品鸿生物科技
Pinhon Biotechnology

Technical Data Sheet

PINHONBIO® Potassium Azeloyl Diglycinate

TDS | Powder grade | General product specification | Version 1.0

Potassium azeloyl diglycinate (PAD) is a water-soluble azelaic acid derivative used as a cosmetic skin-conditioning ingredient. This sheet defines the standing quality limits for the powder grade, including an HPLC assay of 98.0-102.0% on dried basis.

1 Product identity

Product name	PINHONBIO® Potassium Azeloyl Diglycinate (PAD)
INCI name	POTASSIUM AZELOYL DIGLYCINATE
CAS number	477773-67-4
Molecular formula and weight	C13H21KN2O6 / 340.41 g/mol
Product grade and form	Cosmetic grade powder
Ingredient identity	Potassium azeloyl diglycinate, supplied as the technical-grade substance.

2 Quality specification

Test item	Specification	Method
Chromatographic purity	≥98.0%	HPLC
Assay on dried basis	98.0-102.0%	HPLC
Identification	Conforms to the reference structure	^{1}H NMR
Appearance	Off-white to yellowish powder	Visual examination
Odour	Characteristic	Organoleptic examination
pH of a 3% aqueous solution	4.5-7.5	Potentiometry
Loss on drying	≤2.0%	105 °C to constant mass
Residual ethanol	<2,000 mg/kg	Residual-solvent method
Total heavy metals	≤10 mg/kg	ICP-MS
Arsenic (As)	≤2 mg/kg	ICP-MS
Cadmium (Cd)	≤1 mg/kg	ICP-MS
Lead (Pb)	≤2 mg/kg	ICP-MS
Mercury (Hg)	≤0.1 mg/kg	ICP-MS
Staphylococcus aureus	Not detected in 1 g	Microbiological method
Salmonella	Not detected in 1 g	Microbiological method
Escherichia coli	Not detected in 1 g	Microbiological method
Yeasts and moulds	≤100 CFU/g	Microbiological method
Total aerobic microbial count	≤1,000 CFU/g	Microbiological method

Assay is expressed on dried basis. The 102.0% acceptance limit belongs to the analytical assay specification and does not represent a composition above 100%. Controlled laboratory procedures define purity calculation, assay calibration, solution preparation and the analytes included in total heavy metals. 1 mg/kg = 1 ppm.

3 Composition and analytical quality

Ingredient name: POTASSIUM AZELOYL DIGLYCINATE. This is a powder substance grade rather than a diluted aqueous PAD preparation. Chromatographic purity and dry-basis assay are quality measurements; they do not describe two separate formulation ingredients.

Moisture, residual solvent and process-related impurities are controlled by the applicable quality limits. The identity and concentration of an additional carrier or preservative are not specified for this powder grade; aqueous blends or preserved solutions require their own composition and product documents.

4 Properties and formulation guidance

Solubility: Water-soluble. Predissolve in the aqueous phase using sufficient mixing before incorporation into a serum, gel, cleanser or oil-in-water emulsion.

Cosmetic function: Skin conditioning. PAD may be considered in formulations for oily skin and uneven skin appearance. Finished-product performance depends on dose, the complete formulation and supporting evaluation.

Use level: A 0.5-5.0% powder addition range may be used as a development starting point based on public PAD powder technical information. Select the final concentration through formulation, stability and safety assessment; account for actual assay when calculating active content.

Processing: Verify clarity, final pH, electrolyte tolerance, preservative compatibility and packaging stability in the complete formulation. The pH limit in Section 2 is measured on a 3% test solution and is not a finished-product pH requirement. Avoid unnecessary prolonged heating and protect from contamination.

5 Packaging storage and shelf life

Packaging	Double inner plastic bags in a neutral outer cardboard / fibre drum. Net weight according to the order.
Storage	Store in cool and dry places and keep away from strong light and heat. Keep the original container tightly closed and protect from moisture and contamination.
Shelf life	36 months in original unopened packaging when stored as recommended.
Handling	Avoid dust inhalation and contact with eyes and skin. Wear suitable gloves and eye protection. Refer to the SDS.
Transport	Non-dangerous goods. See SDS Section 14.

6 Supplier and document information

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

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Issue date: 14 Oct 2026 | Version: 1.0. This is a general product specification. Batch-specific test results are supplied separately in the COA.

PubChem PAD chemical identity. View source

COSMILE Europe INCI identity and skin-conditioning function. View source

CORUM PAD powder technical information, formulation background only. View source