

## ACKNOWLEDGEMENT

*This thesis arose as a result of research work that has been done since I came to the M.S. University. Though only my name appears on the cover of this Thesis, a great many people have contributed to its preparation. I hereby take an opportunity to thank all those people who have made this thesis possible and because of whom my Ph.D experience has been one that I will cherish forever.*

*First and above all I praise God, almighty for providing me this opportunity and granting me the capability to proceed successfully.*

*For most, I would like to express my sincere gratitude to my guide Prof. Susy Albert to accept me as a Ph.D student. I have been amazingly fortunate to have such a nice guide who always gave a freedom to explore myself and allow me to grow as a research scientist and at the same time guidance and support to recover when ever my steps faltered. Her patience and support helped me to overcome many crisis situations and finish this research work. I am grateful to her for her encouragement and practical advice. I could not imagine having a better mentor for my Ph. D study.*

*I am thankful to, Prof. G. Sandhya Kiran Head and Prof. Arun Arya Ex-Head, department of Botany for providing all the necessary facilities in the department during the course of Research work. I am thankful to The M.S. University of Baroda for providing research fellowship to carry out the work and for the financial support.*

*I would like to thank to Prof. Neeta Pandya, and all the teaching faculty of the Botany Department. I also thank all the non teaching staff of Department of Botany, Mr. Sharmaji, Mr. Praksh Bhatt, Mr. Kartik Raval, Kanu bhai, Arvind bhai, Mahesh Bhai, Tatya bhai, Patil bhai for their kind help in the work.*

*I gratefully acknowledge Dr. M.N. Patel from Technology faculty, The M.S.University of Baroda to provide his valuable time for SEM study included in my research work; Mr. K. Radhamohan, Manager (QC) and Sanjay Kumar Chechi, Manager (QC) from the J.K.Paper Industry*

*who have spared their valuable time in showing the process of pulping and also providing with the unbleached pulp for the study.*

*I would like to thank Ms. Ameer Padhiar, who as a good friend was always willing to help and give her best suggestions. It would have been a lonely lab without her. I am always thankful to my friends and research scholars from laboratory Ms. Bhavna Sharma, Ms. Dhara Gandhi, for giving me enormous support during my work and writing, and incited me to strive towards my goal.*

*A special thanks to my family. Words cannot express how grateful I am to my mother-in law, father-in-law, my mother, father and all family members for all of the sacrifices that you've made on my behalf. Your prayer for me was what sustained me thus far. At the end I would like to express appreciation to my beloved Husband Mr. Devang Dave for always cheering me up and stood by me through the good times and bad.*

*Finally, I would like to thank everybody who was important to the successful realization of my thesis, as well as expressing my apology that I could not mention personally one by one.*

*Bhavika Pandya*