

LIST OF TABLES

TABLE NO.	TITLE	PAGE NO.
2.01	Applications of Pluronic F127 In Drug Delivery	50
2.02	Classification of Liposomes	59
2.03	Various Periodontal Formulations Available In The Market	66
2.04	Solubility of Minocycline Hydrochloride At 25 ⁰ C	68
2.05	Solubility of Clindamycin Phosphate At 25 ⁰ C	73
3.01	Mean Absorbance Value, Regressed Value and Statistical Data of The Calibration Curve For The Estimation of Minocycline Hydrochloride In Distilled Water	101
3.02	Mean Absorbance Value, Regressed Value and Statistical Data of The Calibration Curve For The Estimation of Minocycline Hydrochloride In Phosphate Buffer Saline pH 6.75	102
3.03	Mean Absorbance Value, Regressed Value and Statistical Data of The Calibration Curve For The Estimation of Clindamycin Phosphate In Distilled Water	106
3.04	Mean Absorbance Value, Regressed Value and Statistical Data of The Calibration Curve For The Estimation of Clindamycin Phosphate In Phosphate Buffer Saline pH 6.75	106
4.01	Composition and Characteristics of PluronicF127 Thermoreversible Periodontal Gel Formulations	117
4.02	Composition and Characteristics of PluronicF127 Thermoreversible Periodontal Gels Containing Minocycline Hydrochloride	118
4.03	Composition and Characteristics of PluronicF127 Thermoreversible Periodontal Gels Containing Clindamycin Phosphate	118
4.04	Composition and Characteristics of PluronicF127 Thermoreversible Periodontal Gels Containing Polyethylene Glycol 1000	118
4.05	Composition and Characteristics of PluronicF127 Thermoreversible Periodontal Gels Containing Polyethylene Glycol 1000	119
4.06	Composition and Characteristics of PluronicF127 Thermoreversible Periodontal Gels Containing Polyethylene Glycol 1000	119
4.07	Composition and Characteristics of PluronicF127 Thermoreversible Periodontal Gels Containing Polyethylene Glycol 1000	119
4.08	Composition and Characteristics of Polycarbophil – Pluronic F127 Thermoreversible Periodontal Gels	120
4.09	Composition and Characteristics of Polycarbophil – Pluronic F127 Thermoreversible Periodontal Gels	120
4.10	Composition and Characteristics of Polycarbophil – Pluronic F127 Thermoreversible Periodontal Gels	120
4.11	Composition and Characteristics of Polycarbophil – Pluronic F127 Thermoreversible Periodontal Gels	121
4.12	Composition and Characteristics of HPMC – Pluronic F127 Thermoreversible Periodontal Gels	121
4.13	Composition and Characteristics of HPMC – Pluronic F127 Thermoreversible Periodontal Gels	121
4.14	Composition and Characteristics of HPMC – Pluronic F127 Thermoreversible Periodontal Gels	122
4.15	Composition and Characteristics of HEC – Pluronic F127 Thermoreversible Periodontal Gels	122
4.16	Composition and Characteristics of HEC – Pluronic F127 Thermoreversible Periodontal Gels	122

