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Bioactivity and functionality of gelatin hydrolysates from the skin of oneknife unicornfish (*Naso thynnoides*)**Garner Algo L Alolod**

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Skin gelatin of oneknife unicorn fish (*Naso thynnoides*) was hydrolyzed using a crude protease from *Bacillus sp.* under optimum hydrolysis conditions. Resulting hydrolysates was subjected to centrifugal ultrafiltration to produce fractions of ≤ 10 KDa molecular weight. Antioxidant, antihypertensive and functional properties of the hydrolysate fraction were determined. Results showed that DPPH (a,a-diphenyl-b-picrylhydrazyl) scavenging activity (63%) and ferric reducing antioxidant power (25.90 trolox equivalent (mM/mg)) increased as protein concentration increased. Angiotensin converting enzyme-I (ACE-I) inhibitory activity is directly proportional to the protein concentration with highest value obtained at 33.97% and IC₅₀ determined to be 10.17 μ g/ml. Gel electrophoresis (SDS-PAGE) revealed that the gelatin hydrolysates contain mostly peptides with molecular weight ranging between 5 KDa and 30 KDa. Amino acid profile of the hydrolysates showed that it is rich in residues of glycine (Gly) (40.70%) and glutamic acid+glutamine (Glx) (25.40%). The hydrolysates were soluble over wide pH range (79.38-97.12%). Foaming properties increased while emulsion properties decreased as the gelatin hydrolysate concentration was increased. Results of the present study revealed that oneknife unicornfish gelatin hydrolysates could be a potential food ingredient with antioxidant and antihypertensive properties.

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