

Nutrient content of tropical edible seaweeds, *eucheuma cottonii*, *caulerpa lentillifera* and *sargassum polycystum*.

ABSTRACT

The proximate composition, vitamin C, α -tocopherol, dietary fibers, minerals, fatty acid and amino acid profiles of three tropical edible seaweeds, *Eucheuma cottonii* (Rhodophyta), *Caulerpa lentillifera* (Chlorophyta) and *Sargassum polycystum* (Phaeophyta) were studied. The seaweeds were high in ash (37.15–46.19%) and dietary fibers (25.05–39.67%) and low in lipid content (0.29–1.11%) on dry weight (DW) basis. These seaweeds contained 12.01–15.53% macro-minerals (Na, K, Ca and Mg) and 7.53–71.53 mg.100 g⁻¹ trace minerals (Fe, Zn, Cu, Se and I). The crude protein content of *E. cottonii* (9.76% DW) and *C. lentillifera* (10.41% DW) were higher than that of *S. polycystum* (5.4% DW), and protein chemical scores are between 20 and 67%. The PUFA content of *E. cottonii* was 51.55%, *C. lentillifera* 16.76% and *S. polycystum* 20.34%. Eicosapentaenoic acid (EPA), accounted for 24.98% of all fatty acids in *E. cottonii*. These seaweeds have significant vitamin C (~35 mg.100 g⁻¹) and α -tocopherol (5.85–11.29 mg.100 g⁻¹) contents.

Keyword: Seaweeds; Nutrient composition; Dietary fiber; Minerals; Omega-3 fatty acids; Amino acids.