NATURE SCIENCE TECHNOLOGIES

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QUALITY SPECIFICATION

L-Carnitine USP

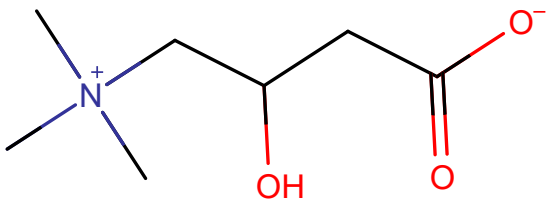
Catalog No.: NST-12-14

CAS No.: 541-15-1

Molecular formula: $C_7H_{15}NO_3$

MW: 161.20

Shelf life: 24 months



No.	Parameter	Specification	Method
1.	Appearance	Crystals or crystalline powder	Visual
2.	Color	White	Visual
3.	Identification	Conforms	IR
4.	Appearance of solution	Clear and colorless	Ph. Eur.
5.	Assay	97.0 % - 103.0 %	USP
6.	Specific rotation	-29.0° to -32.0°	USP
7.	pH	5.5 – 9.5	USP
8.	Taste	Characteristic	Organoleptic
9.	Residue on ignition	≤0.1 %	USP <281>
10.	Loss on drying	≤0.5 %	USP <731>
11.	D-Carnitine	≤0.2 %	HPLC
12.	Solvent residues	USP <467>	GC
13.	Heavy Metals	≤10 ppm	ICP-MS
14.	Lead	≤2 ppm	ICP-MS
15.	Arsenic	≤1 ppm	ICP-MS
16.	Mercury	≤0.1 ppm	ICP-MS

17.	Cadmium	≤1 ppm	ICP-MS
18.	TPC	$<10^3$ CFU/g	USP <2021>
19.	TYMC	$<10^2$ CFU/g	USP <2021>
20.	*Escherichia Coli*	Absent	USP <2022>
21.	*Salmonella*	Absent	USP <2022>
22.	*Staphylococcus aureus*	Absent	USP <2022>

Storage: store in a cool and dry place, keep away from strong light and heat

Stability: 24 months when properly stored