4. PLAN OF WORK AND METHODOLOGY:

1. Literature Review

This will be a continuous process from starting till the finalization of the work. The sources utilized would be Books, Standards like IP, USP, Extra Pharmacopeia WHO guidelines etc., Journals including National and International, Patent, historically established and Internet.

2. Collection and preparation of starting material

Raw Materials will be procured from a reliable source and checked cautiously as per the need.

3. Identification of Drug.

Identification of Drug will be done by IR/FTIR.

4. Drug Excipients Compatibility Studies

Drug Excipients Compatibility Studies between the Drug & Components like oils, Surfactants, cooling agents, preservatives & water will be carried out by preparing the Physical mixture in the suitable ratio.

Excipients will be selected based on the following criteria:

- solubility
- Compatibility
- Enhanced stability of drug/s
- Desirable physical/ cosmetic attributes to the product such as appearance, pH, and aesthetic appeal.

Qualitative and Quantitative analysis will be done by FTIR/HPLC/UV Estimation.
5. **Formulation Development and Optimization Studies.**

Microemulsion based drug delivery system will be developed by trial & error methods and optimized by using the different parameters like Globule Size Measurement, Dilution Test, Zeta Potential Test, pH and viscosity Measurement, Conductivity Measurement and other optimizing tests. One of the most optimized batch will be selected for the in vitro permeation Studies.

6. **In-Vitro study**

Franz Diffusion Cell will be used for the drug permeation studies

7. **Ex-vivo study**

8. **Stability studies**

Accelerated Stability Studies will be carried out based on ICH Guidelines.

9. **Characterisation of the container closure system**

Container Closure suitability Studies will be carried out with all individual components of Containers.