

CERTIFICATE OF ANALYSIS

COA #: **SD20261001_014_TZ30**

SAMPLE INFORMATION

Client	VP Peptides	Accession #	SD20261001_014
Compound	Tirzepatide	Date Received	10/01/2026
Molecular Formula	C225H348N48O68	Date Reported	10/02/2026
Appearance	White lyophilized powder	Labeled Quantity	30mg
Sample Form	Lyophilized Vial	Lot / Batch #	N/A – lot not printed on label
Storage	Room Temp	CAS Number	2023788-19-2
Cap Color	Yellow		



All Chemical Analysis Performed by LC-MS/MS

ANALYTICAL RESULTS

Test / Analysis	Method	Specification	Result	Status
Identity (Mass Confirmation)	LC-MS/MS	Matches reference mass	Tirzepatide	Pass
Purity	LC-MS/MS	≥ 95.0%	99.787 %	Pass
Net Peptide Content*	LC-MS/MS	Report value	32.58 mg	Pass
Observed Molecular Mass	LC-MS	Within ± 1.0 Da	1203.8m/z [Tirzepatide + 4H] ⁴	Pass
Theoretical Molecular Mass	Reference	—	4813.45 Da	Pass
Related Substances / Impurities	LC-MS/MS	Report value	Not Detected	Pass
Residual Solvents	LC-MS/MS	Report value	Not Detected	Pass

John Humes, MS. **John Humes, MS.**
Analyzed by · Laboratory Analyst · 10/02/2026

Chetan Soni, PhD. **Chetan Soni, PhD.**
Approved by · Laboratory Director · 10/03/2026

IMPORTANT NOTICE - FOR RESEARCH USE ONLY

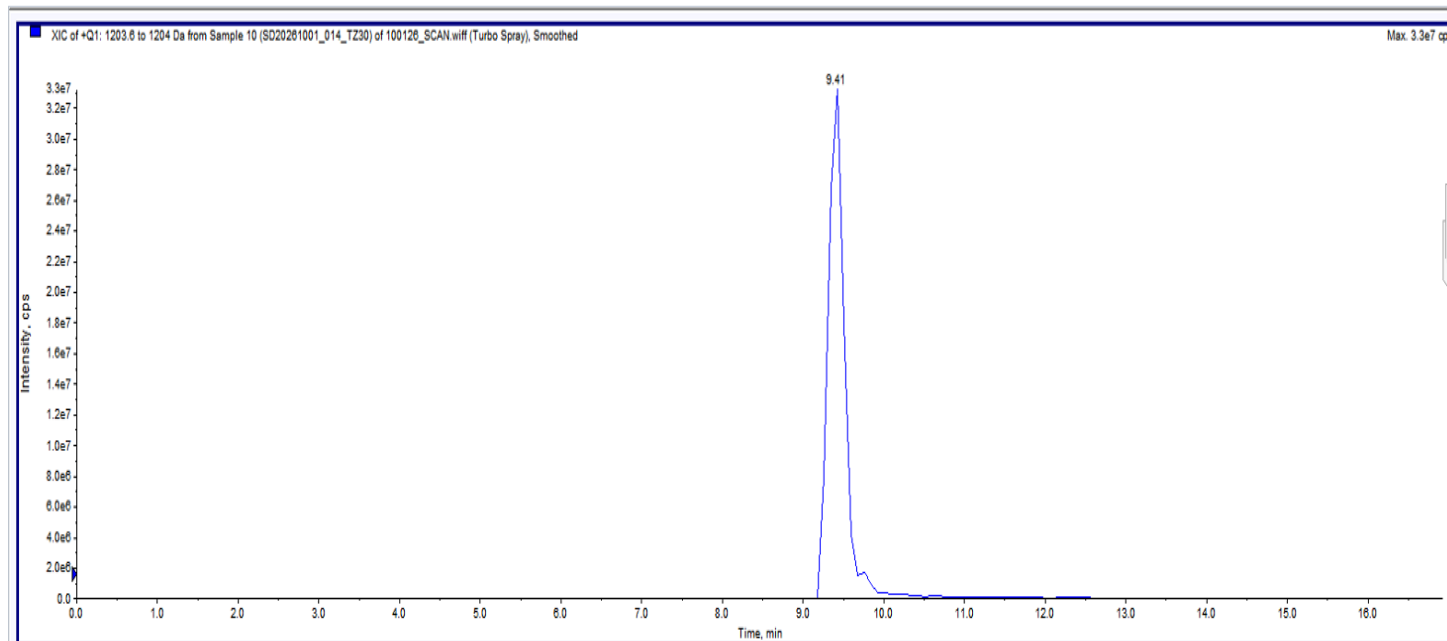
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* Net Peptide Content is calculated from precision gravimetric fill weight and HPLC purity.

