

CERTIFICATE OF ANALYSIS

Product Name		L-Ornithine L-aspartate salt	
Batch No	JL20230630	Manufacture Date	20230630
Test Basis	IN HOUSE	Test Date	20230702
Batch Size	200kg	Report Date	20230708
Delivery Quantity	---	Expiry Date	20250629
Analysis Content	Specifications	Analysis Method	
Appearance	White or off-white powder or crystalline powder	White crystalline powder	
	Chemical reaction: positive	Conforms	
Identification	The infrared absorption spectrum is consistent with that of reference	Conforms	
Specific optical rotation	+26.5° - +29.0°	+27.7°	
PH	5.0-7.0	6.3	
Light transmittance(430nm)	≥98.0	98.8%	
Chloride	≤300ppm	Conforms	
Sulfate	≤200ppm	Conforms	
Ammonium	≤400ppm	Conforms	
Iron	≤30ppm	Conforms	
Loss on Drying	≤7.0%	3.0%	
Residue on ignition	≤0.1%	0.03%	
Residual solvents	Methanol ≤0.3%	0.02%	
Heavy metals	≤10ppm	Conforms	
Arsenic salt	≤1ppm	Conforms	
Related substance	Impurity A: ≤0.1%	0.002%	
	Arginine: ≤0.1%	N.D.	
	Fumaric acid: ≤0.1%	0.0005%	
	Acetic acid: ≤0.1%	0.005%	
	Other max individual impurity: ≤0.1%	0.07%	
	Total impurities except for known impurities: ≤0.5%	0.16%	
Endotoxins	<0.25EU/mg	Conforms	
Assay	98.0%-102.0% calculate on anhydrous basis, contain C ₅ H ₁₂ N ₂ O ₂ . C ₄ H ₇ N ₀ 4	99.4%	
Conclusion		The product complies with IN HOUSE specification	

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