

# CERTIFICATE OF ANALYSIS

Product Name:	L-Cysteine HCl Monohydrate	Report Date:	Jun 09, 2017
Formula:	C <sub>3</sub> H <sub>7</sub> NO <sub>2</sub> S•HCl•H <sub>2</sub> O	Batch No.:	170606
CAS No.:	7048-04-6	Manu. Date:	Jun 06, 2017
Inspection Standard:	AJI92	Exp. Date:	Jun 05, 2019

## RESULTS OF ANALYSIS

Test Items	Specifications	Results	Test Methods
Appearance	White crystals or crystalline powder	Conforms	Visual
Identification	Infrared Absorption	Conforms	IR
Solubility	Very soluble in water. Solubility(H <sub>2</sub> O g/100g): about 100(20°C)	Conforms	AJI92
State of solution (Transmittance)	Clear and colorless not less than 98.0%	99.1%	AJI Test 2
Assay	99.0 to 100.5 %	99.9%	AJI Test 16
Specific rotation $[\alpha]_D^{20}$	+5.5 to +7.0°	+6.2°	AJI Test 1
Chloride(Cl)	19.89 to 20.29%	20.10%	AJI Test 3
Ammonium(NH <sub>4</sub> )	Not more than 0.02%	<0.02%	AJI Test4
Sulfate(SO <sub>4</sub> )	Not more than 0.020%	<0.020%	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 0.0003%	<3ppm	AFS
Arsenic(as As <sub>2</sub> O <sub>3</sub> )	Not more than 1ppm	<1ppm	AJI Test 8
Other amino acids	Chromatographically not detectable	Conforms	AJI Test 9
Loss on drying	8.5% to 12.0%	10.1%	AJI Test 11
Residue on ignition(sulfated)	Not more than 0.1%	0.04%	AJI Test 13
pH	1.5 to 2.0	1.7	AJI Test 33
<b>Conclusion:</b>	Conforms to the specifications of AJI92		

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