COMPOSITIONAL EVALUATION OF YOUNG SHOOT OF DELEB PALM (*BORASSUS AETHIOPUM, MART*) AND WHITE YAM (DIOSCOREA ROTUNDATA) FLOURS

Abstract

Proximate, mineral and amino acid compositions of young shoot of deleb palm (*Borassus aethiopum*, Mart) and white yam (*Dioscorea rotundata*) were studied with appropriate analytical techniques. The respective proximate composition values (g/100g sample) of B. *aethiopum* and *D. rotundata* were: Moisture content have (2.5), ash (3.0 and 4.1), crude fat (0.2 and 1.8), crude fibre (5.0 and 7.8), crude protein (1.0 and 3.3) and carbohydrate (87.2 and 78.3). The calculated metabolizable energy for B. aethiopum and D. rotundata were 1507.11 kJ/100g and 1450.93 KJ/100g, respectively. The metabolizable energy in this study showed that both samples have energy concentrations more favourable than cereals. The most abundant minerals in B. aethiopum and D. rotundata were Ca (275.6 and 346.9 mg/100g), Mg (126.3 and 219.6 mg/100g) and Na (78.0 and 170.5 mg/100g), respectively. Generally the two food samples were found to be good sources of essential minerals while harmful metals such as Pb, Cr and Cd were not at detecteble range of AAS. The levels of Na/K and Ca/P ratios were desirable compared with the recommended values. The amino acid analysis revealed that both samples contained nutritionally useful quantities of most of the essential amino acids with total essential amino acid (TEAA) were 46.49 and 45.44% for B. aethiopum and D. rotundata, respectively. The first limiting amino acid was methionine + Cystine (TSAA), calculated isoeletric point (pl) and predicted protein efficiency ratio (P-PER) for B. aethiopum and D. rotundata were (0.52 and 0.33), (4.03 and 3.78) and (2.17 and 2.60), respectively.

Keywords: Chemical composition, deleb palm, white yam, flour.

Aremu, M.O., **Salau, R.B**. & Suleiman, A.A. (2012).Composition Evaluation of Young Shoot of Deleb Palm (*Borassus Aethiopium,Mart*) and White Yam (*Dioscorea Rotundata*) Flours. *International Journal of Chemical Sciences 5*(2), 168-174.

INTERNATIONAL JOURNAL OF CHEMICAL SCIENCES (IJCS)
www.ijcsnsuk.org