

**QUANTITATIVE DETERMINATION OF CAROTENOIDS
IN THE CO₂-EXTRACT OF PLANTAGO MAJOR**

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One of the main priorities for the development of the pharmaceutical industry of the Kazakhstan Republic is the development and introduction of original domestic substances from medicinal plants and drugs based on them.

Promising targets of modern herbal medicine are representatives of the genus *Plantago* L. family Plantaginaceae Juss. Preparations of *Plantago major* leaves have anti-inflammatory, antimicrobial, antioxidant and hypolipidemic activity. Currently, the most studied biologically active substances of *Plantago major* are from the group of polysaccharides. In this regard, it was of interest to identify and study the lipophilic fraction BAS of plantain leaves.

We obtained a CO₂ - extract of *Plantago major*, for which standardization is a prerequisite to study the complex of biologically active substances contained in it.

By TLC in the solvent system hexane: acetone (8: 2) it was found that solution of CO₂ - plantain extract in hexane in the chromatogram is characterized by the presence of at least three yellow spots, one of which corresponds to a spot of standard β -carotene. Therefore, we carried out a further quantitative content analysis of the amount of carotenoids in this extract. Determination was conducted for CO₂- extract solution in hexane waybread spectrophotometrically at 450 nm. As a compensation solution was used hexane. Content of total carotenoids calculated in two ways - by the standard, which is used as β -carotene, and external standard method - solution of potassium dichromate.

As a result of studies, it was found that the total content of carotenoids in CO₂-*Plantago major* extract is not less than 0.70%. The results of this work will be used futher in the development of formulations based on CO₂ extract.