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CHEMICAL AND ANTIOXIDANT PROPERTIES OF *CERATOTHECA SESAMOIDES* ENDL. LEAVES

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ABSTRACT

Chemical and antioxidant properties of *Ceratotheca sesamoides* vegetables were investigated. The leaves were freshly harvested, dried, milled into powder and packaged. Proximate, antioxidant, amino acids profiles, mineral and carotene contents were analyzed. The proximate compositions of the vegetable were fat (1.79%), crude fibre (6.21%), ash (9.15%), protein (28.92%) and carbohydrate (44.11%). The free radical scavenging activity of the vegetable extract using 2, 2-diphenyl- 1-picrylhydrazyl (DPPH) showed higher antioxidant activities (72000 µ moles TE / 100g) in the vegetable. Amino acids profile showed glutamic acid (2.010 %) and aspartic acid (1.927 %) as the major non-essential amino acids while leucine (1.436 %) was the major essential amino acid. Potassium and calcium were the major mineral contents in the vegetable with appreciable amount of iron. Total carotene found in *C. sesamoides* was 32000 IU/100g with trans beta carotene having higher value. *C. sesamoides* vegetable serves as source of nutrient and antioxidant which aids body metabolism and fight against diseases.

1. Introduction

Nigeria is naturally endowed with numerous vegetables and according to Izuogu et al. (2012), most of which are unexploited beyond traditional localities where they are found and eaten. They are valuable sources of nutrients especially in rural areas where they contribute substantially to protein, minerals, vitamins, fibers and other nutrients which are usually in short supply in daily diets (Mohammed and Sharif, 2011; Asaolu et al., 2012). *Ceratotheca sesamoides* Endl. is closely related to *Sesamumindica* and is commonly referred to as 'false sesame' (Falusi et al., 2002). It is native to the northern parts of West Africa (Zeven and de Wet, 1982; Fasakin 2004). It is widely distributed in variable forms and consumed as a leafy vegetable in the savanna ecological zones of Nigeria (Nura et al., 2012). *Ceratotheca sesamoides* is found in tropical Africa like the open savanna woodlands across the region from Senegal to Northern and Southern part of Nigeria. It is known by various names such as eku (Yoruba-Western Nigeria), (False Sesame-English) (Adegoke et al., 1968; Fasakin and Olofintoye,