Gold Standard Analytics

Gold Standard Analytics LLC, Houston, TX

CERTIFICATE OF ANALYSIS

Report GSA-COA-000134-13406-20261125 · issued Nov 25, 2026

Jason Leslie Bradshaw

PRODUCT	ORDER	SAMPLE
Thymosin Alpha-1	GSA-2026-000134	134-06

ISSUED
Nov 25, 2026



THE SAMPLE AS RECEIVED

IDENTITY

Thymosin alpha-1

confirmed by mass

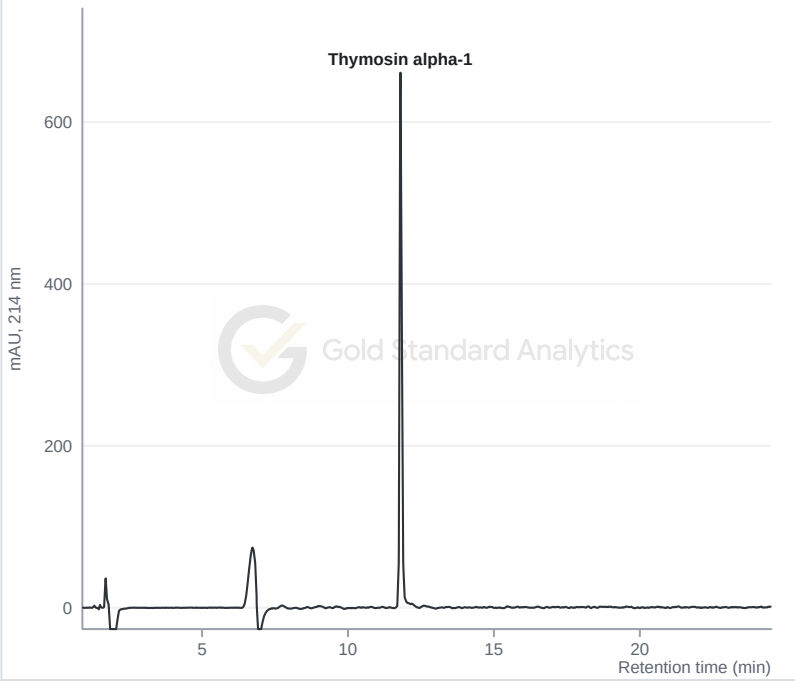
PURITY

99.77 %

HPLC-UV, 214 nm, mean of 2 injections

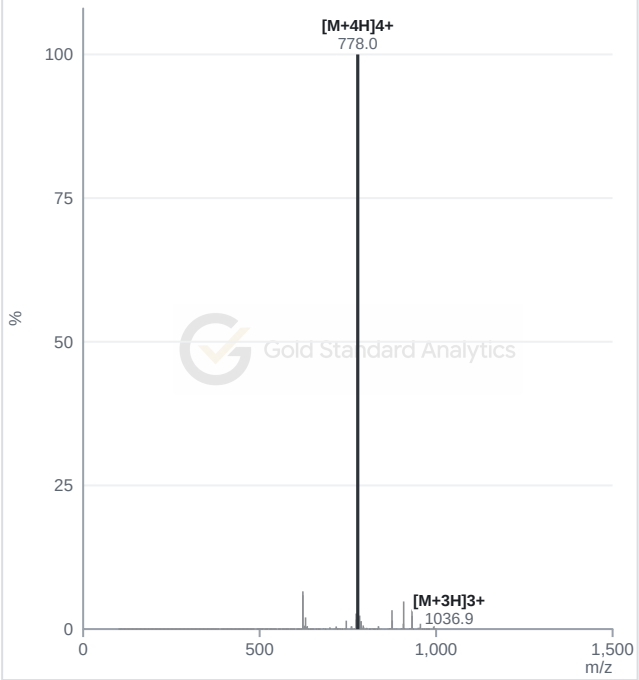
HPLC CHROMATOGRAM

UV, 214 nm



MASS SPECTRUM

main peak (11.80 min)



