

CONTENTS

<u>Chapter</u>	<u>Page Number</u>
INTRODUCTION	1
REVIEW OF LITERATURE	7
MATERIALS AND METHODS	32
Culture media used	32
Reagents	38
Reference strains	40
Traditional knowledge	42
Collection of samples	42
Microbiological analysis	43
Characterisation of bacterial isolates	44
Genotypic characterisation of LAB isolates	51
Characterisation of yeast isolates	53
Pathogenic contaminants	56
Technological properties of LAB	58
Acidification and coagulation	58
Antimicrobial and bacteriocin activity	58
Enzymatic profiles by API-zym	59
Phytic acid degradation	60
Biogenic amines	61
Hydrophobicity assay	61

Fermentation dynamics <i>in situ</i>	62
Preparation of gundruk and khalpi using selected strains of LAB	63
Sensory evaluation	64
Proximate composition	66
RESULTS	70
Traditional fermented vegetable products	70
Microbial population	87
Grouping of representative strains	92
Characteristic and identity of LAB	97
Prevalence of LAB	128
Pathogenic contaminants	135
Yeasts	137
Technological properties	139
Acidification	139
Antimicrobial activities	149
Bacteriocin assay	166
Quantification of bacteriocin	166
Enzymatic profiles	171
Degradation of antinutritive factors	175
Screening of biogenic amine producing strains	185

Hydrophobicity of LAB strains	195
Fermentation dynamics <i>in situ</i>	206
Gundruk and khalpi preparation using selected starter strains	212
Proximate composition	216
DISCUSSION	219
Traditional preservation	219
Microorganisms	221
Pathogenic contaminants	225
Yeasts	226
Technological properties	227
Fermentation dynamics	232
Starter culture	234
Proximate composition	236
Conclusion	236
SUMMARY	238
BIBLIOGRAPHY	242