

Article

# Alkaline extraction, structural characterization, and bioactivities of novel (1→6)- $\beta$ -D-glucan from *Lentinus edodes*

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**Table S1. The results of L<sub>9</sub> (3<sup>3</sup>) orthogonal test**

Orthogonal Experiment number	Factor			Extraction yield(%)
	Temperature A (°C)	Time B (h)	Concentration C (mol/L)	
1	0	0.5	0.1	3.59
2	0	1	0.25	6.11
3	0	2	0.5	9.84
4	20	0.5	0.25	5.98
5	20	1	0.5	9.50
6	20	2	0.1	5.28
7	60	0.5	0.5	8.95
8	60	1	0.1	7.11
9	60	2	0.25	7.73
K <sub>1</sub>	6.513	6.173	5.327	6.940
K <sub>2</sub>	6.920	7.573	6.607	6.780
K <sub>3</sub>	7.930	7.617	9.430	7.643
R	1.417	1.444	4.103	

**Table S2. Orthogonal extraction design of *lentinus edodes* polysaccharides**

Level	Factor		
	Temperature A (°C)	Time B (h)	Concentration C (mol/L)
1	0	0.5	0.1
2	20	1	0.25
3	60	2	0.5

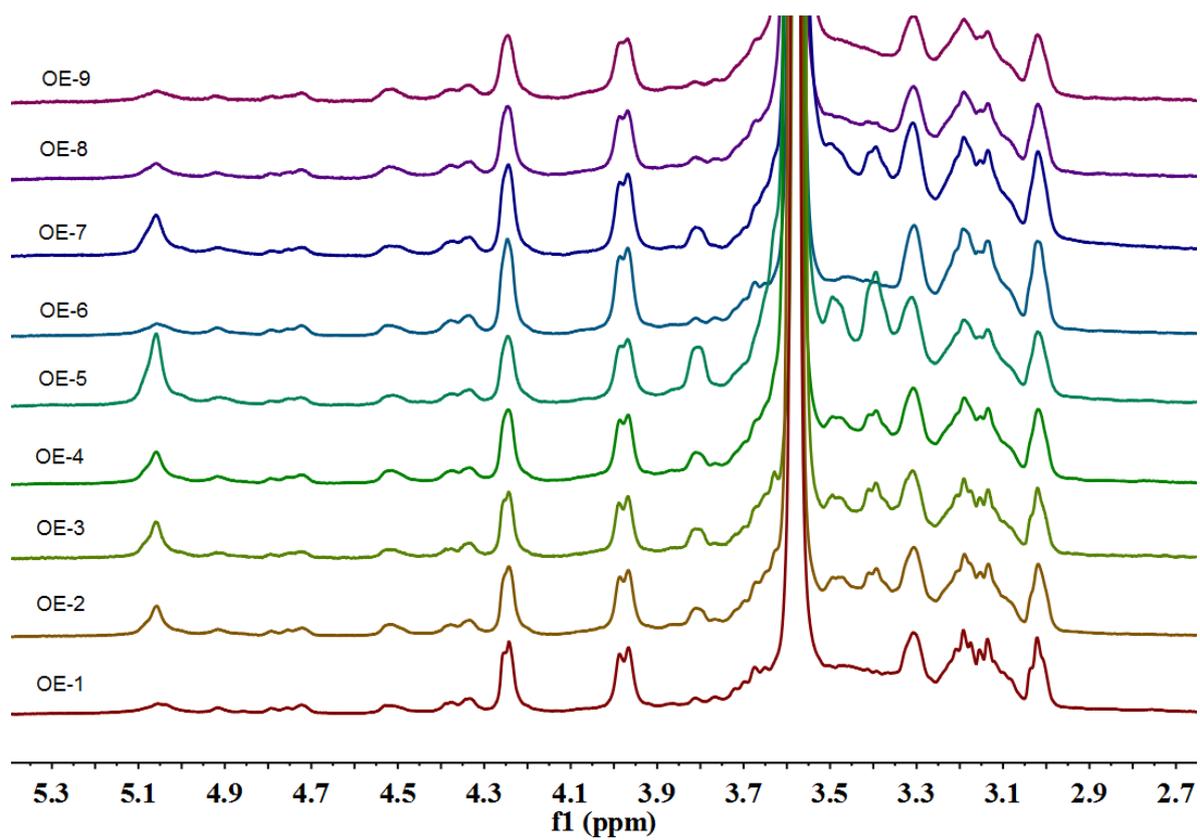


Figure S1. The <sup>1</sup>H-NMR spectrum of OEs in DMSO/D<sub>2</sub>O (6:1 v/v) at 60°C.

