

Title Quantitative and qualitative studies on the bacteriological quality of Indian white shrimp (*Penaeus indicus*) stored in dry ice

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Abstract

Indian white shrimp (*Penaeus indicus*) stored in dry ice at the 1:1 ratio were found to be organoleptically suitable for consumption when they were stored for 24 h without reicing. Shrimp stored in water ice at the 1:1 ratio (as control) were acceptable up to 18 h. Shrimp stored in a combination of dry ice and water ice at the ratio of 1:0.2:0.5 were also found to be acceptable up to 24 h. Total bacterial load ranged from 10^6 to 10^9 cfu g⁻¹, while total psychrophiles ranged from 10^3 to 10^6 cfu g⁻¹. Total lactics were found in the levels of 10^2 – 10^6 cfu g⁻¹. H₂S producers were from 10^3 to 10^5 cfu g⁻¹. Lowest temperature of -4.8 °C was observed in shrimps stored in dry ice at 1:1 ratio. Bacterial flora associated with fresh raw shrimp were *Aeromonas*, *Pseudomonas*, *Vibrio*, *Flavobacterium* and *Serratia*. *Aeromonas* constituted 38% of the flora in raw shrimp. *Flavobacterium* (43%), *Pseudomonas* (47%) and *Pseudomonas* (38%) were the dominant bacterial flora in the shrimp stored in dry ice at 1:1 ratio, in the combination package, and in water ice at 1:1 ratio, respectively.