Production of butanol from glycerol by using *Clostridium pasteurianum* MBEL_GLY2

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In the present work, studies related to butanol production by glycerol fermentation were undertaken. Chemical mutagenesis of *C. pasteurianum* cells were performed to obtain a hyper butanol producing mutant strain MBEL_GLY2. Corresponding average butanol yield was found to be 0.30 g/g. The maximum butanol productivity obtained during present study was found to be 0.43 g/l/h. Acetone, acetate and butyrate were not detected in the fermentation broth while ethanol was produced in trace quantities. PDO was never produced as major product. An average of 27.4 g/l total solvent (Butanol, Ethanol and PDO) was produced under optimized conditions. A maximum butanol selectivity of 0.65 g butanol per g of total solvent was obtained. [This work was supported by the Advanced Biomass R&D Center of Korea (ABC-2010-0029799) through the Global Frontier Research Program of the Ministry of Education, Science and Technology (MEST). 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.]