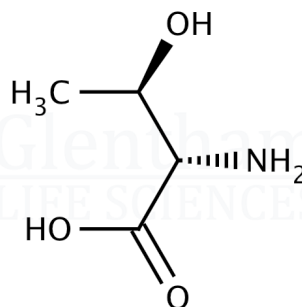


Certificate of Analysis

Product Name	L-Threonine
Glentham Code	GM4509
CAS Number	72-19-5
EINECS	200-774-1
MDL Number	MFCD00064270
PubChem SID	310280944
Batch Number	950USW
Molecular Weight	119.12
Molecular Formula	C ₄ H ₉ NO ₃
Storage Temp.	+20°C



Property	Specification	Batch 950USW
Physical Description	White or almost white crystalline powder or flakes	White crystalline powder
Assay	99.0 - 101.0 %	99.62%
Chloride (Cl)	≤ 0.02%	Conforms
Ammonium (NH ₄)	≤ 0.02%	Conforms
Sulphate (SO ₄)	≤ 0.02%	Conforms
Iron (Fe)	≤ 10ppm	Conforms
Heavy Metals	≤ 10ppm	Conforms
Arsenic (As ₂ O ₃)	≤ 1ppm	Conforms
Loss on Drying	≤ 0.2%	0.15%
pH	EP, USP: 5.0 - 6.5, AJI: 5.2 - 6.2	5.6
Specific Optical Rotation	EP, AJI: -29.0 to -27.6 °, USP: -29.1 to -26.7 ° -28.4°	
Lead (Pb)	≤ 3ppm	≤ 2ppm
Mercury (Hg)	≤ 0.1ppm	Conforms
Cadmium (Cd)	≤ 1ppm	Conforms
Any Individual Impurity	≤ 0.5%	Conforms
Total Impurities	≤ 2.0%	Conforms
Residue on Ignition	≤ 0.10%	0.05%
Pharmacopoeia Specification(s)	Conforms to EP, USP, AJI	Conforms

Specification Version	v1.0
Manufacture Date	2021-12-27
Re-Test Date	2029-02-24

Glentham Life Sciences confirm that the above referenced product conformed to the information displayed in this document on the quality release date. Please check www.glentham.com or contact us using the details above for the current version of this document.

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