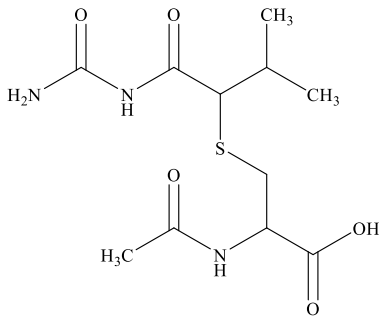


Certificate of Analysis

Certificate No.: 20200618026

Date: June 18, 2020

Retest date: June 15, 2023

Compound Name:		Bromisoval Impurity 4 (Mixture of Diastereomers)
Synonyms:	<i>N</i> -acetyl- <i>S</i> -(3-methyl-1-oxo-1-ureidobutan-2-yl)cysteine	
TLC Catalogue Number:	B-193005	
CAS Number:	N/A	
Molecular Weight:	305.35	
Molecular Formula:	C ₁₁ H ₁₉ N ₃ O ₅ S	
Source:	TLC Pharmaceutical Standards	
Source Lot No.:	3860-043A2	
Storage Conditions:	Store at 2-8 °C	
Solubility:	Methanol, DMSO	

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%	99.2%
Impurity (HPLC)	RT 18.73, 0.17%	
Water Content (KF)	N/A	0.8%
Residual Solvents (NMR)	1.5% acetonitrile	
Assay (%)	Not less than 90.0%	96.9%
Recommendation:	Released.	

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

Attachments: HPLC, IR, MS and NMR spectra.