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Influence of baking and extraction methods on the fatty acids and antioxidant activity of the poisonous mushroom *tricholoma terreum* from Turkey

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Mushrooms have long been part of the human nutrition. In recent years, mushrooms have attracted much research attention due to being important natural resources of bioactive compounds, antibacterial, antioxidant, and anticancer agents. *Tricholoma terreum* (Schaeff.) P.Kumm. is an edible mushroom growing in many districts of Europe; however, the fruiting bodies of this wild mushroom was suspected as toxic and should be consumed after cooked. In the present study, *T. terreum* were collected from Muğla, Turkey. The influence of baking on the fatty acid profile and antioxidant activity of the extracts of *T. terreum* obtained by traditional, Soxhlet and ultrasonic assisted extraction technique was investigated. The fatty acid profile and antioxidant properties based on free radical scavenging activity was studied using GC-MS and spectrophotometer, respectively. The fatty acid content and radical scavenning activity of mushroom extracts were varied by using on the bases of different solvent extractions and several extraction techniques. The linoleic and palmitic acid found to be the main fatty acids in baked samples while linoleic, linolenic and oleic acid in unbaked ones. When mushroom was baked, palmitic acid and linoleic acid percentages of all extracts increased, whilst linolenic acid decreased. Among the all extracts, the water extract of unbaked and baked mushroom obtained by Soxhlet extraction was found to be the most active on DPPH• assay. It was observed that the baked mushroom extracts exhibited less activity than those of raw extracts.

Biography

Sevil Yücel has received the PhD at Istanbul Technical University, Department of Chemical Engineering in 1991. She began working at Yildiz Technical University, Department of Bioengineering in 2006 as Assist. Prof. and worked at the same department with the title of Assoc. Prof. between 2009-2014 years. She is still working at Yildiz Technical University, Department of Bioengineering as professor till 2014. Sevil Yücel has many research papers published in SCI indexed journals and by the international indexed journals, book chapters and international meetings.

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