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Determination of Nutritional Composition Total Phenol Content of Khat (*Catha Edulis*)

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Abstract

The leaves and soft twigs of khat (*Catha edulis*) popularly known as Miraa are chewed for the release of a juice that has active ingredients that alter the mood of the user. The psychoactive chemicals are well studied, however there is paucity in literature on the nutritional composition of khat. The users and policy makers are not aware of the nutritional composition if any. Knowledge on the nutritional, medicinal and other benefits will enhance production and marketing of khat. The aim of the study was to determine the phenolic and nutritional composition of khat. Samples of khat of three grades marketed were obtained from a specific farmerin a region that grows the shrub in Meru, Kenya. The samples were sorted and analysed for moisture content using oven drying, protein using Kjedahl method, fat by soxhlet method, carbohydrates by difference, ash by muffle furnace ashing, fibre, Vitamin C by DCIPP method and total phenols using Folin Ciocalteau method. All samples were analysed in triplicate and the means were considered to be significantly difference at $p \leq 0.05$. The moisture content ranged from 68.58–73.36 %, protein content 0.0048–0.0089 %, ash 1.45–1.70 %, fat 1.03–1.18 % and fibre 21.98–24.52 % indicating khat has a very high fibre content. The total phenols ranged from 0.314–4.356 mg of GA/100g. Vitamin C ranged from 1.25–1.91mg/100g and tannins from 2.10–6.08 mg/100g. Results from this study indicate that khat is very low in protein, fat and carbohydrates but very high in fibre. Khat therefore can be utilised also for its high fibre content and total phenol content.

Keywords: Fibre, khat, nutritional composition, total phenols

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