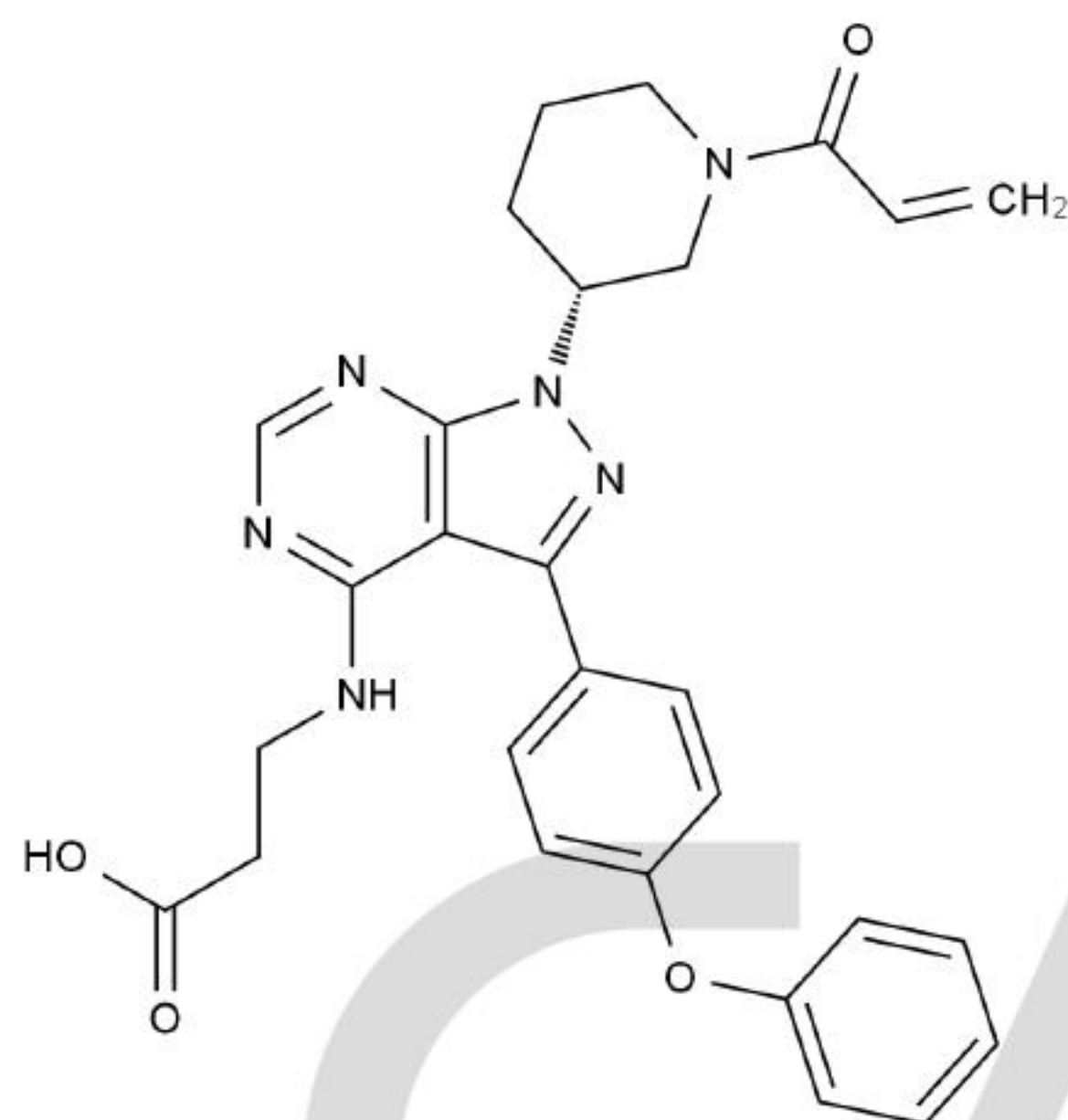


Certificate of Analysis

Reference Material

Product Name:	Ibrutinib Impurity 50	Catalogue Number:	C4X-106450
Chemical Name:	N/A	Lot Number:	1019-RD-0011
CAS Number:	N/A	Expiry Date:	May 31, 2027
Molecular Formula:	C ₂₈ H ₂₈ N ₆ O ₄	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	512.56		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White to Off-White Solid
Identification	HRMS&HNMR	Confirmed
Purity	HPLC	98.43%
Loss On Drying	TGA	0.39%
Assay		98.0%

Comment:

The calculation of the 100% method follows the formula (calculated on the non-dried basis):

Assay (%) = (100% - Loss On Drying) * Purity HPLC (%) / 100%

Loss On Drying is considered as absolute effect, HPLC purity is considered as relative effect.

Signature:

Prepared by:

Hinlam

Reviewed by:

Xenia

Aporoved by General manager:

David

Date: Jul 28, 2022

Date: Oct 24, 2022

Date: Oct 24, 2022

