

ABSTRACT

THE EFFECT OF PHOTOPERIOD OF *Nitzschia* sp. CULTURE ON CRUDE LIPID CONTENT AND N P RATIO

By

Swarna Sri Novianti

Nitzschia sp. commonly use as feed for fish larvae and zooplankton, because of its high lipid content. The combination compound of orthophosphate (P) and nitrate (N) play an important role to form protoplasm's cell. The elements can act as a limiting factor for biological activity. Specific growth rate on *Nitzschia* sp. influenced by nutrient and photoperiod. The study aimed determined the effect of different photoperiod during culture *Nitzschia* sp. on the crude lipid content and N P ratio in culture medium. The research was conducted on March 2015 at the Laboratory of Aquaculture, Department of Aquaculture, Faculty of Agriculture, University of Lampung. The study consisted of three treatments, such as A (photoperiod 6T: 18G), B (photoperiod 12T: 12G) and C (photoperiod 18T: 6G). The main variables measured were cell density, crude lipid content and N P ratio in culture medium. The data analyzed by t-test ($\alpha=0,05$). The increasing of light period tent to decreasing of cell density of *Nitzschia* sp., but it has the different trend with crude lipid content and N P ratio in culture medium. Photoperiod had no effect on *Nitzschia* sp. cell density, crude lipid content and N P ratio in culture medium.

Keywords: photoperiod, cell density, crude lipid content, N P ratio, *Nitzschia* sp.