

LIST OF ABBREVIATIONS

TZ-Tizanidine HCl
CBZ-Cyclobenzaprine HCl
SA- Sodium alginate
SDC-Sodium deoxycholate
TC-Thiolated chitosan
TMC-Trimethyl chitosan
NPs-Nanoparticles
WHO-World Health Organization
BBB-Blood Brain Barrier
CNS-Central Nervous System
ECF -Extracellular fluid
CSF-Cerebrospinal fluid
CVOs -Circumventricular organs
Pgp- P-glycoprotein
BCB-Blood-Cerebrospinal fluid Barrier
ISF- Interstitial fluid
pCPP:SA -1,3 bis-para-carboxy phenoxy propane:sebacic acid
TRH -Thyrotropin-releasing hormone
GDNF- Glial-derived neurotrophic factor
pKa-Dissociation constant
TGA-Thioglycolic acid
EDC-1-ethyl-3-(3-dimethylaminopropyl) carbodiimide hydrochloride
TNB-2-nitro-5-thiobenzoic acid
ss-mucin- Submicron-sized mucin
NMP-N-methyl-2- pyrrolidinone
DQ-Degree of quaternization
DM-Degree of methylation
RSM-Response Surface Methodology
BBD-Box-Behnken design
Df- Degree of freedom

SS- Sum of squares

MS-Mean square

F- Significance

AdjR² - adjusted R²

PredR²- predicted R²

LMC- Low molecular weight chitosan

MMC- Medium molecular weight chitosan

LMTC- Low molecular weight thiolated chitosan

MMTC- Medium molecular weight thiolated chitosan

LMTMC- Low molecular weight trimethyl chitosan

MMTMC- Medium molecular weight trimethyl chitosan

LMC-TZ NPs- Low molecular weight tizanidine HCl loaded chitosan nanoparticles

LMC-CBZ NPs- Low molecular weight cyclobenzaprine HCl loaded chitosan nanoparticles

MMC-TZ NPs-Medium molecular weight tizanidine HCl loaded chitosan nanoparticles

MMC-CBZ NPs-Medium molecular weight cyclobenzaprine HCl loaded chitosan nanoparticles

LMTC-TZ NPs- Low molecular weight tizanidine HCl loaded thiolated chitosan nanoparticles

LMTC-CBZ NPs- Low molecular weight cyclobenzaprine HCl loaded thiolated chitosan nanoparticles

MMTC-TZ NPs- Medium molecular weight tizanidine HCl loaded thiolated chitosan nanoparticles

MMTC-CBZ NPs- Medium molecular weight cyclobenzaprine HCl loaded thiolated chitosan nanoparticles

LMTMC-TZ NPs- Low molecular weight tizanidine HCl loaded trimethyl chitosan nanoparticles

LMTMC-CBZ NPs- Low molecular weight cyclobenzaprine HCl loaded trimethyl chitosan nanoparticles

MMTMC-TZ NPs- Medium molecular weight tizanidine HCl loaded trimethyl chitosan nanoparticles

MMTMC-CBZ NPs- Medium molecular weight cyclobenzaprine HCl loaded trimethyl chitosan nanoparticles

LMC-RB NPs- Low molecular weight Rhodamine B loaded chitosan nanoparticles

MMC-RB NPs- Medium molecular weight Rhodamine B loaded chitosan nanoparticles

LMTC-RB NPs- Low molecular weight Rhodamine B loaded thiolated chitosan nanoparticles

MMTC-RB NPs- Medium molecular weight Rhodamine B loaded thiolated chitosan nanoparticles

LMTMC-RB NPs- Low molecular weight Rhodamine B loaded trimethyl chitosan nanoparticles

MMTMC-RB NPs- Medium molecular weight Rhodamine B loaded trimethyl chitosan

PBS-Phosphate buffer saline

PS-Particle Size

EE%- Entrapment efficiency

HPLC- High Performance Liquid Chromatography

NMR- Nuclear Magnetic Resonance

TEM-Transmission electron microscope

ANOVA -Analysis Of Variance

AUC- Area under Curve

T_{max} - Time at which C_{max} achieved

C_{max} - Maximum concentration

$T_{1/2}$ - Half life

i.v.- Intravenous

i.n.-Intranasal

°C-Degree Celsius

i.p.-Intraperitoneal

USP- United States Pharmacopoeia

nm- Nanometer

mmol-milimole

ml- Milliliter

mg- Milligram

nM- Nano molar

μl- Microliter

μm- Micrometer

ng-Nanogram

SD-Standard Deviation

DLS- Dynamic light scattering

PCS- Photon correlation spectroscopy

mV-milli volt

UV- Ultraviolet

rpm -- Rotations per minute

RB-Rhodamine B

FDA-Food and drug administration

RH-Relative humidity

MEM-Eagle's Minimum Essential *Medium*

FBS-Fetal bovine serum

HBSS-Hank's balanced salt solution

HEPES -30 mM N-[2-hydroxyethyl] piperazine- N'-[2-ethanesulphonic acid]

MTT-3-(4,5-Dimethylthiazol-2-yl)-2,5-diphenyltetrazolium bromide, a tetrazole

DMSO-Dimethyl sulfoxide

TEER-Transepithelial electrical resistance

P_{app}- Permeability Coefficients

SPECT- Single Photon Emission Computed Tomography

^{99m}Tc- Technetium

S_nCl₂-Stannous chloride

DTPA-Diethylene triamine penta acetic acid

DTI-Drug targeting index

DTP %- Drug targeting percentage

NMDA-N-methyl-D-aspartate

%MPE-Percent maximum possible effect

R_f-Relative solvent front