

Specification : *Andrographis paniculata* Extract / สารสกัดฟ้าทะลายโจร
(Manose RM-0066)

(Application : An active ingredient for prevention and treatment of common cold
สารสำคัญในผลิตภัณฑ์เสริมอาหารสำหรับป้องกันและรักษาหวัด)

1. Name of the raw material : *Andrographis paniculata* Extract
2. Active components : Diterpenoids, flavonoids, quinic acids, xanthones and noriridoids⁽¹⁾
3. Common and scientific name/ Family of the plant : *Andrographis paniculata* (Burm. f.) Wall. Ex Nees/ ACANTHACEAE
4. Physical appearance : Brownish solid with specific herbal odor
5. pH : 5
6. Standardization : HPLC fingerprint using andrographolide as a marker⁽²⁾
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 : Prevention and treatment of common cold⁽³⁻⁴⁾, anti-inflammatory⁽⁵⁾, hepatoprotective⁽⁶⁾, anti-bacterial⁽⁷⁾, anti-viral⁽⁸⁾, anti-parasitic⁽⁹⁾, anti-cancer⁽¹⁰⁾ and immunomodulatory activities⁽¹¹⁾
10. Animal / human performance test : Prevention of common cold in human volunteers⁽³⁻⁴⁾, anti-inflammatory, hepatoprotective and immunomodulatory effects in animals^(5-6, 11)
11. Safety : No skin irritation in human volunteers/ LD₅₀ >5 g/kg BW in rats

-
12. Pharmaceutical, food supplement or cosmetic applications : Food supplements for prevention and treatment of common cold
 13. Recommended concentrations in the product : 0.1 – 5 %
 14. Storage : Keep in tight and light protection container at room temperature
 15. Precautions : -
 16. Cost per kg : Please request

References

1. Hossain MS, Urbi Z, Sule A, Rahman KMH. *Andrographis paniculata* (Burm. f.) Wall. ex Nees: A review of ethnobotany, phytochemistry and pharmacology. The Scientific World Journal 2014, Article ID 274905.
2. Sharma M, Sharma R. Identification, purification and quantification of andrographolide from *Andrographis paniculata* (burm. F.) Nees by HPTLC at different stages of life cycle of crop. Journal of Current Chemical and Pharmaceutical Sciences 2013, 3(1): 23–32.
3. Hancke J, Burgos R, Caceres D, Wikman G. A double blind study with a new monodrug Kan Jang: decrease of symptoms and improvement in the recovery from common colds. Phytotherapy Research 1995, 9(8): 559–562.
4. Caceres DD, Hancke JL, Burgos RA, Wikman GK. Prevention of common colds with *Andrographis paniculata* dried extract. A pilot double blind trial. Phytomedicine 1997, 4(2): 101–104.
5. Madav S, Tandan SK, Lal L, Tripathi HC. Anti-inflammatory activity of andrographolide. Fitoterapia 1996, 67(5): 452–458.
6. Verma VK, Sarwa KK, Kumar A, Zaman M. Comparison of hepatoprotective activity of *Swertia chirayita* and *Andrographis paniculata* plant of North-East India against CCl₄ induced hepatotoxic rats. Journal of Pharmacy Research 2013, 7(7): 647–653.
7. Leelarasamee A, Trakulsomboon S, Sittisomwong N. Undetectable anti-bacterial activity of *Andrographis paniculata* (Burma) wall. ex nees. Journal of the Medical Association of Thailand 1990, 73(6): 299–304.

-
8. Reddy VLN, Reddy SM, Ravikanth V, et al. A new bis-andrographolide ether from *Andrographis paniculata* nees and evaluation of anti-HIV activity. *Natural Product Research* 2005, 19(3): 223–230.
 9. Padma Y, Narasimhudu CL, Devi S, Natha NMB, Naga RB, Philip GH. *In vitro* anthelmintic activity of *Andrographis paniculata* (burm.f.) nees. *International Journal of Pharmaceutical Research and Development* 2011, 3(3): 202–205.
 10. Kumar RA, Sridevi K, Kumar NV, Nanduri S, Rajagopal S. Anticancer and immunostimulatory compounds from *Andrographis paniculata*. *Journal of Ethnopharmacology* 2004, 92(2-3): 291–295.
 11. Bukoye O, Musbau A. Immune modulation potentials of aqueous extract of *Andrographis paniculata* leaves in male rat. *Researcher* 2011, 3(1): 48–57.