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## Studying bee honey in different areas of Sri Lanka

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Bee honey is a commonly used natural ingredient in *Ayurveda* for its medicinal and therapeutic properties. The objective of this study was to conduct a physicochemical analysis of bee honey samples collected from different areas of Sri Lanka. All the samples were directly collected from bee combs in *Anuradhapura, Kurunegala, Matale, Matara* and *Monaragala* districts (sample A, B, C, D and E). All were assessed for organoleptic, physical and chemical parameters including TLC and HPTLC. Total sugar content in each sample was measured using refractometer. Results revealed that samples A, B, C and E were having dark brownish colour and sample D was light colour. Total ash values were 0.65%, 1.1%, 0.2%, 6.75%, 0.3% respectively and only C and E were within the standard range of 0.14%-0.30%. Moisture contents were 26.35%, 22.15 %, 19%, 25.5%, 21.1% respectively and it revealed that samples B, C and E were within the standard range of 18%-23%. All the samples were having an acidic pH value (3, 2.7, 3.5, 3, 2.1) and standard range for pH value in bee honey is 3.2-4.5. Only sample C was within the normal pH range. Total sugar contents were 73%, 76.5%, 77.5%, 74%, 77.5% respectively and C and E were having the highest sugar content. TLC fingerprints (Ethyl-acetate: Methanol/1:1) were not same for all the samples. Chemical profiles were detected using HPTLC fingerprints indicating 6 peaks for sample A, 5 peaks for samples C and E and 4 peaks for the sample B. This study concludes that sample C which was collected from Matale District, Sri Lanka is matching with the quality standards for bee honey.

Keywords - Bee honey, HPTLC, Matale, Physico-chemical, Sugar content

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