

Specification of Monkey Jack heart wood extract (Manose RM-028)

1. **Name of the raw material** : Monkey Jack heart wood extract
2. **Active components** : Phenolic acids, flavonoids and stilbenoids^{(1), (2)}
3. **Scientific name of the plant / Family** : Monkey Jack (*Artocarpus lacucha* Roxb. ex Buch.-Ham.)/ MORACEAE
4. **Physical appearance of the raw material** : Brownish solid with specific odor
5. **pH of the raw material** : 5
6. **Standardization of the raw material** : HPLC fingerprint using oxyresveratrol as a marker⁽²⁾
7. **Solubility** : Soluble in water and ethanol
8. **Microbial contamination** : None
9. **Biological activities** : Anti-oxidant (DPPH, lipid peroxidation and chelating activity) and whitening effect by tyrosinase inhibition
10. **Safety** : No skin irritation in human volunteers
11. **Animal / human performance test** : Anti-wrinkle and whitening in human volunteers⁽³⁾
12. **Pharmaceutical, food supplement or cosmetic applications** : Whitening and anti-wrinkle cosmetic and food supplement 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. Hossain MF, Islam MA, Akhtar S, Numan SM. Nutritional value and medicinal uses of monkey Jack fruit (*Artocarpus lakoocha*). International Research and Journal of Biological Sciences 2016, 5(1): 60-63.
2. Palanuvej C, Issaravanich S, Tunsaringkarn T, Rungsiyothin R, Vipunngun N, Ruangrunsi N, Likhitwitayawuid K. Pharmacognostic study of *Artocarpus lakoocha* heartwood. Journal of Health Research 2007, 21(4): 257-262.