Specification : Fermented Tea Leaf Extract / สารสกัดใบเมี่ยง

(Manose RM-0085)

(Application : An active ingredient for anti-oxidant, anti-diabetic and immunomodulatory/ refreshment in food supplements / สารสำคัญในผลิตภัณฑ์เสริมอาหารต้านปฏิกิริยาออกซิเดชัน ลดระดับน้ำตาลในเลือดและกระตุ้นภูมิคุ้มกัน/ ให้ความสดชื่น)

1.	Name of the raw material	:	**Fermented Tea Leaf Extract**
2.	Active components	:	catechins, flavonoids, anthocyanins และ phenolic acids[(1)]
3.	Common and scientific name/ Family of the plant	:	Fermented Tea Leaf (*Camellia sinensis* L. (Kuntze))/ THEACEAE
4.	Physical appearance	:	Dark brownish solid with herbal odor (for solid crude extract) and light brown clear solution with herbal odor (for extract solution)
5.	pH	:	5
6.	Standardization	:	HPLC fingerprint using catechin as a marker
7.	Stability of active constituent	:	Catechin was stable at room temperature and light protection condition[(2)]
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-cancer[(1)], anti-diabetic[(1)], anti-bacterial[(1)] and immunomodulatory effect[(1)]
11.	Animal / human performance test	:	Anti-oxidant and anti-diabetic in animals[(1)]
12.	Safety	:	No skin irritation in human volunteers / LD_{50} > 5 g/kg BW in rats

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13.	**Pharmaceutical, food supplement or cosmetic applications**	:	Anti-oxidant, anti-diabetic immunomodulatory and refreshment food supplements
14.	**Recommended concentrations in the product**	:	0.1-10% w/w for dietary supplement products (the solid crude extract 0.1%, while 10% for the 1% crude extract in propylene glycol)
15.	**Storage**	:	Keep in tight and light protection container at room temperature
16.	**Precautions**	:	None
17.	**Cost per kg**	:	Please request

References

1. Zhao T, Li Chao, Wang S and Song X. (2022) Green tea (*Camellia sinensis*): A review of its phytochemistry, pharmacology and toxicology. **Molecules.** 27: 3909.

2. Zeng L, Ma M, Li C and Luo L. (2017) Stability of tea polyphenols solution with different pH at different temperatures. **International Journal of Food Properties.** 20(1): 1-18.