

# Changes in biogenic amines, biochemical and microbial attributes of three spotted crab (*Portunus sanguinolentus*) during iced and refrigerated storage

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## Abstract

Three spotted crab (*Portunus sanguinolentus*) is a preferred variety of crab among seafood consumers. Biochemical, microbial and sensory characters along with formation of biogenic amines of whole crabs stored under iced and refrigerated condition was evaluated. Cadaverine, putrescine and spermidine were the major amines formed during spoilage and a strong correlation between cadaverine and psychrotrophs was observed in refrigerated (0.92) and iced storage (0.86) respectively. Histamine was at lower level and not likely to cause any toxicological problems to consumers. Although TVB-N and TMA-N increased significantly ( $p < 0.01$ ), TVBN was observed as a good indicator of spoilage than TMA-N. Mesophilic and psychrotrophic bacteria crossed 7 log CFU/g on 8th day, rejection day of refrigeration, while it was below spoilage limit in iced storage. A shelf life of 6 and 10 days were observed in storage under refrigeration and icing respectively based on microbiological, biochemical and sensory attributes.