

ALADDIN SCIENTIFIC CORPORATION

14078 Meridian Parkway, Riverside, CA. 92518

Certificate of Analysis

Date of Testing: 2022-08-04 20:30:17
 Date of Next Testing: 2026-08-03 20:30:17
 Product Name: **L-Serine**
 CAS Number: 56-45-1
 Specifications & Purity: Animal Free, USP, Moligand™, Ph.Eur., ≥98.5%
 Lot #: G2230168
 SKU #: **S137887**
 Version: **3**
 Analysis #: **085824**
 Storage Temperature: Protected from light, Room temperature

Parameter	Limit Values	Result
Chloride	0-0.02 (%)	0.01600 %
Sulfate(SO42-)	0-0.02 (%)	0.00500 %
Iron(Fe)	0-10 (ppm)	0.00000 ppm
Heavy metals	0-10 (ppm)	0.00000 ppm
Loss on drying	0-0.2 (%)	0.00000 %
Ignition Residue(Ash)	0-0.1 (%)	0.00000 %
(As)Arsenic	0-1 (ppm)	0.00000 ppm
Ammonia (NH4)	0-0.02 (%)	0.01200 %
Specific Rotation(25°C, C = 10 in 2 M HCl, USP)	14-15.6 (°)	14.29100 °
Assay(Nonaqueous Titration anhydrous)	98.5-101.5 (%)	99.24000 %
Specific rotation(20°C, C = 10 in 2 M HCl, EP)	14.4-15.5 (°)	14.50000 °
Appearance (S137887)	White powder	White powder
Origin	non-animal source	non-animal source
Solubility in H2O , Colorless Clear, 0.5 g to 10 ml of H2O	pass	Pass
Proton NMR spectrum	Conforms to structure	Conforms to Structure



QualityAssurance@aladdinsci.com

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

John Su
QA & QC Manager