

Antifungal and Antioxidant Properties of Two Portuguese Propolis Samples

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Propolis (bee glue) is a resinous and balsamic mixture produced by bees from plant exudates^[1] and used for the maintenance of the structural integrity and the sanitary status of the beehive. Chemically complex by nature, propolis composition depends not only of surrounding flora and harvesting year but also of the mode of collection^[2-3], making propolis standardization very difficult. Propolis has an equally diverse set of bioactivities - mainly antimicrobial, antioxidant and anti-inflammatory - which have been generally related to the presence of some compounds such as flavonoids, phenolic acids and their esters^[3].

Portuguese propolis is still a poorly exploited product yet displaying very interesting properties^[4-5]. The goal of this work concerns the characterization of two Portuguese propolis samples collected in 2017 in two apiaries - Gerês (G) and Pereiro (P) - particularly regarding their chemical composition and antifungal potential, aiming medical and cosmetic applications. Ethanol extracts were prepared - G17.EE e P17.EE - and tested. Although chemically different in terms of phenolic and ortho-diphenol contents, both extracts showed high antioxidant capacity, diverging from other extracts prepared from samples collected in the same apiaries in different years. G17.EE e P17.EE also display antimicrobial activity against yeasts and filamentous fungi with clinical interest. These bioactivities, associated to a composition rich in phenolic compounds, renew our interest in these propolis samples for future applications.

References:

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