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Investigation of Relation between Muscle Fiber Destruction and Water Holding Capacity of Hammor (*Epinephelus coioides*) Fillets During Refrigerated Storage

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Abstract

This study was done to investigate the relationship between microstructure destruction and water holding capacity (Water holding capacity, WHC) of Hammor (*Epinephelus coioides*) fillets, after caught and during refrigerated storage (4°C). 30 fresh Hammor samples were provided from Hormozgan Pier Fishing in 2012 and manually filleted. The fillets were stored in a refrigerator for 14 days and pH, WHC, and muscle fibers indexes were evaluated on days 0, 4, 7, 10 and 14 of storage. WHC of fillets decreased during days of storage and the distance between muscle fibers increased ($P<0.05$). Liquid loss and water loss increased from % 13.7 and 12.7 at the initial storage to % 23.9 and 21.3 at the end day of storage, respectively. Changes in the distance between fibers were in the range of % 4.70- 59.25. The results showed that the increase of liquid leakage and decrease of WHC was probably due to destruction of muscle fibers at the end days of storage.

Keywords: *Muscle fibers, Water Holding Capacity, Hammor (Epinephelus coioides) fillets, Refrigerated storage.*