Antioxidant activity of methanolic extract of green seaweed *Caulerpasertularioides.farlowii*

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Abstract
The antioxidant activity of four samples of *Caulerpasertularioides farlowii* from northern coasts of the Persian Gulf was evaluated. The seaweed samples were collected from four stations including Bandargah, Halileh, Dayyer and Nayband gulf along the coasts of Bushehr province from December 2010 until March 2012. Methanolic extracts of the seaweeds were assessed for their antioxidant activity using DPPH radical scavenging assay with determining the IC_{50} of each extract. Total phenolicswas determined by Folin-Ciocalteu reagent and flavonoid content was evaluated by colorimetric method. Gallic acid and rutin were used for calibration curves. All samples showed antioxidant activity, phenolics and flavonoid contents to various degrees which were significantly different. The highest antioxidant activity with the lowest IC_{50} value, the highest contents of the phenolics and flavonoids contents were found in the extract of *Caulerpasertularioides* sample collected from Dayyer (Dec 2010) and the lowest one was found in the extract of the sample collected from Nyband (Mar 2012). The phenolics and flavonoid contents showed positive correlations with DPPH radical scavenging activity ($p<0.01$). Besides, there was a positive correlation between total phenolics and flavonoid content of the extracts ($p<0.01$). However, it seems that any variation in sea water parameters including human made pollution or weather changing can influence on antioxidative properties of seaweeds.

Keywords: Antioxidant, Total phenolics, Flavonoid, *Caulerpa*, Persian Gulf.