

Certificate of Analysis

Product Name: **L-Carnitine L-Tartrate**
 Starting Material: **Epichlorohydrin (ECH) (Chemical Synthesis)**
 Country of Origin: **China**
 Batch Number: **Varies**
 Manufacture Date: **Varies**
 Retest Date: **Varies**

Test Results Obtained by PureBulk

ITEMS	SPECIFICATIONS	RESULTS
L-Carnitine (HPLC)	68.2±1.0%	69.10%
L-Tartaric Acid (HPLC)	31.8±1.0%	32.78%
L-Carnitine L-Tartrate (Identification) (HPLC)	Positive	Conforms/Positive Sample peak retention time compares positively to standard peak retention times within ± 10%
Aerobic Plate Count	≤1000 cfu/g	<20 cfu/g
Coliforms	≤100 cfu/g	<20 cfu/g
<i>E. Coli</i>	Negative	Absent
<i>Staph aureus</i>	Negative	Absent
Yeast & Mold	≤100 cfu/g	<20 cfu/g
<i>Salmonella</i>	Negative	Absent
<i>Pseudo. aeruginosa</i>	Negative	Absent
Conclusion (PureBulk):	This product conforms to standards	

The following information is an indirect translation of information provided from the Manufacturer's Certificate of Analysis, and should not be used solely as an instrument for strict quality control.

ITEMS	SPECIFICATIONS	RESULTS
Appearance	White Crystals or White Crystalline Powder	Conforms
Particle Size (mesh)	Through 60 mesh	95% pass
Specific Rotation	-9.5~ -11.0°	-10.3°
pH	3.0~4.5	3.7
Loss on Drying	≤0.50%	0.13%
Residue on Ignition	≤0.50%	0.03%
Residual Solvents Ethanol	≤0.5%	Conforms
Solubility	Clarification	Conforms
Cyanide	Not Detectable	Not Detectable
Heavy Metals	≤10 ppm	<10 ppm
As	≤1 ppm	<1 ppm
Pb	≤3 ppm	<3 ppm
Cd	≤1 ppm	<1 ppm
Hg	≤0.1 ppm	<0.1 ppm
Bulk Density	0.4-0.8 g/ml	Conforms
Tapped Density	0.5-0.9 g/ml	Conforms
Conclusion (Manufacturer):	This product conforms to enterprise standards	

Additional Information: Allergen Free || BSE/TSE Free || Gluten-Free || Vegan/Vegetarian
GMO Statement: Non-GMO
Composition: L-Carnitine: 68.2±1.0%
 Tartrate Acid: 31.8±1.0%
 Water: <0.5%
 Carrier/Excipients/additive: Free
Storage Conditions: **Keep in sealed container under 25°C.**
Keep away from strong light, heat and moisture.

Purebulk.Inc verifies that the information contained herein is true and correct to the best of our knowledge.

Verified By: Ann Foote / Nicole Rammage / Candace Gibson

(This document was produced electronically and is valid without signature.)