

PP46. AMINO ACID AND MINERAL COMPOSITIONS OF FLOWERS OF *CROCUS SATIVUS* L.

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Among the *Crocus* species, *Crocus sativus* L. (saffron, *Iridaceae* family) is considered the most valuable due to the unique color of its flowers, aroma, color and taste of dried stigmas of flowers used as a valuable spice (spice). Stigmas are also used as food coloring and in medicine. In folk medicine, saffron is recommended as a sedative, hypnotic, mild antidepressant and mental enhancer, as well as for the prevention and treatment of a number of other diseases.

The purpose of this study is a comparative analysis of the compositions of amino acids (AA), micro- and macroelements of individual parts of flowers (stigmas, stamens, petals) of *Crocus sativus* grown in Uzbekistan.

AA of individual parts (stigma, stamens, petals) of flowers of *Crocus sativus* L. growing in Uzbekistan were studied for the first time. 20 AAs were identified in the samples, which 8 were nonessential, 8 were irreplaceable, 4 were partially nonessential amino acids. The total amount of AA in the stigmas was 11.35001 mg/g, in the stamens 60.85032 mg/g, in the petals 48.7104 mg/g. Essential AAs are found in approximately equal amounts in petals (15.73832 mg/g) and stamens (14.84272 mg/g), partially replaceable AAs dominate in stamens (29.48137 mg/g). According to the results of a comparative analysis, the stamens of the flowers of *Crocus sativus* are quantitatively richer in amino acids than their other parts.

For the first time, the elemental composition of individual parts of the flowers of *Crocus sativus* was studied by optical emission spectrometry with inductively coupled argon plasma. It was found that the predominant elements in the raw material are K, Na, Mg, Ca, Fe, P, Al and Ga. Flower petals are enriched with macro- and microelements.

The obtained data allow us to consider the petals and stamens of *Crocus sativus*, which are waste products of saffron production, as a promising source of mineral elements and valuable amino acids with a wide range of pharmacological activity, based on them can be used to develop new food additives and pharmaceutical substances