

**PENGARUH JENIS FITOPLANKTON DAN INTENSITAS CAHYA  
TERHADAP PENINGKATAN KADAR OKSIGEN DI AIR**

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**ABSTRAK**

Penelitian ini dilakukan untuk mengetahui pengaruh jenis fitoplankton dan intensitas cahaya terhadap peningkatan kadar oksigen terlarut di perairan. Penelitian dilakukan di Laboratorium Biologi Universitas Negeri Medan, Sumatera Utara untuk pengambilan data. Penelitian dilaksanakan pada bulan Mei 2017. Variabel penelitian yang digunakan ada dua yaitu, perlakuan dengan jenis fitoplankton dan perlakuan intensitas cahaya. Jenis fitoplankton yang digunakan adalah fitoplankton *Arthospira platensis*, *Chorella vulgaris*, dan *Diatom sp.*, sedangkan intensitas cahaya yang digunakan adalah 107 lux, 409 lux, dan 870 lux. Penelitian menggunakan Rancangan Acak Kelompok (RAK) dengan 4 kali pengulangan. Pengamatan terhadap kadar oksigen terlarut dilakukan setelah 7 hari menggunakan DO meter dan dilanjutkan dengan menghitung pertumbuhan jumlah fitoplankton dibawah mikroskop. Hasil penelitian menunjukkan bahwa tidak terdapat pengaruh kombinasi jenis fitoplankton dengan intensitas cahaya terhadap peningkatan kadar oksigen di air setelah 7 hari.

Kata kunci : Oksigen terlarut, Jenis fitoplankton, Intensitas cahaya.



**INFLUENCE OF PHYTOPLANKTON TYPES AND LIGHT INTENSITY  
ON THE INCREASING OF OXYGEN CONTENT IN WATERS.**

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**ABSTRACT**

This study was aim to know the influence of phytoplankton types and light intensity on the increase of dissolved oxygen in the waters. The research was conducted in Biology Laboratory State University of Medan, North Sumatera for data retrieval. The research was conducted in October 2016 - May 2017. The research variables used were two, that is the treatment with the phytoplankton type and the light intensity . Types of phytoplankton used were phytoplankton *Arthospira platensis*, *Chorella vulgaris*, and *Diatom sp.*, While light intensity used was 107 lux, 409 lux, and 870 lux. The study used Randomized Block Design with 4 repetitions. Observation of dissolved oxygen level was done after 7 days using DO meter and continued by counting growth of phytoplankton number under microscope. The results showed that there was not influence of combination phytoplankton types with light intensity to increase oxygen content in water after 7 days.

Keywords: Dissolved Oxygen, Type of phytoplankton, Light intensity.

