

Nutritional Importance and Functional Properties of Baobab Leaves

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Abstract : The potential of Baobab leaves is understudied and not yet fully documented. The purpose of this work is to highlight the important nutritional value and practical qualities of baobab leaves. In this research, proximate analysis was studied to determine the macronutrient quantitative analysis in baobab leaves. Studies were also conducted on other characteristics, such as moisture content, which is significant to the food business since it affects food quality, preservation, and resistance to deterioration. Dietary fiber, which was also studied, has important health benefits, such as lowering blood cholesterol levels by lowering low-density lipoprotein or "bad" cholesterol. It functions as an anti-obesity and anti-diabetic agent, lowering the likelihood of haemorrhoids developing. Additionally, increasing face bulk and short-chain fatty acid synthesis improves gastrointestinal health and overall wellness. Baobab leaves had a moisture content of 6.4%, fat of 16.1%, ash of 3.2%, protein of 18.7%, carbohydrate 57.2% and crude fiber of 4.1%. The minerals determined in the sample of baobab leaves are Ca, Fe, Mg, K, Na, P, and Zn with Potassium (347.6 ± 0.70) as the most abundant mineral while Zn (9.31 ± 0.60) is the least abundant. The functional properties studied include pH, gelation temperature, bulk density, water absorption capacity, oil absorption capacity, foaming property, emulsifying property, and stability and swelling capacity, which are 8.72, 29, 0.39, 138, 98.20, 0.80, 72.80, and 73.50 respectively. The Fourier Transform InfraRed absorption spectra show bands like C=O, C-Cl and N-H. Baobab leaves are edible, nutritious, and non-toxic, as the mineral contents are within the required range.

Keywords : dietary fibre, proximate analysis, macronutrients, minerals, baobab leaves, frequency range

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