

Specification : The Mixed Thai Medicinal Plant Extract for Hair Blackening Stimulation /สารสกัดสมุนไพรไทยผสมช่วยกระตุ้นให้ผมดำ (Manose RM-0131)

(Application : An active ingredient for hair blackening stimulation cosmetic products/
สารสำคัญในผลิตภัณฑ์เครื่องสำอางช่วยให้ผมดำ)

1. Name of the raw material : The Mixed Thai Medicinal Plant Extract for Hair Blackening Stimulation
2. Active components : Coumestan derivatives, triterpene saponins, steroidal saponins, triterpenes, steroids, steroidal alkaloids, flavonoids, phenolic acids and thiophene derivatives from False daisy⁽¹⁾ / Chlorophyll, tannic acid, gallic acid, rutin, isoquercetin, catechin and quercetin from Ya-nang⁽²⁾
3. Common and scientific name/ Family of the plant : False daisy⁽³⁾ (*Eclipta prostrata* (L.) L.)/ COMPOSITAE and Ya-nang (*Tiliacora triandra* Diels)/ MENISPERMACEAE
4. Physical appearance : Brownish-green semi-solid with specific odor
5. pH : 6 (1% in distilled water)
6. Standardization : HPLC fingerprint using gallic acid as a marker
7. Solubility : Soluble in water and ethanol
8. Microbial contamination : No pathogenic microorganism with less than 1,000 cfu/g of the total plate count of bacteria, yeast and fungi which is conformed to the Thai FDA regulation
9. Biological activities :
 - False daisy and Ya-nang extract showed antioxidant DPPH radical scavenging ($SC_{50} = 1.84 \pm 0.08$ and 2.17 ± 0.16 mg/ml, respectively) (standard vitamin C = 0.01 ± 0.01 mg/ml)⁽⁴⁾
 - False daisy and Ya-nang extract showed tyrosinase stimulation activity in cell line of 31.79 ± 5.47 and $33.35 \pm 17.02\%$ at 1 mg/ml, respectively (theophylline = $63.77 \pm 14.64\%$ at 0.1 mg/ml)⁽⁴⁾

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- False daisy and Ya-nang extract showed melanin induction activity in cell line of 33.21 ± 3.53 และ $65.54 \pm 24.56\%$, respectively at 1 mg/ml (theophylline = $50.07 \pm 11.61\%$ at 0.1 mg/ml)⁽⁴⁾
10. Animal / human performance test : -
11. Safety : -
12. Pharmaceutical, food supplement or cosmetic applications : Hair blackening stimulation cosmetic products
13. Recommended concentrations in the product : 1-10 %w/w
14. Storage : Keep in tight container at cool place (4 °C) protected from light
15. Precautions : None
16. Cost per kg : Please request

References

1. Timalsina D. and Devkota H.P. *Eclipta prostrata* (L.) L. (Asteraceae): Ethnomedicinal uses, chemical constituents, and biological activities. **Biomolecules**, 2021; 11(11): 1738.
2. Monthana M., Kamonwan R., Min-Hsiung P. and Donporn W. Some phytochemicals and anti-inflammation effect of juice from *Tiliacora triandra* leaves. **Journal of Food and Nutrition Research**, 2018; 6: 32-38.
3. Lee C-S., Kang J-A., Kim G-Y. and Kim G-R. A Study on the effect of *Eclipta prostrata* extract and MTS on the improvement of scalp health and prevention of hair loss for workers in their 20s and 30s. **Medico-legal Update, January-March 2020**, Vol. 20, No. 1: 1850-1856.
4. Manose In-house Project “Extract from Thai Medicinal Plant for Hair Blackening” **Manose Health and Beauty Research Center** (www.manose.co), unpublished, 2018.