

**MORPHOGENESIS EFFECT OF *Solanum lycopersicum* BY
RICE WATER THROUGH TISSUE CULTURE METHOD**

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ABSTRACT

MORPHOGENESIS EFFECT OF *Solanum lycopersicum* BY RICE WATER THROUGH TISSUE CULTURE METHOD

Solanum lycopersicum is known in biotechnology field to be used as experimental subject to study interactions between various plant growth regulators. It is highly recommended plant to be used in tissue culture technique as the germination process take less period of a time. However, due to the highly cost production of tissue culture medium, rice water was used as alternative plant growth regulator, vitamins and nutrients to study the morphogenesis effect of *S. lycopersicum*. Four different treatment of rice water were added in the media in this study which are three times washed rice water with concentration of 150 ml/L and 50 ml/L and six hours soaked rice with concentration of 150 ml/L and 50 ml/L. Murashige and Skoog (MS) medium supplemented with 3.0 mg/L benzyl aminopurine (BAP) was compared to other treatments as control. The results obtained shows that *S. lycopersicum* seed treated with rice water give higher growth rate than seed treated with BAP. From this result, rice water assumed to have substitute nutrients for *S. lycopersicum* growth as the phosphate and nitrate were present in the rice water when analysis was done using Fourier-Transformed Infrared Spectroscopy (FT-IR). The rice water also was analysed using Atomic Absorption Spectroscopy (AAS) to confirm the presence and concentration of potassium that act as macronutrient for development of *S. lycopersicum*. The results were assumed to be able to aid the production of this species.