

## EVALUATION OF QUALITY PARAMETERS AND STANDARD COMPLIANCE IN SELECTED COMMERCIALY AVAILABLE SRI LANKAN BEE HONEY

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Assessment of the quality and authenticity of commercial bee honey is crucial to ensure consumer safety and rights. This study aimed to evaluate the quality of some selected commercially available Sri Lankan bee honey. Bee honey samples representing different commercially available brands (n=27) and raw bee honey samples (n=5) as control samples were collected from some major bee honey-producing areas in Sri Lanka. The quality of those samples was evaluated through physicochemical parameters: The pH, electrical conductivity (EC), total soluble solids (TSS), density, refractive index (RI), water content (WC), color (intensity, Pfund scale, L\* a\* b\* values), viscosity, free acidity (FA), ash, pollen density, and sugar profile. Results depicted that the values of the samples were in the ranges of 2.55-4.57 for pH; 59.75-772  $\mu\text{S cm}^{-1}$  for EC, 71.35-80.10% for TSS, 1329.76-1428.23  $\text{kg m}^{-3}$  for density, 1.4704-1.4933 for RI, 17.25-26.40% for WC, 0.040-0.943 for color intensity, -23.75-311.52 mm for color pfund, 500-5100 cP for viscosity, 10.94-103.46  $\text{meq kg}^{-1}$  for FA, 0.0392-1.034% for ash, 5195.5–74,262,862.50 per g for pollen density, 0-8.931% and 24.978-84.188% for sucrose and fructose content respectively. Although many samples confirmed to the standard norms (TSS- max 75-80%, RI- Max 1.4740-1.4840, WC- max. 20-22%, FA- max. 50  $\text{meq kg}^{-1}$ , ash-max. 0.5-0.6%, sucrose- max. 5%, fructose and glucose-min. 60-68%) provided by the local and international standards (SLS, CODEX, EU). It was noted that several raw bee honey samples and many commercially available samples are not confirmed to the norms. It can be concluded that non-conformances of some commercial and raw bee honey samples to the local and international quality standard norms are an indication of inferior quality and high potential of adulteration of commercially available bee honey.

**Keywords:** Authenticity, Consumer safety, Pollen density, Local and international standard norms.