عنوان مقاله:

Bioactivity Potential of Gracilaria salicornia, Padina boergesenii, Polycladia myrica: Antibacterial, Antioxidant and Total Phenol Assays

محل انتشار:

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خلاصه مقاله:

Antibacterial activities of MeOH and aqueous extracts of Gracilaria salicornia (C. Agardh) Dawson, Padina boergesenii Allander and Kraft, Polycladia myrica (S. G. Gmelin) Draisma, were examined against Gram-positive bacteria Staphylococcus aureus Rosenbach ۱۸۸۴, Pseudomonas aeruginosa (Schröter ۱۸۷۲) Migula ۱۹۰۰, and Escherichia coli (Migula ۱۸۹۵). Indeed, extracts of wet samples showed ۵.۳±۰.۵۸ to ۳۴.۳±۰.۶ mm antibacterial activity. Furthermore, antioxidant activities of algae were evaluated using DPPH and ABTS radical scavenging methods. Whereas in the DPPH method, aqueous extract of Polycladia myrica showed the highest antioxidant activity, MeOH and aqueous extracts of Gracilaria salicornia exhibited the lowest antioxidant activity. Besides, the antioxidant activity of extracts was higher using the ABTS method. Additionally, aqueous extracts showed the lowest IC۵۰ values in comparison to MeOH extracts. The total phenolic content of the aqueous extract was ۵.۰۷±۰.۰۸ to ۴۶.۷۳±۰.۲۴ mg gallic acid /۱۰۰ g higher than the MeOH extract. The MeOH and aqueous extracts of Padina boergesenii demonstrated the highest TPC among others.

کلمات کلیدی:

Antibacterial, Antioxidant, Total phenol, Bioactive compounds, Seaweed