

Amalia Khofifah NPM 190351100062. Kandungan Klorofil-a pada *Nostoc commune* dari Habitat yang Berbeda. Dibawah bimbingan **Indah Wahyuni Abida, S.Pi., M.Si.**

ABSTRAK

Blue green algae (cyanobacteria) yakni *Nostoc commune* penghasil karotenoid terbesar, terdiri dari *astaxanthin*, *luthein*, *zeaxanttin*, dan *cryptoxanthin*. *Nostoc commune* menunjukkan peningkatan sifat antioksidan dengan meningkatnya kandungan asam lemak tak jenuh, lipid, karbohidrat, protein, klorofil-a. *Nostoc commune* dikenal dengan sebutan *star jelly* karena bentuknya yang seperti *jelly*, spesies ini di negara China dan Taiwan digunakan sebagai bahan olahan makanan untuk kesehatan. Tujuan penelitian ini adalah: 1) Mengetahui kondisi lingkungan *Nostoc commune* pada habitat yang berbeda, 2) Mengetahui kandungan klorofil *Nostoc commune* pada habitat yang berbeda, 3) Mengetahui hubungan faktor lingkungan dengan kandungan klorofil *Nostoc commune* pada habitat yang berbeda. Penelitian ini dilakukan pada bulan September-November, metode yang digunakan *purposive sampling* di wilayah Pulau Madura, diantaranya berada di area persawahan Gilianyar Kamal Kabupaten Bangkalan, perairan sungai Kabupaten Pamekasan dan tandon air kolam lele Desa Durbuk Kecamatan Pademawu Kabupaten Pamekasan. Sampel yang telah diambil dari lapang akan dilakukan identifikasi makroskopis, analisis kualitas air, dan analisis kandungan klorofil *Nostoc commune* menggunakan metode spektrofotometri dengan perhitungan menurut Harbone (1973) dan APHA (1998) di Laboratorium Terpadu Laboratorium Lingkungan dan Laboratorium Oseanografi Fakultas Pertanian Universitas Trunojoyo Madura. Hasil pengamatan kondisi lingkungan sungai menunjukkan aliran limbah industri tekstil memasuki sungai, maka menjadikan *Nostoc commune* mudah sobek dan hancur. Kandungan klorofil-a tertinggi di seluruh habitat diperoleh sebesar 26,125 mg/L perhitungan rumus Harborne (1973) dan rumus APHA (1998) sebesar 26,238 mg/L, terdapat pada lokasi sungai titik 2 dengan pengulangan minggu ke 2. Presentase hubungan intensitas cahaya dengan kandungan klorofil-a hasil perhitungan Harborne (1973) pada habitat berbeda, *Nostoc commune* dengan regresi linier sederhana, hasil R^2 0,5227, yang diduga intensitas cahaya mempengaruhi 52 % keberadaan klorofil-a dan sisanya dipengaruhi faktor lain.

Kata kunci : *Kualitas air, Klorofil-a, Nostoc commune, Star Jelly.*

Amalia Khofifah NPM 190351100062. *Chlorophyll-a Content In Nostoc commune from Different Habitats*. Under the guidance of **Indah Wahyuni Abida, S.Pi., M.Si.**

ABSTRACT

Blue green algae (cyanobacteria) is the largest carotenoid-producing *Nostoc commune*, consisting of astaxanthin, lutein, zeaxanthin, and cryptoxanthin. *Nostoc commune* showed increased antioxidant properties with increased content of unsaturated fatty acids, lipids, carbohydrates, proteins, chlorophyll-a. *Nostoc commune* is known as star jelly because of its jelly-like shape, this species is used in China and Taiwan as a processed food ingredient for health. The aims of this study were: 1) to determine the environmental conditions of the *Nostoc commune* in different habitats, 2) to determine the chlorophyll content of the *Nostoc commune* in different habitats, 3) to determine the relationship between environmental factors and the chlorophyll content of the *Nostoc commune* in different habitats. This research was conducted in September-November, the method used was purposive sampling in the Madura Island region, including in the Giliyanar Kamal rice field area, Bangkalan Regency, Pamekasan Regency river waters and catfish pond water reservoirs in Durbuk Village, Pademawu District, Pamekasan Regency. Samples taken from the field will be subjected to macroscopic identification, analysis of water quality, and analysis of chlorophyll content of the *Nostoc commune* using the spectrophotometric method with calculations according to Harbone (1973) and APHA (1998) at the Integrated Laboratory of the Environmental Laboratory and Oceanography Laboratory, Faculty of Agriculture, University of Trunojoyo, Madura. Observations on the environmental conditions of the river show that the flow of textile industry waste enters the river, making *Nostoc commune* easily torn and destroyed. The highest chlorophyll-a content in all habitats was obtained at 26.125 mg/L from the calculation of the Harborne formula (1973) and the APHA formula (1998) of 26.238 mg/L, found at the location of the river point 2 with repetition week 2. The percentage relationship between light intensity and chlorophyll content -a calculated by Harborne (1973) in different habitats, *Nostoc commune* with simple linear regression, R² result 0.5227, which is suspected to be light intensity affects 52% of the presence of chlorophyll-a and the rest is influenced by other factors.

Keywords: *Water quality, Chlorophyll-a, Nostoc commune, Star Jelly.*