KH
PepNexa
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Document No.
PEPNEXA–QC–AD8061

CERTIFICATE OF ANALYSIS

NAD+

CAS No. 53-84-9

Batch No.
PEPNEXA-2026-NAD-8061

Grade
GMP

Issue Date
Aug 20, 2026

theslowestviper1997@gmail.com | pepnexa.com

ISO 9001:2015 GMP Certified

Purity (HPLC)	Molecular Weight	Test Method	Endotoxin
99.3%	663.49 Da	RP-HPLC / ESI-MS	< 0.2 EU/mg

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. Priya Nair
Analytical Chemistry Lead
PepNexa · Hong Kong
Issue Date: Aug 20, 2026

QC Laboratory
Analytical Testing Dept.

Certification
ISO 9001:2015 · GMP

VERIFY DOCUMENT

PepNexa
Scan to verify

Batch Verification
PEPNEXA-2026-NAD-8061

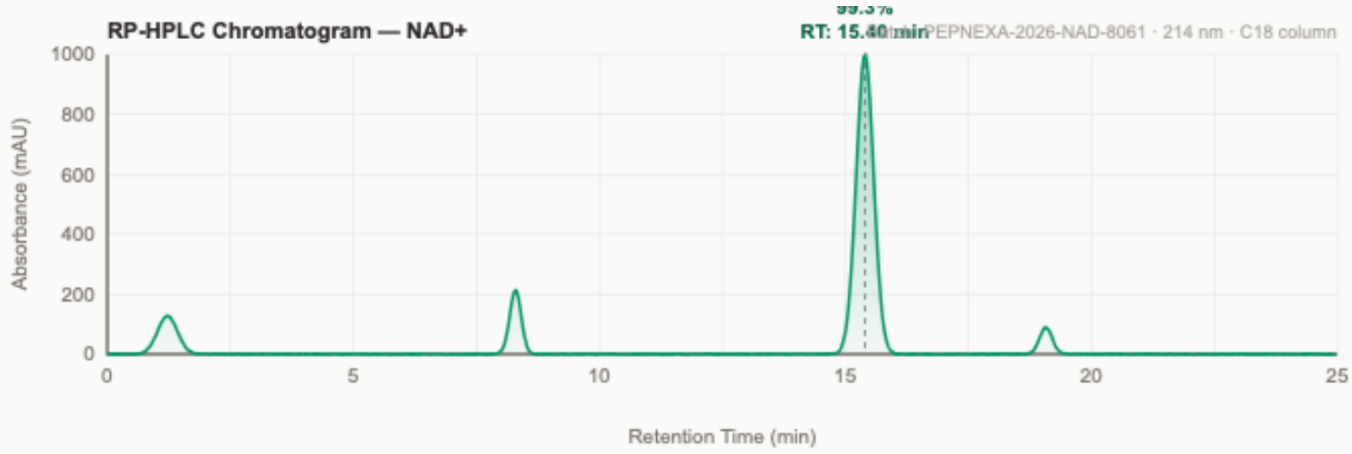
Verify Online

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RP-HPLC Purity Analysis

Reversed-phase HPLC · UV detection at 214 nm

Purity: 99.3%



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

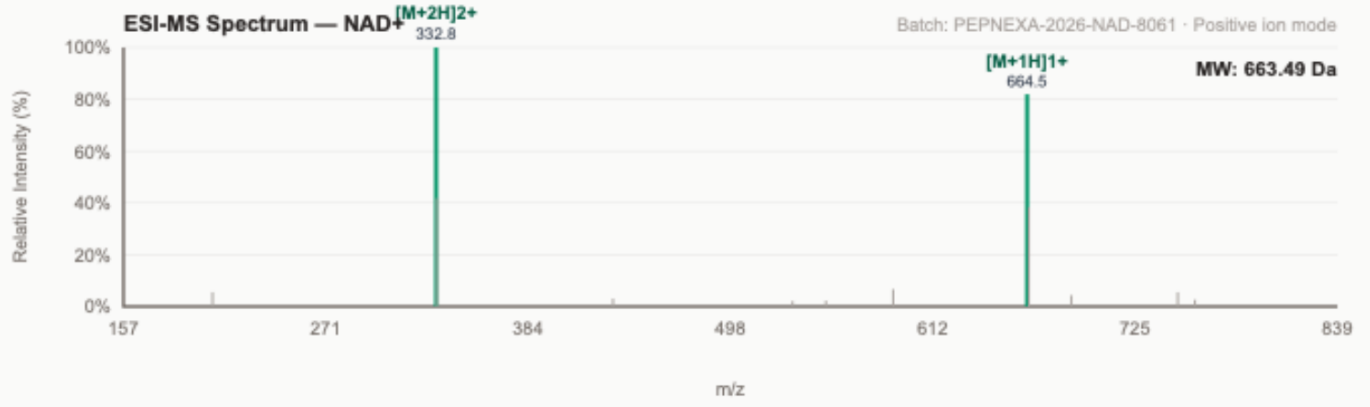
PEAK INTEGRATION TABLE

Peak #	RT (min)	Area	Area %	Assignment
1	13.42	2,847,391	**99.3%**	**NAD+ (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: 663.49 Da



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

MS INSTRUMENT PARAMETERS

