List of contents

LIST OF TABLES

LIST OF Figures

List of Abbreviations

µg/ml	Microgram/milliliter
ALOA	Agar Listeria Ottaviani and Agosti
BAM	Bacteriological Analytical Manual
CDC	Centers for Disease Control and Prevention
CCPs	Critical Control Points
CFSAN	Center for Food Safety and Applied Nutrition
CAMP	Christie- Atkins Munch Petersone test
CIP	Caseinolytic proteins
FAO	Food Agriculture Organization
FDA	Food and Drug Administration
USFDA	United States Food and Drug Administrations
HACCP	Hazard Analysis Critical Control Point
HBMEC	Human Brain Microvascular Endothelial Cells
ICMSF	International Commission on Microbiological Specification for Food microorganisms
IDF	International Dairy Federation
Iap	Invasion Associated Protein, gene coding for protein p60.
Inl A	Internalin A gene
Inl B	Internalin B gene.
ISO	International organization for standardization
LLO	Listeriolysin O
L.monocytogenes	*Listeria monocytogenes*
L.grayi	*Listeria grayi*
l.ivanovii	*Listeria ivanovii*
L.innocua	*Listeria innocua*
L.seeligeri	*Listeria seeligeri*
L.welshimeri	*Listeria welshimeri*
MLD	Minimum lethal Dose
MPI	Gene coding for metalloprotease protein

OXA	Oxford agar
PALCAM	Polymyxin B-Acriflavin- lithium Chloride Ceftazidime-Aesculin-Mannitol agar base
PCR	Polymerase Chain Reaction
PC-PLC	Phosphatidyl Choline- specific Phospholipase C
PCR-RFLP	Polymerase Chain Reaction-Restriction Fragment Length Polymorphism.
PFGE	Pulsed-Field Gel Electrophoresis
PLC A	Gene encodes citrated Phosphatidyl Inositol-specific Phospholipase C (PI-PLC)
PLC B	Gene encodes Phosphatidyl Choline Phospholipase C.
PRF A	Positive Regulatory Factor gene
R. equi	*Rhodococcus equi*
RAPD	Randomly Amplified Polymorphic DNA
RPM	Round Per Minute
SE	Standard Error
S. aureus	*Staphylococcus aureus*
TSC-YE	Tryptose Sulphate Cycloserine- Yeast Extract
UK	United Kingdom
USA	United States of America
WHO	World Health Organization

7. SUMMARY

Milk and milk products are an excellent media for the growth of numerous microbes especially pathogenic bacteria as listeria, which produces infections to consumer (Listeriosis). Therefore, this study was performed on a total of 280 random samples (40 of each) which were collected from small retails and different supermarkets, street vendors and farmers at Qalubyia Governorate, Egypt, to estimate the prevalence of listeria spp. in raw milk, kareish cheese, domiatti cheese, tallage cheese, fresh cream, soured cream and pasteurized cream with special interest to *L.monocytogenes*, and studying their cultural, biochemical and special reference to some virulence genes. The results of listeria spp. isolation revealed that, 6 out of 280 samples were positive for isolation (2.2%) represented as, one positive sample (0.4%) from raw milk, 2 samples from kareish cheese (0.7%) and Domiatti cheese (0.7%) and one positive sample from pasteurized cream (0.4%).

Listeria spp. failed to be detected in the examined Tallaga cheese, fresh cream and soured cream.

The results of bacteriological examination of examined samples revealed that, a total of 6 (2.2%) isolates of listeria spp. were recovered from 280 samples includes 1 *L.monocytogenes* and 5 *L.grayi*, while *L.monocytogenes* was isolated with an incidence of (2.5%) from raw milk samples only, while, *L. grayi* was isolated with an incidence of (12.5%) from samples of Domiatti cheese 2 (5%), kareish cheese 2 (5%) and one pasteurized cream sample (2.5%).

The results of virulence tests for the isolated *L.monocytogenes* strain showed narrow zone of β-hemolysis on 5% sheep blood agar. Meanwhile, *L. grayi* strain was non-virulent as none of them could produce hemolysis.

The PCR results for *L.monocytogenes* showed that genes (16S rRNA, *inl*A, *inl*B and *hyl*A) were detected in isolated strain. While, *prf* A gene could not be detected. So, the isolated strain was confirmed to be a virulent *L.monocytogenes*.