

Detection of foodborne *Bacillus cereus* in food

J. N. Ombui, M.O. Otieno, J.G. Nduhiu and J.K. Macharia

Department of Public Health, Pharmacology and Toxicology, Faculty of Veterinary Medicine, University of Nairobi, P.O. Box 29053, Nairobi, Kenya.
E-mail: jnombui@yahoo.com

Market milk samples collected from retail shops in Nairobi, Kenya were analyzed for possible contamination with enterotoxigenic *Bacillus cereus*. *B. cereus* isolates were tested for hemolysin BL using the reverse passive latex agglutination test and non-hemolytic enterotoxin using Tecra ELISA immunoassay. A polymerase chain reaction was done on bacterial colonies in microtitre plates using primers synthesized for the genes of the hemolysin BL and the non-hemolytic enterotoxin. Forty one percent of the milk samples were contaminated with *B. cereus*. Fourteen percent of *B. cereus* isolates produced hemolysin BL and about 80 % produced non-hemolytic enterotoxin. A PCR amplification assay detected the presence of *hbla* gene in all hemolysin BL positive isolates. The study concluded that *B. cereus* occurs in pasteurized milk and their presence poses a potential public health risk. Post pasteurization contamination that is commonly blamed for spoilage of milk products by *B. cereus* is not necessarily the most important source of this organism. PCR amplification assay provide an alternative approach for screening *B. cereus* strains for their potential ability to produce enterotoxins.