

DEVELOPMENT OF A HERBAL PORRIDGE INCORPORATING AYURVEDIC HERBS RICH IN ANTI-AGING PROPERTIES

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An attempt was made to expose a dietary solution for aging issues by formulating a porridge that incorporated with Ayurvedic herbs; *Hathawariya*, *Pita sudu sarana*, *Ashwagandha*, and Turmeric. Initially, *Hathawariya* and *Pita sudu sarana* leaves were dehydrated at 60°C for 5 hours using a cabinet dryer. Dried leaves were powdered and passed through a 425 µm sieve to obtain fine particles. While powdered form of *Suwandhel* rice, *Ashwagandha*, onion, garlic, ginger, turmeric and pepper were selected as other ingredients. Three formulations were prepared by using all ingredients according to the prescribed levels in Ayurvedic medicine. The best formulation was selected by sensory evaluation conducted by 30 untrained panellists. The antioxidant activity of the final formulation was determined via in vitro total phenolic (TP), total flavonoid (TF), ferric reducing antioxidant power (FRAP) and DPPH (2,2-diphenyl-1-picrylhydrazyl) assays to recognize the anti-aging related properties. Proximate composition, pH, total soluble solids (TSS) and colour (L*, a* and b*) of the final product were also determined. Keeping quality was assessed based on microbial stability; total plate count and yeast and mould counts, over a 14-day storage period. According to the results, TP, TF, FRAP and half-maximal inhibitory concentration (IC₅₀) for DPPH were 2.05±0.15 mg GAEg⁻¹, 0.24±0.02 mg QEg⁻¹, and 1.13±0.01 mg TEg⁻¹, and 4.47±0.02 mg mL⁻¹ respectively. Proximate composition: moisture, ash, crude fat, crude protein and crude fibre of product were 6.29±0.06%, 9.28±0.09%, 2.21±0.03%, 11.47±0.19% and 6.72±0.18% respectively. pH (5.8±0.03), TSS (5.9±0.04) and initially colour L* (55.5±0.18), a* (0.4±0.06), b* (21.8±0.03) were recorded initially and any significant difference ($p>0.05$) was not shown during storage. Total plate count and yeast and mould counts were found at a safe level (<10⁵ and <2×10⁵ CFU g⁻¹), respectively. In conclusion, this herbal porridge is capable of being used in commercial preparations as a significant product with anti-ageing properties.

Keywords: *Ashwagandha*, *Hathawariya*, *Pita sudu sarana*, Sensory evaluation