
Specification : Mouth Spray Throse (Manose PR-0003)

(Application : For bad smell breath and refreshment)

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1. Name : Mouth Spray Throse
 2. Active Compositions : Extracts of Thai medicinal plants such as Turmeric (*Curcuma longa*), Guava (*Psidium guajava*) and Kot-Pung-Pla (*Terminalia chebula* gall) in ethanolic solution
 3. FDA Registration No. : 50-1-6300013401
 4. Characteristics
 - Physical appearance : Yellowish solution
 - pH : 6
 - Odor : Herbal odor
 - Particle size : 406.43±80.91 nm
 5. Standardization : HPLC fingerprint using gallic acid as a marker
 6. Biological activities :
 - Antioxidative activity by DPPH radical scavenging with the SC_{50} value of 16.48±0.04 mg/ml in comparing to vitamin C (0.03±0.01 mg/ml)
 - Anti-inflammatory activity by inhibition of nitric oxide release in macrophage (RAW 264.7) of 54.41±4.59% at 5 mg/ml which is 1.28 folds in comparing to the standard anti- inflammatory drug, triamcinolone acetonide (42.59±2.28% at 0.5 mg/ml)
 - Anti-inflammatory activity by heat denaturation inhibition of albumin from egg white with the IC_{50} value of 0.49±0.17 mg/ml which is 0.67 fold of the standard anti- inflammatory drug, diclofenac (the IC_{50} value of 0.33±0.12 mg/ml)
 - Anti-inflammatory activity in EPP (ethyl phenyl propiolate) induced ear edema of Wistar rats at 30

minutes of $47.90 \pm 14.84\%$ which is 0.85 fold in comparing to the standard anti-inflammatory diclofenac gel (1%) ($56.57 \pm 12.20\%$)

- Anti-bacterial activity by growth inhibition of *S. epidermidis*, *S. aureus* and *S. mutans* with the inhibition zone of 9.93 ± 0.32 , 8.63 ± 0.33 and 10.91 ± 1.46 mm, respectively, while the standard antibacterial drug, erythromycin at 15 μg gives 27.60 ± 0.66 , 24.85 ± 0.87 and 19.69 ± 1.68 mm, respectively

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 on gingival fibroblasts with more than 70% cell viability at 1 mg/ml
 - No skin irritation in human volunteers by the closed patch test
10. Stability : Physically stable by the heating-cooling process (45 and 4 °C) of 6 cycles
11. Shelf life at 30 °C : 3 years
12. Indication and use : Spray in mouth and throat for fresh breath and anti-inflammation/ anti-bacterial activity
13. Packaging and Storage : 20 ml in a bottle with sprayer/ keep in dry and cool place protected from light
14. Precaution : Rinse off and stop using when there is any undesirable effect
15. Cost : Please request



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