

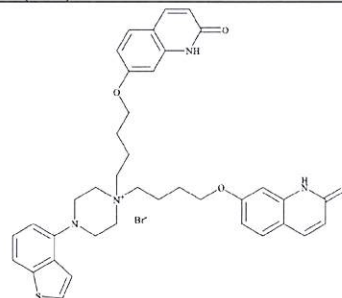
Certificate of Analysis

Certificate No.: **20240930009**



Date: September 30, 2024

Retest date: September 26, 2027

Compound Name: Brexpiprazole Impurity 27 Bromide	
Synonyms:	4-(benzo[<i>b</i>]thiophen-4-yl)-1,1-bis(4-((2-oxo-1,2-dihydroquinolin-7-yl)oxy)butyl)piperazin-1-ium, bromide (1:1)
TLC Catalogue Number:	B-115088
CAS Number:	2454317-18-9
Molecular Weight:	649.83 79.90
Molecular Formula:	C ₃₈ H ₄₁ N ₄ O ₄ S. Br
Source:	TLC Pharmaceutical Standards
Source Lot No.:	6475-041A3
Storage Conditions:	Store at 2-8 °C
Solubility:	Methanol, DMSO, DMF, solution of Acetonitrile and Water



Test Description	Specifications	Results
Visual Description	Pale 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%	96.3%
Impurity (HPLC)	RT 1.30, 0.22%; RT 10.29, 0.17%; RT 12.42, 2.96%	
Residue (TGA at 800 °C)	N/A	1.7%
Residual Solvents (NMR)	0.5% methanol	
Assay (qNMR)	Not less than 85.0%	89.7%
Recommendation:	Release. The compound contains 3.0% impurity with MW = 569 (RT 12.42) according to its HPLC and LC-MS.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		10/01/2024
Approved by:	Quality Assurance		10/01/2024

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