Literature Review

Lakshmana A Rao et al, developed a simple, rapid, selective, sensitive, linear, precise and accurate RP- HPLC method for the determination of raltegravir in bulk and tablet dosage forms. The method was validated as per the ICH guidelines for its sensitivity, linearity, accuracy and precision. The percentage RSD for Precision and accuracy of the method was found to be less than 2 %. The Method was successfully employed for routine quality control of raltegravir in bulk samples and its pharmaceutical formulations.

P Rama Devi et al., developed a simple, sensitive, rapid and reproductive UV-VIS Spectroscopic Method for estimation of data in tablet formulation. All the Validation parameters were found to be within acceptance range according to ICH norms. The described method was successfully employed for quality control assay of the component simultaneously and dissolution data helpful in generating the further information regarding in vitro absorption rate in tablet dosage form.

Mahmood Ahmad et al, 2011, Developed a rapid, sensitive and reproductive HPLC method for simultaneous quantification of 5-fluorouracil, adriamycin and cyclophosphamide (FAC).

F. Mistiran et al., 2010, developed a new HPLC method for the simultaneous determination of two anti diabetic drugs. The developed HPLC method achieved good precision and accuracy as well as limit of quantitations. The developed and validated method is suitable to be used for routine analysis of Ara-C and DOX.

K. Ravi Kumar et al, 2010, Developed a simple and selective RP- HPLC method for quantification Capecitabine from bulk drug and pharmaceutical formulations. The proposed method was found to be precise, accurate, selective and rapid for the determination of Capecitabine in capsules.

A Malakar, et al, 2012, Developed a new simple, specific, precise and accurate reversed-phase liquid chromatography method for the determination of Vildagliptin (VLG) in Tablet
dosage form. The method was validated in accordance with International Conference on Harmonization acceptance criteria for specificity, linearity, precision accuracy, robustness and system suitability.


A. García, et al., 2012, Developed reliable chromatographic methods and applied as limit tests for the control of three genotoxic impurities (GTIs) in cloperastine fendizofate. The developed methods were successfully applied for the determination of GTIs in five different batches of cloperastine fendizofate. In all the analyzed batches, the three target GTIs were below the concentration limit.

A. Bartolincic, et al., 2005, Developed Suitable HPLC methods for the direct separation of bambuterol and albuterol enantiomers. Validation of methods in selected conditions shows that the chosen methods is selective and precise with linear response of detector for both pairs of enantiomers.

N. Kapoor, et al, 2006, Developed an accurate, sensitive and specific reversed phase high performance liquid chromatographic method (RP-HPLC) for the simultaneous quantitative determination of the nucleoside reverse transcriptase inhibitors lamivudine, stavudine with the non-nucleoside reverse transcriptase inhibitor nevirapine in pharmaceutical fixed dose combinations.

J. Sunil, et al., 2010, Developed Simple and precise HPLC method was developed for the estimation of Artemether and Lumefantrine in pure and Pharmaceutical Dosage Forms.

B Nasir, et al., 2012, Developed new economical HPLC method for the estimation of artemether in injections which was specific, linear, accurate and precise.
N Appala Raju, et al, 2008, Developed A simultaneous stability indicating RP-HPLC method for the estimation of Emtricitabine, Tenofovir disoproxil fumerate and Efavirenz in tablet dosage form. The method was validated by determining its sensitivity, Linearity, accuracy and precision. The proposed method is simple, fast, sensitive, Linear, accurate, rugged and precise and hence can be applied for routine quality control of Emtricitabine, Tenofovir disoproxil fumerate and Efavirenz in bulk and in tablet dosage form.

PT. Nagaraju, et al., 2011, Developed Two simple, precise and economical UV methods have been developed for the estimation of Emtricitabine in bulk and pharmaceutical formulations. Results of analysis were validated statistically and by recovery studies were found to be satisfactory.

M. Alagar Raja, et al., 2012, Developed a simple, selective and well validated spectrophotometric and RP-HPLC method for estimation of Abacavir sulfate in pharmaceutical formulations, which are widely used as anti –HIV drug. The developed spectrophotometric and RP-HPLC method is simple, rapid, precise, accurate, reliable and economical.

