1. **Sevgi Tatar Ulu et al, (2016)**, A novel pre-column derivatization reversed-phase high-performance liquid chromatography with fluorescence detection is described for the determination of Buproprion in pharmaceutical preparation, human plasma and human urine using mexiletine as internal standard.

2. **P. Bharath Rathna Kumar et al, (2015)**, A simple, rapid, accurate, precise specific and sensitive reverse phase high performance liquid chromatographic method has developed and validated for the simultaneous estimation of Naltrexone hydrochloride (NTX) and Buproprion hydrochloride (BUP) in tablet dosage form.

3. **Akram M. El-Didamony et al, (2015)**, Simple, accurate, precise, and rapid extractive spectrophotometric method was developed for the determination of four antipsychotics drugs, namely sulpiride (SUP), olanzapine (OLP), clozapine (CLP) and aripiprazole (ARP) both in tablets and in biological fluids.

4. **Ravindra Vedantham et al, (2015)**, A short and practical synthesis of Mirabegron, a novel β3-adrenoceptor (AR) agonist for the symptomatic treatment of overactive bladder (OAB), starting from (R)-styrene epoxide in 4 steps is reported.

5. **K.Anverbasha et al, (2014)**, A Chiral liquid chromatographic (LC) method was developed for the enantiomeric resolution of Mirabegron(R)-2-(2-aminothiazol-4-yl)-N-(4-(2-hydroxy-2-phenyl ethyl) amino) ethyl) Phenyl acetamide, adrenoceptor agonist bulk drugs. The enantiomers of mirabegron were resolved on a Chiralpak IF (250mm x 4.6mm, 3.0µm) column using a mobile phase system containing nHeptane, methyl tertiary butyl ether, methanol and ethanol amine in the ratio of (30:28:42:0.1v/v/v/v).

6. **N.Ravindra et al, (2014)**, A simple reverse phase HPLC method was developed for the determination of Aripiprazole present in pharmaceutical dosage forms. A Discovery HSF5 C18, 4.6mm x 250 mm, 5 µm column from Supelco (India), with mobile phase methanol: Acetonirile:sodium sulphate buffer (pH-4) (25:25:50) was used. The flow rate was 1.2 ml/min and effluent was monitored at 254 nm.

7. **K. SHAH et al, (2014)**, A simple, precise, and accurate isocratic reversed-phase (RP) stability-indicating HPLC assay method was developed and validated for determination
of Aripiprazole in bulk and solid pharmaceutical dosage form. A reversed-phase C8 (250×4.0 mm, 5 µm particle size) column for HPLC and C8

8. Florin SOPONAR et al, (2014), A reversed phase HPLC-DAD method was developed and validated for simultaneous determination of aripiprazole and five of its chemical related impurities in tablet dosage forms. The chromatographic separation of the studied compounds was achieved on a Zorbax SB-C18 column (150 mm x 4.6 mm, 5 µm particle size) and a mobile phase composed of methanol : water : orthophosphoric acid. The elution was isocratic with a flow rate of 1.5 mL/min, column temperature was set to 40°C and the injection volume was 20 µL.

9. Chusena Narasimharaju Bhimanadhuni et al, (2013), have established simple and reliable head space Gas chromatographic method for the determination of methanol, Diethyl Ether, Isopropyl alcohol and Toluene as residual solvents present in Mirabegron. injector temperature set at 220°C and FID-detector set at 240°C.

10. Lovekesh Mehta et al, (2013), A simple, rapid, precise, sensitive, cost effective and reproducible reverse phase high performance liquid chromatographic (RP-HPLC) method was developed and validated for the determination of Bupropion HCl in a solid dosage form.

11. Duygu Yeniceli et al, (2013), have proposed a new LC method has been developed and validated for the direct determination of Bupropion and its main metabolite,

12. Jitender Singh et al, (2013), A simple, rapid, precise, sensitive, cost effective and reproducible reverse phase high performance liquid chromatographic (RP-HPLC) method was developed and validated for the determination of bupropion HCl in a solid dosage form. The proposed RP-HPLC method was developed on phenomenonex LunaR (C-18 250 × 4.6 mm, 5µm) column with a mobile phase composed of methanol : acetate buffer (pH-6) in the ratio of 80:20 in isocratic mode at a flow rate 1.0 mL/min. Detection was carried out using UV detector at 251 nm. The retention time under optimized chromatographic conditions was found to be 3.19 minutes.

13. Sukumar senha et al, (2013), A simple, sensitive method for the determination of meta-chlorobenzoic acid in bupropion hydrochloride is described. Chromatographic separation
of m-chlorobenzoic acid is achieved using a mobile phase consisting of n-hexane and ethanol.

14. Alice Varghese et al, (2013), A novel, rapid, sensitive, accurate and specific HPLC assay with UV-Visible detection (250 nm) was developed and validated for the determination of bupropion hydrochloride in rat plasma.

15. Lovekesh Mehta et al, (2013), A simple, rapid, precise, sensitive, cost effective and reproducible reverse phase high performance liquid chromatographic (RP-HPLC) method was developed and validated for the determination of Bupropion HCl in a solid dosage form.

