ABSTRACT

The Identification of Monoflora Honey (Mango, Rambutan, Longan) Using *Attenuated Total Reflectance - Fourier Transform Infrared* (ATR-FTIR) Method

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This research aims to prove that the ATR-FTIR spectroscopic method can differentiate between honey. The sample used in this research is monoflora honey with the source of floral mango, rambutan, and longan nectar. The identification of honey is conducted with ATR-FTIR spectroscopic and analyzed using multivariate analysis technique (Hierarchical Cluster Analysis) with ATR-FTIR spectroscopic data. The equipments that will be used in this research is ATR-FTIR Alpha II Spectrophotometer (Bruker, Optik, Ettlingen, Germany). The materials needed in this research are: monoflora honey sample (source of floral mango, rambutan, and longan nectar) and 1% isopropanol solvent in methanol. 6 samples of monoflora honey are obtained from the local producers in several regions of Indonesia on September 2019. All samples are collected in the sterile glass bottles and stored at room temperature until the FTIR analysis is conducted. Based on the conducted research, ATR-FTIR can be used in the identification of the difference in the spectral pattern of Mango, Rambutan and Longan Honey based on the source of nectar floral quickly and easily. There is a difference in the spectra of Rambutan Honey with Longan Honey, however for the Mango Honey still not completely separated. Therefore, further research is needed to help in the identification process of honey based on the nectar floral source and the addition of total samples is needed in order to get a better result.

Keywords: Monoflora honey, FTIR spectroscopy, Attenuated Total Reflectance, Hierarchial Cluster Analysis

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