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**ASSESSMENT OF SAFETY OF OYSTERS (*CRASSOSTREA MADRASENSIS*)
HARVESTED FROM GANGEWADIYA AND KANDAKULIYA IN PUTTALAM
DISTRICT**

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ABSTRACT

The microbiological and chemical quality of the harvested oysters and the surrounding water was tested using standard techniques for enumeration of the indicator organisms, pathogenic microorganism and heavy metals. Oyster samples (n=34) contained Aerobic Plate Count (APC) in the range of 3.0×10^3 to 4.6×10^5 cfu/g. In oyster, Faecal coliforms varied between not detected (ND) to 110 MPN/g whereas *Escherichia coli* ranged from ND to 90 MPN/g. *Salmonella* spp. and *Vibrio cholerae* was absent in all the tested oyster samples. *Vibrio parahaemolyticus* was not found in any of the oyster sample (<3cfu/g). Faecal streptococcus varied between 23 and 200 MPN/g. APC of water samples (n=28) ranged from 2.0×10^2 to 7.0×10^4 cfu/g whereas Coliforms counts varied between ND to 1800+ MPN/g. Faecal coliforms as well as *E. coli* varied from ND to 1600 MPN/g. Water samples tested were free from *V. parahaemolyticus* (<1cfu/g) and *V. cholerae* and *Salmonella* spp. *F. streptococcus* varied from 2.1 to 500 MPN/100ml. Levels of some heavy metals (such as Mercury (Hg), Cadmium (Cd), Arsenic (As) and Lead (Pb)) were also analyzed and they were in the range of 2.93 to 138.86 ppb for Hg (n=21), for Cd (n=21) from 3.95 to 917.36 ppb, for As (n=21) 117.64 to 1458.05 ppb and for Pb (n=18) from ND to 1178.93 ppb. According to obtained results levels of heavy metals in oysters were found below the maximum permissible limits. Care should be taken to deplete oysters harvest from these areas efficiently before consumption.

Keywords: Oysters, microorganisms, heavy metals