

SELECTIVE NATURAL ANTIOXIDANTS IN
RAMBUTAN (*Nephelium lappaceum*), PAMELO
(*Citrus maxima*), BANANA (*Musa accuminata* cv
Berangan), FRUIT BY-PRODUCTS

LINDA GECILIA ADHIAMBO ANDAGO

B. Sc. (Hons.) FOOD SCIENCE AND NUTRITION
SCHOOL OF APPLIED SCIENCES
UNIVERSITY COLLEGE SEDAYA INTERNATIONAL

2007

ABSTRACT

The total phenolic content and overall antioxidant activity was determined in the fruit by products of three locally found tropical fruits, Rambutan (*Nephelium lappaceum*), Pomelo (*Citrus maxima*) and Pisang Berangan (*Musa accuminata* cv Berangan). The antioxidant activity (free radical scavenging, metal ion chelating and ferric reducing antioxidant power) of all the fruit by products was measured using DPPH, FRAP and FIC assays. Different concentrations of methanol were used to extract the phenolic content of the fruit by-product samples, the different concentrations were 50%, 70% and 90% methanol. Different extraction times, 1h and 24h were factored into the experiments and the total phenolic content and antioxidant activity varied. The peels of Rambutan, Pisang Berangan and the Pomelo were found to have a high phenolic content. The Rambutan seed was also found to have a high phenolic content. The total Phenolic content was 1777mgGAE/100g, 1761mgGAE/100g, 1838 mgGAE/100g, 1668.50 mgGAE/100g, 1801mgGAE/100g for the banana peel, rambutan peel, rambutan seed, pomelo peel and pomelo pith respectively. The results also showed that there was antioxidant activity in the extracts obtained from the fruit by-products. The results of this study show that there is a large amount of phenols and phenolic content in the peels and seeds of fruits and they could prove to be a good source of natural antioxidants.