

Planlet Stevia (*Stevia Rebaudiana*) Growth Response to Some Kinetin Concentrations with Red Blue LED Lighting by In Vitro

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ABSTRACT

The purpose of the study entitled Planlet Stevia (*Stevia Rebaudiana*) growth response to some kinetin concentrations with red and blue LED lighting by *In Vitro* is to know the influence of kinetin concentration through plantlet stevia (*Stevia Rebaudiana*) growth, to know the influence of LED lighting red and blue to Plantlet stevia growth, and to know the influence of concentration and LED red and blue lighting to plantlet stevia growth response by *in vitro*. This study was conducted in laboratory of Plant Tissue Isolation Method of Politeknik Negeri Jember. It was started from October 2019 until February 2020. The method used was Factorial Completely Randomized Design (FCRD), which was consisted of two treatments and five replications. The first treatment was LED lighting (White; Red blue). The second treatment was kinetin concentration that was consisted of three levels concentrations (2 ppm; 3 ppm; 4 ppm). Further testing was carried out with the Duncan Multiple Range Test (DMRT) with a level of 5%. The result of this study were: first, by giving the kinetin concentration, it was influenced real in the parameter of the bud appearance and the bud height. Second, the use of red and blue LED lighting was influenced real in the parameter of the bud appearance, number of bud and the bud height. Whereas, by giving the kinetin concentration and red and blue LED lighting was influenced real in the parameter of the bud appearance, number of bud and the bud height. In the parameter of number of leaves was influenced not real to all treatments.

Keywords : *Stevia, LED Lighting, Kinetin, In Vitro*