

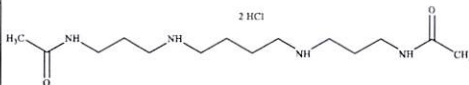
Certificate of Analysis

Certificate No.: **20260616013**



Date: June 16, 2026

Retest date: June 11, 2029

Compound Name: <i>N</i> ¹ , <i>N</i> ¹² -Diacetyl Spermine DiHCl	
Synonyms:	<i>N,N</i> -((butane-1,4-diylbis(azanediyl))bis(propane-3,1-diyl))diacetamide, hydrochloride (1:2)
TLC Catalogue Number:	S-063005
CAS Number:	77928-71-3
Alternate CAS Number:	61345-83-3 (free base)
Molecular Weight:	286.42 *2*36.46
Molecular Formula:	C ₁₄ H ₃₀ N ₄ O ₂ · 2 HCl
Source:	TLC Pharmaceutical Standards
Source Lot No.:	7365-084A7
Storage Conditions:	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%	99.8%
Impurity (HPLC)	RT 11.73, 0.12%	
Residual Solvents (NMR)	0.1% methanol and 0.2% acetonitrile	
Assay (qNMR)	Not less than 85.0%	88.0%
Recommendation:	Release.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		06/16/2026
Approved by:	Quality Assurance		06/16/2026

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