KEEP INGREDIENTS CO. LTD

No. 2019, Unit 1, Building 10, Yuexiucheng Phase 1, Guodu Xuefu Street, Chang'an District, Xi'an, Shaanxi, 710119, China

TECHNICAL DATA SHEET

Nervonic Acid

1. PRODUCT DESCRIPTION

Nervonic acid (cis-15-tetracosenoic acid) is a monounsaturated fatty acid with the molecular formula C24H46O2 and CAS No. 506-37-6. The product is derived from the kernel of Acer truncatum Bunge and is standardized to a nervonic acid content of not less than 90.0% (GC). It is supplied as a white flaky crystal with a characteristic odour.

2. PRODUCT INFORMATION

Item	Information
Product name	Nervonic Acid
Synonyms	Selacholeic acid; cis-15-tetracosenoic acid
Molecular formula	C24H46O2
Molecular weight	366.62 g/mol
CAS number	506-37-6
Botanical source	Acer truncatum Bunge
Part used	Kernel
Assay	Nervonic acid ≥90.0% (GC)
Appearance	White flaky crystal
Odour & taste	Characteristic
Melting point	41 – 43 °C
Country of origin	China
Supplier	KEEP INGREDIENTS CO. LTD, Xi'an, Shaanxi, China
Shelf life	24 months (under stated conditions, in original packaging)

3. PRODUCT SPECIFICATION

Item	Standard	Test method
Nervonic acid	≥90.0%	GC
Appearance	White flaky crystal	Visual
Odour & taste	Characteristic	Organoleptic
Loss on drying	≤3.0%	USP <731>
Ash	≤3.0%	USP <281>
Melting point	41 – 43 °C	USP <741>
Residual solvents	≤10.0 ppm	USP <467>
Arsenic (As)	≤0.5 ppm	ICP-MS
Lead (Pb)	≤0.9 ppm	ICP-MS
Cadmium (Cd)	≤1.0 ppm	ICP-MS
Mercury (Hg)	≤0.3 ppm	ICP-MS
Total plate count	≤10,000 CFU/g	USP <61>
Yeast & mould	≤50 CFU/g	USP <61>
E. coli	≤10 CFU/g	USP <62>
Salmonella	Negative	USP <62>

Staphylococcus aureus	Negative	USP <62>

Storage: stored in cool and dry places, kept away from strong light and heat. Packing: by 25 kgs/drum, inner by double plastic bag. Shelf life: 24 months under the above conditions and in the original packaging.

4. CERTIFICATE OF ANALYSIS

Product name	Nervonic Acid
Batch No.	KYNA2026081102
Botanical source	Acer truncatum Bunge
Part used	Kernel
Quantity	200 kgs
Manufacture date	2026.08.11
Analysis date	2026.08.17
Expire date	2028.08.10

Item	Standard	Result	Test method
Assay (nervonic acid)	≥90.0%	92.36%	GC
Appearance	White flaky crystal	Complies	Visual
Odour & taste	Characteristic	Complies	Organoleptic
Loss on drying	≤3.0%	0.58%	USP <731>
Ash	≤3.0%	0.72%	USP <281>
Melting point	41 – 43 °C	42.4 °C	USP <741>
Residual solvents	≤10.0 ppm	Not detected	USP <467>
Arsenic (As)	≤0.5 ppm	< 0.5 ppm	ICP-MS
Lead (Pb)	≤0.9 ppm	< 0.9 ppm	ICP-MS
Cadmium (Cd)	≤1.0 ppm	< 1.0 ppm	ICP-MS
Mercury (Hg)	≤0.3 ppm	< 0.3 ppm	ICP-MS
Total plate count	≤10,000 CFU/g	Complies	USP <61>
Yeast & mould	≤50 CFU/g	Complies	USP <61>
E. coli	≤10 CFU/g	Complies	USP <62>
Salmonella	Negative	Negative	USP <62>
Staphylococcus aureus	Negative	Negative	USP <62>

Note: the batch conforms with specification and is Non-GMO, Allergen Free and BSE/TSE Free.

5. COMPOSITION

No.	Ingredient	% (w/w)
1	Nervonic acid	NLT 90.0%
2	Other fatty acids	NMT 7.0%
3	Moisture	NMT 3.0%

6. NUTRITIONAL INFORMATION

Nutrient	Amount	NRV (%)
Calories (kcal)	820	41
Protein (g)	0.5	1

Total fat (g)	90.5	151
Total carbohydrate (g)	1.0	0
Sodium (mg)	5	0

7. ANALYSIS METHOD

Parameter	Condition
Chromatographic column	HP-5 (30 m × 0.32 mm, 0.25 μm)
Injector temperature	260 °C
Detector temperature	270 °C
Column temperature programme	180 °C (2 min) → 15 °C/min → 230 °C (25 min)
Split ratio	80 : 1
Injection volume	0.2 μl
Total flow	83.487 mL/min
Column flow	1.0 mL/min
Carrier gas	Nitrogen (FID: hydrogen : air : makeup nitrogen = 30 : 400 : 25)

Solution preparation: weigh 5 g of the sample, add 30 mL of 2% methanol-sulphuric acid solution, stir for 15 min and reflux for 2 h on a water bath heated to 80 ± 1 °C, then remove and cool to room temperature. Add 20 mL of n-hexane, shake for 2 min, then add 20 mL of saturated sodium chloride solution, shake and allow to stand for stratification. Collect the upper n-hexane extract into a 50 mL test tube, add 3 g of anhydrous sodium sulphate, shake for 1 min. Let stand, filter the upper solution through a 0.45 μm membrane for injection.

GC analysis: under the above conditions, after the baseline of the instrument is stable, the sample is injected and measured. The area normalization method is used for calculation; integration is not performed when the area of the main peak is less than 0.1%.

Physical properties: white flaky crystal; melting point 41 – 43 °C; boiling point 459.84 °C; soluble in polar organic solvents (e.g. DMSO, DMF) and poorly soluble in low-polarity solvents and water; stable under normal conditions and incompatible with strong oxidizing agents. The MSDS indicates the product is intended for food additive and pharmaceutical industry use.

8. STATEMENTS AND COMPLIANCE

- **Gluten free:** the product is gluten free.
- **GMO free:** the product is GMO free.
- **BSE/TSE free:** the product is free from BSE (Bovine Spongiform Encephalopathy) and TSE (Transmissible Spongiform Encephalopathy).
- **Non-irradiation:** the product has not been irradiated.
- **Allergen free:** the product is allergen free.
- **Hazard:** the product is not classified as hazardous according to GHS criteria, is not classified as dangerous goods for transport, has low acute toxicity and is not classified as carcinogenic or mutagenic.

9. STORAGE AND TRANSPORTATION

- **Shelf life:** 24 months under the stated conditions and in the original packaging.
- **Storage:** store in cool and dry places; keep away from strong light and heat.
- **Packing:** by 25 kgs/drum, inner by double plastic bag.
- **Transport:** not classified as dangerous goods for transport.

