

ABSTRACT

THE PROFILE OF INORGANIC NITRATE AND INTRACELLULAR CRUDE PROTEIN ON *Nannochloropsis* sp. BIOMASS EXPONENTIAL PHASE

By

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Inorganic nitrate is one of the important sources of nutrients in the culture of *Nannochloropsis* sp. especially in exponential phase, and factor of fluctuations in cell density and intracellular crude protein content. The study aimed to analyze the effect of reduction inorganic nitrate up to 50% in Conwy culture media towards density and intracellular crude protein content *Nannochloropsis* sp. in exponential phase. The results showed that reduction of inorganic nitrate content can shorten exponential phase so that can accelerate harvest microalgae. Reduction of inorganic nitrate also has a negative side, which was a decrease of intracellular crude protein content and cell density *Nannochloropsis* sp. Deficiency of inorganic nitrate by 50% inclined to reduce 19,3% of P/Nt ratio and 3,26% of P/NO₃⁻ ratio.

Keywords: inorganic nitrate, exponential phase, intracellular crude protein, *Nannochloropsis* sp., cell density.