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Technical Data Sheet (TDS)

1. Product Overview

- Product Name: 黄芪提取物
- English Name: Astragalus Extract (Astragalus Membranaceus (Fisch.) Bge. Extract)
- CAS Number: 84687-42-3
- Formula: Blend of Natural Astragalus Active Ingredients (Flavonoids, Astragaloside IV, Polysaccharides)
- Molecular Weight: Variable (400-8000 Da)
- Product Characteristics: Natural plant extract from high-quality astragalus root via water extraction, alcohol precipitation and purification; yellowish brown fine amorphous powder with mild astragalus fragrance; high total flavonoids content (≥20%) and astragaloside IV content (≥1.0%), rich in astragalus polysaccharides and bioactive saponins. Non-toxic, non-irritating, fully biodegradable; stable under recommended storage conditions, with obvious health care and biological effects. Suitable for health food, Chinese medicine preparations, cosmetics, functional food and animal feed additive production.

2. Technical Specifications (Complies with Plant Extract Industrial Standards)

Item	Specification
Appearance	Yellowish brown to brown fine amorphous powder
Odor	Mild natural astragalus characteristic fragrance
Total Flavonoids Content (HPLC)	≥ 20.0%
Astragaloside IV Content (HPLC)	≥ 1.0%
pH Value (1% aqueous solution,25℃)	5.5-7.5
Loss on Drying	≤ 5.0%
Ash Content	≤ 5.0%
Heavy Metals (Pb)	≤ 5 ppm
Heavy Metals (As)	≤ 1 ppm
Total Bacterial Count	≤ 100 CFU/g
E. coli	Negative
Salmonella	Negative
Particle Size	95% passing 80 mesh
Water Solubility	Freely soluble in water; soluble in 70% ethanol
Storage Stability	24 months (unopened, ≤25℃, RH ≤60%)

3. Product Advantages

1. **High Active Ingredient Content**: Total flavonoids ≥20%, astragaloside IV ≥1.0%, rich in astragalus polysaccharides; high purification degree, guaranteed product efficacy.
2. **Natural & Safe**: Extracted from natural astragalus root, no chemical additives, pesticide residue free, heavy metal up to standard; compliant with FDA and EU food safety standards, long-term use safe.
3. **Excellent Water Solubility**: Freely soluble in water, easy to formulate; suitable for all water-based products, no need for special solubilizer, reducing formulation cost.
4. **Stable Quality & Long Shelf Life**: Strict quality control in the whole production process; batch-to-batch consistency is good; 24-month shelf life under dry and low-temperature conditions.
5. **Green & Environmentally Friendly**: Water-based green extraction process; low energy consumption, no three wastes pollution; product is fully biodegradable, no environmental impact.
6. **Multi-functional & Wide Application**: With multiple biological effects; applicable to food, medicine, cosmetics, feed and other multiple fields, high cost performance.

4. Application Fields

- **Health Food & Dietary Supplements**: Production of astragalus capsules, tablets, oral liquids, granules; used as a functional additive for immunity enhancement, anti-fatigue, blood circulation improvement and spleen and stomach nourishment.
- **Pharmaceutical Raw Materials**: Core raw material for Chinese and Western medicine preparations; used in the treatment of chronic hepatitis, nephritis, cardiovascular and cerebrovascular diseases and immune deficiency diseases.
- **Cosmetics**: Raw material for skin care products (facial cream, serum, lotion, mask); with anti-oxidation, moisturizing, anti-aging and skin barrier repair effects.
- **Functional Food**: Additive for health drinks, solid beverages, cereal, dairy products; improve product nutritional and functional value, suitable for all age groups.
- **Animal Feed Additive**: High-end feed additive for livestock, poultry and aquaculture; improve animal immunity, reduce disease rate and promote growth and development.

5. Usage Methods

- **Dosage (Adjust according to application field and product specification)**:
  - Health Food: 0.5-3.0% of the total formula (based on pure extract).
  - Pharmaceutical Preparations: Determined according to Chinese medicine prescription and clinical requirements (0.1-5.0%).
  - Cosmetics: 0.1-2.0% of the total formula (suitable for all skin care products).
  - Functional Food: 0.05-0.5% of the total formula.
  - Animal Feed: 0.01-0.1% of the total formula (aquaculture/livestock and poultry).
- **Addition Method**:
  - Directly dissolve in water and mix with other raw materials for water-based formulation; dissolve in 70% ethanol first then add to oil-based formulation (cosmetics).
  - Stir evenly at 20-35℃; avoid high temperature (>60℃) during mixing to prevent active ingredient degradation.
- **Optimal Conditions**: Process in a cool, dry and dust-free environment; avoid direct sunlight and high humidity during formulation; adjust pH to 5.5-7.5 for better stability.

6. Packaging & Storage

- **Packaging Specifications**:
  - 1 kg/bag (aluminum foil vacuum bag, HDPE drum outer packing)
  - 5 kg/drum (HDPE drum with aluminum foil inner lining, sealed)
  - 10 kg/drum (HDPE drum with aluminum foil inner lining, sealed)
  - 25 kg/drum (HDPE drum with aluminum foil inner lining, sealed)
  - Custom small packaging (100g/500g) available for R&D and small-batch production.
- **Storage Conditions**:
  - Store in a cool, dark, dry and well-ventilated warehouse at **≤25℃**, relative humidity ≤60%.
  - Keep container tightly closed to prevent moisture absorption, oxidation and contamination.
  - Store separately from strong acids, strong bases, oxidizing agents and high-concentration organic solvents.
- **Shelf Life**: 24 months (unopened, under specified storage conditions); 6 months after opening (seal tightly and store as required).
- **Transportation**:
  - Non-hazardous goods; transport by closed dry ordinary vehicles.
  - Avoid direct sunlight, high temperature, rain, collision and rough handling during transport.
  - Do not transport with strong acids, strong bases and oxidizing agents.