

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

Headquarters: No. 666 Chanling Avenue, Douhudi Town, GongAn, Jingzhou, Hubei, 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		
CAS No.:	7048-04-6		
Quantity:	1000kgs	Manufacture Date:	Dec 19, 2018
Batch No.:	57184823	Analysis Date:	Dec 24, 2018
Quality Standard:	USP33	Expiry Date:	Dec 18, 2019
Test Items	Limit		Result
Appearance	white crystalline powder or colourless crystals		conform
Identification	as per USP33		conform
Specific rotation	+5.7° to +6.8°		+6.34°
Loss on drying	8.0% to 12.0%		10.11%
Residue on ignition	not more than 0.4%		0.04%
Sulfate	not more than 0.03%		<0.03%
Iron	not more than 0.003%		<0.003%
Heavy metals	not more than 0.0015%		<0.0015%
Chromatographic purity	as per USP33		conform
Assay	98.5% to 101.5%		99.93%
Conclusion: The products conform to USP33 standard.			
Reported by: 陈燕		Verified by: 郭刚	
Storage: Preserve in well-closed containers.			