

***In Situ* Gas-stripping of Mixed Fuel Alcohols from *Clostridium acetobutylicum* Fermentation**

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Clostridium acetobutylicum BKM19 is a hyper-alcohol-producing derivative of *C. acetobutylicum* PJC4BK, a buk knockout strain. In the present study, the plasmid pIPA3-Cm2, which comprises a synthetic acetone operon (*adc-ctfA-ctfB*) and a primary/secondary alcohol dehydrogenase from *C. beijerinckii* NRRL B-593, was introduced to *C. acetobutylicum* BKM19 to establish an IBE-producing strain. This strain was used in fed-batch fermentation experiments with in situ removal of solvents. Consistent with a previous study using *C. beijerinckii*, fed-batch fermentation could not be prolonged without appropriate supplementation of nutrients other than glucose. By feeding ammonia and other nutrients, the fed-batch fermentation had been operated for more than 200 hours and ca. 600 g/L of glucose was completely consumed. [This work was supported by the Advanced Biomass R&D Center(ABC) of Global Frontier Project funded by the Ministry of Education, Science and Technology. Further support by GS Caltex, BioFuelChem, EEWS program of KAIST, and the World Class University program (R32-2008-000-10142-0) of the MEST are appreciated.].