ACKNOWLEDGEMENTS

I take this opportunity to express my deep sense of gratitude and sincere thanks to my revered Guruji **Prof. Vasdev Singh** for his in depth guidance, regular encouragement and invaluable suggestions through out the work.

I express my sincere regards to **Dr. M.H. Divekar**, Professor and Head, Chemical Engineering Department for his help, motivation and cooperation. I also heartily acknowledge the help extended by other faculty and staff members of the Department.

My special thanks are also to **Dr. Datta Madamwar**, Professor and Head, Post graduate Department of Biosciences, S.P. University, V.V. Nagar for extending the facilities during training taken at his Department under the scheme of **Young Scientist Fellowship** (**YSF**), awarded by **GUJCOST** (Gujarat Council on Science and Technology, Department of Science and Technology, Government of Gujarat).

I wish to express my profound sense of gratitude to **Dr. S.L. Oswal**, Professor, Department of Chemistry, Veer Narmad South Gujarat University(VNSGU) Surat for his untiring help. I am also thankful to **Shri K.K. Vithani**, Chairman, Farmson group of industries, Baroda, **Dr. R. V. Jasra**, Deputy Manager, Central Salt and Marine Centre of Research Institute (CSMCRI), Bhavnagar, **Dr. Manocha**, Head, Department of Material Science, S.P.University, V.V.Nagar, **Shri Madhukar Gandhi**, Director, Pollucon Labs. Pvt. Ltd, Surat, **Dr. P.B. Desai**, Diretor, SICE, Surat, **Mr. G.B. Vasavada**, Scientist, GPCB, Bharuch, **Dr. P.V. Desai**, Professor, Dept. of Biosciences, VNSGU and my students for their miscellaneous help. I also thank **Mr. Hasmukh Dudhat** and **Dr. Jigisha Parikh** for their moral support.

I am really thankful to the management of my work place Sarvajanik College of Engg. and Tech., Surat for the consideration and support.

I am short of words to express my inner sentiments towards my family members especially to wife **Falguni**, **mother**, **father** and **brother** for their support, which has made it possible to reach the end of this voyage. My daughter **Siddhi** and nephew **Akshat** also need a special mention here.

I also wish to thank all those who have contributed directly or indirectly but are not be acknowledged here.

DEEPAK MOHANLAL JAIN