

ILS Laboratories

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Tirzepatide - 20

Tested for: Frontier Aminos

FrontierAminos.com

COA #: COA-2026-957004
Lot Number: TRZ20-14
Accession #: ACC-2026-7186
Labeled Content: 20

Analysis Date: 07/08/2026
Appearance: Good
Sample Matrix: Lyophilized
Volume: 3mL
Date Received: 06/30/2026

PASS



Scan to verify
authenticity at ils-lab.com
Access Code: JQUSSQP4

Method: Full QC Panel

Identity

Tirzepatide

Peptide Purity

99.90%



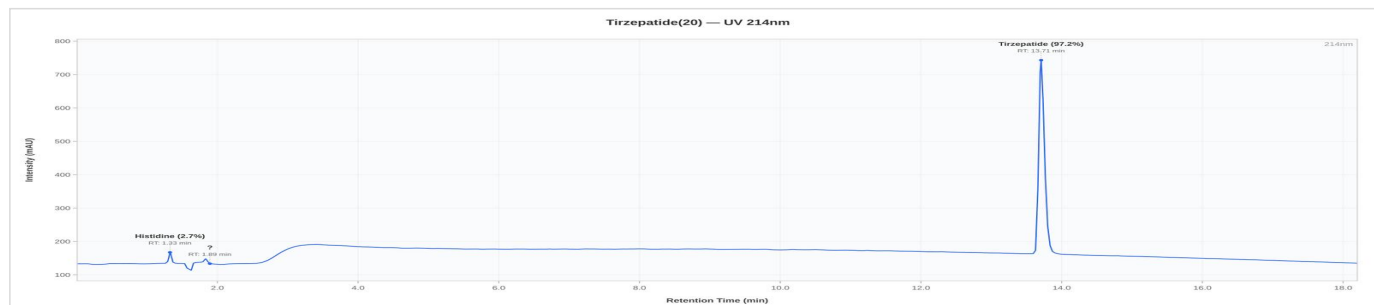
Purity, Identity & Quantitation (HPLC)

Analyte	Specification	Result	Unit	Status
Peptide Purity (HPLC)	>= 95.0%	99.90%	%	PASS
Net Peptide Content	Report Only	20.59	mg	N/A
Identity (HPLC-RTM)	Tirzepatide	Confirmed	-	PASS
Fentanyl Screen	Immunoassay, 50 ng/mL cutoff	Not Detected	-	PASS



Tirzepatide 20 - TRZ20-14

HPLC Chromatogram



Representative chromatogram, Conformity V1

HPLC Conformity Testing Results (4 samples tested)

Sample	Purity	NPC	ID	Result
Dedicated V0	99.50%	21.22 mg	Confirmed	PASS
Conformity V1	99.51%	21.35 mg	Confirmed	PASS
Conformity V2	99.39%	20.62 mg	Confirmed	PASS
Conformity V3	99.90%	20.59 mg	Confirmed	PASS
Mean	99.57%	20.95 mg	—	—
Std Dev	0.1935%	0.3433 mg	—	—

Heavy Metals Analysis (ICP-MS)

Test	Specification	Result	Status
Arsenic (As)	NMT 1.5 ppm	Not Detected	PASS
Cadmium (Cd)	NMT 0.5 ppm	Not Detected	PASS
Chromium (Cr)	NMT 10 ppm	Not Detected	PASS
Mercury (Hg)	NMT 1.5 ppm	Not Detected	PASS
Lead (Pb)	NMT 1 ppm	Not Detected	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	0.077 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.

Notes & Methodology

- Date Tested: 07/08/2026. Methods: Purity, Identity & Quantitation (HPLC).
- The sample was confirmed to be Tirzepatide by HPLC. Identification by chromatographic retention time comparison with a reference standard.
- 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.
- Endotoxin tested per USP <85> kinetic chromogenic method. Acceptance criteria per client specification.
- 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.
- Purity values are capped at 99.9% to reflect instrument limit of detection (LOD). Trace impurities below the detection threshold may be present.
- Chromatogram shown is representative: Conformity V1 (99.51% purity, closest to batch mean of 99.57%).
- 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.
- 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.



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