## **ACKNOWLEDGEMENT**

I express my deep sense of gratitude to **Dr. B.M. Sawant.** Reader in chemistry, Shivaji University Kolhapur, for guiding, successful completion and encouragement throughout this work.

I am thankful to the members of teaching and non-teaching staff of this department for their valuable co-operation from time to time.

I also express my sincere gratitude towards Dr. R.S. Jadhav, Principal, Krishan Mahavidyalaya, Rethare (Bk.), Shri. S.R. Patil, Head of the Chemistry Department, Mrs. K.V. Mohite, Dr. C.V. Mohite, Shri. M.L. Hongekar, Dr. B.N. Pawar, Shri. C.E. Mahadik, Department of Chemistry Krishna Mahavidyalaya Rethare (Bk.) for their encouragement.

I extend my thanks to Shri. S.V. Supanekar & Mrs. A.A. Tikekar of the Micro-biology Department, Willingdon College, Sangli, for micro-biological tests.

I am also thankful to Shri. G.T. Yadav, Shri. D.R. Kharade, Shri. T.N. Lokhande, Shri. S.R. Pawar, Shri. P.P. Kumbhar, Shri. N.S. Thorat, and Shri. B.G. Shinde for their help and encouragement.

I am deeply indepted to my parents, brothers and sisters who have inspired and encouraged me throughout my study.

Finally, I express my gratitude to all those who helped me directly or indirectly for the completion of this work.

I thank Shri. V.V. Apte for typing.

Department of Chemistry, Shivaji University, Kolhapur 416 004.

Date: 31 May 1990