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Research article**Melientha suavis Pierre. Extract: Antioxidant and Sunscreen Properties for Future Cosmetic Development**

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Abstract The ultimate aim of this study was to evaluate antioxidant activities using DPPH and ABTS assay and antioxidant substances of *Melientha suavis* Pierre (*Melientha*) extracts with ethanol (EtOH) and subsequent partition with hexane, dichloromethane (CH₂Cl₂), ethyl acetate (EtOAc) and distilled water (W). The *Melientha* extract was assessed the sunscreen activities by sun protection factor which was compared with octyldimethyl PABA. Additionally, the stability test of *Melientha* extracts added in the cosmetic base-formula was investigated. The sun protection substances of *Melientha* extracts were determined by GC-MS analysis. Among the extract and fractions, the ethanolic extract showed the highest activities. The IC₅₀ of *Melientha* extract to free radical scavenging determined by DPPH assay and ABTS assay were 53.20 ± 7.37 µg/ml and 64.17 ± 5.76 µg/ml, respectively. The total phenolic compound of ethanol extract was 149.87 ± 2.72 mg GE/g of ext and total flavonoid content was 51.60 ± 4.12 mg CE/g of ext. The sun protection factor (SPF) of ethanol extract was 26.61 ± 0.10. Cinamate and its derivative which were claim as sunscreen substance was found by GC-MS analysis of *Melientha* ethanol extract.

Keywords: Antioxidant activity, GC-MS, Cream, Natural product

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