

Specification : Mixed medicinal plant extract for oral care cosmetic products / สารสกัดสมุนไพรผสมใช้ในผลิตภัณฑ์สำหรับช่องปากและฟัน (Manose RM-0065)

(Application : An active ingredient for oral care cosmetic products / สารสำคัญในผลิตภัณฑ์ทำความสะอาดในช่องปากและฟัน)

1. Name of the raw material : Mixed medicinal plant extract for oral care cosmetic products
2. Active components : Alkaloids, saponins, tannins, terpenes, steroids, phenolics and flavonoids
3. Scientific name of the plant : Clove (*Syzygium aromaticum* (L.) Merr.& L.M.Perry/ MYRTACEAE), Monkey Jack (*Artocarpus lacucha* Roxb./ MORACEAE) and Sappan Tree (*Caesalpinia sappan* L./ LEGUMINOSAE) / Family
4. Physical appearance : Orange-brownish solid with specific herbal odor
5. pH : 4.69
6. Standardization : HPLC fingerprint using eugenol as a marker
7. Solubility : Practically insoluble in methanol / slightly soluble in ethanol / very soluble in water and propylene glycol / insoluble in glycerin and mineral oil
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-inflammation in *vitro* โดยสามารถยับยั้งการสลายตัวของอัลบูมินจากความร้อนได้ 50% (IC₅₀) at

6.06±0.07 mg/ml (IC₅₀ of diclofenac

diethylammonium = 0.62±0.04 mg/ml)

- Anti-inflammation in macrophage (RAW 264.7)

โดยสามารถยับยั้งการหลั่งไนตริกออกไซด์ได้

24.66±2.03% at 0.01 mg/ml โดยมีฤทธิ์เป็น 0.82

เท่าของ triamcinolone acetonide (30.09±2.15% at 1 mg/ml)

- Anti-bacteria *Staphylococcus aureus* โดยมี

inhibition zone = 18.53±0.36 mm at 2 mg คัด

เป็น 0.78 เท่าของ erythromycin (inhibition zone =

23.86±0.34 mm at 0.025 µg)

- Anti-bacteria *Staphylococcus mutans* โดยมี

inhibition zone = 14.33±1.08 mm at 2 mg คัด

เป็น 0.52 เท่าของ erythromycin (inhibition zone =

27.64±0.30 mm at 0.025 µg)

10. Animal / human : -
performance test

11. Safety : No skin irritation in human gingival fibroblast
volunteers at 0.1 mg/ml = 93.75±3.95%

12. Pharmaceutical, food : Oral care cosmetic products
supplement or cosmetic
applications

13. Recommended : 0.1-2 % w/v
concentrations in the
product

14. Storage : Keep in tight and light protection container at
room temperature

15. Precautions : None
16. Cost per kg : Please request

References

1. Kaur G.J. and Arora D.S. (2009) Antibacterial and phytochemical screening of *Anethum graveolens*, *Foeniculum vulgare* and *Trachyspermum ammi*. **BMC Complementary and Alternative Medicine**. 9:30
2. Batiha G.E-S., Alkazmi L.M., Wasef L.G., Beshbishy A.M., Nadwa E.H. and Rashwan E.K. (2020) *Syzygium aromaticum* L. (myrtaceae) : Traditional uses, bioactive chemical constituents, pharmacological and toxicological activities. **Biomolecules**. 10(2): 202
3. Zarrin Tasnim Rafa Z.T., Fuad F., Islam R., Hasan M., Kafi A.H., Islam S. and Parvin S. Phytochemical and pharmacological investigation of *Plumbago indica* L. **Journal of Medicinal Plants Studies**. 4(2): 115-118