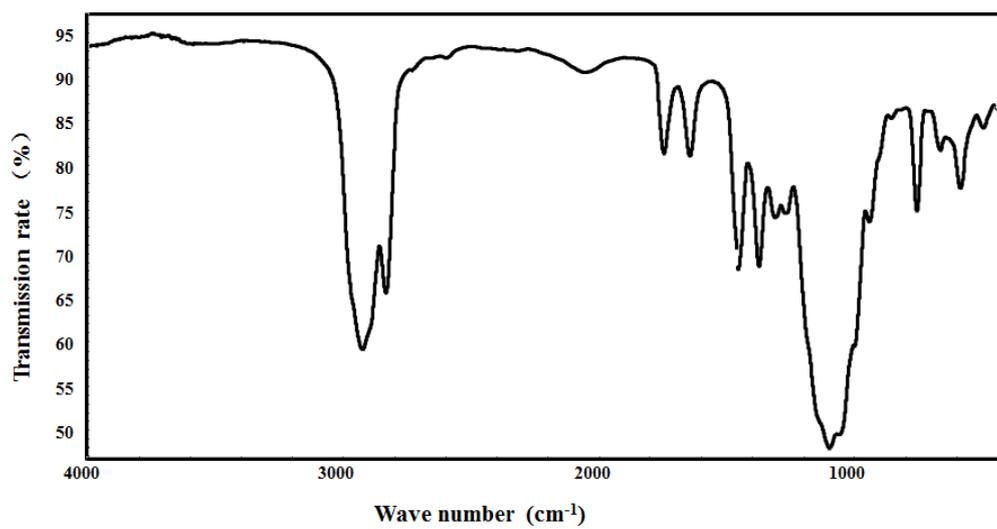


Figure S2. FT-IR spectrum of LeP-N2 after full methylation.

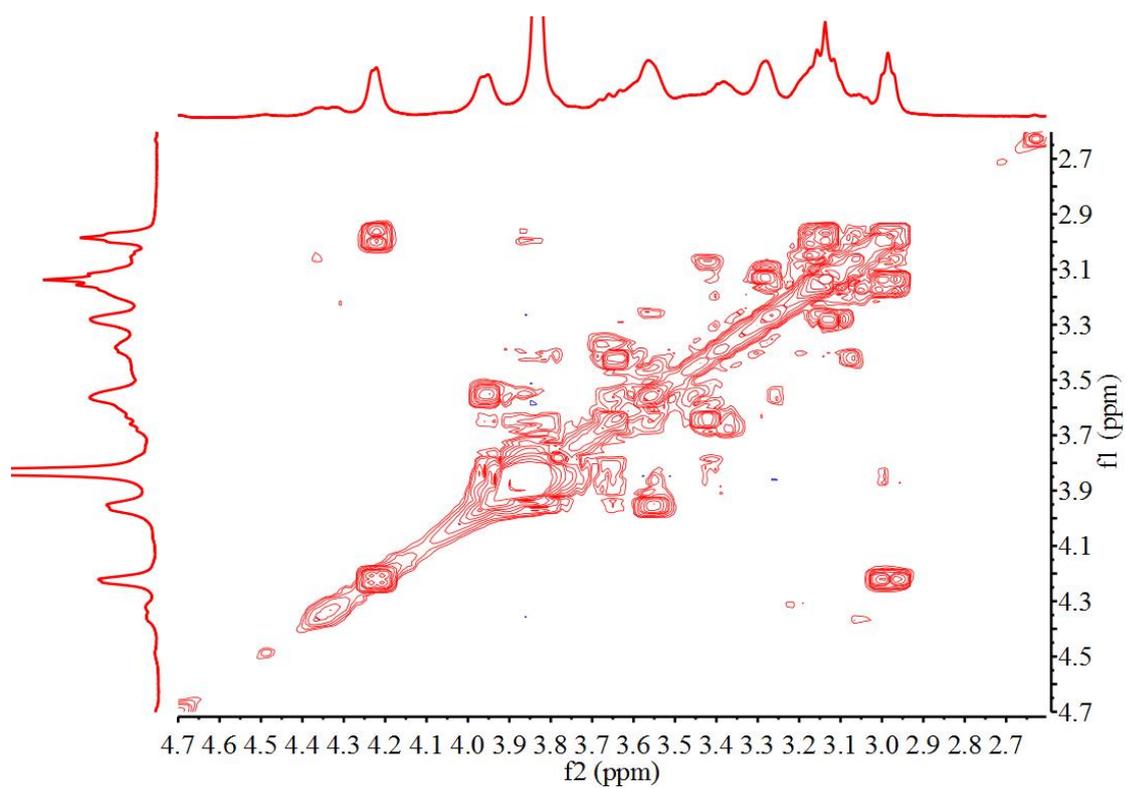


Figure S3. The  $^1\text{H}$ - $^1\text{H}$  COSY spectrum of LeP-N2