Pengaruh Pencahayaan Siklus harian terhadap Produksi Biomassa Chlorella Vulgaris Buitenzorg dalam Fotobioreaktor Kolom Gelembung

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Abstrak

Green Algae Chlorella vulgaris Buitenzorg green have a potencies such as their ability in CO2 fixation and it 's protein and essensial contents observation for supplement food purpose. Chlorella vulgaris Buitenzorg's cultivation results using daily cycle illumination showed that the final biomass production and CO; fixation rate are lower if compared to continuous illumination treatment. The comparisons between these two treatments are 54.0% for CTR (carbon dioxide transferred rate) value and 50.0% for qc-0; (microbial carbon dioxide fixation ability) value as parameter that shown it 's CO2 fixation ability and 79.0% for biomass production. Both of treatments was done in 1.0 L bubble column fotobioreactor content 600 mL Beneck medium that was sparged by 3.6 m/h superficial velocity of air consisting of 10. 0% CO; as carbon source at 29. 0°C and l.0 atm. Additionally, the consumption energy for biomass formation (EX) in daily cycle illumination, was 70.0% larger than continuous illumination treatment.