

TECHNICAL DATA SHEET

Flax Seeds Extract (40% SDG)

Flax Lignans (SDG) ≥ 40.0% | Botanical Source: Linum usitatissimum L. (Seed)

This Technical Data Sheet is issued by KEEP INGREDIENTS CO. LTD for the evaluation of the product described herein. The supplier and the customer undertake to maintain the CONFIDENTIAL information contained or enclosed in this document.

1. PRODUCT DESCRIPTION & INFORMATION

Product Description

Flax seeds extract is obtained from the seeds of Linum usitatissimum L. (flax/linseed) through solvent extraction, isolation, concentration and spray drying. The extract is standardised to its flax lignan content, expressed as secoisolariciresinol diglucoside (SDG), at 40.0%. It is a fine, light yellow-brown powder with a characteristic odour and taste, and is suitable as an ingredient for food, pharmaceutical and cosmetic applications.

Product Information

Item	Information
Product name	Flax Seeds Extract (40% SDG)
Botanical source	Linum usitatissimum L. (flax seed)
Part used	Seed
Standardised marker	Flax lignans (SDG), ≥ 40.0%
Product form	Fine powder
Solvents used	Water / Ethanol
Carrier used	None
Sterilization method	Heat / Non-irradiation (ETO-free)
Country of origin	China
Supplier	KEEP INGREDIENTS CO. LTD, Xi'an, Shaanxi, China
Shelf life	36 months in the original package under stated conditions



2. PRODUCT SPECIFICATION

Item	Specification	Test Method
Assay (Flax lignans / SDG)	≥ 40.0%	HPLC
Identification	Correspondence to the reference standard	HPTLC
Appearance	Fine powder	Visual
Colour	Brownish-yellow to golden / light yellow-brown	Visual
Odour	Characteristic	Organoleptic
Taste	Characteristic	Organoleptic
Sieve (80 mesh)	≥ 90%	80 mesh screen
Bulk density	30-70 g/100 ml	CP2020
Ash	≤ 5.0%	5 h at 525°C
Loss on drying	≤ 5.0%	3 h at 105°C
Heavy metals (total)	≤ 10.0 ppm	ICP-MS
Arsenic (As)	≤ 2.0 ppm	ICP-MS
Lead (Pb)	≤ 1.0 ppm	ICP-MS
Mercury (Hg)	≤ 0.1 ppm	ICP-MS
Cadmium (Cd)	≤ 0.1 ppm	ICP-MS
Total plate count	< 10,000 CFU/g	AOAC
Yeast & mould	< 1,000 CFU/g	AOAC
E. coli (per 10 g)	Negative	AOAC
Salmonella (per 10 g)	Negative	AOAC

Packing: 25 kg net, polyethylene bag with cardboard drum. Storage: store in tight, light-resistant containers; avoid exposure to direct sunlight, moisture and excessive heat. Shelf life: 36 months if stored under the conditions above and in original packing.



3. PRODUCT COMPOSITION

Composition	Percentage (% w/w)
Flax seeds extract	90%
Water	NMT 5%
Ash	NMT 5%

The above composition is declared in the Composition List issued for this product.



4. PRODUCTION FLOW CHART

Flax Seeds Extract is produced by the following manufacturing process:

Step	Process
1	Starting material acceptance, storage
2	Rinse the raw material, dry and mill
3	Extract target ingredients by solvent
4	Isolate the target ingredients
5	Concentrate under negative pressure
6	Dry and heat in spray dryer
7	Mill the dried product, sift and blend
8	Pack the finished product in polyethylene bag with cardboard drum

The flow chart is as declared in the Manufacturing Flow Chart issued for this product.



5. CERTIFICATE OF ANALYSIS

Item	Information
Product name	Flax Seeds Extract (40.0% SDG)
Batch No.	KYFSE2026031001
Batch quantity	195.5 kg
Manufacturing date	Mar 10, 2026
Report date	Mar 30, 2026
Expiry date	Mar 09, 2029
Part used	Seed
Botanical source	Linum usitatissimum L.
Carrier used	None
Solvents used	Water / Ethanol
Sterilization method	Heat / Non-irradiation (ETO-free)
Country of origin	China

