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Haron, H.[a] , Talib, R.A.[a] , Subramaniam, P.[b] , Arifen, Z.N.Z.[a] , Ibrahim, M.[c]

A COMPARISON OF CHEMICAL COMPOSITIONS IN KELULUT HONEY FROM DIFFERENT REGIONS [Perbandingan Komposisi Kimia dalam Madu Kelulut dari Kawasan Berbeza]

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[a] Nutritional Sciences Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, 50300, Malaysia
[b] Health Psychology Programme, Faculty of Health Sciences, Universiti Kebangsaan Malaysia, Kuala Lumpur, 50300, Malaysia
[c] Department of Nutrition Sciences, Kuliyyah of Allied Health Sciences, International Islamic University Malaysia, Jalan Istana, Pahang, Bandar Indera Mahkota, Kuantan, 25200, Malaysia

Abstract
Kelulut honey (KH) is honey produced by stingless bees (Trigona spp.) found in Malaysia. This study investigated the difference inherent in the chemical composition of kelulut honey collected from the east coast, and the central and northern regions of Peninsular Malaysia. Total sugar content, individual sugar content, total phenolics, total flavonoids, ascorbic acid, ascorbic acid equivalent antioxidant content (AEAC), and proline content were determined. Sugar analysis revealed that kelulut honey contained 62.33-79.53 g/100g of total sugar, with maltose as the predominant sugar (15.85-37.74 g/100g), followed by fructose (9.91-53.64 g/100g), glucose (10.96-25.04 g/100g), and sucrose (0.54-3.48 g/100g). The results indicate that total flavonoids (78.95±0.70 mg QE/kg) and phenolics (1149.48±40.52 mg GAE/kg) were the highest in honey from the east coast region. The proline and ascorbic acid content were less likely to be affected by geographical factors. Kelulut honey possesses a unique sugar profile that may contribute to its unique taste. In conclusion, the geographical and floral origin of honey are the two most important factors that fundamentally affect the physical-chemical properties of honey samples.

Author Keywords
chemical; compositions; honey; kelulut; region

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Correspondence Address
Haron H.; Nutritional Sciences Programme, Malaysia; email: hasnaharon@ukm.edu.my

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