

CERTIFICATE OF ANALYSIS

Product Name:	L-Cysteine(base)	Report Date:	May 1, 2017
Formula:	C ₃ H ₇ NO ₂ S	Batch No.:	170310
CAS No.:	52-90-4	Manu. Date:	May 10, 2017
Inspection Standard:	AJI92	Exp. Date:	May 09, 2019

RESULTS OF ANALYSIS

Test Items	Specifications	Results	Test Methods
Appearance	White crystalline powder	Conforms	Visual
Identification	Infrared Absorption	Conforms	IR
Specific rotation $[\alpha]_D^{20}$	+8.3 to 9.5°	+8.8°	AJI Test 1
State of solution(Transmittance)	Clear and colorless Not less than 95.0%	98.8%	AJI Test 2
Chloride(Cl)	Not more than 0.04%	<0.04 %	AJI Test3
Ammonium (NH ₄)	Not more than 0.02%	<0.02%	AJI Test 4 [A-1]
Sulfate (SO ₄)	Not more than 0.03%	<0.03%	AJI Test 5
Iron(Fe)	Not more than 10ppm	<10ppm	AJI Test 6
Heavy metals(Pb)	Not more than 10ppm	<10ppm	AJI Test 7
Lead	Not more than 3ppm	<3ppm	AFS
Arsenic(as As ₂ O ₃)	Not more than 1ppm	<1ppm	AJI Test 8
Other amino acids	Chromatographically not detectable	Conforms	AJI Test 9
Loss on Drying	Not more than 0.5%	0.12%	AJI Test 11
Residue on ignition(sulfated)	Not more than 0.1%	0.05%	AJI Test 13
Assay	98.0 to 102.0 %	99.7%	AJI Test 16
pH	4.5 to 5.5	5.1	AJI Test 33
Conclusion:	Conforms to the specification of AJI92		

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