

FEATURED PRODUCT

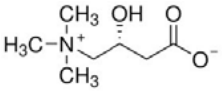
L-Carnitine Base

INTRODUCTION:

L-Carnitine Base is a naturally occurring amino acid derivative that plays a crucial role in energy metabolism. It facilitates the transport of long-chain fatty acids into the mitochondria for oxidation, widely utilized in nutritional supplements, pharmaceuticals, and sports nutrition.

MANUFACTURE:

L-Carnitine Base is produced using advanced manufacturing processes that ensure high optical purity, exceptional product quality, and excellent batch-to-batch consistency. Following synthesis, the material undergoes rigorous purification and crystallization steps to meet stringent quality standards. Comprehensive quality control measures are implemented throughout production, making L-Carnitine Base suitable for nutraceutical, pharmaceutical, animal nutrition, food, and specialty chemical applications.

Synonym	(−)-(R)-3-Hydroxy-4 (trimethylammonio)butyrate; Vitamin BT; Levocarnitine;
CAS no.	541-15-1
EINECS no.	208-768-0
Molecular formula	$C_7H_{15}NO_3$
Molecular weight	161.20 g/mol
Structure	

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APPLICATION:

Specialty Nutra & Sports Nutrition:

- Fat Metabolism: Helps transport long-chain fatty acids into the mitochondria to be burned for clean, sustained cellular energy.
- Recovery & Endurance: Popular as a stimulant-free ingredient in pre-workouts to help reduce muscle fatigue and spare glycogen.
- Functional Foods: Frequently incorporated into RTD (ready-to-drink) functional beverages and dietary powders for weight management

Pharmaceuticals & Therapeutics:

- Cardiovascular Health: Used in API (Active Pharmaceutical Ingredient) formulations to treat carnitine deficiencies and support patients dealing with heart conditions or undergoing dialysis.
- Metabolic Support: Vital for normalizing metabolic functions and preventing mitochondrial dysfunction.

Cosmetics & Personal Care:

- Incorporated into topical contouring creams, cellulite-control products, and anti-aging treatments for its reported skin-conditioning benefits.

APPLICATION:

Animal Healthcare & Aquaculture:

- Livestock & Pet Care: Added to feed to improve fat metabolism, feed conversion rates, and the reproductive or growth capabilities of meat-producing poultry and livestock.
- Fish Culture: Promotes lipolysis, effectively sparing protein consumption while helping aquatic life acclimate to temperature extremes.

Dietary Supplements & Functional Foods:

- Added to weight management formulations and energy drinks to support natural fat metabolism and cellular energy production.

Agriculture & Agro Chemicals:

- Plant Biostimulants: Specialized derivatives are increasingly sprayed as foliar biostimulants to improve plant resilience and mitigate the effects of environmental stressors like drought or extreme temperatures.
- Seed Treatment: Used as a mitotic stimulator during seed priming to protect crops from the harmful, genotoxic effects of salt stress

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SPECIFICATIONS:

Test	Unit	Specification
Appearance	-	White crystals or crystalline powder
Identification (By IR)	-	Should conform to the structure
Specific rotation $(\alpha)D^{20}$	°	-29.0° to -32.0°
pH	-	5.5 – 9.5
Water Content	%	NMT 4.0
Residue on ignition	%	NMT 0.5
Chloride (Cl)	%	NMT 0.4
Heavy metals (Pb)	ppm	NMT 10.0
Sodium (as Na)	%	NMT 0.1
Potassium	%	NMT 0.2
D-Carnitine	%	NMT 0.2
Residual solvents		
•Methanol	%	Not be detected
•Ethanol	%	NMT 0.5
Assay	%	97.0 – 103.0
Microbial Test		
•Total Plate Count	cfu/g	NMT 1000
•Yeast and Mold	cfu/g	NMT 100
•E. coli	-	Should be Negative
•Salmonella	-	Should be Negative

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STORAGE & PRECAUTION:
Keep container tightly closed in a cool, dry and well-ventilated place.

PACKING:
25 kg Fiber drum

ICS offers L-Carnitine Base on commercial scales and welcomes enquiries. No matter the quantity you need, our exceptional quality & services will make ICS your supplier of choice. For additional information or Safety Data Sheet (SDS), please contact us at- info@itsusainc.com or Phone# 713-337-0152.

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