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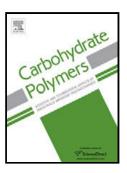
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ACCEPTED MANUSCRIPT

1	Optimization of ultrasonic-assisted extraction and in vitro antioxidant activities of
2	polysaccharides from Trametes orientalis
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12	ABSTRACT
13	A Box-Behnken design was employed to optimize ultrasonic-assisted extraction of Trametes
14	orientalis polysaccharides (TOP). The crude polysaccharides were purified by DEAE cellulose-52
15	chromatography, giving a main fraction named as PTOP. The antioxidant properties of PTOP were
16	evaluated by different in vitro antioxidant assays, such as 1,1-Diphenyl-2-picrylhydrazyl (DPPH)
17	radical scavenging activities, reducing power, superoxide radical scavenging activities, and
18	chelating ability of ferrous ions. The results showed that optimal extraction parameters were as
19	follows: ratio of water to raw material 30.6 mL/g, ultrasonic power 109.8 W, extraction
20	temperature 40.2°C, and extraction time 42.2 min. Under these conditions, the experimental yield
21	of polysaccharides was 7.49±0.14%, which agreed closely with the predicted value (7.47%).
22	Furthermore, PTOP exhibited antioxidant capacity in a concentration-dependent manner in all
23	assays.
24	
25	Keywords
26	Trametes orientalis polysaccharides ultrasonic-assisted extraction antioxidant

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