## LIST OF FIGURES

Figure	Title	Page
No.		No. 1811
2.1	Mechanisms of ischemic brain damage	14-16
2.2	Anatomical regions of brain	19
2.3	Schematic representation of BBB	21
2.4	Schematic comparison between brain (L) and general (R)	22
	capillaries	
2.5	(A) Blood Brain Barrier (B) Blood cerebrospinal fluid Barrier	24
2.6	Nasal vascular supply	33
2.7	Olfactory tract to brain	33
2.8	Nose to brain transport routes	35
2.9	O/W type, W/O type and bicontinuous microemulsion	55
2.10	Different regions of Phase Diagram	62
2.11	Ternary system	62
3.1	Zero order curve of clobazam at 230nm	114
3.2	Second order curve of clobazam (4DL, 1000SF) at 230nm	116
3.3	Chromatograms of clobazam	117
3.4	Zero order curve of clopidogrel bisulphate at 270nm	118
3.5	Second order curve of clopidogrel bisulphate (4DL,1000SF)at	120
	277nm	
3.6	Chromatograms of clopidogrel bisulphate	121
4.1	Phase diagram of CZ system 1(Capmul MCM, Acconan	139
	CC6:Tween 20, Distilled Water)	
4.2	Phase diagram of CZ system 2(Capmul MCM, Tween 20:	139
	Transcutol P, Distilled Water)	
4.3	RSM and contour plots for zeta potential of CZ system1	141
4.4	RSM and contour plots for Globule size of CZ system1	141
4.5	RSM and contour plots for zeta potential of CZ system2	144
4.6	RSM and contour plots for Globule size of CZ system2	144
4.7	Phase diagram of CS system 2(Capmul GMO, Tween 20:	147
	Transcutol P, Acetate buffer pH5)	

4.8	Phase diagram of CS system 3(Capmul GMO, Tween 20: PEG200, Acetate buffer pH5)	147
	Acetate buffer pH5)	
	~ ′	
	RSM and contour plots for zeta potential of CS system1	149
4.10	RSM and contour plots for Globule size of CS system1	149
4.11	RSM and contour plots for zeta potential of CS system2	151
4.12	RSM and contour plots for Globule size of CS system2	151
4.13	RSM and contour plots for zeta potential of CS system3	154
4.14	RSM and contour plots for Globule size of CS system3	154
4.15	TEM positive image of clobazam microemulsion	156
4.16	TEM positive image of clopidogrel bisulphate microemulsion	156
4.17	Optical microscopy images of nasal mucosa treated with	157-
	formulations	158
6.1	Gamma scintigraphy images of rabbits following 99mTc-CZS <sub>IV</sub> ,	194
	<sup>99m</sup> Tc-CZS <sub>IN</sub> , <sup>99m</sup> Tc-CZME <sub>IN</sub> , <sup>99m</sup> Tc-CZMME <sub>IN</sub>	
6.2	Gamma scintigraphy images of rabbits following <sup>99m</sup> Tc-CSS <sub>IV</sub> ,	200
	99mTc-CSS <sub>IN</sub> , 99mTc-CSME <sub>IN</sub> , 99mTc-CSMME <sub>IN</sub>	
6.3	Gamma scintigraphy images of rabbits following <sup>99m</sup> Tc-IGF1S <sub>IV</sub> ,	205
	<sup>99m</sup> Tc-IGF1S <sub>IN</sub> , <sup>99m</sup> Tc-IGF1G <sub>IN</sub>	
7.1	Effects of clobazam formulations after IV and IN administration	217
•	on onset of seizures induced by PTZ in mice	
7.2	Brain and Plasma levels of IGF-1 in IGF-1 treated mice	221
7.3	Brain and Plasma levels of Glutathione in IGF-1 treated mice	222
7.4	Brain and Plasma levels of Glutathione in Clopigrel bisulphate	226
	treated mice	