

CHAPTER II

PURPOSE OF INVESTIGATION

The purpose of this investigation was to study the applicability of the multiple linear regression analysis (SPSS/PC⁺ program) to solve the modified and developed equation for the equivalent volume determination in potentiometric titration method. This purpose was included the study of the new technique for determination of two-mixed weak acid (their pKa were quite close), which the former method could not be used in determination.

The first part of this investigation was to study the appropriation of computer program, SPSS/PC⁺, for solving the modified equation (Eq. 53) in determination of two weak acid mixtures. It could be made by synthesizing the theoretical data from Newton's approximation method with the aid of Macro Lotus program. The last part of this investigation was to study the possibility of this modified equation in determination of two-mixed weak acidic compounds in the actual experiments, when their ΔpK_a value between two weak acids were varied.