

STUDY THE LIPOPHILIC FRACTION OF DILL HERB

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Introduction. Family *Apiaceae* is widely used in the official and folk medicine around the world. *Anethum graveolens* is a plant that is widely cultivated and used in medicine and food as a spice [1, 4]. The plant perfect growing in different conditions and the season you can collect several harvests [2].

Pharmacopeia herbal drugs are fruits of dill – *Anethi graveolentis* fructus, but scientific interest is the study of above-ground parts - herb dill to expand the resource base of biological active substances (BAS).

Materials and methods. The object of the study was the lipophilic fraction of dill herb, extractants – chloroform. To determine the qualitative and quantitative analysis of fatty acids in *Anethum graveolens* herb using 100 mg of sample. Extraction of the acid tests conducted by use Folch solution (chloroform -methanol 2:1) by heating to 40 ° C for 5 minutes.

Qualitative and quantitative analysis of fatty acids was determined by gas chromatography (gas chromatograph "Chrome - 5") on a metal column 2.6 m long, 0.32 mm in diameter filled with sorbent " Hromaton - super" 10% polyethylenglycolsuccinate. Analysis of samples of free fatty acids was carried out in isothermal mode at 195 ° C and heated flame ionization detector to 250 ° C. Rate of carrier gas of high purity nitrogen 50 ml / min., water 30 ml / min., air - 300 ml / min. Identification of free fatty acids was carried out by comparing the time of their exit from the known methyl esters of fatty acids. Quantitative analysis was performed by the absolute calibration of each fatty acid separately, as well as mixtures thereof with the drawing calibration curves which were determined and the concentration of each fatty acid in the sample [3].

Results and discussion. Identified (mcg/100 mg) 11 fatty acids: decanic (2,0), lauric (4,0), tridecanic (3,3), meristic (20,0), pentadecanic (5,0), palmitic (180,5), geptodecinic (10,0), stearinic (76,0), oleic (620,0), linoleic (700,0), linolenic (40,0). Linoleic and linolenic acids are essential and part of a complex of vitamin F. The sum (mcg/100 mg) of unsaturated fatty acids 1440,0, saturated – 194,5. By quantitative content are dominant palmitic, oleic and linoleic acids, the content of which in (%) of the sum of acids was 11%, 37,9% and 42,8% respectively.

References:

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