ACKNOWLEDGEMENTS

Constant inspiration and encouragement given by all concerned was the driving force that enabled me to submit this thesis in the present form. Guidance, direction, co-operation, love and care came in my way. At this moment, it is a pleasant task to express my gratitude to all those who contributed in many ways to the success of this research and made it a memorable experience for me.

Firstly, I offer my adoration to Almighty God who began this work in me and carried it to completion. It is He who has blessed me with the people whose names I feel privileged to mention here.

It’s indeed like reaching a milestone in the long journey of life. As I tide over this phase of my life, I sincerely thank the creator for making me follow the footsteps and the path shown by my esteemed guide Dr. Nirmal Kumar J. I., Professor and Head, P.G. Department of Environmental Science and Technology, ISTAR, for his encouraging words that enabled me to act with quality and precision. I appreciate all his contributions of time, ideas, immense patience, incredible moral support, immaculate guidance and financial support to make my Ph.D. experience productive and stimulating. Under his guidance, I successfully overcame many difficulties and learned a lot. Financial assistance provided by the University Grant Commission (UGC), New Delhi, Government of India, also needs to be highly acknowledged.

It is my great privilege to express my profound thanks and immense sense of gratitude to Dr. P. M. Udani, Director, ISTAR, Prof. J. H. Patel, Ex Director and Dr. Marlin Thomas, I/C Director for providing necessary laboratory facilities during my research work. I am also grateful to Dr. Sanjay Patel and late Dr. V. S. Patel, Director, SICART for providing with the managerial support and instrumental facilities at Sophisticated Instrumentation Centre for Advanced Research and Testing (SICART). My Special thanks to Dr. M. R. Tiwari, Ms. Rima Sheth and Dr. Gautam R. Chauhan for technical assistance during analysis of the samples on GC, HPLC and FTIR. I thank Mr. M.C. Solanki, Mr. Prahlad Patel and Mrs. Dipti Patel, Staff, SICART for providing necessary assistance in the documentation work.

I express my deep gratitude to the faculty Dr. Hiren B. Soni and Mrs. Dhruti Patel for their constant support, encouragement and valuable suggestions. I would like to convey my eternal
gratefulness to Dr. Rita N. Kumar, HOD, Department of Biological and Environmental Sciences, N.V. PAS. Her motivation and wide knowledge have been of great value for me.

I am indebted to my fellow colleagues for providing a stimulating and scientific environment. My thanks go in particular to Ms. Shamiyan Khan, Ms. Nidhi Parmar, Ms. Megha Barot, Ms. Hiral Soni, Ms. Sheju Thomas, Ms. Miral Patel, and Ms. Kavita Thakur for their unconditional help, encouragement, cooperation, and for making a pleasant work atmosphere in lab. I wish to thank my best friends Prakash, Sweta, Hiral, Nida, Mitisha, Mahesh, Karan, Ravi and Buddy for their constant love, care and moral support throughout which kept me buoyant.

My special thanks to Mrs. Parul Thakkar, Mr. Hitesh Patel, Mr. Ritesh Jani, Mr. Pramod Parekh, Mr. Vijay Patel, Mr. Kamlesh Patel and the other non-teaching staff of ISTAR and SICART for their assistance in course of the work.

Very special thanks to Mr. Sanjay Lal, Assistant Professor, ARIBAS and Dr. C. B. Upasani, Director, Jyoti Om Chemical Research Centre, Ankleshwar for providing me first platform to learn research.

It is a matter of pride and honour to acknowledge my parents Mrs. Mrudulaben Patel, my late father Mr. Girishchandra Patel, without whose support this work would have not been accomplished. Words fall short for their unconditional love, support and cooperation right from the beginning till date. My special thanks to my elder sisters, my younger brother Nikunj and tiny tots Aarush and Jayani for all the love. I extended my thanks to my cousins and all family members whose motivation, joyful talk, initiation and utmost care, for keeping up patience with me during my hard times and supporting me throughout the research.

Last, but not the least, I would like thank to all my friends and well-wishers who are involved directly or indirectly for their moral support and encouragement during the execution of this task.

Jignasabahen Girishchandra Patel