RSC advances

Sequential solvent fractionation of lignin for selective production of monoaromatics by Ru catalyzed ethanolysis

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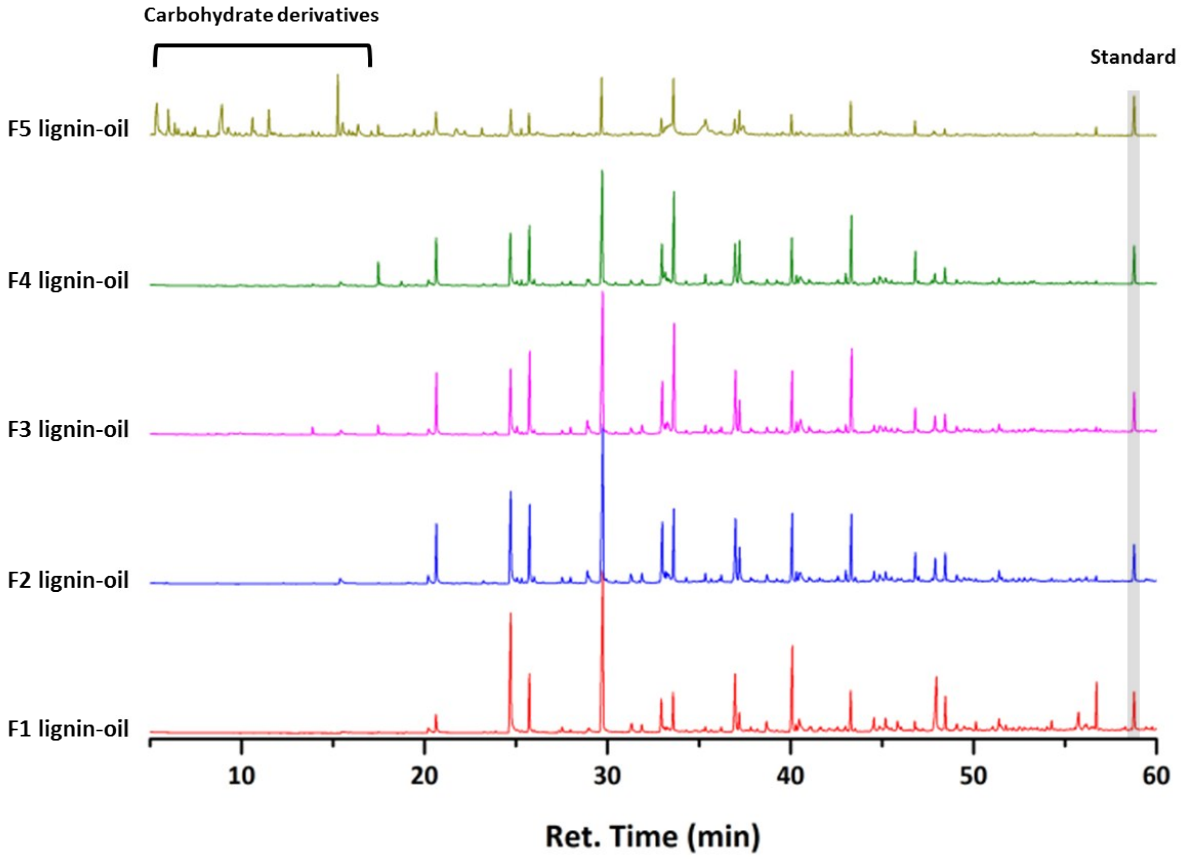

Figure S1. GC-FID chromatogram of lignin-oil derived from different lignin fraction

Table S1. GC/MS detectable monoaromatic compounds in lignin-oils

Peak No.	Compounds	Type	Yield (mg/g of lignin)					
			SL	F1	F2	F3	F4	F5
1	*p*-cresol	C1C6	1.4	1.2	1.4	1.0	0.9	-
2	Guaiacol	C6	5.9	2.3	5.9	5.4	3.2	3.0
3	4-ethylphenol	C2C6	9.1	15.2	9.6	6.1	4.5	3.2
4	3-methylguaiacol	C1C6	0.3	0.4	0.6	0.7	0.3	0.7
5	4-methylguaiacol	C1C6	7.1	6.1	7.6	7.7	4.3	2.0
6	2-ethyl-5-methylphenol	C2C6	0.5	0.3	0.6	0.6	0.3	-
7	3-methoxycathecol	C6	1.7	1.6	3.1	1.7	1.5	-
8	4-ethylguaiacol	C2C6	13.1	17.6	15.3	12.5	8.2	4.0
9	4-vinylguaiacol	C2C6	0.9	1.1	0.8	0.6	0.3	-
10	4-ethyl-1,2-dimethoxybenzene	C2C6	0.6	0.6	0.8	0.7	0.3	-
11	Syringol	C6	8.4	5.4	10.7	9.5	5.9	2.7
12	4-propylguaiacol	C3C6	5.5	3.7	6.7	10.5	8.4	5.2
13	4-methylsyringol	C1C6	6.0	6.5	7.1	7.2	4.1	2.0
14	trans-isoeugenol	C3C6	6.4	5.2	8.9	9.1	11.6	6.8
15	Acetoguaiacone	OP	0.6	0.8	0.5	0.4	0.3	-
16	4-ethylsyringol	C2C6	5.7	9.2	6.6	6.0	4.0	1.7
17	Guaiacyl acetone	OP	0.5	0.4	0.6	0.7	0.6	-
18	Homovanillyl alcohol	OP	1.0	1.3	1.0	1.6	1.0	-
19	Vanillic acid, ethyl ester	OP	0.3	0.3	0.3	0.3	0.2	-
20	4-propylsyringol	C3C6	4.9	3.4	6.4	8.4	6.4	2.7
21	Ethyl homovanillate	OP	0.6	1.0	0.6	0.4	0.4	-
22	Acetosyringone	OP	6.2	14.6	3.5	2.7	1.8	-
23	Diydroferulic acid, ethyl ester	OP	1.5	2.0	1.6	1.1	0.9	0.3
	Sum of C6P		16.0	9.2	19.8	16.6	10.5	5.7
	Sum of C1C6P		14.9	14.2	16.8	16.6	9.7	4.7
	Sum of C2C6P		29.9	44.2	33.7	26.5	17.7	8.9
	Sum of C3C6P		16.8	12.4	21.9	27.9	26.4	14.7
	Sum of OP		10.6	20.4	8.1	7.2	5.2	0.3
	Total		88.3	100.3	100.2	94.9	69.6	34.3