

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2022-08-22 10:31:14  
 Date of Next Testing: 2023-08-17 10:31:14  
 Product Name: **D-Lactose monohydrate**  
 CAS Number: 64044-51-5  
 Specifications & Purity: Ultra Pure, ≥99.5%(HPLC)  
 Lot #: H2218750  
 SKU #: **L100103**  
**Analysis:** **127435**  
 Storage Temperature: Argon charged

Parameter	Limit Values	Result
Sulfate(SO42-)	0-50 (%)	50.00 %
Strontium(Sr)	0-5 (ppm)	5.00 ppm
Chromium(Cr)	0-5 (ppm)	5.00 ppm
Aluminum(Al)	0-5 (ppm)	5.00 ppm
UV Absorbance 280nm	0-0.02	0.01
Cobalt(Co)	0-5 (ppm)	5.00 ppm
PH	3.5-6	3.50
Barium(Ba)	0-5 (ppm)	5.00 ppm
Bismuth(Bi)	0-5 (ppm)	5.00 ppm
Iron(Fe)	0-5 (ppm)	5.00 ppm
Zinc(Zn)	0-5 (ppm)	5.00 ppm
UV Absorbance 260nm	0-0.02	0.01
Molybdenum(Mo)	0-5 (ppm)	5.00 ppm
Chloride (Cl-)	0-50 (ppm)	50.00 ppm
Copper(Cu)	0-5 (ppm)	5.00 ppm
Purity(HPLC)	99.5-100 (%)	100.00000 %
(Pb)Lead	0-5 (ppm)	5.00 ppm
(As)Arsenic	0-0.1 (ppm)	0.10 ppm
Magnesium(Mg)	0-5 (ppm)	5.00 ppm
Lithium(Li)	0-5 (ppm)	5.00 ppm
Calcium(Ca)	0-10 (ppm)	10.00 ppm
Potassium(K)	0-50 (ppm)	50.00 ppm
Nickel(Ni)	0-5 (ppm)	5.00 ppm
Cadmium(Cd)	0-5 (ppm)	5.00 ppm
Ignition Residue (as sulfate)	0-0.05 (%)	0.03 %
Manganese(Mn)	0-5 (ppm)	5.00 ppm

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Parameter	Limit Values	Result
Sodium(Na)	0-50 (ppm)	50.00 ppm
Specific Rotation [a] <sub>D</sub> 20/D(c=10 in water,22h)	52-54 (°)	53.10000°
Appearance (L100103)	Colorless or White Powder or Crystals	Colorless or White Powder or Crystals
Insoluble matter	pass	Pass
Solubility in H <sub>2</sub> O , Colorless and clear(0.5M,20°C)	pass	Pass
λ,0.5 M in H <sub>2</sub> O	Pass	Pass

A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager