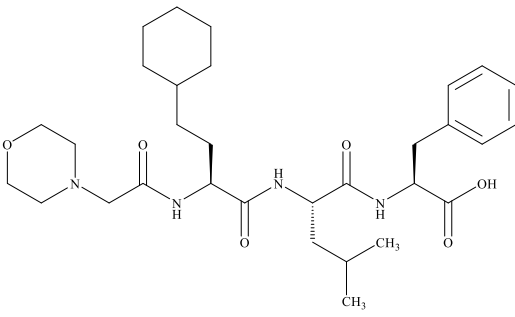


Certificate of Analysis

Certificate No.: 20200826005

Date: August 26, 2020

Retest date: August 24, 2023

Compound Name:	Carfilzomib Impurity 30	
Synonyms:	((S)-4-cyclohexyl-2-(2-morpholinoacetamido)butanoyl)-L-leucyl-L-phenylalanine	
TLC Catalogue Number:	C-121033	
CAS Number:	N/A	
Molecular Weight:	572.75	
Molecular Formula:	C ₃₁ H ₄₈ N ₄ O ₆	
Source:	TLC Pharmaceutical Standards	
Source Lot No.:	4024-060A4	
Storage Conditions:	Store at 2-8 °C	
Solubility:	Methanol, DMSO, DMF	

Test Description	Specifications	Results
Visual Description	White to off-white solid	Conforms
Identification		
IR	Conforms to structure	Conforms
MS	Conforms to structure	Conforms
¹H NMR	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	99.3%
Impurity (HPLC)	RT 1.00, 0.39%	
Water Content (KF)	N/A	1.3%
Optical Rotation	N/A	$[\alpha]_D^{25.0}(c=0.38, \text{DMSO}): -1.5^\circ$
Residual Solvents (NMR)	No residual solvent	
Assay (%)	Not less than 90.0%	98.0%
Recommendation:	Released.	

Name	Department	Signature	Date
Reviewed and approved by:	Analytical Services		
Approved by:	Quality Assurance		

Attachments: HPLC, IR, MS and NMR spectra.