

IDENTIFICATION AND ISOLATION OF ANTIMICROBIAL RESISTANCE OF *Clostridium perfringens* FROM PASTEURIZED MILK IN DHAKA CITY

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Executive Summary

The *Clostridium perfringens* is a gram positive rod shaped bacteria that causes food poisoning in both animals and humans. The present study was conducted to isolate and identify these bacteria from pasteurized milk. There were 100 pasteurized milk samples collected from Dhaka city during the periods between July 2022 and June 2023. The samples were divided into 4 groups such as group A, group B, group C and group D. The all collected samples were cultured in the broth media. Six samples from group A (2) and C (4) showed pellicle and turbidity. Among the six suspected samples, two samples from group A (1) and C (1) produced grey white colored colonies in Blood agar media. One sample from group A showed green colored colonies in MacConkey agar media. The TSI slant showed yellow colored due to acid production in case of one sample of group A and this sample was observed as gram positive rod shaped bacteria under microscope. Regarding the bacteriological test, the prevalence of the *Clostridium* species in pasteurized milk was 1% in Dhaka North City Corporation. Detail molecular investigation need for proper isolation and identification; and hygienic management should emphasize for providing safe milk for all.

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