

# **Fatty Acid Composition and Antioxidant Activity of Seaweed Extracts from the Southern Sea Coast of Korea**

So Yun Park, Jinik Hwang and Taek-Kyun Lee

Korea Ocean Research & Development Institute, Geoje, Korea

In this study, the twenty species of seaweed from the southern sea coast of Korea were analyzed for the fatty acid composition and for their antioxidant activities. The seaweeds studied were Green (*Enteromorpha linza*, *Ulva pertusa*, *Codium arabicum*, *Codium coactum*), Red (*Undaria pinnatifida*, *Gelidium amansii*, *Gracilaria textorii*, *Gracilaria verrucosa*, *Chondrus ocellatus*, *Schizymenia dubyi*) and Brown (*Colpomenia sinuosa*, *Ecklonia stolonifera*, *Hizikia fusiformis*, *Laminaria japonica*, *Sargassum filicinum*, *S. hemiphyllum*, *S. horneri*, *S. micracanthum*, *S. thunbergii*, *Undaria pinnatifida*). The seaweeds were dried and ground before analysis. The major finding is that saturated fatty acid values were less than the values of monounsaturated fatty acids and polyunsaturated fatty acids in all seaweed species. In addition, antioxidant activity of these seaweeds extracts was evaluated by 1,1-diphenyl-2-picryl-hydrazyl (DPPH) radical scavenging activity and total phenolic content was determined. A positive linear correlation between antioxidant activity and total phenolic content was established.