

Qualification and quantification of heptadecane in *Synechocystis sp.* pcc 6803 using various extracting methods

박원근, 김현수<sup>1</sup>, 양지원<sup>†</sup>  
한국과학기술원; <sup>1</sup>중원대학교  
(jiwonyang@kaist.ac.kr<sup>†</sup>)

As climate change and energy crisis have threatened humankind, many researchers tried to do their best to solve these problems. One possible solution is the biofuel from microalgae which is alternative, and eternal energy. Microalgae can use infinite solar energy to make lipid based fuel and the other forms of fuel, and also value added products without any carbon dioxide production and environmental weakness. Among the many kinds of fuel product from microalgae, extracted alkanes were highly spotlighted because they can be directly used as alternative fuels without additional transformation and modification. In addition, the fact that alkanes are the major constituents of fossil fuel (up to 60%), and gasoline (C4~C12), diesel (C8~C21) and jet fuel (C5~C15) make the alkane production from microalgae ideal form of biofuel production. In this study, we tested the various extraction solvent to extract alkanes from *Synechocystis sp.* PCC 6803 cells and qualify and quantify heptadecane contents using HP-INNOWax column which is used in FAME analysis.

This work was supported by the Advanced Biomass R&D Center (ABC) of Korea Grant funded by the Ministry of Education, Science and Technology (ABC-2010-0029728)