Acknowledgement

It is my profound sense of gratitude and indebtedness to my mentor, Late **Dr. N.K. Patel**, Professor, Department of Chemistry, Sardar Patel University, whose vigilant guidance had always helped me to overcome the difficult situation, constructive suggestion, continuous encouragement and fatherly love has been much important throughout the pursuance of the research tenure.

I am heartily thankful to **Dr. H. S. Patel**, Head and Professor, Department of Chemistry, Sardar Patel University, for providing me research and laboratory facilities.

Words are insufficient to express my gratitude to my father **Manubhai Ambalal Patel** and beloved mother **Shri Shushilaben M. Patel**. The present work would have not been possible without their indispensable help, patience and encouragement in all my endeavors. I heartily acknowledge my elder late brothers **Hemant Patel**, and my sister **Jaimini** love, constant concern and encouraging motivation. I am grateful to my uncle **Arvindbhai** for their precious contributions to my life and achievement. I am indebted to my cousin **Hiren** and my aunty **Alkaben**. I sincerely express my gratitude to late grandfather **Ishwarbhai Parsotamdas Patel** and late grandmother **Revaben Ishwarbhai Patel** and his family and for their timely help and worthy suggestions.

The successful completion of research work depends to a large extent on analytical services. I am heartily thankful to **Dr. Navin Talpada**, Microanalyst, Department of Chemistry, Sardar Patel University who has helped in several analysis work needs throughout
my research work, I wish to convey my sincere thanks to the Sophisticated Instrumentation Centre GIRDA for TGA, DSC analysis.

Special thanks are extended to all teaching and non-teaching staff members of the Department of Chemistry, Sardar Patel University, for their benevolent cooperation. A special word of appreciation for my friends Dr. Mehul Patel, Nirmithbhai, Chirag patel, Sanket Jani, Premal Panchal, Vivek Dave, Arvind, Miteshbhai, Ketan Patel, Ankjt Shah, Ankjt Patel, Dipen Mahida, Amit Patel, Amar Shah, Vikash Patel, Chaitanya Bhavsar, Maulik Rathod, Pavan patel, Dr. Brijeshbhai M. Patel, Shivam Patel, Ravi Thakkar, Sagar Patel, Bhavik Patel and my street friends.

My acknowledgement would not be complete without expressing due regards and gratitude to all who have helped me directly or indirectly throughout this study for their cooperation and patience without which this study would not have been possible.

Last but not least, I offer my prayer to Lord Shiv and my divine Guru Shri Sai Baba without whose blessings nothing would have been possible.

Bhaumik M. Patel