

Specification : Golden Shower Flower Extract / สารสกัดดอกคูณ
(Manose RM-007)

(Application : An active ingredient for anti-wrinkle / whitening cosmetics /
anti-inflammation products and food supplements / สารสำคัญในผลิตภัณฑ์
เครื่องสำอางช่วยให้ผิวขาว / ต้านริ้วรอย / ผลิตภัณฑ์ต้านอักเสบและเสริมอาหาร)

1. Name of the raw material : Golden Shower flower extract /
10% w/v extract in propylene glycol
2. Active components : Anthraquinones, flavonoids and
proanthocyanidins⁽¹⁾
3. Common and Scientific name/
Family of the plant : Golden Shower (*Cassia fistula* L.)/
LEGUMINOSAE-CAESALPINOIDEAE
4. Physical appearance : Brownish solid with specific herbal odor /
clean brownish solution
5. pH : 4.70 (10% w/v extract in propylene glycol)
6. Standardization : HPLC fingerprint using catechin as a marker
7. Solubility : Soluble in water and ethanol

8. **Microbial contamination** : No pathogenic microorganism with less than 1,000 cfu/g of the total plate count of bacteria, yeast and fungi which is conformed to the Thai FDA regulation
9. **Biological activities of the extract** :
- Antioxidative activity by DPPH radical scavenging with the SC_{50} value of 0.20 ± 0.05 mg/ml (ascorbic acid = 0.02 ± 0.00 mg/ml)
 - Antioxidative activity by lipid peroxidation inhibition with the IPC_{50} value of 1.27 ± 0.11 mg/ml (ascorbic acid = 0.07 ± 0.01 mg/ml)
 - Antioxidative activity by metal chelating with the MC_{50} value more than 1,000 mg/ml (EDTA = 0.27 ± 0.01 mg/ml)
 - Collagen and hyaluronic acid stimulating activity
 - Collagenase and MMP-2 inhibition activity⁽³⁾
 - Tyrosinase inhibition activity⁽³⁾
10. **Animal / human performance test** : Anti-oxidative activities in animals⁽²⁾

11. Safety : No skin irritation in human volunteers
12. Pharmaceutical, food supplement or cosmetic applications : Anti-wrinkle/ whitening cosmetics, anti-inflammation products and food supplements
13. Recommended concentrations in the product : 0.01 - 0.5 % w/v (extract) / 0.1 - 5 % w/v (10 % w/v extract in propylene glycol)
14. Storage : Keep in tight and light protection container at room temperature
15. Precautions : None
16. Cost per kg : Please request

References

1. Bahorun T, Neergheen VS, Aruoma OI. (2005) Phytochemical constituents of *Cassia fistula*. *African Journal of Biotechnology*. 4(13): 1530-1540
2. Neelam C, Ranjan B, Komal S, Nootan C. (2011) Review on *Cassia fistula*. *International Journal of Research in Ayurveda & Pharmacy*. 2(2): 426-430
3. Limtrakul P, Yodkeeree S, Thippraphan P, Punfa W and Srisomboon J. (2016) Anti-aging and tyrosinase inhibition effects of *Cassia fistula* flower butanolic extract. *BMC Complementary and Alternative Medicine*. 16 : 497