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Antioxidant and cytotoxic activities of sulfated polysaccharides from five different edible seaweeds

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Abstract

In recent times, there has been a growing interest in the exploration of antioxidants and global trend toward the usage of seaweeds in the food industries. The low molecular weight up to 14 kDa sulfated polysaccharides of seaweeds (*Portieria hornemannii*, *Spyridia hypnoides*, *Asparagopsis taxiformis, Centroceras clavulatum* and *Padina pavonica*) were evaluated for in vitro antioxidant activities and cytotoxic assay using HeLa cell line and also characterized by FTIR. The high yield (7.74% alga dry wt.) of sulfated polysaccharide was observed in *P. hornemannii* followed by *S. hypnoides* (0.69%), *C. clavulaum* (0.55%) and *A. taxiformis* (0.17%). In the brown seaweed *P. pavonica,* the sulfated polysaccharide yield was 2.07%. High amount of sulfate was recorded in the polysaccharide of *A.*