Gold Standard Analytics

Gold Standard Analytics LLC, Houston, TX

CERTIFICATE OF ANALYSIS

Report GSA-COA-CUST-LA-TZPCAPS-20261112-8 · issued Nov 23, 2026

LA Peptides

PRODUCT	ORDER	SAMPLE
Tirzepatide capsules	Custom sample	LA-TZPCAPS-20261112
LABEL	**ISSUED**	**BATCH**
Tirzepatide capsule	Nov 23, 2026	2618



THE SAMPLE AS RECEIVED

IDENTITY ✓

Tirzepatide

confirmed by mass and retention time

PURITY ✓

99.86 %

HPLC-UV, 214 nm, 2 injections

FENTANYL SCREEN ✓

Not detected

fentanyl and 15 related compounds

ENDOTOXINS ✓

< 0.050 EU/mL

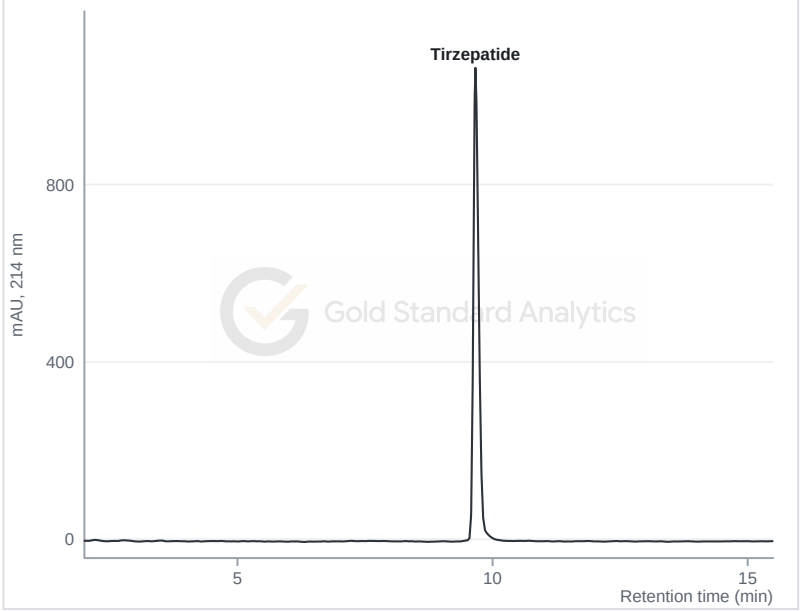
Pass; spike recovery 69 %

✓ **Sterility** Pass; both canisters, 14 days — **No growth**

✓ **Heavy metals** USP <232>, ICP-MS: Pb, Cd, Hg, As, Co, V, Ni — **Pass**

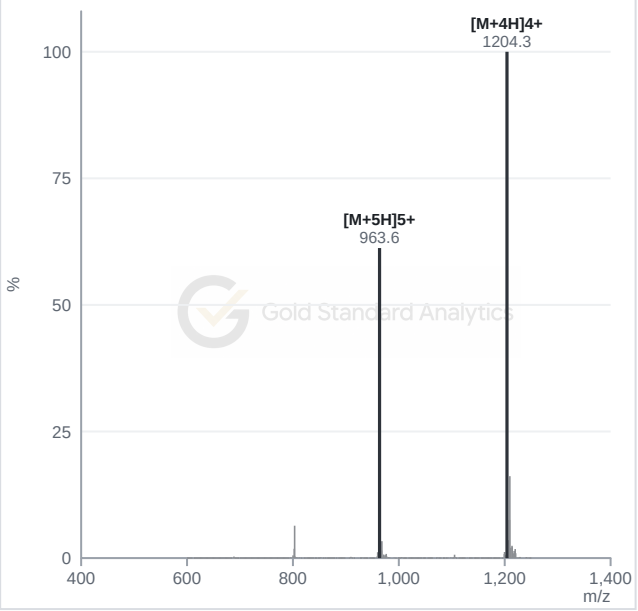
HPLC CHROMATOGRAM

UV, 214 nm



MASS SPECTRUM

main peak (9.66 min)



