

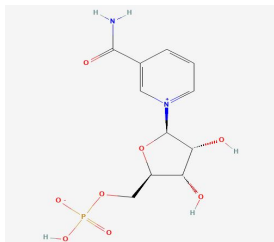


Technical Data Sheet

Tianjin Jincheng Biotechnology Co., Ltd.

Product Name: Citicoline

Chemical Structure:



Molecular Formula: C₁₄H₂₆N₄O₁₁P₂

Molecular Weight: 488.32

CAS No.: 987-78-0

Specifications

Item	Limit	Analysis method
Description	White crystalline powder, odorless; freely soluble in water, insoluble in ethanol and acetone	Visual
Identification	(1) A green colour is produced; (2) HPLC retention time complies; (3) IR spectrum complies	Colorimetric / HPLC / IR
pH	2.5 to 3.5	pH meter
Chloride	Not more than 170 ppm	USP <221>
Ammonium salt	Not more than 500 ppm	Colorimetric method
Iron salt	Not more than 10 ppm	Colorimetric method
Sulfate	Not more than 200 ppm	USP <221>
Free phosphate	Not more than 0.1%	Colorimetric method
Related substances	5'-CMP: max 0.3%; single impurity: max 0.2%; total other impurities: max 0.7%	HPLC
Residual solvents	MeOH 0.3%, EtOH 0.5%, acetone 0.5% (max)	GC
Loss on drying	Not more than 6.0%	Gravimetric method
Heavy metals	Not more than 5 mg/kg	USP <231>
Arsenic	Not more than 1 mg/kg	ICP-MS
Total plate count	Not more than 1000 cfu/g	USP <61>
Yeast and mold	Not more than 100 cfu/g	USP <61>
E. coli	Negative in 10 g	USP <62>
Assay (HPLC)	Not less than 98.0%	HPLC

Recommended shelf life: 2 years

External packing: Fibre drum, 25 kg net

Inner packing: Double-layer PE bag

Storage: Preserve in tight containers, protected from light, in a cool and dry place.

Note: Analytical methods refer to current USP general chapters and the manufacturer's in-house standard; this document is for reference only and the quality of each batch is subject to the COA supplied with the goods.

Preparation Date: Sep. 20, 2026 | Version: 1.0 | Prepared by: | Product code: JC-CDP-001