Gold Standard Analytics

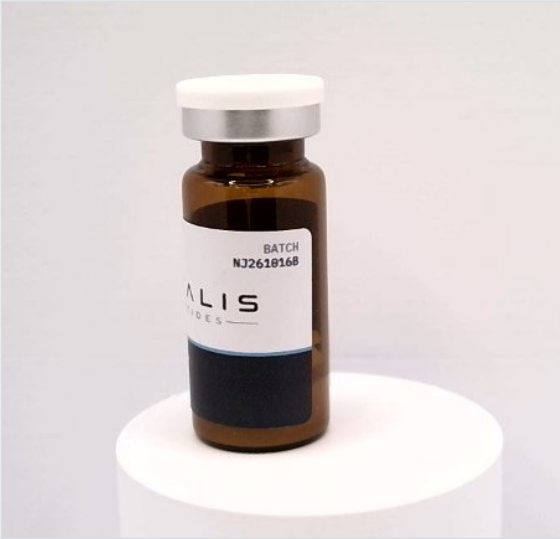
Gold Standard Analytics LLC, Houston, TX

CERTIFICATE OF ANALYSIS

Report GSA-COA-000092-09201-20261118 · issued Nov 18, 2026

Vitalis Peptides

PRODUCT	ORDER	SAMPLE
NAD+	GSA-2026-000092	092-01
LABEL	**LOT**	**ISSUED**
Vitalis Peptides, batch NJ261016B	NJ261016B	Nov 18, 2026



THE SAMPLE AS RECEIVED

IDENTITY

NAD+

confirmed by mass

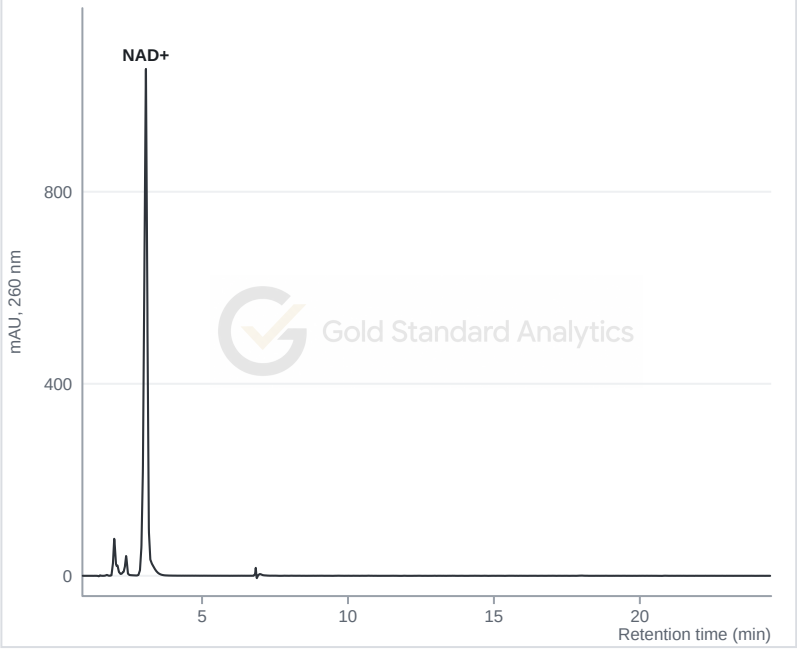
PURITY

94.7 %

HPLC-UV, 260 nm

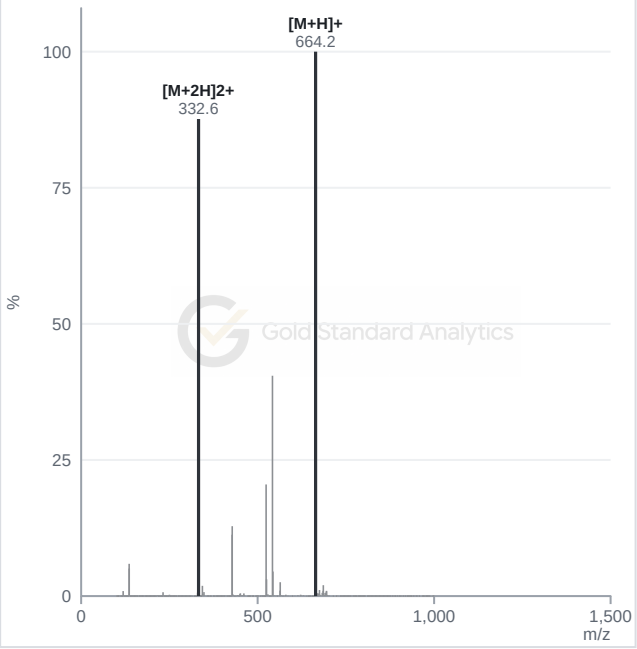
HPLC CHROMATOGRAM

UV, 260 nm



MASS SPECTRUM

main peak (3.08 min)



RELEASED BY

Ian Ebert

Laboratory Director · Nov 19, 2026

Scan to verify

goldstandardanalytics.com/coa/

Results are not covered by ISO/IEC 17025 accreditation. Results relate only to the sample as received and tested.

