品鸿生物科技
Pinhon Biotechnology

Technical Data Sheet

PINHONBIO® Hydrolyzed Sponge 99%

General specification | Version 1.0 | 29 Oct 2026

1. Product identity

INCI name	HYDROLYZED SPONGE
Description / grade	Freshwater sponge-derived spicule powder / cosmetic grade
Source species	Spongilla fragilis Leidy (accepted name: Eunapius fragilis (Leidy, 1851))
Source part / extraction solvents	Dried sponge body / ethanol and water

2. Quality specification

Test item	Specification
Spicule content	≥99%
Appearance	Uniform fine white powder, free from visible foreign matter
Odour	Characteristic
Loss on drying	<7%
pH (1% aqueous suspension)	5.0–8.0
Residual ethanol	<2,000 ppm
Sieve analysis	Not less than 98% passes through an 80-mesh sieve
Lead (Pb)	<3.0 ppm
Arsenic (As)	<2.0 ppm
Mercury (Hg)	<1.0 ppm
Cadmium (Cd)	<2.0 ppm
Total plate count	≤1,000 CFU/g
Total yeasts and moulds	≤100 CFU/g
Coliforms	Negative
Salmonella	Negative
Staphylococcus aureus	Negative

Spicule content is determined on the as-received sample by gravimetric analysis combined with microscopic examination, using the manufacturer's method. It is a method-defined spicule specification, not a chemical silica-purity assay. Loss on drying is controlled separately.

Microbial absence criteria apply to the test portion specified in the laboratory procedure. Sieve passage does not by itself specify individual spicule length or diameter.

3. Technical description

A processed freshwater sponge raw material containing microscopic siliceous skeletal structures (spicules). The product is supplied as a fine white powder for professional cosmetic formulation.

The siliceous spicules are not water-soluble; they form a particulate dispersion in a suitable vehicle. The pH specification therefore refers to a 1% aqueous suspension.

4. Applications and formulation guidance

Suitable for development of spicule-containing cosmetic formulations. Published research on sponge spicules describes a physical interaction with the skin barrier. Performance and tolerability depend on particle morphology, concentration, vehicle and application technique; literature results from other sponge species are not product-specific efficacy data.

Disperse gradually in a compatible vehicle while minimizing airborne dust. Evaluate dispersion uniformity, settling, formulation stability and skin tolerance in the intended finished product. Select the concentration and application conditions through finished-product assessment.

Avoid direct contact of the raw powder with eyes and mucous membranes. Spicules can cause prickling, redness and mechanical irritation. Do not use the raw material for injection or assume that it is sterile. Refer to the SDS for handling controls.

5. Packaging storage and shelf life

Packaging	Double inner plastic bags in an outer fibre drum; pack quantity as agreed.
Storage	Store in a cool, dry place, protected from strong light and heat. Keep the original container tightly closed and protect from moisture and contamination.
Shelf life	24 months in original unopened packaging under the recommended storage conditions.
Handling	Avoid dust generation. Use suitable gloves, eye protection and ventilation during bulk handling.

6. Supplier and reference basis

SHAANXI PINHON BIOTECH CO., LTD. | Manufacturer & Supplier

Room 704, Unit 2, Building 1, I-Duhui, No. 11 Tangyan South Road, Yanta District, Xi'an, Shaanxi, China

Albert Zhao | +86 19829300704 | info@pinhoningredients.com | www.pinhoningredients.com

Quality limits: PINHONBIO product COA and manufacturer-confirmed test basis. This TDS states the general grade specification; batch results are supplied separately.

Taxonomy: World Porifera Database, Eunapius fragilis. https://www.marinespecies.org/aphia.php?p=taxdetails&id=167160

Technical literature: Zhang et al., Pharmaceutics (2021), 13(12), 2119. https://doi.org/10.3390/pharmaceutics13122119