

Plant Growth Regulators and Tubers as Medium for the Growth Rate of White Oyster Mushrooms (*pleurotus ostreatus*) Mycelium

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Abstract

Research on tissue culture method on White Oyster Mushroom is being done mainly for the purpose of production. To increase the amount of production some methods are still being done by researchers. In this research, boiled tubers (cassava, potato, sweet potato, and canna) are the four different growth media used. In the experimental group, the different kinds of growth media were added with 2 ppm of growth hormone regulator (ZPT), Naphthalene Acetic Acid (NAA) and Kinetin (N6-furfuryladenine); while the control group was without the growth hormone regulator (non-ZPT). The data of this study is the length of the mycelium. The results of the study showed that: (a) ZPT does not significantly affect the growth of mushroom mycelium with $p = 0.639$; (b) the types of growth media used significantly affects the mycelium growth $p = 0,005$. Duncan Multiple Range Test shows that canna tuber and sweet potato give the most to the significance of the analysis, thus they are the best growth media; (c) the length of time, as indicated by the time of measuring the length of the mycelium of the experimental group, significantly affects with $p = 0.000$. Duncan's Multiple Range Test (DMRT) shows that the seventh time of measurement is the best; (d) in the interaction of ZPT, non-ZPT, and types of media significantly influence the growth of the mycelium with $p = 0.000$; (e) the interaction of ZPT, non-ZPT, and tuber media on time does not significantly affect the growth of the mycelium with $p = 0.562$; (f) the interaction of the types of growth media and time media do not significantly affect the growth of the mycelium with $p = 0.924$; (g) ZPT, non-ZPT tuber, and time medium do not affect the growth of white oyster mushroom mycelium with $p = 0.791$.

Keywords: *Pleurotus ostreatus*, tubers, growth hormone regulators (ZPT), tissue culture