Perbandingan kandungan protein tiga strain nostoc yang ditumbuhkan pada medium BG11 N-free dengan tiga variasi natrium karbonat (Na2CO3) = Protein content comparison of the three nostoc strain that were grown on BG11 N-free medium with three natrium carbonate (Na2CO3) variation / Risda Nasuha Bachri

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Abstrak

ABSTRAK
Kandungan protein yang dimiliki oleh Nostoc berpotensi dijadikan sumber bahan makanan alternatif. Protein tersebut dapat diperoleh secara maksimal apabila strain, medium, metode penghancuran sel, dan metode pengukuran kadar protein yang digunakan tepat. Strain yang digunakan dalam penelitian adalah strain CPG8, CPG24, dan GIA13a. Terdapat tiga macam medium yang digunakan, yaitu medium kontrol BG11 N-free, medium A, dan medium B. Ketiga medium tersebut memiliki kandungan Na2CO3 yang bervariasi. Kandungan Na2CO3 dalam medium kontrol adalah 0,02 gr/L, kandungan Na2CO3 dalam medium A adalah 0,04 gr/L, dan tidak terdapat Na2CO3 dalam medium B. Variasi kandungan Na2CO3 tersebut bertujuan untuk mengurangi selubung musilage. Selubung musilage dapat menghalangi proses penghancuran sel oleh sonikator. Akibatnya, jumlah protein yang keluar dari dalam sel tidak maksimal. Filtrat hasil sonikasi diukur kadar proteinnya menggunakan metode Bradford. Hasil penelitian menunjukkan bahwa kadar protein Nostoc strain CPG8, CPG24, dan GIA13a yang ditumbuhkan pada ketiga medium berbeda-beda.
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ABSTRACT
Protein content owned by Nostoc potentially is used as alternative food sources. The protein can be maximum obtained if strain, medium, cell destruction method, and protein level measuring method is used appropriately. Strains that being used in the study is CPG8, CPG24, and GIA13a strain. There are three kinds of medium, namely the control medium BG11 N-free, medium treatment A and medium treatment B. Those medium contains vary Na2CO3 level. Na2CO3 level in control medium is 0,02 gr/L, Na2CO3 level in medium treatment A is 0,04 gr/L, and there is no Na2CO3 in medium treatment B. Variation content of Na2CO3 aims to reduce mucilage sheath. Mucilage sheath can hinder the process of cell destruction by sonicator. As a result, the amount of protein out of the cell was not optimal. The filtrate?s protein level from sonication is measured using Bradford method. The results showed that the protein content of CPG8, CPG24, and GIA13a strain that were grown in three medium is vary.