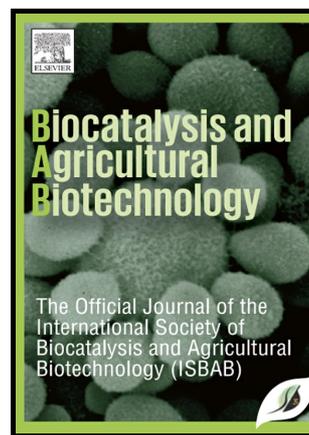


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Total phenolic, flavonoid contents and free radical scavenging capacity of extracts from tubers of *Stachys affinis*

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Abstract

We extracted the metabolites from *Stachys affinis* tubers (SAT) using the ethanol (70 %) and it was concentrated using the rotary evaporator then the dried ethanol extract was fractionated as n-hexane fraction (NHF), dichloromethane fraction (DCMF), ethyl acetate fraction (EAF), n-butanol fraction (NBF) and water fraction (WF). Afterward, the antioxidant activity of these fractions was evaluated. The results revealed that among fractions, the highest antioxidant activity (including 1, 1-Diphenyl-2-picrylhydrazyl (DPPH) radical scavenging, superoxide radical scavenging, superoxide radical scavenging, reducing power, metal-chelating activity and total antioxidant activity) was exhibited in EAF and lowest in NHF. Moreover, the nitrite scavenging activity was found the minimum in WE whereas maximum in EAF. The biochemical content of phenol (587.33 ± 4.18 mg TAE/g) and flavonoid (60.00 ± 0.58 mg QE/g) was exhibited higher in EAF than the other extracted were tested. Overall the present results indicated that higher concentration of the phenol and flavonoid from the EAF might be increased the antioxidant activity and further studies deserve to identify the compound specificity on the enhanced antioxidant activity of EAF.

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