

Technical Data Sheet (TDS)

Version Date: 20 FEB 2026

1. Product Overview

- Product Name: Ginkgo Biloba Extract (GBE)
- Botanical Source: *Ginkgo biloba* L. Leaf (autumn mature leaf, no pest and disease)
- Active Markers: Flavonol Glycosides $\geq 24\%$, Terpene Lactones $\geq 6\%$ (EP/USP/CP Standard)
- Product Grade: Food/Health Care/Pharmaceutical Grade
- Appearance: Light yellow to brown yellow fine powder
- Solubility: Sparingly soluble in water, soluble in ethanol
- Product Characteristics: Natural plant extract extracted by water-ethanol reflux method; standardized active component content; low heavy metal and pesticide residue; no artificial additives/preservatives; strong anti-oxidant and blood circulation improvement activity; stable quality under controlled storage; suitable for food, health care products and pharmaceutical formulation.

2. Technical Specifications (EP 10.0 / USP 45 / CP 2020)

Item	Specification	Test Method
Appearance	Light yellow to brown yellow fine powder	Visual Inspection
Flavonol Glycosides (on dry basis)	$\geq 24.0\%$	HPLC
Terpene Lactones (on dry basis)	$\geq 6.0\%$	HPLC
Loss on Drying	$\leq 5.0\%$	105°C, 2h Gravimetry
Total Ash	$\leq 8.0\%$	550°C Ignition Method
Acid-Insoluble Ash	$\leq 2.0\%$	Acid Digestion + Ignition
Heavy Metals (Pb)	≤ 5 ppm	AAS
Heavy Metals (As)	≤ 1 ppm	AFS
Heavy Metals (Cd)	≤ 0.5 ppm	AAS
Heavy Metals (Hg)	≤ 0.1 ppm	AFS
Pesticide Residues	Complies with EP/USP limits	GC-MS/MS
Microbiological Tests	Total aerobic ≤ 1000 cfu/g; M&Y ≤ 100 cfu/g; Pathogens negative	Microbiological Culture
Particle Size	95% passing 80 mesh	Sieve Analysis
pH Value (1% aq. suspension)	5.0-7.0	Digital pH Meter
Bulk Density	0.45-0.65 g/cm ³	Pycnometer Method

3. Product Advantages

1. **Standardized Active Components:** Complies with EP/USP/CP global standards; fixed Flavonol Glycosides (24%) and Terpene Lactones (6%) content; batch-to-batch consistency, no active component fluctuation.
2. **Natural & Safe Extraction:** Water-ethanol green extraction process (no organic solvent residue); no artificial additives, preservatives or colorants; low heavy metal/pesticide residue (meets food/pharmaceutical standards); GRAS certified in US, no toxic side effects in normal dosage.
3. **Potent Biological Activity:** Flavonol Glycosides with strong anti-oxidant property (scavenge free radicals); Terpene Lactones improve blood microcirculation and vascular elasticity; widely used in cardiovascular and cerebrovascular health care products.
4. **Good Formulability & Stability:** Sparingly soluble in water, soluble in ethanol; compatible with common food/ pharmaceutical excipients (maltodextrin, lactose, starch); 24-month long shelf life under cool dry storage; slight hygroscopy (controllable with sealed packaging).

5. **Multi-Application Flexibility:** Available in food/health care/pharmaceutical grade; suitable for various dosage forms (powders, capsules, tablets, oral liquids); meets different industry formulation requirements.

4. Application Fields

- **Health Care Products:** Cardiovascular/cerebrovascular health supplements; anti-oxidant dietary supplements; memory improvement and anti-aging products for middle-aged and elderly.
- **Food Additives:** Natural anti-oxidant for functional food, beverage, candy; extend food shelf life (replace synthetic anti-oxidants); add health care function to food.
- **Pharmaceutical Intermediates:** Raw material for peripheral blood circulation improvement drugs; adjuvant ingredient for anti-oxidant pharmaceutical formulations.
- **Cosmetics:** Anti-aging and anti-oxidant ingredient for skin care products (toner, serum, cream); scavenge skin free radicals, delay skin aging (low dosage).

5. Usage & Formulation Guidelines

- **Formulation Compatibility:** Suitable for solid dosage forms (capsules, tablets, powders) and liquid dosage forms (oral liquids, beverages); compatible with maltodextrin, lactose, starch, glycerin and other common excipients; add solubilizer (propylene glycol) for high-concentration aqueous formulations.
- **Recommended Dosage:** Adult daily dosage 120-240 mg (as pure GBE); add 0.5-2.0% (w/w) as food additive; add 0.1-0.5% (w/w) as cosmetic ingredient.
- **Processing Precautions:** Process in a well-ventilated workshop; avoid high temperature (>60°C) during formulation (prevent active component degradation); control workshop humidity <70% to avoid hygroscopy; no contact with strong oxidizing agents.

6. Packaging & Storage

6.1 Packaging Specifications

- 1 kg/bag (food-grade aluminum foil bag, vacuum sealed)
- 5 kg/10 kg/drum (sealed HDPE drum with inner aluminum foil bag)
- 25 kg/drum (food-grade fiber drum with inner aluminum foil bag, vacuum sealed)
- Custom packaging (100g/500g) for small batch orders (per customer requirements)

6.2 Storage Conditions

- Store in a **cool, dry, well-ventilated warehouse** at ≤25°C; keep container tightly sealed; avoid direct sunlight and high humidity (>70%).
- Incompatibilities: Strong oxidizing agents, concentrated acids, high temperature (>60°C).
- Shelf Life: **24 months** (unopened, under specified storage conditions); 6 months after opening (resealed, dry, cool storage).
- Segregation: Store separately from strong oxidizing agents/concentrated acids; may be stored with other natural plant extracts and food raw materials.

6.3 Transportation

- Non-hazardous goods; ordinary freight transport (no UN number/hazard labels); transport at ≤25°C; use sealed packaging to avoid moisture and dust contamination; avoid direct sunlight and high temperature during shipping.

7. Quality Assurance

- Extraction process complies with **GMP and ISO 9001** certification; green water-ethanol extraction (no organic solvent residue); complete production traceability system (from raw leaf to finished extract).
- Each batch is accompanied by a batch-specific **Certificate of Analysis (COA)** with full test results; all indexes meet EP/USP/CP standards; quality records retained for 5 years.
- Strict raw material control: Select autumn mature *Ginkgo biloba* leaves with no pest and disease; detect heavy metal/pesticide residue of raw materials before extraction; reject unqualified raw materials.
- Regular stability study (accelerated/long-term); continuous improvement of extraction process to ensure batch-to-batch consistency and stable biological activity.