

## **Antioxidant activity, total phenolic and flavonoid contents of selected commercial seaweeds of Sabah, Malaysia**

### **Abstract**

*Kappaphycus alvarezii* (an edible type of red seaweed) is commonly used in South-East Asia as raw material for domestic industries and for export. In the state of Sabah, Malaysia, this species has been commercialized by local people. This study was conducted to evaluate the phytochemicals and antioxidant activity of selected commercial seaweeds available in Sabah market. Three varieties of *Kappaphycus alvarezii*, 'giant', locally known as white and purple seaweeds, 'tambalang hijau', locally known as green seaweed and 'green flower' seaweeds were used. All samples were extracted using 80% methanol. Giant (white seaweed) was found to have the highest total phenolic and total flavonoid contents with the values of  $49.04 \pm 6.05$  mg GAE/100g dried sample and  $15.54 \pm 1.68$  mg CE/100g dried sample; respectively. Giant (white seaweed) also displayed the highest free radical scavenging (DPPH and ABTS assays) and ferric reducing activity as compared to other seaweeds. These findings suggested that Sabah commercial seaweeds contain an acceptable amount of phytochemicals which has a potential as a natural antioxidant that might be beneficial for human health.