

Certificate of Analysis

Date of Testing: 2023-03-04 15:03:27
 Date of Next Testing: 2027-03-03 15:03:27
 Product Name: **Mannitol**
 CAS Number: 69-65-8
 Specifications & Purity: Ultrapure, ≥99.0%(HPLC)
 Lot #: B2327396
 SKU #: **M108829**
Analysis: 183553

Parameter	Limit Values	Result
Sulfate(SO42-)	0-200 (ppm)	12.60 ppm
Calcium(Ca)	0-100 (ppm)	0.00 ppm
Phosphorus (P)	0-0.01 (%)	0.00 %
Silicon(Si)	0-0.02 (%)	0.00 %
Melting point	166-170 (°C)	169.40000 °C
Chloride (Cl-)	0-50 (ppm)	15.00 ppm
Copper(Cu)	0-50 (ppm)	0.00 ppm
Sodium(Na)	0-200 (ppm)	0.00 ppm
Purity(HPLC)	99-100 (%)	99.80800 %
Zinc(Zn)	0-10 (ppm)	0.00 ppm
Potassium(K)	0-50 (ppm)	0.00 ppm
loss on drying, 105 °C	0-0.5 (%)	0.25 %
Iron(Fe)	0-50 (ppm)	0.00 ppm
Magnesium(Mg)	0-50 (ppm)	0.00 ppm
Lead(Pb)	0-50 (ppm)	0.00 ppm
Specific Rotation $[\alpha]_{25}^D(c=1 \text{ in } 1\% \text{ acidified Molybdate \& H}_2\text{SO}_4)$	137-145 (°)	138.28 °
Reducing sugars	0-0.2 (%)	0.10 %
Appearance (M108829)	White Powder or Crystals	White Powder or Crystals
Solubility in H2O	Almost transparency	almost transparency
Infrared spectrum	Conforms to Structure	Conforms to Structure



ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

A handwritten signature in black ink that reads "John Su". The signature is written in a cursive, flowing style.

John Su
QA & QC Manager