RELEASED BY

Ian Ebert

Chemist & Lab Lead · Nov 24, 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

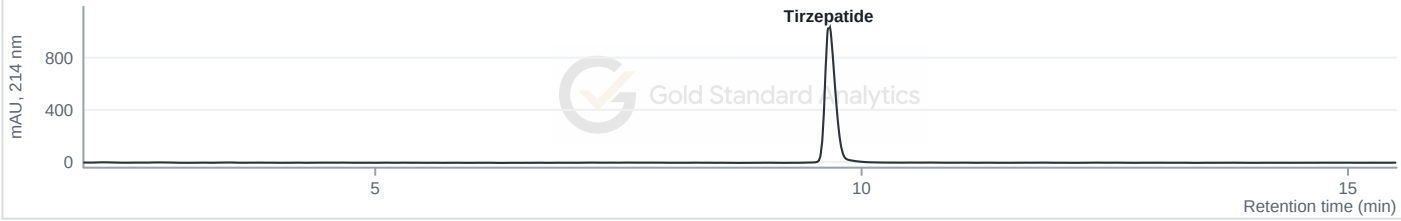
Custom sample · LA Peptides

Customer	**LA Peptides**	Prepared	**Capsule contents dissolved and filtered to remove the filler, 11 Nov 2026**
Order	**Custom sample**	Tested	**12 Nov 2026**
Sample	**LA-TZPCAPS-20261112**	Tests	**Identity, Purity, Impurity breakdown, Fentanyl screen, Bacterial endotoxins, Sterility, Elemental impurities**
Label	**Tirzepatide capsule**		