4.17	Composition and Characteristics of HEC – Pluronic F127 Thermoreversible Periodontal Gels	123
4.18	Composition and Characteristics of PVP – Pluronic F127 Thermoreversible Periodontal Gels	123
4.19	Composition and Characteristics of PVP – Pluronic F127 Thermoreversible Periodontal Gels	123
4.20	Composition and Characteristics of PVP – Pluronic F127 Thermoreversible Periodontal Gels	124
4.21	Composition and Characteristics of Carbopol 934P – Pluronic F127 Thermoreversible Periodontal Gels	124
4.22	Composition and Characteristics of Carbopol 934P – Pluronic F127 Thermoreversible Periodontal Gels	124
4.23	Composition and Characteristics of Carbopol 934P – Pluronic F127 Thermoreversible Periodontal Gels	125
4.24	Composition and Characteristics of Carbopol 934P – Pluronic F127 Thermoreversible Periodontal Gels	125
4.25	Composition and Characteristics of PVA – Pluronic F127 Thermoreversible Periodontal Gels	125
4.26	Composition and Characteristics of PVA – Pluronic F127 Thermoreversible Periodontal Gels	126
4.27	Composition and Characteristics of PVA – Pluronic F127 Thermoreversible Periodontal Gels	126
4.28	Composition and Characteristics of PAA – Pluronic F127 Thermoreversible Periodontal Gels	126
4.29	Composition and Characteristics of PAA – Pluronic F127 Thermoreversible Periodontal Gels	127
4.30	Composition and Characteristics of PAA – Pluronic F127 Thermoreversible Periodontal Gels	127
4.31	Composition and Characteristics of 0.5%w/w NaOH – Pluronic F127 Thermoreversible Periodontal Gels	127
4.32	Composition and Characteristics of 0.5% w/w NaOH – Pluronic F127 Thermoreversible Periodontal Gels	128
4.33	Composition and Characteristics of 0.5% w/w NaOH – Pluronic F127 Thermoreversible Periodontal Gels	128
4.34	Composition and Characteristics of 0.5% w/w NaOH – Pluronic F127 Thermoreversible Periodontal Gels	128
4.35	Effect of Various Additives on Enthalpy of Pluronic F127 Gels	129
4.36	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Polycarbophil (0.20%) - Pluronic F127	142
4.37	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Polycarbophil (0.30%) - Pluronic F127	142
4.38	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Polycarbophil (0.40%) - Pluronic F127	143
4.39	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Polycarbophil (0.50%) - Pluronic F127	143
4.40	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of Polycarbophil (0.20%) - Pluronic F127	144
4.41	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of Polycarbophil (0.30%) - Pluronic F127	144
4.42	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of Polycarbophil (0.40%) - Pluronic F127	145
4.43	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal	145

	Gels of Polycarbophil (0.50%) - Pluronic F127	
4.44	Determination of Syringeability of Various Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mixed Mucoadhesive Periodontal Gels of Polycarbophil- Pluronic F127	159
4.45	In Vitro Release Profile of Minocycline Hydrochloride From Polycarbophil - Pluronic F127 Thermoreversible Periodontal Gel	160
4.46	In Vitro Release Profile of Clindamycin Phosphate From Polycarbophil - Pluronic F127 Thermoreversible Periodontal Gel	161
4.47	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Polycarbophil - Pluronic F127 Mucoadhesive Periodontal Thermoreversible Gel	162
4.48	In Vitro Permeation Profile of Minocycline Hydrochloride From Polycarbophil - Pluronic F127 Thermoreversible Periodontal Gel	165
4.49	In Vitro Permeation Profile of Clindamycin Phosphate From Polycarbophil - Pluronic F127 Thermoreversible Periodontal Gel	166
4.50	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gels	167
4.51	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At 4°C	167
4.52	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At Room Temperature	167
4.53	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of HPMC (0.25%) - Pluronic F127	172
4.54	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of HPMC (0.50%) - Pluronic F127	172
4.55	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of HPMC (0.75%) - Pluronic F127	173
4.56	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of HPMC (0.25%) - Pluronic F127	173
4.57	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of HPMC (0.50%) - Pluronic F127	174
4.58	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of HPMC (0.75%) - Pluronic F127	174
4.59	Determination of Syringeability of Drug Loaded Mixed Mucoadhesive Periodontal Gels of HPMC- Pluronic F127	180
4.60	In Vitro Release Profile of Minocycline Hydrochloride From HPMC - Pluronic F127 Thermoreversible Periodontal Gel	181
4.61	In Vitro Release Profile of Clindamycin Phosphate From HPMC - Pluronic F127 Thermoreversible Periodontal Gel	182
4.62	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded HPMC - Pluronic F127 Mucoadhesive Periodontal Thermoreversible Gel	183
4.63	In Vitro Permeation Profile of Minocycline Hydrochloride From HPMC - Pluronic F127 Thermoreversible Periodontal Gel	185
4.64	In Vitro Permeation Profile of Clindamycin Phosphate From HPMC - Pluronic F127 Thermoreversible Periodontal Gel	186
4.65	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gels	187
4.66	Drug Content, pH and Gelling Temperature of Minocycline	187

