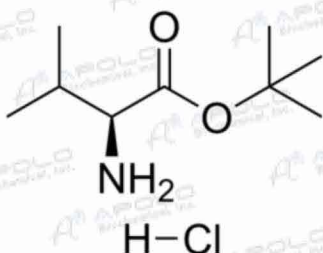


CERTIFICATE OF ANALYSIS

Product Name: tert-Butyl L-valinate hydrochloride

Chemical Structure:



Lot Number: 250365CSW019799

CAT Number: APL-1351840

CAS Registry Number: 13518-40-6

Manufacture Date: 01/2023

Expiry Date: 01/2026

Molecular Formula: C₉H₂₀ClNO₂

Molecular Weight: 209.71

Storage: 2-8°C

Analysis Data

Item	Specification	Results
Appearance	White to off-white (Solid)	Conforms
Purity (NMR)	≥ 97.0%	97.0 %
¹ H NMR Spectrum	Consistent with structure	Conforms
OR[α] (C=1.01g/100ml H ₂ O)	≤ 10.0°	4.6°

The foregoing is a copy of the Certificate of Analysis as provided by our supplier

Jennifer LaBrecque

Jennifer LaBrecque 01/2023
Quality Assurance Manager

Conclusion: The above product meets the specifications of APOL

