

Changes in Silvery Pomfret (*Pampus argenteus*) Muscle Quality and Protein Physicochemical Properties During Freezing and Correlation Analysis

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SUMMARY. The protein oxidation (pH, salt-soluble and water-soluble protein contents, Ca²⁺-ATPase activity, and carbonyl contents) and texture of pomfret fillets at -18, -25, and -45 °C were evaluated during 0-250 d and the correlation between these indicators was analyzed. The result indicated that pomfret fillet texture was better when the freezing temperature was lower, followed by less protein oxidation. Namely, the pomfret fillets at -45°C showed a better texture than those of pomfret fillets at -18 and -25 °C. Correspondingly, the pomfret fillets at -45°C showed less protein oxidation than those of pomfret fillets at -18 and -25 °C. There was a strong link between the parameters of protein oxidation and the texture of pomfret fillets that had been frozen.

RESUMEN. La oxidación de proteínas (pH, contenido de proteínas solubles en sal y en agua, actividad de Ca²⁺-ATPasa y contenido de carbonilo) y la textura de los filetes de palometa a -18, -25 y -45 °C se evaluaron durante 0-250 días y se analizó la correlación entre estos indicadores. El resultado indicó que la textura del filete de palometa era mejor cuando la temperatura de congelación era más baja, seguida de una menor oxidación de proteínas. Es decir, los filetes de palometa a -45 °C mostraron una mejor textura que los filetes de palometa a -18 y -25 °C. En consecuencia, los filetes de palometa a -45 °C mostraron menos oxidación de proteínas que los filetes de palometa a -18 y -25 °C. Hubo un fuerte vínculo entre los parámetros de oxidación de proteínas y la textura de los filetes de palometa que habían sido congelados.

KEY WORDS: correlation analysis, deep-frozen storage, *Pampus argenteus*, quality changes;

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