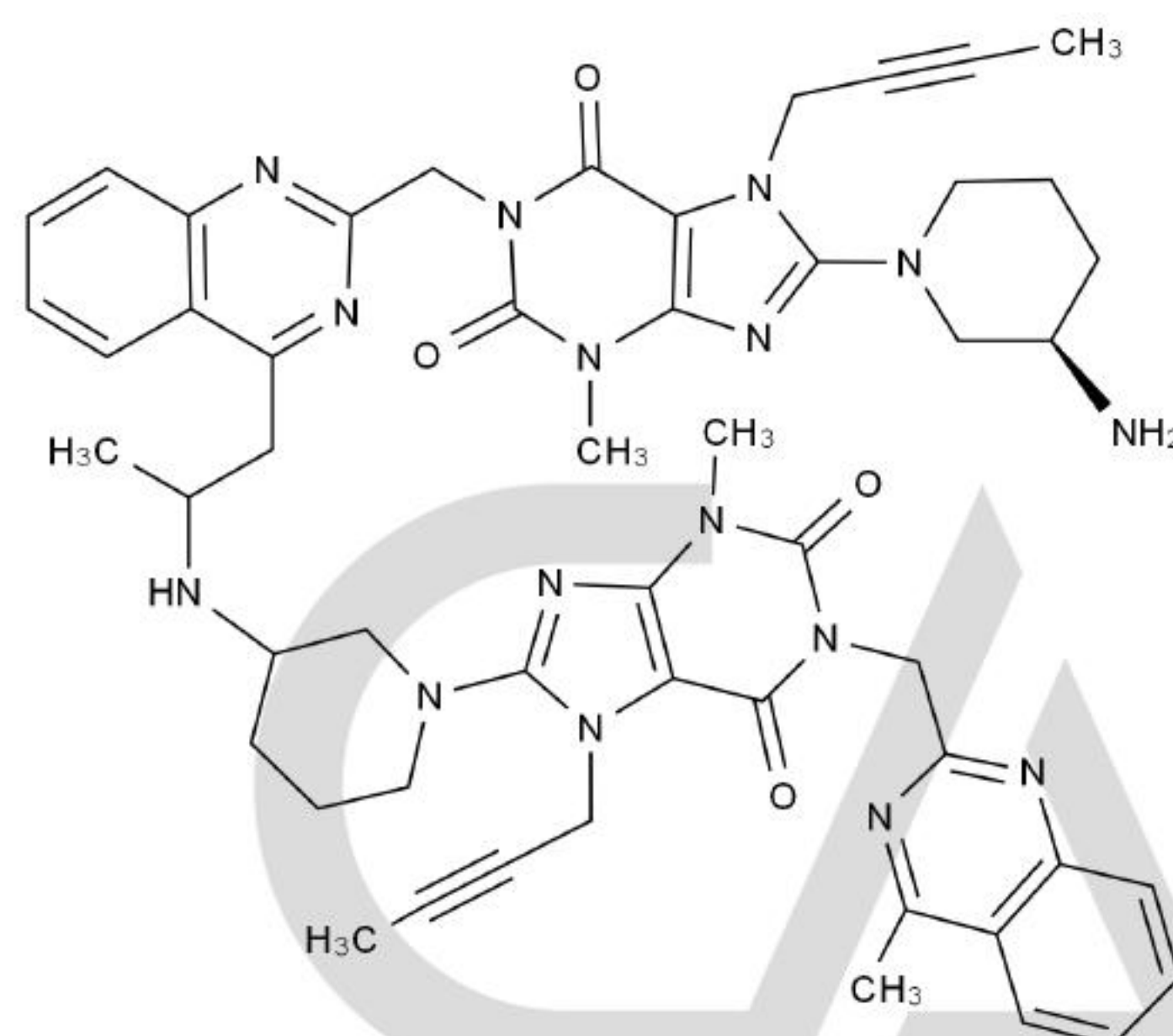


Certificate of Analysis

Reference Material & Standard

Product Name:	Linagliptin Impurity 76 (Mixture of Diastereomers)	Catalogue Number:	C4X-110176
Synonyms:	N/A	Lot Number:	0226-RH-0016
CAS Number:	N/A	Expiry Date:	Jun 16, 2028
Molecular Formula:	C ₅₂ H ₅₈ N ₁₆ O ₄	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	971.12	Shipping Condition:	Shipping at Room Temperature

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Yellow Solid
Identification	LCMS&IR&HNMR	Confirmed
Purity	HPLC	95.92%
Water Content	Karl Fischer	3.50%
Residual Solvents	NMR	0.1% dichloromethane
Assay		92.5%

Comment:

The calculation of the mass balance 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:

Reviewed by:

Approved by General Manager:

Date: Mar 02, 2026

Date: Mar 02, 2026

Date: Mar 02, 2026



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