

Title Antioxidant activities of buckwheat extracts
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Abstract

The antioxidant activities of buckwheat (*Fagopyrum esculentum* Möench) extracts were evaluated and compared with butylated hydroxyanisole (BHA), butylated hydroxytoluene (BHT) and tertiary butylhydroquinone (TBHQ) using a β -carotene bleaching assay, a 2,2-diphenyl- β -picrylhydrazyl (DPPH) assay and the Rancimat method. Buckwheat was extracted with solvents of different polarities. The methanol extract showed the highest antioxidant activity coefficient (AAC) of 627 ± 40.0 at 200 mg/l by the β -carotene bleaching method and longest induction time of 7.0 ± 0.2 h by the Rancimat method. The acetone extract showed the highest total phenolics of 3.4 ± 0.1 g catechin equivalents/100 g and the highest scavenging activity of $78.6 \pm 6.2\%$ at 0.1 mg/ml by the DPPH method. The properties of the extracting solvents significantly affected the yield, total phenolics and antioxidant activity of buckwheat extract.