4.67	Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At 4° C Drug Content, pH and Gelling Temperature of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At Room Temperature.	187
4.68	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of HEC (0.25%) - Pluronic F127	191
4.69	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of HEC (0.50%) - Pluronic F127	191
4.70	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of HEC (0.75%) - Pluronic F127	192
4.71	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of HEC (0.25%) - Pluronic F127	192
4.72	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of HEC (0.50%) - Pluronic F127	193
4.73	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of HEC (0.75%) - Pluronic F127	193
4.74	Determination of Syringeability of Drug Loaded Mixed Mucoadhesive Periodontal Gels of HEC- Pluronic F127	199
4.75	In Vitro Release Profile of Minocycline Hydrochloride From HEC - Pluronic F127 Thermoreversible Periodontal Gel	200
4.76	In Vitro Release Profile of Clindamycin Phosphate From HEC - Pluronic F127 Thermoreversible Periodontal Gel	201
4.77	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded HEC - Pluronic F127 Mucoadhesive Periodontal Thermoreversible Gel	202
4.78	In Vitro Permeation Profile of Minocycline Hydrochloride From HEC - Pluronic F127 Thermoreversible Periodontal Gel	204
4.79	In Vitro Permeation Profile of Clindamycin Phosphate From HEC - Pluronic F127 Thermoreversible Periodontal Gel	205
4.80	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Gels	206
4.81	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At 4°C.	206
4.82	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At Room Temperature	206
4.83	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PVP (0.50%) - Pluronic F127	210
4.84	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PVP (1.00%) - Pluronic F127	211
4.85	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PVP (2.00%) - Pluronic F127	211
4.86	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PVP (0.50%) - Pluronic F127	212
4.87	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PVP (1.00%) - Pluronic F127	212
4.88	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PVP (2.00%) - Pluronic F127	213
4.89	Determination of Syringeability of Drug Loaded Mixed Mucoadhesive Periodontal Gels of PVP- Pluronic F127	218

4.90	In Vitro Release Profile of Minocycline Hydrochloride From PVP - Pluronic F127 Thermoreversible Periodontal Gel	220
4.91	In Vitro Release Profile of Clindamycin Phosphate From PVP - Pluronic F127 Thermoreversible Periodontal Gel	221
4.92	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded PVP - Pluronic F127 Mucoadhesive Periodontal Thermoreversible Gel	222
4.93	In Vitro Permeation Profile of Minocycline Hydrochloride From PVP - Pluronic F127 Thermoreversible Periodontal Gel	224
4.94	In Vitro Permeation Profile of Clindamycin Phosphate From PVP - Pluronic F127 Thermoreversible Periodontal Gel	225
4.95	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Gels	226
4.96	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At 4° C	226
4.97	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At Room Temperature	226
4.98	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Carbopol 934P (0.20%) - Pluronic F127	230
4.99	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Carbopol 934P (0.30%) - Pluronic F127	231
4.100	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Carbopol 934P (0.40%) - Pluronic F127	231
4.101	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of Carbopol 934P (0.50%) - Pluronic F127	232
4.102	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of Carbopol 934P (0.20%) - Pluronic F127	232
4.103	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of Carbopol 934P (0.30%) - Pluronic F127	233
4.104	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of Carbopol 934P (0.40%) - Pluronic F127	233
4.105	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of Carbopol 934P (0.50%) - Pluronic F127	234
4.106	Determination of Syringeability of Drug Loaded Mixed Mucoadhesive Periodontal Gels of Carbopol 934P- Pluronic F127	240
4.107	Release Profile of Minocycline Hydrochloride From Carbopol 934P - Pluronic F127 Thermoreversible Periodontal Gel	242
4.108	In Vitro Release Profile of Clindamycin Phosphate From Carbopol 934P - Pluronic F127 Thermoreversible Periodontal Gel	243
4.109	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Carbopol-934P - Pluronic F127 Mucoadhesive Periodontal Thermoreversible Gel	244
4.110	Ex Vivo Permeation Profile of Minocycline Hydrochloride From Carbopol 934P - Pluronic F127 Thermoreversible Periodontal Gel	247
4.111	Ex Vivo Permeation Profile of Clindamycin Phosphate From Carbopol 934P - Pluronic F127 Thermoreversible Periodontal Gel	248
4.112	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Gels	249
4.113	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At 4° C	249

