

Technical Data Sheet (TDS)

- Xylo-Oligosaccharide 50% (Liquid)

Product Name: Xylo-Oligosaccharide 50% (Liquid) **English Name:** Xylo-Oligosaccharide 50% (Liquid) **CAS Number:** 87-89-8 (Xylose reference) **Main Components:** Xylo-oligosaccharides (DP 2-10, ≥50%), Water **Revision Date:** 25 FEB 2026

1. Product Overview

SIGALD Xylo-Oligosaccharide 50% (Liquid) is a high-purity, aqueous solution of natural prebiotic oligosaccharides primarily composed of xylobiose, xylotriose, and xylotetraose. It is produced by enzymatic hydrolysis of natural xylan (extracted from corncobs or hardwood) followed by purification and concentration. As a recognized prebiotic, it selectively promotes the growth of beneficial Bifidobacteria and Lactobacilli in the human gut, while being resistant to digestion by human enzymes. This liquid formulation offers excellent solubility and ease of incorporation into aqueous systems, making it ideal for beverages, dairy products, and dietary supplements. It is non-GMO, gluten-free, and complies with the highest food safety standards (GB/T 23532, FDA GRAS).

Key Benefits:

- **Powerful Prebiotic:** High selectivity for beneficial gut flora (10-20 times more effective than inulin).
- **Low Calorie:** Approximately 0.7 kcal/g, suitable for low-sugar and reduced-calorie products.
- **Stable Processing:** Heat and acid stable, suitable for pasteurization, sterilization, and acidic beverage formulations.
- **Mild Sweetness:** ~40% the sweetness of sucrose, with a clean taste profile.
- **Tooth-Friendly:** Non-cariogenic (not metabolized by oral bacteria).

2. Technical Specifications (Complies with GB/T 23532)

Parameter	Specification	Test Method
Appearance	Colorless to pale yellow clear viscous liquid	Visual
Odor & Taste	Mild sweet, no off-odor/taste	Sensory
Xylo-Oligosaccharide (DP 2-10)	≥ 50.0% (Typical: 55.8%)	HPLC-RID
Xylose Content	≤ 5.0%	HPLC-RID
Relative Density (20/20°C)	1.20 - 1.25	Pycnometer
pH Value (10% Solution, 25°C)	4.0 - 6.0	pH Meter
Water Content	40.0 - 50.0%	Karl Fischer
Ash Content	≤ 0.5%	Gravimetric (550°C)
Heavy Metals (Pb)	≤ 0.1 ppm	ICP-MS
Microbiology	Total Plate Count ≤ 100 CFU/g Yeast & Mold ≤ 10 CFU/g E. coli, Salmonella: Negative	GB 4789.2 GB 4789.15 GB 4789.3/4

3. Application Fields & Recommended Dosage

Xylo-Oligosaccharide 50% (Liquid) is a versatile functional ingredient suitable for a wide range of food, beverage, and supplement applications.

Industry	Application	Recommended Dosage (%)	Function
Beverages	Water, juice, tea, coffee, sports drinks	0.5 - 3.0	Prebiotic, mild sweetener
Dairy Products	Yogurt, milk, probiotic drinks, cheese	1.0 - 5.0	Prebiotic synergy, texture modifier
Confectionery	Gummies, chocolate, hard candies, biscuits	2.0 - 10.0	Prebiotic, sugar reducer
Dietary Supplements	Liquid shots, syrups, capsules (fill)	10.0 - 50.0	Core prebiotic ingredient
Baby Food	Formula milk, complementary food	0.5 - 1.0	Intestinal health (follow local regs)



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Industry	Application	Recommended Dosage (%)	Function
Animal Feed	Pet food, livestock feed	0.1 - 1.0	Gut health, growth promotion

4. Usage Guidelines & Processing

4.1 Solubility & Incorporation

- Solubility:** Miscible with water in all proportions. Dissolves instantly without clumping.
- Incorporation:** Can be added at any stage of production. For best results in high-solids products, add after the main heating phase.
- Temperature Stability:** Stable at temperatures up to 121 °C (autoclaving) for 30 minutes. No degradation occurs during typical food processing (pasteurization, baking).
- Acid Stability:** Remains stable in acidic conditions (pH 2.5 - 8.0), making it ideal for carbonated drinks and fruit juices.

4.2 Compatibility

- Highly Compatible:** Works well with probiotics (synergistic effect), vitamins, minerals, proteins, and common food additives.
- Blending:** Can be used in combination with other prebiotics (inulin, FOS) or sweeteners (stevia, erythritol) to enhance functionality and taste.

4.3 Storage After Opening

- Once opened, store in a refrigerator (2-8 °C) and use within 30 days to prevent microbial contamination.

5. Packaging & Storage

5.1 Packaging Specifications

Grade	Packaging
Sample	100mL, 500mL Food-Grade PET Bottles
Commercial	1L, 5L Food-Grade HDPE Jars
Bulk	25L, 200L Food-Grade HDPE Drums; IBC Totes

5.2 Storage Conditions

- Temperature:** Store in a cool, dry warehouse at **5-25 °C**.
- Protection:** Protect from direct sunlight and UV radiation.
- Freezing:** Avoid freezing. If frozen, thaw at room temperature and mix thoroughly before use (quality is not affected).
- Shelf Life:** **18 months** from the date of manufacture when stored unopened in the original sealed packaging.

6. Quality Assurance & Regulatory Compliance

- Manufacturing:** Produced in an ISO 22000 (HACCP) and GMP certified food-grade facility.
- Raw Materials:** Derived from non-GMO corncobs/hardwood. Free from pesticides, herbicides, and heavy metal contaminants.
- Compliance:**
 - China:** GB 2760-2021, GB/T 23532, QS/SC Certified.
 - USA:** FDA GRAS (GRN No. 173), Kosher Certified.
 - EU:** Compliant with Novel Food Regulation, Halal Certified.
- Documentation:** Each batch is accompanied by a **Certificate of Analysis (COA)**. Certificates of Origin, Kosher, and Halal are available upon request.

7. Supplier Information

- Supplier:** NEWAY SINOPHC TECH. LIMITED
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- Telephone:** +86-021-50350029
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- Technical Support:** Our team provides formulation support, including dosage optimization for specific prebiotic efficacy and stability testing in your products.