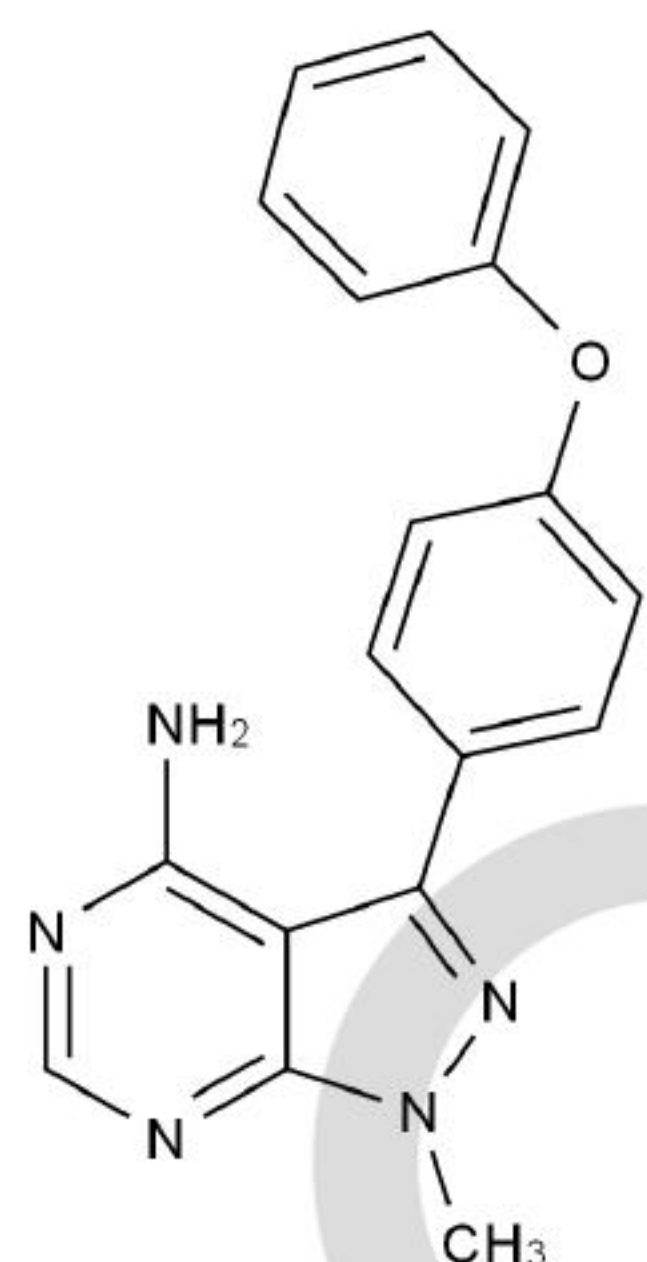


Certificate of Analysis

Reference Material & Standard

Product Name:	Ibrutinib Impurity 15	Catalogue Number:	C4X-106415
Synonyms:	N/A	Lot Number:	0513-RD-0030
CAS Number:	2213398-75-3	Expiry Date:	Jan 19, 2028
Molecular Formula:	C18H15N5O	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	317.34		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	99.521%
Loss On Drying	TGA	0.0226%
Assay		99.5%

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:

Koi

Reviewed by:

Lisa

Approved by General Manager:

David

Date: Jan 20, 2025

Date: Jan 21, 2025

Date: Jan 21, 2025

