

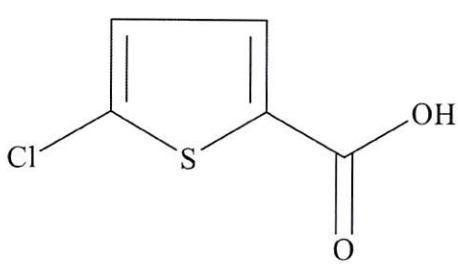
Certificate of Analysis

Certificate No.: **20240711503**


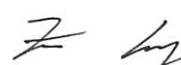
Date: July 11, 2024

Retest date: July 9, 2027

Compound Name: Rivaroxaban EP Impurity F	
Synonyms:	5-chlorothiophene-2-carboxylic acid
TLC Catalogue Number:	R-2918
CAS Number:	24065-33-6
Molecular Weight:	162.59
Molecular Formula:	C ₅ H ₃ ClO ₂ S
Source:	TLC Pharmaceutical Standards
Source Lot No.:	1670-044A1
Storage Conditions:	Store at 2-8 °C
Solubility:	DMSO



Test Description	Specifications	Results
Visual Description	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%	99.9%
Impurity (HPLC)	N/A	
Water Content (KF)	N/A	0.5%
Residual Solvents (NMR)	No residual solvent	
Assay (%)	Not less than 90.0%	99.4%
Recommendation:	Release.	

Name	Department	Signature	Date
Reviewed and approved by:	Quality Control		07/12/2024
Approved by:	Quality Assurance		07/12/2024

Attachments: HPLC, IR, MS and NMR spectra.