

Investigation of Proximate Composition, Minerals Content and Acute Toxicity Study of *Moringa Oleifera* Lam

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Abstract

Moringaoleifera Lam., popularly known as Drumstick tree, Dan-tha-lon in Myanmar, belongs to familyMoringaceae. This study aimed to scientifically investigateproximate compositions, minerals content, phytochemical constituents and acute toxicity studyof *M. oleifera* leaves. The proximate compositions were done by Association of Official Analytical Chemist (1990). Mineral elements were measured by atomic absorption spectrophotometer. Qualitative phytochemical analysis was carried out by Raaman (2006). Acute toxicity study was done by Organization for Economic Co-operation and Development, 425 guideline. According to proximate compositions, the percentage of moisture, ash, fiber, fat, protein and carbohydrate in *M. oleifera*was 6.69, 11.97, 10.13, 4.84, 23.88 and 42.49%. Macrominerals (Ca, Mg, K, Na) content were 1603.89±10.42, 66.99±0.25, 205.63±0.37 and 51.78±0.31 ppm. Microminerals (Cr, Cu, Fe, Mn, Zn) content were 2.05±0.28,13.71±0.76, 57.38±0.53, 17.71 ± 0.05 and 13.83±1.26 ppm.Toxic minerals, Cd was not detected and Pb content was4.19±1.00 ppm.All minerals content were within permissible limit. In phytochemical analysis, the leaves contained alkaloids, α amino acid, flavonoids, glycosides, phenols, reducing sugar, saponins and tannins. Acute toxicity study revealed that, no toxic sign and lethality at dose 5000 mg/kg (LD₅₀>5000 mg/kg). These findings indicated that, *M. oleifera*leaves provide good source of many nutrients for human health and used as food supplement for community.

Key Words: Proximate Compositions, Minerals Content, Acute Toxicity, and *Moringaoleifera*