

## ABSTRACT

White oyster mushroom is one of the economically valuable consumption mushrooms. The growth of white oyster mushrooms requires additional nutrients. The main nutrients required by white oyster mushroom include carbohydrates (cellulose, hemicellulose and lignin), protein, fat, minerals, and vitamins. One of the factors that can affect the growth of white oyster mushroom is the composition of the growing media and the provision of coconut water nutrients. The purpose of this research is to determine the effect of growth media compositions, and coconut water nutrition as well as the interaction between growth media composition and coconut water nutrition. This research was carried out from May to August, 2023 at the Komplek TNI-AD Rudal 001, Pulo Rungkom, North Aceh Regency. This research used Completely Randomized Design Factorial. The first factor is the composition of the substrate (M) of M1= 50% coffee horn skin+50% sawdust, M2= 60% coffee horn skin+40% sawdust, and M3= 70% coffee horn skin+30% sawdust. The second factor coconut water nutrition (K) of K0= control, K1= 50% coconut water and K2= 50% fermentation coconut water. The results showed that the composition of the growing media had a very significant effect on the variables of pinhead emergence time, harvest 1 fruit hood diameter, harvest 1 total fresh weight of the fruit body, and organoleptic test (taste). In addition, the composition of the growing media had a significant effect on the diameter of the fruiting body hood of harvest 4. The provision of coconut water nutrients had a very significant effect on the organoleptic test (taste and scent). Then it significant the variable number of fruiting bodies in harvest 2. Other than that, there is an interaction in the composition of the growth media given coconut water nutrition on the variable pinhead emergence time and organoleptic test (scent).

**Keywords :** *Oyster Mushrooms, Coconut Water, Fermentation*