

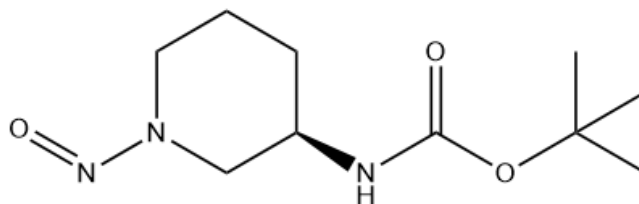
## Certificate of Analysis

**Catalogue Number**

KL-06-00334

**Lot Number**

KLP0112AK01

**Structure**

**Product Name**

N-Nitroso Linagliptin Impurity 48

**Synonyms**

tert-butyl (R)-(1-nitrosopiperidin-3-yl)carbamate

**CAS Number**

3031851-92-7

**Molecular Formula**
 $C_{10}H_{19}N_3O_3$ 
**Molecular Weight**

229.28 g/mol

**Mfg. Date**

20-11-2025

**Re-Test Date**

19-11-2028

**Shipping Condition**

All Product are stable to be shipped at room temperature, unless otherwise specified.

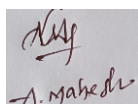
**Long Term Storage Conditions**

2°C ~ 8°C Protected from light and Sealed

**Analytical Information**

Test	Specifications	Results
Appearance	Pale Yellow Solid	Pale Yellow to Pale Brown Solid
Solubility	Soluble in DMSO, Methanol	Conforms
Purity by HPLC	Not less than 90.00%	99.70%
Identification by $^1\text{H}$ NMR	Conforms to structure	Complies
Identification by Mass	Conforms Molecular Weight	Complies
Identification by IR	Conform functional groups	Complies
Weight Content By TGA	Not specified	0.054%
Residue of Ignition By TGA	Not specified	0.083%
Potency	Not specified	99.56%

Prepared by



Reviewed &amp; Approved by



Note: Use for research &amp; analytical purpose only. Not for human consumption

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