TABLE OF CONTENT

Acknowledgement
List of Tables   i-iv
List of Figures  v-x
List of Abbreviations xi-xii

1 INTRODUCTION 1-24
  1.1 Pharmaceutical Analysis-An Overview 1
  1.2 Analytical methods 2
  1.3 Chromatography 3
  1.4 High Performance Liquid Chromatography 5
  1.5 Method Development 12
  1.6 Method Validation 15
  1.7 Forced Degradation Study 19
  1.8 Stability Indicating methods 22

2 AIM AND OBJECTIVES 25-26

3 PLAN OF WORK 27

4 REVIEW OF LITERATURES 28-49
  4.1 Lafutidine & Domperidone 28
  4.2 Darunavir Ethanolate & Ritonavir 33
  4.3 Azithromycin & Ofloxacin 37
  4.4 Cefpodoxime Proxetil & Ofloxacin 40
  4.5 Cefpodoxime Proxetil & Levofloxacin 45

5 DRUGS PROFILE 50-57
  5.1 Lafutidine 50
  5.2 Domperidone 51
  5.3 Darunavir Ethanolate 52
  5.4 Ritonavir 53
  5.5 Azithromycin 54
  5.6 Ofloxacin 55
  5.7 Cefpodoxime Proxetil 56
  5.8 Levofloxacin 56
6 EXPERIMENTAL, RESULTS AND DISCUSSION 58-284

6.1 Lafutidine & Domperidone (Method I) 58-94
   6.1.1 Materials 58
   6.1.2 Methodology 59
   6.1.3 Results and Discussion 67

6.2 Lafutidine & Domperidone (Method II) 95-119
   6.2.1 Equipments and Materials 95
   6.2.2 Methodology 96
   6.2.3 Results and Discussion 103

6.3 Darunavir Ethanolate & Ritonavir (Method I) 120-154
   6.3.1 Equipments and Materials 120
   6.3.2 Methodology 123
   6.3.3 Results and Discussion 131

6.4 Darunavir Ethanolate & Ritonavir (Method II) 155-180
   6.4.1 Equipments and Materials 155
   6.4.2 Methodology 155
   6.4.3 Results and Discussion 163

6.5 Azithromycin & Ofloxacin 181-209
   6.5.1 Equipments and Materials 181
   6.5.2 Methodology 182
   6.5.3 Results and Discussion 190

6.6 Cefpodoxime Proxetil & Ofloxacin 210-240
   6.6.1 Equipments and Materials 210
   6.6.2 Methodology 211
   6.6.3 Results and Discussion 219

6.7 Cefpodoxime Proxetil & Levofloxacin 241-271
   6.7.1 Equipments and Materials 241
   6.7.2 Methodology 242
   6.7.3 Results and Discussion 251

7 SUMMARY AND CONCLUSION 272-284
   7.1 Lafutidine and Domperidone Method I & II 272
   7.2 Darunavir and Ritonavir Method I and Method II 275
   7.3 Azithromycin and Ofloxacin 278
6.25 Forced Degradation Study

**Darunavir And Ritonavir (Method 1)**

6.26 Observed Group Frequencies by FT-IR

6.26a Calibration curve of Ritonavir and Darunavir Ethanolate

6.27 Various Trials and Optimization of Chromatographic Conditions

6.28 System Suitability Parameters

6.29 Results of Specificity Study

6.30 Assay of Formulation (Darunavir + Ritonavir)

6.31 System Precision Data

6.32 Method Precision Data

6.33 Intraday Precision

6.34 Interday Precision

6.35 Recovery Study

6.36 Linearity and Range

6.37 Solution Stability of Sample

6.38 Robustness-Effect of Change in Flow Rate

6.39 Forced Degradation Study

**Darunavir And Ritonavir (Method 2)**

6.40 Various Trials and Optimization of Chromatographic Conditions

6.41 System Suitability Parameters

6.42 Assay of Formulation (Darunavir And Ritonavir)

6.43 System Precision Data

6.44 Method Precision Data

6.45 Intraday Precision

6.46 Interday Precision

6.47 Recovery Study

6.48 Linearity and Range

6.49 Solution Stability of Sample

6.50 Robustness-Effect of Change in Flow Rate

6.51 Forced Degradation Study