

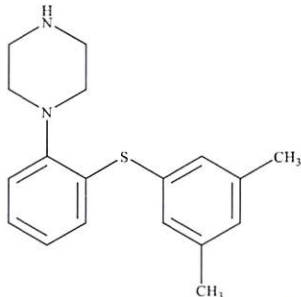
Certificate of Analysis

Certificate No.: **20230707022**



Date: July 7, 2023

Retest date: July 6, 2026

Compound Name: Vortioxetine Impurity 7	
Synonyms:	1-(2-((3,5-dimethylphenyl)thio)phenyl)piperazine
TLC Catalogue Number:	V-043008
CAS Number:	508233-75-8
Molecular Weight:	298.45
Molecular Formula:	C ₁₈ H ₂₂ N ₂ S
Source:	TLC Pharmaceutical Standards
Source Lot No.:	4317-047A8
Storage Conditions:	Store at 2-8 °C
Solubility:	Methanol, Acetonitrile



Test Description	Specifications	Results
Visual Description	White to off-white 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)	N/A	
Water Content (KF)	N/A	0.2%
Residual Solvents (NMR)	0.1% isopropyl ether	
Assay (%)	Not less than 90.0%	99.5%
Recommendation:	Release.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		07 / 11 / 2023
Approved by:	Quality Assurance		07 / 11 / 2023

Attachments: HPLC, IR, MS and NMR spectra.