

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2024-07-19 13:26:50
 Date of Next Testing: 2026-07-09 13:26:50
 Product Name: (1S)-(+)-10-Camphorsulfonyl chloride
 CAS Number: 21286-54-4
 Specifications & Purity: $\geq 97\%$
 Lot #: G2412155
 SKU #: C102454
 Version: 3
 Analysis #: 340337
 Storage Temperature: Store at -20°C , Argon charged

Parameter	Limit Values	Result
Melting point	65-69 ($^{\circ}\text{C}$)	66.57000 $^{\circ}\text{C}$
Purity(Titration by AgNO ₃)	96.5-103.5 (%)	99.49000 %
Specific Rotation [a] _D 20/D(c=1 CHCL ₃)	29-35 ($^{\circ}$)	30.82800 $^{\circ}$
Appearance (C102454)	White to Almost white to Light Beige and Light Brown Powder or Crystals	White to Almost white to Light Yellow and Light Beige and Light Brown Powder or Crystals
Solubility in Toluene	almost transparency	almost transparency
Proton NMR spectrum	Conforms to structure	Conforms to Structure



John Su
QA & QC Manager