

Accepted Manuscript

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PII: S0960-8524(17)30908-2
DOI: <http://dx.doi.org/10.1016/j.biortech.2017.06.021>
Reference: BITE 18258

To appear in: *Bioresource Technology*

Received Date: 15 April 2017
Revised Date: 3 June 2017
Accepted Date: 5 June 2017

Please cite this article as: Yang, M., Kuittinen, S., Vepsäläinen, J., Zhang, J., Pappinen, A., Enhanced acetone-butanol-ethanol production from lignocellulosic hydrolysates by using starchy slurry as supplement, *Bioresource Technology* (2017), doi: <http://dx.doi.org/10.1016/j.biortech.2017.06.021>

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

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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

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