SUMMARY

The thesis is divided into two parts. Part I is concerned with the complexometric determination of iron (III).

Chapter 1 gives introduction to titrimetric methods.

Chapter 2 covers a review of the previous work reported in literature on the complexometric determination of iron (III). Particular emphasis is given on the application of this method to the determination of iron (III) in various iron bearing materials. Eleven classes of different chemical compounds are discussed as indicators.

Chapter 3 is divided into two Sections. Section A reports the use of phenolic acids and amides as indicators for the direct titration of iron (III) with NTA. The process is applied to determination of iron in synthetic solutions, ores and drugs.

Section B reports the use of phenolic ketones and ketoximes as indicators for the direct titration of iron (III) with DICYTA, NTA and HEDTA. The process is applied to the determination of iron (III) in synthetic solution, ores and drugs.

Chapter 4 is the discussion of the results obtained in the development of indicators. In general, it can be said that DICYTA is best titrant among these three titrants for direct complexometric determination of iron (III).