

Specification : Ma Kiang Fruit Extract 10% in Propylene glycol/
สารสกัดผลมะเกี๋ยง 10% ใน Propylene glycol (Manose RM-0059)

(Application : An active ingredient for whitening / anti-wrinkle cosmetics
and food supplement products / สารสำคัญในผลิตภัณฑ์เครื่องสำอาง
ช่วยให้ผิวขาว / ต้านริ้วรอย และผลิตภัณฑ์เสริมอาหาร)

1. Name of the raw material : Ma Kiang fruit extract 10% in Propylene glycol
2. Active components : Anthocyanins, glycosides, vitamin C and flavonoids⁽¹⁾
3. Common and scientific name / Family of the plant : Ma Kiang (*Cleistocalyx nervosum* var. *paniala*)/ MYRTACEAE
4. Physical appearance : Brownish solid with specific odor
5. pH : 4
6. Standardization : HPLC fingerprint using cyanidin 3-glucoside as a marker⁽²⁾
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 : Anti-oxidant (DPPH, lipid peroxidation and chelating activity)⁽¹⁾, MMP-2 (collagen degradation enzyme) inhibition⁽¹⁾ and whitening effect by tyrosinase inhibition⁽¹⁾

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10. Animal / human performance test : Anti-oxidative activity in animals⁽³⁾
 11. Safety : No skin irritation in human volunteers
 12. Pharmaceutical, food supplement or cosmetic applications : Whitening / anti-wrinkle cosmetics and food supplement products
 13. Recommended concentrations in the product : 1-50 % w/w
 14. Storage : Keep in tight and light protection container at room temperature
 15. Precautions : None
 16. Cost per kg : Please request

References

1. Manosroi J, Chankhampan C, Kumguan K, Manosroi W, Manosroi A. (2015) *In vitro* anti-aging activities of extracts from leaves of Ma Kiang (*Cleistocalyx nervosum* var. *paniala*). **Pharmaceutical Biology**. 53(6): 862-869 (Corresponding author and co-authors are from Manose Health and Beauty Research Center)
2. Jansom C, Bhamarapravati S, Itharat A. (2008) Major anthocyanin from ripe berries of *Cleistocalyx nervosum* var. *paniala*. **Thammasat Medical Journal**. 8(3): 364-370
3. Taya S, Punvittayakul C, Chewonarin T, Wongpoomchai R. (2009) Effect of aqueous extract from *Cleistocalyx nervosum* on oxidative status in rat liver. **Thai Journal Toxicology**. 24(2): 101-105