

## ***In vitro* Antioxidant, Anti-inflammatory and Antacid Activities of the Crude Extract of the Marine Algae *Codium sp.***

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*Codium sp.* is one of the marine algae found in Sri Lankan coastal areas. This study aimed to evaluate the antioxidant, anti-inflammatory, and antacid activities of the chloroform-methanolic crude extract of *Codium sp.* The total phenolic (TPC) and total flavonoid contents (TFC) were measured using Folin-Ciocalteu and aluminium chloride colorimetric methods respectively. The antioxidant activities were determined using 2, 2-diphenyl-1-picryl hydrazyl (DPPH) scavenging assay, ferric reducing power assay (FRAP), and oxygen radical absorbance capacity (ORAC). The TPC, TFC, DPPH, FRAP and ORAC values of chloroform-methanolic crude extract of *Codium sp.* were found to be  $24.17 \pm 0.00$  mg Quercetin equivalent/g of dried extract,  $1.94 \pm 0.62$  mg Gallic acid equivalent/g of dried extract,  $73.86 \pm 1.38$  mg Trolox equivalent/g of dried extract,  $20.35 \pm 0.55$  mg Trolox equivalent/g of dried extract, and  $109.42 \pm 3.44$  mg Trolox equivalent/g of dried extract, respectively. The anti-inflammatory activities of the crude extract based on the egg albumin and the bovine serum albumin denaturation methods were  $0.95 \pm 0.20$  mg Diclofenac equivalent/g of dried extract and  $0.84 \pm 0.18$  mg Diclofenac equivalent/g of dried extract. The antacid activity was determined by preliminary and acid-neutralizing capacity tests. According to the results, the pH and the consumed amount of the H<sup>+</sup> ions of the *Codium sp.* were  $3.73 \pm 0.06$  after the addition of HCl and  $0.02 \pm 0.00$  mmol/mL, respectively. The results showed the potential of *Codium sp.* extract as a natural source of substances with anti-inflammatory, antacid, and antioxidant properties for the development of novel dosage forms.

**Keywords:** *antioxidant, antacid, anti-inflammatory, Codium sp.*