

Certificate of Analysis

Date of Testing: 2022-11-08 17:59:21

Date of Next Testing: 2026-11-07 17:59:21

Product Name: **D-Norvaline**

CAS Number: 2013-12-9

Specifications & Purity: 99%

Lot #: J2229360

SKU #: **N106191**

Analysis: 123944

| Parameter | Limit Values | Result |
|--|---|---|
| Specific Rotation [α] ₂₀ /D(c=10 in 5M HCL) | -26--20 (°) | -21.97° |
| Purity(Nonaqueous Titration) | 98.5-101.5 (%) | 100.02 % |
| Enantiometric Excess | 98-100 (%) | 98.01 % |
| Appearance (N106191) | White Powder, Crystals, Granules and/or Lumps | White Powder, Crystals, Granules and/or Lumps |
| Proton NMR spectrum | Conforms to Structure | Conforms to Structure |



John Su
QA & QC Manager