

**EFFECT OF BAP (*Benzil Amino Purine*) AND IAA (*Indole Acetid Acid*)
COMBINATION ON EKSPLANT GROWTH
VANILI (*Vanilla planifolia* A.)
BY IN VITRO**

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ABSTRACT

This study aims to determine the effect of the combination between the concentrations of growth regulating substances BAP and IAA on the in vitro growth of shoots of *Vanilla planifolia* eksplants. This research was conducted at the Tissue Culture Laboratory, State Polytechnic of Jember from January to May 2020. The method used was Factorial Completely Randomized Design (RALF) with two treatment factors and three replications. The first factor is BAP growth regulators with 3 levels of BAP concentration (0 ppm; 1 ppm; 2 ppm). The second factor is the growth regulator IAA with 3 levels of IAA concentration (0 ppm; 0.5 ppm; 1.5 ppm). Further testing was carried out with the Duncan Multiple Range Test (DMRT) with a level of 5%. The results showed that the combination of BAP and IAA was effective in influencing the height of vanilla plantlets in vitro. The combination of BAP and NAA treatments had a very significant effect on shoot emergence time and had a significant effect on the increase in the number of vanilla plantlet roots.

Key words: *Vanilla planifolia* A., BAP x IAA combination, shoot growth