

PHARMACOGNOSTIC STUDY OF TWO *Ocimum sanctum* LINN. (LAMIACEAE) MORPHOTYPES GROWN IN SRI LANKA

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Ocimum sanctum Linn. (Lamiaceae) is a therapeutically important medicinal plant widely used for an array of ailments in traditional systems of medicine. There is no standardized protocol developed in Sri Lanka in order to meet the quality requirements prescribed by national and international pharmacopeia. Present study was undertaken to investigate pharmacognostical aspects of two morphotypes of *O. sanctum* grown in Sri Lanka. Morphological characters, moisture content, ash values and extractive values, preliminary phytochemical screening, Thin Layer Chromatography (TLC) profiles, screening of free radical scavenging activity, using 2,2-Diphenyl-1-Picrylhydrazyl (DPPH) for methanolic extracts of leaf, flower and bark and the brine shrimp toxicity assay for the two *O. sanctum* morphotypes were determined. Eleven morphological characters were identified as distinguishable polymorphic characters while all others were monomorphic to both morphotypes. Moisture content by oven method and moisture analyzer method for morphotype one and two were 17.95 ± 0.07 and 16.44 ± 0.40 and 17.70 ± 0.27 and 16.50 ± 0.49 , respectively. The percentages of total ash, acid insoluble ash and water soluble ash for morphotype one and two were 11.42 ± 0.01 , 0.13 ± 0.03 , 5.17 ± 0.44 and 11.04 ± 0.07 , 0.05 ± 0 , 4.70 ± 0.16 , respectively. The percentages of extractable matter by hot and cold maceration methods for morphotype one and two were, 19.03 ± 0.65 , 13.01 ± 0.65 and 11.76 ± 0.54 , 10.33 ± 0.51 , respectively. Qualitative phytochemical screening exhibited presence of alkaloids, flavonoids, saponins, steroid glycosides and tannins in both morphotypes. Thin Layer Chromatography (TLC) profiles exhibited same banding pattern for both morphotypes after visualizing under UV 366 nm and after spraying with vanillin-sulphuric acid. IC_{50} values for the methanolic extracts of leaf, flower and bark of morphotype one and two were 20.69, 48.13, 30.12, 20.76, 46.86 and 55.81 ppm respectively. It seems possible to use the outcome of the present study for the validation of Sri Lankan pharmacopeia.

Key words: Brine shrimp toxicity assay, Morphotypes, *Ocimum sanctum*, Phytochemicals, Thin layer chromatography