ACKNOWLEDGEMENT

It gives me great pleasure to express my feeling deep sense of gratitude and respect to my guide **Prof. P. P.Hankare**., Professor and Head, Department of Chemistry, Shivaji University, Kolhapur. The work presented here could not have been accomplished without his inspiring guidance, constructive criticism and constant encouragement during the course of my research.

I owe tremendous debt to Prof. K. J. Patil and Dr. S. N. Deshmukh for their scientific guidance, earnest suggestions and encouragement during this work.

I take this opportunity to thank Honorable Vice-Chancellor Prof. M. M. Salunkhe, for the inspiration to achieve excellence at Department of Chemistry. Also, I owe to Prof. V. S. Darshane Ex-Head, Department of Chemistry, Institute of Science Mumbai for his scientific guidance, valuable suggestions and encouragement during this work.

I am thankful to Prof. M.B. Deshmukh, Prof. M. A. Anuse, Dr. P. N. Bhosale, Dr. U. V. Desai, Prof. S. R. Patil, Dr. G. S. Gokavi, Dr. Mrs. N. P. Hilage Dr. Mrs. R. S. Salunkhe, Dr. S. S. Chavan, Dr. K. M. Garadkar, Dr. D. M. Pore, Dr. G. B. Kolekar, Dr. S. S. Kolekar, Dr. D. H. Dagade, Dr. P. V. Anbhule, Mr. G. S. Rashinkar and other teaching staff of the Department for their keen interest and encouragement during the research period.

I should express my sincere thanks to Dr. V. M. Bhuse, Dr. P.A. Chate, Dr. S.D.Delekar and Mr. D. J. Sathe for useful discussion and valuable guidance while writing of the dissertation.

I sincerely acknowledge the help and co-operation from L.B. Parit P.A.Chavan, Sanjay Dangare, Sanjay Jirge, Shirish Desai, Mali, Patil and other non-teaching staff of the Department of Chemistry, Shivaji University Kolhapur.

I am highly grateful to Dr. Mulla I. S., (NCL Pune) the encouragement during the research period. The thanks are also extended to the operators of

CFC center personnel's Mr. A. V. Mohite, Mr. Rane K. S.

Sonandkar Mr. S. R. Kalas for their timely helping and cooperative in nature.

My special thanks are due to my laboratory colleagues M. R. Asabe, M.

R. Kadam, Dr. P. D. Kamble, Mr. R. S. Rokade, Dr. L. V. Gavali, Dr. A. S.

Khomane, V.T. Vader, S.D Jadhav, N. M. Patil, K. C. Rathod, Umesh Sankpal,

Raju Fatil and Amol Patil for their cheerful co-operation and help in every

aspect throughout this work.

My thanks are also due to my friends Manisha, Sujata, Sunetra, Lalita,

Anita, Ulka, Sheela, Sunita, Mausami, Vijay, Rahul, Sandip, Bapu, Nilesh, for

their friendly suggestions and timely help making my stay at Department very

comfortable and memorable one.

Had it not been the kind love, care and concern of my father Shri.

Vishwanath Dnyanu Jadhav and my mother Sou. Mangal Jadhav. It would

have been impossible for me to reach this stage of my life. As parents, they

provided me the entire essential support and encouragement not only for the

period of this thesis but throughout my life.

My special gratitude goes to my brother Prashant and sister Deepali

who has provided me all type of moral and emotional support throughout my

life. I also thank all the people who have helped directly and indirectly during

this work.

Place: Kolhapur

Date:16/06/2008

Miss. A.V. Jadhav