RELEASED BY

Ian Ebert
Laboratory Director · Nov 25, 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

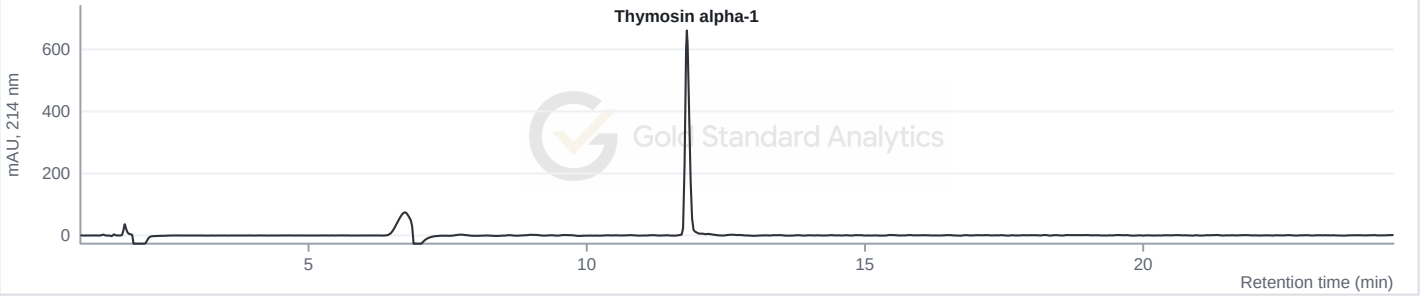
Order GSA-2026-000134 · Sample 134-06 · Jason Leslie Bradshaw

Customer	**Jason Leslie Bradshaw**	Prepared	**24 Nov 2026**
Order	**GSA-2026-000134**	Tested	**25 Nov 2026**
Sample	**134-06**	Tests	**Identity, Purity**
Label	**Blue Zone Pet Peptides, Thymosin Alpha 1 10 mg**		

Graphs

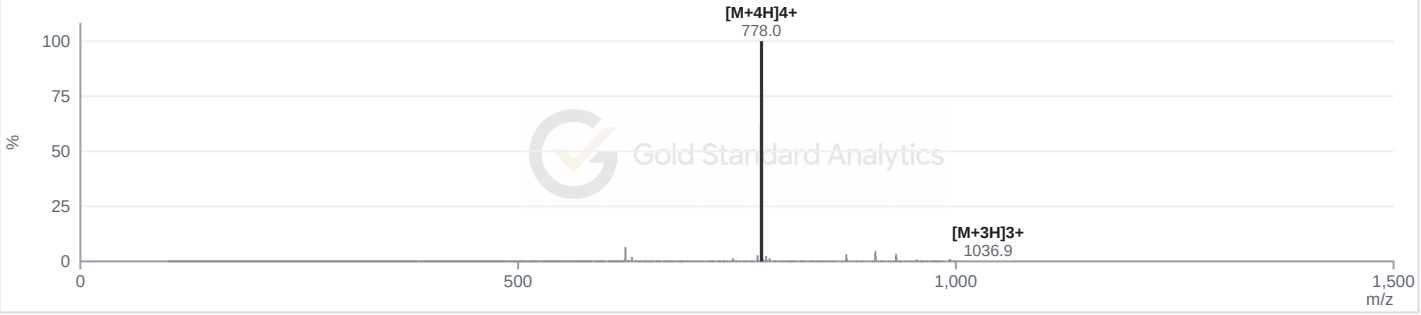
HPLC CHROMATOGRAM

HPLC chromatogram (UV, 214 nm) · mAU, 214 nm against Retention time (min)



