

## **A Comparative Study of Organoleptic Characteristic, Biochemical Properties and Colour Intensity of Gelam and Kelulut Honey**

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### **Structured Abstract**

**Background:** Honey is valued for its unique flavours, nutritional content, and purity. Each variety presents a unique sensorial profile depending on floral origin and environmental factors. Although they are popular, little research exists on the comparison of Gelam and Kelulut honey organoleptic characteristics. The objective of this study is to compare and analyze the flavour, smell, colour, and texture of the two honeys, to quantitatively designate their colour and to analyse the biochemical properties of sugar content and moisture content in Gelam and Kelulut Honey.

**Methods:** The research procedure involved the collection of honey samples from local sources, sensory evaluation by a trained panel, honey colour determination using a combined spectrophotometric method accompanied by Pfund scale as well as analysis of sugar and moisture content using refractometric method.

**Results:** Sensory analysis indicated that Kelulut honey is lighter in color, with floral and fruity scents, less sweet, high in acidity, and buttery-watery texture. Gelam honey is darker, with woody and fruity aroma, sweeter, no acidity, and has a chewy-syrupy texture. Moisture content analysis revealed that Kelulut honey had a significantly higher moisture content (28.07%) compared to Gelam honey (17.03%). Sugar content, measured as Brix percentage, was higher in Gelam honey, indicating an inverse relationship between moisture and sugar concentration. Benedict's and Barfoed's tests revealed the presence of reducing sugars and monosaccharides for both types of honey, verifying their authenticity and quality.

**Conclusion:** In conclusion, the findings of this study demonstrated clear differences in sensory and physicochemical properties among Gelam and Kelulut honey, indicating the need for overall analysis for quality determination and public awareness.

**Keywords:** Organoleptic Analysis, Moisture Content, Gelam Honey, Kelulut Honey

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