

Physicochemical Properties of Moringa oleifera Seeds

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Abstract : Our research focuses on some physicochemical parameters of Moringa Oleifera seed meal and its seed oil to determine its nutritional quality. Proximate, mineral, and vitamin analyses were performed on the defatted seed meal, while fatty acid determination was carried out on the seed oil. The results of the proximate composition show moisture content (3.52 ± 0.01), ash (2.80 ± 0.33), crude fibre (3.92 ± 0.01), protein (42.96 ± 0.05), crude fat (7.04 ± 0.01) and carbohydrate (36.79 ± 0.04). The mineral composition shows that the seed is rich in Ca, K, and Na with 220ppm, 205ppm, and 118ppm, respectively. The seed has vitamins A and C with 2.17 ± 0.01 mg/100g and 6.95 ± 0.00 mg/100g respectively. The seed also contains 56.62 %, 38.50 %, and 5.24 % saturated, monounsaturated, and polyunsaturated fatty acids, respectively. It could be illustrated that Moringa seeds and their oil can be considered potential sources for both dietary and industrial purposes.

Keywords : Moringa oleifera seed, chemical composition, fatty acid, proximate, minerals and vitamins compositions

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