

## **Growth Regulating Substance and Media on the Growth of White Oyster Mushroom (*Pleurotus ostreatus*) Mycelium**

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**Abstract:** White Oyster mushroom (*Pleurotus ostreatus*) is an alternative food for human kind because of its high nutrients content. This study used growth regulating substance (ZPT) and media to determine the growth of the mycelium of white oyster mushroom. ZPT used in this study are NAA and Kinetin, and the growth media used are extract of different kind nuts (long beans, beans, peanut, green bean, and soya bean). Factorial analysis of variance (Anova) was used to analyze the data at a significant level of  $\alpha = 0.05$ . The results shows that: (1) There's a significant effect of ZPT and Non-ZPT on the mycelium growth with  $p=0.000$ , Duncan Multiple Range Test (DMRT) showed that Kinetin gave the highest contribution to the significancy of Anova; (2) growth media used in the study shows a significant differences on the mycelium growth with  $p=0.039$ , Duncan Multiple Range Test shows that beans of long bean and soya bean are the highest contribution to the significancy of Anova; (3) time/days of measurement done in the study shows a significant differences on the mycelium growth with  $p=0.000$ , Duncan Multiple Range Test shows that T6 or day 14 of measurement shows the highest contribution to the significancy of Anova; (4) the interaction of ZPT, Non-ZPT and growth media show a significant differences on the mycelium growth  $p=0.000$ ; (5) the interaction of ZPT, Non-ZPT and time of measurement show a significant differences on the mycelium growth with  $p=0.000$ ; (6) the interaction of growth media and time of measurement show a significant differences on the mycelium growth with  $p=0.000$ ; and (7) the interaction of ZPT, Non-ZPT, growth media and time of measurement do not affect significantly the mycelium growth with  $p=0.053$ .

**Keywords:** White oyster mushroom (*Pleurotus ostreatus*), growth regulating substance, tissue culture, growth media