

**Chemical composition and physicochemical properties of tropical red seaweed,  
*Gracilaria changii***

**ABSTRACT**

A study on the proximate composition, minerals, vitamins, carotenoids, amino acids, fatty acids profiles and some physicochemical properties of freeze dried *Gracilaria changii* was conducted. It was discovered that this seaweed was high in dietary fiber ( $64.74 \pm 0.82\%$ ), low in fat ( $0.30 \pm 0.02\%$ ) and Na/K ratio ( $0.12 \pm 0.02$ ). The total amino acid content was  $91.90 \pm 7.70\%$  mainly essential amino acids ( $55.87 \pm 2.15$  mg g<sup>-1</sup>) which were comparable to FAO/WHO requirements. The fatty acid profiles were dominated by the polyunsaturated fatty acids particularly docosahexaenoic ( $48.36 \pm 6.76\%$ ) which led to low x6/x3, atherogenic, and thrombogenic index. The physicochemical properties of this seaweed namely the water holding and the swelling capacity were comparable to some commercial fiber rich products. This study suggested that *G. changii* could be potentially used as ingredients to improve nutritive value and texture of functional foods for human consumption.