

**PHYTOCHEMICAL SCREENING AND ANTIFUNGAL ACTIVITIES OF
Azadirachta indica and *Psidium guajava* LEAVES EXTRACTS**

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ABSTRACT

PHYTOCHEMICAL SCREENING AND ANTIFUNGAL ACTIVITIES OF *Azadirachta indica* AND *Psidium guajava* LEAVES EXTRACTS

This study was carried out with the objective to investigate the antifungal activities and phytochemical screening analysis of leaves extracts of *Azadirachta indica* and *Psidium guajava*. The aim of the study is to assess the antifungal activity by determining the zone of inhibition of the leaves extracts on selected pathogenic fungi. This study was done by using different concentration of methanol and distilled water plants crude extracts. The antifungal activities of extracts (50, 100, 200, 400 and 600 µg/ml) of *A. indica* and *P. guajava* were tested against *Trichophyton mentagrophytes*, *Candida albicans* and *Malessezia spp.* The Kirby-Bauer disc diffusion assay (zone inhibition assay) was used to determine the antifungal activities. The minimum inhibitory concentration of 50 µg/µL of both plants extracts were about 3 mm to 16 mm. Based on the study, *P. guajava* crude extract showed larger diameter of inhibition zone which were 16 mm to 25 mm in inhibiting *Trichophyton mentagrophytes* and *Malessezia spp.* than *A. indica* crude extract that only showed about 11 mm to 14 mm of zone inhibition for both solvent; methanol and distilled water. Methanol is more effective solvent than distilled water for the antifungal activity. However, distilled water have more polarity than methanol, so it produced more extraction compared to methanol. The phytochemical analyses of the plants were carried out. In phytochemical screening test, *P. guajava* crude extract from both solvent showed the presence of saponin, alkaloid, tannin, and phenol. Apart from that, *A. indica* crude methanol extract showed the presence of flavonoid, tannin, and phenol but in distilled water extracts, flavonoid was absence. The antifungal activities of the *A. indica* and *P. guajava* were due to the presence of various secondary metabolites. Hence, these plants have the potential to be used in the development of new pharmaceuticals research activities related to bioactive natural products.