

Technical Data Sheet (TDS)

- Stevia Glycoside (Food Grade)

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1. Product Overview

- **Product Name:** Stevia Glycoside (Food Grade)
- **CAS Number:** 57817-89-7
- **EINECS/EC Number:** 261-167-8
- **Main Component:** Rebaudioside A $\geq 95\%$, Stevioside $\leq 5\%$
- **Molecular Weight:** 967.07 (Rebaudioside A)
- **Source:** Natural extract from *Stevia rebaudiana* Bertoni leaves (purified by chromatography/crystallization)
- **Product Characteristics:** High-purity food-grade stevia glycoside (total glycosides $\geq 95\%$) with Rebaudioside A as the main component; white crystalline powder, odorless, intense sweet taste (200-300 \times sucrose) with no bitter aftertaste; **zero calorie, non-nutritive sweetener** with slight hygroscopicity and high stability under food processing conditions. It is not metabolized by the human body, has no impact on blood sugar and insulin, and is a natural alternative to synthetic sweeteners (aspartame, sucralose). As a core food additive for low-sugar/zero-calorie food, it acts as **sweetener, flavor enhancer and sugar replacer**; compatible with most food ingredients, suitable for all food and beverage formulation. FDA GRAS/EC E960 certified; compliant with GB 2760/FDA/EC/CAC/FCC/USP standards, widely used in healthy food production.
- **Core Application:** Food additive (non-nutritive sweetener) for beverage, confectionery, bakery, dairy, sauce, seasoning, functional food, low-sugar/zero-calorie food and diabetic food industries; sugar replacer for all sucrose-added food.

2. Technical Specifications (Compliant with GB 2760 & FCC/USP)

Item	Standard Requirement
Appearance	White to off-white crystalline powder, free-flowing
Odor/Taste	Odorless, intense sweet, no bitter aftertaste
Total Stevia Glycosides	$\geq 95.0\%$
Rebaudioside A	$\geq 95.0\%$
Stevioside	$\leq 5.0\%$
Loss on Drying	$\leq 5.0\%$
Residue on Ignition	$\leq 0.1\%$
Heavy Metals (as Pb)	≤ 1 ppm
Arsenic (As)	≤ 0.5 ppm
Cadmium (Cd)	≤ 0.05 ppm
Mercury (Hg)	≤ 0.01 ppm
pH Value (1% aqueous solution, 25°C)	5.0-7.0
Ethanol Insoluble Matter	$\leq 0.1\%$
Total Bacterial Count	≤ 100 CFU/g
E. coli	Negative
Salmonella	Negative in 25g
Water Solubility (25°C)	≥ 10 g/100mL
Hygroscopy	Slightly hygroscopic
Sweetness Multiple	200-300 \times sucrose (1% aqueous)
Temperature Stability	Stable at 0-121°C (food processing temperature)
Storage Stability	36 months unopened ($\leq 25^\circ\text{C}$, RH $\leq 60\%$, sealed)

3. Product Advantages

1. **Natural Zero Calorie:** Pure plant extract, zero calorie contribution, not metabolized by the human body; ideal sweetener for low-sugar/zero-calorie food, meets healthy eating demands.

- High Sweetness Intensity:** 200-300× sweetness of sucrose (Rebaudioside A), small dosage achieves sufficient sweet taste, reduces production cost significantly.
- No Bitter Aftertaste:** High Rebaudioside A content (≥95%) eliminates the bitter/astringent aftertaste of ordinary stevia extract, clean sweet taste close to sucrose.

4. Application Fields & Recommended Dosage

(Adjust dosage according to food type, sweetness requirement and compound formula; all dosages are **w/w** based on food raw materials, comply with GMP dosage limits for all food categories. Sweetness conversion: 1g stevia glycoside (250×) = 250g sucrose.)

Application Field	Typical Products	Recommended Dosage	Core Effect
Beverage	Carbonated drink, fruit juice, tea drink, functional drink,	0.02-0.1%	Zero-calorie sweetening, flavor balance, no bitter aftertaste
Confectionery	Hard candy, soft candy, chocolate, chewing gum,	0.05-0.2%	High-intensity sweetening, sugar replacement, texture
Bakery	Bread, cake, pastry, cookie, low-sugar pastry	0.03-0.15%	Low-calorie sweetening, flavor enhancement, no impact on
Dairy Products	Yogurt, milk, ice cream, cheese, low-sugar dairy	0.02-0.1%	Zero-calorie sweetening, taste optimization, stable under
Sauce & Seasoning	Soy sauce, vinegar, ketchup, salad dressing, jam	0.03-0.15%	Low-sugar sweetening, flavor balance, stable under acid
Functional Food	Diabetic food, weight-loss food, nutritional supplement,	0.02-0.1%	Blood sugar friendly, zero calorie, safe for special
Snacks & Prepared Food	Potato chips, nuts, dried fruit, ready-to-eat meal	0.02-0.1%	Low-calorie sweetening, flavor protection, extended shelf life

5. Usage Methods & Formulation Guidelines

Key Tip: Stevia glycoside has moderate water solubility (improves with temperature); dissolve in warm water (40-60°C) for liquid food systems, and dry mix with solid ingredients for powder food; it is recommended to compound with bulking agents (erythritol, trehalose) to optimize taste.

- Warm Water Dissolution Method:** For liquid food systems (beverage, dairy, sauce, jam), dissolve stevia glycoside in 40-60°C food-grade deionized water (1-5% stock solution) with stirring; cool to room temperature and add to food, mix evenly (no precipitation).

6. Packaging, Storage & Transportation

- Small Packaging: 1 kg/5 kg food-grade aluminum foil bags (heat-sealed, moisture-proof; for small food factories/laboratory use)
- Standard Packaging: 25 kg food-grade HDPE plastic drums (inner PE bag, sealed cover; for industrial batch production)
- Bulk Packaging: 500 kg/1000 kg food-grade jumbo bags (moisture-proof film, sealed; for large food factories/bulk purchase)

7. Quality Assurance & Technical Support

- Production Standards:** Manufactured in a GMP/HACCP-compliant food-grade production workshop; the extraction and purification processes adopt green physical methods (chromatography, crystallization) without chemical solvents; meet ISO 9001 (Quality Management) and ISO 22000 (Food Safety) standards; Rebaudioside A content ≥95%, no bitter aftertaste.
- Batch Testing:** Every batch of stevia glycoside is subject to **strict multi-index testing** (physical, chemical, microbiological, purity, Rebaudioside A/stevioside content, heavy metals); a detailed Certificate of Analysis (COA) is provided with each shipment to ensure compliance with GB 2760/FCC/USP/EC standards.