

ACKNOWLEDGEMENT

I am grateful to all; with whom I have had the opportunity and pleasure to work with during this research work. I aspire to convey my profound gratitude to them.

I cannot express enough thanks to my affectionate guide Prof. Anjali Karolia for whom words also fall less; to be thanked for her continued support and encouragement. The work would have not been possible to come to the present shape without her able guidance. I offer my sincere appreciation for the learning opportunities provided by her who continue moulding me at every stage. Her intellectual maturity, patient co-operation, valuable and timely suggestions, her faith in me, and the space she gives to work , makes me feel honoured to work under her able guidance.

I am grateful to Dr. Madhu Sharan, Head, Department of Clothing and Textiles, Faculty of Family and Community Sciences, The Maharaja Sayajirao University of Baroda, Vadodara and Prof. Anjali Karolia (Ex. H.O.D.) for facilitating my study by extending all the departmental facilities required.

I would like to express my gratitude to all my teachers Prof. Amita Pandya, Ms. Vandana Chauhan, Dr. Reena Bhatia, Dr. Hemlata Raval, and Dr. Falguni Patel, who put their faith in me and urged me to do better. They have been a great help at required time.

The first external support that I received was from Dr. R.G. Patil, Ex. Head, Soil and Water Management Research Unit, Navsari Agricultural University, Gujarat and Chirag Patel – SRF, from the same department. He not only helped me to procure banana fiber and also helped me to interact with several intellectuals of this field.

I am highly indebted to Dr. Sushil Hada, Textile Research & Application Development Centre. TRADC, for sharing a project between TRADC and the Department of Clothing and Textiles. He and his subordinate Ms. Ankita Kaushik had been an immense support for carrying out the work smoothly. It was indeed pleasure and learning experience working with the them.

I am highly indebted to Dr. Rajan P. Nachane, Retired Principal Scientist, Central Institute for Research on Cotton Technology (Indian Council of Agricultural Research), for always being supportive, motivating and appreciating the research work. He had helped to procure banana yarns which were the resultant of a national level project and also a link between the last updated work on banana fiber and the present research. He had been kind to get the KAWABATA test done at CIRCOT along with Dr. Sheela Raj. My heartiest thanks to them.

I am hugely indebted to Dr. L.Ammayappan, Senior Scientist, at National Institute of Research on Jute and Allied Fiber Technology (NIRJAFT), Kolkatta. He had been kind enough to interact, take the samples and send the test reports for FTIR.

I also take this opportunity to thank Mr. Gupta and his team at Weavers Service Centre team Ahmadabad, for weaving my samples especially weaving my imagination into reality “Banana Khadi”.

Sincere thanks are due to Ms. Sangita Patil from Rossari Biotech India P. Ltd for supplying enzymes for the research work.

I am thoroughly grateful to Mr. Raj Varghese, Achroma Chemicals (Clariant) for providing softeners. He had been very prompt to send softeners as and when required.

I would like to express my gratitude to Prof D. K. Kanchan, Department of Physics, Faculty of Science, The Maharaja Sayajirao University of Baroda, Vadodara for FTIR test and also for helping and supporting for patent application.

I am sincerely thankful to Dr. P.C. Patel, Ex-Head of the Department of Textile Engineering, and Dr. Milind Koranne Head, Department of Textile Engineering Faculty of Technology and Engineering, The Maharaja Sayajirao University of Baroda, Vadodara for extending laboratory facilities. Several test and especially bundle fiber strength test which was very frequently conducted and for long time was only possible with the kind cooperation of Bhadresh bhai and Hemang bhai.

A earnest expression of gratitude to Dr. Adhar Mandot for his support in spinning of yarns and also for fiber testing. Thanks are also due to Gopi bhai for spinning of

banana yarns. His dedication towards the work has helped me to obtain the required quality of work.

I am also grateful to Prof. S.K. Dutta (Ex. Head), Dr. Rao Vandana and Dr. Rehani Bharati, expertise of SEM and XRD respectively from the Department of Metallurgical and Material Engineering, Faculty of Technology and Engineering, The Maharaja Sayajirao University of Baroda, Vadodara for conducting SEM and XRD.

Sincere thanks are expressed to the faculty and the technical staff of Clothing and Textile Department. I am thankful to Dave bhai, especially for all the paper work he had helped with, Naynesh bhai, Sanjay bhai, Nishant bahi and Dilip bhai for always being enthusiastic about working in Laboratory. A gratifying note of thanks to Pratik bhai, for helping with computers whenever required. Thanks are also due to Sachin bhai for starting the soxhelet cycle early in the morning, Ela ben, kaplia ben, santosh bhai and harish bhai.

The entire tenure of my Ph.D was just not learning, but it was also living to the fullest. All thanks to my friends Jennifer, Sukriti, Arpita, Ankita, Chhavi, Vandita, Shaleeni, Pryanka, Rinku, Sangita bhabhi, and all my friends. They all had been supportive, motivating and fun filling.

I am heartily thankful to my Mother-in-law, for her constant support, since the time I have been married. She has taught me so much, and was more than me for my son Vihaan. Unknowingly Vihaan had helped me so much, by just not troubling me and strengthening me by his magical smile. Thanks are just due to my husband, who has been a strong support throughout the journey.

From the bottom of my heart I feel thankful to my entire in- laws family, who has always been supportive. Last but never the least; I am enormously thankful to my Mummy, Papa, Abhishek, Kritisha and Tashvi for their love and support.

Thank you God for everything

Amrita Doshi