

## Supporting Information

Associative behavior of lignosulphonates in moderately concentrated water, water-salt and water-alcoholic media

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## FTIR spectra of lignosulfonates.

The **FTIR spectra** of the LS samples were recorded on an FTIR Spectrometr B-Rad FTS 175 in the range of 400–5000 cm<sup>-1</sup> with a spectral resolution of 0.5 cm<sup>-1</sup> and an absolute error of  $\pm 0.1$  cm<sup>-1</sup>.

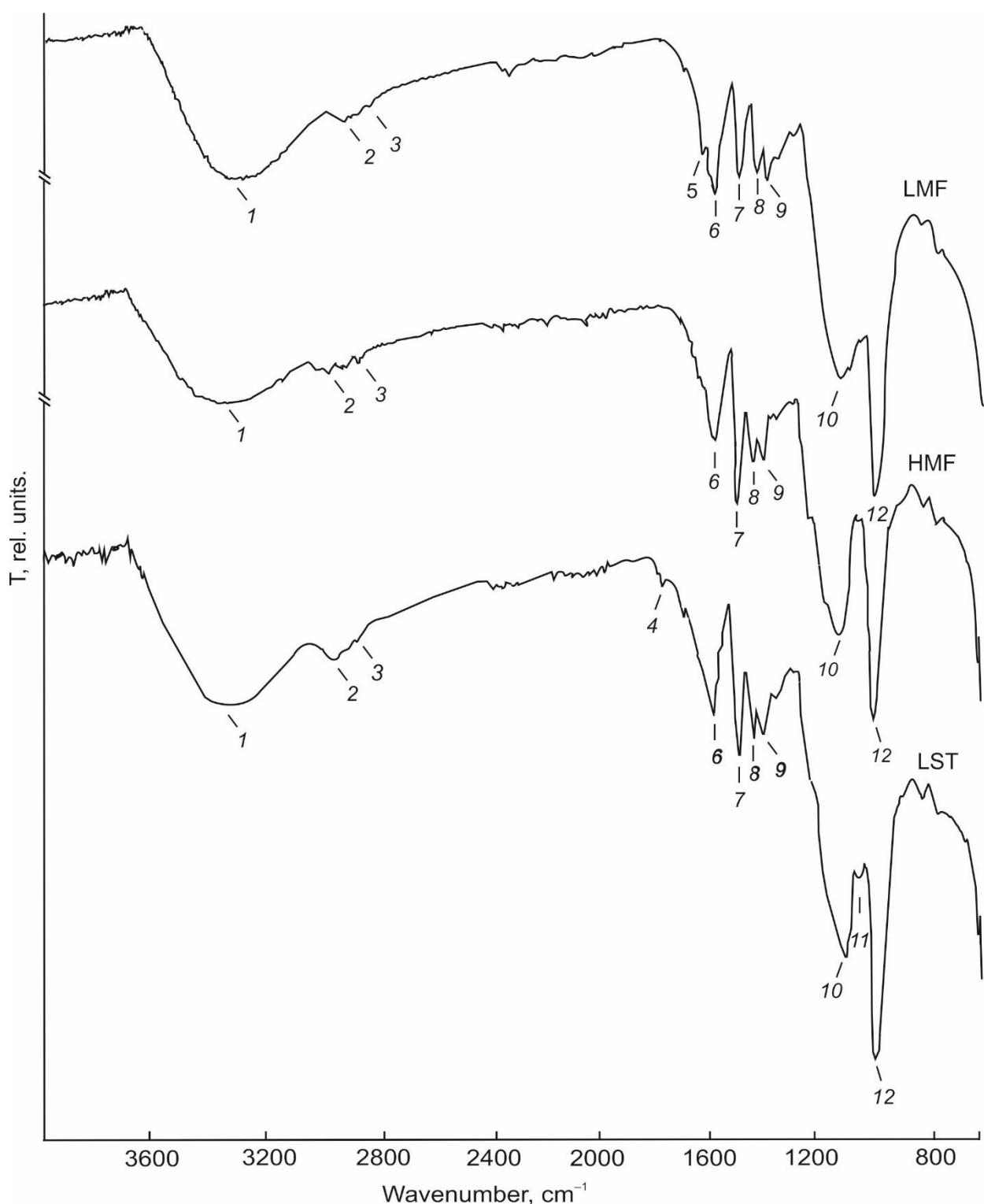


Figure S1. FTIR spectra of different lignosulfonates.

**Table S1. FTIR spectral data for HMF, LMF and LST samples.**

№ (Peak)	$\nu$ , cm <sup>-1</sup>		Assignment	Sample		
	Guaiacyl lignin (G-units)	Guaiacyl- syringyl lignin (S- units)		HMF	LMF	LST
1	3425-3400	3450-3400	Stretching vibrations of OH groups (involved into a hydrogen bonding)	3400-3200	3472-3200	3475-3241
2	2920	2942	Stretching vibrations of C-H bond in methyl and methylene groups	2940	2960	2940
3	2875-2850	2880	- // -	2880	2880	2850
4	1771	-	Aromatic acetoxy group	-	1771	1771
5	1715	1715-1710	Stretching vibrations of carbonyl groups of non-conjugated ketones and carboxyl groups	-	1715	-
6	1605	1595	Skeletal vibrations of the aromatic ring	1596	1596	1595
7	1515-1510	1505	- // -	1500	1507	1507
8	1460-1470	1470-1460	Bending vibrations of the C-H bonds (asymmetric)	1460	1456	1455
9	1430	1425	Skeletal vibrations of the aromatic ring	1419	1419	1418
10	1140	1145 (плечо)	In-plane bending vibrations of the C-H bond in the guaiacyl ring	1140	1134	1139
11	1085	1085	Bending vibrations of the C-O bond in secondary alcohols and aliphatic ethers	-	1079	1083
12	1035	1030	In-plane bending vibrations of the C-H bonds in the aromatic ring of the guaiacyl type and bending vibrations of the C-O bond in the primary alcohols	1020	1020	1020
13	855	860 (sh)	Out-of-plane bending vibrations of the C-H bonds in the aromatic ring	859	863	859
14	815	835				
15	750-770	750-770				
16	620		Sulfonate groups	665	668	668