



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-Tyrosine

Molecular Formula: C₉H₁₁NO₃

Batch No.: HDC20230929

Manufacturing Date: Sep 29th, 2023

CAS No.: 60-18-4

Molecular Weight: 181.19

Batch Quantity: 1000.00kg

Retest Date: Sep 28th, 2026

Test Items	Specifications	Test Results
Appearance	White crystals or crystalline powder	Conforms
Identification	As per USP39	Conforms
Assay	98.5% ~ 101.5%	99.8%
Specific Optical Rotation[α] _D ²⁵	-9.8° ~ -11.2°	-10.2°
Chlorides	Not more than 400 ppm	<400 ppm
Sulfates	Not more than 400 ppm	<400 ppm
Iron (Fe)	Not more than 30 ppm	<15 ppm
Lead (Pb)	Not more than 3 ppm	<3 ppm
Cadmium (Cd)	Not more than 1 ppm	<1 ppm
Mercury (Hg)	Not more than 0.1 ppm	<0.1 ppm
Arsenic (As)	Not more than 1.5 ppm	<1.5 ppm
Heavy Metals	Not more than 15 ppm	<15 ppm
Loss on Drying	Not more than 0.30%	0.11%
Residue on Ignition	Not more than 0.40%	0.06%
Single impurity	Not more than 0.5%	<0.5%
Total impurities	Not more than 2.0%	<1.0%
Total plate count	Not more than 1000 CFU/g	<1000 CFU/g
Yeasts & Moulds	Not more than 100 CFU/g	<100 CFU/g



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Coliforms	Negative/25g	Not detected
Salmonella	Negative/25g	Not detected
Staphylococcus aureus	Negative/25g	Not detected
Escherichia coli	Negative	Not detected

Conclusion: The testing results of this batch are complied with the Standard of USP39.

Storage Conditions: Preserved in tight, light-resistant containers; kept at room temperature away from heat and moisture.