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Effect of Enzymatic Fish Protein Hydrolysate from Fish Scrap on the State of Water and Denaturation of Lizard Fish (*Saurida wanieso*) Myofibrils during Dehydration

[Md. Abu Ali KHAN^{1\)}](#), [Md. Anwar HOSSAIN^{1\)}](#), [Kenji HARA^{2\)}](#), [Kiyoshi OSATOMI^{2\)}](#),
[Tadashi ISHIHARA^{2\)}](#) and [Yukinori NOZAKI^{2\)}](#)

1) Graduate School of Science and Technology, Nagasaki University

2) Faculty of Fisheries, Nagasaki University

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Fish protein hydrolysate (FPH) was prepared from scraps of 5 marine species, in order to utilize by-products effectively by protease treatment. Protein was the major component of the FPH ranging 82–86%. The effects of 5% FPH (dried weight/wet weight) on the state of water and the denaturation of lizard fish *Saurida wanieso* myofibrils were evaluated by desorption isotherm curves, Ca-ATPase activity, and differential scanning calorimetry (DSC) during dehydration. The myofibrils with FPH showed a decreased water activity (A_w), while they exhibited significantly higher Ca-ATPase activity compared to myofibrils without FPH (control). The myofibrils with FPH had higher amount of unfrozen water than the control. These results suggest that the FPH suppressed dehydration-induced denaturation, which seems to be attributable to the stabilization of the hydrated water surrounding the myofibrils.

Keywords: [fish protein hydrolysate](#), [Ca-ATPase activity](#), [water activity](#), [unfrozen water](#), [lizard fish](#), [myofibrils](#), [dehydration](#)

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