

Specification : Niosome HG : HG Anti-hair Loss Actives Loaded  
in Niosomal Dispersion / สารสำคัญสมุนไพรมุ่งช่วยลดการหลุดร่วง  
ของเส้นผม HG เก็บกักในอนุภาคนีโอโซม (Manose RM-0129)

(Application : An active ingredient for anti-hair loss cosmetic products /  
สารสำคัญในผลิตภัณฑ์เครื่องสำอางช่วยลดการหลุดร่วงของเส้นผม)

1. Name of the raw material : HG Anti-hair Loss Actives Loaded in Niosomal Dispersion
2. Active components : Fatty acids, isoflavones, phytosterols and saponins<sup>(1)</sup>
3. Common and scientific name/ Family of the plant : Sorghum (*Sorghum bicolor* (L.) Moench)/ GRAMINEAE and Soybean (*Glycine max* L.)/ LEGUMINOSAE
4. Physical appearance : Light brownish-orange turbid dispersion with specific odor
5. pH : 5.28
6. Standardization : HPLC fingerprint using linoleic acid as a marker
7. Solubility : Soluble in alcohol
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 : 5 $\alpha$ -reductase inhibition activity of 22.40 $\pm$ 3.26% at 1 mg/ml which is 0.38 and 0.37 time of the standard anti-hair loss drugs, dutasteride and finasteride at 1 mg/ml (59.25 $\pm$ 1.31 and 59.79 $\pm$ 1.12%), respectively<sup>(2)</sup>
10. Animal / human performance test : -

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11. **Safety** : No cytotoxicity on human skin fibroblasts at 10 mg/ml with cell viability of  $114.32 \pm 1.15\%$  (SLS =  $5.48 \pm 0.93\%$  at 1 mg/ml)<sup>(2)</sup>
12. **Pharmaceutical, food supplement or cosmetic applications** : Anti-hair loss cosmetic products
13. **Recommended concentrations in the product** : 10-50 %
14. **Storage** : Keep in tight and light protection container at room temperature
15. **Precautions** : None
16. **Cost per kg** : Please request

## References

1. Kanchana P., Santha M.L. and Raja K.D. A review on *Glycine max* (L.) Merr. (soybean). **World Journal of Pharmacy and Pharmaceutical Sciences**, 2016; 5(1): 356-371.
2. Manose In-house Project “The Mixed Thai Medicinal Plant Extracts for Hair Blackening” **Manose Health and Beauty Research Center** (www.manose.co), unpublished, 2019.