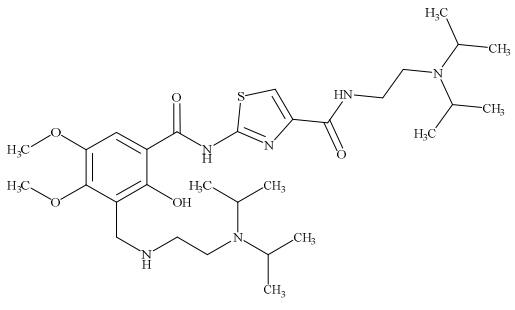


Certificate of Analysis

Certificate No.: 20200318022

Date: March 18, 2020

Retest date: March 16, 2023

Compound Name:	Acotiamide Impurity 13	
Synonyms:	<i>N</i> -(2-(diisopropylamino)ethyl)-2-(3-(((2-(diisopropylamino)ethyl)amino)methyl)-2-hydroxy-4,5-dimethoxybenzamido)thiazole-4-carboxamide	
TLC Catalogue Number:	A-140029	
CAS Number:	N/A	
Molecular Weight:	606.83	
Molecular Formula:	C ₃₀ H ₅₀ N ₆ O ₅ S	
Source:	TLC Pharmaceutical Standards	
Source Lot No.:	3740-081A5	
Storage Conditions:	Store at 2-8 °C	
Solubility:	Methanol, DMSO, DMF	

Test Description	Specifications	Results
Visual Description	Yellow solid	Conforms
Identification		
IR	Conforms to structure	Conforms
MS	Conforms to structure	Conforms
¹ H NMR	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	99.8%
Impurity (HPLC)	RT 14.45, 0.17%	
Water Content (KF)	N/A	0.1%
Residual Solvents (NMR)	0.3% methanol	
Assay (%)	Not less than 90.0%	99.4%
Recommendation:	Released.	

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

Attachments: HPLC, IR, MS and NMR spectra.