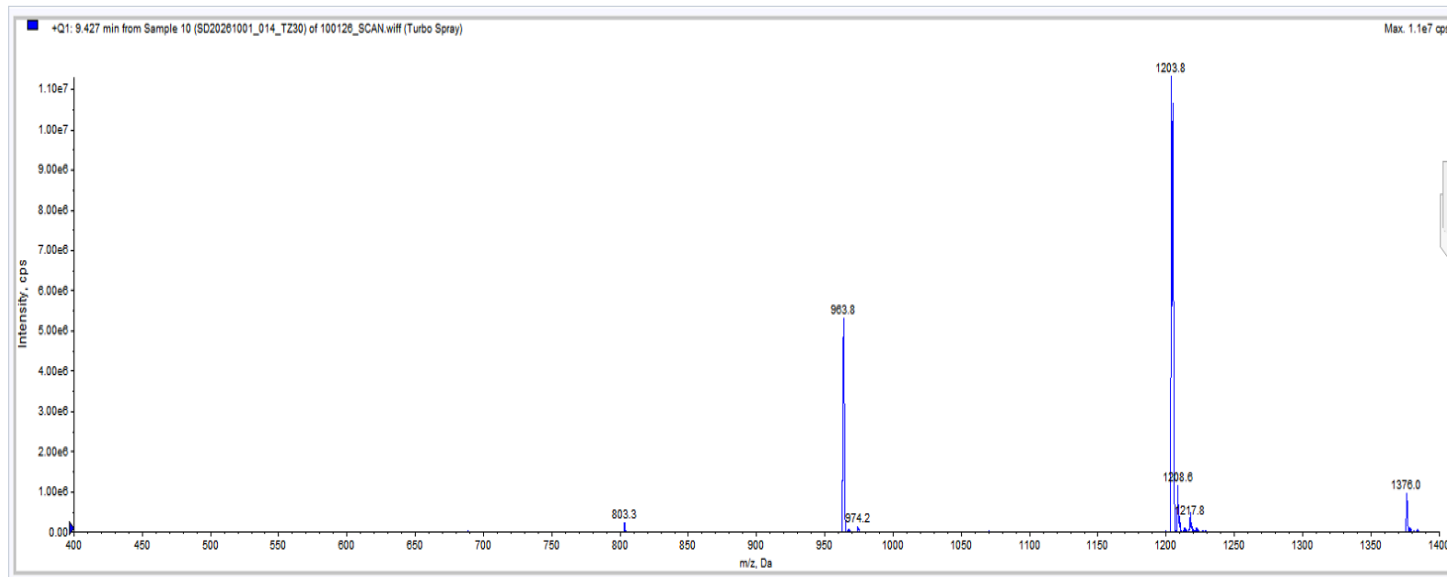
ANALYTICAL DATA

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CHROMATOGRAM



MASS SPECTRUM (LC-MS)



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ANALYTICAL INTERPRETATION

Chromatogram

Retention Time Match

Mass Spectrum (LC-MS)

Analyte: Tirzepatide

Sample ID: SD20261001_014_TZ30

Method: LC-MS, positive-mode Q1 full scan

Retention Time: 9.427min

Observed peptide envelope — Tirzepatide (9.427min)

803.3m/z [Tirzepatide + 6H]

Description: Highest-charge, lowest-m/z core ion of the envelope; matches the expected 6+ state for a ~4.8kDa peptide.

963.8m/z [Tirzepatide + 5H]

Description: Strong, central ion in the envelope; confirms the typical 5+ charge state for Tirzepatide.

1203.8m/z [Tirzepatide + 4H]⁴

Description: Lower-charge, higher-m/z ion; consistent with the intact peptide's 4+ state and expected mass.

1298.6m/z adducted/isotopic variant of 4+ region

Description: Slightly shifted higher-m/z peak, likely Na/matrix adduct or isotopic extension of the 4+ envelope.

1376.0m/z extended tail of the same peptide envelope

Description: Higher-m/z, lower-intensity ion within the same peptide cluster, supporting a continuous envelope rather than a separate species.

Interpretation

A single, well-defined high-mass peptide envelope is observed at 9.427min, dominated by charge states 6+, 5+, and 4+ (803.3, 963.8, 1203.8m/z). The additional ions at 1298.6 and 1376.0m/z represent adducted or isotopic variants within the same envelope, not separate impurities. This charge-state distribution and m/z pattern are fully consistent with the expected molecular mass and ionization behavior of Tirzepatide.

Identity conclusion

Identity by LC-MS Q1 full scan — Tirzepatide confirmed.

The observed multi-charged peptide envelope (6+ 4+) at 9.427min, with correlated adduct/isotope peaks, matches the declared Tirzepatide component and shows no non-correlated dominant species.

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