

NUTRITIONAL EVALUATION OF *CANARWM SCHWEINFURTHII* ENGL. SEEDS

Canarium schweinfurthii Engl. is a large forest tree, which often grows as high as 50 m tall. In the savanna part of Nigeria they are often cultivated for its fruits which are edible, purplish, ellipsoid but slightly three-angled. Generally, the fruits are boiled and eaten without much value for the oil content. How-

Table 1. Chemical characteristics of seed oil

Characteristic	Value
Saponification value	213
Iodine value	87
Peroxide value	40
Acid value	0.34
% FFA (as oleic value acid)	0.17
Ascorbic acid, mg / 100 g	46.9
Vitamin E, mg / g	154.6
Refractive index, 20°C	1.329

Table 2. Concentration of mineral elements in seeds

Mineral element (whole seed)	Content, mg / 100g
Mg	20.0
Ca	30.0
Fe	50.0
Zn	65.0
Cu	20.0
Pb	ND

ND = Not detected

ever, among the Kama tribe of Adamawa State I Nigeria, they have extracted the oil from the seeds of *C. schweinfurthii* and used in crude

form for cooking and body cream. A lot of interest has been generated by recent studies on the chemical composition of the fruits (Eromosele *et al.*, 1991) and seeds (Eromosele and Eromosele, 1993) of some wild plants. The results have shown that some wild plants are sources of high levels of ascorbic acid and edible oils. This paper presents results of chemical characteristics of the seed oil of *Canarium schweinfurthii* as well as the concentration of the mineral elements in the seeds.

The chemical characteristics are presented in Table 1. The saponification value of the oil was 213. The value is within the range of values of some edible oils (Utz *et al.*, 1982) i.e., palm oil (196-205) groundnut oil (188-196) and corn oil (187-196). The iodine value was 87, which was comparable with those of groundnut oil (84-99) and castor oil (81-91) and thus may be classified as non-dry oils. The acid value of the oil was low (0.34). The corresponding percentage of free fatty acid (% FFA as oleic acid) was 0.17.

The result of elemental analysis of the seed showed that Mg and Ca levels in the seeds were 20 mg / 100 g and 30 mg / 100 g respectively. Iron content was high (50 mg / 100 g) compared with jojoba seed (9.2 mg / 100 g) and okra seed (9.9 ± 0.96 mg / 100 g) (Utz *et al.*, 1982). Lead was not detected in the seed. The vitamin C content was significant (46.9 mg / 100 g) and compares favourably with values for common fruits like orange (50 mg / 100 g) and strawberries (48 mg / 100 g).

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