

DETERMINATION OF PHYSIOCHEMICAL AND NUTRACEUTICAL PROPERTIES OF TRADITIONAL SRI LANKAN SPICY SOUP, *THAMBUM HODDA*

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The growing interest in traditional herbal preparations highlights the importance of scientifically evaluating their health-promoting properties. This study aimed to assess nutraceutical properties [Total Polyphenol Content (TPC), Total Flavonoids Content (TFC), Tannins Content (TC), essential minerals (Zn, Mn, Ca, Cu, Na, K, Fe, Mg)], physicochemical [pH, Total soluble solids (TSS), and color values (L^* , a^* and b^*)] and sensorial properties ($n=30$; untrained assessors) of a traditional Sri Lankan spicy soup called *thambum hodda*. Two recommended recipes (R_1 and R_2) for *thambum hodda* were compared with positive control: *Rasam* (R_3), a well-known South Indian soup. R_1 demonstrated the highest TPC (5.51 ± 0.05 mg GAE g^{-1}), TFC (10.47 ± 0.03 mg QE g^{-1}), and TC (0.0059 ± 0.05 mg L^{-1}) while R_3 reported the lowest values for these parameters. The highest level of essential minerals, such as Mg (51.57 ± 0.53 ppm), Fe (2.98 ± 0.37 ppm), and K (1011.45 ± 5.42 ppm) were reported in R_1 while R_2 exhibited the highest Zn (351.07 ± 3.39 ppb), and Ca (189.22 ± 1.98 ppm) levels. Initial pH values were 3.29 ± 0.05 for R_1 , 3.23 ± 0.01 for R_2 , and 3.49 ± 0.05 for R_3 while TSS values were 4.12 ± 0.56 , 3.13 ± 0.05 and 2.68 ± 0.14 , respectively. Color values differed across recipes: R_1 ($L^*: 33.01 \pm 0.76$, $a^*: 2.33 \pm 0.28$, $b^*: 5.37 \pm 0.87$), R_2 ($L^*: 35.05 \pm 1.54$, $a^*: 2.15 \pm 0.75$, $b^*: 3.68 \pm 0.20$), and R_3 ($L^*: 33.06 \pm 0.40$, $a^*: 1.98 \pm 0.28$, $b^*: 4.00 \pm 0.44$). Sensory evaluation revealed that R_1 and R_2 had significantly higher ($p < 0.05$) acceptability than R_3 . However, seven (07) days of storage trials under refrigerated conditions ($4 \pm 0.5^\circ C$) exhibited significant changes ($p < 0.05$) in TPC, TFC, TC, and pH values of all samples, while, color values, and TSS did not varied significantly ($p > 0.05$). In conclusion, the traditional *Thambum hodda* demonstrates a broad spectrum of nutraceutical properties which aid in uplifting the overall health of individuals.

Keywords: Health-promoting properties, Herbal preparations, Mineral content, Sensory evaluation, Storage stability