4.114	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At Room Temperature	249
4.115	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PVA (0.50%) - Pluronic F127	253
4.116	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PVA (1.00%) - Pluronic F127	253
4.117	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PVA (2.00%) - Pluronic F127	254
4.118	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PVA (0.50%) - Pluronic F127	254
4.119	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PVA (1.00%) - Pluronic F127	255
4.120	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PVA (2.00%) - Pluronic F127	255
4.121	Determination of Syringeability of Drug Loaded Mixed Mucoadhesive Periodontal Gels of PVA- Pluronic F127	261
4.122	In Vitro Release Profile of Minocycline Hydrochloride From PVA - Pluronic F127 Thermoreversible Periodontal Gel	262
4.123	In Vitro Release Profile of Clindamycin Phosphate From PVA - Pluronic F127 Thermoreversible Periodontal Gel	263
4.124	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded PVA - Pluronic F127 Mucoadhesive Periodontal Thermoreversible Gel	264
4.125	Ex Vivo Permeation Profile of Minocycline Hydrochloride From PVA - Pluronic F127 Thermoreversible Periodontal Gel	266
4.126	Ex Vivo Permeation Profile of Clindamycin Phosphate From PVA - Pluronic F127 Thermoreversible Periodontal Gel	267
4.127	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Gels	268
4.128	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At 4° C	268
4.129	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At Room Temperature	268
4.130	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PAA (0.50%) - Pluronic F127	272
4.131	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PAA (1.00%) - Pluronic F127	273
4.132	Composition and Characteristics of MnHCl Loaded Mixed Periodontal Gels of PAA (2.00%) - Pluronic F127	273
4.133	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PAA (0.50%) - Pluronic F127	274
4.134	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PAA (1.00%) - Pluronic F127	274
4.135	Composition and Characteristics of ClPO4 Loaded Mixed Periodontal Gels of PAA (2.00%) - Pluronic F127	275
4.136	Determination of Syringeability of Drug Loaded Mixed Mucoadhesive Periodontal Gels of PAA- Pluronic F127	280
4.137	In Vitro Release Profile of Minocycline Hydrochloride From PAA - Pluronic F127 Thermoreversible Periodontal Gel	281

4.138	In Vitro Release Profile of Clindamycin Phosphate From PAA - Pluronic F127 Thermoreversible Periodontal Gel	282
4.139	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded PAA - Pluronic F127 Mucoadhesive Periodontal Thermoreversible Gel	283
4.140	Ex Vivo Permeation Profile of Minocycline Hydrochloride From PAA - Pluronic F127 Thermoreversible Periodontal Gel	285
4.141	Ex Vivo Permeation Profile of Clindamycin Phosphate From PAA - Pluronic F127 Thermoreversible Periodontal Gel	286
4.142	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Gels	287
4.143	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At 4° C	287
4.144	Drug Content and pH of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Thermoreversible Gel After 180 Days Storage At Room Temperature	287
4.145	Composition of Various Optimized Periodontal Thermoreversible Gel Formulations	292
5.01	Composition and Effect of Concentration of Polymer and Plasticizer on The Strip Formation	306
5.02	Composition and Effect of Mucoadhesive Polymer on The Periodontal Strip Formation	308
5.03	Composition and Characteristics of Plain Periodontal Strips	312
5.04	Composition and Characteristics of Minocycline Hydrochloride Loaded Mucoadhesive Periodontal Strips	312
5.05	Composition and Characteristics of Clindamycin Phosphate Loaded Mucoadhesive Periodontal Strips	313
5.06	Mechanical and Biological Property of Plain Periodontal Strips	319
5.07	Mechanical and Biological Property of Minocycline Hydrochloride Loaded Mucoadhesive Periodontal Strips	320
5.08	Mechanical and Biological Property of Clindamycin Phosphate Loaded Mucoadhesive Periodontal Strips	320
5.09	In Vitro Release Study of The Minocycline Hydrochloride Loaded Mucoadhesive Periodontal Strips	322
5.10	Release Kinetics Parameters of Minocycline Hydrochloride Loaded Mucoadhesive Periodontal Strips	323
5.11	In Vitro Release Study of The Clindamycin Phosphate Loaded Mucoadhesive Periodontal Strips	325
5.12	Release Kinetics Parameters of Clindamycin Phosphate Loaded Mucoadhesive Periodontal Strips	326
5.13	In Vitro Permeation Study of The Minocycline Hydrochloride and Clindamycin Phosphate Loaded Mucoadhesive Periodontal Strips	329
5.14	Drug Permeation Kinetics of Various Drug Loaded Periodontal Strip Formulations	330
5.15	Mechanical and Biological Property of Minocycline Hydrochloride Loaded Mucoadhesive Periodontal Strips After 180 Days Storage At Room Temperature	336
5.16	Mechanical and Biological Property of Clindamycin Phosphate Loaded Mucoadhesive Periodontal Strips After 180 Days Storage At Room Temperature	337
5.17	Mechanical and Biological Property of Minocycline Hydrochloride Loaded Mucoadhesive Periodontal Strips After 180 Days Storage At 4°C	337
5.18	Mechanical and Biological Property of Clindamycin Phosphate Loaded	338

