ACKNOWLEDGEMENTS

I am highly indebted to my respected teacher and supervisor Prof. A. C. Shah, Dean, Faculty of Science for suggesting the problem and stimulating interest, constant encouragement and invaluable guidance at every step through out my entire work.

I am also grateful to Late Prof. K. N. Trivedi, formerly Head of Chemistry Department for his everlasting interest and guidance during the work.

I express my thanks towards Prof. S. M. Desai, Department of Chemistry for his timely help and cooperation during the course of work.

Special thanks are due to Dr. S. S. Madhava Rao for his everinspiring guidance and moral support. It is beyond words to express the benefits obtained by me from his inspirational talks and numerous discussions that immensely helped me during my present work. I would like to extend my thanks to him for carrying out elemental analysis, IR and some PMR spectra for the work.

It is my pleasure to express my sincere thanks to Prof. A. K. Rakshit, Head, Deptartment of Chemistry, Prof. A. C. Shah, former Head of Chemistry Department and Prof. Surekha Devi for their keen interest and for providing me the laboratory facilities during the period.

I wish to record my thanks to Dr. T. Rajmanar, Vice-President, Sun Pharma Advance Research Centre, Baroda; Dr. R. Soman, former Vice-President, Maltichem Research Centre, Baroda for spectral analysis of some of the samples. I am thankful to Dr. Rajnikant, University of Jammu, Jammu-Tawi for the structural analysis of the single crystal by X-ray Diffraction method.

I would like to thank Dr. R. H. Mehta, Dr. H. R. Panchal, Dr. Rajeev Rehani, Dr. Rohit Soni and all my colleagues for their kind cooperation and help.

Finally I am indebted to my family members who have been the constant source of inspiration for me and without their cooperation and moral support this thesis would not have been possible.

The financial support obtained as a fellowship from UGC, New Delhi is acknowledged gratefully.

Samir Mistry