品鸿生物科技
Pinhon Biotechnology

Technical Data Sheet

PINHONBIO® Spilanthol

TDS | Concentrated grade | General product specification | Version 1.0

Concentrated spilanthol supplied as a yellow oily liquid for professional cosmetic formulation. The standing quality specification is purity ≥95.0%, total impurities <5.0% and any single impurity <2.0%, assessed by quantitative nuclear magnetic resonance (qNMR).

1. Product identity

Product name	PINHONBIO® Spilanthol
Other name	Affinin
CAS number	25394-57-4 (spilanthol)
Chemical name	(2E,6Z,8E)-N-(2-methylpropyl)deca-2,6,8-trienamide
Molecular formula / weight	C14H23NO / 221.34 g/mol
Product form	Concentrated oily liquid; no intentionally added carrier is specified.
Related impurities	Predominantly related isomers described by the supplier as differing in carbon-carbon double-bond position.

2. Quality specification

Test item	Specification	Method
Spilanthol purity	≥95.0%	qNMR
Total impurities	<5.0%	qNMR
Any single impurity	<2.0%	qNMR
Identification	Conforms to the spilanthol reference	^{1}H NMR
Appearance	Yellow oily liquid	Visual examination
Odour	Characteristic	Organoleptic examination
Clarity in MCT	Clear solution at 5% in MCT	Visual examination
Arsenic (As)	≤1.0 mg/kg	Elemental analysis
Lead (Pb)	≤2.0 mg/kg	Elemental analysis
Mercury (Hg)	≤1.0 mg/kg	Elemental analysis
Cadmium (Cd)	≤1.0 mg/kg	Elemental analysis
Total plate count	≤1,000 CFU/g	Microbiological method
Yeasts and moulds	≤100 CFU/g	Microbiological method
Diarrhoeagenic Escherichia coli	Not detected in 1 g	Microbiological method
Salmonella	Not detected in 1 g	Microbiological method

qNMR means quantitative nuclear magnetic resonance. Controlled procedures define calibration, integration and individual impurity assignments. The 5% MCT clarity test is a prepared test dilution and does not describe the composition of the concentrated product. 1 mg/kg = 1 ppm.

3. Composition and impurity profile

Component	Supplier-declared composition range
Spilanthol	97-98%
Related isomeric impurities, combined	2-3% in total

These composition ranges describe the concentrated grade used for the SDS; they are separate from the standing release limits in Section 2 and are not a batch assay report. The isomeric fraction is a combined amount: no individual impurity may reach 2.0%. Component amounts within the paired ranges must total 100%.

The related impurities are described as mainly alkene positional isomers. Individual structures, isomer ratios and separate CAS numbers are not assigned by this TDS. The molecular formula and weight above identify spilanthol; they do not constitute a complete characterization of every impurity.

4. Formulation guidance

Use as a concentrated raw material for controlled incorporation into a finished cosmetic. Prepare a compatible premix before addition and verify uniformity. The supplied specification includes a clear 5% dilution in MCT; assess solubility, haze and separation at the actual concentration and in the full formulation.

Select the use level through formulation development and finished-product safety assessment. Verify compatibility with solvents, emulsifiers, preservatives, other actives and packaging. Minimize unnecessary heat, strong light and air exposure during processing.

5. Packaging storage and handling

Packaging	Compatible sealed aluminium bottles; the source specification uses 1 kg inner bottles in an outer fibre / cardboard drum. Order-specific net weights may be used.
Storage	Store tightly closed in a cool, dry, shaded place, protected from strong light and heat. Reseal promptly and prevent contamination.
Shelf life	24 months in original unopened packaging when stored as recommended.
Workplace precautions	Causes skin and serious eye irritation; may cause respiratory irritation. Avoid splashes, skin contact and inhalation of mist. Refer to the SDS.
Transport	Non-dangerous goods on the available composition and reference transport information; see SDS Section 14.

6. Supplier information

Shaanxi Pinhon Biotechnology Co., Ltd. | Manufacturer & Supplier

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7. Document control and references

Issue date: 14 Oct 2026 | Version: 1.0. Standing specifications apply across batches of the concentrated grade. Individual batch results are provided separately in the COA.

PubChem Spilanthol identity and molecular information. View source

LGC Standards Spilanthol SDS, safety and transport background. View source

BIPM description of quantitative NMR methodology. View source