

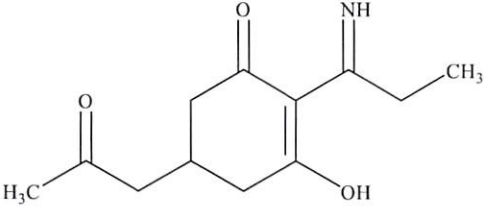
## Certificate of Analysis

Certificate No.: **20250331003**



Date: March 31, 2025

Retest date: March 27, 2028

<b>Compound Name:</b> Clethodim Impurity 12	
<b>Synonyms:</b>	3-hydroxy-2-(1-iminopropyl)-5-(2-oxopropyl)cyclohex-2-en-1-one
<b>TLC Catalogue Number:</b>	C-9818
<b>CAS Number:</b>	1210428-22-0
<b>Alternate CAS Number:</b>	N/A
<b>Molecular Weight:</b>	223.27
<b>Molecular Formula:</b>	C <sub>12</sub> H <sub>17</sub> NO <sub>3</sub>
<b>Source:</b>	TLC Pharmaceutical Standards
<b>Source Lot No.:</b>	6727-075A4
<b>Storage Conditions:</b>	Store at 2-8 °C
<b>Solubility:</b>	Methanol, DMSO



Test Description	Specifications	Results
<b>Visual Description</b>	Pale yellow solid	<b>Conforms</b>
<b>Identification</b>		
IR	Conforms to structure	<b>Conforms</b>
MS	Conforms to structure	<b>Conforms</b>
<sup>1</sup> H NMR	Conforms to structure	<b>Conforms</b>
<b>Purity (HPLC)</b>	Not less than 95.0%	<b>98.7%</b>
<b>Impurity (HPLC)</b>	RT 10.07, 0.58%; RT 15.46, 0.58%	
<b>Residual Solvents (NMR)</b>	0.5% methanol	
<b>Assay (qNMR)</b>	Not less than 90.0%	<b>95.3%</b>
<b>Recommendation:</b>	<b>Release.</b>	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		03/31/2025
Approved by:	Quality Assurance		03/31/2025

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