

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-03-18 16:50:52

Date of Next Testing: 2026-03-17 16:50:52

Product Name: **L-Serine**

CAS Number: 56-45-1

Specifications & Purity: Animal Free, USP, Moligand™, Ph.Eur., ≥98.5%

Lot #: C2205100

SKU #: **S137887**

Version: **3**

Analysis #: **048772**

Storage Temperature: Protected from light, Room temperature

Parameter	Limit Values	Result
Specific Rotation[a] ₂₅ /D(c=10 in 2 M HCl in EP)	14.4-15.5 (°)	15.50000 °
Purity	98.5-101.5 (%)	99.40000 %
Chloride	0-0.02 (%)	0.01000 %
Sulfate(SO ₄ ²⁻)	0-0.02 (%)	0.01000 %
Iron(Fe)	0-10 (ppm)	5.00000 ppm
Heavy metals	0-10 (ppm)	8.00000 ppm
Loss on drying	0-0.2 (%)	0.05000 %
Ignition Residue(Ash)	0-0.1 (%)	0.05000 %
(As)Arsenic	0-1 (ppm)	0.30000 ppm
Ammonia (NH ₄)	0-0.02 (%)	0.01000 %
Specific Rotation(25°C, C = 10 in 2 M HCl, USP)	14-15.6 (°)	15.30000 °
Appearance (S137887)	White powder	White powder
Origin	non-animal source	non-animal source
Solubility in H ₂ O , Colorless Clear, 0.5 g to 10 ml of H ₂ O	pass	Pass
Proton NMR spectrum	Conforms to structure	Conforms to Structure



QualityAssurance@aladdinsci.com

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

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

John Su
QA & QC Manager