ABSTRACT

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EXTRACTION AND ISOLATION OF ANTIOXIDANT SUBSTANCES IN KAPOK HONEY (Ceiba pentandra HONEY)
(xi + 130 pages : 9 tables; 15 figures; 10 appendices)

Kapok honey is a kind of monofloral honey which has a lot of nutrition inside it, such as antioxidant. This research was carried out to identify the antioxidant substances inside kapok honey. The methods used in this research divided into 3 steps, which are extraction, isolation, and identification. During the gradual maceration process of extraction, there are 3 different solvent used, ethanol, ethyl acetate, and hexane. The extract showing the highest amount of antioxidant activity then be separated using chromatography column and thin layer chromatography to produce an isolate. Next, isolate from that separation is analyzed using the GC-MS. The result showed that from 3 different solvents, ethyl acetate shows the highest radical scavenger as much as 167.08%. Separation using column chromatography resulting 22 fractions which divided into six groups based from the similarities of the wavelength. The first from six group of fraction (combination of fifth and seventh fraction which have the similarity of wavelength) has the highest radical scavenger as much as 167.42%. The combination of solvent used in thin layer chromatography that produced one spot of isolate with the highest radical scavenger (12.76%) is ethyl acetate:acetone:acetic acid glacial with 4:4:2 ratio. According to the GC-MS results, there are six substances that is found to have the antioxidant activity which are o-cymene, antioxidant 425, hexacosane, piperine, stigmasterol, and stigmast-5-en-3-ol.

Keywords : antioxidant, extraction, isolation, kapok honey
References : 64 (1968-2011)