

Wuhan Amino Acid Bio-Chemical Co., Ltd.

武汉阿米诺科技有限公司

Add: Bonded Warehouse Building, Wuhan Economic &amp; Technology Development Zone, Wuhan, China

中国武汉市经济技术开发区保税仓库大楼

28/03/2024

## CERTIFICATE OF ANALYSIS

Product: L-Tryptophan  
Batch No.: 20240225  
Quantity: 50kg  
Expiry Date: Feb., 24, 2026

CAS. No.: 73-22-3  
Manu. Date: Feb., 25, 2024  
Inspecting Date: Feb., 25, 2024

Item	Specification	Test result
Appearance	White to yellowish white crystals or crystalline powder	Conforms
Identification	Conforms EP9.0	Conforms
Appearance of solution	Clear and not more intensely coloured than solution BY <sub>6</sub>	Conforms
Specific rotation $[\alpha]_D^{20}$	-30.0° to -33.0°	-31.3°
Ninhydrin-positive substances	Substance: for each impurity, Maximum 0.2% Total Maximum 0.5%	Conforms
Impurity A and other related substances	1, Impurity A $\leq 10$ ppm	Conforms
	2, Sum of impurities with a retention time less than that of tryptophan $\leq 100$ ppm	
	3, Sum of impurities with a retention time greater than that of tryptophan and up to 1.8 times the retention time of N-acetyltryptophan $\leq 300$ ppm	
Chloride (Cl)	Not more than 200ppm	<200ppm
Ammonium (NH <sub>4</sub> )	Not more than 200ppm	<200ppm
Sulfate (SO <sub>4</sub> )	Not more than 300ppm	<300ppm
Iron (Fe)	Not more than 20ppm	<20ppm
Heavy metals (Pb)	Not more than 10ppm	<10ppm
Loss on drying	Not more than 0.50%	0.09%
Residue on ignition	Not more than 0.10%	0.07%
Assay	98.5% to 101.0%	99.3%
Conclusion: The product conforms to the specification of EP9.0 standards.		

Analyst: 1

Check: 2

