

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-08-03 17:58:26

Date of Next Testing: 2027-08-02 17:58:26

Product Name: **L-Valine**

CAS Number: 72-18-4

Specifications &amp; Purity: 99%

Lot #: H2301789

SKU #: **V103487****Analysis: 259617**

| Parameter   | Limit Values          | Result                |
|---|-----------------------|-----------------------|
| Specific Rotation [a] <sub>D</sub> <sup>20</sup> (c=8 in HCl(1+1))              | 27-28.5 (°)           | 28.30°                |
| Purity(HPLC)  | 98-100 (%)            | 98.01000%             |
| Nitrogen by Elemental Analysis  | 11.3-12.5 (%)         | 11.50%                |
| Carbon by Elemental Analysis  | 50.2-51.7 (%)         | 51.20%                |
| 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