ABSTRACT

THE EFFECT OF SALINITY AND NITROGEN TO *Nannochloropsys* sp. CRUDE LIPID CONTENT

By

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The high content of lipid (fatty acid) in microalgae is needed in hatchery. Several researches have done to increase the lipid content of natural feed by manipulating their environmental conditions. The aim of research was know the effect of salinity and nitrogen source to crude lipid content of *Nannochloropsys* sp linearly. The research was done at Phytoplankton Laboratory of Main Centre for Marine Culture Development. The research consists of 4 treatments and was done in triplicate. Those are treatment A (salinity 30-31 ppt and nitrogen 100%), treatment B (salinity 30-31 ppt and nitrogen 50%), treatment C (salinity 34-35 ppt and nitrogen 100%), and treatment D (salinity 34-35 ppt and nitrogen 50%). The main parameters (cell density and the crude lipid content) were analyzed by Chi-square Fisher and the supporting parameter (culture medium’s water quality) was described initially. The result show that the highest average increase density of *Nannochloropsys* sp. (311.9%) reached in the higher salinity condition and 100% nitrogen concentration. The highest average increasing crude lipid of *Nannochloropsys* sp. (62.2%) reached in the higher salinity condition and 50% nitrogen concentration. Chi-square test showed that the treatments affected *Nannochloropsys*’s density. But in spite of the treatment, did not much affect to the *Nannochloropsys* sp. crude lipid content.

Key words: crude lipid, salinity, nitrogen, *Nannochloropsys* sp.