



Response of Sodium Pyruvate ($\text{CH}_3\text{COCO}_2\text{Na}$) on Phycocyanin Production of *Spirulina platensis*

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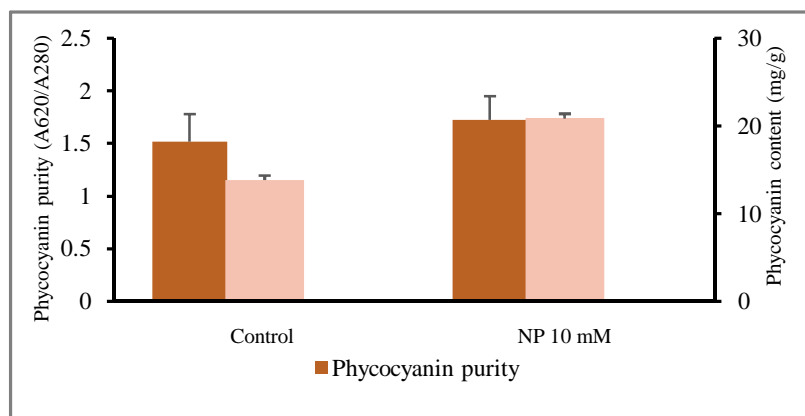
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ABSTRACT

Spirulina platensis is one of the microalgae that are often cultivated. The largest essential biopigment compound in *Spirulina platensis* is phycocyanin. Phycocyanin can function as an antioxidant that can prevent free radicals, cancer cell growth, increase immunity and stamina. Therefore, phycocyanin is a potential therapeutic agent to treat various diseases and maintain a healthy body. This research was conducted to see the effect of sodium pyruvate ($\text{CH}_3\text{COCO}_2\text{Na}$) concentration on growth rate and phycocyanin content of *Spirulina platensis*. The methods used in this study included microalgae growth as measured by cell density method with a wavelength of 680 nm, dry biomass weight using linearity regression formula, phycocyanin concentration and phycocyanin purity by measuring wavelengths of 620 nm and 280 nm. The results showed that the addition of sodium pyruvate concentration had a negative effect on the growth rate of microalgae, but it could increase the phycocyanin concentration and phycocyanin purity.

Graphical Abstract



Keywords: *Spirulina platensis*, Metabolic stress, Sodium Pyruvate, Growth rate, Phycocyanin concentration, Phycocyanin purity.