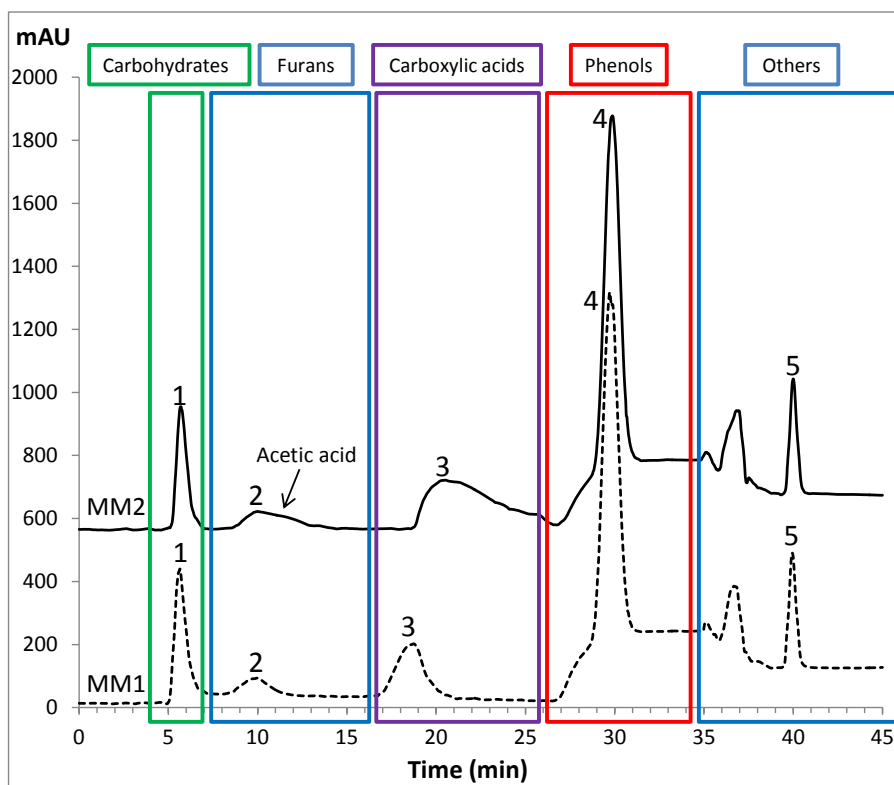
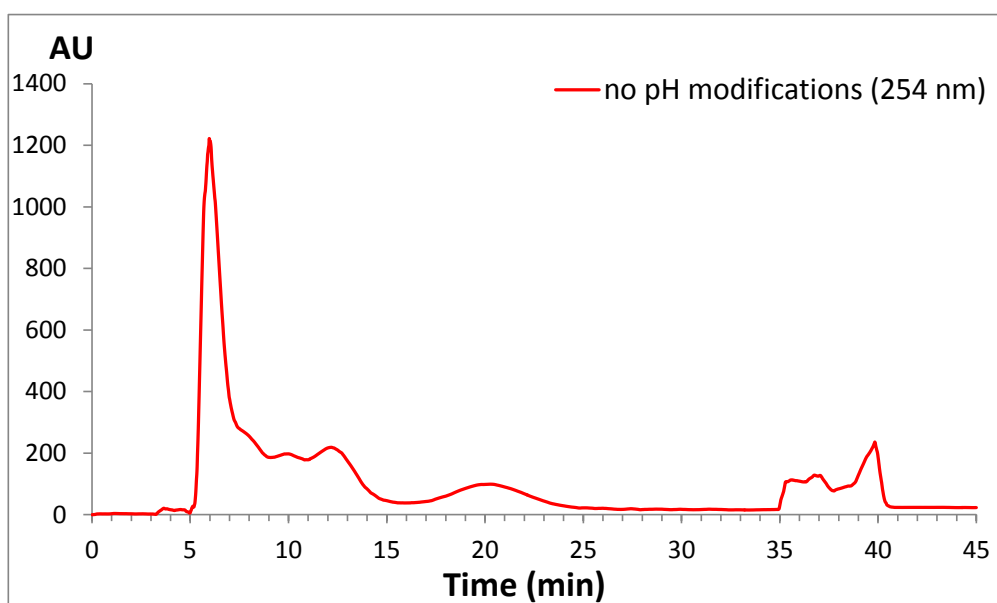


## Supplementary material



**Figure S1:** CPC-UV chromatograms of the model mix without acetic acid (MM1 in dashed lines) and of the model mix with 3.2 g/L of acetic acid (MM2 in full line) obtained at 210nm. pH of the mobile phase was 9.8 on the intermediate step (15 – 25 min). 1. Salicin, 2. Hydroxymethylfurfural, 3. Ferulic acid, 4. Guaiacol, 5. Cinnamaldehyde.



