

TITLE: *IN VITRO* ACTIVITY OF METHANOLIC EXTRACTS FROM *Solanum sessiliflorum* SEEDS ON TWO FILAMENTOUS FUNGI STRAINS

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ABSTRACT:

The *Solanum sessiliflorum*, also known as “cubiu”, is an amazonian fruit with agroindustrial economic potential. Its nutritional composition and some pharmacological properties have been studied earlier, but antimicrobial studies are still lacking. The present work aimed to evaluate the influence of a methanolic extract obtained from the *S. sessiliflorum* seeds on two fungal strains, commonly found as food spoilers. Six fruits were collected at the experimental agronomic station of the Instituto Federal do Amazonas (IFAM), Campus Manaus Zona Leste. At the same day, the seeds were separated from the endocarps and left to dry on air at room temperature for 48h. The extract was obtained in methanol (ME) after serial (3x) ultrasonic bath (20 minutes each). The extract was concentrated in a rotative evaporator and dried in a desiccator. *Aspergillus flavus* and *Fusarium falciforme* (preserved in the collection of the IFAM, Campus Manaus Centro) were inoculated on Sabouraud agar in test tubes. After sporulation, spore suspensions were used as inoculums in the concentration of 10^5 determined with a Neubauer chamber. The fungal strains and the ME (10mg/mL) were then inoculated in microtiter plates to evaluate the minimum inhibitory concentration (MIC) in triplicate. Cetoconazol was used as positive control in the same concentrations. A spectrophotometer (630 nm) was used immediately after inoculation (T_0) and after 24h incubation at 35 °C and data served to calculate the MIC and the growth index (GI%), considering the negative control as 100%. The results indicated that *A. flavus* was stimulated by ME, showing 251,6 GI% in the highest concentration. Following the serial dilutions, growth was decreasing alongwith the ME concentration. *F. falciforme* GI% fluctuated in the diferent concentrations, stimulating (118,6 GI% at 0,03 mg/mL) or inhibiting (-182,2 GI% at 0,01 mg/mL) growth. Overall, the ME demonstrated the ability to induce fungal growth, thus indicating the need of further studies to develop methods or products to accelerate fungal growth for pharmaceutical and industrial purposes.

Keywords: Endophytic fungi, extract, cubiu, antifungal, stimulant.