



Certificate of Analysis

Product Name:	Acetyl-L-carnitine	Batch Number:	Varies
CAS No.	3040-38-8	Manufacture Date:	Varies
Molecular Formula:	C ₉₀ H ₁₇ NO ₄	Expiry Date:	Varies

IDENTIFICATION		SPECIFICATION	RESULT
Assay		98.5 - 102.0%	99.21 - 100.1%
Physical	Appearance	White crystalline powder	Complies
	Identification	IR	Complies
	Loss on drying	≤ 0.5%	0.23 - 0.27%
	Residue on ignition	≤ 0.5%	0.04 - 0.09%
	Specific rotation	-26.0° ~ -29.0°	27.96° ~ -28.14°
	pH	2.3 - 2.6	2.34 - 2.41
Chemical	Heavy Metals	≤ 10 ppm	< 10 ppm
	Arsenic (As)	≤ 1 ppm	< 1 ppm
	Cyanide	Negative	Negative
	Lead (Pb)	≤ 3 ppm	< 3 ppm
	Cadmium (Cd)	≤ 1 ppm	< 1 ppm
	Mercury (Hg)	≤ 0.1 ppm	< 0.1 ppm
Microbial	Total Plate Count	≤ 1000 cfu/g	Complies
	Yeast & Mold	≤ 100 cfu/g	Complies
	Coliforms	≤ 10 cfu/g	Complies
	E. Coli, Salmonella	Negative	Complies

Else	Storage condition	Sealed, kept in shady and dry place
	Shelf life	Two years

