

Specification of Purple glutinous rice extract loaded in nanovesicular suspension**(Manose RM-027)**

1. **Name of the raw material** : Purple glutinous rice extract loaded in nanovesicular suspension
2. **Active components** : Purple glutinous rice extract 1 % (anthocyanins)
3. **Scientific name of the plant / Family** : Purple glutinous rice (*Oryza sativa* L.)/
GRAMINEAE
4. **Physical appearance of the raw material** : Turbid light purple suspension with specific odor
5. **pH of the raw material** : 5
6. **Standardization of the raw material** : HPLC fingerprint using anthocyanins as a marker⁽¹⁾
7. **Solubility** : Soluble in water and ethanol
8. **Microbial contamination** : None
9. **Biological activities** : Anti-oxidant (DPPH, lipid peroxidation and chelating activity)⁽¹⁾ and whitening effect by tyrosinase inhibition⁽¹⁾
10. **Safety** : No skin irritation in human volunteers
11. **Animal / human performance test** : Anti-wrinkle and whitening in human volunteers⁽¹⁾
12. **Pharmaceutical, food supplement or cosmetic applications**
: Anti-wrinkle and whitening cosmetic and food supplement products
13. **Recommended concentrations in the product (%)**
: 1-5 %
14. **Storage** : Keep in tight and light protection container at room temperature
15. **Precautions (if any)** : None
16. **Cost per kg** : -

Reference

1. Manosroi A, Chankhampan C, Kumguan K, Manosroi W, Manosroi J. Anti-aging performance evaluation of cream containing niosomes loaded with the purple glutinous rice (*Oryza sativa* Linn.) *extract*. Advanced Science Letters 2012, *In press*.