

**Table S1.** The optimal wavelength (nm) of aquatic solutions (caffeine = C, hemicellulose = HC, lignin = L, coniphenyl alcohol = CoA, sinapyl alcohol = SA, coumaryl alcohol - CuA) or cellulose suspension (C).

Pure chemical	CF	C	HC	L	CoA	SA	CuA
Concentration (g/L)	I						
Wavelength (nm)	287	–	289	254	292	295	295
Absorbance (A)		–	1.012	1.680	1.850	2.999	2.847

**Table S2.** Data of Dunnett Multiple Comparisons Test (Anova) – comparison of the control (CF - caffeine solution) with other samples containing a mix of caffeine and any of the other components (HC – hemicellulose, L – lignin, CuA – coumaryl alcohol, CoA - coniphenyl alcohol, C – cellulose, SA – sinapyl alcohol).

Comparison	Difference	q	Asterisks	P-level
CF vs HC	0.1420	50.282	**	$p < 0.01$
CF vs L	0.1097	38.833	**	$p < 0.01$
CF vs CuA	0.2143	75.895	**	$p < 0.01$
CF vs CoA	0.1013	35.882	**	$p < 0.01$
CF vs SA	–0.004000	1.416	ns	$p > 0.05$
CF vs C	0.002000	0.7082	ns	$p > 0.05$

**Table S3.** Data of Tukey-Kramer Multiple Comparisons Test (Anova) – comparison of main wood components lignin (L), cellulose (C), and hemicellulose (HC).

Comparison	Difference	q	Asterisks	P-level
L vs C	–0.1077	53.917	***	$p < 0.001$
L vs HC	–0.03233	16.192	***	$p < 0.001$
C vs HC	–0.1400	70.108	***	$p < 0.001$

**Table S4.** Data of Tukey-Kramer Multiple Comparisons Test (Anova) – comparison of lignin (L) with its the precursors (CuA – coumaryl alcohol, CoA - coniphenyl alcohol, SA – sinapyl alcohol).

Comparison	Difference	q	Asterisks	P-level
L vs SA	–0.1137	56.921	***	$p < 0.001$
L vs CuA	0.1047	52.414	***	$p < 0.001$
L vs CoA	–0.0083	4.173	ns	$p > 0.050$

CuA vs SA	−0.2183	109.34	***	$p < 0.001$
CuA vs CoA	−0.1130	56.587	***	$p < 0.001$
SA vs CoA	0.1053	52.748	***	$p < 0.001$

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