纳维盈医化科技
NEWAY SINOPHC TECH

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Technical Data Sheet (TDS)

- Feed Grade Sodium Saccharin
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1. Product Overview

- **Product Name**: Sodium Saccharin (Feed Grade)
- **CAS Number**: 6155-57-3 | **Molecular Formula**: $C_7H_4NNaO_3S \cdot 2H_2O$ | **Molecular Weight**: 241.19 g/mol
- **Chemical Nature**: The sodium salt of saccharin, a high-intensity, non-nutritive sweetener. It is the **water-soluble form** of saccharin, 300-500 times sweeter than sucrose.
- **Core Characteristics**: **Excellent water solubility** (critical advantage over saccharin), high sweetness intensity, stable under high temperature, low dosage, cost-effective, and compliant with global feed safety standards.
- **Core Application**: The preferred sweetener for liquid feed, wet feed and compound feed. Specifically designed to improve palatability for weaned piglets, young poultry and aquatic animals, effectively masking bitter tastes from amino acids, minerals and medications.

2. Technical Specifications (Feed Grade)

Item	Standard Requirement	Test Method
Assay (as $C_7H_4NNaO_3S$)	≥99.0%	Volumetric Titration
Appearance	White crystalline powder, odorless	Visual Inspection
Loss on Drying	12.0%-16.0%	105℃ Constant Weight Method
pH Value (10% Aqueous, 25℃)	7.0-9.0	Digital pH Meter
Residue on Ignition	≤0.1%	600±50℃ Ignition Method
Heavy Metals (as Pb)	≤1 ppm	Atomic Absorption Spectrometry (AAS)
Arsenic (As)	≤0.5 ppm	Atomic Fluorescence Spectrometry (AFS)
Total Bacterial Count	≤10 CFU/g	Plate Count Method
E. coli / Salmonella	Negative	Microbiological Detection
Particle Size (Typical)	80-120 mesh (customizable)	Sieve Analysis

3. Product Advantages (Feed Grade Focus)

1. **Superior Water Solubility**: Dissolves instantly and completely in water (100g/100mL), making it ideal for **liquid feed, drinking water supplementation** and wet feed production—applications where saccharin (insoluble) cannot be used.
2. **Powerful Palatability**: 300-500 times sweeter than sucrose, effectively masks the unpleasant aftertaste of synthetic amino acids, vitamins and medicinal additives in feed.
3. **Enhanced Feed Intake**: Significantly increases the feed intake of weaned piglets and young animals, reducing stress-related weight loss and improving overall growth performance.
4. **Thermal Stability**: Maintains full sweetness even after exposure to the high temperatures of feed pelleting and aquatic feed extrusion (>180℃).
5. **Cost Efficiency**: Requires only ppm-level addition to achieve desired palatability, resulting in negligible increases to feed formulation costs.

4. Application & Dosage Guide (Feed Formulation)

4.1 Target Species & Core Benefits

- **Weaned Piglets**: The most effective sweetener for starter feed; increases voluntary feed intake, promotes gut health and reduces post-weaning diarrhea.
- **Poultry**: Improves acceptance of low-cost diets and medicated feed, ensuring chicks consume the necessary nutrients and medications.
- **Aquaculture**: Ideal for pelleted and moist feeds; reduces feed waste and improves feed conversion ratio (FCR) in fish and shrimp.

- **Liquid Feed/Drinking Water**: Used to sweeten water for sick animals or during heat stress to encourage hydration.

4.2 Recommended Inclusion Levels (w/w, based on total feed/water)

Application Scenario	Target Species	Recommended Dosage
Compound Feed	Weaned Piglets (7-30 kg)	50-200 ppm (0.005%-0.02%)
Compound Feed	Grower/Finisher Pigs	20-50 ppm (0.002%-0.005%)
Compound Feed	Chicks/Pullets	10-30 ppm (0.001%-0.003%)
Aquaculture Feed	Fish/Shrimp	30-100 ppm (0.003%-0.01%)
Drinking Water	All Species (Stress Period)	20-50 ppm (0.002%-0.005%)
Note: Adjust dosage based on diet composition and animal acceptance. Higher levels may be needed for highly bitter medicated feeds.		

5. Handling & Formulation Guidelines

1. **Premixing for Dry Feed**: Due to the low dosage, premix with a carrier (e.g., corn starch, dextrose) at a ratio of 1:100 to 1:500 to create a "sweetener premix" before adding to the main feed batch.
2. **Direct Dissolution for Liquid Feed**: Dissolve directly in water or liquid feed base. Stir until completely clear; no precipitation will occur.
3. **Compatibility**: Compatible with all common feed ingredients including amino acids, vitamins, minerals and probiotics. **Avoid direct mixing with strong acids** (will precipitate insoluble saccharin).
4. **Processing**: Can be added at any stage of production (mixing, pelleting, extrusion). Its stability ensures no loss of sweetness during processing.

6. Packaging, Storage & Shelf Life

- **Packaging Specifications**:
  - **Standard Packaging**: 25 kg moisture-proof paper drum with double food-grade PE inner liners (sealed to prevent deliquescence).
  - **Bulk Packaging**: 500 kg / 1000 kg jumbo bags with inner PE liners (for large feed mills).
  - **Sample Packaging**: 10 g / 50 g HDPE plastic bottles (sealed, for quality testing).
- **Storage Requirements**:
  - **Critical**: Store in a cool, dry, well-ventilated warehouse; temperature ≤25℃, relative humidity ≤60%.
  - Keep tightly sealed at all times to prevent **deliquescence** (absorbing moisture and dissolving).
  - Shelf Life: **36 months (unopened, under specified conditions)**; 6 months after opening (if resealed with airtight tape).
- **Transportation Requirements**: Non-hazardous goods. Transport in covered, dry ordinary cargo vehicles. Protect from rain, snow and high humidity to prevent package dampening and product caking/dissolution.

7. Quality Assurance & Control

1. **Production Standards**: Produced in a GMP-compliant facility with ISO 9001 (Quality) and ISO 22000 (Food Safety) certifications. The production process is closed to ensure purity and prevent contamination.
2. **Batch Testing**: Every batch undergoes rigorous testing for assay, solubility, loss on drying, heavy metals and microbiology. A detailed English COA is provided with each shipment.
3. **Third-Party Validation**: Accepts testing by international authoritative laboratories (SGS, Intertek, BV) to verify compliance with China, EU and US feed safety standards.