

# Effect of high hydrostatic pressure treatment on physical parameters, ultrastructure and shelf life of pre- and post-rigor mortis palm ruff (*Serirolella violacea*) under chilled storage

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© 2018 Elsevier Ltd To identify processing conditions that better maintain palm ruff quality attributes, high hydrostatic pressure (HHP) was applied to pre- and post-rigor fillets. Physical parameters as whiteness index (WI), water holding capacity (WHC), texture and ultrastructure and shelf life were evaluated after the application of 450 and 550 MPa (3 and 4 min) and during cold storage. Pre-rigor fillets retained less water and were softer than post-rigor, although the onset of rigor increased palm ruff's WHC and firmness. Application of HHP whitened palm ruff's dark flesh; however, this effect reverted at the end of the storage. Pressurized post-rigor samples retained less water than the control and storage caused a WHC increase in samples pressurized at 550 MPa, independent on the rigor condition. Post-rigor fillets softened at pressures of 450-550 MPa appearing to have a lower threshold than beef or cod (above 600 MPa). Ultrastructural changes revealed a subtle contraction (7.4%)