

B-34: Some microbiological characteristics of farm shrimps (*Penaeus monodon*) at harvest and processing

L S Kumarasinghe¹, T S G Fonseka², U Edirisinghe

(¹ *Aqua Gardens, Agro Marines, Hendala, Wattala*, ²*Institute of Post Harvest Technology, NARA, Colombo 15*)

Over 50% of the income from export of fishery products is attributed to farmed shrimps. Bacteriological quality of farmed shrimps is essential in assessing the status of shrimp exports. The present study was conducted to determine the bacterial quality of farmed shrimps (*Penaeus monodon*) at harvest and at the processing site.

Shrimp samples (n=30) were collected at harvesting and 4 different stages at processing. These samples were examined for the total plate counts, total coliforms, faecal coliforms, *E. coli* and *Salmonella*.

The total plate count of the bacteria at harvest ranged from 10^3 to 10^6 cells/g with a mean of 2×10^4 cells/g. The total plate count showed fluctuation at different stages of processing and net increase of the total plate count of frozen products at final sampling site was one log cycle over that at the raw material. Faecal coliforms were not detected in 83% of the samples while 17% of the samples carried faecal coliforms with Most Probable Number (MPN) ranging from 3-100/g. Only 1 sample (3%) was positive for *E. coli* which showed the MPN count of 43/g.

Of the 10 composite samples examined for *Salmonella*, presumptive positive colonies were detected in 8 composite samples taken at harvest, receiving, before washing, after washing and frozen storage. All these isolates were found to be non-*Salmonella* by further biochemical tests such as TSI, Indole, Urease, OMPGS, Methyl red and Lysine decarboxylase.

Total plate counts of contamination of shrimps in relation to faecal coliforms and *E. coli* as well as *Salmonella* in this study were within the limits in International Commission on Microbiology Specification for foods.

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