

## Technical Data Sheet (TDS)

### 1. Product Overview

- Product Name: Ginseng Extract
- English Name: Ginseng Extract (Panax Ginseng C.A. Meyer Extract)
- CAS Number: 90045-38-8
- Formula: Blend of Natural Ginseng Active Ingredients (Ginsenosides, Polysaccharides, Amino Acids)
- Molecular Weight: Variable (500-10000 Da)
- Product Characteristics: Natural plant extract from high-quality ginseng root via water-alcohol extraction and purification; light brown fine amorphous powder with mild ginseng fragrance; high total ginsenosides content ( $\geq 80\%$ ), rich in ginseng polysaccharides and bioactive amino acids. Non-toxic, non-irritating, fully biodegradable; stable under recommended storage conditions, with obvious health care effects. Suitable for health food, cosmetics, pharmaceutical intermediates and functional food production.

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

Item	Specification
Appearance	Light brown to dark brown fine amorphous powder
Odor	Mild natural ginseng characteristic fragrance
Total Ginsenosides Content (HPLC)	$\geq 80.0\%$
pH Value (1% aqueous solution, 25°C)	5.0-7.0
Loss on Drying	$\leq 5.0\%$
Ash Content	$\leq 5.0\%$
Heavy Metals (Pb)	$\leq 5$ ppm
Heavy Metals (As)	$\leq 1$ ppm
Total Bacterial Count	$\leq 100$ CFU/g
E. coli	Negative
Salmonella	Negative
Particle Size	95% passing 80 mesh
Water Solubility	Slightly soluble in water; freely soluble in 70% ethanol
Storage Stability	24 months (unopened, $\leq 25^\circ\text{C}$ , RH $\leq 60\%$ )

### 3. Product Advantages

1. **High Purity & Rich Active Ingredients:** Total ginsenosides content  $\geq 80\%$ , rich in ginseng polysaccharides, amino acids and other bioactive substances; high extraction efficiency and good product purity.
2. **Natural & Safe:** Extracted from natural ginseng root, no chemical additives, non-toxic, non-irritating, compliant with FDA GRAS and EU food supplement standards.
3. **Stable Quality:** Strict quality control during extraction and purification; batch-to-batch consistency is good; stable under dry and low-temperature storage conditions (24-month shelf life).
4. **Good Processability:** Fine powder, good fluidity and anti-caking property; easy to mix with other raw materials; soluble in ethanol and slightly soluble in water, suitable for various formulation processes.
5. **Environmentally Friendly:** Water-alcohol green extraction process; no waste water and gas pollution; product is fully biodegradable, no environmental impact.
6. **Multi-functional:** With multiple health care effects; can be used in multiple fields such as food, cosmetics and pharmaceuticals.

### 4. Application Fields

- **Health Food & Dietary Supplements:** Production of ginseng capsules, tablets, oral liquids, granules; used as a functional additive for anti-fatigue, immunity enhancement and sub-health improvement.



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- **Cosmetics:** Raw material for skin care products (facial cream, serum, mask); with anti-aging, moisturizing, anti-oxidation and skin repair effects.
- **Pharmaceutical Intermediates:** Raw material for Chinese and Western medicine preparations; auxiliary treatment for cardiovascular and cerebrovascular diseases, fatigue syndrome.
- **Functional Food:** Additive for health drinks, solid beverages, candy, baked food; improve product nutritional and functional value.
- **Animal Feed Additive:** High-end feed additive for livestock and poultry; improve animal immunity and production performance (small amount application).

## 5. Usage Methods

- **Dosage (Adjust according to application field and product specification):**
  - Health Food: 0.5-2.0% of the total formula (based on pure extract).
  - Cosmetics: 0.1-1.0% of the total formula (suitable for all skin care products).
  - Functional Food: 0.05-0.5% of the total formula.
  - Pharmaceutical Intermediates: Determined according to drug preparation process and clinical requirements.
- **Addition Method:**
  - Mix with water-soluble excipients (maltodextrin, lactose) first for water-based formulation; dissolve in 70% ethanol first then add to oil-based formulation.
  - Stir evenly at 20-35°C; avoid high temperature (>60°C) during mixing to prevent active ingredient degradation.

## 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  $\leq 25^{\circ}\text{C}$ , relative humidity  $\leq 60\%$ .
  - 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.

## 7. Safety & Protection

- The product is a natural non-hazardous plant extract, safe for human and animal use in normal dosage.
- Avoid dust inhalation and eye contact during large-scale handling; wear N95 dust mask and safety glasses.
- Wear nitrile rubber gloves for prolonged skin contact; wash hands thoroughly with soap and water after handling.
- In case of eye contact, rinse with plenty of clean water for 5-10 minutes; consult a doctor if irritation persists (rare in normal use).
- Do not ingest large amounts of pure extract directly; if accidentally swallowed, rinse mouth with water and consult a doctor if discomfort occurs.

## 8. Quality Assurance

1. Produced in accordance with ISO 9001 quality management system, ISO 14001 environmental management system and GMP plant extract production standards.
2. Raw material ginseng is sourced from qualified planting bases; strict inspection of raw materials to ensure no pesticide residue and heavy metal exceeding the standard.
3. Each batch of product is strictly tested by professional laboratory and accompanied by a detailed Certificate of Analysis (COA) with complete test indicators.
4. Provide complete technical documents including MSDS, TDS, raw material inspection report and production process report.