

Supplementary Information

Freeze-thaw repetition as an auxiliary method to promote efficient separation of hemicellulose from poplar

Huixia Zhu^a, Qianli Ma^{*b,c}, Jie Sheng^a, Rendang Yang^{*a}

^a State Key Laboratory of Pulp and Paper Engineering, South China University of Technology,

Guangzhou, CN 510640, China; E-mail: shanyue5230@126.com.

^b International Centre for Bamboo and Rattan, Beijing 100102, China.

^c National Forestry and Grassland Administration/Beijing Co-build Key Laboratory of Bamboo and Rattan Science

& Technology, Beijing 100102, China.

* Correspondence: rendangyang@163.com; maql@icbr.ac.cn

Table S1 Polymeric and monomeric carbohydrates distribution of hydrolysate

Samples	TSE (mg/g)	TMsE (mg/g)	PMs (%)	TPsE (mg/g)	PPs (%)
F _{AT}	64.93±2.02 ^d	2.78±0.16 ^e	4.30±0.040 ^f	62.13±2.89 ^c	95.70±0.40 ^a
F ₁	69.35±1.95 ^c	3.34±0.17 ^d	4.81±0.10 ^f	66.07±2.04 ^b	95.19±0.09 ^a
F ₂	75.92±0.69 ^b	4.96±0.24 ^c	6.54±0.37 ^e	70.89±0.91 ^a	93.46±0.37 ^b
F ₃	78.69±1.63 ^b	5.87±0.20 ^b	7.47±0.41 ^d	72.77±1.83 ^a	92.53±0.41 ^c
F ₄	85.88±1.53 ^a	14.97±1.00 ^a	17.51±1.48 ^c	70.91±2.53 ^a	82.47±1.48 ^d
F ₅	71.26±2.23 ^c	15.04±1.14 ^a	21.08±1.08 ^b	56.23±2.52 ^d	78.92±1.08 ^e
F ₆	54.10±1.41 ^e	14.85±1.00 ^a	27.40±1.18 ^a	39.27±0.54 ^e	72.60±1.18 ^f

*TSE: Total saccharide extraction;

TMsE: Total monosaccharide extraction;

TPsE: Total polysaccharide extraction;

PMs(%): Proportion of monosaccharides (relative to total extracted hemicellulose);

PPs(%): Proportion of polysaccharides (relative to total extracted hemicellulose);

Different superscripts in the same column indicate the significant difference ($p < 0.05$), same superscripts in the same column indicate

no significant difference ($p > 0.05$).