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Quality and post harvest losses in off-shore tuna fishery in Suthern and Western coasts of Sri Lanka

Off-shore tuna fishery is increasingly constrained by post harvest losses due to poor handling practices and quality. This study assesses and compares the handling practices, biochemical, and Western coastal areas: Tangalle, Mirrissa, Galle, Beruwala, and Negombo.

Storing time of fish in fish holds of boats, was 9.02 $\pm$ 6.67 d. Fish were staked in 4-5 layers per shelf in fish holds except in Galle. In Galle, fish are stored in narrow spaces of vertically partitioned fish holds.

Ice is use to preserve fish in all boats except at Gall, where, ice-sea water slurry is used. Temperatures of fish stored in boats were 3.24 ± 1.30 °C, 11.32 ± 3.750 °C, 5.15 ± 1.08 °C, 7.42 ± 6.56 °C and 2.14 ± 1.90 °C in Tangalle, Mirrissa, Galle, Beruwala and Negombo respectively. Total volatile base (TVB) content of fish samples, was 21.30 ± 10.86 mg/ 100g and TVB content >25 mg/ 100g was detected in 33% of samples. Tri-methyl amine nitrogen (TMA) content of fish samples was 8.14 ± 5.77 mg/ 100g and TMA content >5mg/ 100g was detected in 48% of samples.

Aerobic plate count > 105 cfu/ g, were detected in 64% of deskinned fish samples. Fecal coliforms and *Escherichia coli* were detected in37% and 31% of deskinned fish samples respectively. All skin-0n fish samples were *E. coli* positive. Ice used for fishing trips, used ice in fish holds, bilge water, and sea water used in cleaning purposes at all sites were *E. coli* positive. Based on sensory assessment, estimated post harvest losses were 31.65 ± 22.62%, 27.20 ± 11.51%, 53.34 ± 6.34%, 31.0 ± 4.2%, and 25.13 ± 5.32%, at Negombo, Beruwala, Mirrissa, Tangalle, and Galle respectively.