TEST REPORT

E-mail: lin@peptideformulationlab.com
Web： peptideformulationlab.com

Task Number #594152

Testing ordered > 15 Jul '26

Sample received > 18 Jul '26

Client	ShiLai™ Peptide Technologies
Sample	Thymosin alpha 1 (10 mg)
Manufacturer	ShiLai™ Peptide Technologies
Batch	AR1636RT2

Sample description >

See picture or pictures attached.

Tests requested >

Assessment of a peptide cartridges.

Results >

Thymosin alpha 1	10.92mg
Assay (HPLC)	100.0%
Identity (MS)	Confirmed
Purity	99.84%
Related Impurities	≤0.8%
pH	5.8 ± 0.2
Endotoxin	<0.5 EU/mg
Sterility	Pass

Analysis conducted > 21 Oct 2026

Signature >

Go to the website peptideformulationlab.com and contact the relevant person in charge to verify this test document.

69VW204815YP3

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The photo of sample：



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Thymosin alpha 1 Injection Pen (illustrative laboratory data) - Stability by HPLC (10mg)

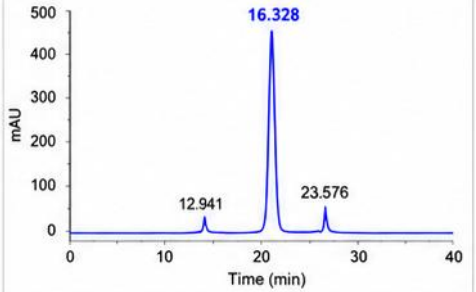
Product Name	:	Thymosin alpha 1 Injection Pen (illustrative laboratory data) - (10mg)	**Sample Conc.**	:	3.333 mg/mL
Batch No.	:	AR1636RT2	**System**	:	Agilent 1260 Infinity II
Strength	:	10 mg / Pen	**Software**	:	OpenLAB CDS
Diluent	:	Bacteriostatic Water for Injection	**Run Time**	:	40 min
Column	:	Waters Xbridge BEH C18, 4.6 × 150 mm, 3.5 µm	**Wavelength**	:	220 nm
Mobile Phase	:	A: 0.1% TFA in Water B: 0.1% TFA in Acetonitrile	**Data Rate**	:	10 Hz
			Study Condition	:	Reconstituted and stored at 2–8 °C
Gradient	:	5% B to 60% B in 30 min	**Evaluation**	:	Area Normalization
Flow Rate	:	1.0 mL/min	**Report Date**	:	2026-09-10
Column Temp	:	30 °C			
Detection	:	UV 220 nm			
Injection Vol.	:	10 µL			

SUMMARY OF RESULTS (2–8 °C)

Time Point	Assay (%)	Purity (%)	Total Impurities (%)	pH
Day 0	100.0	99.84	0.16	7.23
Day 30	99.9	99.79	0.21	7.20
Day 60	99.6	99.67	0.33	7.18
Day 90	99.4	99.52	0.48	7.16

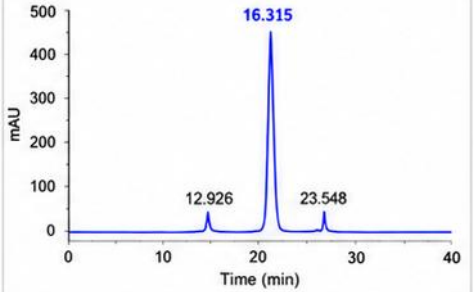
HPLC CHROMATOGRAMS (UV 220 nm)

Day 0 (Initial)



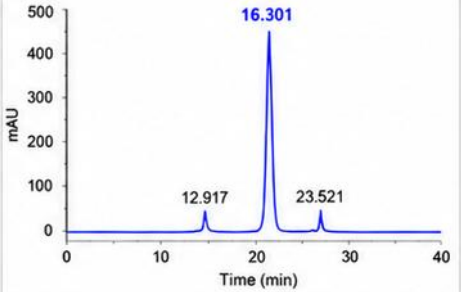
Peak No.	Retention Time (min)	Peak Name	Area (mAU-s)	Area (%)
1	12.941	Impurity 1	9,124	0.08
2	16.328	Thymosin alpha 1	10,910,452	99.84
3	23.576	Impurity 2	8,782	0.08
Total			10,928,358	100.00

Day 30



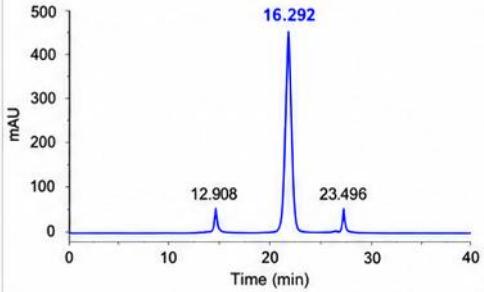
Peak No.	Retention Time (min)	Peak Name	Area (mAU-s)	Area (%)
1	12.926	Impurity 1	11,506	0.11
2	16.315	Thymosin alpha 1	10,512,763	99.79
3	23.548	Impurity 2	10,842	0.10
Total			10,535,111	100.00

Day 60



Peak No.	Retention Time (min)	Peak Name	Area (mAU-s)	Area (%)
1	12.917	Impurity 1	16,842	0.16
2	16.301	Thymosin alpha 1	10,504,285	99.67
3	23.521	Impurity 2	18,036	0.17
Total			10,539,163	100.00

Day 90

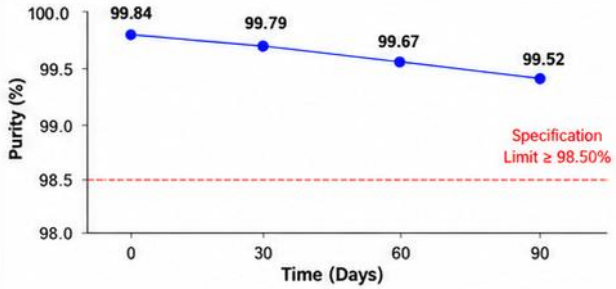


Peak No.	Retention Time (min)	Peak Name	Area (mAU-s)	Area (%)
1	12.908	Impurity 1	24,378	0.24
2	16.292	Thymosin alpha 1	10,133,456	99.52
3	23.496	Impurity 2	24,102	0.24
Total			10,181,936	100.00

STABILITY DATA (2–8 °C)

Time Point	Assay (%)	Purity (%)	Total Impurities (%)	pH	Appearance
Day 0 (Initial)	100.0	99.84	0.16	7.23	Clear, Colorless
Day 30	99.9	99.79	0.21	7.20	Clear, Colorless
Day 60	99.6	99.67	0.33	7.18	Clear, Colorless
Day 90	99.4	99.52	0.48	7.16	Clear, Colorless

Purity Trend Over 90 Days (2–8 °C)



SYSTEM SUITABILITY (Day 0)

Parameter	Result	Acceptance Criteria
Retention Time (Thymosin alpha 1)	16.328 min	N/A
Theoretical Plates (N)	18,642	≥ 10,000
Tailing Factor (T)	1.08	≤ 2.0
Resolution (Rs, Imp1)	4.71	≥ 1.5
Resolution (Rs, Imp2)	5.36	≥ 1.5

CONCLUSION

Under refrigerated conditions (2–8 °C), the reconstituted Thymosin alpha 1 Injection Pen maintained excellent chemical stability for 90 days. Purity remained above 99.50%, with minimal increase in total impurities and no significant change in pH or appearance.