## **Acknowledgements:**

With all humility and reverence, I sincerely express my deep sense of gratitude and we have thanks to my guide Dr R. S. R. Murthy, for his invaluable guidance, expert  $U_{n_{1}v_{1}}$  suggestions, innovative thoughts, immense patience, attention and kindness to guide and supervise my work through out the course. He has been a person to instill in me a sense of commitment and dedication and I am grateful to him for his criticism and exhortation rendered through out the research. I also thank him for his constant cooperation and encouragement to carry out this work

Financial support in terms of National Doctoral Fellowship from All India Council of Technical Education (AICTE), India is gratefully acknowledged.

I would like to express my sincere thanks to

Dr. A. N. Misra, Head, Pharmacy Department, M S. University of Baroda for providing me the necessary facilities for the research work.

Dr. R. Balaraman, Professor of Pharmacology, Dr. S. H. Mishra, Professor of Phytochemistry, Dr M. R. Yadav, Professor of Pharmaceutical Chemistry, Dr(Mrs) Krutika Sawant, Reader of Pharmaceutics, Dr.(Mrs) Rajani Giridhar, Reader of Pharmaceutical chemistry, Dr.(Mrs) S.J.Rajput, Reader of Pharmaceutical Quality Assurance, Dr R.C Mashru, Pharmaceutical Quality Assurance and all other staff members of Pharmacy Department, M S. University of Baroda for their co-operation and support during my work.

I am highly thankful to Natco Pharma Ltd., Hyderabad, India and Cipla Ltd, Mumbai, India for providing gift sample of sumatriptan succinate. I am also highly grateful to Rita Corporation, USA for providing me gift sample of chitosan glutamate.

I am also grateful to Dr Ranjan Sengupta, Professor in Chemical Engineering Department and Dr (Mrs) Sengupta, Chemical Engineering Department, M S University of Baroda for their help in rheological studies. I am also grateful to Dr. Savithiri Shıvakumar, BioArc Research Solutions, Vadodara for their help. I am highly thankful to my friends Mr Rajesh Gondaliya, Mr Vipul Patel, Mr Vinay Lad, Mr Sudıpta Basu for their cooperation and help during the research work.

My friends and co-workers Pradip, Manish, Bijay, Tushar, Arvind, Chitrang, Rishit, Vijay Sutariya, Pranav, Vivek, Shrikant, Yogesh, Somashekhar, Jolly and all my seniors, colleagues and juniors deserve my special thanks for their cooperation and support.

I express my heartfelt gratitude to my dear parents, parents-in-law and family members for their blessing and co-operation which helped me the most during my work. My husband, Jayesh deserves special thanks for standing by my side, helping me and inspiring me throughout my work.

Finally, I thank almighty God for his favors showered on me.

Rita & Majithiya