Benha University
Faculty of Veterinary Medicine
Department of Food Hygiene& Control
(Milk Hygiene & Control)

Enterotoxogenic Bacteria in Milk and Some Milk Products

Thesis Submitted to
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Presented *by*

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List of Abbraviations

ANOVA	Analysis of varianlce
APHA	American Public Health Association
B. cereus	*Bacillus cereus*
CFS	Cell free culture supernatant
CFU	Cell forming unit
E. coli	*Escherichia coli*
FAO	Food and Agriculture Organization
FDA	Food and Drug Administration
Gm	Gram
HACCP	Hazard Analysis and Critical Control Point
IDF	International Dairy Federation
ISO	International Organization for Standardization
L. gasseri	*Lactobacillus gasseri*
L. plantarum	*Lactobacillus plantarum*
LAB	Lactic acid producing bacteria
MIRCEN	Microbiological Resource Center
Ml	Milliliter
Mm	Millimeter
PCR	Polymerase Chain Reaction
Ppm	Part per million
Rpm	Round per minute
S. aurus	*Staphylococcus aureus*
SEs	Staphylococcal enterotoxin
STEC	Shiga Toxin Producing *E.coli*
TBX	Trypton bile glucuronic medium
TSB	Tryptic soya broth
WHO	World Health Organization

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Abstract

Title: **Enterotoxogenic Bacteria in Milk and Some Milk Products**

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Abstract:

The study divided into two parts, survey part to detect the prevalence of enterotoxogenic bacteria as *E. coli, B. cereus and S. aureus* in milk and dairy products and experimental part to estimate the ability of lactobacilli spp. and their bacteriocins to control growth of these pathogen in vitro by agar well diffusion technique and experimentally in yoghurt model.

The study was carried out on one hundred and twenty samples of raw milk, raw cream, cheese and plain yoghurt, all were be subjected for bacteriological analysis for detection and identification of *E. coli, B. cereus and S. aureus.*

The antimicrobial effect of lactobacilli strains represented by *L. plantarum* (1%) and *L. gasseri* (1%) only and/or combined with their extracted bactriocins was tested against identified isolated pathogenic strains in yoghurt model.

The results showed that *L. plantarum* (1%) and *L. gasseri* (1%) and their bacteriocins were effective for biological control of isolated pathogens.

Keywords: Enterotoxogenic bacteria, Milk, cheese, lactobacilli, bactriocins.