6.01	Mucoadhesive Periodontal Strips After 180 Days Storage At 4° C Effect of stirring speed on the encapsulation efficiency and particle size of minocycline hydrochloride loaded ethyl cellulose microspheres	351
6.02	Effect of stirring speed on the encapsulation efficiency and particle size of clindamycin phosphate loaded ethyl cellulose microspheres	352
6.03	Actual Drug Content and Encapsulation Efficiency of Various Microspheres Containing Minocycline Hydrochloride	353
6.04	Actual Drug Content and Encapsulation Efficiency of Various Microspheres Containing Clindamycin Phosphate	353
6.05	Characteristics of Minocycline hydrochloride loaded mucoadhesive periodontal microspheres	357
6.06	Characteristics of Clindamycin phosphate loaded mucoadhesive periodontal microspheres	357
6.07	Determination of syringeability of various Minocycline hydrochloride/ Clindamycin phosphate loaded periodontal microspheres	358
6.08	In Vitro Release Studies of Minocycline Hydrochloride From The Drug Loaded Periodontal Microspheres	360
6.09	In Vitro Release Studies of Clindamycin Phosphate From The Drug Loaded Periodontal Microspheres	361
6.10	Release Kinetics Parameters of Minocycline Hydrochloride Loaded Mucoadhesive Periodontal Microspheres	361
6.11	Release Kinetics Parameters of Clindamycin Phosphate Loaded Mucoadhesive Periodontal Microspheres	361
6.12	In Vitro Permeation Study of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Microspheres	365
6.13	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Mucoadhesive Periodontal Microspheres	365
6.14	Actual Drug Content and Encapsulation Efficiency of minocycline hydrochloride/ clindamycin phosphate loaded mucoadhesive periodontal microspheres after 180 days storage at room temperature	369
6.15	Actual Drug Content and Encapsulation Efficiency of Minocycline hydrochloride/ Clindamycin phosphate loaded mucoadhesive periodontal microspheres after 180 days storage at 4° C	369
7.01	Composition of Various Conventional Liposomes Containing Minocycline Hydrochloride	386
7.02	Composition of Various Conventional Liposomes Containing Clindamycin Phosphate	387
7.03	Characterization of Conventional Liposome Containing Minocycline Hydrochloride	390
7.04	Characterization of Conventional Liposome Containing Clindamycin Phosphate	391
7.05	Composition of Various Liposome Loaded Periodontal Gel Formulations	392
7.06	Determination of Syringeability Of Various Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Periodontal Liposomal Gel	393
7.07	In Vitro Release Profile of Minocycline Hydrochloride From Conventional Periodontal Liposome Gel	395
7.08	In Vitro Release Profile of Clindamycin Phosphate From Conventional	396

