Technical data sheet

Product Name: Icariin
Botanical Name: Epimedium spp.
Common Name: Horny Goat Weed Extract
CAS No.: 489-32-7
Molecular Formula: $C_{33}H_{40}O_{15}$
Molecular Weight: 676.66 g/mol
Appearance: Yellow to light yellow crystalline powder
Plant Part Used: Aerial parts / Leaves
Extraction Method: Ethanol and water extraction
Standardization: Icariin 98% by HPLC

1. PRODUCT DESCRIPTION

Icariin is a naturally occurring flavonoid glycoside and the major bioactive constituent of Epimedium, a traditional botanical plant commonly known as Horny Goat Weed.

It is obtained from Epimedium plant materials through extraction, purification, concentration and drying processes. Icariin is widely used as a botanical ingredient in dietary supplements, nutraceutical formulations and botanical research.

2. SPECIFICATION

Parameter	Specification
Icariin Content (HPLC)	≥98.0%
Appearance	Yellow to light yellow powder
Odor	Characteristic
Identification	Positive by HPLC
Loss on Drying	≤5.0%
Total Ash	≤1.0%
Particle Size	95% Pass 80 Mesh
Heavy Metals	≤10 ppm
Lead (Pb)	≤2.0 ppm
Arsenic (As)	≤1.0 ppm
Cadmium (Cd)	≤1.0 ppm
Mercury (Hg)	≤0.1 ppm
Total Plate Count	≤1,000 CFU/g
Yeast & Mold	≤100 CFU/g
E. coli	Negative

Salmonella	Negative

Note: The above specifications are proposed reference values for a 98% grade. Actual limits and test results should be confirmed against the manufacturer's validated product specification and COA.

3. PHYSICOCHEMICAL PROPERTIES

- Molecular Formula: $C_{33}H_{40}O_{15}$
- Molecular Weight: 676.66 g/mol
- CAS Number: 489-32-7
- Solubility: Practically insoluble in water; soluble in certain organic solvents.
- Stability: Sensitive to prolonged exposure to light, heat and moisture.

4. APPLICATIONS

Icariin is commonly used as a botanical active ingredient in:

- Dietary supplements and nutraceutical products.
- Herbal and botanical formulations.
- Functional ingredient development.
- Botanical extracts and research applications.

5. PRODUCTION PROCESS

Raw Material Selection → Cleaning and Preparation → Extraction → Filtration → Concentration → Purification → Crystallization → Drying → Sieving → Quality Inspection → Packaging.

6. PACKAGING

- 1 kg aluminum foil bag.
- 5 kg aluminum foil bag.
- 25 kg fiber drum with double inner food-grade PE bags.

Customized packaging is available upon request.

7. STORAGE

Store in a tightly sealed container in a cool, dry and well-ventilated place. Protect from direct sunlight, heat and moisture.

8. SHELF LIFE

24 months under recommended storage conditions.

9. TRANSPORTATION

Transport as non-dangerous goods under normal conditions. Protect the product from moisture, direct sunlight and physical damage during transportation.

10. REGULATORY INFORMATION

- EINECS / EC Number: Not established / to be confirmed.
- E-number: Not applicable.
- Food-grade or dietary supplement suitability: Subject to the regulatory requirements of the destination market.