

Supplementary Materials: The following supporting information can be downloaded at: www.mdpi.com/xxx/s1, Table S1: The weight loss of toasted oak chips; Table S2: The amount of neutral sugars extracted from oak chips; Table S3: The amount of four types of monosaccharides extracted from the oak chips; Table S4 The amount of four types of polysaccharides extracted from the oak chips

Table S1. The weight loss of toasted oak chips [%]

Duration (min)	Temperature (°C)					
	180	200	220	240	260	280
10	5.4 ± 0.2	5.9 ± 0.2	7.0 ± 0.2	10.2 ± 0.3	15.6 ± 0.9	24.4 ± 0.07
20	4.5 ± 0.5	7.0 ± 0.1	8.8 ± 0.2	12.2 ± 1.2	20.5 ± 1.6	37.9 ± 3.2
30	7.1 ± 0.1	7.8 ± 2.6	9.2 ± 1.9	12.8 ± 1.6	22.7 ± 1.3	43.0 ± 3.7

Table S2. The amount of neutral sugars extracted from oak chips [mg/g chips]

Duration (min)	Temperature (°C)					
	180	200	220	240	260	280
10	8.8 ± 1.4	9.2 ± 0.4	12.3 ± 0.8	14.5 ± 0.7	8.9 ± 0.3	6.2 ± 0.2
20	11.3 ± 0.7	8.9 ± 0.6	9.9 ± 0.2	9.0 ± 0.5	2.9 ± 0.1	1.9 ± 0.2
30	11.6 ± 0.7	9.2 ± 0.3	9.4 ± 0.5	7.8 ± 0.2	3.4 ± 0.2	1.3 ± 0.1

Table S3. The amount of four types of monosaccharides extracted from the oak chips [mg/g chips]

(A) Glucose						
Duration (min)	Temperature (°C)					
	180	200	220	240	260	280
10	1.66 ± 0.01	1.07 ± 0.03	0.15 ± 0.02	0.01 ± 0.004	n.d.	n.d.
20	0.66 ± 0.04	0.28 ± 0.02	0.10 ± 0.01	0.03 ± 0.02	0.23 ± 0.05	0.53 ± 0.16
30	0.80 ± 0.04	0.16 ± 0.02	0.05 ± 0.02	n.d.	0.49 ± 0.07	0.31 ± 0.02
(B) Arabinose						
Duration (min)	Temperature (°C)					
	180	200	220	240	260	280
10	1.39 ± 0.07	0.99 ± 0.04	0.25 ± 0.03	0.09 ± 0.02	n.d.	n.d.
20	0.65 ± 0.07	0.17 ± 0.01	0.14 ± 0.08	0.03 ± 0.01	n.d.	n.d.
30	0.62 ± 0.12	0.16 ± 0.03	0.06 ± 0.02	n.d.	n.d.	n.d.
(C) Galactose						
Duration (min)	Temperature (°C)					
	180	200	220	240	260	280
10	0.10 ± 0.02	0.03 ± 0.01	0.04 ± 0.02	0.05 ± 0.03	n.d.	n.d.
20	0.09 ± 0.003	0.06 ± 0.004	0.14 ± 0.01	0.12 ± 0.04	n.d.	n.d.
30	0.10 ± 0.01	0.09 ± 0.01	0.12 ± 0.03	0.10 ± 0.01	n.d.	n.d.
(D) Xylose						
Duration (min)	Temperature (°C)					
	180	200	220	240	260	280
10	0.33 ± 0.01	0.13 ± 0.01	n.d.	0.11 ± 0.02	0.11 ± 0.11	0.02 ± 0.01
20	0.13 ± 0.12	0.06 ± 0.01	0.14 ± 0.01	0.45 ± 0.08	0.18 ± 0.03	0.02 ± 0.003
30	0.13 ± 0.01	n.d.	0.13 ± 0.01	0.51 ± 0.05	0.08 ± 0.01	n.d.

n.d.; not detected.

Table S4. The amount of four types of polysaccharides extracted from the oak chips [mg/g chips]

(A) Glucose						
Duration	Temperature (°C)					
(min)	180	200	220	240	260	280
10	0.64 ± 0.15	0.95 ± 0.13	1.09 ± 0.10	0.85 ± 0.05	1.61 ± 0.13	6.09 ± 0.20
20	1.00 ± 0.08	0.85 ± 0.05	0.64 ± 0.04	0.75 ± 0.05	1.74 ± 0.19	2.23 ± 0.22
30	1.31 ± 0.05	0.77 ± 0.06	0.63 ± 0.03	0.91 ± 0.05	1.55 ± 0.09	1.01 ± 0.23
(B) Arabinose						
Duration	Temperature (°C)					
(min)	180	200	220	240	260	280
10	0.91 ± 0.29	0.89 ± 0.10	0.80 ± 0.05	0.19 ± 0.01	0.16 ± 0.01	0.05 ± 0.01
20	0.68 ± 0.07	0.63 ± 0.04	0.26 ± 0.08	0.13 ± 0.02	0.06 ± 0.01	0.06 ± 0.02
30	0.94 ± 0.07	0.40 ± 0.04	0.17 ± 0.01	0.09 ± 0.01	0.12 ± 0.03	n.d.
(C) Galactose						
Duration	Temperature (°C)					
(min)	180	200	220	240	260	280
10	0.67 ± 0.06	1.09 ± 0.05	2.41 ± 0.12	2.23 ± 0.24	1.03 ± 0.03	0.03 ± 0.03
20	1.03 ± 0.05	1.48 ± 0.43	1.59 ± 0.06	1.62 ± 0.13	0.25 ± 0.04	0.01 ± 0.01
30	1.34 ± 0.14	1.93 ± 0.15	2.20 ± 0.48	1.29 ± 0.09	0.13 ± 0.03	n.d.
(D) Xylose						
Duration	Temperature (°C)					
(min)	180	200	220	240	260	280
10	0.15 ± 0.05	0.26 ± 0.02	1.11 ± 0.17	4.30 ± 0.10	3.36 ± 0.15	n.d.
20	0.25 ± 0.03	0.46 ± 0.06	1.57 ± 0.09	2.70 ± 0.19	0.39 ± 0.07	n.d.
30	0.29 ± 0.02	0.53 ± 0.05	1.63 ± 0.13	1.84 ± 0.10	0.61 ± 0.54	n.d.

n.d.; not detected.