



大连汉德姆精细化学品有限公司

DALIAN HANDOM CHEMICALS CO.,LTD.

Certificate of Analysis

Product Name: L-Serine

CAS No.: 56-45-1

Batch No.: HDC20240429

Batch Quantity: 800.00kg

Manufacturing Date: Apr 29th, 2024

Retest Date: Apr 28th, 2026

Test Items	Specifications	Test Results
Description	White crystalline or crystalline powder, slightly sweet taste. The product is soluble in water and formic acid, almost insoluble in ethanol and ether. Dissolve in dilute	Conforms
Identification	The IR absorption spectrum of this product should be consistent with the standard product spectrum or the reference spectrum (spectrum set 917).	Conforms
Assay	99.0% ~ 101.0% (on dried basis)	99.4%
Chiral Assay	/	99.1%
Specific Rotation $[\alpha]_D^{20}$	+14.4° ~ +15.5°(on dried basis)	+15.0°
pH Value	5.2 ~ 6.2	5.8
State of Solution	Not less than 98.0%	99.0%
Chloride (Cl)	Not more than 0.020%	<0.020%
Ammonium (NH ₄ ⁺)	Not more than 0.02%	<0.02%
Sulfate (SO ₄)	Not more than 0.020%	<0.020%
Arsenic (As)	Not more than 1 ppm	<1 ppm
Iron (Fe)	Not more than 10 ppm	<10 ppm
Other amino acids (TLC)	Not more than 0.2%	<0.2%
Loss on Drying	Not more than 0.20%	0.14%
Residue on Ignition	Not more than 0.10%	0.07%
Heavy Metals	Not more than 10 ppm	<10 ppm

Conclusion: The testing results of this batch are complied with the Standard of AJI92.