

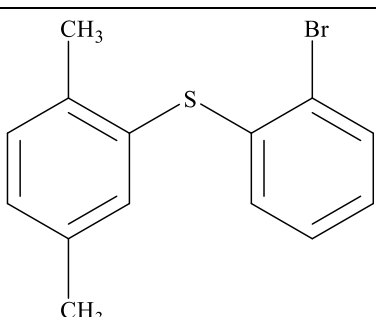
Certificate of Analysis

Certificate No.: 20210608019

Date: June 8, 2021

Retest date: June 2, 2024

Compound Name: Vortioxetine Impurity 50	
Synonyms:	(2-bromophenyl)(2,5-dimethylphenyl)sulfane
TLC Catalogue Number:	V-043058
CAS Number:	2014403-39-3
Molecular Weight:	293.22
Molecular Formula:	C ₁₄ H ₁₃ BrS
Source:	TLC Pharmaceutical Standards
Source Lot No.:	4481-047A6
Storage Conditions:	Store at 2-8 °C
Solubility:	Methanol



The image shows the chemical structure of (2-bromophenyl)(2,5-dimethylphenyl)sulfane. It consists of two benzene rings connected by a sulfur atom (S). The left benzene ring has methyl groups (CH₃) at the 2 and 5 positions. The right benzene ring has a bromine atom (Br) at the 1 position.

Test Description	Specifications	Results
Visual Description	White to off-white solid (low M.P.)	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%	99.7%
Impurity (HPLC)	RT 6.54, 0.14%	
Water Content (KF)	N/A	0.1%
Residual Solvents (NMR)	No residual solvent	
Assay (%)	Not less than 90.0%	99.6%
Recommendation:	Release.	

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

Attachments: HPLC, IR, MS and NMR spectra.