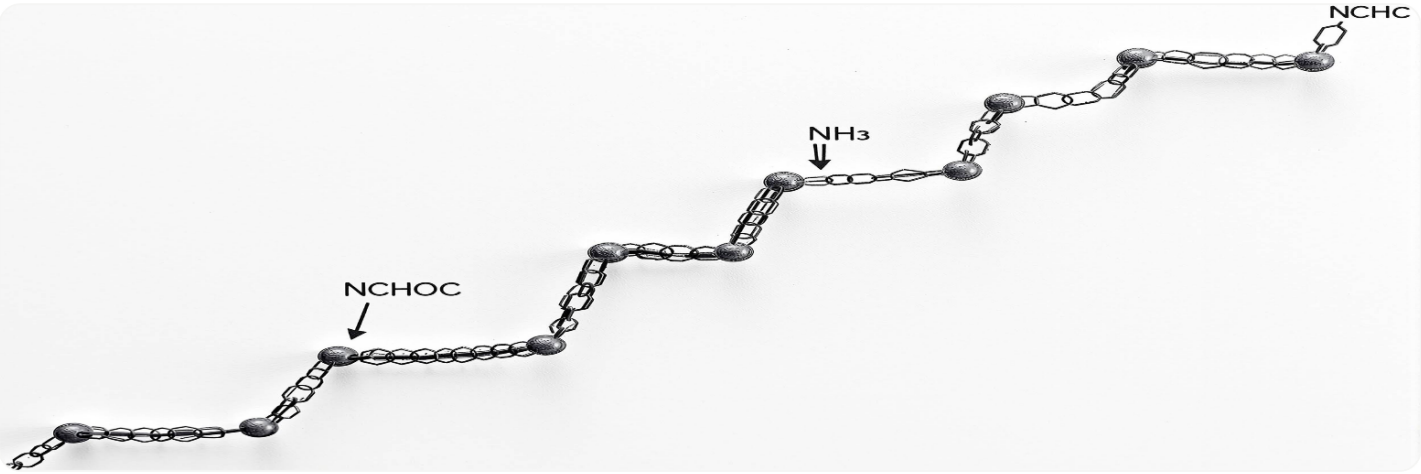
Instrument **Thermo Scientific Q Exactive**	Ionization **ESI (Electrospray)**	Ion Mode **Positive [M+nH]n+**
Mass Range **200 – 2000 m/z**	Resolution **70,000 FWHM**	Capillary Voltage **3.5 kV**
Source Temp. **320°C**	Sheath Gas **N_2, 35 arb**	Mass Accuracy **< 5 ppm**

DECONVOLUTED MASS RESULT

Theoretical MW	Observed MW	Mass Error
663.49 Da	**663.39 Da**	**< 2 ppm**

Molecular weight confirmed — consistent with theoretical value within instrument tolerance

MOLECULAR STRUCTURE — NAD+



2D structural representation · NAD+ · CAS 53-84-9

PHYSICOCHEMICAL PROPERTIES

CAS Number **53-84-9**	Molecular Weight **663.49 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-NAD-8061

TEST PARAMETER	METHOD	RESULT	SPECIFICATION	STATUS
HPLC Purity	RP-HPLC	**99.3%**	≥99.0%	PASS
Molecular Weight (MS)	ESI-MS	**663.49 Da**	663.4 ± 0.3 Da	PASS
Nucleotide Identity	Ph. Eur.	**Conforms**	Conforms to reference	PASS
Endotoxin (LAL)	LAL	**0.18 EU/mg**	< 0.5 EU/mg	PASS
Appearance	Ph. Eur.	**White powder**	White to off-white powder	PASS
Water Content (KF)	Karl Fischer	**3.5%**	≤ 6.0%	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. Priya Nair · Aug 20, 2026