

### Wastewater-Born Microalgae Cultivation on BG-11 Medium: Lipid Productivity and Bacteria Existence

Joseph christian utomo, \*  
POSTECH  
(jimpark@postech.ac.kr\*)

Microalgae are considered as one of the most promising biofuels source (Mata, 2010). However, industrial-scale microalgae production is not practical yet. One of the problems is contamination by bacteria in open-culture systems (Brennan, 2010). This study focused on screening of high lipid productivity microalgae and identification of their co-operating bacteria in the culture. Several unialgal but xenic microalgae cultures were isolated from wastewater treatment plant and cultivated on BG-11. Highest lipid content and productivity were observed from *Scenedemus acuminatus* with 33% of biomass and 8.5 mg L<sup>-1</sup>day<sup>-1</sup>, respectively. Oleic acid was the most dominant fatty acid methyl ester compounds in almost every cultivated culture. Microbial community on final cultivation was also examined using Denaturant Gradient Gel Electrophoresis (DGGE) and shows several bacteria species existed in the culture.