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PHYTOCHEMICAL SCREENING OF ANTIFUNGAL BIOCOMPOUNDS FROM FRUITS AND LEAVES EXTRACT OF *CERBERA ODOLLAM* GAERTN

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ABSTRACT

Nowadays, heavy usage of fungicide in agricultural industries has resulted in environmental pollution in addition to expose a significant risk to human health. Hence, there is a need to develop alternatives to replace synthetic fungicides. In this research, phytochemical test was carried out on both fruits and leaves of *Cerbera odollam* Gaertn using standardized procedures to determine the antifungal compounds present in the ethanol extracts. Antifungal bioassay was performed through Kirby-Bauer disc diffusion method at various weight (0.5mg to 100mg) against fungi:

Aspergillus niger, *Fusarium*

oxysporum

and

Penicilium citrum

. Fungi assay was assessed based on the minimum inhibitory amount of both ethanol extracts. The results of the research showed the presence of the active compounds such as alkaloid, cardiac glycoside, phenol, steroid, tannin and terpenoid in the extracts. Leaves extracts were found to have more phytoconstituents as compared to the fruits extracts. Besides, antifungal activity of leaves extract had moderate antifungal effects against

Aspergillus niger

(13.40mm inhibition zone) and

Penicilium citrum

(15.73mm inhibition zone). However,

Fusarium oxysporum

did not exhibit inhibition zone with this extract. Leaves extract showed best antifungal activity against

Penicilium citrum

, with the lowest dosage (<1mg) when compared to others. Meanwhile, fruits had showed weak antifungal activity (below 11.00mm inhibition zone) for all the tested fungi. The study on

Cerbera odollam

's fruits and leaves extract indicated that they have an antifungal potential to be used as an alternative to synthetic fungicides. Investigation for its active biocompounds could be exploited further.

Keywords

Cerbera odollam, fruits, leaves, phytochemical screening, antifungal