



Phenolic Compounds of Spain Propolis

Félix ADANERO-JORGE^{1*}, M^a Camino GARCÍA-FERNÁNDEZ², Rosa M VALENCIA-BARRERA¹ y J. Javier SANZ-GÓMEZ²

¹Department of Biodiversity and Environmental Management, Botany, University of León, León, Spain.

²ICTAL, Food Science and Technology Institute, University of León, León, Spain.

Received/Geliş Tarihi: 08/10/2018, Accepted/ Kabul Tarihi: 19/10/2018

*Corresponding author /Yazışılan yazar

Abstract

The phenolic compounds, flavonoids in particular, are very frequent in the plant kingdom with many beneficial properties. Some of these compounds are present in exudates or buds of plants. They appear in propolis as a consequence of the collection and transformation by specialized honey bees in the hive. The aim of the study is the determination¹ of phenolic compounds by UPLC-MS/MS and UPLC-PDA in methanolic extracts² of 134 samples of propolis from Castilla y León (North and Centre of Spain). Such samples were gathered using high density polyethylene mesh for food use which placed in Langstroth beehive from April 2011 to August 2012.

The results obtained reveal the interesting source of bioactive compounds of the North and Centre of Spain propolis, being the most significant caffeic acid and its derivatives (CAPE and isoprenyl caffeate), chrysin, pinobanksin, p-coumaric acid, galangin and kaempferol; other compounds identified only in some samples were benzoic acid, trans-ferulic acid, taxifolin, luteolin, sakuranetin, apigenin+genistein and eriodictyol. Furthermore, the content of CAPE and isoprenyl caffeate may restrict its use, for the food and pharmaceutical industry, since they are considered allergens³.

References:

1. Kasote, D., Suleman, T., Chen, W., Sandasi, M., Viljoen, A., van Vuuren, S. (2014) "Chemical profiling and chemometric analysis of South African propolis", *Biochemical Systematics and Ecology*, 55, pp. 156-163.
2. Dias, L. G., Pereira, A. P., Estevinho, L. M. (2012) "Comparative study of different Portuguese samples of propolis: pollinic, sensorial, physicochemical, microbiological characterization and antibacterial activity", *Food and Chemical Toxicology*, 50, pp. 4246-4253.
3. Walgrave, S. E., Warshaw, E. M., Glesne, L. A. (2005) "Allergic contact dermatitis from propolis", *Dermatitis*, 16(4), pp. 209-215.