

Supplementary Information

Table S1. Assignments of the FT-IR spectra of the lignin samples.

Assignments	Wavenumbers (cm ⁻¹)
O–H stretch	3401
C–H stretch in methyl and methylene groups	2939
C=O stretch in unconjugated ketones, carbonyl and in ester groups (frequently of carbohydrate origin)	1705
C=O stretch; in conjugated <i>p</i> -substituted aryl ketones	1655
aromatic skeletal vibrations; S > G	1593
C-H deformations; asym. in –CH ₃ and –CH ₂ –	1504
Aromatic skeletal vibrations combined with C-H in-plane deform	1423
Aliphatic C-H stretch in CH ₃ , not in OMe; phen.OH	1362
condensed S and G rings (substituted in one of the positions in the ring)	1327
G ring plus C=O stretch	1261
Typical for HGS lignins; C=O in ester groups (conjugated)	1161
Aromatic C-H in-plane deformation	1122
Aromatic C-H in-plane deformation, G > S; plus C-O deform, in primary alcohols; plus C=O stretch (unconjugated)	1030
C-H out-of-plane in positions 2, 5, and 6 of G units	833

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