



## Improvement of The Bacteriological Quality of Fish Fillets and Peeled Prawn Available in The Egyptian Markets

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### Abstract

Sixty two samples of chilled fish fillets, 50 samples of iced peeled shrimp and 15 samples each of frozen imported and local peeled shrimp samples were collected from Cairo and Giza markets. Samples were evaluated by sensory and quality attributes (color, odor, texture), chemical deteriorative criteria (pH, TVB-N, TBA) and bacterial criteria (bacterial counts, APC at 35 o C, APC at 7 o C, anaerobes, *Pseudomonas* spp., *Aeromonas* spp., coliform (MPN) and *S. aureus* and isolation and identification of specific pathogens *Vibrio* spp., *E. coli*, *Listeria* spp., *A. hydrophila*, *S. aurerus* and *Y. enterocolitica*, *Salmonella* and *Shigella*. About 82.3% of filets samples were accepted according to the ESS (3494/2005), while 72% of peeled shrimp samples were accepted according to ESS (516/1993), whereas, 100 and 93% of frozen imported and local shrimp samples were accepted. *L. monocytogenes*, *V. parahaemolyticus* and *E. coli* were isolated from fillets and peeled shrimp samples, while *S. monteideo* was isolated from one peeled shrimp sample. Acetic acid (AA) 2% and trisodium phosphate (TSP) 10% dips for 1 min improved the quality and extended the shelf life of fillets by 3 and 6 days, respectively and for 6 fays for peeled shrimp samples. Parboiling of intact shrimps improved the sensory attributes, reduced the initial bacterial counts and extended the shelf life of peeled shrimp samples for about 3 days. Both AA 2% and TSP 10% dips for 1 min significantly reduced counts of *L. monocytogenes*, *S. typhimurium*, *E. coli* O157:H7 experimentally inoculated in fillets and peeled shrimp samples.

### Keywords

fish fillets , shrimp , chemical deteriorative criteria , bacterial criteria , Ess ,