

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2023-09-27 08:54:09

Date of Next Testing: 2027-09-26 08:54:09

Product Name: (-)-Limonene

CAS Number: 5989-54-8

Specifications & Purity: $\geq 95\%$ (GC)

Lot #: L1910219

SKU #: L157739

Version: 0

Analysis #: 275480

Storage Temperature: Protected from light, Room temperature, Argon charged

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D}(c=\text{Neat})$	-90--61 (°)	-89.33000 °
Purity(GC)	95-100 (%)	97.15800 %
Appearance (L157739)	colorless to pale yellow liquid	colorless to pale yellow liquid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su
QA & QC Manager