

LIST OF TABLES

S.No	Description	Page No.
2.01:	Optimum conditions table of STV with MBTH -IBDA (M _{1a})	84
2.02:	Optimum conditions table of STV with MBTH –Ce(IV)(M _{1b})	85
2.03:	Optimum conditions table of STV with MBTH –NaIO ₄ (M _{1b})	86
2.04:	Optimum conditions table of STV with PHH-PFC (M ₂)	87
2.05:	Optimum conditions table of STV with Brucine –NaIO ₄ (M ₃)	88
2.06:	Optimum conditions table of STV with O-Phen-Fe (III)(M ₄)	89
2.07:	Optimum conditions table of STV with NQS (M ₉)	90
2.08:	Optimum conditions table of STV with p-CA(M ₁₀)	91
2.09:	Optimum conditions table of STV with TP000 (M _{11a}) andARS(M _{11b})	92
2.10:	Intra-day precision and accuracy results of Stavudine	93
2.11:	Results of percentage recovery values of Stavudine	94
2.12 a:	Optical and regression characteristics of the proposed methods for STV	95
2.12 b:	Optical and regression characteristics of the proposed methods for STV	96
2.13a:	Assay of STV in Pharmaceutical Formulations	97
2.13b:	Assay of STV in Pharmaceutical Formulations	98
2.14:	Optimized chromatographic conditions	101
2.15:	System suitability factor	103
2.16:	Regression statistics of the proposed method of stavudine	104
2.17:	Recovery studies of the proposed HPLC method	105
2.18:	Precision data	106
2.19:	Robustness data of stavudine	107
2.20:	Results of analysis of tablet containing Stavudine & recovery studies	108
3.01:	Optimum conditions table of LMV with PGNL and RSNL (M _{12b} & M _{12b})	128

3.02:Intra-day precision and accuracy results of Lamivudine	135
3.03:Results of percentage recovery values of Lamivudine	136
3.04 a: Optical and regression characteristics of the proposed methods for LMV	137
3.04 b: Optical and regression characteristics of the proposed methods for LMV	138
3.05a: Assay of LMV in Pharmaceutical Formulations	139
3.05b: Assay of LMV in Pharmaceutical Formulations	140
3.06: Optimized chromatographic conditions	144
3.07:Calibration of the RP HPLC for the estimation of Lamivudine	145
3.08:Precision data of HPLC method	146
3.09: Results of Recovery studies of tablet containing Lamivudine studies	147
4.01: Optimum conditions table of ZDV with Isatin(M₇)	171
4.02: Optimum conditions table of ZDV with Vanillin(M₈)	172
4.03:Intra-day precision and accuracy results of Zidovudine	173
4.04:Results of percentage recovery values of Zidovudine	174
4.05 a: Optical and regression characteristics of the proposed methods for ZDV	175
4.05 b: Optical and regression characteristics of the proposed methods for ZDV	176
4.06a: Assay of ZDV in Pharmaceutical Formulations	177
4.06b: Assay of ZDV in Pharmaceutical Formulations	178
4.07: Optimized chromatographic conditions	182
4.08: Calibration of the RP HPLC for the estimation of Zidovudine	184
4.09: Precision data	185
4.10: Recovery studies of the proposed HPLC method	186
4.11: Results of analysis (Recovery studies) of tablet containing zidovudine	186
5.01: Optimum conditions table of EFZ with AMV(M₅)	212
5.02: Optimum conditions table of EFZ with Fe(III) -PFC(M₆)	213

5.03:Intra-day precision and accuracy results of EFZ	214
5.04:Results of percentage recovery values of EFZ	215
5.05 a: Optical and regression characteristics of the proposed methods for EFZ	216
5.05 b: Optical and regression characteristics of the proposed methods for EFZ	217
5.06a: Assay of EFZ in Pharmaceutical Formulations	218
5.06b: Assay of EFZ in Pharmaceutical Formulations	219
5.07: Linear regression data for calibration curves	223
5.08:Results of HPLC assay and recovery studies	224

