

Antifungal Activity of Some Plant Extracts Against Decay Fungi From Palmyrah Leaf Handicrafts

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ABSTRACT

Fungi associated with decaying handicrafts made from palmyrah leaf were isolated from two different sites of the Jaffna peninsula and characterized as *Aspergillus niger*, *Aspergillus flavus* and *Penicillium* sp. These were used as test fungi for screening antifungal activity of neem leaf, neem seed, neem bark, omum (Thyme) and turmeric powder obtained from local market were used. The hot water extracts of above plants parts were evaluated against the isolated fungi on PDA. During screening of antimicrobial activity, tests and controls were set to determine MIC (minimum inhibitory concentration) and Percentage of Growth Inhibition (PGI). Hot water extracts of neem leaf, neem seed, neem bark and turmeric powder recorded no significant ($0.05 > P$) antifungal activity while omum showed significantly different PGI for all fungal species compared with control and showed lowest MIC was at 15ml/dl. Therefore omum was selected for further study and active component of omum as thymol was compared with the omum hot water extract. There was no significant difference in PGI of thymol at the concentrations of 0.5, 1 and 2 ml/dl and 15ml/dl of omum hot water extracts, against all fungal species. Therefore omum could be used for further study to develop a new environmental friendly antifungal agent for the preservation of leafy handicrafts. Further formulation, field experiments are necessary to achieve this target.

Key words: Antifungal activity, hot water extract, neem and omum