

CHEMICAL ANALYSIS OF *HYSSOPUS OFFICINALIS* L.

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Introduction



Fig.1 *Hyssopus officinalis* L.

Hyssopus officinalis L. (hyssop), a species native to the Caspian Sea region, has been cultivated in the Republic of Moldova as aromatic plant and has been used in folk medicine as antitussive, expectorant, carminative, digestive and sedative remedy.

Keywords

Hyssopus officinalis L., chemical compounds, hydroxycinnamic acids.

Purpose

Identification of chemical compounds and estimation of hydroxycinnamic acids total content in the vegetal product *Hyssopi herba*.

Material and methods

Vegetal product (*Hyssopi herba*) was collected from the collection of the Scientific Center for the Cultivation of Medicinal Plants of "Nicolae Testemitanu" SUMPh. Qualitative analysis was performed with sedimentation and color reactions. The total content of hydroxycinnamic acids (THA) was determined by spectrophotometric method, measuring the optical density at 325 nm wavelength (Metertech UV/VIS SP 8001).



Fig.2 Scientific Center for the Cultivation of Medicinal Plants „Nicolae Testemitanu” SUMPh, Republic of Moldova



Fig.3 The spectrophotometer - Metertech UV/VIS SP 8001

Results

Through qualitative reactions, in *Hyssopi herba*, tannins, flavonoids, saponosides were identified and the lack of alkaloids, coumarins and anthracene derivatives were confirmed. From the vegetal product were obtained 2 extracts: 30% ethanolic and aqueous; the THA was quantified by spectrophotometric method, expressed as chlorogenic acid. The THA were higher in ethanolic extract (3.64%) compared to aqueous (2.67%).



Fig.4 Qualitative reactions for tannins

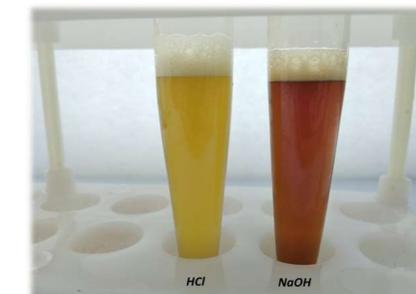


Fig.5.1 Qualitative reactions for saponosides

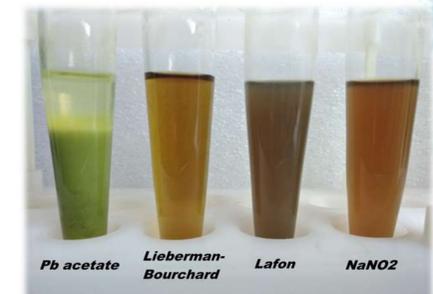


Fig.5.2 Qualitative reactions for saponosides

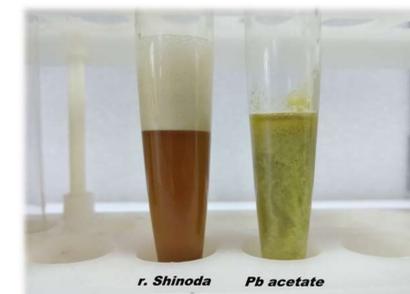


Fig.6 Qualitative reactions for flavonoids

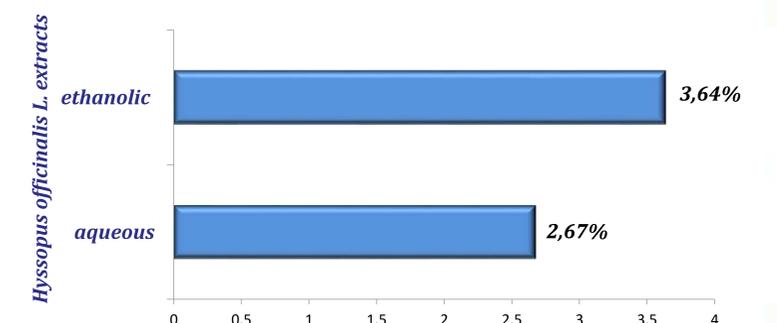


Fig.7 The total content of hydroxycinnamic acids, %

Conclusions

The obtained results may justify the continuation of studies for the use of *H. officinalis* L. as a source of phenolic compounds, a plant appreciated for its volatile content.