Chapter No.	Particulars	Page No.
	TITLE PAGE	
	APPROVAL	
	CERTIFICATE	
	DECLARATION	i
	BIO-DATA	ii
	ACKNOWLEDGMENTS	iii
	CONTENTS	iv
	LIST OF ABBREVIATIONS AND SYMBOLS	vi
	LIST OF FIGURES	viii
	LIST OF TABLES	xi
	ABSTRACT	xiii
1	INTRODUCTION	1-6
2	REVIEW OF LITERATURE	7-34
2.1	Mango and its Processing	7
2.2	High Pressure Processing	10
2.3	High Pressure Processing System	13
2.4	Effects of High Pressure Processing on Physicochemical Quality Attributes of Fruit Products	18
2.5	Effect of High Pressure on Microorganisms	22
2.6	Effect of High Pressure on Fruit Enzymes	26
2.7	Sensory Aspects of High Pressure Processed Fruit Products	30
3	MATERIALS AND METHODS	35-72
3.1	Chemicals, Microbiological Media and Equipment Used	35
3.2	Preparation of Mango Pulp	35
3.3	Packaging of Mango Pulp	36
3.4	High Pressure Processing	37
3.5	Thermal Treatments	41
3.6	Effect of pH and Total Soluble Solids on Enzymes inactivation during High Pressure Processing	41
3.7	Effect of HPP on Enzymes, Natural Microflora, Inoculated Microorganisms and Physicochemical Quality Attributes of Mango Pulp	45
3.8	Modeling the Inactivation Kinetics of Enzymes, Natural Microflora, Spoilage and Pathogenic Microorganisms during HPP and Thermal Treatments	58

CONTENTS

Chapter No.	Particulars	Page No.
3.9	Optimization of High Pressure Process Parameters for Mango Pulp using Response Surface Methodology	65
3.10	Quality Changes during Storage of Optimized Mango Pulp and Shelf-life Evaluation	68
3.11	Statistical Analysis	71
4	RESULTS AND DISCUSSION	73-158
4.1	Raw Material	73
4.2	Impact of pH and Total Soluble Solids on Enzymes of Mango Pulp during High Pressure Processing	74
4.3	High Pressure Inactivation Kinetics of Enzymes in Mango Pulp	85
4.4	High Pressure Destruction Kinetics of Natural Microflora in Mango Pulp	95
4.5	High Pressure Destruction Kinetics of Selected Spoilage and Pathogenic Microorganisms in Mango Pulp	102
4.6	Effect of High Pressure Processing on Physicochemical Quality Attributes of Mango Pulp	116
4.7	Modeling the Sensory Aspects of Mango Pulp during High Pressure Processing using Fuzzy Logic Technique and its Comparison to Thermal Processing	129
4.8	Optimization of High Pressure Process Parameters for High Quality Mango Pulp and Product Characterization	133
4.9	Changes in Quality of High Pressure and Thermally Processed Mango Pulp during Storage	142
5	SUMMARY AND CONCLUSIONS	159-170
5.1	Experimental	161
5.2	Results Summary	164
5.3	Conclusions	169
	CONTRIBUTIONS BY THE SCHOLAR	171
	FUTURE SCOPE OF RESEARCH	172
	REFERENCES	173-188
	APPENDICES	189-192
Ι	List of Chemicals and Microbiological Media	189
II	List of Equipment	190
III	Fuzzy Logic Sensory Score Card based on 5-Point Scale	191
IV	9-Point Hedonic Sensory Score Card	192
	PATENT, PUBLICATIONS AND PRESENTATION	193