PREFACE

Water has always been a vital resource for human beings. With the progress in agriculture and industry there has been an increased demand for the consumptive uses of water namely – irrigation, power, domestic and industrial. Inspite of this growing dependence on the quantity of water not much attention has been given to its deteriorating quality. It has been found that intense industrialization concentrated on the banks of rivers and estuaries has an adverse impact on the riverine and estuarine water quality.

Pollution is a necessary evil of all development. Due to lack of development of a culture of pollution control there has resulted a heavy backlog of gaseous, liquid and solid pollution in our country. In order to assess the change caused by effluents, effective and reliable monitoring systems are required. Life is the best indicator of environment. Hence the biological methods can be successfully applied in predicting the hazardous effects caused by various effluents. Algal assay is one such method where algae are employed as pollution indicators.

Microalgae, a group of microscopic photosynthetic organisms which float on the surface water of rivers, lakes and oceans, are the major producers of the aquatic ecosystem. Alteration in microalgal community as well as their domination or abundance can be considered as an indicator of water pollution. The organic compounds, which enter the water bodies and get incorporated into the cells of the algae, may not always be destroying. But these may concentrate in them thus affecting the food chain.
The present investigation, "Studies on the toxicity of industrial effluents on phytoplankters" has been undertaken to assess the impacts of three different industrial effluents on five freshwater phytoplankters. The thesis has been divided into seven chapters. Chapter I, the introductory chapter, deals with the relevance of the research work undertaken. The second chapter explains the materials selected and methods employed for the study. Chapter III comprises the observations and results of the experiments with different effluents and test organisms, and physicochemical parameters of the water bodies. Discussion of the present work was carried out with relevant previous literature in the fourth chapter. The fifth chapter gives a brief conclusion of the results of the study. Chapter VI briefly summarizes the present work. Chapter VII, the last chapter includes the literature part.