

## Certificate of Analysis

Date of Testing: 2025-07-09 10:33:43  
Date of Next Testing: 2029-07-08 10:33:43  
Product Name: **4-O- $\beta$ -Galactopyranosyl-D-mannopyranose**  
CAS Number: 20869-27-6  
Specifications & Purity:  $\geq$ 98%  
Lot #: F2526393  
SKU #: **G120948**  
Version: **1**  
Analysis #: **518570**

Parameter	Limit Values	Result
Water by Karl Fischer	0-5 (%)	2.20 %
Purity(HPLC area)	98-100 (%)	100.00 %
Carbon by Elemental Analysis(anhydrous)	41.6-42.6 (%)	42.48 %
Specific Rotation [ $\alpha$ ] <sub>20</sub> /D(9.00-11.00 mg/ml H <sub>2</sub> O)	24-30 (°)	25.77 °
Appearance (G120948)	White to Off-White Powder or Lyophilized Powder	White to Off-White Powder or Lyophilized Powder
D2O NMR spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , Colorless,Clear to Slightly Hazy(49.00-51.00mg/ml)	pass	Pass



John Su  
QA & QC Manager