

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

## Certificate of Analysis

Date of Testing: 2023-01-17 09:43:13  
 Date of Next Testing: 2027-01-16 09:43:13  
 Product Name: **L-Asparagine Monohydrate**  
 CAS Number: 5794-13-8  
 Specifications & Purity: non-animal source, for cell culture, ≥99.0%  
 Lot #: A2310476  
 SKU #: **A119452**  
**Analysis:** **179700**  
 Storage Temperature: Protected from light

Parameter	Limit Values	Result
Iron(Fe)	0-10 (ppm)	5.30 ppm
Ignition Residue(Ash)	0-0.1 (%)	0.04 %
Specific Rotation [α] <sub>20</sub> /D(c=10 in 6M HCl in dried basis)	33-36.5 (°)	33.01 °
Chloride	0-0.02 (%)	0.01 %
Sulfate(SO <sub>4</sub> <sup>2-</sup> )	0-0.02 (%)	0.01 %
Ammonia (NH <sub>4</sub> )	0-0.1 (%)	0.05 %
Purity(HPLC)	99-100 (%)	99.79400 %
Loss on drying	11.5-12.5 (%)	11.92 %
Endotoxin Assay	0-1 (EU/mg)	0.50 EU/mg
Heavy metal (as Pb)	0-10 (ppm)	4.60 ppm
Appearance (A119452)	white crystalline powder	white crystalline powder
Cell Culture Test	pass	Pass
Infrared spectrum	Conforms to Structure	Conforms to Structure
Ninhydrin-Positive Substances	Conforms	Conforms
Solubility in H <sub>2</sub> O , Colorless,Clear,1g/50ml	pass	Pass



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

John Su  
QA & QC Manager