31$ similar to roquefortine), *Ocimum basilicum* (11) and *Dracocephalum moldavica* (13, two of them with $Rf_5=0,34$ and $Rf_5=0,33$ by their chromatographic characteristics similar to epikostaklavin).

Keywords : biologically active substances, Lamiaceae, component composition, medicinal plant

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