
Specification : Broken Bones Tree Extract / สารสกัดฝักเพกา
(Manose RM-0033)

(Application : An active ingredient for whitening and anti-aging cosmetic products / สารสำคัญในผลิตภัณฑ์เครื่องสำอางช่วยให้ผิวขาวและชะลอวัย)

- Name of the raw material** : Pod of Broken Bones Tree Extract
- Active components** : Alkaloids, flavonoids, glycosides and tannins
- Common and scientific name/ Family of the plant** : Broken Bones Tree (*Oroxylum indicum* (L.) Kurz.)/
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- Physical appearance** : Greenish-brown semi solid with specific herbal odor
- pH** : 4.29
- Standardization** : HPLC fingerprint using tannin as a marker (retention time = 2.798 mins.)
- Solubility** : Sparingly soluble in hot and cold water, slightly soluble in methanol, soluble in ethanol and practically insoluble in glycerin, propylene glycol and mineral oil
- 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
- Biological activities** :
 - Antioxidative activity by DPPH radical scavenging with the SC_{50} value of 0.16 ± 0.03 mg/ml (ascorbic acid = 0.02 ± 0.00 mg/ml)
 - Tyrosinase inhibition activity with the IC_{50} value of 0.94 ± 0.05 mg/ml (kojic acid = 0.04 ± 0.01 mg/ml)

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10. **Animal / human performance test** : The product containing 1%w/w extract exhibited whitening effect by melanin synthesis reduction in human volunteers after 4 weeks of application
 11. **Safety** : The product containing 1% w/w extract exhibited no irritation on human volunteer skin by the 4h closed patch test
 12. **Pharmaceutical, food supplement or cosmetic applications** : Whitening and anti-aging cosmetic products
 13. **Recommended concentrations in the product** : 0.5-1.5 % w/w
 14. **Storage** : Keep in tight and light protection container at room temperature
 15. **Precautions** : None
 16. **Cost per kg** : Please request