**Figure S21:** CPC-UV chromatogram of the water soluble phase of a fast pyrolysis bio-oil obtained at 254 nm.

**Table S1:** Reproducibility of the retention time and MS sensitivity for 3 standards.

n = 8	Hydroxybenzoic acid	Vanillin	Coniferaldehyde
Retention time $\pm$ 3*SD (min)	12.2 $\pm$ 0.2	15.5 $\pm$ 0.1	18.5 $\pm$ 0.1
RSD (%)	0.5	0.3	0.1
MS intensity $\pm$ 3*SD (ESIneg, x 10e5)	14 $\pm$ 6.1	7.9 $\pm$ 2.5	32 $\pm$ 7.0
RSD (%)	14	10	7.2

**Table S2:** List of peaks detected in Figure 1 and Figure 6.

One dimensional LC (Figure 1) LC retention time (min), 3 modes combined	Two dimensional CPCxLC (Figure 6)				
	<sup>1</sup> D CPC retention time (min)	<sup>2</sup> D LC retention time (min)	UV (254nm)	BPC neg	BPC pos
1.0	28	1.1	✓		✓
1.1	6	1.1	✓	✓	✓
1.2	37	1.1	✓		
1.3	36	1.3		✓	
1.5	6	1.6	✓	✓	✓
1.6	7	1.6		✓	
1.7	7	1.6		✓	
1.9	7	1.9		✓	
2.1	7	2.1		✓	
2.2	7	2.2	✓	✓	
2.4	28	2.8	✓		
2.6	7	2.8	✓		
2.8	9	3.2	✓		✓
2.9	7	3.5		✓	
3.1	9	3.5	✓		✓
3.3	28	3.6	✓		
3.4	7	3.6	✓		✓
3.5	7	3.9	✓	✓	
3.6	7	4.7			✓
3.7	14	5.1	✓		
3.9	7	5.3	✓		
4.1	14	5.4	✓		
4.7	7	6.1	✓		
5.0	8	6.3		✓	
5.4	7	6.8	✓		
5.7	6	7.2		✓	
6.1	7	7.4	✓		
6.3	11	7.6	✓		
6.5	15	7.8	✓		
6.8	11	8.3	✓		✓
7.0	7	8.8	✓		
7.2	11	8.9	✓		✓
7.4	9	9.0	✓		
7.6	7	9.1	✓		
7.8	7	9.3	✓		
8.3	7	9.5	✓		
8.8	6	9.6		✓	
9.0	7	9.6	✓		
9.3	10	9.7	✓		
9.6	21	9.7	✓		
9.9	7	9.8	✓		
10.1	20	10.1	✓		✓
10.2	7	10.2	✓		
10.3	13	10.2	✓		✓
10.4	6	10.2		✓	

10.5	7	10.4			✓
10.6	7	10.6	✓		
10.7	7	10.6	✓		
10.8	7	10.7	✓		
11.0	10	11.0	✓	✓	
11.2	7	11.0		✓	
11.4	7	11.0	✓		
11.5	22	11.0	✓		
11.6	7	11.2	✓		
11.7	10	11.3	✓		
11.8	7	11.4	✓		
11.9	37	11.5			✓
12.0	7	11.6	✓		
12.1	23	11.7	✓	✓	
12.2	13	11.7	✓		
12.4	7	11.7	✓		
12.5	10	11.7	✓		
12.7	7	11.9	✓		
12.8	7	12.1	✓		
12.9	24	12.2			✓
13.0	7	12.2	✓		
13.3	22	12.2	✓	✓	
13.5	8	12.3		✓	✓
13.6	7	12.3	✓		
13.8	7	12.5	✓		
13.9	28	12.7	✓	✓	
14.0	10	12.7	✓		
14.1	7	12.8	✓		
14.2	23	12.9		✓	
14.3	7	13.0	✓		
14.5	22	13.1	✓		
14.6	8	13.2			✓
14.7	7	13.2	✓		
14.8	28	13.3	✓		
14.9	24	13.4	✓	✓	✓
15.0	7	13.5	✓		
15.3	28	13.5	✓		
15.5	7	13.6	✓		
15.7	13	13.7		✓	
15.8	7	13.7	✓		
15.9	25	13.8	✓	✓	
16.0	21	13.8	✓	✓	
16.2	28	13.8	✓		
16.3	7	13.9	✓		
16.4	23	13.9	✓	✓	
16.5	13	13.9		✓	
16.6	8	14.0			✓
16.8	7	14.0	✓		
17.1	8	14.1		✓	
17.2	25	14.1	✓		✓
17.3	28	14.3		✓	
17.5	7	14.3	✓		
17.7	23	14.3	✓		
17.8	20	14.4		✓	
17.9	20	14.5	✓		
18.5	7	14.5	✓		
18.7	13	14.6	✓		
19.0	28	14.7	✓	✓	
19.5	44	14.8			✓
19.6	7	14.8	✓		
20.1	21	14.8	✓	✓	

