

**B-63: Some biochemical characteristics of *Vibrios* isolated from diseased shrimp (*Penaeus monodon*)**

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Shrimp culture is a very important agro-based industry in Sri Lanka. There are many constraints to the development of this industry. Disease in shrimp is one of the main constraints. The disease may be due to viruses, fungi, parasites and bacteria. Many pathogenic *vibrios* cause shrimp disease in larval stages and grown ups.

This study was carried out to isolate *Vibrio* spp prevalent in some diseased Shrimp and to investigate biochemical characteristics of isolated *Vibrios*.

Shrimp showing disease symptoms collected from 3 brackish water farms were used for this investigation.

- Sample I - Blackish brown patches on the cephalothorax with soft shell.
- Sample II - Dark brown areas on cephalothorax with soft shell.
- Sample III - Dark brown deposits on the abdomen and water sample from this pond.

Ten grams of samples were weighed specially from the disease affected areas, macerated in 3% salt peptone water and serial dilutions were made. The dilutions were plated in TCBS agar and incubated at 37°C 24 h. *Vibrio* counts were taken and well isolated colonies of common appearance were purified and series of biochemical reactions were carried out.

Fairly high total *Vibrio* counts in the range  $10^4$  -  $10^6$  cells/g were observed in diseased shrimp samples taken for this study. Except for one sample, sucrose positive and sucrose negatives *Vibrios* had fairly equal distribution, while the other sample had slightly higher number of sucrose positive cells.

Biochemical reactions of the *Vibrios* isolated from samples were compared with the biochemical characteristics of 4 important *Vibrio* spp. Some isolates showed characters quite similar to *V. anguillarum*, *V. splendidus*, *V. harveyi*, and *v. fisheri*. The biochemical reactions of the other isolates did not match with biochemical reactions of important disease causing species.

These results indicate that some of *Vibrio* spp which contribute to disease in shrimp examined may be *Vibrios*.