ACKNOWLEDGEMENT

It is matter of great pleasure and proud privilege for me to express my heartfelt sense of gratitude towards all those personalities who have always lent a hand in my pursuit for knowledge in diverse ways. I wish to thank each one of them from the bottom of my heart.

Therefore first and foremost I bow my head humbly before ALMIGHTY GOD for making me much capable that I could adopt and finish this important task. I am highly indebted intellectually to my guide Dr. Kanuprasad D. Patel, Associate Professor, Chemistry Department, V. P. & R. P. T. P. Science College, Sardar Patel University, who has helped me at each and every stage of my research work with patience and enthusiasm. It could have hardly been possible for me to undertake this research venture without his precious, intellectual, knowledgeable and valuable suggestions. I am indebted to his more than he knows.

I am very thankful to Charuter Vidya Mandal and all Principals (V. P. & R. P. T. P. Science College), Dr. D. J. Desai (Ex-Principal), Mr. K. M. Patel (Ex-1/C-Principal) and Dr. B. D. Patel, for his keen interest in the research, and for providing all necessary laboratory and library facilities. I also owe to Dr. B. C. Dixit, Associate Professor and Head, Chemistry Department and to all the other Teaching and Non teaching Staff Members of the V. P. & R. P. T. P. Science College for their relevant support to me.

My parents deserve special mention for their inseparable support and prayers. My success today had its roots in the inspiration provided by my Parents, Mr. Chimanbhai R. Patel and Mrs. Daxaben C. Patel. They are the ones who have born the major brunt of difficulties to make my study comfortable, enjoyable from the very beginning till the end.

I gratefully acknowledge the important and valuable role of my older brother Sumit and his wife Nikita for their selfless love and providing encouragement in my endeavor to carry out this research from beginning to end. I am very delighted to acknowledge my little sweet niece Misha for unwind me during such a hard task.
I express heartily feelings to all my colleagues Dr. Gaurang Kharadi, Dr. Ravi Patel, Dr. Mrs. Trupti Darji, Dr. Gautam Chauhan, Dr. Chandresh Jagani, Mr. Atul Patel, Mr. Hitesh Dholoriya, Mr. Ketan Patel, Mr. Kryur Kamani, Mr. Tarosh Patel, Mr. Satish Vanpria, Bhavesh Pansuriya, Harshad Kathrotiya and Tarun Akhaja for their kind help during the course of my work. Words fail me to express my appreciation to my friends Arpan Patel, Bhavini Patel, Jaymin Patel, Harshit Patel, Hetal Patel, Ankit Thakkar, Rikesh Patel, Jalpa Patel, Bhautish Patel, Kunjan Patel, Anshul Pandya, Kalpit Vaidya, Hiral Patel, Sharad Patel, Sagar Patel, Minesh Dave, Hardik Patel, Brijesh Patel, Jayesh Patel, Priyank Patel and Hardik Bhatt for their co-operation throughout research work. I am specially very thankful to Dr. Bharatbhai Z. Dholakiya, SVNIT, Surat for his kind help during the course of my work.

I am also grateful to Sophisticated Instrumentation centre for Applied Research and Testing (SICART), Vallabh Vidyannagar, Sophisticated Analytical Instrumentation Facility (SAIF), RSIC, Punjab University, Chandigarh, IIT Bombay, Bombay, Vaibhav Analytical Service, Ahmedabad and Microcare Laboratory, Surat.

Finally, I would like to thank everybody who was important to the successful realization of thesis, as well as expressing my apology that I could not mention personally one by one.

Date: Jiten C. Patel