

Título: INFLUENCE OF YERBA MATE AQUEOUS EXTRACTS ON THE GROWTH OF FUNGI PRODUCERS OF OCHRATOXIN A

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Resumo:

Ochratoxin A (OTA) is a secondary metabolite produced by some species of *Aspergillus* and *Penicillium*, due to their large molecular stability it is hardly degraded. OTA is nephrotoxic, neurotoxic, it is related to neurodegenerative diseases such as Alzheimer's and Parkinson's and is considered potentially carcinogenic in humans. The control of mycotoxins is centred on the use of synthetic fungicides, but the growing demand for natural products has encouraged the search for alternative control methods. Many medicinal plants have antimicrobial properties that can be applied as growth inhibitors of mycotoxin-producing fungi, among them, the yerba mate (*Ilex paraguariensis*). Six plants of yerba mate were collected in the city of Ivaí do Sul (Paraná, Brazil) and it was prepared aqueous extract of yerba mate leaves in the concentration of 1 g/L, 5 g/L, 10 g/L and 100 g/L. The extracts were tested against *Aspergillus* species OTA producers (*Aspergillus niger*, *Aspergillus carbonarius*, *Aspergillus westerdijkiae* and *Aspergillus ochraceus*). It was use the agar dilution method to evaluate the antimicrobial activity of aqueous extracts of yerba mate, mixing 1 mL of the extract with a molten Sabouraud agar medium in a sterile Petri dish and adding an agar plug of Sabouraud agar medium disc containing the mycelium of an *Aspergillus* strain. It was observed that the extracts, at concentrations of 1 g/L, 5 g/L and 10 g/L inhibited the growth of *Aspergillus* section *Circumdati* (*A. ochraceus* and *A. westerdijkiae*) and at a concentration of 100 g/L all extracts promote the growth of *Aspergillus* section *Circumdati*. The yerba mate extracts, in all concentrations tested, did not influence the growth of *A. carbonarius* and *A. niger*. It was concluded that the yerba mate extract can inhibit the growth of some *Aspergillus* species, therefore it can be used for controlling fungi producers of OTA.

Palavras-chave: *Aspergillus*; Extracts; Growth inhibition; Yerba mate.

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