عنوان مقاله:

Seasonal variation of fucoxanthin content in four species of brown seaweeds from Qeshm Island, Persian Gulf and evaluation of their antibacterial and antioxidant activities

محل انتشار:

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خلاصه مقاله:

Fucoxanthin contents of four species of brown seaweeds (Dictyota indica, Padina tenuis, Colpomenia sinuosa and Iyengaria stellata) from intertidal zone of Qeshm Island, Persian Gulf were assessed in summer and winter of ۲۰۱۶. In addition, some physicochemical properties (pH, temperature, salinity and conductivity) of seawater were monitored on the same time. The antibacterial activity of algal extracts was determined by disc diffusion assay, minimum inhibitory and minimum bactericidal concentration tests; and the antioxidant activity through ferric reducing antioxidant power method. The fucoxanthin contents of the studied seaweeds were higher in winter. D. indica showed the highest amount of fucoxanthin (approximately ۴۶۲.۷۹ and ۲۱۰.۷۲ µg/g) in both seasons, which makes it commercially applicable e.g. in food and pharmaceutical industries. Furthermore, D. indica, I. stellata, P. tenuis and C. sinuosa showed a strong ferric reduction power in both seasons. Considerable inhibition zone against gram negative (Escherichia Coli: PTCC۱۳۳۰) and gram positive bacteria (Staphylococcus aureus: PTCC۱۱۱۲) were also observed.

کلمات کلیدی:

Fucoxanthin, Brown seaweed, Antibacterial activity, Antioxidant activity, seasonal variation