

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2024-12-06 11:06:26

Date of Next Testing: 2027-12-06 11:06:26

Product Name: **L-Glutamine-<sup>13</sup>C<sub>5</sub>,<sup>15</sup>N<sub>2</sub>**

CAS Number: 285978-14-5

Specifications & Purity: ≥98 atom% <sup>13</sup>C, ≥98 atom% <sup>15</sup>N

Lot #: L2405391

SKU #: **L471821**

Version: **1**

Analysis #: **441752**

Storage Temperature: Protected from light, Room temperature

| Parameter                         | Limit Values          | Result                |
|-----------------------------------|-----------------------|-----------------------|
| Purity(HPLC area)                 | 95-100 (%)            | 99.20000 %            |
| Isotopic purity( <sup>13</sup> C) | 98-100 (%)            | 99.00000 %            |
| Isotopic purity( <sup>15</sup> N) | 98-100 (%)            | 99.00000 %            |
| Enantiomeric Excess               | 95-100 (%)            | 98.00000 %            |
| NMR Spectrum 1H                   | Conforms to Structure | Conforms to Structure |
| Appearance(L471821)               | White solid           | White Solid           |



John Su  
QA & QC Manager