



ISO 9001 CERTIFIED  
ISO 13485 CERTIFIED

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CERTIFICATE OF QUALITY

**Product:** L-CYSTEINE HCl, ANIMAL-FREE  
**Grade:** USP GRADE  
**Code:** N554  
Appearance: White crystalline powder.  
Mol. Formula: HSCH<sub>2</sub>CH(NH<sub>2</sub>)COOH\*HCl\*H<sub>2</sub>O  
Mol. Weight: 175.63

Description:

<u>Assay:</u>	<u>Min</u>	<u>Max</u>	<u>Units</u>	<u>Disposition</u>
Chromatographic Purity	PASS		P/F	PASS
Heavy Metals (as Pb)		0.0015	%	PASS
Identification	PASS		P/F	PASS
Iron		0.003	%	PASS
Loss on Drying	8.0	12.0	%	PASS
Purity (Dry Basis)	98.5	101.5	%	PASS
Residue on Ignition		0.4	%	PASS
Specific Rotation	+5.7	+6.8	degrees	PASS
Sulfate		0.03	%	PASS

Storage: Store at room temperature. Protect from moisture.

*n554usp*

This signature indicates that the above material has met all quality specifications and has been reviewed by a quality representative.

Signature:

Title:

QC MANAGER

Date:

6/13/2012