

## Certificate of Analysis

Date of Testing: 2023-04-26 16:18:00  
Date of Next Testing: 2025-04-15 16:18:00  
Product Name: **D-(+)-Mannose**  
CAS Number: 3458-28-4  
Specifications & Purity: analytical standard  
Lot #: D2320073  
SKU #: **M103970**  
**Analysis:** **154158**  
Storage Temperature: Room temperature

Parameter	Limit Values	Result
Specific Rotation $[\alpha]_{25}^D(c=4 \text{ in H}_2\text{O after 24hr})$	13.5-14.9 (°)	13.62°
Purity(HPLC)	99.5-100 (%)	99.71700%
Appearance (M103970)	White to Off-White Powder or Solid or Chunks	White to Off-White Powder or Solid or Chunks
Infrared spectrum	Conforms to Structure	Conforms to Structure
Proton NMR spectrum	Conforms to Structure	Conforms to Structure



John Su  
QA & QC Manager