

**Additional file 10. Pyrolysis GC-MS analysis of ball milled wood (BMW), different LCC fractions, and the residue.**

| Fraction | Line | C      | G       | S       | H      | P      | L         | S/G     | C/L     |
|----------|------|--------|---------|---------|--------|--------|-----------|---------|---------|
| BMW      | WT   | 78.1 ± | 7.72 ±  | 11.80 ± | 1.24 ± | 0.08 ± | 20.8 ±    | 1.53 ±  | 3.75 ±  |
|          |      | 0.5    | 0.14    | 0.08    | 0.29   | 0.00   | 0.4       | 0.03    | 0.09    |
|          | TR   | 79.1 ± | 7.81 ±  | 10.63 ± | 1.41 ± | 0.07 ± | 19.9 ±    | 1.36 ±  | 3.97 ±  |
|          |      | 0.4    | 0.21    | 0.27    | 0.12   | 0.01   | 0.4       | 0.02*** | 0.09*   |
| LCC-X    | WT   | 91.1 ± | 2.79 ±  | 3.72 ±  | 1.34 ± | 0.08 ± | 7.9 ± 0.2 | 1.33 ±  | 11.50 ± |
|          |      | 0.2    | 0.05    | 0.03    | 0.11   | 0.01   |           | 0.02    | 0.26    |
|          | TR   | 91.2 ± | 3.01 ±  | 3.65 ±  | 1.24 ± | 0.08 ± | 8.0 ±     | 1.21 ±  | 11.42 ± |
|          |      | 0.1    | 0.02*** | 0.11    | 0.10   | 0.01   | 0.1       | 0.03**  | 0.22    |
| LCC-1    | WT   | 79.6 ± | 7.26 ±  | 9.06 ±  | 2.39 ± | 0.18 ± | 18.9 ±    | 1.25 ±  | 4.21 ±  |
|          |      | 0.7    | 0.44    | 0.23    | 0.05   | 0.00   | 0.6       | 0.04    | 0.17    |
|          | TR   | 75.2 ± | 8.51 ±  | 11.46 ± | 2.75 ± | 0.20 ± | 22.9 ±    | 1.35 ±  | 3.29 ±  |
|          |      | 0.5*** | 0.25**  | 0.22*** | 0.08** | 0.02   | 0.5***    | 0.01**  | 0.10*** |
| LCC-2    | WT   | 57.5 ± | 11.58 ± | 17.23 ± | 1.96 ± | 0.06 ± | 30.8 ±    | 1.49 ±  | 1.86 ±  |
|          |      | 0.6    | 0.17    | 0.12    | 0.05   | 0.01   | 0.3       | 0.01    | 0.03    |
|          | TR   | 59.6 ± | 11.92 ± | 15.85 ± | 2.05 ± | 0.08 ± | 29.9 ±    | 1.33 ±  | 2.00 ±  |
|          |      | 1.0*   | 0.73    | 0.78*   | 0.30   | 0.00   | 1.3       | 0.04**  | 0.09    |
| LCC-3    | WT   | 51.1 ± | 14.36 ± | 23.37 ± | 2.83 ± | 0.25 ± | 40.8 ±    | 1.63 ±  | 1.25 ±  |
|          |      | 0.4    | 0.49    | 0.35    | 0.14   | 0.01   | 0.7       | 0.03    | 0.01    |
|          | TR   | 53.1 ± | 14.05 ± | 21.63 ± | 2.69 ± | 0.25 ± | 38.6 ±    | 1.55 ±  | 1.39 ±  |
|          |      | 0.5    | 0.53    | 1.04    | 0.10   | 0.00   | 1.5       | 0.02**  | 0.06    |
| Residue  | WT   | 50.2 ± | 6.27 ±  | 10.84 ± | 0.82 ± | 0.04 ± | 18.0 ±    | 1.73 ±  | 2.86 ±  |
|          |      | 1.8    | 0.71    | 1.09    | 0.06   | 0.00   | 1.7       | 0.02    | 0.13    |
|          | TR   | 57.9 ± | 6.46 ±  | 9.54 ±  | 0.63 ± | 0.03 ± | 16.7 ±    | 1.48 ±  | 3.48 ±  |
|          |      | 1.0    | 0.43    | 0.65    | 0.01** | 0.00   | 1.1       | 0.00**  | 0.16**  |

C-Carbohydrates, G - Guaiacyl lignin, S - Syringyl lignin, H - *p*-hydroxyphenyl, P - phenolics, L - G+S+H+P, S/G - Syringyl to Guaiacyl ratio. All values are relative. Mean ± SE, *n* = 3 technical replicates. WT is combination of 6 individual trees. Trans is combination of two trees from each transgenic line (8, 4, 17). Asterisks correspond to means significantly different from WT according to the ANOVA (\* *P* ≤ 0.1, \*\* *P* ≤ 0.05, \*\*\* *P* ≤ 0.01).