

Table S1. Identification and relative quantification of the pyrolysis derived compounds of bamboo samples (values as percentage of chromatographic areas).

Peak n ^o	RT	Compound		Inner bamboo (IB)	Middle bamboo (MB)	Outer bamboo (OB)	Klason IB	Klason MB	Klason OB
1	5.80	2-oxo-propanal	c	4.4	3.7	3.6	0.7	0.0	0.0
2	7.71	hydroxyacetaldehyde	c	4.7	4.3	4.4	0.2	0.0	0.0
3	8.21	acetic acid	c	6.8	5.8	5.2	1.1	0.0	1.3
4	8.98	1-hydroxy-2-propanone (acetol)	c	1.6	1.6	1.6	0.0	0.0	0.0
5	9.36	HOCH=CHOH	c	0.5	0.5	0.4	0.0	0.0	0.0
6	10.33	CH ₂ =CH-CO-O-CH ₃	c	0.4	0.4	0.4	0.0	0.0	0.0
7	10.51	1,2-ethanediol	c	0.3	0.3	0.3	0.0	0.0	0.0
8	10.65	3-hydroxypropanal	c	2.9	2.6	2.4	0.0	0.0	0.0
9	10.82	CH ₂ =CH-CO-CHO	c	0.2	0.2	0.2	0.0	0.0	0.0
10	10.96	2(5 <i>H</i>)-furanone	c	0.4	0.3	0.3	0.0	0.0	0.0
11	11.15	3-Methyl-2(5 <i>H</i>)-furanone	c	0.2	0.2	0.1	0.0	0.0	0.0
#12	11.23	2(3 <i>H</i>)-furanone & 3-furaldehyde	c	0.7	0.7	0.6	0.0	0.0	0.0
13	11.41	CH ₃ -CO-CHOH-CHO	c	1.5	1.3	1.5	0.0	0.0	0.0
14	11.46	succindialdehyde	c	0.6	0.6	0.6	0.0	0.0	0.0
#15	11.78	furfural & 2-cyclopenten-1-one	c	2.6	2.3	2.0	0.3	0.0	0.3
16	12.41	furfuryl alcohol	c	0.2	0.2	0.2	0.0	0.0	0.0
#17	12.54	5-methyl-2(3 <i>H</i>)-furanone (angelica lactone) & 1-acetoxy-propan-2-one	c	0.5	0.5	0.5	0.0	0.0	0.0
18	12.81	not identified sugar (NI)	c	0.1	0.2	0.1	0.0	0.0	0.0
19	12.87	5-methyl-2(5 <i>H</i>)-furanone (β-angelica lactone)	c	0.2	0.2	0.2	0.0	0.0	0.0
#20	13.07	furyl methyl-ketone (acethylfuran) & NI sugar	c	0.1	0.1	0.1	0.0	0.0	0.0
21	13.24	not identified sugar	c	0.3	0.3	0.3	0.0	0.0	0.0
22	13.37	4-cyclopentene-1,3-dione	c	0.2	0.2	0.2	0.0	0.0	0.0
23	13.80	2-hydroxy-2-cyclopenten-1-one	c	1.4	1.3	1.4	0.0	0.0	0.0
24	14.23	not identified sugar	c	0.8	0.8	0.7	0.0	0.0	0.0
#25	14.36	5-methylfurfural & NI sugar	c	1.7	1.8	1.5	0.0	0.0	0.0
26	15.01	2(5 <i>H</i>)-furanone isomer	c	0.7	0.6	0.7	0.0	0.0	0.0

27	15.44	4-hydroxy-5,6-dihydro-(2H)-pyran-2-one	c	4.2	4.0	3.7	0.0	0.0	0.0
28	15.78	2H-pyran-2,6(3H)-dione	c	0.9	0.9	0.8	0.0	0.0	0.0
29	15.86	not identified sugar	c	0.9	0.8	0.8	0.0	0.0	0.0
30	16.17	phenol	H	0.3	0.3	0.3	3.7	3.3	3.0
31	16.80	4,5-dimethyl-1,3-dioxol-2-one	c	0.5	0.5	0.6	0.0	0.0	0.0
32	16.80	guaiacol	G	0.5	0.5	0.6	4.4	5.1	6.3
33	17.22	<i>o</i> -cresol	H	0.1	0.1	0.1	1.1	0.4	1.1
34	17.22	not identified sugar	c	0.1	0.1	0.1	0.0	0.0	0.0
35	17.70	not identified compound	O	0.4	0.3	0.3	0.0	0.0	0.0
36	17.76	methyl-butyraldehyde derivative	c	0.3	0.3	0.3	0.0	0.0	0.0
37	17.79	maltol	c	0.3	0.3	0.3	0.0	0.0	0.0
38	17.95	orcinol	L	0.3	0.3	0.3	0.0	0.0	0.0
#39	17.95	<i>p</i> - & <i>m</i> -cresol	H	0.3	0.3	0.3	2.0	1.7	2.1
40	18.32	methylguaiacol isomer	G	0.1	0.1	0.1	0.5	0.4	0.8
41	18.31	4-methyl-(5H)-furan-2-one	c	0.1	0.1	0.2	0.0	0.0	0.0
#42	18.50	5-hydroxymethyldihydrofuran-2-one & not identified sugar	c	0.7	0.6	0.6	0.0	0.0	0.0
#43	18.95	4-methylguaiacol & NI	G	0.7	0.7	1.1	3.1	3.6	5.0
44	19.21	2,3-dihydroxyhex-1-ene-4-one	c	0.6	0.5	0.5	0.0	0.0	0.0
45	19.27	3,5-dihydroxy-2-methyl-(4H)-pyran-4-one	c	0.5	0.5	0.6	0.0	0.0	0.0
46	20.73	4-ethylguaiacol	G	0.1	0.1	0.2	0.9	1.1	1.5
47	20.94	not identified sugar	c	1.9	2.0	1.9	0.0	0.0	0.0
48	21.51	1,4:3,6-dianhydro- α -D-glucopyranose	c	0.5	0.4	0.4	0.0	0.0	0.0
49	21.73	4-vinylphenol	H	4.9	4.7	4.6	6.7	7.7	4.8
50	21.97	4-vinylguaiacol	G	3.3	3.2	3.2	5.3	6.0	5.2
51	22.45	eugenol	G	0.3	0.3	0.4	0.4	0.0	0.0
52	22.70	5-hydroxymethylfurfural	c	1.2	1.2	1.2	0.0	0.0	0.0
53	23.04	syringol	S	1.3	1.6	1.3	8.0	11.7	6.9
54	23.65	<i>cis</i> isoeugenol	G	0.1	0.1	0.1	0.3	0.4	0.5
55	23.71	3-methoxy-5-methylphenol	L	0.1	0.1	0.1	0.5	0.5	0.7
56	24.30	2-hydroxymethyl-5-hydroxy-2,3-dihydro-(4H)-pyran-4-one	c	1.3	1.6	1.6	0.0	0.0	0.0
57	24.66	1,5-anhydro-B-D-xylofuranose	c	1.1	1.2	1.4	0.5	0.4	0.5

