

**Specification : Barbed Grass Extract / สารสกัดหญ้าารีแพร์**

**(Manose RM-0048)**

**(An active ingredient for anti-aging cosmetics and food supplements**

**for menopausal women / สารสำคัญในผลิตภัณฑ์เครื่องสำอางชะลอวัย**

**และผลิตภัณฑ์เสริมอาหารสำหรับสตรีวัยทอง)**

1. **Name of the raw material** : Barbed Grass Extract (Crude Extract / Semi - Purified Extracts)
2. **Active components** : Phenolic compounds, fatty acids, flavonoids and phytosterol<sup>(1)</sup>
3. **Common and scientific name/ Family of the plant** : Barbed Grass (*Centotheca lappacea* (L.) Desv.)/  
Poaceae
4. **Physical appearance** : Dark brownish viscous semi-solid with specific herbal odor (Crude Extract) / Light brownish viscous semi-solid with specific herbal odor (Semi - Purified Extract)
5. **pH** : -
6. **Standardization** : HPLC fingerprint using gallic acid as a marker
7. **Solubility** : soluble in ethanol
8. **Microbial contamination** : No pathogenic microorganism with less than 1,000 cfu/g of bacteria, yeast and fungi which is conformed to the Thai FDA regulation
9. **Biological activities** : - The crude extract exhibited DPPH free radical scavenging activity with the SC<sub>50</sub> value of 2.40 ± 0.13 mg/ml  
- The semi - purified extract exhibited DPPH free

radical scavenging activity with the  $SC_{50}$  value of 0.05 mg/ml ( $SC_{50}$  value of vitamin C was  $0.24 \pm 0.08$  mg/ml)

10. Animal/ human performance test : - The crude extract gave the anti-inflammation activity in EPP (ethyl phenyl propolate) induced ear edema of Wistar rats at 60 minutes of  $30.53 \pm 9.71\%$ , while the standard anti-inflammatory product, diclofenac gel (1%) gave the percentage inhibition of  $31.03 \pm 12.72\%$  at 60 minutes.
- The crude extract exhibited estrogenic effect in animals with dose-dependent manner.
- The crude extract at the dose of 200 mg/kg gave the highest estrogenic effect with the wet and blotted uterine weight of  $48.77 \pm 23.23$  and  $30.86 \pm 18.42$  mg, respectively.
11. Safety : No skin irritation in human volunteers
12. Pharmaceutical, food supplement or cosmetic applications : anti-aging cosmetics and food supplements for menopausal women
13. Recommended concentrations in the product : 1 % w/w (for semi - purified) and 5 % w/w (for crude extract) in anti-aging cosmetics and 76 mg/day of the crude extract for food supplements
14. Storage : Keep in tight and light protection container at room temperature
15. Precautions : None

16. Cost per kg : Please request

## References

1. Kamoltham T, Rungsimakan S, Supan K, Rodsienglump P. (2017) Chemical Constituents of *Centotheca lappacea* (L.) Desv. Aerial Parts. **Journal of Thai Traditional and Alternative Medicine.** (15): 15
2. Kamontham T, Manosroi J, Chankhampan C, Manosroi W, Manosroi A. (2018) *In vitro* Anti-aging activities of *Centotheca lappacea* (L.) Desv. (Ya Repair) Extract. **Chiang Mai Journal of Science.** 45(2) : 846-857 (Corresponding author and co-authors are from Manose Health and Beauty Research Center)