	Periodontal Liposome Gel	
7.09	Release Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Conventional Periodontal Liposome Gel	397
7.10	In Vitro Permeation Profile of Minocycline Hydrochloride/ Clindamycin Phosphate From Conventional Periodontal Liposome Gel	399
7.11	Permeation Kinetics Parameters of Minocycline Hydrochloride/ Clindamycin Phosphate Loaded Conventional Periodontal Liposome Gel	400
7.12	Stability Study of Various Drug Loaded Periodontal Liposome Gel At 4°C And At Room Temperature	401
8.01	Effect of $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ Concentration on Radio Labeling Efficiency of Plain Minocycline Hydrochloride And Its Periodontal Formulations	411
8.02	Effect of $\text{SnCl}_2 \cdot 2\text{H}_2\text{O}$ Concentration on Radio Labeling Efficiency of Plain Clindamycin Phosphate And Its Periodontal Formulations	411
8.03	Effect of pH on Radio Labeling Efficiency of Minocycline Hydrochloride And Its Periodontal Formulations	412
8.04	Effect of pH on Radio Labeling Efficiency of Clindamycin Phosphate And Its Periodontal Formulations	412
8.05	Effect of Incubation Time on Radio Labeling Efficiency of Minocycline Hydrochloride and Its Periodontal Formulations	413
8.06	Effect of Incubation Time on Radio Labeling Efficiency of Clindamycin Phosphate and Its Periodontal Formulations	414
8.07	In Vitro Stability Studies of Radio Labeled Minocycline Hydrochloride and Its Periodontal Formulations In Saline	414
8.08	In Vitro Stability Studies of Radio Labeled Clindamycin Phosphate and Its Periodontal Formulations In Saline	415
8.09	Stability Studies of Radio Labeled Minocycline Hydrochloride and Its Periodontal Formulations In Human Serum At 37°C	415
8.10	Stability Studies of Radio Labeled Clindamycin Phosphate and Its Periodontal Formulations In Human Serum At 37°C	415
8.11	DTPA Challenging Test of Radio Labeled Minocycline Hydrochloride and Its Periodontal Formulations	416
8.12	DTPA Challenging Test of Radio Labeled Clindamycin Phosphate and Its Periodontal Formulations	416
9.01	Blood kinetics study of $\text{Tc}^{99\text{m}}$ Labelled Minocycline Hydrochloride and their Periodontal Formulations	422
9.02	Blood kinetics study of $\text{Tc}^{99\text{m}}$ Labelled Clindamycin Phosphate and their Periodontal Formulations	423
9.03	Pharmacokinetics Parameters for the In vivo Studies of $\text{Tc}^{99\text{m}}$ Labelled Minocycline Hydrochloride / Clindamycin Phosphate Loaded Periodontal Formulations in Rabbits	424
10.01	MIC of Minocycline Hydrochloride/ Clindamycin Phosphate and Their Periodontal Formulations Against S. Aureus ATCC 29213 and E. Coli ATCC 25922	437
10.02	Study of Antimicrobial Activity of Minocycline Hydrochloride And Their Periodontal Formulations Against S. Aureus ATCC 29213 and E. Coli ATCC 25922	437
10.03	Study of Antimicrobial Activity of Clindamycin Phosphate and Their Periodontal Formulations Against S. Aureus ATCC 29213 and E. Coli ATCC 25922	438
10.04	Study of Antimicrobial Activity of Formulation Additives and The Solvent Against S. Aureus ATCC 29213 And E. Coli ATCC 25922	438
10.05	Study of Antimicrobial Activity of Minocycline Hydrochloride Loaded Periodontal Thermoreversible Gel Formulation Against S. Aureus ATCC 29213 and E. Coli ATCC 25922 At Different Time Interval	438

10.06	Study of Antimicrobial Activity of Clindamycin Phosphate Loaded Periodontal Thermoreversible Gel Formulation Against S. Aureus ATCC 29213 and E. Coli ATCC 25922 At Different Time Interval	439
10.07	Study of Antimicrobial Activity of Minocycline Hydrochloride Loaded Periodontal Mucoadhesive Strip Formulation Against S. Aureus ATCC 29213 and E. Coli ATCC 25922 At Different Time Interval	439
10.08	Study of Antimicrobial Activity of Clindamycin Phosphate Loaded Periodontal Mucoadhesive Strip Formulation Against S. Aureus ATCC 29213 and E. Coli ATCC 25922 At Different Time Interval	440
10.09	Study of Antimicrobial Activity of Minocycline Hydrochloride Loaded Periodontal Mucoadhesive Microsphere Formulation Against S. Aureus ATCC 29213 And E. Coli ATCC 25922 At Different Time Interval	440
10.10	Study of Antimicrobial Activity of Clindamycin Phosphate Loaded Periodontal Mucoadhesive Microsphere Formulation Against S. Aureus ATCC 29213 and E. Coli ATCC 25922 At Different Time Interval	440
10.11	Study of Antimicrobial Activity of Minocycline Hydrochloride Loaded Periodontal Mucoadhesive Liposomal Gel Formulation Against S. Aureus ATCC 29213 and E. Coli ATCC 25922 At Different Time Interval	441
10.12	Study of Antimicrobial Activity of Clindamycin Phosphate Loaded Periodontal Mucoadhesive Liposomal Gel Formulation Against S. Aureus ATCC 29213 And E. Coli ATCC 25922 At Different Time Interval	441
11.01	Composition of Various Optimized Periodontal Formulations	455