

Pengaruh variasi suhu terhadap berat biomassa nostoc (cyanobacteria) HS-5 dan HS-20 pada medium BBM = The effect of temperature variation to biomass weight of nostoc (cyanobacteria) HS-5 and HS-20 in BBM

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Abstrak

ABSTRAK

Penelitian bertujuan untuk mengetahui pengaruh variasi suhu terhadap pertumbuhan Nostoc HS-5 dan HS-20. Nostoc HS-5 yang digunakan berasal dari sumber air panas Ciseeng yang memiliki suhu habitat 30 mdash;43 C, sedangkan Nostoc HS-20 yang digunakan berasal dari sumber air panas Gunung Pancar yang memiliki suhu habitat 46 mdash;69 C. Penelitian dilakukan dengan menghitung berat biomassa dan kandungan klorofil pada hari ke-0, 1, 2, 3, 4, 7, 10, 14, 17, dan 21. Suhu yang digunakan adalah suhu 20 C, 35 C, dan 50 C. Medium yang digunakan adalah medium BBM dengan pH 6,6. Masing-masing perlakuan dilakukan dalam 4 kali ulangan. Analisis statistik menggunakan uji statistik non-parametrik uji Friedman =0,05 dan uji Spearman =0,01 . Berdasarkan data kualitatif, hasil penelitian menunjukkan terdapat perbedaan yang cukup nyata pada berat biomassa Nostoc HS-5 dan HS-20 pada suhu 20 C, 35 C dan 50 C. Rerata berat biomassa tertinggi terdapat pada biakan Nostoc HS-5 dan HS-20 yang diinkubasi pada suhu 35 C. Selain itu, tidak terlihat adanya korelasi antara berat biomassa dan kandungan klorofil Nostoc HS-5 dan HS-20.

ABSTRACT

The research aims to know the effect of variation temperature to the growth of Nostoc HS 5 and HS 20. Nostoc HS 5 isolated from Ciseeng hot spring which has habitat temperature range of 30 mdash 43 C, and Nostoc HS 20 isolated from Pancar Mountain hot spring which has habitat temperature range of 46 mdash 69 C. The research was done by measuring biomass weight and chlorophyll content on day 1, 2, 3, 4, 7, 10, 14, 17, 21. The temperatures which used were 20 C, 35 C, and 50 C. The growth medium which used was BBM with pH 6,6. Each treatments was made in four replications. Non parametric statistical analysis using the Friedman test 0,05 and Spearman test 0,01 . Based on qualitative, the result showed there were significant differences on the biomass weight of Nostoc HS 5 and HS 20 grown at temperature of 20 C, 35 C and 50 C. The highest amount of average biomass weight for Nostoc HS 5 and HS 20 was showed in 35 C. Beside that, there was no correlation between biomass weight and chlorophyll content of Nostoc HS 5 and HS 20.