PREFACE

Health is a prime importance to human beings and wants to get cured in the least possible time whenever they fall ill. This desire and necessity has resulted in the use of a large number of synthetic organic compounds as medicines despite the fact that usually side effects are related with the utilization of these drugs. In recent times, practice of giving a number of drugs together has very much increased. Due to drug interaction, the levels of the active drugs together have very much increased. Due to drug interactions, the levels of the active drug may be too high for a longer time to cause side effects.

Further, the reduction/oxidation products of these medicines, which are produced during the metabolism, may also be responsible for their side effects. It is therefore necessary to develop sensitive trace analytical methods for the analysis of the drugs by using most sophisticated and advanced Electro analytical and Spectroscopic techniques like D.P.P., D.C., C.V., UV-derivative etc.

Main aim of present research work is to develop and validate new analytical methods by employing Voltammetry and Spectroscopic method techniques for qualitative and quantitative analysis of selected drugs which are very important medicinally for present research work.

The objective of research work is to reduce analysis time, solvent consumption, sample quantity and simultaneous analysis of purity and assay. The developed analytical method must generate reproducible and reliable data in order to permit valid interpretation of the studies they support.

Following category of drugs were selected for development and validation by employing Voltammetry and Spectroscopic methods. Cefdinir, Cefditorine and Cefpodoxime drugs in Pharmaceutical bulk drugs. The systematic study of analytical method development and method of validation for purity and assay assessment has been carried out and presented in the thesis. The entire thesis consists of seven chapters.

Chapter-1 refers to general introduction, brief history of Electro analytical and Spectrophotometric, method developmental studies and validation analytical methods for quality testing of active pharmaceutical ingredients in pharmaceutical research and development.
Chapter-2 refers to the survey of concerned literature on multi method usage and validation techniques for the identified drugs.

Chapter-3 refers to the aims and objectives of the work.

Chapter-4 refers to the Experimental part to be done for the present work.

Chapter-5 refers to the Electro analytical investigation of the Cephalosporins by using Electro analytical methods done in the work.

Chapter-6 refers to the Spectrophotometric investigation of the Cephalosporins by using Spectrophotometric methods done in the work.

Chapter-7 describes the Summary and conclusion of the work in the present investigation and relevant recommendations.