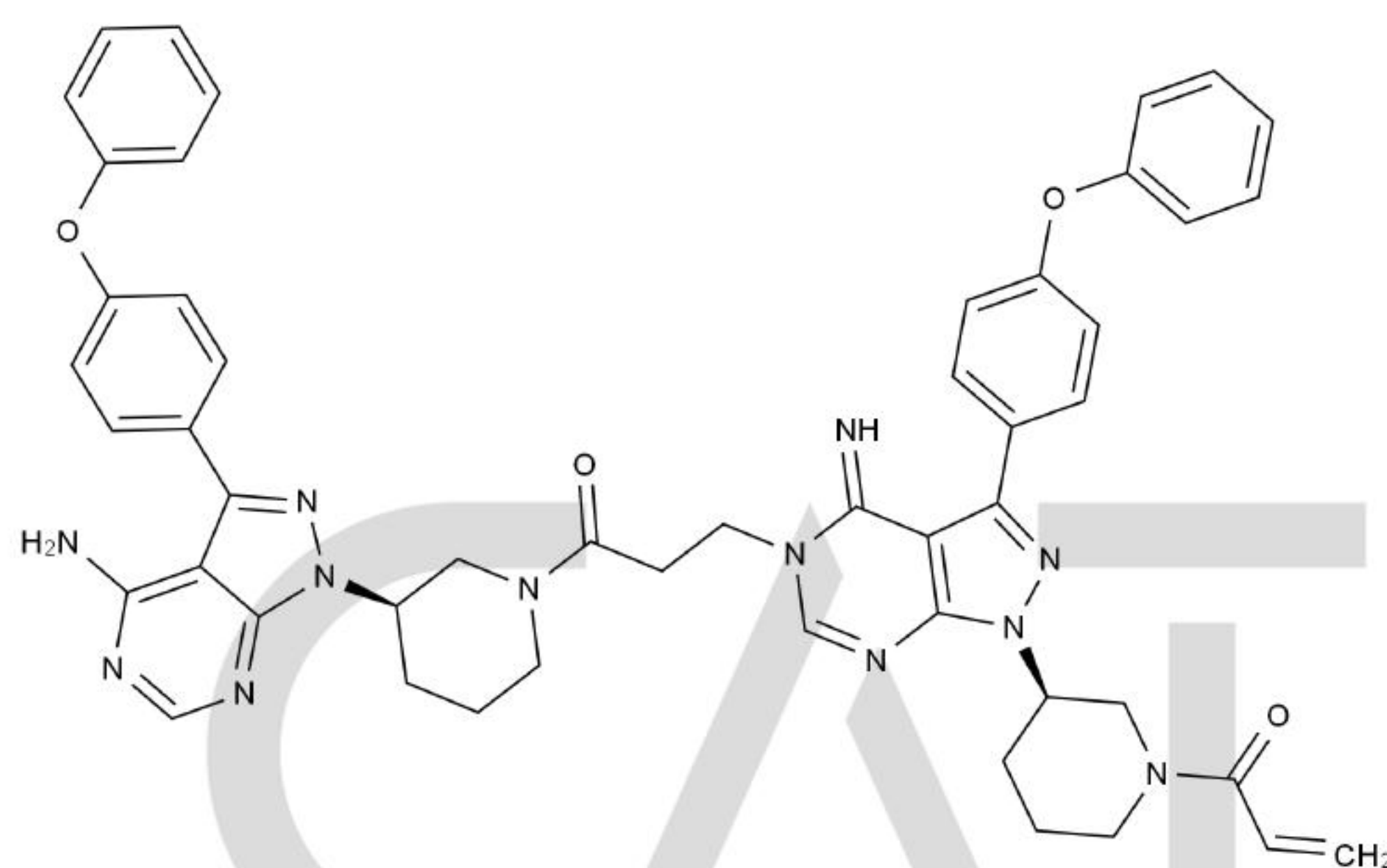


Certificate of Analysis

Reference Material & Standard

Product Name:	Ibrutinib Impurity 18	Catalogue Number:	C4X-106418
Synonyms:	N/A	Lot Number:	0526-RG-0045
CAS Number:	2417548-76-4	Expiry Date:	May 22, 2028
Molecular Formula:	C ₅₀ H ₄₈ N ₁₂ O ₄	Storage:	-20°C±5°C Protected from light and Sealed
Molecular Weight:	880.99		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	White Solid
Identification	LCMS&IR&UV&HNMR	Confirmed
Purity	HPLC	96.781%
Water Content	Karl Fischer	0.16%
Residual Solvents	NMR	0.78% n-hexane; 2.25% ethyl acetate and 0.79% dichloromethane
Assay		92.9%

Comment:

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

Assay (%) = (100% - Water Content - Residual Solvents) * Purity HPLC (%) / 100%

Water Content and Residual Solvents are considered as absolute effect, HPLC purity is considered as relative effect.

Signature:

Prepared by:

Lily

Reviewed by:

Hinlam

Approved by General Manager:

David

Date: May 27, 2025

Date: May 27, 2025

Date: May 27, 2025

