

The Efficient Use of Carbondioxide for biofuel production

김보람, 김동표^{1,†}

POSTECH; ¹Dept. of Chemical engineering, POSTECH

(dpkim@postech.ac.kr[†])

Conversion of lipid from algae into fuel play important role in biomass industry. However, at the current levels it needs to cut costs for commercialization. There are many approach to reduce costs of production such as strain selection, increase cell growth rate, lipid secrete and increase harvesting efficiency. We used high concentration carbon dioxide to increase cell growth rate. Actually, under the stress conditions many microalgae have been known to increase the formation and accumulation of neutral lipid (20~50%DCW) through changing their lipid biosynthetic pathways. We assumed microalgae can be stressful by high concentration of carbon dioxide. We tried cultivation of Chlamydomonas reinhardtii in high concentration carbon dioxide condition and analyzed amount of lipid accumulation.