

## Certificate of Analysis

Date of Testing: 2023-02-17 21:43:56  
Date of Next Testing: 2027-02-16 21:43:56  
Product Name: **DL-Thioctic acid**  
CAS Number: 1077-28-7  
Specifications & Purity: 99%  
Lot #: B23111180  
SKU #: **T106640**  
**Analysis:** **176156**  
Storage Temperature: Store at 2-8°C, Argon charged

Parameter	Limit Values	Result
Specific Rotation [α] <sub>20</sub> /D(c=5 in EtOH)	-1-1 (°)	0.02°
Heavy metals	0-10 (ppm)	0.00 ppm
Purity(Neutralization titration)	98.5-101.5 (%)	98.91%
Loss on drying	0-1 (%)	0.32%
Chloride (Cl <sup>-</sup> )	0-0.071 (%)	0.04%
Sulfate Ash	0-0.1 (%)	0.03%
Melting point	60-63 (°C)	62.77000 °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
Infrared spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager