

CHAPTER V



SUMMARY AND CONCLUSION

A chemical investigation of the leaf and skin waxes of the Thai banana plant Klue Namwa was carried out with a view to finding chemicals of industrial importance. Chromatography of the unsaponifiable matter of the leaf wax on aluminium oxide and silica gel afforded a steroidal fraction, about 30 % by weight of the unsaponifiable matter, which contained β -sitosterol as the major component, and a long chain diol about 2.5 % by weight of the wax, which was identified as 1,20-Eicosanediol.

The skin wax of this plant deposited impure ceryl cerotate, m.p. 75° - 78°, which corresponded to about 10 % by weight of the wax, from a solution of the wax in a mixture of chloroform and methanol. Chromatography of the impure ester over aluminium oxide furnished pure ceryl cerotate, m.p. 79° - 80°. Hydrolysis of the chloroform and methanol soluble portion of the wax followed by chromatography of its unsaponifiable matter on aluminium oxide yielded a steroidal fraction, about 9 % by weight of the wax which contained 24-methylenecycloartanol. Isolation of this compound was accomplished by means of repeated chromatography of its acetyl derivative.

The results of the above investigation show that

the constituents of the skin wax of Klue Namwa differ considerably from those reported by Jewers for the skin wax of a variety of Musa sapientum obtained from the British Cameroons. A more detailed investigation of the other constituents of the skin wax of Klue Namwa, and also waxes of other varieties of banana plants which grow in Thailand would seem profitable, as this information could lead to a possible taxonomic classification of the banana plant. The difference in the composition of the leaf and skin waxes of other Thai banana plants could reveal similar differences in composition of their leaf and skin waxes and therefore would be worthy of study.