

## Certificate of Analysis

Date of Testing: 2024-03-25 10:58:38

Date of Next Testing: 2026-03-25 10:58:38

Product Name: **Diethyl L-(-)-Malate**

CAS Number: 691-84-9

Specifications & Purity:  $\geq 97.0\%$ (GC)

Lot #: C2409192

SKU #: **D136832**

**Analysis: 316310**

Parameter	Limit Values	Result
Density (20°C)	1.127-1.131	1.13
Refractive index n <sub>20</sub> /D	1.433-1.437	1.44
Purity(GC)	97-100 (%)	98.99%
Specific Rotation [α] <sub>20</sub> /D(c=Neat)	-13--10 (°)	-11.76°
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure
Appearance (D136832)	Colorless to light yellow liquid	Colorless to light yellow liquid



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QA & QC Manager