

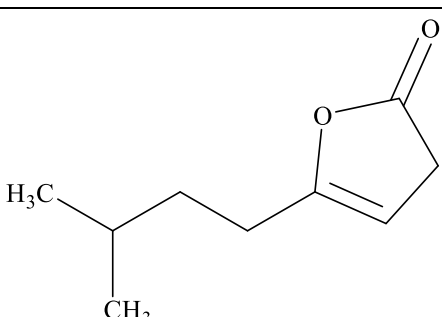
Certificate of Analysis

Certificate No.: 20200824005

Date: August 24, 2020

Retest date: August 18, 2023

Compound Name: Annonacin Impurity 1 (5-(3-Methyl-butyl)-3H-furan-2-one)	
Synonyms:	5-isopentylfuran-2(3H)-one
TLC Catalogue Number:	A-126002
CAS Number:	81715-82-4
Molecular Weight:	154.21
Molecular Formula:	C ₉ H ₁₄ O ₂
Source:	TLC Pharmaceutical Standards
Source Lot No.:	4007-048A2
Storage Conditions:	Store at 2-8 °C
Solubility:	Methanol, DMSO, DMF, Acetonitrile



Test Description	Specifications	Results
Visual Description	Yellow liquid	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%	95.3%
Impurity (HPLC)	RT 4.29, 1.80%; RT 16.68, 0.42%; RT 17.53, 1.11%	
Water Content (KF)	N/A	0.6%
Residual Solvents (NMR)	0.5% <i>n</i> -hexane	
Assay (%)	Not less than 90.0%	94.3%
Recommendation:	Released. The compound contains 1.8% double bond shift by-product (RT 4.29) according to its HPLC and LC-MS.	

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

Attachments: HPLC, IR, MS and NMR spectra.