CONTENTS

	Page
INTRODUCTION	1
AIM AND SCOPE OF WORK	5
REVIEW OF LITERATURE	7
MATERIALS AND METHODS	31
I. Preparation of the aroma concentrate	•
(General Procedure).	33
II. Fractionation of aroma concentrate.	36
III.Gas liquid chromatographic analysis.	3,7
RESULTS AND DISCUSSION	40.
- Aroma of the roasted beef.	40
- Aroma of roasted camel meat.	•••• 52
- Aroma of adulterated beef meat with camel	
meat.	54
- Volatile components of roasted beef adul-	
terated with hydrolyzed soybean proteins	
(HSP).	90
- Volatile components of the adulterated	
roasted beef meat with camel meat and HSP.	98
- Model system aroma	105
 Sulphur containing amino acid and sugar 	
(Model System).	111
-Volatile components of three ground beef	
samples containing HSP from the local market.	12Ò
SUMMARY	129
GENERAL CONCLUSION	133
REFERENCES	136
ARABIC SUMMARY	

LIST OF TABLES

<u> Table</u>	•	<u>P</u>	age
1	Volatile components of roasted beef	••••	48
2	Volatile components of roasted camel meat	••••	55
3	Aroma concentrates of adulterated beef (B:C) admixtures.	••••	63
4	Volatile components of neutral-acidic fraction of total beef and (B:C) admixtures.	••••	71
5	Volatile components of basic fraction of total body and (B:C) admixtures.	••••	79
6	The total area percentage of aliphatic aldehydes, ketons, alcohols, esters, lactones and furans in beef, camel and their admixtures (B:C).	••••	87
7	The total area percentage of pyrazine and oxazoles in beef, camel and their admixtures (B:C).	••••	88
8	Aroma concentrates of adulterated beef (B:HSP).	••••	93
9	Aroma concentrates of adulterated beef (B:C:HSP).	1	.00
10	Volatile components of model system (serine, glutamic, glycine, ≪ -alanine, leucine, isoleucine and glucose) with and without beef fat.	1	.07
11	Volatile components of model system (serine + cysteine + glutamic + glucose)	1	.1 2
12	Volatile components of model system (proline + cysteine + methionine + ribose)	1	16
13	Aroma concentrates of purchased samples (beef minced meat + soybean protein).	••••1	23
14	Total area percentage of short chain aldehydes in beef, HSP, 70:30 (B:HSP) and purchased samples A, B and C.	1	. 2 <i>j</i> 6

LIST OF FIGURES

Figure			Page
1	Volatile components of roasted beef and its neutral-acidic and basic fractions.	••••	51
2	Volatile components of roasted camel and its neutral-acidic and basic fractions.	••••	58
3	Aroma concentrates of adulterated beef with camel meat (B:C) in different ratios .	••••	66
4	Volatile components of neutral-acidic fraction of total beef and (B:C) admixtures.	••••	74
5	Volatile components of basic fraction of total beef and (B:C) admixtures.	• • •, •	82
6	Effect of adding camel meat to beef meat on the concentration % of triethyl-pyrazine.	••••	89
7	Aroma concentrates of adulterated beef with hydrolyzed soybean protein (B:HSP) in different ratios.	••••	96
8	Aroma concentrates of adulterated beef with camel meat and hydrolymed soybean protein (B:C:HSP).	••••	103
9	Volatile components of model system (M.S) (serine, glutamic, glycine, ≪-alanine, leucine, isoleucine and glucose) with and without beef fat.		110
10	Volatile components of model system (serine + cysteine + glutamic + glucose).	• • •	11.9
11	Volatile components of system (proline + cysteine + methionine + ribose°).	• • • •	119
12	Aroma concentrates of purchased samples (A, B and C) beef minced meat + soybean protein.	• • •	127

LIST OF ABBREVIATIONS

B : Beef

C : Camel

HSP : Hydrolyzed soybean protein

TSP : Textured soyprotein

DSP : Defatted soybean protein

CP : Chick pea

MDB : Mechanically deboned beef

MDCM : Mechanically debonted chicken meat

HVP : Hydrolyzed vegetable protein

 \sim -B-USA : \sim -B-unsaturated aldehyde

T : Trace

M.S. : Model System