

PREFACE

The main scope of the study was to estimate trace metal ions using novel analytical organic reagents by the direct and derivative spectrophotometric methods. Hydrazones are important class of analytical organic reagents for direct and derivative spectrophotometric estimation of trace metal ions.

A comprehensive summary of work entitled “**A Study on Analytical Properties of Metal Complexes Using New Novel Chromogenic Reagents**” has been described as under.

Chapter 1

Introduction: This chapter describes the significance of the various analytical organic reagents and their use in the spectrophotometric determination of trace metal ions.

Chapter 2

This chapter includes a detailed literature survey of the present investigation of trace metal ions using various analytical organic reagents.

Chapter-3

Theoretical analysis of present research work was incorporated in this chapter. Preparation of organic reagent solutions, buffer solutions, solutions of different ions, purification of solvents and brief description of instruments employed in the present study and general experimental procedures of the present investigation are incorporated.

Chapter 4

Experimental investigation of present study was incorporated in this chapter. It includes synthesis and characterization of novel analytical organic reagent α -Amyl Cinnamaldehyde Isonicotinoyl hydrazone (ACINH). Direct and derivative spectrophotometric estimation of Hg(II) and Cd(II) metal ions using ACINH reagent and also included in this chapter.

Chapter 5

This chapter includes the experimental results of each investigation of the present study was incorporated.

Chapter 6

This chapter includes the discussion of results of the present investigations.

Chapter 7

This chapter incorporated the summary, conclusion and recommendations of the present investigation.