Acknowledgement

I take this opportunity with immense pleasure to express my deep sense of gratitude to my teacher and research guide Dr. Ganesh Pandey, who has helped me a lot to learn and think more about chemistry. I thank him for his excellent guidance, constant encouragement, sincere advice, friendship and unstinted support during all the tough times of my Ph. D. life. I do sincerely acknowledge the freedom rendered to me by him for independent thinking, planning and executing the research. I consider very fortunate for my association with him which has given a decisive turn and a significant boost in my career.

Special thanks to all my present colleagues Dr. (Mrs.) Gadre, Dr. Singh, Nagesh, Sahoo, Murugan, Kapur, Tiwari, Rani, Late Mal, Upal, Prabal, Srinivas, Sanjay, Balakrishna, and Inderesh for maintaining a warm and a very cheerful atmosphere in the lab. They made working the lab very enjoyable. Special acknowledgements to Dr. (Mrs.) Gadre, Akhil Sahoo, Mrs. Kulkarni, Aditya and all labmates for taking trouble in bringing out the thesis.

Help from the spectroscopy and mass groups is gratefully acknowledged. I sincerely thank Mr. A. G. Samuel and Dr. Rajmohan for helpful discussions and Mrs. Phalgune, Dr. Sanjayan, Mr. Sathe, Rupali and Mrs. Shanta Kumari for their kind cooperation.

I would like to specially thank to my senior colleagues Mohanakrishnan, Seshu Babu, Saumenda, Manasda, Debasisda, Trusar, Partha, Sochan, Maji and my all friends in NCL campus and GJ hostel for their cheerful company which made my stay at NCL memorable one.

Special thanks are due to my professor Dr. K. S. Mukherjee who taught me the basic chemistry during my M.Sc studies.

It is my great pleasure to thank my parents, sister-in-law, brother, nephew and my other family members for their blessings, love, care and continuous encouragements throughout my education.

Finally I thank Dr. K. N. Ganesh, Head, Division of Organic Chemistry (Syn.) and Director, National Chemical Laboratory, Pune for providing infrastructural facilities to complete my work successfully. I am also thankful to CSIR, New Delhi for the financial assistance.

Joydev Kumar Laha