

Título: Evaluation the activity of the bioactive compounds (menthofuran, menthone, carvone and pulegone) present in different species of *Mentha* spp. against *Candida* yeasts

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Abstract

Medicinal plants have been investigated as an alternative to therapeutic and preventive treatment of various diseases due to the rich diversity and composition of bioactive components present in extracts and essential oil. The genus *Mentha* spp. beyond its use in the cosmetic, food and biological industry has been widely studied by components present in the essential oil that may be responsible for its anti-inflammatory activity, anti-allergic, nematocidal, antioxidant, antifungal and antibacterial among other potentials. Increasingly associated with pathologies, *Candida* yeasts spp. has aroused the interest of researchers in the discovery of new drugs as an alternative action against these microorganisms. The plants of the genus *Mentha* spp. has showed important bioactive compounds with potential antimicrobial action by many studies. The present study aims to evaluate the activity of bioactive compounds as pulegone, menthone, carvone and menthofuran (which have been isolated from the acquired company Sigma Aldrich) present in different species of *Mentha* spp. against *Candida* spp. by using the broth microdilution method (CLSI, 2002), by the determination of MIC (minimum inhibitory concentration). The species tested were: *C.lusitanae*, *C. dubliniensis*, *C. tropicalis*, *C.rugosa*, *C. glabrata*, *C. albicans* and *C.krusei*. All tested compounds showed antifungal activity, wherein menthofuran and carvone showed average concentration of 0.5mg/ml, while pulegone and menthone showed average concentration of 8 mg/ml. These results show that menthofuran and carvone exhibit antifungal activity at lower concentrations and they are more efficient than pulegone and menthone when tested against strains of *Candida* spp. Compounds isolated from *Mentha* species show a specific antifungal activity and new perspectives in future researches as an alternative supporting treatment against such microorganisms.

Palavras chave: antifungal activity; *Candida* spp.; *Mentha* spp; medicinal plants