

CHAPTER II

PURPOSE OF INVESTIGATION

Generally, water solubility of solid drugs is governed by a variety of factor. One of the most important factors appears to be solid-solid interaction in the solute phase.

The effect of cholic acid derivatives on the dissolution of benzocaine was presented by Pathipvanich in 1984 (18). From this investigation, it was demonstrated that the slowest release rate of benzocaine from the glass mixture in the aqueous medium pH 1.30 and 7.60 may be obtained from the possible interaction between the derivatives of bile acid and benzocaine in this mixture.

The purpose of this experiment was to study the influence of cholic acid on the release of the drugs which had different acid-base properties from their respective physical and glass mixture and to provide more information about the interaction that may be occurred in the glass mixtures. To serve this idea, the six drugs with varied acid-base properties were selected. Among them, there were two of acidic drugs, basic drugs and neutral compounds. Each of them was mixed with equimolar of

cholic acid to prepare the mixtures. Compared with the results from the pure compound, the releasing rate of the drugs from the mixtures in aqueous medium pH 1.30 and 7.60 were expected to show the cholic acid-drug interaction. Furthermore, the comparative IR outcomes were used to confirm the occurrence of the expected interaction and to specify the possible functional groups that may be involved in this interaction.