

RESEARCH OF VITAMIN COMPOSITION IN LEAVES ACORUS CALAMUS

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Introduction. Vitamins - are low molecular weight organic compounds that sorely needed for normal body functioning, because they are a part are lot of enzymes and hormones that stimulate the growth of the organism, its differentiation and morphogenesis, provide immune responses play an important role in supporting the resistance of the organism to a number of infections, poisons, radiation and other adverse external factors. Also, many of which exhibit antioxidant activity, which is one of the factors affecting life expectancy.

During the search for sources of new types of native medicinal plants, our attention caught the leaves of sweet flag (*Acorus calamus* L.). It has long been known medicinal plant that is widespread in Ukraine and found its use both in formal and in folk medicine, and in cooking and perfumes. In the official medicine currently used only rhizomes. They are used to treat digestive, urinary tract, oral cavity, in the treatment of oncological diseases. At the same time, in some foreign sources indicates significant similarity of quantitative and qualitative composition of biologically active substances in the leaves and rhizomes. Experimental studies have shown the following of action extracts from the leaves of *Acorus* as anti-inflammatory, antimicrobial, fungicidal, insecticidal, spasmolytic, antidiabetic, anticancer.

As part of a comprehensive study **aimed** to investigate medicinal herbs, our objective was to research of vitamin composition leaves of *calamus*.

The material for the research was sweet flag leaves, harvested near Kharkiv in 2013.

Results and discussion. The content of vitamins B was determined by fluorometry at fluorometer EF-3MA. Vitamin B₁ measured in terms of thiamine hydrochloride, vitamin B₂ - for riboflavin, vitamin PP or B₃ - to nicotinic acid. Determination of the amount of carotenoids and tocopherols conducted spectrophotometric method. Optical density of the solution was measured on a spectrophotometer "UV-46" at a wavelength of 450 nm (total carotenoids) and 520 nm (total tocopherols). All the definitions carried out according to standard techniques.

Found that in leaves *calamus* accumulates the most vitamin B₁ – 3.98 mg /%. Vitamin B₂ was at 1.18 mg /%. Nicotinic acid contained 1.21 mg /%. The amount of tocopherols was 1.98 mg/%, and the content of carotenoids in the leaves of sweet flag was – 2.07 · mg /%.

Conclusion. The results will be used in further studies.