MASS SPECTRUM

Mass spectrum of the main peak (11.80 min) · Counts against m/z



Results

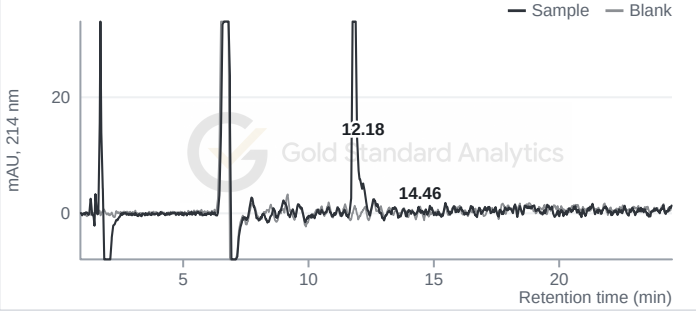
Identity **Consistent with thymosin alpha-1.** The main peak is thymosin alpha-1 at 11.80 min (m/z 1036.9 and m/z 778.0; measured mass 3,107.8, expected 3,108.3).

Purity **99.77 %** by HPLC with UV detection at 214 nm (share of the total peak area), the mean of two injections (99.73 % and 99.81 %). 2 impurities were found and are listed below: forms of the peptide identified by mass, which are counted at any size. Other peaks count above about 0.65 % of the thymosin alpha-1 peak height. 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 a peptide and is not counted in purity. The large peak at about 6.7 min comes from the instrument, not the sample: the same peak appears when only blank solvent is injected.

Zoomed views

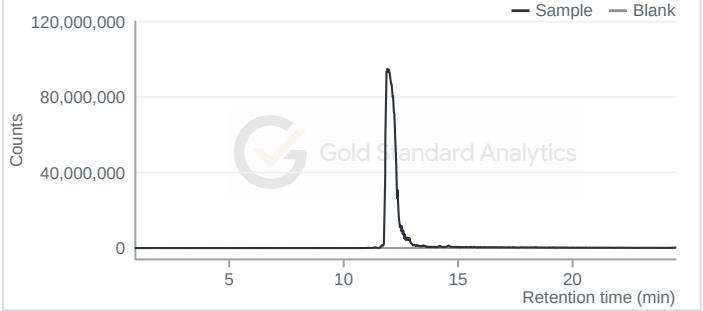
HPLC, SMALL PEAKS

Zoomed in on the small peaks (5 % of the main peak) · mAU, 214 nm against Retention time (min)



ION TRACE

Ion trace, m/z 1037.1 ([M+3H]3+): sample vs blank · Counts against Retention time (min)



Impurities

Every peak other than the declared peptide that was counted:

PEAK (MIN)	AMOUNT	WHAT IT IS
12.18	0.10 %	A separate form of Thymosin alpha-1 with the same mass (an isomer); its exact structure is unknown. Its mass spectrum also shows a strong water-loss ion.
14.46	0.13 %	A separate form of Thymosin alpha-1 with the same mass (an isomer); its exact structure is unknown.

> Amounts are each peak's share of the total UV peak area at 214 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 214 nm, after subtracting a blank run in the same sequence. Identity: molecular mass from the mass spectrum. 5 µL injected, twice; autosampler at 12 °C.

Notes

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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-000134-13406-20261125 · Certificate GSA-2026-833394

Customer and order	Jason Leslie Bradshaw · GSA-2026-000134
Sample and report	134-06 · Thymosin Alpha-1 Certificate of Analysis
Report reference	GSA-COA-000134-13406-20261125
Certificate accession	GSA-2026-833394
Released and signed by	Ian Ebert, Laboratory Director
Date and time (UTC)	2026-11-25 21:30:52Z
Signature meaning	Approved for release. The signer reviewed this report and approved its release to its customer.
Approval reference	6fb04bcc-ba80-406f-bba7-d05572b70d2f
Electronic signature	Signed electronically in a signed-in GSA staff account.
Original report SHA-256	efdce518f3a962404dc6902b12988d63354929b181ab40b6e12357d692e1220f
Verify this certificate	https://goldstandardanalytics.com/coa/GSA-2026-833394

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Signature

Ian Ebert, Laboratory Director

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