

## Certificate of analysis

### Melatonin

CAS No.	73-31-4	Code	BIOJMEL001
Batch No	XPSM240409	Manufacture Date	Apr.07, 2024
Expiry Date	Apr.06, 2026	Quantity	7Kg

Testing Items	Specifications	Results
Appearance	A white to off-white crystalline powder.	Complies
Solubility	Slightly soluble in water, soluble in acetone, ethyl acetate and methanol	Complies
Identification	IR UV HPLC	Complies Complies Complies
Chloride and sulfate	≤0.02%	<0.02%
Loss on drying	≤1.0%	0.09%
Residue on ignition	≤0.1%	0.04%
Melting range	117~120°C	119.0~119.3°C
Particle size	≥98% through 80 mesh	Complies
Microorganism	Total plate count ≤1000cfu/g Yeasts and Molds ≤100cfu/g E.Coli: Absent in 10g Salmonella: Absent in 10g S.aureus: Absent in 10g	<1000cfu/g <100cfu/g Absent in 10g Absent in 10g Absent in 10g
Residual solvent	Ethanol ≤500ppm	428ppm
Density	Tap density ≥0.45g/ml Bulk density ≥0.35g/ml	0.56g/ml 0.45g/ml
Clarity and degree of opalescence of liquids	Clear in the 1% melatonin solution of ethanol of chloroform	Complies
Heavy metals	Total ≤10ppm Pb ≤1ppm As ≤1ppm Hg ≤0.1ppm Cd ≤0.5ppm	<10ppm <1ppm <1ppm <0.1ppm <0.5ppm
Related compounds	Any individual impurity ≤0.1% Total impurities ≤1.0%	0.060% 0.37%
Assay(on the dried basis)	98.5%~101.5%	99.65%
Conclusion	This product conforms to USP-NF2023 standard	

**\*Storage condition: Store below 25°C, Protect from moisture and light.**