

Specification : Chebolic Myrobalans Extract/ สารสกัดสมอไทย (Manose RM-0111)

(Application : An active ingredient for anti-hypertensive food supplements and anti-acne cosmetic/ สารสำคัญในผลิตภัณฑ์เสริมอาหารสำหรับโรคความดันโลหิตสูง และผลิตภัณฑ์เครื่องสำอางต้านเชื้อสิว)

1. Name of the raw material : Chebolic Myrobalans Extract
2. Active components : Phenolic compounds, flavonoids, tannins, glycosides and gallic acid⁽¹⁾
3. Common and scientific name/ Family of the plant : Chebolic Myrobalans (*Terminalia chebula* Retz. var. *chebula*)/ COMBRETACEAE
4. Physical appearance : Dark brown solid with herbal odor
5. pH : 5
6. Standardization : HPLC fingerprint using gallic acid as a marker
7. Stability of active constituent : Gallic acid is stable at room temperature and light protection condition
8. Solubility : Soluble in water and ethanol
9. 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
10. Biological activities : - Anti-oxidant⁽¹⁾, anti-inflammatory⁽¹⁾, anti-microbial⁽¹⁾, anti-cancer⁽¹⁾ and anti-hypertensive⁽²⁾ activity
11. Animal / human performance test : Anti-hypertensive activity in animals
- Anti-hypertensive activity of the extract (% relative activity = 61.73 %) (% relative activity of the standard drug, prazosin = 45.43 %)

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| 12. Safety | : | No skin irritation in human volunteers / LD ₅₀ > 5 g/kg BW in rats |
| 13. Pharmaceutical, food supplement or cosmetic applications | : | Anti-hypertensive and anti-cancer in food supplements / anti-acne, anti-oxidant, anti-inflammatory and anti-microbial in cosmetics |
| 14. Recommended concentrations in the product | : | 0.1-1.0% w/w in food supplements and cosmetics |
| 15. Storage | : | Keep in tight and light protection container at room temperature |
| 16. Precautions | : | None |
| 17. Cost per kg | : | Please request |

References

1. Bulbul MRH, Chowdhury MNU, Naima TA, Sami SA, Intiaj MS, Huda N, Uddin MG. (2022) A comprehensive review on the diverse pharmacological perspectives of *Terminalia chebula* Retz. **Heliyon**. 8: e10220.
2. Sornwatana T, Bangphoomi K, Roytrakul S, Wetprasit N, Choowongkamon K, Ratanapo S. (2015) Chebulin: *Terminalia chebula* Retz. fruit-derived peptide with angiotensin-I-converting enzyme inhibitory activity. **Biotechnology and Applied Biochemistry**. 62(6): 746-753.
3. Manose In-house Project “The Development of Extract from Thai Medicinal Plants for Anti-hypertensive Food Supplements and Anti-acne Cosmetics”, **Manose Health and Beauty Research Center** (www.manose.co), unpublished, 2013.