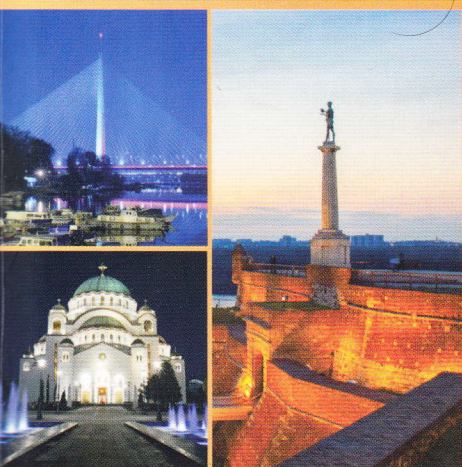




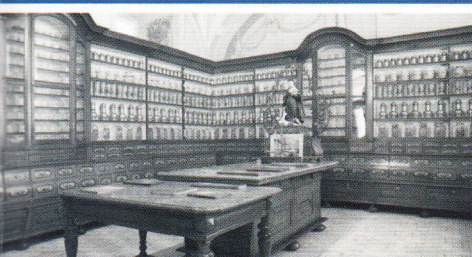
Savez farmaceutskih udruženja Srbije
Pharmaceutical Association of Serbia

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VI

KONGRES FARMACEUTA SRBIJE sa međunarodnim učešćem SERBIAN CONGRESS OF PHARMACY with international participations



FARMACIJA U SLUŽBI ZDRAVLJA
NAUKA I PRAKSA
THE ROLE OF PHARMACY IN HEALTH SERVICE
SCIENCE AND PRACTICE

ZBORNİK SAŽETAKA ABSTRACT BOOK

15-19. oktobar 2014.
Beograd, hotel Crowne plaza

October 15th-19th 2014.
Belgrade, Hotel Crowne plaza



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in Khartoum state (Sudan), were studied. Essential oils were isolated by hydrodistillation in a Clevenger type apparatus and analyzed by GC-FID and GC-MS methods. The antimicrobial activity of the essential oils was tested using broth microdilution method against seven standard strains of bacteria and two strains of fungi.

Content of the essential oil in the inflorescence and stems of *C. nervatus* was 0.6% (v/w) and 2.0% (v/w) and in *C. proximus* leaves and roots it was 1.1% (v/w) and 2.0% (v/w). In the essential oils from inflorescence and stems of *C. nervatus* the major class of compounds were oxygenated monoterpenes (51.3-75.9%) with piperitone (47.7-71.5%) as the main component in the both oils. In the oils from leaves and roots of *C. proximus* oxygenated sesquiterpenes (48.4-86.4%) were dominant. The most abundant compounds in *C. proximus* leaves oil were piperitone (37.9%) and elemol (16.9%), whereas and in roots oil those were elemol (19.9%) and hinesol (17.0%). The investigated essential oils exhibited weak antimicrobial activity.

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Karakterizacija suvog vodenog ekstrakta cvasti suručiće, *Filipendula hexapetala* Gilib.

②

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Univerzitet u Beogradu – Farmaceutski fakultet, Katedra za farmakognoziju, Srbija

Cvast suručiće (*Filipendula hexapetala* Gilib., Rosaceae) se tradicionalno primenjuje kod različitih stanja poput prehlade, reumatizma, gihta, groznice i infekcija. Iako se u narodnoj medicini kao preparat ove droge upotrebljava čaj (infuz), u dosadašnjim istraživanjima njegov hemijski sastav nije ispitan. Cilj ovog rada bio je da se okarakteriše suvi vodeni ekstrakt cvasti i da se odrede osnovni hemijski parametri ove biljne droge.

Biljni materijal je prikupljen na planini Zlatibor i osušen na vazduhu. Gubitak sušenjem, ukupni pepeo, sadržaj flavonoida i sadržaj tanina u osušenoj cvasti određeni su prema propisima Ph. Eur. 7.0. Suvi vodeni ekstrakt (SVE), dobijen nakon ekstrakcije cvasti ključalom vodom i uparavanja, analiziran je HPLC-DAD i HPLC-ESI-MS metodama. Kvantifikacija komponenti ekstrakta izvršena je HPLC analizom primenom metode eksternog standarda.

Gubitak sušenjem i ukupni pepeo iznosili su 8,39% i 4,99%, redom. Sadržaj ukupnih flavonoida bio je relativno visok (3,16%), dok su tanini činili 6,41% cvasti. HPLC analizom, u SVE je utvrđeno prisustvo i određen sadržaj tri fenolkarboksilne kiseline: galne (0,93%), elagne (0,52%) i salicilne (0,3%), kao i tri flavonoida: hiperozida (0,74%), izokvercitrina (1,12%) i astragalina (0,6%). Na osnovu UV i masenih spektara, detektovana su i tri glikozida kvercetina (4,51%, računato kao izokvercitrin), dva glikozida kemferola (0,66%, računato kao astragalin) i jedan derivat salicilne kiseline (0,39%, računato kao salicilna kiselina).

