

Specification : Anti-hair Loss Shampoo (Manose PR-0012)

(Application : For anti-hair loss)

1. Name : Anti-hair Loss Shampoo
2. Active Compositions : Mixed Thai medicinal plant extracts [Sorghum (*Sorghum bicolor*) and Soybean (*Glycine max* (L.) Merrill)]
3. FDA Registration No. : In the process of cosmetic product notification with Thai FDA
4. Characteristics
  - Physical appearance : Light yellowish clear viscous liquid
  - pH : 7.42
  - Odor : Light herbal aromatic odor
5. Standardization : HPLC fingerprint using linoleic acid as a marker
6. Biological activities :
  - Anti-inflammatory activity by inhibiting heat denaturation of egg white albumin with the  $IC_{50}$  value of  $0.07 \pm 0.06$  mg/ml which was 9 folds of the standard anti-inflammatory drug, diclofenac diethylammonium ( $IC_{50}$  value of  $0.63 \pm 0.01$  mg/ml)
  - Anti-bacterial activity against *Staphylococcus aureus* at 2.5 mg with the inhibition zone of  $11.13 \pm 1.14$  mm which was 0.43 fold of the standard anti-bacterial drug, erythromycin 0.015  $\mu$ g (inhibition zone of  $25.92 \pm 0.88$  mm)
  - Anti-bacterial activity against *Staphylococcus epidermidis* at 2.5 mg with the inhibition zone of  $16.22 \pm 0.58$  mm which was 0.46 fold of the standard anti-bacterial drug, erythromycin 0.015  $\mu$ g (inhibition zone of  $35.37 \pm 0.33$  mm)
  - Anti-fungal activity against *Candida albicans* at 2.5 mg with the inhibition zone of  $9.65 \pm 1.15$  mm which was 0.30 fold of the standard anti-fungal drug, fluconazole

- 
- 0.025 µg (inhibition zone of 32.21±1.34 mm)
- Antioxidative activity by DPPH radical scavenging with the SC<sub>50</sub> value of >1000 mg/ml (SC<sub>50</sub> value of vitamin C = 0.06±0.03 mg/ml)
  - Melanin induction activity in melanoma (B16F10) cell line at 42.89±8.61% which was 0.45 fold of the standard drug, theophylline at 93.61±5.38%
  - Tyrosinase stimulation activity in melanoma (B16F10) cell line at 660.00±8.19% of 44.53±5.57% which was 0.04 fold of kojic acid
7. Clinical Performance : -
8. Microbial Contamination : No pathogenic microorganism contamination. The amounts of the aerobic bacteria, yeast and fungi are less than 1,000 cfu/g which is in the acceptable range of Thai FDA, Ministry of Public Health
9. Safety Evaluation : - No cytotoxicity in human skin fibroblasts with cell viability of 106.27±1.85% at 0.1 mg/ml  
- No skin irritation in human volunteers by the 4h closed patch test
10. Stability : Passed the physical stability test by the heating-cooling process (45 and 4 °C) of 6 cycles
11. Shelf life at 30 °C : 3-5 years
12. Indication and use : Shampooing by applying on the wet hair, gently massage for 1-2 minutes and then rinse off with clean water
13. Packaging and Storage : 50-100 ml in a bottle / keep in cool/ dry place and protected from light
14. Precaution : - For external use only  
- Avoid from inhalation and get into eyes  
- Rinse off and stop using when there is any undesirable effect
15. Cost : Please request



**An International Leader in Research and Development of Natural Products**

**ผู้นำระดับนานาชาติในการวิจัยและพัฒนาผลิตภัณฑ์ธรรมชาติ**

---