ACKNOWLEDGEMENT

With immense pleasure and deep sense of gratitude and reverence I want to acknowledge my guide Dr(Mrs.) Punita S. Parikh, Associate Professor, Department of Botany, The M. S. University of Baroda, Vadodara for her precious guidance, constant encouragement, generous help and painstaking efforts towards the successful completion of this work. The present work bears at every stage the impression of her counsel, concrete suggestions, criticisms and meticulous attention towards the details of the thesis which has made this work a success.

I want to express my sincere gratitude towards Dr. (Mrs.) Sandhya K, Garge, Head, Department of Botany, The M. S. University of Baroda, Vadodara for providing constant encouragement and all the necessary facilities to complete my research work.

I express my gratitude towards Dr P. S. Nagar, Assistant Professor, Department of Botany, The M. S. University of Baroda, Vadodara for his valuable suggestions, constant encouragement and necessary support for completing my course work.

I appreciate sincere help by Mr. Pavan, Department of Applied Chemistry, M. S. University of Baroda for his help in instrumental studies of FTIR.

I extend my sincere greatfullness towards Dr. B. R. Rehani, Department of Metallurgical and Material Engineering, The M. S. University of Baroda for their help in instrumental studies of XRD.

I extend my indebted thanks Mr. P. Dholak, who helped me by providing the necessary facilities for collecting secondary data from taluka panchayat and government bodies like WASMO.

I would also like to express my gratitude to Department of Science and Technology, for the financial help that I received as a Junior Research Fellow for project sanctioned to the department vide DST File No.: DST/TM/WTI/2k11/279.

I thank my friends Mr. Karan Rana (Botany), Mr Gaurang Kale, (Botany), Mr Ajit Vasava (Botany), Ms. Mittal Bhatt (Botany), Mr. Rakesh Gujar (Botany), Mr. Ketan Makwana (Chemistry), Ms. Mohini Sadhu (Chemistry), Mr Nakul (Physics) and Mr Chaitanya Limberkar (Physics) of The M. S. University of Baroda who were always enthusiastic regarding my research work and never hesitated to help me.

I also thank to my seniors and colleagues Mrs. Soma Sikhdar, Ms Payal Vyas, Ms. Krupa Unadkat and Mrs Sreestutti Tattu for their guidance and constant enthusiasm.

I thank and dedicate my thesis to my family who have always been by strong foundation.

Lastly I thank to all the well-wishers for their constant source of strength through prayers and moral support.

Rahul D. Parikh