HYDROXYCINNAMIC ACIDS OF SOME SPECIES OF GENUS THYMUS

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Introduction. Hydroxycinnamic acids are one of the most widespread classes of natural phenolic compounds contained in medicinal plant and herbal drugs. Among them, in plants of the genus Thymus, caffeic and rosemarinic acids are most often spread. Hydroxycinnamic acids show high antioxidant activity, have also anti-inflammatory, antiviral, immunostimulating effect.

Goal. To study the qualitative and quantitative composition of hydroxycinnamic acids of Thymus serpyllum, Th. crenulatus, Th. marshallianus, Th. pulegioides, Th. dimorphus, family Lamiaceae.

Materials and methods. The qualitative composition of hydroxyrcinnamic acids was analyzed using chromatography on paper and in thin layers of the sorbent. For this purpose, chromatographic paper Filtrak № 1 and 5, chromatographic plates "Silufol" and "Sorbfil" were used. The analysis was carried out in a solvent system: chloroform-methanol-water-24: 14: 3; butanol-acetic acid-water-4: 1: 2; 2 and 15% acetic acid. After chromatography, the chromatograms were analyzed in UV light before and after treatment with specific reagents (ammonia vapor, sodium hydroxide solution). The composition and acid content of hydroxyrcinnamic acids in the Thymus sample was determined by HPLC on a Shimadzu LC 20 Prominence chromatograph and spectrophometrically on an Evolution 60S.

Results. With the help of various types of chromatography, the presence of caffeic and rosmarinic acids in the investigated species of Thymus has been determined. The HPLC method was used to determine the content of caffeic and rosmarinic acids in the medicinal plant and herbal drugs. It was found that the content of rosmarinic acid ranges from 2343.40 mg / kg to 14351.74 mg / kg, caffeic acid from 74.41 mg / kg to 93.86 mg / kg. A procedure for the spectrophotometric determination of the total hydroxycinnamric acid acids with the reference into rosmarinic acid in Thymus spesies plants has been developed. The amount of hydroxycinnamic acids varies from 3.27% to 19.28%.

Conclusions. The results of the analysis of the content of hydroxycinnamic acids in Thymus species indicate the prospect of creating preparations with antiviral activity based on different Thymus species herbal drugs.