

LIST OF TABLES

Table	Title	Page
2.1.	List of most widely used polymers, surfactants and cryoprotectants as constituent of nanoparticles	22
2.2.	Classification of antihypertensive drugs by their mechanism of action	30
3.1.	Summary of the analytical method validation of lercanidipine by RP-HPLC method	62
3.2.	Summary results of bioanalytical method validation of lercanidipine in rabbit plasma	66
4.1.	Samples analyzed for drug-excipient compatibility studies by FTIR and DSC	76
4.2.	Formulation composition details of lercanidipine nanoproliosomes	79
4.3.	Physical attributes recorded during drug-excipient interaction studies of lercanidipine	91
4.4.	Different batches of lercanidipine nanoproliosomes and their characteristic values	97
4.5.	Impact of homogenization pressure on the physicochemical properties of lercanidipine nanoproliosomes	101
4.6.	Selection of different types of cryoprotectants and their influence on the physicochemical properties of lercanidipine nanoproliosomes	104
4.7.	Evaluation of different concentrations of trehalose on the optimized batch of lercanidipine nanoproliosomes	106
4.8.	<i>In situ</i> absorption rate constant values of native lercanidipine and lercanidipine nanoproliosomes	120
4.9.	Pharmacokinetic parameters of pure drug after intravenous and oral administration and optimized batch of lercanidipine nanoproliosomes (B. No. PL-06)	123
4.10.	Systolic blood pressure values in normal and uninephrectomized DOCA control, pure drug and lercanidipine loaded nanoproliosomes (B. No. PL-06)	127
4.11.	Comparative table outlining the physicochemical properties of initial versus three month sample of lercanidipine nanoproliosomes	128
5.1.	Samples analyzed for drug-excipient compatibility studies by FTIR and DSC	141

5.2.	Drug: Polymer weight ratio used in lercanidipine nanoparticles	144
5.3.	Physical observations recorded during drug-excipient interaction studies of LER nanoparticles	153
5.4.	Particle size, polydispersity index, zeta potential and % encapsulation efficiency details of lercanidipine loaded nanoparticles	158
5.5.	Effect of different stabilizers on physicochemical properties of lercanidipine nanoparticles	163
5.6.	Effect of different concentration of PVA on the particle size, PDI, zeta potential and %EE of lercanidipine nanopartricles	164
5.7.	Impact of homogenization speed on the particle size, PDI, zeta potential and %EE of lercanidipine nanopartricles	166
5.8.	Particle size, PDI and zeta potential values of lercanidipine nanoparticles obtained by varying probe sonication amplitude during formulation optimization batches	166
5.9.	Evaluation of different cryoprotectants for their influence on the physicochemical properties of lercanidipine nanoparticles	169
5.10.	Physicochemical parameters obtained by varying concentrations of mannitol used as a cryoprotectant in lercanidipine nanoparticulates	169
5.11.	<i>In situ</i> absorption rate constant values of native lercanidipine and lercanidipine nanoparticles	185
5.12.	Pharmacokinetic parameters of pure drug after intravenous and oral administration and optimized batch of lercanidipine nanoparticle (B. No. PN-05)	187
5.13.	Systolic blood pressure values in sham and uninephrectomized DOCA-control, pure drug and lercanidipine loaded nanoparticles (B. No. PN-05)	189
5.14.	Comparative table outlining the physicochemical properties of initial versus three month sample of lercanidipine nanoparticles	190