

Certificate of Analysis

Product Name: **L-Threonine**
 Formula: **C₄H₉NO₃**
 CAS-No: **72-19-5**
 Molecular Weight: **119.12 g/mol**
 Starting Material: **Glucose**
 Country of Origin: **China**
 Batch Number: **Varies**
 Manufacture Date: **Varies**
 Retest Date: **Varies**

Test Results Obtained by PureBulk

ITEMS	SPECIFICATIONS	RESULTS
L-Threonine (HPLC)	98.5-101.5%	99.76%
L-Threonine <Identification> (HPLC)	Positive	Confirmed: Sample peak retention time compares positively to standard peak retention times within ± 10%.
Aerobic Plate Count	≤1,000 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 crystalline powder	Conforms
Specific Optical Rotation	-26.7° ~ -29.1°	-28.0°
Chloride (Cl)	≤0.05%	<0.05%
Sulfate (SO ₄)	≤0.03%	<0.03%
pH	5.0-6.5	5.67
Iron (Fe)	≤0.003%	<0.003%
Heavy Metals (Pb)	≤0.0015%	<0.0015%
Loss on Drying	≤0.2%	0.14%
Residue on Ignition	≤0.4%	0.05%
Conclusion (Manufacturer):	This product conforms to USP32 standards	

Additional Information: Non-Allergen || Gluten-Free || Vegetarian/Vegan || BSE/TSE Free
GMO Statement: Non-GMO
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.)