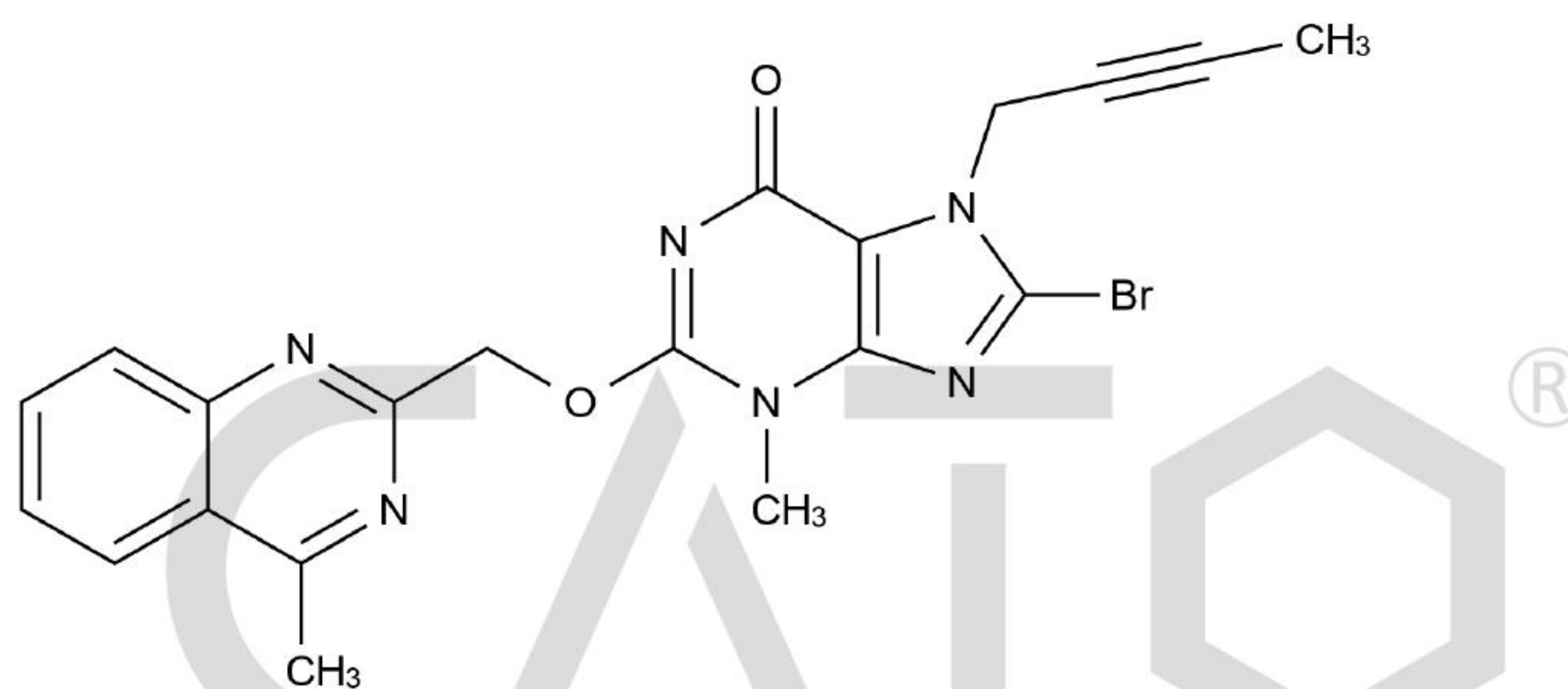


Certificate of Analysis

Reference Material & Standard

Product Name:	Linagliptin Impurity 80	Catalogue Number:	C4X-110180
Synonyms:	N/A	Lot Number:	1012-RH-0146
CAS Number:	2446799-71-7	Expiry Date:	Mar 29, 2030
Molecular Formula:	C ₂₀ H ₁₇ BrN ₆ O ₂	Storage:	2°C ~ 8°C Protected from light and Sealed
Molecular Weight:	453.29	Shipping Condition:	Shipping at Room Temperature

Chemical Structure:



Test Items	Method	Results
Appearance	Visual inspection	Pale Yellow Solid
Identification	LCMS&UV&CNMR&HNMR	Confirmed
Purity	HPLC	99.557%
Water Content	Karl Fischer	0.34%
Residual Solvents	NMR	1.17% dimethyl sulfoxide
Assay	Mass Balance	98.1%

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: Oct 13, 2026

Date: Oct 14, 2026

Date: Oct 14, 2026



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