Chapter – III

Plan of Work
3. PLAN OF WORK

Preformulation Study
- Solubility profile of drug and Excipients
- Drug-polymer interaction by FT-IR, DSC and PXRD.

Trial preparation of Niosomes
- Optimization of best batch from trial batches based on in vitro release studies and entrapment efficiency

Characterization studies
- Drug content, size analysis (optical microscopy, SEM and TEM analysis), Entrapment efficiency, in vitro release studies
- Trial preparation of Niosomal in-situ gel: optimization of niosomal in-situ gel based on in vitro release studies and gelling time

Formulation of Niosomal in-situ gel and characterization studies
- pH, Drug content, Viscosity, Gelling time, effect of osmotic shock
- Sterility testing, In vitro HET CAM test, stability studies

Release studies
- In vitro release study
- Ex vivo transcorneal permeation studies (Comparison of the developed formulation with the marketed product)
- Release studies by using kinetic models

Animal studies
- Ocular irritant test (as per OECD 405 guidelines)
- Aqueous humour analysis by HPLC method
- Intra ocular pressure determination