T. Raja et al., 2011, Developed a method for the estimation of abacavir, lamivudine and zidovudine by High Performance Liquid Chromatography (HPLC). The method was successfully applied to pharmaceutical formulation because no chromatographic interferences from the tablet excipients were found. The method retained its accuracy and precision when the standard addition technique was applied.

S. N. Alvi et al, 2011, Developed simple and reliable HPLC method for the determination of the caffeine level in human plasma. The method was successfully applied to monitor caffeine levels in healthy volunteers with correction of caffeine levels using the mean ratio of the slopes of the calibration’s curves constructed using human and synthetic plasma.
A. Suneetha et al., 2010, Developed an accurate, sensitive, precise and robust reverse phase high performance liquid chromatographic method for the estimation of almotriptan malate in pharmaceutical dosage. The method was validated statistically and applied for the quantitative analysis of almotriptan malate in bulk and formulations.

V.P. Koteswara Rao, et al, 2011, Developed a new simple RP-HPLC method for the simultaneous estimation of Emtricitabine, Tenofovir and Efavirenz. The developed method was validated for accuracy, precision, and system suitability. The good percentage recovery of the sample clearly indicates the reproducibility and accuracy of the developed method.

G Bahrami, et al., 2008, Developed a fast and sensitive method for determination of oseltamivir carboxylic acid (OCA), the active moiety of anti-influenza agent, oseltamivir phosphate, in human serum by high performance liquid chromatography and UV detection.

SS Panda et al., 2009, Developed a rapid, simple and precise stability indicating ion-pairing RP-HPLC method for the determination of Tenofovir disoproxil fumarate. This method was also successfully applied for routine analysis of Tenofovir in tablet dosage forms.

K Pradeep, et al., 2011, Developed a simple, Accurate, Precise and rapid high performance thin layer chromatographic method for the estimation of Tenofovir in tablet dosage forms. The method is applicable to routine analysis of Tenofovir in bulk and pharmaceutical formulations. The method was validated according to various ICH parameters like linearity, accuracy, precision, specificity, limits of detection, limits of quantification, range and solution stability.

CH Venkat Reddiah, et al., 2012, Developed a novel rapid, sensitive and reproducible high performance liquid chromatographic method for quantitative determination of Efavirenz, Lamivudine and Tenofovir Disoproxil Fumarate in active pharmaceutical ingredients and its dosage forms. The developed HPLC method was further subjected to hydrolytic, oxidative, photolytic and thermal stress conditions. The performance of the
method was validated according to the present ICH guidelines for specificity, limit of
detection, limit of quantification, linearity, accuracy, precision, and ruggedness.

RB. Singh, et al, 2012, Developed a new RP-HPLC method for the determination of
Emtricitabine in the bulk drug and tablet dosage form, and it was applied to the in vitro drug
dissolution studies. The liquid Chromatography method was extensively validated for
linearity, range, accuracy, precision, and specificity.

R Prasanna et al., 2012, Developed A High Performance Liquid Chromatographic method
has been developed for the analysis of Lumefantrine in the solid dosage form. The validation
of method was carried out as per ICH guidelines. The described HPLC method was
successfully employed for the analysis of pharmaceutical formulations containing
Lumefantrine and can be employed for bioequivalence study in future for the same
formulations.

E U. Stolarczyk, et al., 2007. Developed a gas chromatographic method with direct injection
for the determination of CEE and NMP in the active substance. This method is also applied
to quantitative determination of other residual solvents used in the synthesis of this active
substance: ethanol, acetone, toluene, dichloromethane, benzene (which can be formed from
acetone or toluene) as was shown in testing selectivity of the method.

chromatographic method has been developed and validated for the determination of two
novel dipeptidylpeptidase-4 (DPP-4) inhibitors; namely vildagliptin (VLG) and saxagliptin
HCl (SXG) simultaneously in their binary mixtures with metformin HCl (MET). The
methods developed were satisfactorily applied to the analysis of the pharmaceutical
formulations and proved to be specific and accurate for the quality control of the cited drugs
in pharmaceutical dosage forms.