

Antioxidant activity of gamma-irradiated polysaccharides from seaweeds

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Polysaccharides including fucoidan and laminarin from seaweeds, were irradiated with gamma rays, and antioxidative activities were measured. 2-diphenyl-1-picrylhydrazyl radical scavenging ability and reducing power of the gamma irradiated polysaccharides were significantly higher than those non-irradiated. To investigate the change of antioxidant activity, their molecular structure was analyzed. The gamma irradiation decreased the average molecular weights of polysaccharides decreased by gamma irradiation, and UV spectra of irradiated polysaccharides showed increases in the numbers of carboxyl and carbonyl groups and double bonds.