

## Certificate of Analysis

Date of Testing: 2022-10-22 15:25:25  
 Date of Next Testing: 2026-10-21 15:25:25  
 Product Name: **N-Acetyl-L-Cysteine**  
 CAS Number: 616-91-1  
 Specifications & Purity: USP,EP,≥98.5%  
 Lot #: J2212114  
 SKU #: **A105421**  
**Analysis:** **147876**  
 Storage Temperature: Store at 2-8°C,Argon charged

Parameter	Limit Values	Result
Loss on drying	0-1 (%)	0.01 %
Total impurities	0-0.5 (µg/kg OR ng/g)	0.02 µg/kg OR ng/g
Other impurities	0-0.5 (%)	0.01 %
n,n'diacetyl-l-cystine	0-0.5 (%)	0.02 %
Ignition Residue (as sulfate)	0-0.2 (%)	0.00 %
Endonuclease Detection	0-0.1 (EU/g)	0.00 EU/g
Specific Rotation [α] <sub>20</sub> /D(c=5 in Phosphate buffered saline)	21.3-27 (°)	24.00°
Heavy metal (as Pb)	0-10 (ppm)	6.00 ppm
n,s-diacetyl-l- cysteine	0-0.5 (%)	0.03 %
l-cystine	0-0.5 (%)	0.01 %
Zinc(Zn)	0-10 (ppm)	2.86 ppm
PH test	2-2.8	2.15
l-cysteine	0-0.5 (%)	0.01 %
Assay	98.5-101 (%)	99.03 %
Appearance (A105421)	white crystalline powder	white crystalline powder
biochemical toxicity	passes	passes
Infrared spectrum	Conforms to Structure	Conforms to Structure
Solubility in H <sub>2</sub> O , 0.5 G /10 ML in water, clear, colorless	pass	Pass
volatile organic substances	pass	Pass



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A handwritten signature in black ink that reads "John Su".

John Su  
QA & QC Manager