

LIST OF FIGURES

S. No.	Figure	Page No.
1.1:	Folate and its role in various metabolic functions in Human body	6
1.2	a-d) Structure and name of some folate derivatives with fully oxidised, partially oxidised and fully reduced pteridine ring. (Adapted from Patring, 2007)	9
1.3	Whole folate biosynthesis pathway and enzymes involved in the biosynthesis pathway	12
3.1	a) Folic acid concentration vs absorbance at 600 nm standard curve b) Linearization of the standard curve for the ease of the calculation	57
4.1	Time course study profile of folate production by the <i>Streptococcus thermophilus</i> and <i>Lactobacillus helveticus</i> in MRS medium	69
4.2	Time course study profile of folate production by the <i>Streptococcus thermophilus</i> and <i>Lactobacillus helveticus</i> in reconstituted skim milk medium	70
4.3	Comparative chart of folate production by <i>Streptococcus thermophilus</i> in MRS medium and reconstituted skim milk medium	71
4.4	Comparative chart of folate production by <i>Lactobacillus helveticus</i> in MRS medium and reconstituted skim milk medium	72
4.5	Growth Kinetics profile of both the folate Producer strains	73
4.6	HPLC Chromatogram of Standard folic acid solution	80
4.7	HPLC Chromatogram of Uninoculated milk sample	80
4.8	HPLC Chromatogram of fermented milk produced by the <i>S. thermophilus</i>	81
4.9	Effect of temperature on folate production	83
4.10	Effect of pH on folate production	84
4.11	Effect of inoculum age on folate production	85
4.12	Effect of inoculum volume on folate production	86
4.13	Effect of different carbon sources on folate production	87

4.14	Effect of different precursors and prebiotic addition on folate production	88
4.15	Pareto chart on the basis of PBD showing significant factors for the folate production	93
4.16	Contour plot for folate production showing the synergistic effects of (a) Mannitol and PABA, (b) Mannitol and Glutamate, (c) Glutamate and PABA, (d) PABA and Lactose, (e) Mannitol and lactose, and (f) Gluatamte and lactose	100-102
4.17	Comparative profile of folate production by the free and immobilized cells of <i>S. thermophilus</i> in calcium alginate beads	105
4.18	Folate production profile in fruit cake by the <i>S. thermophilus</i>	106
4.19	Folate production profile in orange juice by the <i>S. thermophilus</i>	107
4.20	Comparative folate production profile in orange juice by the <i>S. thermophilus</i> without any additive, with PABA and glutamate addition	108
4.21	Folate production profile in tomato juice by the <i>S. thermophilus</i>	109
4.22	Comparative folate production profile in tomato juice by the <i>S. thermophilus</i> without any additive, with PABA and glutamate addition	110