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BOOK OF ABSTRACTS



A COMPLEX CHEMICAL COMPOSITION STUDY OF *THYMUS TAURICUS*, A PROSPECTIVE MEDICINAL SPECIES OF UKRAINIAN FLORA

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Species of genus *Thymus* L., family Lamiaceae contain high concentrations in biologically active substances such as phenols, terpenes and flavonoids revealing wide range in pharmacological activity (anti-inflammatory, antibacterial, antioxidant) while having quite low toxicity.

The aim of our research is to complete the pharmacognostic characterization of *Thymus tauricus* Klok. et Shost as a prospective species of *Thymus* from the Ukrainian flora, to obtain biologically active compounds and determine their biological effects.

Volatile oil from *Th. tauricus* Klok. et Shost. was obtained by hydrodistillation. Approximately 64 biologically substances were identified using GC. The main components are: thymol 39.72%, p-cimol 19.68%, carvacrol 7.57%, γ - terpinene 4.49%, β -caryophyllene 3.72%, camphor 2.62%, linalool 2.51%. 5 flavonoids and 5 hydroxycinnamic acids accumulated in herb with concentration 2.29% - 2.63% and 0.33% - 0.38% which were identified by HPLC (Agilent Technology). Eryocitrin, luteolin, luteolin-7-O- β -D-glycosyde, apigenin-7-O- β -D-glycoside, caftaric, ferulic and rosmarinic acids were identified in *Th. tauricus* herb for the first time.

3 flavonoids and 2 hydrocinnamic acids such as: luteolin, luteolin-7-O- β -D glucopyranoside, apigenin-7-O- β -D -glucopyranoside, chlorogenic and rosmarinic acids were identified by CC technique. HPLC method was used to determine amino-acids on amino-acid analyzer AAAT-339 and Agilent Technologies 1100 equipped with microcapillary columns. The concentration for conjugated and free amino-acids in *Th. tauricus* was determined as $12.01 \pm 0.47\%$ and $2.65 \pm 0.11\%$.

The high antibacterial and antimycotic effect for volatile oil and vaginal bacilli with volatile oil from *Th. tauricus* was determined regarding pathogenic fungi strains *Candida* as well as bacilli and bacteria *St. aureus*, *St. pyogenes*, *B. anthracoides*, *E. coli*.

The herbal material from *Th. tauricus* are prospective for cultivation and may be used for obtaining volatile oil and manufacturing new soft plant medicinal forms with antimycotic and antibacterial effect for treating gynecologic diseases (chlamydia, candidiasis, vaginitis).