# " The Effect of Increasing the Concentration of Potassium KNO3 on the Growth of In Vitro Potato Plantlets *(Solanum tuberosum L.)* "

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## *ABSTRACT*

This study aims to examine the best concentration and determine the optimal concentration of KNO3 that provides the best growth in Granola potato plantlets. The study was conducted at the Plant Tissue Culture Laboratory of Jember State Polytechnic. This study was conducted in June - Completed in 2024. This study used a Non-Factorial Completely Randomized Design (CRD) with one treatment factor, namely KNO3 consisting of 5 concentration levels of 475 mg / l, 950 mg / l, 1425 mg / l, 1900 mg / l, 2375 mg / l. which was repeated 4 times for each treatment so that there were 20 units. Data from the results of the study will be analyzed for variance. If there is a significant effect between treatments, it will be tested using ANOVA, namely the honest significant difference test (HSD) at the 5% level and very significant at the 1% level. Based on the results of the study, it can be concluded that the 475 mg / L concentration treatment has the most significant effect on plantlet growth, especially on the parameters of book length and root length. This treatment showed significantly different results compared to other concentration treatments. Thus, a concentration of 475 mg/L can be recommended as the optimal concentration to increase the growth of potato plantlets in vitro.

**Keywords:** ***KNO3,Growth,Increase***