

Acknowledgements

May I begin expressing my deep gratitude to my guide, **Dr Bharat H. Patel**, for his meticulous supervision and encouragement during the entire period of the research work. It is his constant encouragement, keen interest and invaluable guidance, which has helped me to complete this work. His insight into the research work and critical evaluation has been of great help throughout the course. It was really a pleasing opportunity to work under his worthy guidance. I thank him for his invaluable guidance, constructive criticism and the moral support he has provided during the research investigation.

I am extremely grateful to the **The M S University of Baroda** for providing opportunity to study in such esteemed organization. I acknowledge my valuable thanks to **Dr S R Shah, Head of the Department** and **Dr J N Shah** for providing research facilities available to the laboratory of **Department of Textile Chemistry, Faculty of Technology and Engineering**. I am especially thankful to **R C Technical Institute** for providing the platform for me to perform my research work in the laboratories of the **Textile Processing Technology Department**.

Words fall short to express my profound gratitude to my **parents**, who have been the pillars of my strength. With enormous pleasure, I express my thanks to my wife **Sonal** and son **Het** for their unconditional support and motivation during the entire course of my PhD work. I take this opportunity to express my gratitude to my **parents in law** from the bottom of my heart for their selfless encouragement and help in the hour of need.

This type of Thesis naturally draws information from many standard publications on the subjects. I express my sincere thanks to all the authors and publishers of publications.

There are many more individuals who have in one way or the other contributed to the success of my research work; I thank all of them who made this journey easy.

I would like to thank the pen(s) with which I have written the entire manuscript, and to the computer for transforming this hand written manuscript into the presented thesis form.

Last, but not the least, I express my heartfelt gratitude to **“The Almighty God”** without her kind blessings, it would not have been possible to complete this endeavor.

Chintan R Madhu