L-Carnitine

$C_7H_{15}NO_3$ · CAS 541-15-1 · L-carnitine base, crystalline

INDICATIVE SPECIFICATION — CONFIRMED IN WRITING AT QUOTATION

CHEMICAL FORM	FORMULA	CAS	PRIMARY ASSAY
L-carnitine base, crystalline	$C_7H_{15}NO_3$	541-15-1	98.0–102.0% (HPLC)
METHOD	**MINIMUM ORDER**	**LEAD TIME**	**STANDARD PACK**
HPLC	1 kg	1–7 days	1 kg foil pouch

SPECIFICATION

PARAMETER	SPECIFICATION	METHOD / NOTE
Assay (anhydrous basis)	98.0–102.0% (HPLC)	Analytical
Appearance	White crystalline powder	Specification
Identification	IR conforms	Specification
Specific rotation	−29.0° to −32.0° (10% solution)	Specification
Loss on drying	≤0.5%	Specification
Residue on ignition	≤0.1%	Specification
Heavy metals	Pb ≤3 · As ≤2 · Cd ≤1 · Hg ≤0.1 mg/kg	Specification
Microbiology	APC ≤1,000 cfu/g · yeast and mould ≤100 cfu/g · E. coli and Salmonella absent	Specification
Particle size	≥95% through 40 mesh	Sieve
Marker set	L-carnitine (98.0–102.0%, anhydrous basis)	Identity / ratio
Appearance	White crystalline powder	Visual
Solubility	Freely soluble in water; the base is hygroscopic and picks up water in an open pack.	Matrix dependent
Standard packaging	1 kg foil pouch · 25 kg fiber drum	Food-grade liner

APPLICATIONS

- Capsules and tablets
- Powder sticks and drink mixes
- Sports and energy powders
- Functional beverages

AVAILABLE FORMS

- Crystalline powder, 40 mesh
- Milled to 80 mesh on request
- Granulated on request

WHAT TO CONFIRM BEFORE ORDERING

- Name the form: L-carnitine base, L-carnitine tartrate and acetyl-L-carnitine are different label ingredients with different masses.
- Ask for the assay basis and the specific rotation; the rotation is the identity check that separates the L form from a racemate.
- The base is hygroscopic; a sealed liner and a low-humidity dose room matter more than the headline assay.
- Confirm the counter-ion and the free carnitine figure if the grade is a salt.

> **Indicative document.** This sheet describes the grade we can quote; it is not a batch COA and does not confirm a result for a specific lot. Final specification, contaminant limits and documentation are agreed in writing before the order. The form, hydrate state, ligand ratio and method are release parameters, not marketing descriptions.

DOCUMENTATION RELEASED WITH EACH LOT

DOCUMENT	CONTENT	SCOPE
Certificate of analysis	Assay, identity, physical parameters, contaminant panel and the release decision for the lot.	Batch-specific
Technical data sheet	Form, hydrate state, CAS, specification ranges, solubility, bulk density, storage and packing.	Product-level
Safety data sheet	Sixteen sections covering hazards, handling, storage, transport and emergency response.	Grade-specific
Allergen and GMO statements	Major allergens, gluten, animal-derived inputs and GMO status.	Batch-specific
Origin and traceability record	Manufacturing site and the link between the lot and the retained sample.	Batch-specific
Residual-solvent statement	The crystallisation system and the solvent class, where applicable.	Batch-specific

HOW TO REQUEST THIS GRADE

01 · BRIEF

Send the target specification, quantity, dosage form and destination market.

02 · COUNTER-SPEC

We confirm what can be matched and the documents available for the grade.

03 · SAMPLE & QUOTE

A sample with its own COA, followed by packing, lead time and terms in writing.

No claim is made here. This sheet does not claim a therapeutic effect, a product certification or a regulatory approval. Health claims belong to the brand that makes them and to the market that authorises them.

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