

ANTIINFLAMATORNA AKTIVNOST ETANOLNIH EKSTRAKATA ŠTITOVA DIVLJE ŠARGAREPE (*Daucus carota* L.) IZ SRBIJE I GRČKE

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Divlja šargarepa, *Daucus carota* L. (Umbelliferae) je aromatična biljka koja se od davnina koristi u tradicionalnoj medicini zbog svojih priznatih terapijskih svojstava. U ovom radu je ispitivana uporedna analiza prinosa ekstraktivnih materija (EM), sadržaja ukupnih fenola i flavonoida, kao i antiinflamatorne aktivnosti ekstrakata divlje šargarepe (štitovi bez semena) iz dve zemlje (Srbije (SDŠ) i Grčke (GDŠ)). Ekstrakti su dobijeni maceracijom 50% V/V etanolom korišćenjem solvomodula 1:10 m/V u toku 48 h. Sadržaj ukupnih fenola i ukupnih flavonoida je određen Folin-Ciocalteu metodom i reakcijom kompleksiranja sa AlCl₃, respektivno, i njihova *in vitro* antiinflamatorna aktivnost goveđim serum albumin-BSA testom. Prinosi EM u dobijenim ekstraktima SDŠ i GDŠ iznosio je 15,96 i 14,23 g na 100 g biljnog materijala. Ekstrakti štitova divlje šargarepe iz dve zemlje imaju sličan sadržaj ukupnih fenola (56,94 i 55,30 mg GKE/g suvog ekstrakta za SDŠ i GDŠ, respektivno) i flavonoida (48,90 i 48,68 mg RE/g suvog ekstrakta za SDŠ i GDŠ, respektivno), dok je ekstrakt SDŠ pokazao bolju antiinflamatornu aktivnost. Oba ekstrakta su pokazala značajan *in vitro* antiinflamatorni efekat, pri čemu je veći procenat detektovan ekstraktom SDŠ (91,83%) u poređenju sa ekstraktom GDŠ (88,27%). Vrednost inhibicije denaturacije BSA za diklofenak natrijum (standardni antiinflamatorni lek) iznosio je 95,6%. Dobijeni rezultati ukazuju na moguću primenu oba ekstrakta u prehrambenoj i farmaceutskoj industriji kao bezbednije alternative sintetičkim aditivima.

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ANTI-INFLAMMATORY ACTIVITY OF WILD CARROT (*Daucus carota* L.) UMBELS ETHANOLIC EXTRACTS FROM SERBIA AND GREECE

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Wild carrot, *Daucus carota* L. (Umbelliferae) is an aromatic plant used since ancient times in traditional medicine due to its recognized therapeutic properties. In this work, the comparative analysis of extractive matter (EM) yield, content of total phenolics and flavonoids, as well as anti-inflammatory activity of the wild carrot (umbels without seeds) extracts from two countries (Serbia (SWC) and Greece (GWC)) was investigated. The extracts were obtained by maceration with 50% V/V ethanol using solvomodule 1:10 m/V for 48 h. The total phenolic and total flavonoid contents were determined according to the Folin-Ciocalteu method and by the complexation reaction with AlCl₃, respectively, and their *in vitro* anti-inflammatory activity by Bovine Serum Albumin-BSA assay. The yield of EM in the obtained SWC and GWC extracts was 15.96 and 14.23 g per 100 g of plant material, respectively. The wild carrot extracts from two countries have similar content of total phenolics (56.94 and 55.30 mg GAE/g of dry extract for SWC and GWC, respectively) and flavonoids (48.90 and 48.68 mg RE/g of dry extract for SWC and GWC, respectively), while the SWCE extract showed better anti-inflammatory activity. Both extracts exhibited a significant *in vitro* anti-inflammatory effect, where the higher percentage was detected by SWC extract (91.83%) in comparison with GWC extract (88.27%). The value of BSA denaturation inhibition for diclofenac sodium (standard anti-inflammatory drug) was 95.6%. The obtained results indicate the possible application of both extracts in the food and pharmaceutical industries as a safer alternative to synthetic additives.

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