PREFACE

Every country has legislation on bulk drugs and their pharmaceutical formulations that set standards and obligatory quality indices for them. These regulations are presented in separate articles general and specific relating to individual drugs and are published in the form of book called pharmacopoeia (e.g. Indian, IP, United Kingdom, BP, United States, USP, European, EP, Japan, JP and Martindale Extra). The other source information books include Merck index, Remington and PDR. Pharmaceutical analysis deals not only with medicaments (drugs and their formulations) but also with their precursors, i.e., with the raw material on whose degree of purity, the quality of medicament depends. The quality of a drug is determined after establishing its purity and the quantity of the pure substance in the bulk drug and its formulations.

The drugs are used in various dosage forms in prophylactic or in therapeutic use. They are formulated as tablets, capsules, dry syrups, liquid orals, creams or ointments, parenterals (injections in dry or liquid form), lotions, dusting powders, aerosols etc. In tablets one or more among the diluents such as starch, lactose, cellulose derivatives, calcium phosphate, mannitol, sorbitol, sucrose, acacia, gelatin, polyvinyl pyrrolidine, alginic acid, tragacanth, stearic acid, talc, magnesium stearate, waxes, methyl paraben, propyl paraben, sodium benzoate, permitted flavors and colors may be added. In capsules one or more among the diluents, certified dyes, gelatin, plasticizers, preservatives, starch, lactose, talc may be added. In dry syrups and liquid orals, sucrose, sorbitol, preservatives, certified colors and flavors might be added. In creams and ointments, waxes, carbopol, petroleum jelly, surfactants,
preservatives, permitted colors and perfumes might be added. In parenterals, water, vegetable oils, mineral oils, simulated oils, propylene glycol, dioxalamines, dimethyl acetamide may be used as vehicles. Any one or more among stabilizers, antioxidants, buffering agents like citrate, acetate, phosphate, co-solvents, wetting, suspending and emulsifying agents like tween-80, sorbitol oleate and preservatives may be added. In lotions, dusting powders and aerosols, talc, silica derivatives, alcohol, preservatives may be added.

The drugs are applied in some instances in rather small doses and they are often mixed with excipients as combinations. The assay of the various dosage forms raises several special problems such as skillful sampling and the preparation of sample solutions. Hence, standard techniques must be employed to ascertain the homogeneity of the sample before collecting for analysis.

This thesis explains various spectrophotometric and HPLC techniques used for seven selected drugs viz., Gatifloxacin, Levofloxacin, Moxifloxacin, Esomeprazole, Pantoprazole, Rabeprazole and Etoricoxib. The methods discussed in the thesis are simple, sensitive, accurate and can be conveniently used for the routine check up of the above mentioned drugs.