

Certificate of Analysis (COA)

Ectoin

Product Name: Ectoin Powder

CAS No.: 96702-03-3

Batch No.: BPCEP102026

Expiry Date: October 2029

Grade: Cosmetic Grade

Origin: USA

Test Item	Specification	Result	Test Method
Appearance	White to off-white crystalline powder	Complies	Visual
Odor	Odorless or faint characteristic	Complies	Organoleptic
Identification	Positive	Positive	IR Spectrum
Assay (dry basis)	$\geq 99.0\%$	99.70%	HPLC
pH Value (2% aqueous solution)	6.0 - 8.0	6.85	pH Meter
Specific Optical Rotation	$+135.0^\circ - +145.0^\circ$	$+141.5^\circ$	Polarimeter
Loss on Drying	$\leq 1.0\%$	0.35%	GB/T 6284 (105°C)
Residue on Ignition	$\leq 0.5\%$	0.12%	USP <281> (800°C)
Solubility	Freely soluble in water	Conforms	Visual
Heavy Metals (as Pb)	≤ 10 ppm	< 10 ppm	AAS / ICP-MS
Lead (Pb)	≤ 2.0 ppm	< 0.5 ppm	ICP-MS
Arsenic (As)	≤ 2.0 ppm	< 0.2 ppm	ICP-MS
Mercury (Hg)	≤ 1.0 ppm	< 0.1 ppm	ICP-MS
Cadmium (Cd)	≤ 1.0 ppm	< 0.1 ppm	ICP-MS
Total Plate Count	≤ 100 CFU/g	< 10 CFU/g	GB 4789.2
Yeast & Mold	≤ 10 CFU/g	< 10 CFU/g	GB 4789.15
E. coli	Absence/g	Not Detected	GB 4789.38
S. aureus	Absence/g	Not Detected	GB 4789.10
P. aeruginosa	Absence/g	Not Detected	GB 4789.4

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