

RESERCH OF HYDROXYCINNAMIC ACIDS IN THE DRY ALCOHOLIC EXTRACT FROM MYRTILLI LEAVES

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Blueberry fruits - (Fructus Myrtilli) are widely used in the medical and pharmaceutical practice. Decoctions of blueberry fruits are used as an astringent in therapy of colitis, enterocolitis and diarrhea.

There are some of drugs which containing biologically active substances of blueberry fruits (Strix, Optics, Visio Balance, Blueberry Forte, etc.) are widespread on the pharmaceutical market of Ukraine.

Bines and leaves of blueberry are used as a hypoglycemic agent in the form of decoctions in the folk and scientific medicine. They are part of the glucose-lowering drugs- Arfazetin and Mirflazin. But there is no single novogalenic or galenic preparation based on the blueberry leaves on the Ukrainian pharmaceutical market. It would be useful to develop a standardized medicines based on this raw material.

Therefore, the aim of our study was to determine the qualitative and quantitative content of hydroxycinnamic acids in the dry alcoholic extract from the leaves of blueberry.

Previously, we have chosen the optimum extractant for extraction of phenolic compounds from blueberry and it is 50% ethanol.

For preparing the extract, 5.0 g. of dry raw materials (blueberry leaves), milled to a particle size of 2-3 mm were filled with 50 ml. of 50% ethanol and infused at room temperature overnight. The extraction was repeated twice. Extracts were combined, filtered and evaporated to a dry extract.

For determining the qualitative composition of the hydroxycinnamic acids in the extract dimensional method using paper chromatography in systems of *n*-butanol-acetic acid-water (4: 1: 2) and 5% acetic acid followed by treatment with ammonia vapor chromatograms using standard samples hydroxycinnamic acids. It was revealed at least three substances which are hydroxycinnamic acid derivatives.

Technique HPLC was used for more detailed study of the extract. The analysis was performed on the Agilent Technologies 1100 chromatograph. As a result, coffee, chlorogenic, *p*-coumaric acids have been identified. Five substances which are derivatives of *p*-coumaric acid could not be identified. It has also been established in the quantitative content of extract.

Also, quantification of hydroxycinnamic acid derivatives was carried out by spectrophotometry. Optical density was measured in a cuvette with a layer thickness of 10 mm. by a spectrophotometer "Specol 1500" (Switzerland). Derivatives of hydroxycinnamic acids content was determined, based on the chlorogenic acid at 327 nm. It was established that content of hydroxycinnamic compounds was 24.9% in the dry extract of the leaves of blueberry.

The data obtained will be used to standardization the dry extract of the blueberry leaves.