

**Título: POTENTIAL OF YEASTS ISOLATED FROM GREEN COFFEE BEANS TO INHIBIT GROWTH AND REDUCE OCHRATOXIN A PRODUCTION BY *Aspergillus* SPECIES**

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**Resumo:**

Ochratoxin A (OTA) is a mycotoxin produced by fungi of the genus *Aspergillus* and *Penicillium*, usually found in cereals, wheat, grapes and coffee. OTA is nephrotoxic, neurotoxic, immunosuppressive and is considered a possible cause of human cancer. In Brazil, the main producers of OTA are *Aspergillus ochraceus*, *Aspergillus westerdijkiae*, *Aspergillus carbonarius* and *Aspergillus niger*, so the aim of this study was to evaluate the ability of fifteen yeasts isolated from green coffee beans in inhibiting the growth and OTA production from *Aspergillus* species. Isolation of yeasts from green coffee bean samples it was performed in triplicate placing four coffee beans in a Petri dish containing Sabouraud agar medium. Inhibition tests it were performed using the radial growth technique, spreading a yeast suspension on 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. Three small aliquots (plugs) of a fungal strain were taken after the inhibition test and transferred to test tubes with methanol. Using the *plug-agar* technique, the toxin was extract, filtrated and analyzed in a HPLC instrument. The concentrations were expressed in ng/L. Yeasts isolated from green coffee beans it was identified from sequencing of the ribosomal DNA ITS region as *Wickerhamomyces anomalus*, *Hyphopichia burtonii*, *Meyerozyma caribbica*, *Meyerozyma guilliermondii*, *Aureobasidium pullulans* e *Kwoniella heveanensis*. The yeasts were able to inhibit *A. ochraceus*, *A. westerdijkiae*, *A. carbonarius* and *A. niger*, the inhibition percentage ranged from 20,96% to 100%. Among the tested species, *A. westerdijkiae* was more susceptible, with inhibition mean percentages of 78,34%. Analysing the ability of reduction of OTA production by the yeasts isolated, it was found that the yeast *H. burtonii* were able to reduce the OTA production up to 100% of the four *Aspergillus* species tested. Finally, it was concluded that yeasts isolated from coffee beans have inhibitory potency against the species tested, and may be an alternative to control of species of *Aspergillus* and OTA in foods.

**Palavras-Chave:** *Aspergillus*; Coffee; Growth Inhibition; Ochratoxin A; Yeast.

**Agência Fomento:** CNPq