Chapter – X

SUMMARY AND CONCLUSIONS
Quality assurance and quality control of pharmaceutical dosage forms are essential for ensuring the availability of safe and effective dosage forms to consumers. Hence, pharmaceutical analysis occupies a pivotal role to statutory certification of drugs and their dosage forms either by the industry or by the regulatory authorities. The complexity of problems encountered in pharmaceutical analysis, coupled with the importance of achieving the selectivity, speed, cost, simplicity, sensitivity, precision and accuracy, results in new methods of analysis being quickly adopted by the pharmaceutical industry and chemical industries, depending upon the facilities available.

Pharmaceutical dosage forms often contain combination of drugs for potentiating or complementing one another in therapy. In some cases, no precise analytical methods are reported and quite often the reported methods need improvement or changes because of lack of specificity and sensitivity with existing methods.

The author developed totally eight HPLC methods for the estimation of different categories of drugs in bulk samples and pharmaceutical formulations either in single or combined forms. The author selected four drugs (Ceftazidime, Dobutamine hydrochloride, Efavirenz and Amphotericin B) for estimation in single dosage forms and seven drugs (Candesartan cilexetil, Irbesartan, Hydrochlorothiazide, Efavirenz, Zidovudine, Lamivudine and Abacavir) for estimation in combined dosage forms.

The author developed totally eight isocratic methods for the estimation of above selected ten drugs in bulk samples and pharmaceutical formulations. All the methods were validated as per ICH guidelines. In all the methods, a full scale validation to assess
the viability of the methods has been performed. The validation mainly includes selectivity, specificity, linearity, precision, accuracy, limit of detection and quantification etc.

All the methods reported were simple and specific and can easily be adapted for the estimation of the selected drugs in the bulk samples and pharmaceutical formulations for the regular quality control applications.