CONTENTS

CHAPTER	Page no
1 INTRODUCTION	1-3
2 REVIEW OF LITERATURE	4-13
2.1 Dietary fibre	
2.2 Classification of Dietary fibre	
2.3 Physicochemical properties	
2.4 Health benefits	
2.5 Recommendation for fibre intake	•
2.6 Sources of dietary fibre	
2.7 Dietary fibre contents in some by-products	
2.8 Antioxidants	
2.9 Some research review on banana peel	
2.10 Importance of 'Bhim kol' banana	
2.11 Cookies as a food model	
3 MATERIALS AND METHODS	14.20
	14-29
3.1 Materials 3.2 Methods	
	14
3.2.1 Processing of Banana peel powder 3.2.2 Proximate analysis of Peel powder	15-19
5.2.2 I Toximate analysis of I cel powder	15-19
3.2.4 Dietary fibre analysis of Peel powder	19-21
3.2.5 Determination of antioxidant activity, TPC, Total flavonoid content	21-23
3.2.6 Preparation of fibre rich fraction of banana peel powder	23
3.2.7 Some physicochemical properties of Fibre rich fraction of peel power	der 23-24
3.2.7.1 Water holding capacity (WHC) and oil-holding capacity (O	HC)
3.2.7.2 Solubility and swelling power determination	
3.2.7.3 Estimation of bulk density	
3.2.7.4 pH	
3.2.8 Processing of cookies	25

3.2.9 Analysis Of some Physical Characteristics of cookies	26
3.2.10 Proximate compositional analysis of cookies	26-27
3.2.11 Analysis of Total Dietary Fibre of cookies (TDF)	27
3.2.12 Analysis of free radical scavenging percentage of cookies by DPPH method	27
3.2.13 Sensory analysis	27
3.2.14 Mathematical modeling for moisture sorption isotherm of cookies	27-28
3.2.15 Statistical analysis	
4. RESULTS AND DISCUSSIONS	30-44
5. CONCLUSION	45
6. REFERENCE	46-50

List of Tables

Tables	Page no.	
Table 1 Formulation of ingredients	25	
Table 2 water activity of saturated salt solutions at 40°c	28	
Table 3 Models and equations	28	
Table 4 Weight percentage of Ripe Bhim kol peel	30	
Table 5 Proximate composition of banana peel powder	32	
Table 6 Antioxidant activity, Total phenolic content (TPC) and To	tal flavonoid content	33
Table 7 Physicochemical properties of Fibre rich fraction of pure cellulose	f Peel powder comparing v	with
pure cellulose	35	
Table 8 physical characteristics of cookies	36	
Table 9 colour of cookies	37	
Table 10 Proximate analysis of cookies	38	
Table 11 TDF and Free radical scavenging % analysis of cookies	40	
Table 12 Sensory analysis of cookies	. 42	
Table 12 Comparisons of the models	40	

List of Figures

Figures		Pag
Figure 1	Bhim kol	30
Figure 2	Bhim kol peel powder	31
Figure 3	TPC standard curve	33
Figure 4	Qercetin standard curve	33
Figure 5	Picture of cookies	37
Figure 6	Graph of TDF vs BPP % level of Cookies	39
Figure 7	Peel powder concentration vs % Scavenging	40
Figure 8	Sensory analysis graph of cookies	41
Figure 9	Adsorption isotherm curve	43
Figure 10	Curve of GAB model	44
Figure 11	L curve of BET model	44
Figure 12	curve of Hasley model	44