The sample

Order GSA-2026-000092 · Sample 092-01 · Vitalis Peptides

Customer	**Vitalis Peptides**	Lot	**NJ261016B**
Order	**GSA-2026-000092**	Prepared	**16 Nov 2026**
Sample	**092-01**	Tested	**18 Nov 2026**
Label	**Vitalis Peptides, batch NJ261016B**	Tests	**Identity, Purity**

Graphs

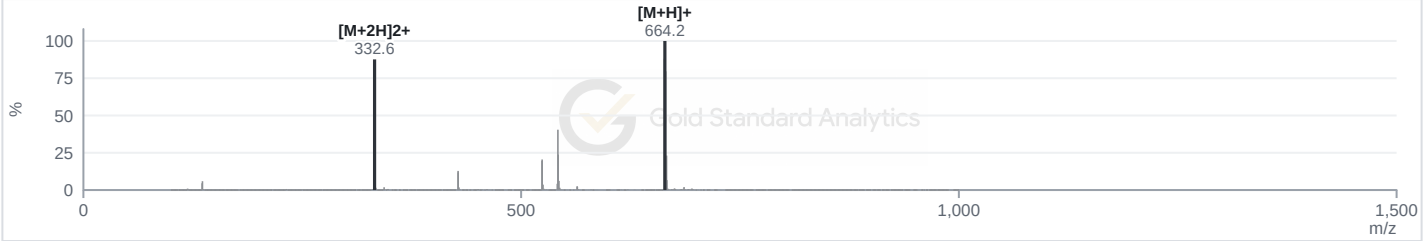
HPLC CHROMATOGRAM

HPLC chromatogram (UV, 260 nm) · mAU, 260 nm against Retention time (min)



MASS SPECTRUM

Mass spectrum of the main peak (3.08 min) · Counts against m/z



Results

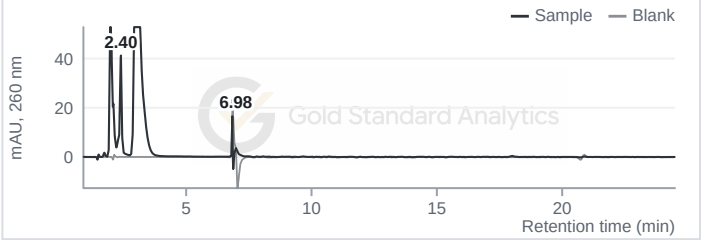
Identity **Consistent with NAD+.** The main peak is NAD+ at 3.08 min (m/z 664.2 and m/z 332.6; measured mass 663.2, expected 663.4).

Purity **94.7 %** by HPLC with UV detection at 260 nm (share of the total peak area), the mean of two injections (95.3 % and 94.1 %). 3 impurities were found and are listed below. Unexplained peaks count above about 0.6 % of the NAD+ peak height; breakdown products of NAD+ identified by mass count down to about 0.05 % of it. The vial also contains a sugar alcohol such as mannitol (a common vial filler), seen by mass at the start of the run; it is not counted in purity. The sharp feature at about 7 min comes from the instrument, not the sample: it appears in every run, blank solvent included.

Zoomed views

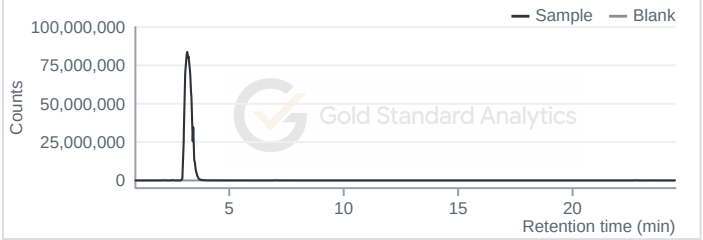
HPLC, SMALL PEAKS

Zoomed in on the small peaks (5 % of the main peak) · mAU, 260 nm against Retention time (min)



ION TRACE

Ion trace, m/z 664.1 (NAD+ [M+H]+): sample vs blank · Counts against Retention time (min)



Impurities

Every peak other than NAD+ that was counted:

PEAK (MIN)	AMOUNT	WHAT IT IS
1.99	2.7 %	ADP-ribose (mass 559), a breakdown product of NAD+: NAD+ that has lost its nicotinamide part.
2.40	2.1 %	Nicotinamide (mass 122), a breakdown product of NAD+.
6.98	0.53 %	A substance related to NAD+ (ion at m/z 603.2); its exact structure is unknown.

Amounts are each peak's share of the total UV peak area at 260 nm, the mean of the two injections.

How it was tested

Liquid chromatography with UV and mass-spectrometry detection: Agilent 1290 Infinity II LC with a 6490 triple-quadrupole mass spectrometer. Column Polaris C18-A, 2.0 x 150 mm, 45 °C; water and acetonitrile, each with 0.1 % formic acid. Purity: UV peak area at 260 nm, where NAD+ absorbs, after subtracting a blank run in the same sequence; two injections. Identity: molecular mass from the mass spectrum. 1 µL injected; autosampler at 12 °C.

Notes

Results apply only to the sample as received and tested.

Release

This report is signed electronically at release. The signature is printed on page 1, and the release record, added as the last page, gives the date and the verification code.

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Release record

Report GSA-COA-000092-09201-20261118 · Certificate GSA-2026-451678

Customer and order	Vitalis Peptides · GSA-2026-000092
Sample and report	092-01 · NAD+ Certificate of Analysis
Report reference	GSA-COA-000092-09201-20261118
Certificate accession	GSA-2026-451678
Released and signed by	Ian Ebert, Laboratory Director
Date and time (UTC)	2026-11-19 00:45:51Z
Signature meaning	Approved for release. The signer reviewed this report and approved its release to its customer.
Approval reference	5e30ad92-5174-448f-b18e-a0ef6fb9734d
Electronic signature	Signed electronically in a signed-in GSA staff account.
Original report SHA-256	13ef28f126a7f149fe18567dce9edc47feec03a0174b868adddf6e77cb80a412
Verify this certificate	https://goldstandardanalytics.com/coa/GSA-2026-451678

Scan to view this certificate online

Signature



Ian Ebert, Laboratory Director