16. Duygu Yeniceli et al, (2013), have proposed a new LC method has been developed and validated for the direct determination of Bupropion and its main metabolite, Hydroxy Bupropion in human plasma. Chusena Narasimharaju et al, (2012), have reported a reverse phase high performance liquid chromatographic method was developed for the determination of Mirabegron in bulk and Pharmaceutical dosage form.

17. Raymond van Teijlingen et al, (2012), have developed a liquid chromatography/tandem mass spectrometry methods for mirabegron and eight metabolites (M5, M8, M11–M16) were developed and validated for heparinized human plasma containing sodium fluoride. Bhadru Bhanotu et al, (2012), A new, simple, specific, sensitive, rapid, accurate and precise RP-HPLC method was developed for the estimation of Aripiprazole in bulk and pharmaceutical formulations. Aripiprazole was chromatographed on a INERTSIL C18 column (250x4.6mm I.D., particle size 5 μm) in a mobile phase consisting of 0.02 M Sodium Dihydrogen Orthophosphate: Methanol in the ratio 30:70 v/v..

18. R. jain et al, (2012), developed a simple, accurate and economic spectrophotometric method for the determination of aripiprazole in tablet formulation. In the present method acidic solution of the aripiprazole formed colored ion-association complexes with bromocresol green, soluble in chloroform.

19. NARAYANA M et al, (2012), a validated specific stability indicating reversed-phase liquid chromatographic method was developed for the quantitative determination of Aripiprazole and its related substances in bulk samples, pharmaceutical dosage forms in
presence of degradation products. Forced degradation studies were performed on bulk sample of Aripiprazole asper ICH prescribed stress conditions using acid, base, oxidative, thermal stress and photolytic degradation to show the stability indicating power of the method. with ortho-phosphoric acid in water and Acetonitrile using a simple linear gradient.

20. **ASHU M et al, (2012)**, proposed a simple, selective, rapid, and economical reversed phase high performance liquid chromatography (RP-HPLC) method for the determination of aripiprazole in the pharmaceutical dosage form has been developed and validated. The separation and quantification were achieved on waters spherisorb 5μ ODS 24.6mm x 250mm column using a mobile phase of buffer: acetonitrile: THF (30:60:10, v/v/v) at a flow rate of 1.5 ml/min with detection of analyte at 255 nm. The separation was achieved within 3.91± 0.1 min for aripiprazole sample.

21. **NANDINI R et al, (2012)**, described the development of a simple, rapid and stability indicating reversed phase column liquid chromatographic method for 7-[4-[4-(2,3-dichlorophenyl) piperazine -1- yl]butoxy]-3,4-dihydro-1H-quinolin-2-one, a leading antipsychotic drug known by the generic name Aripiprazole in the presence of its impurities and degradation products generated from forced decomposition studies.

22. **KANDIKONDA SANDEEP et al, (2012)**, an accurate and precise UV spectrophotometric method with multivariate calibration technique for the determination of aripiprazole in pharmaceutical formulations has been described. This technique is based on the use of the linear regression equations by using the relationship between concentration and absorbance at five different wavelengths. The aripiprazole shows absorption maxima at 255 nm and obeyed Beer’s law in the range of 5-30 μg/mL. The results were treated statistically and were found highly accurate, precise and reproducible. This statistical approach gives optimum results for the eliminating fluctuations coming from instrumental or experimental conditions.

23. **N. Srinivasa rao et al, (2012)**, A novel stability indicating liquid chromatographic assay method was developed for the quantitative estimation of Aripiprazole in tablets 2mg, 5mg, 10mg, 15mg, 20mg, 30mg. An isocratic reverse phase LC-method was developed using
24. **Kandikonda Sandeep et al, (2011)**, An accurate and precise UV spectrophotometric method with multivariate calibration technique for the determination of aripiprazole in pharmaceutical formulations has been described obeyed Beer’s law in the range of 5-30 µg/mL.

25. **K. SHAH et al, (2011)**, A simple, precise, and accurate isocratic reversed-phase (RP) stability-indicating HPLC assay method was developed and validated for determination of Aripiprazole in bulk and solid pharmaceutical dosage form. A reversed-phase C8 (250×4.0 mm, 5 µm particle size) column for HPLC and C8 (50×2.1mm, 1.7 µm particle size) for UPLC method in isocratic mode was used.

26. **J. Nagamallika et al, (2011)**, A simple and selective ultraviolet spectroscopic method were developed and validated for the estimation of Aripiprazole in pure form and in their tablet formulations.

27. **m. a. ambasana et al,(2011)**, A simple, precise, and accurate isocratic reversed-phase (RP) stability-indicating HPLC assay method was developed and validated for determination of Aripiprazole in bulk and solid pharmaceutical dosage form.

