

***Coccinia grandis* (L) Voigt freeze dried powder: Phytochemical fingerprints, proximate analysis and nutritional composition**

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The decoction of *Coccinia grandis* (Linn.) Voigt (family; Cucurbitaceae) leaves is one of the medicinal plant preparations which, is effective as an antidiabetic agent. The present study aimed to expound phytochemical fingerprints, proximate and nutritional composition of freeze-dried powder of the decoction made out of *C. grandis* leaves. Liquid Chromatography-Mass Spectrometric (LC-MS) and Fourier-Transform Infrared Spectroscopic (FT-IR) fingerprints were developed. Proximate and nutritional analysis were performed. Two sharp peaks obtained from LC-MS at 16 minute and 17.2 minute could be considered as characteristic peaks for the freeze dried powder of the *C. grandis*. FT-IR fingerprint showed a sharp peak at 1021 cm⁻¹ which is characteristic for *C. grandis* freeze dried powder. Proximate analysis revealed that freeze dried powder contained carbohydrate, fat, protein and fiber as 26.7±0.3, 0.3±0.0, 29.8±0.4 and 0.3±0.1%, respectively. Vitamin B₁ and B₂ were present as 0.52±0.01 and 0.38±0.02 mg/100 g, respectively while vitamin C was absent in freeze dried powder. Ca, As and Mg were detected as 3.7, 0.08 and 0.2 mg/kg, respectively while Fe, Hg, Pb and Cd were absent in the freeze dried powder. In conclusion, the results revealed that the freeze dried powder of *C. grandis* leaves is a potential source for a nutraceutical that could be explored by means of nutrition demand other than its medicinal value. The phytochemical fingerprints assured the identity and would be quality control references to minimize the batchwise variation in the mass production of the freeze dried powder of *C. grandis* leaves during commercialization.

Key words: *Coccinia grandis*, fingerprints, freeze dried powder, nutrition composition, proximate analysis

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