I am extremely grateful to my supervisor Dr. G. Ramanathan, Professor and Head, Department of Soil Science, Tamil Nadu Agricultural University, Coimbatore for his invaluable discussion and guidance at every stage of this work.

I express my sincere thanks to Dr. V. Gopal, Professor and Head, Department of Environmental Sciences, Bharathiar University, Coimbatore for his help in various ways throughout the investigation.

I duly thank the Management, P.S.G. College of Arts & Science, and the Principal, Dr. B. Sampathkumar for the encouragement and help provided to carry out the work.

I have great pleasure in acknowledging the invaluable help of my friend Dr. P. Rajaguru who had spent much of his valuable time and energy to carry out this study successfully.

I put on record my due thanks to my colleagues Ms. K. Kalaiselvi, Dr. S. Patabi, and Mrs. K. Shanthi, Lecturer, Department of Environmental Science, Dr. V. Chandramohan, Lecturer, Department of Chemistry and Dr. Rajaram, Lecturer, Department of Botany, PSG College of Arts & Science, Coimbatore for their unremitting encouragement, personal involvement and affection shown in completing this study.
My sincere thanks are due to Dr. K. Swaminathan, Reader, Department of Biotechnology, Bharathiar University, Coimbatore for his timely help.

My gratefulness is also due to Dr. Kumaresan, Associate Professor, Department of Soil Science, Tamil Nadu Agricultural University, Coimbatore for his useful comments and informative suggestions.

On a personal note, I am thankful to M/s. Sakthivel Graphics, Ondipudur and M/s Suri Associates for undertaking and accomplishing the onerous task of typing the thesis.

Last but not the least, I am deeply indebted to my family, friends and all those who have taken a keen interest in this study and whose constant encouragement has helped me in the successful completion of this research work.