Table of Contents

Editorial Board

For Authors

- Authors Declaration
- Instruction to Authors
- Guide for Authors
- Copyright Statement
- Submission

For Reviewers

- Guide for Reviewers
- Reviewers Login

Subscription

Czech J. Food Sci.

M. Krpan, K. Marković, G. Šarić, B. Skoko, M.

Hruškar, N. Vahčić: Antioxidant Activities and Total Phenolics of Acacia Honey

Czech J. Food Sci., 27 (2009): S245-S247

The antioxidant activities and total phenolic content of 30 samples of acacia honey from Croatian territory were analysed. Phenolics were determined by the modified Folin-Ciocalteu method, antiradical activity by the 1,1-diphenyl-2-picrylhydrazyl (DPPH) method and potential antioxidant activity using the ferric reducing antioxidant power (FRAP) method. In all samples, physicochemical parameters (water content, electrical conductivity, total reducing sugars, sucrose content, acidity, hydroxymethylfurfural content, prolin content, optical rotation, diastase activity and invertase activity) were measured according to Croatian legislation and International regulatory standards. Honey can be considered as a dietary supplement as it contains some important components including α-tocopherol,

ascorbic acid, flavonoids and phenolics. The composition and properties of honey are dependent on floral origins, climatic conditions of the produced area, processing and storage methods. The results of physicochemical analyses showed that all the values of investigated parameters are in agreement with the current legislation. Phenolic content ranged from 31.72 mg/kg to 80.11 mg/kg, antiradical activity expressed as IC50 ranged from 61.28% to 253.47% and antioxidant activity expressed as FRAP value from 6.95 to 142.43. A positive correlation was observed between total phenolic content and antioxidant activity, indicating that phenolic compounds are mainly responsible for the antioxidant power of acacia honey.

Keywords:
antioxidant activity; honey; phenolics; physicochemical parameters

[fulltext]