Graphs

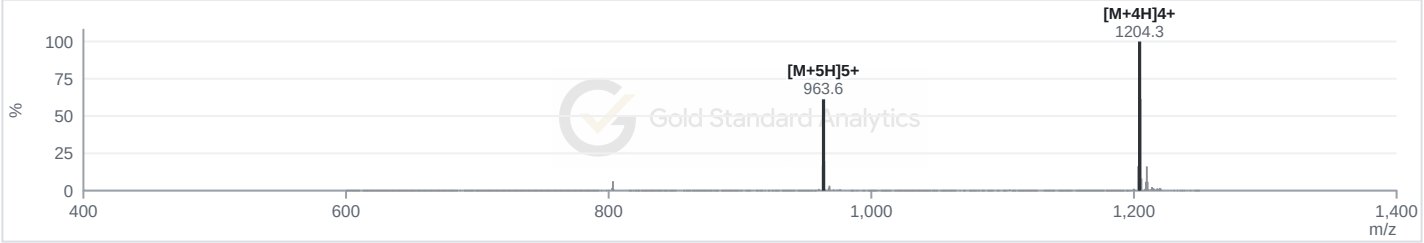
HPLC CHROMATOGRAM

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



MASS SPECTRUM

Mass spectrum of the main peak (9.66 min) · Counts against m/z



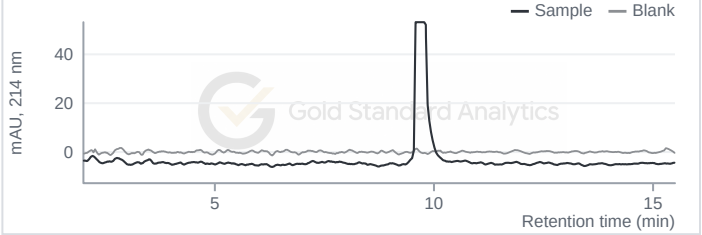
Results

Identity	**Consistent with tirzepatide.** The main peak at 9.66 min carries tirzepatide's 4+ and 5+ ions (m/z 1204.3 and 963.6; molecular mass 4,813.1, expected 4,813.5) and elutes within 0.2 % of a tirzepatide reference standard run in the same sequence (9.68 min).
Purity	**99.86 %** by HPLC with UV detection at 214 nm. No peak other than tirzepatide was found in either of two injections of the same solution, down to about 0.14 % of the tirzepatide peak height, so purity is reported as 99.86 % rather than as 100 %.
Fentanyl screen	**Not detected.** The capsule solution was screened by LC-MS/MS (multiple-reaction monitoring, two ion transitions each) for fentanyl and 15 related compounds: norfentanyl, 4-ANPP, acetylfentanyl, acrylfentanyl, butyrylfentanyl, cyclopropylfentanyl, furanylfentanyl, methoxyacetylfentanyl, para-fluorofentanyl, ocfentanil, carfentanil, sufentanil, alfentanil, remifentanil and valerylfentanyl. This is a screen: no detection limit is stated.
Bacterial endotoxins	**< 0.050 EU/mL; spike recovery 69%** . Pass.
Sterility	**No growth in either canister after 14 days** . Pass.
Elemental impurities (USP <232>)	**Pb < 0.5 µg/g; Cd < 0.2 µg/g; Hg < 0.3 µg/g; As < 1.5 µg/g; Co < 5 µg/g; V < 10 µg/g; Ni < 20 µg/g (Agilent ICP-MS)** . Pass.

Zoomed views

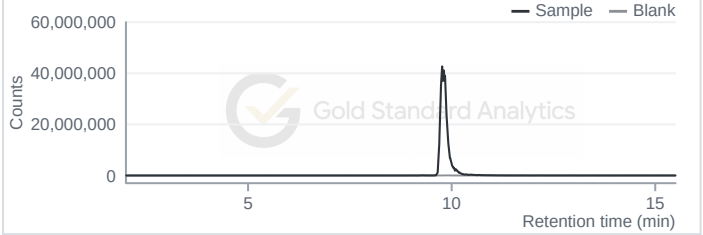
HPLC, SMALL PEAKS

Zoomed in on the small peaks · mAU, 214 nm against Retention time (min)



ION TRACE

Ion trace, m/z 963.6 (tirzepatide 5+): sample vs blank · Counts against Retention time (min)



Impurities

Every UV peak above the reporting limit was tirzepatide.

Amounts are each peak's share of the total UV peak area at 214 nm.

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, 55 °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, and retention time against a tirzepatide reference standard run in the same sequence. Fentanyl screen: a separate injection with LC-MS/MS in multiple-reaction-monitoring mode. In the zoomed view, the blank line is the difference between two blank runs with the slow baseline drift removed. Bacterial endotoxins: endotoxin reader, 0.050 EU/mL limit; result reported as printed by the reader, with spike recovery. Sterility: membrane filtration (canisters), 14-day incubation. Elemental impurities (USP <232>): Agilent ICP-MS; Pb, Cd, Hg, As, Co, V, Ni.

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.

Customer and order	LA Peptides · Custom sample (no order)
Sample and report	LA-TZPCAPS-20261112 · Tirzepatide capsules Certificate of Analysis
Report reference	GSA-COA-CUST-LA-TZPCAPS-20261112-UPL-296a3ef885e6
Certificate accession	GSA-2026-594532
Released and signed by	Ian Ebert, Chemist & Lab Lead
Date and time (UTC)	2026-11-24 23:34:44Z
Signature meaning	Approved for release. The signer reviewed this report and approved its release to its customer.
Approval reference	eb2c140c-baf8-4c2d-9e55-9c52b3544116
Electronic signature	Signed electronically in a signed-in GSA staff account.
Original report SHA-256	ba2191c9478b41785b0a4c359a8b55ce8596bedbd060415e46341586a94d1d64
Verify this certificate	https://goldstandardanalytics.com/coa/GSA-2026-594532

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Signature



Ian Ebert, Chemist & Lab Lead