



Certificate of Analysis

All tests passed. This certificate is verified and authentic.

TESTED FOR



Panda Peptides
pandapeptides.com

Product Information

Product

Thymosin Alpha-1 - 10mg

Lot Number

PP2605-041B

Appearance

Good

Test Type

Full QC Panel

Date Received

09/08/2026

Analysis Confirmed

09/16/2026



Confirmed Fentanyl Free

Immunoassay, 50 ng/mL cutoff

Test Results — Full QC Panel

Analyte	Limit	Result	Unit	Status
Peptide Purity (HPLC)	≥ 95.0%	99.70%	%	PASS
Net Peptide Content	Report Only	10.26	mg	N/A
Identity (ID)	Thymosin alpha-1	Confirmed	-	PASS

⊠ Elemental Impurities — ICP-MS per USP (233)

Element	Limit (ppm)	Result (ppm)	Status
Arsenic (As)	≤ 1.5 ppm	0.067 ppm	PASS
Cadmium (Cd)	≤ 0.5 ppm	0.1132 ppm	PASS
Chromium (Cr)	≤ 10 ppm	< LOQ	PASS
Mercury (Hg)	≤ 1.5 ppm	0.258 ppm	PASS
Lead (Pb)	≤ 1 ppm	0.068 ppm	PASS

Overall: PASS

🛡️ Sterility Testing (PCR)

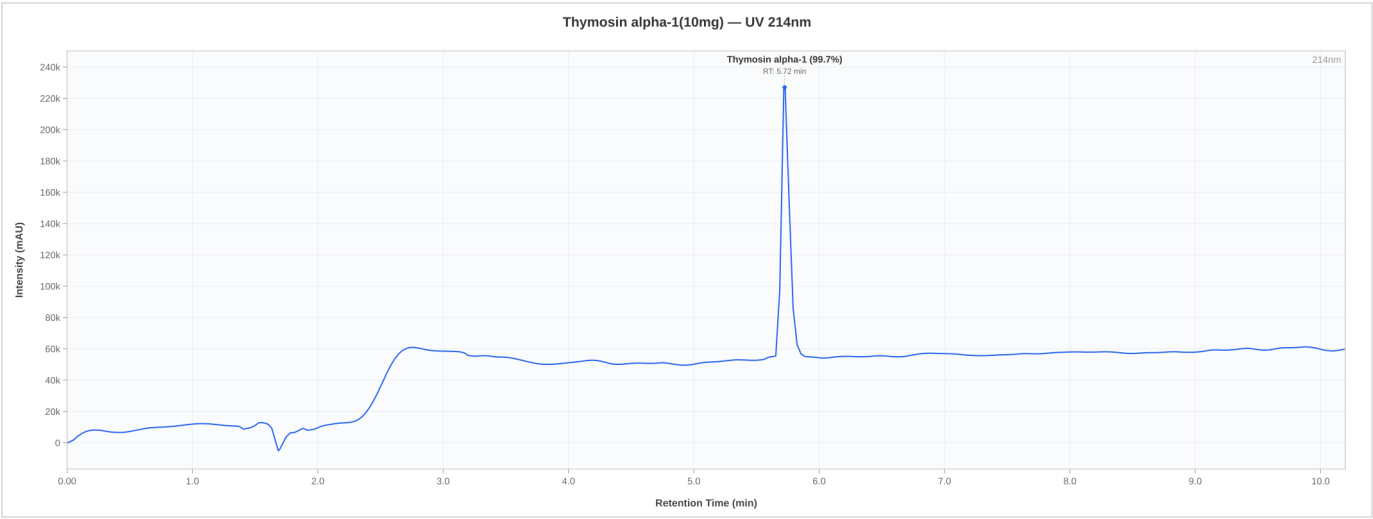
Test	Specification	Result	Status
Sterility (PCR)	No Growth	No Growth	PASS

💧 Endotoxin Testing — USP (85)

Test	Specification	Result	Status
Endotoxin (USP <85>)	Report Result	≤ 0.05 EU/mL	Reported

About this result: Endotoxin is reported as a quantitative value. Acceptable limits vary by product type and matrix, so no universal pass/fail threshold applies to RUO products. This result is below commonly referenced endotoxin thresholds.

HPLC Chromatogram



Representative chromatogram, Dedicated V0 (closest to batch mean purity)

Sample	Purity	Net Content	Identification	Result
★ Dedicated V0	99.70%	10.26 mg	Confirmed	PASS
Conformity V1	99.78%	10.25 mg	Confirmed	PASS
Conformity V2	98.38%	10.2 mg	Confirmed	PASS

STATISTICAL SUMMARY

Purity (HPLC)

Net Peptide Content

Endotoxin (USP <85>)

Mean: 99.29 %
Std Dev: 0.6419 %

Mean: 10.24 mg
Std Dev: 0.0262 mg

Mean: 0.03 EU/mL
Std Dev: 0.0000 EU/mL

★ Representative sample: Dedicated V0 (closest to batch mean purity). The chromatogram above corresponds to this sample.

NOTES & METHODOLOGY

1. Date Tested: 09/16/2026. Methods: Full QC Panel.
2. The sample was confirmed to be Thymosin Alpha-1 by HPLC. Identification by chromatographic retention time comparison with a reference standard.
3. Elemental impurities analyzed by ICP-MS per USP (233) methodology. Acceptance criteria are internal laboratory quality screening limits for research-use materials and do not represent evaluation against any specific pharmacopeial monograph or product specification.
4. Endotoxin tested per USP (85) kinetic chromogenic method. Acceptance criteria per client specification.
5. Sterility testing performed by PCR (Polymerase Chain Reaction) method.
6. Peptide purity determined by RP-HPLC area normalization at 214 nm. Value represents the percentage of the target peptide relative to all peptide-related peaks. Non-peptide process-related impurities, if detected, are excluded from the calculation.
7. Accreditation Scope: ILS Laboratories maintains ISO/IEC 17025 accreditation for activities listed in its published PJLA scope. Peptide testing reported on this certificate is performed for Research Use Only.
8. This certificate reports analytical results for the sample(s) submitted to ILS Laboratories for testing. All sample identifications, product names, brand names, lot/batch numbers, and labeled content are provided by the submitting party and have not been independently verified. Results reflect only the analytical testing of the specific sample(s) provided and do not constitute an evaluation or endorsement of the manufacturer's processes, quality systems, or overall production. ILS Laboratories makes no representations regarding the intended use, safety, efficacy, regulatory status, or intellectual property ownership of any materials tested.

Dr. Greg Kalyuzhny
Lab Director
09/16/2026

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