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LIPID AND PIGMENT COMPOSITION OF *ANABASIS SALSA* (CHENOPODIACEAE), *EPHEDRA DISTACHYA* (EPHEDRACEAE), *GLYCYRRHIZA GLABRA* (FABACEAE) AND *SALVIA TESQUICOLA* (LAMIACEAE) IN «ELTONSKY» NATURAL PARK (VOLGOGRAD REGION)

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SUMMARY

Study the qualitative and quantitative composition of lipids and pigments four species of medicinal plants natural park «Eltonsky». The content of these components is dependent on the species of life forms and features of the plants. It was concluded that the studied plants may be a source of biologically active substances of lipid nature, along with well-known, the compounds used in the pharmacopoeia.

The objects were: *Anabasis salsa* (C. A. Mey.) Benth. ex Volkens, *Glycyrrhiza glabra* L., *Ephedra distachya* L., *Salvia tesquicola* (Klok. et Pobed.) Soják., collected in the natural park «Eltonsky», located in the east of Volgograd region in Pallasovsky District. The content of pigments in acetone extract was determined with a spectrophotometer. Lipids were extracted with chloroform methanol mixture, with subsequent separation using commonly used methods TLC. For analysis of fatty acid (FA) one used their methyl esters, prepared by boiling in a solution of 5 % HCl in methanol. These esters were analyzed on a gas-liquid chromatograph.

The test plant species in a systematic plan fall into two divisions (Magnolio- and Pinophyta) and two classes (Magnolio- and Gnetopsida), and are four orders of magnitude and family. Environmental regime, because of the nature moisture, *S. tesquicola*, *E. distachya* and *A. salsa* are xerophytes and *G. glabra* — to xeromesophyte. By the nature of life forms and *S. tesquicola, G. glabra* are perennials, *E. distachya* — bushes and shrubs *A. salsa*. The content of total lipids in the bushes and shrubs was 2—6 times lower than that in herbaceous plants. Share of BAS lipid formulation type, from 146.4 to 153.1 mg/g dry weight of raw materials for the herbaceous plants, bushes and shrubs 23.3 and 56.5 mg/g dry weight, respectively, of raw materials. Furthermore, the concentration of pigment was also higher in herbaceous plants (7.5—10.7 mg/g dry weight of raw materials) than semishrubs and shrubs (2.3—5.1 mg/g dry weight of raw materials). Among the investigated FA, unsaturated FA (UFAs) was dominant, total content ranged from 57.9 to 65.7 %. The largest content of acids 18:1 and 18:2 was in escapes of *A. salsa* and *E. distachya*, and 18:3 in leaves of *S. tesquicola* and *G. glabra*.

Thus, the lipids and pigments in herbs *A. salsa*, *E. distachya*, *G. glabra* and *S. tesquicola* depend on life forms and species characteristics of plants. The number of lipids enriched in polyunsaturated fatty acids is 15 % by weight of dry material in the leaves of grass plants. These data allow to conclude that the tested plant can be a source of BAS-lipid along with well-known compounds already used in pharmacopoeia.

K e y w o r d s : *Anabasis salsa*, *Ephedra distachya*, *Glycyrrhiza glabra*, *Salvia tesquicola,* fatty acids, lipids, pigments.