

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-09-20 16:15:22

Date of Next Testing: 2026-09-19 16:15:22

Product Name: **Z-L-Alanine**

CAS Number: 1142-20-7

Specifications &amp; Purity: 98%

Lot #: A1513012

SKU #: **Z108996****Analysis: 137435**

| Parameter  | Limit Values                                 | Result                                       |
|--|--|--|
| Purity (Titration by NaOH)                                   | 97.5-102.5 (%)                               | 98.33%                                       |
| Specific Rotation [ $\alpha$ ] <sub>20</sub> /D(c=2 in AcOH) | -16--13 (°)                                  | -13.27°                                      |
| Melting point  | 82-87 (°C)                                   | 82.36000 °C                                  |
| Purity(HPLC)   | 98-100 (%)                                   | 98.16200%                                    |
| Appearance (Z108996)   | White to Off-White Powder or Solid or Chunks | White to Off-White Powder or Solid or Chunks |
| Proton NMR spectrum  | Conforms to structure                        | Conforms to Structure                        |

John Su  
QA & QC Manager