ACKNOWLEDGEMENT

Happiness is the real sense of fulfillment that comes from hard work. It is said that sincerity and hard work breed success and these are precisely the qualities which I have found in my guide as a source of constant inspiration. It has been an honor to be her first Ph.D. student. The joy and enthusiasm she has for her research was contagious and motivational for me, even during tough times in the Ph.D. pursuit. I greatly indebted to my research guide, respected, Dr. (Smt.) Anjali S. Rajbhoj, Associate Professor, Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad for her inspiring guidance, stimulating discussions and constant encouragement throughout the present investigation, which enabled me to complete this work.

It gives me immense pleasure to express my deep sense of gratitude to Dr. S. T. Gaikwad for his guidance and continuous inspiration during the tenure of my research work.

I am grateful to Dr. C. H. Gill, professor and Head, Department of Chemistry, Dr. B. A. M. University, Aurangabad for generously providing all necessary facilities. I am highly thankful to Dr. M. S. Nimse, Dr. A. J. Pathan and Dr. R. Sharma for their guidance and necessary cooperation to execute this work.

I also owe my gratefulness to my teachers, Dr. T. K. Chondhekar, Dr. B. R. Arbad, Dr. M. S. Shingare, Dr. R. A. Mane, Dr. M. K. Lande, Mr. S. R. Sonone, Dr. S. G. Shankarwar, Dr. G. M. Bondle, Dr. B. B. Shingate, Dr. B. R. Sathe, and Dr. A. S. Chavan Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad for their time to time guidance and valuable suggestions and encouragement to execute this work.

I am appreciative to Late Dr. Yuvraj Gudage and Dr. Arindam Ghosh for their ever willing help and kind cooperation during the research work.

It is best time to say few words about my Lab colleagues who constantly encourage in conceivable manner Mrs. Nandini Korde, Mrs. Shalini Dengle, Mr. J. T. Deshmukh, Mr. Milind Gaikwad, Nitin Dighore, Vinod Shelke, Santosh Khillare, Ashish Dhole, Uzma Shaikh, Ajeet Yelwande, Deepak Tayade and all other research colleagues for their willing assistance and support.

The awards of Golden Jubilee Junior Research Fellowship by Dr. Babasaheb Ambedkar Marathwada University, Aurangabad, are acknowledged with gratitude.

I am grateful to lab technicians and all non teaching staff, Department of Chemistry, Dr. Babasaheb Ambedkar Marathwada University, Aurangabad for their help and assistance.
Success is not a goal of only your hard work. It is a combination of all goodness, consistency and moral support and prays of your good wishers. My heartfelt thanks are due to my parents Pandharinath Jadhav and mother Prabhavati Pandharinath Jadhav. Whatever I am and whatever I will be in future is because of their enormous blessings, commitments to my ambitions and selfless sacrifices. This Ph. D. thesis is a result of the extraordinary will, efforts and sacrifices of my parents. My successes are dedicated to them now and always.

I express my thanks to whole of my family who always feels proud on me. Most importantly, the deepest thanks from the bottom of my heart should be dedicated to elder brothers Adinath and Rajan, younger brother Navnath and my sister-in-law Mrs. Swapnita A. Jadhav for their great support and constant encouragement. There is some power in blessings. In every success there is someone who blessed for you. Someone who not only bless you but also take care of your emotions, your frustration, your good willing and so much. I found all of things in my all family members especially in my elder sisters Mrs. Diksha Waghmare, Mrs. Meenakshi Chandanshiv and my brothers in law Mr. Anant Waghmare and Mr. Anil Chandanshiv for their great support and constant encouragement.

I enjoyed a little chunk of my time here with some truly special children Jimmy, Esha, Chutki, Saurabh, Piyu and Marga from whom I learnt knowingly or unknowingly how to find pleasure in the small things of life.

Good friends are always strength to themselves. The success is finally completed due to the kind co-operation and moral support by my friends Vaishali, Manju and Kirti who encouraged me throughout my work.

I would like to thank my dear friends Amruta, Shital, Megha, Shweta, Megha Soni, Imrose, Prajakta, Priyanka Anandgaonkar, Lakshman Gadekar, Dinesh Kadam, Sachin Jadhav and Vijeet Bodhale who always has been beside me offering supporting hand.

I am specially thankful to my hostel friends Madhuri, Shama, Savita, Pragati, Poonam, Asawari, Swati who helped me and inspired me throughout my research work.

Finally, a big thanks goes to all my well wishers and to many great people who helped and supported me directly or indirectly throughout my work.

Miss Sunita P. Jadhav