

## Certificate of Analysis

Date of Testing: 2023-11-01 11:06:05  
Date of Next Testing: 2027-10-31 11:06:05  
Product Name: **L-Valine**  
CAS Number: 72-18-4  
Specifications & Purity: Moligand™, ≥99%  
Lot #: J2325590  
SKU #: **V103487**  
Version: **0**  
Analysis #: **291057**

Parameter	Limit Values	Result
Specific Rotation [α] <sub>20</sub> /D(c=8 in HCl(1+1))	27-28.5 (°)	28.30°
Purity(HPLC)	98-100 (%)	99.23500%
Nitrogen by Elemental Analysis	11.3-12.5 (%)	11.80%
Carbon by Elemental Analysis	50.2-51.7 (%)	50.90%
Appearance (V103487)	white powder	White powder
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless ,Clear ,50 mg/mL in H <sub>2</sub> O	pass	Pass



John Su  
QA & QC Manager