

Antioxidant activities of some selected seaweeds from tuticorin coast.

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ABSTRACT

The antioxidant potential of the acetone and ethanol extract of six seaweeds collected from Tuticorin coast were determined using total antioxidant capacity, DPPH radical scavenging activity, hydrogen peroxide radical scavenging assay and ferric reducing power. The acetone (16.375 ± 0.44 mg gallic acid equivalents/g) and ethanolic extract (12.84 ± 0.39 mg gallic acid equivalents/g) of brown seaweed *Dictyota dichotoma* showed higher phenolic content than all the seaweeds used in this experiment. Higher antioxidant activity (232.76 ± 3.80 mg ascorbic acid/g) was observed in acetone extract of *D. dichotoma* and *Turbinaria ornata* (231.70 ± 2.64 mg ascorbic acid/g) followed by ethanolic extract of *T. ornata* (165.42 ± 1.34 mg ascorbic acid/g). The higher DPPH radical scavenging activity was observed in the acetone extracts of *D. dichotoma* ($57.153 \pm 1.87\%$) and *T. ornata* ($52.071 \pm 1.05\%$). In the present study, the extracts from *Dictyota dichotoma* were found to possess strong antioxidant activity. The antioxidant mechanisms of seaweed extracts may be attributed to their free radical-scavenging ability. In addition, phenolic compounds appear to be responsible for the antioxidant activity of seaweed extracts. On the basis of the results obtained, seaweeds can be used for a variety of beneficial chemopreventive effects. However, further studies on the antioxidative components of seaweed extracts and more in vivo evidence are required.