SUPPLEMENTARY

Influence of hemicellulose and lignin on the effect of drying of cellulose and the subsequent enzymatic hydrolysis

Tian-Jie Ao [a, b, e], Jie Wu [b, c*], Richard Chandra [b, d*], Huai-Yu Zhang [c], Yu-Feng Yuan [b], Yi-Ping Luo [a], Dong Li [a], Chen-Guang Liu [e], Scott Renneckar [c], Jack Saddler [b]

[a] Chengdu Institute of Biology, Chinese Academy of Sciences, Chengdu 610213, PR China

[b] Forest Product Biotechnology/Bioenergy Group, Department of Wood Science, Faculty of Forestry, University of British Columbia, 2424 Main Mall, Vancouver, BC, V6T 1Z4, Canada

[c] Advanced Renewable Materials Lab, Department of Wood Science, University of British Columbia, 2424 main mall, Vancouver, BC, V6T 1Z4, Canada

[d] Trinity Western University, 22500 University Dr, Langley, BC, V2Y 1Y1, Canada

[e] State Key Laboratory of Microbial Metabolism, Joint International Research Laboratory of Metabolic & Developmental Sciences, School of Life Sciences and Biotechnology, Shanghai Jiao Tong University, Shanghai 200240, China

*Corresponding author

E-mails: adam.wu@ubc.ca; richard.chandra@twu.ca;

Table S1. The characteristics of EMAL lignin from starting and pretreated corn stover using GPC and NMR

	Molecular weight from GPC			**Functional group from 31P NMR (mmol/g)**				
	Mn (kDa)	**Mw (kDa)**	**Đ**	**Aliphatic OH**	**Total Phenolic OH**	**Condensed Phenolic**	**Non-condensed Phenolic**	**Carboxylic acid**
EMAL from starting corn stover	4.9	8.2	1.7	4.6	3.0	0.5	2.5	0.2
EMAL from pretreated corn stover	2.5	7.2	2.9	3.1	2.9	0.8	2.1	0.3
Softwood Kraft lignin[1]	1.4	12.7	9	1.4	2.1	1.1	1.0	0.3

References

[1] J. Liu, J. Wu, Y. Lu, H. Zhang, Q. Hua, R. Bi, O. Rojas, S. Renneckar, S. Fan, Z. Xiao and J. Saddler, Bioresour. Technol., 2023, 367, 128276.