

Relative analysis of calculable Phytochemical Contents of Leafy Vegetables Sourced from Two Major Markets in Umuahia Abia State Nigeria - Chimere Ezekwe, University of Agriculture Umudike

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Verdant vegetables assume a significant part in the sanative and officinal needs of the individuals of Umuahia in Abia State Nigeria. The verdant vegetables can be cut and crushed into a fluid or included suppers for clinical purposes. The similar appraisal of quantitative phytochemical substance of verdant vegetables sourced from two significant business sectors in Umuahia, Abia State, Nigeria, was finished utilizing standard techniques in sets of three. The quantitative phytochemical screening indicated that the alkaloids content of the leafy vegetables ranged from $0.63 \pm 0.02\%$ to $5.13 \pm 0.01\%$ with *Vernonia amygdalina* in Ubani recording the highest $5.13 \pm 0.01\%$ while *Gnetum africanum* in Ori-Ugba recorded the lowest $0.63 \pm 0.02\%$. There was no significant statistical variation ($p > 0.05$) between *Pterocarpus soyanxii* sourced from the two markets. The saponins content of the leafy vegetables ranged from $1.30 \pm 0.02\%$ to $9.13 \pm 0.06\%$ with *Gnetum africanum* in Ori-Ugba recording the lowest $1.30 \pm 0.02\%$ while *Pterocarpus soyanxii* also in Ori-Ugba recorded the highest $9.13 \pm 0.02\%$. There was a significant statistical variation ($p < 0.05$) in saponins content of leafy vegetables of the same species between the two markets. The flavonoids level of the leafy vegetables ranged from $2.51 \pm 0.01\%$ to $7.79 \pm 0.03\%$ with *Pterocarpus soyanxii* in Ori-Ugba recording the lowest $2.51 \pm 0.01\%$ and *Talinum triangulare* also in Ori-Ugba recording the highest $7.79 \pm 0.03\%$. There was a significant statistical variation ($p < 0.05$) in flavonoids content of the leafy vegetables of the same species from the two markets. The tannins levels ranged from $0.05 \pm 0.01\%$ to $0.14 \pm 0.01\%$ with *Telfairia occidentalis* in Ori-Ugba market recording the lowest $0.05 \pm 0.00\%$ while *Pterocarpus soyanxii* in Ubani market recorded the highest $0.14 \pm 0.01\%$. The tannins levels obtained in this study were generally low, although the tannins levels in Ori-Ugba market were much lower. There was no significant statistical variation ($p > 0.05$) in tannins content between *Vernonia amygdalina* and *Talinum triangulare* samples in the two markets. The phenols levels ranged from $0.05 \pm 0.00\%$ to $0.26 \pm 0.00\%$ with *Talinum triangulare* and *Pterocarpus soyanxii* from Ori-Ugba market recording the lowest while *Talinum triangulare* in Ubani market recorded the highest $0.26 \pm 0.00\%$. There was a significant statistical variation ($p < 0.05$) in phenols content of leafy vegetables of the same species in the two markets. The phytochemical analysis carried out in this research have revealed that the leafy vegetables samples sourced from Ori-Ugba and Ubani market have appreciable amounts of phytochemicals which can serve the therapeutic

needs of the residents of Umuahia. It is hereby advised that the steady intake of these leafy vegetables be encouraged.

INTRODUCTION

Throughout the past 10 years, the general idea of promoting health using vegetables and fruits has become a rightful way of the preservation of mental and physical health by preventing or treating illness (Nielsen, 2010). Vegetables are crucial constituents of human diets that have nutrients which are needed in large quantities and element that occurs at very small quantities in the body but is nonetheless important for many biological processes (Abdullah and Chmielnicka, 1990). Vegetables have appearances that are green and leaf-like bearing edible roots, stems and leaves (Sharma, 2004). The basic components in vegetable leaves gives alkalizing results and also neutralizes the acidity caused by foods that have animal origin (Genderd, 1994). Vegetables provide good source of carotene, ascorbic acid, riboflavin, folic acid and minerals like calcium, iron and phosphorous (Nnam et al., 2012). Vegetables are foods that gives crucial protection and are good for the sustenance of good health and keeping diseases away (Kubmarawa et al., 2009). Phytochemicals can be defined as naturally occurring compounds in plants. Phytochemicals are responsible for the colour, flavour and smell of plants. Also, they help the plant fight against diseases. Therapeutic importance of phytochemicals to human health and fighting of diseases have been studied (Okwu, 2004). Phytochemicals are also non-nutrient, bioactive plant compounds in vegetables, fruits, grains and other plant products. They have been associated with cutting the risk of major degenerative diseases (Liu, 2004). Phytochemicals, which are seen in large amounts in vegetables and fruits, are involved in this protective effect (Sundarrayanan et al., 2011). This research work aims to compare and assess the quantitative phytochemical contents of some selected leafy vegetables sold at Ori-Ugba Market and Ubani Markets in Umuahia, Abia State, Nigeria.