LIST OF FIGURES

S.No	Description	Page No.
2.01:	Absorption spectrum of STV with MBTH -IBDA (M_{1a})	76
2.02:	Absorption spectrum of STV with MBTH –Ce(IV)(M_{1b})	76
2.03:	Absorption spectrum of STV with MBTH –NaIO₄(M_{1b})	76
2.04:	Absorption spectrum of STV with PHH-PFC(M₂)	76
2.05:	Absorption spectrum of STV with Brucine –NaIO₄ (M₃)	77
2.06:	Absorption spectrum of STV with O-Phen-Fe(III)(M₄)	77
2.07:	Absorption spectrum of STV with NQS (M₉)	77
2.08:	Absorption spectrum of STV with PCA(M₁₀)	77
2.09:	Absorption spectrum of STV with TPooo (M_{11a})	78
2.10:	Absorption spectrum of STV with ARS (M_{11b})	78
2.11:	Beer’s law plot of STV with MBTH -IBDA (M_{1a})	78
2.12:	Beer’s law plot of STV with MBTH –Ce(IV)(M_{1b})	78
2.13:	Beer’s law plot of STV with MBTH –NaIO₄(M_{1c})	79

2.14: Beer's law plot of STV with PHH-PFC(M₂)	79
2.15: Beer's law plot of STV with Brucine –NaIO₄ (M₃)	79
2.16: Beer's law plot of STV with O-Phen-Fe(III)(M₄)	79
2.17: Beer's law plot of STV with NQS (M₉)	80
2.18: Beer's law plot of STV with p-CA(M₁₀)	80
2.19: Beer's law plot of STV with TPooo (M_{11a})	80
2.20: Beer's law plot of STV with ARS (M_{11b})	80
2.21: Ringbom plot of STV with MBTH -IBDA (M_{1a})	81
2.22: Ringbom plot of STV with MBTH –Ce(IV)(M_{1b})	81
2.23: Ringbom plot of STV with MBTH –NaIO₄(M_{1c})	81
2.24: Ringbom plot of STV with PHH-PFC(M₂)	81
2.25: Ringbom plot of STV with Brucine –NaIO₄ (M₃)	82
2.26: Ringbom plot of STV with O-Phen-Fe(III)(M₄)	82
2.27: Ringbom plot of STV with NQS (M₉)	82
2.28: Ringbom plot of STV with PCA(M₁₀)	82
2.29: Ringbom plot of STV with TPooo (M_{11a})	83
2.30: Ringbom plot of STV with ARS (M_{11b})	83
2.31. HPLC Chromatogram of STV	100
2.32. Calibration curve of stavudine	105
3.01: Absorption spectrum of LMV with MBTH -IBDA (M_{1a})	129
3.02: Absorption spectrum of LMV with Brucine –NaIO₄ (M₃)	129
3.03: Absorption spectrum of LMV with PCA(M₁₀)	129
3.04: Absorption spectrum of LMV with TPooo (M_{11a})	129
3.05: Absorption spectrum of LMV with ARS (M_{11b})	130
3.06: Absorption spectrum of LMV with NaNO₂ - Phlroglucinol (M_{12a})	130

3.07: Absorption spectrum of LMV with NaNO₂ - Resorcinol (M_{12b})	130
3.08: Beer's law plot of LMV with MBTH -IBDA (M_{1a})	131
3.09: Beer's law plot of LMV with Brucine –NaIO₄ (M₃)	131
3.10: Beer's law plot of LMV with PCA(M₁₀)	131
3.11: Beer's law plot of LMV with TPooo (M_{11a})	131
3.12: Beer's law plot of LMV with ARS (M_{11b})	132
3.13: Beer's law plot of LMV with NaNO₂ - Phlroglucinol (M_{12a})	132
3.14: Beer's law plot of LMV with NaNO₂ - Resorcinol (M_{12b})	132
3.15: Ringbom plot of LMV with MBTH -IBDA (M_{1a})	133
3.16: Ringbom plot of LMV with Brucine –NaIO₄ (M₃)	133
3.17: Ringbom plot of LMV with PCA(M₁₀)	133
3.18: Ringbom plot of LMV with TPooo (M_{11a})	133
3.19: Ringbom plot of LMV with ARS (M_{11b})	134
3.20: Ringbom plot of LMV with NaNO₂ - Phlroglucinol (M_{12a})	134
3.21: Ringbom plot of LMV with NaNO₂ - Resorcinol (M_{12b})	134
3.22: Typical chromatogram of lamivudine	143
3.23: Calibartion curve of lamivudine	145
4.01: Absorption spectrum of ZDV with MBTH -IBDA (M_{1a})	165
4.02: Absorption spectrum of ZDV with MBTH - NaIO₄ (M_{1c})	165
4.03: Absorption spectrum of ZDV with Brucine –NaIO₄ (M₃)	165
4.04: Absorption spectrum of ZDV with Isatin (M₇)	165
4.05: Absorption spectrum of ZDV with Vanillin (M₈)	166
4.06: Absorption spectrum of ZDV with PCA (M₁₀)	166
4.07: Absorption spectrum of ZDV with TPooo (M_{11a})	166
4.08: Absorption spectrum of ZDV with ARS (M_{11b})	166

