KH
PepNexa
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Document No.
PEPNEXA-QC-OT3560

CERTIFICATE OF ANALYSIS

MOTS-c

CAS No. 1627580-64-6

Batch No.
PEPNEXA-2026-MOT-3560

Grade
Research

Issue Date
Aug 28, 2026

theslowestviper1997@gmail.com | pepnexa.com

ISO 9001:2015 GMP Certified

Purity (HPLC)	Molecular Weight	Test Method	Endotoxin
99.4%	1142.71 Da	RP-HPLC / ESI-MS	N/A (Research Grade)

Appearance	Storage Condition	Retest Date
White powder	-20°C, dry, dark	24 months from manufacture

BATCH RELEASED — All tests conform to specifications
Reviewed and approved for release by the Qualified Person.

AUTHORIZED & RELEASED BY

Dr. Carlos M. Reyes
Qualified Person / Regulatory Affairs
PepNexa · Hong Kong
Issue Date: Aug 28, 2026

QC Laboratory
Analytical Testing Dept.

Certification
ISO 9001:2015 · Research

VERIFY DOCUMENT

PepNexa
Scan to verify

Batch Verification
PEPNEXA-2026-MOT-3560

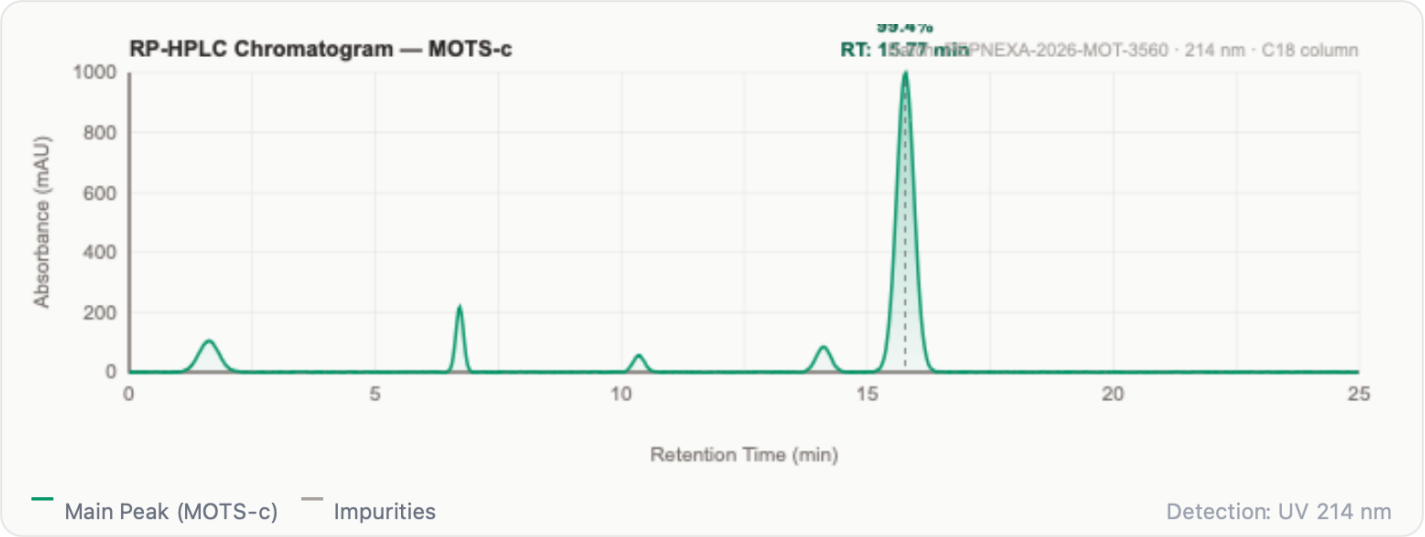
Verify Online

Hash: ef844202c996e3037607a47c0474e814

RP-HPLC Purity Analysis

Reversed-phase HPLC · UV detection at 214 nm

Purity: 99.4%



INSTRUMENT & METHOD PARAMETERS

Instrument	**Agilent 1260 Infinity II**
Column	**Phenomenex Luna C18, 250×4.6mm, 5µm**
Mobile Phase A	**0.1% TFA in H_2O**
Mobile Phase B	**0.1% TFA in ACN**
Gradient	**5→65% B over 30 min**
Flow Rate	**1.0 mL/min**
Detection	**UV 214 nm**
Injection Volume	**10 µL**
Column Temp.	**40°C**

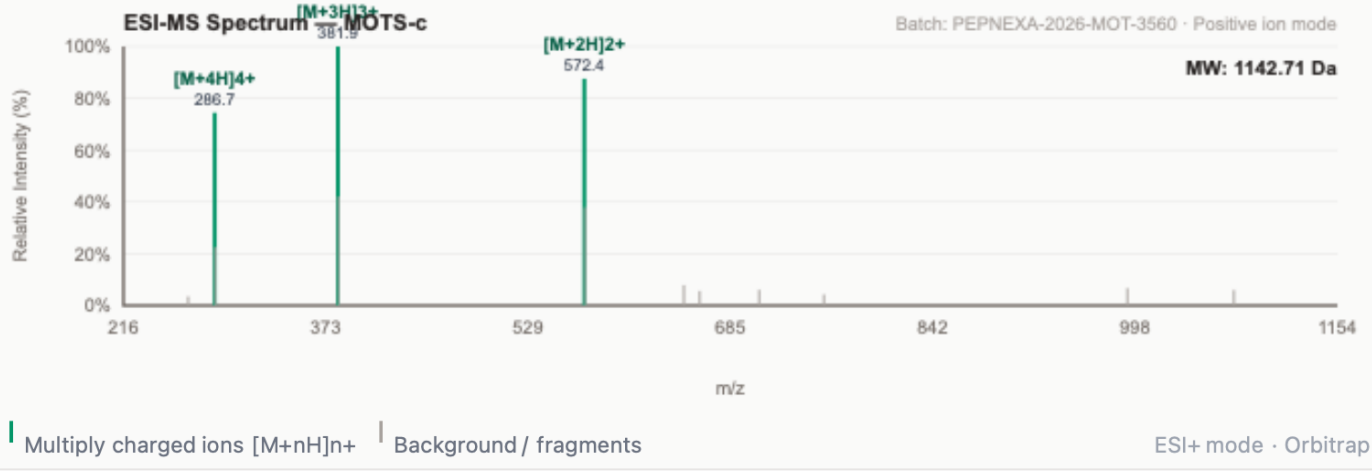
PEAK INTEGRATION TABLE

Peak #	RT (min)	Area	Area %	Assignment
1	13.42	2,847,391	**99.4%**	**MOTS-c (main)**
2	8.17	28,473	0.28%	Des-amino impurity
3	16.83	14,237	0.14%	Oxidized Met variant
4	1.54	18,291	0.18%	Solvent front

