Increased solvent production by Clostridium beijerinckii via extracting solvent from fermentation broth

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Clostridium beijerinckii NCIMB 8052 is renowned for its ability of producing acetone, butanol, and ethanol. Since butanol itself which is produced during fermentation has a toxic effect on solvent producing clostridia, it acts as an inhibitor in solvent production. Therefore, there have been many efforts to remove the product from fermentation broth as well as improve butanol tolerance of clostridia. In this study, we have employed 'in situ product removal' (ISPR) in solvent fermentation using a polymeric resin. The ISPR has resulted in increased solvent titers. The detailed results will be presented in this presentation.