SYNTHESIS AND CHARACTERIZATION OF CHROMIUM(III)-CURCUMIN COMPLEX

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Curcumin can form strong colored chelates with transition metal's ions. In this study, six samples are prepared at different temperature and ratio. The samples are prepared at room temperature and 40°C. Meanwhile, the ratio of Chromium(III) : curcumin is prepared at 1:1, 1:1.5 and 1:2. The aim of this study is to find out the best ratio and temperature for the metal complexation. The samples are prepared using reflux and characterized using UV Vis Spectrometer, Fluorescence Spectrometer, FTIR and TGA. From the result, ratio of 1:2 is the best for reaction of metal complex. Thus the recommendation is to further study on ratio 1:2 in the application of photonic devices.

CHAPTER 1

INTRODUCTION

1.1 Background

Curcumin (*Curcuma Longa L.*) is a naturally occurring yellow pigment obtainable from the rhizomes of turmeric which belong in ginger family. The main constituent of curcuma species is curcumin which is responsible for the biological activity of turmeric. Curcumin commonly used in spices, cosmetics and traditional Chinese and Indian medicine.

1.1.1 Structure of Curcumin

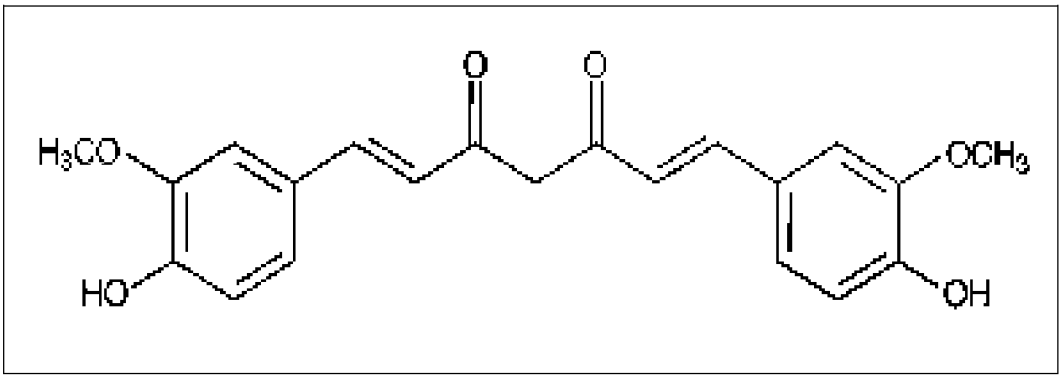

Figure 1.1 Structure of Curcumin