

The Antioxidant and Sensory Characteristics of Jellies made from *Musa paradisiaca* and *Trigona sp* honey

Mohd Nur Nasyriq Anuar, Muhammad Ibrahim, Nur Aizura Mat Alewi, Ainin Azwani Abdul Rafa, Malik Adewoyin, Badr Eddin Kharsa & Norazlanshah Hazali*

Department of Nutrition Sciences, Kulliyah of Allied Health Sciences, International Islamic University Malaysia

ABSTRACT

Objectives/Research Problem: The demand for convenient functional foods has increased globally in accordance with the increase of awareness towards healthy lifestyle among consumers. Natural resources for production of functional foods contain high amount of phytochemicals (Carotenoid, flavonoid, polyphenols), essential nutrients (carbohydrate, protein, fat, vitamin, mineral, water) and safe for consumption. *Musa paradisiaca* (MP) and *Trigona sp* honey (TH) were reported to possess many health benefit including in the prevention of major chronic degenerative diseases. The study investigated the antioxidant and sensory characteristics of jelly made from MP and TH.

Materials and Method: The jellies were prepared in food preparation laboratory and sensory room, Department of Nutrition Sciences, IIUM. The evaluation of antioxidant was carried out including total phenolic content (TPC), total flavonoid content (TFC) as well as DPPH radical-scavenging activity. In sensory evaluation, 39 untrained panelists were employed to assess the jelly using 9-point hedonic scale test.

Results and Discussion: It was observed that all different combinations of MP and TH enhanced the antioxidant value of the jellies including TPC ($18.30 \pm 2.67 - 63.96 \pm 0.57$ mg GAE/ 100g) and TFC ($3.43 \pm 0.21 - 58.33 \pm 7.43$ mg CEQ/ 100g). In addition, the jellies also showed increased in DPPH radical-scavenging activities ($51.24 \pm 5.27 - 64.94 \pm 1.14$, % of inhibition at 200 mg/mL). Sensory evaluation showed that the jellies produced score ranging from 5.17 ± 0.73 to 6.17 ± 0.77 by the panellists, which considered acceptable with a good quality jelly product. Among the jellies, jelly with combination (MP: 100%; TH: 100%) exhibit the highest content for total phenolic, and total flavonoid, and DPPH radical-scavenging activity, and obtain sensory score of 6.08 ± 0.31 , which indicate the jelly was considered acceptable.

Conclusion: The jelly produced from MP and TH was high in antioxidant and can be used as a functional product to facilitate the nutritional intake of antioxidant suppressed related diseases.

KEYWORDS: *Musa paradisiaca*, *Trigona sp* honey, Antioxidant Jelly, Sensory Evaluation.

*CORRESPONDENCE: abumaisarah@iium.edu.my