XI'AN LAND NUTRA CO.,LTD
Room 1202, Building 1, Vanke Huizhi Center, No. 56, Xifeng Road, Yanta District, Xi'an City, Shaanxi Province,China

Technical Data Sheet

1. Product and Company Information

Product Name: Skullcap Extract (Baicalin ≥85%)
Product Code: SCE-BAI-85%
Botanical Name: *Scutellaria baicalensis Georgi*
Part Used: Dried root
Active Ingredient: Baicalin
Specification: ≥85.0%
Recommended Use: Dietary supplement ingredient, Functional food additive, Cosmetic ingredient, Traditional herbal medicine component
Restrictions: Not for diagnostic or therapeutic use.
Manufacturer Details: Xi'an Land Nutra Co., Ltd.
Address: 12th Floor, Vanke Huizhi Center, Yanta District, Xi'an City, Shaanxi, China
Email: sale01@landnutra.com

2. Product Composition

Component	Chemical/Botanical Name	CAS No.	Content	Test Method
Active Ingredient	Baicalin	21967-41-9	≥ 85.0%	HPLC
Moisture	Water	7732-18-5	≤ 5.0%	Loss on Drying
Total Ash	--	--	≤ 5.0%	Gravimetric
Acid Insoluble Ash	--	--	≤ 1.0%	Gravimetric
Heavy Metals	--	--	≤ 10-20 ppm	ICP-MS
Others	--	--	Balance	--

3. Physical and Chemical Properties

Property	Specification	Test Method
Appearance	Light yellow to pale yellow fine powder	Visual
Odor	Characteristic	Organoleptic
Taste	Slightly bitter	Organoleptic
Molecular Formula	$C_{21}H_{18}O_{11}$	--
Molecular Weight	446.36 g/mol	--
Melting Point	223–225°C	USP <741>
Bulk Density	0.4–0.6 g/cm³ (typical)	USP <616>
Particle Size	100% pass 80 mesh	Laser diffraction / Sieve analysis
pH (1% suspension)	5.0–7.0	Potentiometric
Solubility	Soluble in alkaline solutions, DMSO, pyridine; slightly soluble in ethanol, methanol; practically insoluble in water	Visual
Loss on Drying	≤ 5.0%	USP <731>
Water Activity (aw)	≤ 0.25	ISO 21807

4. Technical Performance Data

Performance Parameter	Specification	Test Method
Potency Analysis		
Baicalin Content	≥ 85.0%	HPLC-UV
Heavy Metals		

Performance Parameter	Specification	Test Method
Total Heavy Metals	≤ 10-20 ppm	ICP-MS
Lead (Pb)	≤ 2.0 ppm	ICP-MS
Arsenic (As)	≤ 1.0 ppm	ICP-MS
Cadmium (Cd)	≤ 1.0 ppm	ICP-MS
Mercury (Hg)	≤ 0.1 ppm	ICP-MS
Residual Solvents	Meets USP <467> standards	GC
Microbiological Control		
Total Plate Count	≤ 1,000 CFU/g	USP <61>
Yeast & Mold	≤ 100 CFU/g	USP <61>
E. coli	Negative	USP <62>
Salmonella	Negative	USP <62>
Stability Data		
6-month stability at 25°C/60% RH	Retention ≥ 95%	Accelerated study
12-month stability at 25°C/60% RH	Retention ≥ 90%	Accelerated study
Physical Performance		
Flowability	Good	USP <1174>
Disintegration time (in tablet)	≤ 30 minutes	USP <701>

5. Application Guidelines

Recommended Applications:
Dietary Supplements: Immune support formulations, anti-inflammatory herbal capsules, liver and cardiovascular health blends

Functional Foods & Beverages: Herbal teas, powdered drink mixes, wellness shots, fortified beverages
Cosmetic Formulations: Antioxidant-rich creams and serums, anti-aging skincare, soothing skin products
Pharmaceutical Applications: Traditional Chinese medicine compounds, anti-allergy and anti-infection formulations
Natural Colorant: As a natural dye for textiles and food products
Biological Functions:
Antibacterial, anti-inflammatory, and antispasmodic effects
Antioxidant properties (removes oxygen free radicals)
Inhibits melanin formation
Reduces cerebral vascular resistance, improves blood circulation
Anti-platelet aggregation effect
Usage Recommendations:

Parameter	Recommendation
Typical dosage range	200–500 mg per serving (standardized to ≥85% baicalin)
Suggested daily intake	500–1500 mg daily (divided doses)
Compatibility	Compatible with most herbal, vitamin, and mineral ingredients
Processing conditions	Stable below 60°C; protect from light and moisture during processing
Mixing instructions	Due to low water solubility, pre-disperse in ethanol or alkaline solutions; for powder blends, ensure uniform mixing

6. Storage and Handling Information

Parameter	Requirement
Storage Temperature	2–8°C (long-term); 15–25°C (short-term)
Relative Humidity	< 60% RH
Light Protection	Store in opaque, airtight containers; avoid direct sunlight

Parameter	Requirement
Container	Keep tightly sealed; store away from moisture
Shelf Life	24 months from date of manufacture
Special Precautions	Protect from light, heat, and moisture; store in cool, dry place; avoid alkaline conditions for prolonged periods as baicalin is unstable in alkaline solutions

7. Packaging Specifications

Package Type	Net Weight	Packaging Material
Small package	1 kg	Double-layer aluminum foil bag with desiccant; vacuum sealed
Standard package	25 kg	Double-layer food-grade PE bag + aluminum foil + fiber drum
Bulk packaging	Customizable	Upon request

8. Remarks & Compliance

Allergen Statement: Free from major allergens (gluten, soy, dairy, egg, shellfish, nuts).
GMO Status: Non-Genetically Modified.
Botanical Source: Dried root of Scutellaria baicalensis Georgi.
Extraction Method: Water or ethanol-water extraction.
Certifications: Manufactured in a GMP-compliant facility. COA provided with each batch.
Remark: This product is a standardized Skullcap extract with baicalin content ≥85%, suitable for dietary supplements, functional foods, and cosmetic applications.