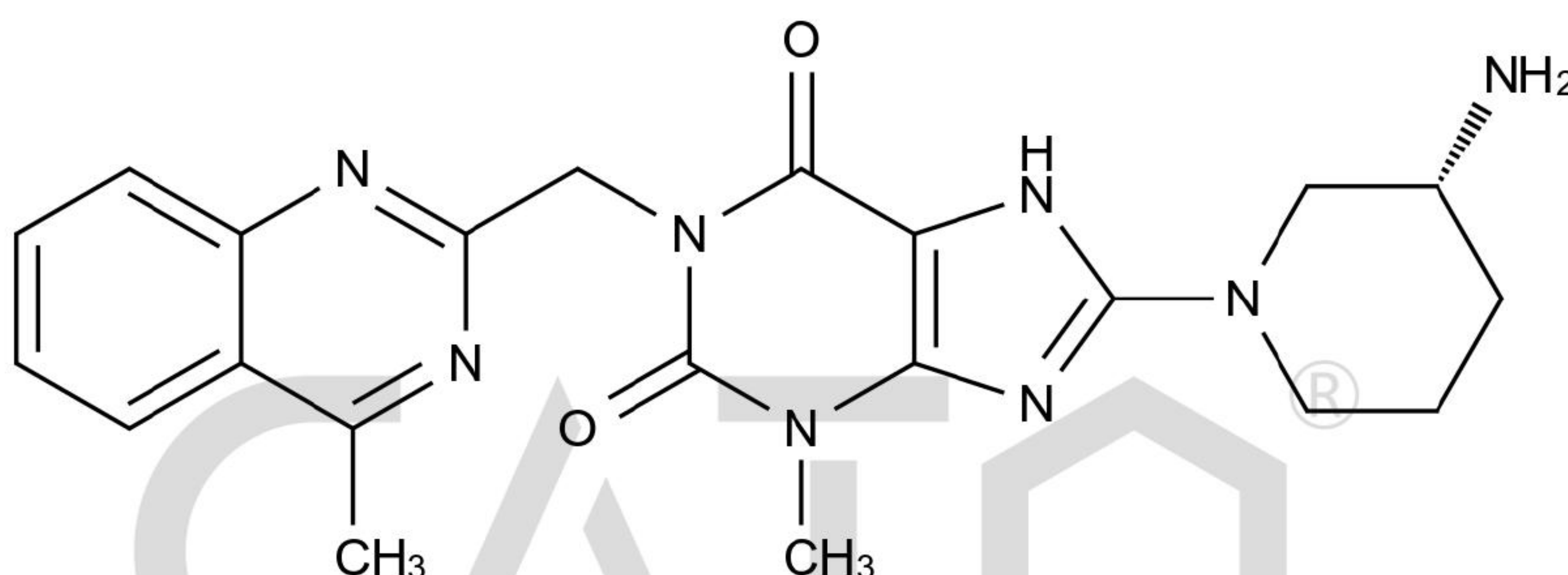


Certificate of Analysis

Reference Material & Standard

Product Name:	Linagliptin Impurity 89	Catalogue Number:	C4X-110189
Synonyms:	N/A	Lot Number:	0821-RG-0053
CAS Number:	N/A	Expiry Date:	Aug 24, 2029
Molecular Formula:	C ₂₁ H ₂₄ N ₈ O ₂	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	420.47		

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Off-White Solid
Identification	LCMS&HNMR	Confirmed
Purity	HPLC	98.573%
Loss On Drying	TGA	1.8148%
Assay		96.8%

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:

Nice

Reviewed by:

Koi

Approved by General Manager:

David

Date: Aug 25, 2025

Date: Aug 25, 2025

Date: Aug 25, 2025

