Santiago Gallegos-Tintore et al., J Food Process Technol 2014, 5:4
http://dx.doi.org/10.4172/2157-7110.S1.006

OMICS Group Conferences
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3rd International Conference and Exhibition on
Food Processing & Technology
July 21-23, 2014 Hampton Inn Tropicana, Las Vegas, USA

Antioxidant activity of Lion Fish (*Pterois volitans* L.) muscle protein hydrolysates

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The lion fish *(Pterois volitans* L.*)* is a native tropical fish from Indo-Pacific Ocean that has invaded much of the Atlantic Ocean, the Caribbean Sea and Gulf of Mexico. To control the population, the consumption, marketing and sport fishing are proposed. Moreover, epidemiological studies highlight the importance of natural antioxidants especially in the prevention of cancer and cardiovascular disease. Recently a great deal of interest has been expressed regarding marine-derived bioactive ingredients because of their numerous health beneficial effects. Several studies have demonstrated the high potential of the hydrolyzed protein from marine sources for obtaining antioxidant peptides.

Due previous, lion fish muscle protein was used as substrate to generate enzymatic protein hydrolysates. Protein was hydrolysed for 1.5 hour with alcalase. Antioxidant activity was studied at different times of the hydrolytic process. The 60 and 90min protein hydrolysates with a degree of hydrolysis (DH) of 36.8 and 44.9% respectively, showed highest antioxidant activity both about 22.3% and 7.4% for non-hydrolysed protein (NHP).

The SDS-PAGE profile showed the highest DH of the 90min protein hydrolysate finding polypeptides with molecular weight (MW) between 3.2 and 7.9 kDa. Likewise for the NHP two polypeptides with high presence and MW of 52.7 and 46.2 kDa were detected.

Biography

Santiago Gallegos-Tintore has completed his PhD at the age of 36 years from National Polytechnic Institute, Mexico. He has published around than 10 papers in indexed journals. He is currently working as a Research Professor at the Autonomous University of Yucatan, Mexico.

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