LATVIJAS UNIVERSITĀTES 75. STARPTAUTISKĀ KONFERENCE

ĶĪMIJAS SEKCIJA

Tēžu krājums

2017

POLYPHENOL RICH EXTRACTS OF *CAMELINA SATIVA*

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Camelina sativa is an oilseed plant that belongs to the *Brassicaceae* family. Camelina press-cakes contain remarkable amount of glucosinolates, antioxidants, including polyphenolic compounds (394 mg GAE/100 g meal), tocopherols, vitamin C and carotenoids [1-3]. The phenolic content strongly depends on the oil extraction process [2].

In this work, extracts of press-cakes of *Camelina sativa* seeds as potential sources of antioxidants were studied. The press-cakes were extracted with different solvents under variable conditions. The obtained extracts were characterized by total polyphenol content (TPC) and 1,1-diphenyl-2-picryl hydrazyl (DPPH) and galvinoxyl (GO) radical scavenging activity. TPC was expressed as mg of gallic acid (Fig. 1), sinapic acid or chlorogenic acid per 100 g of press-cake meal. DPPH and GO inhibition was expressed as IC_{50} values. The highest TPC (1536 mg GAE/100 g meal) was observed for 70% ethanol extract prepared at room temperature from defatted meal. Ethanol extract demonstrated the highest antiradical activity, when extraction was realized under reflux: extract of defatted meal was most active against DPPH (2 μg GAE/mL), but non-defatted meal – against GO (3 μg GAE/mL).

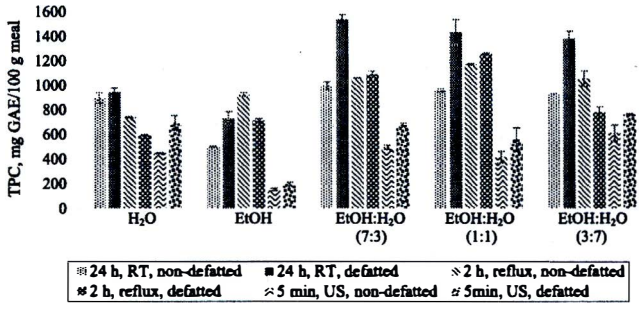

Fig. Total polyphenol content of extracts of camelina seed press-cakes (RT – room temperature; US – ultrasound)

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References:

[1] Terpinc, P.; Polak, T.; Makuc, D.; Poklar, N.; Abramovič. H. *Food Chem.* **2012**, *131*, 580-589.
[2] Terpinc, P.; Čeh, B.; Poklar, N.; Abramovič, H. *Ind. Crops Prod.* **2012**, *39*, 210-217.
[3] Salminen, H.; Heinonen, M. *J. Agric. Food Chem.* **2008**, *56*, 7472-7481.