

Antioxidant activity of tuna cooking juice hydrolysate by irradiation

최종일*, 김재훈, 송범석, 김재경, 박종흠, 이주운
한국원자력연구원
(choiji@kaeri.re.kr*)

Tuna protein hydrolysates are of increasing interest because of their potential application as a source of bioactive peptides. Large amounts of tuna cooking juice with proteins and extracts are produced during the process of tuna canning, and these cooking juice wastes cause environmental problems. Therefore, in this study, cooking juice proteins were hydrolyzed by irradiation for their utilization as functional additives. The degree of hydrolysis of tuna cooking juice protein increased depending on the absorbed doses. To investigate the antioxidant activity of the hydrolysate, we performed the ferric reducing antioxidant power assay, and the lipid peroxidation inhibitory and superoxide radical scavenging activities were measured. All of the antioxidant activities were increased in the hydrolysate, suggesting that radiation hydrolysis, which is a simple process that does not require an additive catalysts or an inactivation step, is a promising method for food and environmental industries