

## Production of Docosahexaenoic Acid in a Culture by *Thraustochytrium aureum* BK1 using Natural Sea Water Medium

Sang-Kyu Song<sup>1</sup>, Heui-Yun Kang<sup>2</sup> and Byung-Ki Hur<sup>1\*</sup>

<sup>1</sup>Department of Biological Engineering, Inha University, Inchoen 402-751, Korea.

<sup>2</sup>Institute of Biotechnological Industry, Inha University, Incheon, 402-751, Korea

TEL: +82-32-860-7512, FAX: +82-32-872-4046

The optimum culture condition of *Thraustochytrium aureum* BK1 was investigated for the industrial production of docosahexaenoic acid(DHA, C22:6, n-3). The aim of this work is to produce DHA using natural sea water(NSW) medium. NSW being used only, dry cell weight(DCW) and DHA/total fatty acid(TFA) were 0.55 g/L and 30%, respectively at the stationary phase. Adding N - source(yeast extract : 1 g/L, peptone : 1 g/L) and vitamin(Thiamine HCl  $0.1 \times 10^{-4}$  g/L, Vitamin B<sub>12</sub>  $1.0 \times 10^{-6}$  g/L, aminobenzoate  $2.0 \times 10^{-5}$  g/L, cyanobalamin  $4.0 \times 10^{-6}$  g/L, calcium pantothenate  $1.0 \times 10^{-5}$  g/L), however, DCW and DHA/TFA were 3.1 g/L and 45% respectively at the stationary phase. In case that the initial glucose 10 g/L, agitation speed 200 rpm, culture temperature 24°C, working volume 3 L in the 5 L fermenter. Dew, Lipid/DCW and DHA/TFA were 3.5 g/L, 20% and 40% respectively after 3 days of cultivation.

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