

Shine Star (Hubei) Biological Engineering Co., Ltd.

Headquarters: No. 1 Yanjiang Road, Gong An, Jingzhou, Hubei, 434300 P. R .China
Tel: +86-27 8578 6222 Fax: +86-27 8578 6555
E-mail: sales@Shine-Star.com.cn www.Shine-Star.com.cn

CERTIFICATE OF ANALYSIS

Product Name:	L-Cysteine Hydrochloride Monohydrate		
CAS No.:	7048-04-6		
Quantity:	Sample	Manufacture Date:	Dec. 21, 2011
Batch No.:	57113710	Analysis Date:	Dec. 26, 2011
Quality Standard:	AJI92	Expiry Date:	Dec. 20, 2012
Test Items	Limit		Result
Identification	conform		conform
Appearance	white crystals or crystalline powder		conform
Specific rotation $[\alpha]^{20}_D$	+5.5° to +7.0°		+6.19°
State of solution	clear and colorless		99.5%
	not less than 98.0%		
Chloride (Cl)	19.89 to 20.29%		20.13%
Ammonium (NH ₄)	not more than 0.02%		<0.02%
Sulfate (SO ₄)	not more than 0.020%		<0.02%
Iron (Fe)	not more than 10ppm		<10ppm
Heavy Metals (Pb)	not more than 10ppm		<10ppm
Arsenic (As ₂ O ₃)	not more than 1ppm		<1ppm
Other amino acids	conform		conform
Loss on drying	8.50 to 12.00%		11.72%
Residue on ignition	not more than 0.10%		0.04%
Assay	99.0% to 101.5%		99.65%
pH	1.5 to 2.0		1.7
Conclusion: The products conform to AJI92 standard.			
Analyst: 涂静 胡昌清 张冰 万东静		Verifier: 郭刚	
Storage: Preserve in well-closed containers and protected from light			