## TABLE OF CONTENT

		•
CHAPTER	TITLE	PAGE NO.
· 1	INTRODUCTION	1-3
2	REVIEW OF LITERATURE	4-14
2.1	Physico-chemical properties of peel	4
2.2	Dietary fiber and its Health benefits	4
2.3	Sources of dietary fibre	5
2.4	Determination of dietary fibre	7 .
2.5	Curd	8
2.6	Physiochemical properties of curd	8
2.7	Fortification of milk and milk products	9
2.8	Fortifiction of food products with dietary fibre	10
2.9	Fortifiction of milk and milk products with dietary fibre	11
2.10	Storage study of curd and yoghurts:	12
3	MATERIALS AND METHODS	15-24
3.1	Materials used	15
3.2	Orange peel powder preparation	15
3.3	Analysis of orange peel powder	16-19
3.3.1	Reducing sugar	16
3.3.2	Protein	16
3.3.3	Fat	17
3.3.4	Crude fiber	17
3.3.5	Dietary fibre	18
3.3.6	Moisture content	19
3.4	Analysis of milk	19-20

3.4.1	Fat	19
3.4.2	Solid not fat	20
3.5	Preparation of Misti dahi (sweet curd)	20
3.6	Fortification	21
3.7	Analysis of product	22-23
3.7.1	Moisture content	22
3.7.2	рН	22
3.7.3	Water activity	22
3.7.4	Syneresis	22
3.7.5	Texture	23
3.7.6	Color	23
3.7.7	Sensory analysis	23
3.8	Storage study of misti dahi	24
3.8.1	Microbiological analysis	24
3.9	Statistical Analysis	24
4	RESULTS AND DISCUSSION	25-43
4.1	Chemical composition of orange peel powder	25
4.2	Physico-chemical analysis of fortified Misti dahi	25-31
4.2.1	Water activity	25
4.2.2	pH	27
4.2.3	Syneresis	27
4.2.4	Moisture content	28
4.2.5	Texture	29
4.2.6	Color	30
4.2.7	Sensory analysis	31
4.3	Storage study	31-42

4.3.1	Effect of storage on pH	32
4.3.2	Effect of storage on water activity	. 33
4.3.3	Effect of storage on syneresis	35
4.3.4	Effect of storage on textural properties	36
4.3.5	Effect of storage on Color	38
4.3.6	Effect of storage on sensory properties	40
4.3.7	Bacterial growth during storage	42
5	SUMMARY AND CONCLUSION	44-46
· · · · · · · · · · · · · · · · · · ·	REFERENCES	47-52
	APPENDIX	53-56

## LIST OF FIGURES

SL.NO.	CONTENT	PAGE NO.
3.1	Flow diagram of orange peel powder preparation	15
3.2	Flow diagram of preparation of Misti dahi	21
4.1	Changes of water activity at different percentage of orange peel powder	26
4.2	Changes of pH due to the addition of different percentage of orange peel powder	27
4.3	Changes of syneresis due to the addition of different percentage of orange peel powder	28
4.4	Changes of moisture content due to the addition of different percentage of orange peel powder	28
4.5	Changes of pH due to storage of curd fortified with orange peel powder.	33
4.6	Changes of a <sub>w</sub> due to storage of curd fortified with orange peel powder	34
4.7	Changes of syneresis due to storage of curd	35
4.8	Storage at refrigerated (7°C) temperature	43
4.9	Set dahi fortified with orange peel powder	43

## LIST OF TABLES

SL.NO.	CONTENT	PAGE NO.
4.1	Chemical composition of orange peel powder.	25
4.2	Change in pH, a <sub>w</sub> , syneresis and moisture content at different percentage of peel.	26
4.3	Textural properties of curd containing different concentration of orange peel powder.	29
4.4	Color values of curd containing different concentration of orange peel powder	30
4.5	Changes of sensory properties at different concentration of orange peel powder	31
4.6	Changes of pH at different days of storage	32
4.7	Changes of water activity at different days of storage	33
4.8	Changes of syneresis at different days of storage	35
4.9	Changes of textural properties due to storage at 7°C	36
4.10	Changes of textural properties due to storage at 25°C temperature	37
4.11	Changes of textural properties due to storage at 37°C temperature	37
4.12	Changes of color due to storage at 7°C temperature	38
4.13	Changes of color due to storage at 25°C temperature	39

4.14	Changes of Color due to storage at 37°C temperature	39
4.15	Results of sensory analysis of curd stored at 7°C temperature	40
4.16	Results of sensory analysis of curd stored at 25°C temperature	40
4.17	Results of sensory analysis of curd stored at 37°C temperature	41
4.18	Growth of total microbial load during storage	42

## LIST OF ABBREVIATIONS

%	Percent
NaOH	Sodium Hydroxide
HCl	Hydrochloric acid
H <sub>2</sub> SO <sub>4</sub>	Sulphuric acid
min	Minute
nm	Nano meter
g	Gram
°C	Degree Centigrade
cfu	Colony forming unit
rpm	Rotation per minute
ANOVA	Analysis of Variance
μg	Microgram
d.b	Dry basis
S.D	Standard Deviation
Fig	Figure
i.e	that is
mg	Milligram
ml	Milliliter
μm	Micrometer
a <sub>w</sub>	Water activity
M	Molar
h	Hour
mm	Milimeter
sec	Second
w.b	Wet basis