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## Phytochemical and nutritional properties of dried leaf powder of *Moringa oleifera* Lam. from Machala El Oro province of Ecuador

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*Moringa oleifera* is a soft wooded tree whose fruits, roots and leaves have been advocated for traditional, medicinal and industrial uses. The phytochemical and nutritional properties of the dried leaf powder of *M. oleifera* used as nutraceuticals, dietary supplements, functional foods or a source of vegetable in meal preparation were investigated in this study to scientifically provide an empirical evidence for its use and benefits. Using standard phytochemical screening procedures, the phytochemicals identified were tannins, saponins, alkaloids, flavonoids, cardiac glycosides and reducing sugars. The physico-chemical analysis using standard official methods and gas chromatography revealed the following nutrients; proteins (24.31%), carbohydrate (41.20%), ashes (11.50%), crude fiber (10.28%), total fat (9.22%), moisture (6.12%) and saturated fatty acids (3.77), unsaturated fatty acids (5.45), monounsaturated fatty acids (0.87), polyunsaturated fatty acids (4.58) and trans fatty acid (0.00) for fatty acid profile. Using acid hydrolysis and ion-exchange chromatography, the amino acid analysis report showed the presence of essential and semi essential amino acids in varying amounts with a total of 27.16 nmol at 570nm and proline was 1.432 nmol at 440 nm. These findings have far reaching nutritional importance in the healthcare system of this country and will help to address undernutrition in a cost effective manner. Thus, the use of *M. oleifera* leaves as nutrients should be encouraged and sustained in this and other countries.

### Biography

Chinwe Christy Isitua is a Scientist who completed her PhD in 2013 from University of Benin, Nigeria and is currently doing her Postdoctoral studies in Universidad Tecnica de Machala Ecuador with the Emblematic Prometeo Project Fellowship of the Secretariat of Higher Education, Science, Technology and Innovation (SENESCYT) Ecuador.

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