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Title	Investigation of Free Radical Scavenging Activity and Tyrosinase Inhibitory Effects of <i>Melodorum fruticosum</i> Flowers for Potential Uses in Skin Care
Key words	<i>Melodorum fruticosum</i> , Melanin, Tyrosinase, Antioxidant

ABSTRACT

Skin pigmentary abnormalities are considered to be aesthetically unfavorable, thus have led to the development of cosmetic and therapeutic treatment using several depigmenting agents aimed to modulate skin pigmentation. *Melodorum fruticosum* has shown to have many pharmacological properties including antioxidant properties; however, there has yet to be a study on how the flower of the plant can potentially be used in skin care formulation. This study aimed to assess *Melodorum fruticosum* flower for its potential use in skin care formulation by extraction methods of boiling with distilled-water (W) and maceration using ethanol (E). Total phenolic (TPC) and total flavonoid (TFC) contents were quantified. The two antioxidant and tyrosinase inhibition activities were determined by DPPH and FIC; and the modified dopachrome methods, respectively. The results showed that both extracts have the same activities in terms of TPC, TFC, free radical scavenging activity and metal chelation activity. However, the MF-W extracts showed the highest tyrosinase inhibition activities with the value of $IC_{50} 0.410 \pm 0.023$. Evidence from this research suggests that extract MF-W might be a promising novel active source for whitening and reducing hyperpigmentation.