20.2	12	14.9		✓	
20.3	7	15.0	✓		
20.6	7	15.3	✓		
20.8	24	15.4	✓	✓	✓
20.9	28	15.4	✓		✓
21.0	7	15.5	✓		
21.1	25	15.5		✓	
21.2	13	15.6	✓	✓	
21.4	36	15.6		✓	✓
21.5	10	15.6		✓	✓
21.8	15	15.6			✓
21.9	7	15.6	✓		
22.2	28	15.7	✓	✓	
22.4	26	15.9	✓		✓
22.7	12	16.0			✓
22.9	7	16.0	✓		
23.0	7	16.0			✓
23.1	22	16.2	✓	✓	
23.6	28	16.2	✓		
23.9	7	16.3	✓		
24.0	11	16.3		✓	
24.3	7	16.5	✓		
24.4	11	16.6		✓	
24.8	25	16.6	✓	✓	✓
25.4	33	16.6	✓		
25.8	15	16.7		✓	✓
26.0	22	16.7		✓	
26.3	28	16.7	✓		
26.8	25	16.9	✓	✓	
27.2	14	16.9		✓	
27.8	27	17.1			✓
28.0	22	17.1	✓	✓	
28.3	15	17.2		✓	
	37	17.2			✓
	7	17.4	✓		
	22	17.4			✓
	37	17.5			✓
	20	17.6		✓	
	26	17.7		✓	
	11	17.8		✓	
	28	17.8		✓	
	24	17.9		✓	✓
	14	17.9		✓	
	18	17.9		✓	
	13	18.0			✓
	27	18.2		✓	
	24	18.2		✓	✓
	28	18.3			✓
	16	18.3		✓	
	20	18.3		✓	
	22	18.5		✓	
	7	18.5	✓		
	26	18.5	✓	✓	✓
	21	18.6		✓	
	7	18.7	✓		
	28	18.8			✓
	24	18.9			✓
	21	19.1		✓	✓
	24	19.1		✓	
	25	19.3		✓	
	27	19.5	✓		

	36	19.6			✓
	24	19.6	✓	✓	
	26	19.7		✓	✓
	28	19.8		✓	✓
	28	19.9	✓	✓	
	24	20.0			✓
	22	20.0		✓	
	26	20.3	✓	✓	✓
	24	20.4			✓
	28	20.6		✓	✓
	22	20.9		✓	
	27	21.1			✓
	28	21.1	✓	✓	
	29	21.3		✓	✓
	23	21.4		✓	
	36	21.4		✓	
	27	21.5			✓
	27	21.6		✓	
	26	21.7	✓	✓	✓
	23	22.0		✓	
	27	22.0		✓	✓
	26	22.4		✓	✓
	29	22.4		✓	
	36	22.7		✓	
	25	23.1		✓	
	27	23.1			✓
	28	23.6		✓	✓
	23	23.7		✓	
	36	23.7			✓
	26	23.7		✓	✓
	36	23.9		✓	
	27	24.0			✓
	23	24.1		✓	✓
	23	24.4		✓	✓
	36	24.8		✓	
	38	25.4		✓	✓
	28	25.6		✓	
	26	25.8			✓
	23	26.3		✓	
	40	26.3	✓		
	40	26.6	✓		
	36	26.6		✓	
	29	26.7		✓	
	28	26.8			✓
	36	26.8			✓
	44	26.9			✓
	37	27.0			✓
	36	27.2		✓	
	44	27.2			✓
	37	27.3			✓
139	217	217	112	99	70