

**EVALUATION OF ANTIOXIDANT ACTIVITY OF *Eucheuma spinosum* AND
Sargassum crassifolium THROUGH 1, 1 – DIPHENYL – 2 – PICRYLHYDRAZYL
(DPPH) METHOD AND PHYTOCHEMICAL SCREENING**

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ABSTRACT

EVALUATION of ANTIOXIDANT ACTIVITY of *Eucheuma spinosum* and *Sargassum crassifolium* THROUGH 1,1 – DIPHENYL – 2 – PICRYLHYDRAZYL (DPPH) METHOD and PHYTOCHEMICAL SCREENING

The study aims to evaluate the antioxidant activity of *E. spinosum* and *S. crassifolium* that are potential natural sources of antioxidants. The cleaned *E. spinosum* (637.53 g) and *S. crassifolium* (288.46 g) samples were macerated for 48 hours using 80% methanol. The crude methanol, n – hexane and DCM extracts of these two seaweed samples were assayed for their free radical scavenging activities using the DPPH Free Radical Scavenging Method. Ascorbic acid (250 mg/L) and DPPH (20 mg/L) solutions were used as positive and negative controls respectively. The results showed that all three extracts of *E. spinosum* had low free radical scavenging activities, while all three (crude methanol, n- hexane and DCM) extracts of *S. crassifolium* exhibited significant antioxidant activities (50.93%, 61.07% and 57.89% respectively). Since the n- hexane extract of *S. crassifolium* showed the highest antioxidant activity from the samples, its half maximal effective concentration was measured and found to be 79.69 mg/L and was higher than Ascorbic Acid (12.42 mg/L). In contrast to the very low free radical scavenging activity of *E. spinosum*, it contained several phytochemicals whereas only terpenes were present in *S. crassifolium*.