

**PROTEIN AND LIPID CONCENTRATION IN SEMI-  
MASS CULTURE OF LOCAL STRAIN *Euglena* sp.  
WITH 17 DAYS NITROGEN EXCESS TREATMENT**

By

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**ABSTRACT**

The release of Greenhouse Gas from conventional livestock feed necessitates a cheaper, more eco-friendly alternative. Microalgae had been seen as a promising solution due to their high nutrient content. The effect of nitrogen excess on their protein and lipid concentration was not documented until now and served as the aim of this research. This research could help offer insight on the effect of nitrogen excess on the protein and lipid content of *Euglena* sp. The local strain of *Euglena* sp., taken from Nogotirto Algae Park, was observed as a semi-mass scale of 50 L with three treatments of  $(\text{NH}_4)_2\text{SO}_4$  in three different concentrations. The results of the study showed that the treatment with the lowest nitrogen had the highest lipid concentration and productivity. The addition of nitrogen decreased protein concentration but the treatment did not have a significant effect on protein productivity.

**Keywords:**

*Euglena* sp., Concentration.  $(\text{NH}_4)_2\text{SO}_4$ , Productivity, Statistical analysis.