

Technical Data Sheet (TDS)

Version Date: 28 FEB 2026

1. Product Overview

- Product Name: European Bilberry Extract (EBE)
- CAS Number:84082-34-8
- Botanical Source: *Vaccinium myrtillus* L. Wild European Bilberry Fruit (ripe, premium grade)
- Active Marker: Anthocyanosides $\geq 25\%$ (standardized content)
- Product Grade: Food/Health Care/Cosmetic/Pharmaceutical Grade
- Appearance: Purple red to dark red fine powder
- Solubility: Soluble in water, freely soluble in ethanol
- Product Characteristics: Natural plant extract via **cold water extraction** (no organic solvent residue); standardized anthocyanosides (25%); rich in natural anthocyanin pigments/antioxidants; low heavy metal/pesticide residue; stable in dark/cool conditions; suitable for food, cosmetics, health care products and pharmaceutical formulation (core eye health ingredient).

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

Item	Specification	Test Method
Appearance	Purple red to dark red fine powder	Visual Inspection
Anthocyanosides (dry basis)	$\geq 25.0\%$	HPLC (pH differential method)
Loss on Drying	$\leq 5.0\%$	105°C, 2h Gravimetry
Total Ash	$\leq 5.0\%$	550°C Ignition Method
Acid-Insoluble Ash	$\leq 1.0\%$	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 Limits	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. solution)	3.0-5.0	Digital pH Meter
Bulk Density	0.35-0.55 g/cm ³	Pycnometer Method
Water Solubility	Soluble (15 g/100 mL, 25°C)	Solubility Test

3. Product Advantages

1. **Standardized Anthocyanosides:** $\geq 25\%$ anthocyanosides (EP/USP/CP standard); batch-to-batch consistency; no active component fluctuation (CAS:84082-34-8 registered).
2. **Wild Raw Material & Green Extraction:** Wild European bilberry fruit (no artificial cultivation); cold water extraction (no organic solvent residue, no anthocyanin degradation); no artificial additives/preservatives.
3. **Specialized Eye Health Activity:** Anthocyanosides improve retinal blood circulation, protect eye cells from oxidative damage; relieve eye fatigue, dryness and blurred vision; core ingredient for eye health products.
4. **Natural Pigment & Antioxidant:** Dual function of natural purple pigment and antioxidant; no synthetic colorants needed; suitable for colored functional food/cosmetics.
5. **High Safety & Compatibility:** GRAS certified; ultra-low heavy metal/pesticide residue; compatible with common food/cosmetic/pharmaceutical excipients; stable in dark/cool formulations (pH 3.0-7.0).

4. Application Fields



NEWAY SINOPHC TECH. LIMITED

ADD:RM. 204, BUILDING 3, NO. 188, AONA RD., CHINA (SHANGHAI) PILOT FREE TRADE ZONE.
Email:marketing01@newayphc.com; Phone:+86-021-50350029 <https://www.newayphc.com>

- **Health Care Products:** Core eye health supplements (capsules, tablets, oral liquids); relieves eye fatigue/dryness, improves vision; antioxidant products for middle-aged/elderly; dietary supplements for computer/phone users.
- **Food Additives:** Natural purple pigment/antioxidant for beverage, jam, candy, pastry; replaces synthetic colorants/antioxidants; adds functional eye health property to food.
- **Cosmetics:** Antioxidant/anti-aging cosmetic ingredient (serum, cream, mask); scavenges free radicals, improves skin elasticity, fades pigmentation; natural purple colorant for cosmetic formulations.
- **Pharmaceuticals:** Intermediate for eye health pharmaceutical formulations; adjuvant ingredient for antioxidant/anti-inflammatory drugs (CAS:84082-34-8 compliant).

5. Usage & Formulation Guidelines

• Formulation Compatibility:

- Eye Health Products: Suitable for solid/liquid dosage forms; compatible with lactose, starch, mannitol, honey and health care excipients; avoid high temperature (>70°C) and direct sunlight.
- Food/Beverage: Soluble in water/ethanol; compatible with sugar, fruit juice, jam and food excipients; add natural purple pigment (no additional colorants needed); optimal pH 3.0-6.0.
- Cosmetics: Suitable for water-based formulations; compatible with hyaluronic acid, glycerin, vitamin C and cosmetic excipients; use light-proof packaging for finished products.

• Recommended Dosage:

- Health Care Products: Adult daily dosage 200-400 mg (as pure extract); formulated into 100-200 mg per capsule/tablet.
- Food Additive: 0.05-0.5% (w/w) (pigment/antioxidant); 0.5-1.0% (w/w) (functional food).
- Cosmetics: 0.1-1.0% (w/w) (antioxidant/anti-aging); 0.5-2.0% (w/w) (natural pigment).

- **Processing Precautions:** Avoid high temperature (>70°C) and direct sunlight (protects anthocyanosides); control workshop humidity <70%; no contact with strong oxidizing agents/concentrated alkalis; use low-dust handling procedures.

6. Packaging & Storage

6.1 Packaging Specifications

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

6.2 Storage Conditions

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

6.3 Transportation

- Non-hazardous goods (CAS:84082-34-8); ordinary freight transport (no UN number/hazard labels); transport at ≤25°C; use **sealed light-proof packaging**; avoid direct sunlight/high humidity/collision; no special transport restrictions.

7. Quality Assurance

- Extraction process complies with **GMP, ISO 9001 and ISO 22000** certification; cold water green extraction (no organic solvent residue, CAS:84082-34-8 registered); complete production traceability system (from wild bilberry fruit to finished extract).
- Each batch is accompanied by a batch-specific **COA** with full test results; all indexes meet EP/USP/CP standards; quality records retained for 5 years (GMP requirement).