品鸿生物科技
Pinhon Biotechnology

Technical Data Sheet

PINHONBIO® Spilanthol 5% (DMI)

A clear, light yellow to yellow solution containing nominally 5% spilanthol in dimethyl isosorbide. Supplied as a concentrated ingredient for professional cosmetic formulation.

Product information

Product type	Spilanthol 5% solution in Dimethyl Isosorbide.
Active identity	Spilanthol | CAS 25394-57-4 | C14H23NO | 221.34 g/mol
Carrier identity	Dimethyl Isosorbide | CAS 5306-85-4
Carrier INCI	DIMETHYL ISOSORBIDE

Composition

Component	Nominal content by weight
Spilanthol	5%
Dimethyl Isosorbide	95%

Quality specifications

Test	Specification
Spilanthol content	≥5.0%
Identification	Conforms to spilanthol identity by ^{1}H NMR.
Appearance	Light yellow to yellow liquid.
Odour	Characteristic.
Clarity	Clear solution.
Arsenic	≤1.0 mg/kg
Lead	≤2.0 mg/kg
Mercury	≤1.0 mg/kg
Cadmium	≤1.0 mg/kg
Total plate count	≤1,000 CFU/g
Yeast and moulds	≤100 CFU/g
Diarrheogenic Escherichia coli	Not detected in 1 g.
Salmonella	Not detected in 1 g.

The composition is nominal; the release specification for spilanthol is ≥5.0%. Molecular formula, molecular weight and active CAS number refer to spilanthol, not the complete mixture.

Application and formulation guidance

For incorporation into professionally developed cosmetic products, including emulsions and compatible serum or oil systems. Select the use level according to the target active concentration, solvent compatibility and finished-product safety assessment.

Carrier compatibility	DMI is a water-soluble solvent used for cosmetic actives. Water compatibility of the carrier does not establish water solubility of the complete 5% product. On aqueous dilution, spilanthol may cause haze or separate; evaluate the finished solvent system.
Incorporation	Preblend with a compatible solvent or formulation phase, then add gradually with mixing. Check dilution compatibility before scale-up. Keep processing temperature and holding time as low as practicable, and verify physical stability after incorporation.
Formulation checks	Evaluate colour, odour, clarity or dispersion, phase stability and compatibility with the other ingredients. Test stability and packaging compatibility in the finished formulation.

Active concentration calculation

Nominal spilanthol concentration in the finished product (%) = use level of this ingredient (%) × 0.05.

For example, a 1.0% addition of the 5% ingredient contributes nominally 0.05% spilanthol. This is a concentration calculation, not a recommended cosmetic use level.

Packaging storage and shelf life

Standard packaging	1 kg aluminum bottle with protective outer packaging.
Storage	Keep tightly closed in a cool, dry and shaded place. Protect from heat, sunlight, moisture and contamination. Use clean, compatible equipment when dispensing.
Shelf life	24 months in unopened original packaging when stored properly.

Handling and safety

Use standard industrial hygiene and suitable eye and skin protection. Avoid inhaling mist and direct eye contact. This concentrated raw material is not intended for direct consumer application. Refer to the SDS/MSDS matching the selected carrier for handling, spill response and transport information.

Document information

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This general TDS states the specifications for the 5% DMI grade and applies across batches of the same formulation. Batch test results are supplied in the corresponding COA. Carrier changes require the matching grade document.

Quality requirements and packaging are based on the supplier product specification. Carrier compatibility information is supported by the references below; it is not a numerical physical-property specification for the complete mixture.

Carrier product reference: View reference

DMI solvent properties: View reference

Supplier contact

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