

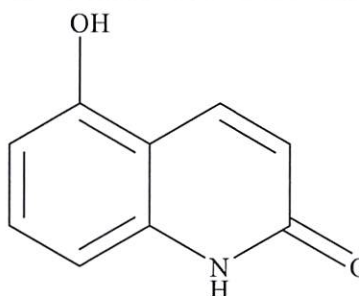
Certificate of Analysis

Certificate No.: 20220928025

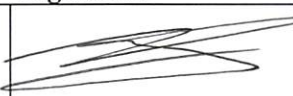

Date: September 28, 2022

Retest date: September 26, 2025

Compound Name: Brexpiprazole Impurity 9	
Synonyms:	5-hydroxyquinolin-2(1H)-one
TLC Catalogue Number:	B-115011
CAS Number:	31570-97-5
Molecular Weight:	161.16
Molecular Formula:	C ₉ H ₇ NO ₂
Source:	TLC Pharmaceutical Standards
Source Lot No.:	5234-054A11
Storage Conditions:	Store at 2-8 °C
Solubility:	DMF, DMSO



Test Description	Specifications	Results
Visual Description	Pale brown solid	Conforms
Identification		
IR	Conforms to structure	Conforms
MS	Conforms to structure	Conforms
¹H NMR	Conforms to structure	Conforms
Purity (HPLC)	Not less than 95.0%	99.4%
Impurity (HPLC)	RT 12.42, 0.23%	
Water Content (KF)	N/A	0.1%
Residual Solvents (NMR)	2.1% dimethylformamide	
Assay (%)	Not less than 90.0%	97.2%
Recommendation:	Release.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		09 / 29 / 2022
Approved by:	Quality Assurance		09 / 29 / 2022

Attachments: HPLC, IR, MS and NMR spectra.