

Effect of IAA and GA3 toward the growing and saponin content of purwaceng (*Pimpinella alpina*)

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Abstrak

Abstract. Fathonah D, Sugiyarto. 2009. Effect of IAA and GA3 toward the growing and saponin content of purwaceng (*Pimpinella alpina*). Nusantara Bioscience 1: 17-22. The aims of this research are to examine (i) the effect of IAA and GA3 in different concentrations to the growth of the plants and (ii) the saponin contained inside the *P. alpina*, leaves. The research was done in Sikunang Village, Kejajar Subdistrict, Wonosobo District, Central Java from July to November 2007. The experiment methods were used the Completely Random Design with two factors were used to analyze this experiment. First treatment gives IAA and GA3, second was done by giving different IAA and GA3 concentration. These experiments were repeated three times. Variables measured in this research were the growth of plant which is consisted of the number of leaves, their height, width, wet weight as well as dry weight. The chemical compound of the secondary metabolite in the form of leave saponin was employed. The result was analyzed by Analysis of Variance (ANOVA), then continued to Duncan Multiple Range Test in 5% level to analyze the real difference between those treatments. The result showed that giving IAA and GA3 differently affect the growth *P. alpina*. In variable of the height, the optimal wet weight and dry weight of the plant in GA3 treatment was 50 ppm; optimum number of leaves in GA3 treatment was 50 ppm where as the leave width in IAA treatment was 200 ppm and GA3 treatment was 75 ppm and optimum saponin treatment was IAA 200 ppm and GA3 25 ppm.