INTRODUCTION

Eucalyptus is a wide genus belonging to the family Myrtaceae, with over 630 species. The trees are generally grown for timber and many of them give essential oils and kinos. The essential oils are used in medicine, perfumery and industry. From the perfumery point of view, only two species of Eucalyptus are important: Eucalyptus citriodora Hook, and Eucalyptus macarthuri Deane and Maiden. The oil of E. citriodora is one of sources of citronellal which could be used as a starting material for the manufacture of citronellol, hydroxycitronellal and menthol, Virmani and Detta, (1967).

The E. citriodora oil is widely used in perfumes, cosmetics, soaps, pharmaceutical industries, and confectionary. The E. citriodora trees are widely grown in Egypt as their oil is one of the important volatile oils. The cultivated area of plant increases gradually. The oil is obtained by steam distillation of the green overground parts of the Eucalyptus citriodora Hook trees, Guenther, (1961).

The present investigation was carried out to stuay the physico-chemical properties and chemical composition of the eucalyptus oil produced in Egypt and to separate citronellal from the volatile oil.

Citronellal as such has only limited application in perfume and flavor industries. It's present importance lies in the fact that it serves as a start material for the manufacture of a range of synthetics. In the past, it was used in the manufacture of citronellol and hydroxy citronellal. The dextro-rotatory isomer is cyclized and hydrogenated to give levo menthol, while dl-citronellal leads to dl-menthol, Bedoukian (1967).