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Proximate Composition of *Anthocleista vogelli* Leaves

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Abstract: The proximate composition of *Anthocleista vogelli* leaves was determined using the method of association of analytical chemist (A.O.A.C). The following parameters: Carbohydrate, Protein, Crude fibre, Moisture, Fat and Ash were determined. The proximate composition of wet samplewasas follows: Carbohydrate (6.80±0.02), Protein (0.2±0.00), Crude fibre (0.29±0.10), Moisture (90.20±0.03), Fat (2.57±0.04), Ash (0.03±0.03) respectively while the dry sample was Carbohydrate (9.98±0.02), Protein (0.2±0.00), Crude fibre (0.43±0.14), Moisture (20.21±0.56), Fat (2.07±0.45) and Ash (0.25±0.02) respectively. This shows that *Anthocleista vogelli* is a good source of nutrition.

Key words: *Anthocleista vogelli* · Carbohydrate and Protein

INTRODUCTION

Anthocleista vogelli is a tree that grows up to 55cm in height with thick tortuous trunk and woody branches. It belongs to the species of trees and shrub-like tropical plants in the Gentian family, tribe *Potalieae* and sub tribe *Potaliinae*. There are about 50 species in the genus, native mainly to tropical Africa, including Madagascar and Mascarene lands [1]. *Anthocleista* was placed in the family *Longaniaceae*, but more recently molecular, morphological and phytochemical evidence has placed the group well within the *Gentianaceae* [2]. Locally, the plant is called "Kwari" in Hausa, "Apaoro" in Yoruba, "Oriweni" in Bini and " Orimi" in Benin [3].

The leaves and stem-bark are used for treating swellings in the body (anti-inflammatory). The root-bark and leaves are used in local medicine [4]. The root decoction is drunk in Sierria Leone for chest pain, the wood-ash is used for soap making while the wood is used as a quiver for arrows and packing cases [5]. It is used as a strong purgative and diuretic. It is used as a wash, bath or vapour bath to treat leprosy, veneral diseases, oedema and scrotal elephantiasis [6]. In Sierria Leone, a decoction of the roots with lemon is taken to treat hepatitis, while a decoction of dry fallen leaves is taken to treat jaundice. In Nigeria, the bark and seed are used as an antipyretic and tonic. The seed is also used as a purgative. In Congo, fresh twig bark with manoic is eaten raw to treat aspermia. A stem bark decoction is taken to treat hernia and the root decoction is taken to treat stomach ache in women, ovarian problems, venereal diseases, bronchitis and fever and also as purgative and to induce labour. Sap of young leaves, root powder or bark pulp is used to treat sores, abscesses, as a haemostatic and for cicatrization. Sap is applied topically to treat otitis or ophthalmia. Aplaster of pulp of terminal buds is used to draw out thorns or splinters and is applied to snakebites [5].

MATERIALS AND METHODS

The leaves of *Anthocleista vogelli* were collected from Presco Campus, Ebonyi State University, in Izzi L.G.A, of Ebonyi State and were identified by Prof. Onyekwelu of the Department of Applied Biology, Ebonyi State University. The leaves were dried, ground to powder and were greenish in colour, after which they were taken to University of Nigeria research center, Nsukka Enugu State, Nigeria for analysis.

The proximate analysis was carried out according to standard methods of Association of Analytical Chemist A.O.A.C [1]. This was used to determine the carbohydrate, protein, ash, crude fibre, moisture and fat and oil contents.

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Table 1: Proximate Composition of *Anthocleista vogelli* leaves (wet)

Proximate Composition	Percentage (%)
Carbohydrate	6.80±0.02
Protein	0.02±0.00
Crude fibre	0.29±0.10
Moisture	90.20±0.03
Fat	2.57±0.06
Ash	0.15±0.02

Data are mean ± standard deviation of triplicate determination on wet sample.

Table 2: Proximate Composition of *Anthocleista vogelli* leaves (dry)

Proximate Composition	Percentage (%)
Carbohydrate	9.98±0.04
Protein	0.03±0.03
Crude fibre	0.43±0.14
Moisture	20.21±0.56
Fat	2.07±0.45
Ash	0.25±0.02

Data are mean ± standard deviation of triplicate determination on dry sample

RESULTS AND DISCUSSION

The result of proximate compositions obtained in Table 1 shows that wet leaves of *Anthocleista vogelli* have significant level of Moisture, fat and Carbohydrate while Ash, Protein and Crude fibre were in less amounts. Table 2 shows an appreciable level of Carbohydrate and Moisture, with considerable levels of Fat, Crude fibre, Ash and Protein. Hence, *Anthocleistavogelli*leaves can be utilized as a good source of these nutrients and dietary value.

CONCLUSION

The result of this study revealed that *Anthocleistavogelli* leaves are rich in Carbohydrate and Moisture and has low levels of Fat, Protein, Crude fibre and Ash.

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