List of Tables

Table 1.1 Marketed formulations of lipid solutions……7

Table 1.2 Patents on micro emulsions…….……8

Table 1.3 Different transporter protein with their drug substrate…….…..……23

Table 1.4 Various NDDS approaches to bypass EDTs…….……..……29

Table 1.5 Drugs bioavailability bioenhanced by Piperine…….…….....……35

Table 1.6 Drugs bioavailability bioenhanced by Naringin…….……..……..36

Table 1.7 Drugs bioavailability enhanced by Quercetin…….…….…...41

Table 4.1 Study Design for Caco-2 cell lines (Plate No. 1).…….……..…. 111

Table 4.2 Study Design for Caco-2 cell lines (Plate No. 2)…….……...…..112

Table 4.3 Study Design for Caco-2 cell lines (Plate No. 3)...…….……..112

Table 4.4 Study Design for Caco-2 cell lines (Plate No. 4) ……...…….……..112

Table 4.5 Study Design for Caco-2 cell lines (Plate No. 5)……...…….……..113

Table 4.6 Animals detail used for pharmacokinetic Studies……..…….……..113

Table 4.7 Dosing details for pharmacokinetic studies……..…….……...114

Table 4.8 Results of LOF and Levene's test for linear regression model……...……...118

Table 4.9 Results of Trueness in terms of relative bias (%)……....……..119

Table 4.10 Result of method accuracy in terms of relative beta-expectation tolerance limit and risk assessment obtained by selected regression modelin different matrix……..……121

Table 4.11 Result of robustness studies in different variations in terms of mean concentration found and %RSD (n=6) …….…….…….123

Table 4.12 Results of relative and absolute intermediate precision and repeatability in terms of (%RSD) …….…….…….126

Table 4.13 Results of concentration determination of acyclovir in tablet, skin cream, eye ointment and injection …….…….……128

Table 4.14 Summary of contribution to the measurement uncertainty……..……...133

Table 4.15 Results of LOF for linear regression model…….……..…….135

Table 4.16 Results of Trueness in terms of relative bias (%)…….…...……136

Table 4.17 Results of relative and absolute intermediate precision and repeatability in terms of (%RSD) …….…….…….137

Table 4.18 Result of method accuracy in terms of relative beta-expectation tolerance limit and risk assessment obtained by selected regression model in matrix…….……..…….137
Table 4.19 Extraction efficiency results for plasma samples…….…….……139
Table 4.20 Combine standard uncertainty for LC-MS method…….…..…….143
Table 4.21 Content of Uniformity of different binary systems…….……...…….144
Table 4.22 Permeation coefficient and Enhancement ratio (ER) for ACV and ACV:QU, ACV:Sil, ACV:LT at different weight ratios…….……..….149
Table 4.23 Pharmacokinetic Parameters of ACV after a single oral dose of ACV, in absence and presence of each of three different bioenhancers. …….……..…….163
Table 5.1 Study Design for Caco-2 cell lines (Plate No. 1) ……..178
Table 5.2 Study Design for Caco-2 cell lines (Plate No. 2) …….…...……..178
Table 5.3 Study Design for Caco-2 cell lines (Plate No. 3) …….……..179
Table 5.4 Study Design for Caco-2 cell lines (Plate No. 4) …….……..179
Table 5.5 Study Design for Caco-2 cell lines (Plate No. 5) …….……..179
Table 5.6 Animals detail used for pharmacokinetic Studies…….……..180
Table 5.7 Results of Trueness in terms of relative bias (%)…….…….……..183
Table 5.8 Results of repeatability and intermediate precision and repeatability in terms of (%RSD)……..….……...……..184
Table 5.9 Result of method accuracy in terms of relative beta-expectation tolerance limit and risk assessment obtained by selected regression model in matrix…….…..……..184
Table 5.10 Extraction efficiency results for plasma samples…….……184
Table 5.11 Content of Uniformity of different binary systems…….……..185
Table 5.12 Permeation coefficient for SQU, SQU-QU, SQU-Sil and SQU-LT at different weight ratios…….……190
Table 6.1 Preparation of different creams with bioenhancers…….……216
Table 6.2 Results of drug content and spreadability studies of different creams……224