PDF - DETERMINATION OF ANTI-OXIDANT, NUTRITIONAL AND ANTI-NUTRITIONAL COMPOSITION OF Garcinia kola AND Chrysophyllum albidum FROM RAINFOREST ECOSYSTEM OF ONDO STATE - researchcub.infoSignificance of the Study

ABSTRACT

This study was undertaken to determine the anti-oxidant, nutritional and anti-nutritional composition of Garcinia kola and Chrysophyllum albidum from rainforest ecosystem of Ondo state, Nigeria. The anti-oxidant analysis was performed for seed kernel, fruit pulp, fruit skin and the whole fruit of Chrysophyllum albidum while nutritional and anti-nutritional composition for the species were performed for the fruit pulp and seed kernel. For Garcinia kola nutritional, anti-nutritional and anti-oxidant composition was performed on the seed kernel, fruit pulp and the fruit pod. Total phenol, total flavonoid, Vitamin C and 1-1, diphenyl

picaryl hydrazine (DPPH) were the anti-oxidants determined for C. albidum and Garcinia kola. Analyses for nutritional (moisture content, ash, protein content, crude fibre, fat, carbohydrate) and anti-nutritional (phytate, oxalate tannin, alkaloid, saponin, flavonoid) composition were conducted. The results showed that moisture and ash content of the fruit pulp and seed kernel of C. albidum were comparable; protein, fat and fibre contents were higher in the fruit pulp than in the seed kernel while carbohydrate content of the seed kernel was higher than that in the fruit pulp. For G. kola, the fruit pod had higher ash content than the fruit pulp and seed kernel, the fruit pulp had the highest moisture content, followed by fruit pod and lastly by the seed kernel. The protein and fat contents of the seed kernel and fruit pod were similar but higher than that of the fruit pulp. Carbohydrate content was higher in seed kernel than in the fruit pulp and fruit pod. The results of anti-nutritional analyses indicated that the seed kernel and fruit pulp of G. kola and C. albidum did not have high concentration of anti-nutrients. The fruits of the two species were found to contain good amount of anti-oxidants. Thus, the consumption of the two species is not detrimental health and they can be used as food supplements in food manufacturing.

DETERMINATION OF ANTI-OXIDANT, NUTRITIONAL AND ANTI-NUTRITIONAL COMPOSITION OF Garcinia kola AND Chrysophyllum albidum FROM RAINFOREST ECOSYSTEM OF ONDO STATE