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Ming Yang, Suvi Kuittinen, Jouko Vepsäläinen, Junhua Zhang, Ari Pappinen

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Enhanced acetone-butanol-ethanol production from lignocellulosic hydrolysates by using starchy slurry as supplement

Ming Yang[a,b], Suvi Kuittinen[b], Jouko Vepsäläinen[c], Junhua Zhang[a,*] , Ari Pappinen[b]

[a]College of Forestry, Northwest A&F University, 3 Taicheng Road, 712100 Yangling, China

[b]School of Forest Sciences, University of Eastern Finland, P.O. Box 111, FI80101 Joensuu, Finland

[c]School of Pharmacy,University of Eastern Finland, P.O. Box 1627, FI70211 Kuopio, Finland

Abstract:

This study aims to improve acetone-butanol-ethanol production from the hydrolysates of lignocellulosic material by supplementing starchy slurry as nutrients. In the fermentations of glucose, xylose and the hydrolysates of *Salix schwerinii*, the normal supplements such as buffer, minerals, and vitamins solutions were replaced with the barley starchy slurry. The ABE production was increased from 0.86 to 14.7 g/L by supplementation of starchy slurry in the fermentation of xylose and the utilization of xylose increased from 29% to 81%. In the fermentations of hemicellulosic and enzymatic hydrolysates from *S. schwerinii*, the ABE yields were increased from 0 and 0.26 to 0.35 and 0.33 g/g sugars, respectively. The results suggested that the starchy slurry supplied the essential nutrients for ABE fermentation. The starchy slurry as

* Corresponding author: Tel. +86 13892883052.

E-mail address: junhuazhang@nwsuaf.edu.cn