

In vitro fungistatic activity of ethanolic extract of propolis against postharvest phytopathogenic fungi: preliminary assessment

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Abstract

A study was conducted to evaluate the fungistatic activity of a sample of Colombian propolis. The crude matrix was extracted with ethanol (96% v/v); the thus obtained ethanolic extract of propolis (EEP) was centrifuged, concentrated at low pressure and used to determine its effect on the mycelial growth of economically important phytopathogenic fungi (*Aspergillus niger*, *Penicillium* sp., *Rhizopus oryzae* and *Botrytis cinerea*) with the poisoned food technique on potato dextrose agar. The results, expressed as the median effective concentration of emulsified propolis extract, indicated that *A. niger* was the most susceptible fungus (0.09% w/v), followed by *Penicillium* sp. (0.42% w/v), *R. oryzae* (0.53% w/v) and *B. cinerea* (1.09% w/v). From the obtained information, it may be concluded that EEP had a suppressing effect on pathogen growth of the above-mentioned fungi. Consequently, EEP may have the potential to be used alone or in combination with others procedures as an alternative source of antifungal agents for the protection of plants and highly perishable fruits and vegetables during the crop and postharvest stages.