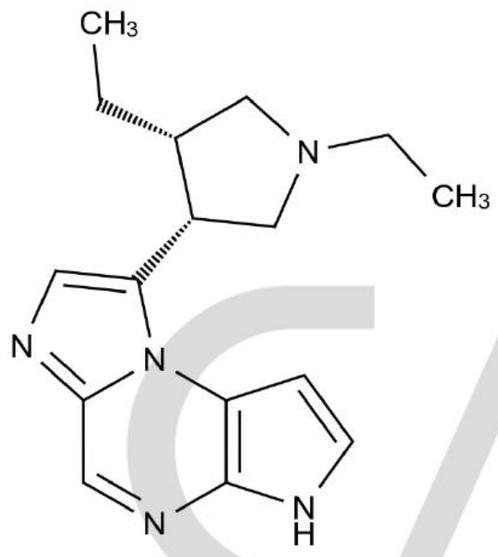
Certificate of Analysis

Reference Material & Standard

Product Name:	Upadacitinib Impurity 110	**Catalogue Number:**	C4X-2405110
Synonyms:	N/A	**Lot Number:**	1019-RH-0050
CAS Number:	N/A	**Expiry Date:**	Oct 20, 2030
Molecular Formula:	$C_{16}H_{21}N_5$	**Storage:**	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	283.37	**Shipping Condition:**	Shipping at Room Temperature
Solubility:	Acetonitrile		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Light Yellow Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	98.849%
Loss on Drying	TGA	0.5234%
Assay	Mass Balance	98.3%

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Comment:

The calculation of the mass balance 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: Alice Date: Oct 21, 2026

Reviewed by: Koi Date: Oct 21, 2026

Approved by General Manager: David Date: Oct 21, 2026

CATO Research Chemicals Inc.