

**Specification of Paprika extract (Manose RM-016)**

1. **Name of the raw material** : Paprika extract
2. **Active components** : Capsaicin 2.5 %
3. **Scientific name of the plant / Family** : *Capsicum frutescens* L. / SOLANACEAE
4. **Physical appearance of the raw material** : Light brownish paste with specific odor
5. **pH of the raw material** : 4
6. **Standardization of the raw material** : HPLC fingerprint using capsaicin as a marker;  
capsaicin content = 2.5%
7. **Solubility** : Soluble in water and ethanol
8. **Microbial contamination** : None
9. **Biological activities** : Analgesic<sup>(1)</sup>, anti-inflammation<sup>(2)</sup>, increase blood  
circulation<sup>(3)</sup> and anti-cancer<sup>(4)</sup>
10. **Safety** : No skin irritation in human volunteers
11. **Animal / human performance test** : Analgesic and anti-inflammation in human  
volunteers
12. **Pharmaceutical, food supplement or cosmetic applications**  
: Analgesic and hair growth promotion cosmetic  
products
13. **Recommended concentrations in the product (%)**  
: 0.2-0.4 % in cream / gel / lotion
14. **Storage** : Keep in tight and light protection container at room  
temperature
15. **Precautions (if any)** : External use, avoid contact with eyes or soft tissue  
because of irritation, must not use in children under 6  
years old
16. **Cost per kg** : -

## References

1. Anand P and Bley K. Topical capsaicin for pain management: therapeutic potential and mechanisms of action of the new high-concentration capsaicin 8% patch. *British Journal of Anaesthesia* 2011, 107(4): 490–502.
2. Zimmer AR, Leonardi B, Miron D, Schapoval E, Oliveira JR, Gosmann G. Antioxidant and anti-inflammatory properties of *Capsicum baccatum*: From traditional use to scientific approach. *J. Ethnopharmacol.* 2012, 139, 228–233.
3. Liang YT, Tian XY, Chen JN, Peng C, Ma KY, Zuo Y, *et al.* Capsaicinoids lower plasma cholesterol and improve endothelial function in hamsters. *Eur J Nutr* 2013, 52(1):379-388
4. Lin CH, Lu WC, Wang CW, Chan YC, Chen MK. Capsaicin induces cell cycle arrest and apoptosis in human KB cancer cells. *BMC Complementary and Alternative Medicine* 2013, 2-9.