


CERTIFICATE OF ANALYSIS

Product Name:	L-Leucine	Report Date:	May 13, 2017
Formula:	C ₆ H ₁₃ NO ₂	Batch No.:	170310
CAS No.:	61-90-5	Manu. Date:	May 10, 2017
Inspection Standard:	USP38	Exp. Date:	May 09, 2019

RESULTS OF ANALYSIS

Test Items	Specifications	Results
Appearance	White to off white crystalline powder	Conforms
Identification	Complies with standard	Conforms
Specific rotation $[\alpha]_D^{25}$	+14.9 to +17.3°	+15.4°
pH	5.5 to 7.0	5.9
Loss on Drying	Not more than 0.2%	0.16%
Residue on ignition(sulfated)	Not more than 0.4%	0.04%
Chloride(CL)	Not more than 500 ppm	< 500ppm
Sulfate(SO ₄)	Not more than 300 ppm	<300ppm
Iron(Fe)	Not more than 30 ppm	<30ppm
Heavy metals	Not more than 15 ppm	<15ppm
Lead	Not more than 3 ppm	<3ppm
Chromatographic Purity	NMT 0.50% of any individual impurity NMT 2.00% of total impurity	Conforms
Organic volatile impurities	Meet the requirements	Meet the requirements
Assay	98.5 to 101.5%	99.6%
Conclusion:	Conforms to the specifications of USP38	

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