


CERTIFICATE OF ANALYSIS

Product Name:	L-Ornithine HCl	Report Date:	Aug 07, 2017
Formula:	C ₅ H ₁₂ N ₂ O ₂ •HCl	Batch No.:	170807
CAS No.:	3184-13-2	Manu. Date:	Aug 04, 2017
Inspection Standard:	AJI92	Exp. Date:	Aug 03, 2019

RESULTS OF ANALYSIS

Test Items	Specifications	Results
Characters	White crystals or crystalline powder	Conforms
Infrared Spectrum	Compares to standard	Conforms
Specific rotation $[\alpha]_D^{20}$	+23.0 to +25.0°	+23.4
State of solution (Transmittance)	Not less than 98.0%	99.9%
Ammonium (NH ₄)	Not more than 0.02%	<0.02%
Sulfate (SO ₄)	Not more than 0.020%	<0.020%
Iron(Fe)	Not more than 10ppm	<10ppm
Heavy metals(Pb)	Not more than 10ppm	<10ppm
Lead	Not more than 3ppm	<3ppm
Arsenic(as As ₂ O ₃)	Not more than 1ppm	<1ppm
Other amino acids	Chromatographically not detectable	Conforms
Loss on Drying	Not more than 0.20%	0.14%
Residue on ignition(sulfated)	Not more than 0.10%	0.07%
pH	5.0 to 6.0	5.3
Conclusion:	Conforms to the specifications of AJI92	

Analyst: **侯健之**Auditor: **辽薛兰**Chief of QC: **于铁梅**