I express my sincere gratitude to my supervisor(s) Dr. Sarbeswar Kalita and Dr. Gajen Ch. Sarma for their continuous guidance and support throughout the course of my research work. It would not have been possible for me to carry out this work without their inspiring guidance and mental boost. I am equally thankful to Head of the Department of Environmental Science, G.U for providing me necessary administrative, academic and laboratory facilities to successful accomplish the research work.

I am thankful to Dr. S.K. Dutta, principal, Dhing College, also the President and members of Governing Body, Dhing College for allowing me to pursue Ph.D under FDP of UGC. Thanks are due to Deputy Secretary, UGC-NERO, Assam for granting Teacher Fellowship to me under Faculty Development Programme (FDP) of UGC's 11th plan period.

I am thankful to Dr. H.P. Sarma, Prof. and Head, Department of Environmental Science, G.U for providing me guidance in every step of my work. Thanks to Ms. Sutapa Chakrabarty SRF, G.U for providing me necessary technical and laboratory expertise at the initial stages of my research Work.

I am thankful to Dr. G.C. Sarma, Curator of Botany Department for providing me necessary permission to utilize ‘Algal culture Laboratory’ for conducting culture experiments. I am taking the opportunity to render my sincere gratefulness to the authority of Nagaon Paper Mill, APCB, and NERIWALM for providing necessary information and laboratory help.

I wish to express my sincere thanks and gratefulness to Dr. Dulal Ch. Goswami, Retd. Prof. and Head Dept. of Environmental Science for providing necessary suggestion and technical guidance in every stages of research work. I am thankful to all Research Scholars, Students and Office bearers of Environmental Science Department for extending their cooperation and help during my research period.

My entire work is dedicated to the patience, support, moral boosting, help and tolerance of my family members, my beloved mother and mother-in-laws, my wife ‘Rashmi’ and son ‘Gaurav’ throughout the research period. They have been the keeper of my spirit, my best friends and above all custodians of my courage and determination.

I am indebted to the almighty for successful completion of my research work

Place: Guwahati: Assam

Date: 27/08/2011