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EFFECT OF SOME MUTAGENIC AGENTS ON THE VEGETATIVE GROWTH OF *Pleurotus ostreatus* (Jacq. ex. Fr.)

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ABSTRACT

Mycelium of *Pleurotus ostreatus* was exposed to different mutagenic agents at time intervals ranging between 5 to 15 minutes, transferred onto Potato dextrose agar (PDA) and incubated at 25±2°C for 7 days. Results showed that the mycelia exposed to Electromagnetic force (E.M.F) and Ultraviolet light (UV) together with those exposed to 30%, 50%, and 70% ethanol and 30% chloroform grew on the PDA while no growth was observed at 50%, and 70% concentrations of chloroform. There was no significant difference in colonization rate of the spawn and the control, but there were significant differences during colonization of the sawdust. Complete colonization of the sawdust by mycelia exposed to E.M.F, UV light and control occurred from 8 to 10 days, while the mycelium exposed to chloroform occurred after 14 days resulting in possibly changes in the genomic structure of the mycelia leading to different colonization rates on the substrates. These findings could be exploited for production of strain for enhanced production of *Pleurotus ostreatus* mushrooms. Utilization of readily available agricultural wastes for production of mushrooms with high nutritive value can therefore assist in alleviating malnutrition and providing affordable protein source to man in the face of ever increasing human population thereby ensuring global food security.

Keywords: *Pleurotus ostreatus*, Agricultural wastes, Electromagnetic force, Ultraviolet light, Chloroform, *Ceiba pentandra*.