

Certificate of Analysis

Date of Testing:	2025-08-14 14:40:31
Date of Next Testing:	2029-08-13 14:40:31
Product Name:	L-Valine
CAS Number:	72-18-4
Specifications & Purity:	Moligand™, Animal Free, USP, JP, Ph.Eur., for cell culture, ≥98.5%
Lot #:	J2126052
SKU #	V139523
Version	1
Analysis #:	553742

Parameter	Limit Values	Result
Sulfate(SO42-)	0-0.02 (%)	0.01 %
PH(5% in Water)(USP)	5.5-7	5.67
Endotoxin Assay	0-1 (EU/mg)	0.25 EU/mg
Iron(Fe)	0-10 (ppm)	5.34 ppm
Specific Rotation[a]25/D(c=8 in 6M HCL/USP)	26.6-28.8 (°)	27.34°
Specific Rotation [a]20/D(c=8 in 6 M HCl / EP in JP)	27.6-28.7 (°)	27.90°
Ammonia (NH4)	0-0.02 (%)	0.00 %
Heavy metals	0-10 (ppm)	0.00 ppm
Arsenic(As)	0-1 (ppm)	0.00000 ppm
Residue on ignition(Ash)	0-0.1 (%)	0.02000 %
Appearance (V139523)	White powder	White powder
Cell Culture Test	pass	Pass
Identity by IR	Conforms to Structure	Conforms to Structure
Origin	non-animal source	non-animal source
Solubility in H2O , Colorless Clear , 25mg/ml, H2O	pass	Pass



ALADDIN SCIENTIFIC CORPORATION

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A handwritten signature in black ink that reads "John Su".

John Su
QA & QC Manager