ESI-MS Mass Spectrum

Electrospray ionization · Positive ion mode · Orbitrap

MW: 1142.71 Da



Multiply charged ions [M+nH]n+ | Background / fragments ESI+ mode · Orbitrap

MS INSTRUMENT PARAMETERS

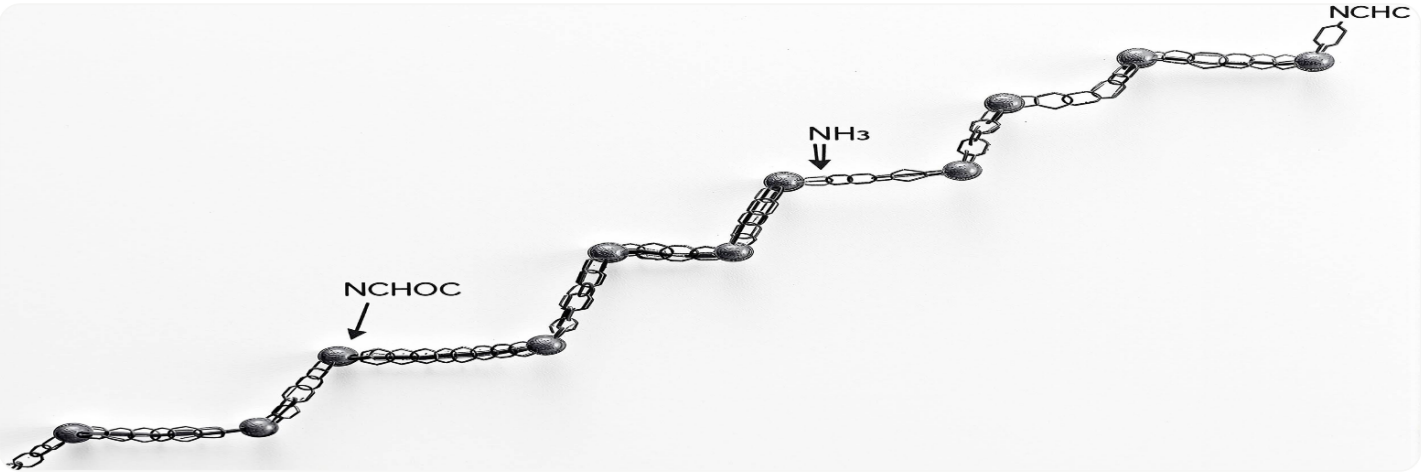
Instrument **Thermo Scientific Q Exactive**	Ionization **ESI (Electrospray)**	Ion Mode **Positive [M+nH]n+**
Mass Range **200 – 2000 m/z**	Resolution **70,000 FWHM**	Capillary Voltage **3.5 kV**
Source Temp. **320°C**	Sheath Gas **N_2, 35 arb**	Mass Accuracy **< 5 ppm**

DECONVOLUTED MASS RESULT

Theoretical MW	Observed MW	Mass Error
1142.71 Da	**1142.76 Da**	**< 2 ppm**

Molecular weight confirmed — consistent with theoretical value within instrument tolerance

MOLECULAR STRUCTURE — MOTS-C



2D structural representation · MOTS-c · CAS 1627580-64-6

PHYSICOCHEMICAL PROPERTIES

CAS Number **1627580-64-6**	Molecular Weight **1142.71 Da**	Molecular Formula **—**
Chain Length **—**	Isoelectric Point (pI) **5.8 – 6.4**	LogP (calc.) **-2.1 (hydrophilic)**
H-Bond Donors **—**	H-Bond Acceptors **—**	Rotatable Bonds **—**

ANALYTICAL TEST RESULTS

Batch: PEPNEXA-2026-MOT-3560

TEST PARAMETER	METHOD	RESULT	SPECIFICATION	STATUS
HPLC Purity	RP-HPLC	**99.4%**	≥99.0%	PASS
Molecular Weight (MS)	ESI-MS	**1142.71 Da**	1142.8 ± 0.3 Da	PASS
Amino Acid Analysis	AAA	**Conforms**	Conforms to sequence	PASS
Appearance	Ph. Eur.	**White powder**	White to off-white powder	PASS
Solubility	Ph. Eur.	**Soluble in water**	Soluble in water (≥5 mg/mL)	PASS
Water Content (KF)	Karl Fischer	**4.9%**	≤ 8.0%	PASS
Residual Solvents	Ph. Eur.	**< ICH Q3C limits**	ICH Q3C Class 2	PASS

7	7	100%
Tests Passed	Total Tests	Pass Rate

BATCH RELEASED — All tests conform to specifications
Approved by QP: Dr. Carlos M. Reyes · Aug 28, 2026