

**UNIVERSITI TEKNOLOGI MARA (UiTM)**

**PURITY AND QUALITY OF SELECTED MALAYSIAN  
HONEY**

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## ABSTRACT

Pure honey is extensively well known to possess various health benefits while adulterated honey was proven to adversely cause many health complications. Therefore, this study was primarily designed to investigate the purity and quality of selected commercial Malaysian honeys. The honey samples involved in this study include 10 test samples which were obtained commercially around the area of Selangor and four reference samples as control samples which were scientifically proven to be pure and fake honey. All the samples were tested with physicochemical test to determine the purity of the honey samples. Then, the samples were tested with the traditional methods which were traditionally believed to be able to distinguish pure honey from fake honey. The results acquired from the traditional methods were compared to the physicochemical results to determine the reliability of the traditional methods to be used as a benchmark in determining the purity of honey. The results of the study indicated that Sample 05 and Sample 10 had shown positive results in most of the tests conducted and there were two traditional methods which had shown significant results as compared to the physicochemical tests. Thus, this study proposed that, further in the future, more supplementary test should be conducted to prove the purity of Sample 05 and Sample 10 and the two traditional methods; heating a spoonful of honey and storage of honey in the refrigerator should be more extensively investigated to confirm the reliability in determining the purity and quality of honey.

Keywords: Adulterated honey, commercial Malaysian honeys, physicochemical tests, purity and quality, traditional methods reliability

## CHAPTER 1

### INTRODUCTION

#### 1.1 Background

The usage of pure natural honey as one of the most important medicinal properties was proved since the ancient history and it is significantly appreciated as a traditional medicine (Mandal & Mandal, 2011). Impressively, new scientific studies have also proved that pure honey possess many medicinal properties in human physiological body systems and its ability to function as wound dressing, antioxidants, antibacterial, anti-mutagenic, anti-inflammatory agents and others (Alvarez-Suarez *et al.*, 2010). Besides that, pure honey is also acknowledged as a non-pharmacological approach in diabetic patient therapy to reduce the body weight and blood lipids (Bahrami *et al.*, 2009). Due to its medicinal benefits, honey was consumed worldwide as medical therapies, dietary supplements and various other purposes. However, those medical benefits of honey were achieved and proved only by the consumption of the pure honey.