

Pengaruh Elisitor Ekstrak *Saccharomyces cerevisiae* terhadap Biomassa dan Kadar Saponin Akar Adventif *Talinum paniculatum* (Jacq) Gaertn., Secara *In-vitro*.

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ABSTRACT

This study aimed to determine the effect of various concentrations of *S. cerevisiae* extract as biotic elicitor and time of harvesting to biomass and saponin levels of adventitious roots *T. paniculatum*(Jacq) Gaertn in-vitro. Leaves of *T. paniculatum* grown on Murashige and Skoog medium (MS) supplemented 2 mg / L IBA and *S. cerevisiae* extract with concentrations of 0; 0.025; 0.05, and 0.1% g / L. Biomass and saponin levels of adventitious root *T. paniculatum* measured at harvest age 2, 4, and 6 weeks. Biomass measured after fresh weight of adventitious roots *T. paniculatum* dried in the oven 50⁰C, for 5 days. Saponin levels are determined by semi-quantitative method on TLC plate and eluted with propanol : H₂O with a ratio of 14 : 3. Elicitor concentration 0.025% by harvest time at the 4th week produced highest average biomass of 16.1 mg. Lowest mean value of biomass produced at giving elicitor concentration 0.1% harvesting the 2nd week in 1.4 mg. Brown-Forsythe test results show extracts of *S. cerevisiae* give effect on adventitious root biomass *T. paniculatum* (Sig 0.003 <α 0,05). Significant difference treatments Only shown in giving elicitor concentration of 0.1% (sig 0.011 <α 0,05). Harvesting time give effect on biomass adventitious root *T. paniculatum* (Sig 0.043 <α 0.05), From Games-Howel test showed no significant difference between treatments. The best concentration of *S. cerevisiae* extract is to increase of saponin contetns in adventitious root of *T. paniculatum* is 0.025% of 2 weeks culture.

Key words : *adventitious root, elicitor, saponins, Talinum paniculatum*

Pendahuluan

Pemanfaatan tumbuhan sebagai bahan baku obat terus meningkat. Sampai saat ini, sebagian besar bahan baku tanaman obat masih dipanen dari alam (Lestari dan Mariska, 1997). Salah satu tanaman obat adalah ginseng jawa atau *Talinum paniculatum* (Hutapea, 1991). Manfaat yang dapat diambil dari tanaman ginseng jawa adalah untuk meningkatkan nafsu makan kurang dan afrodisiaka (Wijayakusuma *et al.*, 1994). Berbagai kandungan kimia dapat ditemukan di tanaman ini. Faridah dan Isfaryanti (1996) menyebutkan bahwa akar ginseng jawa