

ACKNOWLEDGEMENTS

I wish to express my deep sense of gratitude and reverence to my teacher and guide Prof. Surekha Devi for her keen interest, invaluable suggestions and constant encouragement throughout the tenure of this work. I am deeply indebted to her for giving me an opportunity to work under her guidance and helping me in every possible way in bringing out this work from concept to reality.

I am also very much thankful to Prof. A. K. Rakshit, Head, Department of Chemistry and Prof. A. C. Shah, Dean, Faculty of Science, M. S. University of Baroda for providing the necessary instrument and computer facilities.

I take this opportunity to thank the Research and Development Department, Indian Petrochemicals Corporation Limited, Vadodara for financial support of the present investigation.

Sincere thanks also go to Dr. M. Ravindranathan, Dy. General manager, R & D, IPCL for granting permission to work in IPCL and also to Dr. R. C. Jain, Sr. Manager for providing the necessary facilities during the course of work. Dr. Sunil Soni, Mr. Mukesh Patel, Mr. Sangamnerkar, Mrs. Kalpana (Librarian), for their help on various occasions and whenever I approached them during the course of my work.

My sincere and respectful thanks are due to Mr. Pranav Joshi (Executive Director, Bayers ABS Ltd., Vadodara) and Dr. V. Janarthanan (Vice President, Head of R & D, Bayer ABS Ltd., Vadodara) for their encouragement, active support and help during the course of the research work, and lately from the bottom of my heart to Dr. Neeraj Gupta (General Manager, Global R & D) for giving me invaluable suggestions and scientific guideline. I am also thankful to Mr. Subodh Pal and Mr. Mukesh Modi for their help in getting rheological and mechanical analysis of my polymer samples.

I also owe a special word of thanks to Dr. Ashish Lele, Scientist, NCL for his invaluable help and suggestions which I received during the course of my work at NCL, Pune. My thanks are also due to Dr. B. D. Sarawade, NCL for SEM analysis and Dr. S. Sivaram, Director, NCL for his valuable suggestions and facilities extended during the research work.

Sincere thanks to Dr. A. N. Mishra, Director, Gujarat Alkalies and Chemicals Limited, Vadodara for granting me permission for the chlorination reaction.

A special thanks to Prof. Ajay Gupta, Director, IUC-DAEF Centre, Indore and Dr. A. M. Awasthi for helping me to get DSC analysis of my polymers.

My heartfelt thanks to my labmates and friends Dr. Paresh Sanghvi, Dr. Alpesh Patel, Dr. Naveen Pokariyal, Dr. Ishit Thakore, Dr. Sonal Thakore, Sumit Bhawal, Vikas, Majid, Mandar, Mahendra, Sachin and Sheetal for their invaluable assistance and moral support.

I am thankful to my friend Mr. Mitesh Patel, Dr. Ismail Mathakiya, Amit Tyagi, Yashwant Sharma, Ms. Neenaben, Mr. Mukul and Mr. Debankur for their moral support and help during this period.

A special thanks goes to Mr. Shirish Nagarkar, Department of Microbiology, M. S. University of Baroda for his constant support during typing, printing and preparation of the manuscript of my work.

I owe special thanks to Dr. G. N. Devy for giving me courage to achieve my goal during the initial period of the research work who motivated me to take this challenge.

Special thanks also goes to Mr. Hitesh Raval for prompt analysis of my samples and Mr. Rane, Mr. Bhavsar, Mr. Nagarkar, Mrs. Revathi, Mr. Ninad Mehta, Mr. Brahmhatt and all staff members of the Department of Chemistry, Faculty of Science, M. S. University of Baroda for their assistance and help during the course of the work.

Above all, I would like to place on record the support and encouragement of my parents, Mr. Baldevbhai B. Barot, Veenaben B. Barot and my sister Hetal B. Barot who have always stood by me in moment of despair, with their blessings, support and encouragement.

- RAGESH B. BRAHMBHATT