58	24.66	<i>trans</i> isoeugenol	G	1.1	1.2	1.4	1.1	1.5	1.7
59	24.88	4-methylsyringol	S	1.0	1.2	1.1	5.1	7.7	4.7
60	25.25	vanillin	G	0.6	0.7	0.9	0.9	1.1	1.8
61	25.53	1-(4-hydroxy-3-methoxyphenyl)propyne	G	0.3	0.3	0.4	0.3	0.3	0.3
62	25.74	1-(4-hydroxy-3-methoxyphenyl)propyne	G	0.2	0.2	0.3	0.1	0.3	0.3
63	26.35	4-ethylsyringol	S	0.2	0.3	0.3	1.3	0.9	0.7
64	26.38	homovanillin	G	0.2	0.3	0.3	0.0	0.9	0.7
65	26.70	not identified compound	O	0.2	0.2	0.2	0.0	0.0	0.0
66	26.85	acetoguaiacone	G	0.3	0.3	0.4	0.9	1.2	1.6
67	27.13	4-hydroxybenzaldehyde	H	0.3	0.4	0.3	0.3	0.0	0.0
68	27.47	4-vinylsyringol	S	1.3	1.4	1.2	3.8	5.2	2.9
69	27.80	guaiaacylacetone	G	0.1	0.1	0.1	0.4	0.5	0.7
70	27.80	4-allylsyringol	S	0.5	0.5	0.5	1.5	2.1	1.1
71	28.41	propioguaiacone	G	0.0	0.0	0.0	0.4	0.0	0.5
#72	28.66	coniferyl alcohol isomer & guaiacyl vinyl ketone	G	0.3	0.3	0.5	0.2	0.5	0.3
73	28.83	<i>cis</i> 4-propenylsyringol	S	0.3	0.3	0.3	0.6	0.9	0.7
74	28.83	α -oxy-propioguaiacone	G	0.0	0.0	0.0	0.6	0.9	0.7
75	29.70	4-propinylsyringol	S	0.9	0.9	0.7	2.1	2.0	1.6
76	29.70	1,6-anhydro- β -D-glucopyranose	c	9.3	10.2	13.7	2.5	0.3	1.1
77	29.92	<i>trans</i> 4-propenylsyringol	S	1.4	2.5	0.9	4.1	6.4	3.2
78	30.53	syringaldehyde	S	1.0	1.1	1.1	2.8	2.9	2.4
79	31.26	homosyringaldehyde	S	0.4	0.6	0.5	0.6	1.4	0.0
80	31.61	syringic acid methyl ester	S	0.2	0.2	0.2	1.8	2.0	1.9
81	31.61	not identified sugar	c	0.7	0.7	0.9	0.0	0.0	0.0
82	31.71	acetosyringone	S	0.7	0.8	0.7	2.6	3.2	2.2
83	32.46	syringylacetone	S	0.4	0.4	0.7	3.2	2.6	1.6
84	32.46	<i>trans</i> coniferaldehyde	G	0.4	0.4	0.7	0.0	0.0	1.6
85	32.95	propiosyringone	S	0.1	0.1	0.1	0.7	0.8	0.7
86	33.07	3-(3,5-dimethoxy-4-hydroxyphenyl)-3-oxopropanal	S	0.3	0.2	0.3	2.2	1.3	0.9
87	36.69	<i>trans</i> sinapaldehyde	S	0.4	0.6	0.7	1.5	0.0	1.1
total identified				85.3	84.5	87.0	81.3	89.0	77.2

Total carbohydrates (c)	59.4	56.4	59.1	5.3	0.8	3.3
Total lignin (S+G+H)	25.0	27.2	27.0	75.5	87.8	73.2
Others (O+L)	0.7	0.7	0.7	0.5	0.5	0.7
Lignin monomeric composition (% of total area)						
H	5.9	5.8	5.6	13.8	13.1	11.1
G	8.6	8.7	10.8	19.9	23.7	29.6
S	10.5	12.7	10.6	41.8	51.0	32.6
S/G	1.22	1.46	0.99	2.10	2.15	1.10
C/L	2.4	2.1	2.2	0.07	0.01	0.04

RT – retention time (min); # - overlapped compounds; C -carbohydrates derivatives; Lignin derivatives: S – syringyl units; G - guaiacyl units; H – *p*-hydroxyphenyl units; O – other compounds not identified to derive from carbohydrates or lignin.

