Malabar Tamarind (*Garcinia cambogia*) is an exotic fruit grown in southern parts of India and in some other countries which has been used to impart a distinctive sour flavour to Indian cooking. **Hydroxy citric acid, (-) HCA** is found to be the active constituent present in this spice. HCA is the source for the revolutionary natural diet ingredient which is currently a rage in developed countries. Being an alpha-beta di-hydroxy tri-carboxylic acid, HCA is easily liable to form lactones. In order to prevent the lactonisation, HCA is converted into different salts.

A brief review of different Garcinia plants, the traditional applications of *Garcinia cambogia* fruits, the chemistry of HCA, physiological functions, toxicity of HCA etc. are given in the introductory chapter. The details regarding the materials and various analytical methods used for the study are incorporated in chapter 2. Chapter 3 focuses on the distribution of HCA and citric acid in different plant parts of *Garcinia cambogia*, and fruits grown in different places. Chapter 4 deals with the conversion of HCA into different salts, like calcium, potassium, magnesium and sodium hydroxy citrates, their physical and chemical properties etc. The different analytical methods developed for the estimation of HCA using UV-spectrophotometer, HPTLC and HPLC are discussed in chapter 5. The results of all investigations are summarized in chapter 6.