

A MICROBIAL ASSESSMENT FOR A TECHNIQUE OF DEPURATION OF CULTURED FLAT OYSTER, (*Crassostrea madrasensis*) FOR PANADURA ESTUARY

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ABSTRACT

Oysters are commonly consumed in raw form and semi cooked form. Cooking may destroy all the pathogen which would radically change the texture, flavour and taste of the product. Consumption of raw product is known to cause many health hazards such as typhoid, paratyphoid fever, salmonellosis, *Vibrio parahaemolyticus* infection and cholera. When transferred to clean water, they are known to expel digested matter contaminants; chemical and biochemical due to a process known as depuration.

This study was undertaken to determine the effect of a technique of depuration in cultured flat oyster (*Crassostrea madrasensis*) on the efficiencies of elimination of Total Bacterial Counts (TBC), Total Coliform counts (TCC), Faecal Coliform counts (FCC), *E. coli*, *V. parahaemolyticus* and *Salmonella* during six hour intervals, the test temperature was around 27°C and salinity of water was 32ppt. The initial TCC, FCC, and *E. coli* reduced to a level below detection within 24 hours of depuration. While *V. parahaemolyticus* eliminated during 18 hour of depuration. *Salmonella* were negative during the period of depuration.

KEY WORDS : Depuration, Oyster, Paratyphoid, Typhoid, *Salmonella*, *E. coli*, *Vibrio parahaemolyticus*

INTRODUCTION

Oysters, under family *Ostreidae*, are the group that account for largest production of molluscs through aquaculture in many parts of the world. Marine aquaculture may well have begun with oysters, which were cultivated in Europe even during Roman-era (Bardach, 1976). People living in coastal areas in Sri Lanka and other Asian countries are usually known to consume “wild” oysters. In the Old days Sri Lankan specially the population living in the central “Kandyan” region used pearls from “pearl oysters” to make