

***EFFECT OF GROWTH REGULATORS NAA (Naphthalene Acetic Acid)
AND BAP (BenzylAmino Purine) ON CALLUS INDUCTION OF OIL
PALM EXPLANTS (Elaeis Guineensis Jacq.) IN VITRO***

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ABSTRACT

Palm oil is one of the plantation commodities that has an important role in economic activities in Indonesia because of its ability to produce vegetable oil which is much needed by the industrial sector. However, the supply of high-yielding oil palm seeds is limited and demand is increasing. However, conventional propagation takes a long time. So that tissue culture technique is an alternative to overcome these problems. This study aims to determine the effect of the application of NAA (Naphthalene Acetic Acid) and BAP (Benzyl Amino Purin) on callus induction of explants of oil palm (Elaeis guineensis Jacq.) in vitro. This research was conducted in August-November 2022 at the Jember State Polytechnic Tissue Culture Laboratory. This study used a completely randomized design (RALF), which consisted of 2 treatment factors, namely the first factor included 4 levels of NAA concentration (0 ppm, 1 ppm, 2 ppm, 3 ppm) and the second factor included 4 levels of BAP concentration (0 ppm, 1 ppm, 2 ppm, 3 ppm). The explants used were young palm leaves. Callus induction responses included the percentage of live explants, the percentage of explant contamination, the percentage of callus growth, the time of callus appearance, callus texture and callus color. The results of the ANNOVA data analysis and the 5% BNJ test showed that the results of the BAP treatment were significantly different in terms of the percentage of live explants and the percentage of explant contamination.

Key words: NAA, BAP, Callus induction