4.09: Beer's law plot of ZDV with MBTH -IBDA (M_{1a})	167
4.10: Beer's law plot of ZDV with MBTH - NaIO₄ (M_{1c})	167
4.11: Beer's law plot of ZDV with Brucine –NaIO₄ (M₃)	167
4.12: Beer's law plot of ZDV with Isatin (M₇)	167
4.13: Beer's law plot of ZDV with Vanillin (M₈)	168
4.14: Beer's law plot of ZDV with PCA (M₁₀)	168
4.15: Beer's law plot of ZDV with TPooo (M_{11a})	168
4.16: Beer's law plot of ZDV with ARS (M_{11b})	168
4.17: Ringbom plot of ZDV with MBTH -IBDA (M_{1a})	169
4.18: Ringbom plot of ZDV with MBTH - NaIO₄ (M_{1c})	169
4.19: Ringbom plot of ZDV with Brucine –NaIO₄ (M₃)	169
4.20: Ringbom plot of ZDV with Isatin (M₇)	169
4.21: Ringbom plot of ZDV with Vanillin (M₈)	170
4.22: Ringbom plot of ZDV with PCA (M₁₀)	170
4.23: Ringbom plot of ZDV with TPooo (M_{11a})	170
4.24: Ringbom plot of ZDV with ARS (M_{11b})	170
4.25: HPLC Chromatogram of zidovudine	181
4.26: Linearity of zidovudine	184
5.01: Absorption spectrum of EFZ with MBTH -IBDA (M_{1a})	206
5.02: Absorption spectrum of EFZ with MBTH - Ce(IV) (M_{1b})	206
5.03: Absorption spectrum of EFZ with MBTH–NaIO₄ (M_{1c})	206
5.04: Absorption spectrum of EFZ with AMV (M₅)	206
5.05: Absorption spectrum of EFZ with Fe(III)- PFC (M₆)	207
5.06: Absorption spectrum of EFZ with NQS (M₉)	207
5.07: Absorption spectrum of EFZ with TPooo (M_{11a})	207

5.08: Absorption spectrum of EFZ with ARS (M_{11b})	207
5.09: Beer's law plot of EFZ with MBTH -IBDA (M_{1a})	208
5.10: Beer's law plot of EFZ with MBTH - Ce(IV) (M_{1b})	208
5.11: Beer's law plot of EFZ with MBTH–NaIO₄ (M_{1c})	208
5.12: Beer's law plot of EFZ with AMV (M₅)	208
5.13: Beer's law plot of EFZ with Fe(III)- PFC (M₆)	209
5.14: Beer's law plot of EFZ with NQS (M₉)	209
5.15: Beer's law plot of EFZ with TPooo (M_{11a})	209
5.16: Beer's law plot of EFZ with ARS (M_{11b})	209
5.17: Ringbom plot of EFZ with MBTH -IBDA (M_{1a})	210
5.18: Ringbom plot of EFZ with MBTH - Ce(IV) (M_{1b})	210
5.19: Ringbom plot of EFZ with MBTH–NaIO₄ (M_{1c})	210
5.20: Ringbom plot of EFZ with AMV (M₅)	210
5.21: Ringbom plot of EFZ with Fe(III)- PFC (M₆)	211
5.22: Ringbom plot of EFZ with NQS (M₉)	211
5.23: Ringbom plot of EFZ with TPooo (M_{11a})	211
5.24: Ringbom plot of EFZ with ARS (M_{11b})	211
5.25: Typical chromatogram of efavirenz by HPLC	222
5.26: Calibration curve of efavirenz by HPLC	223