

Career Henan Chemical Co

CERTIFICATE OF ANALYSIS

Product Name: L-CYSTEINE BASE
Batch No.: 171020 Manufacture Date: 2017.10.20
CAS No.: 52-90-4 Report Date: 2017.10.22
QNTY : 1000KGS Expiry Date: 2019.10.19

Item	Specifications	Result
Appearance	White crystals or crystalline powder	Conforms
Specific rotation $[a]_D^{20}$	+8.3° ~ +9.5°	+8.90°
State of solution	≥95.0%	98.5%
Chloride(Cl)	≤0.02%	0.015%
Ammonium(NH ₄)	≤0.02%	0.010%
Sulfate(SO ₄)	≤0.030%	0.015%
Iron(Fe)	≤10PPm	5PPm
Heavy metals(Pb)	≤10PPm	3PPm
Arsenic(As ₂ O ₃)	≤1PPm	0.1PPm
Loss on drying	≤0.5%	0.40%
Residue on ignition	≤0.1%	0.07%
Other amino acids	Conforms	Qualified
Assay	98.0~101.0%	99.8%
PH	4.5~5.5	5.0

Conclusion: This product conforms to USP30 standard.

Analysis date: 2017.10.22

Analyst: Dr.LIAN

Check by: LI

