

Specification of Butterfly Pea extract (Manose RM-013)

1. **Name of the raw material** : Butterfly Pea extract
2. **Active components** : Anthocyanins, triterpenoids ⁽¹⁾
3. **Scientific name of the plant / Family** : Butterfly Pea (*Clitoria ternatea* L.)/
LEGUMINOSAE-PAPILIONOIDEAE
4. **Physical appearance of the raw material** : Dark purple solid with specific odor
5. **pH of the raw material** : 5
6. **Standardization of the raw material** : HPLC fingerprint using anthocyanin as a marker ⁽¹⁾
7. **Solubility** : Soluble in water and ethanol
8. **Microbial contamination** : None
9. **Biological activities** : Anti-oxidant, anti-bacterial and hair blackening ^{(1), (2)}
10. **Safety** : No skin irritation in human volunteers
11. **Animal / human performance test** : Anti-oxidant and hair blackening in human
volunteers
12. **Pharmaceutical, food supplement or cosmetic applications**
: Hair blackening, anti-wrinkle and anti-aging
cosmetic products
13. **Recommended concentrations in the product (%)**
: 0.1-5 %
14. **Storage** : Keep in tight and light protection container at room
temperature
15. **Precautions (if any)** : None
16. **Cost per kg** : -

References

1. Pulok KM, Venkatesan K, Satheesh Kumara N, Micheal H. The Ayurvedic medicine *Clitoria ternatea* - from traditional use to scientific assessment. *Journal of Ethnopharmacology* 2008, 120: 291-301.
2. Sitthiphong S, Sawai N, Khaunnapa P, Somkamol M, Pokchut K, Thanachod T, Paiboon R,
3. Siriinan T. The 6th International Conference on Natural Products for Health and Beauty (NATPRO 6) 2016.