

탄소원과 질소원의 농도비에 따른 *Thraustochytrium aureum* (ATCC 34304)의 성장 특성 변화 및 DHA 생산량의 변화

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Abstract

The effect of the initial concentration ratios of carbon source to nitrogen source in the artificial sea-water media on the growth characteristics of *Thraustochytrium aureum* (ATCC 34304) were investigated. The cultivation media were made by the combination of carbon source, 5 to 25 g/L, and nitrogen source, 0.5 to 20 g/L.

The yield of biomass on glucose, $Y_{X/S}$, decreased according to the increase of the ratio of C to N. The sugar conversion ratio was over 90% in the range of C to N ratio, from 0.625 to 3.125. However, the sugar conversion ratio reduce down below 50% when the nitrogen source concentration was over 16 g/L. DHA content in the lipid decreased very slowly according to the increase of the C to N ratio. The highest amount of biomass, lipid and DHA were 8.653, 1.256 and 0.532 g/L respectively.

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