

## Certificate of Analysis

Date of Testing: 2023-06-02 15:29:51  
Date of Next Testing: 2027-06-01 15:29:51  
Product Name: **(1S)-(+)-Menthyl chloroformate**  
CAS Number: 7635-54-3  
Specifications & Purity: 97%  
Lot #: E2327326  
SKU #: **M113561**  
**Analysis:** **233081**  
Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Refractive index n <sub>20</sub> /D	1.458-1.46	1.46
Density (20°C)	1.031-1.035	1.03
Purity(GC)	97-100 (%)	98.60%
Specific rotation [α] <sub>20</sub> /D(neat)	70-80 (°)	74.00000
Appearance (M113561)	colorless to brown liquid	colorless to brown liquid
NMR Spectrum 1H	Conforms to structure	Conforms to Structure



John Su  
QA & QC Manager