TITLE: PRODUCTION OF MYCOTOXINS AND FUNGI CONTAMINATION IN SEEDS OF *Bixa orellana* USED IN FOOD PREPARATION

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ABSTRACT: Annatto is widely used since the indigenous culture until the textile industry, food (production of paprika) and in the production of medicaments. The characteristic colour of the annatto seeds occurs because of the presence of carotenoids, pigment present in nature, as an example, the bixin, that can play a large roll in physiological actions assisting in anti-inflammatory interactions, in lipid and cardiac processes and showing antibacterial and antifungal activity. Fungi have the ability of spoil food through production of a natural metabolic called mycotoxin. Among the most important are aflatoxins, ochratoxin, fumonisin, zearalenone and deoxynivalenol. These toxins are divided by their toxicity levels and require attention because they present carcinogenic, teratogenic and mutagenic potentials. The aim of this study is evaluate the fungal growth in *B. orellana* seeds, isolating and identifying infectious agents. Was used seeds sold at retail and separated by treatment: whole seeds not washed, ground seeds not washed, whole seeds washed with distilled water, ground seeds washed with distilled water, whole seeds washed with hypochlorite 2.5% and ground seeds washed with hypochlorite 2,5%. The seeds were cultivated in Sabouraud dextrose agar with added chloramphenicol and where the growth was monitored every 24 hours. The identification of fungal species was done using the slide culture technique. The structures were classified as: septate or non-septate hyphae, hyaline or dematiaceous and their respective reproduction structure. The species determination was made through the analysis of the reproduction structure following the identification key. The main objective was identifying the fungal species and associate to witch mycotoxin can be produced by that fungi. The main fungi found were: *Aspergillus flavus*, *Aspergillus niger* and *Rizhopus spp*. In conclusion, the challenges in monitoring mycotoxicosis begin in the irregular distribution of the batches, as well, more controlled studies on seeds and grains contamination by fungi.

Keywords: carotenoids, fungi, mycotoxins, annatto.