S obzirom na to da srodna *Filipendula ulmaria* predstavlja biološki izvor oficinalne droge *Filipendulae herba*, dobijeni rezultati (visok sadržaj sekundarnih metabolita u cvasti i SVE suručiće) ukazuju na mogućnost primene potencijalne droge *Filipendulae flos*, čiji bi biološki izvor bila *Filipendula hexapetala*.

Characterization of Dry Water Extract of Flowers of Dropwort, *Filipendula hexapetala* Gilib.

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University of Belgrade – Faculty of Pharmacy, Department of Pharmacognosy, Serbia

Flowers of dropwort (*Filipendula hexapetala* Gilib., Rosaceae) have been used traditionally to treat various conditions such as common cold, rheumatism, gout, fever and infection), its chemical composition was not investigated previously. The aim of this work was to characterize dry water extract of flowers and to determine basic chemical parameters of this herbal drug.

Plant material was collected on Mt. Zlatibor and air-dried. The loss on drying, total ash, the content of flavonoids and the content of tannins in dry flowers were determined according to Ph. Eur. 7.0. Dry water extract (DWE), obtained by extraction with boiling water and evaporation, was analyzed by HPLC-DAD and HPLC-ESI-MS. Quantification of extract components was done by HPLC-DAD using external standard method.

Loss on drying and total ash were 8.39% and 4.99%, respectively. Content of total flavonoids was relatively high (3.16%), while tannins constituted 6.41% of flowers. Identification and quantification of three phenolic acids: gallic (0.93%), ellagic (0.52%) and salicylic (0.3%), and three flavonoids: hyperoside (0.74%), isoquercitrin (1.12%) and astragalol (0.6%), in DWE were done by HPLC analysis. Three quercetin glycosides (4.51%, expressed as isoquercitrin), two kaempferol glycosides (0.66%, expressed as astragalol) and one salicylic acid derivative (0.39%, expressed as salicylic acid) were detected on the basis of their UV and mass spectra.

Considering use of related *Filipendula ulmaria* as biological source of officinal herbal drug *Filipendulae herba*, obtained results (high content of secondary metabolites in flowers and DWE of dropwort) suggest the possibility of use of potential herbal drug *Filipendulae flos*, which biological source would be *Filipendula hexapetala*.

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Nadzemni delovi boba (*Vicia faba*) kao potencijalni izvor antiinflamatornih i antioksidativnih agenasa

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Departman za hemiju, biohemiju i zaštitu životne sredine, Prirodno-matematički fakultet, Univerzitet u Novom Sadu

Bob (*Vicia faba*), je predstavnik familije Fabaceae, koji je, pored svoje visoke nutritivne vrednosti, veoma bogat sekundarnim metabolitima koji se odlikuju širokim spektrom bioloških aktivnosti. S obzirom da su nejestivi delovi ove biljke nedovoljno istraženi, cilj ovog rada bio je da se ispita antiinflamatorni i antioksidativni potencijal njenih nazemnih delova (herbe).

Ekstrakcija biljnog materijala izvršena je maceracijom 5 g suvog biljnog materijala sa 67 mL 80% MeOH, 4 × 120 min (8 h), na 25 °C. Antiinflamatorni potencijal ispitan je u humanim trombocitima, pomoću metode zasnovane na određivanju sposobnosti inhibicije enzima ciklooksigenaze-1 i 12-lipooksigenaze. Proces inflamacije izazvan je dejstvom kalcijumove jonofore - kalcimicina, a stepen inhibicije produkcije metabolita arahidonske

kiseline određeni...
ispitan je spektrom...
NO', kao i FRAP...

Na osnovu rezultata...
kozanoida izražen...
TXB₂ 6,84 mg/ml...
konstruisati krive...
tralizacije DPPH...
prema Fe(III)-2,4,5-...
po g suvog ostatka...

Ekstrakt boba je p...
HETE i umeren CO...
sposobnost hvatanja...
nim prirodnim izvora...

Broad Bean (*Vicia faba*) of Anti-inflammatory

F. Šibul, D. Orčić, T. Tomin
Department for Chemistry, B...

Broad bean (*Vicia faba*)...
tritional value, broad...
biological activities. S...
plant, aim of this pap...
of its aerial parts (herb...
Dry material (5 g) was...
°C. Anti-inflammatory...
determination of cyclo...
was induced with calci...
determined using LC-...
eter was used. DPPH...
reduction potential was...

According to results...
IC₅₀ values: 12-HETE 4...
IC₅₀ value cannot be de...
due to its absence in co...
and for NO' scavenging...
s-triazine complex is 66...

Broad bean extract...
12-HETE, and moderat...
expressed free radical s...
dicinal agents.

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