Item	Specification	Result	Test Method
Appearance	Fine powder	Conform	Visual
Identification	Correspondence to the reference standard	Conform	HPTLC
Assay (SDG)	≥ 40.0%	41.9%	HPLC
Colour	Light yellow-brown	Conform	Visual
Odour	Characteristic	Conform	Organoleptic
Taste	Characteristic	Conform	Organoleptic
Sieve (80 mesh)	≥ 90%	91%	80 mesh screen
Bulk density	30-70 g/100 ml	50 g/100 ml	CP2020
Ash	≤ 5.0%	3.1%	5 h at 525°C
Loss on drying	≤ 5.0%	3.9%	3 h at 105°C
Heavy metals (total)	≤ 10.0 ppm	Conform	ICP-MS
Arsenic (As)	≤ 2.0 ppm	Conform	ICP-MS
Lead (Pb)	≤ 1.0 ppm	Conform	ICP-MS
Mercury (Hg)	≤ 0.1 ppm	Conform	ICP-MS
Cadmium (Cd)	≤ 0.1 ppm	Conform	ICP-MS
Total plate count	< 10,000 CFU/g	< 10 CFU/g	AOAC
Yeast & mould	< 1,000 CFU/g	< 10 CFU/g	AOAC
E. coli (per 10 g)	Negative	Not detected	AOAC
Salmonella (per 10 g)	Negative	Not detected	AOAC



Storage: store in tight, light-resistant containers; avoid exposure to direct sunlight, moisture and excessive heat.
Shelf life: 36 months if stored under the above conditions and in original packing.
Packing: 25 kg net, polyethylene bag with cardboard drum.

6. NUTRITIONAL INFORMATION

6.1 Nutritional Data (average quantity per 100 g)

Item	Result (per 100 g)
Energy	488 kcal
Protein	33.2 g
Fat	7.18 g
Carbohydrate	45.6 g
Sodium	50.2 mg



7. ANALYTICAL METHOD (HPLC)

7.1 Analysis of Flax Lignans (SDG) by HPLC

The SDG content is determined by high-performance liquid chromatography (HPLC) against a Secoisolariciresinol Diglucoside (SDG) reference standard, as recorded in the analytical test record of this product.

7.2 Reference Standard Solution

Accurately weigh 10 mg of Secoisolariciresinol Diglucoside (SDG) reference standard into a 50 mL volumetric flask, dissolve in 20% methanol, dilute to volume with the same solvent, and mix well (solution concentration 0.2 mg/mL).

7.3 Test Solution

Accurately weigh 39.2 mg and 38.3 mg of the sample powder (accurate to 0.1 mg) respectively into two clean, dry 100 mL volumetric flasks. Add 5 mL of water to each flask and sonicate to dissolve. Add 3 drops of 10 N sodium hydroxide solution, sonicate for 5 minutes to ensure complete dissolution. Add 5 mL of water, then add 4 drops of hydrochloric acid. Cool to room temperature, dilute to volume with 20% methanol, and mix well.

Gluten control: the gluten content of this batch was tested by enzyme-linked immunosorbent assay (sandwich ELISA) and found to be less than 5 mg/kg (method reference SN/T 5655.1-2023).

8. PRODUCT STATEMENTS

8.1 Product Composition Statement

PRODUCT COMPOSITION

Flax seeds extract 90%; water NMT 5%; ash NMT 5% (% w/w).

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8.2 Country of Origin

COUNTRY OF ORIGIN

The product originates from China. Country of origin: China.

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8.3 Non-GMO Statement

NON-GMO

The product is Non-GMO, derived from Non-GMO flax seeds from the company's own planting base and produced in a Non-GMO facility, so no GMO cross-contamination occurs.

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8.4 Vegetarian Statement

VEGETARIAN / VEGAN

The product is a vegan product and is produced and packaged in a vegan facility.

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8.5 Non-Gluten Statement

GLUTEN FREE

The product is gluten free (gluten $\leq$ 20 ppm); the tested result for this batch is less than 5 ppm, and it is manufactured in a gluten-free facility.

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8.6 Allergen Statement

ALLERGEN

The product is manufactured free from any allergen sources. It is packaged in facilities that do not allow exposure to peanuts, wheat/gluten, eggs, tree nuts, sesame, fish, or crustaceans. As per the European allergen directive (2007/68/EC and updates), the product is free from all listed allergens (cereals containing gluten, crustaceans, eggs, fish, peanuts, soybeans, milk, mustard, sesame seeds, molluscs and products thereof) in raw materials, in the product, in the factory and on the production line.

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8.7 Food Safety System

FOOD SAFETY SYSTEM

The manufacturing facility maintains a documented Food Defense Plan under its food safety management system, covering access control, processing security, storage, shipping and receiving, water security, personnel security, information security, supply chain security, laboratory security controls and product recall, with an annual vulnerability assessment and test/drill programme.

