

## Certificate of Analysis

Date of Testing: 2024-11-04 11:32:21  
Date of Next Testing: 2028-11-03 11:32:21  
Product Name: **DL-Thioctic acid**  
CAS Number: 1077-28-7  
Specifications & Purity:  $\geq 99\%$   
Lot #: J2430621  
SKU #: **T106640**  
Version: **1**  
Analysis #: **419294**  
Storage Temperature: Store at 2-8°C, Protected from light, Argon charged

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{20/D(c=5 \text{ in EtOH})}$	-1-1 (°)	-0.26 °
Heavy metals	0-10 (ppm)	0.00 ppm
Purity(Neutralization titration)	98.5-101.5 (%)	100.19 %
Loss on drying	0-1 (%)	0.28 %
Chloride (Cl-)	0-0.071 (%)	0.02 %
Sulfate Ash	0-0.1 (%)	0.00 %
Melting point	60-63 (°C)	62.98000 °C
Appearance (T106640)	yellow powder, crystals and/or chunks	yellow powder, crystals and/or chunks
Solubility(2% in 10% NaOH)	Pale yellow transparent liquid	Pale yellow transparent liquid
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



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QA & QC Manager