

Title Antioxidant activity and total phenolic compounds of pistachio (*Pistachia vera*) hull extracts
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Abstract

In this study, the phenolic antioxidants of pistachio (*Pistachia vera*) hull were extracted by two different solvent extraction methods (solvent and ultrasound-assisted methods) with three different solvents (water, methanol and ethyl acetate) and the results were compared with supercritical fluid extraction (SFE). The total phenolic compounds were determined according to the Folin–Ciocalteu method. Furthermore, the effects of water and methanolic extracts of pistachio hull on the stability of soybean oil during heating at 60 °C (oven test method) were determined. The pistachio hull extract (PHE) was effective in retarding oil deterioration at 60 °C, with activity increasing with concentration in the range 0.02–0.06%. At a concentration of 0.06%, the PHE was similar in activity to BHA and BHT added at 0.02%. Hence, it is clear that pistachio hulls, which at present are often considered as agricultural waste, contain antioxidant that may usefully be extracted and added to foods.