9. SAFETY DATA SHEET



9.1. Identification

Item	Information
Common name	Flax Seeds Extract (40% SDG)
Manufacturer / Supplier	KEEP INGREDIENTS CO. LTD, No. 2019, Unit 1, Building 10, Yuexiu Zheng Phase 1, Guodu Xuefu Street, Chang'an District, Xi'an, Shaanxi, 710119, China

9.2. Hazard(s) Identification

Item	Information
Acute effects	Possible eye, skin, gastrointestinal and/or respiratory tract irritation.
Chronic effects	Possible hypersensitization.
Inhalation	May cause irritation. Remove to fresh air.
Eye	May cause irritation. Flush with copious quantities of water.
Skin	May cause irritation. Flush with copious quantities of water.
Ingestion	May cause irritation. Flush out mouth with water.

9.3. Composition / Information on Ingredients

Item	Information
Principal component	Flax Seeds Extract (SDG) 40%
CAS No.	Not specified

9.4. First-Aid Measures

Item	Information
General	Remove from exposure. Remove contaminated clothing. Persons developing serious hypersensitivity (anaphylactic) reactions must receive immediate medical attention. If the person is not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention.
Overdose treatment	Treatment of overdose should be symptomatic and supportive.

9.5. Fire-Fighting Measures

Item	Information
Extinguisher media	Water spray, dry chemical, carbon dioxide or foam as appropriate for the surrounding fire and materials.
Firefighting procedures	As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.
Fire and explosion hazards	This material is assumed to be combustible. As with all dry powders, it is advisable to ground mechanical equipment in contact with dry material to dissipate the potential buildup of static electricity.

9.6. Accidental Release Measures

Item	Information
Containment	No special materials are required.
Clean-up procedures	Clean directly.

9.7. Handling and Storage

Item	Information
Handling	As a general rule, avoid all contact and inhalation of dust, mists and/or vapors associated with the material. Wash thoroughly after handling.
Storage	Store in tight, light-resistant container as defined in USP-NF. Handle and store per label instructions to ensure product integrity.
Spill response	Wear approved respiratory protection, chemically compatible gloves and protective clothing. Wipe up or collect spillage using a high-efficiency vacuum cleaner. Avoid breathing dust. Place spillage in an appropriately labelled container for disposal. Wash spill site.
Disposal	Dispose of waste in accordance with all applicable federal, state and local laws.

9.8. Exposure Controls / Personal Protection

Item	Information
Respiratory protection	When working with small quantities in a well-ventilated area, respiratory protection may not be required. The use of an approved dust mask is recommended.
Ventilation	No special ventilation requirements.
Gloves	Rubber.
Eye protection	Safety glasses.
Protective clothing	Protect exposed skin.

9.9. Physical and Chemical Properties

Item	Information
Appearance and odour	Brown powder; weak odour.
Other properties	Not specified (melting point, boiling point, specific gravity, vapor pressure, solubility).

9.10. Stability and Reactivity

Item	Information
Stability	Stable under normal conditions (no reactivity data indicating instability).

9.11. Toxicological Information

Item	Information
Carcinogen listings	NTP: No; IARC: No; OSHA: No.

9.12. Ecological Information

Item	Information
Data	No data available (non-mandatory section).

9.13. Disposal Considerations

Item	Information
Waste management	Dispose of with other normal solid waste.

9.14. Transport Information

Item	Information
DOT description	Non-regulated (49 CFR 172.101).
Container/mode	25 kg/drum/package.
Reportable quantity	Not applicable.

9.15. Regulatory Information

Item	Information
Data	No data.

9.16. Other Information

Item	Information
Disclaimer	The information accumulated herein is believed to be accurate but is not warranted, whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is current, applicable and suitable to their circumstances.



10. STORAGE & TRANSPORT

Item	Information
Shelf life	36 months if stored under the stated conditions and in original packing.
Storage	Store in tight, light-resistant containers; avoid exposure to direct sunlight, moisture and excessive heat.
Packing	25 kg net, polyethylene bag with cardboard drum.
Transport	Non-regulated for transport (DOT 49 CFR 172.101). Keep the package sealed and dry during transport.

Safety notes: This product is an ingredient material and is not a medicine. Keep out of reach of children.

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Authorized signature & company stamp

This Technical Data Sheet is issued by KEEP INGREDIENTS CO. LTD and is valid together with the supplied Certificate of Analysis. The information given is based on our knowledge of the product at the time of publication and is given in good faith; it does not exempt the user from applying the regulations governing the use, storage and labelling of the product in their own country.

