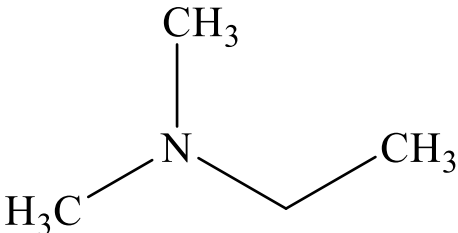


# Certificate of Analysis

Certificate No.: 20200714026

Date: July 14, 2020

Retest date: June 12, 2023

<b>Compound Name:</b>		<b>Clavulanic Acid Impurity 10</b>	
<b>Synonyms:</b>	<i>N,N</i> -dimethylethanamine		
<b>TLC Catalogue Number:</b>	C-3232		
<b>CAS Number:</b>	598-56-1		
<b>Molecular Weight:</b>	73.14		
<b>Molecular Formula:</b>	C <sub>4</sub> H <sub>11</sub> N		
<b>Source:</b>	TLC Pharmaceutical Standards		
<b>Source Lot No.:</b>	3939-015A1		
<b>Storage Conditions:</b>	Store at -20 °C		
<b>Solubility:</b>	Methanol, DMSO, Acetonitrile		

Test Description	Specifications	Results
<b>Visual Description</b>	Colorless liquid	<b>Conforms</b>
<b>Identification</b>		
<b>IR</b>	Conforms to structure	<b>Conforms</b>
<b>MS</b>	Conforms to structure	<b>Conforms</b>
<b><sup>1</sup>H NMR</b>	Conforms to structure	<b>Conforms</b>
<b>Purity (HPLC)</b>	Not less than 95.0%	<b>100.0%</b>
<b>Impurity (HPLC)</b>	N/A	
<b>Water Content (KF)</b>	N/A	<b>0.8%</b>
<b>Residual Solvents (NMR)</b>	No residual solvent	
<b>Assay (%)</b>	Not less than 90.0%	<b>99.2%</b>
<b>Recommendation:</b>	<b>Released.</b>	

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

**Attachments:** HPLC, IR, MS and NMR spectra.