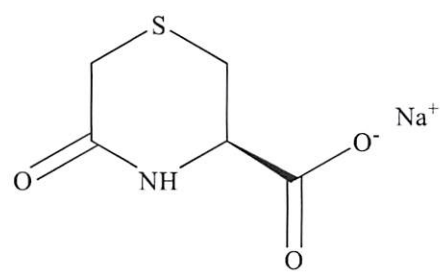


Certificate of Analysis



 Certificate No.: **20260204503**

Date: February 4, 2026

Retest date: February 3, 2029

Compound Name:	Cysteine Impurity 1 Sodium Salt	
Synonyms:	(R)-5-oxothiomorpholine-3-carboxylate, sodium salt (1:1)	
TLC Catalogue Number:	C-7782	
CAS Number:	88933-48-6	
Alternate CAS Number:	305-89-9 (free acid)	
Molecular Weight:	160.17 22.99	
Molecular Formula:	C ₅ H ₆ NO ₃ S. Na	
Source:	TLC Pharmaceutical Standards	
Source Lot No.:	3739-066A7	
Storage Conditions:	Hygroscopic, store at 2-8 °C	
Solubility:	Methanol, Water	

Test Description	Specifications	Results
Visual Description	White to off-white solid	Conforms
Identification		
IR	Conforms to structure	Conforms
MS	Conforms to structure	Conforms
¹ H NMR	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	100.0%
Impurity (HPLC)	N/A	
Purity (Chiral HPLC)	Not less than 98.0%	99.8%
Water Content (KF)	N/A	4.5%
Optical Rotation	N/A	$[\alpha]_D^{20.0}(c=0.43, CH_3OH): -64.5^\circ$
Residual Solvents (NMR)	2.3% methanol	
Assay (%)	Not less than 90.0%	93.0%
Recommendation:	Release.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		02/04/2026
Approved by:	Quality Assurance		02/10/2026

Attachments: Peak Attribution Table, Assay Calculation, HPLC, IR, MS and NMR spectra.