

عنوان مقاله:

Evaluation of in vitro Antioxidant Activities and Antibacterial Potentials of Two Brown Algae Extracts; *Lyengaria stellata* and *Padina boergesenii*  
Inhabiting the Persian Gulf, Iran

محل انتشار:

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خلاصه مقاله:

Abstract In-vitro antioxidant activities of semi-purified methanolic extract of *Lyengaria stellata* and *Padina boergesenii* were evaluated using DPPH radical-scavenging activity and reducing power. Total phenolic contents (TPC) and total flavonoid contents (TFC) were also investigated. The acetone fraction of *L. stellata* contained the highest value ( $126.04 \pm 8.65$  mg GAE/g) of TPC, and the highest concentration of TFC ( $94 \pm 0.13$  and  $82 \pm 0.09$  mg GAE/g) was obtained in ethanol fractions of *Lyengaria stellata* and *Padina boergesenii*, respectively. The highest DPPH scavenging activity (88.5%) was observed in the acetone fraction of *L. stellata* (1 mg/ml). The most significant reducing power was observed in the acetone fractions of both seaweeds at 100 mg/ml concentration ( $1.130 \pm 0.040$  and  $0.839 \pm 0.010$ , respectively). Ethanol and acetone fractions of *L. stellata* showed the greatest antibacterial activity ( $29.6 \pm 0.5$  and  $28.0 \pm 0.7$  mm, respectively) against *Staphylococcus aureus*. The minimum value of MIC was observed in acetone fractions of both seaweeds against *S. aureus* ( $50.7$  and  $50.8$   $\mu$ g/ml), while *Salmonella enterica* showed the highest resistance to seaweeds extracts according to the highest MIC values ( $>200$  mg/ml) and the smallest IZ diameters. The extract of both algae showed considerable antioxidant activity according to DPPH radical scavenging activity and reducing power assays.

کلمات کلیدی:

Antibacterial Activity, Antioxidant potential, Persian Gulf, Seaweeds, *Lyengaria stellata*, *Padina boergesenii*

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