# CONTENTS

<table>
<thead>
<tr>
<th>CHAPTER</th>
<th>TITLE</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Introduction</td>
<td>1 - 3</td>
</tr>
<tr>
<td>II</td>
<td>Review of Literature</td>
<td>4 - 58</td>
</tr>
<tr>
<td>III</td>
<td>Object of the present work: Plan of work</td>
<td>59 - 61</td>
</tr>
<tr>
<td>IV</td>
<td>Experimental: Materials and Methods</td>
<td>62 - 72</td>
</tr>
<tr>
<td>V</td>
<td>Results and Discussion</td>
<td>73 - 124</td>
</tr>
</tbody>
</table>

1) Contents of 'volatile', 'total' and 'head space' carbonyls in ghee and changes during storage | 73 - 79|

2) Isolation, fractionation, characterization and estimation of the 'volatile', 'total' and 'head space' carbonyls in ghee and changes during storage | 79 - 113|

a) Isolation | 79 - 80|

b) Fractionation, characterization and estimation | 80 - 113|

i) TLC method for the separation of monocarbonyl-DNP:s from dicarbonyl-bis-DNPs | 81 - 84|

ii) Class separation of monocarbonyl-DNPs | 84 - 91|

iii) Estimation of monocarbonyl classes in ghee | 91 - 97|

iv) TLC separation of the monocarbonyl-DNP-classes into individual components | 97 - 99|

v) GLC separation of the monocarbonyl-DNP-classes into individual components | 99 - 102|

vi) Variations in the contents of individual monocarbonyls in ghee during storage | 103 - 112|
vii) Fractionation of dicarbonyl-DNPs isolated from ghee 112 - 113

3) Variations due to storage in the 'volatile' and 'total' carbonyl contents of ghee prepared from fresh and 'ripened' butter 113 - 117

4) Isolation, fractionation, characterization and estimation of 'volatile' and 'total carbonyls in ghee prepared from fresh and 'ripened' butter, and changes in the make-up on storage 117 - 124

VI Summary 125 - 130

Tables (1 - 44)

Graphs and Figures (1 - 17)

References 1 - XI