

Supplementary information

Table S1. The standard percentile readings from the analysis d (0.1), d (0.5), and d (0.9).

Experiment		d (0.1), μm	d (0.5), μm	d (0.9), μm
0.15 s*	Feed	10.622	67.576	194.365
	Product	3.900	18.935	59.880
0.16 s	Feed	8.767	46.730	177.316
	Product	4.500	19.995	61.356
0.40 s	Feed	9.900	43.522	136.032
	Product	4.581	21.640	51.351
0.48 s	Feed	13.838	63.327	196.362
	Product	3.018	17.026	39.732
0.70 s	Feed	11.612	81.564	242.200
	Product	5.575	24.759	114.322
0.70 s*	Feed	11.016	76.513	219.105
	Product	4.566	21.031	53.417
0.79 s	Feed	12.373	75.159	206.867
	Product	4.107	22.242	60.951
0.80 / 0.86 s	Feed	13.880	82.554	226.601
	Product	3.765	21.683	63.902
0.86 s	Product	3.356	17.127	47.214
	Feed	14.563	84.021	245.385
1.51 s	Product	20.084	61.712	111.822
	Feed	14.816	70.582	221.492
1.84 s	Product	7.227	29.836	61.932

*Experiments with the addition of acetic acid

Table S2. Mass balance of solid parts of products and feeds.

t / t at 375 °C*	Extractives, %	Cutin, %	Cellulose, %	Hemicellulose, %	Protein, %	Other
Feed	7.18 ± 0.85	53.97 ± 0.98	14.62 ± 0.85	2.46 ± 0.54	8.41 ± 0.38	13.36
0.25 s / 0.48 s	11.15 ± 1.17	66.44 ± 0.62	13.24 ± 1.84	0.00 ± 0.00	4.29 ± 0.12	4.88
Feed	6.48 ± 2.02	55.14 ± 1.06	14.07 ± 1.16	2.67 ± 0.34	8.39 ± 0.15	13.25
1.05 s / 1.84 s	14.35 ± 0.83	71.99 ± 0.59	6.75 ± 1.24	0.00 ± 0.00	3.02 ± 0.03	3.89
Feed	6.14 ± 1.90	56.02 ± 1.72	17.07 ± 0.14	3.09 ± 0.02	7.88 ± 0.23	9.80
6.33 s / 0.40 s	10.34 ± 2.13	67.12 ± 0.28	16.41 ± 0.71	0.00 ± 0.00	3.58 ± 0.28	2.55
Feed	8.21 ± 4.32	44.94 ± 2.99	18.11 ± 1.16	3.10 ± 0.50	7.79 ± 0.31	17.85
0.06 s / 0.16 s	10.85 ± 0.34	65.55 ± 0.85	15.79 ± 1.04	0.00 ± 0.00	4.12 ± 0.05	3.69
Feed	7.78 ± 2.00	40.48 ± 2.40	19.63 ± 0.34	4.96 ± 0.09	11.08 ± 0.76	16.07
0.53 s / 0.70 s	12.39 ± 0.14	54.56 ± 0.52	18.92 ± 0.48	0.00 ± 0.00	4.07 ± 0.26	10.06
Feed**	8.65 ± 1.79	43.43 ± 2.56	18.88 ± 0.94	5.03 ± 0.28	10.62 ± 0.35	13.39

0.52 s / 0.70 s**	13.97 ± 1.44	59.51 ± 5.03	14.12 ± 0.33	0.08 ± 0.05	3.16 ± 0.15	9.16
Feed	18.30 ± 1.62	38.58 ± 0.21	13.64 ± 3.03	2.17 ± 0.38	11.20 ± 0.27	16.11
0.37 s / 0.86 s	18.59 ± 0.57	57.00 ± 1.18	13.90 ± 0.16	0.00 ± 0.00	5.25 ± 0.56	5.26
0.51 s / 0.80 s	18.43 ± 0.98	59.48 ± 0.69	14.10 ± 0.22	0.00 ± 0.00	5.62 ± 0.70	2.37
Feed**	12.13 ± 5.12	44.22 ± 1.60	16.55 ± 1.98	3.65 ± 0.50	10.99 ± 0.01	12,46
0.49 s / 0.79 s**	18.85 ± 5.92	59.85 ± 0.95	8.15 ± 3.18	0.00 ± 0.00	4.37 ± 0.26	8.78
Feed	12.54 ± 0.39	44.13 ± 0.36	14.62 ± 3.08	3.03 ± 0.49	10.09 ± 2.06	15.59
0.89 s / 1.51 s	25.75 ± 2.38	62.81 ± 0.61	2.79 ± 0.06	0.00 ± 0.00	6.44 ± 0.96	2.21

* t – reaction time, t at 375 °C – reaction time at 375 °C

** experiments with the addition of acetic acid