Recent advancements in technology provide viable dosage alternative for patients who have difficulty in swallowing the tablet. Oral disintegrating and dissolving tablets are one of them and differ from traditional tablets in that they are designed to be dissolving on the tongue rather than swallow whole. Various technologies used in the manufacturing of mouth dissolving/disintegrating tablets are; freeze drying, direct compression, spray drying, sublimation etc. Many patented technologies like Durasolv®, Flash Dose®, FlashTab®, Oraquick®, Orasolv®, and Zydis® have also gained importance in the international market. Orodispersable tablets dissolve and/or disintegrate rapidly in the saliva without the need for water. Some tablets designed to dissolve in saliva within few seconds, are true mouth dissolving tablets. The basic approaches for developing mouth dissolving tablets include maximizing the porous structure of the tablet matrix. Thus we tried to formulate mouth dissolving tablets giving complete dissolution of the formulation with minimum residue and concentrated on complete dissolution of all ingredients rather than use of insoluble super disintegrates. For preparation MDTs, levocetirizine as bitter drug and Cefixime as poorly aqueous soluble drug was selected.

This thesis deals with the formulation of mouth dissolving tablets by using model drugs and finalized the MDTs on the basis of evaluation for hardness, minimum friability with least in vitro disintegration and dissolution time. In the present investigation we have chosen two model drugs (Levocetirizine diHCl as bitter drug and Cefixime Trihydrate as poorly aqueous soluble drug). To mask the bitter taste and solubility enhancement, we tried to prepare solid dispersion using sugar derivative (mannitol). For formulation of MDTs, modified effervescent method and sublimation method have been chosen to complete dissolution of the formulation. The formulations were evaluated for hardness, friability, in vitro disintegration, in vivo dissolution studies. The finalized formulation has chosen for Ex vivo, In vivo studies in animal to check the permeability and bioavailability enhancement of drug by formulating MDTs.