

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2025-12-15 11:39:53
 Date of Next Testing: 2029-12-14 11:39:53
 Product Name: (S)-(+)-1,2,3,4-Tetrahydro-1-naphthylamine
 CAS Number: 23357-52-0
 Specifications & Purity: $\geq 99\%$, $\geq 98\%$ (ee)
 Lot #: B2223212
 SKU #: T113718
 Version: 1
 Analysis #: 619359
 Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Purity(Titration by HClO ₄)	98.5-101.5 (%)	98.96 %
Refractive index n ₂₀ /D	1.562-1.566	1.56
Specific Rotation [α] ₂₀ /D(c=1 CHCL ₃)	35-41 (°)	37.52°
Density (20°C)	1.036-1.04	1.04
Purity(GC)	99-100 (%)	99.97 %
Appearance (T113718)	colorless to brown liquid	colorless to brown liquid
Proton NMR spectrum	Conforms to structure	Conforms to Structure



John Su
QA & QC Manager