

Specification : Pepper Extract / สารสกัดพริกไทย

(Manose RM-0014)

(Application : An active ingredient for anti-sprain and increase blood circulation / hair loss protection cosmetics and weight loss food supplements / สารสำคัญในผลิตภัณฑ์ยาจากสมุนไพร แก้เคล็ดขัดยอก / เพิ่มการไหลเวียนโลหิต / เครื่องสำอางป้องกันผมร่วง และผลิตภัณฑ์เสริมอาหารลดน้ำหนัก)

1. Name of the raw material : Pepper Extract
2. Active components : Alkaloids, monoterpenes and volatile oils ⁽¹⁾
3. Common and scientific name / Family of the plant : Pepper (*Piper nigrum* L.)/ PIPERACEAE
4. Physical appearance : Light brownish solid with specific odor
5. pH : 5
6. Standardization : HPLC fingerprint using piperine as a marker⁽¹⁾
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 : Anti-oxidant⁽¹⁾, burning effect⁽²⁾, anti-inflammation⁽³⁾ and anti-sprain⁽⁴⁾
 10. Animal / human performance test : Anti-inflammation in animals and anti-sprain in human volunteers⁽⁴⁾
 11. Safety : No skin irritation in human volunteers
 12. Pharmaceutical, food supplement or cosmetic applications : Active ingredient in anti-sprain and increase blood circulation / hair loss protection in cosmetics and weight loss food supplement products
 13. Recommended concentrations in the product : 0.1-5 % w/w
 14. Storage : Keep in tight and light protection container at room temperature

15. Precautions : May cause irritation when contact with eyes or soft tissue. Do not use in children under 6 years old.
16. Cost per kg : Please request

References

1. Nahak G, Sahu RK. (2011) Phytochemical evaluation and antioxidant activity of *Piper cubeba* and *Piper nigrum*. **Journal of Applied Pharmaceutical Science**. 1(8): 153-157
2. Keith S. (2010) Black Pepper overview of health benefits. **Nutrition**. 45(1): 43-47
3. Costa R, Machado J, Abreu C. (2016) Evaluation of analgesic properties of *Piper nigrum* essential oil: a randomized, double-blind, placebo-controlled Study. **World Journal of Traditional Chinese Medicine**. 2(2): 60–64
4. Jun SB, Da HO, Hyun MC, Bong-Jun S, Sung-Jig L, Jung YK, Hyung-In Y, Myung CY, Dae-Hyun H, Kyoung SK. (2009) Anti-inflammatory and antiarthritic effects of piperine in human interleukin 1 β -stimulated fibroblast-like synoviocytes and in rat arthritis models. **Arthritis Research and Therapy**. 11(2): 1-9