

**ANALYSIS OF TRACE METALS IN SELECTED TRADITIONAL
HERBAL PLANTS USED FOR ANTI-DIABETIC TREATMENT**

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ABSTRACT

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The aim of this study was designed to analyze of trace metals present in antidiabetic plant and concentration in selected traditional herbal plants and the concentration of metals between different plants. The selected leaves of herbal plants were *pokok misai kucing* (*Orthosiphon stamineus*), *pokok bismillah* (*Vernonia amygdalina*) and *daun bidara* (*Ziziphus mauritiana*). The selected trace metals studied were Fe (iron), Mn (manganese), Ni (nickel) and Zn (zinc). The samples were analyzed by using Flame Atomic Absorption Spectroscopy. The concentrations of trace metals in leaves part of herbal plants samples were varied ranged from 78.9 mg kg⁻¹ to 127.2 mg kg⁻¹ for iron, 26.8 mg kg⁻¹ to 86.1 mg kg⁻¹ for manganese, 14.9 mg kg⁻¹ to 16.2 mg kg⁻¹ for nickel and 25.8 mg kg⁻¹ to 149.3 mg kg⁻¹ for zinc. Concentrations of trace metals for iron, zinc and nickel for three herbal plants were higher than WHO permissible limit while manganese and zinc for species *Ziziphus mauritiana* were below WHO maximum limit. The results showed the analyzed traditional herbal plants can be considered as potential sources for providing a reasonable amount of required elements to the patients of diabetes mellitus. In addition, these results can be used to set new standards for prescribing the dosage of the herbal drugs prepared from these plants materials.

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