

ABSTRACT

Investigation of the Ackee Fruit.

Blighia sapida

Andrea Michelle Goldson

In this report, the ackee fruit, *Blighia sapida* is examined. Chapter one is a literature review of *Blighia sapida*.

Chapter two is an overview of the compounds isolated from the arilli of *Blighia sapida*. Triglycerides were the main compounds isolated. The major triglyceride isolated from the arilli of the fruit, compound A, was identified as 1,2-dioleoylpalmitin. The insecticidal activity of this compound was investigated.

In this chapter the percentage free fatty acid, percentage free lipid content and the fatty acid profile of the ackee arilli at various stages of maturity is also examined. Whereas the percentage free lipid content and the fatty acid profile of mature fruits have been investigated, that of the fruit from immaturity to full maturity has not been previously reported. There was a dramatic increase in the percentage free lipid content of the ackee arilli at full maturity. Oleic acid was the major fatty acid observed at all stages of maturity.

An extract of the ripe ackee seed was investigated in chapter three. This led to the isolation of compound F, a diglyceride. The percentage free lipid content of ackee seeds at various stages of maturity and the fatty acid profile of the ripe ackee seeds, which have not been previously investigated, are reported therein. The ackee seeds were not a major source of free lipid. There was, however, a gradual increase in the total percentage free lipid content of the seeds as the fruit matured. The predominant fatty acid identified in extracts from the ripe ackee seed was oleic acid.

Keywords: Andrea Michelle Goldson; *Blighia sapida*; ackee; fatty acid.