WORK PLAN OF THE STUDY & 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. Procurement of drug and polymer.

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 DSC and IR spectral analysis.

4. Preparation of medicated dental gel and paste.

Preparation of medicated dental gel:
Medicated dental gel will be prepared by dispersing the polymer of different concentrations in water on continuous stirring for a specified period. The drug will be dispersed in propylene glycol and the solution will be added gently to above polymer dispersion under continuous stirring. The mixture will be stirred gently until homogeneous gel will form.

Preparation of medicated dental paste:
Medicated dental paste will be prepared using the polymer of different concentrations. Polymer will be mixed together with half quantity of purified water and glycerin using mortar and pestle. Drug will be dissolved in remaining half of quantity of purified water and will be added to the above mixture and trituration will be continued for about half an hour. Kaolin will be added to the above mixture gradually. Trituration will continued until a smooth paste will obtain.
5. Characterization of the prepared dental gel and paste by evaluating various physico-chemical parameters like:

- Drug content uniformity
- Rheological behavior
- pH
- Spreadability
- Tube extrudability
- Drug polymer interaction studies by using - DSC and IR spectral analysis.


Keishery-Chein diffusion cell will be used for in vitro drug release studies.

7. Stability studies.

Stability studies will be carried out according to the ICH guidelines.