28. **H. O. Kaila et al,(2011)**, A simple, precise, and accurate isocratic reversed-phase (RP) stability-indicating HPLC assay method was developed and validated for determination of Aripiprazole in bulk and solid pharmaceutical dosage form

29. **Pradipbhai D. et al, (2010)**, have demonstrated a simple, rapid, precise and accurate ultra performance liquid chromatography (UPLC-PDA) method has been developed on a Waters CSH C18 column (100 mm × 2.1 mm, 1.7 µm) using gradient elution of ammonium acetate (10 mM, pH 5) and acetonitrile as mobile phase.

30. **Bhattacharyya et al, (2010)**, described a rapid and sensitive reverse phase HPLC method is depicted for the qualitative and quantitative assay of Bupropion hydrochloride in pharmaceutical dosage form. Bupropion hydrochloride was chromatographed on a reverse phase C18 column with a mobile phase consisting of methanol : phosphate buffer (pH-6) in the ratio of 80:20% v/v. The mobile phase was pumped at a flow rate of1ml/min. Aceclofenac was used as an internal standard and the eluents were monitored at 223 nm. The retention time of the drug was 5.7 min.

32. M. A. Sameer Abdulaziz et al, (2010), have described two simple, rapid and accurate methods for the determination of Bupropion hydrochloride (BUP) in pure and in pharmaceutical preparations are described.

33. ANDRZEJ et al,(2010), A series of aripiprazole (AR3) syntheses were performed at laboratory scale (10 mmol of the AR1 substrate) in order to optimize the amount of another substrate AR2, as well as Na2CO3, ethanol and varying the reaction time. The reaction parameters were chosen according to the D-optimal plans. A high conversion ratio, about 90-99 %, was obtained. Purity of crude product (AR3) was determined by HPLC

34. Akramm.el-didamony et al, (2009), A simple, rapid and sensitive extractive Spectrophotometric method has been developed for the determination of four antipsychotic drugs, namely Aripiprazole (ARZ), Clozapine (CLZ), Olanzapine (OLZ) and Sulpiride (SLP) both in pharmaceutical formulations and in spiked human serum and spiked human urine.

35. Kalaichelvi et al et al, (2009), A simple, sensitive and reproducible spectrophotometric method was developed for the determination of aripiprazole in pure form and in pharmaceutical formulation. It has an absorption maximum at 219 nm and obeys beer's law in the concentration range 2- 10 Î¼g mL-1. Results of analysis were validated statistically and by recovery studies.

36. K.Shah et al, (2009), A simple, precise, and accurate isocratic reversed-phase (RP) stability-indicating HPLC assay method was developed and validated for determination of Aripiprazole in bulk and solid pharmaceutical dosage form. A reversed-phase C8 (250×4.0 mm, 5 μm particle size) column for HPLC and C8 (50×2.1mm, 1.7 μm particle size) for UPLC method in isocratic mode was used.

37. B.S. SASTRY et al, (2009), A rapid, sensitive and specific reverse phase-high performance liquid chromatography (RP-HPLC) method was developed for the estimation of aripiprazole in pharmaceutical formulations.
The current concept of good manufacturing practices (GMP) emphasizes that the quality of pharmaceutical products should be constructed during the overall process cycle. Quality control department plays an important role in the quality-by-design (QbD) concept since it demands the acquisition of in-process reliable analytical data.

A novel pre-column derivatization reversed-phase high-performance liquid chromatography with fluorescence detection is described for the determination of Bupropion in pharmaceutical preparation, human plasma and human urine using mexiletine as internal standard

1. **Rathna Kumar et al, (2008),**  
A simple, rapid, accurate, precise specific and sensitive reverse phase high performance liquid chromatographic method has developed and validated for the simultaneous estimation of Naltrexone hydrochloride (NTX) and Bupropion hydrochloride (BUP) in tablet dosage form. The chromatographic separation was performed using phenomenex C18 Column Inertsil ODS having dimensions of 4.6x250mm having particle size of 5µm, with mobile phase consisting of Buffer and Acetonitrile (60:40% v/v), flow rate was adjusted to 1.0ml/min and detection wavelength at 224 nm. The proposed method has been validated for linearity, range, precision, accuracy and robustness were within the acceptance limit according to the ICH Q2B guidelines. The retention times of Naltrexone Hydrochloride and Bupropion Hydrochloride were 2.5 mins and 4.6 mins respectively. The linearity was performed in the concentration in the range of 6.25µg/ml to 18.75µg/ml and 37.5µg/ml to 112.5µg/ml and with a correlation coefficient of 0.998 and 0.999 respectively. % RSD for system precision was found to be 0.504 and 0.922,% RSD for repeatability 0.429 and 0.350, % RSD for intermediate precision was 0.937 and 0.0503 respectively. The % percentage purity of Naltrexone Hydrochloride and Bupropion Hydrochloride was found to be 99.63% and 99.20% respectively. The method was found to be robust even by change in the mobile phase ±5% in less flow condition.

40. **Akram M. El-Didamony et al, (2008),**  
Simple, accurate, precise, and rapid extractive spectrophotometric method was developed for the determination of four antipsychotics
drugs, namely sulpiride (SUP), olanzapine (OLP), clozapine (CLP) and aripiprazole (ARP) both in tablets and in biological fluids